

Physics Abstracts

Science Abstracts Series A
July–December 1982

Subject Index (A–L)

Q
-
S3
V.85
1982
INDEX (A-L)
NIE
C~

Sc

U. L. G. A.

MAR 2 - 1983

LIBRARY

inspec
The Institution of Electrical Engineers

CONTENTS

Title page	i	Subject index	S1669
Abbreviations and acronyms	iii		

SIX-MONTHLY INDEXES TO SCIENCE ABSTRACTS

Cumulative indexes to Science Abstracts are published twice a year covering the period January-June and July-December. They comprise author and subject indexes and some specialised or 'small' indexes. For Physics Abstracts and Electrical & Electronics Abstracts the Author Index and Subject Index are published as separate volumes. In this case the Small Indexes are included in the Author Index volume.

Cumulative author and subject indexes for preceding years are also available. For details please see inside back cover.

Subject Index

The Subject index provides an alphabetical subject key to the articles included in the abstracts journal. Some general guidance on its use is given below:

1. Look in the index for the name of the specific subject in which you are interested. In most cases this name will be a heading in the index and you will find relevant articles listed under it. The majority of the subject headings fall into the following categories: property, phenomena, substance or named objects, instrument, device, theory, method, process, application, event.
2. Occasionally you will be directed from the subject heading chosen to a different heading under which the relevant or additional articles are listed.
3. If you do not find the subject heading you first chose, try a more general heading.
4. Each entry under the heading relates to an article appearing in the abstracts journal and gives the serial number of that article in the journal preceded by the last digit of the current year, e.g. 2-12345; i.e. Abstract number 12345 in the abstracts journal for 1982

The language of the article, if it is not in English, is also indicated. e.g. oxide glasses, viscosity in glass transition range (Japanese) 2-22290.

Each entry starts with a Keyword or Keyphrase considered to be most relevant to the heading. On sorting these Keywords, the qualifying prefixes are usually ignored. (e.g. α -brass, 5-sulphosalicylic, 31 Cygni, n-Ge are sorted under brass, sulphosalicylic, Cygni, Ge respectively).

There are three main Keyword lists; alphabetical A-Z, elementary particles, and chemical symbols (organic substances are written and not given as chemical formula). More than one Keyword list may be present under each subject heading.

For document on, say, 'photoemission of germanium' at least two access points 'photoemission' and germanium' are provided. Under the heading 'photoemission' the Keyword will be 'Ge' and under 'germanium' the Keyword will be 'photoemission'.

In a case like this, it is advisable and quicker to use the heading 'photoemission' and go straight to the chemical symbol list for 'Ge'.

Intermetallic compounds are indexed under the appropriate alloy headings. The chemical formula is used as Keyword. However, it is important to realise in searching the chemical symbol list that, at present, alloys and intermetallic compounds are sorted separately. For example FeCo is sorted at the end of the Fe- list e.g. Fe-Al, ... Fe-Co, ... Fe-Si, ... Fe-Si-B, ... FeCo, ... FeSi and so on in this order.

Subject Index (A – L)

© 1983: THE INSTITUTION OF ELECTRICAL ENGINEERS

Abbreviations and Acronyms

Abbreviations and acronyms are used in the modifiers in all INSPEC Cumulative Subject Indexes. Individual terms should be readily understood in the context of the subject headings. **Inorganic substances** are usually given by their chemical formulae. Iron and aluminium garnets appear in the formulae lists as MIG and MAG (where M is metal element, e.g. YIG and YAG); $(\text{Pb},\text{La})(\text{Zr},\text{Ti})\text{O}_3$ and $\text{Ce}_2\text{Mg}_3(\text{NO}_3)_{12}$ appear as PLZT and CMN respectively. **Organic substances** including **liquid crystals** are not given as formulae but common abbreviations are used.

ABS resin	acrylonitrile-butadiene-styrene	CESR	conduction electron spin resonance
AC	alternating current	CGTO	contracted Gaussian-type orbital
ACV	air cushion vehicle	CHF	coupled Hartree-Fock
A/D	analogue-to-digital	CI	configuration interaction
ADC	analogue digital conversion	CIDEP	chemically induced dynamical electron polarisation
ADP	administrative data processing	CIDNP	chemically induced dynamical nuclear polarisation
AE	acoustic emission	CIEH	charge iterated extended Huckel
AEC	atomic electron correlation(s)	CIHY	configuration interaction Hylleras
AES	Auger electron spectra(oscopy)	CMI	computer managed instruction
AF	audio frequency	CMOS	complementary metal-oxide-semiconductor
AFC	automatic frequency control	CNC	computerised numerical control
AFL	abstract family of languages	CNDO	complete neglect of differential overlap
AFMR	antiferromagnetic resonance	COC	cholesteryl oleyl carbonate
AGC	automatic gain control	COM	computer output to microform (fiche or film)
AGR	advanced gas-cooled reactor	COOB	4,4'-cyano-octyloxy-biphenyl
ALARA	as low as reasonably achievable	CP	charge, parity
ALU	arithmetic logic unit	CPA	coherent potential approximation
AM	amplitude modulation	CPA	critical path analysis
APACHE	accelerator for physics and chemistry of heavy elements	CPM	critical path method
APR	acoustic paramagnetic resonance	CPSK	coherent phase shift keying
APS	appearance potential spectra(oscopy)	CPT	charge, parity, time
APW	augmented plane wave	CPU	central processing unit
ARMA	autoregressive moving average	CRO	cathode ray oscilloscope
ASCII	American standard code for information exchange	CRSR	coherent resonant Stokes rotation
ATC	air traffic control	CRT	cathode ray tube
ATE	automatic test equipment	CS	coupled states
ATM	Axilrod-Teller-Moto	CSM	continuous slowing down models
ATR	attenuated total reflection	CSRS	coherent Stokes-Raman spectra(oscopy)
ATWS	anticipated transients without scram	CT	computerised tomography
AVC	automatic volume control	CTR	controlled thermonuclear reactor
BARITT	barrier injection transit time	CVD	chemical vapour deposition
BBEA	4-butoxybenzal-4'-ethylaniline	CW	continuous wave
BBGKY	Bogoliubov-Born-Green-Kirkwood-Yvon	D/A	digital-to-analogue
BCC	body centred cubic	DAC	digital analogue conversion
BCD	binary-code decimal	DBMS	database management system
BCS	Bardeen-Cooper-Schrieffer	DBR	distributed Bragg reflector
BFO	beat-frequency oscillator	DC	direct current
BH	buried heterostructure	DDC	direct digital control
BWO	backward wave oscillator	DIP	dual in-line package
BWR	boiling water reactor	DDL	diode-diode logic
BWT	backward wave tube	DECENT	distribution of exact classical energy transfer
CAD	computer aided design	DESY	Deutsches Electron Synchrotron
CAE	computer aided engineering	DF	Dirac-Fock
CAI	computer assisted instruction	DFB	distributed feedback
CAM	computer aided manufacturing	DH	double heterostructure
CARS	coherent antiStokes Raman scattering (spectra)	DIL	dual-in-line
CATV	community antenna TV	DITE	divertor in torus experiment
CB	citizen band	DLTS	deep level transient spectra(oscopy)
CBI	computer based instruction	DM	delta modulation
CBOOA	cyanobenzylidene octyloxyaniline	DMA	direct memory access
CCBA	coupled channel Born approximation	DMM	digital multimeter
C-CD	charge-coupled device	DMOS	double diffused metal-oxide-semiconductor
CDFR	commercial demonstration fast reactor	DMSO	dimethylsulphoxide
CDI	collector diffusion isolation	DNA	deoxyribonucleic acid
CDM	code division multiplexing	DNMR	double nuclear magnetic resonance
CDW	charge-density wave	DOBAMBC	p-decyloxybenzylidene p'-amino 2-methyl butyl cinnamate
CEM	channel electron multiplier	DOD	different orbitals for different spins
CEPA	coupled electron pair approximation	DORIS	Dopple-ring-Speicher
CERN	Conseil Européen pour la Recherche Nucléaire	DOS	disc operating system

DOVETT	double velocity transit time	FDM	frequency division multiplex(ing)
DP	data processing	FDNC	frequency dependent negative conductance
DPCM	differential pulse code modulation	FDNR	frequency dependent negative resistance
DPPH	diphenylpicrylhydrazyl	FEM	field emission microscopy
DPSK	differential phase shift keying	FET	field effect transistor
DSC	differential scanning calorimetry	FFHR	fusion-fission hybrid reactor
DTA	differential thermal analysis	FFT	fast Fourier transform
DVM	digital voltmeter	FFTF	fast flux test facilities
DV-X α	discrete variational X α method	FIM	field ion microscopy
DWBA	distorted wave Born approximation	FIR	finite impulse response
DWIA	distorted wave impulse approximation	FM	frequency modulation
		FMIT	fission materials irradiation test facility
E1,E2	electric dipole, quadrupole	FMR	ferromagnetic resonance
E ² PROM	electronically erasable read-only-memory	FMSR	fast mixed spectrum reactor
EAROM	electronically alterable read-only-memory	FPT	finite perturbation theory
EAS	extensive air shower	FPLA	field programmable logic array
EB	exponential Born	FSK	frequency-shift keying
EBBA	4-ethoxybenzylidene-4'n-butylaniline	FSGO	floating spherical Gaussian orbitals
EBIC	electron beam induced current(s)	FTR	fast test reactor
EBR	experimental breeder reactor		
EBT	Elmo Bumpy Torus	GAMBIT	gate modulated bipolar transistor
ECC	emergency core cooling	GANIL	grand accelerateur national a ions Lourds
ECCM	electronic counter-counter measures	GCFL	gas-cooled fast breeder reactor
ECELR	epithermal critical experiment laboratory reactor	GCM	generator coordinate method
ECG	electrocardiography (-gram)	GDR	giant dipole resonance
ECL	emitter coupled logic	GHF-NO-CI	generalised Hartree-Fock/natural orbital/ configuration interactions
ECM	electronic countermeasures	GIAO	gauge-invariant atomic orbitals
EDA	ethylene diamine	GO	Gaussian orbitals
EDP	electronic data processing	GOO	generalised Overhauser orbitals
EDTA	ethylene diamine tetra-acetic acid	GPM	ground potential model
EEBAC	ethyl-4-(4'-ethoxy-benzylidene-amino) cinnamate	GTO	Gaussian-type orbitals
		GVB	generalised valence bond
EEG	electroencephalography (-gram)		
EELS	electron energy loss spectra(oscropy)	HAM	hydrogenic atoms in molecules
EEPROM	electrically erasable programmable read-only-memory	HBAB	hexyloxybenzylidene-p' aminobenzonitrile
EFM	extended Flygare method	HBT	N-(p-hexyloxybenzylidene)-p-toluidene
EFT	electronic funds transfer	HCDA	hypothetical core disruptive accident
EHD	electrohydrodynamics	HCP	hexagonal close packed
EHF	extremely high frequency	HEED	high energy electron diffraction
EHP	electron-hole potential method	HEMP	high altitude electromagnetic pulse
EHT	extended Huckel theory	HF	high frequency or Hartree-Fock
EHV	extra high voltage	HFB	Hartree-Fock-Bogoliubov
ELDOR	electron electron double resonance	HFER	hot fuel examination facility
ELF	extremely low frequency	HFIR	high flux isotope reactor
EM	electromagnetic	HFO	Hartree-Fock-Overhauser
EMC	electromagnetic compatibility	HFS	hyperfine structure
EMF	electromotive force	HGMS	high gradient magnetic separation
EMG	electromyography (-gram)	HIXE	heavy ion induced X-ray emission
EMI	electromagnetic interference	HLW	high level waste (radioactive)
EMP	electromagnetic pulse	HMO	Huckel molecular orbitals
ENDOR	electron nuclear double resonance	HOAB	heptyloxyazoxybenzene
ENG	electronic newsgathering	HOBHA	p-n-heptyloxy-benzylidene-p-n heptylaniline
EOF	end of file	HOMO	highest occupied molecular orbitals
EPEN	empirical potential energy function based on interactions of electrons and nuclei	HTGR	high temperature gas-cooled reactor
		HV	high voltage
EPMA	electron probe microanalysis	HVEM	high voltage electron microscopy
EPR	electron paramagnetic resonance	HWR	heavy water reactor
EPROM	erasable programmable read-only-memory		
ERG	electroretinography (-gram)	IAEA	International Atomic Energy Authority Agency
ESCA	electron spectroscopy for chemical analysis	IBA	interacting boson approximation
ESCAR	experimental superconducting accelerating ring	IBM	interacting boson model
		IBPBAC	isobutyl-4-(4'-phenylbenzylideneamino) cinnamate
ESFI	epitaxial silicon film on insulator		
ESS	electronic switching system	IC	integrated circuit
EUV	extreme ultraviolet	ICDF	intermediate coupling Dirac-Fock
EW	electronic warfare	ICF	inertial confinement fusion
EXAFS	extended X-ray absorption fine structure	IDT	interdigital transducer
FAMOS	floating gate avalanche metal-oxide-semiconductor	IEPA	independent electron pair approximation
		IETS	inelastic electron tunnelling spectra(oscropy)
FBR	fast breeder reactor	IF	intermediate frequency
FCC	face centred cubic	IGFET	insulated gate field effect transistor

IR	infinite impulse response	M1,M2	magnetic dipole, quadrupole
IKO	Institute v. Kernph Ouder Amsterdam	MBBA	4-methoxybenzylidene-4'-n-butyl-aniline
I ² L	integrated injection logic	MBE	molecular beam epitaxy
I ³ L	isoplanar I ² L	MBPT	many body perturbation theory
ILS	instrument landing system	MCD	magnetic circular dichroism
IMPATT	impact avalanche transit time	MCSCF	multiconfiguration self-consistent-field
INDO	intermediate neglect of differential overlap	MCPESCF	multiconfiguration paired excitation SCF
INDOR	internuclear double resonance	MCZDO	multi-centre zero differential overlap
ING	intense neutron generator	MCX _α	multiconfiguration X _α
INO	iterative natural orbital	MEC	molecular electron correlation(s)
INTELSAT	international telecommunications satellite consortium	MEDO	multipole expansion of diatomic overlap
I/O	input/output	MESFET	metal-semiconductor field effect transistor
IOC-α	inclusion of the overlap charges in the omega	MF	medium frequency
IPSS	international packet switching service	MFP	mean free path
IR	infrared	MHD	magnetohydrodynamics
IRDO	intermediate retention of differential overlap	MIC	microwave integrated circuit
IRS	information retrieval system	MIDP	microwave induced delayed phosphorescence
ISABELLE	intersecting storage and acceleration	MIEHM	modified iterative extended Huckel method
ISFET	ion-sensitive field effect transistor	MIM	metal-insulator-metal
ISL	integrated Schottky logic	MIMD	multiple input multiple data
ISR	intersecting storage ring	MIS	metal-insulator-semiconductor or management information system
ISX	impurity study experiment	MIT	Massachusetts Institute of Technology
ITC	ionic thermocurrents	MM	millimetre
ITEP	Institute of Theoretical and Experimental Physics	MMF	magnetomotive force
ITR	ignition test reactor	MNOS	metal-nitride-oxide-semiconductor
IU	Indiana University	MO	molecular orbitals
IVO	improved virtual orbitals	MOCIC	molecular orbital constraint of interaction coordinates
JAERI	Japan Atomic Energy Research Institute	MOCVD	metal-organic chemical vapour deposition
JET	Joint European torus	MODPOT	model potential
JFET	junction field effect transistor	MOS	metal-oxide-semiconductor
JINR	Joint Institute for Nuclear Research	MOSFET	metal-oxide-semiconductor field effect transistor
KEK	Japan National Laboratory for High Energy Physics	MOST	metal-oxide-semiconductor transistor
KKR	Korringa-Kohn-Rostoker	MRD	multi-reference double excitation
LAMPF	Los Alamos meson physics facility	MRINDO	modified Rydberg INDO
LC	inductance-capacitance	MS	management science
LCAO	linear combination of atomic orbitals	MSI	medium scale integration
LCBO	linear combinations of (semi-localised) band orbitals	MSK	minimum shift keying
LCD	liquid crystal display/device	MSR	molten salt reactor
LCGO	linear combination of Gaussian orbitals	MSU	Michigan State University
LCP	large coil program	MTBF	mean-time between failures
LCRO	linear combination of Rydberg orbitals	MTF	modulation transfer function
LEC	liquid encapsulated Czochralski	MTX _α	muffin-tin X _α
LED	light emitting diode	MUF	maximum usable frequency
LEED	low energy electron diffraction	MWPC	multiwire proportional chamber
LEP	large electron positron	NAL	National Accelerator Laboratory
LET	linear energy transfer	NAND	not-and(logic)
LF	low frequency	NC	numerical control
LMC	Large Magellanic Cloud	NCMET	non-closed shell many electron theory
LMFBR	liquid metal fast breeder reactor	NDDO	neglect of diatomic differential overlap
LMTO	linear combination of muffin tin orbitals	NDT	nondestructive testing
LNG	liquified natural gas	NEMO	non-empirical molecular orbitals
LOCA	loss of coolant accident	NEVE	non-empirical valence-electron
LOCE	loss of coolant experiment	NHS	National Health Service
LOFT	loss of flow test facility	NIC	negative impedance convertor
LPE	liquid phase epitaxy	NMOS	N-channel metal-oxide-semiconductor
LSA	limited space charge accumulation	NMR	nuclear magnetic resonance
LSD	local spin density	NMR-ON	NMR on oriented nuclei
LSI	large-scale integration	NNDO	neglect of non-neighbour differential overlap
LTE	local thermodynamic equilibrium	NOR	not-or(logic)
LUMO	lowest unoccupied molecular orbitals	NQR	nuclear quadrupole resonance
LV	low voltage	NRC	nuclear regulatory committee
LWBR	light water breeder reactor	NRM	natural remanent magnetisation
LWR	light water reactor	NSSS	nuclear steam supply system
MADO	Mulliken approximation for differential overlap	NTO	natural transition orbitals
		OCR	optical character recognition
		ODMR	optical detection of magnetic resonance
		OEM	original equipment manufacture
		OER	oxygen enhancement ratio

OPHF	orbital polarised Hartree-Fock	PWBA	plane wave Born approximation
OPW	orthogonal plane wave	PWIA	plane wave impulse approximation
OR	operations research	PWM	pulse width modulation
ORELA	Oak Ridge electron linear accelerator	PWR	pressurised water reactor
ORNL	Oak Ridge National Laboratory		
OS	operating system	QCD	quantum chromodynamics
OTEC	ocean thermal energy conversion	QDMBPT	quasi-degenerate many-body perturbation theory
OTF	optical transfer function	QED	quantum electrodynamics
		QPSK	quaternary phase shift keying
PAA	paraazoxyanisole		
PABX	private automatic branch exchange	RAM	random access memory
PAC	perturbed angular correlation	RBE	relative biological effectiveness
PAHR	post accident heat removal	RC	resistance-capacitance
PAM	pulse amplitude modulation	RCNDO	Rydberg CNDO
PAP	paraazoxyphenetole	RCS	rapid cycling synchrotron
PBF	power bursts facility	R & D	research and development
PBR	pebble bed reactor	RF	radio frequency
PBX	private branch exchange	RFI	radio frequency interference
PC	printed circuit	RG	renormalisation group
PCAC	partially conserved axial currents	RHEED	reflection high energy electron diffraction
PCB	printed circuit board	RHF	restricted Hartree-Fock
PCES	phase change energy storage	RINDO	Rydberg INDO
PCGVB	pairwise correlated generalised valence bond	RKKY	Rudermann-Kittel Kasuya-Yosida
PCILOCC	perturbative configuration interaction using localised orbitals for crystal calculation	RLC	resistance-inductance-capacitance
PCM	pulse code modulation	RMS	root-mean-square
PCRv	prestressed concrete reactor vessel	RNA	ribonucleic acid
PCX	plasma confinement experiment	ROM	read-only memory
PDX	poloïdal divertor experiment	RPA	random phase approximation
PEP	positron electron proton	RPAE	random phase approximation with exchange
PET	polyethylene terephthalate	RPM	relaxation potential model or revolutions per minute
PETRA	positron electron tandem ringbeschleuniger anlage	RTG	radioisotope thermoelectric generators
PF	power factor	SACCI	symmetry adapted cluster configuration interaction
PFM	pulse frequency modulation	SAMO	simulated ab initio molecular orbitals
PFR	prototype fast reactor	SAW	surface acoustic waves
PHWR	pressurised heavy water reactor	SCC	stress corrosion cracking
PID(PI,PD)	proportional+integral+differential (derivative)	SCF	self consistent field
PIXE	proton induced X-ray emission	SCL	space charge limited
PLA	phase locked arrays or programmable logic array	SCPT	self consistent perturbation theory
PLBR	prototype large breeder reactor	SCR	silicon controlled rectifier
PLC	programmable logic control	SDM	space division multiplexing
PLL	phase locked loops	SDO	shielded diatomic orbitals
PLT	Princeton Large Torus	SEHF	spin extended Hartree-Fock
PM	pulse modulation	SEM	scanning electron microscope
PMMA	polymethylmethacrylate	SFE	solar-flare effect
PMDR	phosphorescence microwave double resonance	SGEMP	system generated electromagnetic pulse
PMOS	P-channel metal-oxide-semiconductor	SGHWR	steam generating heavy water reactor
PMR	proton magnetic resonance	SHF	superhigh frequency
PNDO	partial neglect of differential overlap	SHG	second harmonic generation
PNO-CI	pair natural orbital configuration interaction	SIMS	secondary ion mass spectra(scopy)
POL	pair orthogonalised Lowdin	SIN	Swiss Institute of Nuclear Research
POPAE	protons on protons and electrons	SINDO	scaled INDO
POPOP	phenyl-oxazolyl-phenyl-oxazolyl-phenyl	SISAM	spectrometer with interference selective amplitude modulation
POS	point of sale	SIT	static induction transistor
PPDP/S	Pariser-Parr-Del Bene-Pople/Segal calculations	SMC	Small Magellanic Cloud
PPI	plan position indicator	S/N	signal-to-noise
PPM	pulse position modulation or parts per million	SOG	strongly orthogonal geminal
PPP	Pariser-Parr-Pople	SOS	silicon on sapphire
PRDDO	partial retention of diatomic differential overlap	SPA	separated pair approximation
PRF	pulse recurrence (repetition) frequency	SPC	stored program control
PROM	programmable read-only-memory or Pockels readout optical modulator	SPEAR	Stanford positron electron asymmetric ring
PS	proton synchrotron (CERN)	SPHF	spin polarised Hartree-Fock
PSK	phase shift keying	SPIN-CIPSI	spin symmetry adapted generalisation of CIPSI
PTFE	polytetrafluoroethylene	SPS	super proton synchrotron (CERN)
PTM	pulse time modulation	SREMP	source region electromagnetic pulse
PVC	polyvinyl chloride	SQUID	superconducting quantum interference device
PWA	partial wave analysis	SRMCASE	symmetry-restricted-multiconfiguration annihilation of single excitations
PWB	printed wiring board	SSB	single sideband

SSBW	surface skimming bulk wave	TUCA	transient undercooling accident
SSC	sudden storm commencement	TV	television
SSI	small scale integration	TW	travelling wave
SST	supersonic transport	TWT	travelling wave tube
STD	salinity-temperature-depth or subscriber trunk dialling	UART	universal asynchronous receiver/transmitter
STEC	solar thermal energy conversion	UCHF	uncoupled Hartree-Fock
STEM	scanning transmission electron microscopy	UHF	ultra high frequency or unrestricted Hartree-Fock
STO	Slater-type orbitals	UHPS	underground hydroelectric pumped storage
STOL	short take-off and landing	UHV	ultra high voltage
STP	Slater-transfer Preuss	UKAEA	United Kingdom Atomic Energy Authority
SW	short wave	ULA	uncommitted logic array
SWR	standing wave ratio	ULF	ultra low frequency
SXAPS	soft X-ray appearance potential spectrum	UMD	unitised microwave devices
TBBA	terephthal-butylaniline	UPS	ultraviolet photoelectron spectra
TCNE	tetracyanoethylene	US	ultrasonic
TCNQ	tetracyanoquinodimethane	UV	ultraviolet
TCR	temperature coefficient of resistance	VAD	vapour phase axial deposition
TDHF	time dependent Hartree-Fock	VB	valence bond
TDM	time division multiplex(ing)	VCR	video cassette recorder
TDMA	time division multiple access	VDM	vector dominance model
TDPAC	time differential perturbed angular correlation	VDU	visual display unit
TDS	thermal desorption spectra(oscopy)	VHF	very high frequency
TE	transverse electric	VLBI	very long base line interferometry
TEA	transversely excited atmosphere	VLF	very low frequency
TEGFET	two-dimensional electron gas field effect transistor	VLSI	very large scale integration
TEM	transverse electromagnetic or transmission electron microscopy	VMOS	vertical channel metal-oxide-semiconductor
TEXT	Texas Experimental Tokamak	VOR	VHF omnidirectional range
TFTR	Tokamak fusion test reactor	VPE	vapour phase epitaxy
TGA	thermogravimetric analysis	VRC	visual record computer
TGFB	triglycine fluoroberyllate	VRDDO	variable retention of diatomic differential
TGS	triglycine sulphate	VS	virtual storage
TGSe	triglycine selenate	VSb	vestigial sideband
TJS	transverse junction stripe	VSEPR	valence shell electron pair repulsion
TLD	thermoluminescent dosimeter(-ry)	VSWR	voltage standing wave ratio
TM	transverse magnetic	VTOL	vertical take-off and landing
TMI	Three Mile Island	VTR	voltage transformation ratio or video tape recorder
TMMC	tetramethylammonium manganese chloride	VUV	vacuum ultraviolet
TMMTSF	tetramethyltetraselenofulvalene	VVER	water moderated water cooled reactors
TMTF	tetramethyltetrathiofulvalene	WKB	Wentzel-Kramers-Brillouin
TOP	transient overpower accident	WP	word processing
TNS	The next step	WWER	water moderated water cooled reactors
TRAPATT	trapped plasma avalanche triggered transit	XPS	X-ray photoelectron spectra
TREAT	transient reactor test facility	ZEBRA	zero energy breeder reactor assembly
TRM	thermoremanent magnetisation	ZGS	zero gradient synchrotron
TSC	thermally stimulated currents	ZPPR	zero power plutonium reactor
TSEE	thermally stimulated exo-electron emission		
TTF	tetrathiofulvalinium		
TTL	transistor transistor logic		
TTT	tetrathiotetracene		

Subject Index

1/f noise *see random noise*

A-centres

CaO:Mg, neutron or electron irradi., circular polarised luminesc. from F- and F_A-centres 2-110915
KCl crystal, energy parameters for F_A(II) centres and F_A(II) like defects, radiative transitions 2-93257
KCl, self-induced optical anisotropy, reorienting F_A(Li)-centres 2-108980
KCl:Li, Li(F₂⁺)_A centre lasing action 2-85980
KCl:Pb, radiation kinetics during intense excitation in A absorpt. band 2-110932
Si, electron and γ -irrad., defect prod. and lifetime control 2-109833
n-Si, electron irradi., A-centre introduction rate, rate eqn. calc. 2-56037
Si, epitaxial, neutron irradi., A and E centre study 2-103756
Si, radiation defect laser annealing 2-103814
Si:H, F, amorphous, ODMR study 2-93065
Si:P, electron irradi., electron trap study by transient capacitance 2-110282
Si:P, O, electron and neutron irradi., point defects and colour centres, DLTS study 2-103754
SrCl₂:K, photochemically coloured, thermally stimulated depolarisation currents meas. (*Russian*) 2-116112
ZnS, Se_{1-x}, donor-A-centre pairs, ODMR and phosphoresc. study 2-56978

A/D conversion *see analogue-digital conversion*

ab initio calculations

acenes, electronic struct., ab initio interpretation of XPS data 2-90444
acetaldehyde, phosphoresc. lifetime, ab initio CI calcs. 2-80502
acetone, phosphoresc. lifetime, ab initio CI calcs. 2-80502
acetylene, IR intensities, ab initio study, dipole moment derivatives 2-96553
acetylene form. from CH fragments, intermol. forces calc., ab initio valence bond theory 2-80753
acetylene-HF (HCl), H-bonded complex, geometry and energy, ab initio MO calcs. 2-113861
alcohol-water mixtures, H-bonding, ab initio MO calcs. 2-80469
aldoximes, electronic props., struct., ab initio SCF calcs. 2-85531
amino acids, H⁺ transfer energies and electrostatic lattice energies, CNDO/2 and ab initio SCF calcs. 2-78079
atom+molecule sudden theory of scatt., ab initio corrections and validity of collision model 2-90667
atomic collisions, pair-potential calcs. 2-65069
atomic electron scatt., momentum space approach, ab initio calcs. 2-108704
atomic spin orbit coupling consts. calc. using universal systematic sequence of even tempered exponential type basis set 2-54742
atomic transitions, relativistic many-body theory, eqn. of motion approach 2-96477
aziridines, N inversion barriers, hyperconjugation effects calcs. 2-96440
benzene, molecular polarisability, ab initio HF calcs. 2-90449
benzenes, monosubstituted and disubstituted, struct., ab initio STO-3G level calcs. 2-96434
2,2'-bipyridine, fluoresc. spectrum, role of associate form. and rot. isomerism, ab initio SCF calcs. 2-90604
bis(4-dimethylaminophenyl)imino)sulphur and struct. analogues, donors, conform. anal., adduct form. with TCNQ 2-61454
borepin, geometry optimisation, ab initio MO calcs. 2-108356
bullvalene, ab initio SCF MO calcs. 2-75181
butadiene, polar twisted minima in ionic singlet excited surfaces 2-108362
calcium malonate, Ca(II) ion binding, ab initio calcs. 2-64857
carbenes, highly polar, elec. dipole moments, semiempirical and ab initio calcs. 2-80449
carbonyl compounds, conjugated monosubstituted, stretching force const., geometry, ab initio calcs. 2-85538
carbonyl compounds, tetraatomic, lowest triplet state pot. surfaces, ab initio SCF MO calcs. 2-64872
carbonyl cyanide, geometries calc. using ab initio gradient program, bond lengths, electronic struct., force consts. 2-113858
CCV HF, NMR spin-spin coupling, ab initio calc. 2-102495
chromium diformate, ground and ionic states, correl. effects calcs. 2-80465
computational strategies for ab initio calcs. on large mols. 2-80424
conjugated molecules, mag. shielding tensors, ab initio quantum mech. calcs. 2-80506
CSF iterations, convergence methods, appl. to CNDO, INDO and STO-3G calcs. 2-64852
 α -cyano carbanions, isomerisation, struct., stability, ab initio STO calcs. 2-102370
cyanogen-HF(HCl), H-bonded complex, dissociation energies, ab initio SCF MO calcs. 2-64859
cyanopolyacetylenes, elec. dipole moments, semiempirical and ab initio calcs. 2-80449
cyclic ethers, cationic polymerisation mechanism from electrostatic mol. potential contour maps 2-83383
cyclobutane-d₆(d₈), vibrs. geometry, force consts., ab initio HF calcs. 2-108349
1,4-cycloheptadiene, struct. and conformations, ab initio gradient calcs. 2-75163
cycloheptatriene, geometry optimisation, ab initio MO calcs. 2-108356
1,3,5-cycloheptatriene, struct. and conformations, ab initio gradient calcs. 2-75163
cyclopropane, struct. and vibr. anal., ab initio HF calcs. 2-59688
cyclopropane-HF(HCl), H bonding, ab initio SCF-MO calcs. 2-96432
cyclopropyl radical, struct. and vibr. anal., ab initio HF calcs. 2-59688
decamethylferrocene, equilib. geometry, Hartree-Fock model, LCAO SCF calcs. 2-108374

ab initio calculations continued

diacetylene, vibr. freq., pot. energy functions, IR intensities, SCF calcs. 2-113872
diamond surface, electronic struct. and H₂ chemisorption, ab initio atom cluster model 2-115641
diatomic molecules, two-electron integrals, elliptical basis set calc., LiH appl. 2-113879
diatomic mols., extended basis NDDO calcs. 2-113891
1,1-dichlorocyclopropane, rot. consts., mol. struct., HF calcs., electron diff. obs. 2-108364
dicyanodiazomethane, geometries calc. using ab initio gradient program, bond lengths, electronic struct., force consts. 2-113858
1,2-difluoroethylene, cis-trans energy difference, electron correl. and polarisation functions 2-113867
dimers, H-bonded, ²H and ¹⁴N quadrupolar coupling consts., SCF MO calcs. 2-96449
dimethyl diselenide, torsional barrier heights, MO calcs. 2-102375
dimethyl ether-BF₃, electron donor acceptor complex, He I photoelectron spectra 2-90625
dimethyl formamides, Raman and IR spectra, vibr. freq. calc. using force field base ab initio calcs. 2-85650
dioxirane, symmetric ring opening, nonadiabatic interactions, ab initio CI calcs. 2-67736
DMSO, bond lengths, S d orbital, geometry optimisation, ab initio calcs. 2-96444
double zeta pseudopotentials, pseudo-FSGO calcs. 2-102371
effective valence shell Hamiltonian QDMBPT, ab initio treatment 2-108369
electron densities, atomic orbitals, molecular orbitals representation, plotting program, in FORTRAN 2-64862
electron mobility in dense gases, multiple scatt. process influence 2-103255
electronic struct. and magnetism 2-104241
ethene-HF, configs., interaction energy, ab initio SCF calcs. 2-113863
ethyl radical, (1,2) H migrations, ab initio POL-CI calcs. 2-59708
ethyl radical, conformational preference, ab initio UHF fragment interaction anal. 2-113876
N-ethyl-acetamide, ab initio studies on peptide unit nonplanarity 2-113886
ethylene, double zeta pseudopotentials, pseudo-FSGO calcs. 2-102371
ethylene, nonadiabatic coupling between low lying singlet states, geometrical relax., ab initio CI calcs. 2-96466
ethylene, V-N bands, system, ab initio nonadiabatic vibronic calcs. 2-75194
ethylene-HF (HCl), H-bonded complex, geometry and energy, ab initio MO calcs. 2-113861
ethylenes, 1,2-disubstituted, ab initio STO-3G calcs. with geometry optimisation 2-96435
ferrocene, equilib. geometry, Hartree-Fock model, LCAO SCF calcs. 2-108374
fluorobenzenes, lowest virtual MO orbitals, electronic props., ab initio STO-3G calcs. 2-113856
fluoromethane, ab initio MO calcs. of systematics in photoelectron spectra 2-59855
fluoromethane, anharmonic force fields, ab initio calcs. 2-75174
5-fluorouracil, and 4-hydroxytautomeric form., ab initio MO STO calcs. 2-113864
formaldehyde, π^* -n phosphoresc., spin-orbit interaction 2-80713
formaldehyde, molecular polarisability, ab initio HF calcs. 2-90449
formaldehyde, phosphoresc. lifetime, ab initio CI calcs. 2-80502
formaldehyde, electronic spectrum, ab initio CI study 2-54758
formamide, internal rot., solvent effect, ab initio study using polarisable continuum model 2-80835
formate, Ca(II) ion binding, ab initio calcs. 2-64857
formic acid, cis-trans isomerism, HF and MCSCF calcs. 2-96436
formyl radical, lower excited states, ab initio CI calcs. 2-59706
fragment matrix extraction for diatomics-in-molecules from ab initio calcs. on diatomics 2-75170
glyoxime, mol. struct., ab initio HF STO-3G calc. 2-96431
glyoxylate ion, geometry and energies, ab initio calcs. 2-59683
glyoxylic acid, geometry and energies, ab initio calcs. 2-59683
graphite surface, electronic struct., ab initio atom cluster model 2-115641
(HCl)₂, geometry, force consts., moments, ab initio SCF calcs. 2-80454
HCP transition metals, nucl. spin-lattice relax., ab initio ASA-SCF-LMTO linear tetrahedron calc. 2-98985
hexatriene, polar twisted minima in ionic singlet excited surfaces 2-108362
ionic crystals, lattice distortion due to isovalent impurities 2-61002
isobutene+Na⁺ interaction, semiempirical ab initio calcs. 2-114064
isoelectronic molecules, dissociation process, ab initio study 2-88355
ketene imine, electronic struct., ab initio SCF and CI calcs. 2-75180
lithium formate monodeuterate, lattice energy, electrostatic term, determ. from electron density 2-115173
metals, Auger and X-ray photoemission shifts, embedded-atom calcs. 2-54822
methane, CH bond disoc., ab initio pot. energy curve 2-93758
methane, nuclear spin-spin coupling tensor, anisotropy calc. using extended ab initio calcs. 2-108555
methanimino cation, rot. spectra and dipole moment from ab initio calcs. 2-85524
methyl, geometries and HFS consts., ab initio calcs. 2-70136
methyl carbene triplet radical, (1,2) H migrations, ab initio POL-CI calcs. 2-59708
methyl cation, triplet state, struct., inversion barrier, ab initio MO theory 2-108354

ab initio calculations continued

- methyl ion + methane, gas phase reaction, mechanistic study, *ab initio* MO calcs. 2-99647
- methyl magnesium chloride, Grignard reagent, struct., vibr. freqs., *ab initio* calcs. 2-108449
- N-methyl-acetamide, *ab initio* studies on peptide unit nonplanarity 2-113886
- methylthium clusters, binding energies, geometry, *ab initio* SCF STO calcs. 2-96787
- 5-methoxyuracil, and 4-hydroxytautomer form., *ab initio* MO STO calcs. 2-113864
- methylsilane, vertical excitation energies for singlet and triplet states, *ab initio* calcs., photochemistry 2-72996
- methylsulphuryl radical, electronic struct. *ab initio* SCF-MO calcs. 2-85533
- molecules, elec. field effects, mol. geometry model 2-59723
- molecules and mol. ions, spin-orbit coupling consts., *ab initio* calc. using universal even tempered basis set of exponential functions 2-96415
- molybdenum deformat, ground and ionic states, correl. effects calcs. 2-80465
- naphthothia-diazines and naphthoselina-diazines, electronic struct., STO-3G calc. and XPS meas. 2-90445
- nitrobenzene, photoelectron angular distrib. and PES assignments 2-102531
- nitromethane, photoelectron angular distrib. and PES assignments 2-102531
- nitrosoacetylene, struct. calc. by *ab initio* SCF and GVB calcs., consts. rel. to IR, microwave and visible spectra 2-59698
- olefins, catalytic hydrogenation by Pd complex, MO calcs. 2-83378
- one electron integral calcs. from *ab initio* pseudopot. calcs. 2-54765
- organic compounds, bond order, charge densities from *ab initio* mol. wavefunctions 2-64844
- organic compounds, ionisation pot., susceptibilities, moments *ab initio* SCF calcs. 2-113871
- organic molecules, [1,3]/dipolar cycloadditions, LCAO-SCF-MO *ab initio* calcs. 2-111462
- organic mols., dipole moments, atomic electron populations, *ab initio* MO theory 2-108329
- 3-octanone equilib. geometry, *ab initio* SCF calcs. 2-85527
- oxo-compounds, unsaturated, ionisation, hole-mixing effects 2-59857
- 2-oxopyrrolidin-1-ylacetamide, *ab initio* molecular energies and dipole moment anal. 2-70135
- paraphenylenes, electronic struct., *ab initio* interpretation of XPS data 2-90444
- pentacyclic mols., one-electron props., *ab initio* calcs. 2-64866
- peptide-ion model complexes, charge transfer, induced polarisation 2-73183
- peptides, H⁺ transfer energies and electrostatic lattice energies, CNDO/2 and *ab initio* SCF calcs. 2-78079
- perfluorocarbon, use in O₂ and CO₂ transport, STO-3G calcs. 2-88527
- perturbative configuration interaction method, appl. to intermol. and intramol. calcs. 2-102399
- polarisation function additivity and electron correl. effects in *ab initio* MO calcs. 2-96424
- polyacetylene chains, *ab initio* HF calcs. using Christoffersen basis set 2-70457
- polymers, elec. cond., bond gaps, valence effective Hamiltonian study 2-76890
- polymers, highly conducting, electronic struct., *ab initio* calculations 2-80851
- propylene, nonadiabatic coupling between low lying singlet states, geometrical relax., *ab initio* CI calcs. 2-96466
- propylene, potential-energy and dipole moment surfaces 2-102410
- pseudopotential calculations, theory 2-104223
- pyrazine, r₀ struct., *ab initio* gradient method 2-85529
- pyridine, r₀ struct., *ab initio* gradient method 2-85529
- pyrimidine, r₀ struct., *ab initio* gradient method 2-85529
- quantum chemical literature data-base, (book) 2-89482
- quixotic molecules, hypothetical HAB, geom., electronic struct. and common props. 2-85551
- SAMO method, comparison with transferability of atomic potentials method 2-108344
- SCF calcs., convergence props. 2-80441
- semiconductors, phonon and struct. energy *ab initio* calc. methods, review 2-76612
- solutions, electrostatic free energy and internal energy approx. evaluation 2-62424
- sulphones, *ab initio* MO calcs., geometries 2-90438
- tetrathiafulvalene, electronic structure calc. using *ab initio* HF Slater procedure, photoemission spectra 2-64863
- tetrazole, angular tautomerism, electric dipole moment study, *ab initio* MO calcs. 2-96773
- thioacrolein, mol. struct., electronic props., *ab initio* SCF calcs. 2-64869
- thioformaldehyde-d₀(d₁), ground and triplet states, vibr., SCF MO calcs. 2-85539
- thioglyoxal, mol. struct., electronic props., *ab initio* SCF calcs. 2-64869
- three-photon resonant medium, optical bistability and reversed switching effect 2-102849
- thymine, and 4-hydroxytautomer form., *ab initio* MO STO calcs. 2-113864
- transition metal binuclear complexes, sudden polarization *ab initio* SCF calcs. 2-102662
- transition metal-H₂O complex, *ab initio* SCF MO study, Solomon-Bloembergen eqn. appl. 2-70137
- transition metals, cubic, tetragonal shear moduli calcs. 2-115328
- s-triazine, π - and π -cations, Jahn-Teller distortion, *ab initio* MO calcs. 2-96473
- s-triazine, r₀ struct., *ab initio* gradient method 2-85529
- trifluoromethyl ion, struct., inversion barrier, CI, *ab initio* SCF calcs. 2-64885
- uracil, and 4-hydroxytautomer form., *ab initio* MO STO calcs. 2-113864
- vibrational freqs. and harmonic force consts., mol. orbital calcs. 2-80443
- vinyl radical, (1,2) H migrations, *ab initio* POL-CI calcs. 2-59708
- vinylamine, struct., *ab initio* MO calc. with complete geometry optimisation using three different basis sets 2-113855
- vinylcyclopropane, rot. isomerism, pot. energy curves, *ab initio* SCF calcs. 2-108352
- vinylguanidium ion, *ab initio* MF-SCF-MO calcs. 2-113865
- Ag-Pd, electronic struct. atomic approx. 2-104244
- Al, interatomic pots. and electronic props., *ab initio* calc. 2-56460

ab initio calculations continued

- Al, phonon freq. calcs. 2-86810
- Al₂O₃, electronic struct. and mol. topology, *ab initio* calcs. 2-54764
- Al₂O₃, electronic struct. and mol. topology, *ab initio* calcs. 2-54764
- Ar dimer, exchange repulsion, *ab initio* calcs. 2-80463
- ArHe, pair pots. and electric dipole moments, *ab initio* calculations 2-54755
- As, core effective potentials, *ab initio* calcs. 2-70140
- BBr₃, B K photoabsorpt. spectra 2-80649
- BCl₃, B K photoabsorpt. spectra 2-80649
- BF₃, B K photoabsorpt. spectra 2-80649
- BH₄⁺, nucl. spin-spin coupling tensors calcs. 2-108361
- B₂N₂H₄, photoelectron spectrum, theoretical models calcs. 2-80722
- B₂N₂H₄⁺ radical, photoelectron spectrum, theoretical models calcs. 2-80722
- B₂O, electronic struct. and mol. topology, *ab initio* calcs. 2-54764
- B₂O₂, electronic struct. and mol. topology, *ab initio* calcs. 2-54764
- Be, electronic and struct. props., HF *ab initio* calc. 2-82218
- Be, metallic, core expansion calcs. 2-81709
- Be, total energy calcs., lattice const. 2-87168
- Be, X-ray spectrum near Raman band, electronic struct. calc. 2-72577
- BeAlF₃, struct. and pot. energy surfaces, *ab initio* MO studies 2-54757
- BeF₂⁺, B₂ and A₂ states, electronic splitting 2-85532
- BeHF, fragment matrix extraction for diatomics-in-molecules from *ab initio* calcs. on diatomics 2-75170
- BeH₂, geometry, dipole moments, pseudopotentials, FSGO calcs. 2-102372
- BeN, low-lying electronic states, *ab initio* calcs. 2-80505
- BeN⁺, low-lying electronic states, *ab initio* calcs. 2-80505
- Br₂⁺, *ab initio* interaction polarisability and pair pot. 2-75179
- C-Li, electronic struct., *ab initio* GVB, SCF and CI calcs. 2-108357
- CH, bond functions for *ab initio* calcs., MGSF calcs. 2-96438
- CH, mol. struct. calcs. using *ab initio* effective spin-orbit operators 2-75168
- CH⁺, A¹ state, A-doubling of energy levels, rot. adiabatic treatment 2-59689
- CN, A¹ and B² states, transition moments determ. from *ab initio* calcs. 2-85746
- CN⁺, NMR spin-spin coupling, *ab initio* calc. 2-102495
- C₂N₂, stretching vibr., freq. and IR intensities, anharmonic pot. energy functions, geometry and rot. consts. 2-96554
- CO, mol. struct. calcs. using *ab initio* effective spin-orbit operators 2-75168
- CO⁺, mol. struct. calcs. using *ab initio* effective spin-orbit operators 2-75168
- CO+H₂(He), rot. energy transfer and anisotropic intermol. pots., *ab initio* calcs. and expt. 2-75387
- CO+He(Ne), vibr. relax. rate coeff., *ab initio* calcs. 2-59906
- CO₂-H₂, use of space fixed expansion for fitting ang. depend. of *ab initio* rigid rotor pot. 2-108658
- (CO₂)₂, vibr. freq., empirical pots., *ab initio* calcs. 2-85615
- C₂O₂ isomers, bond lengths, *ab initio* SCF calcs. 2-113862
- COH⁺, rot. spectra and dipole moment from *ab initio* calcs. 2-85524
- CO₂-HCl, *ab initio* SCF MO study, H-bond energies 2-54766
- CO₂-HF, *ab initio* SCF MO study, H-bond energies 2-54766
- CaH, interaction energies calcs. 2-96727
- CaH⁺, interaction energies calcs. 2-96727
- chloromethane, *ab initio* MO calcs. of systematics in photoelectron spectra 2-59855
- (Cl₂)₂ config., charge transfer contrib. calcs. 2-108363
- ClF₃, electronic struct. and bonding, reaction energy, extensive RHF *ab initio* calcs. 2-96433
- Cr atom and ions, valence state structs., electron correl. effects 2-108399
- Cr complexes, Cr₂(O₂CCH₃)₄, photoelectron spectra, interpretation using *ab initio* MO calcs. and correl. effect 2-96635
- Cr₂Cl₄⁺, binuclear complexes, sudden polarization *ab initio* SCF calcs. 2-102662
- Cu-Al(Ni), electronic struct. atomic approx. 2-104244
- Cu, mol. stability, *ab initio* SCF mol. orbital calc. 2-102380
- CuO, IR Y²⁺-X²⁺ transition, laser induced fluoresc., interpretation of X²⁺ ground state 2-64977
- FCN, anharmonic force fields, *ab initio* calcs. 2-75174
- Fe (001) film, surface states, surface magnetisation, electron spin polarisation 2-61540
- Fe₂, electronic band structure, *ab initio* HF and CI calcs. 2-108400
- Fe(II), porphyrin complexes, electronic struct., Mossbauer spectra, *ab initio* LCAO SCF calcs. 2-108596
- Ga, core effective potentials, *ab initio* calcs. 2-70140
- Ge, core effective potentials, *ab initio* calcs. 2-70140
- GeH₄, geometries and HFS consts., *ab initio* calcs. 2-70136
- H atom infinite chain, ground-state energy and mag. susceptibility, *ab initio* correlated calc. 2-80864
- H, electron scatt., momentum space approach, *ab initio* calcs. 2-108704
- H-bonded molecules, ³D quadrupole coupling, *ab initio* SCF calcs. 2-80655
- H+formaldehyde, rate const., pot. energy surface, transition state theory, *ab initio* CI calcs. 2-72980
- H₂, chemisorbed on Cu(100), many-electron embedding theory 2-110139
- H₂, molecular polarisability, *ab initio* HF calcs. 2-90449
- H₂+ethynyl radical—H₂+C₂H₂ reaction rate const., *ab initio* determ. 2-83358
- H₂⁺ clusters, even- and odd-numbered, *ab initio* SCF and SD-CI calcs. 2-108759
- HCN, anharmonic force fields, *ab initio* calcs. 2-75174
- HCN, C-state, photofragment fluoresc. spectrum 2-85754
- HCNO, pot.-functions, equilib. functions, *ab initio* MO calcs. 2-90441
- HCl, electronic spectrum assignment, *ab initio* CI calcs. 2-70211
- HCl, electronic struct. and photodissoc. 2-102376
- HF, pot. energy curve, Rydberg-valence mixing, spectra, *ab initio* CI calcs. 2-54777
- HNO⁺, vibronic and rot. struct., visible spectrum, *ab initio* study 2-85677
- HNSO, force field, vibr. freq., *ab initio* CI and basis set calcs. 2-75195
- H₂O, double zeta pseudopotentials, pseudo-FSGO calcs. 2-102371
- H₂O, molecular polarisability, *ab initio* HF calcs. 2-90449
- H₂O, nuclear spin-spin coupling tensor, anisotropy calc. using extended *ab initio* calcs. 2-108555
- H₂O, vibr.-rot., quadrupole moment, g-factor, spin-rot., *ab initio* SCF calcs. 2-64867
- H₂O+Li₂O reaction surface, *ab initio* MO calc. 2-83368

ab initio calculations continued

- (H₂O)₂, H bonds, vibr. intensity, ab initio calcs. 2-85528
H₂O₂, IR intensities, ab initio calculation, dipole moment derivatives 2-70243
(H₂O)₂, photoelectron spectrum, vertical ionisation energies 2-59856
(H₂O)₂-Li⁺, vibr. intensity, ab initio calcs. 2-85528
HPF⁻, electronic struct., geometry and charge distrib. calcs. 2-59705
H₃PO₄⁻ + Mg²⁺(Be²⁺)(Na⁺)(Li⁺) interactions, ab initio SCF study, model of cation binding to nucleic acid 2-88344
H₂S, bond length and angle, ab initio calcs., uniform basis sets 2-80451
H₂SO₄, struct. and torsional modes, ab initio calcs. 2-70134
He-He, intermol. forces calc., ab initio valence bond theory 2-80753
He-Li, intermol. forces calc., ab initio valence bond theory 2-80753
He₂, determ. of ground state pot. from expt. by use of reliable pot. model 2-59881
K, specific mass shift, many-body perturbation theory 2-96642
KBr, ab initio interaction polarisability and pair pot. 2-75179
KCN, ab initio vibr.-rot. spectrum calcs. 2-90535
KCl, optic phonons, ab initio calc. 2-66147
Kr, crystal, band struct., Gaussian OPW calc. 2-61349
La II, HFS in low even configurations, interpretation 2-59955
Li, specific mass shift, many-body perturbation theory 2-96642
Li, surfaces (100) and (110), BCC, H atom-cluster interactions, ab initio CI calc. 2-116325
Li-Lewis base complex, struct. and props., ab initio unrestricted HF MO calcs. 2-75172
Li⁺-X (X=O²⁻, OH⁻, OH₂, N³⁻, NH₂⁻, NH₃) isoelectronic series, geometric struct. and stability, FSGO calc. 2-80442
Li₂, geometry, dipole moments, pseudopotentials, FSGO calcs. 2-102372
Li₂, predissociated vibr.-rot. levels predicted using ab initio calcs. 2-54904
Li₂⁺, ²Li spontaneous emission and predissoc. calcs. 2-59868
LiBH₄+formaldehyde (acetaldehyde), carbonyl reduction mechanism, ab initio SCF calcs. 2-67732
LiBeH₄, normal vibr. freq. and force field determ. by ab initio calc. 2-108462
LiBr, ab initio interaction polarisability and pair pot. 2-75179
Li₃C, electronic struct., ab initio GVB, SCF and CI calcs. 2-108357
LiCN, ab initio SCF pot. energy surface 2-96482
LiH, ab initio SCF and CI studies, FSGO calcs., HF function determ. 2-102397
LiH, dipole moment, polarisabilities, electric field gradients and nuclear screening, bond length depend. 2-54763
LiH, geometry, dipole moments, pseudopotentials, FSGO calcs. 2-102372
LiH, intermol. forces calc., ab initio valence bond theory 2-80753
LiON, struct., isomerisation, ab initio CI SCF calcs. (French) 2-108395
Mg (0001) surface, interatomic pot. considerations in low energy Ar⁺ scatt. 2-77666
Mg, X-ray photoelectron spectra, shake-up satellites calcs. 2-59765
MgAlF₆, struct. and pot. energy surfaces, ab initio MO studies 2-54757
MgH (X²Σ⁺), spin splitting consts., ab initio calcs. 2-75167
MgHe system, ab initio CI pot. energy curves 2-80765
MgO (001), chemisorption of H₂ and CO, ab initio SCF calc. 2-104158
Mo complexes, Mo₂(O₂CH₃)₂ and Mo₂(O₂CCH₃)₂, photoelectron spectra, interpretation using ab initio MO calcs. and correl. effect 2-96635
Mo₂Cl₈⁴⁻, binuclear complexes, sudden polarization ab initio SCF calcs. 2-102662
NCNO, pot. surface for dissoci., ab initio CI calcs. 2-62394
NF⁺, ground state, Vuv photoelectron spectrosc. and ab initio calcs., ionisation 2-114043
NH, bond functions for ab initio calcs., MCSCF calcs. 2-96438
NH-O bonds, neighbouring monovalent metal cation effects 2-80450
NH₂⁺, nucl. spin-spin coupling tensors calcs. 2-108361
NH₃, nuclear spin-spin coupling tensor, anisotropy calc. using extended ab initio calcs. 2-108555
NH₄⁺, nucl. spin-spin coupling tensors calcs. 2-108361
NH₄CO₂H, and dimer, geometry, moments, pot., ab initio calcs. 2-85546
N₂O⁺, photoelectron spectrum, vibronic struct., electron correl., strong non-Condon effects, Green's function calc. 2-96633
N₂O, cryst. struct., neutron diff. study, ab initio calcs. 2-76386
N₂O, struct., ab initio restricted HF SCF MO calcs. 2-59685
Na, X-ray photoelectron spectra, shake-up satellites calcs. 2-59765
Na⁺ cation solution by organic nitroxide radical, ²³Na NMR and ab initio investig. 2-80677
NaBr, ab initio interaction polarisability and pair pot. 2-75179
NaCl, cohesive props., ab initio pseudopot. calc. 2-109738
Na⁺+CO, (3²P) state quenching, stereochem. effects, expt. and calcs. 2-108605
Ne, electron scatt., 10-100 eV, model pot. calcs. 2-96746
Ne isoelectronic sequence, outer subshell photoionisation, ab initio calcs. 2-75222
Ne isoelectronic sequence, third order correl. energies 2-80501
NeHe, pair pots. and electric dipole moments, ab initio calculations 2-54755
NiC, electronic struct., ab initio GUB calcs. 2-85559
NiO, O-O interactions, covalency effects 2-59686
O³⁺+H, charge exchange, rot. coupling matrix, ab initio CI calcs. 2-85799
O⁺, ground and excited states, pot. energy curves, predissociation, MRD-CI calcs. 2-96662
O₂+He, vibr. relax., ab initio quantum mech. calcs. 2-59905
OCS, anharmonic force fields, ab initio calcs. 2-75174
OH, bond functions for ab initio calcs., MCSCF calcs. 2-96438
OH, mol. struct. calcs. using ab initio effective spin-orbit operators 2-75168
PF₃⁺, electronic struct., geometry and charge distrib. calcs. 2-59705
PH₂⁺, nuclear spin coupling anisotropy, spin-orbit effects ab initio calcs. 2-96596
PH₂⁺, electronic struct., geometry and charge distrib. calcs. 2-59705
PH₃, excited states, photodissociation, ab initio HF and CI calcs. 2-85561
PH₃, nuclear spin coupling anisotropy, spin-orbit effects ab initio calcs. 2-96596
PH₄⁺, nuclear spin coupling anisotropy, spin-orbit effects ab initio calcs. 2-96596
Pb, electronic states, relativistic quantum mech. calcs. 2-113866
PdC, bonding, all electron ab initio calculations 2-75140
SCO...HCl, ab initio SCF MO study, H-bond energies 2-54766
SCO...HF, ab initio SCF MO study, H-bond energies 2-54766

ab initio calculations continued

- SF₃, ground electronic state and geometry, ab initio LCAO MO SCF calcs. 2-102381
SF₆, electric dipole moment function for IR-active modes, ab initio calcs. 2-108510
SH, pot. energy curves, ab initio MRD CI calcs. 2-80503
(SN)₂, chain, ab initio struct. calcs. 2-104282
Si, ab initio calcs. of phonon dispersion relations 2-76620
Si, phase stability, ab initio pseudopot. and linear-muffin-tin-orbitals calcs. 2-55883
Si, valence states, QDMBPT, ab initio treatment 2-108369
Si²⁺, valence states, QDMBPT, ab initio treatment 2-108369
SiF₃⁺, struct., inversion barrier, CI, ab initio SCF calcs. 2-64885
SiH, mol. struct. calcs. using ab initio effective spin-orbit operators 2-75168
SiH₃, geometries and HFS consts., ab initio calcs. 2-70136
SiO, mol. struct. calcs. using ab initio effective spin-orbit operators 2-75168
Si(111), (2×1) struct., Mott insulator model 2-110419
SnO, (X²Σ) state, gas phase high temp. photoelectron spectroscopy 2-80724
Ti atom and ions, valence state structs., electron correl. effects 2-108399
TiH, mol. struct., relativistic ab initio CI calcs. 2-85562
V atom and ions, valence state structs., electron correl. effects 2-108399
Xe, crystal, band struct., Gaussian OPW calc. 2-61349

abacs see nomograms

aberrations

- aberrations in optics and particle optics only*
see also lenses; optical instrument testing; particle optics
achromatic quadrupole lenses as probe-forming lens for high-energy ions 2-95544
Acme catadioptric telescope design 2-95422
all-spherical catadioptric telescope with small corrector lenses 2-108989
aperture aberration of fifth order, optimal compensation, light partial spatial coherence influence (Czech) 2-70509
aplanatism, higher order 2-75535
aspheric corrector design for high aperture objective operating in photon limited conditions 2-55294
astigmatic laser beam correction (Chinese) 2-97025
astronomical 5 m telescope, optical system config. 2-112330
ball lens aberration effect anal. for laser diode to single mode fibre coupler 2-102936
barochromatic aberration of optical systems 2-70514
beam optical systems, spherical aberration, analytical expressions 2-80903
Brewster angle window, aberration correction in converging light 2-102915
centred optical systems, axial point aberrations, polychromatic correction 2-55298
combined electron focusing and deflection systems, fundamental rays and aberrations (German) 2-90794
compensator, two-lens afocal, for spherical aberration and coma correction (Russian) 2-70645
curved Bragg crystal spectrometers, geometrical aberrations 2-113085
cylindrical grating, aberration corrected 2-55317
defocused white light speckle effect 2-80898
diffraction-limited imaging, resolution, singular value anal., coherent illum. case 2-90825
directional treatment of images utilising astigmatism in incoherent light (French) 2-85906
distorted boundary imaging, astigmatism influence (Czech) 2-96844
dye laser, passively mode locked, stability and astigmatic analysis of six-mirror ring cavity 2-60120
electron beam high-velocity deflection, dynamic astigmatism 2-70490
electron focusing and dual-channel deflection systems with combined mag. and electrostatic fields, optical props. 2-65146
electron focusing-deflection system with multi-stage deflectors, relativistic aberration theory 2-75507
electron focusing-deflection system with multi-stage deflectors, relativistic aberration theory (Chinese) 2-90792
electron microscope, imaging process, electron-optical parameters of high resolution instruments 2-53897
electron microscope, superconducting lens system, high resolution imaging at low magnification (German) 2-53899
electron microscopy, high resolution, crystal atomic images, internal fine struct. obs. 2-63817
electron probe microscopes, spherical aberration correction method 2-113068
electron-optical straight axis systems, phase density distrib. 2-108774
electrostatic box lens with four planes of symmetry, spherical aberration partial elimination 2-85882
electrostatic mirrors and lenses, three-cylinder design, mass spectrometer appl. 2-89847
electrostatic prism, internal refl., paraxial props., aberrations 2-65147
European Southern Observatory telescope projects, image quality considerations 2-94602
focal reducer, flat-field, reflecting 2-73840
fusion beam train phase aberration correction using deformable mirror adaptive optics 2-97031
geometrical distortion compensation by a deformable mirror 2-102734
graded-index sphere lens with hemispherical rod cladding, spherical aberration 2-102954
gradient index optics, conf., Honolulu, HI, USA (May 1981) 2-58521
grazing-incidence mirror system, props. and performance 2-84762
high power laser system aberrations 2-97034
hole grating laser beam sampler, wavefront distortion, exact analysis 2-97039
hologram memory device capacity, influence of aberrations caused by system misalignment 2-55095
holograms, long wavelength, optical reconstruction using optimal reference wave 2-70521
holographic efficient aberration-free lenses, design in presence of construction-reconstruction wavelength shift 2-60039
holographic gratings, aberration corrected, for flat field imaging spectroscopy 2-109026
holographic image deformation in space 2-60038
holographic imaging systems two- and three-element, chromatic connection 2-70519
holographic imaging with quadratic detect., filtering props. 2-65188

aberrations continued

- holographic plane diffraction grating production, optical schematics 2-70526
- holography, white-light reconstruction, improvement with astigmatism (*Chinese*) 2-65184
- image assessment methods, introductory survey 2-114199
- image edge raggedness and blur anal. 2-65175
- imaging spectrometer with acoustically tunable optical filter, correction of aberrations 2-58911
- interferometer, lateral shearing, interference field phase distrib. 2-58894
- IR zoom lens system design for target detect., 8 to 13 μ m 2-102903
- irradiance moments, propag. and use for unique phase retrieval 2-108778
- laser beam expanders, large diameter, interferometry 2-97038
- laser beam quality characs., limitations on RMS phase use 2-97033
- laser beam reflectors, mirror figure-of-merit and material index-of-goodness 2-97140
- laser damage vestige structure and spherical aberration correlation 2-65288
- laser output beam quality rel. to phase aberrations 2-97032
- laser resonators, Strehl ratio, spherical aberration anal. 2-65260
- laser resonators with reflecting axicons, wavefront aberrations 2-75604
- laser shock wave expts., out-of-focus intensity distrib., focal number and aberration effects 2-97030
- laser systems, large solid-state, aberrations and focusability 2-97035
- lasers, short wavelength, figures of merit 2-108902
- lens with concentric surfaces, astigmatism, inlet pupil random position (*Russian*) 2-85901
- lenses, camera, initial optical schematics calc. using fund. aberration coeffs. 2-70650
- lenses, distributed-index, aberration evaluation and reduction, review 2-75648
- lenses, gradient-index rod, wave-front aberration meas. 2-75649
- lenses, modular optical design, book 2-89470
- lenslet array processors 2-65329
- magnetic focusing prisms with hyperbolic field, aberrationless variants 2-55058
- magnetic lens, optimisation with pole piece of finite inside diameter 2-85880
- magnetic spectrometer, aberrations correction by electric multipole lenses 2-113063
- microlens, gradient-index rod, selfoc, with spherical surface 2-75647
- modified Wadsworth monochromator matched to storage ring source, theory 2-86078
- monochromators, props. using concave holographic diffr. grating, collimated illumination 2-60222
- moving platform experiments, drag of light aberration 2-53607
- Nijboer expression calc. using wave and geometric-optic aberrations (*German*) 2-90822
- noncoherent Fourier-transforming interferometers 2-74498
- objectives, two-lens, cemented, limiting capability evaluation 2-75658
- ophthalmic lenses, oblique astigmatic error, power error and distortion minimisation using aspherical surfaces 2-111812
- polarising microscope, optical transfer functions, off-axis aberration effect 2-53831
- quadrupole probe-forming systems of ion microprobe, real and parasitic aberrations 2-96820
- radially symmetric amplitude distrib., aberration-balancing technique, Marechal approach generalisation 2-96843
- rainbow holography, astigmatic, diffr.-limited recording scheme 2-75543
- Raman amplifiers, pump spatial variations transfer to Stokes phase 2-108958
- rhodamine 6G tunable dye laser pumped by pulsed Xe ion laser (*Chinese*) 2-90922
- selfoc-rod lenses, chromatic aberration anal. (*Chinese*) 2-102727
- single-mode fibre components, coupling efficiency of optics 2-102928
- sixth-order aberrations, interferograms and point spread functions 2-114201
- speckle, time-varying, correlations near focal plane of lens, aberration 2-55068
- speckle patterns of weak diffusers, off-axis aberration effect 2-55070
- spherical primary mirror with aspheric corrector plates located near focus, optimum soln. 2-65332
- STEM post specimen. lenses of EELS 2-64196
- symmetrical systems, derivatives of aberration functions with respect to axial distances 2-80904
- telescope system astigmatism and field curvature correction, psychophysical meas. 2-105873
- telescopic system of two mirrors, calc. of paraxial props., wave aberration (*Czech*) 2-55292
- Temos 4, mosaic telescope problem soln. (*French*) 2-94600
- thermal viewer basic parameter, photographic recorder recording-spot size effect 2-53838
- thick meniscus field correctors of field curvature and astigmatism 2-108988
- three-mirror telescope anastigmats, classification 2-91019
- toroidal mirror pairs, imaging performance for grazing-incidence appls., comparison 2-102896
- two-lens finite-thickness cemented doublet aberration coeff. calc. 2-91022
- wavefront distortions in power optics, conf., San Diego, CA, USA (Aug. 1981) 2-94890
- Zernike aberration coefficient conversion to Seidel and higher-order power-series aberration coeffs. 2-90832
- CO₂ laser fusion systems, phase aberrations and beam cleanup techniques 2-102816
- CO₂ waveguide laser mode aberration by Brewster angle windows 2-60131
- HF CW chemical lasers, medium induced phase aberrations 2-102784
- KrF with phase-conjugate Bragg mirror 2-60136
- Nd:glass active-mirror laser amplifier, flashlamp-induced thermal distortion 2-102799

abrasion

- see also hardness; wear*
- brittle solid, hysteresis in abrasive wear 2-67559
- coatings, anticorrosion, abrasion testing device 2-116637
- crystals, abrasive treatment, static model (*Russian*) 2-66120
- diamond composite, textile yarn guide appl. feasibility 2-72893
- ductile metals, formation of wear debris by abrasion 2-88216
- glass surfaces used in precision optics, roughness and crack layers (*French*) 2-108985

abrasion continued

- grooving, controlled, force and energy meas., abrasive wear study 2-57488
- metal parts, magnetisation effect on interaction of rubbing surfaces (*Russian*) 2-77952
- metals, abrasion, SEM obs. of worn surfaces 2-67568
- metals, abrasive wear, analytical model of blast wear intensity 2-67569
- metals, ductile, abrasive wear (*German*) 2-83242
- metals, review of abrasive wear 2-105346
- nylon 6,6-PTFE, two-body abrasion against 6 to 50 μ m SiC abrasives 2-111330
- optical coatings, microhardness and scratch testing 2-81131
- polycarbonate-PTFE, two-body abrasion against 6 to 50 μ m SiC abrasives 2-111330
- polytetrafluoroethylene, formation mechanism of wear particles 2-88212
- solar energy conversion technologies, solid-solid interface research needs
- adhesion abrasion and polymer coatings 2-88247
- stacking fault energy role, on galling and wear behaviour 2-88218
- steel, 0-2 tool type, electron beam surface melted, sliding wear behaviour 2-88220
- steel, abrasive wear resistance evaluation method 2-93713
- steel, austenitic stainless, abrasive wear, electrochem. polarisation influence 2-88198
- steel, austenitic stainless, comparison of types 304 and 316 2-105345
- steel, martensitic stainless, wear against WC up to 500°C 2-83238
- steel parts, magnetoabrasive polishing influence on macrostresses magnitude and distrib. (*Russian*) 2-77989
- steels, abrasive wear resist. improvement, cryogenic treatment 2-116556
- steels, ion-implanted, surface hardness and abrasive wear resist. 2-57490
- steels, stainless, abrasive-corrosive wear 2-88214
- transparent materials, abrasion meas. with hazemeter 2-78036
- Al-Si-Ni-Mg-Cu, Ni, Mg, and Cu additions effect on tensile strength, hardness, abrasion and thermal expansion (*Korean*) 2-57418
- Al₂O₃, effects of Cr₂O₃ additions on sintering and mech. props. 2-99375
- Fe-(Si)-C, grey, microstruct. and abrasive wear mechanism (*French*) 2-116557
- MgO, single crystals, polishing with vibr. sliding in water, characts. 2-88250
- Na₂O-SiO₂ glass, abrasive wear, scale effect 2-67563
- Ni, electroless deposits, heat treatment effects on physical props. 2-57384
- SiC, anisotropic tribological props. 2-88219
- TiC and TiC_xNy, abrasive power of powders, prod. technology role 2-67271
- abrasive wear** *see abrasion*
- absolute gravity** *see gravity*
- absolute pressure measurement** *see pressure measurement*
- absolute temperature** *see temperature*
- absorbers (surge)** *see surge protection*
- absorption**
 - for absorption of substances see sorption*
 - see also acoustic wave absorption; electromagnetic wave absorption*
 - molecular monolayers, surface enhanced Raman scatt., long and short range effects 2-102483
- absorption spectra** *see spectra*
- abstracting**
 - Chemical Abstracts Condensates and Chemical and Pharmaceutical Bulletin keyword systems compared (1978-79) (*Japanese*) 2-68948
- abundance ratio** *see element relative abundance; isotope relative abundance*
- a.c. generators**
 - see also synchronous generators*
 - diesel generator vibration isolation on floating floors 2-97260
 - JET flywheel-generator-converter, design fabrication and erection 2-69939
- a.c. machines**
 - see also a.c. generators; synchronous machines*
 - multifilament superconductor windings production and energy consumption and performance (*Slovak*) 2-72128
- a.c. network analysers** *see network analysers*
- acceleration**
 - see also acceleration measurement; accelerometers*
 - galaxies, acceleration by cosmological density fluctuations rel. to pole moments in Rubin-Ford data 2-106892
 - low-gravity fluid flows 2-97493
 - waves, propag. in isotropic elastic membranes 2-53519
 - Cu plate, accelerated by reacting and detonating explosives, free surface vel. meas. 2-76591
- acceleration measurement**
 - ablative acceleration meas. by streaked X-ray shadowgraphy, comparison with optical meas. 2-79722
 - confocal Fabry-Perot sensor, optical displacement sensor for acceleration and vibration meas. 2-58889
 - differential capacitance accelerometer development (*Chinese*) 2-69148
 - fibreoptic sensors, introduction 2-81105
 - ground accel. meas. using EM seismometer 2-94519
 - impact testing of polymers based on velocity and acceleration meas. 2-105427
 - noise effect in deriving signals from accelerometers 2-79542
- accelerators (particle)** *see particle accelerators*
- accelerometers**
 - see also acceleration measurement*
 - differential capacitance accelerometer development (*Chinese*) 2-69148
 - errors in derived kinematic variables from fixed accelerometer config. 2-95328
 - fibre optic accelerometer, multimode, based on photoelastic effect 2-102925
 - fibre optic launched confocal Fabry-Perot accelerometer, design and performance 2-91087
 - fibre-optic accelerometer with segmented photodetector 2-74391
 - force and vibration meas. on hydroelastic gate model (*German*) 2-76053
 - high-sensitivity fibre-optic accelerometer, use of compliant rubber cylinder 2-95327
 - noise effect in deriving signals from accelerometers 2-79542
 - nuclear reactor vibration characts. meas., w.r.t. safety in earthquakes (*German*) 2-64599
 - piezoaccelerometers transverse sensitivity meas., using tuning-fork vibrator 2-65549
 - piezoelectric, pyroelectric side-effects modelling and calc. 2-64015

accelerometers continued

- reference piezoelectric accelerometer, medium frequency range (*French*) 2-65548
- vibration and shock meas., calibration and standards 2-53717

accidents

- see also *electric shocks; explosions; safety*
- BWR small-break loss-of-coolant accidents, two simulation tests 2-102244
- containment anal., heat transfer from saturated and superheated atm. 2-113711
- criticality accidents, use of compiled spectra for neutron dose determ. 2-62771
- design and development of a postaccident sampling system 2-113721
- disaster management and damage assessment, space technology appl. 2-107083
- fission materials, hazard pot. anal. (*German*) 2-85152
- LWR, degraded core cooling hydrodynamics 2-113681
- LWR accident analysis using TRAC computer code, development assessment status 2-102256
- natural factors limiting the spread of radioactivity after serious damage to a reactor (*Dutch*) 2-64604
- neutron dosimeter using an organic solid state track detector 2-59551
- nuclear power plant accident analysis, using simulation language DSNP 2-102253
- nuclear power plant operational training simulators, upgrading for accident simulation 2-102248
- nuclear power plant status during abnormal reactor operating conditions, accident sequence identification 2-113713
- nuclear power risk estimates, realistic assessment 2-74867
- nuclear weapon accident exercises, using radioactive materials, management 2-108146
- radiation protection, conf., Vancouver, BC, Canada (May 1982) 2-112659
- Three Mile Island, degraded core accident rel. to nuclear reactor safety research 2-85203
- Three Mile Island accident, evaluation of response of TLDs to ^{133}Xe radiations 2-64691
- Three Mile Island Unit 2 reactor recovery progress 2-64607
- Three Mile Island Unit 2 safety philosophy and safety systems performance 2-102194
- ^{192}Ir , insoluble, committed dose equivs. from accidental inhalation 2-68154

accommodation coefficient see *sorption***accretion disks** see *circumstellar shells***accumulation layers**

- Gunn diodes, accumulation layers, basic props. calc. 2-82369
- two-dimensional systems, electronic props., review 2-82467
- Al-SiO₂-SiC, MOS struct., elec. props. meas. 2-72060
- GaAs-Al_{0.1}Ga_{0.9}As heterostructure, cyclotron and plasmon emission from two-dimens. electrons 2-61770
- Ge-GaAs interface, two-dimens. electron states, light scatt. study 2-110885
- Hg_{0.7}Cd_{0.3}Te-anodic oxide interface, photoelec. and field effect props. 2-87398
- Hg_{1-x}Cd_xTe-native oxide MIS struct., elec. props. meas. 2-87399
- InAs accumulation layer, subband populations in tipped mag. fields, Shubnikov-de Haas oscils. 2-56707
- InP (100) MIS system, energy levels of n-channel accumulation layer 2-61541
- InSe, cyclotron resonance of electrons bound at defects, internal accumulation layer formation 2-56944
- MIS structure, minority carrier accumulation and capacitance under light illum. 2-115907
- ZnO, surface, two-dimens. plasmon spectra, low energy EELS study 2-61544

accumulators see *secondary cells***acidity** see *pH***acids, organic** see *organic compounds***acoustic analysis**

- Huygens and active acoustic absorbers in heterogeneous moving fluid (*French*) 2-114494

acoustic applicationssee also *ultrasonic applications*

- acoustic drying, drying factors and appls. of macrosonics range 2-91185
- adhesive bonded multilayer joint detection and location of non-bonds, acoustic impedance method 2-83323
- fibre reinforced composite, acoustic backscattering of subcritical flows 2-111405
- geophysics, formulation and soln. of acoustic logging problem for direct transverse and longit. waves 2-58185
- glass microballoons, coating technique using acoustic levitation 2-85244
- hardness meas., sensitivity 2-62348
- high-pressure vessels, AE during hydrostatic testing 2-62349
- oceanic acoustic tomography, demonstration off Bermuda 2-106359
- refractory fibre formation in an acoustic field 2-93483
- remote sensing of atmosphere and oceans, international symposium, Calgary, Alberta, Canada, (1981 June 22 to 25) 2-94912
- source coordinate determination in two and three dimensional spaces 2-62365
- static stress/strain anal. of NDT samples, holographic methods 2-116676
- Al alloys 7075, acoustic emission and inclusion fracture 2-62298

acoustic arrays

- 10-element acoustic antenna, imitation of received signals (*Russian*) 2-114571
- acoustic imaging using two different methods of signal processing 2-75784
- adaptive array processing using predicting coefficients as constrained conditions 2-114555
- adaptive beamforming, steady-state performance 2-114556
- annular aperture arrays, use in acoustic holography 2-81166
- array transducer, expt. study of cross-coupling 2-65441
- beam response in presence of amplitude and phase fluctuations 2-97302
- conical reflecting arrays, low-frequency, experimental study 2-60332
- cylindrical acoustic lens for high power transmitting array in sector scanning sonar 2-109146
- directional pattern synthesis of large arrays 2-75783
- directivity index of arrays of random line arrays 2-97301
- directivity of a system of compensated rings in the presence of an acoustically compliant sphere 2-114576

acoustic arrays continued

- Fresnel lens, scanning sonar transmitter application 2-102994
- general Chebyshev complex function approximation procedure and an application to beamforming 2-97303
- line arrays, equally spaced, maximum entropy beamforming algorithms 2-70771
- multi-element broadside arrays, beam-width and directivity theory 2-55370
- numerical solution of a 'noncorrect' problem in the synthesis of an axisymmetrical annular discrete array in a cylindrical baffle 2-114500
- ocean acoustic propagation modelling and source characterisation by spectral density matrix eigenvectors 2-60283
- parametric acoustic transmitters (*Japanese*) 2-114512
- parametric array, near field (*Chinese*) 2-75747
- parametric array, synthesis of arbitrary broadband signals 2-109099
- parametric arrays, effect of acoustic saturation on efficiency 2-114511
- parametric line array, radiation field calc. method (*Chinese*) 2-75746
- phased acoustic arrays, geometry synthesis of cophased subarrays 2-91110
- power array with broadband constant beamwidth 2-75801
- sector directivity patterns synthesis, partial patterns modification method 2-114587
- ship-towed linear hydrophone arrays, effective lengths for flow noise 2-70751
- single-element transducer vibration analysis 2-55379
- sparse volume array for architectural acoustic measurements 2-55384
- two-dimensional arrays with omnidirectional radiation (*German*) 2-86152
- underwater convex transducer array design with heart-shaped directivity 2-60337
- underwater sound, normal mode spatial filtering 2-70749

acoustic delay linessee also *ultrasonic delay lines*

- amplitude weighted metal strip reflective array compressors 2-81186
- beams, fold and focused, BAW delay line improvement 2-97304
- hydrophone with liq. delay line oscillator 2-91131
- AIN on sapphire SAW delay lines, zero temp. coeff. 2-86185

acoustic detectors see *acoustic transducers***acoustic devices**

- see also *acoustic delay lines; acoustic generators; acoustic microscopes; acoustic microwave devices; acoustic parametric devices; acoustic radiators; acoustic receivers; acoustic resonators; acoustic transducers; bells; surface acoustic wave devices; ultrasonic devices*
- cylindrical acoustic lens for high power transmitting array in sector scanning sonar 2-109146
- Fresnel lens, scanning sonar transmitter application 2-102994

acoustic dispersionsee also *ultrasonic dispersion*

- critical fluids, sound propagation, viscosity and sp. ht. theories 2-103252
- elastic sphere, lowest resonances study (*French*) 2-114715
- liquid crystal, nematic-smectic A transition, anomalous sound attenuation, mode coupling theory 2-66131
- metals, Rayleigh acoustic waves, interaction with electrons, tilt effect acoustic waves, interaction with electrons, tilt effect 2-66595
- multilayer structure with periodic coating, SAW dispersion and amplification, theory 2-114522

acoustic echoes see *echo***acoustic emission**see also *ultrasonic materials testing*

- acoustic signal in solid body, reconstruction procedure for original form 2-93740
- Barkhausen noise stress meas., acoustic method 2-83318
- brass, α/β phase, laser surface hardening, acoustic emission monitoring 2-67602
- brittle materials, microstrength meas. 2-93743
- carbon and glass fibre reinforced plastics, shear crack propag., acoustic emission monitoring 2-88317
- cast Fe, nodular, freq. spectra of acoustic emission 2-62326
- cavitation bubble dynamics, laser prod., acoustic emission study 2-55646
- cluster test coil supercond. mag., acoustic emission meas. 2-69896
- cold cracks in welded joints, high strength, investigation using acoustic emission method 2-67668
- composite, porous glass, microcrack fusion dynamics obs. by acoustic emission 2-62337
- composite materials, NDT, review 2-62338
- damage processes, acoustic emission 2-62290
- dislocations surfacing, acoustic emission pulse generation, registration conditions (*Russian*) 2-56320
- ear, human, evoked acoustic emissions, equipment and response parameters 2-94075
- echolocating Atlantic bottlenose dolphins, acoustic emission monitoring 2-78354
- engineering calc. of energy spectrum 2-55378
- excitation by conc. harmonic force source under elastic half-space surface 2-114506
- failure time calc. from AE signal activity 2-88327
- fatigue cracks, friction prod. between edges, AE charact. 2-83328
- Fe, electrolytic, friction and wear, strain and failure processes investigation by acoustic emission method 2-116633
- fibre reinforced composites, acousto-US charact. 2-83315
- forced convection nucleate boiling detection by acoustic emission 2-75092
- glass fibre reinforced epoxy laminate, AE energy anal. of damage 2-62291
- glass fibre reinforced polyester resin sheet moulding cpd. imperfection monitoring by NDT 2-78042
- high frequency sound emission from moving point multipole sources embedded in arbitrary transversely sheared mean flows 2-86276
- high-pressure vessels, AE during hydrostatic testing 2-62349
- large structure under corrosive environment, AE monitoring 2-111388
- lead frame bond failure mode in film integrated circuits, discriminants anal. of AE data 2-99621
- materials, inspection equipment at VNIIN Lab., USSR 2-111428
- materials testing, industrial appls. (*French*) 2-88301
- materials testing at Engineering Physics Inst., Moscow 2-111427
- materials testing for lattice defects and flaws 2-111429
- measurement technology for nuclear reactor structure monitoring 2-57584
- metallic glass tape, ferromag., localized struct. variation detection by acoustic emission 2-11361
- metals, friction and wear, strain and failure processes investigation by acoustic emission method 2-116633

acoustic emission continued

multichannel monitoring system for nuclear reactors 2-102109
 NDT appl. (*Hungarian*) 2-116656
 nuclear reactor primary coolant system leakage detection using acoustic emission 2-64594
 nuclear reactor steam drums, AE obs. 2-111387
 numerical simulation by finite difference method 2-75758
 phase transformations in martensitic steel, acoustic emission analysis 2-111430
 piezoelectric acoustic emission transducer, improved design 2-81201
 piezoelectric polymer film transducer for acoustic emission sensor 2-86196
 pine resin heating, acoustic emissions as models for seismic activity 2-102972
 plate, elastic pulses propag., epicentral responses, acoustic emission mechanism 2-91310
 plate, elastic pulses propag., general responses, acoustic emission mechanism 2-91311
 plate, elastic pulses propag., point source models w.r.t. acoustic emission mechanism 2-91309
 polymeric materials, acoustic emission associated with tree growth 2-110762
 polymers under stress, acoustic emission and EPR studies 2-66133
 principles, of acoustic emission testing 2-62323
 PWR feedwater control valves, computerised acoustic monitoring 2-74892
 rectangular parallelepiped with rigid-lubricated boundaries, forced vibr. response 2-65505
 refractories, acoustic emission and deformation-fracture behaviour under three-point bend test 2-62230
 ring fibre interferometer phase nonreciprocity due to acoustic emission 2-79662
 Rochelle salt, ferroelectric, acoustic emission, threshold elec. field 2-92701
 rocks, freq. characts. and relation to microcracking process 2-100371
 rocks, US radiation from crack in strained rock specimen 2-117295
 sand-cement mortar, acoustic emission and longevity under steady load 2-93619
 signal analysis, appls. of deconvolution 2-62325
 signal distortion by change of gain in sensing device 2-57565
 signal source co-ord. calc., errors 2-83329
 snow, acoustic properties, review 2-88928
 solid cylinders, acoustic emission during forging 2-105433
 source coordinate determination in two and three dimensional spaces 2-62365
 source coordinate determination taking into account effective propagation velocity 2-91192
 steel, AE monitoring system for crack growth (*French*) 2-62371
 steel, alloy, type 09G2SF, failure time calc. from AE signal activity 2-88327
 steel, austenitic stainless, sensitised, corrosion fatigue, crack growth and AE behaviour, SEM obs. (*Japanese*) 2-83281
 steel, C, type Ck 35, hydrogen embrittlement detection by AE 2-62192
 steel, C and alloy, heat-treated, deform. and fracture processes by acoustic emission method 2-105420
 steel, deform. process development with temp., acoustic emission study of A508 and A533B 2-57423
 steel, En8, stainless and C mild, laser surface hardening, acoustic emission monitoring 2-67602
 steel, heavy-section, controlled flaw prep. for fracture mech. testing 2-72929
 steel, high C, friction and wear, strain and failure processes investigation by acoustic emission method 2-116633
 steel, high strength, AE during fracture toughness tests. mech. condition effects (*Japanese*) 2-57555
 steel, pressure vessel, thick-walled, brittle-failure resist. 2-99626
 steel, welded joints, crack detection and location using AMUR-6 acoustic emission apparatus 2-83330
 steel reinforced concrete, AE appl. to corrosion damage charact. 2-78026
 steels, reproducible AE signatures by indentation 2-62324
 structural materials, prediction of tearing instability, acoustic emission rating parameter 2-111393
 superconducting magnets, mechanical disturbances, triangulation technique 2-69918
 superconducting magnets, quench source triangulation using acoustic emission 2-69920
 superconductor, and superconducting magnet, AE triangulation of disturbances and quenches 2-56807
 superconductors, technical, sources of acoustic emission 2-86799
 supersonic jets, overexpanded, instability and acoustic emission (*French*) 2-76005
 technology and appls. (*Italian*) 2-62306
 thermally activated macrofracture of inhomogeneous solid, kinetic theory 2-103099
 thermoset plastic connector blocks, rapid proof testing system using AE 2-83317
 turbomachine flow non-stationarity and noise spectrum prediction (*French*) 2-75761
 water, cavitating lip, acoustic emission and sonoluminesc., dissolved gases effect 2-55622
 water leak into atmos. through small hole, AE study 2-57578
 Al alloy D16AT, heat-treated, deform. and fracture processes by acoustic emission method 2-105420
 Al alloys 7075, acoustic emission and inclusion fracture 2-62298
 Al specimens, expt. set up for acoustic emission study 2-109138
 Al-Cu (4 wt.%), laser surface hardening, acoustic emission monitoring 2-67602
 Al-Cu-Mg-Zn, acoustic emission during static deform. 2-72777
 Al-Mg, heat-treated, deform. and fracture processes by acoustic emission method 2-105420
 B fibre reinforced Al, acoustic emission and longevity under steady load 2-93619
 CaCO₃, calcite, acoustic emission pulse generation during surfacing of dislocations (*Russian*) 2-56320
 Cu-Be, AE generated during tensile deform. (*Japanese*) 2-105232
 Fe-C (1.3 wt.%), martensite, acoustic emission during ageing, microcracking 2-57387
 GeTe, during polymorphic transitions 2-109972
 Ni-Al bronze cast, detection of selective phase corrosion by AE 2-67631
 Pb₂Ge₂O₇, ferroelec., acoustic emission from domain wall motion 2-99077

acoustic emission continued

a-Si:H films, growth and characterisation 2-83031
 Si₃N₄, hot pressed, acoustic charact. of mech. props. (*Japanese*) 2-67511
 Ti-Al-V alloy sheet, acoustic emission during deform., microstruct. influence, twin form. 2-88324
 Zr alloys, hydrogen charged, subcrit. crack nucleation and propag., acoustic emission obs. 2-72936

acoustic equipment
see also acoustic arrays; acoustic wave interferometers; ultrasonic equipment
 10-element acoustic antenna, imitation of received signals (*Russian*) 2-114571
 Doppler acoustic system, pollutant dispersion appls. 2-73179
 electronic artificial reverberator, design (*Spanish*) 2-97333
 fiber-optical sensor for surface acoustic waves 2-97323
 hydroacoustic equipment, optimizing Cu spheres for precision calibration 2-60323
 microcomputer based data acquisition for audio signals 2-75800
 pneumoacoustic atomizer for liquid metal spraying 2-91189
 Al specimens, expt. set up for acoustic emission study 2-109138

acoustic field
 acousto-optic deflector, travelling US field, meas. using laser anemometer config. 2-114575
 circular piezoelectric transducer, pulse response, diffraction phenomena 2-102966
 diffuse, acoustic mode selection, collinear acousto-optic diffr. appl. 2-72450
 directional response pattern simulator 2-75814
 duct-radiated sound fields, 2-D finite element analysis 2-114503
 extended sound sources 2-91126
 finite amplitude acoustic noise propagating in a tube, statistical characteristics 2-91148
 forward and backward projection of acoustic fields using FFT methods 2-70775
 Fresnel zone plate transducers, near field acoustic pattern 2-114598
 Huygens and active acoustic absorbers in heterogeneous moving fluid (*French*) 2-114494
 impulse response and other types of room acoustical responses 2-75778
 impulsive sound sources using electric discharges 2-81202
 independent sampling of mean square pressure in reverberant sound fields 2-109118
 jet noise, pressure dependence and silencing of blow-offs 2-91128
 line array, radiation field calc. method (*Chinese*) 2-75746
 mode representation and generalised ray representation 2-65422
 moving source, acoustic field, thermal mechanism of sound excitation, arbitrary trajectory 2-55374
 optical probe for rapid visualisation of acoustic fields inside microwave acoustic wave devices 2-55388
 parametric array, near field (*Chinese*) 2-75747
 pulsed acoustic radiators, acoustic field analysis 2-70728
 pulsed jet noise characteristics 2-91155
 'Radical' singularities associated with the onset of new mode orders 2-114499
 relativistic sound field transformations, theory formulation 2-75822
 scattering at rough boundary, extension of Kirchhoff's approximation 2-81141
 sound radiation by elastic structures 2-91127
 thin-walled spherical piezoelectric receiving transducer with a controllable electrical load 2-114586
 underwater acoustic waveguides, calc. of sound field, asymptotic behaviour of normal modes 2-109103
 underwater coherent sound sources, radiation field anal. 2-60278
 underwater sound field, normal modes and rays relation 2-91132
 vibrating sphere acoustic radiator, influence of perfectly reflecting wall on field and impedance 2-114505
 vibration of structures excited acoustically 2-91141
 viscoelastic damping layers, effect on sound field generated in waveguides by flexurally vibrating plates 2-60290

acoustic generators
see also earphones; loudspeakers; photoacoustic effect
 calibration of acoustic emitters in a bounded space 2-75820
 directional response pattern simulator 2-75814
 disk-jet sound generator with a convergent jet 2-114585
 EM-acoustic wave interaction in solids 2-98419
 expanding sphere, generation of pressure and velocity field 2-114591
 finite amplitude acoustic noise propagating in a tube, statistical characteristics 2-91148
 optoacoustic sources of sound, review 2-114595
 organ pipes sound generation mechanism, wave propagation on turbulent jets, amplitude growth 2-97319
 pneumoacoustic generator with an angle-mounted resonator 2-114588
 second harmonic generation in piezoelect. semiconductors 2-70741
 sound pulse of finite amplitude generation, loudspeaker use, new method 2-91116
 ultrasonic sound sources, improved, circular diaphragms use for generating convergent fields in air and far-field properties 2-91186
 US power accumulator using directional converter 2-75805

acoustic holography
 annular aperture arrays, use in acoustic holography 2-81166
 array acoustic imaging using two different methods of signal processing 2-75784
 digital in-line holographic techniques for long wavelength imaging 2-109126
 interphase, prototype system (*Spanish*) 2-55381
 long wavelength holograms, optical reconstruction using optimal reference wave 2-70521
 phase-only holograms, evaluation of quantization error 2-109125
 phase-only holographic reconstruction, resolution enhancement 2-109124
 pressure field of sound source, imaging techniques 2-91146
 reconstruction algorithms, potentials and limits 2-105391
 reconstruction of acoustic hologram of point source in an inhomogeneous waveguide, optical method 2-60313
 sonar 3d underwater sound US imaging system 2-75808
 sound source detection on the basis of acoustical holography for noise abatement 2-114551
 static stress/strain anal. of NDT samples, holographic methods 2-116676
 ultrasonic imaging system using Doppler-modulated wave fronts 2-109142
 US, image reconstruction, single and double FFT methods comparison (*Japanese*) 2-114559

acoustic holography continued

- US holographic imaging by means of liq. surface deform. (*Slovak*) 2-114558
- visualization of three-dimensional ultrasonic wave fronts using holographic interferometry 2-81167

acoustic imaging

- see also *acoustic holography*
- apodized conical focusing for ultrasound imaging 2-60320
- array acoustic imaging using two different methods of signal processing 2-75784
- array single-element transducer vibration analysis 2-55379
- array transducer, expt. study of cross-coupling 2-65441
- biomedical US, bibliography from 1.1.71 2-63773
- C-scan imaging using interdigital transducers 2-78030
- digital US C-scan image construction using electronic ordered dither microprocessor-based techniques 2-62303
- echocardiographic 2D images sequence, approach to optimal threshold selection 2-100069
- electronic scanning ultrasonic diagnostic equipment 2-78477
- ferroelectric ceramic, acoustic microscopy, imaging of flows, grain struct. and elastic props. 2-105410
- fluorocarbon gas-filled acoustic lens 2-75810
- high resolution imaging method using ultrasonic impulsive sound 2-75807
- holographic sonar 3D underwater ultrasonic imaging 2-75808
- imaging of ultrasonic waves in solids, using transverse acoustoelectric effect in piezoelectric semiconductors 2-91190
- interdigital transducers for acoustic imaging 2-114597
- mass screening system for breast cancer detect. 2-78478
- medical and underwater surveillance systems, microprocessor controlled 2-81192
- optimum ultrasonic imaging system using ARMA processing 2-75806
- phase-only reconstruction in acoustical imaging, anal. and processing 2-117040
- pressure field of sound source, imaging techniques 2-91146
- pulse-echo US imaging system with adaptive learning network signal processing methods 2-81191
- recent developments, theory and practice 2-65437
- resolution for images from Fresnel or Fraunhofer diffraction using the FFT 2-60306
- scanning acoustic microscope micrographs, enhancement using false-colour encoding 2-65433
- soft tissue, acoustic vel. and attenuation const. meas. by ultrasonic CT 2-78513
- sound field imaging, low-frequency, by means of nematic liquid crystal acoustooptic cell 2-116150
- superresolution ultrasonic imaging system by forced vibration of object 2-70774
- thoracic wall phonocardiogram recording and correlation 2-94129
- tissue US attenuation anisotropy effects on computerised tomography 2-57876
- ultrasonic lens, design, characts. and image quality 2-114567
- underground cultural properties, computer assisted imaging based on acoustic pulse-echo techniques (*Japanese*) 2-81190
- US computerised tomography, reconstruction algorithm for body sections with opaque obstructions 2-62706

acoustic impedance

- see also *acoustic wave velocity*
- adhesive bonded multilayer joint detection and location of non-bonds, acoustic impedance method 2-83323
- aqueous soln., study of US vel. and associated parameters 2-71577
- cylindrical acoustic radiator with circular cap, radiation impedance 2-60271
- diamine cured epoxy resins, microballoon filled, acoustic. mech. and phys. props. 2-60322
- ear, technique for detecting ipsilateral acoustic reflex 2-111821
- Fermi gas, transverse acoustic impedance 2-61238
- films, acoustic props. meas. using reflection loss of acoustic transmission line 2-104211
- Helmholtz resonators, effects of grazing flow on acoustic impedance 2-114485
- inhomogeneous matching layer with continuously changing acoustic impedance, impedance matching properties 2-109140
- laser-doppler anemometry, appls. to acoustic impedance meas. (*German*) 2-86182
- marine sediments, acoustic impedance, vel. and attenuation 2-58034
- orifice impedance under turbulent boundary layer with pressure gradient 2-70723
- phenyl benzoate, specific acoustic resist., reflection method meas. 2-109908
- phenyl salicylate, specific acoustic resist., reflection method meas. 2-109908
- reed generators, air-driven, acoustic admittance meas. 2-75756
- sound propagation in a pipe containing a liquid of comparable acoustic impedance 2-86149
- starch, aqueous soln., study of US vel. and associated parameters 2-71577
- two-layered matching of complex impedances 2-70799
- vibrating piston diaphragm, rectangular, acoustic radiation resistance 2-109110
- vibrating sphere acoustic radiator, influence of perfectly reflecting wall on field and impedance 2-114505
- vibration transmission and sound radiation 2-91145

acoustic insulating materials see *noise abatement***acoustic intensity**

- see also *acoustic noise*; *loudness*
- binaural time/intensity trading 2-62636
- impact sounds loudness, comparison with and without steady duration 2-91154
- low-frequency hearing threshold, case of missing 6 dB 2-62631
- plane-wave approx. by acoustic intensity 2-86150

acoustic intensity measurement

- analyser design using two microphone technique 2-55386
- building sound transmission prediction using statistical energy analysis 2-114572
- calibration and standards 2-60334
- independent sampling of mean square pressure in reverberant sound fields 2-109118
- infrasound meas., effect of wind 2-60330
- liquids, US power and cavitation meas. methods, review 2-70791
- loudness of Gaussian fluctuating sound (*Japanese*) 2-102989

acoustic intensity measurement continued

- noise, meas. method effects upon hearing damage evaluation (*German*) 2-109147
- nomographs, use in acoustic propagation and room acoustic, use of nomographs 2-60273
- one dimensional fluid flow, analytical and expt. investig. 2-97329
- one-inch laboratory standard condenser microphone, coupler for calibration up to 20 kHz (*Japanese*) 2-102983
- pressure field of sound source, imaging techniques 2-91146
- sound level meters, temp. coeff. meas. method using const. temp. bath (*Japanese*) 2-102986
- sound level meters using standard sound source, instrum. error meas. method (*Japanese*) 2-102988
- standard sound source waveform synthesizer using digital means (*Japanese*) 2-102987
- systematic measurement errors with two microphone sound intensity meters 2-114574
- transient noise sources, acoustic intensity meas. 2-91187
- transmission loss measurement of composite panels, single reverberation chamber method 2-60305

acoustic magnetic resonance

- see also *acoustic nuclear magnetic resonance*; *acoustic paramagnetic resonance*
- No entries

acoustic measurements see *acoustic variables measurement***acoustic microscopes**

- electron beam-acoustic microscope appls. to semiconductor characterisation and IC diagnosis 2-81173
- ferroelectric ceramic, acoustic microscopy, imaging of flows, grain struct. and elastic props. 2-105410
- magnetoelastic microscope for inertial confinement fusion program, beam profile meas. 2-85447
- mechanically scanned acoustic microscopy (*Japanese*) 2-91191
- nondestructive materials examination for density and elasticity, appls. 2-70794
- photodisplacement microscope using modulated semiconductor laser 2-114568
- pulse-compression subsurface acoustic microscopy 2-114569
- SAW attenuation measurement using reflection acoustic microscopy 2-102990
- scanning, employing concave US transducers 2-81185
- scanning, surface crack obs. 2-57552
- scanning acoustic microscope micrographs, enhancement using false-colour encoding 2-65433
- scanning photoacoustic microscopy, principle and applications (*Chinese*) 2-91181
- thermal-wave microscopy to image subsurface areas in semicond. manufacturing 2-75811
- V(z) curves obtained by acoustic microscope with line-focus beam, anal. 2-97325
- V(z) curves obtained by acoustic microscopy, leaky SAW parameters effect 2-97326

acoustic microwave devices

- see also *acoustic transducers*; *surface acoustic wave devices*
- optical probe for rapid visualisation of acoustic fields inside microwave acoustic wave devices 2-55388

acoustic mode of crystals see *lattice dynamics***acoustic noise**

- acoustic intensity meas. of transient noise sources 2-91187
- active acoustic absorption, theoretical and practical problems (*French*) 2-75764
- active acoustic attenuation in air ducts conveying turbulent flows (*French*) 2-75948
- active attenuation of noise, monopole system 2-70724
- aircraft interior noise prediction, preliminary analytical models, development and validation 2-114547
- aircraft noise contour prediction programs, comparison 2-57755
- airfoil sections fluctuation pressures and rotor broadband noise (*French*) 2-75766
- annoyance models for noise from mixed sources 2-97285
- annoyance/noise level relationships for rail, air and road traffic 2-97284
- architectural noise, Kalman's filtering theory under preestablished estimation algorithm form (*Japanese*) 2-97297
- attenuation and ecological aspects of gas turbines 2-91157
- automobile passenger compartment, structural-acoustic finite element anal. 2-75780
- axial fan noise, anal. using Lowson's method (*French*) 2-75762
- boundary layer noise, influence of polymer addition (*French*) 2-75767
- building-site noise, research program (*French*) 2-109111
- choked jets, shock associated noise meas. 2-60293
- circular cosh duct, acoustic mode propag., closed form. soln. 2-65581
- coaxial jet noise, expt. study of isothermal subsonic jets 2-114548
- combustion noise, influence of droplet size of liquid fuel 2-102975
- community noise impact indicators 2-62530
- data analysis in noise and vibration problems, aeroacoustic appls. (*French*) 2-91194
- data analysis techniques in noise and vibration problems, report 2-91139
- depthwise-inhomogeneous lossy waveguide, spatial correlation of surface noise 2-114504
- detectability of switching transients of bands of noise (*Japanese*) 2-94072
- diesel generator vibration isolation on floating floors 2-97260
- duct, sound power radiated in presence of flow (*French*) 2-75768
- emission limit ratings method 2-109112
- environmental acoustics, theoretical foundations 2-97287
- finite amplitude acoustic noise propagating in a tube, statistical characteristics 2-91148
- flow generated noise, fundamental concepts 2-91413
- flow over perforated surfaces, noise prediction 2-114783
- fossil fuel power plants, noise prediction 2-62531
- frequency discrimination, at 1200 Hz in presence of high-freq. masking noise 2-62632
- frequency response of noise 2-91164
- [from] flow around a cylinder near a wall (*French*) 2-97277
- gas expansion-produced noise, calc. and reduction of acoustic power 2-109113
- guidelines for developing an effective hearing conservation program 2-114550
- guinea pig auditory cortex, augmentation of evoked potentials after exposure to intensive noise 2-116932
- hearing conservation program, impact on occupational injuries 2-114549

acoustic noise continued

- hearing loss, noise-induced, rel. to temporal integration 2-116937
 high intensity acoustic wave/noise interactions, statistical characs. 2-91119
 highway traffic noise field analysis 2-109115
 human auditory system, special criteria for impulse noise 2-100044
 impinging jets, dynamics, noise generation 2-65627
 impulse noise, time distrib. in enclosure 2-65430
 impulse noise and continuous noise anal., integrating sound level meter 2-100045
 jet noise, low-speed, prediction (*French*) 2-75760
 jet noise, pressure dependence and silencing of blow-offs 2-91128
 Lagrangian boundary condition and non-linear propagation as causes of Gaussian noise spectrum deformation 2-97255
 lift/drag ratios and sonic boom intensities of a circular wing 2-70747
 loudness, annoyance, and noisiness produced by single-tone-noise complexes 2-97283
 loudspeakers, column, propag. characs. 2-60339
 low frequency traffic noise, prediction 2-97278
 low-frequency ambient ocean noise and sound transmission over a thinly sedimented rock bottom 2-73574
 masking of noise bursts by an adjacent vowel for hearing-impaired listeners 2-88558
 maximum permissible levels in EEC 2-75759
 mufflers with flow reversals, aeronautic anal. 2-70765
 multimode expansion chambers, acoustic performance, steady fluid flow effects 2-97232
 noise reduction processes in cutting with high speed tools 2-91156
 nonlinear propagation anal. 2-102976
 opencast coal extraction sites 2-60300
 personal noise exposure dependence of workers and housewives on daily life activities (*Japanese*) 2-97291
 prediction of sound transmission through corridors 2-97293
 pulsed jet noise characteristics 2-91155
 quasiline noise source for urban traffic, moving flow 2-102977
 road traffic, meas. and prediction of annoyance caused by time varying noise 2-111602
 road traffic noise, annoyance, mathematical modelling and sound proofing of vehicles 2-57756
 road traffic noise, dynamical estimation method of objective noise under background noise (*Japanese*) 2-97288
 road traffic noise, power levels of vehicles and noise exposure statistics (*Japanese*) 2-97289
 road traffic noise levels in the year 2000 in an urban environment, prediction models (*French*) 2-70761
 rotor in perturbed flow, noise emission mech. (*French*) 2-75763
 saw teeth, meas. of vortices in wake 2-60528
 schoolchildren and noise, 4 kHz dip, tone screening in 14391 children 2-68023
 ship structure-borne sound transfer to cabins 2-60295
 side-edge flap noise generation by aircraft when landing 2-86170
 solid media, evaluation of random noise 2-114546
 sound transmission class calc. 2-60302
 source function study by causality method (*French*) 2-75947
 speech intelligibility, in noise: effect of fluency and hearing protector type 2-62639
 straight-through mufflers with tube expansion chambers, aeroacoustic anal. 2-70764
 stress fields fluctuation in continuous media 2-91140
 supersonic jet, moderate Reynolds no., flow and acoustic props. 2-65626
 traffic noise signal regularity 2-75770
 turbomachine flow non-stationarity and noise spectrum prediction (*French*) 2-75761
 turbomachinery rotor noise, dependence on inlet turbulence and strut flow disturbances 2-86171
 turbulent jets, noise characteristics 2-91412
 unsteady flow, noise source mechanisms 2-75946
 unsteady flow interaction with jet pipe, low freq. sound radiation and generation 2-109310
 variable area duct acoustics, general mapping procedure 2-97531
 vehicle noise power, individual, estimation by exponential approx. (*Japanese*) 2-97290
 waveguide noise field model 2-70734

acoustic noise measurement

- 125 dB reference sound source for acoustic meas. under high background noise (*German*) 2-86188
 airframe noise, large scale model meas. using cross-correlation techniques 2-70746
 cavitation noise meas. system 2-86186
 ear sound level meas. inside ear muffs, Knowles miniature microphone appl. 2-97324
 electronic exchange power supply equipment 2-97280
 environmental noise meas. and assessment based on short L_{eq} values 2-97279
 environmental sound level analyser, microprocessor-controlled 2-60329
 HV, SF₆ insulated, partial discharges acquisition and localisation using noise anal. (*German*) 2-76218
 impulse noise meas., methods and assumptions 2-60333
 industrial noise meas., hunt for decibels (*French*) 2-97281
 instrumentation for noise analysis and control 2-75803
 intensity of noise, meas. method effects upon hearing damage evaluation (*German*) 2-109147
 jet noise source distrib. meas., accuracy of polar correl. technique 2-65436
 jet noise source meas. using elliptical acoustic mirror and laser velocimeter 2-76042
 keyboard keystroke noise meas., operator simulation using profile robot driver 2-75804
 machine noise at final installation site 2-60303
 microelectronics appl., state of art and development trends (*German*) 2-114570
 nuclear reactor structure monitoring, acoustic emission technology appls. 2-57584
 oceanographic noise mapping, tomographic approach 2-68512
 supersonic jets, convergent nozzles, broadband shock noise, acoustic meas. 2-65617
 switchgear noise levels measurement and reduction measures (*German*) 2-65429

acoustic noise measurement continued

- systematic measurement errors with two microphone sound intensity meters 2-114574
 tomographic ocean surveillance 2-63146

acoustic nuclear magnetic resonance

- dipole-dipole interactions, reson. acoustic saturation of quadrupolar transitions 2-110657
 leucosapphire, ²⁷Al quadrupole and hexadecapole transitions, ANMR 2-110659
 nuclear spin-system with non-equidistant spectrum acoustic pulses effect 2-110660
 transition metals, nuclear acoustic reson. study of electron-lattice interaction 2-56950
 NaCl, quadrupolar energy relax., reson. acoustic field excitation 2-110680
 Nb₃Mo₃, supercond. alloys, nuclear acoustic reson. study of electron-lattice interaction 2-56950
 Ta, ultrasound induced elec. field gradient, quadrupole nucl. acoustic reson. study 2-56951

acoustic paramagnetic resonance

- condensed matter, US methods, conf., Zilina, Czechoslovakia (Sept. 1980) 2-63733
 metals, acoustic spin resonance of conduction electrons (*Russian*) 2-72351
 ruby:Cr³⁺ effect of ²⁷Al nuclei on hypersound intensification (*Russian*) 2-77422
 CaO:Cr, APR study, Jahn-Teller effect 2-66899
 GaAs:Cr, APR spectra, illum. effect 2-66898
 GaAs:Cr³⁺, APR study 2-66897
 InP: Fe, APR study 2-66900
 Si:B, US investigation of acceptor ground state, distrib. of splittings 2-98577

acoustic parametric amplifiers

- surface acoustoelectronic waves, parametric amplification 2-91124
 YIG:Ga-ZnO, SAW parametric amplification obs. 2-92332

acoustic parametric devices

- see also acoustic parametric amplifiers; acoustic parametric oscillators*
 array, near field (*Chinese*) 2-75747
 arrays, effect of acoustic saturation on efficiency 2-114511
 line array, radiation field calc. method (*Chinese*) 2-75746
 radiators, source radiating nonlinearly confined spherical beams, statistical anal. of operation 2-114599
 reception of acoustic signals in inhomogeneous media 2-91121
 transmitters, nonlinear acoustics (*Japanese*) 2-114512

acoustic parametric oscillators

- modal anal. expt. 2-109139
 Si/LiNbO₃ substrate, SAW parametric oscill. 2-65440

acoustic radiators

- see also acoustic generators; Doppler effect*
 arrays, sector directivity patterns synthesis, partial patterns modification method 2-114587
 baffled cylindrical radiators, sound field of two cooperating infinite radiators 2-114496
 cylindrical acoustic radiator with circular cap, radiation impedance 2-60271
 extended sound sources 2-91126
 impulsive sound sources using electric discharges 2-81202
 levitating apparatus for submillimeter samples 2-86154
 parametric radiators, source radiating nonlinearly confined spherical beams, statistical anal. of operation 2-114599
 power output by monopole above reflected plane, experimental investigation 2-114484
 pulsed acoustic radiators, acoustic field analysis 2-70728
 rectangular panels, acoustic radiation efficiency 2-97276
 sound field reflection, effect on acoustic radiator 2-91112
 sound radiation, fundamental concepts 2-91125
 sound radiation by elastic structures 2-91127
 two-dimensional arrays with omnidirectional radiation (*German*) 2-86152
 ultrasonic wave radiator, hollow cylindrical vibrating system 2-91135
 vibrating sphere acoustic radiator, influence of perfectly reflecting wall on field and impedance 2-114505
 vibration transmission and sound radiation 2-91145

acoustic reactance *see acoustic impedance***acoustic receivers**

- see also microphones*
 directional response pattern simulator 2-75814
 sensitivity meas. in deadened meas. volume 2-60326

acoustic resistance *see acoustic impedance***acoustic resonators**

- chamber containing rigid sphere, resonance freq. shift 2-114491
 deformed spherical resonators, acoustic resonance frequencies 2-81144
 Helmholtz resonator, influence of throat configuration on Q-value 2-70731
 Helmholtz resonator, placed in wall of pipe carrying continuous flow (*French*) 2-75744
 Helmholtz resonators, effects of grazing flow on acoustic impedance 2-114485
 modal anal. expt. 2-109139
 pneumoacoustic generator with an angle-mounted resonator 2-114588
 preconditioned phenomena in acoustic measurements 2-97330
 quartz piezoelectric tunable resonator 2-70804
 reflective piezoelectric transducers in open acoustic resonator, exptal. study of oscillations 2-60341
 SAW, reflection characteristics of open metal strip arrays 2-91105
 SAW resonators, freq. trimming using reactive ion etching 2-81199
 single-frequency acoustic oscillations, Rijke tube as source 2-114592
 thermal hysteresis in acoustic resonators 2-86153
 three-frequency parametric interaction in a rectangular piezoelectric resonator 2-114520
 US vel. and attenuation meas., interferometric methods 2-102992

acoustic signal processing

- acoustic emission signal analysis, deconvolution appls. 2-62325
 adaptive array processing using predicting coefficients as constrained conditions 2-114555
 adaptive beamforming, steady-state performance 2-114556
 adaptive nulling technique for signal reception 2-97300
 amplitude attenuation of impulsive waves in random media based on travel time corrected mean wave formalism 2-70722

acoustic signal processing continued

- AN/JYS-1 advanced acoustic signal processor, architectural review 2-75786
 array acoustic imaging using two different methods of signal processing 2-75784
 array beam response in presence of amplitude and phase fluctuations 2-97302
 cast Fe, nodular, freq. spectra of acoustic emission 2-62326
 coherence processing, high speed, using sectionalized Fourier transform 2-70772
 complex-signal coherent detection, nonparametric tests 2-60309
 digital audio signal processing by microcomputer 2-81165
 directional pattern synthesis of large arrays 2-75783
 directivity index of arrays of random line arrays 2-97301
 echo-to-reverberation (clutter) ratio for strongly bistatic systems 2-70776
 envelope statistics of partially saturated processes 2-97299
 flaw-to-grain echo enhancement by split-spectrum processing 2-78062
 forward and backward projection of acoustic fields using FFT methods 2-70775
 frequency response of noise 2-91164
 general Chebyshev complex function approximation procedure and an application to beamforming 2-97303
 high resolution spectral analysis of a narrow-band signal in broad-band correlated noise 2-75782
 high-performance signal processing using SAW components (*German*) 2-109122
 Kirchhoff approach to ocean surface-scatter communication channel 2-91163
 line arrays, equally spaced, maximum entropy beamforming algorithms 2-70771
 medical and underwater surveillance systems, microprocessor controlled 2-81192
 modal anal. expt. 2-109139
 nearfield inverse scattering formalism for the three-dimensional wave equation: The inclusion of a priori velocity information 2-81164
 optimum ultrasonic imaging system using ARMA processing 2-75806
 ORing loss data for square law detectors followed by an ORing device and an accumulator 2-109123
 parametric array, synthesis of arbitrary broadband signals 2-109099
 passive sonar fluctuating signals, averaged short time periodogram processor performance 2-60281
 periodic interface, acoustic wave diffr., ultrasonic anomalies 2-97254
 phase and frequency tracking by forward dynamic programming 2-60311
 piecewise interpolation technique for audio signal synthesis 2-86177
 pulse-echo US imaging system with adaptive learning network signal processing methods 2-81191
 reflection response for normal incidence probing of vertically nonhomogeneous media 2-100307
 reflection seismogram deconvolution, stacking and migration techniques 2-63144
 resolution for images from Fresnel or Fraunhofer diffraction using the FFT 2-60306
 sinusoids in noise, instrumental-variable frequency estimation and tracking 2-60310
 sonar combination of SAW analogue and digital processing 2-60288
 sonar systems, microprocessor appls. in signal processing and picture generation 2-81194
 sound source position calc. using passive sensor systems 2-114577
 subtractive filtering method in formant analysis of speech 2-86176
 superresolution ultrasonic imaging system by forced vibration of object 2-70774
 three-pass signals suppression in SAW filters 2-114557
 time delay spectrometry (*Danish*) 2-97298
 turbine rotor bore ultrasonic waveforms, advanced signal processing 2-57588
 turbulence effects on scanning with adaptive phased array 2-70773
 two-dimensional spectral estimation by linear prediction 2-60308
 ultrasonic imaging system using Doppler-modulated wave fronts 2-109142
 underwater signal processing, high-speed programmable digital systems 2-63143

acoustic streaming

- 2-D nonlinear acoustic streaming in field of highly attenuated sound beam 2-91120
 biological tissues, rectified diffusion and acoustic microstreaming by bubbles 2-57846
 Green's function methods 2-114521
 non-Newtonian fluids, reversal by finite amplitude sound wave 2-81147
 sphere near unsteady source, acoustic streaming 2-70738
 He, superfluid, acoustic streaming velocity meas. 2-110062

acoustic superradiance

No entries

acoustic surface wave devices *see surface acoustic wave devices***acoustic surface waves** *see surface acoustic waves***acoustic transducers**

- see also acoustoelectric transducers; ultrasonic transducers*
 acoustic sensors for measuring linear deformation under radiation conditions 2-102110
 array single-element transducer vibration analysis 2-55379
 clock sized dimensions, physical limitations (*French*) 2-55392
 concave flextensional acoustic transducer response, finite element analysis 2-114579
 design of acoustic probe insensitive to pseudo-sound (*French*) 2-75815
 fluid/structure interaction analysis in the consideration of directivity patterns of hull-mounted transducers 2-114583
 infrared sensor, using high temperature-dependent performance of liquid delay line oscillator 2-109150
 inhomogeneous matching layer with continuously changing acoustic impedance, impedance matching properties 2-109140
 instrumentation for noise analysis and control 2-75803
 magnetoacoustic coupling coeff. for periodic EM-acoustic transducers 2-81198
 modal anal. expt. 2-109139
 multiplexer using Lamb wave transducer dependent on terminal condition 2-70798
 nuclear reactor structure monitoring, acoustic emission technology appls. 2-57584
 piezoelectric, resonant, operation in radiating and receiving modes 2-114596
 profiled zone plate theory 2-91205

acoustic transducers continued

- rare-earth iron square ring dipole transducer 2-109149
 SAW devices with apodised transducers, transfer function deviation 2-97342
 scattering measurements, transducer effect 2-114565
 two-layered matching of complex impedances 2-70799
 underwater radiator, low freq., based on discrete periodic structs. 2-102968
 unidirectional transducers for SAWD, using interdigital transducers 2-91208
acoustic variables measurement
see also acoustic intensity measurement; acoustic noise measurement; acoustic wave velocity measurement; Q-factor measurement; ultrasonic measurement
 absorption and admittance coeffs., meas. in tubes (*German*) 2-86183
 acoustic resonators, precondensation phenomena in acoustic measurements 2-97330
 acoustic meas. of arc voltage applicable to arc welding and arc furnaces 2-55387
 building structures, material properties meas. 2-114553
 calibration of microphones, in infrasound range 2-55385
 digital frequency controller (*German*) 2-95368
 ellipsometry, EM couplingless acoustic wave generation in metals 2-65434
 films, acoustic props. meas. using reflection loss of acoustic transmission line 2-104211
 flute head joints, acoustical characterisation 2-75796
 frequency response of sound level meters (*Japanese*) 2-102985
 impedances of an orifice under turbulent boundary layer with pressure gradient 2-70723
 intracochlear acoustic pressure: comparison between direct measurements and models (*French*) 2-97322
 microphone temperature coefficient of sensitivity, meas. method (*Japanese*) 2-102984
 power response meas., elimination of noise 2-114573
 receiver sensitivity meas. in deadened meas. volume 2-60326
 reverberation time assessment, sound insulation test 2-75799
 SAW, visualisation, using SEM 2-86190
 sound level meters, temp. coeff. meas. method using const. temp. bath (*Japanese*) 2-102986
 sound transmission loss meas. technique for finite sized samples 2-60319
 test facility development in Zimbabwe 2-109131

acoustic velocity *see acoustic wave velocity***acoustic wave absorption**

- see also noise abatement; ultrasonic absorption*
 absorber embedding foamed polystyrene in pyramid gaps, design and expt. 2-97292
 active acoustic absorption, theoretical and practical problems (*French*) 2-75764
 active acoustic attenuation in air ducts conveying turbulent flows (*French*) 2-75948
 active sound absorber in ducts 2-70763
 air bubble curtain in water, effect on acoustic wave propag., history and theory 2-75750
 air bubble curtains in water effect on acoustic wave propag., expt. 2-75751
 antiferromagnets, relaxation processes, magnetoelastic waves, sound absorption meas. 2-77408
 atmospheric absorption, low-pass filter characts. 2-75748
 atmospheric attenuation of ultrasonic freqs., meas. significance for echolocation by bats 2-70745
 bulk reaching porous sound absorbers and a new boundary condition for thin porous layers 2-70719
 bulk reaction boundary condition, experimental investigation 2-70720
 calculator program to compute absorption by air 2-86155
 crystallising liquids, theoretical analysis 2-71583
 dirty cryst., lattice absorption of acoustic waves by phonons (*Russian*) 2-81899
 ducts, broadband active sound attenuators (*French*) 2-75765
 glass windows, double- and triple-layer, computation of sound transmission loss 2-70762
 gypsum wallboard partitions, sound transmission loss for steel stud partitions having cavities filled with glass fiber batts 2-70769
 gypsum wallboard partitions, sound transmission loss using 2x4 in. wood stud partitions 2-70770
 hearing protector, improved artificial head for meas. 2-86169
 hearing protectors, performance 2-94216
 heavy water, D₂O, liq., sound absorpt. mechanism, thermodynamic theory 2-81894
 Huygens and active acoustic absorbers in heterogeneous moving fluid (*French*) 2-114494
 liquid crystal, nematic-smectic A transition, anomalous sound attenuation, mode coupling theory 2-66131
 measurement of coefficients of absorption and admittance in tubes (*German*) 2-86183
 multimode expansion chambers, acoustic performance, steady fluid flow effects 2-97532
 nomographs, use in acoustic propagation and room acoustic, use of nomographs 2-60273
 normal mode attenuation in shallow water 2-62960
 organic solvents, sound vel. and liq. struct., laser light scatt. method 2-81895
 resonant-cavity parallel baffles as duct silencers, wind tunnels appl. 2-60294
 SAW attenuation measurement using reflection acoustic microscopy 2-102990
 sound transmission loss meas. technique for finite sized samples 2-60319
 superconductor, pure, nonlinear effects on propag. of shortwave transverse sound (*Russian*) 2-56786
 underwater sound, attenuation parameters from normal mode measurements 2-81154
 viscoelastic damping layers, effect on sound field generated in waveguides by flexurally vibrating plates 2-60290
 water, liq., sound absorpt. mechanism, thermodynamic theory 2-81894
 Ag₂Si, anomalies of acoustic attenuation and vel. at β - γ phase transition 2-109910
 Al₂O₃-SiO₂, porous ceramic, sound insulating characts. 2-97252
 Bi, nonlinear absorption of shear sound (*Russian*) 2-98203
 He adsorpt. on different vacuum flashed W surfaces, energy and tangential momentum accommodation coeff. 2-76805

acoustic wave absorption continued

- Nb, thermoelastic effect in acoustic loss at supercond. transition 2-104542
- NbH₃, sound attenuation, H content effects, elastic domains 2-81898
- NbH₃, twin boundary motion, sound attenuation study, microstruct. effects 2-81897
- Ne adsorpt. on different vacuum flashed W surfaces, energy and tangential momentum accommodation coeff. 2-76805
- Ni, sound excitation and transmission, resonant and nonresonant, 9.37 GHz 2-61076

acoustic wave amplification

- see also *acoustoelectric effects*
- light amplification, nonlinear effects in light/sound interaction 2-65426
- multilayer structure with periodic coating, SAW dispersion and amplification, theory 2-114522
- musical bows, acoustics 2-97320
- semiconductor, hypersound amplification, band nonparabolicity effects, Kane dispersion law and twoband approx. 2-61525
- sound impulse meas. and testing, planning of hall acoustics (*German*) 2-91160
- sound transmission by IR light for improving speech intelligibility (*German*) 2-91159
- two directional amplification by alternating drift of carriers in piezoelec. semicond. layer struct. 2-61527
- YIG:Ga-ZnO, SAW parametric amplification obs. 2-92332

acoustic wave attenuation see *acoustic dispersion*; *acoustic wave absorption*; *acoustic wave scattering*; *acoustic wave transmission*; *ultrasonic absorption*

acoustic wave diffraction

- see also *ultrasonic diffraction*
- double-layer waveguide with septum, normal mode diffraction analysis 2-70733
- finite strip, diffraction problems which display effects of multiple interacting edges 2-70730
- noise barrier in presence of atmospheric turbulence 2-70748
- normal mode SAW diffraction by interfaces 2-114519
- plane harmonic wave diffraction by embedded quarter space 2-86141
- plane wave, Rayleigh scatt. by a grating 2-91113
- plane wave diffraction at acoustically transparent wedge 2-65424
- resolution for images from Fresnel or Fraunhofer diffraction using the FFT 2-60306
- solid media, evaluation of random noise 2-114546
- underwater sound, boundary reflection/diffraction effects and the parabolic-equation split-step algorithm 2-114524
- waveguide, plane, with thin elastic walls, acoustic wave diff. by ideal screen 2-81137

acoustic wave diffusion see *acoustic wave scattering*

acoustic wave effects

- see also *acoustic magnetic resonance*; *acousto-optical effects*; *acoustoelectric effects*; *biological effects of acoustic radiation*; *sonoluminescence*; *ultrasonic effects*
- aircraft skin structs., sonic fatigue life estimation at room and elevated temps. 2-65428
- attached water jet, at curved wall, acoustic wave effects (*Japanese*) 2-91506
- cholesteric-nematic mixture, compressional deformation. response 2-97912
- cylinder with low-freq. oscills., heat exchange, sonic field effects 2-109168
- gases, acoustic wave oscills. effect on free energy 2-71062
- nonconserved order parameter system, periodic spinodal composition, nonlinear sound waves effect 2-81930
- rigid cavity, fluid filled, action of internal acoustic shock waves emitted by variable boundary surface 2-91305
- shell, cylindrical, nonlinear response to transient acoustic wave 2-91308
- shell, elastic cylindrical, effect of nonstationary internal wave 2-81283
- stellar chromospheres heating, role of acoustic shock waves in non-mag. regions 2-63366
- TDGL model, phase transition under periodic temp., critical point, sound wave effects 2-81931
- KCl, EM emission stimulated by acoustic wave 2-116301
- KH₂PO₄ crystal, forced resonance acoustic vibrs. (*Russian*) 2-103909
- LiF, EM emission stimulated by acoustic wave 2-116301
- NaCl, EM emission stimulated by acoustic wave 2-116301

acoustic wave interference

- see also *acoustic wave interferometers*; *acoustic wave interferometry*
- finite amplitude sound wave nonlinear distortion reduction 2-70737
- waveguide with statistically rough wall, modal description of acoustic field 2-102965

acoustic wave interferometers

- see also *acoustic wave interferometry*
- No entries

acoustic wave interferometry

- see also *acoustic wave interferometers*
- bacterial cultures, growth rate meas. using US interferometry 2-73399
- constantan film, evaporated polycryst., hypersound attenuation and phase vel., 1-24 GHz 2-109907
- diffuse acoustic field, acoustic mode selection, collinear acousto-optic diff. appl. 2-72450
- liquids, interferometric methods of US vel. and attenuation meas. 2-102992
- multibeam seismics, interferometry with under water sound (*Dutch*) 2-78581
- surface roughness meas. using acoustic interferometry and speckle correlation 2-75812
- Ag film, evaporated polycryst., hypersound attenuation and phase vel., 1-24 GHz 2-109907
- Cu film, evaporated polycryst., hypersound attenuation and phase vel., 1-24 GHz 2-109907

acoustic wave propagation

- see also *acoustic dispersion*; *atmospheric acoustics*; *Doppler effect*; *liquid helium sound propagation*; *seismic waves*; *shock waves*; *surface acoustic waves*; *ultrasonic propagation*; *underwater sound*
- acoustic centre of sound source, wave function anal. (*Japanese*) 2-102962
- acoustic impedance condition for ondulatd boundary 2-86140
- active attenuation of noise, monopole system 2-70724
- aerocolloids, distribution of finite-amplitude disturbances 2-91134
- air bubble curtain in water, effect on acoustic wave propag., history and theory 2-75750
- air bubble curtains in water effect on acoustic wave propag., expt. 2-75751

acoustic wave propagation continued

- amplitude attenuation of impulsive waves in random media based on travel time corrected mean wave formalism 2-70722
- anisotropy of acoustic transmission lines, parabolic approximation 2-70736
- atmospheric fog, nonequilibrium acoustic phenomena 2-70744
- beam-reinforced sandwich panel with fluid middle layer driven by line force 2-60291
- bounded sound beams incident on half-spaces and plates 2-114488
- bridge vibration, infrasound generation (*Japanese*) 2-91137
- chemically reacting systems, sound propag. in presence of thermodynamic couplings 2-67745
- circular duct containing assembly of circular cylinders, guided waves 2-60269
- circumferential propagation of acoustic boundary waves in boreholes 2-70726
- critical fluids, sound propagation, viscosity and sp. ht. theories 2-103252
- deep ocean sound attenuation at very low frequencies 2-86160
- Doppler effect, sound freq. spectrum 2-75742
- edge wave propag. in elastic media 2-60457
- finite amplitude acoustic noise propagating in a tube, statistical characteristics 2-91148
- finite-amplitude noise propagating in tube, changes of zero-crossing slopes 2-81150
- finite-difference treatment of interface conditions for the parabolic wave equation: The horizontal interface 2-70750
- Gaussian sound beams in 3-D medium 2-91109
- guided mode disappearance during upslope propagation in variable depth shallow water overlying a fluid bottom 2-114527
- gyrotropic tensor, non-zero coeffs. 2-61072
- highly filled polymeric rubber composites, struct. changes under stretching, acoustic obs. (*Russian*) 2-109703
- Howe's equation for sound propagation in turbulent atmosphere (*French*) 2-78824
- Lagrangian boundary condition and non-linear propagation as causes of Gaussian noise spectrum deformation 2-97255
- liquid with gas bubbles, nonlinear props. study 2-71582
- liquids, bubble dynamics study 2-60614
- in liquids confined in tubes with compliant walls 2-102961
- loudspeakers, column, propag. characts. 2-60339
- metals with open Fermi surface, sound pulse propagation (*Russian*) 2-61078
- moving mass sources, Hamiltonian approach 2-60270
- nonchromatic acoustic radiation vertical propag. in atmosphere, nonlinear effects 2-75749
- nondiffusive fluid, chemically reacting mixtures, acoustic wave kinetic props. meas. 2-99643
- nonhomogeneous thin elastic rods subjected to time-dependent velocity impact 2-81138
- ocean acoustic propagation modelling and source characterisation by spectral density matrix eigenvectors 2-60283
- oceanic acoustic rays in the deep six sound channel 2-73573
- open waveguide on a rough substrate 2-114502
- optical generation of sound: nonlinear effects, review 2-72452
- organ pipes sound generation mechanism, wave propagation on turbulent jets, amplitude growth 2-97319
- physical principles and applications, book 2-58570
- piezoelectric crystal, bounded, acoustoelectromagnetic pulse propag. 2-92702
- pipe flow, heat source interference, thermally induced acoustic oscills. 2-75953
- plane-wave approx. by acoustic intensity 2-86150
- porous materials, acoustic characts., wave propag., transmission and reflection 2-65423
- α -quartz, SAW propagation characts. on singly and doubly rotated cuts 2-78421
- quartz point defects, acoustic loss, IR and magnetic resonance results 2-98084
- quasilongitudinal leaky SAW excitation 2-70732
- radiation of ring-stiffened cylindrical steel shells in water (*German*) 2-97259
- random ocean front, mean multipath intensity relation for sound propag. 2-109101
- rarefied gas, Gross-Jackson model 2-60268
- rigid torus, analysis of acoustic propagation 2-86142
- SAW propagation on photoinduced grating in alternating electric field 2-91122
- SEM study of SAW propag. 2-113048
- shallow-water acoustic communication channel capacity estimates 2-60287
- shear horizontal acoustic waves, propag. on sinusoidally corrugated layered surfaces, theory 2-81148
- shear SAWs, excitation using wedge 2-91118
- short-range acoustic transmissions through cyclonic eddies between a submerged source and receiver 2-81153
- snow, acoustic properties, review 2-88928
- solid-solid interfacial wave propag., influence of external press. 2-61272
- sound propagation in a pipe containing a liquid of comparable acoustic impedance 2-86149
- sound pulse of finite amplitude generation, loudspeaker use, new method 2-91116
- sound radiation, fundamental concepts 2-91125
- spatial stochastic systems theory and appl. to fields and waves in random moving media 2-53535
- spherical wave propag. above an impedance boundary, asymptotic soln. 2-114493
- spinning acoustic mode propag. in partially choked converging ducts, computer model 2-70727
- strip-bars joined asymmetrically end-to-end 2-114501
- surface reverberation in the waveguide propagation of sound in the ocean 2-94397
- torsional dispersion relations of waves in an infinitely long clad cylindrical rod 2-86143
- transition sound radiation in turbulent medium 2-114498
- underwater sound field, normal modes and rays relation 2-91132
- underwater sound propagation, approx. to 3-D parabolic eqn. method 2-117315
- underwater sound propagation, effects of sub-surface bubble layer 2-114526
- variable area duct acoustics, general mapping procedure 2-97531
- variable area duct without flow, 1-D analysis 2-114492

acoustic wave propagation continued

- vegetation propag. rel. to noise red. 2-65427
- waveguide problems solved using finite element method 2-81145
- waveguide with statistically rough wall, modal description of acoustic field 2-102965
- WKBJ Green's function, appls. to acoustic propagation in horizontally stratified oceans 2-86158
- CO₂, radial laser-induced sound wave propag. and vibr. relax. 2-81439

acoustic wave reflection

- see also echo; reverberation; ultrasonic reflection*
- boundary and interface problems in regions with very rough boundaries 2-63829
- bounded sound beams incident on half-spaces and plates 2-114488
- complex impedance theory for surface acoustic wave interelectrode multireflection effects 2-114508
- free surface of initially stressed sandy medium 2-109097
- ground effect analysis, surface wave and layer pot. representations 2-60276
- inhomogeneous matching layer with continuously changing acoustic impedance, impedance matching properties 2-109140
- multibeam seismics, interferometry with under water sound (Dutch) 2-78581
- ocean bottom reflectivity, effect of near surface sediment layering 2-109102
- phenyl benzoate, specific acoustic resist., reflection method meas. 2-109908
- phenyl salicylate, specific acoustic resist., reflection method meas. 2-109908
- physical principles and applications, book 2-58570
- porous materials, acoustic characts., wave propag., transmission and reflection 2-65423
- practical estimation of panel with reflection coefficient 2-91106
- Rayleigh wave from periodic grooved zone on solid surface, Bragg refl. 2-61275
- room walls, distribution of sound angular incidence 2-75777
- SAW reflection from periodic surface structure at oblique incidence 2-114518
- seismic and marine sediment reflection response analysis 2-100307
- seismogram deconvolution, stacking and migration techniques 2-63144
- sound field reflection, effect on acoustic radiator 2-91112
- strip-bars joined asymmetrically end-to-end 2-114501
- successive-approximation methods in the problem of reflection of a plane sound wave from a series of fluid and elastic layers 2-91111
- transmission and reflection coeffs., one-dimensional acoustic wave equations 2-86148
- underwater sound, boundary reflection/diffraction effects and the parabolic-equation split-step algorithm 2-114524
- vibration transmission and sound radiation 2-91145
- (Pb, Nd)(Ti, Mn, In)O₃ piezoelectric ceramic SAW reflector, poled/unpoled domain array 2-91196

acoustic wave refraction

- see also acoustic dispersion; ultrasonic refraction*
- acoustogravity wave refraction in solar atmosphere 2-116759
- fluorocarbon gas-filled acoustic lens 2-75810
- perturbations equations and associated jump relations. Application to acoustic refraction (French) 2-91107
- sea shelf, acoustic wave vertical refraction and quasi modes, hydroacoustic study 2-73579
- sound focusing by a liq. sphere 2-60279

acoustic wave scattering

- see also ultrasonic scattering*
- backscattering from linear arrays of gas-filled bubbles 2-86145
- body of revolution with acoustically rigid walls, sound scattering properties 2-60272
- boundary and interface problems in regions with very rough boundaries 2-63829
- CW acoustic plane waves, scattering by sound 2-81146
- cylindrical vortex embedded in fluid at rest, appl. to reverberation studies 2-81143
- diffusion of a plane acoustic wave by a solid immersed cylinder: experimental and theoretical study of the resonances 2-55371
- elastic prolate spheroid, analysis and computation using T-matrix formulation 2-81139
- elastic sphere, lowest resonances study (French) 2-114715
- elastic surfaces, finite, bounding ducts or cavities near resonance, scatt. of sound 2-70729
- factories, sound scattering model, appln. to noise control 2-91149
- flexurally vibrating plate driven by sources of arbitrary impedance, compensation of acoustic radiation 2-60289
- hydroacoustic equipment, optimizing Cu spheres for precision calibration 2-60323
- inhomogeneity size and shape determination from scattering of low-frequency sound waves, Born approx. 2-83305
- k-space formulation of the scattering problem in the time domain 2-114487
- layered semiconductors, Brillouin scattering meas. using microprocessor-controlled Fabry-Perot interferometer 2-79655
- layered structures, scattering from inhomogeneities, analysis using T-matrix method 2-81140
- low frequency inverse scattering solution 2-102691
- measurements, transducer effects 2-114565
- multiple gratings of compliant tubes, analysis 2-114490
- multiple scattering of discrete spherical scatterers with quasicrystalline and Percus-Yevick approx. 2-70721
- multiple scattering of waves, diagnostic appls. 2-63830
- nearfield inverse scattering formalism for the three-dimensional wave equation: The inclusion of a priori velocity information 2-81164
- ocean noise field anisotropy, influence of sound scattering 2-62994
- ocean surface-scatter communication channel, Kirchhoff approach 2-91163
- physical principles and applications, book 2-58570
- plane sound wave scatt. by vortex pair 2-86285
- Rayleigh wave scattering by edge cracks, numerical simulation and expt. 2-114510
- rough boundary, extension of Kirchhoff's approximation 2-81141
- rough fluid-rigid interface, extension of Biot's theory for low-frequency sound 2-81142
- rough surface, coherent multiple scatt. 2-63828
- rough surface, fluid/solid 2-86146

acoustic wave scattering continued

- rough surface, two-sided boundary conditions for average scalar field 2-115363
- rough surface scattering, physical optics solutions 2-86144
- SAW waveguide with edge corrugation, scattering 2-55373
- SH waves scattering from surface breaking cylindrical cracks 2-86147
- shallow sea, underwater sound attenuation calcs. 2-94398
- sound scattering by rigid and elastic obstacles in water 2-86156
- spatial stochastic systems theory and its application to fields and waves in random moving media. II. Preliminary application to scattering and reverberation 2-86151
- sphere, elastic solid, acoustic medium reson. scatt. of finite sound beam (Ukrainian) 2-75745
- statistically inhomogeneous and anisotropic absorptive medium, two-freq. radiative transfer eqn. 2-63946
- symmetric bistatic volume, soln. 2-60307
- T-matrix approach to scatt. of acoustic, EM and elastic waves 2-89551
- transmission and reflection coeffs., one-dimensional acoustic wave equations 2-86148
- underwater acoustic medium as generalised communication channel 2-60284
- underwater sound, scattering calculations using the characteristic rays of the coherence function 2-81152
- volume backscattering coeff. meas. using 87.5 kHz sonar 2-73576

acoustic wave transmission

- see also ultrasonic transmission*
- inhomogeneous matching layer with continuously changing acoustic impedance, impedance matching properties 2-109140
- physical principles and applications, book 2-58570
- porous materials, acoustic characts., wave propag., transmission and reflection 2-65423
- prediction of sound transmission through corridors 2-97293
- sandwich panel with constrained viscoelastic damping layer 2-91151
- shallow-water transmission loss prediction using the Biot sediment model 2-86157
- sound transmission class calc. 2-60302
- sound transmission loss meas., specimen frame influence 2-114554
- structure-born sound transmission between source and receiving structure, effective mobilities, theory and expt. 2-114530
- structure-born sound transmission between source and receiving structure, effective mobilities, estimation procedures 2-114531
- underwater acoustic transmission channel characterisation 2-60286
- Ni, sound excitation and transmission, resonant and nonresonant, 9.37 GHz 2-61076

acoustic wave velocity

- see also acoustic dispersion; liquid helium sound propagation; shock waves; ultrasonic velocity*
- acoustoelastic effect of Rayleigh surface wave in isotropic material 2-98420
- binary molten salt mixtures, sound vel., excess thermodynamic parameters 2-76595
- castor oil, thermodynamics props. as a function of temp. and press., using sound vel. and density data 2-61166
- crystallising liquids, theoretical analysis of dispersion 2-71583
- β -cyanopropionic aldehyde, sp. heat and sound vel. determ. 2-61158
- 1,2-dichloroethane-alkanol mixtures, isentropic compressibilities and sound vels. meas. 2-81893
- explosive, aluminumized melt cast, axial longitudinal sound vel. US and weak shock techniques 2-76601
- glasses, transverse relax. time of defects, sound vel. study 2-103654
- graphite intercalation compound with K, Rb, Cs, phonon branches, neutron spectra study 2-76618
- liquid metals, non-simple, sound vel. and entropy, Percus-Yevick phonon description 2-61068
- magnetic phase transition, electron s-d orbital redistribution, sound vel. change 2-104620
- marine sediments, acoustic impedance, vel. and attenuation 2-58034
- metal, elastic moduli and sound velocity, quantum oscillations in mag. field, theory (Russian) 2-116042
- metals, Rayleigh acoustic waves, interaction with electrons, tilt effect acoustic waves, interaction with electrons, tilt effect 2-66595
- methane hydrate, acoustic vel. from Brillouin spectra obs. 2-109909
- organic solvents, sound vel. and liq. struct., laser light scatt. method 2-81895
- polyoxymethylene whisker reinforced polymers, Young's moduli, acoustic props. 2-93547
- polyvinylidene fluoride films, piezo- and pyroelectric effects, sound vel., thermally induced elec. oscils. 2-72429
- quartz, piezoceramic, synthetic, elastic and elec. characts. at 4.2K, acoustic device appl. (Ukrainian) 2-82784
- rubber, acoustic props., anomalous elec. field effects 2-103906
- rubber, natural, sound vel. and free retraction vel., strain effects meas. 2-115361
- strain wave velocity in single crystals and polycrystalline media, relation to thermal properties 2-61062
- superconductor, pure, nonlinear effects on propag. of shortwave transverse sound (Russian) 2-56786
- tetrafluoro-methane and methane, temperature dependence of some acoustical and thermodynamical properties 2-98201
- TMTSF salt, (TMTSF)₂PF₆, sound vel. meas. 2-61075
- water, supercooled, sound velocity anal., Brillouin light scatt. study 2-76597
- water properties, Fortran library of subroutines 2-96098
- water properties, STP computer code 2-96099
- water-ethanol, supercooled, sound velocity anal., Brillouin light scatt. study 2-76597
- water/Si boundary, leaky SAW rel. meas., by reflection acoustic microscope using line focus beam 2-104133
- Ag₂Si, anomalies of acoustic attenuation and vel. at β - γ phase transition 2-109910
- AlPO₄, berlinite, shallow bulk acoustic wave (SBAW) props. 2-98206
- Au/Al thin film diffusion couple, elastic props., SAW vel. study 2-82183
- BCl₃, vibrational excited state relaxations, IR double resonance absorpt. investig. (Chinese) 2-75254
- Bi₂Ge₂Si₂O₁₀ single crystals with low sound speed, Czochralski growth methods 2-62058
- D₂O, supercooled, sound velocity anal., Brillouin light scatt. study 2-76597
- Fe-Ni, Invar, magnetic phase transition, electron s-d orbital redistribution, sound vel. change 2-104620

acoustic wave velocity continued

- He adsorpt. on different vacuum flashed W surfaces, energy and tangential momentum accommodation coeff. 2-76805
³He BCC cryst., sound vel. and defects, temp. depend. 2-98380
⁴He, liquid, sound propagation near λ point, specific heat 2-71754
 $\text{Hg}_{1-x}\text{AsF}_x$, resistivity at high temp. and sp. ht. at low temp. 2-92585
 $\text{Na}_2\text{O-Li}_2\text{O-SiO}_2$, glass, energetics, from acoustic meas. 2-71590
 $\text{Na}_2\text{O-SiO}_2$, glass, energetics, from acoustic meas. 2-71590
 Ne adsorpt. on different vacuum flashed surfaces, energy and tangential momentum accommodation coeff. 2-76805
 (Pb, Nd)(Ti, Mn, In) O_3 , piezoelectric ceramic SAW reflector, poled/unpoled domain array 2-91196
 Pb, liq., phonon-like collective oscillation modes and related props. calc. (Russian) 2-65843
 Rb, liq., phonon-like collective oscillation modes and related props. calc. (Russian) 2-65843
 Se, amorphous, liq. and solid, struct. and phys. props., uniaxial compression effects 2-71352
 SiO_2 , vitreous, large block, elastic props., nonuniform distrib. 2-103898
 W, of gas, energy and tangential momentum accommodation coeff. 2-76806
 Xe hydrate, acoustic vel. from Brillouin spectra obs. 2-109909

acoustic wave velocity measurement

- see also *ultrasonic velocity measurement*
 compressional-wave velocity measurement in seabed materials by use of equipment deployed near, but above the bottom 2-73575
 films, acoustic props. meas. using reflection loss of acoustic transmission line 2-104211
 inhomogeneous matching layer with continuously changing acoustic impedance, impedance matching properties 2-109140
 laser-doppler anemometry, appls. to acoustic impedance meas. (German) 2-86182
 liquids, sound vel. difference meas. technique using interdigital transducers 2-81179
 phase velocity of SAW, meas. using comb filters 2-81183
 Rayleigh waves velocity measurements (French) 2-97417
 source coordinate determination taking into account effective propagation velocity 2-91192

acoustic waveguides

- anisotropy of acoustic transmission lines, parabolic approximation 2-70736
 damping, distinctions between boundary and distributed, in waveguide with cutoff frequency 2-109108
 depthwise-inhomogeneous lossy waveguide, spatial correlation of surface noise 2-114504
 double-layer waveguide with septum, normal mode diffraction analysis 2-70733
 finite element method, appls. to acoustic guided wave problems 2-81145
 flat overlay waveguides for SAW using acoustic surface impedance, finite element anal. 2-91182
 generalized orthogonality relations for the normal modes of a piezoelectric waveguide and their application in the theory of resonators 2-60340
 interference struct. of field in waveguide with statistically rough wall 2-102965
 noise field model 2-70734
 open waveguide on a rough substrate, sound propag. 2-114502
 plane waveguide with thin elastic walls, acoustic wave diff. by ideal screen 2-81137
 refined finite element anal. of clad fibre acoustic waveguide 2-109096
 rodlike, continuous matching transitions 2-102963
 SAW waveguide, scattering 2-55373
 thin-film travelling-wave light modulator using light diff. by acoustic wave 2-91039
 two-mode waveguide, randomly perturbed, wave propag. modeling 2-89550
 underwater acoustic waveguides, calc. of sound field, asymptotic behaviour of normal modes 2-109103
 viscoelastic damping layers, effect on sound field generated in waveguides by flexurally vibrating plates 2-60290

acoustic waves

- see also *acoustic emission; magnetoacoustic effects; shock waves; surface acoustic waves; ultrasonic waves*
 cosmology, nonlinear effects rel. to isothermal perturbations prod. by primordial sound spectrum 2-58511
 cosmology, nonlinear evolution of adiabatic sound wave power spectrum 2-58510
 disordered solids, acoustic and dielec. low temp. props., review 2-56094
 open-ended tube, gas resonant oscils. 2-60274
 oscillations theory, integral eqn. methods for boundary-value problems (German) 2-101189
 piezoelectric crystals, nonlinear props. of bulk and surface acoustic waves 2-98416
 plasma acoustic-Langmuir wave resonance interaction, integrability of eqns. 2-76125
 solar atmosphere, props. of wave motion in transition region and low corona from radio obs. (Russian) 2-100864
 solar chromosphere, parametric generation of acoustic-gravity waves in isothermal atmosphere 2-68718
 strongly fluctuating field, second statistical moment calculation 2-114497
 sung vowels inside and in front of mouth, pressure wave meas. (German) 2-102979
 thermoacoustic self-oscillations in a gas volume with internal heat supply sources 2-81404

acoustical laboratories

- see also *anechoic chambers; reverberation chambers*
 Institute for Research Coordination in Acoustics and Music facilities (Japanese) 2-81187
 underwater sound research, position control for acoustic probe 2-81193

acoustics

- see also *acoustic applications; acoustic devices; acoustic equipment; acoustic noise; anechoic chambers; architectural acoustics; atmospheric acoustics; audio acoustics; hearing; musical acoustics; photoacoustic effect; sound reproduction; ultrasonics; underwater sound; vibrations*
 Acoustical Soc. Amer. 103rd meeting, Chicago, IL, USA, 1982 2-68952
 bibliography, references to contemporary papers 1980/81 2-97251
 data analysis in noise and vibration problems, aeroacoustic appls. (French) 2-91194
 hot chocolate effect [acoustic mode of water column] 2-79303
 impact sounds loudness, comparison with and without steady duration 2-91154

acoustics continued

- infant vocalic utterances at 3, 6, and 9 months, acoustic features 2-109127
 physical principles and applications, book 2-58570
 physics data handbook 2-58565
 vibration-isolation elements, influence of elastic dissipation parameters, load characteristics, and degree of lateral constraint or damping properties 2-114543
 wave equations, boundary value problems 2-114495

acousto-optical devices

- see also *acousto-optical effects*
 amplitude-frequency characteristics of an acoustooptic modulator 2-97167
 bistable optical switching based on Bragg diffraction 2-60229
 chalcogenide glasses, selection criteria 2-87740
 correlator with an offset recording plane of the holographic filter 2-114408
 deflector, anisotropic, using optically active uniaxial crystals 2-81157
 deflector, travelling US field, meas. using laser anemometer config. 2-114575
 deflector for high-speed holo cinematography 2-70523
 fibre US sensor, single-mode 2-81098
 fibreoptic sensors, introduction 2-81105
 integrated and guided-wave optics, conf., Pacific Grove, CA, USA (Jan. 1982) 2-58550
 interferometric acoustic sensors, fibre coating optimisation 2-81099
 laser mirror using acousto-optical device meas. and control system, displacement 2-97051
 laser power stabilisation system 2-85990
 matched filter correlator performance 2-91028
 modulator, isolation and freq. conversion props. 2-91038
 modulator for Nd^{3+} :YAG ring laser with diff. acoustooptic mode feedback 2-97015
 modulators, appl. to high-resolution saturation spectroscopy 2-74518
 modulators with anisotropic diff. 2-86089
 multi-beam acousto-optical modulator used in laser recorder, light noise due to three-phonon scatt. 2-90805
 optical probe for rapid visualisation of acoustic fields inside microwave acoustic wave devices 2-55388
 pulse-echo transducer system 2-81204
 Raman-Nath modulator sound field state discrimination (Chinese) 2-97019
 signal processor, compact, for real-time Fourier transform. 2-114195
 signal processor, time-integrating, for discrete Fourier transformations 2-96839
 sonar system concept with acoustooptic sensing, fibre optic transmission and opt. signal processing 2-70752
 spectrograph for RATAN-600 radio telescope, design features and anal. 2-94606
 spectrometer for RATAN-600 radio telescope, appl. to H I 21 cm line obs. 2-94607
 thin-film travelling-wave light modulator using light diff. by acoustic wave 2-91039
 time-integrating acousto-optical processor for Fourier transform. 2-108818
 time-integrating correlator using guided-wave anisotropic acoustooptic Bragg diffraction and hybrid integration 2-60263
 transducers in iterative optical vector-matrix processors 2-80905
 tunable filter IR analyser, automated 2-109018
 tunable filters, review 2-55307
 tunable filters for high resolution spectral analysis 2-109019
 tunable optical separators, using multilayered thin film optical waveguides controlled by SAWs, characts. 2-81125
 two-component laser Doppler anemometer system using acousto-optical splitters (Russian) 2-114935
 wideband acousto-optic guided wave devices, new approach 2-75725
 Nd:YAG continuously excited laser resonator acousto-optic switch (Polish) 2-97006
 TeO₂ acousto-optic tunable filter, appl. in coherent forward scatt. spectrometry 2-88391
 TeO₂ tunable large ang. aperture acousto-optic filters for 1.0-1.6 μm region 2-109024
- acousto-optical effects**
 see also *acousto-optical devices*
 Bragg acousto-optic eqns., plane wave derivation, finite-width optical beam scatt. appl. 2-65164
 Bragg cell diffraction, patterns, appl. to optical processing 2-65154
 centrosymmetric crystals, EM wave nonlinear absorpt. due to excitation of sound 2-93152
 chalcogenide glasses, selection criteria, acousto-optic devices 2-87740
 cholesteric-nematic mixture, compressional deform. response 2-97912
 clearing of a nematic liquid-crystal film with free ends in a sound field 2-61872
 collinear acousto-optic diff. using diffuse acoustic field 2-72450
 diffused waveguide with a dielectric film, acoustooptic interaction 2-114425
 double-slit imaging by acoustically coherence-controllable illum. 2-90801
 extracavity laser band-shape and bandwidth modification 2-97021
 fibres, acoustically induced birefr. 2-109058
 fibres, single-mode utilising Ni coatings, acoustic desensitisation 2-109064
 hydrodynamic effects in the optical breakdown of a liquid 2-116149
 Lamb wave analysis through light polarization discrimination techniques 2-75875
 laser coherence control by US waves (Japanese) 2-86025
 light diffraction by acoustic waves for case when beam axes coincide 2-96831
 light diffraction by adjacent US beams, difference-differential eqns. 2-102971
 light diffraction by two adjacent US beams 2-109104
 light scattering kinematics from SAW in anisotropic media (German) 2-80895
 liquid crystals, appls. 2-110814
 liquids, US rel. and absorpt. meas. up to 1.5 GHz by high resolution Bragg reflection 2-75809
 metallic film, volume EM, surface polaritons and SAWs, theory of three-wave mixing 2-82937
 nematic liquid cryst. layer, acoustooptic effect on US inclined incidence (Russian) 2-99088

acousto-optical effects continued

- nematic liquid crystal films, acousto-electro-optical effects, thickness dependence meas. 2-116148
 nonlinear cryst., SHG and laser radiation diffr. by acoustic waves 2-65305
 nonlinear effects, in light/sound interaction 2-65426
 optical generation of sound: nonlinear effects, review 2-72452
 parametric amplification processes, noise amplification in quantum theory 2-70606
 periodic object imaging by acoustically coherence-controllable illum. 2-90802
 piezoelectric semiconductor, photoelastic effect, electron contrib. 2-92703
 Raman-Nath acousto-optical diffraction in phase grating plane 2-80897
 ruby laser radiation intensity, two-freq. acoustic modulation 2-97022
 solid-state laser radiation intensity two-freq. acoustic modulation 2-97022
 sound field imaging, low-frequency, by means of nematic liquid crystal acoustooptic cell 2-116150
 two-dimensional imaging by acoustically coherence-controllable illum. 2-90803
 wideband differential interferometric system using optical fibres 2-79663
 Ag film, volume EM, surface EM and SAWs, three-wave mixing 2-82936
 AlGaAs injection lasers, acoustooptic modulation resonances 2-55226
 BCl₃ molecule, fluorescence excited by intense IR laser radiation, pulse optical-acoustic-optimal effect (*Chinese*) 2-75338
 Ba(NO₃)₂, ionic-mol. cryst., US absorpt. 2-56100
 CdS crystals, effect of using variable rise-time optical pulses on acoustic domains, freq. spectra 2-82823
 CdS crystals, optical transmission modulation mechanisms caused by acoustic domains 2-82824
 Fe₂O₃, acousto-optical modulation, permittivity (*Russian*) 2-57051
 GaP crystal with induced anisotropy, anisotropic Bragg diffr. of light by ultrasound 2-61873
 LiNbO₃ crystal, anomalous acousto-optical interaction 2-77486
 LiNbO₃:Ti optical waveguide, acoustooptic interaction, wide-band, with mode conversion 2-91045
 Nd:glass laser radiation intensity two-freq. acoustic modulation 2-97022
 Nd:YAG laser, CW pumped acousto-optically Q-switched (*Czech*) 2-85987
 Nd:YAG laser radiation intensity, two-freq. acoustic modulation 2-97022
 Pb(NO₃)₂, ionic-mol. cryst., US absorpt. 2-56100
 Sr II pulsed gas discharge lasers, output power, acoustic wave influence 2-114348
 Sr(NO₃)₂, ionic-mol. cryst., US absorpt. 2-56100
 Te, IR-sound acousto-optical interactions 2-67025
 Ti-diffused optical waveguide, codirectional TE-TM mode conversion through acoustooptic interactions 2-65404

acoustoelasticity *see elasticity***acoustoelectric devices***see also acoustoelectric transducers*

No entries

acoustoelectric effects

- acoustic wave two directional amplification by alternating drift of carriers 2-61527
 acoustoelectronics, and piezoelectricity 2-99055
 bonded joint strength determ. by simulating electroacoustic channel of resonant instrument 2-83332
 extrinsic semiconductors and semimetals, Kane spectrum of electrons, nonlinear galvanomagnetic effects (*Russian*) 2-92660
 imaging of ultrasonic waves in solids, using transverse acoustoelectric effect in piezoelectric semiconductors 2-91190
 metallic ultrathin films on piezoelectric substrate, secondary acoustoelectric current 2-66594
 metals, Rayleigh acoustic waves, interaction with electrons, tilt effect acoustic waves, interaction with electrons, tilt effect 2-66595
 piezoelectric crystal, bounded, acoustoelectromagnetic pulse propag. 2-92702
 piezoelectric doped semicond., acoustoelectric amplification threshold, scattering effects, calc. 2-98701
 piezoelectric semiconductor, acoustic wave visualisation using photoluminesc. modulation 2-66592
 piezoelectric semiconductor, photoelastic effect, electron contrib. 2-92703
 piezoelectric semiconductor, US wave parametric instability 2-104436
 piezoelectric semiconductors, backward-wave generation in slightly nondegenerate acoustoelectric interaction 2-56648
 piezoelectric semiconductors, effects of a strong acoustic wave in a piezoelectric semiconductor 2-61526
 piezoelectric semiconductors, electro-acoustic effect theory 2-72032
 Rochelle salt, ferroelectric, acoustic emission, threshold elec. field 2-92701
 SAW, transverse, parametric excitation by microwave elec. field 2-87345
 semiconductor, hypersound amplification, band nonparabolicity effects, Kane dispersion law and two band approx. 2-61525
 semiconductor, longitudinal sound resonance parametric cyclotron instability 2-104438
 semiconductor, photoelectric effects from indirect interband and intervalley transitions assisted by acoustic waves 2-61519
 semiconductor, wide-band, optic phonon flux amplification by strong elec. field 2-61097
 semiconductor superlattice, narrow band-gap, acoustoelectric effect 2-104437
 semiconductors, Corbino disc geometry, acoustic waves amplification and generation 2-77129
 semiconductors, planar acoustomagnetolectric effect in the long-wave region 2-87344
 surface acoustoelectromagnetic waves, coupled, theoretical anal. 2-56647
 surface acoustoelectronic waves, parametric amplification 2-91124
 Ag discontinuous film, carrier mobility 2-82479
 Al discontinuous film, carrier mobility 2-82479
 Al_{0.5}Ga_{0.5}As, Γ -X-junction position, effect of alternating axial press. meas. 2-66449
 Au discontinuous film, carrier mobility 2-82479
 Bi, charge carrier drift in external fields, sound amplification, I-V nonlinearity, review (*Russian*) 2-115826
 Bi, superconducting amorphous film, SAW, acoustoelec. attenuation 2-56783
 CdS, AC cond. inhomogeneities, acoustic meas. 2-77131
 CdS, Brillouin scatt. study of stationary electro-acoustically amplified acoustic flux 2-77541
 CdS, electro-acoustic current fluctuations 2-98702

acoustoelectric effects continued

- CdS, electro-acoustically active, AC and DC cond. 2-77128
 CdS, piezoelectric interaction of elastic waves with carriers 2-115827
 CdS single crystal, electroacoustic interaction, nondegenerate, at sum and difference freqs., mechanism 2-92706
 CdS-ZnS(ZnSe)(ZnTe), acoustoelectric domains, Brillouin scatt. 2-82408
 Cu discontinuous film, carrier mobility 2-82479
 GaAs electrical surface props. determ. by thermo-optical acousto-electric voltage method 2-92720
 GaAs:Cr, exciton and subband-gap absorption, quenching and enhancement, acoustoelectric volt. spectroscopy 2-82235
 GaAs:Cr surface states, two-beam transverse acoustoelec. spectroscopy study 2-82463
 GaAs-oxide interface states, two-beam transverse acoustoelec. spectroscopy study 2-82463
 Ge, internal friction meas. in intrinsic and n-type crystals 2-81890
 n-InSb, acoustic and EM oscils., multitransit generation in alternating elec. field 2-66593
 p-InSb, acoustoelectric effects, ultrasonic attenuation 2-77130
 n-InSb, acoustoelectric stationary domains, elec. field distrib., meas. and second mode model 2-77127
 LiNbO₃, acoustoelectric charge injection obs. 2-92704
 LiNbO₃ piezoelectric plate, acoustoelectric convolution and correlation (*Russian*) 2-92707
 LiNbO₃-CdSe film, alternating field acoustoelectronic effect, CdSe cond. effects 2-72033
 LiNbO₃-CdSe multilayer struct. with periodic-array contacts, freq. doubling 2-92705
 Si, internal friction meas. in intrinsic and n-type crystals 2-81890
- acoustoelectric transducers**
see also earphones; headphones; hydrophones; loudspeakers; microphones
 gas transducers, possibilities for development and appln. 2-114593
 SrTiO₃ resonant dielec. electroacoustic transducer 2-86199
- acoustooptics** *see acousto-optical effects*
- actinide alloys**
see also actinide compounds; neptunium alloys; plutonium alloys; thorium alloys; uranium alloys
 No entries
- actinide compounds**
see also compounds of individual actinides, e.g. uranium compounds
see also actinide alloys
 carbides, extended regular soln. model appl. 2-105499
 mononitrides and monochalcogenides, Coghlin-Schneffer interaction and mag. orderings and excitations theory 2-72184
- actinide metal compounds** *see actinide compounds*
- actinide metals** *see actinides*
- actinides**
see also individual actinides, e.g. uranium
 criticality control, subcritical mass limits for ²³⁷Np, ^{238,240,241}Pu and ^{241,244}Cm 2-96118
 gamma-ray spectra, anal., environmental contamination appl. 2-54712
 isotope targets prep. for nucl. meas. 2-108196
 LWR fuel isotopic analyses, database 2-102079
 Mono Lake, California, chemistry of elevated concs. of actinides 2-94408
 Mono Lake, California, radionuclides concs. 2-94407
 nuclear target development, conf., Gatlinburg, TN, USA (Oct. 1980) 2-106997
 optical properties of metals, data collection 2-93138
 targets preps. for solid state research 2-108182
- actinium**
see also nuclei with
 No entries
- actinium compounds**
 No entries
- actinometers** *see radiometers*
- actinometry** *see radiometry*
- activation analysis** *see chemical analysis by nuclear reactions and scattering*
- active circuits** *see active networks*
- active filters**
 spectroscopy amplifiers with time-invariant filters, critical parameters regulation and design aspects 2-64810
 wideband active sound control, adaptive digital filtering algorithm 2-91153
 wideband active sound control system design algorithm 2-91152
- active networks**
see also active filters
 bridge for low temp. meas. (*Polish*) 2-95376
- active nitrogen** *see nitrogen*
- active oxygen** *see oxygen*
- actuators**
 artificial heart and auxiliary blood circulation systems, actuating devices 2-78497
- adaptive control**
see also adaptive systems
 dry etching process, implementation of adaptive process control 2-83258
 isothermal pressing of alloys, adaptive control system (*Russian*) 2-72720
 myoelectric hand controller with proportional control 2-68200
 PDX Tokamak, divertor discharge, position control procedure 2-86458
 wideband active sound control, adaptive digital filtering algorithm 2-91153
- adaptive optics**
see also optical phase conjugation
 coherence and adaptive systems, conditional coherence function 2-70502
 coherence and adaptive systems, conditional coherence function and effect of noise on meas. system 2-70503
 coherent optical adaptive technique system computer modelling algorithm 2-81050
 corner cube array coherent optical adaptive system as phase conjugator 2-81029
 deformable mirror adaptive optic systems, holographic phase conjugation and Strehl ratio 2-108824
 deformable mirror requirements 2-102900
 deformable mirror use as spatial filter, appl. to circular beams 2-55303
 fusion beam train phase aberration correction using deformable mirror adaptive optics 2-97031
 high power laser system aberration correction 2-97034
 image enhancement, adaptive filtering 2-60032

adaptive optics continued

- intracresonator phase conjugating mirror for beam distortion reduction 2-102824
- laser amplifier train compensation with nonlinear conjugation techniques 2-70619
- local optical correction system, beam control concept 2-102835
- mirror, deformable, primary, design, space telescope appls. 2-102895
- mirror, deformable glass, thickness profile determ. for variable focus device 2-70648
- mirrors with piezoelectric drives, local deform. meas., freq. depend. 2-109000
- nonlinear adaptive optics approaches at 1.3 μm 2-90997
- phase conjugation in compensated active imaging appls. 2-70617
- pseudo-conjugation/compensation of high-power optical trains, precision corner, lens and K-mirror arrays 2-102899
- resonant medium, 3 polarised wave interaction 2-65160
- retrodirective arrays for phase conjugation approx. 2-70647
- spatial information processing and distortion correction via degenerate four-wave mixing 2-70616
- telescope, ground, phase detector wave-front sensing and correction, different wavelength effects 2-78837
- wavefront compensation with pseudoconjugation, precision corner, lens and K-mirror arrays 2-70646
- wavefront distortions in power optics, conf., San Diego, CA, USA (Aug. 1981) 2-94890
- wavefront sensing and control aspects in a high energy laser optical train 2-102836

adaptive systems

- see also adaptive control; adaptive optics; learning systems; pattern recognition*
- filter, performance, with nonlinearities in correlation multiplier 2-97311
- isothermal pressing of alloys, adaptive control system (*Russian*) 2-72720
- telecommunication aids for elderly disabled population 2-68193

adders

- NQR spectrometer signal accumulator 2-89766

adding machines *see calculating apparatus***adherence *see adhesion*****adhesion**

- animal cell adhesion to glass, study by disturbed total internal reflection 2-57935
- bonded multilayer joint detection and location of non-bonds, acoustic impedance method 2-83323
- book, adhesion of dust and powder 2-94933
- cell adhesion phys., review 2-116894
- cohesion parameters applic. to wetting and adhesion, review 2-104119
- crack propagation at material interfaces, crack profiles determ. 2-116627
- creep torsionmeter, use in thermorheological charact. of struct. adhesive 2-93693
- dielectric monitoring of bonding process 2-111449
- disperse system, solid-liquid-gas, effects of surface tension and viscosity of liq. medium 2-66322
- epoxide adhesives, inelastic electron tunnelling spectroscopy appl. 2-56370
- epoxide resin adhesives, having different network structs., fatigue behaviour (*Japanese*) 2-82202
- epoxy resin-glass adhesion 2-78066
- epoxy systems, elastomer filled, viscoelastic fracture 2-67512
- failure, fracto-emission of electrons, positive ions and photons 2-77716
- fibres reinforced composites, fibre surface energy characterisation 2-56326
- fibre reinforced polymers coatings, internal stresses, reduction by physiochem. means 2-83187
- fibre reinforced thermoplastics, matrix-fibre adhesion strength estimation 2-105407
- glass fibre reinforced plastics, interface strength, temp. depend. (*Japanese*) 2-57419
- glass surface, review 2-92318
- glued connections, residual stresses meas. at low temps. 2-72911
- glued joints, strength eval. 2-72903
- industrial anaerobic adhesives (*Polish*) 2-88332
- infinite plane with curved notch, contact problem of elasticity theory 2-65539
- interfaces, adhesive, shear modulus gradients, US Rayleigh wave study 2-66338
- liquid metal-solid interface, true contact area, expt. study 2-56328
- metal film, ion plating on plastic substrate 2-116386
- metal-coated ABS plastics, interphase struct. (*Russian*) 2-61300
- metal-metal adhesive bonds, interfacial failure, short beam shear test method use 2-105414
- metallic thin film deposition methods using ion beam technology 2-57304
- mica, surface adhesion, effect of meniscus forces, appl. of macroscopic thermodynamics 2-56300
- model adhesive joints, failure loads when subjected to tension, compression or torsion 2-97454
- paint coatings on metals, protective properties, inhibitors influence 2-67655
- phagocytosis and cell spreading processes, role of adhesion forces 2-67979
- phase contact problems in presence of adhesion, method of fictitious absorpt. 2-114735
- polymer, high-performance, adhesive fracture energy, fracture mech. approach, T_g and relax. processes depend. 2-111403
- polymer cement, KR-3, for optical component fabrication, technological props. 2-102960
- polymer coating adhesion applied as hot melt, test temp. effect 2-67637
- polymer-metal interface chem. interactions, correlation with adhesion 2-78132
- polymers, coke filled, strength and deform. props. 2-83188
- polymers, friction coefficient eqn. 2-111327
- polyvinylbutyral films, adhesion to flat glass, measured by shear and exfoliation methods 2-57590
- PTFE, X-ray damaged, improved adhesion of Ni films, XPS study 2-76872
- rod pull out problem, theory and expt. 2-97467
- rods, cylindrical, stretched in traction, adhesive joining (*French*) 2-81293
- scale on steel, adhesion strength meas. methods 2-62369
- shear modulus gradients, US Rayleigh wave meas. 2-105408
- solar energy conversion technologies, solid-solid interface research needs, adhesion abrasion and polymer coatings 2-88247
- steel joints, polymer glued, strength eval. 2-72903
- surface films and metallurgy related to lubrication and wear 2-109902

adhesion continued

- surface science, conference, Liverpool, England (April 1981) 2-58538
 - thin evaporated films, adhesion, nature of forces, influencing factors 2-87975
 - thin film-substrate systems, problems, resolution 2-86235
 - toner photoconductor adhesion in electrophotographic system, charge, size and shape effects 2-107437
 - US NDT data, assessment of adhesive props. using pattern recognition anal. 2-62333
 - US study of interface elastic props. 2-83340
 - varnish coatings on metals, protective properties, inhibitors influence 2-67655
 - Ag balls, diffusion bonding to Cu substrate and vice versa 2-72940
 - Ag, optical films, mechanical props. 2-82191
 - Al alloy conversion coatings, corrosion protection, adhesive bond durability, cracking 2-83270
 - Al, optical films, mechanical props. 2-82191
 - Al-Mg alloy adhesive joints, surface anal. and bonding 2-116679
 - $\text{Al}_2\text{O}_3\text{-Cr}_2\text{O}_3$ solid solutions, wetting by liq. metals, Cr_2O_3 content influence 2-61261
 - Au atom sticking coeff. on $\text{MgO}(001)$ meas. with torsion microbalance 2-66374
 - Cr, optical films, mechanical props. 2-82191
 - Cr-Au film, vacuum deposited, partial press. and temp. effect on props. 2-76871
 - Fe-base binary alloys, in contact with SiC single cryst., adhesion, friction and wear 2-88199
 - MgF_2 films, vacuum deposited, Young's modulus, internal stress and internal friction meas. 2-82185
 - $\text{MgF}_2(\text{CaF}_2)(\text{BaF}_2)$, optical films, mechanical props. 2-82191
 - Mo, adhesion interaction with Mo, Nb, MoSi_2 and NbSi_3 , silicising effect 2-72941
 - Nb, adhesion interaction with Mo, Nb, MoSi_2 and NbSi_3 , silicising effect 2-72941
 - Ni, electroless deposits, heat treatment effects on physical props. 2-57384
 - Se, ion plated on α -brass, adhesion and interface chemistry 2-66405
 - Ta protective coatings on Al, Cu, AISI 316L, Inconel 600 for fusion reactor appl. 2-74911
- adiabatic compression, plasma *see plasma heating***
- adiabatic demagnetisation *see magnetic cooling***
- adion *see adsorption***
- administrative data processing**
- see also management information systems; manufacturing data processing; medical administrative data processing*
 - emergency response system, microcomputer based for public officials 2-102215
- admittance, electric *see electric admittance***
- admittance, electric, measurement *see electric admittance measurement***
- ADP *see administrative data processing***
- ADP (ammonium dihydrogen phosphate) *see ammonium compounds***
- adsorbed layers**
- see also monolayers*
 - acetone, adsorbed on transition metal surface, AES study 2-110136
 - acetone on porous quartz, diffusion of adsorbed gas 2-66294
 - acetylene, adsorbed on Pt(111), angle resolved photoemission using synchrotron radiation 2-115564
 - acetylene adsorbed on Ni(111), full dynamical LEED anal. 2-115521
 - adatom cluster diffusion on surfaces 2-98435
 - adatom diffusion, Monte Carlo anal. 2-115568
 - adatom structures, model 2-87011
 - adsorbates and small condensed mols. containing O and N, X-ray excited Auger spectra 2-83433
 - AES and UPS studies 2-110133
 - aromatic mols., on AG (110) surface, enhanced photofragmentation, Raman study 2-116725
 - atom-phonon interaction at a surface 2-98425
 - atoms, localised modes linear response theory study 2-82115
 - atoms and mols. on metal surface, IR and EELS vibr. spectroscopy study 2-116162
 - benzene, on metal particles, vibr., enhanced Raman effect study 2-80631
 - carbon tetrachloride, on graphite (0001), appl. of Landau theory to 2D struct. phase transition 2-76802
 - centrosymmetric mols., optical SHG 2-108964
 - chemisorbed layers, island size distrib., LEED and Fourier anal. 2-115510
 - citrates ions adsorbed on Au sol particles, surface enhanced Raman scatt. 2-116195
 - CO, adsorbed on Mo, mol. dissociation, pulsed voltage and pulsed laser atom-probe study 2-76828
 - coalescence and cluster motion on amorphous surfaces, mol. dynamics simulation 2-56351
 - commensurate adsorbed surface phases, domain walls and melting 2-110148
 - composite materials, local field intensities 2-82810
 - covalent and ionic systems Auger induced decomposition/dissociation 2-76834
 - diametric molecules, dissociation, surface mag. field, laser and phonon continuum effects 2-87063
 - diffraction lines of substrate, stacking faults effects 2-92361
 - diffusion in surface layers, review 2-104140
 - diffusion of adatoms, molecular dynamics study 2-87061
 - diffusion of adsorbates, particle hopping lattice gas model 2-92362
 - 1,1-diphenylethylene adsorbed layer, reaction intermediates, resonance Raman spectra 2-73014
 - disordered struct., secondary electron emission and elastic electron reflection study 2-110994
 - dye, adsorbed, photoemission yield spectroscopy 2-87953
 - dye adsorbed molecule surface interaction, polarised absorpt. and fluoresc. spectroscopy 2-71795
 - dye films, adsorbed, electron affinity, statistical energy levels 2-58937
 - dynamic surface tension and surface diffractal viscosity, meas. technique for mixed monolayers 2-98386
 - dynamics of systems with two interfaces 2-115523
 - epitaxial thin film growth, 2D-3D transition 2-87110
 - ESD, angular resolved, for surface struct. determ. 2-110107
 - ethylene, adsorbed on Ni, SIMS and thermal desorp. study 2-56353
 - ethylene, adsorbed on Pt(111), angle resolved photoemission using synchrotron radiation 2-115564

adsorbed layers continued

ethylene, chemisorbed on O precovered Ag(110), EELS cross-section, energy depend. 2-56364
 ethylene on Fe(110), adsorbed layers, characterisation by Auger electron spectra, decomposition 2-73029
 ferritin, adsorbed on W, field desorption imaging technique 2-76829
 films, wetting and clustering 2-86979
 fine structure anal. 2-109639
 formaldehyde, adsorbed on Ag(110), oxidation, EELS study 2-116728
 Fourier transform IR emission spectra, surface analytical technique 2-116746
 Fourier transform reflection IR spectroscopy of adsorbed species, instrumental considerations 2-89831
 Grafoil, of Kr submonolayers, EXAFS study 2-82139
 graphite, ³He, ⁴He multilayer physisorption, mean-field theory 2-87050
 graphite with adsorbed ³He and ⁴He, multilayer physisorption, mean-field theory 2-110152
 graphite with adsorbed He, statistical mechanics calcs. 2-104141
 HCP, statistical model of form. 2-98440
 hexagonal cryst. with overlayer, elastic surface waves anal. 2-56318
 HTAB adsorbed on Ag and Ni, IR specular reflection spectra 2-116291
 impurities adsorbed on alkali halide laser window surfaces, photoacoustic spectroscopy 2-60192
 indirect interaction on metal surfaces 2-71806
 inert gas monolayers on Ni (110) and Ga film, UPS meas. 2-57261
 inorganic ions adsorbed on Ag and Ni, IR specular reflection spectra 2-116291
 IR spectra for adsorbed mols. on metal particles, metal-surface selection rules calc. 2-90552
 large molecule layers, surface struct. determ. by LEED, combined space method 2-55814
 liquid capillary bridges between adsorptive solid spheres, physical model 2-98437
 liquid-liquid interface, adsorbed species surface diffusion and convection, theory 2-98387
 long-range correls., correl. functions and density profiles calc. 2-82138
 metal surface, adsorbed mols. giant Raman scatt., review 2-110966
 metal-adsorbed mol. system, enhanced IR absorption and reflection spectra study 2-77527
 metals, adsorbed particle, spontaneous Raman processes, cross section growth (Russian) 2-59810
 metals, adsorbed vibrationally excited molecules, indirect vibr. coupling, jellium model 2-82116
 methane, adsorbed film, orientational transitions 2-98443
 methane, coadsorbed with CO on W, interactions, ESD and flash desorpt. study 2-110163
 methane on graphite, rot. diffusion, incoherent quasielastic neutron scatt. study 2-56352
 methane on graphite (0001), phase diagram, specific heat study 2-98248
 methanol, adsorbed on transition metal surface, AES study 2-110136
 methyl acetate, adsorbed on transition metal surface, AES study 2-110136
 microvolt and millivolt molecular tunnelling spectroscopy by neutron scattering 2-71292
 molecule, energy loss intensities, role of electrodynamic interactions 2-62029
 molecules, overtones and multiphonon processes in EELS, vibration spectra 2-99238
 molecules adsorbed on small metal sphere, slow electron inelastic scatt. 2-116312
 molecules on metal surface, enhanced IR absorption 2-87797
 monolayers, commensurate-incommensurate transitions, chem. pot. and press. induced 2-115405
 morphology and composition of crystal surfaces, book contrib. 2-66333
 nitrobenzene, adsorbed on Ni (111), surface Raman spectra without surface enhancement obs. 2-77504
 nitrobenzene on Ni(111), surface Raman spectroscopy without enhancement 2-67061
 non-adiabatic processes of adsorbates, theory 2-115543
 nucleic acid bases adsorbed on Ag electrode, surface enhanced Raman spectra 2-72485
 order-disorder transitions, phase diagrams, adsorption isotherms 2-98275
 order-disorder transitions 2-115549
 order-disorder transitions on surfaces, classification, review 2-92323
 organic dyes, quantum yield and luminesc. spectra 2-116243
 overlayer ordering and epitaxy, thermodynamics 2-110205
 perylene red mols., vacuum deposited on Al₂O₃, interface orientation, reflection absorpt. IR spectra study 2-76822
 photoelectron spectroscopy using synchrotron radiation 2-93373
 phthalocyanine mols., vacuum deposited on Al₂O₃, interface orientation, reflection absorpt. IR spectra study 2-76822
 polyethylene treeing phenomena obs., effect of adsorbed O₂ 2-99040
 polymer, diffuse layer, loop weight distrib. (French) 2-110137
 polymer chains on square lattice, critical exponents for self-avoiding lattice walks 2-107250
 polymer grafted on solid surface, free and adsorption, configuration 2-82134
 polymers, adsorbed at solid-soln. interface, config. investig. by small angle neutron scatt. and NMR 2-114140
 potentials of mean force for adatoms on surfaces 2-98465
 pyridine mols. on Ag-Cu electrode, surface enhanced Raman scatt. 2-99131
 pyridine, adsorbed on Ag, surface enhanced Raman scatt., role of direct surface interaction 2-77537
 pyridine, on Ag, surface enhanced Raman scatt. 2-82859
 pyridine, on Ag electrode, photochemical activation effect on surface enhanced Raman scatt. 2-110828
 pyridine, on Ag particles, vibr., enhanced Raman effect study 2-80631
 pyridine, on Ag-Au, surface enhanced Raman effect, role of electron scatt. 2-61907
 pyridine, on Pt, surface enhanced Raman scatt. induced by Ag adatoms 2-110871
 pyridine, resonantly stimulated desorption from Ag surfaces, by polarised IR laser radiation 2-104149
 pyridine adsorbed on Ag surface, surface enhanced Raman scatt. 2-82838
 pyridine on Ag, surface enhanced Raman scatt., chemisorpt. and charge transfer role 2-110872
 Raman scattering, surface enhanced, surface-plasmon-polariton resonances, classical calc. 2-77529

adsorbed layers continued

rare gas adsorbates, local work function determ. by photoemission 2-82436
 rare gas physisorbed monolayer on graphite, orientational epitaxy of wall near commensurate-incommensurate phase transition 2-66355
 rhodamine dyes, submonolayer coverages on SiO₂, reson. second harmonic generation, UV study 2-55261
 semiconductor surface, adsorbed layers electronic struct. changes, theory 2-82426
 silver hydrozole, adsorbed perylene, giant Raman scatt. (Russian) 2-57099
 small particle systems, spontaneous elec. dipole moments 2-59990
 stearic acid Langmuir film adsorbed on Ag and Ni, IR specular reflection spectra 2-116291
 superlattices, hypersound generation through EM excitation 2-56319
 surface and adsorbate structural studies by photoemission in the $h\nu=50$ -to 500-eV range 2-104123
 surface crystallography, ion scatt. studies 2-110106
 surface electron barrier, adsorbate screening effect, improved Thomas-Fermi calc. 2-115865
 surface enhanced Raman scatt., chemisorpt. and charge transfer role 2-110872
 surface enhanced Raman spectroscopy of adsorbate on metal surface 2-99133
 symmetry calc. for adsorbed mol. lattice on substrate lattice 2-92363
 thiophene reactive adlayer on Ag foil, molecular SIMS 2-87056
 thiourea, adsorbed on Ag electrode, surface enhanced Raman scatt. 2-99200
 thiourea, on Ag electrode, photochemical activation effect on surface enhanced Raman scatt. 2-110828
 transmission characteristics of adsorbate covered metal surface model 2-72599
 two-dimensional incommensurate solids, one-harmonic structures 2-82143
 two-dimensional matter systems on solid surfaces (French) 2-56338
 vibrating atoms, electronic struct., mag. field effect, theory 2-110435
 vibrational freqs. on metal surfaces, charge transfer effects, EHD model 2-56323
 water, on Au electrode, effect on electrolyte interface, work function and pot. of zero charge meas. 2-61557
 Ag (100) surface, adsorbed Cl⁻, fractional coverage, dipole sum calcs., appl. to enhanced Raman spectra 2-87004
 Ag, Ar multilayer physisorption, mean-field theory 2-87050
 Ag film, adsorbed mol. charge transfer excitation, EELS obs. 2-62027
 Ag, on Pt, inducement of surface enhanced Raman scatt. from adsorbed pyridine 2-110871
 Ag, on Si (111), struct. anal. by LEED/const. momentum transfer averaging technique 2-56347
 Ag on W thin plates, effects on conduction electron diff. and reflection (Russian) 2-71959
 Ag on W thin plates, effects on conduction electron diff. and reflection (Russian) 2-82339
 Ag with adsorbed pyridine, coadsorbed CO, effect on surface enhanced Raman spectra 2-87031
 Ag with ethylene submonolayers, Raman scatt. spectra line intensities (Russian) 2-110857
 AgBr, surface pot., adsorbed layer effects, expt. study 2-92724
 Ag(110) of H₂O, adsorption and reaction studies 2-87034
 Ag(111), adsorbed pyridine, benzene and pyrazine, electron energy loss studies 2-87032
 Al, adsorbed on GaAs (110), surface structure, first-principles pseudopot. determ. 2-110143
 Al, adsorbed on GaAs(110), surface struct., LEED study 2-110120
 Al with adsorbed Ar, local-field effect in optical reflectance 2-104834
 Ar adsorbed on Al(111), photoemission studies 2-62048
 Ar, on Ag (111), two-dimens. gas phases 2-61293
 Ar, on Co₃O₄ powder, study by surface differential diff. meas. 2-82124
 Au atom sticking coeff. on MgO(001) meas. with torsion microbalance 2-66374
 Br, on Si (111), surface registration, X-ray standing waves determ. 2-104151
 Br₂ on porous quartz, diffusion of adsorbed gas 2-66294
 C adsorbed on Ir, oxidation kinetics 2-66373
 C on Ru(0001), adsorbate band dispersions, photoelectron spectra study 2-66446
 CH₃O on Cu (100), electron scatt. from surface vibr. modes 2-98424
 CN adsorbed layer, picosecond surface Raman spectroscopy, surface damage effects obs. 2-93170
 CO, adsorbed on Ag, surface enhanced Raman scatt., role of direct surface interaction 2-77537
 CO, adsorbed on Pt, oxidation, photocatalytic effect 2-111519
 CO adsorbed layer, disordered, on Ni(001), He scatt. study 2-98445
 CO adsorbed on Cu (100), IR spectra study 2-56359
 CO adsorbed on Cu(Pd)(Ni)(Pt) (100), ordered structs., LEED, EELS, IR data 2-98456
 CO adsorbed on Ni (001), core level angle resolved XPS, single scatt. theory, mol. vibr. effects 2-111034
 CO, adsorbed on Pt, photoemission reson. enhancement via autoionisation obs. 2-77700
 CO, adsorbed on Pt (111), vibrational spectroscopy, EELS and IR 2-110125
 CO, adsorbed on transition metal surface, AES study 2-110136
 CO adsorbed periodic overlayer on Ni(100), adatom vibr. mode freq. estimation 2-87006
 CO adsorption on Mo(100), high resolution EELS study 2-71794
 CO chemisorbed on highly dispersed Pt, double NMR study 2-104747
 CO, chemisorbed on Pd-Cu (110), Pt core level shifts, XPS study 2-77143
 CO, chemisorbed on Pt(111), reson. photoemission obs. 2-105039
 CO, chemisorbed on Rh, dissociation mechanism 2-57638
 CO, coadsorbed with methane on W, interactions, ESD and flash desorpt. study 2-110163
 CO, free and adsorbed mols., electron energy loss spectra, scatt. process 2-70414
 CO on Cu (100), electron scatt. from surface vibr. modes 2-98424
 CO, on Ni (111), energy loss intensities, role of electrodynamic interactions 2-62029
 CO, on Pt (111), scatt. cross sections for thermal He and H₂ beams 2-105027
 CO, on W[100], ($\sqrt{2}\times\sqrt{2}$)R45° surface phase, LEED struct. anal. 2-110142
 CO₂, adsorbed on O covered Ag (110), vibr., EELS study 2-87924

adsorbed layers continued

- CO₂, adsorbed on O covered Ag (110), vibr., EELS study 2-87924
 Cl, adsorbed on Si and Ge(111), surface EXAFS study 2-110977
 Cs adlayer on reconstructed Ir, Pt and Au surfaces, structure, LEED study 2-115509
 Cs on epitaxial Cr film on W (110), effect on work function, two-stage oxidation phenomenon (*Russian*) 2-61298
 Cs, on W, adatom indirect interaction 2-71806
 Cs, on W, displacement by Sm 2-104164
 Cu, of CO, laser flash desorption, surface diffusion 2-87039
 Cu, surface (110), O covered, surface reconstruction, Ne⁺ and H₂O⁺ ion scatt. 2-61268
 Cu(110), of Xe, commensurate-incommensurate transition, PES study 2-104154
 Fe film, evaporated at oblique incidence, columnar struct. 2-98493
 Fe-polydimethylphenylsiquenone, filled polymer, ferromag. adsorbents, mag. props. 2-66871
 Fe(CO)₅, on (0001) graphite, dynamical props., Mossbauer study 2-56342
 Fe-phenol-formaldehyde resin, filled polymer, ferromag. adsorbents, mag. props. 2-66871
 Fe(100) of H₂O, bonding and electron energy loss spectra 2-87030
 Gd (0001), adsorption of Xe, charge transfer instability absence 2-115552
 Ge, of O, and H₂, influence on surface cond. (*Russian*) 2-72047
 Ge-GaAs (110) interface electron states, polarisation dependent UPS study 2-110455
 H (D), adsorbed on diamond (111), H termination, EELS study 2-110145
 H adsorbed on Ge (111), electron states, angular resolved UPS study 2-110414
 H, adsorbed on Pd (100), phase diagrams for a square lattice with two- and three-body interactions 2-115556
 H adsorbed on Si(001), 2X1 and 1X1 structs., inelastic LEED study 2-92710
 H adsorbed on W (001), phase suppression by steps 2-98409
 H, adsorbed on W (110), angle resolved UPS and EELS study 2-92360
 H, chemisorbed on GaP(As) (110), pseudopot. calc. 2-110423
 H film, spin polarised, fluctuation correl. and superfluidity (*Russian*) 2-82065
 H on GaAs(110) electronic struct. calc. 2-110422
 H, on metal surface, electronic damping of adsorbate vibrations 2-104135
 H, on Ni (100) and (111), binding props., effective medium theory calc. 2-82137
 H, on Ni (100) and (111), vibr. freq. calcs. 2-98422
 H, on Pt (111), water form, with coadsorbed O, XPS and temp. programmed reaction obs. 2-83411
 H on W (100), induced surface reconstruction, polarised LEED study 2-56308
 H on W(001), desorption kinetics and surface restructuring 2-87025
 H, surface segregation on Si (111) by photon stimulated desorption at Si K edge 2-110154
 H⁺, electron stimulated desorption from Nb (110) and O-contaminated Nb (100) and Ta (110) 2-110153
 H₂, adsorbed on W (111), ang. resolved photoemission meas. and LCAO calc. 2-83008
 H₂, condensed layers on Cu and Au, photoemission study 2-93374
 H₂, on Fe(110), phase transitions, phase diagram, LEED study 2-98276
 H₂, on metal surface, electronic damping of adsorbate vibrations 2-104135
 H₂, on W thin plates, effects on conduction electron diff. and reflection (*Russian*) 2-71959
 H₂, on W thin plates, effects on conduction electron diff. and reflection (*Russian*) 2-82339
 H₂, solid, H atom adsorption temp. depend. 2-82074
 H₂O on amorphous Si-H, effects on elec. cond. 2-71984
 3He, adsorbed on thick Ne films, heat capacity 2-98442
 He films on solid Ne, two dims. electrons, electron mobility meas. 2-61246
 He of spin polarised atomic H, quasi-two dimensional character (*Russian*) 2-82073
³He, on Grafoil, melting, neutron scatt. study 2-71763
⁴He, adsorbed on SiO₂, isotherm, US attenuation phonon echo meas. 2-104107
⁴He film, adsorption of spin polarised H, surface polaron 2-82075
⁴He film, on pyrolytic graphite, third-sound vel. and superfluid onset 2-61242
⁴He film with adsorbed spin polarised atomic H, spin relax. 2-82067
⁴He, on graphite substrate, superfluid transition, calorimetric study rel. to third sound meas. 2-104108
⁴He, superfluid, adsorbed film, density profile calc. 2-104109
⁴He, superfluid with adsorbed stabilised atomic H, surface spin relax. 2-104116
 I, adsorbed on Si and Ge(111), surface EXAFS study 2-110977
 I, on Si(111)7X7 and Ge(111)2X8, surface EXAFS study 2-66360
 I₂, coadsorbed with I₃⁻ on Pt and Pd, surface enhanced Raman spectra 2-99132
 K adsorbed on graphite (0001), LEED study 2-76791
 KCl, of pyridene, gas-surface interactions, IR laser stimulated 2-87037
 Kr adsorbed on Al(111), photoemission studies 2-62048
 Kr, on Ag (111), two-dims. gas phases 2-61293
 Kr, on Cu (110), surface structs. and uniaxial phase transitions 2-66367
 Kr, on graphite, commensurate-incommensurate phase diagram, helical Potts model 2-82136
 Li, on W, adatom indirect interaction 2-71806
 Mg surface, adsorbed O₂ layer, photoelectric work function meas., Fowler method 2-87371
 Mn overlayer on Cu(100), LEED, AES and UPS study 2-87111
 Mo, of O, effect on excited particle emission (*Russian*) 2-87073
 Mo with monolayer Cs, adsorbed H, negative H ion production by sputtering 2-99253
 N₂, chemisorbed on Ni (110) and physisorbed on Pd (111), angle resolved UPS and EELS study 2-92359
 N₂, on W(100), (√2X√2)R45° surface phase, LEED struct. anal. 2-110142
 NH₃, adsorbed on Fe(110), vibrational EELS spectra 2-98459
 NH₃, adsorbed on transition metal surface, AES study 2-110136
 NH₃ on amorphous Si-H, effects on elec. cond. 2-71984
 Ne, on basal plane graphite, orientational alignment 2-66361

adsorbed layers continued

- Ne on graphite, fluid-solid transition line, phase diagram, lattice constant, LEED study 2-66185
 Ni (110), adsorbed H, vibr. modes, EELS study 2-76797
 Ni, of pyridene, gas-surface interactions, IR laser stimulated 2-87037
 Ni(100), with adsorbed O, electron energy loss spectroscopy 2-87029
 O adsorbed layer, disordered, on Ni(001), He scatt. study 2-98445
 O adsorbed on Al surfaces, K-edge, angle-resolved XPS and extended X-ray absorpt. fine struct. spectroscopy appl. 2-70339
 O adsorbed on Ni(110), angle resolved UPS study 2-77699
 O adsorption on Ru(001), Ni(111) and Ni(100), SIMS study 2-98448
 O, chemisorbed on Ni (100), p(2X2) and c(2X2) structs., surface EXAFS study 2-93326
 O, chemisorbed on V and Nb, sputtering, secondary ion emission escape vel. depend. 2-77679
 O chemisorption on Al (111), quantum chem. cluster model 2-110127
 O, on Al(111), cluster and DVM approach to LEED pot. generation 2-98439
 O, on epitaxial Cr film, on W (110), effect on work function, two-stage oxidation phenomenon (*Russian*) 2-61298
 O on Ni (001), c(2X2) binding distance, LEED expt. and theoretical study 2-104152
 O on Ni (100), ordered struct., EELS spectrum, theoretical anal. 2-67162
 O, on Ni (100) and (111), vibr. freq. calcs. 2-98422
 O on Ni (110), atomic structure, LEED, AES, EELS and work function study 2-66329
 O, on Pt(111), water form, with coadsorbed H, XPS and temp. programmed reaction obs. 2-83411
 O, on Pt(111) and Pt(997), thermal He atom scatt. (*German*) 2-87001
 O₂, adsorbed on Cu low index planes, LEED fine struct., surface barrier resonances obs. 2-56309
 O₂, adsorbed periodic overlayer on Ni(100), adatom vibr. mode freq. estimation 2-87006
 O₂, on a-Si:H thin film, electronic struct. XPS and UPS study, chemical shift 2-57254
 O₂, on GaAs cylindrical sample, orientation depend., AES meas. 2-115565
 O₂, on W thin plates, effects on conduction electron diff. and reflection (*Russian*) 2-82339
 Pb, on Cu(100), LEED studies 2-98450
 Pb on GaAs (001), electronic struct., angle-resolved photoemission study 2-110424
 Pb overlayer adsorption on Cu, surface structural characterization by secondary electron emission 2-87923
 Pd on W curved cryst. surface, equilib. coverage distrib., field electron probe-hole study 2-56360
 Pd(100) with adsorbed H, correlation between photoemission and photon stimulated desorption 2-92351
 Pt surface (110), cross-channel diffusion mechanism anal. 2-61288
 Pt surface (111), clean and adsorbate covered, He beam scatt. 2-99259
 Pt(S), H₂+O₂ surface reaction kinetics 2-116727
 Pt(110), adsorbed CO, surface phase studies 2-66353
 Pt(100) of CO and NO, surface phase study 2-86985
 Pt(111), of carboxylates, struct. and reactivity 2-87035
 Pt(111), of NO, desorption, molecular beam study 2-87038
 Re(0001) adsorbed Ba film, work function, elec. props. (*Russian*) 2-61560
 Rh, adsorbed water layer, stability under electron impact (*French*) 2-76808
 Rh (111), adsorbed small hydrocarbon mols., LEED study 2-76825
 Ru (001) of N₂, sticking coeff. coverage depend. 2-76837
 S adsorbed monolayer on Cu and Pd (110) faces, struct. (*French*) 2-71788
 S adsorbed on Ni(110), angle resolved UPS study 2-77699
 S adsorbed on Pt (100) surface, UPS study of surface electronic struct. 2-77145
 S c(2X2) on Co(001), surface superstruct., LEED study 2-98404
 S, chemisorbed on Ni surfaces, electronic struct. calc. 2-77150
 S on Cu (100), electron scatt. from surface vibr. modes 2-98424
 S, on Ni (011) and (111), photoelectron diff. study 2-116335
 S, on Ni (100), ordered struct., EELS spectrum, theoretical anal. 2-67162
 S, on Ni (100) and (111), vibr. freq. calcs. 2-98422
 S, on Pd(100), LEED anal. 2-98449
 Se adsorbed on Ni(110), angle resolved UPS study 2-77699
 Se, chemisorbed on Ni surfaces, electronic struct. calc. 2-77150
 Se, on Ni (011) and (111), photoelectron diff. study 2-116335
 Si (111) surface, H adsorption, departure from stable SiH₃ phase 2-76838
 Si adatoms on W surfaces, atomic processes, direct obs. by FIM 2-115570
 Sm, on W, displacement of Cs 2-104164
 Te, adsorbed layer on W(110), multiple commensurate-incommensurate transitions, LEED study 2-115560
 Te adsorbed on Ni(110), angle resolved UPS study 2-77699
 Te, adsorbed on Si and Ge(111), surface EXAFS study 2-110977
 Te, chemisorbed on Ni surfaces, electronic struct. calc. 2-77150
 Te, on Si(111)7X7 and Ge(111)2X8, surface EXAFS study 2-66360
 Ti film, of water vapour, elec. cond. and work function 2-66354
 Ti, on Si(111), secondary electron spectroscopy 2-87015
 Ti(0001), chemisorbed CO, correlated wave function calcs. 2-104148
 Ti(001), of H₂O, desorption study 2-87028
 W-O₂ film, adsorbed layers, excess current noise, Auger study 2-82496
 W(110) with adsorbed CO, core-level processes in electron stimulated desorption 2-110151
 Xe adsorbed on Al(111), photoemission studies 2-62048
 Xe, on Ag (111), two-dims. gas phases 2-61293
 Xe, on Cu (110), surface structs. and uniaxial phase transitions 2-66367
 Xe, on graphite, bound state resonant scatt. of atoms 2-87935
 Xe-Kr adsorbed bilayer on Pd, interlayer diffusion, photoemission and Auger study 2-104081
¹²⁹Xe adsorbed on Y zeolites, NMR signal shifts, density depend. 2-82727

adsorption

see also heat of adsorption

adsorbed species, vibr. spectra overtones 2-87005

Aerosols, chemically modified, N₂ adsorp., energy distrib. functions eval. using numerical methods 2-67772

adsorption continued

- alkali halides, of pentatriacontane, on (100) face, SCF Mo simulation (French) 2-76809
 alkali metal (110) surface, adsorbate-induced surface states effect on optical props. 2-104452
 aluminosilicate glass, crystallised, of distilled water, effects on microhardness and microbrittleness 2-99525
 atomistic or molecular processes on clean surfaces: recent advances 2-110130
 benzene, diamagnetic shielding const. interaction with surface, NMR study 2-102501
 benzenethiol, adsorbed on Cu(III) at 300K, angular resolved UPS and XPS spectra 2-78134
 binary gas mixtures, competitive adsorpt. on energetically heterogeneous solids 2-110160
 boundary lubrication, dynamic behaviour of surface-adsorbed molecules 2-57489
 α -brass based alloys, intercryst. internal adsorpt. 2-61148
 core level photoelectron spectroscopy for surface crystallography 2-77694
 critical binary mixtures, obs. of anomalous adsorption 2-56332
 crystal growth from soln., stoichiometric crystal, A-B, theory of growth 2-65894
 crystalline solids, of gases, Percus-Yevick theory 2-76831
 diffusion coefficient in dilute gas, meas. method, adsorption effect 2-60708
 dissociative gas adsorpt. rate on solid surface, statistical rate theory of interfacial transport 2-87018
 equilibrium surface, Freundlich, Dubinin-Rodushkevich and Temkin behaviours, unified theory 2-87023
 ferrous metals, adsorbed and absorbed H_2 chars. 2-71791
 fluid-solid interfaces, wetting transitions 2-115501
 foils, electrodeposited, ESCA signal intensity dependence on surface area (roughness) 2-110098
 gas mixtures, binary, adsorption on energetically heterogeneous solids, const. mole fractions 2-76814
 gas-solid interactions, adsorption-complex isomerism and quantum chemical study 2-93816
 Gibbs adsorpt. eqn., appl. to interfacial 2-82123
 glass surface, review 2-92318
 graphite, adsorption of Lennard-Jones gas, Monte Carlo method 2-66359
 graphite, epitaxial adsorption of 4He , fourth sound meas. 2-86971
 graphite, exfoliated, compressed and uncompressed, adsorpt. isotherms 2-87059
 graphite, high temp. Ar adsorpt., Percus-Yevick approx. 2-98438
 graphite, of gases, at high temps., Percus-Yevick eqn. 2-76832
 graphite, of H_2 , commensurate-incommensurate transition, LEED study 2-87064
 graphite, of I rel. to fission reactor coolant distrib. 2-80123
 graphite, physisorption kinetics of 3He , mean field theory, compensation effect near monolayer coverage 2-87046
 graphite surface, 3He multilayer adsorption, Hartree-Fock theory 2-115533
 graphite surface (0001), He atoms specular inelastic selective adsorpt. obs. 2-7235
 halocarbon adsorption on solid surfaces, particularly Fe, review 2-82120
 halogen adsorption on solid surfaces, particularly Fe, review 2-82120
 heterogeneous solid surfaces, low temp. gas adsorption, surface topography effects 2-104146
 hydrocarbons, adsorpt. and decomp., effect on Pt aggregates on Y-type zeolites 2-65123
 hydrogenated species at surface of solid material, chemical effects induced by MeV ion beams 2-93852
 II-VI semiconductors, clean and adatom treated surface props. 2-110115
 II-VI single crystal, intrinsic defects, formation kinetics in coexistence with equil. vapour phase 2-86662
 image potential barrier for large angle inelastic surface electron scatt. 2-87368
 Inconel 600 surfaces, H_2 and CO adsorpt. behaviour under laser-induced thermal desorpt. 2-66357
 interfacial tension variation with crit. two-dimens. nucleus size, theory 2-87041
 isothermal, mathematical model with arbitrary function expressing change in adsorbate conc. 2-115158
 jellium metal, atomic adsorption, adatom binding at surface ledges 2-82148
 kinetic eqns. for physisorption, compensation effect 2-115532
 kinetic models with bulk dissolution 2-110134
 kinetic theory of gas-surface interaction 2-115536
 liquid-solid interfaces, Raman spectrosc. obs. 2-98428
 localised monolayer gas adsorption on heterogeneous surfaces, stochastic modelling 2-115572
 low friction adsorbed system, linear and nonlinear hydrodynamics 2-110149
 luminescence spectra, surface emission universal component rel. to unidentified substance absorption 2-116247
 magnetic coatings, particles packing and orientation behaviour, interaction of polyester binder with mag. powder (Japanese) 2-87547
 Mars, regolith CO₂ adsorption rel. to regolith-atmosphere exchange of H₂O and CO₂ 2-112367
 metal, free electron, adsorption of He, kinetics, polarization induced dissipation 2-98447
 metal surface, atomic reactive scatt., energy dissipative trajectory theory 2-93348
 metal surface, non-adiabatic processes 2-87939
 metal surface, O₂ adsorpt. and oxide form., photoemission studies, review 2-116331
 metal surface, oriented adsorption, selection rule, IR spectra 2-87065
 metal surface, sticking and inelastic scatt., electron-hole pair creation mechanism 2-99258
 metal surface, sticking probability, electron-hole pair mechanism, temp. depend. 2-56336
 metal surfaces, adsorbates, double modulation FT IR obs. 2-95490
 metals, adsorbed atom diffusion coeffs., FEM 2-115555
 metals, work functions, relation between theory and expt. 2-92728
 misch metal-Ni-Si alloys, H adsorpt.-desorpt. chars. 2-87024
 molecular sieves, indigenous, appl. in cryosorption pumping 2-69187
 monolayers, struct. factor influence on props., dimensional incompatibility 2-76868
 multicomponent solution adsorpt. on homogeneous solid surfaces 2-76815
 multilayer adsorption from binary mixtures onto homogeneous solid surfaces, statistical thermodynamics 2-115571

adsorption continued

- multimolecular, from soln., modified BET eqn. appl. 2-76816
 neutron scattering from adsorbed systems, review 2-110150
 non-metallic crystals, dislocation etch pit form. 2-109802
 nondissociative gas adsorption rate on solid surface, statistical rate theory of interfacial transport 2-87017
 nucleation, two-dimensional, nucleus size dependence of interfacial tension calc. 2-65893
 nucleation barrier for adsorbed films 2-61282
 photoemission splendectra, satellite structs. 2-105048
 polyethylene, stress/strain behaviour change on soaking in environmental stress cracking medium 2-67579
 polymer, self-avoiding lattice walk model 2-87016
 polymer substrate, single crystal 2-61280
 polyoxymethylene, single crystal, of serum proteins 2-61280
 proteins, from sheep's blood, Fourier transform IR obs. 2-100015
 quantum gas, statistical mechanics calcs. 2-104141
 quartz, of propane, influence of adsorbed water (Japanese) 2-61281
 review of surface phase mechanics and thermodynamics (French) 2-66341
 semiconductor, surface electronic props., modification in gaseous media (French) 2-92718
 spherical particle, particle diameter calc., negative adsorption of co-ions 2-87022
 steel, alloy, physicomech. props., influence of surface-active substances during plastic deform. 2-83191
 steel, austenitic, Cr-Ni, surface (100), water vapour adsorpt., AES studies 2-66343
 steel, low-C, contact with liq. metal medium, deform. rate influence on ductility, adsorption induced embrittlement 2-99550
 steel, stainless, types 304 and 316, He⁺ irradi., surface roughness, form Xe adsorpt. 2-76525
 steel, surface chem. kinetic model of H embrittlement 2-105334
 stepped crystal surfaces, differential reflectometer for studies of adsorption 2-95445
 substrate, deformed, soln. to adsorbed atoms (Russian) 2-104167
 surface analysis by electron and ion beam methods, conf., Newcastle, NSW, Australia (Feb. 1981) 2-106995
 surface diffusion and heterogeneous nucleation on solid substrates 2-76813
 surface physics, conf., Bechyně, Czechoslovakia (Sept.-Oct. 1980) 2-89457
 surface science, conference, Liverpool, England (April 1981) 2-58538
 surface-species system, laser/phonon stimulated processes, synergistic effects, master eqn. approach 2-66371
 Taylor dispersion phenomena, general theory 2-74327
 temperature-compensated differential tensiometer for gas adsorption by low surface area solids meas. 2-95361
 two-dimensional matter systems on solid surfaces (French) 2-56338
 volcanic-ash from eruptions of Mount St. Helens, adsorption of COS and CS₂ 2-78623
 water/high-energy solid interface, of hydrocarbon, thermodynamics of displacement wetting 2-76780
 wetting characteristics of contact line change of phase heat transfer, adsorpt. and capillary condensation 2-71772
 zeolite, of methane and Kr, Freundlich parameters 2-76839
 zeolite, type ZSM-5, of methanol and ethylene, IR study 2-82132
 zeolites, of hydrocarbons, IR spectra 2-111520
 Ag (110), adsorbed O₂, ellipsometric study near Ag plasma freq. 2-92364
 Ag (110), of O₂, spectroscopic ellipsometry study 2-98453
 Ag (110) of NH₃, thermal desorption spectroscopy and EELS study 2-66372
 Ag (111), methanol adsorpt., oxidation and decomposition, UPS and XPS study 2-76826
 Ag (111), of K, ellipsometry, LEED, and EELS study 2-61295
 Ag electrodes, of benzene, surface-enhanced Raman spectra 2-61276
 Ag electrodes, of crystal violet, surface enhanced Raman scatt. 2-99104
 Ag, monocryst. electrode, of diethyl ether, admittance and reflectance meas. (French) 2-76810
 Ag, of pyridene derivatives, effects on electronic struct., surface enhanced Raman spectra study 2-92357
 Ag, of Ru(CN)₃⁴⁻, surface enhanced Raman spectrosc. obs. 2-61889
 Ag, polycrystalline, adsorpt. of O₂, H₂O, CO, CO₂, formaldehyde and methanol, SIMS investig. 2-105516
 Ag surface, adsorbed O₂, UPS, XPS and AES studies 2-76803
 Ag-O liquid alloys, surface tension and adsorption meas. 2-104117
 Ag-Pb system, solid-liq. region of phase diagram, interfacial tensions and adsorption 2-88057
 AgBr emulsion grains, space charge charact., effect of soln. pAg and pH 2-72418
 Al, adsorption of O₂, SIMS studies 2-104169
 Al cluster, CO adsorpt. 2-87057
 Al oxide, adsorpt. of 1,3-dihydroxy- and 1-amino-3-hydroxypropane, chemisorpt. and oxide surface species, tunnelling spectra 2-78140
 Al single crystal, CO exposed, EELS study 2-98457
 Al, surface, (100), O₂ adsorpt., ab initio unrestricted HF calc. 2-76835
 Al-Al₂O₃-Ag tunnel junction, adsorbed mol. monolayers, surface enhanced Raman spectra obs. 2-82867
 Al-Mg, adsorption of O₂, SIMS studies 2-104169
 Al-Zn, adsorption of O₂, SIMS studies 2-104169
 AlH₃, photochem. sensitivity 2-73001
 Al₂O₃ surface, Cu²⁺ and VO²⁺ adsorbed, dispersion modes, ESR study 2-116057
 Al₂O₃-MgO, adsorpt. of acetone, IR obs., rel. to acid-base props. 2-96574
 Al(100), electron spectroscopic study of CO adsorption 2-76819
 Al(111), clean and precovered, of NH₃, struct. and orientation 2-82122
 Ar, cryst., of H³⁷Cl, theory 2-92341
 As films, O₂ adsorption in oxidation, photoemission study 2-92355
 Au discontinuous thin film, I-V charact., adsorption effects 2-110499
 Au film, of water, work function and thermal desorption mass spectrometry study 2-98468
 Au, monocryst. electrode, of diethyl ether, admittance and reflectance meas. (French) 2-76810
 Au surface, adsorbed O₂, UPS, XPS and AES studies 2-76803
 Ba²⁺, effect on fatty acid monolayer compressibility at air-water interface 2-104145
 C, activated, surface oxide structures, spectral obs. 2-78128
 C electrodes, high-surface area, in-situ Mossbauer spectroscopy of adsorbed species 2-93070

adsorption continued

- CO matrices, photoelectron spectra of Cu and Ni atoms and clusters 2-83416
 CS₂/nitromethane binary mixture, crit. anomaly induced by selectively adsorbing wall 2-61120
 CdCl₂, adsorption of N₂ and Ar, surface homogeneity effect 2-115563
 CdCl₂, N₂ adsorption isotherm crossing 2-56341
 CdS, colloidal, surface photochem., rel. to adsorbed methylviologen 2-83394
 CdTe (110) vacuum cleaved surfaces, photoenhanced oxidation (*Japanese*) 2-116577
 Co, adsorption and decomp. of water, LEED, UPS, surface pot., and thermal desorption study 2-104160
 Co surface, competitive accumulation of S and graphite 2-82121
 CoSi (100) and CoSi₂ (110), interaction with O₂, LEED, AES, and UPS STUDY 2-104162
 Cr epitaxial film on W (110) face, adsorbed O and Cs effect on work function, two-stage oxidation phenomenon (*Russian*) 2-61298
 Cr₂O₃, of CO₂, electroconductivity kinetics 2-77036
 Cs thick film oxidation, multiplet struct. in photoemission studies 2-72596
 Cu (100), adsorption and coadsorption of Cs and O₂, LEED, AES, and work function meas. 2-82140
 Cu (110), of O₂, Debye Waller factor, surface struct., He scatt. study 2-87070
 Cu (110)-Ni surface alloy, adsorption of O₂ and reaction with H₂ and CO 2-104161
 Cu (111), clean and Na covered, CO adsorption, surface state shifts, UPS study 2-98716
 Cu, adsorption of NO on (100) and (110) surfaces, EELS, LEED and TSD studies 2-110128
 Cu, electroless plating kinetics meas., ligand adsorpt. inhibition effects 2-93451
 Cu, of CO, on flat and rough surfaces, IR spectrosc. 2-66352
 Cu, of H₂ sorption parameters estimation (*Russian*) 2-87075
 Cu, of NO₂, reaction, UHV ESR obs. 2-67765
 Cu of O₂, dielec. functions, ellipsometry study 2-87737
 Cu, of Pb and Sn, growth of monolayers of ultrathin films 2-71829
 Cu, of Ru(CN)₆³⁻, surface enhanced Raman spectrosc. obs. 2-61889
 Cu stepped surfaces, interaction with H₂, pairwise-additive model 2-56349
 Cu surface, (100) and (111), NO adsorption, EELS study 2-77640
 Cu surface, adsorpt. of ethylene (H₂O), chemisorbed O effects, XPS obs. 2-67188
 Cu surface, cylindrical cryst., initial O₂(S₂) adsorpt. kinetics, AES study 2-56355
 Cu-He interaction pot. determ. by atomic beam scatt. 2-99266
 Cu-Ni, surface (110), CO adsorption 2-56362
 CuBr-CuI system, physicochem. props. 2-111512
 Cu(110) of Xe, temp. depend. photoemission line slopes 2-71796
 Cu(110) surface, adsorption of sulphur heterocycles, photoelectron spectra 2-62428
 D₂O, adsorption on montmorillonite, hydration vibr., IR obs. 2-62426
 Dy, of N₂, NH₃, N₂O and NO, XPS and Auger electron spectra 2-62429
 Fe (111), N₂ adsorpt. kinetics meas. 2-56356
 Fe adsorption on Fe (001) and (110), work function study 2-92722
 Fe film, O adsorpt., excess current noise obs. 2-77137
 Fe, solid, role of adsorption on wetting, by liq. Pb alloys (*French*) 2-71771
 Fe surface (100), coadsorpt. of CO and H₂ 2-56363
 Fe surface (110), CO adsorption, thermal desorpt. spectroscopy, dissociation enhancement by surface defects 2-98464
 Fe surfaces, (111) and (100), K promoted, N₂(N) adsorpt. meas. 2-56357
 Fe_{1-x}Co_xGe₃, 0 ≤ x ≤ 0.05, selective etching on dislocations 2-86669
 γ-Fe₂O₃ aq. suspensions, H⁺ adsorpt. desorpt. kinetics, press. pump method 2-71792
 γ-Fe₂O₃, DC elec. cond., effect of adsorbed O₂ and water 2-115752
 Fe₃O₄ aq. suspensions, H⁺ adsorpt. desorpt. kinetics, press. pump method 2-71792
 FeOOH aq. suspensions, H⁺ adsorpt. desorpt. kinetics, press. pump method 2-71792
 Fe(110), of H₂, pair interaction energy, embedded cluster formalism 2-92356
 GaAs (110), adsorption state of Al, rel. to Schottky barrier form. 2-115546
 GaAs (110), formic acid adsorption EELS study 2-98454
 GaAs cylindrical cryst., O₂ adsorpt., orientation depend. 2-110146
 GaAs, cylindrical sample, adsorpt. of O₂, orientation depend., AES meas. 2-115565
 GaAs, of O₂, density of valence states, photoemission study 2-82142
 GaAs, surface oxide phase form. by H₂O or O₂ adsorpt., UPS, XPS and SIMS study 2-115544
 Ge (100) alkali metal adsorption, surface cond. and interface states, EELS study 2-92716
 Ge (111) surface covered with Na, K or Cs in submonolayer range, EELS obs. 2-72585
 Ge surface, adsorpt. of H, electrophysical props. 2-76833
 H₂O, D₂O and HDO adsorbed on Ag electrodes, surface enhanced Raman spectra 2-90554
³He-⁴He solutions, dilute, liquid-solid interface thermodynamics 2-76766
⁴He superfluid surface, adsorption and atom scatt. 2-110068
 Hg-solution interface, adsorpt. of α-naphthoic acid (α-naphthoate ion) 2-110159
 Hg-solution interface, of poly-DL-alanine 2-71790
 Ir, adsorbed ethylene, decomposition, surface struct. effects, comparison with Pt 2-98460
 Ir, of CO, on flat and rough surfaces, IR spectrosc. 2-66352
 Ir, of H₂, N₂, work function changes, field emission study 2-87047
 Ir surface (110), interaction of H₂ and cyclopropane, thermal desorpt. mass spectrometry study 2-87062
 Ir tape, covered by graphite monolayer, adsorpt. of K 2-115569
 KCl:Pb²⁺, (100) and (111) face crystal growth rates, Pb²⁺ effects (*Russian*) 2-65897
 KI microcrysts., surface electronic transitions and adsorbate charge transfer 2-104453
⁸⁵Kr storage cylinder, adsorption, heat transfer 2-64694
 LaB₆, adsorption of O on (100), (110), and (111) surface, UPS, XPS, and LEED meas. 2-66365
 LaB₆, of Cs and O₂, work function change and Auger study 2-87068
 La_{1-x}Sr_xFeO₃, of CO, effect on elec. cond., appl. to gas sensors 2-71797

adsorption continued

- Li model clusters, of H₂, surface enhanced Raman intensities, Hartree-Fock calcs. 2-80626
 Mg, hydriding using Fe particles as dissociation catalyst 2-67650
 MgO, of metal carbonyls, decarbonylation, spectrosc. obs. 2-64958
 Mo, polycryst. N₂ adsorpt. and NH₃ decomp. AES obs. 2-67157
 Mo surface (100), adsorpt. of CO, high resolution EELS study 2-71794
 MoS₂, of thiophene, butene and H₂S, binding energies 2-105500
 NO+CO, long transients in surface reactions at high pressures 2-78131
 Na, vapour deposited, of benzene and benzene-d₆, surface enhanced Raman spectra 2-96576
 NaCl, of fluoromethane, IR laser induced desorption by multiquantum vibr. excitation 2-104136
 Na₂O-ZnO-B₂O₃-SiO₂ glasses, chem. durability, effect of Zn²⁺ adsorption 2-93648
 Nb surface (110), adsorption of S, static SIMS, ion dose effects 2-99274
 Nb surface (110), coadsorpt. of O and Cs, work function and thermal stability (*Russian*) 2-104166
 Ni (100), H₂ and CO coadsorpt., electron spectroscopy study 2-76827
 Ni (100), of N₂ and CO, photoemission study 2-56355
 Ni (100) reactions between adsorbed CO and O, XPS/LEED studies 2-83414
 Ni (110), of Ar, Kr, Xe, CO, O₂, N₂, electronic binding energies of valence levels, UPS study 2-82437
 Ni (110), of N₂, O₂, and CO at 20K, UPS and work function meas. 2-104159
 Ni (111), of water, preadsorbed O effect of azimuthal ordering 2-104157
 Ni (111) surface, clean and O-adsorbed, high energy ion scatt. study 2-62039
 Ni, adsorption of ethylene and acetylene, chem. modification, SIMS investigation 2-105515
 Ni film, CO adsorption, IR luminesc. under ultrahigh vacuum 2-93281
 Ni, of CO, decomposition and oxidation of surface carbide 2-62432
 Ni, of ethylene, on (100) surface, mol. disloc. 2-83407
 Ni, of N₂, HF cluster model calc. 2-56334
 Ni surface, O₂ and H₂ adsorption kinetics, surface struct. effects, Auger, LEED and work function meas. 2-87066
 Ni surface, stepped, CO adsorpt. and dissociation, FEM study 2-92358
 Ni surface (110), clean and O covered, Li⁺ and He⁺ ion scatt. 2-99263
 Ni surface (111), O preadsorbed, NH₃ interaction 2-110156
 Ni surfaces (001) and (111), O₂ interaction, SIMS investig., residual hydrogenated cpds. intervention 2-73015
 Ni(100) surface, effects of Fe in reactivity 2-78135
 Pb²⁺, effect on fatty acid monolayer compressibility at air-water interface 2-104145
 Pd catalyst, SiO₂ supported, adsorption of ethylene, H₂ and CO, IR study 2-82129
 Pd islands, interaction of CO and O₂ thermal desorpt. and AES studies 2-56361
 Pd surface (100), CO adsorpt., IR reflection absorpt. study 2-98466
 Pt (111), adsorbed NO vibr. coupling, IR reflection absorption spectra 2-56329
 Pt (111), adsorption and surface reactions of O₂, CO, and ethylene, EELS and thermal desorption study (*German*) 2-98469
 Pt (111), adsorption and surface reactions of ethylene and O 2-105511
 Pt (111), NO adsorption-desorption kinetics, mol. beam study 2-104144
 Pt, adsorbed ethylene, decomposition, surface struct. effects, comparison with Ir 2-98460
 Pt, adsorption of ethylene and acetylene, field emission study 2-82119
 Pt aggregates in Y-type zeolites, at. struct., hydrocarbon adsorpt. and decomposition effects 2-65123
 Pt electrode, adsorpt. of CO, polarisation modulated IR refl.-absorpt. spectrosc. obs. 2-115541
 Pt, of CO, on flat and rough surfaces, IR spectrosc. 2-66352
 Pt of methylacetylene, propylene and 2-butenes, surface structs., LEED study 2-71804
 Pt particulate films, CO chemisorption 2-76818
 Pt, platinised, of trifluoroacetate and trifluoromethanesulphonate ions, soln. cond. meas. 2-110158
 Pt, study of H₂ and CO coadsorption 2-92338
 Pt surface, adsorbed O₂, UPS, XPS and AES studies 2-76803
 Pt surface (100), catalytic oxidation of CO, kinetic oscils. 2-93815
 Pt surface (110), nonreconstructed, prep., thermal stability and adsorpt. characts. 2-115515
 Pt surface (111), HD scatt., rot. mediated selective adsorption calcs. 2-70102
 Pt surface (111), interaction of NO, mol. beam study 2-57238
 Pt surface (111) and stepped surface (755), adsorbed K and K₂O monolayers, LEED, AES and TDS 2-56365
 Pt surface (321), kinked, adsorpt. of CO 2-61292
 Pt surface (997), reconstruction, O₂ induced, He diffr. pattern shape changes 2-115514
 Pt thin film, methane, ethane or propane coadsorption with H₂, surface pot. meas. 2-92353
 Pt-S, of CO, effect of S layer, AES and temp. programmed desorption study 2-66369
 Pt(III), of CO, chemisorpt. in presence of K, thermal adsorpt. and electron energy loss spectra 2-83410
 Pt/Pb, polycrystalline, O₂ adsorpt. at high temps., SIMS study 2-104170
 Pt(111), clean and O₂ covered, formic acid adsorption, EELS study 2-115531
 Pt(111) cryst. surface, butane and pentane adsorpt. and bonding, O treatment and D preadsorpt. effect 2-71793
 Pt(001), adsorption of chlorobenzene and benzene, angle-resolved photoemission meas. 2-56340
 Re(0001), adsorption of benzene studied by thermal desorpt., Auger spectra and LEED between 100 to 300K (*French*) 2-110141
 Rh (100), adsorpt. and coadsorpt. of D₂ and CO, LEED and thermal desorpt. study 2-56354
 Rh, layer by layer growth of Pt, O₂ adsorpt. and Rh segregation (*French*) 2-83122
 Rh particles, Al₂O₃ supported, of NO, IETS study 2-56343
 Ru (001), of CO, island form. and dissolution at low coverages 2-82126
 Ru (001), of cyclopropane, orientation and symmetry, EELS and photoelectron spectroscopy 2-78130
 Ru (001), of N₂O, XPS, UPS, and thermal desorption study 2-61296
 Ru (001), of water, IR study 2-67060
 Ru (001) of H₂ and CO, work function, XPS, UPS and thermal desorption study 2-71805
 Ru(001) of H₂O and O₂, vibr. and struct. props. 2-104150
 S (111), of simple gases, effect of lateral interactions 2-56348

adsorption continued

- (SN), proton-spin lattice relax. time from incorporated water 2-61781
 Se amorphous vacuum condensates, cryst. 2-104181
 Si (100), As adsorpt., UPS study 2-77144
 Si (111) and (100), of H, UPS study 2-116338
 Si (111) of Ag, struct. and electronic props., LEED and AES study 2-82093
 Si (111)7×7, CO electron stimulated adsorpt. (*Russian*) 2-115573
 Si (111)7×7, SEXAFS studies of I adsorpt. 2-83417
 Si, adsorption of O₂, pulsed laser atom-probe study 2-110129
 Si, of F₂, SIMS and quartz cryst. microbalance obs. 2-82125
 Si surface, (100), O₂ adsorption, Auger and ionisation electron spectra study 2-92365
 Si surface (100), Ag film growth, LEED and AES study 2-56397
 Si surface (111)-(7×7), D adsorption, nuclear microanal., LEED and ion scatt. study 2-76821
 SiO₂, adsorption, Si-H band as surface probe 2-82844
 SiO₂ gels, surface charact., effect of inclusion of polyglycol 4000 2-78143
 SiO₂, methanol and N₂ adsorpt., porosity charact. 2-62433
 SiO₂, reaction products of propanal, weakly adsorbed molecules study by ¹³C NMR 2-93810
 SiO₂, supported water surface, of hydrocarbons, meas. using gas chromatographic technique 2-57636
 SiO₂ surface, Cu²⁺ and VO²⁺ adsorbed, dispersion modes, ESR study 2-116057
 Si(111), of Ti, secondary electron spectroscopy 2-87015
 SrTiO₃ (100), adsorption of H₂O and D₂O EELS and UPS study 2-115537
 SrTiO₃, non-adsorption of carbonate ions, Raman spectra study 2-66347
 Ti (001), of water, photon stimulated desorption and UPS study 2-115553
 TiN(100), surface state revealed by photoemission and gas adsorption studies 2-77705
 TiO₂, adsorption of H₂O, SIMS study 2-104168
 UO₂, porous, low-temp. Kr adsorpt. 2-61297
 V (001) of O, and CO, surface struct., LEED and Auger study 2-71783
 V₂O₅, amorphous phase, hydrated 2-55847
 W (011), adsorption of Sc and Ti, d shell role 2-104165
 W (100), chemisorption and physisorption of acetylene at 80K 2-56344
 W (100), of Se, AES, LEED, work function, and thermal desorption meas. 2-66362
 W (100), of Te, binding states, LEED, Auger and work function study 2-82146
 W (100), total hemispherical emissivity, adsorbate-induced change 2-61182
 W (110), of α-CO, singlet-triplet interplay in charge transfer relax. process 2-105045
 W (110), of I₂, LEED and Auger study, antiphase boundary model 2-82144
 W (110), of I₂, non-coincident adatom net model, LEED patterns 2-82145
 W (110), work function change on adsorption of O 2-61558
 W (211) surface, substrate strain induced interaction of adatoms, diffusion and self trapping 2-66368
 W, adsorption of N₂/O, mixture at low temp., FEM study 2-76804
 W, field adsorption of Ne, electron-stimulated field desorption study 2-105053
 W, of gas, energy and tangential momentum accommodation coeff. 2-76806
 W surface (001), transition to incommensurate reconstruction induced by H adsorpt. 2-56313
 W, surface (110), NH, adsorpt. and decomposition, XPS study, core level binding energy interpretation using equiv. core approx. 2-115558
 W vacuum flashed surfaces, of Ne and He, energy and tangential momentum accommodation coeff. 2-76805
 WC, oxidised and non-oxidised WC 2-104147
 W(110) and Ru(001), of N₂O, XPS and UPS mes., horizontal and vertical configurations 2-73009
 Xe adsorption energy profiles at flat and stepped metal surfaces 2-115561
 Y₂O₃, N₂O adsorption, formation of O⁻ 2-92339
 ZnO, adsorption of H₂ and D₂, coverage induced IR freq. shifts 2-115539
 ZnO, coadsorption of CO and H₂, vibr., IR study 2-115540
 ZnO film, electronic props., defects, morphology and adsorpt. depend. 2-104515
 ZnO, of CO₂, effect on surface acidity, IR study 2-82131
 ZnO, of HD, config. effects, IR spectrosc. obs. 2-61886
 ZnO surfaces, decomp. of ethanol and acetaldehyde, thermal desorption and surface cond. meas. 2-105508
 Zr-Al alloy, compatibility in Tokamak, impurity adsorption on getters 2-69851

advertising

- broadcast telecine equipment Rank Xerox Mk III appl. 2-74537

aerials *see* **antennas****aerodromes** *see* **airports****aerodynamics**

- see also* hypersonic flow; jets; shock waves; supersonic flow; transonic flow; turbulence; wind tunnels
 aero-optical phenomena rel. to laser beam quality, overview 2-97036
 aerodynamic levitation apparatus coupled with solar furnace for study of matter in the liquid state (*French*) 2-109430
 aircraft wake vortices detection and analysis, measuring system (*Dutch*) 2-114957
 airfoil, unsteady incompressible inviscid aerodynamics 2-65567
 area rule for integral quantities 2-84446
 automated laser Doppler anemometer, aerodynamic expts. (*Russian*) 2-114937
 blast waves, internal heat transfer effect on struct. 2-70988
 Boltzmann eqn., shock profile soln. 2-114846
 compressible flow, K-consistence prop., first-order difference schemes 2-75985
 compressible flow, K-consistence prop., second-order difference schemes 2-75986
 conference, Aachen, Germany (March 1980) 2-68969
 continuous medium mechanics problems, method of moving coordinates 2-112702
 design problems, direct approach 2-91483

aerodynamics continued

- flapping vane as a rotodynamic machine for the forced circulation of a medium (*Russian*) 2-81410
 force meas. on cylindrical struct. in the wake of parallel cylinder 2-81340
 force singularities of aeroelastically unstable two-dimensional panels 2-91301
 gas mixtures, gasdynamic separation, theory 2-75998
 gasdynamics of detonations and explosions, conf., Gottingen, FRG (Aug. 1979) 2-58549
 hemisphere immersed in turbulent boundary layer, time-averaged aerodynamic forces 2-86271
 holographic interferometry, aerodynamic flow meas. appl. (*French*) 2-60042
 idealised ground-vehicle bodies, aerodynamic effects of shape, camber, pitch and ground proximity 2-60571
 laser windows, pulsed aerodynamic shock tube generated, optical quality 2-102831
 lateral discharge through inclined holes in thick wall, discharge coeff. 2-55635
 lifting surfaces, small aspect ratio in grand effect anal. 2-70975
 molecules, gas dynamic flow and laser spectroscopy 2-60574
 nonequilibrium gas dynamics, sonic discontinuity behaviour, waves shocks 2-71039
 permeable boundary models for computational gas dynamics 2-112712
 profile, thin deformable, transient aerohydrodynamic charact. (*Russian*) 2-81428
 radiating gas bicharact., weak discontinuities propag. 2-91479
 re-entry drag deceleration, maximum value calc. 2-112303
 slender body spinning, Magnus forces, vortex model 2-70955
 slender slot in wind tunnel wall study 2-114834
 sliding flexible sheets, inviscid theory 2-97468
 sphere, drag in supersonic and hypersonic transition regimes 2-70906
 spherical compression waves, appl. to ICF 2-109368
 spoiler control effectiveness, hinge moments and wake turbulence, design variables effects 2-75989
 star-shaped body, aerodynamic charact. at Mach numbers 3 to 5 2-86296
 subsatellite three-dimensional motion, effect of air drag perturbations 2-78940
 subsonic wind tunnel at NASA, inlet aerodynamics 2-86359
 sugar cane, aerodynamics of pneumatic drag, mathematical model for more efficient sorting methods (*Spanish*) 2-55609
 thin cylindrical shells in cross flow, model for aeroelastic instability 2-55541
 thin wings with arbitrary sideslip at subsonic and supersonic speeds 2-81353
 transport in the near aerodynamic wakes of flat plates 2-97554
 two-dimensional airfoils, unsteady pressure by aerodynamic periodic interface 2-114833
 unsteady viscous supersonic flow over a short flap 2-86297
 upstream boundary-layer state effect on shock interaction at compression corners 2-114851
 vortex chamber, tangential injection, aerodynamics study 2-70974
 wake induced time-variant aerodynamics including rotor-stator axial spacing effects 2-65611
 wing-fuselage combination in supersonic gas stream, wave resistance decrease 2-70984
 CO₂-N₂, turbulent mixing of relaxing gases in a supersonic nozzle 2-60521

aeronomy *see* **meteorology; terrestrial atmosphere; upper atmosphere****aerosols***see also* **foams**

- Abastumani, USSR, gas and aerosol admixtures comp. and origin (*Russian*) 2-117402
 Abastumani background aerosol, origin and transform. processes (*Russian*) 2-117403
 absorption meas. using aethalometer 2-112146
 Aerosols, chemically modified, N₂ adsorpt., energy distrib. functions eval. using numerical methods 2-67772
 airborne aerosol particles with attached α-active nuclei, size distrib. meas. 2-67917
 Aitken nucleus concs. rel. to space charge power spectra 2-63035
 analysis by neutron activation and X-ray fluorescence methods 2-93848
 Arctic soot, effect on solar radiation budget 2-94418
 equatorial Atlantic, n-alkanes rel. to particle size 2-94470
 atmosphere, aerosol composition in marine and coastal boundary layer 2-117390
 atmosphere, aerosol conc. over S.Pacific, Ross Sea and Antarctica 2-63051
 atmosphere, aerosol modelling in marine boundary layer 2-117389
 atmosphere, aerosol modelling rel. to electro-optical systems performance in marine environments 2-117455
 atmosphere, aerosol plume generated by a town, model 2-68421
 atmosphere, airborne LIDAR meas. system 2-63111
 atmosphere, conc. and size distrib. for different meteorological conditions (*Chinese*) 2-112100
 atmosphere, Deccan Plateau, India, chem. and size composition 2-83930
 atmosphere, dry deposition, to lake and ocean surfaces 2-106171
 atmosphere, effects of aerosols on millimetre-wave propag. 2-117392
 atmosphere, effects of particle comp. and shape on size distrib., retrieval from ang. scatt. functions 2-58118
 atmosphere, evaluation of four types of samplers for aerosols along roadways 2-105631
 atmosphere, gaseous trace component conc. determ., laser sounding method (*Russian*) 2-73729
 atmosphere, investigation by expt. transmittance data inversion 2-112118
 atmosphere, IR lidar remote sensing from space, theory 2-94500
 atmosphere, IR remote sensing affected by sea foam 2-106346
 atmosphere, lidar echo from geometrically and optically thin aerosol layers 2-83942
 atmosphere, lidar multispectral method for aerosol and cloud obs. 2-94501
 atmosphere, marine aerosol distribution, wind speed depend. modelling by gamma function 2-106261
 atmosphere, meas. of soot particles in Sweden rel. to possible origins of airborne Hg 2-68467
 atmosphere, meso-scale variability of stratosphere (*Russian*) 2-94438
 atmosphere, meteorological models for optical props. in marine boundary layer 2-117452

aerosols continued

- atmosphere, negative ion mol. clusters 2-83922
 atmosphere, optical characterisation using computer programs 2-73686
 atmosphere, optical extinction in plume, effect of coagulation of particles 2-94487
 atmosphere, optical props. variability of submicron fraction (*Russian*) 2-63090
 atmosphere, particle size distrib. and visibility in Calgary 2-105620
 atmosphere, particulates generated by Texas road traffic 2-100442
 atmosphere, Pb concs. in aerosols in downtown Guatemala City 2-105622
 atmosphere, polar stratospheric cloud occurrence, 1978 and 1979 AD obs. 2-117419
 atmosphere, radiative heating of St. Louis (USA) boundary layer, pollution effects 2-63011
 atmosphere, relation between light scatt. coeff. and particulate matter conc. in forest fire smoke 2-105617
 atmosphere, satellite meas. of aerosols optical thickness over oceans 2-117454
 atmosphere, size distrib. determ. from spectral solar irradi. meas. 2-89048
 atmosphere, size distrib. functions (*Chinese*) 2-112101
 atmosphere, size distrib. in marine convective boundary layer 2-58107
 atmosphere, size spectra from spectral extinction data, linear inversion method 2-94416
 atmosphere, solar activity influence on condensation nuclei conc. 2-83921
 atmosphere, Soufriere volcano eruption plume 2-106060
 atmosphere, South Pole Plateau heat, aerosol and water vapour movements 2-117423
 atmosphere, spectral extinction due to aerosol in tropical regions 2-63094
 atmosphere, stratification and variability of mesospheric aerosol (*Russian*) 2-88951
 atmosphere, sulphate aerosol over Antarctica, residence times 2-117424
 atmosphere, sulphate layer due to Mt. St. Helens 1980 eruption 2-78798
 atmosphere, suspended aerosol distrib. (*Russian*) 2-106372
 atmosphere, total urban particle production in Australia 2-83529
 atmosphere, trace-element conc. in soils contributing to atmos. aerosol 2-62912
 atmosphere, transport of aerosols of high Cl conc. into central and eastern United States 2-63062
 atmosphere, tropical stratosphere mixing with troposphere 2-112026
 atmosphere, turbidity at Ann Arbor due to Mount St. Helens volcanic cloud 2-78842
 atmosphere, turbidity parameters at Bombay 2-68409
 atmosphere, very large particles as initiators for warm rain 2-94453
 atmosphere, visibility and aerosol comp. in Houston Texas 2-112124
 atmosphere, visibility reduction due to sulphate and nitrate aerosols 2-68480
 atmosphere aerosols, modified gamma size distrib. model for marine environment 2-117453
 atmosphere dust rel. to wind speed 2-63058
 atmosphere of N. Europe, particle size distrib. obs. 2-63052
 atmosphere over Beijing in winter, elemental concs. (*Chinese*) 2-88989
 atmosphere over Mediterranean Sea, trace metal pollution assessment method 2-62539
 atmosphere particulate pollutants, case studies of interregional transport meas. versus model predictions 2-99860
 atmosphere pollution detection from satellite visible digital data anal. 2-73175
 atmosphere with haze light extinction scale height features 2-112127
 atmospheric, backscatt. spectra for nonabsorbing accumulative fraction, calcs. 2-117425
 atmospheric, high-energy laser interaction, vaporisation front, solitary wave 2-83941
 atmospheric, lidar multiple scatt. depend. on receiver range 2-106306
 atmospheric, light absorpt. coeff. meas. using integrating sandwich method 2-112144
 atmospheric, light absorpt. meas. using integrating plate method, filter internal refl. coeff. effects 2-112119
 atmospheric, photophoretic force size depend. 2-105517
 atmospheric, polydisperse, aqueous, bleaching by 10.6 μ m laser radiation 2-117465
 atmospheric, size distrib. determ. using solar aureole technique, expt. validation 2-94503
 atmospheric, spatial-frequency and wavelength-depend. effects on atm. MTF 2-106314
 atmospheric, trace element anal. using photon-induced X-ray fluores. 2-111606
 atmospheric, X-ray methods for chem. characterisation 2-67907
 atmospheric Aitken nuclei counters, intercomparison of different instruments 2-63104
 atmospheric dust conc. in Chandigarh, India 2-93962
 atmospheric extinction determ. from satellite imagery 2-63120
 chemistry of aq. aerosols, review 2-58111
 China, concs. and turbidity (1959-70) (*Chinese*) 2-88994
 climate models with suspended particles 2-112103
 cloud condensation nuclei, workshop, Reno, Nevada (Oct. 1980) 2-89439
 coagulation at high Knudsen no. 2-57643
 conference, atmospheric effects on electro-optical infrared millimeter systems, at San Diego, CA (August 1981) 2-112644
 DC plasma jets, anal. utility, aerosol introduction effects 2-89818
 detection by photoelectric charging, appl. to atmospheric particles 2-83901
 discharge plasma, electron space charge ion heating 2-55756
 dispersed, detection by TV camera 2-53737
 dispersion in stratosphere and mesosphere (*Russian*) 2-100465
 dust levels during severe droughts in Prairie Provinces 2-94423
 dust storms in Asia and aerosol characs. at Mauna Loa, Hawaii 2-63039
 electrolytically controlled nuclear track plastic filter prod. 2-64831
 extinction by aerosol clouds of nonspherical particles 2-114189
 fog condensation nuclei, effect on fog microstruc. 2-117391
 haze aerosols, effect on atmospheric light transmission 2-117459
 haze in West Germany during Meppen 80, optical and physical props. 2-117449
 hot contaminated air surveillance at industrial plant using mica track microfilters 2-64830
 human respiratory tract deposition using multimodal aerosols 2-111824
 ice crystals in atmosphere, form. by artificial nucleation rel. to supercooled fog dissipation 2-100484
 ICP emission, signal instability due to electrostatic effects in nebuliser spray chamber 2-115057

aerosols continued

- inhaled aerosols: lung deposition and clinical appls. 2-83588
 IR absorption spectra of oceanic aerosols 2-83946
 IR backscattering profiles at 10.6 microns 2-100548
 Knollenberg aerosol counter, response meas. 2-94526
 light absorption, diffuse reflectance and diffuse transmission meas. 2-53821
 light absorption measurement, photometric and calorimetric techniques 2-53812
 light absorption measurements, workshop, Fort Collins, CO, USA (July-Aug. 1980) 2-53407
 light volumetric scatt. and absorpt., parametric sensitivity in Mie modelling 2-70506
 magnetoelectric aerosols, disperse content determ. using spectral-transparency method 2-68487
 marine atmospheric turbidity and vertical mass loading 2-63093
 May spinning top aerosol generator, improvements 2-69313
 metallic body in aerosol stream, charging 2-97638
 methylene blue particles collected on filters, photoacoustic meas. of absorptivity, substrate refl. effect 2-53851
 Mount St. Helens eruption, lidar meas. 2-78622
 optical absorption, imaginary refr. index, mass conc. and size meas., integrating plate method 2-53806
 optical depth of atmospheric aerosols and the valid range of Angstrom's formula (*Chinese*) 2-89006
 optical properties, information content rel. to size distrib. 2-108787
 optical properties of aerosols growing to fog 2-117451
 organic aerosols in atmosphere, effect on IR radiation attenuation (*Russian*) 2-106312
 particle generation, transport and characterisation, comparison of light absorpt. instruments 2-57639
 particle size distrib., multifilter exam. technique 2-63113
 particle size measurement, expt. and theoretical study of two-dimensional virtual impactor 2-111605
 particles from turbulent gas streams, thermophoretic deposition 2-60628
 particulate matter and marine primary productivity inhibition 2-62524
 particulate samples, X-ray powder diffr. system for chem. speciation 2-105630
 phase functions meas. 2-117447
 photochemical, mechanisms and characs. (*Dutch*) 2-106206
 pollution meas. with metal-coated Nuclepore filters 2-67926
 polyatomic gases, motion of aerosol particles containing internal heat sources 2-114885
 pulsed clearing of synthetic aqueous aerosols by CO₂ laser radiation 2-65279
 radiometric levitation of micron sized spheres 2-67154
 resuspended soil aerosols containing Pu activity at Rocky Flats plant 2-57751
 Saturn atmosphere, aerosol struct. model from polarisation obs. 2-73902
 scattered background light, spatial-freq. depend., atm. modulation transfer function 2-78836
 sea salt deposition on ceramic insulators of power lines 2-94463
 sea salt dry deposition, wind speed and particle size dependence 2-63038
 size comp. in arid zone, seasonal var. in Karakums 2-106285
 size distrib. from spectral optical depth obs., linear inversion theory 2-117488
 size distribution, quasi stationary approx. 2-78772
 soot particles collected on filters, photoacoustic meas. of absorptivity, substrate refl. effect 2-53851
 sources in polluted atmosphere, evaluation using receptor models 2-62529
 South Pole, microparticle deposition from 1450 to 1850 as natural background aerosol record 2-78814
 spherical particle motion in a rarefied gas, vel. profiles, drag forces 2-109369
 stratosphere, conc. increase due to Alaid eruption (April 1981) 2-73624
 stratosphere, ion nucleation, potential aerosol source 2-106266
 stratosphere, observation and theory, review 2-106278
 stratosphere aerosol (1974-80), comparison of lidar and balloon borne particle counter meas. 2-106232
 stratosphere aerosol increase during 1981, lidar obs. over central Europe 2-100450
 stratosphere aerosol layer, S budget and H₂SO₄ evaporation from aerosol particles 2-112046
 submicron natural atmospheric particles, volatile and nonvolatile components nature (*Russian*) 2-106219
 sulphate aerosol formation in low-temp. regions of stratosphere 2-78799
 sulphate layer, implications of COS and CS₂ from eruptions of Mount St. Helens 2-78623
 sulphates, O isotope study 2-63025
 sulphates over Sweden, aircraft meas. 2-94422
 troposphere, aerosol heating rates from radiative flux meas. 2-58119
 tropospheric aerosol layers, shortwave radiative props. evaluation uncertainties, expt. and numerical errors 2-94490
 tropospheric desert aerosols, Landsat multispectral radiometry 2-63041
 upper atmosphere, chemical enrichment, role of cometary material 2-100615
 upper atmosphere outgoing radiation, aerosol effects 2-78895
 SW USA, regional visibility rel. to particle concs. 2-112123
 Venus, haze particles IR props. 2-73886
 Venus atmosphere, aerosol component measured by Venera 11/12 descent vehicles, IR/visible obs. 2-68643
 volcanic aerosol dispersion in stratosphere, model study 2-63040
 volume scattering ratios determ., comparison of polar and integrating nephelometers 2-53805
 water-droplet aerosol, illumination by laser probe, refractive props. of transparent region 2-55074
 windblown dust effect on IR and optical visibility 2-117444
 Ag particles, van der Waals forces enhancement, coagulation rate meas. 2-93822
²⁴¹Am, retention and translocation by beagles after ²⁴¹AmO₂ inhalation, influence of aerosol size 2-73378
 C particles, van der Waals forces, coagulation rate meas. 2-93822
 C, particulate, collected on Teflon filters, monitoring with photoacoustic and transmission techniques 2-53850
 H₂SO₄ aerosol, IR laser backscatter spectra, appl. to atm. 2-65166
 NH₃ aerosol, pH control of clouds and precip., atmos. comp. meas. and modelling 2-68402
 (NH₃)₂SO₄ aerosol, IR laser backscatter spectra, appl. to atm. 2-65166
 O₃, absorbed on porous particles, dissoci., rel. to ball lightning 2-105512

- aerospace**
 see also *aerospace computing; aerospace control; aerospace instrumentation; aerospace propulsion; aerospace simulation; aerospace test facilities; aircraft; ground support systems; space research; space vehicles; terrestrial atmosphere*
 No entries
- aerospace applications of computing** see *aerospace computing*
- aerospace biophysics**
 artificial gravity, biomedical aspects 2-62794
 astronaut environmental problems, conf., Bonn, Germany (Nov. 1980) 2-58522
 astronaut motor functions, pathophysiology in prolonged manned space flights 2-62790
 Biorack project, European contribution to space biology 2-117098
 bone, effects of space flight, anal. by quantum concept of bone remodelling 2-62791
 bone strength, effects of hypokinesia in primates, space flight appl. 2-62644
 cardiovascular physiology in space, current views and future programs 2-62783
 cardiovascular reflexes during rest and exercise modified by gravitational stresses 2-62643
 circulatory system, human, digital computer model, aerial combat appl. 2-116962
 Cosmos-396 biological satellite, LET spectra obs. 2-62796
 haematological and immunological changes in crew during space flight 2-62788
 hypogravity, physiological responses, effect of physical fitness and training 2-62784
 HZE particles, role in space flight, results from space and ground-based expts. 2-62793
 kidney, human, ion regulatory function in prolonged space flights 2-62787
 lung mass, determ. from flow-volume loop, weightlessness effect, astronaut appl. 2-62785
 manned space flights, overview of endocrine and metabolic changes 2-62786
 mass perception rel. to body wt. changes, space flight appl. 2-62640
 nausogenic properties of various dynamic and static force environments 2-62789
 radiation: risk and protection in manned space flight 2-62792
 Skylab flights, struct. and functional changes in man accompanying weightlessness 2-105844
 Soviet biosatellites, summary of expts. onboard 2-62781
 Soviet biosatellites of the Cosmos series, future investigations planned 2-62795
 Space Shuttle suit alert system visual acuity problem 2-105842
 USA biological expts. in space, review 2-62782
 USA manned space flight, first 20 years, biomedical status report 2-62779
 USSR manned space missions, medical investigations review 2-62780
 weightlessness effects 2-68176
 zero gravity simulation expts., human adaptation 2-105843
- aerospace computer control**
 see also *aerospace computing*
 consolidated space operations centre 2-94574
 NASA space missions development, using advanced automation technologies 2-94579
- aerospace computing**
 see also *aerospace computer control*
 aircraft wake vortices detection and analysis, measuring system (Dutch) 2-114957
 NASA space missions development, using advanced automation technologies 2-94579
 noise contour prediction programs, comparison 2-57755
 onboard computer development in US civilian spacecraft, historical review 2-100703
- aerospace control**
 see also *attitude control*
 geostationary orbit obtaining from off-nominal low transfer orbit 2-89112
 interplanetary spacecraft mission techniques and orbital mechanics 2-63209
 Kiku-3 Engineering Test Satellite IV, operation and control (Japanese) 2-84061
- aerospace engines**
 aircraft engine noise control in aircraft manufacturing industry 2-60299
 gas turbines, corrosion prevention by organometallic cpd. additives 2-116623
- aerospace instrumentation**
 see also *aircraft instrumentation; Langmuir probes*
 computerised optical-scanning tomography of turbulent wakes and exhaust plumes 2-76050
 flare imaging X-ray imaging spectrometer for solar flare, imaging 2-100743
 gamma-ray Compton telescope, balloon-borne, props. and performance 2-89147
 International Solar Polar Mission, CMOS RAMs, LSI, radiation resistance to Jupiter radiation belts 2-68595
 ion composition meas. in space, exptl. techniques 2-94612
 multichannel analyser for multidetector solid state detector array 2-75124
 onboard computer development in US civilian spacecraft, historical review 2-100703
 satellite electrophotometer, high-speed, two-channel, operating in photon-counting regime, performance (Russian) 2-94605
 visible/IR imaging systems for spacecraft (Japanese) 2-89110
 Si detectors for X-ray, ion and electron spectrometers, low temp. characts. 2-75108
- aerospace propulsion**
 see also *aerospace engines*
 environmental effects of space systems 2-88487
 gasdynamics of detonations and explosions, conf., Gottingen, FRG (Aug. 1979) 2-58549
 liquid H₂ appl. developments 2-83524
 Space Shuttle main engine Mach disks, H₂/O₂ exhaust plumes spectrochemical analysis 2-111527
- aerospace simulation**
 see also *aerospace test facilities*
 conference, Pasadena, CA, USA (May 1982) 2-94908
- aerospace simulation continued**
 rocket plume, lab. H₂O jet simulation, radiometric obs. of 752.033 GHz rot. absorpt. line 2-90520
 rocket plume detection using satellite-borne submillimetre-wave radiometry at thermospheric altitudes 2-94575
- aerospace test facilities**
 see also *wind tunnels*
 NASDA's high-intensity acoustic test facilities 2-70795
 uncured insulating layer thickness meas. by potentiometric micrometer 2-74469
- AFC** see *automatic frequency control*
- afterglows**
 microwave injection, upper-hybrid soliton, density cavity 2-60755
 Monte Carlo model of plasma afterglow 2-55798
 noble gas MHD generator, discharges in inlet region 2-91681
 plasma electron energy distrib., electron temp. and stepwise excitation 2-86490
 H, Z-pinch discharge, afterglow, degree of ionisation 2-81562
 He discharge afterglow, high press., reaction kinetics theory 2-71281
 He-N₂, Penning ionisation, charge transfer, kinetic model 2-96716
 KBr:Ti, activator electroluminesc., recomb. and intracentre processes, strong electric field effect 2-72557
 N₂ plasma, flowing afterglow, quenching of (B³Π_g) state by ethanol 2-75339
 NaCl:Ag(Cu), activator electroluminesc., recomb. and intracentre processes, strong electric field effect 2-72557
 SO₂-inert gas afterglow, SO(B³Σ⁻, A¹Π-X³Σ⁻) emission in UV and visible spectral ranges 2-90561
 Zn level slow electron impact excitation special features 2-80825
 ZnS:Mn, pulse excited, afterglow of Mn centres 2-110924
- AGC** see *automatic gain control*
- age (Earth)** see *geochronology*
- age determination, radioactive** see *radioactive dating*
- age hardening** see *precipitation hardening*
- ageing**
 see also *precipitation hardening; strain ageing*
 alloy, dislocation motion during ageing, particle distrib. influence, computer simulation (Russian) 2-91963
 alloys, multistage ageing, elastic stress effect, coherent particle crit. radius (Russian) 2-105152
 alloys, multistage ageing, elastic stress effect, precipitate stability (Russian) 2-105151
 battery systems, reliability evaluation 2-62471
 black chrome selective surfaces degradation at elevated temps. 2-97131
 dielectric materials behaviour and electrical and thermal stresses (Italian) 2-56999
 Elinvar, Fe-Mn-V-C, dispersion hardened, nonmag., mech. characts. 2-62132
 epoxy based coatings, hygrothermal ageing 2-111368
 epoxy resins, linear and network, phys. ageing phenomena below glass transition 2-62161
 filled elastomer, effect of large strains on ageing 2-105191
 glass, unified model of kinetic treatments of glass transition and viscoelastic props. 2-66221
 glass fibre reinforced epoxy, fracture energy maps, hygrothermal ageing effects 2-57449
 glass fibre reinforced polyester, water sorption and mech. props. 2-116522
 HV semiconducting glazed insulators properties and behaviour (Italian) 2-77957
 Inconel X750, age hardenable, stress corrosion cracking in hot water, rel. to prior heat treatment 2-83299
 Inconel X750, stress corrosion cracking, yield strength, rel. to heat treatment, Zr levels 2-83300
 PET films, physical ageing in glassy polymer, IR spectra 2-103667
 plastic foams, mech. props. change during storage, prediction 2-116508
 plates, viscoelastic, ageing, with linear cracks, durability (Ukrainian) 2-103092
 PMMA, glassy, phys. ageing effect on stress relax., correl. with Young's modulus 2-62160
 polyethylene film, elec. ageing, radiothermolum. obs., relax. characts. (Russian) 2-93288
 polymer, glassy, approach to thermodynamic equil., improved calorimetric procedure 2-89717
 polymer, glassy, nonequil. behaviour, review 2-60892
 polymer, partially cured, glass transition temp. as nonequil. parameter, effect on dynamic mech. response 2-66224
 polymer cable insulation, aging, for equipment qualification, in nuclear reactors 2-107961
 polymer thin-film optical waveguides, ageing process, visible-UV study 2-109039
 polypropylene electret, vapour induced depolarisation currents 2-87658
 polypropylene film, effect of high O₂ press. and temp. on ageing 2-116576
 polystyrene, sulfonated, effect of ageing on thermal behaviour 2-88109
 polyurethane foam, mech. props. change during storage, prediction 2-116508
 polyvinyl acetate, nonequil. annealing behaviour, water sorption and glass transition, dielec. and thermal meas. 2-66223
 polyvinyl alcohol, vibr. spectra, effects of simultaneous UV irradi. and heating 2-57121
 PVC glass, vitrified at elevated press., nonequil. processes, conform. and enthalpic changes 2-86873
 rare earth-Co matrix magnets heated in dry air, thermal stability and temp. coeffs. 2-72292
 stainless steel, type 304, creep and creep recovery at low stresses, plastic strains, ageing effect 2-93579
 steel, alloy, ageing effects 2-67405
 steel, alloy, fracture behaviour, effects of comp. variations and ageing treatments in air and H₂ 2-67522
 steel, austenitic stainless, ageing, dimensional changes (Russian) 2-67385
 steel, austenitic stainless, creep and plastic strains at 593°C, under step stress changes, ageing effects 2-99509
 steel, austenitic stainless, neutron irradi., type 316, increased He content effect on void form. and solute segregation 2-109846
 steel, austenitic stainless, strengthened by phase strain hardening and ageing 2-72741
 steel, austenitic stainless, void swelling in type 316 under long time proton irradi. 2-102038

ageing continued

- steel, Cr-Mo, temper embrittlement, atom probe anal. 2-67471
 steel, Cr-Mo-V type, pearlitic, stresses influence during ageing on loss of strength 2-99549
 steel, ferritic-austenitic Cr-Ni-Mn steel, aged, stress. stratification, neutron diff. study (*Russian*) 2-93541
 steel, maraging, Ni and Cr effect on thermal stresses and relax. capability, thermal welding simulation (*Russian*) 2-67386
 steel, martensitic, fracture, delayed, high temp. deformation influence (*Russian*) 2-93586
 steel, mild, plastic deform. in metal cutting 2-105267
 steel, Ni, Mn and Ni-Mn based, maraging, economically alloyed, heat treatment influence on struct. and props. 2-67394
 steel, Ni-Co-Mo-Ti, maraging, heat treatment for service life improvement 2-72739
 steel, Ni-Mn-Mo, high-strength cast maraging, ageing influence on mech. props. 2-67397
 steel, Ni-Mo-Co, age-hardening, weld struct., hot stage microscopic invest. 2-111190
 steel, Ni-Ti, austenitic, a high-strength, fatigue limit, grain size and γ -phase stability influence 2-72822
 steel, stainless, austenitic, ageing with γ' precipitation, intermittent reaction (*Russian*) 2-67346
 steel, stainless, type 316, cast, creep, effect of thermal ageing and grain size 2-105196
 TGS, nonequib. ferroelec. cryst., relax. currents 2-110341
 Ag evaporated films, surface morphology under anodic and cathodic load and during ageing 2-98504
 Ag thermally developed photographic materials, ageing, photosensitivity (*Russian*) 2-58957
 Ag-glass mirrors durability in moist acid vapours, applications in outdoor environments 2-67843
 Al electrolytic capacitor, anodic oxide layer obs. using TEM and SEM 2-99580
 Al, quenched, clustering process of vacancies 2-55964
 Al-Cu, ageing, microcalorimetric studies 2-99457
 Al-Cu, Mn, Ti, Cd and Zr impurities effect on ageing, electron microscopy study (*Russian*) 2-93539
 Al-Cu (4 wt.%), resistivity maximum during Guinier-Preston zone formation 2-82319
 Al-Cu (4 wt.%), stacking fault energy change during ageing (*Russian*) 2-115256
 Al-Cu (4wt.%), GP zones at initial stages of ageing small-angle X-ray scatt. (*Japanese*) 2-83142
 Al-Cu-Mg, 2024 alloy, ageing effects and plane strain constraint on ductility 2-67441
 Al-Cu-Mg, ageing, elec. cond. study using eddy current meas. 2-88230
 Al-Cu-Mg (1.3, 1.3 at.%), high temp. ageing, coherence loss, electron microscopy study (*Russian*) 2-93540
 Al-Cu-Mg (1.3, 1.3 at.%), high temp. ageing, coherent precipitation obs. (*Russian*) 2-99429
 Al-Cu-Mg (4.5, 1.5 wt.%), alloy 2124, H embrittlement 2-57468
 Al-Li-Mn(Zr)(Mg)(Cu), corrosion behaviour, correl. with microstruct. 2-88253
 Al-Mg (8wt.%), grain boundary segregation 2-88087
 Al-Mg-Si-Cu-Cr, quench sensitivity, effects of Cu and Cr 2-105174
 Al-oxide-Pb tunnel junctions, water infused, thermal and voltage annealing 2-82472
 Al-Te contacts, needle struct., current-voltage characts. after different types of aging (*French*) 2-61566
 Al-Zn, ageing, microcalorimetric studies 2-99458
 Al-Zn (15 and 25 wt.%), intercryst. precipitation (*French*) 2-116448
 Al-Zn (15-25 wt.%), grain boundary migration mechanism (*French*) 2-86684
 Al-Zn (4 wt.%), GP zones, ageing and reversion, elec. resist. meas. (*Japanese*) 2-83143
 Al-Zn-Mg, aged at 20, 80 and 120°C, decomp., quench conditions influence (*French*) 2-72743
 Al-Zn-Mg, isothermal ageing, O-180°C, after direct quench, mech. props. and microstruct. 2-93536
 Al-Zn-Mg, microhardness with technical impurities, development during two-step ageing treatment 2-93537
 Al-Zn-Mg, slatiness of fracture after rolling 2-111303
 Al-Zn-Mg, stress corrosion behavior of weldments, effect of heat input rate and postweld heat treatment (*Korean*) 2-67633
 Al-Zn-Mg, struct. and strength after duplex ageing 2-72727
 (Al-Cu)-Al₂O₃ composite, SAP type, precipitation hardening 2-77836
 Al₂Ga_{1-x}As_x/GaAs concentrator solar cells, organometallic, vapour phase epitaxial, fabrication and performance 2-93921
 Al₂Mg(OH)₂(Si₂O₁₀)(Ca₂Na)₂·4H₂O, bentonite, texture changes during vibr. grinding and after ageing (*Czech*) 2-88101
 As₂Se₃, thin film, vitreous effect of age, photocond. meas. 2-56645
 As₂Se₂Te₂, glassy, piezoelec. effects, expt. study 2-57021
 C fibre reinforced epoxy, fracture energy maps, hygrothermal ageing effects 2-57449
 CdTe, Ag diffused, degradation of elec. and optical props. 2-115751
 Co-base wear-resistant alloys, carbide transform. during ageing 2-77851
 Co-Cr-Mo-C alloys, wrought, phase transform. 2-99423
 Co-Cr-W, processed by liq. phase sintering, microstruct. invest. 2-67310
 Co-Fe-Nb semihard mag. alloy, cold working effects on precipitate morphologies rel. to mag. hysteresis 2-92962
 (Co_{0.78}Fe_{0.22})V alloy, ordered, microstruct. 2-72719
 Cr-Cr₂O₃ solar black chrome film, microstruct., comp., plating process variables, thermal ageing effects, performance 2-93943
 Cu-Al-Ni, shape memory alloys, ageing effects 2-77852
 Cu-based shape memory alloys, ageing 2-88144
 Cu-Be alloy, multistage twinning of tetragonal two-phase blocks formed during ageing, γ' particle distrib. (*Russian*) 2-67348
 Cu-Be-Co (13.1, 0.2 at.%), rapid solidification effect on ageing (*Japanese*) 2-105137
 Cu-Be-Ni (2 wt.%, 0.30 wt.%), ageing characts. (*Chinese*) 2-62147
 Cu-Co alloys, precipitated particles, coarsening process (*Japanese*) 2-83125
 Cu-Mg alloy, disintegration kinetics upon natural ageing, X-ray diffuse scatt. study 2-77850
 Cu-Mn-Al, exchange anisotropy, hysteresis loops and coercive force study 2-66866
 Cu-Ni-Mn, grain boundary reaction after ageing (*Japanese*) 2-77848
 Cu-Ni-Sn (10.8 wt.%), grain boundary reaction after ageing (*Japanese*) 2-77849

ageing continued

- Cu-Ni-Sn spinodal alloy, tensile props. improvements by two-phase heat treatment 2-116478
 Cu-Ti, strength and ductility, 4 to 70K (*Japanese*) 2-105234
 Cu-Ti alloy, thin foil, microstruct. changes 2-71826
 Cu-Zn-Al, shape memory alloys, ageing effects 2-77852
 Cu₂O, chemically oxidised solar plate absorbers, optical props. and long-term stability 2-105597
 (Fe,Ni)₃V, long-range ordered alloys, fusion reactor appl., mech. props. 2-85218
 α -Fe, dislocation splitting, alloying additions influence (*Russian*) 2-115231
 Fe-Al-C alloy, abnormally high tetragonality of martensite lattice, origin 2-97996
 Fe-base superalloy A-286, effect of composition and high energy rate forging on precipitation 2-111183
 Fe-C (1.3 wt.%), martensite, acoustic emission during ageing, microcracking 2-57387
 Fe-Cr (32 at.%) supersaturated solid solns., spinodal decomp. at 470°C, precip. morphology 2-105162
 Fe-Cr-Ni, austenite-ferrite struct., tensile props. and fracture (*Japanese*) 2-105239
 Fe-Cr-Ni-Al, NiAl precipitation during ageing 2-105156
 Fe-Ni-Co-Ti, martensite and austenite, deformed γ' particles elastic deform. and $\gamma \rightarrow \alpha$ transitions (*Russian*) 2-88078
 Fe-Ni₃Si (18.3 at.%), martensite aging, precipitated intermetallic phase struct., electron microscopy study (*Russian*) 2-93514
 Fe-Ni-Ti, phys. props., reverse martensitic transform. effect (*Russian*) 2-67334
 Fe-Ni-Ti type N26T3 alloy, martensitic transform. in austenite 2-105145
 Fe-Ni-V and Fe-Ni-Co-V alloys, maraging kinetics, specific elec. resist. obs 2-105204
 Fe-V-C ferritic steel, carbide precipitate size, EELS and energy dispersive anal. 2-67362
 GaAs-Ga_{1-x}Al_xAs DH laser, deep level luminescence spectra (*Chinese*) 2-65217
 GaP ohmic contacts, laser annealed, for high temp. devices 2-56692
 GaP:N LED, yellow sideband radiation increases during ageing 2-116261
 Ge₂Se₂Te₂, glassy, piezoelec. effects, expt. study 2-57021
 Ge_{1-x}Te_x(Sb₂S₃), glassy, piezoelec. effects, expt. study 2-57021
 InGaAsP/InP double heterostruct. lasers, aged, TEM obs. of dark defects 2-55143
 InGaAsP-InP buried heterostructure laser reliability, degradation modes 2-80946
 InGaAsP-InP DH LED, aged, dark defects 2-91974
 InGaAsP-InP V-grooved substrate BH laser with smooth far field pattern and stable ageing characts. 2-80985
 In_{1-x}Ga_xAs_{1-y}P_y-InP V-grooved substrate BH 1.3 μ m laser, aging tests 2-114303
 LiF:Mg, TLD-100, clustering and precip., dielec. loss study 2-92213
 LiF:Mg, TLD-100, thermoluminesc. meas., clustering and precip. effects 2-93291
 Mn₃Al₂C₃, magnetic viscosity 2-72291
 Mo-Hf-C, powder metallurgy, props. 2-111228
 Mo-Ti-Zr-C, powder metallurgical, props. 2-111228
 NaCl:Pb, Mn, excitation and emission spectra 2-104952
 Nb, Snoek effect, rel. to O impurity content, cold work and ageing (*French*) 2-67414
 Nb-Zr-C, embrittlement during ageing, X-ray, SEM and TEM study (*Russian*) 2-93585
 Nb-Zr-V-C alloy, high-temp. creep in vac., long ageing and V additions influence 2-99504
 Ni-Be (1at.%), radiation induced homogeneous precip., HVEM obs. 2-83124
 Ni-Be alloy, multistage twinning of tetragonal two-phase blocks formed during ageing, γ' particle distrib. (*Russian*) 2-67348
 Ni-Cr-Al-Ti, ageing and γ' phase precipitation after strong deform., recrystn. processes (*Russian*) 2-99443
 Ni-Ti (102wt.%), liquid quenched modulated struct. alloy, ageing (*Japanese*) 2-105193
 PLZT ceramic, transparent ferroelectric, dielec., optical and semicond. props., reduction effect (*Russian*) 2-99668
 Pb-Ag (0.038 at.%), kinetics of Ag precip. 2-111187
 Pb-Sn, supersaturated solid soln., discontinuous precip. obs. during ageing (*Russian*) 2-88082
 PbS, lattice period, influence of composition and γ -irradiation 2-76382
 Pb(Zr,Ti)O₃, impurity doping effects 2-86689
 Pb₂Au₃Si₁₈ metallic glass, DSC, relax. and struct. change 2-65864
 Se, amorphous thin film, photodependence of structural relax. 2-81678
 Se, glassy, piezoelec. effects, expt. study 2-57021
 Sm, thin film, elec. props., effects of pressure, ageing and in situ annealing 2-87422
 Sm(Co_{0.86}Cu_{0.14})₇, struct. and coercivity, heat treatment effects (*Russian*) 2-88227
 Ta, Snoek effect, rel. to O impurity content, cold work and ageing (*French*) 2-67414
 Ta, strength, temp. and deform. rate influence, plastic deform. mechanisms 2-67464
 Ti alloys, metastable transformations study, by acoustic characts. meas. 2-105421
 Ti-Al, mech. props. and thermal stability, comp. depend. (*Russian*) 2-77874
 Ti-Al-Mo, α'' phase form. and decomp. (*Russian*) 2-99385
 Ti-Al-V (6.4 wt.%), deform. modes of α -phase as function of O conc. and ageing 2-77889
 Ti-Al-Zr-Mo-Si (6, 5, 0.5, 0.25 wt.%), silicide precip. 2-83128
 β -Ti-Mn(V)(Mo-V), magnetic susceptibility variation with ageing rel. to microstruct. changes 2-83247
 Ti-Mo (10 at.%), struct. after low temp. ageing, X-ray and electron microscopy study (*Russian*) 2-93538
 β Ti-Mo-Zr-(Al), metastable, deform. and fracture 2-57433
 Ti-Nb-Si-Ge foil, struct. and supercond. props. (*Russian*) 2-92818
 Ti-V-Cr-Mo, VT3-1, α'' phase form. and decomp. (*Russian*) 2-99385
 Zn-Al (1.1 wt.%), superplastic, ageing influence of deform. behaviour (*Czech*) 2-67438
 ZnS:Mn, Cu, Cd, electrolum. films, field enhanced changes in comp. and struct. 2-116263
 ZnS:Mn,Cu,Cl, amorphous and cryst. electrolum. film, elec. cond. props. meas. 2-87429
 ZnS:Mn electrolum. films grown by al. layer epitaxy, ageing process 2-116264

ageing continued

- ZrO₂-Y₂O₃ (8 wt.%), polycrystalline, annealing effect on elec. cond. 2-76734
 ZrO₂-Y₂O₃-Nd₂O₃, ceramic, thermal aging rel. to struct. and electrophysical props. 2-111208

agriculture

see also farming

- Bihar wet and dry spells occurrence, importance for agriculture 2-68394
 central California, variability of surface temp. in agricultural fields 2-111928
 California Desert Conservation Area, remote sensing rel. to resource inventory techniques 2-111608
 crop classification combining radar remote sensing and Landsat data 2-58047
 crop water stress index, soil moisture from thermal IR meas. of vegetation temps. 2-106157
 design of a commercial solar-powered greenhouse with irrigation water from saline water sources 2-67825
 insect pest control, RF-insect interaction (*Spanish*) 2-62682
 N.Ireland, fertiliser nitrate concs. in rivers 2-67899
 nutrient elements in apples during growth period, elemental study by PIXE 2-67776
 plant seeds, stability of stimulatory effect of preirrad. (*Russian*) 2-116996
 radar remote sensing of agricultural land, Dutch ROVE program 2-58044
 remote sensing, effect of subpixel-sized cloud on vegetative assessment index 2-106307
 remote sensing of crops on ploughed land by side-looking radar 2-58046
 remote sensing satellite system appl. SPOT project 2-73561
 small and vertical axis wind turbines, appls. 2-78179
 soil moisture remote sensing by radar, land surface roughness effects 2-58151
 soybean canopy light reflectance, solar illum. angle influence 2-73552

air

see also terrestrial atmosphere

- activation by an electron synchrotron 2-109448
 air-water, two-phase flow through pipeline with gate valve and orifice plates 2-71020
 air-water interface, heat and momentum transfer 2-91523
 air-water system, flow in packed bed, heat transfer 2-109399
 air-water two phase flow, surface effect on droplet deposition 2-55647
 breakdown obs., barrier effect in air and SF₆-insulated nonuniform electrode configurations 2-103265
 bubbles, size and rise velocity meas. in liquids 2-60608
 corona in point-plane gap, dual-patch regime stabilisation 2-103510
 corona inception in air at high pressure 2-103506
 DC corona discharge in air, mass spectra of ionic species obs. 2-103513
 DC corona discharges in air or O₂, gaseous products obs. 2-103514
 DC electric breakdown of positive point plane gaps, NO_x, CO₂ and H₂O conc. effects 2-91698
 desorption from water film, cryotrapping vacuum pump appl. 2-86976
 dichlorodifluoromethane-air mixture of electronegative and buffer gas, electron attachment coeff. meas. 2-97698
 dry, prebreakdown currents and breakdown potentials in longitudinal magnetic fields 2-71280
 electric breakdown, filamentary stages of point to plane discharges 2-103550
 electric breakdown, low threshold, laser spark initiation, plasma waves 2-91702
 electric breakdown by oscillating lightning impulse voltage, breakdown behaviour of nonuniform electrode arrangements 2-97821
 electric breakdown due to pulsed intersecting radio beams 2-112023
 evaporation-humidified, ion context, elec. cond. meas. 2-86377
 flowing gas spark gaps, statistical breakdown times 2-91711
 formaldehyde determ. in clean air 2-63114
 free convection effects on laminar forced convective heat transfer in a horizontal isothermal tube 2-91402
 greenhouse/dryer, double-block, for year-round operation 2-116784
 heat transfer from a yawed cylinder independence principle 2-55564
 high temperature, sp. ht. and isentropic exponent, analytical expressions 2-97696
 hydrate inclusions in Greenland ice core 2-100408
 impulse ratios of gaps in compressed gases 2-97820
 jet, self-excitation, whistler nozzle driven, laminar and turbulent flows 2-55631
 jet, swirling, confined, turbulent mixing (*Russian*) 2-81331
 jet, turbulent axisymmetric, coherent struct. 2-60601
 laser-induced breakdown, pulse-width and focal-volume depend. 2-66055
 methane-air flame, nascent NO detect. by multiphoton ionis. 2-59863
 methane/air sooting diffusion flames, laser induced visible fluorescence 2-116699
 mixture of 20% O₂ and 80% N₂, two- and three-body electron attachment 2-85782
 nanosecond surface discharge at low pressure in air 2-103512
 neutral gas, reduced-density channel, meas. by laser deflection technique 2-58790
 optical breakdown in air near conducting target, elec. current prod. 2-55766
 optical breakdown plasma, interferometry study (*Russian*) 2-81550
 optical low-threshold breakdown, plasma form. for oxidation of metals 2-99604
 Pachen curves anal. using Townsend breakdown eqn. 2-109450
 plasma, emission coeff. determ. 2-71102
 plasma prod. using axicon focused laser 2-65741
 refractive index measurement of moist air in 3 µm region 2-95444
 refractive-index meas. by moiré deflectometry 2-112959
 slow optical discharge initiated by optical-breakdown plasma 2-109623
 stopping power of protons and alpha particles 2-70386
 supersonic ejectors, zero-secondary flow performance 2-75992
 thermal conductivity, 312 to 373K, 0.1 to 24 MPa 2-86373
 transport coeff. determ. 2-103246
 turbulent stream, lig. evaporation, heat and mass transfer 2-65586
 water/air turbulent mist flow, droplet deposition on flat plate 2-97514
 CO-air turbulent diffusion flame, laser absorpt. sampling probe 2-78145
 CO-air mixture of electronegative and buffer gas, electron attachment coeff. meas. 2-97698

air continued

- N₂, molecular vibration levels population, plasma neutrals temp. meas. in microwave discharge, CARS 2-114006
 N₂-O₂, air-like mixture, three-body attachment coeff., Boltzmann eqn. calc. 2-90693
 air bases see airports
 air bubbles see bubbles
 air compressors see compressors
 air conditioning
 Cantonal Chemical Laboratory integrated heat supply system operation and performance (*German*) 2-73135
 contamination in air, elimination in film, and TV tape handling rooms 2-89836
 flat plate solar air heater transient anal. 2-83510
 hybrid double-absorption cooling systems for solar power utilisation, anal. and design 2-78242
 liquid desiccant system optimisation for low grade solar/geothermal dehumidification and cooling 2-88406
 molten CO₂ electrochem. cell for CO₂ concentration for manned spacecraft 2-83469
 solar-powered dual absorption system, selection criteria using fuzzy decision anal. 2-111539
 sound power radiated in duct in presence of flow (*French*) 2-75768
 thermal energy storage, conf., Washington, DC, USA (Sept. 1981) 2-58552
 two-pass solar air heaters thermal performance anal. 2-78249
 NH₃-H₂O absorption refrigeration cycles, solar operated, simulation, design and economics for building cooling 2-99835
 air permeability see permeability
 air pollution
 see also air pollution detection and control; smoke
 Abastumani, USSR, gas and aerosol admixtures comp. and origin (*Russian*) 2-117402
 acid precipitation in S. California, spatial vars. 2-62519
 acid rain, acid-base considerations 2-78266
 acid rain effect on environment 2-107081
 acid rain regional scale model 2-112067
 acidity of dew, frost and fog 2-94478
 acidity of Scotland and England's rain 2-83923
 aerosol particles, effects of comp. and shape on size distrib., retrieval from ang. scatt. functions 2-58118
 aerosol particles size measurement, expt. and theoretical study of two-dimensional virtual impactor 2-111605
 aerosol plume generated by a town, model 2-68421
 aerosol pollution, effects on millimetre-wave propag. 2-117392
 aerosol pollution along roadways, evaluation of four types of samplers 2-105631
 aerosols, meas. of aerosol composition in marine and coastal boundary layer 2-117390
 air quality descriptions based on conc. statistical distributions 2-105623
 SE Arizona, emissions from Cu ore smelters, plume studies 2-62517
 Athens, Greece, SO₂ conc. levels 2-68405
 atmospheric boundary layer, pollution in presence of inversion 2-100434
 atmospheric corrosion, initiation by SO₂ and particulate matter, test-cell apparatus 2-111355
 atmospheric corrosion, initiation by SO₂ and particulate matter, corrosivity of individual pollutants 2-111356
 atmospheric diffusivity profiles from synoptic reports 2-94420
 Australia, total urban particle production 2-83529
 Bermuda, acid rain due to N.America pollution 2-78270
 Bombay, India, humidity and turbidity parameters 2-68409
 Boston urban plume, NO_x removal and reactions 2-78271
 Boulder Country, Colorado, 1967-80 conductivity rel. to air quality 2-83920
 boundary layer convective mixing off California coast 2-83877
 boundary layer dispersion theory for non-uniform site 2-68403
 brominated methanes/ethanes, photochemistry in stratosphere/troposphere from UV absorpt. spectra 2-111600
 California, USA, visibility trends 2-83943
 California coastal area, oxidant conc. prediction models 2-63014
 California S. coast air basin, trace pollutants in photochemical smog 2-57748
 Canada, anthropogenic emissions inventory 2-93961
 chemically reactive plume from power plant, chem. model 2-62514
 Chesapeake Bay, air pollution meteorology on summer day, model 2-93957
 chlorofluorocarbon increase causing O₃ perturbation 2-100503
 chlorofluoromethane (CFC 11 and 12) residence times in stratosphere 2-106208
 chlorofluoromethanes effect on O₃ conc. 2-73623
 coastal environment, plumes convective downmixing 2-78269
 collective doses from airborne effluents 2-78456
 computer modelling, colour display appls. 2-83974
 conference, atmospheric effects on electro-optical infrared millimeter systems, at San Diego, CA (August 1981) 2-112644
 conference on air pollution long range transport, held at Albany, NY, USA (April 1981) 2-94905
 cooling-tower plume rise models (natural-draft towers) 2-63012
 corrosion of steel structures, in Europe, study of atmos. conditions 2-72886
 Cracow, Poland, snow pH and contamination by heavy metals and S 2-83534
 DDT in atmos. of N Atlantic 2-99867
 Delhi, India, heat and humidity islands physical features 2-111601
 dichlorodifluoromethane, atmospheric burden 2-111596
 dichlorodifluoromethane in Earth's atmosphere sources rel. to observed concs. 2-100453
 diffusing cloud in boundary layer, ground-level trajectory 2-94421
 diffusion equation for short-range dispersion from continuous ground-level source, approximate analytical soln. 2-100431
 dispersal from point source, turbulent-diffusion theory 2-100519
 dispersal of roadway generated pollution, models 2-99862
 dry deposition of particulates to lakes and sea surface 2-106171
 dust conc. in Chandigarh, India 2-93962
 Europe, increased atmosphere CO₂ content, effect on climate and Suess effect 2-106304
 Florida, wind roses rel. to pollutant concs. 2-112006
 fluoride in rain, study showing pollution and not sea spray as source 2-63013
 fog, reversible absorption of pollutant from area source into fog layer 2-83870

air pollution continued

forest fire smoke, relation between light scatt. coeff. and particulate matter conc. 2-105617
 Greenland and Antarctic snow chem. composition (F, Cl⁻, NO₃⁻, SO₄⁻) 2-78792
 Greenland ice sheet cores, ²³⁹⁺²⁴⁰Pu/¹³⁷Cs and ²³⁹⁺²⁴⁰Pu/⁹⁰Sr as fallout records 2-69994
 halocarbon oxidation by OH in atmos., global, hemispheric models 2-68406
 heavy metal monitoring by anal. of tree bark 2-105615
 heavy metal pollution in Germany, deposition and emission sources (*German*) 2-78825
 heavy metal pollution of Japan urban areas 2-105615
 Himalaya Pb, Cu, Al, Mg and C from domestic fires 2-62527
 horizontal diffusion in atmos., Lagrangian dynamical theory 2-68404
 Houston, Texas, visibility and aerosol comp. meas. 2-112124
 ICRP Task Group Lung Model for radioisotope pollution dosimetry, modifications rel. to age-dependence 2-117088
 institutional low-level radioactive wastes, radioisotope emissions from incineration 2-93963
 interregional transport of pollutants, case studies of measurements versus model predictions 2-99860
 lateral dispersion in boundary layer from continuous sources 2-106167
 lifetimes of pollutants in troposphere 2-83868
 liquid natural gas, spills, vapour dispersion simulation 2-99865
 Long Island, New York, ionic species concentrations in precipitation rel. to meteorological variables 2-83535
 long-range transport model 2-94465
 long-range transport model 2-100520
 Los Angeles, CO exposure on commuter routes 2-111597
 Los Angeles, photochem. smog chem. composition 2-83530
 Los Angeles Basin, pollutant ventilation and summertime circulation 2-105627
 maximum pollutant concentration prediction using plume rise patterns and new formulae (*Italian*) 2-78265
 meteorological data for reactor accident risk calculations 2-54570
 methane, global increase in atmospheric concs. between 1978 and (1980) 2-100452
 methane, total column abundance over Siberia (*Russian*) 2-73703
 methane in freshly fallen snow, implications for past atmos. 2-83885
 methylchloroform, cyclic global emissions 2-62525
 Minneapolis-St. Paul urban heat island, temp. adjustment effect on local climate 2-78829
 models and movement (book) 2-53441
 Nanjing (China), urban area acidity of rain (*Chinese*) 2-78741
 natural and man-made radionuclides in global atmosphere 2-105625
 Netherlands up to 2000 AD, energy production and pollution (*Dutch*) 2-88481
 New York area, sulphur pollutants seasonal variations 2-68407
 nitrate content of rain, increase since 1850 AD 2-99866
 North America acid rain monitoring, review 2-105616
 North Pole, hydrocarbons in snow and ice 2-105628
 Northern Ireland, background atmospheric contribs. to trace-metal sedimentary flux in Lough Neagh 2-105609
 obscuring effect on visual contrast 2-117443
 Olympic National Park, Washington, USA, pollutant monitoring results 2-99854
 organochlorine in atmos. of N Atlantic 2-99867
 particulate fallout predictions for clean rooms 2-99864
 particulate matter and marine primary productivity inhibition 2-62524
 photochemical, mechanisms and charact. (*Dutch*) 2-106206
 plume dispersion using improved puff algorithm 2-63055
 plume model validation 2-73176
 plume propag. over Ghent, EEC air pollution meas. campaign 2-93964
 plumes, source size effect on conc. fluctuations 2-78731
 point discharge currents, effect of nearby large pollution source 2-117405
 power plant plume effect on radiative transfer, radiation meas. 2-100558
 puff growth into Ekman layer 2-105626
 radiative heating of St. Louis (USA) boundary layer, pollution effects 2-63011
 radioactive materials, dispersion and deposition risks in Germany (*German*) 2-83532
 radiochemical study under low β radiation rates 2-62515
 radionuclide composition of gaseous effluents from Belayarsk power station 2-116858
 rainfall modification due to effects of power station 2-78802
 rainwater, chem. differences of hilltop and valley rain 2-83867
 relative dispersion of particles in atoms, theory 2-68457
 remote sensing, concentration estimation 2-73174
 residence time of air parcels within transient high press. system 2-83876
 roadway generated particulates produced by Texas road 2-100442
 Salt Lake City, Utah, multivariate analysis of particulate sulphate obs. 2-83869
 secondary pollutant formation in boundary layer of England 2-83865
 Sines industrial complex, Portugal, impact on lichen flora 2-105619
 smoke, P-derived, IR optical props., 7-14 μ m region 2-105613
 smoke plume dispersal over sea, aerial photograph obs. (*German*) 2-63060
 smoke pollution of Mostar, Yugoslavia 2-106173
 southern hemisphere trace gas concs. 2-106209
 Space Shuttle booster rocket contrib. to atmos. aerosol 2-106265
 St. Louis, Missouri, multivariate analysis of particulate sulphate obs. 2-83869
 St. Louis, particulate S and H₂SO₄ meas. (1977-8) 2-93959
 stack discharged radionuclides, ground level conc. depend. on averaging time 2-102275
 statistical aspects of air pollution quality 2-99858
 stratosphere, planetary waves and transport of trace chemicals 2-78788
 stratospheric pollutants, concentration trends in Northern Hemisphere (1974-9) 2-111598
 sulphate conc. at Whiteface Mountain, New York, USA 2-78752
 sulphate from industrial sources and formation at atmos. 2-106280
 sulphates, O isotope study 2-63025
 1,1,1,2-tetrafluoroethane (refrigerant) pollution and rel. surface temp. rise 2-83875
 tetron flights across a ridge, pollutant dispersion calc. appl. 2-111995
 thermal plume, air motion measurement techniques comparison 2-106260
 Tokushima industrial area of Japan, conc. prediction models 2-57749
 Tokyo and Tiba areas of Japan, rainwater chem. composition (1978 to 1979) (*Japanese*) 2-73654
 trace gas concs. in and above tropical boundary layer 2-106275

air pollution continued

trichlorofluoromethane, atmospheric lifetime from two dimens. model calcs. 2-83533
 turbulent diffusion, rel. to air pollution, full tensor calcs. 2-99861
 turbulent dispersion from line source, model 2-83879
 United Kingdom, photochemical air pollution form. control strategies evaluation, model formulation effects 2-62516
 United States, anthropogenic emissions inventory 2-93961
 NE United States, persistent elevated pollution episodes 2-99859
 NE United States, seasonal visibility and pollutant sources 2-62518
 urban air quality model, sensitivity to input data 2-58106
 urban boundary layer model for pollution conc. studies 2-105614
 urban heat islands, present state of knowledge 2-68448
 urban heat islands and pollutant dispersion, models 2-106166
 urban particulate levels, ¹⁴C meas. of C combustion sources 2-62523
 western USA, acid rain occurrence 2-105618
 eastern USA, background pollutants arriving from northwest 2-83873
 valley air pollution dispersal, special problems (*German*) 2-88936
 visibility reduction due to sulphate and nitrate aerosols 2-68480
 visibility statistics obtained from airports in USA 2-68479
 visibility trend data, statistical anal. by ridits and cumulative percentiles 2-63086
 CO above Soviet cities, spectroscopic meas. (*Russian*) 2-99863
 CO diffusion near highways, numerical model 2-112007
 CO in freshly fallen snow, implications for past atmos. 2-83885
 CO over St. Louis hourly conc. variability 2-93958
 CO₂ climate change model 2-117436
 CO₂ conc. sensitivity of climate models 2-100541
 CO₂ concentration rel. to climate, regional scenarios for CO₂-warmed Earth 2-73671
 CO₂ concentrations meas. at Montsouris Observatory, Paris (1877 to 1910) 2-106204
 CO₂ effect on monsoon rainwater pH in India 2-68438
 CO₂ from fossil fuels, partitioning in atmos.-ocean system 2-100527
 CO₂ increase and effect on Antarctic ice and sea-level 2-88917
 CO₂ increase causing O₃ perturbation 2-100503
 CO₂ increase monitored at Barrow, Alaska 2-83932
¹⁴C, projected estimate of biosphere content due to nucl. power programme 2-62526
 HTO in atmos., produced by Chinese nucl. bomb tests 2-100526
 Hg in Sweden, meas. of total airborne Hg rel. to possible origin 2-68467
 NH₂O₂ conc. obs., Los Angeles, USA 2-105624
 NO and NO₂ emission effects on O₃ in metropolitan regions 2-62521
 NO₂ in Los Angeles, future levels, source-type contrib. 2-78268
 NO₂ emission rates, effect on smog formation in California 2-62522
 N₂O atmospheric lifetime from two dimens. model calcs. 2-83533
 O₃, anal. of total O₃ concs. for natural and man-made trend variability 2-100454
 O₃ conc. increase in troposphere due to aircraft 2-106172
 O₃, daily max. levels in St. Louis, forecasting 2-62520
 O₃ layers, human effects on atmospheric content (*French*) 2-100511
 O₃ perturbation due to CO₂ and CFC increases, circulation model 2-100503
 O₃ pollution control by NO_x emission limitation 2-105624
 O₃ secondary pollutant formation in boundary layer 2-83865
 O₃, surface conc. over St. Louis, 1975-6 regional pollution study 2-93956
 P particulates in NW Atlantic air, sources 2-83874
 Pb concentrations in aerosols in downtown Guatemala City, meas. during February and March (1980) 2-105622
 Pb in human blood, Silver Valley Lead Study 2-83531
²¹⁰Rn, A=220, 222, and decay products in German dwellings: activity concs., dose calcs. and risk estimates 2-117097
 SO₂ and SO₄²⁻ in New York City (1972-79) 2-93960
 SO₂ atm. mean daily conc. by Markov chain model 2-106169
 SO₂ conc. in Mostar, Yugoslavia 2-106173
 SO₂ concentrations in Madrid, behaviour in invariant model (*Spanish*) 2-88482
 SO₂ long-range transport model (*German*) 2-94424
 SO₂ over St. Louis, hourly conc. variability 2-93958
 SO₂ pollutant residence times (*German*) 2-94425
 SO₂ pollution of Vienna in winter, daily conc. models 2-106170
 SO₂ removal from atmos. by rain 2-83866
 SO₂ to SO₄ aerosol transformation rate during transport over North Sea 2-83871
⁹⁰Sr in surface air and stratosphere, inventory of 1963-75 data 2-111599
²³⁷U fallout from Chinese nuclear weapons test (16th Oct. 1980) (*Italian*) 2-68473
 V in New York City (1972-9) 2-93960
⁹⁵Zr from Chinese nucl. bomb tests 2-100526

air pollution detection and control

aerosol absorption meas. using aethalometer 2-112146
 aerosol concentrations meas., relation between light scatt. coeff. and particulate matter conc. in forest fire smoke 2-105617
 aerosol filtration developments since 1968, nuclear appl. 2-96312
 aerosol particles size measurement, expt. and theoretical study of two-dimensional virtual impactor 2-111605
 aerosol sources evaluation using receptor models 2-62529
 aerosols, atmospheric, trace element anal. using photon-induced X-ray fluorescence 2-111606
 aerosols, atmospheric, X-ray methods for chem. characterisation 2-67907
 aerosols, gaseous trace component conc. determ., laser sounding method (*Russian*) 2-73729
 aerosols, light absorpt. meas. using integrating plate method, filter internal refl. coeff. effects 2-112119
 aerosols, particle size distrib. and visibility in Calgary 2-105620
 aerosols meas. with metal-coated Nuclepore filters 2-67926
 aerosols sampling along roadways, evaluation of four types of samplers 2-105631
 air impurities: radioactive carbon dating and computerization 2-57747
 air pollution measurement using laser absorpt. computed tomography, model studies laser measurement method to obtain 2-D data over km sized areas 2-73177
 airborne aerosol particles with attached α -active nuclei, size distrib. meas. 2-67917
 airborne data acquisition system 2-99869
 assessment of the legislative and regulatory environment: NO_x case studies 2-67903
 atmospheric and molecular high-resolution IR spectroscopy by high-pres. tunable CO₂ laser 2-95494
 calorimetry appl. design modifications and developments 2-53765

air pollution detection and control continued

cement stack gas conc., remote and cross-stack meas. using mobile FT-IR system 2-57757
 CO₂ monitoring in an air separation plant with the ULTRAMAT 3 gas analyzer 2-116764
 computerised air quality control system 2-62544
 computerised optical-scanning tomography of turbulent wakes and exhaust plumes 2-76050
 conductivity probe calibration for thermal pollution meas. 2-88484
 diffusion denuder with filter pack for nitrate/HNO₃ determ. 2-93968
 dimethylhydrazine, unsymmetrical (UDMH), laser remote sensing using differential-absorpt. CO₂ lidar 2-93965
 direct-flow analyzer of the disperse composition of dust 2-60679
 Doppler acoustic system, pollutant dispersion appls. 2-73179
 electrochemical sensors for air pollution (*German*) 2-88485
 electrolytically controlled nuclear track plastic filter prod. 2-64831
 ethylene, differential absorpt. meas. using CO₂ laser with power-balanced two-wavelength oscill. 2-90964
 exotic tracers for atmospheric studies 2-94507
 flue gas desulphurisation, sprayer-dryers 2-73055
 fluoride in rainwater, ion-selective electrode measurement methodology 2-62534
 geothermal power stations 2-78184
 heavy metal monitoring by anal. of tree bark 2-105615
 hot contaminated air surveillance at industrial plant using mica track microfilters 2-64830
 hydrazine, laser remote sensing using differential-absorpt. CO₂ lidar 2-93965
 industrial atmospheres automatic surveillance by computerised centralised IR spectrometer (*French*) 2-62528
 IR analysers for gases and vapours meas. in atmosphere 2-111525
 IR emission meas. using balloon-borne cryogenic Fourier transform spectrometer 2-117474
 Knollenberg aerosol counter, response meas. 2-94526
 laser monitoring of reactive atms. species, optogalvanic wavelength calibration 2-93966
 level prediction, selection of variables (*Japanese*) 2-62542
 long-path laser absorpt. spectrometer, scintillation noise reduction by aperture averaging 2-101464
 methane, atmospheric conc. determ. by spectral method (*Russian*) 2-73703
 microprocessor-based analyser for toxic chemicals detection, photoionisation detector-gas chromatograph combination 2-83537
 millimeter-wave spectrometer, sensitivity and response time improvements 2-89825
 monitoring instruments, Indian requirements 2-105621
 monomethylhydrazine (MMH), laser remote sensing using differential-absorpt. CO₂ lidar 2-93965
 natural and man-made material differential refl., rel. to air pollution meas. accuracy improvement 2-99868
 NO_x removal technique from coal fired boiler by dry system (*Japanese*) 2-57634
 nuclear power station, exhaust emission monitoring equipment (*German*) 2-85399
 online DP techniques (*Italian*) 2-67905
 optical gas analyser, using Pb-salt diode laser, specific density determ. 2-57758
 Particle Induced X-ray Emission techniques (*Italian*) 2-99857
 particulate spatial distrib. meas. with telephotometer 2-93967
 particulates, bistatic lidar appl. 2-106349
 particulates, inverse problem in bistatic lidar meas. 2-106350
 plumes, colour-IR photography 2-111603
 radioactive, stack gas diffusion from nuclear power station obs. 2-116859
 rain sampler for subsequent chem. analysis 2-106327
 resuspended soil aerosols containing Pu activity at Rocky Flats plant 2-57751
 rocket plume, lab. H₂O jet simulation, radiometric obs. of 752.033 GHz rot. absorpt. line 2-90520
 rocket plume detection using satellite-borne submillimetre-wave radiometry at thermospheric altitudes 2-94575
 satellite digital remote sensing in visible range 2-73175
 satellite-borne research development 2-73181
 simultaneous concentration monitoring using dye laser visible and UV freqs., SO₂, NO, NO₂ 2-62540
 size-chemical profiles of environmental samples by PIXE, 2-57761
 space technical appl., conf., Pentagon City, VA, USA (March 1981) 2-68972
 steam power stations with atmospheric fluidised-bed combustion boilers
 limestone consumption reduction methods 2-71028
 sulphur particulates and H₂SO₄ airborne measurement apparatus 2-68497
 Swedish air monitoring network for particulate radioactivity 2-75058
 Swedish nuclear power station on-line isotopic stack monitoring system 2-70004
 technology overview 2-78267
 telephotometer for meas. of contrast reduction of distant objects 2-68496
 tethered radiosonde system 2-67904
 toxic industrial compound CO₂ laser absorpt. spectra 2-83536
 toxic trace elements in air (Tehran), determ. by neutron activation anal. 2-78162
 trace gas detection using tunable IR diode laser method 2-73690
 trace metal pollution in Mediterranean marine atm. 2-62539
 tropospheric gaseous pollutants, lidar meas. 2-63132
 UV LADAR for tracking explosion plumes and ejecta 2-93972
 VVR-M reactor, atmospheric pollutant reduction 2-64699
 X-ray fluorescence, on-line analysis of particulate S 2-73178
 CO₂ frequency-switching waveguide laser for atm. pollution monitoring 2-96893
 HCl remote sensing by lidar, optoacoustic meas. of specific absorpt. coeffs. at DF laser wavelengths 2-112116
 H₂SO₄, aerosol, IR laser backscatter spectra, appl. to atm. 2-65166
 HT and HTO in air, prototype monitor design and performance 2-78272
 'H on-line monitor development with γ -ray rejection and energy discrimination 2-75057
 Hg, remote meas. using differential absorpt. lidar 2-78274
 Hg, sequential two-photon laser-induced fluoresc. detect. 2-99737
¹²⁵I, airborne levels during protein labelling 2-62777
 (NH₄)₂SO₄, aerosol, IR laser backscatter spectra, appl. to atm. 2-65166
 NO monitoring system using tunable laser and microcomputer aided signal processing system 2-93971

air pollution detection and control continued

NO, single photon laser-induced fluoresc. detect. for atm. conditions of composition and press. 2-105629
 NO₂ pollutant in atm., conc. determ. from solar radiation transmission spectra 2-93975
 NO₂ summertime ground-level distrib. rel. to motor vehicle NO emissions 2-67902
 NO₃⁻ in aerosols, Fourier-transform IR spectroscopy method 2-99870
 NO_x flue gas removal systems, economic evaluation 2-73054
 NO_x pollution in atmosphere, CEC harmonisation of meas. methods 2-78275
 Nd:YAG laser based radar system for monitoring air pollution (*Japanese*) 2-93974
 O₃ pollution control by NO_x emission limitation 2-105624
 O₃ trend analysis, appl. to search for natural and man-made variability 2-100454
 Pb monitoring for industrial hygiene survey 2-67906
 Pu contamination, airborne detection by α -spectrometry 2-70116
 Rn and Tn, decay products, optimised scheme for concs. meas. 2-93970
 Rn and Tn daughters, unattached, evaluation of meas. techniques 2-93969
 Rn concentration meas. in air and water using Kodak LR-115 track detector 2-67914
²²²Rn in air, meas. using liq. scintillation techniques 2-57759
 SO₂ pollutant in atm., conc. determ. from solar radiation transmission spectra 2-93975
 SO₂, single photon laser-induced fluoresc. detect. for atm. conditions of composition and press. 2-105629
 Th processing facility, decommissioning, population dose 2-64700

air pumps see compressors
air terminals see airports
air traffic
 annoyance/noise level relationships for rail, air and road traffic 2-97284

aircraft
 see also aerospace control; aerospace instrumentation; helicopters
 Concorde, temp. forecasts at 100 mb. level 2-112071
 descent through strong wind-shear over Bahrain 2-68470
 direct effects of lightning on aircraft, protection procedures 2-83895
 engine noise control in aircraft manufacturing industry 2-60299
 fretting-initiated fatigue, material/structure degradation 2-67479
 icing reports and winter orographic clouds, precipitation analysis 2-88962
 interior noise prediction, preliminary analytical models, development and validation 2-114547
 lightning, aircraft susceptibility assessment and development of protection criteria 2-83899
 lightning, electromagnetic interaction with aircraft 2-83896
 lightning simulation and testing for assessing effects on aircraft and avionics 2-83898
 natural lightning, EM interaction with aircraft, exptl. data and modelling review 2-83892
 noise contour prediction programs, comparison 2-57755
 side-edge flap noise generation by aircraft when landing 2-86170
 triggered lightning, effect on aircraft 2-83893

aircraft instrumentation
 airborne warning systems for natural and aircraft-initiated lightning 2-83894
 aircraft wake vortices detection and analysis, measuring system (*Dutch*) 2-114957
 graphite/epoxy materials appl. 2-74478
 in-flight vibration measurement in A310 Airbus (*French*) 2-95364
 lightning, electromagnetic interaction with aircraft 2-83896
 lightning simulation and testing for assessing effects on aircraft and avionics 2-83898
 reconnaissance equipment and systems, conf., San Diego, CA, USA (Aug. 1981) 2-74146
 static charging and its effects on avionics systems 2-83897
 tracking system for coordinated research missions 2-100570

airfields see airports
airglow
 see also atmospheric spectra; aurora; nightglow; sky brightness; twilight
 EUV dayglow during solar active conditions, spectral obs. 2-73744
 F-region ionisation struct. obs. by means of spectral emissions 2-89043
 measurement of low-altitude airglow using downlooking satellite 2-73710
 mesosphere O₂ concentration variations during total eclipse, air glow obs. 2-100613
 rocket exhaust induced ionospheric hole and optical emissions 2-83992
 self-absorpt. of the N₂ LBH bands in the far UV dayglow 2-63159
 temperature of exosphere, deduced from twilight O⁺ spectral emissions 2-63153
 Tunguska meteor fall, 1908 June 30, anal. of physical, chemical, optical and historical impacts 2-106629
 N⁺ dayglow at 214.3 nm and emission mechanisms 2-100616
 O atom association rates and airglow excitation mechanisms 2-63157
 O I 1304 Å dayglow, Monte Carlo reson. scatt. model with partial freq. redistribution 2-100618
 O I 5577 Å line, peak emission altitude, Chapman and Barth mechanisms 2-106380
 O⁺ ²P state visible airglow 2-89064
 O₂ (Δ_g), global daytime and twilight study 2-100619
 O₂ Herzberg bands, dayglow emissions and backscattered UV spectrum 2-100620
 O(1D) 6300 Å emission line shape calcs. appl. to space platform obs. 2-96493
 O(³P)₁ 63 micron emission from thermosphere 2-100617

airports
 computerised optical-scanning tomography of turbulent wakes and exhaust plumes 2-76050
 noise contour prediction programs, comparison 2-57755
 noise prediction procedures 2-62533

alarm systems
 audible overload protection for RA73 gamma ray detector, home defence appl. 2-100131
 nuclear facilities, inspection methods for safeguard systems 2-74805

albedo
 albedo evaluation problems in satellite remote sensing 2-94512
 1862 Apollo, diameter and albedo, IR obs. 2-58288
 Boltzmann equation, linear, Pade approximants, finite slab albedo calc. 2-86203

albedo continued

- P/Comet Halley, nucleus albedo and radius rel. to unsuccessful search, (1981 December 18) 2-63318
 Earth, monthly means and interannual changes, statistical estimates 2-112040
 Earth, near UV albedo variability at tropical latitudes 2-68488
 Earth, solar refl. from fractional cloud cover 2-117439
 Earth surface, techniques for field meas. of reflectance 2-112142
 electron method of density measurement, powder metallurgy materials 2-83327
 energy albedo, Pade approximants 2-84565
 energy albedo calc. for finite slab 2-84564
 Jupiter atmosphere, albedo, absorption model and airglow obs. 2-79006
 linear transport in nonhomogeneous media 2-74367
 Mars, surface props., opposition effect, Viking Orbiter TV pictures 2-100799
 Moon, connection between albedo and polarisation props. and Fresnel component of reflected light 2-68640
 planetary albedo estimates from meteosat data 2-94492
 planetary atmospheres, planetary albedo calculation 2-112356
 planetary surfaces, var. of albedo with solar incidence angle 2-106573
 Saturn atmosphere albedo, absorption model and airglow, UV obs. 2-79006
 semi-arid regions, surface albedo effect on July circulation 2-106175
 snow optical properties, review 2-89005
 surface albedo and aerosol extinction determ. from satellite imagery 2-63120
 troposphere, isotropic multiple scattering and surface albedo effects on photochemistry 2-94419
 Venus, albedo in 0.2-4 μ m range, implications for atm. comp. 2-84129
 Pb layers, differential γ -ray albedo depend. on layer thickness 2-96407

alclad *see* **aluminium alloys****Alfvén waves** *see* **magnetohydrodynamic waves; solid-state plasma****algebra**

- see also* **Boolean algebra; linear algebra; matrix algebra**
 C*-algebra, limits of states 2-101198
 clifford algebra approach to twistors 2-53506
 deformation theory applied to quantization and group representations 2-101244
 derivation properties of a deformed Poisson algebra and the quantisation problem 2-107150
 flexible composition algebras, classification 2-113163
 flexible composition algebras, classification 2-113164
 general quantum meas., local transition maps 2-74239
 Jordan algebras and meas. systems 2-112732
 linearizable evolutionary systems of equations, symmetries (*Russian*) 2-74267
 mappings of topological spaces, elementary props. 2-53480
 optics, first-order, canonical operator representation, lossless systems 2-60009
 overtopologies and their algebraic significance 2-69002
 quantum sets, rel. to Clifford algebras 2-95057
 quantum theory, Rach-Wigner algebra, book 2-79287
 reaction systems, chem. potential, algebraic quantum theory (*German*) 2-78121
 real Clifford algebras modulo 8 periodicity and particle phys. 2-113132
 representation group, gauge field derivation (*Chinese*) 2-53981

algorithms (computer listings) *see* **subroutines****aliphatic compounds** *see* **organic compounds****alkali metal alloys**

- see also* **caesium alloys; lithium alloys; potassium alloys; rubidium alloys; sodium alloys**
 alkaline earth alloys, disordered, heat of form., density functional pseudopot. formalism 2-104283

alkali metal compounds

- see also* **alkali metal alloys; alkali metal halides; caesium compounds; francium compounds; lithium compounds; potassium compounds; rubidium compounds; sodium compounds**

- alkali nitrate-AgNO₃ mixtures, nonisothermal, Soret coeffs. and transport props. 2-71678
 antimonites, IR spectra isolated in N₂ matrix, bond angles estimation 2-80595
 arsenites, IR spectra isolated in N₂ matrix, bond angles estimation 2-80595
 borate glasses and melts, microstruct., X-ray scatt. study 2-91794
 cyanides, elastic softening and ferroelastic instabilities 2-56147
 glasses, alkali metal cation characteristic vibrs. 2-57077
 halogenates, phonon spectra, NQR and vibr. spectra 2-93047
 hydrides, energy conversion systems, props. and appls. 2-111594
 intercalated graphite, C KVV Auger line shape and X-ray emission 2-87920
 intercalation compounds with graphite, discommensuration struct. of mass density waves, thermodynamic theory 2-98017
 intercalation compounds with graphite, disordered, decorated-lattice struct. factors 2-81764
 metavanadates, X-ray emission spectra, second coord. sphere effects 2-90567
 mixed-alkali glass, structural features 2-71370
 molecular crystals, electron gas model 2-104272
 molten alkali nitrates, bulk viscosity and relaxation 2-109906
 niobates, prep. using glass-ceramic methods 2-67279
 nitrates, molten salts and binary mixtures, pseudo-Grüneisen parameters 2-98230
 phosphites, IR spectra isolated in N₂ matrix, bond angles estimation 2-80595
 polyether-alkali metal salt complexes, ionic cond. meas. 2-110032
 polynuclear uranyl fluoride complexes, luminesc. and vibr. spectra 2-99123
 salts, polyatomic secondary ion form. and emission 2-77680
 silicate glass, alkali-lead, water content influence on viscosity, T_g, thermal expansion and hardness 2-93632
 silicate glass, thermally stimulated currents and alkali-ion motion 2-57012
 single valence-electron alkali compounds, core polarisation, pseudopot. calc. 2-90458
 superoxides, elastic softening and ferroelastic instabilities 2-56147
 alkali metal oxide-CaO-Al₂O₃-SiO₂ glass, liq.-liq. phase separation, struct. interpretation, alkali aluminate complex form. 2-103973
 PO₂F₂⁻, local symmetric force field, IR and Raman 2-90559

alkali metal halides

- see also* **compounds of individual alkali metals, e.g. sodium compounds**
 activated, photoconductivity, thermoluminescence and TSC 2-82404
 activated, photostimulated luminesc. decay kinetics, radiation defects spatial distrib. (*Russian*) 2-82902
 adsorption of pentatriacontane, on (100) face, SCF Mo simulation (*French*) 2-76809
 alkali halide: BH₄⁻ (BD₄⁻), Raman spectra of isolated ions 2-116186
 alkali halides: BH₄⁻ (BD₄⁻), vibr. studies by IR and Raman spectra 2-82841
 alkali halides: FHF⁻, IR spectra 2-82843
 alkali halides: SbF₆⁻, IR spectra 2-82842
 Anderson transition in electronic colour centre systems 2-92504
 aqueous solns., UO₂²⁺ impurity photolum. spectra meas. (*Russian*) 2-77593
 chlorides: Cu, off-centre instability of Cu⁺ ions due to charge-transfer excitation 2-67085
 clusters stability, secondary ion mass spectrometry 2-70468
 cohesive and surface energy eval. 2-65915
 cohesive energy, compressible ion theory 2-71387
 cohesive energy, rel. to phonon frequencies of crystals 2-66150
 cohesive properties of alkali halide crystals 2-115175
 colour centre lasers, electrical pumping 2-102801
 colour centre lasers, possibility of visible oscillation (*Japanese*) 2-70569
 colour centre lasers, review 2-96956
 colour centres, thermoluminesc., expt. and computer anal. 2-57193
 colouring curves, computer simulation using heterogeneous nucl. model 2-91960
 crystal compressibility 2-98178
 crystals, localisation structs. calcs. (*Russian*) 2-56486
 crystals, repulsive hardness param. and ionic props. correl. 2-109732
 crystals, van der Waals pots. calcs. 2-97983
 crystals and aq. solns., optical dispersion and molar refractivities 2-110795
 crystals and aqueous solns., four-wave mixing 2-102865
 dielectric behaviour, deform. dipole model analysis using compressible ion theory 2-57000
 dielectric const. press. derivative 2-104797
 dielectric constant and polarisability, static, vol. depend. 2-57001
 dislocations attendant to HF vibr. electrostatic field effect on translational motion 2-76453
 doubly charged cluster, energy surface and stability 2-80863
 elastic constns., third-order, from model pots. 2-98180
 electronic structure study 2-110248
 F_B-centres, absorption splitting 2-57134
 F centre pairs, exchange effects in ODES 2-56981
 F-centre, semicontinuum model 2-60976
 F-centres, thermal dissociation energy, electrolytic coloration meas. 2-60977
 F-centres absorption spectrum, surface polarisation effects, theoretical anal. 2-77556
 F-centres g-factor shift of relaxed excited state 2-56464
 Grüneisen parameter calc. 2-56144
 Grüneisen parameter vol. dependence and bulk modulus press. dependence calc. 2-109940
 hard sphere crystal, entropy study 2-104025
 hydrogen centres, interatomic pot., vibr. modes, and diffusion, pseudopot. cluster calc. 2-65992
 interionic potentials derived by hybrid Thomas-Fermi-Dirac method 2-65918
 iodides, free exciton luminescence, and sample depend. 2-116234
 ion dynamics, anion-cation mirror symm. 2-81911
 ionic radii and second neighbour repulsion in ionic solids 2-55880
 ionicity, and effective charges, anal. 2-71389
 IR fibre crystal materials 2-97130
 Jahn Teller effect for Hg-like luminescence centres 2-82297
 laser induced irreversible absorpt. changes, laser calorimetry study 2-57037
 laser windows, photoacoustic spectroscopy of adsorbed surface impurities 2-60192
 lattice constants, Rittner pot., Simons-Parr-Finlan technique 2-91930
 lattice defect creation by electronic excitation, review 2-115218
 lattice distortion due to isovalent impurities 2-61002
 liquid, charge ordering and struct. 2-109654
 local fields due to electronic distortion, multipolar excitations 2-76997
 low-temp. thermal conductivity, effect of independ. and coupled vibrs. effect 2-71745
 luminescence and stimulated emission from colour centres 2-82893
 lyoluminescence, struct. and props. 2-99192
 mechanoluminescence of crystals 2-104975
 mixed crystals, cohesive energies and bulk moduli calc. 2-60920
 molecular crystals, lattice phonons, tunnel states 2-76329
 molecules, spectroscopic constants and dipole moment calcs. 2-102561
 molecules+inert gas atoms, dissociation, ionisation, momentum model 2-114098
 molecules and crystals, empirical pot. parameters 2-90643
 molten, entropy calc. within mean spherical approx. 2-60864
 molten salts and binary mixtures, pseudo-Grüneisen parameters 2-98230
 MX₂ ionic states, pot. surfaces 2-80771
 polymorphic transition, press. induced, hysteresis phenomena, theoretical study 2-109973
 Rayleigh light scatt. by point defects and complexes 2-99139
 Schottky defect formation entropy and vacancy pair formation enthalpy calc. 2-109786
 single crystal growth using a simple rot. puller in air and protective atmospheres 2-62059
 single crystal surface, inelastic He beam scatt. 2-99254
 spectral hole burning, localised vibrational modes in cryst. solids 2-104919
 sputtering, electron and photon induced 2-99232
 sputtering process, excited sputtered atoms kinetic energy determ. 2-77737
 sputtering under ion bombardment 2-99240
 Stark effect in F-centre emission, theoretical problems 2-104850
 triplet excitons, hyperfine interactions ESR optical registration study 2-87629
 dislocation oscillatory motion, electrostatic field effect 2-71463
 OH⁻ defect tunnelling centres decay rates, phonon coupling effects, instanton theory 2-81778

alkali metals

- see also caesium; francium; lithium; potassium; rubidium; sodium
 adsorption on Ge(100), surface cond. and interface states, EELS study 2-92716
 alkali metal+inert gas system, optically pumped, evolution of spin orientation, numerical simulation 2-96516
 alkaline earth ions isoelectronic with alkali metal atoms, hyperfine interactions 2-90738
 atom+atom collision spin relax. on the $a^3\Sigma_u^+$ mol. term 2-59892
 atom+inert gas interaction, model pot. calcs. 2-102580
 atom+tetrahaloethylene, reaction, anomalous chemiluminesc. 2-62400
 atomic clusters, binding energy, cryst. growth, HMD method 2-115158
 atoms, elastic scatt. of intermediate energy positrons and electrons 2-75427
 atoms, ground and excited states, Schrodinger eqn. soln. by cubic spline method 2-64854
 atoms, hyperfine splittings shift due to blackbody radiation 2-64910
 atoms, photoionisation spectra, Stark effect theory 2-90475
 atoms, photon assisted radiative collisions 2-85594
 atoms, semiempirical pseudopot., use in calc. static electric dipole polarizability 2-114122
 atoms, spin polarisation, hyperfine coupling collisional breaking effects 2-90486
 atoms+inert gas atoms or ions, thermal energy collisions, spectroscopic study (German) 2-114970
 cations, solution, pot. energy function models 2-59886
 clusters, photoionisation and fragmentation in supersonic mol. beams 2-102547
 dimer, preparation, perturbation and predissoc., crossed laser and mol. beam studies 2-75471
 dimers, empirical pot. parameters 2-90643
 dimers, lowest triplet state curve, pot. model for evaluation isotropic pairwise interaction energies 2-80767
 dimers and dimer cations, pot. curves, spectrosc. rule 2-80757
 electron transport props., electron-phonon and electron-electron scatt. contr. 2-115727
 intercalated in graphite, C KW Auger lineshape, screening effects, cluster model 2-77635
 intercalation cpd. with graphite, orientation of discommensurations 2-103721
 ion+inert gas interaction, model pot. calcs. 2-102580
 ions, core binding energies from Dirac-Fock calcs. combined with atomic binding energies 2-85832
 liquid, electrical resistivity and thermoelectric power 2-61436
 liquid, interionic potentials and struct. factors calc. 2-97905
 liquid, optimised RPA for struct. 2-91760
 phonon dispersion relations model calcs. 2-66145
 positive ions, interaction pots. and mobilities 2-91584
 spectra of rare gas impurities in alkali hosts, model calcs. 2-116216
 surface (110), adsorbate-induced surface states effect on optical props. 2-104452
 trimer anions and cations, electronic struct., vibr. freq. calc., electron affinity 2-70121
 vacancy energy characts. from effective pair pots. (Russian) 2-60974
 vapour, ionized, eqn. of state 2-76056
 vapour, IR signal four-photon reson. up-conversion in nonmonochromatic pump field 2-81027
⁴He-alkali metal plasmas, He and free electron mag. reson. signal separation 2-113915

alkaline earth alloys

- see also barium alloys; beryllium alloys; calcium alloys; magnesium alloys; strontium alloys
 alkali metal alloys, disordered, heat of form., density functional pseudopot. formalism 2-104283

alkaline earth compounds

- see also barium compounds; beryllium compounds; calcium compounds; magnesium compounds; radium compounds; strontium compounds
 chalcogenide crystals, relative stability and structural phase transitions 2-98270
 chalcogenides, cohesive energy, compressible ion theory 2-71387
 chalcogenides, cryst., van der Waals pots. calcs. 2-97983
 chalcogenides, ionic radii and second neighbour repulsion in ionic solids 2-55880
 chlorides, Mn^{2+} spin-Hamiltonian param. anal. 2-87196
 crystals, repulsive hardness param. and ionic props. correl. 2-109732
 fluoride, ion cond. electrolytes for thermodynamic studies of alkaline earth metahafnates 2-81983
 fluorides, luminescence and stimulated emission from colour centre s 2-82893
 hexammines 2-61767
 hydroxides, energy conversion systems, props. and appls. 2-111594
 hydroxosalts, $M_2[Al(OH)_4] \cdot nH_2O$ (A=Be, Zn, Cr^{III}, Al, Ga, Ti, Zr, Sn^{IV}, Sb^V), precip. from aq. soln. 2-67726
 IR fibre crystal materials 2-97130
 metahafnate, thermodynamic stability investig. using EMF method with CaF₂-type electrolyte 2-81983
 oxides, elastic consts., 3rd and 4th order 2-76563
 oxides, elastic moduli and covalency correlations 2-86772
 precipitation, of sparingly soluble salts from aq. soln. heterogeneous nucleus numbers meas. 2-66229
 quaternary oxides, $A_4BC_3O_{20}$ (A=Sr,Ba; B=Ti,Ge,Sn; C=Al,Ga), cryst. struct. and luminesc., neutron diff. obs. 2-60935
 rare earth doped alkaline earth fluorides, point defect modelling 2-103757
 salts, cryst. growth from aq. soln., laboratory and industrial studies, review 2-111042
 single valence-electron alkali compounds, core polarisation, pseudopots. calc. 2-90458
 H₂O-alkaline earth dichloride systems, solid-liq. equil., liquidus curve (French) 2-76643
 H₂O-alkaline earth dichloride systems, solid-liq. equil., diagrams (French) 2-76644
 MgF₂-like crystals, colouring by neutron and gamma radiation 2-103816

alkaline earth metals

- see also barium; beryllium; calcium; magnesium; radium; strontium
 alkaline earth ions isoelectronic with alkali metal atoms, hyperfine interactions 2-90738
 atoms, core and valence excited states, electronic relaxation influence 2-90447
 atoms, photon assisted radiative collisions 2-85594

alkaline earth metals continued

- dimer, preparation, perturbation and predissoc., crossed laser and mol. beam studies 2-75471
 ions + H⁺, electron capture, model pot. calcs. 2-75414
 lattice dynamics, compression effect 2-92120
 two electron Rydberg states 2-70160
- alkalinity** see pH
- allotropism** see polymorphism
- alloy steel**
 see also tool steel
 aerospace materials, high-freq. fatigue tests 2-57546
 ageing effects 2-67405
 ALNICO steel, mag. props. (Chinese) 2-72262
 austenitic, Cr-Ni, surface (100), water vapour adsorpt., AES studies 2-66343
 austenitic-ferritic, solidification, α -ferrite form., influence of O 2-72690
 barothermomechanical treatment effect on struct. and temper embrittlement susceptibility 2-57386
 boriding process, influence of alloying element additions 2-105378
 carbide precipitates, comp. and morphology, STEM and X-ray microanalysis, replica technique 2-67352
 case hardened, fracture behavior evaluation by means of fracture mechanics values (German) 2-83204
 Charpy-V type specimens, fracture appearance, effect of notch root radius and austenitising temp. 2-99534
 coatings based on component nitrides obtained by plasma flow condensation in vacuum (Russian) 2-67219
 cold forgeability, effect of microstruct. 2-99456
 cold rolled, type 08, isothermal austenitization 2-105201
 construction steel, 37KhN3(MF), fracture and mech. props. (Russian) 2-105288
 constructional, critical hardening rates and hardness calcs. 2-67390
 constructional, low-temp. oxide film form. after polishing, Auger spectra obs. 2-57539
 constructional, thermal embrittlement and fracture features, P influence 2-105323
 corrosion fatigue crack growth in NaCl soln., stress ratio effect on type SNCM 2-111361
 corrosion properties, in saline media 2-57507
 corrosion rate in sea water, polarisation resist. technique 2-67613
 Cr-Mo, vacuum carburised, SCM 420, fatigue strength, carburised layer microstruct., effects (Japanese) 2-105304
 crack initiation, and propag. in In-induced embrittlement, in type 4140 2-111295
 crack initiation, effect of H source 2-57474
 cyclic fatigue strength, rel. to damping ability 2-111317
 deformation, process development with temp., acoustic emission study in type A533B 2-57423
 die, hardened with vanadium carbonitride, props. 2-111211
 dispersion hardened, 12 KhMF, grain boundary fracture under creep (Russian) 2-105287
 dual-phase, deform. characts., effect of martensite vol. fraction 2-67443
 ductile-brittle transition curve determ. by Charpy impact testing of type SA-516-70 2-67492
 ductile-to-brittle transition temp., depend. on radiation temp. in steels with different Cu contents (German) 2-67505
 duplex microstructures, influence on fatigue crack growth in near-threshold region 2-111294
 dynamic recrystallisation and work hardening (Russian) 2-105178
 electric, grain oriented, core loss, effect of degree of grain orientation alignment (Japanese) 2-104652
 electric grade, isotropic with planar cubic texture, prod. by two-stage treatment, mag. charact. 2-67379
 emission spectrochemical analysis, fixed time integration method (Japanese) 2-78159
 failure time calc. from AE signal activity of type 09G2SF 2-88327
 fatigue charact., nitriding effects (German) 2-57475
 fatigue crack growth period determination, using microfractographic anal. 2-88305
 fatigue crack propagation, mode III, in AISI 4340 2-99533
 fatigue limits, indirect eval. from static tensile strength 2-72900
 fatigue resistance after diamond and hexanite grinding 2-67543
 ferritic, alloying additions effects on stress corrosion cracking resistance in solns. 2-62260
 ferritic, corrosion by flowing liq. Pb (French) 2-105369
 ferritic, corrosion mechanism by high temp. water 2-57519
 ferritic, Cr-Mo-V, constitutive eqn. for creep at 823 to 838K 2-105241
 ferritic, development for use at 4K 2-59534
 ferritic, irradi., fracture toughness testing using electropot. technique, miniature specimen prep. 2-88310
 ferritic, protection by Al cementation with or without subsequent oxidising (French) 2-99597
 fractographic features and fatigue failure mechanism, 20 GL and 20 GFL 2-72825
 fracture behaviour, effects of comp. variations and ageing treatments in air and H₂ 2-67522
 fracture behaviour, of type 4340 under mode III loading 2-99612
 fracture structure and energy content in bending, notch direction effect, 40 Kh steel 2-67546
 fracture toughness and fatigue crack growth rate 2-105308
 fracture toughness data, correlation of standard and precracked Charpy specimens of types HY-130, HY-80 and A517-F 2-77925
 fracture toughness transition temperature, HY steels, effect of loading rate 2-62227
 fractographic anal. rel. to corrosion fatigue mech. of types A533-B and C-Mn 2-88267
 heat resistant, creep under different temp. and force conditions 2-67460
 heat resistant, die, struct. and mech. props., alloying effect 2-111243
 heat treatment into lower bainite, C distrib., alloying elements influence (Russian) 2-67389
 heat-resistant, thermomechanical fatigue curves 2-111318
 heat-resisting, 20 Cr-25 Ni, alloying elements effect on creep and creep rupture (Japanese) 2-62203
 heat-treated, deform. and fracture processes by acoustic emission method 2-105420
 high speed, prods. produced by powder metallurgy 2-77776
 high speed, unidirectionally deformed layers, ψ splitting and microscopic residual shear stress in X-ray stress meas. (Japanese) 2-78011
 high strength, crack arrest toughness 2-77931
 high strength, H stress cracking, effect of P conc. 2-77938

alloy steel continued

- high strength, notched, criterion for plastic failure 2-62228
 high strength, stress corrosion cracks, micro- and macrobranching (Japanese) 2-111290
 high-speed, hydroextruded, austenitic grain size 2-111197
 high-speed, struct. and props., Ce addition effect 2-111242
 high-strength, cylinder, crack depth determ. using mag. perturbation 2-62329
 high-strength low-alloy steels, surface spectrosc. anal., annealing effects 2-99713
 hot-work tool steels, performance 2-67473
 hot-work X40CrMoV51, short-time creep behaviour 2-83203
 HSLA, tempered Nb-bearing, fatigue crack initiation and propag. 2-111292
 HSLA cyclic SCC, stress ratios effects 2-72861
 interphase boundary migration, bowing mechanism 2-83129
 ion-implanted, surface hardness and abrasive wear resist. 2-57490
 lath martensite, deformed and undeformed, tempering process, effect of Nb additions 2-99454
 low alloy, cavitation erosion 2-88205
 low alloy, ductile fracture, microfractographic study (Russian) 2-77903
 low alloy, fatigue failure at inclusions, influence of vacant lattice sites 2-83199
 low alloy, grain boundary segregation and embrittling effect of P 2-62187
 low alloy, heat improved, brittle fracture, fractographic parameters meas. (Russian) 2-88157
 low alloy, high strength, fatigue crack initiation and strain-controlled fatigue 2-67520
 low alloy, high strength, fracture, effect of thin film form. 2-67470
 low alloy, high strength, hot rolling theories, statistical evaluation 2-105205
 low alloy, high strength, residual stress near fatigue fracture surface, meas. by X-ray method (Japanese) 2-77918
 low alloy, high strength, temper rolling metallurgical and mech. phenomena (French) 2-93545
 low alloy, high strength, weld metals, nature of acicular ferrite 2-67286
 low alloy, mech. props., struct. and failure, influence of controlled rolling 2-72831
 low alloy, metastable, austenite, mech. props. 2-105254
 low alloy, Mode III fatigue crack propag. 2-67521
 low alloy, Ni effect on hydrogen stress cracking resistance, review 2-116598
 low alloy, quenched, lath martensite struct., TEM study 2-111420
 low alloy, quenched and tempered, susceptibility to environment assisted cracking, relationship with loading 2-77975
 low alloy, rheological props. of ShKh15 2-72778
 low alloy, SCC diagnosis (Japanese) 2-78009
 low alloy, SCC in water and $K_2Cr_2O_7$ soln. 2-67624
 low alloy, stress corrosion cracking in seawater, influence of pH and sulphide ions (Italian) 2-93686
 low alloy, struct. after controlled rolling, effect of austenitising temp. 2-72744
 low alloy, struct. and props. after rolling, rel. to austenite transform. kinetics 2-72745
 low alloy, surface crack propag. laws, expt. study 2-67486
 low alloy ESR, grain boundary sulphide precip. effect on hot ductility 2-67350
 low alloyed powders and compacts, hot ductility, correl. with other props. 2-88148
 low C austenitic, supercooled austenite, abnormal decomp. 2-72666
 low-alloy, 65G, fatigue crack kinetics, influence of water and its inhibiting 2-88282
 low-alloy, brittleness transition temps. from different methods, comparison 2-116526
 low-alloy, cold brittleness threshold, strain rate effect 2-99558
 low-alloy, crack resist. determ. in brittle crack propag. from impact bend test results 2-72908
 low-alloy, detachment cleavage study 2-116519
 low-alloy, dual-phase, computer simulations of austenite/ferrite diffusional transformations 2-72692
 low-alloy, embrittlement after hardening, impurities influence 2-88192
 low-alloy, H embrittlement in long-term strength tests 2-67539
 low-alloy, hardness and brittleness of nitrated case 2-62282
 low-alloy, low-pearlite, V addition effect on struct., phase comp., and mech. props. 2-72818
 low-alloy, mech. props., rare earth elements effect 2-72773
 low-alloy, quenched and tempered, transcryst. cleavage microcracks initiation and propag. 2-111320
 low-alloy, rolling rolls quality, forging and heat treatment influence 2-67392
 low-alloy, shape and size of plastic deform. zone at blind fatigue crack under tension 2-116549
 low-alloy, strengthening mechanism of NiAl precipitate (Korean) 2-116453
 low-alloy, superplasticity and polymorphic transforms. 2-62177
 low-alloy, unstable crack propag. and arrest during cyclic loading 2-116548
 low-alloy, with different Ti concs., phase comp., microstruct., and mech. props. 2-72827
 low-alloy, Z 2-116545
 low-C low-alloy, Si and Ni additions effect on mech. props. 2-105333
 low-pearlite, rolling regime influence on strength and toughness props. 2-99545
 low-pearlite with Nb and V, strengthening phase precip. during hot deform. 2-62133
 maraging, 3.5 GPa-grade, with or without nitriding, fatigue props. (Japanese) 2-77915
 maraging, N18K9MST, influence of Ti additions on delayed fracture props. (Russian) 2-105286
 maraging, Ni and Cr effect on thermal stresses and relax. capability, thermal welding simulation (Russian) 2-67386
 marine type Q19, fatigue crack propag. in seawater, crack depth effect on rate 2-57527
 martensite struct. after quenching and tempering (Russian) 2-99460
 martensitic, ferritic, Cr-Mo-V-W, low temp. irradi. with (n, α)He prod., effect on tensile props. 2-71508
 mechanical props. and struct., effect of austenitisation temp. and hot deform. for 40KhN2MA (Russian) 2-77901
 medium-C low-alloy En 24, intercritical treatments, duplex struct. 2-105189

alloy steel continued

- microduplex, superplastic deform. activation energy, differential temp. tests 2-88325
 microplastic deformation and H interaction with defects of type 40 KH steel 2-105261
 Nb-microalloyed, roles of sulphides, oxides and pearlite in ductile fracture 2-67515
 Ni-Cr, low alloy, nucleation threshold stresses for dynamic fracture 2-72787
 nitrated, etching techniques 2-72922
 nitrosulphurised, wear props. 2-62233
 nuclear reactor constructional materials, liq. Na influence on strength, calc. method 2-96112
 physicomechanical properties, influence of surface-active substances during plastic deform. 2-83191
 polishing, magnetic-abrasive, effectiveness, methodology 2-67656
 porous fibre materials, corrosion resist. determ. 2-67694
 precipitation hardening, carbides and nitrides (French) 2-67361
 pressure vessel, thick-walled, brittle-failure resist. 2-99626
 quenched and tempered, fracture, effect of H₂ 2-67527
 quenched and tempered, mech. stability of retained austenite 2-77933
 rail, high-strength, hardenability, chem. comp. influence 2-72730
 roll, heat treatment influence on struct. and props. 2-67393
 rotor grade, caustic SCC mechanism 2-111379
 steel, 10MnNi2Mo, eval. of mech.-metallurgy (Czech) 2-67514
 steel, alloy, hot deform. struct. form. and stress-strain diagram during unstable stage (Russian) 2-77876
 structural, high temp., high cycle fatigue strength, procedure for estimating 2-62368
 structural, mech. test method for low strain rates 2-93709
 tool, type 0-2, electron beam surface melted, sliding wear behaviour 2-88220
 transformation behaviour of synthetic weld heat-affected zone, Ni effects 2-72673
 transformer, method for determ. energy of mag. anisotropy induced by coatings 2-72188
 transformer grade, C migration on ferrite surface during graphite centres form. 2-67378
 uniaxial straining, thermal effects 2-99500
 vacuum-melted, strengthening using combined cyclic elec. heat treatment and thermomech. heat treatment 2-72711
 vibration-hardening treatment, influence of polymer-containing oil media, mech. characts. 2-99603
 weld metal, SAW Nb microalloyed, stress relieved, mech. props. and microstruct. 2-105192
 weld metal similar to X20 CrMoV121, heat treatment effect on phase transform. and mech. props. 2-62144
 X-ray elastic constants meas., 30HGV steel 2-111225
 Al, high C, struct. changes during tempering (Russian) 2-105190
 Al, US treatment effect on C redistrib. and austenitic-martensitic transform. (Russian) 2-7331
 B, type 10B35, X-ray facitography on const. fatigue fractured surface (Japanese) 2-77919
 Ca-Ni-Mo-Mn, Mo distrib. during long-term holding between 554 and 654°C (French) 2-72700
 Cr (12 wt.%), heat resisting, hardness of creep-ruptured specimens, residual life prediction (Japanese) 2-62204
 Cr (9 wt.%), oxidation in CO₂ coded reactors 2-64483
 Cr, cast, fatigue threshold, effects of environment, stress ratio and defect size (Japanese) 2-111287
 Cr, ferritic, anodic disoln. in H₂SO₄ influence of Cr on mass transfer limitation 2-67612
 Cr₂, fracture toughness, correl. with sulphide inclusion level (German) 2-93615
 Cr, martensitic-ferritic, struct. and props., sintering technology, influence 2-83193
 Cr, nitrated, microstruct. 2-105381
 Cr type, H impregnation behaviour and embrittlement resist., microplastic deform. influence 2-99552
 Cr type, plasma spraying of Mo influence on creep, preliminary applic. of low-melting layer 2-99601
 Cr, wear resistance, effect of chem. comp., tempering and austenitising 2-72848
 Cr-Mn, creep induced embrittlement, fracture mechanics study 2-67491
 Cr-Mn, medium C, design for wear apps. 2-83235
 Cr-Mn type, carbide form., W and Mo influence 2-105160
 Cr-Mn-Si, deform. under high pressure, effect on temper brittleness 2-6739
 Cr-Mn-Si-Ni, K_{1c} test data statistical treatment (Chinese) 2-105397
 Cr-Mo, cast, corrosion fatigue in fresh water and corrosion inhibition using inhibitors (Japanese) 2-62276
 Cr-Mo, const. and var. stress creep tests 2-62166
 Cr-Mo, creep, effect of P 2-105217
 Cr-Mo, FIM obs. 2-67285
 Cr-Mo, fatigue strength, low cycle, evolution method at elevated temps. (Japanese) 2-105412
 Cr-Mo, ferritic, carburisation-decarburisation in liq. Na environment 2-111369
 Cr-Mo, H stress cracking, enhanced resist., role of Mo 2-99537
 Cr-Mo, heat resist., partially recryst. struct. effect 2-67399
 Cr-Mo, high strength, delayed fracture strength, influence of residual stress due to surface treatment (Japanese) 2-72810
 Cr-Mo, high strength, thermomech. strengthening 2-77855
 Cr-Mo, low alloy, mech. props. improvement by cyclic heat treatment (Korean) 2-67387
 Cr-Mo, low C, tempering behaviour, effect of C content 2-77853
 Cr-Mo, low-alloy type 10Kh2M, heat resistance at 500°C in Na, NaOH admixture effect 2-67459
 Cr-Mo, precip. of Fe₃MoC carbides 2-83123
 Cr-Mo, pressure vessel, autoradiography of H trapping rel. to hydrogen embrittlement (French) 2-62213
 Cr-Mo, reactor materials, cyclic loading influence on Li corrosion behaviour 2-80172
 Cr-Mo, segregation of embrittling elements to prior austenite grain boundaries 2-93517
 Cr-Mo, surface segregation of impurities (Czech) 2-116447
 Cr-Mo, temper embrittlement, atom probe anal. 2-67471
 Cr-Mo (2/4, 1, at.%), heat treatment for breeder reactor boilers 2-54500
 Cr-Mo (2.25, 1wt.%), in Pb-Li liq., Pb conc. effect on corrosion susceptibility 2-80173

alloy steel continued

- Cr-Mo (9.1 wt.%), caustic cracking at 300°C 2-99587
 Cr-Mo type, plastic deform. influence on H transport 2-71728
 Cr-Mo type HT-9, microstruct. effect on mech. props. rel. to fusion reactor apps. 2-88108
 Cr-Mo-Al, plasma-nitriding in N_2 - H_2 - CH_4 gas mixtures (German) 2-88292
 Cr-Mo-Mb-V, used in vapour generators for fast neutron reactors 2-77826
 Cr-Mo-Nb-V, fast breeder reactor components, precip. study (French) 2-88089
 Cr-Mo-Ni, stainless, irradi., time-temp. depend. of long-term strength 2-99633
 Cr-Mo-Ni-W-V, carbide obs. (Chinese) 2-62145
 Cr-Mo-V, 12Kh1MF, dispersion hardening, creep rate (Russian) 2-77871
 Cr-Mo-V, creep strength estimation from quasistationary creep rate data 2-93701
 Cr-Mo-V, creep-fatigue failure mechanism map at 565°C 2-105312
 Cr-Mo-V, fatigue-creep interactions, failure mode 2-99522
 Cr-Mo-V, ferritic, fatigue, high temp., low cycle, strain wave shape and freq. effects 2-105313
 Cr-Mo-V, heat resistant, thermomech. fatigue, effect on struct. and mech. props. 2-116546
 Cr-Mo-V, high temp. ductility, compositional effects 2-111238
 Cr-Mo-V, life anal. for fatigue-creep 2-93583
 Cr-Mo-V, simultaneous creep-fatigue, mechanistic approach to creep-dominated failure 2-88183
 Cr-Mo-V (1.5, 1, 0.25 wt.%), carbide phases determ. by quantitative stereological anal. and electrolytic isolation (Czech) 2-67788
 Cr-Mo-V type, fatigue crack growth, near-threshold, load ratio influence 2-105332
 Cr-Mo-V type, martensitic, performance under low-cycle fatigue at elevated temp. (French) 2-78054
 Cr-Mo-V type, pearlitic, stresses influence during ageing on loss of strength 2-99549
 Cr-Mo-V-Nb, with (n.a.) He, yield strength, tensile strength, neutron hardening 2-80122
 Cr-Ni, austenitic stainless, combined shock loading and high-speed deform. effects 2-99560
 Cr-Ni, martensitic stainless, high-strength corrosion-resistant, fatigue resist. in air and seawater 2-99561
 Cr-Ni (13, 4-6 wt.%), temper embrittlement (Czech) 2-116535
 Cr-Ni steel, Kh16Ni5M3B, reactor irradi. in N_2O_4 medium, effect on strength and plasticity 2-116613
 Cr-Ni type, low-cycle fatigue, combined influence of external H atm. and preliminary H impregnation 2-99553
 Cr-Ni-Mn steel, aged, struct. stratification, neutron diff. study (Russian) 2-93541
 Cr-Ni-Mo, fracture, nonmetallic inclusions shape influence 2-72819
 Cr-Ni-Mo-V steel, secondary naphthalene-like fracture obs. (Russian) 2-99516
 Cr-Ni-Mu (1.9, 0.85, 0.76 wt.%) original struct. and heating rate influence on props. after hardening from intercrit. range 2-72736
 Cr-Ni-W, transient creep 2-76574
 Cr-Mo-V, temper embrittlement rel. to heat treatment 2-83232
 Cu-(Ni), powder metallurgy materials, characteristic props. relevant to fatigue design 2-83226
 Fe-Ti-V-N system, complex nitrides form. in liq. metal 2-67295
 Mg, quenched and tempered, fracture behaviour 2-83221
 Mn and Ni-Mn based, maraging, economically alloyed, heat treatment influence on struct. and props. 2-67394
 Mn, hot ductility, effect of non-metallic inclusions 2-83196
 Mn, struct. and phase comp., tempering temp. influence 2-105199
 Mn, superplasticity and polymorphic transforms. 2-62177
 Mn-Cr-Mo-Nb, austenitic, heat resisting, props. and microstruct. (Korean) 2-57534
 Mn-Mo-Nb, pipeline, yielding behaviour 2-105256
 Mn-Nb-V, low-pearlite, struct. and mech. props. after controlled rolling 2-57385
 Mn-Si-(Nb), low alloy, heat treated, $M_{23}C_6$ type carbides form. 2-116469
 Mn-(Nb), intercrit. austenitisation quantitative study 2-77854
 Mo, tempered, struct. changes and carbide formation, electron microscopy study (Russian) 2-99459
 Mo-Cr-Ni, superficial heat treating with CO_2 laser radiation 2-116611
 Mu-Ni, low-C, cast, replacing Ni with Mn for low temp. operation 2-72731
 Nb-V-N, low-alloy, hot forming simulation in multistage tensile test (German) 2-116468
 Ni and Ni-Mn based, maraging, economically alloyed, heat treatment influence on struct. and props. 2-67394
 Ni, hot deform., substruct. effect on austenite strength 2-72735
 Ni, low C, heat treatment and O_2 cutting influence on struct. and props. 2-72732
 Ni type, austenite struct. state influence on martensite transform. characteristics 2-93508
 Ni-Co-Mo, maraging, biphasic struct., low-cycle impact fatigue strength 2-67530
 Ni-Co-Mo, martensite crystals, true thickness distrib. determ. 2-72907
 Ni-Co-Mo-Ti, maraging, heat treatment for service life improvement 2-72739
 Ni-Co-Mo-(W)-Ti, maraging, props. after high-temp. treatment 2-67395
 Ni-Cr, stress corrosion cracking in NaCl soln. near lower temper martensite embrittlement range 2-83264
 Ni-Cr, wear meas. using Faxel Lubricant Testing Machine 2-111425
 Ni-Cr stainless steels corrosion resistance in thermochemical cycle of hydrogen production using concentrated sulphuric acid 2-72863
 Ni-Cr-Mo-V turbine disc, corrosion fatigue crack growth rate, steam impurity effects 2-62263
 Ni-Cr-Ti-Al, precip. and dislocation struct. in creep, 1023-1173K (Czech) 2-116507
 Ni-(Cr)-(Mo)-(V), relative hardenability and interaction effects of Mo and V 2-62131
 Ni-Mn-Mo, high-strength cast maraging, ageing influence on mech. props. 2-67397
 Ni-Mo, austenitic, strengthened by phase strain hardening and hydroextrusion, mech. props. 2-72715
 Ni-Mo steel, phase transitions during heating and strengthening (Russian) 2-116438
 Ni-Mo-Co, age-hardening, weld struct., hot stage microscopic invest. 2-111190

alloy steel continued

- Ni-Mo-V, rotor, fatigue crack growth, threshold and low-rate 2-62223
 Ni-Ti, austenitic, a high-strength, fatigue limit, grain size and γ -phase stability influence 2-72822
 Si (3 wt.%), grain oriented, for transformers, mag. losses 2-72272
 Si, (3 wt.%), role of cold work on secondary recrystallization (Korean) 2-83134
 Si, electrical, texture form., preliminary annealing effect 2-111198
 Si, grain orientated, magnetomech. damping and mag. domain struct. 2-56907
 Si, grain oriented, laser processing for reducing core loss 2-72255
 Si, ribbons, roller quenched, mag. props., pot. core material 2-87522
 Si-Al bearing electrical, internal oxidation and mag. props., annealing conditions influence 2-72724
 Si-Al sheet, density determ. and calibration procedure (German) 2-53740
 Si-Mn, bainitic transform. (German) 2-116436
 Si-P, dual-phase, development of high strength sheets 2-105251
 Si-steel, bainitic transformation (Czech) 2-67326
 V, continuously cooled, strengthening contrib. at peak hardening from precip. 2-72710
 V, hot deformed, isothermal austenite-ferrite transform, TEM study 2-111172
 V, mech. props. rel. to γ - α transform. kinetics 2-83112
 V, tempered, struct. changes and carbide formation, electron microscopy study (Russian) 2-99459
- alloying additions**
 aero gas turbines, corrosion prevention by organometallic cpd. additives 2-116623
 α -brass based alloys, intercryst. internal adsorpt. 2-61148
 rare earth-Pd alloy, B addition effects on lattice size 2-71396
 steel, alloy, boriding process, influence of alloying element additions 2-105378
 steel, austenitic stainless, Mo alloyed, passivation, surface composition 2-77984
 steel, austenitic stainless, powder, hot ductility effect of Pb and Bi 2-88129
 steel, austenitic stainless, precip. reactions, effect of stabilising additions 2-72699
 steel, austenitic stainless, refinement, for corrosion resist. improvement 2-72870
 steel, austenitic stainless, stress corrosion cracking, intergranular, susceptibility effects of comp., thermodynamic model 2-93659
 steel, austenitic stainless 316, radially solidified, B doped, pre-irradiated, spatial distrib. and stability of boride particles 2-85211
 steel, austenitic stainless 316, Ti effect on microstructs. changes rel. to void swelling 2-86741
 steel, C, Nb addition effect on tempering of undeformed lath martensite (Japanese) 2-57381
 steel, Cr-Mn type, carbide form., W and Mo influence 2-105160
 steel, high-speed, struct. and props. C addition effect 2-111242
 steel, leaded, brittle fracture cause 2-111310
 steel, low alloy, Ni effect on hydrogen stress cracking resistance, review 2-116598
 steel, low C sheets, Mn and N effect on recrystallisation texture (Japanese) 2-105181
 steel, low-alloy, low-pearlite, V addition effect on struct., phase comp., and mech. props. 2-72818
 steel, low-alloy, mech. props., rare earth elements effect 2-72773
 steel, low-C low-alloy, Si and Ni additions effect on mech. props. 2-105333
 steel, maraging, N18K9M5T, influence of Ti additions on delayed fracture props. (Russian) 2-105286
 steel, maraging, Ni and Cr effect on thermal stresses and relax. capability, thermal welding simulation (Russian) 2-67386
 steel, medium-C, pearlitic-ferritic, alloying effect on fatigue failure and fracture toughness 2-111309
 steel, melt comp. effect on solidification cracking rel. to continuous casting 2-83107
 steel, Ni, Mn and Ni-Mn based, maraging, economically alloyed, heat treatment influence on struct. and props. 2-67394
 steel, P grain boundary embrittlement, electronic model for alloying elements effect 2-105278
 steel, stainless, scale phase composition and steel structure changes during oxidation at 1100°C 2-62284
 steel, stress-relieved SAW metal, Nb microalloyed, mech. props. and microstruct. 2-105192
 steel, tool, high speed, S 6-5-2 (M2), Nb and C effects on struct. and tool life (German) 2-57360
 steel, transformation behaviour of synthetic weld heat-affected zone, Ni effects 2-72673
 steels, 20 Cr-25 Ni heat resisting, alloying elements, effect on creep and creep rupture (Japanese) 2-62203
 transition metal alloying, volume effects 2-116421
 Zircaloy-4, Cr, Sn and O content effect on solid state phase boundary temp. 2-83083
 Ag-Zn, internally oxidized, containing various alloying additions, elec. contact charact. 2-83248
 Al-Li-Mg, Mg effect on Young's modulus 2-57391
 Al-Mg-Mn-Zr-Ca-Ti, chem. comp. optimisation rel. to fracture toughness, Mn, Zr, Cr and Ti additions effect 2-77945
 Al-Si (20 wt.%), hypereutectic alloy, effect on cast struct. of P and Na additions (Japanese) 2-55890
 Al-Si-Ni-Mg-Cu, Ni, Mg, and Cu additions effect on tensile strength, hardness, abrasion and thermal expansion (Korean) 2-57418
 Al-Si-Sb alloys, struct. modification with Sb additions (Chinese) 2-62130
 Al-Ti-Bi, grain refinement, Be-enhanced 2-83086
 Al-Zn-Mg, decomp. kinetics, effect of small Mg additions 2-99388
 Al-Zn-Mg alloys, influence of alloying additions (Cr, Cu and Li) on thermal oxidation 2-105359
 CePd₃Si₃, Ce valence state, Si addition effect, lattice const. and susceptibility meas. 2-97997
 Cr-Al-Y-M (M=Co, Ti, Si, Ni, Mn, Pt, Fe), alloying additions effect 2-116451
 Cu-Al-Mn alloys, influence of Mn on phase shifts (French) 2-99543
 Cu-Al-Zu, damping capacity, quenching and Zn addition effects 2-116441
 Cu-Pd alloys, effects of alloying and chemisorpt. on Auger line shape 2-77142
 Cu-Su-Cr, struct. and mech. props., Cr effect 2-111244
 Fe, cast, compacted-vermicular graphite, rel. between physico-mech. props. and numerical indexes 2-105337

alloying additions continued

- Fe, cast, hypoeutectic, Ce microdistrib. between struct. components, wide solidification range 2-99393
- Fe, cast, thermodynamic stimulus to graphitisation, alloying elements influence, chilling action 2-105139
- α -Fe, dislocation splitting, alloying additions influence (*Russian*) 2-115231
- Fe-B-Si-C amorphous ribbon, mag. props., deleterious effect of Al 2-87525
- Fe-base binary alloys, in contact with SiC single cryst., adhesion, friction and wear 2-88199
- Fe-C, phase equilb., small alloying additions influence (*Czech*) 2-116424
- Fe-Cl-Cu, cast high strength, effect of Al-Cu additions (*Korean*) 2-67311
- Fe-Cr-Ni-Al, NiAl precipitation during ageing 2-105156
- Fe-Cr(Al), oxidation, high temp., wet and dry atmos. (*Japanese*) 2-83283
- Fe-Ni Invar alloys, Young modulus anomaly, alloying effect (*Russian*) 2-77857
- Fe-P-Ni(Mo), powder premixes, sintered props., effect of Cu 2-88026
- Fe-X-C (X=Ti, V, Nb, W, Cr, Mo), C activity, influence of alloying additions (*German*) 2-93491
- Fe_{1-x}Mn_xTi, hydrogenation and oxidation characs., Mn additive effect, subsurface role 2-76690
- In-Cu(Ag), liq. binary system, O diffusivity and thermodynamic props. 2-86907
- Mo, neutron irradiat., anneal hardening, influence of purity, cold work and alloying elements 2-103843
- Mo-Re, re effect on void swelling, in-situ obs. in HVEM 2-86743
- Mo-Zr, ion bombarded by 10 MeV ⁴He⁺ ions, depth depend. of radiation hardening 2-88095
- MoSi₂-Pd protective coatings on Nb, Pd effect 2-116614
- Nb-Zr-V-C alloy, high-temp. creep in vac., long ageing and V additions influence 2-99504
- Nb₃Sn, infiltration process prep., supercond. props., effect of Cu and Ga additions 2-61676
- Nb₃Sn-Ti, composite processed, Ti addition effect on supercond. props. 2-104555
- Ni alloy, heat-resisting, directional solidification, B influence on fine struct., diffusion and creep 2-67321
- Ni alloy, heat-resisting cast, directed change of comp. and morphology of primary carbide phases 2-67320
- Ni, high-temp. ductility, Sb, Sn, As and P addition effect, intergranular embrittlement 2-72839
- Ni-Cr-La-Y-Al, La, Y and Al addition effects on high temp. oxidation 2-93685
- SmCo₅-Sn(Fe), alloying addition effect on X-ray diffr. relative intensity (*Chinese*) 2-79793
- Sm₂Co₁₇, mag. props., effect of heat treatment and addition of Fe, Mn, V and Sn (*German*) 2-67575
- Ti alloys, high melting point, low temp. plasma interaction (*Russian*) 2-99595
- Ti-Al-Mo-Sn-Si, $\alpha + \beta$ struct., mech. props., effect of Si 2-83081
- Ti-Al-Zr-Mo-W system, equil. diagram, struct. and props., influence of Zr, Mo and W 2-57331
- Ti-Al-Nb, as-annealed and creep deformed, superdislocation networks, APB energy role 2-98091
- TiNi, influence of Pd on martensitic transformation 2-83117
- VC-based carbide phase, thermal vibr. of ats., effect of alloying elements (*Russian*) 2-103912
- V₃Ga tapes, composite processes, Ga and Mg additions effect on supercond. props. (*Japanese*) 2-77773
- W-Cr-Pd sintered alloys, Pd addition effects on oxidation 2-72885
- WC-Ni cemented carbides, prep. and props. 2-111119
- WC-TiC-TaC-NbC-Co cemented carbide, C content effects 2-77939
- β -Zr(Fe) phase, effect of Ti in stabilisation 2-105166

alloys

- alloys such as Au-Cu, Au-Cu-Zn are indexed under components of the named elements i.e. gold alloys; copper alloys; zinc alloys in these examples
- see also actinide alloys; alkali metal alloys; alkaline earth alloys; alloying additions; aluminium alloys; antimony alloys; arsenic alloys; bismuth alloys; boron alloys; cadmium alloys; dilute alloys; eutectic alloys; gallium alloys; germanium alloys; indium alloys; lead alloys; liquid alloys; mercury alloys; rare earth alloys; selenium alloys; silicon alloys; solid solutions; superalloys; tellurium alloys; thallium alloys; tin alloys; transition metal alloys; zinc alloys
- A15 intermetallic cpds., linear thermal expansion coeff., real struct. influence 2-56223
- ageing, multistage, elastic stress effect, coherent particle crit. radius (*Russian*) 2-105152
- ageing, multistage, elastic stress effect, precipitate stability (*Russian*) 2-105151
- amorphous, mag. field depend. of forced magnetostriiction 2-98930
- amorphous, positron annihilation expts., review 2-104986
- amorphous, struct. determ. by TEM 2-115111
- antiphase order-disorder transitions (*French*) 2-86865
- BCC alloys, diffuse ω phase, Bragg maxima displacement, theory 2-97840
- BCC and FCC, heat of formation, comparison of pair pot. and thermochemical models 2-111506
- binary, cubic, tracer diffusion via vacancies, Monte Carlo calc. 2-86938
- binary, electron irradiat., rad. induced segregation at internal sinks 2-86731
- binary, evolution toward equil. shape of θ' precip. by interface diffusion 2-72702
- binary, FCC struct., phase separation, phase diagram, cluster variation calc. 2-92220
- binary, Fermi surface meas., positron annihilation study, expt., apparatus (*German*) 2-104232
- binary, ordering and segregation, density of states, electronic theory 2-76888
- binary, phase positions on near-neighbour diagrams, interatomic distances 2-92158
- binary, phase separation and mag. ordering in case of one mag. component 2-115421
- binary, short-range order, cluster model, coherent pot. approx. calcs. 2-115378
- binary 2-115215
- binary alloy, composition-modulated films, for studying stability and crit. phenomena in solid solns. 2-56402
- binary alloys, alloy broadening of impurity electronic spectra 2-82278

alloys continued

- binary alloys, effect of supersaturation on parabolic rate constant 2-67731
- binary alloys, Ising model phase diagram calcs. 2-76634
- binary alloys, multiple-scatt. theory in single-site approx. 2-76895
- binary alloys, simplified treatment of limiting conditions for selective oxidation 2-67619
- binary intermetallic compounds, struct. regularities 2-99403
- binary phases with α -Mn cryst. struct., computer prediction 2-76366
- binary solutions, Gaussian formalism for free energy as function of comp. 2-83088
- binary substitutional, vacancy wind effect in diffusion, Monte Carlo calc. 2-92255
- binary system with chem. interaction of components, contract melting props. (*Russian*) 2-66183
- coherent particle precipitation hardening, anisotropic elasticity theory 2-116454
- complex, high temp. radiation damage 2-109843
- composition modulated alloys, electronic struct., CPA calc. 2-104224
- composition variation det. using gamma-ray scattering analysis 2-70031
- composition-modulated alloys, elastic consts., effect of screening singularities 2-103877
- creep, influence of stacking fault energy 2-66110
- creep behaviour, Class II, modified constitutive eqn. 2-71550
- creep behaviour, friction stress concept appl. 2-62167
- damage structures irradiat. with cascade of various PKA energy spectra 2-109825
- deformed, solubility, diffusivity and trapping of H 2-81964
- diffusion mobility of atoms in metal cryst. containing refl. or absorpt. barriers, random walk calc. (*Russian*) 2-61192
- dislocation motion during ageing, particle distrib. influence, computer simulation (*Russian*) 2-91963
- disordered, alternative derivation of CPA, tight binding model (*Chinese*) 2-110221
- disordered, electronic struct., self-consistent cluster CPA incorporating off-diagonal disorder and short range order 2-61336
- disordered alloys, coherent and incoherent neutron scatt. theory 2-65811
- disordered BCC alloys, electronic density of states, self-consistent cluster CPA calc. 2-115639
- dissipative properties under cyclic tension-compression, static tension effect 2-99631
- elect. struct., symposium, Gaussig, Germany (Apr. '81) 2-68968
- EM, high resolution applied to chem. problems, conf., New York, USA, (Aug. 1981) 2-94904
- entropy, role in phase transformations 2-104030
- equiatomic, cryst. struct., stability criteria for AuCu and CsCl structs. 2-65926
- equiaxed two-phase, fracture in alloys with isolated plastic particles 2-77937
- equiaxed two-phase fracture in alloys with isolated elastic particles 2-77936
- fatigue crack growth, effect of vacuum, review 2-93600
- fatigue testing, low-cycle test rig 2-93706
- fatigue testing, step-by-step loading, expt. planning 2-116652
- FCC supersaturated, multiple-layer intermediate martensitic struct. form. (*Russian*) 2-66017
- ferromagnetic, cold rolling induced mag. anisotropy use for cryst. defect analysis (*Russian*) 2-67574
- ferromagnetic alloys, amorphous, kinetics of induced uniaxial mag. anisotropy rotation 2-87489
- ferromagnetic amorphous alloys, magnetoelastic props., review 2-56905
- ferromagnetic metals, spin fluctuations, temp. variation of local moment and short range order 2-61717
- film, simultaneous X-ray EDS meas. of thickness and composition (*Chinese*) 2-109630
- film preparation, evaporation kinetics from melt (*Russian*) 2-66393
- formation, Miedema's theory, microscopic basis 2-91867
- fracture toughness initiation, at high loading rates by stress waves, new expt. method 2-105432
- fusion material, microhardness test techniques for high energy neutron source expts. 2-88313
- fusion material, void nucleation by gas atoms, He generation rate and conc. effect 2-86720
- fusion reactor material development 2-108116
- hard alloys, elastic deform. during compression, math. modelling 2-77863
- hardness measurement during nitriding, meas. apparatus 2-72912
- hydrides, thermal, solvus and plateau press. hysteresis relationships 2-73008
- imaginary compounds, Kurnakov's concept 2-99394
- intermetallic phases, valence rules 2-81697
- ion bombardment, solute redistrib. process 2-109858
- ion bombardment induced subsurface composition modifications at elevated temps. 2-77692
- irradiated, recoil resolution and particle stability, dissolution and inverse coarsening 2-86719
- Ising lattice, order-disorder transformations, BBGKY eqns. 2-56153
- Kondo alloys with rare earth impurities, degenerate exchange model, Bethe ansatz technique 2-66769
- Krupkowski method for thermodynamic props. 2-76708
- L1₂ ordered, screw dislocation dissociation and core struct. in applied shear stress 2-76444
- L1₂ ordered, screw dislocations, dissociation and core struct., computer simulation 2-76440
- laser irradiated surfaces, regrowth, surface nonuniformities and coupling phenomena 2-61030
- laser surface alloying, review 2-116609
- metal-metalloid alloys, amorphous, EXAFS spectroscopy 2-93328
- microstructural development, effects of pulsed dual-ion irradiat. 2-109852
- model binary alloy, phase change kinetics, decomposition, nucleation 2-81968
- motive force of diffusion and change in the free energy on the phase separation (*Japanese*) 2-56242
- multicomponent alloys with sublattices, diffusion 2-61190
- multicomponent, diffusional reactions, numerical treatment 2-61188
- multicomponent alloys, cluster effects 2-92436
- ordered, displacement cascade damage, TEM obs. 2-103861
- ordered partially, internal friction and dynamical stability of superdislocations 2-71449
- ordering transitions, thermodynamic theory (*Russian*) 2-92150
- particle size and strain determ. from Fourier X-ray line shape anal. of single reflection 2-97846

alloys continued

- peritectic, thermal analysis, cooling curves interpret. 2-105118
 precipitate coarsening, induced by point defect recombination under irradi. 2-83121
 prime candidate alloys, path A, rapidly solidified, microstruct. 2-85210
 random alloys, electronic states, SCF-KKR-CPA method 2-76904
 random alloys, localisation estimation 2-66491
 random binary alloy, antiferromagnet in random field 2-115963
 random binary alloy with short range order of atomic arrangement, magnetisation 2-116035
 random muffin-tin, itinerant electron magnetism, multiple scatt. theory 2-104570
 segregation kinetics under irradiation (*Russian*) 2-104003
 short-range order parameter calc. (*Russian*) 2-98297
 single-phase, numerical calcs. of diffusion 2-66276
 2D-solid solubility maps, thermochem. and orbital radii coordinates comparison 2-61151
 solidification, primary dendrite arm spacing 2-105138
 solidification in gravitational field, model 2-99415
 solidification in-situ electron microscopy (*French*) 2-62116
 spinodally modulated struct., energetics in thermally activated dislocation motion 2-103777
 statistical strength (*Japanese*) 2-111188
 structural, cracked, loading cyclicality effect on failure resist. 2-99630
 superconducting, with localised excited states in energy gap, strong coupling theory 2-104543
 superconducting alloys, Ginzburg-Landau functional calc. 2-92815
 superconductors, small- κ , energy gap and vortex creation energy 2-72126
 surface, morphology and composition, book contrib. 2-66333
 surface composition, review 2-92322
 surface films and metallurgy related to lubrication and wear 2-109902
 surface physics, conf., Bechyne, Czechoslovakia (Sept.-Oct. 1980) 2-89457
 surface precipitation in case of ordering in interior (*Russian*) 2-104125
 surface roughness inspection for exoemission investigations, X-ray photoelectron spectroscopy study 2-57581
 surface segregation due to chemisorption and absorpt. 2-56345
 surface segregation in binary alloys, temp. depend. calc. (*Russian*) 2-76691
 tensile test diagram construction, with deform. anisotropy 2-105406
 ternary, superlattice configuration entropy 2-56216
 ternary alloys, conc., onset of magnetism, review 2-56853
 ternary diffusion paths, analytical representation 2-104082
 textured, HCP struct., elastic props. anisotropy (*Russian*) 2-77858
 thermomechanically treated, creep yield stress 2-99479
 two-phase, diffusional creep 2-105218
 two-phase, lamellar eutectic, shock-induced fracture 2-111260
 vacuum induction melting 2-69177
 wear mechanism, electron approach 2-109903
 work function of emitted electrons, chem. comp. effect (*Russian*) 2-104465
 X-ray excited Auger spectra, Fermi energy and dipole barriers, review 2-116329
 yield strength, review (*Chinese*) 2-62165

alloy alloys see iron alloys**Al₂O₃ see alumina****Al₂O₃- α see corundum** **α -Al₂O₃ see corundum****alpha-decay**

- see also alpha-decay theory; alpha-particle spectra*
 A=104-114 mass excess, α and β /EC decay Q-values from ⁵⁸Ni(⁵⁸Ni,X) 2-113354
 half-life, fit to semiempirical relationships, self-improving parameter program 2-64377
 neutron-deficient nuclides produced in (p,x) on U, Th, Au, Ta, alpha spectroscopy 2-59299
 photon pulses, radioisotope standard sources, photomultiplier characts. 2-64738
 Z=109, existence in nature, invest. (*Chinese*) 2-59442
 Z=110, existence in nature, invest. (*Chinese*) 2-59442
²⁴¹Am α -decay, pair prod. mechanism 2-90061
²⁴²Am^m α -decay, ²³⁸Np levels, bandheads, γ -transitions, conversion electrons 2-113348
²¹⁸Fr(²¹⁸At-²¹⁰Bi, isomeric states in Fr and At from α -spectroscopic data 2-85004
¹⁵⁵Gd, α -decay from ¹⁵⁵Gd(n,x), strength functions, statistical approach (*Russian*) 2-59363
¹⁶²Hf α -decay energy and mass values 2-90058
¹⁷⁸Hf, α -decay, from ¹⁷⁷Hf(n,x), strength function, statistical approach (*Russian*) 2-59363
¹⁴⁴Nd-¹⁴⁰Ce, following ¹⁴³Nd(n, γ) 2-113408
¹⁶Os, A=167, 168, alpha-decay energies, half-lives and branching ratio study 2-64431
²¹³Po α -emitting state half life, transition, levels, spins 2-59298
²¹⁸Po half-life meas. 2-85005
²¹⁸Po, A=171, 172, alpha-decay energies, half-lives and branching ratio study 2-64431
²¹⁹Pu decay, γ transition emission probabilities and energies 2-74744
¹⁷²Yb, α -decay from ¹⁷¹Y(n,x), strength function, statistical approach (*Russian*) 2-59363

alpha-decay theory

- see also alpha decay*
 fission approach 2-85006
 reduced widths, nucl. dynamic effects 2-113426
 translead region, α -width, Fermi-liquid model 2-107813
 two-body energy eigenvalue theory for α -decay and α elastic scatt. widths 2-59377
²¹⁰Po, A=210, 212, 214, 216, absolute α -decay width, configuration mixing role 2-69613

alpha-particle absorption

No entries

alpha-particle angular distribution

- see also alpha-particle spectra*
 heavy ion collisions, fast light particle formation direct mechanism 2-54442
 heavy ion collisions, spin and isospin fluctuations and depend. on dinuclear complex shape 2-64420

alpha-particle angular distribution continued

- ¹²C(¹²C, α)²⁰Ne, 15 MeV, ang. distrib., excitation energy, nonstatistical effects 2-96035
⁴⁸Ca(¹⁶O,X), 142 MeV, deep inelastic collisions, neutron, proton and alpha emission 2-59401
⁷⁴Ge(p, α), 36.25 MeV, DWBA anal., ⁷¹Ga levels, spectrosc. strengths 2-107864
²⁴Mg(¹²C, α), 24-36 MeV, excitation curves and α mag. distrib. 2-69670
²⁴Mg(⁴He,X), X=p or α , 8.05-20.42 MeV, fluctuations due to statistical multiplet compound emission 2-59375
¹⁶O(α), 3.5-4.9 MeV, ang. distrib., phase shift and optical model anal. 2-59371
³⁰Si(p, α)²⁷Al, 4.9-6.08 MeV, excitation energies and reson. strengths 2-64406

alpha-particle attenuation see alpha-particle absorption**alpha-particle detection and measurement**

- see also alpha-particle spectrometers; radioactivity measurement*
 airborne aerosol particles with attached α -active nuclei, size distrib. meas. 2-67917
 biotite mica, electron and α -particle damage, implications for track formation mechanisms 2-59660
 cellulose acetate solid state track detector, p, d and α registration (*Chinese*) 2-96393
 cellulose nitrate, alpha-particles registration, statistical behaviour 2-70078
 CR-39 carbonate plastic track detector for neutron and α -particle dosimetry 2-64696
 CR-39 detector, energy dependence of etch pit diameter for 1.29-5.48 MeV α -particles 2-113830
 CR-39 detector, track diameters for α -particles, energy sensitivity 2-64782
 CR-39 polycarbonate detector, UV radiation influence on nucl. track recording props. 2-96391
 CR-39 track detectors, etch pit growth study using Si rubber cast technique 2-64779
 Daicel cellulose nitrate, α -particle registration props. applying diffusion etch model 2-70083
 electrochemical etching, freq. depend. in polycarbonate detector 2-108255
 energetic nuclear collisions induced by 12 MeV α -particle in nuclear emulsion 2-64780
 freshwater mussel tissue, α -emitter distrib. meas. by α -track autoradiography 2-68219
 ionisation chamber coupled to parallel grid avalanche counter, time resolution 2-80389
 Kodak LR115-II films, α -particles detection at various angles of incidence 2-70077
 Kodak LR-115 track detector for α -particles detection in environment 2-67914
 liquid scintillation counter connected to multichannel pulse-height analyser, quantitative α -emitter meas. method (*Japanese*) 2-54732
 long focal-plane detector with hybrid structure for spectrograph 2-90380
 LR-115 and CR-39 plastic detectors responses to Rn 2-67901
 lung tissue, human, α -active nuclei microdistribution using autoradiography 2-68174
 lung tissue, human, α -active nuclei microdistribution using autoradiography technique 2-68223
 medium and low energy heavy charged particles crossing complex media, ionisation cross-sections 2-75128
 mica, alpha-recoil track registration props. study 2-70090
 monitor for reprocessing plant 2-69997
 nuclear track, elec. tree generation by sequential elec. and chem. treatment 2-70072
 plastic track detectors, Kodak LR 115, sensitivity rel. to α energy and incidence angle 2-85479
 plastic track detectors CR-39 and CN-88, light particle response comparison 2-102343
 portable photon-electron rejection Alpha liquid scintillation spectrometer 2-54714
 proportional alpha particle detector for studying (n, α) reaction in pulsed neutron services 2-85491
 radiation pressure detector 2-113828
 radioactive minerals from SW England, CR-39 α -particle autoradiographs 2-68524
 recoil damage, preferential solution effects 2-108256
 siliciclate organic scintillators, relative scintillation efficiencies for alpha particles 2-85489
 separation from protons in relativistic nuclear emulsion 2-64768
 spark counting system, modified automatic, for U ore eval. 2-75120
 thin-film dosimetry for neutrons and alpha particles 2-64697
 tissue equivalent spherical counter 2-113844
 track detectors, electrochemical etching, α -particle-energy discrimination 2-108320
 α -particle spectroscopy using CR-39 plastic track detector 2-64744
 Ar-N gas scintillation proportional counter performance 2-102336
 CdTe detectors, α -particle polarisation effects obs. 2-85497
 He, liquid, VUV scintillation detection using Ge photodiode 2-113813
 ionising radiation, 2D detection using Si diode matrix array (*German*) 2-90398
 Li₂B₄O₇:Mn TLD phosphor, light conversion efficiency for α -particles rel. to ⁶⁰Co gamma radiation 2-75136
 MgO detector based on controlled secondary electron emission 2-108270
 Rn activity meas. using automatic device 2-64827
 Rn dosimetry, α -particles in plastic detector, track density distrib. 2-64695
 Rn subsurface distrib. meas. with LR-115, CR-39 and thermolum. detectors 2-67913
 Si strip detector with 12 μ m resolution 2-90370
 Si surface barrier detectors, plasma decay times for fission fragments and α -particles 2-102338
 U exploration, α -track technique principles 2-68525
 U fragments in human lung, anal. using CR-39 plastic autoradiography 2-68175

alpha-particle effects

- biotite mica, electron and α -particle damage, implications for track formation mechanisms 2-59660
 Chinese hamster V79 cells, G2 delay, cell recovery period 2-88627
 gas targets, high-pres., opt. obs. of intense particle beam influence, radionuclide prod. 2-113794
 lymphocytes, human, microdosimetry of α -particle irradi. 2-88612

alpha-particle effects continued

- metals, damage initiation and energy spectra formation of primary knocked atoms, nucl. reaction effects 2-76526
 minerals, α -recoll damage and preferential soln. effect, track prod. mechanism 2-64778
 steel, stainless, type 304L, surface blistering by 6 MeV alpha particles, temp. thresholds 2-80219
 steel, stainless, types 304 LN and 12R72HV, CC D trapping, α -irrad. effect 2-69844
 yeast cells, evidence for DNA double-strand breaks as critical lesions on ionising particle irradiation 2-68072
 yeast cells, ploidy influence on RBE of densely ionising radiation (*Russian*) 2-88599
 Al thin film, surface topography meas. using α -particle energy loss distrib. 2-76552
 Al₂O₃ (Si,Ti) thermoluminescent phosphor appl. for environmental and personnel dosimetry 2-96316
 CaF₂Ti₂O₇, alpha decay self irradi. damage 2-80064
 Er film, stopping power and straggling of protons and ⁴He ions 2-56051
 H₂CN⁺-N₂ production from α -irrad. N₂+CH₄ mixture, Titan atm. appl. 2-100826
 K targets prep. from KI by vacuum evaporation 2-108177
 Nb/Si and Nb/Si, α -particle irradi. effects on supercond. and struct. props. 2-98167
 Ni, alpha particle implanted, stopping power and radiation damage distrib., Boltzmann eqn. calc. 2-76548
 Pt, surface blistering by 6 MeV alpha particles, temp. thresholds 2-80219
 Pt-Rh (10 wt.%) surface, blister formation by irradi., exposure and temp. depend. 2-74928

alpha-particle interactions see alpha particle-nucleus reactions**alpha-particle model see nuclear cluster model****alpha particle-nucleus reactions**

- for inelastic alpha particle-nucleus scattering, see "alpha particle-nucleus scattering"
 cross section in intranuclear cascade model 2-85021
 energetic nuclear collisions induced by 12 MeV α -particle in nuclear emulsion 2-64780
 mechanism interference, distorted wave calc. (*Russian*) 2-90126
 meson production reaction 2-54370
 nuclear props. at intermediate energy with light ion probes 2-54371
 (α ,2 α), 60-140 MeV, off-shell factor calc. 2-54413
 (α ,2 α), distorted wave impulse approx. for A=16-66 2-113521
 (α ,2n γ) on A=80-210, 28-35 MeV, neutron spectra and ang. distrib. 2-54414
 (α ,d), simultaneous and sequential two-nucleon transfer reaction props. 2-101854
 (α ,f), actinides, fission energy depend., superfluid model (*Russian*) 2-59325
 (α ,X), 100-400 MeV/N, secondary particle formation time, nonequilibrium processes (*Russian*) 2-107900
 (α ,X), light fragment formation, coalescence approach, snowball model 2-90113
 (α ,xn), fast neutron prod., thermal moving source model breakdown 2-101902
²⁷Al(α ,p), 18 MeV reaction, pre-equilib. emission, exciton model 2-59370
 Al(α ,X), 10-35 MeV, excitation function meas. 2-59367
³⁵Ar(α , γ), 5.5 MeV, ³⁶Ca lowest T=2 state, decay transitions 2-107798
¹⁹Au(α ,X), X=n, 2n, absolute cross section meas., gamma de-excitation competition effect 2-96018
 Au(α ,X), 12.7 GeV, light fragments identification from binary events using track detectors 2-64415
¹⁰B(α ,p γ), 2.5-3.1 MeV, proton ang. distrib., from γ -ray line shape 2-90121
²⁰⁹Bi(α ,3n), ²¹⁰At 10⁻ isomer, half life, singlet-force splitting effect 2-113321
²⁰⁹Bi(α ,n), ¹⁸-20.8 MeV, ²¹²At low-seniority shell-model structure 2-54233
²⁰⁹Bi(α ,f) asymmetric fission of ²¹³At (*Russian*) 2-80042
¹²C(α ,X), eqns. of motion from time depend. cluster model 2-54415
¹²C(α ,p γ), ¹³N, 10.5-20 MeV, absolute cross section and ¹⁶O level parameters 2-59376
⁴⁰Ca(α ,f), Q-value 2-59374
⁴⁰Ca(α ,X), optical pot. imaginary part, shell model calcs., collective state effects 2-101908
⁴⁰Ca(α ,X), X= α p or 2 α , giant reson. structures, forward-backward asymmetry in decay 2-69668
 C(α , α '), 1.39, 4.19 GeV, absolute production cross section 2-113520
³⁰Cr(α ,f), 28, 36 MeV, fission fragments mass distrib. study (*Russian*) 2-90184
⁵⁶Co(α ,p), 18 MeV reaction, pre-equilib. emission, exciton model 2-59370
 Cr(α ,X), A=52-54, 27.2 MeV, total cross-section, isotope/isotone effects (*Russian*) 2-59368
⁵⁶Fe(α , α '), 59-160 MeV, exciton coalescence model anal. 2-107875
 Fe(α ,X), 5.04 GeV, density isomer search from multiple delayed neutron emission (*Russian*) 2-107746
¹⁵⁰Gd(α ,xn γ), 70 MeV, equilibrium and preequilibrium, energy and ang. momentum transfers 2-80021
 Gd(α ,xn), 40-110 MeV, ¹⁵²⁻¹⁶¹Dy quasi-continuum γ -ray deexcitation, yrast states, stat. model anal. 2-79973
 H(α ,X), 44 GeV, inclusive hadron transverse momentum distrib. 2-80022
 H(α ,apn), 140 MeV, breakup, three-body model 2-107874
 H(α ,ap), 9.85-13.99 MeV, kinematically complete meas. 2-113519
 H(α ,ap)n, A=6 continuum system study 2-64418
¹He(α , α +p)³H, 26.3 MeV, deuteron spectrum (*Russian*) 2-107876
¹He(α , γ)Be, 165-1170 keV CM, cross-section and branching ratio meas. 2-85065
¹He(α , γ)Be, E_{cm}=107-1266 keV, capture reaction and solar neutrino problem 2-59380
⁴He(⁴He,X), 60-160 MeV, ⁶He, ⁶Li, ⁷Li, ⁷Be, prod. cross section meas. 2-54416
⁴He(α ,2 α), off shell behaviour, interaction potentials 2-85067
⁴He(α ,X), 31 GeV, inclusive hadron transverse momentum distrib. 2-80022
⁴He(α ,X), eqns. of motion from time depend. cluster model 2-54415
⁴He(α ,X), time dependent cluster theory, collective modes and monopole vibrs. 2-54236

alpha particle-nucleus reactions continued

- ⁴He(α , α), ISR energies, additive quark model of multiparticle prod. 2-79847
⁴He(α ,ap)³H, 119 MeV, ⁴He excitation energies 2-95956
¹⁶³Ho (α ,3n), ¹⁶⁶Tm odd-odd nucleus band structure study 2-69515
 In(α ,3n γ), 36-48 MeV, ^{114,116}Sb bands, J⁺, transitions and T_{1/2}, decoupled neutron 2-79931
⁶Li(α ,X), X= α , d α , quasifree scatt., theoretical anal. 2-95994
¹⁷³Lu(α ,2n), 29.5 MeV, ¹⁷⁷Ta isomer, levels, J⁺, T_{1/2}, mag. moment, transitions 2-90014
²⁴Mg(α ,X), X= α p or 2 α , giant reson. structures, forward-backward asymmetry in decay 2-69668
²⁴Mg(α , γ), ²⁸Si energy levels calc. 2-101815
 Mg(α ,X), 10-35 MeV, excitation function meas. 2-59367
¹⁰⁰Mo(α ,3n), 34-46 MeV, high spin collective excitation in ¹⁰¹Ru 2-54235
¹⁴N(α , γ)¹⁸F, resonance strengths relative to elastic scatt. cross section 2-90075
¹⁴N(α , γ)¹⁸F, search for parity nonconservation 2-84951
²⁰Ne(α , γ)²⁴Mg, screening effect on reaction rate 2-59372
⁵⁸Ni(α ,pn γ), 24-40 MeV, ⁶⁰Cu deduced high-spin levels, J⁺ 2-107730
⁵⁸Ni(α ,ap), 140 MeV, localised excitation, proton spectra 2-90125
²³Np(α ,f), 28, 36 MeV, fission fragments mass distrib. study (*Russian*) 2-90184
 Pb(α ,X), 5.04 GeV, density isomer search from multiple delayed neutron emission (*Russian*) 2-107746
 Pb(α ,X), 21-55 MeV, cross sections and thick target yields 2-74767
⁴⁸Rh(α ,Xn), A=103, 105, 12-44 MeV 2-64417
³²S(α ,d), 50 MeV, ³⁴Cl levels, J⁺, spect. factors, DWBA anal. 2-113365
⁴⁵Sc(α ,X), 27.2 MeV, total cross-section, isotope/isotone effects (*Russian*) 2-59368
⁷⁷Se (α ,2np), 30-55 MeV, ⁷⁸Br high-spin states in-beam study 2-54234
²⁸Si(α ,d), 50 MeV, ³⁰P levels, J⁺, spect. factors, DWBA anal. 2-113365
²⁸Si(α ,p γ), 7.95, 8.00 MeV, ³¹p3/2⁺ and 5/2⁺ state g-factors 2-79947
 Si(α ,X), 10-35 MeV, excitation function meas. 2-59367
¹⁴⁶Sm(α ,f), 80 MeV, transitions to high-lying p-states 2-79939
¹⁴⁸Sm(α ,5n), 76 MeV, ¹⁴⁷Gd 8.6 MeV, ⁵⁶⁰ns high spin isomer decay, spin and transitions 2-90004
⁸²Sn(α ,2n γ), A=116, 118, band structure in ^{118,120}Te 2-89992
⁸²Sn(α ,X), A=112, 124, 15.3 GeV, ^{3,4,8,9}He and ^{6,7,8,9,11}Li inclusive prod. 2-101910
¹¹⁷Sn(α ,an), 109 MeV, giant quadrupole resonance, fast neutron emission 2-85016
 Sn(α ,X), 5.04 GeV, density isomer search from multiple delayed neutron emission (*Russian*) 2-107746
¹¹⁸Ta(α ,Xn), 45 MeV, neutron spectra and nuclear level density (*Russian*) 2-54419
 Ta(α ,X), 15.2 GeV, ce Rb, In, Cs isotropic distrib. (*Russian*) 2-54398
 Ta(α ,X), 4.2 GeV/N, π^- prod., angular and momentum characs. (*Russian*) 2-113318
 Ta(α ,X), 4.2 GeV/c, pion prod. characs. 2-85064
¹³⁵Te(α ,n) reaction, ^{135m}Xe, ¹³⁸Xe prod. cross-sections and isomeric ratios 2-74768
²³²Th(α , α'), total kinetic energies and mass distrib. of fission fragments 2-90174
²³²Th(α ,f), 70-1000 MeV, fission fragment ang. correlations, momentum transfer 2-59429
 Ti(α ,X), 27.2 MeV, total cross-section, isotope/isotone effects (*Russian*) 2-59368
^{202,203}Tl(α ,xn), 64 MeV, ^{202,203}Bi high spin isomers, g-factors 2-90015
²³⁸U(α ,f), 28, 36 MeV, fission fragments mass distrib. study (*Russian*) 2-90184
⁵¹V(α ,X), 27.2 MeV, total cross-section, isotope/isotone effects (*Russian*) 2-59368
⁹⁰Yb(α ,2n), A=174, 176, 27 MeV, high-spin states in ^{176,178}Hf, E1 transition probabilities 2-54310

alpha particle-nucleus scattering

- elastic and inelastic scatt., review 2-54369
 elastic scatt., barrier and internal wave contrib., quantum calc. 2-54427
 isoscalar transition rates, implicit folding procedure 2-95968
 medium energy region, cross sections analysis, oscillation damping effect (*Russian*) 2-59379
 surprisal analysis of inclusive reactions 2-69644
 transmission coefficients for light projectiles 2-69621
 two-body energy eigenvalue theory for α -decay and α elastic scatt. widths 2-59377
 (α , α), 140,172 MeV, A=40-208 2-101907
 (α , α), 4.2 GeV, A=40-68, matter density and RMS radius, folding model anal. 2-69524
 NN in $\alpha\alpha$ and αp , 89, 126 GeV, elastic scatt., differential cross section 2-95871
⁸Be(α , α), three-body problem, generalised optical pots., rescattering effects (*Russian*) 2-59309
⁹Be (α , α'), 35.5 MeV, elastic and inelastic scatt. anal. by coupled channel method 2-54411
²⁰⁸Bk(α , α'), 17.06 MeV, ground state rot. band, Coulomb excitation, transition sites, mag. moments 2-69511
¹²Cl(α , α'), i=0-2, 10.5-20 MeV, absolute cross section and ¹⁶O level parameters 2-59376
¹²Cl(α , α'), 17.0-22.7 MeV, α -cluster states, resonances, J⁺ (*Russian*) 2-107823
¹²Cl(α , α'), 3.52-3.62 MeV, ¹⁶O, 2⁺ state and 3⁻ resonance, 9.85 MeV excitation, R-matrix anal. 2-90067
¹²Cl(α , γ), 19.3-30.7 MeV, ang. correlation function 2-90122
⁴⁰Ca(α , α'), A=40, 42, 44, 48, elastic scatt., microscopic study, within generator coord. method framework 2-54412
⁴⁰Ca(α , α'), 104 MeV, elastic scatt. and Glauber multiple scatt. model 2-107871
⁴⁰Ca(α , α'), 31, 100 MeV, second-order imaginary optical pot. microscopic calc. 2-54418
⁴⁰Ca(α , α'), 104 MeV, neutron density distrib. by different strong probes, radial sensitivity 2-69525
⁴⁰Ca(α , α'), 70 MeV, 1⁺ state obs. 2-54396
²³H(α , α'), 6, 14 MeV, differential cross section, multichannel R-matrix anal. 2-59373
²³H(α , α')³H, A=6 continuum system study 2-64418
³H(α , α'), specific distortion effects in resonating-group method 2-90123
³H(α , α'), bound states to 113 MeV, resonating-group study 2-54269
³He(α , α'), cross section ang. distrib. and vector pol. 2-101857
³He(α , α'), bound states to 113 MeV, resonating-group study 2-54269

alpha particle-nucleus scattering continued

- ⁴He(α , α), specific distortion effects in resonating-group method 2-90123
⁴He(⁴He,⁴He), high energy elastic scatt. differential cross section calc. 2-96020
⁴He(⁴He,⁴He) elastic scatt. and ⁹Be nuclear cluster structure unified study 2-95948
⁴He(α , α), 15 MeV, generator coordinate amplitude approximations from statistical regulations 2-113381
⁴He(α , α), antisymmetrisation effects, HI optical pot. real part approx. 2-90124
⁴He(α , α), Z 2-96023
⁶Li(α , α), single channel resonating group calcs. 2-96009
²⁴Mg(α , α), ²⁸Si energy levels calc. 2-101815
²⁴Mg(α , α), 18.1 MeV, ang. distrib., anomalous large angle scatt., optical anal. (Chinese) 2-96022
¹⁴N(α , α'), 34.85 MeV, negative parity states, transitions, DWBA anal. 2-84958
⁵⁸Ni(α , α'), 129 MeV, L=0 strength, monopole resonance at 20 MeV 2-90070
⁵⁸Ni(α , α'), 100-283 MeV, microscopic α -nucleus pot. cross sections 2-107872
¹⁶O(α , α'), A=17, 18, γ -ray prod. yields meas. 2-64399
¹⁶O(α , α'), 3.5-4.9 MeV, ang. distrib., phase shift and optical model anal. 2-59371
¹⁶O(α , α'), partly Pauli-forbidden states influence on reson. width in optical model 2-96023
¹⁶O(α , α'), resonating group eqn. structure 2-54332
²⁰⁸Pb(α , α'), giant dipole reson. Coulomb excitation 2-54344
²⁰⁸Pb(α , α'), 84-119 MeV, giant monopole resonance excitation 2-85015
²⁰⁸Pb(α , α'), 100-283 MeV, microscopic α -nucleus pot. cross sections 2-107872
⁸⁵Rb(α , α'), Coulomb excitation, ⁸⁵Rb decay scheme and transition probabilities 2-84994
³⁰Si(α , α'), 120 MeV, 2⁺ states, n and p transition matrix elements, relative signs 2-101796
¹⁴⁴Sm(α , α'), 84-119 MeV, giant monopole resonance excitation 2-85015
^{6,7,8,9,11}Li inclusive prod. (Russian) 2-101910
²³Th(α , α'), 100, 172 MeV, isoscalar giant resonance excitation, monopole giant resonance splitting 2-90068
²³⁸U(α , α'), 100, 172 MeV, isoscalar giant resonance excitation, monopole giant resonance splitting 2-90068
⁹⁰Zr(α , α'), 104 MeV, A=90, 92, elastic and inelastic, cross sections, transition rates, collective anal. 2-90127
⁹⁰Zr(α , α'), 99.3 MeV, low-energy octupole reson. gamma decay 2-85017
⁹⁰Zr(α , α'), 100-283 MeV, microscopic α -nucleus pot. cross sections 2-107872

alpha particle scattering see alpha particle-nucleus scattering**alpha-particle spectra**

- see also *alpha-particle angular distribution*
 heavy ion collisions, fast light particle formation direct mechanism 2-54442
 neutron-deficient nuclides produced in (p,x) on U, Th, Au, Ta, alpha spectroscopy 2-59299
¹²C(X), on U, Th, Au, Ni, 30-84 MeV/u, linear momentum transfer determ. 2-113539
⁹⁵Mo(⁴He, α), ⁹¹Mo, 25 MeV, f-p neutron-hole strength fragmentation in ⁹¹Mo 2-54409
¹⁸O(γ ,x), x=p,d,t, α , charged photoparticle emission from ¹⁸O giant reson. 2-54354
¹⁸¹Ta(¹⁶⁵Ho,X), 1354 MeV, deep inelastic reactions, α -emission 2-64430
- alpha-particle spectrometers**
 see also *alpha-particle spectra*
 CR-39 plastic track detector for high resolution α -particle spectroscopy 2-96366
 direct α -spectrometric analysis method for environmental materi als 2-62543
 monitor for preprocessing plant 2-69997
 portable photon-electron rejection Alpha liquid scintillation spectrometer 2-54714
 soil contamination meas. using alpha-beta-gamma spectrometer 2-54676
 tissue equivalent spherical counter 2-113844
 Ge spectrometer calibration from nuclear data 2-75096
²¹⁰Po, assay using background rejecting extractive liq. scintillation 2-54678
 Pu contamination, airborne detection by α -spectrometry 2-70116

alpha-particles

- see also *cosmic ray alpha-particles and helium nuclei*
 energy straggling effect 2-79318
 slowing-down losses in a rippled mag. field 2-71076
³Al(d, α), A=36, 38, 16 MeV, tensor anal. powers, α -particle D-state effects 2-90082
⁴⁰Ar(α ,X), secondary α -particle interaction mean free path 2-90154
⁵⁶Fe(α ,X), secondary α -particle interaction mean free path 2-90154
 H₂O mean excitation energy physical state effect as determ. from α -particle stopping power meas. 2-81861
¹⁵S(d, α), 16 MeV, tensor anal. powers, α -particle D-state effects 2-90082

alpha-radiation see alpha-particles**alpha-rays see alpha-particles****alpha-rhythm see bioelectric potentials****alpha-rhythm measurement see electroencephalography****altitude measurement see height measurement****alumina**

- see also *corundum*
 adsorbed phthalocyanine (perylene red) mols., interface orientation, reflection absorpt. IR spectra study 2-76822
 adsorption of 1,3-hydroxy- and 1-amino-3-hydroxypropane, chemisorpt. and oxide surface sites, tunnelling spectra 2-78140
 amorphous and polycrystalline, dielec. function, lineshape anal., EELS study 2-76955
 amorphous dielectric film, short-range order struct., change after ion implantation 2-86690
 amorphous struct., high resolution electron microscopy studies 2-71357
 amorphous thin film, struct. model, Monte Carlo calc. (Russian) 2-103627
 anelastic deform. effect on high temp. stress relaxation 2-67410
 anodic film form. on InP, enhancement MISFET appl. 2-82461
 anodic film in MIMS struct., deep trapping levels, photoelec. spectrosc. obs. 2-82405

alumina continued

- anodic films, cryst. and amorphous, voids, TEM study 2-93666
 anodic films, elec. breakdown charact., 4.2 to 354K 2-110769
 anodic oxide film, electrolum., interference effect 2-61983
 anodic oxide film thickness determ. by electrolum. method 2-110961
 beta alumina electrolytes with improved properties for storage batteries 2-73106
 ceramic powders, explosive compaction 2-83069
 ceramics, neutron irradi. damage 2-115301
 ceramics, reaction with saturated steam 2-111334
 coating, plasma sprayed on steel and Cu, temp. distrib. during deposition 2-116390
 cordierite based crystallised glass, damage resistance of fortified surfaces 2-111339
 CVD on cemented carbides, increase in wear charact. (Korean) 2-62073
 delayed fracture, crack origins and microcracking 2-88175
 dense, steam-enhanced impurity segregation 2-111116
 dry impregnation of M(NO₃)₂ (M=Be, Mg, Ca, Sr, Ba) and MoO₃, cryst. struct. 2-109761
 emission centre form. by H₂O absorpt., photoluminescence study 2-110930
 extended tight-binding calc. electronic structure of α -Al₂O₃ 2-110241
 far-IR absorption, 300-1500K, multiphonon processes 2-93174
 fibre, prep. and changes of microstruct. by heat treatment (Japanese) 2-116417
 Fibre FP reinforced pure Pb composite electrodes for Pb-acid battery 2-111544
 fibre reinforced Al, work of fracture, effect of isothermal exposure and thermal cycling 2-57472
 fibre reinforced Al-Mg, fabrication method 2-67259
 film, electron beam evaporation prep., appl. to GaAs MOS diodes 2-62068
 film, low freq. dielec. loss meas. 2-116118
 film growth, on Al acetylacetonate by thermal decomposition 2-87994
 film on β -NiAl, X-ray topographic study 2-88275
 film on Al, solar absorptance and thermal emittance 2-70639
 fracture, crack-tip plasticity, electron channelling study 2-88170
 fusion materials, nonmetals, radiation damage parameters, neutron and x-ray interactions 2-74898
 grain size depend. of fracture energy 2-57457
 hip joint, mech. characterisation by double torsion method (French) 2-88690
 hot pressed, fracture stress reflecting spots 2-88172
 ion incidence angle effect on cleanliness, roughness and topography 2-92050
 localised states, XPS, SCF X α SW calcs. 2-111035
 melting point measurements, in solar furnace in different atms. 2-58830
 metal-Al₂O₃-SiO₂-Si struct., charge profile, photoionisation study 2-66648
 mulitite powders, effect of explosive shock waves 2-98199
 notched bend specimens, memory effect of crack resist. during slow crack growth 2-105284
 optical constns. of amorphous, polycryst., α , γ phases, EELS study 2-57224
 order-disorder transitions, IR evidence 2-68656
 particles/epoxy matrix composite, dynamic response, theoretical anal. 2-57406
 particles/epoxy matrix composite, pressure-shear loading, dynamical response meas. 2-57405
 η -phase, surface states, luminescence study 2-61955
 phonon spectrum thermalisation obs. by freq. crossing 2-61220
 plasma spray coating on Mo, fusion reactor struct. materials appl. 2-74914
 plasma-sprayed layer on steel, roll coatings formed during Al hot rolling 2-111385
 polymorphic transitions, influence of MgO and SiO₂ additions 2-111169
 powder, plasma metallization (Russian) 2-67272
 prebreakdown conduction measurements in vacuum gaps 2-91705
 pressed powder pellets, initial sintering obs. 2-116419
 Pt-Al₂O₃ selective cermet coatings for high temperature photothermal conversion 2-105598
 rolls, roll coatings formed during Al hot rolling 2-111385
 second phase influence on deform. and recrystn. of Bi₂Te₃-based alloys 2-83170
 self-supporting targets thickness topography study using ion multiple scatt. 2-67171
 shock loaded ceramic, glass transition 2-71647
 sintered, variable microstruct., strength meas. (French) 2-88154
 sintered and fusion cast, fracture induced photon emission, appl. to fracture mechanics 2-93293
 sintering, and mech. props., effects of Cr₂O₃ additions 2-99375
 sintering and crystalline transform., effect of variations in polymerised oxides 2-111130
 sphere in KCl single cryst., crowdon mass transfer mechanism in localized stress relaxation (Russian) 2-66121
 stretching vibrs. of unperturbed and H-bonded OH and OD groups, appearance regions 2-116188
 supported Co, sorption of CO monolayers, tunnelling spectra 2-66349
 surface, Cu²⁺ and VO²⁺ adsorbed, dispersion modes, ESR study 2-116057
 surface, liq. cryst. alignment, tilt angle, conoscopic method 2-71344
 surface, Ni migration, TEM obs. 2-86983
 suspension, high conc., rheology and binding props. 2-88042
 thermal expansion anisotropy, stress meas. 2-76713
 thermal shock stability (French) 2-88155
 thin film, cond. props., tunnelling 2-110514
 thin films, ⁴He ions multiple scatt., ang. distrib. anal. 2-67170
 β -type, solid electrolyte, mobile ion conc. and mixed alkali effect 2-92271
 wear characteristics, against ultrahigh mol. wt. polyethylene 2-88222
 whiskers, grown on stainless steels, techniques and performance potential 2-57728
 AgI-Al₂O₃, enhanced ionic cond., AC elec. cond. meas. 2-82011
 Al₂O₃, coated mirrors, reflectance (170-1000 nm) rel. to Al₂O₃ film thickness 2-81047
 Al-Al₂O₃, dispersion strengthened, fatigue strength, effect of heat treatment temp. (Japanese) 2-93610
 Al-Al₂O₃, powder metallurgical, heat resistant, props. 2-72875
 Al-Al₂O₃ films, cluster size distrib. near metal-insulator transition 2-82169
 Al-Al₂O₃-Ag tunnel junction, adsorbed mol. monolayers, surface enhanced Raman spectra obs. 2-82867

alumina continued

- Al-Al₂O₃-Ag(Au)(Cu) tunnel structures, photon emission, expt. study 2-82471
 Al-Al₂O₃-Au struct., dielec. props. meas. at low freq. (*French*) 2-72075
 Al-Al₂O₃-Au(Cu)(Ag) tunnel junctions, electron energy loss function image in light emission 2-116267
 Al-Al₂O₃-GaAs MOD diode, electron beam evaporation prep. 2-62068
 Al-Al₂O₃-Pb tunnel junctions, voltage annealing with alternating polarity 2-104500
 Al-Al₂O₃-graphite composite system, threshold switching characts. correl. with fracture path 2-105331
 (Al₂SiO₅-Al₂O₃) composite, SAP type, precipitation hardening 2-77836
 Al₂O₃ (Si,Ti) thermoluminescent phosphor appl. for environmental and personnel dosimetry 2-96316
 Al₂O₃ in MIS structures with dielectrics prep. at low temps., charge instability mechanism 2-61601
 β -Al₂O₃, soft X-ray monochromator crystal, stability in synchrotron radiation 2-84759
 β -Al₂O₃ solid electrolytes, review 2-104055
 β^* -Al₂O₃, thermolum. props. 2-93292
 β^* -Al₂O₃, wetting by liq. Na 2-66325
 Al₂O₃(Fe), temperature depend. of Fe acceptor level 2-110898
 β -Al₂O₃-Ag⁺(Cu⁺), solid ceramic electrolyte, cells for thermodynamic studies 2-99378
 Al₂O₃-Cr³⁺, second order microwave elec. field effects 2-66904
 Al₂O₃-Cu porous anodic film, elec. props. meas. 2-82501
 Al₂O₃-Fe, thermoluminescence props., Fe ions absence effects 2-110957
 Al₂O₃-V, nonequilib. phonon propag. by quasidiffusion 2-92297
 α -Al₂O₃-Y, isoelec. donor 2-98642
 Al₂O₃/Al beam displacers and axicons with polarization-preserving single-layer-coatings 2-114396
 β -Al₂O₃/La₂O₃-Eu³⁺, optical props., struct., dye laser site-selective excitation and X-ray diff. obs. 2-61959
 β -Al₂O₃-Ag₂O, cryst. struct., X-ray powder diff. 2-115190
 β^* -Al₂O₃-Ag₂O, far IR absorpt. 2-116190
 Al₂O₃-B₂C annular burnable absorber, fabrication, development, appl. 2-80100
 Al₂O₃-B₂C burnable poison, gas release, swelling, high fluence effects 2-80099
 Al₂O₃-BaAl₂O₄ system, phase relations relevant to hexagonal BaAl₂O₉ 2-57338
 Al₂O₃-CaO melt, solidification and vitrification 2-72686
 Al₂O₃-Cr₂O₃ solid solutions, wetting by liq. metals, Cr₂O₃ content influence 2-61261
 β -Al₂O₃-K₂O, superionic conducting membrane, prod. by ion exchange 2-76733
 β -Al₂O₃-Li₂O, Li⁺ distrib. and motion, NMR and Raman study 2-66284
 β -Al₂O₃-M₂O, triply occupied mirror planes 2-71659
 Al₂O₃-MgO, adsorpt. of acetone, IR obs., rel. to acid-base props. 2-96574
 Al₂O₃-Mo composite powder, room- and high-temp. thermal cond. 2-66308
 β -Al₂O₃-NH₃⁺, defect struct., PMR study 2-110649
 β -Al₂O₃-Na₂O, amorphous-like acoustical props. at low temp. 2-56097
 Al₂O₃-Na₂O, β and β^* phases, chem. coloration 2-67767
 β -Al₂O₃-Na₂O, ceramic, solid electrolyte, chemical coloration, EPR study 2-66914
 β -Al₂O₃-Na₂O, cryst. struct., X-ray powder diff. 2-115190
 β -Al₂O₃-Na₂O, hot-pressed polycryst., fracture energy at high temp. 2-93630
 β -Al₂O₃-Na₂O, ionic cond., 223 to 573K, effect of Na/S cell cycling 2-92265
 β -Al₂O₃-Na₂O, polycrystalline, X-ray obs. of surface layers 2-67587
 β Al₂O₃-Na₂O, segregation to surface, electron induced, AES and XPS 2-115422
 β -Al₂O₃-Na₂O, solid electrolyte degradation in systems with transport number gradients due to internal deposition, theory 2-92257
 β -Al₂O₃-Na₂O, ultrafast ceramographic specimen prep. 2-11408
 β -Al₂O₃-Na₂O electrolyte, mode 1 degradation initiation 2-56245
 β -Al₂O₃-Na₂O-Ce, elec., mag., and phys. props. 2-82012
 β^* -Al₂O₃-Na₂O-Li₂O, ceramic, solid electrolyte, chemical coloration, EPR study 2-66914
 Al₂O₃-Na₂O-SiO₂ thin films, X-ray emission spectra, Al coordination 2-110985
 β^* -Al₂O₃-Na₂O(Na₂O-Li₂O)(Ag₂O), dehydration reactions, DTA and TGA study 2-78091
 β Al₂O₃-Na₂O, densification kinetics 2-62095
 Al₂O₃-SiO₂, mullite form. kinetics, grain comp. and component activity effects 2-77786
 Al₂O₃-SiO₂, porous ceramic, sound insulating characts. 2-97252
 α -Al₂O₃-SiO₂ (fused) compacts, sintering 2-99374
 Al₂O₃-SiO₂, mat. thermal cond. meas., for fusion blankets 2-69860
 Al₂O₃-SiO₂ mixtures, impurity effect on mullite and kaolinite 2-116450
 Al₂O₃-SiO₂ refractory fibre, apparent thermal cond. rel. to phys. props. 2-115475
 Al₂O₃-WO₃ layer system, electrochromic props. 2-104847
 Al₂O₃-XO₂-Na₂O (X=Si, Te, Ge), ionic conductor, elec. props. and struct. 2-110030
 Al₂O₃-Y₂O₃ dispersion strengthened alloys, convergent beam diff. anal. of dispersoids 2-99436
 Al₂O₃-ZrO₂-MgO, MgO and ZrO₂ effects on microstruct. and mech. props. 2-88038
 Al₂O₃-ZrO₂-SiO₂, AZS, refractories, corrosion by vapours of NaOH and Na₂CO₃ 2-116560
 β^* -Al₂O₃-H₂(H₂O)_n, solid electrolytes for H₂O hydrolysis, characts. and prod. 2-71716
 Au/Si₃N₄-Te₄₈As₁₀Ge₁₀/Al₂O₃/Al structure, current-voltage characts. 2-61589
 Au-Al₂O₃ granular films, optical props., topological considerations 2-62002
 B₂C-Al₂O₃ burnable poison appl., in PWRs 2-80098
 B₂O₃-Al₂O₃-Fe₂O₃ based glasses, Fe coordination, Mossbauer study 2-103641
 BaGeO₃-Al₂O₃-CaF₂-MgF₂:Eu³⁺, glass, spectral-luminescence, IR and Raman study 2-72553
 CaO-Al₂O₃-CaF₂, melt struct., anion packing 2-71325
 CaO-Al₂O₃-SO₃, calcined powders, appl. to U recovery from aqu. soln. 2-80144
 CaO-Al₂O₃-SiO₂, liquid-state interdiffusion using multiatomic ion models 2-86914

alumina continued

- CaO-MgO-Ca₂SiO₄=Ca₂Al₂Fe₂O₁₀ magnesite-dolomite refractories, thermal equilib. 2-62111
 Co-Al₂O₃ mag. emulsion, electron diff. study (*German*) 2-82667
 Cr-Al₂O₃ electrodeposited composite coatings 2-116579
 CuO-ZnO-Al₂O₃ system, reduction process, rel. to catalysts for methanol synthesis 2-83373
 FeO-Al₂O₃-SiO₂, amorphous, spin glass, mag. behaviour 2-72226
 n-HgSe-Al₂O₃-Pb junction, tunnelling spectroscopy study 2-92777
 InP/Al₂O₃ MOSFETs, CVD of Al₂O₃ dielec. layer 2-111090
 K- β -Al₂O₃, low temp. microwave conductivity tunnelling model, dielec. const. 2-76736
 K₂O-B₂O₃-Al₂O₃ glass, Al³⁺ with non-bridging O, density, refr. index and microhardness determ. 2-109684
 K₂O-Al₂O₃-Al₂O₃ system, phase relationships, 1200-1700°C 2-111156
 β^* -K₂O-MgO.5Al₂O₃ ionic cond. and IR absorption spectra 2-92260
 Li-Al₂O₃-Cu layers, electron tunnelling, ESR study 2-82714
 Li₂GeO₄-Al₂O₃, solid electrolytes, cationic cond. and struct. 2-110031
 Li₂O-Al₂O₃-SiO₂ gels, cryst. rel. to glass prep. 2-76309
 Li₂O-ZrO₂-Na₂O(Al₂O₃), subsolidus phase equilibria 2-116430
 MgO dopd, grain boundary meas. techniques 2-109812
 MgO-Al₂O₃, transparent ceramic, coprecipitation followed by calcination 2-99379
 MgO-Al₂O₃-CaO-SiO₂, fused, retrograde stability of periclase rel. to cracking 2-83103
 MgO-Al₂O₃-Cr₂O₃, kinetics of soln. in oxide melts 2-88063
 MgO.3.5Al₂O₃ single crystal, non-stoichiometric spinel, precipitation 2-88085
 MgO-Al₂O₃, high-purity fusions, sintering, effect of Y₂O₃ additive 2-57324
 MnO-Al₂O₃ system, growth by Verneuil method, phase composition 2-105062
 MoO₃-Al₂O₃, catalyst, struct. of uncrystallised Mo compounds 2-65862
 MoO₃-Al₂O₃ system, reaction and degree of cryst., effect of prep. conditions 2-67206
 Na- β -Al₂O₃, low temp. microwave conductivity tunnelling model, dielec. const. 2-76736
 β -Na₂O-Al₂O₃, AC ionic conductivity, equivalent circuit modelling 2-115457
 Na₂O-Al₂O₃-B₂O₃ glass, tetrahedral B, NMR spectra 2-97932
 Na₂O-B₂O₃-CeO₂.3Nb₂O₅-(Al₂O₃), porous glass ceramics 2-77811
 Na₂O.5Al₂O₃, electron irradiation damage mechanisms 2-66072
 Na β -alumina surface study using XPS and Auger methods 2-92329
 Nb-Al₂O₃ cermet film, elec. cond. calc. 2-82475
 Nb-Al₂O₃-Pb(Ag), electron tunnelling in normal and supercond. states 2-115913
 Pt/Al₂O₃ cermet, selective absorber coatings for solar radiation 2-83512
 Si-SiO₂-Al₂O₃ structures, radiation effects (*Chinese*) 2-92761
 SiO₂-Al₂O₃ amorphous thin films, coordination and bond character of cations 2-92238
 SiO₂-B₂O₃-Al₂O₃-BaO, pyroceramic, low temp. thermal cond. 2-110054
 SrO-BaO-Al₂O₃-TiO₂-SiO₂ system, crystallised-glass materials, isomorphous substitutions, X-ray diff. study 2-71615
 TiC-Al₂O₃, condensates, microhardness and microbrittleness 2-77904
 TiN-Al₂O₃ composites, hot pressed, props. rel. to TiN conc. 2-72753
 W-Al₂O₃ cermet film, Hall effect, electronic tunnelling near percolation limit 2-77202
 ZnO-Al₂O₃, struct. and chem. comp. of transition region 2-76851
 ZnO-Al₂O₃, gahnite, behaviour of Cr³⁺ and Fe³⁺ ions 2-98296
 ZrN-Al₂O₃ composite powder, room- and high-temp. thermal cond. 2-66308
 ZrO₂-Al₂O₃-CaO, sub-solidus phase equilib. 2-111161
 ZrO₂-Al₂O₃-Y₂O₃, solid electrolyte, phase equilib. 2-111160

aluminium

- see also nuclei with
 (111) surface, oxidation, EELS study 2-88279
 abrasion, SEM obs. of worn surfaces 2-67568
 adsorbed Ar, local-field effect in optical reflectance 2-104834
 adsorbed O on Al surfaces, K-edge, angle-resolved XPS and extended X-ray absorpt. fine struct. spectroscopy appl. 2-70339
 adsorbed on GaAs(110), surface struct., LEED study 2-110120
 adsorbed on GaAs (110), surface structure, first-principles pseudopot. determ. 2-110143
 adsorption of O₂, SIMS studies 2-104169
 adsorption on GaAs (110) rel. to Schottky barrier form. 2-115546
 air pollution in Nepal Himalayas, due to domestic fires 2-62527
 Al₂O₃ films on Al solar absorptance and thermal emittance computation 2-70639
 anelastic relax. of self-interstitials, X-ray diffuse scatt. study 2-56082
 annealed, mechanical behaviour under uniaxial tension, numerical anal. (*Japanese*) 2-88136
 anodic barrier films, direct obs. of ion implanted Xe marker layers 2-71481
 anodic barrier-type films, flaw generation 2-67629
 anodic films, porous, cell walls, STEM/energy-dispersive X-ray anal. 2-86988
 anodic oxide film, breakdown during pore filling 2-67660
 anodic oxide film, electrolum., interference effect 2-61983
 Arctic Ocean, Zn, Cd, Cu, Al vertical profile obs. 2-62997
 atom, inner shell ionisation by Compton effect 2-59768
 atom, matrix isolated, MCD study 2-80537
 atomic scattering factors determ., by Pedelousung-beat meas. using white radiation 2-71291
 Auger image, in scanning Auger electron microscope 2-101504
 backscattering of He⁺, equil. charge state distrib. 2-54957
 beam exit window materials effect on detection sensitivity in PIXE anal. 2-99717
 bicrystal grown from melt, crystal boundary behaviour (*Japanese*) 2-104173
 bicrystals, fatigue cracks initiation along grain boundaries 2-72844
 block temperature controller for fatigue testing 2-78057
 cavities formation, at and away from grain boundaries during 600 MeV proton irradiation 2-66078
 chemical polishing initiation, effect of oxide layer 2-111383
 chemisorption of Li, O, and Na on (111) surface, cluster model 2-66363
 chemisorption on GaAs (110), extended Huckel mol. orbital calc. 2-66345
 chemisorption on Si(111) and GaAs(110) (*Chinese*) 2-104139
 cluster, CO adsorpt. 2-87057

aluminium continued

coating on steel, porosity determ. using electron probe microanalysis 2-99624
 coatings, highly reflective, for the UV 2-97148
 coincidence site lattice twist boundary energy, long-ranged pot. 2-81795
 cold rolling to foil 2-103188
 commercial purity, microstruct. development during rolling 2-83136
 conductors, steel reinforced, coupled axial torsion model 2-116498
 contact resistance meas. of Al-Al interface 2-115867
 contact to NiSi using thin W barrier 2-87393
 corrosion, energy transfer during Al dissolution, theory 2-77995
 corrosion, initial dissolution step 2-57525
 corrosion products, $\text{Al}_2\text{O}_3 \cdot x\text{H}_2\text{O}$, visual detection by staining with fluorescing and nonfluorescing dyes 2-116608
 corrosion testing, in flowing hot sea-water 2-57547
 crack tip produced dislocations motion during cyclic loading, TEM obs. 2-93625
 creep, dislocation networks 2-57400
 creep, dislocation substruct. rel. to power law breakdown 2-67454
 creep, Harper-Dorn, nature and origin 2-116491
 creep, high-temp., dislocation density and internal stresses (*Russian*) 2-67447
 creep, static and cyclic of pure specimens, quenching effect 2-72779
 creep, steady and transient, based on constitutive eqns. 2-103886
 creep deformation characteristics, effective stress 2-62171
 crevice corrosion, expt. study 2-77998
 crevice corrosion in dil. NaCl soln., mathematical model 2-77999
 crystal, tensile stress-strain relations, constitutive relations calcs. 2-67407
 cylinder, impact deformation meas. at high temp. 2-83172
 Debye-Waller factor calcs. 2-103932
 defect structure, offer low-temp. plastic deformation. (*Russian*) 2-67444
 deformation analysis in cold rolling, viscoplasticity 2-116461
 deformation modelling during repeated stress relax. runs 2-111248
 deformed, cyclically and monotonically, stress-substruct. relationships in wavy slip mode metals 2-99498
 deformed, elec. resistivity recovery during isochronous annealing, kinetics (*Russian*) 2-92563
 deformed, fatigue cracks, gel electrode imaging 2-111414
 deformed, small-angle cold neutron scatt. study 2-71548
 deformed single crystal, high-angle grain boundaries form. 2-86683
 diffraction grating absorbed energy meas. by photoacoustic detector in Wood anomaly region 2-91035
 diffusion and solubility of H in pure large-grain samples 2-71725
 diffusion in ion implanted paramagnetic α -Fe-Al 2-76731
 diffusion in Si, oxidation effects 2-56257
 discontinuous film, carrier mobility 2-82479
 ductile flow and fracture in two dims. 2-70865
 electrical breakdown during anodisation in borate soln., TEM and SEM study 2-110771
 electrolytic capacitor, anodic oxide layer obs. using TEM and SEM 2-99580
 electrolytic capacitor, dielectric meas. on $\text{Al}(\text{OH})_3$ anodised layers 2-104809
 electrolytic capacitors, proton magnetic relaxation study of anodic oxide layer 2-104733
 electron and plasmon characteristic energy loss spectra 2-116309
 electron emission under molecular H ion bombardment 2-72592
 electron irradi., frozen free split phenomena, mech. relax. study 2-56084
 electron irradi., vacancy cluster form. and radiation-induced refining, HVEM obs. 2-81829
 electronic energy bands, KKRZ calc. 2-76910
 electroplating Fe and steel in AlCl_3 based molten salt mixtures 2-62285
 electroplating with Ni or Cr using electrolytic brushing combined with cathodic activation 2-99599
 epitaxial growth on polycryst. Si surface, micro-probe RHEED study 2-61308
 equibiaxial stretching textures 2-88103
 erosion by WC-Co sphere impingement at oblique incidence 2-111324
 erosion-corrosion in high temp. high velocity water, water chemistry 2-57515
 erosive wear, by particle-laden high rel. liq. jet 2-67567
 fast neutron irradi., positron annihilation 2-87894
 fast neutron irradiated, interstitial clustering in cascades, diffuse X-ray scatt. 2-103833
 fast secondary electron emission by X-ray irradi. 2-57262
 fatigue, low-cycle, in pre-strained pure specimen (*Japanese*) 2-62199
 fatigue crack behaviour at low stress intensities 2-62191
 Fermi density effect on stopping power 2-56060
 Fermi surface parameters, Fourier transform of positron annihilation curves 2-98524
 film, diffusion barrier between Al and Si formed by evaporated TiN 2-92394
 film, electron transmission and backscattering, Boltzmann eqn. model (*French*) 2-77643
 film, evaporated, absolute refl. meas. using high-precision multipass reflectometer 2-101446
 film, evaporated, oxidation studied by AES, EELS and electron stimulated desorpt. 2-76855
 film, oxidised, on glass, optical constns., multiple angle ellipsometric analysis 2-53818
 film, picosecond electron diffr. study 2-91730
 film, reduced electron density, elec. cond. study 2-82477
 film deposition, planar magnetron characts. at high power input 2-57291
 film in $\text{Ge}[111]$, reactions and surface atomic struct. 2-86991
 film thickness meas., Grigson microdiffraction in STEM, systematic errors 2-63980
 films, granular, reson. absorpt. of light, plasma reson. 2-67134
 films, laser machined holes, TEM, SEM and numerical study 2-86725
 films, oxide growth of RF plasma, ellipsometric study, refractive index 2-57529
 films, vacuum deposited, effects of impurities on emittance 2-98317
 films on quartz substrate, optical props., open wave resonator characts. (*Russian*) 2-93312
 foil, deformation twinning, TEM study 2-66013
 fracture surface, fractographic inspection in air and vacuum (*Japanese*) 2-62319
 fusion materials-radiation effects facility, use of Los Alamos Meson Physics Facility 2-85239
 fusion neutron simulation study, comparison of electron and self-ion damage 2-85225
 fusion-neutron irradi. damage rates 2-103828

aluminium continued

gamma-ray photon multiple scatt., saturation depth 2-115320
 graphite fibre reinforced Al, elasticity, ultrasonic meas. 2-93552
 He ion energy straggling, 0.25 to 0.75 MeV/a.m.u., backscatt. study 2-76550
 high pressure structural phase transition, first principles total energy calc. 2-66207
 hot rolling with rolls of different materials, roll coating form. 2-111385
 Hugoniot elastic limit of 2024 specimen, impact expt. 2-93565
 implanted in Fe, high temp. oxidation 2-77976
 impurity scatt. time, critical current density 2-82548
 inelastically scatt. radiation in EDXRF spectrometer, expt. and theoretical distribts. 2-99216
 interaction cross section with low energy neutrons 2-59446
 interatomic pair pot. calcs. 2-91865
 interatomic pots. and electronic props., ab initio calc. 2-56460
 intercrystalline fracture obs. by high power US (*Russian*) 2-88160
 ion beam textured surfaces, quasi-liquid states 2-82984
 ion bombarded, secondary electron emission coeff. meas. 2-72591
 ion bombarded with C^+ , plastic deformation stress meas. 2-86760
 ion implantation radiation damage, Mossbauer study and math. model 2-81835
 ion implanted, radiation damage and annealing studies 2-76532
 ion vapour deposited aluminium, process and coating performance 2-83272
 ionic implantation for SIMS quantification, corrosion study 2-99744
 irradiated, void growth, cyclic pulsed temp. effect 2-86717
 irradiated with Al ions, pure and He doped 2-86747
 isoaxial bicrystals, fatigue crack initiation along primary slip bands in grain boundary affected region (*Japanese*) 2-105302
 isothermal compression to 10 GPa at 673K 2-66107
 laser irradi. disc target, preheat effects, expt. and theoretical study 2-81551
 laser irradiated by microsec. pulsed CO_2 TE laser radiation, anomalous behaviour 2-115284
 laser prod. plasma, AlXI and AlX, 2p-3d multiplets, spectral intensity anomalies 2-60777
 lattice dynamics, coherent neutron scattering from polycrystals 2-56120
 lattice location of O impurities by ion channelling technique 2-81843
 lattice relax. at surface, work function, surface energy 2-87008
 layer on C target, laser produced plasma, ablation thickness estimation by ion expansion anal. 2-91636
 liquid, 3p electron density of states 2-82199
 liquid, dissolution of Cr, kinetic parameters and diffusion coeffs. 700-900°C 2-99395
 liquid, field emission ion source, emission characteristics meas. 2-74570
 liquid, high-purity, viscosity and density, 670-950°C 2-66272
 liquid, interatomic pair pot., combined WCA and RPA calc. 2-60857
 liquid, static struct. factor rel. to effective pair pot. 2-60868
 liquid, structure factors, pseudopotential and WCA method 2-65844
 liquid metal ion source, emission characts. 2-96353
 liquid metal ion source C needle emitter appl. 2-89854
 magnetic breakdown, from temp. variations of magnetoresistivity (*Russian*) 2-98624
 magnetic field influence on defect struct. during plastic deform. (*Russian*) 2-103882
 magnetron sputtered film overlaid with plasma SiN film, trapped Ar induced deformation 2-82155
 mass absorption coeff. and range of beta particles 2-75135
 materials with $Z_1=23-30$, electronic stopping cross section for 30-300 keV protons 2-66086
 matrix composite, B fibre reinforced, acoustic emission and longevity under steady load 2-93619
 MBE layers, epitaxial relationship with GaAs [001] substrate 2-56396
 microstructural evolution during 600 MeV proton irradi., He prod. rate effects 2-86746
 mirror, first surface specular reflectance standards, prep. and calibration 2-114405
 mirror design for large aperture precision collimator, long wavelength IR sensor test facility 2-102958
 mirrors with Al reflective layers, back side protection with varnish coatings 2-97147
 moving grain boundary double successive detachment from adsorbed impurity 2-115254
 multi-chamber dry etching system for fabricating VLSI 2-69184
 muon diffusion and trapping 2-110049
 muonic X-ray cascade, refilling rates 2-85847
 neutron irradi., shallow positron traps 2-82295
 nonreciprocal SAW propagation 2-92335
 notched specimen fatigue damage, isolation of time-depend. strain component 2-67476
 nuclear stopping regime, evidence for insulator-metal effect on Z_1 range oscills. 2-103869
 numerical analysis of Hopkinson bar experiments on dislocation dynamics 2-71446
 optical films, mechanical props. 2-82191
 optical properties of metals, data collection 2-93138
 overlayer of O on (111) surface, position, electronic and binding props. 2-82135
 oxidation by plasma formed due to low-threshold breakdown of air 2-99604
 oxide coatings, corrosion protection Auger and XPS study 2-83268
 oxide film chem. composition, influence on surface props., SIMS, XPS, AES 2-104209
 oxide film form., EXAFS study in total yield and refl. modes 2-57212
 oxide film thickness, ^{16}MeV neutron activation and BET method 2-53736
 penetration into porous TiB_2 , effect on fracture and mech. props. 2-57456
 pH potential diagram for seawater, expt. 2-62262
 phonon freq. calcs. 2-86810
 photoelectric cross sections 2-96514
 pitting corrosion, current signature during early events 2-77994
 pitting corrosion, pit growth rate determ. 2-62259
 plasma, BLACKJACK 5 pulse generator, $\text{Al}(\text{Ca})(\text{Ti})$ imploding plasma expts. 2-91640
 plasma, optically dense, reson. self-reversed Al line reduction 2-109601
 plasma etching of single wafers 2-72878
 plasma etching process, problems of surface morphology and layer deposition 2-67609
 plasma prod. by ^1H pulse, radiation emission 2-76145

aluminium continued

- plasma ion dispersion at $k \leq k_F$ using EELS 2-76954
 plastic deformation and stress relax. meas., 133 to 673K (*Russian*) 2-99482
 plastically deformed, lattice defect trapped at In impurities, PAC study 2-92022
 plate, penetration process dynamics, exptl. and numerical study 2-70876
 plates, collapse behaviour 2-65477
 plates, crack growth under equibiaxial tension 2-111258
 plates between steel plates, stress-strain curves, plastic flow 2-72756
 point contact spectra, electron-phonon interaction anisotropy (*Russian*) 2-56673
 polishing effect, on low-cycle fatigue 2-105292
 poly-1-vinyl-1,2,4-triazole-Al boundary, charge carrier photoinjection 2-61587
 polycrystalline, plastic deform., electric current pulse influence, 1.7 to 4.2K (*Russian*) 2-115332
 porous, deposition techniques and heat transfer props. 2-87979
 positron annihilation radiation meas. (*Chinese*) 2-110971
 positron interaction, annihilation photon angular correction spectra 2-77617
 protons in Be, Al, Ti, V, Fe, Co, Ni, Cu, Zn, Mo, Rh, Ag, Sn, Ta, Pt, Au, stopping power meas. 2-64820
 pseudopotential elastic const. calcs. (*Chinese*) 2-109880
 pulsed He^+ beam scatt., time of flight technique 2-77670
 pulsed laser annealing, energy absorption, melting 2-81820
 pure, imaging by FIM 2-55885
 pure, wire drawing 2-67364
 pure and commercial, solidifications struct. of ingots, effect of nucleation supercooling 2-99419
 PWR, containment sprays, H_2 evolution 2-74882
 quasi-elastic high press. waves 2-71557
 quenched, clustering process of vacancies 2-55964
 quenching curves 2-57388
 reaction with SiO_2 film, AES and EELS study 2-98474
 reactive ion etching using SiCl_4 2-57531
 recrystallisation, tensile deform. of single crystals. (*Chinese*) 2-62135
 recrystallised, grain vol. distrib. and grain growth, effect of prior cold work 2-99446
 reflectance at visible, IR wavelengths, wavelength and temp. depend. 2-67083
 residual electrical resist. meas., correlation with dislocation density and cryst. growth from melt (*Russian*) 2-98614
 resistivity damage rate under neutron irradiation at 4.6K, 2-103827
 rod fibre texture changes during drawing of initial {112}{111} and Goss orientations 2-57369
 rolled, and shock-wave-deformed, correlation between texture and substruct. 2-99445
 rolled, penetration of shear texture 2-77841
 ruby- Cr^{3+} effect of ^{27}Al nuclei on hypersound intensification (*Russian*) 2-77422
 scratched, photostimulated exoelectron emission, storage effect obs. 2-116343
 secondary electron emission coeff. under ion bombardment 2-111007
 secondary electron emission spectrum, ion induced 2-116320
 secondary ion emission enhancement during low press. oxidation 2-67178
 self-interstitials, hyperfine interaction evidence, theoretical anal. 2-71437
 self-ion sputtering yields 2-77660
 semiconductor-metal interfacial reaction at room temp. 2-56267
 shear band formation, effect of large deform. 2-67416
 sheet, crack propag., refl. holography applied to deform. meas. problems 2-103118
 sheet, X-ray mirror reflectivities from 3.8 to 50 keV 2-84756
 shells, elastic exponential and conical, steel sphere impact, pulse transmission 2-55473
 shock compression measurements at pressures >1 TPa 2-76590
 shock release in 10 GPa range 2-71558
 shock wave attenuation induced by contact detonation 2-71567
 single cryst., specimen current image 2-65813
 single crystal, CO exposed, EELS study 2-98457
 single crystals, microstruct. development by internal isothermal friction (*French*) 2-116487
 solid cylinders, surface contours in axi-symm. upsetting 2-67431
 solidification, low-frequency vibration influence obs. 2-116432
 solubility process in SiC , Fermi level, thermodynamic anal. 2-109992
 spherical wear debris form. in mode II fatigue cracks 2-93636
 spray-deposited black Ni selective absorber coatings on Al substrates for solar thermal conversion 2-78243
 stabiliser for supercond. magnets, low temp. irradiation effect 2-80182
 stacking faults, {111}, energy calc. (*French*) 2-87079
 steel-Al deformation welds, fracture toughness testing 2-67483
 steels, ferritic, protection by Al cementation with or without subsequent oxidising (*French*) 2-99597
 stopping power for slow protons, electron exchange and correl. effects 2-86767
 strain localisation under tension 2-111246
 structural material for fusion reactor appl., Ta protective coatings 2-74911
 subgrain size, stress depend. 2-103765
 substrate, vacuum deposited perylene red and phthalocyanine mols., interface orientation, reflection absorption IR spectra 2-93299
 substrate for Ag film, differential reflectivity, nonlocal electrodynamics 2-87884
 superconducting, magnetoabsorpt. resonances, 35 GHz 2-57067
 superconducting bolometer, $\text{Al}+\text{O}_2$ 2-89808
 superconducting film, critical mag. field 2-56800
 superconducting film, inhomogeneous, local transition temps. and crit. currents, optical probing technique 2-61635
 superconducting films, thermodynamic fluctuations of order parameter, review 2-98809
 superconducting granular, mag. susceptibility meas., grain clustering near T_c 2-61651
 superconducting strip, influence of microwaves on order parameter relax. time 2-72114
 superconducting thin film, inhomogeneous current state, vortex lines, C-V characts. study (*Russian*) 2-82549
 superconductivity, microwave enhancement of crit. current and order parameter 2-110548
 superconductor, order parameter relax. under microwave irradiation 2-72115
 surface, {100}, O_2 adsorpt., ab initio unrestricted HF calc. 2-76835

aluminium continued

- surface, {111}, appl. of r-factor anal. of effect of non-structural parameters in LEED 2-56306
 surface, {111}, blue coloured surface obs. during high temp. oxidation 2-88280
 surface, autoionisation of colliding Ne projectiles, Auger electron energy distribts. 2-57231
 surface, clean and oxidised, energy distrib. meas. of secondary, Auger and reflected electrons (*German*) 2-101499
 surface, damage thresholds for short pulse IR lasers 2-108923
 surface, inert gas ion impact, Auger emission study 2-77684
 surface, LEED temp. depend. study 2-56307
 surface, N_2^+ beam reaction in low kinetic energy region, Auger effect 2-99706
 surface, oxidation state, ang. correlation of positron annihilation study 2-72877
 surface, preconditioned, flaw obs. by anodisation/TEM technique 2-116607
 surface {001} chemisorption of Na, effects on surface dipole moment 2-82439
 surface {111}, adsorbed Ar, Kr and Xe, photoemission studies 2-62048
 surface {111}, angle resolved UV photoemission, direct transitions 2-87947
 surface {111}, clean and precovered, adsorpt. of NH_3 , struct. and orientation 2-82122
 surface {111}, ion bombarded, secondary electron energy resolved angular distrib. 2-93349
 surface {111}, O chemisorpt. 2-110132
 surface {111}, O chemisorption, quantum chem. cluster model 2-110127
 surface {111} and {111}p(1 \times 1) O , cluster and DVM approach to LEED pot. generation 2-98439
 surface bound portions, theory of desorption 2-87195
 surface erosion under the ion bombardment, mech., loading effects, SEM study 2-78021
 surface oxidation and segregation, SIMS studies 2-105388
 surfaces, CO exposed, Auger electron spectroscopy, electron beam stimulated chemisorption 2-82088
 symmetric rod impact technique for dynamic yield determination 2-69165
 target, H^+ collisions, plasma generation, UV spectra (*Russian*) 2-60768
 target, stopping power and effective charge of heavy ions 2-76543
 texture induced acoustic anisotropy due to compressive deformations, strain rate and temp. effect (*Japanese*) 2-77839
 texturing with an RF-ion source using Xe working gas 2-105390
 thermal diffusivity determ. of solid materials near melting point 2-115394
 thermal neutron radiography, point spread functions due to neutron scatt. 2-99610
 thermal outgassing props. between 20°C and 320°C 2-59544
 thermal quenching, positron annihilation study 2-104994
 thermal viscous model for yielding due to shock waves 2-71561
 thin film, blistering by helium ions, TEM study 2-56049
 thin film, neutralisation of 50-230 keV H^+ ions 2-111015
 thin film, on GaAs substrate, positron-annihilation study 2-82952
 thin film, quantum size effect study by resonant tunnelling (*Rumanian*) 2-87420
 thin film, size depend. cond., electron density and mean free path 2-110498
 thin film, surface topography meas. using α -particle energy loss distrib. 2-76552
 thin film deposition in Ar using DC planar magnetron sputtering, O_2 -partial press. condition effects 2-57294
 thin films, polycryst., correl. between struct. and elec. props. (*Russian*) 2-66663
 thin narrow film, localisation and superconducting effects (*Russian*) 2-72106
 transient deformation, phenomenological model based on state variables 2-56088
 tubes, liq. filled, fluid effects and response in transverse impact 2-114707
 twins, energy calc. (*French*) 2-87079
 ultrapur., dislocation dynamics, NMR and TEM study 2-105215
 vacancies, formation vol. and energy, lattice distortion and nonlinear screening, theory 2-98073
 vacancy energy characts. from effective pair pots. (*Russian*) 2-60974
 vacuum condensate, heterogeneous struct. formation 2-105107
 vapour, impurity reduction, purification of AlCl_3 2-99308
 vapour, photoabsorpt. cross section near first ionisation limit 2-59764
 viscosity meas. at high strain rate 2-83157
 wear, SEM study 2-67571
 wedge, refractive index and struct. factor using anomalous X-ray transmission in perfect Si cryst. 2-77467
 X-ray laser research, progress and trends 2-108855
 Ag-Bi₁₂TiO₂₀-Al, local levels in forbidden band of Bi₁₂TiO₂₀ 2-71899
 Al film, AC temp. calorimetry at low temp. 2-53762
 Al film, high quality, vacuum deposition on porous substrates 2-87988
 Al foil + (H^+)(H_2^+), inner shell ionisation by ion bombardment 2-75391
 Al I, L-shell absorpt. spectrum 2-85576
 Al I, lifetimes, MQDT calcs., mixing coeffs. appls. 2-102438
 Al II, spin-forbidden lines, oscillator strength calcs. 2-85590
 Al, in-situ study of subboundary props. during creep, HVEM 2-71462
 Al industry process control using X-ray anal. system 2-116706
 Al, polarisation wave wavelength meas. 2-80776
 Al V to Al IX ion lines, extreme UV emission spectra from plasma focus 2-59735
 Al XII plasma laser; resonantly photopumped, theory 2-90873
 Al¹⁺, Born-approx. electron ionisation cross section, oscillator strengths, proton stopping power calc. 2-96644
 Al¹⁸⁺, ionic target, stopping power, free-electron gas approx. 2-103280
 Al-D, defect trapping of implanted D 2-9020
 Al-D thin film, He ion bombardment, TEM, SEM and α -particle back-scatt. study 2-115319
 Al/ Al_2O_3 coated mirrors, reflectance (170-1000 nm) rel. to Al_2O_3 film thickness 2-81047
 Al/AlN coatings, sputter deposition prep. using pulsed gas processes, characterisation and mech. props. 2-83021
 Al/amorphous Se/Al struct., capacitance and photocapitance, time depend. meas. 2-56724
 Al/Cu bolted joints electrical performance 2-99590
 Al/GaAs Schottky barriers, elec. field in depletion layer 2-98043
 Al/ SiO_2 - B_2O_3 /Au thin film struct., elec. cond. and field electron emission, theoretical model (*French*) 2-72076

aluminium continued

- Al/Sn, liquid system, oxidation, Auger electron spectroscopy 2-93658
 Al/W/NiSi structure, use of thin W barrier to inhibit Al+NiSi reaction 2-98472
 Al-Ag granules in complex film, plasma resonance absorpt. bands 2-116289
 Al-Ag-Al strip, pressure-welded, interdiffusion layer struct., ultramicrotomed thin section method 2-71738
 Al-air cells, characts. and electrochemistry (*German*) 2-88416
 Al-Al₃Cu phase boundary, energy calc. (*French*) 2-87079
 Al-Al₂O₃ films, cluster size distrib. near metal-insulator transition 2-82169
 Al-Al₂O₃/Cu porous anodic film, elec. props. meas. 2-82501
 Al-Al₂O₃/Ag tunnel junction, adsorbed mol. monolayers, surface enhanced Raman spectra obs. 2-82867
 Al-Al₂O₃/Ag(Au)(Cu) tunnel structures, photon emission, expt. study 2-82471
 Al-Al₂O₃/Au struct., dielec. props. meas. at low freq. (*French*) 2-72075
 Al-Al₂O₃/Au(Cu)(Ag) tunnel junctions, electron energy loss function image in light emission 2-116267
 Al-Al₂O₃/GaAs MOD diode, electron beam evaporation prep. 2-62068
 Al-Al₂O₃/Pb tunnel junctions, voltage annealing with alternating polarity 2-104500
 Al-Al₂O₃/graphite composite system, threshold switching characts. correl. with fracture path 2-105331
 Al-Al₃Ni eutectic, high-temp. coarsening 2-57343
 Al-AlN-Al, ion plated thin film capacitor, dielec. and AC cond. props., annealing effects 2-61825
 Al-amorphous Si-Ni(Au) struct., tunnelling characteristics meas. 2-66657
 Al-B composite periodically laminated medium, harmonic wave propag. 2-60447
 Al-BN plasma spray deposited composite coatings, props. 2-83231
 Al-B(C), interstitial solid solution, energy of mixing 2-92216
 Al-CdS-C, switching struct., with potential barrier, elec. characts. 2-87407
 Al-Cr dilute alloy, irradi., self interstitial trap and clustering at impurities 2-76689
 Al-Cr(Ni)-Al layer system anal. by Rutherford backscatt. spectrometry 2-105177
 Al-Fe(Sn)(Pb) double layer scatterers, albedo charact. of bremsstrahlung 2-67708
 Al-GaAs and Al-Al_{0.5}Ga_{0.5}As-GaAs MBE contacts, Schottky barriers, stability props. meas. 2-98723
 Al-GaAs interface, far IR radiation generation by surface wave difference freq. mixing 2-55252
 Al-GaAs MBE Schottky barrier height, O stabilization 2-87367
 Al-GaAs Schottky barriers, influence of interface composition 2-82432
 Al-GaAs(110) interface, possibility of adatom cluster formation 2-61555
 Al-GeS, work function determ. method 2-61553
 Al-In (0.02 at %), mid-channel He ion flux, depth and ang. depend. 2-66096
 Al-InAlAs-InGaAs heterostructure, current transport 2-104486
 Al-Mg, SCC in saline water, protection by anodic coating 2-111358
 Al-Mg/Al/Al-Mg composite, dislocation struct. and element diffusion resist. 2-82037
 Al-Mn, unhomogenized, recrystn. 2-83138
 Al-Mo, erosion yields by vacuum arcs in mag. field, temp. depend. 2-74917
 Al-oxide-Ga thin film tunnel junction, zero bias anomaly, mag. field depend. 2-82546
 Al-oxide-Pb tunnel junctions, water infused, thermal and voltage annealing 2-82472
 Al-oxide-Pb tunnel junctions, effect of top electrode deposition rate on tunnelling characts. 2-82473
 Al-phthalocyanine interface, surface photovoltage, XPS and I-V characterisation 2-56691
 Al-Sb multilayered film, laser induced crystn. 2-61316
 Al-Si Schottky diode with surface layer, current-voltage characts. (*Rumanian*) 2-66621
 Al-Si₃N₄-SiO₂-Si structure, AES and internal photoelec. effect technique meas. 2-82163
 Al-Si-Ti structure, use of Ti thin layers to retard reaction of Al with Si 2-71737
 Al-SiO₂ MIS structures, quantum-mechanical image-force theory test 2-104494
 Al-SiO₂-Si, B-ion implanted MOS structure, radiation defect spectra study by TSC method 2-66646
 Al-SiO₂-Si, MOS capacitor, electron irradi., interface state spectrum, gate bias effect, DLTS study 2-66640
 Al-SiO₂-Si, MOS structure, surface state density determ. based on Hill-Coleman technique 2-77192
 Al-SiO₂-Si, MOS struct., low temp. var. of oxide change and surface state density conc. under γ -irr. 2-104496
 Al-SiO₂-Si capacitor, Cc Si-SiO₂ interface, slow and fast states induced by hot electrons, expt. study at Si-SiO₂ interface 2-87395
 Al-SiO₂-Si capacitors, avalanche injected, positive charge effects on flat-band voltage shift meas. 2-87394
 Al-SiO₂-Si MIS capacitor, DLTS study 2-115896
 Al-SiO₂-Si MOS struct., H₂ anneal effects on metal-semicond. work function difference 2-92771
 Al-SiO₂-Si metal-cermet-oxide-semicond. struct., enhanced electron injection into SiO₂ layers 2-104492
 Al-SiO₂-Si structure, prep. under UHV conditions 2-56716
 Al-SiO₂-Si structures, resonant tunnel switching 2-98757
 Al-SiO₂-Si system, hydrogenation of defects at the Si-SiO₂ interface 2-56373
 Al-SiO₂-Si tunnel diode, metal deposition and oxide growth technology effect on electronic props. 2-56717
 Al-SiO₂-SiC, MOS struct., elec. props. meas. 2-72060
 Al-SiO₂-p-Si MIS tunnel solar cells current mechanism, temp. depend. of dark I-V characts. 2-105555
 Al-Sn(Ag), preparation of tunnel junctions 2-77234
 Al-steel-Pb admixed alloys, wear-resistant, prod. by dynamic compaction 2-88025
 Al-Te contacts, needle struct., current-voltage characts. after different types of aging (*French*) 2-61566
 Al-Te-SiO₂ coating system, reflectivity, graphical representation 2-75521
 Al-transition metal nitride (carbide) films, interfacial reactions, expt. study 2-56368
 Al³⁺-Ni²⁺ interaction in aqs. soln., NMR relax. study 2-87614

aluminium continued

- Al+H⁺ (³He-ion), inner shell ionisation cross sections, projectile charge depend. 2-70387
 Al+He⁺, pulsed beam time of flight technique for studying ion-atom scatt. 2-77670
 Al+heavy ions, convoy electron prod. 2-77647
 Al+O, reactions in Ar matrix, IR spectra of prods., vibr. 2-96564
 Al⁺+C-foli, absolute L-shell Auger electron yield meas. 2-75393
 Al⁺+O₂, cross section, mass spectroscopy 2-105464
 Alⁿ⁺+H⁺, stopping power, generalised oscillator strength formulation 2-114080
 Al₂ molecule, pot. energy curves and dissociation energy 2-114062
 Al₂Ga_{1-x}As-Al-Al₂Ga_{1-x}As struct., instabilities in MBE growth 2-66395
 Al₂O₃ fibre reinforced Al, work of fracture, effect of isothermal exposure and thermal cycling 2-57472
 Al₂O₃/Al, variable range hopping conductivity 2-66546
 Al(100), electron spectroscopic study of CO adsorption 2-76819
 Au/Al thin film diffusion couple, elastic props., SAW vel. study 2-82183
 Au/Si₂Te₄As₃₀Ge₁₀/Al₂O₃/Al structure, current-voltage characts. 2-61589
 Au-Al₂O₃/Al tunnel junctions prod. by electron beam evaporated Al₂O₃ 2-115912
 B fibre reinforced, alloying influence on solubility of fibres, energy calc. 2-66237
 B fibre reinforced Al, dynamic elastic modulus with solid-state chem. interaction 2-83158
 B fibre reinforced Al, fracture and strength characts., chemical action effect (*Russian*) 2-72795
 B fibre reinforced Al, hot pressing, reaction between fibres and matrix 2-83068
 B fibre reinforced Al, interface struct. and strength 2-77942
 B fibre reinforced Al, work of fracture, effect of isothermal exposure and thermal cycling 2-57472
 B fibre reinforced Al-epoxyphthalate matrix composite, mech. props. 2-116488
 B-Al composite, heat deposition meas. in ZING-P' pulsed spallation neutron source 2-102028
 BaTiO₃/Al, acceptor doped, nonstoichiometry 2-77042
 C fibre reinforced, alloying influence on solubility of fibres, energy calc. 2-66237
 C fibre reinforced Al, chopped fibres, prod. by powder metallurgy, dry wear (*Japanese*) 2-105344
 CdS(Se)-Al-Au interface, Schottky barrier modulation, soft XPS study 2-110442
 Fe, oxidation at room temp., Al impurity effects 2-67632
 Ga_{1-x}Al_xAs heterostructure diodes, laser irradi., electroluminescence emission 2-82926
 GaAs/Al, ion implanted, radiation damage 2-115317
 GaAs/Cr, defect centre struct. photocapacitance study 2-104305
 GaAs/Al contact elec. and physical characts., GaAs surface comp. effect (*Ukrainian*) 2-104124
 GaAs-Al single crystal microjunctions by MBE 2-82456
 GaAs-Al struct., exciton dissociation and annihilation, photo-EMF study 2-82250
 GaAs-Al_{0.5}Ga_{0.5}As heterojunction FET, 2-D electron gas, quantum galvanomagnetic props. 2-56686
 GaAs-Al_{0.5}Ga_{0.5}As heterojunction FET, 2-D electrons, far-infrared cyclotron resonance 2-56941
 GaAs-AlGaAs heterojunctions, 20-electron gas, f-factor enhancement, Shubnikov-de Haas oscils. 2-56685
 GaAs-GaAlAs multilayers, high field magneto-transport, spin splitting, g-factors 2-56684
 n-GaAs-Sn(Ag)(Al)(Au) MIS Schottky barriers, electron trapping in oxide layer 2-77196
 p-Ge/Al, impurity states, oscillator strengths, quadrupole moments 2-104303
 Ge/Al, vol. diffusion of Al, SIMS invest. (*German*) 2-66274
 Ge/B, Al, Ga, residual acceptor impurity distrib., photothermal ionisation spectroscopy study 2-81807
 Hg_{0.9}Cd_{0.1}Te:Al⁺, ion implantation, IR reflectivity study 2-116191
 n-InP-Al Schottky barrier, prep., photocurrent, I-V and C-V characts. study 2-61552
 Li-Al cells, phase relationships in positive electrodes 2-88422
 Li-Al/FeS cells optimisation for electric vehicle propulsion applications 2-93887
 NH₃/O₂-fuel oil-Al explosive, aquarium test, shock press. anal. 2-74442
 Nb/Al overlayer struct., surface oxidation, grain boundary diffusion, XPS study 2-67601
 Nb₂O₅/Al, CC acceptor doped, defect struct., elec. cond. study 2-92613
 Ni-Al₂O₃/Al tunnel junctions prod. by electron beam evaporated Al₂O₃ 2-115912
 Ni-Cr/Ni-Al thermocouple response linearization using FET cct. 2-53757
 P₂O₅-SiO₂ glass passivation layers, cracks and Al corrosion 2-88234
 Pt-Al reaction, thermal study, and its effects on contact resistance to Si 2-87388
 Si particle reinforced Al, SASI-50 composite, internal stresses and dimens. instability under cyclic thermal load 2-62210
 Si/Al, neutron irradi., IR absorption by radiation defects 2-116217
 Si/Al/Li, sharp line donor-acceptor pair recombination luminesc. 2-104928
 Si/Cu(Ag)(Au), gettering by Al at low temp., Rutherford backscatt. study 2-115264
 p-Si/Fe/Al, interstitial Fe and Fe-acceptor pairs, DLTS and Hall effect study 2-66476
 p-Si/Mn⁺Al⁺, DTA and electron beam anal., doping effects (*German*) 2-92010
 Si/PtSi/Ti-W/Al system, compound form. and interdiffusion, SEM, X-ray, Auger and microprobe studies 2-71740
 SiC fibre reinforced Al, elasticity, ultrasonic meas. 2-93552
 SiC fibre reinforced Al, tensile props., thermal degradation effects 2-116485
 SiC multifilament reinforced Al, prep. and characts. 2-77941
 p-Si/C:Al, Fermi level, Fermi distrib. and activity coeff. calc. 2-92453
 SiC/Al, implanted ion diffusion, profile anal. by STMS 2-109824
 SiC/Al, sintered and hot pressed, grain boundary segregation, STEM study 2-111180
 SiC/Al/N, luminescence, cross relax. optical detection 2-99180
 SiC/Al polytypes, p-n structs., electrolum. characts. 2-93285
 SiC/B, Al epitaxial layers, lattice deformation and perfection, X-ray study 2-92406

aluminium continued

- SiO₂:Al, variations of surface concs. with oxide content 2-82098
 SiO₂:Al, vitreous, radiation colour centres, multiple nature, ESR and optical absorpt. study 2-72348
 SnO₂-ZnS(A)-Cu-S-ZnS(A)-Al, A=Ag,Mn,Sm, thin film struct., electrolum., cathodolum. and photolum. meas. 2-87871
 Ta₂O₅:Al, acceptor doped, elec. cond., majority defect model 2-92615
 Ti+Al, heavy ion-atom collision, double to single K vacancy production ratio 2-90678
 TiB₂-Al-Mo, coating for fusion reactor first wall, characterisation by lattice constant meas. 2-74912
 ultrathin layer on Ge, effects on Ge oxidation, UPS study 2-67576
 VO₂:Al, IR absorpt. 2-104879
 V₂O₅-P₂O₅/Al struct., contact limited conduction, work function effects 2-72056
 Zn:Al, single cryst., steady-state creep rates, Al doping effect 2-88150
 Zn_{1-x}Cd_xS:Cu, Al cathodoluminescent phosphor, saturation obs. at high current density 2-116273
 ZnS:Cu, Al, phonon-assisted tunnelling in the electroluminescence exciting process 2-110950
 ZnSe:Al, growth and doping by organometallic CVD 2-111087
 ZnSe:Al, IR absorption and defects 2-87823
 ZnSe:Al, photoluminescence obs. 2-61971

aluminium alloys*see also aluminium compounds*

- AC anodising processes, expt. study 2-105366
 acoustic emission and inclusion fracture in type 7075 2-62298
 aerocomic materials, high-freq. fatigue tests 2-57546
 Al-Cu alloys, polycrystalline, second-order elastic moduli, US vel. study 2-72748
 Alnico magnets, anisotropic, model for field computation 2-82638
 anodised and unanodised, ten year open air weathering tests, results (*German*) 2-105364
 biaxial surface stress meas., use of US Rayleigh waves in type 2024-T351 2-57561
 castings, low-temp. characts. (*French*) 2-77895
 coated, corrosion eval. by AC impedance meas. 2-116601
 compressive creep machine, expt. results 2-105417
 conversion coatings, corrosion protection, adhesive bond durability, cracking 2-83270
 corrosion behaviour in saline water, cooperation report 2-57506
 corrosion in HCl, influence of anion 2-67630
 corrosion properties, in saline media 2-57507
 corrosion testing, in flowing hot sea-water 2-57547
 corrosion-preventing coatings, surface studies 2-83266
 creep, self-consistent determ. of time-depend. behaviour 2-92089
 creep deform. and rupture under non-proportional loading 2-57445
 creep in torsion and stress relax. in tension 2-105269
 creep under combined tension and torsion and stress reversal, nonlinear model predictions 2-93577
 critical stress intensity coefficient determination, using specimens of different size 2-62311
 cylinder, internally pressurised ductile, instability and failure 2-99526
 dimpled loaded hole fatigue strength, mean stress effects on type 2024-T3 2-67513
 dislocation transport of H, rel. to hydrogen embrittlement in type 7075 2-83220
 dispersion hardened composites, fabrication and wear props. 2-57363
 extruded, creep damage 2-111227
 fatigue crack growth obs. and interpret. for 7075-T6 alloy 2-66116
 fatigue crack growth period determination, using microfractographic anal. 2-88305
 fatigue crack propag. rates, mode III in type 6061-T6 2-67495
 fatigue crack propagation and crack closure under varying stationary loads (*Japanese*) 2-111286
 fatigue life, resolution into crack initiation and propag. components 2-93596
 fatigue limits, indirect eval. from static tensile strength 2-72900
 fatigue plastic zone size determ. of type 2024-T351 2-93598
 FeCrAlloy surface, oxide layers nuclear reaction anal. 2-99723
 fracture of plates with cracks under tension after loss of stability 2-60481
 heat-treated, deform. and fracture processes by acoustic emission method 2-105420
 Heusler alloys, X₂MnAl (X=Ni, Cu, Pd), Stoner and spin wave excitation spectra, OPW calcs. 2-115990
 high strength, exfoliation corrosion, math. modelling 2-105362
 high strength, fracture toughness determ. with chevron notched short rod and short bar specimens 2-67678
 hinge joint length, charact. parameter study 2-99514
 impact bending fatigue testing, evaluation of dynamic stress intensity factor (*Japanese*) 2-111285
 isothermal pressing, automated control, adaptive system (*Russian*) 2-72720
 isotropic plates, backward elastic waves 2-81888
 K_{IC} test data statistical treatment (*Chinese*) 2-105397
 laser irradi. at 0.35 μ m, thermal and mechanical coupling coeffs., expt. and theoretical study 2-86448
 microstructural aspects of superplasticity 2-83182
 notch sensitivity of LM 13 Al alloy and cast Fe, fatigue strength obs. 2-116534
 notched thin plates, cyclic-inelastic deform. and fatigue resistance in type 2024-T351 2-116525
 oxidative wear, pin-on-disc expts. 2-111328
 painted Al alloy plate, coupling of CW laser radiation, expt. studies 2-90961
 perforated sheets, reinforcement by thermal shock with laser beams of type 2024-T3 2-116452
 plastic strain anisotropy, statistical method appl. 2-105405
 precipitation and dissolution kinetics, calorimetric study of types 2219 and 7075 2-83127
 precipitation hardened, pseudo-intercrystalline brittleness mechanism 2-67502
 rare earth alloys, RAl₃ (R=La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er), quadrupole interaction at ¹¹¹Cd probe 2-116100
 rare earth alloys, RNiAl₃ (R=Y, Gd, Tb, Dy, Ho, Er, Tm, Kb, Lu), mag. susceptibility and cryst. struct. (*Russian*) 2-115968
 rare earth alloys RAlGa, mag. props. study 2-72141
 rare earth-transition metal intermetallics, RM₂Al₆ (M=Cu, Mn, Fe), mag. props. 2-61734

aluminium alloys continued

- residual stress determ., nondestructive evaluation using acoustoelasticity meas. 2-93744
 RR 59 Al alloys, stress relaxation behaviour, self-consistent scheme 2-93551
 shear stress and spall strength under shock loads, preview 2-83213
 sheet metals, neck growth and forming limits 2-93561
 sheets, suppression of fatigue crack growths 2-72798
 shells, cylindrical, under axial compression, plastic stability investigation (*Chinese*) 2-103057
 single specimen method for calculating J_{IC} 2-111268
 stable fracture mechanism, fractographic study (*Japanese*) 2-111281
 steel, Si-Al bearing electrical, internal oxidation and mag. props., annealing conditions influence 2-72724
 strain testing by moire method, high-temp. linear grids appl. 2-93712
 stress corrosion cracking of 7075 alloys, T6-RR temper treatment eval. 2-72879
 stress corrosion cracking resistance improvement, by retrogression and reaging processes, aircraft appl. 2-67623
 stress-strain behaviour, large strain deform. 2-111237
 structural materials, prediction of tearing instability, acoustic emission rating parameter 2-111393
 submicron powders, rapidly solidified, microstruct. 2-67313
 substrength, improperly quenched, fatigue crack growth 2-57437
 superalloys thermodynamics, activity coeffs. of Al, Ti, Cr, Fe, Co, Ni, Mo and W 2-99390
 ternary and quaternary, solidification, estimate of interdendritic undercooling 2-111163
 thin sheet, fracture toughness, scale factor effect 2-72909
 vacancies generation study during oxidation, electron microscope method 2-72897
 wire drawing, optimal die angle calc. 2-62185
 Ag-Al, Fermi surface of Hume-Rothery phases, positron annihilation study 2-61335
 AgAl, molten, short range order and conc. fluctuations 2-91757
 AgAl, molten, thermodynamic props. in weak interaction approx. 2-91759
 Al 6061 T6, fatigue cracks, gel electrode imaging 2-111413
 Al alloys, residual stress determ., nondestructive evaluation using acoustoelasticity meas. 2-93744
 Al bronze, recovery and recrystn. during hot deform. 2-105202
 Al- rare earth alloy granules, resist to deform. 2-116412
 Al-(Zn)-Mg, fatigue crack behaviour at low stress intensities 2-62191
 Al-Ag, thermal expansion of inclusions 2-61180
 Al-Ag (15 at.%), residual elec. resist. and struct., isochronous annealing effects (*Russian*) 2-98613
 Al-Ag (8.2 at.%), single crystals, dechannelling of fast ions by spherical GP zones 2-86762
 Al-Ag(Ge), dilute, Matthiessen's rule deviation at high temp. 2-115729
 Al-Al₃Pt₃, unidirectionally solidified eutectic, microstruct. and mech. props. 2-116434
 Al-Al₃Cu, phase boundary, energy calc. (*French*) 2-87079
 Al-Al₃Cu submicron eutectic thin-film struct. 2-104186
 Al-Al₃O₃, dispersion strengthened, fatigue strength, effect of heat treatment temp. (*Japanese*) 2-93610
 Al-Al₃O₃, oxide dispersion strengthened, high temp. deform. 2-93554
 Al-Al₃O₃, powder metallurgical, heat resistant, props. 2-72875
 Al-Al₃Ni, chill-cast, directionally solidified, effect of hot-rolling 2-83141
 Al-Al₃Ni eutectic, high-temp. coarsening 2-57343
 Al-Al₃(Ti, Zr...), alloy, dispersion strengthening and lattice parameters of dispersed phase w.r.t. x 2-72713
 Al-Alloys, Mossbauer study of Fe impurities 2-56997
 Al-BN coatings, plasma deposited, residual stresses, growth process influence (*Russian*) 2-77755
 Al-B(C) interstitial solns., interaction parameters anal. 2-98307
 Al-Be, temp. and degree of deform. effect on deform. resist. 2-105203
 Al-Be alloys, Be dispersion strengthened, high-temp. creep (*Japanese*) 2-77879
 Al-Be alloys, Be dispersion strengthened, work hardening and recovery in high temp. creep (*Japanese*) 2-77880
 Al-Bi alloys, directionally solidified, occurrence of aligned microstructs. 2-111164
 Al-C, dispersion hardening, mech. alloying in attrition mill, struct. obs. 2-111113
 Al-Ca, Gibbs energy and heat of form., solid electrolyte galvanic cell meas. 2-110011
 Al-Ca-Zn superplastic alloy matrix-metallic glass composite, fabrication feasibility using vac. hot pressing 2-99372
 Al-Co dil. alloys, damage rate and recovery meas. 2-76488
 Al-Co-Fe, electron irradi., ⁵⁷Fe diffusion, Mossbauer study 2-92254
 Al-Co-Fe system, phase equilibria 2-111138
 Al-Cr system, Cr dissolution in liq. Al, kinetic parameters and diffusion coeffs., 700-900°C 2-99395
 Al-Cr-Zr, powder metallurgical, heat resistant, props. 2-72875
 Al-Cu, aged, imaging by FIM 2-55885
 Al-Cu, ageing, microcalorimetric studies 2-99457
 Al-Cu, fatigue crack opening stress meas., electron microscope technique 2-93719
 Al-Cu, ion implanted nonsubstitutional alloy, laser treatment, expt. study 2-86724
 Al-Cu, Mn, Ti, Cd and Zr impurities effect on ageing, electron microscopy study (*Russian*) 2-93539
 Al-Cu, two-phase, inhomogeneity of plastic deform. and fracture modes 2-105245
 Al-Cu, trace track form. on fatigue fracture surfaces 2-88326
 Al-Cu, θ precipitates, coherency loss, dislocations, plastic deformation effects, internal friction study 2-71464
 Al-Cu, vacancy migration energy, quenching rate 2-86942
 Al-Cu (0.5 wt.%, 0.21 wt.%), cold-worked, low temp. internal friction peaks meas. 2-88125
 Al-Cu (1 at.%), dislocation dynamics, NMR and TEM study 2-105215
 Al-Cu (1-6 wt.%), ingots, unidirectionally solidified from bottom, struct. 2-99417
 Al-Cu (10 wt.%), rheocast, microstruct. and mech. props. 2-99420
 Al-Cu (2-6 wt.%), ingot, unidirectionally solidified from bottom, seeded by single crystals, struct. 2-99418
 Al-Cu (2.8 wt.%), lattice rotations, necking and localised deform. in FCC single crystals 2-71546
 Al-Cu (3 wt.%), pre-precipitates, microstruct. obs. using lattice imaging technique 2-111186

aluminium alloys continued

Al-Cu (4 wt.%), evolution toward equil. shape of θ' precip. by interface diffusion 2-72702
Al-Cu (4 wt.%), Guinier-Preston zones, high resolution image calc. 2-71434
Al-Cu (4 wt.%), laser surface hardening, acoustic emission monitoring 2-67602
Al-Cu (4 wt.%), resistivity maximum during Guinier-Preston zone formation 2-82319
Al-Cu (4 wt.%), stacking fault energy change during ageing (*Russian*) 2-115256
Al-Cu (4 wt.%), θ' precipitates, lattice image obs. 2-76363
Al-Cu (4 wt.%) single crystals, containing θ'' precipitates, cyclic stress/strain response 2-99495
Al-Cu (4wt.%), GP zones at initial stages of ageing small-angle X-ray scatt. (*Japanese*) 2-83142
Al-Cu (6 wt.%), fatigue crack growth, near-threshold, load ratio influence 2-105332
Al-Cu alloy, 2024-T851, growth of corner cracks at hole 2-105339
Al-Cu alloy 1201, superplasticity conditions 2-62179
Al-Cu alloy ingots, columnar equiaxed transition 2-105135
Al-Cu alloys, precip. hardening, sound wave vel. and US attenuation 2-88318
Al-Cu alloys, study. with quadrupole mass spectrometer (*French*) 2-111012
Al-Cu alloys solidified under high press., Cu segregation (*Japanese*) 2-116449
Al-Cu eutectic, superplastic, fracture strain and strain rate sensitivity (*Japanese*) 2-57459
Al-Cu eutectic, superplastic, fracture behaviour (*Japanese*) 2-57460
Al-Cu eutectic alloy, substrate temp. effect on rapid solidification 2-93498
Al-Cu films, amorphous, crystallisation 2-71837
Al-Cu films, X-ray microanalysis using STEM (*German*) 2-97876
Al-Cu layer, evaporated, interface elec. resist. and Auger profiling 2-77160
Al-Cu thin film with polyimide passivation, electromigration 2-98503
Al-Cu thin films, large grain growth during recrystn. annealing, elec. resist. and TEM study 2-111203
Al-Cu unidirectionally solidified ingots, inverse segregation (*Japanese*) 2-77816
Al-Cu-Mg, 2024 alloy, ageing effects and plane strain constraint on ductility 2-67441
Al-Cu-Mg, ageing, elec. cond. study using eddy current meas. 2-88230
Al-Cu-Mg, high tensile strength, environmental fatigue strength and fracture (*Japanese*) 2-93612
Al-Cu-Mg, prestrained by pulling, corrosion fatigue crack length distrib. (*Japanese*) 2-93613
Al-Cu-Mg, transient creep 2-76574
Al-Cu-Mg (1.3, 1.3 at.%), high temp. ageing, coherence loss, electron microscopy study (*Russian*) 2-93540
Al-Cu-Mg (1.3,1.3 at.%), high temp. ageing, coherent precipitation obs. (*Russian*) 2-99429
Al-Cu-Mg (4.5, 1.5 wt.%), alloy 2124, H embrittlement 2-57468
Al-Cu-Mg eutectic alloys, unidirectionally solidified, structure, and mech. props. (*Korean*) 2-67312
Al-Cu-Mg-Mn-Si-Fe sheet, fracture toughness and crit. crack length, inhibiting layer effect 2-72826
Al-Cu-Mg-Zn, acoustic emission during static deform. 2-72777
Al-Cu-Mg-Zn-Cr powder, effect of compression by high omnidirectional pressure on struct. and props. 2-72654
Al-Cu(Si), primary dendrite arm spacing, solidification conditions effects (*Japanese*) 2-57342
Al-Fe, dil. tilt boundary detachment from impurity 2-81798
Al-Fe, dil., electron irradi., self-interstitial-impurity complexes, internal friction study 2-56007
Al-Fe, dil. alloy, electron irradi., frozen free split phenomena, mech. relax. study 2-56084
Al-Fe, Fe impurity mag. moment, cluster approx. calc. with k-dependent boundary conditions (*Russian*) 2-115972
Al-Fe, moving grain boundary double successive detachment from adsorbed impurity 2-115254
Al-Fe, solid solns., secondary quenching defects features 2-62153
Al-Fe alloys, Fe profile meas. using SIMS and SEM 2-109999
Al-Fe and Al-Mg, twin-rolling casting, crenelline segregation 2-116435
Al-Fe-Mg (0.25, 0.11 wt.%) alloy, alternating periodic serrations in tensile curves 2-99497
Al-Fe-Si alloys, commercial purity, DC casting, form. of intermetallic cpds. 2-88060
Al-Fe(4wt.%), STEM-EDS X-ray microanal. of rod-shaped precipitator 2-67795
Al-Ge (4 wt.%), superplastic deform. mechanism 2-83190
Al-Ge-Sn, liq. alloy, thermodynamic props., EMF meas. 2-104031
Al-glass composite, prep. and mech. props. 2-57319
Al-Li alloys, cyclic and monotonic ductility, effect of slip distrib. 2-67419
Al-Li-Cu-Zr-Cd system alloys, microstruct.-prop. rels. 2-111210
Al-Li-Mg, Mg effect on Young's modulus 2-57391
Al-Li-Mg system, Guinier-Preston zones, coarsening mechanism, SAXS study 2-62129
Al-Li-Mn(Zr)(Mg)(Cu), corrosion behaviour, correl. with microstruct. 2-88253
Al-Mg, adsorption of O₂, SIMS studies 2-104169
Al-Mg, dil., electron irradi., self-interstitial-impurity complexes, internal friction study 2-56007
Al-Mg, dilute, dislocation pinning by impurity atmospheres, nucleation mechanism, theory (*Russian*) 2-86666
Al-Mg, dislocation motion, impurity atmospheres and effective activation parameters, theory 2-115233
Al-Mg, dispersion hardening, X-ray matrix reflections, double maxima study (*Russian*) 2-93522
Al-Mg, heat-treated, deform. and fracture processes by acoustic emission method 2-105420
Al-Mg, microstruct. development during rolling 2-83136
Al-Mg, oxide formation, Mg diffusion, Auger and SEM study 2-82009
Al-Mg, recrystn. after cold rolling, optical and electron microscopy study 2-88098
Al-Mg, strain localisation under tension 2-111246
Al-Mg (3 at.%), solid soln., correl. between creep and dislocation sub-struct. 2-105249

aluminium alloys continued

Al-Mg (3 wt.%) alloy, corrosion and corrosion inhibition in seawater 2-57512
Al-Mg (4 wt.%), mech. alloyed powder alloy, tensile behaviour 2-105259
Al-Mg (5, 10 wt.%), modulated struct. and Guinier-Preston zones 2-111184
Al-Mg (5 at.%), high temp. deform. under combined high frequency stresses (*Japanese*) 2-105237
Al-Mg (5 wt.%), creep-fatigue interactions, mechanisms 2-99540
Al-Mg (5 wt.%), steady state creep, pre-strain effects, dislocation slip 2-77867
Al-Mg (5 wt.%) solid soln., Harper-Dorn creep, mech. and microstruct. characts. 2-72755
Al-Mg (8wt.%), grain boundary segregation 2-88087
Al-Mg alloy adhesive joints, surface anal. and bonding 2-116679
Al-Mg alloys, polycrystalline, second-order elastic moduli, US vel. study 2-72748
Al-Mg based alloys, surface corrosion during heat treatment 2-99598
Al-Mg/Al-Al-Mg composite, dislocation struct. and element diffusion rest rib. 2-82037
Al-Mg-MgO, oxide dispersion strengthened, high temp. deform. 2-93554
Al-Mg-Mn-Cu-Si-Fe, AMG2 and D16 alloys, plastic deformation and stress relax. meas., 133 to 673K (*Russian*) 2-99482
Al-Mg-Mn-Zr-Ca-Ti, chem. comp. optimisation rel. to fracture toughness, Mn, Zr, Cr and Ti additions effect 2-77945
Al-Mg-Sc alloy, elastic strain caused by ScAl₃ precipitates, electron microscopy study (*Russian*) 2-105207
Al-Mg-Si, J_{1c} evaluation by R-curve and stretched-zone-width methods (*Japanese*) 2-111399
Al-Mg-Si (6000) series alloys, exfoliation corrosion obs. in water 2-93671
Al-Mg-Si-Cu-Cr, quench sensitivity, effects of Cu and Cr 2-105174
Al-Mg-Si(Ge), age-hardening precipitates, microanal. 2-93513
Al-Mg-V, candidate material for NET/INTOR first wall, development and evaluation 2-69834
Al-Mg-Zn, 7070, crack closure and crack propag. rates 2-56076
Al-Mg-Zn-Cu, 7075-T7351, localised corrosion, environmental factors 2-67640
Al-Mg(-Cu), water corrosion study by gas chromatography 2-88255
Al-Mg(Cu)(Ag), Portevin-Le Chatelier effect rel. to solid solubility (*Japanese*) 2-105235
Al-Mg(3 wt.%), high temp. creep, stress sensitivity parameter 2-77869
Al-Mn, Mn effect on corrosion behaviour, metallographic study 2-62256
Al-Mn, muon diffusion and trapping 2-110049
Al-Mn, muon localisation, impurity trapping effects 2-72396
Al-Mn, peritectic reactions and transforms, mechanisms 2-83087
Al-Mn (1 wt.%) alloy, texture development during continuous grain growth 2-105186
Al-Mn (1.2 at.%), electrochemical behaviour, effect of laser-surface melting 2-57523
Al-Mn (1.2 wt.%), rapid solidification with pulsed laser, microstructural and surface modification 2-67323
Al-Mn (1.5×10⁻² at.%), thermal quenching, positron annihilation study 2-104994
Al-Mn extended solid soln., as-quenched, conc. depend. of hardness and lattice parameter 2-116518
Al-Mn solid soln., precip. and recrystn., internal friction obs., fine-grained struct. (*French*) 2-77842
Al-Ni-Co-Cu-Ti, Alnico 8 alloy, α - γ transformation, α , phase precipitation, coercive force study 2-91858
Al-Pb, hyper-monotectic alloys, solidified by rapid cooling, struct. (*Japanese*) 2-105136
Al-Ru (10-15 wt.%), rapidly quenched, phase transform 2-77823
Al-Si, as-cast and age-hardening, wear, friction and surface topography in dry sliding 2-83237
Al-Si, bicrystal growth from melt, crystal boundary behaviour (*Japanese*) 2-104173
Al-Si, fracture, fractographic features 2-111302
Al-Si, single wafer plasma etching of Al and Al-Si alloys 2-72878
Al-Si (Mg)(Zu), thermal cycling influence on alloying elements soln. 2-72738
Al-Si (0.9 wt.%) fibres, sintering in presence of liq. phase, capillary-porous struct. prep. 2-67246
Al-Si (11.3 at.%), fast quenched eutectic alloy, effect of heat treatment on supercond. props. 2-61654
Al-Si (20 wt.%), hypereutectic alloy, effect on cast struct. of P and Na additions (*Japanese*) 2-55890
Al-Si low-activation alloys, fusion reactor suitability 2-64649
Al-Si/Si ohmic contacts to shallow junctions 2-98741
Al-Si-Ge, amorphous, superconducting transition (*Chinese*) 2-104520
Al-Si-Mg-Sr, hypoeutectic, modified by pure Sr, microstruct. and mech. props. 2-99386
Al-Si-Mg-ZrO₂, dispersion hardening 2-57362
Al-Si-Ni-Mg-Cu, Ni, Mg, and Cu additions effect on tensile strength, hardness, abrasion and thermal expansion (*Korean*) 2-57418
Al-Si-Sb alloys, struct. modification with Sb additions (*Chinese*) 2-62130
Al-Si(Cu) ingots, equiaxed cryst. formation by electromag. stirring (*Japanese*) 2-83105
Al-Si(11.3 wt.%), superconducting props., heat treatment effects (*Chinese*) 2-98778
Al-Sn, liquid system, oxidation, Auger electron spectroscopy 2-93658
Al-Sn(Ni), metastable alloy form., by electron beam annealing 2-56041
Al-Ti, Al-Ti₃ struct., electron and X-ray diffr. study 2-60926
Al-Ti, peritectic cooling curves interpret 2-105118
Al-Ti (0.26 wt.%), dil., cold rolled, brittle-ductile transition after liq. Ga embrittlement, temp. and strain rate effect 2-88189
Al-Ti-Bi, grain refinement, Be-enhanced 2-83086
Al-transition metal alloy granules, resist to deform. 2-116412
Al-V low-activation alloys, fusion reactor suitability 2-64649
Al-Zn, adsorption of O₂, SIMS studies 2-104169
Al-Zn, ageing, microcalorimetric studies 2-99458
Al-Zn, irradiation induced solubility decrease and precipitation 2-71655
Al-Zn, NMR and diamag. susceptibility meas. (*Russian*) 2-93020
Al-Zn, strain localisation under tension 2-111246
Al-Zn (11 wt.%), long range internal back stresses, new evaluation technique 2-105220
Al-Zn (15 and 25 wt.%), intercryst. precipitation (*French*) 2-116448
Al-Zn (15-25 wt.%), grain boundary migration mechanism (*French*) 2-86684
Al-Zn (38 wt.%), morphological features of discontinuous reactions 2-67344

aluminum alloys continued

- Al-Zn (4 wt.%), GP zones, ageing and reversion, elec. resist. meas. (Japanese) 2-83143
 Al-Zn (4-12 wt.%), ingot, unidirectionally solidified from bottom, seeded by single crystals, struct. 2-99418
 Al-Zn (45 wt.%), corrosion protection coating, SIMs study 2-93683
 Al-Zn (49 at.%), positron lifetime and γ -line Doppler broadening studies 2-87896
 Al-Zn (6.8 wt.%) single crystals, dechannelling of fast ions by spherical GP zones 2-86762
 Al-Zn (9.5 at.%), high temp. creep mechanism and dissolution process, expt. study 2-88146
 Al-Zn (9.87 at.%), defect struct., vacancy migration, effect of H₂O in annealing atmosphere 2-76451
 Al-Zn alloys, cellular decomp. 2-83120
 Al-Zn alloys, precip. sequence, X-ray scatt. and electron microscopy study (French) 2-116442
 Al-Zn composite material, prep. and treatment optimum conditions (Russian) 2-67257
 Al-Zn-Cu, electron diffr. determ. of soft directions in cryst. lattice at premartensite stage 2-60925
 Al-Zn-Mg, aged at 20, 80 and 120°C, decomp., quench conditions influence (French) 2-72743
 Al-Zn-Mg, decomp. kinetics, effect of small Mg additions 2-99388
 Al-Zn-Mg, high tensile strength, environmental fatigue strength and fracture (Japanese) 2-93612
 Al-Zn-Mg, isothermal ageing, 0-180°C, after direct quench, mech. props. and microstruct. 2-93536
 Al-Zn-Mg, microhardness with technical impurities, development during two-step ageing treatment 2-93537
 Al-Zn-Mg, slatiness of fracture after rolling 2-111303
 Al-Zn-Mg, stress corrosion cracking susceptibility, effect of thickness of tartaric acid-anodised film 2-67604
 Al-Zn-Mg, stress corrosion behavior of weldments, effect of heat input rate and postweld heat treatment (Korean) 2-67633
 Al-Zn-Mg, struct. and strength after duplex ageing 2-72727
 Al-Zn-Mg (4.5, 1 wt.%), extruded rod, anisotropic yield rel. to age hardening (German) 2-11191
 Al-Zn-Mg alloys, influence of alloying additions (Cr, Cu and Li) on thermal oxidation 2-105359
 Al-Zn-Mg granules, resist to deform. 2-116412
 Al-Zn-Mg-Cu, high-strength, powder metallurgical, props. and heat treatment 2-72740
 Al-Zn-Mg-Cu, near threshold fatigue crack growth rates, effect of purity and dispersoid type 2-72840
 Al-Zn-Mg-Cu, precip., DSC study 2-99430
 Al-Zn-Mg-Cu, recrystallised grain size, effect of heating rate 2-57371
 Al-Zn-Mg-Cu, superalloy alloy, cavitation, influence of hydrostatic press. and multiaxial straining 2-116494
 Al-Zn-Mg-Cu (6.2, 2.5, 1.7 wt.%), fatigue crack growth, micromechanisms 2-105273
 Al-Zn-Mg-Cu alloy V95, fatigue crack kinetics, influence of water and its inhibiting 2-88282
 Al-Zn-Mg-Cu alloys, fractography of long-transverse SCC 2-77977
 Al-Zn-Mg-Cu-Cr, 7XXX series alloys, influence of microstruct. and strength on fracture 2-111293
 Al-Zr alloys, microstruct. and mech. props., effect of plastic strain (Korean) 2-62172
 (Al-4Cu)-Al₂O₃ composite, SAP type, precipitation hardening 2-77836
 AlI₁, electronic energy bands, Fermi surface 2-92448
 AlI₂ fibre reinforced Al-Mg, fabrication method 2-67259
 AlSi alloy, liq. quenched, X-ray diffr. line broadening, appl. of Voigt function in single-line method 2-81626
 Au-Al system, phase formation kinetics in diffusion zone under mutual diffusion conditions in elec. field (Russian) 2-92149
 AuAl, Z 2-98790
 AuAl₃, optical props., elec. cond. 2-61861
 B fibre reinforced Al-Cu, hot pressing pressure calc. 2-72656
 B fibre reinforced Al-Cu-Mg-Mn, hot pressing, reaction between fibres and matrix 2-83068
 Bi-Al-Pb, ternary phase diagram, computer calc. (Korean) 2-67289
 C fibre reinforced Al-Si, TiC barrier coating effect on reaction between components 2-99373
 Ce_{1-x}Al_x, metallic glass, elec. cond. 2-98612
 CeAl₃, metallic glasses, electronic struct., photoemission and soft X-ray spectra 2-104234
 Ce-Al thin films, crystallographic phases following electron beam annealing 2-55888
 CeAl₃, electronic struct. and mag. props. 2-66752
 CeAl₃, reson. photoemission studies 2-57267
 CeAl₃, volume collapse in Kondo lattice 2-87476
 CeAl₃, volume mismatch substitution, γ - α transition 2-66197
 CeAl₃, electronic struct., XPS and bremsstrahlung isochromat spectroscopy 2-56434
 CeAl₃, low temperature sp. ht., thermal expansion and Gruneisen parameter 2-66246
 CeAl₃, thermal dilatation and sp. heat at very low temp. 2-56213
 CeAl₃ ($x=2, 3, 1/3$) mixed valence cpd., neutron diffr., props. on basis of interacting Kondo-like ions 2-56831
 Ce_{1-x}Sc_xAl₃, electronic struct. of Ce 2-71933
 Ce_{1-x}Sc_xAl₃, volume collapse and spin fluctuation behaviour 2-55892
 Ce_{1-x}Y_xAl₃, demagnetization, mag. susceptibility and sp. ht. 2-56892
 Ce_{1-x}Y_xAl₃, electronic struct. of Ce 2-71933
 Co-Al eutectic, lamellar, shock-induced incipient fracture 2-72788
 Co-Al-O, liq. solubility of oxides, prediction 2-86889
 Co-CoAl alloys, equiaxed two-phase fracture in alloys with isolated elastic particles 2-77936
 Co-CoAl alloys, equiaxed two-phase, fracture in alloys with isolated plastic particles 2-77937
 Co-Cr-Al alloys, hot-corrosion in modified Dean's rig 2-99584
 Co-Cr-Al-Y (22, 11, 0.5 wt.%) coating, oxide form. at 700°C 2-116621
 Co-Cr-Al-Y vacuum plasma sprayed coatings 2-62274
 Co-Ni-Al-Ti-Cu, porous, laser pulse treatment (Russian) 2-67355
 CoAl, electronic struct. and charge transfer, APW band calc. 2-66430
 Co,TiAl, Heusler alloys, band struct., SAPW calc. 2-82215
 Cr-Al-Y-M (M=Co, Ti, Si, Ni, Mn, Pt, Fe), alloying additions effect 2-116451
 Cr,Al₃, SIMS, very small clusters study 2-77683
 Cu Al and Cu-Al-Ni(Zn)(Si), β -type alloys, internal friction amplitude dependence meas. (Russian) 2-99469

aluminum alloys continued

- Cu coated shell char particle reinforced Al-Si composites, prep. and props. 2-67258
 Cu-Al, amplitude dependent internal friction and microplasticity (Japanese) 2-77859
 α -Cu-Al, DSC eval., energetics 2-83111
 Cu-Al, deform., effect of low-temp. irradi. 2-93564
 Cu-Al, dilute, Matthiessen's rule deviation at high temp. 2-115729
 Cu-Al, dispersion hardened, struct. stability and resist. to deform. (Russian) 2-77872
 Cu-Al, elec. resist., 4.2 to 300K, over entire phase diagram 2-82321
 α -Cu-Al, electronic struct., piezoref. study 2-57052
 Cu-Al, electronic struct. atomic approx. 2-104244
 Cu-Al, impedance-match experiments using high intensity lasers 2-76588
 Cu-Al, modelling of low rel. erosion by spherical particles 2-86790
 Cu-Al, Portevin-Le Chatelier effect rel. to solid solubility (Japanese) 2-105235
 Cu-Al, SIMS, very small clusters study 2-77683
 Cu-Al, short-range order and coherent precipitation in α -phase (French) 2-57358
 Cu-Al, single-phase, electropolishing in H₃PO₄ 2-116617
 Cu-Al, surface electronic states, Tamm state, photoemission, LEED and Auger study 2-98712
 Cu-Al (10 at.%), single crystals, slightly deformed, dislocation multipoles struct., TEM 2-55975
 Cu-Al (10.1 wt.%), bronze, cast, characterisation using X-ray diffr. and microscopy (French) 2-88104
 Cu-Al (3 at.%), dislocation struct. effect on flow stress, X-diffr. and electron microscope study 2-91982
 Cu-Al (7.5 wt.%), fatigue crack growth rel. to plastic zone depth in air and vac. 2-77943
 Cu-Al (9.8-11 wt.%), dual-phase, struct.-prop. relationship, individual phases 2-77833
 Cu-Al (9.8-11 wt.%), dual-phase struct.-prop. relationship, alloy behaviour 2-77834
 Cu-Al lamellar eutectoid alloys, spheroidization by thermomech. treatment 2-93535
 Cu-Al single cryst., X-ray diffuse scatt. effects 2-81714
 Cu-Al solid soln., H₂ solubility, thermodynamic props. (Russian) 2-92207
 Cu-Al-Fe, surface oxidation, suppression during laser surface treatment 2-83294
 Cu-Al-Mn alloys, influence of Mn on phase shifts (French) 2-99543
 Cu-Al-Ni, shape memory alloys, ageing effects 2-77852
 Cu-Al-Ni (14, 3.4 wt.%), shape memory alloy, shape strains assoc. with thermally-induced and stress-induced martensite 2-57350
 Cu-Al-Ni β -phase shape memory alloys, intergranular fracture origin 2-72838
 Cu-Al-Ni: loaded; internal friction meas. (Russian) 2-88116
 Cu-Al-O, liq. solubility of oxides, prediction 2-86889
 Cu-Al-Si-Co (2.8, 1.8, 0.4 wt.%), fine grained, creep 2-105219
 Cu-Al-Zn, damping capacity, quenching and Zn addition effects 2-116441
 Cu-Al-(Ti)-Hf powder, sputtered, internal oxidation to produce dispersion strengthened Cu (Russian) 2-67238
 Cu-Al(Ni), Cu Fermi surface changes due to alloying 2-82209
 Cu-Mn-Al, exchange anisotropy, hysteresis loops and coercive force study 2-66866
 Cu-Mn-Al alloy, influence of static tension on vibration damping behaviour (Japanese) 2-97416
 α -Cu-Su-Al, anneal hardening (Korean) 2-116464
 Cu-Zn Al, martensitic, rapid solidification effects 2-111175
 Cu-Zn-Al, diffusivity of Zn, effects of Al 2-61193
 Cu-Zn-Al, martensite structures for various quenching conditions 2-93510
 β -Cu-Zn-Al, ordered, martensitic phases, premartensitic states and struct. (Russian) 2-62123
 Cu-Zn-Al, shape memory alloys, ageing effects 2-77852
 Cu-Zn-Al, shape memory alloys, review 2-88143
 Cu-Zn-Al, thermoelastic martensitic transform., nucleation, localised soft mode model 2-99427
 Cu-Zn-Al (32.23, 1.84 wt.%), martensitic transform. and shape memory effect (Chinese) 2-62122
 Cu-Zn-Al quenched alloys, martensitic structs., electron diffr. study 2-62124
 Cu-Zn-Al shape memory alloy, rapid solidification and assoc. effects 2-67322
 CuAl, electronic energy bands, Fermi surface 2-92448
 Cu_{0.9}Al_{0.1}, bulk and surface electronic struct. 2-104238
 Cu₂₈AlMn₇₂, solid soln. containing disperse ferromag. Cu₂MnAl inclusions, martensitic transition obs. (Russian) 2-98915
 β -CuAlNi, pseudoelastic, thermal effect in β_1 - β_2 transform. 2-111177
 Cu₂MnAl film, struct., mag. and transport props. 2-60889
 Cu₂MnAl, Heusler alloy, decomp. of β -phase 2-88086
 Cu₂MnAl, Heusler alloy, elec. and mag. props. 2-110326
 CuZnAl, martensitic, high resolution electron microscopy of boundaries 2-71473
 Dy-Al thin films, crystallographic phases following electron beam annealing 2-55888
 DyAl, mag. moments and anisotropy, neutron diffr. and cryst. field calc. 2-115976
 DyAl₃, paramagnetic, hyperfine interactions 2-98974
 DyFe₄Al₃, Mossbauer study 2-87636
 Dy(Fe_{1-x}Al_x)₃ Laves phases, mag. and cryst. props., X-ray and Mossbauer study 2-92899
 Er-Ni-Al, isothermal sections at 800°C, X-ray analysis (Ukrainian) 2-77802
 Eu_{77.5}Al_{22.5}, amorphous, elec. field gradient at S-state ion, Mossbauer study 2-104761
 EuFe₂Al₃ mixed valence cpd., magnetically ordered, XPS study 2-56513
 Fe-Al, dilute alloy, electron irradi., impurity-interstitial trapping sites, mag. aftereffect spectra study 2-56895
 Fe-Al, dislocation dissociation and fault energies (French) 2-98106
 Fe-Al, elastic modulus and internal friction, mag. field effect 2-116050
 Fe-Al, electronic struct., KKR-CPA calc. with muffin-tin pot. model 2-66431
 α -Fe-Al, ion implanted paramagnetic, diffusion of Al 2-76731
 Fe-Al, Mossbauer spectra hyperfine struct. and ordering anal., density function reconstruction 2-87643
 Fe-Al, pseudoelasticity and slip reversibility, optical and electron microscopy obs. 2-111221

aluminium alloys continued

- Fe-Al (10 to 50 at.%), quenched from 1100°C, 10 to 26.5 at.% Al during tempering (*German*) 2-111215
 Fe-Al (12 wt.%), high permeability mechanism, soft mag. props. 2-82654
 Fe-Al (30.5 at.%), plastically deformed, ordered, antiphase domain boundary tubes, electron microscopy study 2-72784
 Fe-Al (40 at.%), ordered, recovery after 20K neutron or electron irradiation 2-56043
 Fe-Al (40 at.%), quenched, nucleation of dislocation helices (*French*) 2-55969
 Fe-Al (40 at.%), quenched or electron irradiation, nucleation of dislocation loops (*French*) 2-55968
 Fe-Al (45 at.%) film, electronic struct., X-ray emission spectra study 2-61338
 Fe-Al alloys, order-disorder phase transition by neutron diffraction 2-115401
 Fe-Al bronze, laser-surface-melted self-quenched, cavitation erosion 2-76491
 Fe-Al-C, abnormally high tetragonality of martensite lattice, origin 2-97996
 Fe-Al-Hf oxidation, Al_2O_3 scales with oxide dispersions, peg formation obs. 2-93670
 Fe-Al-Mo-Zr alloys, precip. hardening by ZrC 2-93524
 Fe-Al-O, liq. solubility of oxides, prediction 2-86889
 Fe-Al-Si, sputtered granules, characters, before and after annealing (*Russian*) 2-67368
 Fe-Al-Sn, Mossbauer study of spin and charge density changes 2-116102
 Fe-B-Si-Al-C amorphous ribbon, mag. props., deleterious effect of Al 2-87525
 Fe-Cr-Al, corrosion in $H_2/H_2O/H_2S$ mixtures at 1200°C 2-105380
 Fe-Cr-Al, corrosion resist. meas. in coal gasification atm., Cr conc. effects 2-93669
 Fe-Cr-Al (20, 4.5 wt.%), oxide dispersion strengthened, long-term high velocity oxidation and hot corrosion testing 2-88274
 Fe-Cr-Al (22.4 wt.%), void form. mechanism at substrate oxide interface 2-67610
 Fe-Cr-Al alloy, wrought, prep. and characters. 2-67249
 Fe-Cr-Al alloys, rapidly quenched, microstructs., mech. props., elec. cond. 2-111332
 Fe-Cr-Al-Hf, corrosion scales, elevated-temp., erosion rate 2-67570
 Fe-Cr-Al-P-C alloys, amorphous corrosion resist. 2-78016
 Fe-Cr-Al (22, 5.5 wt.%), sulfidation, far-from-equilibrium phenomenon 2-62279
 Fe-Cr-Co-Nb-Al, high-coercivity, microstruct. rel. to mag. props. 2-111333
 Fe-Cr-Co-Wi-Si-Al, mag. props. and cryst. struct. (*Russian*) 2-92970
 Fe-Cr-Ni-Al, NiAl precipitation during ageing 2-105156
 Fe-Cr-Ni-Al coatings, for resisting fretting wear in temp. range 20-700 °C 2-88291
 Fe-Cr-Ni-Mn-Si-Al-REM alloys, heat resist., expt. design appl. 2-116604
 Fe-Cr-(Al), oxidation, high temp., wet and dry atmos. (*Japanese*) 2-83283
 Fe-Cr-(Al), mech. props., effect of fast neutron irradiation 2-103844
 Fe-Mn-Al-C, nonequilibrium, ordered austenite wire fabrication by in-rotating-water spinning method, mech. props. 2-93532
 Fe-Mn-P-B-Al alloys, amorphous, evidence for spin-glass phase transition 2-72218
 Fe-Ni-Al system, phase equilib. and cryst. struct. of ternary phases 2-99399
 Fe-Ni-Al-Co-Cu;Ti, thermomag. treatment, struct. form. and mag. props. 2-62152
 Fe-Ni-Co-B-Si-Al, amorphous, initial permeability and long-time stability, freq. depend. 2-72258
 Fe-Ni-Cr-Al-Y alloys, high-temp. oxidation, adherence of Al_2O_3 scale 2-105367
 Fe-Ni-Cr-(Al), corrosion in $H_2/H_2O/H_2S$ mixtures at 1200°C 2-105380
 Fe-Ni(Ti)(Ga)(Al)(Co)(Pt), flow stress at low temp., influence substitutional elements 2-105213
 Fe-Si-Al, dil. alloy, mech. props., elec. cond. and mag. losses meas. 2-83217
 Fe-Si-Al, electric steel sheets, mag. aftereffects meas. 2-82670
 Fe-Si-Al, secondary recrystallization kinetics, Al influence (*Russian*) 2-93417
 Fe-Si-Al, Sendust, order-disorder transform. and dislocation configuration, TEM study 2-83108
 Fe-Si-Al, Sendust polycrystals, plastic deform. (*Japanese*) 2-57416
 Fe-Si-Al, Sendust polycrystals, deformability (*Japanese*) 2-57417
 Fe-Si-Al, Sendust single crystal, plastic deform. (*Japanese*) 2-57415
 Fe-Si-Al nonoriented electrical sheet, oxide film form. and props., effect on material quality, AES obs. (*German*) 2-105386
 Fe-Si-Al Sendust ribbon, rapidly quenched, annealing effect on coercive force 2-72273
 Fe₃A, low-energy Stoner excitations 2-66798
 Fe₃Al, hyperfine field and mag. moment, Mossbauer study 2-72380
 (Fe_{0.9}Mn_{0.1})₇₅P₁₀B₅Al₃, (M=Ni, Mn), amorphous, mag. props. meas. 2-92880
 (Fe_{0.6}Mn_{0.4})₇₅P₁₀B₅Al₃, spin glass, irreversible response study 2-104594
 (Fe_{0.4}Mn_{0.6})₇₅P₁₀B₅Al₃, spin glass, temp.-field phase diagram 2-104619
 (Fe_{0.3}Mn_{0.7})₇₅P₁₀B₅Al₃, amorphous, ferromagnetism collapse 2-104618
 (Fe_{1-x}Mn_x)₇₅P₁₀B₅Al₃, amorphous, spin correls. near ferromag.-spin glass crossover point 2-72268
 Fe_{1-x}Ni_xP₁₀B₅Al₃ amorphous, elec. resist. near ferromag. transition 2-87218
 (Fe_{0.9}Ni_{0.1})₇₅P₁₀B₅Al₃, amorphous, spin wave and scaling law anal., magnetisation meas. 2-92888
 Fe₂Si₃Al₃, elec. resist. and band struct., density of states at Fermi level 2-61440
 Ga-Al-Sb system, saturated melt-solid phase interaction 2-66348
 Gd-Al, charge transfer and isomer shift, ¹⁵⁷Gd Mossbauer spectra 2-104777
 Gd-Al thin films, crystallographic phases following electron beam annealing 2-55888
 GdAl, spin glass, nonlinear susceptibility 2-72215
 GdAl₃, paramagnetic, hyperfine interactions 2-98974
 GdAl₃, transport and thermal props., critical behaviour near Curie point 2-116005
 Gd_{0.9}Al_{0.1}, amorphous, spin glass props. 2-72271
 Gd_{0.9}Al_{0.1}, amorphous spin glass, mag. props. 2-92933
 Hf-Co-Al, Laves phase, mag. susceptibility (*Russian*) 2-72142
 Hf-Cu-Al, Laves phase, mag. susceptibility (*Russian*) 2-72142
 Hf-Ni-Al, Laves phase, mag. susceptibility (*Russian*) 2-72142
 Ho-Ni-Al, isothermal sections at 800°C, X-ray analysis (*Ukrainian*) 2-77802

aluminium alloys continued

- HoAl₃, conduction electron polarisation temp. depend., neutron diffraction study 2-72146
 K₂Al₃, mixed valence cpd., anomalous NMR shifts 2-56958
 K₂CuAl, mixed valence cpd., anomalous NMR shifts 2-56958
 LaAl, lattice dynamics, inelastic neutron scattering meas. 2-56117
 LaAl₃, superconducting, US attenuation and vel. below 5K 2-56782
 La_{0.8}Al_{0.2}, amorphous, fracture surface morphology (*Russian*) 2-99518
 La_{1.00-x}Al_x, amorphous, supercond. transition temp. press. depend. 2-115932
 La_{1-x}Gd_xAl₃, cryst. struct., mag., elec. and ESR props. 2-92564
 Li-Al, impurity solubility, dislocation and deformation effects, ESR study (*Russian*) 2-103996
 β-Li-Al electrode pot. and Li diffusivity meas. at ambient temp. 2-116793
 Li-Al/FeS cell, Ni positive electrode components, corrosion resist. meas. 2-78201
 LiAl, Hall mobility of positive carrier 2-110330
 β-LiAl, positive carrier conc. rel. to Li vacancies, Hall effect and lattice parameters study 2-56552
 Lu_{1-x}(Y_{1-x})Gd_xAl₃, cryst. struct., mag., elec. and ESR props. 2-92564
 Mg-Al, solid soln., creep behaviour at elev. temp. 2-83164
 Mg-Al (0.8 wt.%), high temp. deform., dynamic recrystallization and development of microstruct. 2-116455
 Mg-Al-Y system, phase diagram, isothermal sections at 400°C 2-83091
 Mg-Li-Al-Cd, superplastic deform., effect on struct. and props. 2-62180
 Mg-Li-Cd-Al system, isothermal section in Mg-rich range 2-99398
 Mn_{0.11}Al_{0.89} metastable alloy, mag. and struct. props., X-ray and neutron diffraction and DSC meas. 2-72163
 Mn_{0.4}Al_{0.6}C, magnetic viscosity 2-72291
 Nb-Al, heat of formation and high temp. phase diagram, Knudsen effusion study 2-105117
 Nb-Al-C alloys, fast quenched, metallography and X-ray anal. 2-111207
 Nb₂Al, A15 type phase, supercond., at. ordering, and stoichiometry 2-61637
 Nb₂Al base ternary alloys, ⁹³Nb NQR study 2-110722
 Nb₂Al film, sputter deposited on SiO₂, AES anal. 2-92383
 Nb₂Al films, ion irradiation, supercond., struct. disorder and phase transitions 2-98786
 Nb₂Al films, oxide growth of RF plasma, ellipsometric study, refractive index 2-57529
 Nb₂Al, neutron irradiation, normal-state resistivity anal. 2-56550
 Nb₂Al, supercond., energy gap determ. from heat capacity meas. 2-110532
 Nb₂Al, supercond., ultimate crit. current density (*Chinese*) 2-110556
 Nb₂Al, supercond. props. study by electron tunnelling 2-110545
 Nb₂Al thin films, sputter deposited at high substrate temps., comp. deviation 2-87978
 Nb₂(AlGe), supercond., ultimate crit. current density (*Chinese*) 2-110556
 Nb₂Al_{0.8}Ge_{0.2}, electrical resistivity, temp. depend. 2-61442
 Nb₂(Al_{1-x}Ge_x), A15 superconductor, prep. from transformation from liq. quenched BCC phase 2-98777
 NdAl₃, complete mag. moment vector, magnetisation meas. 2-66784
 Ni-Al, deform. mechanism at high temp. 2-105230
 Ni-Al, ion implanted, annealing kinetics, chem. reaction-rate formalism 2-67365
 Ni-Al, thermal expansion of inclusions 2-61180
 Ni-Al (13 at.%), precipitation, early stages (*Japanese*) 2-77828
 Ni-Al (14.4 at.%), containing coherent precipitates, cyclic hardening, TEM study 2-99447
 Ni-Al alloys, γ' precipitate doublets formation and their energetic stability 2-99431
 Ni-Al bronze cast, detection of selective phase corrosion by AE 2-67631
 Ni-Al coevaporated films, hardness and grain size, optical and electron microscopy study 2-82184
 Ni-Al system, interdiffusion coeffs. in Ni₂Al₃(γ) phase 2-104080
 Ni-Al-Ni-Cr, thermocouples, deterioration of EMF in reducing atm. at high temps. 2-67641
 Ni-Al-Co-Cr(Fe)(Mn)(Si) L₁₂ cpds., melt quenching, improved mech. props. 2-116472
 Ni-Al-Cr (W)(Ti), Ni₃Al based structural alloy, props. 2-72874
 Ni-Al-Cr dendritic monocrystals, solidification, coarsening and microsegregation 2-99413
 Ni-Al-In, β' phase, void distrib., X-ray small angle scattering and TEM 2-105411
 Ni-Al-Nb-Ti high-temperature strength alloys, mech. props. prediction, struct. factors influence 2-72771
 Ni-Al-O, liq. solubility of oxides, prediction 2-86889
 γ-γ'/Ni-Al-(Ti) two phase bicrystal, morphological crystallographic features 2-87076
 Ni-Al(Si), irradiation creep enhancement, 21 MeV deuteron bombardment 2-86750
 Ni-base eutectic superalloy, γ/γ'-α, interfacial struct. 2-82149
 (Ni)-Co-Cr-Al-Y coatings, on IN-100 and Udimet 520 superalloys, microstruct. stability 2-99462
 Ni-Cr, aluminate coatings, form. kinetics and microstruct. 2-116620
 Ni-Cr-Al (16, 4 wt.%), oxide dispersion strengthened, long-term high velocity oxidation and hot corrosion testing 2-88274
 Ni-Cr-Al-Ti, ageing and γ' phase precipitation after strong deformation, recrystallization processes (*Russian*) 2-99443
 Ni-Cr-Al-Y₂O₃, dispersion and precip. hardened superalloy, recrystallization, influence of hot working 2-111196
 Ni-Cr-Al-Y₂O₃, oxide dispersion and precip. strengthened, creep and rupture 2-111299
 Ni-Cr-Co-Al-Ta superalloy, air embrittlement, role of S 2-99541
 Ni-Cr-Co-Mo-Al, aluminate coated, compatibility in simulated HTGR 2-113664
 Ni-Cr-Co-W-Al-Ti-Nb-Hf system, refractory as-cast alloy, phase comp., struct. transforms. during high-temp. heating 2-99434
 Ni-Cr-La-Y-Al, La, Y and Al addition effects on high temp. oxidation 2-93685
 Ni-Cr-Nb-Mo-Al-Ti, heat-resistant, homogenisation effect on struct. and plasticity 2-62181
 Ni-Cu-Al, FMR and mag. props. 2-77384
 Ni-Mo-Al, γ/γ'-α eutectic, directionally solidified, struct. and creep rupture 2-105326
 Ni-NiAl system, microdendritic precipitation 2-111179
 Ni-W-Co-Cr-Al-Nb-C eutectic CoTaC-741 alloy autoradiographic investigation of Pm distrib. 2-105176
 Ni-Zr-Co-Cr-Al-Ti powders, rapidly solidified, shock wave consolidation 2-62089

aluminium alloys continued

- Ni₃(Al, M), (M=Ti, Nb, Hf, Mo, W), heat-resistant, dendritic segregation 2-72698
- Ni₃(Al,Nb), single crystals, tension/compression flow stress asymm. 2-67418
- NiAl, recrystn. and brittleness threshold temp. 2-99546
- β -NiAl, X-ray topographic study of α -Al₂O₃ surface film 2-88275
- Ni₃Al₂ coatings, aluminisation of Ni, form. of intermetallic phases 2-99593
- Ni₃Al, de Haas-van Alphen effect and band struct. 2-66422
- Ni₃Al, elec. resist. and thermo-EMF at high temp. (Russian) 2-66531
- Ni₃Al, irradiated, defect aggregation 2-103748
- Ni₃Al phase, binding energy and thermodynamic stability calc. (Russian) 2-91863
- Ni₃Al, Stoner model, magnetovolume effects and Gruneisen parameters 2-56817
- Ni₃Al, weak itinerant ferromag., magnetocrystalline anisotropy 2-92900
- NiCrAl-Zr alloys, oxidation features, AES study 2-88273
- (Pd,Si)Al, metastable phase, cryst. struct. and phase anal. (German) 2-103694
- Pd-Al, electronic struct., KKR-CPA calc. with muffin-tin pot. model 2-66431
- PrAl₃, complete mag. moment vector, magnetisation meas. 2-66784
- RuAl₂, X-ray L₁ absorpt. edge study 2-62018
- Ru-Al-Co system, phase diagram and corrosion resist. props. of various phases 2-99397
- Se_{1-x}Ce_xAl₃Gd, EPR, intermediate valence 2-56926
- Si-Al, amorphous thin film, thermopower, elec. cond. and optical absorption 2-72079
- Si-Al, refinement of boundaries of regions of homogeneity 2-111168
- Si-AlSi₃, Schottky barrier diodes, implanted P distrib., barrier height 2-82457
- Si-Au-Al, distrib. ratio of Al, zone refining with temp. gradient 2-71487
- SiC whisker reinforced Al alloy composites, deform. behaviour 2-105250
- SiC whisker reinforced Al-Li alloys, mech. props. and microstruct., effect of Li 2-11240
- steel, Al, US treatment effect on C redistrib. and austenitic-martensitic transform. (Russian) 2-67331
- ThNiAl, absorption of H₂, thermodynamic and struct. study 2-56196
- Ti-Al, helical dislocations by low temp. thermocycling, TEM study 2-115237
- Ti-Al, mech. props. and thermal stability, comp. depend. (Russian) 2-77874
- Ti-Al, positron annihilation meas. near polymorphic transition (Russian) 2-99211
- Ti-Al, struct. transition due to deform., positron annihilation parameters (Russian) 2-62013
- Ti-Al (1.65 to 10 wt.%), oxidation behavior, effect of Al (French) 2-57526
- Ti-Al alloy, Cl migration under electron bombardment, AES 2-86935
- Ti-Al based alloys, precipitation of metastable phases, X-ray diff. and mech. props. meas. (Russian) 2-77825
- Ti-Al laminar composites with a soft layer, low-cycle fatigue 2-67548
- Ti-Al-Cr-Mo-V, mech. props., statistical anal. 2-72763
- α -Ti-Al-Mn, optimum heat treatment selection 2-105200
- Ti-Al-Mn and Ti-Al-Mo-V, salt corrosion tendency, alloying influence 2-88287
- Ti-Al-Mo, α'' phase form. and decomp. (Russian) 2-99385
- Ti-Al-Mo, IMI 550 fatigue testing by positron annihilation 2-62339
- Ti-Al-Mo (5.4 wt.%), fatigue and dislocation behaviour, effects of H 2-99520
- Ti-Al-Mo and Ti-Al-V-Sn-Zr, static strength, gas absorpt. influence 2-88152
- Ti-Al-Mo-Sn-Si, $\alpha+\beta$ struct., mech. props., effect of Si 2-83081
- Ti-Al-Mo-Zr, Co coated, plastic deform. and diffusion annealing effect on props. 2-67645
- Ti-Al-Mo-Zr, struct. and mech. props., relationship offer superplastic deform. 2-62178
- Ti-Al-Mo-Zr-Sn-Si, metastable α'' phase, struct. transformation on cold rolling, X-ray study (Russian) 2-99440
- Ti-Al-Nb-Ta, rate and time depend. behaviour under quasistatic monotonic and cyclic loading 2-93578
- Ti-Al-Sn, H-charged, room temp. creep 2-111241
- Ti-Al-Sn-Zr-Mo 6242 alloy, interface phase form. along α/β phase boundaries 2-72703
- Ti-Al-Sn-Zr-Mo (5.2,4.6 wt.%), low cycle fatigue crack nucleation, role of microstruct. 2-57470
- Ti-Al-Sn-Zr-Mo (6.2,4, 6 wt.%), low cycle fatigue, cyclic deform. behaviour 2-57471
- Ti-Al-Sn-Zr-Mo (6.2,4,2 wt.%), shear bands, occurrence during isothermal hot forging 2-57383
- Ti-Al-Sn-Zr-Mo prealloyed spherical powders, consolidation 2-77777
- Ti-Al-Sn-Zr-Mo-Si, fatigue, low cycle high temp., effects of dwell 2-62208
- Ti-Al-Sn-Zr-Mo-Si (6, 2, 4, 2, 0.1 wt.%), H₂ effect on fatigue crack growth 2-72806
- Ti-Al-V, mech. props. after β -annealing 2-67398
- Ti-Al-V, orthopaedic implants, fracture cause 2-105855
- Ti-Al-V (6, 4 wt.%), cavitation erosion behaviour, nitriding effects 2-111331
- Ti-Al-V (6, 4 wt.%), texture hardening in dentate rolling (Japanese) 2-77838
- Ti-Al-V (6.4 wt.%), compact specimen, initial notch shape effect on fatigue pre-cracking and fracture toughness testing 2-78028
- Ti-Al-V (6.4 wt.%), deform. modes of α -phase as function of O conc. and ageing 2-77889
- β -Ti-Al-V (6.4 wt.%), fatigue crack initiation identification by plastic replication 2-111407
- Ti-Al-V (6.4 wt.%), He⁺ irradi., surface swelling 2-74931
- Ti-Al-V (6.4 wt.%), high temp. phase transformations and thermal and mechanical props. meas. 2-71625
- Ti-Al-V (6.4 wt.%), laser welded, microstruct. and mech. props. 2-77935
- Ti-Al-V (6.4 wt.%), low cycle fatigue crack propag., influence of minor cycles 2-67493
- Ti-Al-V alloy, improvement of fatigue life by ion implantation 2-57444
- Ti-Al-V sheet, acoustic emission during deform., microstruct. influence, twin form. 2-88324
- Ti-Al-V surface, response to XeF laser pulse 2-110989
- Ti-Al-V-Sn (6.6,2 wt.%), internal H-induced crack growth effect of stress state 2-99535

aluminium alloys continued

- Ti-Al-V-(Mo), low cycle fatigue, effect of stress-strain behaviour 2-57439
- Ti-Al-Zr alloy, IMI 685, planar slip material, short fatigue crack growth 2-93605
- Ti-Al-Zr-Mo-Si (6, 5, 0.5, 0.25 wt.%), silicide precip. 2-83128
- Ti-Al-Zr-Mo-W system, equil. diagram, struct. and props., influence of Zr, Mo and W 2-57331
- Ti-Al-Zr-Mo(W), cooling rate effect on struct. 2-67315
- Ti-Al-Zr-V-Mo-B sheet, elastic props. anisotropy and texture hardening (Russian) 2-116502
- Ti-Al(V), fast neutron irradi., H₂ effect on mech. props. at high temp. 2-72768
- Ti-Al(V)-(V-Mo), ion irradiated, segregation 2-109859
- Ti-Al(V), tensile props., influence of test temp. and microstruct. 2-111236
- β Ti-Mo-Zr-Al, metastable, deform. and fracture 2-57433
- Ti-V-Fe-Al, shape memory with large temp. hysteresis 2-111249
- Ti₃Al, deformed 'C' component dislocations 2-60983
- Ti₃Al, elec. resist. and thermo-EMF at high temp. (Russian) 2-66531
- Ti₃Al-Nb, as-annealed and creep deformed, superdislocation networks, APB energy film 2-98091
- TM-Al thin films, crystallographic phases following electron beam annealing 2-55888
- TmAlGa₂₋₃, cryst. struct. study 2-55889
- TmFeAl₈, Mossbauer study 2-87636
- UAl₂, acoustic study of elastic behaviour, temp. and mag. field effects 2-56065
- UAl₂, spin fluctuation suppression in high mag. fields, magnetisation and magnetoresist. meas. 2-92865
- UMAl (M=Ni,Co,Mn), absorption of H₂, thermodynamic and struct. study 2-56196
- V-Al, binary alloys, fabricability and tensile strength 2-67496
- V-Nb-Al, ternary alloys, fabricability and tensile strength 2-67497
- V-Nb(Al), dil. alloys, radiation-induced defects, interaction with O 2-103840
- V-Ta-Al, ternary alloys, fabricability and tensile strength 2-67497
- VAI_{0.42}, one-particle pot. determ., cryst. struct., lattice dynamics 2-109938
- V₃Al, electronic struct., X-ray study (Russian) 2-110235
- W-Al-Ge system, ternary cpds. existence and struct. 2-57333
- W-K-Si-Al, bubble-strengthened, swelling during sintering 2-105101
- YAl, lattice dynamics, inelastic neutron scatt. meas. 2-56117
- Y(Al_{1-x}Fe_x)₂, mag. and cryst. struct., magnetisation and Mossbauer spectra study 2-72150
- Y(Co,Al)₅, metastable character, decomposition behaviour, precipitation 2-67342
- Y(Co_{1-x}Al_x)₅, struct. and mag. props. 2-91874
- Y(Fe_{1-x}Al_x)₂, Fe moment localisation, mag. props. 2-82572
- Y₂R_{1-x}Al₂ (R=Pr,Nd,Tb,Dy,Ho,Er,Tm), cryst. field parameters and cryst. field linewidths 2-87204
- YbAl₃, mixed valence cpd., elastic props. 2-56067
- YbAl₃, mixed valence states, cryst. struct. and transformations, X-ray study 2-104319
- Yb_{1-x}R_xAl₂ (R=Nd, Eu, Gd, Dy, Er) exchange and electron spin-lattice relax., ESR study 2-82712
- Zn-Al, casting, mech. props. 2-62113
- Zn-Al, steady state creep near eutectoid transformation, microstructural anal. 2-77868
- Zn-Al (1.1 wt.%), superplastic, ageing influence of deform. behaviour (Czech) 2-67438
- Zn-Al (22 wt.%), comparison of constant strain rate and creep testing procedures 2-99617
- Zn-Al (22 wt.%), eutectoid decomp. kinetics (German) 2-67287
- Zn-Al (22 wt.%), eutectoid, thermomech. treatment effect on superplasticity 2-105195
- Zn-Al (22 wt.%), superplastic, stress-strain rate curve at low strain rates 2-57429
- Zn-Al (22 wt.%), superplastic eutectoid alloy, mech. props. 2-83181
- Zn-Al (22 wt.%), superplastic, low-strain-rate Region I controversy 2-105260
- Zn-Al (2.2 wt.%), superplastic, strain and strain-rate dependent props. under biaxial stresses 2-105266
- Zn-Al alloys, thermal cycling effect across eutectoid transformation temp. on superplasticity 2-67440
- Zn-Al eutectic, superplastic, fracture behaviour (Japanese) 2-57460
- Zn-Al eutectoid, microstructural aspects of superplasticity 2-83182
- Zn-Al eutectoid, superplastic, fracture strain and strain rate sensitivity (Japanese) 2-57459
- Zn-Al eutectoid, superplastic, cavitation, effect of grain size 2-111231
- Zr-Al, H₂, D₂ and T₂ solubility meas., getter appl. 2-86878
- Zr-Al alloy, compatibility in Tokamak 2-69851
- Zr-Mo-Al, β solid soln., decomposition, precipitation kinetics and struct. mechanism 2-77829
- Zr(Fe_{1-x}Al_x)₂, Fe moment localisation, mag. props. 2-82572
- Zr(Fe_{1-x}Al_x)₂, ferromag., mag. props., conversion to superparamagnet and spin glass on H₂ absorption 2-92965

aluminium compounds

see also alumina; aluminium alloys

- AlN, ceramics, explosive compaction 2-83069
- CC, AlN sintering, effect of CaCO₃ addition 2-105109
- CCAl₂Ga_{1-x}Sb, LPE growth on (111)-B oriented GaSb 2-98495
- elbait, Al-rich, cryst. struct. refinement 2-103729
- Ga_{1-x}Al_xP, solid soln., variation of comp. gradient during LPE 2-83047
- GaAs-AlGa_{1-x}As heterojunctions, low temp. quantised Hall effect 2-87381
- salt solns., IR spectra 2-93169
- β' -SiAlon, density, microstruct. and strength, heating rate effects 2-116467
- trihalides, vibr. freq. force consts. calcs. 2-108443
- (Al,Cr)₂BeO₄, laser-quality alexandrite, Cr³⁺ EPR spectrum and anti-phase boundaries obs. 2-87583
- (Al,Ga)As DH lasers, reliability, substrate dislocation density and GaAs:Sb active layer effects 2-55193
- (Al,Ga)As lasers with Ga(As,Sb) active layers, device characts. 2-90890
- (Al,Ga)As/GaAs heterostruct., MBE growth, interface quality and electron mobility, substrate temp. effects 2-56385
- (Al,Ga)As/GaAs heterostruct., single and multiple period modulation doped, electron mobility meas. 2-56676

aluminium compounds continued

- (Al,Ga)As/GaAs heterostruct., electron mobility meas., AlAs mole fraction influence 2-56677
 Al/AlN coatings, sputter deposition prep. using pulsed gas processes, characterisation and mech. props. 2-83021
 Al-AlN-Al, ion plated thin film capacitor, dielec. and AC cond. props., annealing effects 2-61825
 Al-Ga-As, LPE film growth, interdiffusion coeff. of components in solns., temp. depend. 2-76717
 Al-GaAs and Al-Al_{1-x}Ga_xAs-GaAs MBE contacts, Schottky barriers, stability props. meas. 2-98723
 Al-InAlAs-InGaAs heterostructure, current transport 2-104486
 Al-Mg spinel, LiF doped, compaction and recrystn. kinetics 2-93482
 Al-Mg-O-N, phase equilib. 2-88072
 Al-Si compounds, XPS study of silicates, Auger parameter rel. to refractive index 2-99740
 Al-Te, vitreous and crystalline materials, short range order, Mossbauer and electron spectra 2-103657
 AlAs (110) surface, deep defect levels and Schottky barrier calc. 2-110413
 AlAs, band structure, tight binding calc. 2-66443
 AlAs interfaces, dissociation, surface reactions 2-57250
 AlAs thin film, MBE growth, oxidation, XPS study 2-83257
 AlAs-Al_{1-x}Ga_xAs-GaAs superlattices, absorption meas. at high press. 2-82933
 AlAs-GaAs heterojunction laser with distributed Bragg mirror, CW operation at 50°C 2-85996
 AlAs-GaAs superlattice, Zn diffusion and disordering along its layers, expt. study 2-56253
 AlAs-GaAs superlattice, disorder by Si implantation 2-76465
 AlAs-GaAs superlattice, resonance impact ionisation states 2-92738
 AlAs-GaAs superlattices, exciton associated optical absorption spectra at 300K 2-104913
 AlB₂, gas behaviour in hot pressed specimens 2-64489
 AlBF₄, isomerisation, pot. energy surfaces calc. ab initio using double-zeta basis sets 2-102411
 AlBH₄, isomerisation, pot. energy surfaces calc. ab initio using double-zeta basis sets 2-102411
 AlCl₃ based molten salt mixtures, for Al staining Fe and steel 2-62285
 AlCl₃, chelation with C-methylated flavonoids, UV spectrosc. obs. 2-75303
 AlCl₃ doped polyacetylene, metallic elec. cond. and EPR spectrum meas. 2-77027
 AlCl₃, general harmonic force field and vibr. freqs., temp. variation technique of gas-phase electron diff. 2-80811
 AlCl₃, thorough purification, reduction of impurities in Al vapour 2-99308
 AlCl₃-n-butylpyridinium chloride melt, ²⁷Al NMR 2-66923
 AlCl₃, mol. consts. and vibr. 2-85838
 AlClBr₃, mol. const. using kinetic const. method and least square fit method 2-102457
 AlCl₃Br, mol. const. using kinetic const. method and least square fit method 2-102457
 Al(ClO₄)₃, solns. in methanol (ethanol), ligand exchange rates, PMR obs. 2-104712
 Al_{1-x}Cr_x(PO₄)₃·Cr³⁺ tunable IR solid-state laser material, spectroscopic and laser props. 2-108884
 AlD₃, anharmonicity connection and mol. consts. calcs. 2-90500
 AlF, mol. force consts., bond lengths, pot. energy functions, electronegativity anal. 2-75463
 AlF₃, electron struct. of excited X-ray states, X-ray absorpt. spectra 2-110981
 AlF₃-CaF₂-NaF (LiF) system, computer anal. of phase diagrams and thermodynamic props. 2-67308
 AlF₃-YF₃-GdF₃-CaF₂-SrF₂-BaF₂-NaF₆-PF₆(AsF₆) glass, optical and thermal props. 2-115145
 Al₂F₆, isomerisation, pot. energy surfaces calc. ab initio using double-zeta basis sets 2-102411
 Al_{1-x}Fe_x·Mg_{1-x}TiZn_{0.6}(Ga,Mn,Na)_{0.4}O₁₀(OH)₂, hogbomite-8H, cryst. struct. 2-91901
 Al₂Fe_{1-x}O₄, single and polycryst., magnetostriction meas. 2-87569
 (AlGa)As buried convex waveguide struct. laser with truncated convex active region 2-65258
 AlGaAs buried-heterojunction/broad-stripe laser diodes, microwave two-port cct. models 2-114285
 AlGaAs CHD-LOC laser diodes for optical fibre data transmission 2-55355
 AlGaAs CQL10 semiconductor laser for information readout 2-60102
 AlGaAs CSP, BH and TJS lasers, direct FM characts. 2-80960
 AlGaAs CW DH nearly single mode laser, intensity fluctuations in longitudinal modes 2-65224
 AlGaAs CW injection laser with external resonator, emitted radiation mode beats and fluctuations 2-65228
 AlGaAs crank structure high power TJS laser, 15 mW single mode CW operation at high temp. 2-80982
 AlGaAs DH laser, injection locked and resonant type modes, optical FM signal amplification 2-80959
 AlGaAs DH laser, short-term freq. stability 2-65256
 AlGaAs DH laser diodes aged under pulsed operating conditions, degradation behaviour 2-80966
 AlGaAs DH lasers, narrow stripe, gain-guided, proton-bombarded, LPE grown, far field asymm. 2-108877
 AlGaAs DH undoped injection lasers, anal. of longitudinal mode behavior 2-65229
 AlGaAs external grating loaded lasers, oscill. centre freq. tuning, quantum FM noise, direct freq. modulation characts. 2-85961
 AlGaAs injection lasers, acoustooptic modulation resonances 2-55226
 AlGaAs inverted strip buried heterostructure lasers 2-114302
 AlGaAs large optical cavity BH window laser, fabrication and props. 2-96967
 AlGaAs laser, freq. stabilisation to H₂O vapour absorpt. line 2-60129
 AlGaAs laser amplifier, Fabry-Perot cavity type, noise characts. 2-80958
 AlGaAs laser diode, spontaneous and stimulated emission, picosecond. meas. 2-65216
 AlGaAs laser diode, multipurpose (Danish) 2-70565
 AlGaAs laser diode (German) 2-90927
 AlGaAs lasers, frequency stabilization based on H₂O and Rb-D₂ lines 2-65267
 AlGaAs lasers, high injection region luminesc. decay and injected carrier lifetime 2-85962

aluminium compounds continued

- AlGaAs lasers with micro-cleaved mirrors suitable for monolithic integration 2-65259
 AlGaAs narrow stripe proton isolated DH lasers for optical communication, HF intensity noise behaviour during accel. life testing 2-65223
 AlGaAs, optoelectronic integration in integrated optics, review 2-65410
 AlGaAs, organometallic VPE growth, O₂ gettering by graphite and SiC baffles 2-67220
 AlGaAs, semiconductor lasers, progress review 2-55156
 (AlGa)As strip BH lasers prepared by hybrid crystal growth 2-80951
 AlGaAs travelling-wave-type semiconductor laser, polarisation characts., gain sensitivity 2-75572
 AlGaAs, undoped, MOCVD growth and charact. 2-98497
 AlGaAs/GaAs terrestrial concentrator solar cell array, 1 kWp, performance 2-88451
 AlGaAs-GaAs, tunnel heterojunction, MBE growth and elec. props., multigap cascade solar cell interconnect appl. 2-57701
 AlGaAs-GaAs heterostructure, modulation doped, reson. light scatt. in strong mag. fields 2-61921
 AlGaAs-GaAs injection laser with external dispersive cavity, bistable operation and spectral tuning 2-70566
 AlGaAs-GaAs laser, use of plated heat sink 2-55192
 AlGaAs-GaAs solar cells, high efficiency and humidity resistant 2-88450
 AlGaAs-GaAs superlattice avalanche photodiode, multilayer detector for low noise apps. 2-53841
 AlGaAs-GaAs zigzag mesa stripe heterostruct. injection laser, radiative characts. 2-55154
 Al_{0.35}Ga_{0.65}As:Si MBE layer, donor activation energy determ. from elec. transport props. meas. 2-98769
 Al_{0.35}Ga_{0.65}As-GaAs heterostruct., modulation doped, photocond. effects 2-56679
 p-Al_{0.3}Ga_{0.3}As-p-GaAs-n-GaAs solar cell, minority carrier diffusion length modification 2-92644
 p-Al_{0.3}Ga_{0.3}As-p-GaAs-n-GaAs, concentrator solar cell, temp. and intensity behaviour 2-93892
 p-Al_{0.3}Ga_{0.3}As-p-GaAs-n-GaAs, concentrator solar cell, LPE growth with electrolytic contacts 2-93893
 Al_{1-x}Ga_xAs laser, single-mode picosecond pulse generation by injection locking 2-90949
 Al_{1-x}Ga_xAs oxide-defined, narrow-stripe, large-optical-cavity laser, thermal waveguiding obs. 2-97001
 Al_{1-x}Ga_xAs terraced-heterostruct. large optical cavity diode laser, LPE growth and high-power CW single-mode operation 2-114298
 Al_{1-x}Ga_xAs-GaAs concentrator solar cell with high conc. ratio and no forced cooling 2-93898
 Al_{1-x}Ga_xAs-GaAs heterojunction CCD, quantum efficiency, heterojunction spike effects 2-87376
 Al_{1-x}Ga_xAs, MBE layers, spin polarised photoelectron emission meas. 2-93365
 Al_{1-x}Ga_xAs, metalorganic VPE grown, residual shallow acceptors, photoluminescence study 2-93245
 Al_{1-x}Ga_xAs BH high quantum efficiency low threshold microcleaved laser fabrication 2-96976
 Al_{1-x}Ga_xAs, composition control and superlattice fabrication by pulsed MBE 2-99342
 Al_{1-x}Ga_xAs, compositionally graded, electron drift vel., time-resolved optical refl. meas. 2-115771
 Al_{1-x}Ga_xAs epitaxial films with variable composition gradient, production 2-87115
 Al_{1-x}Ga_xAs epitaxial film, homogeneous, high resistivity, synthesis 2-116397
 Al_{1-x}Ga_xAs epitaxial layer, graded band gap, dopant impurity effects on carrier lifetime, dislocation density and internal stresses (Russian) 2-77215
 Al_{1-x}Ga_xAs epitaxial solid soln., graded band-gap, photolum. (Russian) 2-104965
 Al_{1-x}Ga_xAs, growth of variance epitaxial layers, by isothermal mixing of melts 2-88009
 Al_{1-x}Ga_xAs, Γ-X-junction position, effect of alternating exial press. meas. 2-66449
 Al_{1-x}Ga_xAs heteroepitaxial struct., graded-index, current controlled thickness composition profile 2-88013
 Al_{1-x}Ga_xAs heterostructure lasers, visible 300K operation, high press. measurements 2-114300
 Al_{1-x}Ga_xAs, LPE short-time growth, anal. 2-61306
 Al_{1-x}Ga_xAs laser, longitudinal mode self-stabilisation 2-96950
 Al_{1-x}Ga_xAs MOCVD quantum well heterostruct. laser, visible operation 2-114268
 Al_{1-x}Ga_xAs multielectrode rib waveguides, electrooptic polarisation modulation 2-65345
 Al_{1-x}Ga_xAs multielectrode rib waveguides, electrooptic polarisation modulation 2-81065
 Al_{1-x}Ga_xAs p-n junction, double injection, electroluminescence 2-61981
 Al_{1-x}Ga_xAs proton-isolated narrow stripe visible laser grown by MOCVD 2-80984
 Al_{1-x}Ga_xAs, pulse beam technique for composition control of MBE 2-83027
 Al_{1-x}Ga_xAs solar cell, two-element cascade cell design 2-93913
 Al_{1-x}Ga_xAs solid soln., ion implantation study, rel. to elec. activation 2-88012
 Al_{1-x}Ga_xAs:Si:Si(Mg)(Ge)(Be)(Zn), acceptor states, photoluminesc. study 2-104931
 p-Al_{1-x}Ga_xAs:Ge, LPE grown, photolum. spectrum 2-57143
 Al_{1-x}Ga_xAs:Mg²⁺, ion implantation study, rel. to elec. activation 2-86692
 Al_{1-x}Ga_xAs:Si MBE layers, deep electron traps, annealing characts. DLTS study 2-98589
 Al_{1-x}Ga_xAs:Si(Sn), epitaxial films, doping effects on elec. props. 2-110502
 n-Al_{1-x}Ga_xAs:Te solid soln. LPE layers, carrier diffusion length, conc. depend., 77-300K (Russian) 2-56741
 Al_{1-x}Ga_xAs/GaAs concentrator solar cells, organometallic, vapour phase epitaxial, fabrication and performance 2-93921
 Al_{1-x}Ga_xAs/GaAs heterostructures, single and multiple period modulation and doped, I-V characts., suitability for FETs 2-56682
 Al_{1-x}Ga_xAs/GaAs modulation-doped structs., transport props., rel. to Monte Carlo calcs. 2-98731
 p-Al_{1-x}Ga_xAs/p-GaAs/n-GaAs concentrator solar cell, design without collection grid 2-93894
 p-Al_{1-x}Ga_xAs/p-GaAs/n-GaAs/i-GaAs high volt.-low current solar cells, design 2-93895
 Al_{1-x}Ga_xAs-Al_{1-x}Ga_xAs struct., instabilities in MBE growth 2-66395
 Al_{1-x}Ga_xAs-GaAs DH long lifetime lasers (Chinese) 2-65270

aluminium compounds continued

- Al_{0.9}Ga_{0.1}As-GaAs heterostruct., modulation doped, MBE grown, carrier mobility, substrate temp. effect 2-61567
- Al_{0.9}Ga_{0.1}As-GaAs heterostructure grown by LPE, Auger electron spectra (*Chinese*) 2-66388
- Al_{0.9}Ga_{0.1}As-GaAs heterojunction, single period, mobility enhancement 2-77165
- Al_{0.9}Ga_{0.1}As-GaAs heterostruct. photovoltaic converters, fabrication by VPE 2-105562
- Al_{0.9}Ga_{0.1}As-GaAs heterojunction, single period modulation doped, normal and inverted, electron mobility, substrate temp. influence 2-115876
- Al_{0.9}Ga_{0.1}As-GaAs interface, extrinsic layer, photolum. study 2-115576
- Al_{0.9}Ga_{0.1}As-GaAs picosecond photodetectors, bias-free selectively doped 2-95466
- Al_{0.9}Ga_{0.1}As-GaAs superlattice, energy spectrum and zero energy gap condition calc. 2-77168
- Al_{0.9}Ga_{0.1}As DH laser, rake lines, influence of cooling rate and melt config. in LPE 2-77760
- AlGaAsSb-GaAs, multilayer avalanche photodiode low noise detector for 1.3 μ m fibre optic systems 2-53833
- AlGaAsSb-GaAs long-wavelength detectors, 1.3 to 1.55 μ m, for fibre optics 2-53840
- Al_{0.9}Ga_{0.1}AsSb_{1-y}, LPE growth on (111)-B oriented GaSb 2-98495
- Al_{0.9}Ga_{0.1}As(100) epitaxial surface, photoemission study 2-93371
- Al_{0.9}Ga_{0.1}As(110) and GaAs(110)-Al adsorbed system, surface struct., LEED study 2-110120
- Al_{1-x-y}Ga_xIn_yAs, pseudopot. band struct., CPA calc. 2-115657
- (Al_{0.9}Ga_{0.1})_{1-y}In_yAs lattice matched to InP substrate, MBE growth 2-105080
- AlGaInSb semiconductor system, LPE growth 2-83045
- Al_{0.9}Ga_{0.1}Sb-Al_{0.9}Ga_{0.1}As_{0.5}Sb_{0.5} heterostructure LED, moisture transducer appl. 2-79594
- Al_{0.9}Ga_{0.1}As superlattice configuration entropy 2-56216
- AlH and AlH₂ electron-phonon coupling parameter rel. to occurrence of supercond. 2-66462
- α -AlH₃, electron beam induced decomp., analytical diff. obs. 2-78070
- AlH₃, photochem. sensitivity 2-73001
- α -AlH₃, standard heat of formation meas. 2-67762
- AlH₄⁺, anharmonicity connection and mol. consts. calcs. 2-90500
- Al₂H₆, isomerisation, pot. energy surfaces calc. ab initio using double-zeta basis sets 2-102411
- Al(III)-phosphate complexes, aq. solns., ²⁷Al NMR obs. 2-108575
- Al_{0.48}In_{0.52}As, LPE growth lattice matched to InP 2-99355
- Al_{0.48}In_{0.52}As, MBE grown, Si doping and elec. props. meas. 2-92005
- Al_{0.48}In_{0.52}As-Ga_{0.47}In_{0.53}As modulation doped heterostruct., current transport meas. at moderate elec. fields 2-82446
- AlInSb, localised impurity states, cond. band minima role 2-98576
- Al₂Mg(OH)₂(Si₂O₇)₂(Ca,Na)₄·4H₂O, bentonite, texture changes during vibr. grinding and after ageing (*Czech*) 2-88101
- AlN CVD films, comp., kinetics, and mechanism of growth 2-87100
- AlN capped annealing of ion implanted GaAs:Cr, Si, carrier profiles 2-66023
- AlN epitaxial films, cathodoluminescence and optical absorption 2-99195
- AlN epitaxial films on Si, electronic conduction in MIS struct. 2-87434
- AlN film, basal orientation, RF diode sputtering, low temp. growth 2-72623
- AlN film, reactive planar magnetron sputtering, voltage controlled 2-77739
- AlN film deposition by reactive DC magnetron sputtering 2-110213
- AlN, metal organic CVD on Si substrate, substrate temp. effects, surface texture 2-67223
- AlN, multilayer polytypes and packing defects 2-55878
- AlN, multilayer polytypes form. during sintering 2-76404
- AlN on sapphire SAW delay lines, zero temp. coeff. 2-86185
- AlN, phase transition and shock compression 2-71627
- AlN, piezoelectric films, high rate deposition using magnetron sputtering 2-93421
- AlN, piezoelectric films, low temp. growth by RF reactive planar magnetron sputtering, transducer appl. 2-93422
- AlN piezoelectric thin films, for SAW appls. 2-97338
- AlN polytype ceramic formation, mech. props. (*Japanese*) 2-88044
- AlN, thermal shock stability (*French*) 2-88155
- AlN, thermodynamic props., at. no. depend., synthesis method selection 2-66259
- AlN:Cr, sintered, dielec. losses, lattice defect types (*French*) 2-77448
- AlN:Mn, luminesc. and EPR spectra 2-57174
- Al₂N₃O₃, ALON powder prep. by carbothermal reduction of α -Al₂O₃ in N₂ 2-77784
- Al₂O₃, electronic struct. and mol. topology, ab initio calcs. 2-54764
- Al₂O₃, electronic struct. and mol. topology, ab initio calcs. 2-54764
- Al₂O₃, hexagonal phases, X-ray powder diff. data 2-76388
- Al(OH)₃, anodic oxide layer of Al electrolytic capacitor, proton magnetic relaxation study 2-104733
- Al(OH)₃, behaviour in high vac. of XPS spectrometer 2-99739
- Al(OH)₃ layers in Al electrolytic capacitors, dielectric props. and elec. cond. meas. 2-104809
- Al(OH)₃·H₂O, AC proton conduction 2-115451
- γ -AlOOH, solid electrolytes for H₂O hydrolysis, characts. and prod. 2-71716
- 2Al₂O₃·CO₂·15H₂O, structural characteristics, X-ray, IR spectra, DTA and electron microscopy study (*Bulgarian*) 2-76385
- 3Al₂O₃·4SO₃·8H₂O, cryst. data 2-81743
- AlP, band structure, tight binding calc. 2-66443
- AlPO₄, berlinite, shallow bulk acoustic wave (SBAW) props. 2-98206
- AlPO₄, recent progress on cryst. growth, dielectric const. meas. 2-99314
- AlPO₄^{V4+}, X-band ESR spectrum, spin Hamiltonian parameters 2-56917
- Al₂S₃-Ag₂S system, phase diagram (*French*) 2-72675
- Al₂S₃-La₂S₃-Nd₂S₃, chalcogenide mini lasers, emission cross section and threshold power 2-96955
- AlSb, electron-phonon interaction, phonon cond. 2-66152
- AlSb film, phase transition triggered by laser irradi. 2-98500
- AlSb film growth by laser annealing Al/Sb sandwich 2-92416
- AlSb, interband transition energies, spin-orbit effects, electroreflectance study 2-104849
- AlSb, MBE growth on GaAs(GaSb)(InAs) and RHEED characterisation 2-87087
- AlSb-GaSb-InAs, multiheterostructs., two dims. quantum states and semimetal-semicond. transition, theoretical study 2-61575
- AlSb,As_{1-x}Sb_x vacuum deposition, optical and transport props., impurity states 2-82498

aluminium compounds continued

- AlSb(As)(P), surface (110), bound and resonant surface states 2-110429
- Al₂SiO₅(F,OH)₂, topaz, IR obs. of neutron irradi. crystals, hardness changes 2-61040
- Al₂SiO₅F₂, fluor-topaz, thermodynamic props. 2-92226
- Al-O-Al linkage stability in zedites, MO STO-3G calcs. 2-64871
- BeAl₂O₄:Cr³⁺, alexandrite, laser freq. tuning 700 to 800 nm, spectroscopic characts. 2-114288
- CaAlAs BH laser and bipolar phototransistor, monolithic integration 2-55360
- Ca₂Al₂SiO₇-Ca₂SiO₄, nucleation and cryst. growth from melt. 2-72614
- CaO·Al₂O₃ system, phase diagram and thermodynamic props. 2-111147
- (Cr,Fe,Al,Mg)₂O₄ spinel, cation atom distrib., channelling effect in electron-induced X-ray emission 2-98018
- Cr³⁺:BeAl₂O₄, alexandrite, laser, narrowband, tunable, meteorological LIDAR appls. 2-114311
- CrAl₂S₄, thiospinel, thermodynamic props. 2-86906
- CrAl₂S₄+ γ , spinel, homogeneity region 2-76695
- (Ga,Al)As diode laser, single frequency CW, output power and temp. depend. of linewidth 2-75568
- GaAlAs buried heterostruct. laser, monolithic integration with bipolar phototransistor 2-60259
- GaAlAs buried multiheterostructure laser 2-80983
- GaAlAs DH LEDs, recombination-induced deep level form., DLTS study 2-98588
- (GaAl)As DH lasers, long-lived, bonded with In, elimination of In solder deterioration 2-85988
- GaAlAs DH separated multilayer stripe geometry laser mode calcs. 2-85963
- GaAlAs DH shallow proton stripe geometry laser grown by MO-CVD 2-55206
- (GaAl)As DH visible lasers on p-GaAs substrate, reliable and mode-stabilised 2-55207
- (GaAl)As diode laser, linewidth broadening due to electron number fluctuations 2-60077
- GaAlAs double heterojunction sub-nanosec. laser (*Chinese*) 2-65245
- (GaAl)As gain guided lasers, analysis at threshold 2-75575
- (GaAl)As heterostructure laser formed by LPE, growth and dissolution kinetics, temp. programming effects 2-104187
- GaAlAs heterostructures on GaAs, simultaneous LPE method for multilayer structures in multislice boat 2-111100
- GaAlAs laser operating at 0.83 μ m, optical feedback-induced changes in output spectra 2-80957
- GaAlAs layers, localised transmutation doping by ²⁷Al(p, γ) ²⁸Si reaction 2-103792
- GaAlAs, metalorganic CVD, electronic defect levels study 2-71922
- GaAlAs Schottky barrier restricted laser 2-96977
- (GaAl)As semiconductor diode lasers, linewidth charact. 2-65230
- GaAlAs semicylindrical Zn-diffused stripe laser diodes 2-114278
- GaAlAs short-chivity laser fabricated by wet chemical etching 2-114279
- GaAlAs single-mode laser, dynamic wavelength tuning 2-55144
- GaAlAs solar batteries with radiative cooling concentrating systems opt. parameters determ. 2-99785
- GaAlAs transverse junction stripe lasers for 20 Gbit/s optical time multiplexing 2-81118
- GaAlAs visible laser, V-channelled substrate inner stripe, stabilised mode operation 2-55183
- GaAlAs:Zn, variable gap semicond., photon transport of carriers, photoluminescence study 2-116256
- GaAlAs/GaAs DH lasers, self-sustained pulsation characts. (*Chinese*) 2-108874
- GaAlAs-GaAs, channelled substrate narrow stripe laser, expt. characterisation 2-96982
- (GaAl)As-GaAs DH lasers, narrow oxide stripe, lateral current spreading and diffusion problem 2-80964
- GaAlAs-GaAs DH lasers, large-scale utilisation (*Czech*) 2-114284
- n-GaAlAs-GaAs heterojunction interface, MBE grown, 2-D electron gas, tangential magnetoresist. study 2-77162
- GaAlAs-GaAs MOCVD grown wavelength division solar cells, fabrication and characts. 2-105572
- GaAlAs-GaAs superlattices, phonon-limited near equilib. transport 2-56680
- GaAlAs-GaAs transverse DFB cavity laser, room temp. operation 2-102817
- GaAlAs-GaAs-GaAlAs passive etalon, optical bistability obs. 2-102859
- Ga_{0.73}Al_{0.27}As_{0.73} CW room-temp. visible single quantum well diode laser grown by MOCVD 2-85960
- Ga_{0.84}Al_{0.16}As_{0.84}, growth by temp. gradient LPE with convective flow (*Chinese*) 2-111097
- Ga_{0.9}Al_{0.1}As, heterostructures, radiative recombination, efficiency and lifetimes 2-87833
- Ga_{1-x}Al_xAs, anharmonicity and disorder-induced effects, Raman study 2-57083
- Ga_{1-x}Al_xAs, electron drift mobility calcs. 2-77084
- Ga_{1-x}Al_xAs epitaxial layers and single crystals, anharmonicity and disorder-induced effects, Raman study 2-67052
- Ga_{1-x}Al_xAs, epitaxial layers, Hall mobility-drift mobility ratio, press. depend. 2-87431
- n-Ga_{1-x}Al_xAs for high sensitivity pressure sensors, resist. variation with press. 2-95338
- Ga_{1-x}Al_xAs, Hall electron mobility, scatt. parameters 2-115790
- Ga_{1-x}Al_xAs LPE layer, refractive index, surface reflection meas., 1.96 eV 2-93296
- Ga_{1-x}Al_xAs laser, high CW output power, lateral grating array 2-96974
- Ga_{1-x}Al_xAs laser FET monolithic IC, very high freq. operation 2-96969
- Ga_{1-x}Al_xAs, MOCVD grown, elec. props. of Se and Zn 2-98774
- Ga_{1-x}Al_xAs, radiative decay rate exponential distrib. 2-77583
- Ga_{1-x}Al_xAs single quantum well visible laser, MOCVD grown, low threshold and high efficiency obs. 2-96971
- Ga_{1-x}Al_xAs variable-gap optical filter with a controlled pass band 2-75665
- Ga_{1-x}Al_xAs:Be-GaAs p-p-n solar cells, Be diffused doping and elec. props. meas. 2-105557
- Ga_{1-x}Al_xAs:Si, Ge, LPE growth and doping, elec. and photolum. props. 2-116393
- Ga_{1-x}Al_xAs:Si, LPE layers, photon recycling, photoluminescence study 2-82897
- Ga_{1-x}Al_xAs:Sn layers, electron and γ -ray irradi., elec. cond., press. effects (*Russian*) 2-104512
- Ga_{1-x}Al_xAs:Zn, metalorganic CVD film, elec. cond. 2-56733

aluminium compounds continued

- Ga_{1-x}Al_xAs-GaAs double heterostruct., laser annealed, electrolum. device performance 2-55158
 Ga_{1-x}Al_xAs-GaAs isotypic heterojunction, compact analytic model (*French*) 2-104474
 Ga_{1-x}Al_xAs/In_{1-x}Ga_xP on GaAs, LPE growth 2-99361
 GaAl_{1-x}Sb, MBE grown, persistent photocond. centres, capacitance spectroscopy meas. 2-98688
 GaAlSb-GaSb photodetectors for the near infrared spectrum (*German*) 2-84704
 Ga_{1-x}Al_xSb, impact ionisation an alternative interpretation, comments 2-56600
 Ga_{1-x}Al_xSb, LPE layers, photolum. study, cond. bond minimum determ. 2-98540
 n-Ga_{1-x}Al_xSb-p-GaSb heterojunction, elec. and photoelec. characterization 2-98732
 GaAs/Al_{1-x}Ga_xAs interface, MBE grain, deep levels obs. 2-56463
 GaAs/Ga_{1-x}Al_xAs solar cell fabrication using VPE, performance evaluation 2-73124
 GaAs/GaAlAs lasers nonplanar structures fabrication, by metalorganic chemical vapour deposition 2-85958
 GaAs/GaAlAs W-shaped diffused stripe DH lasers grown by metalorganic CVD 2-65232
 GaAs/GaAl solar cells, technology, characts. (*Spanish*) 2-99799
 GaAs-(AlGa)As heterojunction, modulation doped, intersubband scatt. 2-61573
 GaAs-(AlGa)As heterostructures, plasma dispersion in a layered electron gas 2-104276
 GaAs-(AlGa)As twin-mesa laser integrated with passive waveguide, controllable single mode operation 2-55209
 GaAs-Al_{0.36}Ga_{0.64}As DH laser, temp. depend. of lasing characts. 2-80965
 GaAs-Al_{0.1}Gd_{0.9}As DH lasers, near field spectrum (*Chinese*) 2-65219
 GaAs-Al_{1-x}Ga_xAs heterojunction, modulation doped, two-dimens. electron gas, intersubband scatt. obs. 2-110457
 GaAs-Al_{1-x}Ga_xAs modulation doped heterostruct., 2D electron gas transport props. meas. 2-98739
 GaAs-Al_{1-x}Ga_xAs heterostructure, Hall resist. meas., fine struct. const. determ. 2-58777
 GaAs-Al_{1-x}Ga_xAs heterojunctions, zero-resistance state of two-dimensional electrons in a quantizing magnetic field 2-61570
 GaAs-Al_{1-x}Ga_xAs heterostructure, cyclotron and plasmon emission from two-dimens. electrons 2-61770
 GaAs-Al_{1-x}Ga_xAs heterojunction, two-dimens. electron system, magnetophonon reson. obs. 2-98734
 GaAs-Al_{1-x}Ga_xAs multilayer struct., electron-LO phonon modes, Raman scatt., theory 2-110825
 GaAs-Al_{1-x}Ga_xAs quantum well struct., single particle and collective excitations temp. and incident light intensity depend. 2-61920
 GaAs-Al_{1-x}Ga_xAs quantum well structs., extrinsic photoluminesc. 2-82912
 GaAs-Al_{1-x}Ga_xAs quantum well heterostructure lasers, band struct., high press. effects 2-85971
 GaAs-Al_{1-x}Ga_xAs solar cells with various types of concentrating systems 2-99788
 GaAs-Al_{1-x}Ga_xAs stripe geometry heterolasers, power-current characts., bleaching effects 2-112483
 GaAs-Al_{1-x}Ga_xAs-Si, heterojunction barriers, elec. transport and MBE growth 2-82448
 GaAs-Al_{1-x}Ga_xAs-GaAs double heterojunction, p⁺-n-n⁺ diode, for high temp. electronic appl. 2-77163
 GaAs-AlAs (001) superlattice, electronic band struct. 2-61572
 GaAs-AlAs p-n structs., voltage relax. and electrolum. intensity 2-92741
 GaAs-AlAs p-n structures, recombination current meas. at fivefold charge centres in space charge layer 2-82450
 GaAs-AlGaAs avalanche photodetector, single-carrier-type dominated impact ionisation 2-84701
 GaAs-AlGaAs diode laser coupled to external resonator of narrow spectral bandwidth, bistable operation 2-108881
 GaAs-AlGaAs heterojunction, zero-resistance state and quantised Hall effect 2-61491
 GaAs-AlGaAs heterojunctions and multiple quantum well heterostructs., doped, reson. inelastic light scatt. 2-61919
 GaAs-AlGaAs heterojunction, 2-D electron gas, cyclotron resonance of photoconductivity 2-66920
 GaAs-AlGaAs heterojunction, two-dimensional magnetotransport in the extreme quantum limit 2-82376
 GaAs-AlGaAs heterojunctions solar cells at high level of optical excitation 2-116832
 GaAs-AlGaAs heterostruct., mobility calc. of two-dimensional electron gas at 4.2 K 2-66628
 GaAs-AlGaAs heterostructures grown by MBE and their application to devices (*Japanese*) 2-87380
 GaAs-AlGaAs injection laser with double strip contact, waveguide props. of active region 2-85972
 GaAs-Ga_{1-x}Al_xAs, quantum well struct., energy spectrum of donors, effective mass theory 2-56664
 GaAs-Ga_{1-x}Al_xAs, superlattices, mobility tensor (*French*) 2-104475
 GaAs-Ga_{1-x}Al_xAs DH laser, deep level luminescence spectra (*Chinese*) 2-65217
 GaAs-Ga_{1-x}Al_xAs double heterojunction laser, deep level luminesc. 2-102790
 GaAs-Ga_{1-x}Al_xAs epitaxial layers, MBE and LPE, luminesc. props. 2-72564
 GaAs-Ga_{1-x}Al_xAs multiquantum well struct., band edge absorpt. and gain spectra after short pulse excitation 2-62003
 GaAs-Ga_{1-x}Al_xAs quantum well struct., donor states, effective mass approx. 2-110459
 GaAs-Ga_{1-x}Al_xAs superlattice etalon, room temp. excitonic optical bistability obs. 2-97074
 GaAs-Ga_{1-x}Al_xAs:H multiple quantum wells, impurity photoluminescence 2-104955
 GaAs-Ga_{1-x}Al_xAs-P_y heterostructure lattice matching rel. to laser fabrication (*Chinese*) 2-66375
 GaAs-GaAlAs curved rib waveguides, bending loss minimisation, ion beam milling fabrication 2-75676
 GaAs-GaAlAs DH injection laser, 200 Mb/s modulation expt. (*Chinese*) 2-55223
 GaAs-GaAlAs DH laser diode obs. (*Chinese*) 2-90887
 GaAs-GaAlAs graded refractive index separate confinement heterostructure laser grown by organometallic VPE 2-96975

aluminium compounds continued

- GaAs-GaAlAs low-threshold oxide stripe lasers grown by MOCVD 2-85959
 GaAs-GaAlAs multiple quantum well lasers grown by MO-CVD, far-field radiation patterns 2-114271
 GaAs-GaAlAs quantum wells, exciton binding energy 2-115668
 GaAs-GaAlAs superlattice, collective modes, doped quantum wells, wavevector-freq. depend. dielec. const. 2-104279
 GaAs-n-AlGaAs heterojunction, real-space transfer oscillator 2-66625
 GaP-AlP(100) superlattice band struct. 2-110460
 n⁺GaP-i-Al_{1-x}Ga_xAs:Cr(Fe)-M structs., I-V characts. 2-104477
 GaSb-AlSb superlattice, spatially extended optical interface modes 2-66339
 GaSb-AlSb superlattices, MBE growth, photoluminescence 2-99188
 InAs-AlAs solid soln., plasma edge reflectance, carrier density 2-82855
 In_{1-x}Ga_xAl_{1-x}Ga_xAs lattice matched to InP, band-gap energy and electron effective mass, comp. depend. 2-115650
 InGaAlP DH layers, MBE growth on (100) GaAs substrates, laser appls. 2-104206
 InGaAlP on (100)GaAs, MBE growth 2-104189
 K₂Al₂(SO₄)₄, crystal growth kinetics from soln., metastable zone width 2-91837
 K₂Al₂(SO₄)₄·24H₂O, batch precipitation by mixing component aq. solns. 2-116351
 KAl(SO₄)₂·12H₂O, nonuniform soln. growth 2-77722
 LaNi_{4.5}Al_{0.5}D_{0.5}, neutron diff. struct. study 2-71422
 (Mg_{0.5}Fe_{0.08})₂Fe_{0.3}³⁺Al_{0.14}(Si_{1.66}Al_{0.34})O₁₀(OH)₈, lizardite, cryst. struct., polymorphism 2-98008
 (NH₄)Al(SO₄)₂·12H₂O, X-ray and neutron diffraction study 2-60959
 Na-S-Al chloride cells, performance 2-93888
 NaAl(SO₄)₂·12H₂O:Cr³⁺, EPR linewidth anomaly, struct. fluctuations 2-98952
 Na₂MgAlF₇, weberite, space group, X-ray diff. study 2-103676
 NaPO₃-AlF₃-(CaF₂) glasses, Raman spectra, struct. models 2-87758
 Si-Al-O system compounds, chem. state plots, line energies ESCA study 2-83425
 β-Si-Al-O-N ceramics, translucent, effect of impurities and hot pressing temp. 2-57495
 Si-AlN-Au(Al), interface barrier heights, internal photoemission study 2-82464
 Si-C-Al-O film on Mo, D⁺ irradiation effect 2-66081
 Si₃Al₂N₅C₃, new compound with wurtzite struct. 2-57321
 SiC-AlN solid solutions, hot pressed, comp. and props. 2-88037
 (Y,Nd)Al₃(BO₃)₄, optical rotation saturation and circular dichroism 2-104843
 YAl₃(BO₃)₄, optical rotation saturation and circular dichroism 2-104843
 YBaIB₄, mixed valence cpd., elec. resist., mag. susceptibility, sp. ht. 2-56517
 ZnAl₂S₄, thiospinel, thermodynamic props. 2-86906
 ZnCr₂Al_{2-x}S_{4-x}, dil. insulating system, mag. phase diagram 2-110591
 ZrF₄-ThF₄-AlF₃, glass forming area, thermal expansion and UV absorption edge (*French*) 2-115146

aluminosilicate glasses

- acoustic props. meas. of alkali free glass 2-103908
 BS-12 glasses, Ag-activated luminesc. 2-116240
 crystallised, microhardness, microbrittleness, effect of distilled water 2-99525
 devitrified, contact strength in impact, rel. to type of defectiveness 2-99557
 electron irradi., composition changes, XPS and nucl. anal. 2-92319
 near IR absorption of H₂O, OH group vibr. bands 2-99125
 silicogermanate gradient glass, ion exchange diffusion from molten salts, refractive index change 2-111487
 sitalt; luminescence defectoscopy of strength rel. to phase composition 2-99485
 sitalts, thermal stability determ. by luminesc. defectoscopy 2-116671
 surface interdiffusion and phase boundary reaction in aqueous CsCl soln. 2-57503
 thin films, sol/gel prep. and characterisation, SIMS study 2-82093
 Al₂O₃-doped silica-based optical fibres, VAD fabrication 2-114476
 Al₂O₃-H₂O₂-SiO₂, amorphous, EPR, optically detected EPR, and MCD meas., spin glass props. 2-56924
 Al₂O₃-SiO₂-Fe₂O₃, heat treated, Fe valence-coordination state, Mossbauer study 2-103662
 alkali metal oxide-CaO-Al₂O₃-SiO₂ glass, liq.-liq. phase separation, struct. interpretation, alkali aluminate complex form. 2-103973
 CaAl₂Si₂O₈-Ca₂Al₂Si₂O₈, anorthite-gehlenite system, crystn. of glass-forming melts 2-71371
 CaO-Al₂O₃-SiO₂, chem. interactions, molar vol. change 2-72985
 CoO-Al₂O₃-SiO₂ glass, high temp. susceptibility and paramag. Curie temp. study 2-72168
 LiAlSiO₄, β-eucryptite crystallisation from glass, laser Raman spectra 2-71366
 Li₂O-Al₂O₃-SiO₂ glass-ceramic, SiC fibre reinforced, thermal transport props. determ. by composite method 2-104088
 Li₂O-Al₂O₃-SiO₂ glass-ceramic, SiC yarn reinforced, high strength and toughness 2-105298
 Li₂O-Al₂O₃-SiO₂ glass ceramics, microstruct., electron microscopy and electron diff. 2-115140
 Li₂O-Al₂O₃-SiO₂-TiO₂ glass ceramics, cryst. props., grain growth, electron and X-ray study 2-66244
 Li₂O-Al₂O₃-SiO₂-TiO₂, isothermal cross-section, phase decomposition 2-72706
 Li₂O-Al₂O₃-SiO₂-TiO₂ glass ceramic, phase anal., Raman and X-ray obs. 2-110853
 Mg₂Al₂Si₂O₁₀:TiO₂, changes in spectral props. at initial stages of crystn. 2-72529
 MnO-Al₂O₃-SiO₂ glass, high temp. susceptibility and paramag. Curie temp. study 2-72168
 MnO-SiO₂-Al₂O₃ melt, viscosity and IR spectra obs. 2-61184
 NaAl(Si₂Ge)₂ feldspars, ideal mixing of Si and Ge, calorimetric study 2-115144
 Na₂O-B₂O₃-Al₂O₃-SiO₂-CuCl glass, CuCl magnetocrystals growth kinetics obs. 2-103661
 Na₂O-Fe₂O₃-Al₂O₃-SiO₂, with decorative cryst. surface film, synthesis 2-67275
 Na₂O-K₂O-Al₂O₃-SiO₂ glasses, functional form of Arrhenius eqn. for elec. cond. 2-110350
 Si-Y-Al-O-N glasses, microhardness and elastic moduli 2-111278

aluminosilicate glasses continued

- $\text{SiO}_2\text{-Al}_2\text{O}_3\text{-CaO-MgO-Ce}$, U glass-forming melts, U chem., redox interactions 2-93771
 $\text{SiO}_2\text{-Al}_2\text{O}_3\text{-Fe}_2\text{O}_3\text{-CaO-MgO-Na}_2\text{O}$ basalt glass, surface conc. profile, AES study 2-93333
 $\text{SiO}_2\text{-Al}_2\text{O}_3\text{-MgO}$ gel glasses, prep. and crystn. characts. 2-76319
 $\text{SiO}_2\text{-Al}_2\text{O}_3\text{-Na}_2\text{O}$ system, vitreous, support for Pd catalysis of phenylacetylene half-hydrogenation 2-78138
 $\text{SiO}_2\text{-Al}_2\text{O}_3\text{-P}_2\text{O}_5\text{-Sb}_2\text{O}_3$ glasses, strengthened by ion exchange, stress relaxation 2-99471
 $\text{SiO}_2\text{-NaAlO}_2(\text{CaAl}_2\text{O}_4)(\text{MgAl}_2\text{O}_4)$ glasses, three-dimens. network struct. 2-115142
 $\text{SrO-BaO-Al}_2\text{O}_3\text{-TiO}_2\text{-SiO}_2$ system, crystallised-glass materials, isomorphous substitutions, X-ray diffr. study 2-71615

a.m. (modulation) *see amplitude modulation*

ambient temperature *see temperature*

americium

see also nuclei with

- Cumbria environmental radioactivity, sea spray actinide enrichment in West Cumbria 2-111802
 phase transitions under press., cryst. struct., X-ray diffr. study 2-92192
 Am/Li 5 Ci neutron source, neutron spectrum 2-102303
 ^{241}Am metabolism in beagles and humans, models 2-73379
 ^{241}Am , retention and translocation by beagles after $^{241}\text{AmO}_2$ inhalation, influence of aerosol size 2-73378
 $^{241}\text{Am-Be}(\alpha,n)$ source, neutron energy spectrum and resulting mean fluence to dose equiv. conversion factors 2-64728
 $^{241}\text{Am-Ce}$ alloys investigation for target appl. 2-108183
 $^{243}\text{Am-}^{239}\text{Np}$, α -emitting nuclides as absolute efficiency calibration source for Ge detector 2-59580

americium compounds

- Am_2WO_3 , synthesis, X-ray powder diffr., Mossbauer spectra 2-62086

ammeters

- nanammeter for ionisation pressure measurement, CA 3140 op. amp. (Spanish) 2-84669
 pocket calibrator for volts and ohms, use with bench instruments 2-101423

ammonia

- adsorbed on Fe(110), vibrational EELS spectra 2-98459
 adsorbed on Ni surface, decomposition rate, magnetocatalytic effect absence 2-99709
 adsorbed on transition metal surface, AES study 2-110136
 adsorption and decomposition on W(100), XPS study, core level binding energy interpretation using equiv. core approx. 2-115558
 adsorption on Ag (110) surface, thermal desorption spectroscopy and EELS study 2-66372
 adsorption on Dy, XPS and Auger electron spectra 2-62429
 aerosols, pH control of clouds and precip., atmos. comp. meas. and modelling 2-68402
 atmosphere of primitive Earth 2-78796
 $\text{C NH}_3\text{+HCl}^+$, charge exchange reactions, rate coeffs., selected ion flow study 2-88341
 chemisorption on Co, UPS, XPS and work function meas. 2-62430
 chemisorption on Si (111), UPS study 2-87949
 coherent Stark switching, nanosecond optical modulation at 10 μm appl. 2-114415
 cryofilm, thin, IR optical props. 2-87883
 decomposition on Pt and Fe surfaces at high temp., NH radical prod. 2-72959
 dipole polarisabilities, mol. moments, HF approx. 2-108351
 dissociation, on polycryst. Mo surface, AES obs. 2-67157
 distributed collector solar thermal power plant energy conversion and transport by solar energy dissociation of NH_3 2-78248
 electron mobility meas. as function of density reduced electric field 2-60712
 electron-ion recombination coeff. at high densities 2-93760
 equation of state and elec. cond. in 100 GPa shock press. range 2-92143
 FIR optically pumped lasers, two-photon light shift 2-60069
 formation of H-bonds, temp. effect, pion capture method study 2-65109
 fossil fuels, gas sorption systems for S compounds, NH_3 , computer simulation 2-73057
 galactic NH_3 sources, OH emission and maser detect., UHF obs. 2-106944
 gas, selectively IR emitting, radiative cooling props., spectrophotometric study 2-103248
 hydrogen by water electrolysis as basis for small scale ammonia production—a comparison with hydrocarbon based technologies 2-57741
 IC 342, Scl galaxy, interstellar gas temp. meas. from NH_3 radio spectrum obs. 2-68629
 ice detection in BN object and NGC 2264-IR, obs. 2-117717
 influence on metals behaviour, under temp.-force loading 2-111380
 interaction with O predosed Ni (111) 2-110156
 interstellar NH_3 , obs. of (1,1) transition in southern hemisphere mol. clouds 2-106839
 interstellar NH_3 , radio obs. in cold cloud cores 2-106857
 interstellar NH_3 in external galaxies, temp. meas. from radio spectrum 2-68629
 inversion spectrum line collision broadening by symmetric-top gases 2-80738
 IRC+10°216, circumstellar shell NH_3 inversion lines, SHF obs. 2-63428
 Kleinmann-Low Nebula, NH_3 data interpretation 2-106866
 laser, 12 μm , CW optically pumped, Raman processes 2-65203
 laser, pulsed optically pumped, energy characts., numerical model 2-70553
 laser emission 20.9 to 148.7 μm , optically pumped by TE- CO_2 laser 2-85938
 liquid, empirical pot. for conformational, intermol. and solvation studies 2-91747
 liquid, equation of state, appl. to models of major planets 2-73878
 liquid-metal- NH_3 solns., current-voltage drop charact., nonlinearity origin 2-115767
 metal- NH_3 system, appl. of percolation theory and transport coeffs. 2-66516
 molecular beam, collision-induced transitions, double reson. studies 2-59903
 molecular beam, pulsed, optical study 2-80562
 molecular vibr. rot. states, high and very high resolution spectroscopy 2-80838
 molecule, adiabatic rapid passage within Doppler-broadened line, level lifetime meas., Stark effect 2-70311

ammonia continued

- molecule, adsorbed on Al(111), clean and pre-covered, struct. and orientation 2-81222
 molecule, elec. field effects, mol. geometry model 2-59723
 molecule, electron impact dissoci., Doppler profile translational spectrosc. 2-80829
 molecule, far-IR spectroscopic line param. 2-70245
 molecule, in stars, IR heterodyne spectroscopy 2-68635
 molecule, inclusion of 3d orbitals in hybrid orbitals, VB calcs. 2-102394
 molecule, inversion line self-broadening 2-70344
 molecule, IR multiphoton absorpt. 2-64969
 molecule, localised atomic orbitals for atoms in molecules 2-54760
 molecule, lower vibr. energy levels, variational calc. 2-80576
 molecule, microwave transitions studied in intracavity absorbers using off-resonant response of IR lasers 2-108484
 molecule, nuclear spin-spin coupling tensor, anisotropy calc. using extended ab initio calcs. 2-108555
 molecule, photodissociative channels at 1216 Å 2-111498
 molecule, polarisability calcs. assuming additivity of atomic static polarisabilities and dispersion coefficients 2-85837
 molecule, rovibrational transitions, self-broadening and self shifting 2-80568
 molecule, search in Seyfert galaxy and 250 spectra, intervening galaxy constraints 2-74100
 molecule, spectral line broadening and shift, Stark effect 2-108479
 molecule, traveling wave sub-Doppler excited, energy transfer spectroscopy, line profile anal. 2-70220
 molecule, vac. UV photodissoc., photofragment fluoresc. obs. 2-114056
 molecules, ν_2 band Doppler-free two-photon resons., optoacoustic detect. 2-96669
 multiphoton ionisation, mass anal., photoelectron spectra 2-90624
 NGC 2071 reflection nebula region, NH_3 mapping and star form. 2-84298
 $^{14}\text{NH}_3$, $^{15}\text{NO}_3$ and $^{15}\text{NO}_2$, submillimeter wave, diode laser, Fourier transform and grating spectroscopy, vibr.-rot. anal. 2-108485
 nitriding of Si powder, kinetics study 2-88335
 photoacoustic spectroscopy 2-69267
 plasticisation of nylon 6 and 6,6, effect on cryst. state deform., NH_3 absorpt. extent 2-116506
 Raman laser at 12 μm , pumped by low-power CO_2 laser pulses 2-55121
 Saturn atmosphere, methane and NH_3 bands longitudinal variability, IR obs. 2-73901
 Sharpless 106 molecular cloud, NH_3 mapping and H_2O maser detect., SHF obs. 2-101017
 solid, melting as a critical transition 2-81937
 supercritical vapour, excess electron mobility meas. 2-86376
 synthesis, on Fe surface, IR spectrosc. anal. 2-93813
 synthesis, on Fe surface, IR spectrosc. anal. 2-93814
 treatment of TiFe, nitriding, SIMS investig. 2-105389
 valence bands, solid and gas phase UPS study 2-67190
 W33 continuum source, NH_3 ortho/para ratios from spectral obs. 2-101013
 $\text{Ba}(\text{NH}_3)_8$ solution, elec. resist., quenching effect (Russian) 2-115726
 $\text{Ca}(\text{NH}_3)_8$ solution, elec. resist., quenching effect (Russian) 2-115726
 ND_3 , vac. UV photodissoc., photofragment fluoresc. obs. 2-114056
 NH_3 trifluoromethane (methylfluoride), inelastic scatt., beam maser investigation, cross sections for inversion transitions 2-70379
 $^{15}\text{NH}_3$, CW far-IR waveguide laser, optically pumped, relax. oscills. 2-75558
 $^{15}\text{NH}_3$ molecule, $\nu_3=1$ level spectroscopic constants 2-70247
 $^{15}\text{NH}_3$, vibr.-rot. anal., IR obs. 2-75259
 $\text{NH}_3/\text{NH}_3^+$, struct. changes, second order phase transition 2-75142
 NH_3 -cluster ions, collision induced dissoci., metastable ions, mass spectra 2-96749
 NH_3 -formaldehyde, struct., vibr., IR obs. 2-75277
 $\text{NH}_3\text{-H}_2\text{O}$ absorption refrigeration cycles, solar operated, simulation, design and economics for building cooling 2-99835
 NH_3 -ice-methane (propane) mixture 3.4 μm feature, comparison with interstellar feature 2-84304
 $\text{NH}_3\text{-N}_2$ high-power laser tunable in 745 to 930 cm^{-1} range, laser chemistry appls. 2-96997
 $\text{NH}_3\text{-N}_2$, mid-IR high power tunable laser, development and appl. 2-65257
 $\text{NH}_3\text{+NH}_3$ long-range collisions in gas phase, rot. energy transfer calc. 2-85788
 $\text{NH}_3^+\text{+ND}_3$ isotope exchange reactions 2-78076
 $\text{NH}_3\text{-D}$ Stark-effect modulation of CO_2 lasers (Chinese) 2-60128
 $\text{NH}_3\text{-D}$, vibr.-rot., hyperfine struct., microwave obs. 2-85644
 $\text{NH}_3(\text{ND}_3)$, Rydberg spectra 2-75299
 $^{14}\text{NH}_3$ laser, optically pumped, Stark tuning at 10.78 μm 2-80934
 $^{14}\text{NH}_3^+$, matrix isolated in Ne, EST study 2-102508
 $^{15}\text{NH}_3$, far IR lasers, optically pumped, two-photon light shift and Autler-Townes splitting 2-96908
 $^{15}\text{NH}_3^+$, matrix isolated in Ne, EST study 2-102508

ammonia clocks *see atomic clocks*

ammonium compounds

- acetate, dynamic nuclear polarisation by the cooling of tunnelling methyl groups 2-93064
 biphthalate single cryst., X-ray spectrometric props. 2-87893
 halides, Ising model, high-temperature approach, mean field approx. 2-89634
 NH_4Cl conc. aq. solns., NH_4^+ ion coordination 2-71322
 oxalate: Cu^{2+} , EPR study 2-110627
 salts, quaternary, influence on H embrittlement and permeability of steel in H_2S media 2-67541
 tetrabutylammonium bromide, intrinsic absorpt. and exciton luminesc. obs. 2-110933
 $\beta\text{-Al}_2\text{O}_3\text{-NH}_3^+$, defect struct., PMR study 2-110649
 $\text{Cd}(\text{NH}_4)_2(\text{SO}_4)_2\cdot 6\text{H}_2\text{O}\cdot \text{VO}^{2+}$, Tutton salts, EPR spectra, multiple trapping sites 2-61755
 $\text{Ce}(\text{NH}_4)_2(\text{PO}_4)_4$, X-ray structural investigation 2-76383
 $\text{Co}(\text{NH}_4)_2(\text{SO}_4)_2\cdot 6\text{H}_2\text{O}$, cryst. growth from aq. soln., mag. field effect 2-109712
 $\text{Cu}(\text{NH}_4)_2(\text{SO}_4)_2\cdot 6\text{H}_2\text{O}$, crystal growth from aq. soln., mag. field effect 2-109711
 $\text{Fe}(\text{NH}_4)_2(\text{SO}_4)_2\cdot 6\text{H}_2\text{O}$, crystal growth from aq. soln., mag. field effect 2-109711
 KCl:NH_3^+ , localised modes, Green's function technique 2-56136
 $\text{KH}_2\text{PO}_4\text{-NH}_4\text{H}_2\text{PO}_4$, soft mode spectra and ferroelec. phase transition 2-57029

ammonium compounds continued

- (K_{0.78}(NH₄)_{2.22}SnCl₆, NH₄⁺ librational tunnelling, Zeeman relax. NMR study 2-87611
- LiNH₂SO₄, ferroelectric phase transitions, elec. props., IR spectra 2-67000
- LiNH₂SO₄, phase transition, dielectric const., elec. cond. 2-72435
- Mg(NH₄)₂(SO₄)₂·6H₂O·CrO₄²⁻, irradiated, EPR studies 2-61753
- NC₂BeF₃ crystals, phase transitions study 2-109976
- ND₂SeO₄, cryst. struct., X-ray diffr. study 2-98003
- NH₄⁺, ¹⁴N Sternheimer antishielding factor meas. 2-70284
- NH₄⁺, nucl. spin-spin coupling tensors calcs. 2-108361
- NH₄⁺/H⁺-W-O system, phase diagram 2-99407
- NH₄⁺+ND₃ isotope exchange reactions 2-78076
- (NH₄)₂BeF₄, dielec. props. near nonpolar-incommensurate-polar phase transitions 2-104824
- NH₄Ag₂I₃, ice-nucleating behaviour 2-86829
- NH₄AlF₆, ordered and disordered struct., neutron diffr. study 2-65913
- (NH₄)Al(SO₄)₂·12H₂O, X-ray and neutron diffraction study 2-60959
- (NH₄)₂BeF₄, commensurate-incommensurate polar transition, dielectric hysteresis (*Russian*) 2-82799
- (NH₄)₂BeF₄ crystal, ferroelec. domains, SEM obs. 2-116133
- (NH₄)₂BeF₄, Debye temp. and sound vel. calc. from elastic consts. 2-81919
- (NH₄)₂BeF₄, ferroelec., incommensurate phase, quadrupole moment, homogeneous mech. stress effects 2-57023
- (NH₄)₂BeF₄, ferroelec., US study under hydrostatic high press. 2-115362
- (NH₄)₂BeF₄, incommensurate superlattice, X-ray diffr. study 2-55943
- NH₂Br dendritic crystal growth in capillary, quantitative meas. on morphology 2-98506
- NH₂Br, local biphonon (*Russian*) 2-86816
- NH₂Br(Cl), light scatt. near order-disorder transition 2-99140
- NH₂Cl crystal, elec. field- and self-induced polarization 2-104802
- NH₂Cl, orientational disorder of diatomic or polyatomic ions 2-81723
- NH₂Cl, Raman scatt. from nonfundamental states 2-93195
- NH₂Cl, single cryst., tricritical point, Raman study 2-82845
- NH₂Cl:Ni, γ -irrad., off-centre impurity model, EPR investig. 2-82701
- NH₂ClO₄, cryst. spin-rot. relax., ¹H NMR study 2-77403
- (NH₄)₂Cr₂O₇, bleaching action in cinefilm processing (*Russian*) 2-64151
- NH₂F(Cl)(Br), quasimol. features in X-ray K absorption spectra 2-105004
- NH₂FeF₄, elec. field gradient, polarisable point charge model and Mossbauer spectra 2-115721
- NH₂HBeF₄ crystals, phase transitions study 2-109976
- NH₂H₂PO₄ crystal, plastic flow and optical stability threshold during laser irradiation (*Russian*) 2-71498
- NH₂H₂PO₄ crystal, coumarin dye laser radiation SHG 2-114372
- NH₂H₂PO₄ crystals, dislocation-free, pyramidal faces, growth from soln., growth stoppages in presence of impurity obs. 2-65899
- NH₂H₂PO₄, dislocation free growth 2-116355
- NH₂H₂PO₄, for nonlinear devices, temp. dispersion data 2-60148
- NH₂H₂PO₄, growth features of prismatic faces, refl. microscopy obs. 2-115160
- NH₂H₂PO₄, large single crystal growth from soln. for laser technology 2-116354
- NH₂H₂PO₄ single crystals, effect of supersaturation swing in cryst. growth 2-99312
- NH₂H₂PO₄, UV CW radiation generation by sum-freq. mixing in an external cavity 2-90982
- NH₂H₂PO₄, X-cut electrooptic modulator, low operating voltage (*Korean*) 2-55321
- NH₂HSO₄, dielec. relax. meas., appl. of time domain spectroscopy method (*Japanese*) 2-116113
- NH₂HSO₄, ferroelec., dielec. susceptibility dispersion, high freq., dipole ordering 2-87666
- NH₂HSO₄, ferroelec. US vel. and attenuation meas. apparatus appl. (*Japanese*) 2-114566
- NH₂HSeO₄, dielec. and relax. props., isotope effect, pyroelec. and X-ray studies 2-57022
- NH₂HSeO₄, ferroelec. transitions, dielec. const., dielec. loss and DTA study 2-93121
- NH₂HSeO₄, ferroelec. transition, dielec. dispersion study 2-116131
- NH₂HSeO₄, polycrystalline, ¹H NMR chem. shift 2-104725
- NH₂HSeO₄, pyroelectric props. 2-99063
- NH₂I:Cu²⁺ single crystals, EPR investig. 2-82700
- NH₂IO₄, NH₄⁺ ion tunnelling, non-exponential relax. in rot. frame, NMR study 2-93035
- NH₂IO₄, temp. depend. of ¹²⁷I, nucl. quadrupole coupling 2-110714
- NH₂IO₄·2H₂O, proton conductivity, permittivity, cryst. struct. 2-86931
- (NH₄)₂K₂Al(SO₄)₂·12H₂O, mixed alum, microhardness 2-86784
- NH₂LiSO₄, ferroelec. phase transition, thermal expansion study 2-98311
- NH₂LiSO₄(-d₄), phase transitions by quadrupole perturbed ⁷Li NMR 2-110661
- NH₂MgPO₃:Ni²⁺·6H₂O, X- and γ -irrad. damage, EPR and absorpt. spectra study 2-57135
- NH₂MnF₃, proton reson. and crit. relax. 2-98988
- (NH₄)₂-NH₄⁺ cluster, (n=2-8), multiphoton ionisation mass spectra 2-70347
- NH₂NO₃, phase transformations, Raman study 2-87768
- NH₂NO₃, polycryst., phase II Raman spectral consequences of struct. disorder 2-116168
- NH₂NO₃-fuel oil(-Al) explosive, aquarium test, shock press. anal. 2-74442
- NH₂NO₃-LiNO₃, binary melts, Chemla effect, internal mobility meas. 2-66271
- (NH₄)₂P(Mo₂O₇)₄, elec. resist. temp. depend. meas. 2-61468
- (NH₄)₂P₂O₇·2Te(OH)₄·2H₂O, cryst. struct. 2-60944
- (NH₄)₂PtBr₆, phase transitions, NQR study 2-110703
- NH₂ReO₄, NH₄⁺ ion tunnelling, non-exponential relax. in rot. frame, NMR study 2-93035
- NH₂ReO₄, Raman spectrum at high press. 2-116182
- NH₂ReO₄, temp. depend. of ¹²⁷I, nucl. quadrupole coupling 2-110714
- NH₂SO₃⁻, normal coordinate anal. using Urey-Bradley force field and laser Raman freq. 2-113993
- (NH₄)₂SO₄, aerosol, IR laser backscatter spectra, appl. to atm. 2-65166
- (NH₄)₂SO₄, ¹⁴N spin diffusion, proton resonance 2-82733
- (NH₄)₂SO₄, ferroelec., EPR study of triple state centre 2-98936
- (NH₄)₂SO₄, IR photoacoustic spectra, specular and diffuse refl. effects 2-110832
- (NH₄)₂SO₄, paraelec.-ferroelec. phase transition, low temp., thermal anal. 2-104822

ammonium compounds continued

- (NH₄)₂SO₄·H₂O-ethanol-benzene tricit. mixt., thermodynamic model 2-56158
- (NH₄)₂SbF₆, type crystals, superior phase transition (*Russian*) 2-103987
- (NH₄)₂SnBr₆, US study of phase transition 2-66201
- (NH₄)₂SnCl₆ and other ammonium salts, NH₄⁺ reorientation, dielec. and NMR studies 2-93108
- (NH₄)₂SnCl₆, level crossing between NQR and tunnel systems 2-77412
- (NH₄)₂Sn(HPO₄)₂, cryst. struct., X-ray study, block-diagonal least squares method 2-81727
- NH₂TcO₄, E3 transition conversion electron spectrum of ^{99m}Tc, chem. environment effect (*Russian*) 2-54316
- (NH₄)₂TiF₆, cryst. struct., hydrogen bonds 2-91891
- (NH₄)₂(UO₂)(NO₃)₄, NO₃ radical in γ -irrad. single crystals, EPR study 2-56937
- NH₂VO₃, L₂MM Auger transitions under ion bombard. 2-105028
- (NH₄)₂ZnBr₄, ferroelectric phase transition, NQR study 2-104821
- (NH₄)₂ZnCl₄, coexistence of lattice superperiods near phase transitions, X-ray diffr. study 2-92184
- (NH₄)₂ZnCl₄, cryst. struct. in ferroelec. phase 2-71409
- (NH₄)₂ZnCl₄, cryst. struct. study 2-98039
- (NH₄)₂ZnCl₄, ferroelec., phase transition sequence, X-ray diffr. and NQR study 2-76360
- (NH₄)₂ZnCl₄, ferroelec. phase transitions, light scatt. study 2-110830
- (NH₄)₂ZnCl₄, phase transitions, X-ray structural study 2-65911
- (NH₄)₂ZnCl₄, proton mag. relax., commensurate-incommensurate transition 2-77400
- (NH₄)₂ZnCl₄, X-ray structural study of successive phase transitions 2-65912
- NH₂ZnF₃, proton reson. and crit. relax. 2-98988
- (NH₄)₂[Pt(OH)₄], cryst. struct., least squares refinement, X-ray diffr. study (*German*) 2-81730
- Ni(NH₄)₂(SO₄)₂·6H₂O, crystal growth from aq. soln., mag. field effect 2-109711
- Rb₂-(NH₄)₂H₂PO₄, mixed crystals, competing structural orderings and transitions to glass 2-56192
- Zn(NH₄)₂(SO₄)₂·6H₂O, crystal growth from aq. soln., mag. field effect 2-109711

amorphisation

- crystalline phases, fission fragment damage 2-102058
- ion implantation, amorphous processes, review 2-103788
- metal layers, amorphous phase form. by mol. beam condensation, prep. and struct., review (*Russian*) 2-56381
- metals, tribolayers, formed by frictional contact in liq. He 2-62234
- quartz, amorphisation by neutron irrad. positron annihilation study 2-103851
- semiconductor, disorder production, during ion irradiation, composite model, annealing 2-66080
- semiconductors, tribolayers, formed by frictional contact in liq. He 2-62234
- steel, stainless, amorphous, form. and stability, with W or Ti 2-81675
- surface ferromagnetism induced by surface amorphization in a layered antiferromagnetic system 2-87514
- Al-Te, vitreous and crystalline materials, short range order, Mossbauer and electron spectra 2-103657
- Fe alloy, friction glazing, surface melting interpret. of white etching areas 2-67550
- Fe₂B₃, crystalline to amorphous phase transform. by ion bombardment 2-103629
- Ga-Te, vitreous and crystalline materials, short range order, Mossbauer and electron spectra 2-103657
- GaAs:Al(P), ion implanted, radiation damage 2-115317
- GaAs:Se⁻, ion implanted, high temp. annealed, damage, defects and elec. props. 2-98097
- Ge, Mossbauer study of implanted ⁵⁷Co below full amorphisation limit 2-77441
- InP:Mg(Si), implanted, impurity redistrib. during annealing, SIMS study 2-98144
- KFeS₂, effect of amorphisation in mag. props. 2-82659
- LiNbO₃, ion implant. amorphisation optical and EPR studies 2-103789
- Ni, cold deformed, local cryst.-amorphous state phase change obs. 2-57374
- Ni:P, implanted, channelling study of amorphous phase formation 2-81804
- Ni-Ti alloys, electron beam induced amorphisation, electron microscope study 2-109832
- Ni₂-P, amorphous, ion implantation prod., elec. resist., temp. depend. 2-104341
- NiTi shape memory alloy, electron irrad. induced cryst.-amorphous transitions 2-92041
- Si, cryst., laser quenching induced transition to defective cryst. and amorphous state 2-92030
- Si film, polycryst., amorphized by Si ion implantation, solid phase epitaxial recryst. 2-115581
- Si, ion bombardment, surface layer amorphisation, ellipsometry and channelling investig. 2-103855
- Si, ion implant. amorphisation optical and EPR studies 2-103789
- Si, ion implantation, amorphous phase and point defect generation, generalised overlap-damage model 2-115315
- Si, laser annealing, review 2-98157
- Si, Mossbauer study of implanted ⁵⁷Co below full amorphisation limit 2-77441
- Si, single crystals, fast neutron irrad., gradual damage 2-115303
- Si:B, ion implanted, radiation damage production 2-61009
- Si:H microcrystalline glow discharge films, phys. props., substrate bias effect 2-87109
- SiO₂, fused and cryst., ion implant. amorphisation optical and EPR studies 2-103789
- Te single crystal, amorphisation by ion implantation 2-103854
- Zr₂Rh₃ system, supercond. props. variation on amorphisation (*Russian*) 2-56781

amorphous-crystalline transformations *see crystallisation***amorphous magnetic materials** *see magnetic properties of amorphous substances***amorphous semiconductors**

- see also chalcogenide glasses; electrical conductivity of amorphous semiconductors and insulators; insulators*
- AC conductivity, freq. depend. loss, review 2-115747
- aniline black, amorphous organic semicond., elec. cond., thermoelec. and Gunn effects 2-71974

amorphous semiconductors continued

- atomic defects, dangling bonds, electronic structure, luminescence, review 2-65869
 band gap fluctuations, photoluminescence 2-98530
 density of localised states, evaluation from field effect data, theory 2-76887
 disordered systems, low freq., cond. due to variable range hopping, expt. vs. theory 2-66557
 electronic gap state density, calc. from field effect and C-V data 2-76886
 evidence for common origin of Urbach tails 2-71862
 film, gap states, xerographic spectroscopy 2-77213
 glasses, local struct. theory and expt. data review 2-103631
 hopping conduction, strong-field, directed percolation theory 2-77073
 intrinsic, photoconductivity dependence on photogeneration rate 2-72028
 LPCVD A-Si post-hydrogenation and ion-implantation doping 2-71960
 order and disorder, curved space description 2-76311
 p-n amorphous-crystalline heterojunction with built-in interface charge, steady-state transport props. 2-77170
 photoinduced midgap absorpt. 2-72528
 polyacetylene-Br, amorphous film, elec. and optical props. 2-110511
 polypyrrole-Si (a-Si:H) contacts, Schottky barrier formation 2-92727
 Si:H, amorphous oxidised films, valence band spectra 2-104300
 steady-state injection currents, activation energy, size and field dependence 2-82345
 surface double layer model, bulk localised states in gap 2-92726
 transient photoconductivity and photo-induced optical absorption 2-92684
 AgSbSe₃ film, growth and cryst. 2-115620
 Al/amorphous Se/Al struct., capacitance and photocapacitance, time depend. meas. 2-56724
 As, amorphous, temp. depend. of EXAFS 2-105002
 As₂S₃-SiO₂-Si graded-index fresnel lenses for integrated optics, electron-beam direct writing technique 2-86130
 As₂Te₃, amorphous film, energy gap, composition depend. 2-61337
 a-BiH, ESR study, annealing effects on signal intensity and linewidth 2-87591
 C evaporated films, electron transport, semicond. and hole metal behavior 2-61461
 C film, hopping conduction, graphical data interpretation 2-82497
 C:H, amorphous glow discharge film, photoluminescence and ESR spin density 2-93244
 CaO-FeO-P₂O₅ glass, internal friction meas. 2-92105
 Cd-Sb amorphous film, memory switching obs. 2-66596
 CdAs₂, IR absorption spectra 2-110834
 CdGa₂Te₄, film, structural ordering, effect of group I metal impurities 2-87114
 CdGa₂Te₄(Ag) film, polycryst. and amorphous, elec. cond. and Hall effect meas. 2-82490
 CdGeAs₂, IR absorption spectra 2-110834
 CdGe(As₂P_{1-x})₂, IR absorption spectra 2-110834
 CdP₃, IR absorption spectra 2-110834
 CdS:Sb film, vacuum evaporated, elec. and optical props. 2-61631
 CuInSe₂, amorphous and crystalline, optical props. 2-87889
 CuO-CaO-P₂O₅ glass, IR absorpt. spectra, CuI addition influence 2-116213
 CuTiSe₃, ternary semicond., liq. and solid, dielec. relax., defect electron states 2-61829
 FeO-V₂O₅-P₂O₅ glasses, internal friction and elec. cond., interpret. w.r.t. valency state of V ions 2-92606
 Fe₂O₃-TeO₂ glass, Mossbauer effect and elec. cond. meas. 2-87639
 GaAs, amorphous and cryst., melting point, laser and electron beam annealing 2-109829
 GaAs film, amorphous, plasma deposition and characterisation 2-111094
 GaAs-Se implanted layer, low temp. annealing, Rutherford backscatt. channelling study 2-71818
 GaP, thin film struct., electron beam irradi., current characteristics meas. 2-56738
 GaSe amorphous film, electroabsorpt. meas. 2-72456
 Ge, amorphous, effective charges 2-86568
 Ge, amorphous, evaporated, struct. study by neutron diff. 2-86566
 Ge, amorphous, laser irradiated, struct. change features 2-76493
 Ge, amorphous, Mossbauer study 2-99004
 Ge amorphous film, crystallisation boundary dynamics in CW laser irradi. 2-81680
 Ge amorphous film, elec. cond., hopping model, electron-phonon coupling 2-77054
 Ge amorphous film, explosive crystallisation, temp. and thickness effects 2-65860
 Ge amorphous film, low-energy excitations, sp. ht. meas., 0.08 to 2.5K 2-71662
 Ge amorphous films, time-resolved TEM of pulsed crystn. 2-82167
 Ge, amorphous solar selective absorber, medium temp. 2-93945
 Ge, far-IR vibr. spectra using double-beam Fourier transform spectrometer 2-113003
 Ge film, electron beam annealing in TEM 2-71503
 Ge, low freq. cond. due to variable range hopping, expt. vs. theory 2-66557
 Ge, phonon spectra 2-56138
 Ge, random network struct., neutron morphology 2-91791
 Ge:Cl, amorphous, ion implanted, gap-states, elec. cond. study 2-76987
 Ge:H amorphous film, AC losses and elec. cond., polarons 2-77055
 Ge-Si:H, amorphous sputtered alloys, elec., optical and struct. props. 2-98644
 Ge_{1-x}Se_x:Ag amorphous films, Ag photodoping, XPS study 2-57245
 Ge(111), adsorbed Cl(I)(Te) for cryst. and amorphous Ge, surface EXAFS study 2-110977
 In₂S₃, amorphous film, optical props. (Russian) 2-62007
 In₂S₃, crystal growth from amorphous phase, electron-diffraction study (Russian) 2-92384
 In₂Se₃, polycryst. and amorphous, elec. cond., switching phenomena and struct. changes obs. 2-87349
 NbO₃ films, RF sputtered, crystallisation, DTA and elec. cond. 2-104441
 Pd/a-Si:H Schottky barriers, heat treatment effect 2-77183
 (Sb₂S₃), (Sb₂Se₃), Fe, glassy semicond., spin glass like behaviour 2-56871
 Sb₂Se₃, amorphous film, energy gap, composition depend. 2-61337
 Se, amorphous, crystallisation, scanning calorimetry and X-ray diff. study 2-91780
 Se, amorphous, electronic density of states, cluster model, CPA calc. (Russian) 2-104220
 Se, amorphous, liq. and solid, struct. and phys. props., uniaxial compression effects 2-71352

amorphous semiconductors continued

- Se, amorphous, photogeneration, geminate recombination model, expt. and theoretical study 2-87315
 Se, amorphous, second-order Raman scatt. 2-61904
 Se amorphous film, residual voltage, carrier trapping and release parameters 2-110280
 Se amorphous film, stress effects on crystallisation 2-86569
 Se amorphous film, surface relief form. by laser bombardment 2-86728
 Se, amorphous thin film, photoconduction spectral response, annealing near glass transition temp. 2-87330
 Se amorphous thin film on LiNbO₃, US attenuation and Rayleigh surface waves 2-71588
 Se amorphous vacuum condensates, cryst. 2-104181
 Se corrugated surface, surface flattening kinetics under heating, light scatt. study 2-82089
 Se film, photo-induced stress relax. obs. 2-66044
 Se film, photocond. stabilisation and evolution, thermal history effects (French) 2-72030
 Se, glass formation, defects, viscosimetry study in elec. and mag. fields 2-91782
 Se, glassy, bonding coord. defect, positive-U system 2-110303
 Se, mag. props. 2-87474
 Se, nonlinear acoustical effects near glass forming temp. 2-66132
 Se, struct. factor and collective excitations, neutron scatt. study 2-98232
 Se, trigonal, monoclinic and amorphous, Compton profiles and autocorrelation functions, HF and OPW calc. 2-87892
 Se:ClK(Rb), amorphous, carrier generation and EPR studies, dopant effects 2-77083
 Se/polystyrene-hexylmethacrylate copolymer interface, charge transfer 2-56722
 Se(I), vitreous, thermal crystn., DTA study 2-115143
 Se_{0.99}Bi_{0.01}, amorphous, crystn., elec. cond. meas. 2-55860
 Si, amorphous, density of localised states and carrier mobility, elec. cond. study 2-115640
 Si, amorphous, effective charges 2-86568
 Si, amorphous, ion irradi., hopping cond., prep. condition effects 2-92605
 Si, amorphous, MIS struct., theory of photocapacitance 2-98755
 Si, amorphous, Mossbauer study 2-99004
 Si, amorphous, photovoltaic detectors for guided-wave optics 2-64105
 Si, amorphous, RF sputtered, optical props., by spectroscopic ellipsometry (Chinese) 2-67012
 Si, amorphous, Schottky barriers, theory of capacitance-voltage meas. 2-61554
 Si, amorphous, tetrahedrally bonded, simple model of hydrogenation 2-56418
 Si, amorphous and cryst., melting point, laser and electron beam annealing 2-109829
 Si, amorphous CVD layer, localized state density meas. by field effect method 2-56737
 Si amorphous film, CC sputter and plasma deposited, photoconductive decay, carrier lifetime 2-82398
 Si, amorphous film, melting threshold energy in laser annealing 2-92026
 Si, amorphous film, plasma enhanced CVD 2-72631
 Si amorphous films, glow discharge and sputter deposited, optical band-gap, absorption coeff. meas. 2-71856
 Si, amorphous films, localised state investigation using field effect technique 2-104509
 Si, amorphous films, RF-bias sputtered, elec. cond. photoconductivity, ESR spin density, annealing effects 2-56391
 Si amorphous films, time-resolved TEM of pulsed crystn. 2-82167
 Si amorphous layer, low-temp. recrystallisation by high-energy ion beam annealing 2-65861
 Si amorphous layers, deposition and etching by means of beam plasma discharge with tube like electron beam 2-116372
 Si, amorphous p-i-n junction, electroluminescence 2-82927
 Si, amorphous p-i-n junction, photoenhanced electroluminescence 2-82928
 Si amorphous photovoltaic cells, glow discharge prep., substrate condition effect on cell performance 2-83482
 Si, amorphous progress in research and photovoltaic appl. in USA 2-88435
 Si amorphous solar cell, built-in pot., electroabsorption determination 2-111549
 Si, amorphous solar cell, integrated struct., conversion efficiency 2-83485
 Si amorphous solar cells, electroluminescence, quantum efficiency 2-111550
 Si amorphous thin film, microwave plasma CVD fabrication 2-111093
 Si, amorphous UHV deposited film on Si(111), epitaxial regrowth 2-104197
 Si, anneal stable, Raman scatt. study 2-57084
 Si, CVD amorphous p-i-n junction struct., photovoltaic effects, photo-carrier generation and recombination 2-82442
 Si, CVD, amorphous, post-hydrogenated, doping effects, cond. and EPR meas. 2-66679
 a-Si CVD films, anneal-stable, struct. order, Raman scatt. study 2-81679
 Si, CVD growth rate from SiH₄ atm. temp. depend. meas. 2-99345
 Si crystals growth for use in solar cells, methods and economics (Italian) 2-93409
 a-Si, dangling bond centres energy level, ODMR study 2-110732
 Si, defect vibr., Green function-CPA calc. 2-98233
 a-Si, distortion energy distrib. in random network model 2-109678
 Si, elastic and inelastic backscattering of slow electrons 2-105018
 Si, far-IR vibr. spectra using double-beam Fourier transform spectrometer 2-113003
 Si film, amorphous, annealing behaviour of spin density and optical gap, effect of O contamination 2-87735
 a-Si film, diffusion of H, ESR study 2-115469
 Si, film, gap state density, high freq. capacitance-voltage determ. 2-56429
 Si film, glow discharge deposited, optical and elec. props. 2-93307
 Si film, laser beam induced crystn., optical recording appl. 2-65325
 Si, film, laser crystallisation, rel. to density 2-56407
 Si, film, laser induced controlled nucleation and growth process 2-56408
 Si, film, luminesc. study, interf. effects 2-104968
 Si, film, solid phase epitaxy, laser-induced 2-56405
 Si films, localised states investigation using field effect technique (Chinese) 2-66670
 Si glow discharge film, prep. by consecutive separated reaction chamber method and photocond. props. 2-67225
 Si glow-discharge film, reflectivity, spatially inhomogeneous carrier cond. dependence 2-67015

amorphous semiconductors continued

- Si, hopping cond./ion implantation 2-56592
 Si, impurity defect struct. form. by ion implantation, amorphous and cryst. comparison 2-103790
 Si, ion bombarded and annealed, UPS and RBS investig. 2-103857
 Si, ion implanted, ultrarapid cryst. growth and impurity segregation during laser annealing 2-86722
 Si, low energy range distrib. of ^{10}B and ^{11}B 2-66090
 Si, low temp. high energy heavy ion beam annealing 2-81831
 Si MIS solar cell fabrication by RF reactive sputtering and RF glow discharges (*Japanese*) 2-88455
 Si, melting temp., time resolved optical refl. meas. 2-56163
 Si, p-n solar cell, energy conversion calc. 2-57704
 Si, phonon spectra 2-56138
 a-Si, photoelectric effects, surface and bulk contribs. 2-98687
 Si, plasma deposition from SiCl_4 in inductive RF low. press. plasma 2-105091
 Si, polycryst. and amorphous, deposition from silane in low-pressure hot-wall system 2-77746
 Si, polycrystalline, thin film, CW laser recrystallised material 2-56409
 Si solar cell, (cryst. p)-(amorphous i-n) struct. 2-116801
 a-Si solar cells, use of amorphous SiC:H as window material 2-67861
 Si solar cells as power source of future 2-105558
 Si, vac. deposited amorphous, local anomalous oxidation and recrystn. by laser irradiation 2-77728
 Si: P and compensated Si:P,B, ion implanted, epitaxial regrowth obs. 2-92388
 Si:As, amorphous, line-source electron beam annealing 2-66060
 Si:As, amorphous film, laser induced solid phase epitaxy kinetics, time resolved reflectivity study 2-56384
 a-Si:C and a-Si:C, B(P) films, cathodic deposition, charact. 2-88011
 Si:F, H, amorphous, density of localised states, DLTS study 2-98591
 Si:F, H amorphous films, photoelec., and optical props. Schottky barrier solar cell form. 2-83480
 Si:F,H,P films, critical vol. fraction of crystallinity for conductivity percolation 2-56379
 Si:F,H amorphous films, solar cell form., film elec. and optical props. 2-83481
 a-Si:F and a-Si:F, B(P) films, cathodic deposition, charact. 2-88011
 a-Si:F and a-Si:F, H films, motional narrowing effects of NMR spectra 2-77395
 Si:H, amorphous, 1.4 eV luminescence lifetime distrib. 2-72540
 Si:H, amorphous, DLTS response due to localized states 2-56492
 n-Si:H, amorphous, deep levels, electron capture cross section 2-76979
 Si:H, amorphous, elec. cond., effects of H_2O and NH_3 adsorbates, oxidation and light exposure 2-71984
 Si:H, amorphous, electronic states and total energies 2-66429
 Si:H, amorphous, electronic struct. by soft X-ray spectroscopy 2-104301
 Si:H, amorphous, electronic states (*Japanese*) 2-115645
 Si:H, amorphous, excitation wavelength depend. of luminesc. spectra 2-77586
 Si:H, amorphous, field effect conductance, annealing and light induced changes meas. 2-98750
 Si:H, amorphous, gap states distrib., modulated photocurrent phase-shift anal. 2-92534
 Si:H, amorphous, gap-state absorpt. meas. 2-87827
 Si:H, amorphous, H determ., IR absorption meas. (*Japanese*) 2-71490
 Si:H, amorphous, H_2 evolution 2-66280
 Si:H, amorphous, homogeneous CVD prep. and struct., comp. and photocond. props. 2-87085
 Si:H, amorphous, ODMR obs. of luminescence fatigue 2-104954
 Si:H, amorphous, obs. of photoinduced changes in gap states bulk density 2-66472
 Si:H, amorphous, order and disorder, curved space description 2-76311
 p-Si:H, amorphous, photoelectrochem. solar cell, expt. study 2-105573
 Si:H, amorphous, photogeneration, geminate recombination model, expt. and theoretical study 2-87315
 Si:H, amorphous, photoluminescence fatigue and photo-annealing 2-110905
 Si:H, amorphous, post-hydrogenated CVD Schottky diode solar cell 2-99796
 Si:H, amorphous, RF glow discharge deposition rate, crossed elec. and mag. fields effect 2-93447
 Si:H, amorphous, Schottky barrier and MOS structs., barrier heights, photoemission study 2-82465
 Si:H, amorphous, Schottky diode spectral response, gap states effect 2-87753
 Si:H, amorphous, spin-depend. recombination at dangling bonds 2-77424
 Si:H, amorphous, sputtered, time-resolved photolum. spectra 2-77581
 Si:H, amorphous, sputtered, time-of-flight and photoinduced mid-gap absorpt., dispersion 2-87432
 Si:H, amorphous, sputtering and glow discharge prep., photoluminescence and midgap state density 2-87855
 Si:H, amorphous, temp. depend. of room temp. ODMR signals 2-104749
 Si:H, amorphous, time resolved photoluminescence, quenching and carrier mobility 2-104949
 Si:H, amorphous, undoped, diffusion of holes 2-92651
 Si:H, amorphous film, density of states, field effect determ. technique, annealing and illumination effects 2-61593
 Si:H, amorphous film, flow discharge deposited at 1 Torr, elec. and struct. props. meas. 2-87277
 Si:H, amorphous film, interfacial electronic struct. and density of states 2-66601
 n-Si:H, amorphous film, interaction with metal electrodes 2-87389
 n-Si:H, amorphous film, interaction with metal electrodes 2-87390
 Si:H, amorphous film, magnetoresistance study 2-92790
 Si:H, amorphous film, optical props. (*Korean*) 2-57201
 Si:H, amorphous film, optically induced pot. fluctuations, elec. cond. and thermopower study 2-77050
 Si:H, amorphous film, optical and elec. props. 2-82940
 Si:H, amorphous film, RF sputtered, H content, and config., photoconductivity, IR study 2-82397
 Si:H, amorphous film, tetra RF sputtering and optical and elec. props. meas. 2-111072
 Si:H, amorphous films, field effect density of states, annealing and light exposure effects 2-71850
 Si:H, amorphous glow discharge film, photocond. and Fermi level temp. depend., photoinduced changes obs. 2-115810
 Si:H, amorphous plasma deposited film, photocond. IR quenching and gap states, exp. study 2-87318

amorphous semiconductors continued

- Si:H, amorphous Schottky barrier solar cells; CVD prep., electronic props. 2-83484
 Si:H, amorphous Schottky diodes, capacitance-voltage characts. calc. 2-66667
 p-i-n:Si:H, amorphous solar cell struct., deep electron traps 2-56493
 Si:H, amorphous solar cells, hot carrier effects on collection efficiency 2-67852
 Si:H, amorphous solar cells, I-V characts., density of states, and depletion width 2-83483
 Si:H, amorphous sputtered film, dispersive transport, carrier mobility, photoconductivity study 2-82357
 Si:H, amorphous thin film, pure and hydrogenated, adsorbed O_2 layer, electronic struct., XPS and UPS study 2-57254
 Si:H, amorphous thin film solar cells, review 2-105568
 Si:H, As, amorphous film, optical absorption, doping and temp. depend. 2-82945
 a-Si:H, density of states determ., field effect method (*Korean*) 2-56419
 Si:H, electronic props., CPA calc. 2-56430
 Si:H, F, amorphous, ODMR study 2-93065
 Si:H, film, laser induced crystn. 2-55849
 Si:H, film, RF planar-magnetron sputtering, IR and photoelec. props. (*Japanese*) 2-99332
 Si:H, film, vacuum evaporated, substitutional doping by ion implantation, elec. cond. and EPR study 2-55850
 a-Si:H, Ga(As), ion implanted, absorpt. and photocond. spectra 2-115820
 a-Si:H, glow discharge, oxidation investig., optical consts. determ. by ellipsometry meas. 2-116578
 Si:H, hole collection length, surface photovoltage study using liq. Schottky barrier 2-56631
 Si:H, N, amorphous film, elec. and photocond. variation with N doping 2-110339
 a-Si:H, N films, optical and elec. props., solid-state image pickup device appl. 2-82935
 a-Si:H, n-type, energy depend. of capture cross section at trap levels, determ. by isothermal capacitance transient spectroscopy 2-82273
 Si:H, N(Ga), amorphous film, ion implanted, photocond. and energy spectrum 2-92698
 a-Si:H, P, photoinduced absorpt. in picosec. range due to deep hole traps 2-72527
 a-Si:H, photoluminesc. emission broadening 2-110920
 a-Si:H, potential distribs. in Schottky and p-i-n structs. by capacitive techniques 2-92749
 a-Si:H, RF sputtered, elec. and EPR meas. 2-115791
 a-Si:H, reassessment of vibr. spectrum 2-57136
 a-Si:H, time resolved ODMR by frequency response spectroscopy 2-82745
 Si:H,As, amorphous RF sputtered film, pulsed laser annealing 2-86726
 Si:H,B, amorphous, ESR lineshape, g-factors, temp. depend. 2-77373
 Si:H,B, amorphous film, NMR study 2-110686
 a-Si:H,B(P) IR absorption spectra, effects of annealing 2-99156
 Si:H,F, amorphous film, NMR and ESR study 2-93003
 Si:H,N, amorphous, prep. from $\text{SiH}_4\text{-N}_2\text{-H}_2$ mixture and elec. resist. and IR absorpt. meas. 2-93444
 Si:H,O,N, amorphous, ESR of impurity associated defects 2-82699
 Si:H,P amorphous glow discharge thin films, elec. props., heat treatment and P ion implantation effects 2-61467
 Si:H amorphous, oxidation, UPS and Auger study 2-83260
 Si:H amorphous, photoconductivity spectrum 2-104430
 Si:H amorphous, photoluminescence, band gap fluctuation 2-98530
 Si:H amorphous film, DC sputtered, characterization by optical and nuclear methods 2-93308
 Si:H amorphous film, glow discharge deposited, refractive index, 95 to 723K (*French*) 2-62005
 Si:H amorphous film, glow discharge deposited, heterogeneities and surface effects 2-92420
 Si:H amorphous film, glow discharge deposited, H content and mech. stress 2-104210
 Si:H amorphous film, glow discharge deposition, plasma spectroscopy 2-115605
 Si:H amorphous film, growth by silane laser photodissociation, X-ray and IR spectra study 2-116375
 Si:H amorphous film, H conc. correlation with low freq. noise 2-92795
 Si:H amorphous film, multiple DC discharge growth, ellipsometric study 2-92422
 Si:H amorphous film prep., evaporation method 2-62069
 Si:H amorphous films, H_2 evolution 2-93950
 Si:H amorphous films for electrophotography, photosensitivity, glow discharge deposition and doping 2-107435
 Si:H amorphous glow discharge films, elec. and optical props., elec. and mag. field effects 2-82407
 Si:H amorphous layers, refractive index dispersion, dark m-lines method 2-82946
 Si:H amorphous MIS struct., Langmuir-Blodgett film 2-87410
 Si:H amorphous p-i-n solar cell, photocurrent, voltage depend. 2-78211
 Si:H amorphous p-i-n solar cell, expt. study 2-105569
 Si:H amorphous plasma deposited film, photoluminescence, sub-band gap excitation 2-87856
 Si:H amorphous reactively sputtered film, H anal. by IR spectroscopy, nuclear reaction and SIMS 2-76857
 Si:H amorphous solar cell, photovoltaic performance, film props., plasma deposition optimisation 2-83486
 Si:H amorphous sputtered films struct. correlation with prep. cond., STEM study 2-66400
 Si:H amorphous sputtered film, microstruct. and H bonding environments 2-76847
 Si:H amorphous sputtered thin film, carrier propagation, trapping and mobility 2-87283
 Si:H amorphous thin film Schottky barrier diodes, diode characts., film props. 2-82430
 Si:H amorphous thin films, ion-plated, photoconductivity and optical band gap 2-87331
 a-Si:H and a-Si:H,F, dangling bond centres energy level, ODMR study 2-110732
 a-Si:H, annealing effects on ESR, elec. and optical props. 2-66588
 a-Si:H, film, elec. props. optimisation using cross field plasma deposition, photovoltaic device appls. 2-83038
 Si:H films, amorphous, dependence of gap on hydrogen content, photoluminesc. and IR spectra study (*Chinese*) 2-110903
 a-Si:H films, growth and characterisation 2-83031

amorphous semiconductors continued

- a-Si:H films, mol. H₂ presence, proton spin-lattice relax. time meas. 2-61786
 a-Si:H films, motional narrowing effects of NMR spectra 2-77395
 α-Si:H films, optical absorption and density of states in band gap 2-72571
 a-Si:H films, Raman scatt. under high press. 2-72505
 a-Si:H films, residual stress elimination 2-61317
 a-Si:H films, SAW attenuation, paramag. defects, IR, ESR and SEM studies 2-110123
 Si:H n⁺-i-n⁺ struct., amorphous, threshold switching 2-82410
 a-Si:H n-i-p large area solar cells conversion efficiency anal. 2-83471
 a-Si:H n-i-p solar cells, built-in potential determ. 2-93903
 a-Si:H p-i-n high efficiency solar cell using SnO₂/glass substrate 2-93902
 a-Si:H p-i-n solar cell, window effects of a-SiC:H layer 2-83472
 α-Si:H RF sputtered films, elec. props. rel. to threshold and memory switching appls. 2-87347
 Si:H-Au, interface reactions and Schottky barrier formation, expt. study 2-110176
 Si:H(F), amorphous, dangling bond ESR, effect of H or F, Huckel mol. orbital calc. 2-56933
 Si:H(F), amorphous, ESR study relation between defects and incorporated H(F) (*Japanese*) 2-87588
 Si:H(PH₃), amorphous film, density of gap states, space charge spectroscopy study 2-87181
 Si:In amorphous layers, thermal redistrib. of In 2-56003
 α-Si:Mn⁺, doping by ion implantation, dark cond. meas. 2-98128
 Si₃N₄ amorphous CVD film, elec. cond., field effect and gap state density meas. 2-87193
 Si:Ne, Ar, amorphous, ion implanted, localised defect states and impurity distrib., photocond. spectra study 2-61414
 Si:O₂H₂F, amorphous, photoluminescence, localised states, temp. depend. 2-87854
 Si:O(N) films, amorphous, effect of O₂ and N₂ introduction on dark conductivity/photoconductivity (*Chinese*) 2-92788
 Si:P, amorphous, ion implantation doping and surface conductivity 2-115262
 Si:P,B amorphous sputtered solar cell, dopant impurity effects 2-62475
 Si:Sb, laser epitaxy over buried layers 2-56406
 Si:Sb amorphous, sputter depth profiling, mass redistrib. by atomic mixing 2-82974
 Si-Au Schottky solar cell fabrication by RF reactive sputtering and RF glow discharges (*Japanese*) 2-88455
 Si-F amorphous film, grown from SiF₂ disproportionation, F conc. determ. 2-92021
 Si-Ge, defect vibrs., Green function-CPA calc. 2-98233
 Si-Ge-B amorphous film, glow discharge deposited, elec. cond., optical absorpt. and EPR study 2-71965
 Si-In₂,Sn₂O₃, p-i-n solar cell, reactive sputtering fabrication 2-57698
 Si-metal bilayer, laser writing for optical storage, TEM and electron diff. study 2-91011
 Si-on-sapphire, ion implanted, time-resolved optical transmission meas. during pulsed laser annealing 2-61027
 SiC:H, amorphous film for a-Si solar cell, props. and struct. 2-104978
 a-SiC:H, window material for a-Si solar cells 2-67861
 a-SiC:H films, elec. cond., 130 to 350K, hydrogenation effect 2-71986
 a-SiC:H layer, window effect in p-i-n a-Si solar cell 2-83472
 SiC:H-Si:H amorphous heterojunction solar cell, high efficiency (*Japanese*) 2-116825
 Si_{1-x}C_x amorphous film, NMR and IR spectra study 2-77389
 Si_{1-x}C_xH_{1-x} amorphous glow discharge films, ESR, IR and optical study 2-56934
 Si_{1-x}C_{1-x}H_{1-x} amorphous films, reactively sputtered in propane, photoinduced optical changes obs. 2-60179
 Si_{1-x}Ge_x, amorphous, optical props. and photoconductivity 2-104920
 Si_{1-x}Ge_x amorphous film, energy gap, composition depend. 2-61337
 SiH₄ amorphous solar cells, output volt., band tail recombination limit 2-67851
 α-Sn, amorphous, Mossbauer study 2-99004
 Te, amorphous thin film, crystallisation, electronic structure, UV photoemission study 2-71355
 V₂O₅ layers deposited from gels, threshold switching obs. 2-87350
 V₂O₅-based glasses, elec. props. 2-82352
 V₂O₅-P₂O₅ glasses, metal-semicond.-metal struct., dielec. depolarisation currents and loss meas. (*Russian*) 2-61612
 V₂O₅-P₂O₅ glass alloys, forming in electrochemical cells, threshold switching 2-67276
 ZnS:Mn, Cu, Cl DC electrolum. films, field enhanced changes in comp. and struct. 2-116263
 ZnS:Mn,Cu,Cl, amorphous and cryst. electrolum. film, elec. cond. props. meas. 2-87429

amorphous state

- see also electrical conductivity of amorphous metals and alloys; electrical conductivity of amorphous semiconductors and insulators; electron energy states of amorphous solids; magnetic properties of amorphous substances; vitreous state
 acoustic and dielec. low temp. props., review 2-56094
 AES, composition depth profiling, depth depend. of depth resolution 2-105013
 alloys, positron annihilation expts., review 2-104986
 chlorobenzene/cis-decalin mixtures, mol. rot. in glassy, amorphous, and cryst. phases, NMR and DSC study 2-103630
 crystallisation interface temp., DTA and DSC meas. errors anal. 2-103628
 diffraction studies on non-crystalline substances, book 2-58566
 disordered alloys, coherent and incoherent neutron scatt. theory 2-65811
 electric field gradients, theory and expt. data review 2-104323
 electrical conductivity of amorphous solids, CPA study (*Chinese*) 2-110315
 energetic ions energy loss fluctuation in condensed matter, statistical model 2-98170
 EXAFS spectroscopy, conference, Boston, MA, USA (Nov. 1979) 2-74160
 ferric fluorides amorphous, ⁵⁷Fe nucl. quadrupole splittings distrib., struct. implications 2-77003
 fibre, amorphous hollow, contrast in electron microscopy 2-71306
 finite disordered systems, relativistic electronic states 2-61323
 ice, amorphous, effective charges 2-86568
 ionic transport, in amorphous solid electrolytes 2-56250

amorphous state continued

- Lennard Jones amorphous solid, screw dislocations, energy and displacement vector 2-91966
 metal, self-diffusion, vacancy migration (*Russian*) 2-98330
 metal films, mol. beam condensed, elec. and supercond. props., review (*Russian*) 2-56726
 metal-metalloid alloys, amorphous, EXAFS spectroscopy 2-93328
 Mossbauer spectra, ⁵⁷Fe, effect of EFG sign 2-99007
 nuclear methods of analysis, conf., Balatonfured, Hungary (Aug. 1981) 2-101112
 optical materials, cryst. and amorphous, light strength approximate evaluation 2-102889
 organocopper thin-film structures exhibiting threshold switching with short term memory 2-56725
 polyethylene terephthalate, amorphous, conform. changes during vol. recovery, Fourier transform IR spectra obs. 2-61906
 random binary alloy, antiferromagnet in random field 2-115963
 random octahedral network, topology and radial distrib. function 2-91781
 rare earth alloys, amorphous, mag. props., nonaxial crystal field model 2-77301
 solids, correlated diagonal and off-diagonal disorder 2-104235
 solids, two-atom model in enhanced ion backscattering near 180° scatt. angles 2-67172
 superconductor, correlation between energy gap and Hall effect (*Chinese*) 2-104519
 superconductors, amorphous, review 2-66686
 thermal ionisation of Coulomb centres in strong elec. fields 2-71992
 thin films, pulsed energy beam crystn., struct. features 2-60888
 thin films, spin waves 2-72181
 transition metal silicide films, amorphous-cryst. transition, size effects, elec. cond. study 2-92407
 two-dimensional binary random array, order and dislocations 2-91783
 Al-Cu films, amorphous, crystallisation 2-71837
 Al-Si-Ge, amorphous, superconducting transition (*Chinese*) 2-104520
 Al-Si(11.3 wt.%), superconducting props., heat treatment effects (*Chinese*) 2-98778
 Al₂O₃, dielectric film, short-range order struct., change after ion implantation 2-86690
 Al₂O₃, optical consts. of amorphous, polycryst., α,γ phases, EELS study 2-57224
 As, amorphous, effective charges 2-86568
 As, amorphous, thermal relax., specific heat 2-76702
 As, amorphous, time-depend. specific heat meas. 2-66250
 Au, ion bombarded, damage profile, electron microscopy and computer simulation study 2-76531
 Au-Ge metastable phase form. by ion mixing 2-76754
 B amorphous film, internal stress, Young's modulus and thermal expansion meas. 2-82187
 Bi amorphous film, crystn. under gaseous He stream, T≤4.2K (*Russian*) 2-115586
 Bi, superconducting amorphous film, SAW, acoustoelec. attenuation 2-56783
 Bi thin film, avalanche crystallisation (*Russian*) 2-61131
 Bi₂Se₃ amorphous film, atomic distrib. study 2-91751
 C amorphous, thin layers, 2D-, 3D hopping conduction (*French*) 2-92604
 C atomic arrangement by X-ray diff., radial distrib. anal. 2-81673
 C, disordered, micropore struct. obs. by high resolution electron microscopy 2-78024
 C, prep. by low-temp. reduction of PTFE, radial electron density distrib. meas. 2-76308
 C₂H₄ amorphous, sidebands in luminesc. spectra 2-67111
 Co-P, amorphous ferromagnet, ferromagnetic saturation (*Russian*) 2-87491
 Co-P amorphous alloys, annealing effect on anisotropy 2-88229
 Co₈₁Ni₁₉Fe₁₅Si₁₁B₁₆ ribbons, domain pattern annealing effect 2-92978
 Cu₆₀Zr₄₀ amorphous, EXAFS study, struct. characts. 2-110978
 Dy-Cu amorphous films, crystallisation, TEM and electron diff. study 2-92415
 Fe-B (19.1 wt.%), amorphous, structural transitions under thermomagnetic treatment (*Russian*) 2-61130
 Fe₃B, high-pressure, Mossbauer study 2-56994
 Fe₈₃B₁₇ amorphous struct. formation on laser irradi. 2-82960
 Fe_{80-x}Co₂₀B₂₀ (Fe_{80-x}C₂₀B₂₀), amorphous, crystn., Mossbauer study 2-103633
 Fe₇₀Cr₁₀P₁₅C₅, amorphous, spin waves 2-92884
 (Fe₆₅Ni₁₀Co₁₅)₇₃B₂₇, high-pressure, Mossbauer study 2-56994
 FeO-Al₂O₃-SiO₂, amorphous, spin glass, mag. behaviour 2-72226
 FeO film, iron carbonyl oxidative pyrolysis formation struct. and chem. comp., expt. study 2-56399
 Ga film, low temp. ion beam irradiation 2-103858
 Gd-Co, RF-sputtered amorphous film, magneto-optical spectra (*Japanese*) 2-116158
 Gd₃₇Al₆₃ amorphous spin glass, mag. props. 2-92933
 In₂O₃ thin films, electron beam evaporated, elec. props. 2-98776
 K₂O amorphous film, crystn. under gaseous He stream, T≤4.2K (*Russian*) 2-115586
 La₇₀Cu₃₀, amorphous, penetration depth, metallurgical phase separation 2-87446
 LiO₂-NaIO₃ pseudobinary system, phase diagram and amorphous state crystn. kinetics, expt. study (*Chinese*) 2-91778
 Mg_{1-x}Fe_x, amorphous, Mossbauer effect and mag. props. 2-66965
 MoO₃ thin film, electrochromic Li incorporation, for electrochromic display appl. 2-72454
 Nd₂O₃ films, electron beam evaporated, dielec. props. meas. 2-72422
 Ni-Ag co-evaporated amorphous thin films, thermal evolution 2-71835
 Ni-B, amorphous mag. props. 2-92967
 Ni-Cr alloy film, struct. and crystn. 2-55863
 Ni-P amorphous alloys, resist. meas. rel. to prep. 2-92561
 Ni-Pt-P, amorphous, NMR, Knight shift and linewidth 2-93031
 Ni₆₆Y₃₄, amorphous, EXAFS study, struct. characts. 2-110978
 P, intermediate range order, X-ray diff. and Raman scatt. study 2-91779
 PbO-V₂O₅, equimolar system, new phases 2-93496
 PbTiO₃, amorphous ferroelec., time depend. dielec. const. during annealing 2-109676
 PbTiO₃, amorphous state and crystn. process, Raman scatt., SEM, and dielec. meas. 2-81677
 PbTiO₃, ferroelec., Raman scatt. from amorphous state, rel. to crystallisation process 2-57091
 Pd₈₀Ge₂₀, near-edge and EXAFS studies 2-93325

amorphous state continued

- Pr alloys, amorphous, mag. props., nonaxial crystal field model 2-77301
 Sb film, amorphous, vacuum deposited, estimation of density changes associated with growth 2-71838
 Sb-S₁, struct. rel. to As₂X₃ glass struct. 2-86573
 SiC fibre thermal transport props. determ. by composite method 2-104088
 SiC:H-Si:H amorphous heterojunction solar cell, high efficiency (*Japanese*) 2-116825
 Si₃C₂F₆ thin film, amorphous, prep. by reactive sputtering in tetrafluoromethane (*Japanese*) 2-115596
 Si₃N₄, dielectric film, short-range order struct., change after ion implantation 2-86690
 Si₃N₄, film, prep. by ammonolysis of SiCl₄ 2-87995
 Si₃N₄ films, N-rich, composition and elec. cond., MNOS device appls. 2-56743
 Si₃N₄:H, amorphous plasma deposited film, AES and EELS study 2-71816
 SiO₂, amorphous, time-depend. specific heat meas. 2-66250
 SiO₂, dielectric film, short-range order struct., change after ion implantation 2-86690
 SiO₂, electronic states, theoretical model of disorder 2-71857
 SiO₂, fused, evidence for struct. contrib. to phonon lifetimes 2-76628
 Tb-Fe amorphous films, struct., decomposition, crystallisation (*Chinese*) 2-104176
 TbFe₂, amorphous, struct. ordering, neutron scatt. study 2-97923
 TbFe₂ amorphous film, mag. and elec. props. (*Chinese*) 2-104750
 Ti-Co, amorphous, thermal stability study 2-104029
 TiN, amorphous film, CVD on TiB₂ interlayer, Vickers microhardness 2-76854
 Ti₆₀Pd₄₀, amorphous alloy, struct. anal. 2-71351
 Ti₆₀Pd₄₀, amorphous superconductor, T_c study 2-72096
 V-O₂, amorphous, struct. anal. by large angle X-ray scatt. 2-97925
 V₂O₅, amorphous phase, hydrated 2-55847
 V₂Si₂, amorphous supercond. film, crit. temp., thermal annealing effects 2-92801
 WO₃, amorphous film, colour centres, optical absorpt. and EPR study 2-66492
 WO₃, amorphous thin films, coloration mech. study 2-99206
 WO₃ thin film, electrochemical Li incorporation, for electrochromic display appl. 2-72454
 WO₃ thin films in LiClO₄-propylene carbonate-water electrolyte, electrochromism 2-72455
 Y-Co amorphous powders, mech. grinding prep., struct. and mag. props. (*Russian*) 2-61742
 YFe₂, amorphous, struct. ordering, neutron scatt. study 2-97923
 YFe₂, amorphous and crystalline, Mossbauer study 2-110734
 YIG, amorphous, electric field gradient sign distrib., Mossbauer study 2-82765
 YIG, amorphous, second order quadrupole shift in Mossbauer spectrum 2-77440
 Yb thin film, avalanche crystallisation (*Russian*) 2-61131
 Zr-Cu, crystalline and amorphous, enthalpy effects 2-61174
 Zr-Fe(Co)(Ni)(Rh)(Pt), amorphous, thermal stability study 2-104029
 Zr_{0.7}Ni_{0.3}, supercond., lattice sp. ht. and thermal cond., 0.1 to 5K, thermal annealing effect 2-56779
 Zr-Pd, amorphous, upper critical field and paraconductivity 2-77244

amorphous state structure *see noncrystalline state structure***amplification**

- see also acoustic wave amplification; amplifiers*
 optical 70 fs pulses, amplification to gigawatt powers 2-97165
 thermionic ionisation detectors, characteristics study 2-90403
 Be₂Al₂Si₂O₁₈:Cr, emerald cryst., MM wave quantum amplification 2-93329
 GaAs-YIG layered struct., magnetostatic surface wave amplification 2-115988

amplification measurement *see gain measurement***amplifiers**

- see also amplification; d.c. amplifiers; differential amplifiers; high-frequency amplifiers; microwave amplifiers; operational amplifiers; power amplifiers; preamplifiers; pulse amplifiers; radiofrequency amplifiers; ring lasers; wideband amplifiers*
 controlled amplifier for a modulation spectrophotometer 2-95431
 force measurement, quantum amplifier limits 2-84590
 particle size analysis, high resolution cct. using resistive pulse technique 2-53731
 solid state logarithmic amplifier for the DU spectrophotometer 2-89786
 surface barrier detectors, fast timing methods 2-80402
 thermometry, utilising thermistors, complementary amplifying circuit (*Chinese*) 2-69172

amplifying *see amplification***amplitude modulation**

- optical pump-probe spectroscopy, multiple modulation 2-79689
 CO₂ stabilised laser parasitic amplitude modulation due to cavity periodic misalignment 2-55231

analogue computer applications *see analogue simulation***analogue computer methods** *see analogue simulation***analogue computer programming**

- multiple flux quantum transition, analogue computer simulation, rel. to analytical approach 2-77240

analogue digital computers *see hybrid computers***analogue-digital conversion**

- see also digital-analogue conversion*
 algorithmic approach for meas. 2-95301
 conductivity-temperature-depth systems, digitizing methods and error anal. 2-73704
 digital divider system with successive approx. type ADC for position detecting system 2-90383
 electrooptic A/D convertor, 4-bit 275-MS/s 2-60231
 electrooptic guided wave design, 4-bit 828 megasample/sec. 2-60260
 fast interface with data reduction facilities for nuclear physics multiparameter expts. 2-64793
 flash ADC time-of-flight spectrometer 2-107444
 guided-wave interferometer, high-speed, appl. 2-102957
 multichannel analyses based on SDK 85 2-59650
 multidimensional sensor number-code converter with data selection and compression 2-85469
 optical transient digitiser based on nonlinear integrated optics 2-81123
 photogrammetry, mensuration tests using digital images 2-111839

analogue-digital conversion continued

- pulse height readout system for proportional chambers 2-96397
 resolution of meas. with square root metric. for detectors with photomultipliers 2-108316
 soil surveys, digital overlay of cartographic information on Landsat MSS data 2-112141
 solar cell I/V characs. automatic meas. 2-99789
 solid Earth tide horizontal pendulum system 2-78854
 spectrometry with semiconductor detector, circuit using sampling ADC 2-59651
 streamer chamber track digitisation using CCD image sensor and video digitiser 2-75103
 successive approx. A/D conversion system with good differential linearity 2-108303
 Thurlby 1503 DMM appl. 2-79554
 time digitiser with 10 MHz conversion rate for X-ray detector positional read-out 2-64807
 Pt resistance thermometer, A/D convertor for microprocessor (*French*) 2-107325

analogue memories *see analogue storage***analogue simulation**

- Beuken thermoelectric model, thermal systems appls. (*French*) 2-70805
 butt welding, heat conduction problems, analogue simulation 2-55395
 electrical simulation methods for solving heat transfer problems 2-70808
 light particle identification device, power law technique 2-107442

analogue storage

- see also sample and hold circuits*
 Time Projection Chamber, analogue signal processing system 2-59649

analytical chemistry *see chemical analysis***anaphoresis** *see electrophoresis***Anderson model**

- alkali halide crystals, Anderson transition in electronic colour centre systems 2-92504
 Anderson-Hubbard model elementary excitations, Bose excitations in paramagnetic media 2-61694
 asymmetric, density of states 2-66406
 asymmetric, specific heat, elec. cond., thermopower, perturbation calc. 2-76963
 asymmetric Anderson Hamiltonian, ground state, localised electrons and charge susceptibility 2-98592
 axisymmetric Anderson model soln. at T=0 (*Russian*) 2-61397
 chaos, quantum recurrences and Anderson localisation 2-101227
 coexistent ferromagnetism and supercond. in extended periodic Anderson model 2-92811
 coupled two-impurity system, Hartree-Fock staggered ground states 2-56489
 delocalisation theory, effective Hamiltonian, appl. to BCS theory 2-87169
 dilute lattices, localisation and quantum percolation 2-104314
 disordered 1-D system, finite ensemble averages of zero-temp. resist. and conductance 2-77011
 disordered 2-D system, Anderson transition, elec. conductivity, power-law localisation effect 2-61359
 disordered system, scaling theory of Anderson localisation, renormalisation group approach 2-71930
 disordered systems, Anderson-localised, transport, scaling theory 2-61425
 disordered systems, crit. behaviour at mobility edge of Anderson model 2-71873
 disordered systems, localisation length and conductance, 1-parameter scaling 2-104315
 electrical cond., freq. depend. 2-56629
 ground state properties of the generalized Anderson model 2-56414
 Hamiltonian ground state energy 2-66409
 hybridised bands, narrow and wide, extended Anderson model-based theory 2-82194
 impurities, interacting Anderson, Fermi liq. relations 2-56491
 intermediate valence, variational study 2-56505
 intermediate valence compounds, dynamical susceptibility, periodic Anderson model calc. 2-56527
 intermediate valence compounds Kondo problem in nonlocal state (*Russian*) 2-61696
 isotopic disorder, resultant Anderson localisation 2-82292
 itinerant magnetism, Anderson model 2-92853
 localisation, percolation and 1 to 3D crossover, metal insulator transition 2-92470
 localisation and marginal dimensionality 2-61408
 localisation of electrons by electron-electron interaction in an Anderson model 2-82290
 localised system, interstate interaction effect on specific heat 2-77303
 low-temperature thermodynamics, symmetric case 2-77263
 metal, impurity state, muffin-tin pot. for impurity, Friedel theory and Anderson model (*Japanese*) 2-82271
 metal, magnetoresistance of mixed valent Tm impurities 2-87229
 metals, generalised impurities, thermodynamic scaling theory 2-56490
 metals, impurity configurational fluctuations, scaling approach 2-56507
 metals, symmetric Anderson model (*Russian*) 2-56808
 mixed valence compounds, Anderson model, asymmetric, perturbation treatment in terms of Fermi liq. theory 2-66499
 mixed valence compounds, dynamical mag. susceptibility, alloy analog. treatment 2-110562
 mixed valence compounds, local density of states, real space renormalisation of Anderson chain, alloy approx. 2-66414
 mixed valence compounds, screening effects in core-level spectra 2-110309
 mixed valence cpds., electrical resistivity, periodic Anderson model with off-site hybridisation 2-56545
 mixed valence cpds., magnetic susceptibility, periodic Anderson model 2-56818
 mixed valence impurity, static and dynamic susceptibility 2-76990
 mixed valence system, dynamical susceptibility and neutron scatt. cross-section 2-56516
 mobility edge, crit. props., field theoretic formulation 2-71927
 one dimensional periodic Hamiltonian, finite cell calcs. 2-66407
 one-dimensional, inverse localisation length 2-76882
 one-dimensional anomaly in band centre 2-82196
 one-dimensional disordered system, Anderson localisation length and residual resist. 2-110302
 periodic, specific heat calc. 2-61162
 periodic Anderson model, elec. cond., temp. depend. calc. 2-110319
 periodic Hamiltonian, finite cell calcs. 2-76883

Anderson model continued

- random spin systems, susceptibility matrix eigenvalue spectrum 2-110599
rare earth cpds., mixed valence in a periodic Anderson lattice 2-82296
renormalization-group transformation for the Anderson transitions 2-66493
ruby, Anderson localisation and transition, off-diagonal dipolar interactions 2-87148
ruby, Anderson transition study 2-104254
scaling equations from a self-consistent theory of Anderson localization 2-56358
scaling theory of finite systems 2-71929
spin and charge relax. in Schrieffer-Wolff limit 2-56415
superconductor, mixed field valence impurities effect on transition temp., sp.h.t. discontinuity, and crit. field 2-61641
symmetric, magnetic susceptibility 2-98531
symmetric Anderson model, electronic specific heat 2-104018
three dimensional, simple cubic, density of states 2-98511
transition metal dichalcogenides, layered, low dimensional conductors, phys. props., review (*Japanese*) 2-82335
two dimensions, Anderson localisation, review (*Japanese*) 2-82294
two-dimensional Anderson localisation in presence of paramag. impurities and spin-orbit scatt. 2-66490
two-dimensional disordered system, Anderson localization, weakly localized regime 2-61413
two-dimensional gauge-invariant disordered system, Anderson localisation, numerical treatment 2-71926
two-dimensional localised system, magnetoconductance 2-110320
two-dimensional system, Anderson localization and supercond. transition temp. 2-61644
two-dimensional system, magnetoresist., self-consistent treatment 2-61435
two-impurity, thermodynamic scaling theory 2-66408
two-impurity Anderson model in local moment regime, path-integral study 2-56829
two-impurity symm. model, approx. mapping in local moment regime 2-66838
two-impurity system, asymm. ground states, local phonon transfer 2-109933
Al-Fe, Fe impurity mag. moment, cluster approx. calc. with k-dependent boundary conditions (*Russian*) 2-115972
Al₂O₃, localised states, XPS, SCF XaSW calcs. 2-11035
Al₂O₃-Cr³⁺, single-ion-pair fluoresc. ratios and Anderson localisation 2-57176
Cu-Fe, Fe impurity mag. moment, cluster approx. calc. with k-dependent boundary conditions (*Russian*) 2-115972
FeNb₂Se₁₀, metal-insulator and CDW transitions correlation, elec. cond. press. depend. study 2-77133
HgTe, high acceptor conc., cond. processes, multiple scatt. 2-98636
In₂O₃, films, magnetoconductive effects, Anderson localisation 2-56740
Si MOS inversion layer, Anderson localization, neg. magnetoresist. 2-61597
SmB₆, mixed-valent, dynamic mag. response 2-72132

anechoic chambers

- loudspeaker testing using anechoic chamber with optional boundaries 2-109143
MM-wave anechoic chamber, absorber testing method for the oblique incidence 2-91162

anelastic relaxation

- see also *Bordoni effect*; *creep*; *elastic aftereffect*; *internal friction*; *Snoek effect*; *stress relaxation*; *Zener relaxation*
anelastic relax. of self-interstitial-solute atom complex 2-56082
BCC metals, impurity interstitials strain ordering and associated anelasticity, theory 2-98242
BCC metals, random interstitials strain ordering and associated anelasticity, theory 2-98243
Gaussian time spectrum, relax. effects 2-71553
ionic crystals, point defect pair relax. modes, approx. solns. for three-shell model 2-61016
polyester resin, styrene-crosslinked unsaturated, dynamic mech. relax., styrene ring substituents effect 2-109989
polyethylene, chlorinated, as impact modifier for PVC, mech. and dielec. relax. obs. 2-81692
polyethylene, cryst., relax. effects, stochastic defect diffusion model 2-76326
polyethylene, high-density, dynamic birefringence, α -relax. mechanism 2-110812
polyethylene, linear, amorphous, annealing effects in films 2-72726
polymer, partially cured, glass transition temp. as nonequil. parameter, effect on dynamic mech. response 2-66224
polymers, viscoelastic, Bucci relax. times obtained from thermal sampling 2-111220
polypropylene, activation enthalpy for vol. relax., thermal stimulation 2-92108
polypropylene, isostatic, mech. relax., compensation rule validity 2-77861
Snoek-Koster peak concept 2-66122
Snoek-Koster peak in BCC metals, model 2-66124
Snoek-Koster peaks BCC metals, phys. models, review 2-66123
Snoek-Koster relaxation, kink-pair-form, theory 2-66125
Al, anelastic relax. of self-interstitials, X-ray diffuse scatt. study 2-56082
Al, deform. modelling during repeated stress relax. runs 2-111248
Al, electron irradi., frozen free split phenomena, mech. relax. study 2-56084
Al-Fe, dil. alloy, electron irradi., frozen free split phenomena, mech. relax. study 2-56084
Fe₄₀Ni₆₀B₂₀, metallic glass, short-range ordering during structural relax. 2-71359
LaAl₃, superconducting, US attenuation and vel. below 5K 2-56782
Mo, anelastic relax. of self-interstitials, X-ray diffuse scatt. study 2-56082
Mo, electron irradi., self-interstitials, anelastic relax. at 4.7K 2-56083
Nb-Ti, anelastic relax. due to Ti-H complexes, internal friction spectra 2-111222
Sn-Pb alloys, superplastic, superanelasticity 2-83147
Th-Fe(Co)(Ni), fast diffusing solutes, thermal friction studies 2-98326

anelasticity

see also *anelastic relaxation*

- Earth interior, refl.-refr. of general P- and SV-waves in elastic and inelastic solids 2-105955
glassy polymers, nature of nonlinear anelasticity 2-88121
steel, austenitic stainless, thin-walled tubes, state variable anal. of elastic deform. 2-57398

anelasticity continued

- transient deformation, phenomenological model based on state variables 2-56088
Al₂O₃, anelastic deform. effect on high temp. stress relaxation 2-67410
Cu, single crystals, plastically deformed, dislocation anelasticity in kHz range (*German*) 2-83162
MgO, anelastic deform. effect on high temp. stress relaxation 2-67410
- anemometers**
see also *laser velocimeters*
aircraft wake vortices detection and analysis, measuring system (*Dutch*) 2-114957
amplitude-measuring wire/slope-measuring laser water wave gauge comparison 2-81418
automated laser Doppler anemometer, aerodynamic expts. (*Russian*) 2-114937
calibration of hot-wire probes including low velocity range 2-89653
correlational LIDAR meas., atmosphere transparency fluctuations effects 2-106308
cup anemometer overspeeding, wind speed errors due to atm. turbulence effects 2-73649
digital anemometer based on a scanning Fabry-Perot spectrometer 2-71049
drag anemometer for meas. of turbulence over vegetated surfaces 2-63127
flux-gate direction meter for use with anemometer operating at sea 2-78883
gas flow velocity meas., thermoanemometer appl. 2-114950
high-speed flow process investig. using laser Doppler and stroboscopic anemometers (*Russian*) 2-114934
hot wire probe, for high-speed and high-temp. gas dynamics 2-65672
hot-film static-pressure probe for flow meas. 2-97670
hot-wire, book 2-74176
hot-wire, calibration in flows with widely varying temp. (*German*) 2-81422
hot-wire, evaluation method (*German*) 2-71051
hot-wire, liquid-bubble mixture flow local velocity meas. (*German*) 2-81426
hot-wire anemometer meas. corrections, appl. to boundary-layer flow 2-114952
hot-wire anemometry in air, sensor contamination effects 2-91558
hot-wire differential, sensitivity and noise (*German*) 2-55689
hot-wire probes in nominally 2-D wall jet, interference effects 2-86358
hot-wire signal analysis 2-55679
laser anemometer appl. to hydrodynamics investig. in chromatographic columns (*Russian*) 2-114941
laser anemometer, configuration for meas. of travelling US field in acousto-optic deflector 2-114575
laser anemometer for crossflow velocities 2-65662
laser anemometer meas. of boundary layer susceptibility to planar and three dimens. disturb. (*Russian*) 2-114942
laser anemometer particles, sizing criteria 2-86363
laser Doppler anemometer, computer-controlled real-time meas. of intracellular protoplasm flow (*Russian*) 2-117140
laser Doppler anemometer, flow investig. in vortex chamber (*Russian*) 2-114938
laser Doppler anemometer, for plasma stream diagnostics in industrial MHD systems (*Russian*) 2-115040
laser Doppler anemometer, investig. of flow vel. distrib. in packed beds. (*Russian*) 2-114940
laser Doppler anemometer, passive impurity transport velocity meas. (*Russian*) 2-114945
laser Doppler anemometer, two-colour, for nozzle flow meas. 2-65673
laser Doppler anemometer, velocity pulsations correlation function determ. (*Russian*) 2-114947
laser Doppler anemometer for crosswind vel. meas. 2-106326
laser Doppler anemometer investig. of laminar boundary layer stability (*Russian*) 2-114943
laser Doppler anemometer meas. of Reynolds stress in boundary layers and wakes 2-109298
laser Doppler anemometer signals, digital processing accounting for non-uniform discretisation (*Russian*) 2-114936
laser Doppler anemometer with Gaussian beams optical system metrological charact. (*Russian*) 2-114932
laser Doppler anemometers, configurations of multipoint meas. for coherent and noncoherent detection 2-60695
laser Doppler anemometry, influence of axial modes of CW lasers, expt. (*German*) 2-71052
laser Doppler anemometry, influence of CW-lasers axial modes (*German*) 2-65671
laser Doppler anemometry, simultaneous meas. of particle velocity, size and concentration (*German*) 2-64211
laser Doppler anemometry, systematic error elimination (*Russian*) 2-114930
laser Doppler anemometry, two-phase flow, meas. appl. (*German*) 2-65675
laser Doppler anemometry system, two-phase flow meas. 2-65674
laser Doppler anemometry using microprocessor-based data logging and processing 2-79547
laser Doppler anemometry with selection of optical signal coherent component (*Russian*) 2-114931
laser velocimeters for study of nonNewtonian flow (*French*) 2-91563
laser-Doppler anemometry, book 2-89488
laser-Doppler anemometry, real-time velocity measurement (*German*) 2-97680
low-speed heat-pulse anemometer, for use in mining operations 2-55685
magnetic pick-up, meas. from tethered balloons appl. 2-73713
microcomputer-based flow sensing systems (*French*) 2-60681
multichannel laser anemometer investig. of laminar-turbulent flow transition (*Russian*) 2-114939
recording equipment for wind speed in Rumania (*Rumanian*) 2-68505
remote display wind speed and direction indicator, log scale 2-117473
secondary flow meas. by freq. tracking laser Doppler anemometer 2-91559
thermoanemometric expt. at low and high turbulence intensities 2-60515
trial-axial radio-active source anemometer (*French*) 2-100592
triple-split probe for reversing flow, charact. and calibration 2-89654
turbulent flow, meas. by improved anemometry method 2-65658
turbulent intensity determ. using probability after-effects, laser method 2-109427

anemometers continued

- turbulent shear flows, fully developed, struct. of large eddies, hot-wire anemometers meas. 2-75937
- two-channel optical Doppler anemometer turbulent flow spatial correl. meas. (*Russian*) 2-114944
- two-component laser Doppler anemometer system using acousto-optical splitters (*Russian*) 2-114935
- US, kytoon-mounted system, boundary layer turbulent structure obs. 2-68418
- velocity fields measuring using hot-wire anemometer with mechanotron sensing device 2-71050
- vortices, confined, dynamics, flow visualisation and laser-Doppler anemometer meas. 2-97562

angle measurement *see* angular measurement**angular correlation techniques**

- heavy-ion-light particle correlations, sequential decay of heavy reaction product 2-113527
- high angular resolution 2-D correlation apparatus for positron annihilation studies 2-108321
- e^+e^- , 22, 34 GeV, hadronic annihilations, energy weighted ang. correl. anal. 2-101751
- $\gamma\gamma$ correlation experiments at high spins 2-108313

angular measurement*see also* angular velocity measurement

- accuracy estimation in checking cylindrical surfaces with circle gauges 2-89689
- autocollimation theodolite appl. 2-58785
- autocollimator, triaxial, error anal. 2-97155
- automated X-ray orientation system for meas. of angles of cut of doubly rotated quartz crystals 2-97859
- conductor edge slopes meas. 2-58779
- contact angle, optical comparator meas., optometry appl. 2-105810
- diffraction angle measurement technique for holographic optical element 2-70664
- goniometer applicability increase 2-89690
- integrated Si magnetotransistor micro-transducer appl. 2-95325
- linear induction angle converters complementary error calculation (*Russian*) 2-95318
- monolithic goniometer for pure rotation and fine orientation control 2-89877
- plane angle as dimensional quantity 2-69133
- prisms, optical, angular error examination 2-70654
- quadrant detector, image-position error 2-84592
- torsion angle meas. using optical wedge 2-86991
- transducer calibration, microcomputer-based certifying device using reference transducer 2-63976
- transducer circuit, anal. and design (*Chinese*) 2-69157
- UIM-28 three-coordinate universal measuring instrument 2-95322
- CaCO₃ plate optic axis determ. equipment (*French*) 2-58874

angular momentum

- accretion flows in astrophysics, ang. momentum rel. to vortex funnels 2-58233
- Aharonov-Bohm effect, elimination from quantum theory 2-53581
- angular momentum on lattice 2-107170
- astronomical objects, density scaling of angular momentum versus mass universal relationship 2-63235
- elastic media, quasimomentum, quasi ang. momentum, spin 2-58615
- galaxies, gravitational interactions rel. to origin of angular momenta 2-89384
- giant stars, ang. momentum history of Hyades K-type giants 2-63397
- half-integral spin from quantum gravity 2-107215
- interstellar clouds, ang. momentum changes due to cloud collisions 2-63567
- planetary nebulae with close binary nuclei, corrections to ang. momentum loss 2-89259
- planetary ring systems, ang. momentum transport rel. to rings sharp edges 2-112383
- planets, soln. of rot. problem in statistical accumulation theory 2-68642
- potential scatt., phase shift angular momentum struct. 2-94952
- protoplanetary discs around F and G-type stars, ang. momentum rel. to disc models (*Russian*) 2-106687
- rigid body rot. about its centre of gravity, ang. momentum balance law, Lagrangian formalism 2-58597
- stellar interiors, ang. momentum redistrib. in rotating stars 2-112423

angular momentum theory*see also* quantum theory; Regge poles and trajectories

- book 2-74172
- collective rotations of asymmetrically deformed many-body systems 2-107155
- double trigonal group, Clebsch-Gordan coeff., Racah algebra 2-101194
- four-dimensional space, homogeneity and isotropy consequences (*Russian*) 2-79405
- point groups, double groups and projective representations 2-64240
- Rach-Wigner algebra in quantum theory, book 2-79287
- SU(3) bases, 3jm and 6j symbols 2-63841
- SU(6) bases, 3jm and 6j symbols 2-63841
- vector coupling coefficients at large angular momentum values 2-74242

angular velocity measurement

- direction-sensitive current-mode tachogenerator design and performance 2-69161
- HP HEDS-5000 electro-optical tachometer for microprocessor systems (*German*) 2-69155

animal communication *see* biocommunications**anisotropy, magnetic** *see* magnetic anisotropy**anisotropy, magnetocrystalline** *see* magnetic anisotropy**annealing**

- see also* graphitising; laser beam annealing; magnetic annealing; recrystallisation annealing; solution annealing; stress relaxation
- alkali halide, divalent cation-doped, mech. strengthening and impurity precip. 2-88093
- alkaline earth fluorides, thermal neutron irradiated, point defects study 2-65985
- alloy steel, hydrogenated, type 40 KH, H interaction with defects during microplastic deform. 2-105261
- amorphous alloys, study of struct. relax. by ferromag. reson. with spin exchange 2-87598
- apatite, fission track induced radiation damage study using absorpt. spectroscopy 2-70111
- apatite, fission tracks thermal history and length distrib. 2-70092

annealing continued

- austenite, baionitic transformation kinetics, US treatment effect (*Russian*) 2-67325
- BCC metals, mech. props., effects of low-temp. neutron irradiat. 2-103845
- Bordoni relaxation, internal friction due and microdeform. due to intrinsic props. of dislocation 2-77862
- α -brass based alloys, intercryst. internal adsorpt. 2-61148
- Brazilian quartz crystal for track recorder appl., selected etching and annealing props. 2-70093
- bronze, Al, recovery and recrystn. during hot deform. 2-105202
- bubble garnets, ion implantation border line, pot. barrier study 2-77339
- C NbTi superconductor for magnets, fusion neutron damage 2-80184
- CdS, thin evaporated films, optical and elec. props. 2-61624
- ceramic, electronic, in high temp. environment 2-77953
- chondritic phosphates, ²⁴⁴Pu conc. and significance in meteorites fission track dating 2-68685
- concentrator solar cells, high performance, use of ion implantation processing 2-93919
- CR-39 track detector, etching props., post-irradiation annealing effect 2-59630
- creep, high-temp., pore growth and closure at inter-grain boundary (*Russian*) 2-66111
- current-conducting pastes based on polymer binders and fine Ag and graphite powders, prep. and electrophys. props. 2-99384
- defect accumulation and annealing kinetics, spatial correlations (*Russian*) 2-81815
- diamond-N₂, structural imperfection annealing, struct. 2-81766
- diamond-N, ion implanted, cathodoluminescence of impurity-defect complexes 2-116276
- diamond-N, ion implanted, defect form., annealing and interactions, cathodoluminescence study 2-116277
- diamond surface (110), electronic struct. transformation, EELS study 2-56658
- epoxy resins, linear and network, phys. ageing phenomena below glass transition 2-62161
- garnet epitaxial bubble film, ion implantation strain annealing, propag. device stability 2-88100
- glass sheet, device for temp. meas. in elec. furnaces 2-53769
- glass-ceramic, 14 MeV neutron irradiation effects 2-85208
- graphite, deuterium implants thermal release, He-induced damage influence 2-76468
- graphite, neutron irradiation, defect prod. and annealing behaviour 2-80189
- hydrocarbons, polycyclic aromatic, films, struct. and props., substrate temp. effect 2-104205
- Inconel 600, SCC in NaOH, composition and heat treatment effects 2-77983
- insulating crystals, defects, conf. Riga, USSR (May 1981) 2-68967
- Lexan plastic track detector, long-term thermal annealing study 2-59631
- line-source electron beam annealing system 2-66060
- lunar silicates, concepts for fossil track studies 2-63283
- metal, amorphous, magnetomechanical props., model 2-77354
- metal, irradiated, recovery during second stage of annealing (*Russian*) 2-62138
- metal-SiO₂-Si structures, voltage and freq. depend. of simulated RF plasma annealing 2-66639
- metal/Si systems, electron beam induced reactions 2-86955
- metals, FCC, vacancy migration, trapping and clustering by γ -ray spectra 2-56996
- minerals, fission track temp. age theory 2-73508
- Mn, irradi. with 46 MeV Ni⁺, microstruct. before and after 2-92051
- MOS structures, radiation damage by X-ray irradiation (*Chinese*) 2-66645
- multilayer targets with thin ferromagnetic layers for transient field expts. 2-108194
- muscovite mica, fission fragment tracks, thermal annealing 2-113833
- muscovite mica track detectors, low energy ion track-etch pits study 2-70088
- neutron irradiation defects, annealing 2-109840
- Nylon-6,6 annealed in glycerol, thermomechanical props., stress-strain anal. 2-111213
- optical fibre irradiated, light induced annealing characts. 2-75703
- plastic track detectors irradiated by heavy ions, IR, UV and ESR studies 2-59613
- PMMA, glassy, phys. ageing effect on stress relax., correl. with Young's modulus 2-62160
- PMMA, glassy state relax. characteris. by low press. CO₂ sorption, presswell influence 2-65883
- polycapromide, polymorphism and struct. transform. under annealing (*Russian*) 2-66212
- polycarbonate-copolyester miscible blends, mech. props. 2-72775
- polyethylene, linear, amorphous, annealing effects in films 2-72726
- polyethylene, low-density, drawn, shrinkage and retractive forces during annealing 2-111194
- polyethylene, TSC after low temp. γ irradi. 2-110365
- polyethylene, ultrahigh-modulus, nitric acid etching and gel permeation chromatography, struct. obs. and influences 2-109693
- polyethylene, unannealed and annealed soln.-crystallised, straight chain length distrib. by Raman spectroscopy 2-109699
- polyethylene fibre, ultrahigh strength, prep. by zone annealing method, mech. props. (*Japanese*) 2-88051
- polyethylene terephthalate, amorphous, conform. changes during vol. recovery, Fourier transform IR spectra obs. 2-61906
- polyethylene terephthalate film, crystn. of cyclic oligomers, annealing and solvent exposure effects 2-76328
- polyimide, glass-fabric-filled, mech. strength as function of γ -ray irradiation 2-80180
- polymer, glassy, nonequil. nature obs. using Fickian diffusion of alkane permeants 2-66292
- polymer, partially cured, glass transition temp. as nonequil. parameter, effect on dynamic mech. response 2-66224
- polymers, preformed, Langmuir-Blodgett monolayers fabrication 2-88050
- polymers, time depend. currents after changing external elec. field strength in steps 2-66286
- polymethyl-1-pentene, isotactic small angle X-ray scattering 2-86585
- polypropylene, crystallising, impurity diffusion rel. to annealing 2-104049
- polypropylene film, orientated, crystn. of partial melt during annealing (*Russian*) 2-65873
- polystyrene film, atactic, effect of thermal history on gas transport 2-92275

annealing continued

polyurethane acrylate, UV-cured coatings on opt. fibres, sub-T_g annealing, correl. with microbending loss of fibre 2-60251
 polyvinyl acetate, nonequil. annealing behaviour, water sorption and glass transition, dielec. and thermal meas. 2-66223
 potassium tris (oxalato) cobalt (III), neutron irradi., oscill. effects in annealing 2-56042
 PTFE, organic electret for condenser microphones, electret lifetime, annealing, thermally stimulated depolarisation meas. 2-72407
 PVC, glassy, vitrified at elevated press., nonequil. processes 2-66222
 PVC glass, vitrified at elevated press., nonequil. processes, conform. and enthalpic changes 2-86873
 semiconductor, disorder production, during ion irradiation, composite model, annealing 2-66080
 semiconductor, microwave heat treatment 2-116477
 semiconductors, pulsed microwave power annealing 2-71495
 soft magnetic materials, compact, mag. props. and appls. in instruments and devices 2-82653
 solid state track recorders, annealing effects 2-59661
 solid-state track detectors, low energy ion implantation, chem. reactivity 2-70089
 SOS films, effect of high-temp. H₂ annealing 2-93543
 SOS structures, CVD growth, surface defect and strain reduction by ion implantation and solid phase epitaxy 2-66384
 stainless steel-C films prepared by reactive magnetron sputtering, optical constants and microstructure 2-99838
 stainless steel/C graded index solar selective films reflectance prediction and enhancement by annealing 2-105593
 steel, alloy, cold rolled, type 08, isothermal austenitization 2-105201
 steel, alloy, roll, heat treatment influence on struct. and props. 2-67393
 steel, alloy, weld metal similar to X20 CrMoV121, heat treatment effect on phase transform. and mech. props. 2-62144
 steel, alloy type Ck 15, fatigue charact., nitriding effects (*German*) 2-57475
 steel, austenitic 304, diffusivity and solubility of H₂, electrochemical determ. (*Japanese*) 2-104064
 steel, austenitic ferritic, with low interstitial level, mech. and corrosion props. (*Italian*) 2-99563
 steel, austenitic stainless, Cr-Mn, uniaxial tensile props., Li exposure influence 2-80178
 steel, austenitic stainless, grain boundary structure after annealing 2-67382
 steel, austenitic stainless, He bubble form., influence of temp., stress and time 2-108114
 steel, austenitic stainless, structure, effect of cold working and annealing 2-67370
 steel, austenitic stainless 316, fatigue crack propag. in vacuum and air 2-72803
 steel, austenitic stainless 316, radially solidified, B doped, pre-irrad. spatial distrib. and stability of boride particles 2-85211
 steel, C, cementite spheroidization 2-111212
 steel, cold formability (*French*) 2-67383
 steel, Cr-Mn, high-N, precip. and intercryst. corrosion after isothermal annealing 2-72729
 steel, Cr-Mo (2¹/₄, 1, at.%), heat treatment for breeder reactor boilers 2-54500
 steel, dual-phase, struct.-prop. relationships 2-105253
 steel, electric, grain oriented, core loss, effect of degree of grain orientation alignment (*Japanese*) 2-104652
 steel, electric grade, isotropic with planar cubic texture, prod. by two-stage treatment, mag. charact. 2-67379
 steel, high C, spheroidised annealing effects on subsequent heat treatment 2-116470
 steel, high-strength low-alloy, surface spectrosc. anal., annealing effects 2-99713
 steel, hypoeutectoid, spheroidising treatment from various initial conditions, struct. form. 2-99451
 steel, low alloy, rheological props. of ShKh15 2-72778
 steel, low C, C atom segregation, thermoelectric power and elec. cond. study (*Japanese*) 2-105155
 steel, low C, decarburisation of subcrit. temps., resolidification of ferrite 2-72689
 steel, low C, sheets, microstruct. and recryst., influence of second phase particles (*French*) 2-93534
 Steel, Low C, weld zone crack resistivity (*Korean*) 2-57461
 steel, low C sheets, Mn and N effect on recrystallisation texture (*Japanese*) 2-105181
 steel, medium C, mech. props. in dynamic deform., struct. and ultrasonic vibrs. influence 2-72772
 steel, Mn-(Nb), intercrit. austenitisation, quantitative study 2-77854
 steel, pearlitic eutectoid, phase interfaces and dislocations positron trapping 2-99619
 steel, Si, electrical, texture form., preliminary annealing effect 2-111198
 steel, Si-Al bearing electrical, internal oxidation and mag. props., annealing conditions influence 2-72724
 steel, stainless, duplex austenite-ferrite alloys, weld metal microstructures, heat treatment, TEM, EDS study 2-67406
 steel wire, high-elasticity, rapid annealing for prod. lines in thermomech. treatment (*French*) 2-72742
 steels, austenitic powder, oxide inclusions effect on mech. props. and annealing 2-67422
 superconducting magnet materials, low temp. irradiation effect 2-80182
 superconductor, Al₅ type, for fusion reactor magnets, ion and neutron damage studies 2-110549
 surfaces, atomically clean, prep., struct. and props. 2-82103
 ternary diffusion paths, analytical representation 2-104082
 TiN formed by evaporation as a diffusion barrier between Al and Si 2-92394
 Zircaloy-2, oxygen embrittlement on long-term exposure to fission product oxides 2-69707
 Zircaloy-4, Cr, Sn and O content effect on solid state phase boundary temp. 2-83083
 Zircaloy-4, solid state phase equilb., 750 to 1050°C 2-83082
 Ag film, bicryst., gas bubble growth 2-115607
 Ag, proton irradi., In-vacancy interaction, TDPAC study 2-56004
 Ag-Pd alloy, equiatomic, metallurgical instabilities, SRO and elec. resist. anomalies 2-93490
 Ag-Si phase, interdiffusion form., surface struct. anal. by quantitative AES 2-67159
 AgCl(Br), neutron irradi., Frenkel defects, struct., and annealing, NMR study 2-91952

annealing continued

AgSbSe, film, growth and cryst. 2-115620
 Ag(110) with adsorbed H₂O, adsorption and reaction studies 2-87034
 Al, deformed, elec. resistivity recovery during isochronous annealing, kinetics (*Russian*) 2-92563
 Al epitaxial film on Ge[111], reactions and surface atomic struct. 2-86991
 Al, fast neutron irradi., positron annihilation 2-87894
 Al, ion implantation radiation damage, Mossbauer study and math. model 2-81835
 Al, ion implanted, radiation damage and annealing studies 2-76532
 Al moving grain boundary double successive detachment from adsorbed impurity 2-115254
 Al, recrystallised, grain vol. distrib. and grain growth, effect of prior cold work 2-99446
 Al surface, oxidation state, ang. correlation of positron annihilation study 2-72877
 Al-Ag (15 at.%), residual elec. resist. and struct., isochronous annealing effects (*Russian*) 2-61863
 Al-Al₂O₃, dispersion strengthened, fatigue strength, effect of heat treatment temp. (*Japanese*) 2-93610
 Al-Al₂O₃-Pb tunnel junctions, voltage annealing with alternating polarity 2-104500
 Al-AlN-Al, ion plated thin film capacitor, dielec. and AC cond. props., annealing effects 2-61825
 Al-Ce(Gd)(Dy)(Tm) thin films, crystallographic phases following electron beam annealing 2-55888
 Al-Cr(Ni)-Al layer system anal. by Rutherford backscatt. spectrometry 2-105177
 Al-Cu, θ' precipitates, coherency loss, dislocations, plastic deformation effects, internal friction study 2-71464
 Al-Cu films, amorphous, crystallisation 2-71837
 Al-Fe, moving grain boundary double successive detachment from adsorbed impurity 2-115254
 Al-Fe, solid solns., secondary quenching defects features 2-62153
 Al-Fe-Si alloys, commercial purity, DC casting, form. of intermetallic cpds. 2-88060
 Al-GaAs MBE Schottky barrier height, O stabilization 2-87367
 Al-Ni-Co-Cu-Ti, Alnico 8 alloy, α - γ transformation, α ₂ phase precipitation, coercive force study 2-91858
 Al-oxide-Pb tunnel junctions, water infused, thermal and voltage annealing 2-82472
 Al-Ru (10.15 wt.%), rapidly quenched, phase transform 2-77823
 Al-Si (11.3 at.%), fast quenched eutectic alloy, effect of heat treatment on supercond. props. 2-61654
 Al-SiO₂-Si capacitors, avalanche injected, positive charge effects on flat-band voltage shift meas. 2-87394
 Al-SiO₂-Si MOS struct., H₂ anneal effects on metal-semicond. work function difference 2-92771
 Al-SiO₂-Si system, hydrogenation of defects at the Si-SiO₂ interface 2-56373
 Al-Zn (4 wt.%), GP zones, ageing and reversion, elec. resist. meas. (*Japanese*) 2-83143
 Al-Zn (9.87 at.%), defect struct., vacancy migration, effect of H₂O in annealing atmosphere 2-76451
 Al-Zn-Mg, decomp. kinetics, effect of small Mg additions 2-99388
 (Al-Cu)-Al₂O₃ composite, SAP type, precipitation hardening 2-77836
 Al,Ga_{1-x},As,Si MBE layers, deep electron traps, annealing characts. DLTS study 2-95889
 Al₂O₃ (Si,Ti) thermoluminescent phosphor appl. for environmental and personnel dosimetry 2-96316
 Al₂O₃, polymorphic transitions, influence of MgO and SiO₂ additives 2-111169
 AlSb,As_{1-x}, vacuum deposition, optical and transport props., impurity states 2-82498
 As-S glasses, Raman inelastic light scatt. 2-104887
 As₂S₃, amorphous, photodarkening, configuration-coordinate model 2-57033
 AsSe chalcogenide glasses, hole drift mobility near photostructural transformations 2-87280
 As₂Se_{1-x} thin film, photoinduced defects, isothermal annealing characts. (*Russian*) 2-103745
 Au foil, elec. cond., 4.2 to 20K, Cl₂ annealing effect 2-104344
 Au/Co/SiO₂ thin film condensate, electrophys. props., heat treatment influence 2-104505
 Au-Ag two-layer film, grain boundary diffusion investig. by elec. resist. method 2-76874
 Au-Ag composite granular films, optical transmittance 2-72570
 Au-MgO cermet thin films, cosputtered, reflectivity meas., percolation threshold and grain size effects 2-82942
 Au-Si phase, interdiffusion form., surface struct. anal. by quantitative AES 2-67159
 B fibres, strength characts., changes during annealing (*Russian*) 2-72796
 a-B-H, ESR study, annealing effects on signal intensity and linewidth 2-87591
 BN, cryst. phases containing ¹⁰B, radiation damage by (n, α) reactions 2-115306
 Ba(NH₃)₂ solution, elec. resist., quenching effect (*Russian*) 2-115726
 BaPb_{1-x}Bi_xO₃ superconducting film, FR sputtered, supercond. and optical props. 2-66690
 BaPb_{1-x}Bi_xO₃ supercond. props., effect of O² conc. 2-115939
 BaTiO₃, ferroelectric film, prep. from solns. of metal alcoholates 2-72635
 Bi film, evaporated, elec. resistivity, temp. depend. 2-92792
 Bi₂GeO₂₀, photoluminescence spectra, effects of annealing, Al doping, X-ray and γ -ray irradi. (*Russian*) 2-61936
 Bi₂O₃-BaO system, rhombohedral phase, cryst. struct., superlattice existence, electron microscope study 2-60947
 Bi₂Te₃-based alloy, deform. and recrystn., influence of second phase particles Al₂O₃ and ZrO₂ 2-83170
 Bi₂Te₃Se, heat treatment influence on props. 2-72721
 C materials, neutron irradiated, restoration of struct. and props. during thermal annealing 2-86733
 C, neutron irradiated material, thermal and elec. cond. restoration during annealing (*Russian*) 2-66303
 Ca thin film, elec. cond. and defect density, annealing study 2-77206
 CaF₂Eu²⁺, annealing temp. and dopant conc., site selective spectroscopy, defect chemistry 2-104917
 Ca(NH₃)₂ solution, elec. resist., quenching effect (*Russian*) 2-115726
 CaO, ion irradi., F⁺ and F centre form. and annealing, UV spectra and volume study 2-76437

annealing continued

- CaSO₄ phosphor, thermolum. and thermally stimulated exoelectron emission, SO₂ radicals role 2-77602
 Cd₂Hg_{1-x}Te, growth by pressurised cast-recrystallise-anneal technique 2-111068
 CdHo₂S₄, spinel to rocksalt type struct. transition, electron microscopy and diffraction study 2-76651
 CdS thin film, work function, surface pot., annealing effects (*Russian*) 2-87373
 CdS-CuInSe₂ solar cells, annealing and interface effects, EELS, AES, SIMS and XPS study 2-83491
 CdS-CuInSe₂ solar cell, interface formation, comp. and stability, XPS, EELS and AES study 2-111554
 CdS(Se), evaporation kinetics of thin crystals and films on vacuum annealing, comp. changes meas. 2-110157
 CdS_{1-x}Te_x solid soln. films, vacuum deposited, condensation diagram and phase changes meas. 2-110208
 CdSe polycrystalline thin film transistor, conductivity behaviour 2-56735
 p-CdTe, annealed in various atmospheres, carrier traps, TSC study 2-66478
 CdTe, defect annealing, dynamic obs. at lattice resolution 2-91978
 CdTe epitaxial layers, charact. and annealing behaviour of deep levels 2-104288
 CdTe⁽¹¹⁾In, ion implanted, annealing 2-98126
 n-CdTe:(In) deep levels, H₂ annealing effects, DLTS study 2-87176
 CeBO₃, preparation from CeO₂ and B₂O₃, characterisation 2-72645
 Co sputtered film, high coercivity and hysteresis loop squareness, mag. props. 2-82666
 Co₂/Si(SiO₂) thin film condensate, electrophys. props., heat treatment influence 2-104505
 Co-Gd amorphous films, struct. and mag. props., Mossbauer study (*Russian*) 2-77429
 Co-Ni, sputtered film, high coercivity and hysteresis loop squareness, mag. props. 2-82666
 Co-P alloys, amorphous, elec. resist. 2-77014
 Co-P amorphous alloys, annealing effect on anisotropy 2-88229
 Co-Zr(Hf) sputtered amorphous film, struct., soft mag. props. and magnetostriiction meas. 2-87534
 Co₈₈Ni₁₀Fe₂Si₁₁B₁₆, amorphous, annealing effects and short range ordering 2-82588
 Co₈₈Ni₁₀Fe₂Si₁₁B₁₆, amorphous ferromag. alloys, anal. of coercivity 2-87538
 Co₈₈Ni₁₀Fe₂Si₁₁B₁₆ ribbons, domain pattern annealing effect 2-92978
 CoSi₂, epitaxial films, Ar-ion implanted, elec. and struct. props. 2-87413
 Cr epitaxial film on W (110) face, adsorbed O and Cs effect on work function, two-stage oxidation phenomenon (*Russian*) 2-61298
 Cr transport through Cr₂O₃ scales, scale morphology change during high vacuum treatment 2-86927
 Cr-Cu films, elec. cond., annealing characts. and lattice distortion energy spectra 2-92783
 Cr-Ni (45 wt.%) film, amorphous sputtered, crystn. 2-110211
 Cr-Rh-Zr dil. alloy, grain boundary relax., internal friction study (*Russian*) 2-93546
 Cu foil, annealed, electron irradiated, effect of vacuum environment on void nucleation 2-76506
 Cu, polycrystalline, low temp. fatigue, grain size effect (*Japanese*) 2-77920
 Cu powder, atomised, prod. and characts. 2-67243
 Cu, powder compacted specimens, ductile fracture, influence of porosity 2-77948
 Cu, recrystallisation, twin and grain boundary dislocation movement obs. 2-71474
 Cu, recrystn. mechanisms, origin of cube texture 2-116456
 Cu, single crystals, plastically deformed, dislocation anelasticity in kHz range (*German*) 2-83162
 Cu stabiliser in supercond. magnet, radiation damage, review 2-80183
 Cu, subjected to critical work-hardening, annealing phenomena (*French*) 2-99463
 Cu, superconducting magnet stabiliser, fusion neutron damage 2-80184
 Cu, vacuum deposition on muscovite mica, RHEED study of epitaxy 2-115617
 Cu vacuum evaporated films, defect density and elec. props. from annealing study of elec. resistance 2-110495
 Cu, wrought, engng. fatigue props. review 2-88161
 Cu, Young's modulus of single crystal, low temp. peak, deform. and annealing effect 2-88127
 Cu/Cr epitaxial film, ion mixing during RF sputtering deposition 2-82161
 Cu-Al, dispersion hardened, struct. stability and resist. to deform. (*Russian*) 2-77872
 Cu-Al (9.8-11 wt.%), dual-phase, struct.-prop. relationship, individual phases 2-77833
 Cu-Al (9.8-11 wt.%), dual-phase struct.-prop. relationship, alloy behaviour 2-77834
 Cu-Al lamellar eutectoid alloys, spheroidization by thermomech. treatment 2-93535
 Cu-Be (2 wt.%) alloy strips, residual stress profiles along rolling direction, X-ray diffraction obs. 2-67367
 Cu-C steel multilayer composite, dislocation density and diffusion processes study by thermo-EMF method 2-67381
 Cu-Cr sputtered thin film, precipitate morphologies, annealing effects, electron microscopy and EDX study 2-67353
 Cu-Fe, containing α -Fe particles, back stress hardening and static and dynamic hardening 2-67358
 Cu-Mg alloy, disintegration kinetics upon natural ageing, X-ray diffuse scattering study 2-77850
 Cu-Mn-Al, exchange anisotropy, hysteresis loops and coercive force study 2-66866
 Cu-Ni multilayer films, interdiffusion, Auger electron depth profiling 2-82038
 Cu-Ni Zn system, ternary diffusion paths prediction 2-104082
 Cu-Ni-Fe, superplasticity and form. of microduplex struct. (*Japanese*) 2-72769
 Cu-Pb, microstruct., mech., elec., and mag. props., depend on synthesis conditions 2-56748
 α -Cu-Su-Al, anneal hardening (*Korean*) 2-116464
 Cu-Ti, strength and ductility, 4 to 70K (*Japanese*) 2-105234
 β -Cu-Zn, quenched, elec. resist. and hardness recovery on annealing 2-92568
 CuAu, fast neutron irradiated, defect production, resist. meas. (*French*) 2-76510

annealing continued

- Cu₃Au, fast neutron irradiated, defect production, resist. meas. (*French*) 2-76510
 CuInSe₂, impurity states, after annealing, elec. cond. study 2-66475
 CuInTe₂, electrical characts. 2-92648
 CuInTe₂:Zn(Cd), elec. props., hole mobility and conc., annealing effects 2-87279
 Cu₂MnIn(Al)(Sn) films, struct., mag. and transport props. 2-60889
 Cu₂Te, phase transitions during heating and isothermal annealing 2-81944
 Cu₂Te_{0.68}S_{0.32}, phase transitions during heating and isothermal annealing 2-81944
 Cu₃₁Zr₆₇, metallic glass struct., tunnel states, computer model 2-81688
 Cu₆₀Zr₄₀, amorphous, initial quench effect on thermal behaviour 2-91813
 Dy, paramagnetic, deviations from Curie-Weiss law 2-56825
 ErSi₂, surface morphology, pitting, SEM study 2-92313
 Eu, electron irradi. damage, displacement threshold energy 2-81827
 Fe, cast, nodular graphite, min. annealing (*French*) 2-88105
 Fe, deformed, recovery, positron annihilation study (*Chinese*) 2-111226
 Fe overlayer on Pd(111), mag. behaviour, photoemission, LEED and Auger study 2-110611
 Fe powder, characts., porous struct. and particle shape effects 2-83062
 α -Fe-C, electron irradi., vacancies and impurities, positron lifetime study 2-66065
 Fe-Al (10 to 50 at.%), quenched from 1100°C, 10 to 26.5 at.% Al during tempering (*German*) 2-111215
 Fe-Al (40 at.%), ordered, recovery after 20K neutron or electron irradi. 2-56043
 Fe-Al-Si alloy, sputtered granules, characters, before and after annealing (*Russian*) 2-67368
 Fe-B, amorphous and cryst., electron irradi., vacancies, elec. cond. study 2-92038
 Fe-B alloy, amorphous, heat treatment conditions influence on crystn. and struct. (*Russian*) 2-65868
 Fe-B layers, effects of annealing (*Korean*) 2-62150
 Fe-C, dil., primary recrystn. textures 2-57372
 Fe-C, ferrite, C cluster formation, critical cluster size, computer calc. 2-67340
 Fe-Co monocryst. alloy, surface comp., ion bombardment and annealing effects, Auger study 2-71782
 Fe-Cr, packet martensite, struct. changes during annealing, electron microscopy study (*Russian*) 2-99425
 Fe-Cr (45.5 at.%), σ phase form., Mossbauer effect study 2-104776
 Fe-Cu, precipitation during annealing, after low temp. electron irradi. (*Russian*) 2-116445
 Fe-Ni, packet martensite, struct. changes during annealing, electron microscopy study (*Russian*) 2-99425
 Fe-Ni-B based amorphous ferromags., aging effects on mag. props. 2-98909
 Fe-Ni-Co-B-Si-Al, amorphous, initial permeability and long-time stability, freq. depend. 2-72258
 Fe-Ni-Co-Ti (23, 10, 10, wt.%), martensitic transformation 2-83118
 Fe-Ni-Cr, Alloy 800, mechanical behaviour at 838K 2-77888
 Fe-Ni-Mo-B, metallic glasses, annealed, phase transforms 2-67302
 Fe-P alloys, amorphous, elec. resist. 2-77014
 Fe-Si, oxide layer composition, influence on mag. props. 2-56893
 Fe-Si alloys, polycrystalline ribbon form, rapid quenching technique (*Japanese*) 2-116475
 Fe-Si bicrystalline sample, magnetisation reversal dynamics 2-72259
 Fe-Si ribbon-form alloys, rapid quenching preparation techniques, soft mag. props. (*Japanese*) 2-67240
 Fe-Si-Al nonoriented electrical sheet, oxide film form. and props., effect on material quality, AES obs. (*German*) 2-105386
 Fe-Si-Al Sendust ribbon, rapidly quenched, annealing effect on coercive force 2-72273
 Fe-Si(6.5 wt.%), ribbon formed by melt spinning technique, mag. props. 2-110603
 Fe-V-C, cold rolled, containing carbides, recrystallisation 2-83137
 Fe₈₀B₂₀, amorphous, aging effects on mag. props. 2-98909
 Fe₈₀B₂₀, amorphous, crystn., annealing, elec. resist. meas. 2-55853
 Fe₈₀B₂₀, amorphous, irradiated, structural relax. 2-55864
 Fe₈₀B₂₀ metallic glasses, response to irradiation with 800 MeV protons 2-80188
 Fe₇₈B₂₀Mo₂, amorphous, crystn., annealing, elec. resist. meas. 2-55853
 Fe₈₁B₁₄Si₄, metallic glass, struct. relax., effect of quench rate 2-81683
 Fe₈₁B₁₃Si₅C₂, Metglas 2605SC, at rearrangements and cryst. transforms., Mossbauer study 2-103655
 Fe₈₃B₁₃Si₃C_{1.5}, metallic glass, crystn. kinetics study using thermoelec. power meas. 2-86575
 Fe₄Co₇₀Si₁₅B₁₀, amorphous struct., X-ray diffraction study 2-65866
 Fe₄Co₇₀Si₁₅B₁₀, amorphous zero magnetostriction alloy, mag. aftereffect 2-72290
 Fe(Mn,Pt_{1-x})₃, antiferromag. structure, neutron diffraction study (*Russian*) 2-87477
 Fe₄₀Ni₄₀B₂₀, amorphous, neutron irradi. and annealed density changes 2-109850
 Fe₄₀Ni₄₀B₂₀, metallic glass, rel. between struct. relax. and sp. ht. 2-72750
 Fe₁₆Ni₆₂B₁₈Si₄, amorphous, struct. relax., Mossbauer study 2-72383
 Fe₁₃Ni₆₅Cr₁₄P₂B₈, metallic glass, crystn., hardness and tensile deformation meas. 2-91784
 Fe₄₀Ni₁₈Mo₂B₁₃, metallic glass, crystn., TEM study 2-65867
 Fe₄₀Ni₄₀P₁₀B₆, amorphous ferromag. alloys, anal. of coercivity 2-87538
 Fe₄₀Ni₄₀P₁₀B₆, metallic glasses, response to irradiation with 800 MeV protons 2-80188
 Fe₄₀Ni₄₀P₁₀B₆, Metglas 2826, early crystn. behaviour, nucleation mechanisms 2-93500
 Fe_{80-1-x}Ni_{1-x}P_{20-y}B_y, amorphous ferromag. alloys, mag. aftereffect spectra 2-56894
 (Fe,Ni_{1-x})₇₅P₁₀B₁₅Al₃, amorphous, spin wave and scaling law anal., magnetisation meas. 2-92888
 Fe₂O₃-MgO-MnO-CoO (41, 3, 1 mol.%) ferrite film, thermal and thermomag. treatment 2-72294
 Fe_{1-x}S, Mossbauer study of Fe vacancy distrib. 2-81783
 GaAs, ion implanted and annealed, defect conc. distrib. study 2-71923
 GaAs, amorphous and cryst., melting point, laser and electron beam annealing 2-109829
 GaAs, cylindrical sample, adsorption of O₂, orientation depend., AES meas. 2-115565
 GaAs, electron irradi., elec. props. and defect annealing 2-104379

annealing continued

- GaAs, gamma-irradiated, near-intrinsic emission intensity, nontrivial annealing induced increase 2-93260
 GaAs, heavily doped, electron pulsed annealed, elec. quality meas. 2-98161
 GaAs implantation annealing using incoherent light focused by elliptical mirrors 2-76490
 GaAs, ion implanted, transient and furnace annealing behaviour 2-56022
 GaAs, ion irradi., Frenkel defects and annealing 2-115316
 GaAs, ion-implanted, review of furnace annealing, thermal pulse annealing and laser annealing 2-67400
 GaAs, metallised, volatile component loss and contact resistance during annealing 2-92753
 GaAs, proton irradi., damage distrib. and proton range, TEM study 2-76507
 GaAs, proton-bombarded, deep levels study 2-66474
 GaAs, Raman spectrum, phonon modes, ion implantation and annealing effects 2-82833
 GaAs, semi-insulating behaviour and thermal stability, stoichiometry effect 2-110348
 GaAs surface (110), O₂ adsorption, density of valence states, photoemission study 2-82142
 GaAs:B, electron irradiated, IR study of annealing 2-56033
 GaAs:B⁺ ion implanted, lattice damage profile, multilayer anal., ellipsometry study 2-92059
 GaAs:B(Se), depth profiling using spectroscopic ellipsometry 2-79647
 GaAs:C layers, elec. props., and electron microscopy 2-61628
 GaAs:Cr, deep level photoluminescence, vacancies and annealing 2-99190
 GaAs:Cr, ion implanted, annealing, Cr redistrib., SIMS study 2-76484
 GaAs:Cr, ion implanted, postannealed material state 2-103793
 GaAs:Cr, semi-insulating, inhomogeneities, scanning leakage current meas. 2-109800
 GaAs:Cr, Si, damage and Si lattice location studies 2-76479
 GaAs:Cr, Si, ion implanted, AlN capped annealing, carrier profiles 2-66023
 GaAs:Cr, Si implanted, thermally annealed, semi-insulating, deep levels 2-76966
 GaAs:Cr,Si⁺,Se⁺,Mn, ion implanted, Mn redistribution after annealing, SIMS study 2-86699
 GaAs:Fe(O), ion implanted and electron irradi., deep levels and electron traps, annealing 2-98584
 GaAs:S, ion implanted, elec. carrier and atomic profiles correlation 2-72000
 GaAs:S, ion implanted, elec. props. and impurity distrib. 2-98141
 GaAs:Se implanted, dose depend. of epitaxial regrowth 2-56378
 GaAs:Se⁺, ion implanted, transient annealing using graphite strip heater, elec. cond. study 2-82348
 GaAs:Se⁺, ion implanted, high temp. annealed, damage, defects and elec. props. 2-98097
 GaAs:Si, defect struct., effect of annealing Zn and Cu diffusion 2-55976
 GaAs:Si, ion implantation, elec. props., for dual gate MESFET (Chinese) 2-109817
 GaAs:Si, ion implanted, surface polarizations, frustrated internal refl. spectra study 2-71886
 GaAs:Si, study of encapsulation for annealing 2-77082
 GaAs:Si(Sn), ion implanted, Raman spectra study 2-110837
 GaAs:Zn, ion implanted, depth distrib., annealing, SIMS and Rutherford backscattering obs. 2-56000
 n-GaAs-metal interfaces, physical charact. (Chinese) 2-66634
 GaAs-Si₃N₄ interface quality improvement by surface treatment and annealing 2-110487
 GaAs(110), adsorbed Al, surface struct., LEED study 2-110120
 GaP, ion irradi., Frenkel defects and annealing 2-115316
 GaP, metallised, volatile component loss and contact resistance during annealing 2-92753
 GaP, proton irradi., elec. cond. and electron conc. meas. 2-77053
 GaP substrate, impurity outdiffusion by postgrowth annealing 2-115460
 GaP:Zn, density, plastic deform. effects, defect struct. 2-71545
 p-GaP-Au, ion beam contacting by Be implantation 2-115889
 GaS:Cr, impurity redistribution after implantation with Ga₂As₂O, SIMS and TEM study 2-115276
 (GaSb)_{1-x}Ge_x epitaxial film, ion mixing during RF sputtering deposition 2-82161
 GaSe, Ni(Cr), effect of gamma irradiation (Russian) 2-76498
 GaSe:Ni(Fe)(Cr), luminescence spectra, absorption edge, struct. defects (Russian) 2-93273
 Gd-Co, amorphous alloy films, changes in struct., mag. anisotropy and mag. domains (Chinese) 2-62238
 Gd_{1-x}Co_x sputtered film, amorphous, radioactive tracer diffusion 2-92429
 Ge, defect annealing, electron induced, stimulated by 'additional lighting' (Russian) 2-103825
 Ge detector telescopes, appls., radiation damage, annealing 2-80391
 Ge, detectors, status and problems 2-90365
 Ge, electron irradi., displaced atom profiles, positron annihilation study 2-110972
 Ge film, amorphous, electron beam annealing in TEM 2-71503
 Ge, gamma irradi., defect levels, DLTS study 2-76980
 Ge, gamma irradiated, use of thermal annealing for radiation hardening 2-56032
 Ge, gamma-ray induced defects, thermal and electrical stability 2-92033
 Ge high-purity crystals, H conc. and distrib. 2-70051
 n-Ge:As(Sb), 1.5 MeV electron irradi., defect levels, DLTS study 2-92508
 Ge:Cl, amorphous, ion implanted, gap-states, elec. cond. study 2-76987
 Ge:Cu, ion-diffusion and annealing 2-98337
 Ge:P, ion implanted, elec. props. 2-77089
 Ge-P-S glass:Mn²⁺, ESR study 2-104694
 Ge-S glasses, local order, ESR study 2-65865
 Ge-Si:H, amorphous sputtered alloys, elec., optical and struct. props. 2-98644
 Ge_{1-x}Te_x, amorphous film, diffusion of Au, nucl. backscatt. anal. (French) 2-104069
 HfO₂-MgO system, struct. and phase props. (Ukrainian) 2-57336
 HgCdTe, implantation induced damage, effects of implantation and annealing temps. 2-86695
 Hg_{1-x}Cd_xTe, annealing and ion implantation damage, Rutherford backscatt. and channelling study 2-86763
 Hg_{1-x}Cd_xTe, conductivity-type conversion, annealing effects 2-87272
 p-Hg_{1-x}Cd_xTe, electron irradi., carrier lifetime, annealing effects 2-56610
 Hg_{1-x}Cd_xTe:B, ion implantation, elec. cond., annealing effects, SIMS study 2-66026

annealing continued

- InAs, ion irradi., Frenkel defects and annealing 2-115316
 n-InAs:Cd, ion implanted, photo-EMF, spectral response 2-92697
 InAs:Cd,Te, donor-acceptor pair form., annealing, elec. cond. and Hall coeff. study 2-61404
 In_{0.53}Ga_{0.47}As, Be⁺ ion implantation 2-55989
 In₂O₃:Sn films, annealed, elec. resist. and defect model 2-66671
 InP, annealing encapsulants, AES and SIMS study 2-116584
 InP, annealing encapsulants, photoluminesc. study 2-116585
 n-InP, electron bombarded, defect states, DLTS study 2-87171
 InP, electron irradi., defect form. and annealing 2-98159
 InP, ion irradi., Frenkel defects and annealing 2-115316
 InP, Raman spectrum, phonon modes, ion implantation and annealing effects 2-82833
 InP⁺Be, ion implanted, migration during annealing, SIMS study 2-98143
 InP:Be(Ci)(Si)(Ge)(Sn), ion implanted, annealing behaviour obs. 2-98135
 InP:Cd, VPE growth and photolum. characterisation 2-88002
 InP:Fe, Be⁺(He⁺) 2-99168
 InP:Fe, electron irradiated, EPR study 2-104690
 InP:Mg(Si), implanted, impurity redistrib. during annealing, SIMS study 2-98144
 p-InSb, radiation damage and recovery effects 2-66066
 InSb, residual impurities and inhomogeneities, galvanomagnetic meas. 2-110369
 InSb, thermal acceptors influence on electrophys. props. during annealing 2-56577
 InSb:Ge(Sn)(Co), gamma-ray, electron and proton beam irradi., defect annealing, elec. props. (Russian) 2-103817
 p-InSe:Zn, annealing behaviour, photoluminesc. study 2-92276
 In₂Se₃, thin films, growth and props. 2-71840
 KBr:Sn²⁺, cryst., absorpt. spectrum, annealing effects 2-87821
 KCl, γ-ray irradi., impurity-vacancy dipoles, ionic cond. study 2-109790
 KCl:Eu²⁺, γ-irradi., optical, EPR, and ITC meas. 2-109831
 KCl:Mn²⁺, positron annihilation, impurity induced positive ion vacancies 2-99213
 K₂WO₄-UO₂WO₄, reactions, and phase diagram, DTA study 2-88066
 Li₂ compounds, cryst. phases containing ⁶Li, radiation damage by (n,α) reactions 2-115306
 LiF and ⁷LiF TLD polycryst., SEM obs. of neutron irradi. damage, surface defects, TL and response and recovery 2-115298
 LiF implanted single crystals, oriented In metallic aggregates formation 2-76680
 LiF, TLD-100, thermoluminescence, order of kinetics 2-61990
 LiF:Mg,OH, radiation point defect condensation at dislocations (Russian) 2-71944
 LiNbO₃, photorefraction, annealing, charge carrier trapping (Russian) 2-104833
 LiNbO₃ single crystals, optical inhomogeneity, high temp. diffusion annealing effect 2-65322
 Mg, electron irradiated, Frenkel defects study by diffuse X-ray scatt. 2-65989
 MgO, cathodoluminescence at hardness indents, correlation with dislocation struct. 2-72563
 MgO:Li⁺ crystal, dielec. behaviour 2-87661
 MgSiO₃-MgGeO₃, phase relation diagram, physicochemical anal. 2-66175
 Mn-Zn spinel ferrites, prep. by wet chemical method, Mossbauer study 2-56990
 Mo alloy weld, B impurity distrib. (Russian) 2-92017
 Mo alloys, improvement of mech. props. in CTR gaseous environment 2-108106
 Mo, cold rolled and annealed, dislocation struct., electron microscopy study 2-76450
 Mo, detrapping of implanted He and N 2-81808
 Mo, diffusion of interstitial atoms, elastic aftereffect meas. (German) 2-71734
 Mo film on Si, ion beam induced interfacial reactions, TEM obs. 2-110050
 Mo, ion bombarded by 10 MeV ⁴He⁺ ions, depth depend. of radiation hardening 2-88095
 Mo, ion implantation effect on microstruct., TEM obs. 2-71522
 Mo, neutron irradi., anneal hardening, influence of purity, cold work and alloying elements 2-103843
 Mo, neutron irradi., recovery behaviour, impurity effects, elec. resist. study 2-77843
 Mo, neutron irradi., void coarsening during annealing 2-86734
 Mo powder, fine, sintering 2-116413
 Mo, recrystallised foils, grain boundary migration in presence of Ni 2-83146
 Mo, self-ion implanted, in situ annealing 2-92011
 Mo single crystals, microcrack healing in heating under uniaxial compression 2-116550
 Mo wire, rolling and flattening to ribbon, electrostimulated deform. role 2-116465
 Mo:N,H, defect-gas impurity interactions, positron annihilation study 2-67142
 Mo-Hf-C, powder metallurgical, props. 2-111228
 Mo-Ti-Zr-C, powder metallurgical, props. 2-111228
 Mo-W bilayer film, solid state disilicide form., annealing and ion implantation effects 2-92371
 MoSi₃ films, sputtered and coevaporated, cryst. struct. changes on annealing 2-115590
 NaCl:Ca, aggregation phenomena during isothermal annealing 2-76486
 NaCl:Mn, γ and X-ray irradi. charge compensation thermoluminescence and optical absorption spectra 2-61988
 NaCl:O²⁻, γ-irradi., annealing, radiolysis products studied by mass spectrometry (Russian) 2-78167
 NaCl:Sm, thermolum. and optical absorption studies of Zi centres 2-72568
 α-Na₂Si₂O₇, single crystal growth from melt 2-111063
 Nb alloys, cast, heat treatment effect on struct. and props. 2-72733
 Nb, film, stress modification by ion bombardment during deposition 2-82180
 Nb, neutron irradi. induced defects, detrapping of N and O atoms during post-irrad. annealing 2-103839
 Nb, vacancy and interstitial annealing and migration, PAC study 2-86663
 Nb-Fe inhomogeneous system, laser irradi., internal field at ⁵⁷Fe, atom redistrib. and antiferromag. suppression (Russian) 2-66929
 Nb-Ga high T_c supercond. wires, prep. by heating and quenching in liq. He 2-77770

annealing continued

- Nb₃Al films, ion irradi., supercond., struct. disorder and phase transitions 2-98786
 Nb₃Si, Al₅ phase, high press. annealing prep., struct. and supercond. props. 2-77778
 Ni, cold deformed, local cryst.-amorphous state phase change obs. 2-57374
 Ni, electron irradiated, stage III activation energy 2-66069
 Ni film, ion implanted, influence of disorder on resistivity 2-61616
 Ni films and coatings, porosity and internal stresses, annealing and thermal cycling effects (*Russian*) 2-76870
 Ni first wall, passive He pumping, regeneration 2-71190
 Ni, He bubble growth at dislocations, kinetics and phys. mechanisms 2-109826
 Ni, subjected to critical work-hardening, annealing phenomena (*French*) 2-99463
 Ni surface (110), clean and O covered, Li⁺ and He⁺ ion scatt. 2-99263
 Ni, void swelling, pulsed ion beam effects 2-85214
 Ni:D⁺, ion implanted, impurity defect trapping, ion beam anal. studies 2-81812
 Ni:He⁺, D⁺, ion implanted, D trapping, ion beam anal. studies 2-81813
 Ni-Al, ion implanted, annealing kinetics, chem. reaction-rate formalism 2-67365
 Ni-alloys, cast, grain boundary voids formation after cold-working and annealing 2-57375
 Ni-base pseudobinary eutectics, thermal stability in temp. gradient 2-67284
 Ni-C, sintered compacts, nodular graphite form. (*German*) 2-77845
 Ni-Cr, quenched, short range order form. and vacancy annihilation on annealing, elec. cond. study 2-115723
 Ni-Fe, surface (100), oxidation 2-116612
 Ni-Fe (25 at.%), ESCA studies, surface prep. treatments, oxidation effects 2-83295
 Ni-Nb-Cr-Mn weld metals, struct. stability (*Slovak*) 2-116446
 Ni-P alloys, amorphous, elec. resist. 2-77014
 Ni-Pt interaction with Si 2-86953
 Ni-Ti, close to equiatomic, hardening and shape memory effect 2-72737
 Ni-W-Co-Cr-Al-Nb-C eutectic CoTaC-741 alloy autoradiographic invest. of Pm distrib. 2-105176
 Ni-WC cermet, electrocodeposition and mech. props. 2-93462
 Ni₃Cr, laser damages, comparison with tensile deform. and neutron irradiation effects 2-66047
 NiFe, 3d electron density charge on atomic ordering, Mossbauer study 2-61804
 (Ni₉₀Fe₁₀)₈₀P₁₀B₁₀, amorphous, magnetization, annealing influence 2-104660
 NiGa, vacancy conc. and mobility 2-103751
 NiO, diffusion of ⁵⁷Co along grain boundaries 2-76747
 Ni_{1-x}O, sintered, grain growth, influence of O₂ partial press. 2-116476
 Ni₈₀P₂₀, metallic glass struct., tunnel states, computer model 2-81688
 NiSi₃ epitaxial layers on Si(001) substrate, pulsed ion beam annealing, TEM and Rutherford backscattering study 2-66383
 NiSi, Al contact using thin W barrier 2-87393
 NiSi₂, epitaxial films, Ar-ion implanted, elec. and struct. props. 2-87413
 NiSi₂(NiSi)(Ni₂Si), ion bombardment damage and annealing, sheet resist. study 2-56044
 Pb on graphite, morphological change mechanisms during equil. shape establishment 2-91839
 Pb_{1-x}Mo_xS₈, superconducting critical parameters (*Russian*) 2-61646
 PbS, lattice period, influence of composition and γ -irradiation 2-76382
 Pb₃Sn₃Te film, struct. and elec. props., Ar⁺ bombard. and annealing effect 2-56731
 Pb₃Sn₃Te epitaxial films produced by vacuum evaporation, high mobility produced by annealing 2-82486
 Pb_{1-x}Sn_xTe:Cd, photoluminescence study 2-104958
 PbTe film, charge carrier conc. and mobility variations after deposition 2-66680
 PbTe, H⁺(Ag⁺)(Sn⁺) ion-implanted, elec. props. 2-104377
 PbTiO₃, amorphous state and crystn. process, Raman scatt., SEM, and dielec. meas. 2-81677
 Pd thin films, elec. resist., annealing and thickness effects 2-98764
 Pd₈₀Au₂₀Si₁₈ metallic glass, DSC, relax. and struct. change 2-65864
 Pd₈₀Ni₂₀ metallic glass, struct. relaxation mechanism 2-55856
 Pd-Si (PdSi) 2-56044
 Pd-Si epitaxial film, ion beam induced, growth mechanisms and thermal stability 2-115604
 Pd-Si epitaxial films, Ar-ion implanted, elec. and struct. props. 2-87413
 PrBO₃, preparation from PrO₃ and B₂O₃, characterisation 2-72645
 Pt alloys, thermal and fast neutron irradiated, interstitial-impurity reactions during stage I 2-61041
 Pt, neutron irradi., stage I recovery, effect of impurity atom size 2-103837
 Pt sputtered thin film, microstruct. and dislocation density, X-ray diff. study 2-104201
 Pt-Si(PtSi), ion bombardment damage and annealing, sheet resist. study 2-56044
 Se, amorphous thin film, photodependence of structural relax. 2-81678
 Se, amorphous thin film, photoconduction spectral response, annealing near glass transition temp. 2-87330
 Se corrugated surface, surface flattening kinetics under heating, light scatt. study 2-82089
 Se-As alloy film, amorphous, capacitance changes during struct. relax. 2-91785
 Si, amorphous and cryst., melting point, laser and electron beam annealing 2-109829
 Si, amorphous film, laser induced controlled nucleation and growth process 2-56408
 Si, amorphous films, RF-bias sputtered, elec. cond. photoconductivity, ESR spin density, annealing effects 2-56391
 Si, brittle fracture crit. stress, ion implantation and surface treatments effect 2-81882
 Si, Czochralski crystals, intrinsic gettering study 2-76430
 Si, Czochralski grown, yield stress, O precip. and dissolution effects 2-57365
 Si detectors, status and problems 2-90365
 Si, diffusion of Ni, dissociative mechanism, expt. study 2-56259
 Si, electron and γ -irrad., defect prod. and lifetime control 2-109833
 Si, electron beam annealing using pulsed generator 2-84739
 Si, epitaxial stacking faults, elec. props., crystallographic struct., interaction with point defects 2-92379

annealing continued

- Si film, amorphous, annealing behaviour of spin density and optical gap, effect of O contamination 2-87735
 Si film, deposited in SiCl₄-H₂ RF discharge, struct. and optical props. 2-61313
 Si film, on SiN layer, stripe shaped cryst. growth by scanning electron beam annealing 2-87092
 Si film, polycryst., grain growth under CW electron beam annealing, modified SEM study (*Japanese*) 2-115597
 a-Si films, localised states investigation using field effect technique (*Chinese*) 2-66670
 Si, formation of buried SiO₂ layers, optimisation of implantation conditions 2-61004
 Si, gamma and proton radiation defects formation, dislocation effects, elec. cond. and Hall coeff. study 2-86729
 Si, heat-treated, Czochralski grown, compression tests, dislocation study, TEM and etch pit obs. 2-60985
 Si, implantation annealing by thermal imaging of incoherent light sources 2-66037
 Si, implanted wafers, annealing using incoherent light and Si cryst. growth on SiO₂ 2-103791
 Si, ion and neutron irradi., radiation damage, thermal and laser annealing, electron microscopy study 2-71512
 Si, ion bombarded and annealed, UPS and RBS invest. 2-103857
 Si, ion implanted, hyperfine interaction study after thermal and laser annealing 2-99008
 Si, ion implanted, isothermal annealing, IR refl., refr. index, regrowth rates, and carrier profiles 2-110836
 n-Si, laser irradi., shock wave defects, photocond. and annealing study 2-56017
 Si layers, high rate vacuum deposition for solar cells 2-105086
 Si layers implanted, pulsed microwave power annealing 2-71495
 Si, neutron irradi., radiation defects due to Si transmutation into P, elec. cond. study 2-115308
 Si, neutron transmutation doped detectors with improved carrier lifetime 2-59597
 Si, neutron transmutation doped, floating zone grown in H₂ and Ar, annealing behaviour (*Chinese*) 2-109820
 Si oxidation EELS and AES of ultrathin oxide films 2-83252
 Si p-i-n position sensitive detectors fabrication using ion-laser method 2-108271
 Si, polycrystalline, grain boundaries, chem., compositional and elec. props. 2-76458
 Si, proton irradi., rearrangement of intrinsic defects during annealing, Hall coeff. meas. 2-109863
 Si, radiation damage, defect study 2-66068
 Si, self-interstitials, transform. under electronic and thermal stimulation 2-103752
 Si, single cryst., floating zone growth, defects study (*Chinese*) 2-109796
 Si, slip line free, large-area multiple scan annealing with line focussed electron beam, elec. study 2-71505
 Si solar cell, (cryst. p)-(amorphous i-n) struct. 2-116801
 Si solar cell wafer annealing electron accelerator with solid dielectric energy storage 2-90325
 Si, solid phase lateral epitaxial growth onto adjacent SiO₂ film from ion implanted amorphous Si 2-77730
 Si, stacking fault annihilation, surface orientation depend. 2-55985
 Si, stacking fault morphology, annealing temp. effect 2-66021
 Si surface, (111), thermal epitaxial growth during ion bombardment, LEED study 2-87088
 Si surface, tetrahedrally textured, charact. of ion implanted n⁺ layers 2-76475
 Si surface cleanliness control by TEM (*Russian*) 2-99573
 Si, temperature rise induced by continuous Xe arc lamp radiation 2-56009
 Si: P and compensated Si:P,B, ion implanted, epitaxial regrowth obs. 2-92388
 Si:As, ion implanted, blink furnace annealing 2-62140
 Si:As, ion-implanted, laser and thermal annealing comparison, ion backscatt. and elec. meas. 2-55991
 Si:As, range distrib. and thermal annealing props. of low-energy implants 2-115258
 Si:As diffusion and impurity concentration profiles, Rutherford backscatt. study 2-82019
 Si:As films, heavily doped, thermally and laser annealed, elec. props. 2-115924
 Si:As implanted 4 in wafers, fast annealing using imaging furnace with 6.5 kW Xe arc lamp 2-98123
 Si:As⁺, implanted, pulsed electron beam annealing apparatus and utilisation (*Chinese*) 2-66059
 Si:As(W), ion implanted, defect features 2-103796
 Si:B, polycrystalline, on SiO₂, elec. resist., CW laser and furnace annealing effects 2-61025
 Si:BF₃⁺, ion implanted, wafer bending and stress, thermal annealing effect, X-ray topography 2-115311
 Si:B(P)(As)(Sb)(Ga), ion implanted, electron beam annealing by multiple-scan method 2-92036
 Si:Be, atom and carrier depth distrib. 2-92018
 Si:BF₃⁺, recrystallisation by light-flash annealing 2-98130
 Si:C,O, Czochralski grown, donor form. by annealing at 700°C 2-110283
 Si:Fe, electron beam irradi., EPR spectra 2-56920
 p-Si, Fe, interstitial Fe and Fe-acceptor pairs, DLTS and Hall effect study 2-66476
 Si:Fe,B, Fe donor activity on heat treatment, elec., DLTS and EPR meas. 2-71911
 Si:Ga (In)(Sb), ion implanted, dopant redistrib. after flash lamp annealing, He⁺ backscatt. study 2-86936
 Si:H, amorphous, field effect conductance, annealing and light induced changes meas. 2-98750
 Si:H, amorphous film, density of states, field effect determ. technique, annealing and illumination effects 2-61593
 Si:H, amorphous films, field effect density of states, annealing and light exposure effects 2-71850
 Si:H, amorphous Schottky barrier solar cells; CVD prep., electronic props. 2-83484
 Si:H, dislocation donor and acceptor states (*Russian*) 2-92525
 Si:H, FZ cryst., anomalous defect form. by H doping 2-71476
 a-Si:H, Ga(As), ion implanted, absorpt. and photocond. spectra 2-115820
 Si:H, implanted, radiation defects study by DLTS 2-92522
 a-Si:H,B(P) IR absorption spectra, effects of annealing 2-99156

annealing continued

- Si:H amorphous film, glow discharge deposited, H content and mech. stress 2-104210
 a-Si:H film, annealing effects on ESR, elec. and optical props. 2-66588
 Si:H films, amorphous, dependence of gap on hydrogen content, photoluminesc. and IR spectra study (*Chinese*) 2-110903
 Si:In, luminescence intensity enhancement by thermal treatment 2-57153
 Si:In, range distrib. and thermal annealing props. of low-energy implants 2-115258
 Si:In amorphous layers, thermal redistrib. of In 2-56003
 Si:N, low energy implantation, material composition, oxidation resist. and elec. characts. 2-86694
 Si:Ni, γ -irrad., elec. cond., photocond. and galvomag. props. 2-115761
 Si:O, C, Czochralski grown, O related donors, 700 to 800°C, expt. study 2-56469
 Si:O, Czochralski grown, defect obs. after high temp. treatment 2-76427
 Si:O crystals, indentation rosettes and dislocation locking by O 2-98111
 Si:O(B), ion implantation in 100 MeV range 2-81805
 n-Si:P, B ion implanted, deep level profiles 2-98571
 Si:P, electrically inactive impurities, precipitation explanation, TEM study 2-67341
 Si:P, electron irradi. damage, capacitance and dielec. loss meas. 2-92037
 Si:P, ion implanted, depth profiles, channelling and nuclear resonance studies 2-98142
 Si:P, ion implanted, distrib. profiles, elec. props. 2-103797
 Si:P, ion implanted, wavelength modulation spectrum 2-104916
 Si:P, ion implanted and annealed, IR reflectivity characterisation, physical model 2-77532
 Si:P, neutron transmutation doping, radiation defects and annealing, review 2-71513
 Si:P, neutron transmutation doping, radiation defects, electrical activity, annealing 2-86738
 Si:P films, heavily doped, thermally and laser annealed, elec. props. 2-115924
 Si:P shallow radiation induced defect levels, annealing, AC conductance study 2-76970
 Si:P⁺(As⁺) layers, ion implanted, electron beam annealing, elec. props. 2-92039
 Si:S, impurity related defect centres, DLTS and optical absorpt. study 2-71919
 Si:Sm, IR absorpt. spectra, 1.8 μ m absorpt. band, annealing effects 2-57137
 Si:Zn layers, ion implantation, damage annealing 2-103798
 Si/Pt-Si, contact reaction, Auger electron spectroscopy study 2-72058
 Si/PtSi/Ti-W/Al system, compound form. and interdiffusion, SEM, X-ray, Auger and microprobe studies 2-71740
 Si-As surface alloy, supersaturated, formation by ion implantation and pulsed electron beam annealing 2-81801
 Si-CaF₂/Si heteroepitaxial struct., prep. by vac. deposition and charact. 2-115612
 Si-CdS(Zn,Cd)_{1-x}S heterojunction solar cell, elec. props. 2-115875
 Si-Mn, supersaturated solid soln., Mn interstitials, disintegration kinetics (*Russian*) 2-92222
 Si-on-sapphire, cryst. defects reduction by room temp. ion implantation 2-92012
 Si-Se-In film, photo-induced memory effects obs. 2-56636
 Si-Si₃N₄ interface, defect evolution, synchrotron X-ray topographic obs. 2-98471
 Si-SiO₂, thermal oxide, γ -irrad., defects and impurities, EPR study 2-98158
 Si-SiO₂, dielec. props., built-in charge, pulsed annealing effects 2-72066
 Si-SiO₂ interface, Si ion implantation, defects, deep levels, annealing, C-V characts. study 2-61403
 Si-SiO₂ interface, slow and fast states induced by hot electrons, expt. study 2-87395
 Si-SiO₂ interface states, H₂ annealed, stress behaviour 2-56712
 Si-SiO₂, MOS system, interface state generation 2-87408
 SiC buried layer form. in Si, annealing, IR spectra study 2-103799
 SiC, diffusion annealing in B vapour, surface distrib. of B 2-56305
 SiC, electron irradi., band gap changes 2-92460
 SiC fibre reinforced glass, flexural strength and elastic modulus 2-83151
 SiC films, formation by ion implantation of Si cryst. and elec., photovoltaic and struct. props. (*French*) 2-72089
 SiC particles, paramagnetic defects treatment effects, ESR study 2-87593
 SiC:N (6H), exchange-coupled vacancy pairs, ESR study 2-116062
 Si₃N₄/H CVD film, chem. bonding changes and elec. effects 2-115930
 SiO₂ film, thermally grown on Si, elec. behaviour of H ions 2-61634
 SiO₂, fused, implanted D/H ions trapping and release 2-76467
 SiO₂, NH₃ annealed films for thin-gate insulator in MOS structures. 2-92766
 SiO₂, solid phase reduction in presence of Al layer, diffusion barriers, Auger study 2-82034
 SiO₂:Ar⁺, ion implanted electron irradi., antiannealing effect 2-66062
 SiO₂ film, semi-insulating polycryst., optical absorpt., depend. on annealing conditions 2-61999
 Si₃O₂N₄ layers, synthesized by ion implantation, IR and elec. props. 2-99136
 Si(111), adsorption of Ti, secondary electron spectroscopy 2-87015
 Sm, thin film, elec. props., effects of pressure, ageing and in situ annealing 2-87422
 Sm-Co-Cu-Fe-Zr, permanent mag., struct., sintering and annealing effects (*Russian*) 2-88226
 SmB₆, mixed valence cpd., small energy gap, electron tunnelling and IR spectrum 2-56442
 Sm(Co_{0.65}Co_{0.35})₂ (x=4.5, 5.6, 6), coercive force, precipitation effects (*Russian*) 2-92961
 Sm(Co_{0.66}Fe_{0.21}Cu_{0.10}Zr_{0.06})₂, 4_f struct. transformations and coercive force meas. (*Russian*) 2-98913
 Sn_{1-x}Cr_xTe degenerate mag. semiconductor, struct. transform.-induced mag. ordering 2-56852
 SnO, film, vapour deposition, Rutherford backscatt. study 2-71812
 SnO₂-Nb₂O₅, reactions after annealing, X-ray anal. 2-88065
 SnO₂(110), surface reconstruction effects on work function and surface cond. 2-115857
 SnTe, epitaxial film, effect of thermal treatment on comp. and struct., Mossbauer and X-ray study 2-66399
 Ta superconducting films, amorphous and cryst., tunnelling expts. 2-92827
 Ta, wrought, physical-mechanical props., thermal processing effect (*Czech*) 2-57407

annealing continued

- TaSi₃ layers, coverage on Si/SiO₂, surface struct., ion-implant profiles surface anal. study 2-82094
 Tb-Fe amorphous films, struct., decomposition, crystallisation (*Chinese*) 2-104176
 Tb-Ho, paramagnetic, deviations from Curie-Weiss law 2-56825
 TbO₃, preparation from TbO₃ and B₂O₃, characterisation 2-72645
 Te, amorphous thin film, crystallisation, electronic structure, UV photoemission study 2-71355
 Ti alloy VT3-1, fracture toughness, struct. and hot rolling temp. influence 2-105324
 Ti alloys, pseudo- α , optimum heat treatment selection 2-105200
 Ti alloys, two-phase, β - α + β transition, α -phase struct. study (*Russian*) 2-116437
 Ti, internal friction, temp. depend. (*Russian*) 2-115351
 Ti-Al, mech. props. and thermal stability, comp. depend. (*Russian*) 2-77874
 α -Ti-Al-Mn, optimum heat treatment selection 2-105200
 Ti-Al-Mo-Zr, Co coated, plastic deform. and diffusion annealing effect on props. 2-67645
 Ti-Al-V, mech. props. after β -annealing 2-67398
 Ti-Al-Zr-V-Mo-B sheet, elastic props. anisotropy and texture hardening (*Russian*) 2-116502
 Ti-Mo (10 at.%), struct. after low temp. ageing, X-ray and electron microscopy study (*Russian*) 2-93538
 α -Ti-Zr-Mo-V, optimum heat treatment selection 2-105200
 Ti_{0.9}Be_{0.1}Zr_{0.9}, specific heat, superconducting T_c 2-87448
 TiN films deposited on Si, characterisation 2-110212
 TiO₂, ESR studies of defect centres 2-87594
 TiO₂, powder, shock loaded, paramagnetic defects, ESR study 2-77370
 TiO₂ surface (001) thermal faceting 2-86992
 Ti_{1-x}As_x-Te, intersecting section in Ti-As-Te system 2-111153
 V thin films, on oxidised Si wafers, scanning Auger microscopy studies on high-temp. annealing 2-76863
 VO_x/V₂O₅/Si, semiconductor-superconductor-semiconductor, Josephson junction fabrication (*Japanese*) 2-82537
 V₂Si, amorphous supercond. film, crit. temp., thermal annealing effects 2-92801
 V₂Si, neutron irradi., NMR and mag. susceptibility, annealing effects (*Russian*) 2-93021
 W (100), adsorption of Se, AES, LEED, work function, and thermal desorption meas. 2-66362
 W film, plasma-enhanced CVD, elec. resist. and film stress 2-93434
 W, neutron irradi., recovery behaviour, impurity effects, elec. resist. study 2-77843
 W powder, fine, sintering 2-116413
 W-Ag-He, ion implanted, He precipitation at substitutional Ag atoms He desorption study 2-92218
 W-GaAs:Se⁺ Schottky barrier, high temp. elec. and interdiffusion stability meas. 2-87365
 WO₃ films, evaporated and annealed, electronic struct., UPS study 2-115651
 WS₂:B,P,As, dopant diffusion 2-92280
 Y₂Al₂O₇:Tb single crystal, phosphor's produced by ion implantation 2-76472
 YFe₂, amorphous, struct. relax., Mossbauer study 2-72383
 YIG epitaxial films, mag. bubble collapse field and FMR spectrum, ion implantation and annealing effects 2-104670
 YIG:Ca film, mag. dichroism study of Fe⁴⁺ centres 2-72461
 YIG:Ca(Ge)(Si) garnets, rapid diffusion processes 2-71719
 YIG:Ti₂Ca₂Ge₂Ne layers, ionimplanted, annealing effects on cryst. and mag. props. 2-77333
 Y₂O₃:Nd laser oscillation props., point defect conc. effects 2-96954
 (YSmLuCa)₂(GeFe)₂O₁₂-metal interface, mag. parameters, bubble memories 2-72318
 YSmLuCaGe₂Ne(H), ion implanted bubble garnet film, mag. and cryst. props. 2-82644
 Zn-Fe, delta phase stability meas. 2-11144
 ZnO, film, obtained by oxidation of ZnSe, for US transducers 2-86194
 ZnS, 2H to 3C solid state transform, X-ray diff. study 2-98272
 ZnS, Hall photoelectric effect meas. 2-87317
 ZnS:Mn film, sputter deposit, luminesc. and struct. props. variation with annealing 2-93287
 ZnS:Mn sputtered thin films, cathodoluminescence and struct. props. 2-110956
 ZnSe, Hall photoelectric effect meas. 2-87317
 ZnSe MIS structures, blue electroluminescence and I-V characts 2-61982
 ZnSe, Zn-annealed, deep levels and associated carrier recomb. processes 2-110289
 ZnSe:Al, photoluminescence obs. 2-61971
 ZrC, diffusion of metal fission products 2-85153
 (Zr_{0.9}Hf_{0.1})Fe₂, hyperfine mag. field at ¹⁸¹Ta, radiation defects influence, TDPAC meas. 2-56986
 Zr_{0.75}Ni_{0.25}, amorphous supercond., lattice sp. ht. and thermal cond., 0.1 to 5K, thermal annealing effect 2-56779
 Zr_{0.6}Ni_{0.4}, amorphous, supercond. transition temp., effect of config. changes 2-104526
 ZrO₂-Y₂O₃, thermionic cathode, removal of C impurity 2-110113
 ZrO₂-Y₂O₃ (8 wt.%), polycrystalline, annealing effect on elec. cond. 2-76734
 ZrO₂-Y₂O₃:Yb crystals, Yb implanted yttria stabilised, O vacancies, channelling study 2-109867
 Zn₂Pd(Rh) amorphous superconducting ribbons quenched at elevated substrate temperature 2-77225

annealing, magnetic see magnetic annealing

anodes

- activity, small scale, in vacuum arcs 2-115070
 duration testing of MHD anodes 2-93929
 graphite anode structure with Mo wire cathode for high-power TE CO₂ laser 2-60107
 pinched electron beam diode with oil-covered anode, pulsed ion beam extraction 2-90339
 tampon plating, plant, material, solutions (*German*) 2-105489
 vacuum arc, anode surface temp. and spot formation model 2-115075
 vacuum arc anode, X-ray detection 2-91688
 Ar arc, high intensity, studies of anode region 2-91694
 CdSe-p⁺-n-Si tunnel junction solar cell photoanode props. meas. 2-88427

anodes continued

- Li/SO₂ battery anodes, surface struct., electrode chemistry, SEM and XPS study 2-82095
- N₂-Cu arc discharge near anode, transport coeffs at atmospheric press. 2-103502

anodes, electrochemical *see electrochemical electrodes***anodisation**

- chemical polishing initiation, effect of oxide layer 2-111383
- Hg_{0.7}Cd_{0.3}Te anodic oxidation 2-111344
- levelling under secondary and tertiary current distrib. conditions 2-88270
- MOS solar cells, high efficiency, by anodic oxidation processes 2-88448
- steel, mild, Fe²⁺ reducing bacterium effect on passivity loss, anodic depolarisation mechanism 2-62257
- steel, stainless, Cr-Ni, anodic oxide film, XPS study (*Chinese*) 2-62250
- Al, anodic oxide film, breakdown during pore filling 2-67660
- Al, anodic oxide film, electrolum., interference effect 2-61983
- Al, electrical breakdown during anodisation in borate soln., TEM and SEM study 2-110771
- Al electrolytic capacitor, anodic oxide layer obs. using TEM and SEM 2-99580
- Al, oxide film form., EXAFS study in total yield and refl. modes 2-57212
- Al surface, preconditioned, flaw obs. by anodisation/TEM technique 2-116607
- Al-Mn (1.2 at.%), electrochemical behaviour, effect of laser-surface melting 2-57523
- Cu, anodic dissolution in nitrate electrolyte 2-88270
- Cu, containing P, anodic dissolution in bright Cu plating electrolytes, kinetics and mechanisms 2-67664
- Cu, corrosion inhibition by benzotriazole, surface enhanced Raman scatt. study 2-111367
- GaAs, anodic oxidation, island stage 2-111342
- GaAs, anodic oxide film, struct. inhomogeneity 2-87096
- GaAs, galvanostatic anodisation in methanolic KOH 2-88239
- Hg_{1-x}Cd_xTe, anodic oxidation mechanism, expt. study 2-72853
- Hg_{1-x}Cd_xTe, plasma anodisation, MIS structure fabrication 2-57505
- Hg_{1-x}Cd_xTe, plasma anodised, interface study 2-104489
- InP, anodic oxide layer composition 2-67600
- Nb-GaAs structure, anodization and Rutherford backscatt. meas. 2-110184
- Pb, anodic oxidation in H₂SO₄ based soln. to form soluble species 2-67663
- Si, oxide film growth, plasma anodization as dry low temp. technique 2-116581
- SiO₂ ultrathin layers on Si, grown by DC plasma anodization, elec. props. 2-56745
- Ti, self-colour anodisation, colours rel. to electrochem. parameters 2-111381
- V-GaAs structure, anodization and Rutherford backscatt. meas. 2-110184

anodised coatings *see anodised layers***anodised layers**

- metals, anodic breakdown of passive films 2-77991
- Al alloys, AC anodising processes, expt. study 2-105366
- Al alloys, anodised and unanodised, ten year open air weathering tests, results (*German*) 2-105364
- Al anodic barrier films, direct obs. of ion implanted Xe marker layers 2-71481
- Al, anodic barrier-type films, flaw generation 2-67629
- Al electrolytic capacitor, anodic oxide layer obs. using TEM and SEM 2-99580
- Al-Mg, SCC in saline water, protection by anodic coating 2-111358
- Al₂O₃ anodic film formation on InP, enhancement MISFET appl. 2-82461
- Al₂O₃ anodic films, cryst. and amorphous, voids, TEM study 2-93666
- Al₂O₃ anodic films, elec. breakdown characts., 4.2 to 354 K 2-110769
- Al₂O₃:Cu porous anodic film, elec. props. meas. 2-82501
- Al(OH)₃ layers in Al electrolytic capacitors, dielectric props. and elec. cond. meas. 2-104809
- Al(OH)₃ oxide layer of Al electrolytic capacitor, proton magnetic relaxation study 2-104733
- n-CdSe, etched and anodised electrochem. electrode, capacitance-voltage studies 2-66633
- Cu₂O-Cu solar cells, grown by anodic oxidation, photovoltaic effects 2-88460
- Fe-Ni, passive film exam. by AES 2-57513
- GaAs, struct. inhomogeneity 2-87096
- GaAs-oxide interface states, two-beam transverse acoustoelec. spectroscopy study 2-82463
- Hg_{0.7}Cd_{0.3}Te-anodic oxide interface, photoelec. and field effect props. 2-87398
- Hg_{1-x}Cd_xTe-native oxide MIS struct., elec. props. meas. 2-87399
- HgTe, anodic oxidation and electrochem. surface treatment obs. 2-93641
- InP, anodic oxide layer, optical props. and H₂O absorpt. 2-57496
- SiO₂, SIMS investigation 2-105352
- Ti, anodic oxide films, growth and instability, expt. study 2-93674
- Ti, pickled, anodised and thermally oxidised, oxide film effect on corrosion resistance 2-57518
- Ti, self-colour anodisation, colours rel. to electrochem. parameters 2-111381
- WO₃ anodic film, electrochromic props., ellipsometric study 2-93158

anodised thin films *see anodised layers***anolytes** *see electrolytes***anomalous skin effect**

- ferromagnetic metallic film, EM wave transmission impedance calc. (*Russian*) 2-87556
- metals, anomalous skin effect and optical props., phenomenological model 2-99079
- metals, CESR lineshape calc. under anomalous skin effect conditions 2-61768
- metals, current rectification effect, anomalous skin effect (*Russian*) 2-82391
- metals, direct generation of ultrasound by EM radiation 2-104409
- metals, nonlinear cyclotron resonance theory, second harmonic generation 2-98965

antenna accessories

see also directional couplers

- radiation cones from feed-support struts of symmetric paraboloidal antennas, radiotelescopes appl. 2-106530
- superconducting modulation-amplification-demodulation amplifier for weak sonic and infrasonic radio signals 2-89052

antenna arrays

see also antenna phased arrays; directional couplers; microwave antenna arrays

- phase-controlled VHF Yagi, lower and middle atmospheric structure and dynamics study appl. (*German*) 2-106360
- radioastronomy synthesis arrays, response to interfering signals 2-94625

antenna components *see antenna accessories***antenna lobe patterns** *see antenna radiation patterns***antenna patterns** *see antenna radiation patterns***antenna phased arrays**

- acoustic imaging, medical and underwater surveillance systems, microprocessor controlled 2-81192
- phased acoustic arrays, geometry synthesis of cophased subarrays 2-91110

antenna radiation patterns

- Arecibo incoherent backscatter meas., effect of antenna near field effects 2-84095
- cylindrical source antennas, pattern space factor and quality factor 2-114158
- horn antenna, radiation patterns calc. 2-96804
- radiation cones from feed-support struts of symmetric paraboloidal antennas, radiotelescopes appl. 2-106530
- VLF receiving dipole in magnetoplasma, directivity pattern 2-63121

antenna reflectors

- C fibre reinforced plastics, appls. to RF components of satellite payloads (*German*) 2-88052

antenna theory

- cylindrical source antennas, pattern space factor and quality factor 2-114158
- dipole antenna, vertical, over two-layer medium, time response, double deformation calc. 2-55041
- electron cyclotron emission diagnostics, antenna design and performance 2-103458
- equivalent radius of a narrow conducting strip 2-108768
- horn antenna, radiation patterns calc. 2-96804
- microstrip spin-wave antenna, impedance anal. 2-98866
- radioastronomy synthesis arrays, response to interfering signals 2-94625
- splines for electromagnetic approximations 2-102690
- TE focus wave mode pulse formulations, homogeneous Maxwell eqns. 2-102702
- VLF receiving dipole in magnetoplasma, directivity pattern 2-63121

antennas

- see also antenna radiation patterns; dipole antennas; directive antennas; microwave antennas; radar antennas; receiving antennas; reflector antennas*
- biconical, standard pulsed EM fields generation appl. 2-79624
- plasma surrounding plate antenna, energy absorpt. in ion sheath 2-65732
- standard magnetic field radiated by two loop antennas in a coplane 2-112941
- Weber-type gravitational antenna, mechanical filter for suspension 2-53653
- Al-Zn composite material, prep. and treatment optimum conditions (*Russian*) 2-67257

antibaryons *see baryons***anticorrosion coatings** *see corrosion protective coatings***antiferromagnetism**

No entries

antiferroelectric materials

see also antiferroelectricity; ferroelectric materials

- lithium ammonium thallium tartrate monohydrate mixed cryst., dielec. and elastic props., antiferroelec. obs. 2-116134
- squaric acid, antiferroelec. phase transition, realisation of Baxter model 2-82790
- squaric acid, layered antiferroelec., interacting one dimensional Ising spin chain model 2-77457
- squaric acid, low dimensional H bonded material, neutron and Raman spectroscopic studies 2-93199
- squaric acid, protonic ordering, strain effect 2-76664
- trisarcosine calcium chloride, deuterated, dielec. props., temp. and press. depend. meas. 2-99071
- BiMO₄ (M=Nb, Tb, Sb), stibiotantalite struct. antiferroelec., ferroelec. and pyroelec., prep. and props. 2-66998
- Cs₂PO₄, para, ferro, and antiferroelectric phases, vibr. Raman and IR study 2-77508
- Cs₂PO₄, quasi-one-dimens, H-bonded ferroelec., phase diagram, anisotropic compressible Ising model 2-87709
- (NH₄)₂ZnCl₄, phase transitions, X-ray structural study 2-65911
- (NH₄)₂ZnCl₄, X-ray structural study of successive phase transitions 2-65912
- Pb₂InNbO₆, elec. props., band gap energy 2-110395
- PbMO₃, (M=Ti, Zr, Hf), elec. props., band gap energy 2-110395
- PbScNbO₆, elec. props., band gap energy 2-110395
- PbZrO₃, antiferroelec. domain struct., electron microscopy and diff. study 2-57031
- PbZrO₃, antiferroelec. phase, space group and O atom coordinates, electron diff. study 2-109759
- Rb₂ZnBr₄, ferroelectricity and antiferroelectricity coexistence obs. 2-61838
- SbMO₄ (M=Nb, Ta, Sb), stibiotantalite struct. antiferroelec., ferroelec. and pyroelec., prep. and props. 2-66998

antiferroelectricity

see also antiferroelectric materials

- exchange magnetoelectric interaction, spin wave instability (*Russian*) 2-61749
- phase transitions, symm. aspects, unit cell multiplication 2-110784
- squaric acid, antiferroelectric, phase transition fronts 2-93124
- CsH₂(SeO₃)₂, ⁷⁷Se high resolution NMR 2-61779
- H-bonded crystals, isotope, tunnelling effects 2-77459
- NaNO₂, paraelectric phase critical fluctuations 2-82797

- antiferromagnetic Curie temperature *see* Curie temperature
- antiferromagnetic-ferromagnetic transitions *see* ferromagnetic-antiferromagnetic transitions
- antiferromagnetic-paramagnetic transitions *see* paramagnetic-antiferromagnetic transitions
- antiferromagnetic properties of substances**
see also antiferromagnetism; magnetic semiconductors
- alkane diammonium copper halides, layered, superexchange interaction 2-98869
- bis(methylammonium) manganese tetrachloride, heat capacity, 10 to 300K 2-61159
- chromium phosphate, polymeric, ESR and spin dynamics 2-82710
- dibenzotetrathiofulvalene-1s complex, regular antiferromag. chain with indirect exchange interaction (*Russian*) 2-104359
- dimethylammonium manganese chloride, pseudo one-dimensional antiferromag., mag. props. 2-116007
- garnets, with fluctuational interaction sublattices (*Russian*) 2-104606
- insulators, impur., antiferromag., role of S_z -nonconserving interactions in spin dynamics 2-66794
- isopropylammonium copper trichloride (tetrachloride), dielec. const. and pyroelec. current meas. 2-87004
- itinerant electron antiferromagnet, nucl. relax. rate T_1^{-1} 2-87610
- magnesium acetate tetrahydrate: Co^{2+} , EPR spectra 2-61757
- magnetic structures, one-magnon scattering of polarised neutrons 2-66779
- manganese stearate, quasi-two-dimensional, antiferromagnetism 2-56864
- metals, antiferromag., spin fluctuation theory 2-110577
- nickel diglycine dihydrate, antiferromag., mag. susceptibility study, 0.6 to 120K 2-77272
- nickel diglycine dihydrate, antiferromag., sp. ht. meas., 0.5 to 10K 2-77294
- polymers, coupled stereo-irregular chains, local antiferromagnetic ordering 2-116013
- rare earth alloys, amorphous, induced mag., singlet-singlet model 2-104560
- rare earth alloys, amorphous, mag. props., nonaxial crystal field model 2-77301
- rare earth metals, spin wave spectrum, effects of ribbon bridge on fermi surface (*Russian*) 2-82584
- rare earth ternary cpds., mag. and supercond. props. 2-115937
- rare earth-transition metal intermetallics, RM_6Al_6 (M=Cu, Mn, Fe), mag. props. 2-61734
- $\text{Sm}(\text{Mn}_{1-x}\text{Fe}_x)_{11}$, mag. props. study 2-87542
- TCNQ salt, NMP-TCNQ, mag. Mott insulator-metal transition, Hubbard model 2-76926
- TCNQ salts, disordered, random exchange Heisenberg antiferromag. chain, spin dynamics 2-87501
- TCNQ salts, one-dimensional Heisenberg antiferromagnets, with random exchange 2-66858
- tetra(methylamino) lithium, expanded compounds, low temp. mag. susceptibility 2-72775
- tetracyanoquinodimethanes, mag. susceptibility, spin and electron exchange kinetics 2-72175
- TMMC:Cu, high temp. dynamics, effect of impurities, EPR study 2-98944
- TMMC, mag. solitons contrib. to sp. ht. in external mag. field 2-66824
- TMMC, one-dimens., spin dynamics, ESR study 2-72338
- TMMC, one-magnon and two-magnon spectra in mag. field 2-98863
- TMMC, sp. ht. contrib. from mag. solitons 2-72234
- TMMC-d₂, soliton regime, neutron scatt. study 2-56844
- TMTSF:AsF₆, antiferromagnetic resonance obs. 2-93015
- (TMTSF)₂AsF₆, antiferromagnetic reson. below metal-nonmetal transition 2-116067
- (TMTSF)₂AsF₆, antiferromagnetism 2-66787
- (TMTSF)₂ClO₄, itinerant electron antiferromag. precursor to supercond. 2-116068
- (TMTSF)₂PF₆, mag. susceptibility anisotropy, 1.7 to 300K, torsion method 2-92859
- (TMTSF)₂PF₆(AsF₆), mag. susceptibility 2-92881
- transition metals, BCC and FCC, mag. phase diagram at zero temp. 2-66817
- transition metals, energy band calcs. of magnetism 2-66749
- (TTF)-AuS₂C₆(CF₃)₃, susceptibility and magnetisation 2-66785
- Volocoly, antiferromagnetic Invar type alloy in Mn-Ge system (*Japanese*) 2-77291
- weak ferromagnets, one-dimens. and two-dimens., differential susceptibility meas. and mag. phase diagrams 2-56840
- BiFeO₃, spiral mag. ordering, neutron diff. study 2-110569
- CS₂MnCl₃, antiferromag. ordering and mag. struct. below 0.6K, magnetoelect. and MCD study 2-77493
- CaLa_{1-x}Y_xCrO₄ solid solns., struct. and mag. study 2-76391
- Cd₂Co_{1-x}Fe_xO₄, mag. props. and lattice dynamics, Mossbauer effect study 2-77426
- Cd_{1-x}Mn_xTe, 'antiferromag. phase', neutron scatt. studies 2-92868
- Cd_{1-x}Mn_xTe, semimagnetic, Raman scatt. by phonons and magnons 2-77531
- Cd_{1-x}Mn_xTe, spin glass versus antiferromagnetic clustering 2-82613
- Cd_{1-x}Mn_xTe, Zeeman effect of mag. excitations, Raman scatt. study 2-67048
- Ce alloys, antiferromagnetic, reduced moment, crit. behaviour 2-66815
- CeAl₃, electronic struct. and mag. props. 2-66752
- CeBi mag. phase transitions, anisotropic Ising model 2-116021
- CeBi(Sb)(As), mag. struct. and transitions, crit. neutron scatt. study 2-72144
- CeInAg₂, mag. struct., neutron diff. study 2-82565
- Ce_{1-x}La_xMn₂Si₂, mag. props. and struct. 2-87499
- CeMg₂, mag. struct., neutron diff. study 2-82565
- Ce₂Mo₂S₉, mag. susceptibility and elec. cond. under high press. 2-66789
- CeSb_{1-x}Te_x, elec. and mag. props. 2-66523
- Ce₂Y₂Al₂, demagnetization, mag. susceptibility and sp. ht. 2-56892
- Co complex, [Co(C₆H₅NO)₄][CoCl₂], bimetallic, two mag. subsystems, sp. ht. and susceptibility meas. 2-66825
- CoBr₂, trigonal cpd., mag. excitations 2-87485
- CoBr₂·6H₂O, thermal cond., mag. field depend., 1.5 to 30K 2-82043
- CoCO₃, antiferromag., cryst. growth and mag. props. 2-66792
- CoCO₃:Mn²⁺, interactions between magnons and impurity excitations 2-98858
- CoCl₃, trigonal cpd., mag. excitations 2-87485
- CoF₂, far-IR reflectivity of optical magnons 2-98864
- antiferromagnetic properties of substances continued**
- CoF₂, noncollinear state, magneto-optical study (*Russian*) 2-61883
- CoF₂:Mn²⁺, interactions between magnons and impurity excitations 2-98858
- Co_{1-x}Fe_xTiO₃, competing mag. orderings, Mossbauer and neutron diff. study 2-66777
- Co₂Mn₂F₈, mag. excitation spectrum rearrangement (*Russian*) 2-61772
- Co₂Ni_{1-x}Mn_xGe, cryst. and mag. struct. 2-104581
- Co₂Ni_{1-x}Mn_xGe, mag. phase diagram, antiferromag.-ferromagnetic transition, neutron diff. study 2-72206
- Co₂Ni_{1-x}S₂, phase diagram in Ni-rich region, Hubbard model 2-66816
- Co₂O₄, elec. cond., crit. behavior near antiferromag. phase transition 2-98648
- Co₂O₄, heat capacity and thermodynamic props., 5 to 307K, mag. transition 2-81978
- Cr alloys, spin density wave state, Landau theory 2-66757
- Cr, antiferromag., spin-flip transition, latent heat 2-92906
- Cr, antiferromagnetic spin waves, SDW model (*Russian*) 2-77281
- Cr, electrical resistivity due to antiferromag. spin waves 2-61457
- Cr, spin density wave states, tight-binding approx. 2-66751
- Cr, transition from nonmagnetic to antiferromagnetic state (*Russian*) 2-77293
- Cr-Fe, antiferromagnetic, high press. phase diagram, neutron scatt. study 2-116000
- Cr-Fe, mag. first-order transition, susceptibility and latent heat study 2-98880
- Cr-Si, mag. first-order transition, susceptibility and latent heat study 2-98880
- Cr-Si alloys, Cr-rich, thermal cond. meas., 3-300K, rel. to antiferromag. transition 2-92567
- Cr-Si-Fe (2, 0.5 wt.%), mag. behaviours in commensurate spin density wave state 2-92882
- Cr-V(Mn), spin density wave states, tight-binding approx. 2-66751
- CrCl₃, mag. ordering at phase transition, Faraday rot. and susceptibility meas. 2-98882
- (Cr₂O₁₀)¹⁴⁻, dimeric units, correl. struct., antiferromag. and ferromag. props. 2-109752
- Cr₂Se₃, magnetism, mag. susceptibility and magnetisation studies 2-72219
- CrCoBr₃, propagating domain walls, inelastic neutron scatt. study 2-104599
- Cr₂Cr₂Cl₂, exchange interactions, neutron scatt. study 2-66803
- Cr₂FeCl₂H₂O, Heisenberg antiferromag., sp. ht. and mag. susceptibility, 1 to 30K 2-104630
- CrMg₂-Co₂Cl₃, disordered ID antiferromag., Raman scatt. from Co²⁺ excitations 2-67039
- CrMnCl₂·2H₂O, quasi-one-dimens. antiferromag., phase spin-flop transition to intermediate state (*Russian*) 2-56874
- CrMnF₃, spin wave interaction with nuclear spin subsystem (*Russian*) 2-61703
- Cr₂NaHoCl₆, enhanced nucl. spin antiferromag. ordering 2-104589
- CrTiF₄, struct. and mag. studies, antiferromagnetism, X-ray and neutron diff. study 2-65966
- CrVCl₃, one-dimens. Heisenberg antiferromag., mag. and neutron scatt. study 2-66774
- Cu complex, copper chloride dimethyl sulphoxide, pseudo one-dimens. system, antiferromag. reson. study 2-77381
- Cu complex, CuCl₂·TMSO, Heisenberg 1-D ferromag., single cryst. mag. studies 2-66802
- Cu complex, imidazole-bridged Cu(II), mag. exchange 2-87488
- Cu, nuclear magnetism at nK temps., mag. susceptibility and NMR study 2-104595
- Cu, spontaneous nucl. ordering at nK temps.? 2-115983
- Cu-Mn-Al, exchange anisotropy, hysteresis loops and coercive force study 2-66866
- CuCl₂·2H₂(D₂O), antiferromag. resonance freq., mag. susceptibility (*Russian*) 2-98966
- Cu₂Cr₂PS₈, cryst. struct. and mag. props. 2-60946
- (CuO)₂(2B₂O₃·PbO)_x glasses, EPR study of mag. behaviour 2-110631
- Co₂SO₄·5H₂O, proton relax. rate angular depend., deviations from point-dipolar model 2-61783
- Dy, critical field anomalies and anisotropy 2-98878
- Dy-Se, spin glass and antiferromag. transitions, bulk magnetisation study 2-72222
- Dy-Sm, mag. and elec. props. 2-72201
- DyAl, mag. moments and anisotropy, neutron diff. and cryst. field calc. 2-115976
- DyAlO₃, mag. struct., neutron diff. study 2-92869
- Dy₂Co₂, elec. resist. accompanying metamag. phase transitions (*Russian*) 2-66820
- Dy(Fe_{1-x}Ga_x)₂, mag. props. and Mossbauer spectra, 4.2 to 293K (*Russian*) 2-104657
- DyMn₂, mag. dipole, elec. quadrupole hyperfine parameters determ., NMR spectra 2-116087
- DyMo₂S₄(Se₄), dipole antiferromagnetism, collinear struct. and spin wave vector (*Russian*) 2-98847
- DyVO₄, mag. relax. study 2-98989
- α-(Fe_{1-x}Al_x)₂O₃, Mossbauer study 2-87637
- Fe₂As₂, mag. phase diagram, critical behaviour 2-56862
- FeBO₃, parametric phonon excitation (*Russian*) 2-72328
- FeBO₃, phonon parametric excitation, FMR nonlinear relax. 2-77349
- FeCO₃, antiferromag. indirect detection of cooling by adiabatic magnetisation 2-98884
- Fe_{1-x}Cd_xCl₂, dilute antiferromagnet, Raman scatt. from magnons, Ising cluster model 2-61893
- FeCl₃, spin wave interactions in antiferromag. phase 2-110572
- Fe_{1-x}Co_xCl₂, Raman study of excitations 2-72483
- FeF₃, far-IR reflectivity of optical magnons 2-98864
- FeF₂:Mn, localised magnon-pair modes 2-72182
- FeF₂ thin films, mag. and Mossbauer studies as a function of growth model 2-82678
- α-FeGa₂S₄ (1T), mag., elec. and Mossbauer props. (*French*) 2-72389
- FeGe₂, antiferromag., US attenuation anomalies at two transitions 2-104675
- FeGe₂, canted antiferromag., magnetisation meas. (*Russian*) 2-98907
- Fe₂Mn₂F₈, random anisotropic antiferromag., crit. behaviour, mag. birefringence study 2-77295
- (Fe_{1-x}Mn_x)₂P, mag. props. 2-61697
- Fe(MnPt_{1-x})₂, antiferromag. structure, neutron diff. study (*Russian*) 2-87477
- Fe₂Mo₂O₈, cryst. growth, morphology, elec. and mag. props. 2-87960

antiferromagnetic properties of substances continued

- α -Fe₂O₃, haematite, weak ferromag., magnetoresist. anisotropy meas. (*Russian*) 2-92659
- α -Fe₂O₃, weak ferromag. moment stimulation by nonreson. mag. and sound pumping (*Russian*) 2-116044
- FePO₄, anhydrous, mag. phase transition, mag. susceptibility, Mossbauer spectra and neutron diff. 2-110579
- FePS₃(Se₂), layer cpds., mag. interactions 2-61699
- FeRh, paramag., ferromagnetic and antiferromag., band struct., muffin-tin calc. 2-82216
- FeS, phase transitions with interactive order parameters (*Russian*) 2-61709
- FeTiO₃, metamagnetic transition, mag. props. 2-92903
- Fe_{0.5}TiSe₂, cryst. struct., elec., mag., and optical props. 2-81746
- Fe₂WO₆, prep. and characterisation, struct., mag., elec. and photoelectric props. 2-76390
- Fe,Zn_{1-x}F₂, dilute anisotropic antiferromag., random field effects on crit. region 2-87511
- Fe,Zn_{1-x}F₂, randomly diluted antiferromag., field induced 'exchange-flips' 2-66811
- Fe,Zn_{1-x}F₂, randomly diluted antiferromag., nuclear relaxation study 2-77401
- Fe,Zn_{1-x}Fe₂, dil. Ising antiferromag., crit. behaviour, random field effects 2-66854
- GaAs:Cr, semi-insulating, EPR of extended defects 2-87590
- Gd-Y, critical field anomalies and anisotropy 2-98878
- Gd-Y alloys, mag. phases, temp. depend. of elastic props. 2-82564
- GdAlO₃, antiferromagnet, mag. struct., neutron diff. study 2-72161
- GdAlO₃:Cr³⁺, fluoresc. spectrum, splitting and line shape 2-93262
- GdAlO₃:Cr³⁺, optical props. meas. in paramag., antiferromag. phases 2-93275
- GdCo, elec. resist. accompanying metamag. phase transitions (*Russian*) 2-66820
- GdD_{2-x}, antiferromagnetic ordering study 2-72160
- GdMo₂S₈(Se₈), dipole antiferromagnetism, collinear struct. and spin wave vector (*Russian*) 2-98847
- ³He, solid, antiferromag., angle depend., free shift 2-76772
- ³He, solid, mag. props., review 2-115488
- ³He, solid, nucl. mag. ordering 2-66318
- ³He, solid, nucl. spin ordering 2-110086
- Ho containing ¹⁶⁶Ho, mag. struct. determ. using low-temp. nucl. orientation 2-56984
- HoBa₂, mag. struct. and phase diagram, neutron diff. study 2-72152
- HoCo₂, magnetisation reorientation, neutron diff. and Mossbauer study 2-72148
- HoCu₂, magnetisation, elec. cond., thermopower, paramagnetic-antiferromag. transition 2-77327
- Ho(Ir,Rh_{1-x})₂B₂, mag. order and supercond. props. 2-82661
- HoMn₂, cubic and hexagonal, site magnetisation, neutron diff. study 2-72145
- Ho(Rh_{0.7}Ir_{0.3})₂B₂, mag. struct., superconducting T_c 2-104585
- HoVO₄, Van Vleck enhanced nucl. antiferromag., collective excitations, effective nucl. Hamiltonian 2-61680
- K₂CO₃-xFe₂F₆, magnons, Raman study 2-104596
- K₂FeF₄, NMR study of susceptibility 2-82575
- K₂FeF₄, spin wave anal., neutron scatt. 2-82580
- K₂FeF₄, anomalous mag. susceptibility and relax. effects above Neel temp. 2-66783
- K₂FeF₄, field depend. magnetisation curves, Mossbauer study 2-77435
- K₂FeF₄, Neel temp. variation, Mossbauer study 2-92905
- K₂FeF₄, two-magnon Raman scatt., spin wave anal. 2-82865
- KMnF₃, antiferromag., photoluminesc. study (*Russian*) 2-61940
- K₂MnF₄, antiferromag., mag. phase diagram 2-92956
- K₂MnF₄, low dimensional mag. system, EPR (*Japanese*) 2-82711
- K₂MnF₄, quasi two dimensional Heisenberg antiferromag., mag. phase diagram 2-77300
- KpBCr₂F₆, structural and mag. props., X-ray diff. and EPR study 2-60949
- (La,A_{1-x})(Mn³⁺Mn⁴⁺)₂O₇, A=Ca, Ba, Sr, indirect exchange interactions, and Jahn-Teller distortions, neutron diff. study 2-66800
- La₂-Gd₂In, EPR study, mag. and superconducting props. (*Russian*) 2-93002
- La₂LiFeO₆, high-pressure stabilisation and physical props. of Fe(V) 2-66791
- LiFeCl₄, cryst. struct., mag., optical, and ionic cond. props. 2-92266
- Li(ND₃), expanded compounds, low temp. mag. susceptibility 2-77275
- Li(NH₃), expanded compounds, low temp. mag. susceptibility 2-77275
- Li₂Ni₂O₇, magnetic susceptibility, Neel temp. (*Russian*) 2-104593
- r-Mn-Cu(Fe), single-domain antiferromagnet, mag. struct. study 2-87478
- Mn-Ni(Co) layered mag. thin films, magnetisation and struct. 2-72302
- MnCO₃, antiferromag., cryst. growth and mag. props. 2-66792
- MnCO₃, antiferromag., nuclear spin and magnetoelastic waves, susceptibility relax. (*Russian*) 2-82583
- MnCO₃, weak ferromag. moment stimulation by nonreson. mag. and sound pumping (*Russian*) 2-116044
- Mn₂Cr₂Ge₂O₁₂ garnets, mag. phase diagram (*Russian*) 2-56861
- Mn_{1-x}Cr_xSb, mag. phase diagram and struct. 2-104612
- MnF₂, intermediate state antiferromagnetic resonance (*Russian*) 2-87599
- MnF₂, muon rotation study of critical relax. 2-110740
- MnO, mag. susceptibility and elastic consts., distance depend. exchange interaction effects 2-115995
- MnP, spiral phase, neutron polarisation anal. 2-72149
- MnPS₃(Se₂), layer cpds., mag. interactions 2-61699
- α -MnS, linear optical anisotropy and domain struct. at two successive antiferromag. transitions 2-56856
- Mn₂Sn(Ge), triangular spin config. and weak ferromag., polarised neutron diff. study 2-77269
- MnTe, antiferromag. semicond., Mossbauer and X-ray study 2-61795
- Mn_{0.65}Zn_{0.35}F₂, diluted antiferromag., random-field effects, NMR study 2-66942
- Mn_{0.95}Zn_{0.05}F₂, mag. phase diagram meas., random fields effects 2-72196
- Mn_{1-x}Zn_xF₂, heat capacity meas. for x<0.1 2-72210
- Mn,Zn_{1-x}F₂, dil. Ising antiferromag., crit. behaviour, random field effects 2-66854
- Mn,Zn_{1-x}F₂, dilute anisotropic antiferromag., random field effects on crit. region 2-87511
- Mn,Zn_{1-x}F₂, randomly diluted antiferromag., nuclear relaxation study 2-77401
- NH₄MnF₃, proton reson. and crit. relax. 2-98988

antiferromagnetic properties of substances continued

- NaMnCl₃, mag. phase diagram, paramagnetic-antiferromag. transitions circular birefringence study 2-82596
- Nb-Fe inhomogeneous system, laser irradi., internal field at ⁵⁷Fe, atom redistrib. and antiferromag. suppression (*Russian*) 2-66929
- Nd, magnetic structure, below 20K, use of first principles mean field theory 2-66776
- NdMg₂, mag. struct., neutron diff. study 2-82565
- NdRh₂B₄, supercond., mag. ordering, neutron diff. study 2-104583
- NiCO₃, antiferromag., cryst. growth and mag. props. 2-66792
- NiCl₂·4H₂O, anisotropic antiferromagnet, paramagnetic phase boundary 2-66818
- Ni_{1-x}Cu_xS₂, phase diagram in Ni-rich region, Hubbard model 2-66816
- Ni,Mn_{1-x}, magnetic phase diagram, coexistence of spin glass and ferromag. phase 2-92938
- NiO, mag. and lattice mechanical props. 2-92890
- NiPS₃(Se₂), layer cpds., mag. interactions 2-61699
- NiS₂·Se_{0.6}, mag. moment distrib., ⁶¹Ni NMR study 2-115975
- NiS_{2-x}Se_x, phase diagram in Ni-rich region, Hubbard model 2-66816
- OsF₅, magnetic interactions of intra- and interclusters, neutron diff. study (*French*) 2-66805
- P₂O₅-MnO₂ glass, antiferromagnetism, mag. susceptibility, Neel temp. 2-72173
- Pd₂MnSn_{1-x}In_x, ferromag. to antiferromag. transition, NMR study 2-104613
- Pd,Pt_{1-x}Fe, magnetic state, mixed exchange interaction, magnetisation and susceptibility 2-72208
- (Pd,Pt_{1-x})₂Fe, atomic-ordered, sp. ht., 3 to 20K (*Russian*) 2-56204
- Pr alloys, amorphous, mag. props., nonaxial crystal field model 2-77301
- Pr, hyperfine interactions, mag. impurities and antiferromag. ordering 2-104582
- PrAg, magnetisation and susceptibility meas. 2-116032
- PrAg_{1-x}Cu_x, quadrupole interactions and struct. instabilities, neutron diff. and magnetisation study 2-71943
- PuSb₂, magnetic props. 2-92872
- Rb₂CoF₄, magnon Raman scatt., AFMR 2-72356
- Rb₂CoF₄, two-dimensional Ising system, dynamic crit. neutron scatt. study 2-104643
- Rb₂Cr_{1-x}Cd_xCl₄, mag. props. study 2-87505
- Rb₂Cr_{1-x}Mn_xCl₄, mag. props. study 2-87505
- RbFeCl₃, incommensurate mag. struct., role of dipole-dipole interaction 2-66778
- RbFeCl₃, triangular XY-like antiferromag., incommensurate mag. phase transition 2-116004
- RbFeCl_{3-x}B_x, magnetically disordered, optical, Raman and MCD study 2-77544
- β -Rb₂FeF₄·H₂O, 1-D antiferromag., cryst. struct., mag. and Mossbauer study 2-92879
- Rb₂IrCl₆, antiferromagnetism and crit. relax., NMR study 2-56961
- Rh-Cr dil. alloys, low temp. nucl. orientation meas. 2-92546
- RuF₃, magnetic interactions of intra- and interclusters, neutron diff. study (*French*) 2-66805
- Si surface (111), 1×1 struct., antiferromag. ground state, dangling bond states 2-66790
- Si:P, heavily doped, as amorphous antiferromagnet 2-77283
- SmD_{2-x}, antiferromagnetic ordering study 2-72160
- Tb, nonlinear acoustic props. meas. near Neel temp. 2-116051
- Tb-Ho, critical field anomalies and anisotropy 2-98878
- Tb₂FeSi₂, mag. order, neutron diff. study 2-82567
- Tb₂Ge₂, mag. ordering and struct., incommensurate phase transition, neutron diff. study 2-115977
- TbH_{2-x}, antiferromagnetic ordering 2-72158
- TbMo₂S₈(Se₈), dipole antiferromagnetism, collinear struct. and spin wave vector (*Russian*) 2-98847
- TiBe₂, weak itinerant antiferromag., SDW pairing soln. 2-92854
- TiBa₂, mag. props., mag. struct. and cryst. field scheme, neutron scatt. study 2-115978
- TmSe, mixed valent, hybridisation energy gap, inelastic neutron scatt. obs. 2-61352
- TmO₂Y_{0.5}Ag, mag. props., mag. struct. and cryst. field scheme, neutron scatt. study 2-115978
- (Tm_xY_{1-x})(SO₄)₂·8H₂O, effect of dilution on mag. ordering 2-66812
- UBT₃, antiferromagnetic interaction, mag. susceptibility meas. 2-92883
- U₂C₃, neutron irradi., mag. susceptibility, Neel temp., lattice consts. 2-66073
- US(Te)(As), rock-salt struct., mag. excitations and lattice vibr., neutron diff. study 2-72153
- U_{1-x}Th_xSb, Kondo behaviour, ferromag. and antiferromag. behaviour, transport and mag. meas. 2-77032
- V₂O₃, single cryst., physical, elec. and mag. props. 2-66251
- V₂S₄, mag. susceptibility, mag. moments and sp. ht. 2-98852
- YCrO₃, magnetoelastic props., domain struct. changes at spin reorientation transition 2-104680
- Zn_{0.95}Co_{0.05}Fe₂O₄, mag. struct., neutron diff. and Mossbauer study 2-66775

antiferromagnetic resonance

- antiferromagnet, randomly diluted anisotropic, spin waves, spin-flop transition, AFMR 2-104597
- TMTSF₂AsF₆, antiferromagnetic resonance obs. 2-93015
- (TMTSF)₂AsF₆, antiferromagnetic reson. below metal-nonmetal transition 2-116067
- (TMTSF)₂ClO₄, itinerant electron antiferromag. precursor to supercond. 2-116068
- (TMTSF)₂ClO₄, nonlinear threshold phenomena due to SDW transitions 2-92885
- CoCO₃:Mn²⁺, interactions between magnons and impurity excitations 2-98858
- CoF₂:Mn²⁺, interactions between magnons and impurity excitations 2-98858
- Co_{1-x}Mn_xF₂, mag. excitation spectrum rearrangement (*Russian*) 2-61772
- Cu complex, copper chloride dimethyl sulphoxide, pseudo one-dimens. system, antiferromag. reson. study 2-77381
- Cu complex, CuCl₂·TMSO, Heisenberg 1-D ferromag., single cryst. mag. studies 2-66802
- CuCl₂·2H₂O, antiferromagnetic resonance, characteristic fields and spin flop transition 2-104711
- CuCl₂·2H₂(D₂O), antiferromag. resonance freq., mag. susceptibility (*Russian*) 2-98966
- ErFeO₃, HF absorption and mag. phase diagram at low temp. spin reorientation (*Russian*) 2-61710

antiferromagnetic resonance continued

- ³He, solid, nucl. spin ordering 2-110086
- K₂CO₃-FeF₆ magnons, Raman study 2-104596
- MnCl₂, antiferromag. reson. obs. 2-104708
- MnF₂, intermediate state antiferromagnetic resonance (*Russian*) 2-87599
- Rb₂CoF₆, magnon Raman scatt., AFMR 2-72356

antiferromagnetism

- see also *antiferromagnetic properties of substances; exchange interactions (electron); metamagnetism*
- Anderson localised system, interstate interaction effect on specific heat 2-77303
- Anderson model, one dimensional periodic Hamiltonian, finite cell calcs. 2-66407
- Anderson model, two-impurity, thermodynamic scaling theory 2-66408
- anisotropic antiferromagnet in Ising limit 2-98900
- anisotropic Heisenberg chain, S₀=0 excited states 2-110559
- anisotropic Heisenberg chain, solitons and spin complexes 2-72250
- anisotropic quantum spin chain, antiferromag. long-range order 2-87470
- annealed system, mag. mixture, Potts model 2-77299
- antiferromagnet, randomly diluted anisotropic, spin waves, spin-flop transition, AFMR 2-104597
- antiferromagnetic polarisation around local moments in the Hubbard model 2-72129
- antiferromagnetic superconductor, impurity and spin-fluctuation effects 2-82525
- Cayley tree, combined site and bond percolation 2-77310
- Cayley tree basis, local props. 2-87466
- conduction electron self-localised state in strong mag. field 2-61388
- coupled stereo-irregular chains, local antiferromagnetic ordering 2-116013
- crystal, reflectivity spectra, permeability tensor, magnons 2-77473
- dilute mag. alloy, spin glass transitions 2-82616
- disordered magnet, Ising model with random exchange bonds, Monte Carlo study 2-87468
- excited S_z=0 states in anisotropic antiferromagnetic Heisenberg Hamiltonian 2-66748
- FCC lattice, approx. methods of studying antiferromagnetism 2-104559
- ferro- and antiferromagnetism, spin fluctuation theory of coexistence 2-104569
- fluctuation corrections to hydrodynamics eqns. (*Russian*) 2-61722
- Heisenberg, antiferromagnet, FCC, with nearest-neighbour interactions, spin dynamics on fully occupied lattice 2-82581
- Heisenberg antiferromagnetic chain, ground state 2-72251
- Heisenberg antiferromagnetic chain, S=1/2, with competing interactions, spontaneous dimerisation 2-77318
- Heisenberg antiferromagnetic spin 1/2 chain, finite cell calcs. 2-104649
- Heisenberg chain, alternating, excitation spectra 2-92955
- Heisenberg ferromagnet, quenched random site, mag. states with partial spin glass freezing 2-77252
- Heisenberg ferromagnets, quantum spin chain dynamics, sum rules 2-104567
- Heisenberg magnet, quenched random site, with competitive exchange interactions, high temp. mag. states in simple cubic and BCC lattices 2-56816
- Heisenberg xxz chains, excitation spectrum, magnons 2-104568
- hexagonal antiferromagnet, mag. ordering 2-110567
- Hubbard model, antiferromag. phase 2-110561
- Ising and Heisenberg antiferromagnet, competing interaction effects on physical props. 2-77247
- Ising antiferromagnet, FCC, Monte Carlo study of entropy 2-82618
- Ising lattice, homogeneous long range and antiferromag. order, kinetic theory 2-103669
- Ising model, BCC, with competing interactions, fluctuation induced first order transition, free energy series study 2-77306
- Ising model, frustrated, variational real space renormalisation group 2-101336
- Ising model, fully frustrated 2-D correlation functions 2-66857
- Ising model, random, in d dimens., susceptibility, high-temp. series expansion 2-82623
- Ising model, random antiferphase state and frustration in two dimensions 2-82620
- Ising model site diluted, FCC and frustrated square lattice, spin glass and super-antiferromagnetism 2-77313
- isotropic Heisenberg chain of arbitrary spins, picture of low-lying excitations 2-56815
- itinerant magnetism, two-band model 2-94955
- localisation model, exact solution 2-98593
- localised electron magnetism rel. to paramag. wave function of completely itinerant electrons 2-115965
- magnetically ordered phases, field direction depend. (*Japanese*) 2-72164
- magnetization soliton excitation in antiferromagnetic using magnetoacoustic interaction 2-72329
- magnetoelastic oscills. of domain walls, magnetostrictive strains 2-72256
- magnetoelastic soliton 2-82687
- metals, dislocation-induced elec. resist. rel. to antiferromag. ordering at dislocations (*Russian*) 2-104360
- monoclinic, easy magnetisation axis direction, temp. depend. (*Russian*) 2-115997
- nuclear spin relax. at ultralow temps. 2-72372
- nuclear spin-lattice relax. mechanisms 2-72373
- one-dimensional Heisenberg antiferromagnet, antiferromag.-spin Peierls state phase diagram calc. 2-87469
- one-dimensional Heisenberg antiferromagnets, with random exchange 2-66858
- one-dimensional interacting Fermi system with mag. impurities, magnetisation curve 2-82658
- phase equilb. curve in case of strong cryst. field anisotropy (*Russian*) 2-82594
- piezomagnetic antiferromagnet, solitons (*Russian*) 2-104677
- polaron density of states of hole in narrow band of alternate lattice of fermions 2-98557
- Potts and Ashkin-Teller 3-D models 2-82612
- Potts model, antiferromagnetic, on square lattice, crit. behaviour anal. 2-104641
- Potts model, ferromag. and antiferromag. in (1+1) and (2+1) dimensions 2-72231
- Potts model, generalised three-state and antiferromag., phase transitions and entropy 2-66852
- Potts model, three-dimensional three-state, phase transition 2-72205

antiferromagnetism continued

- Potts model, three-state, on square lattice, Monte Carlo renormalisation group anal. 2-77315
 - Potts model, triangular lattice, crit. behaviour 2-104639
 - pyrite lattice, annealed Ising bond mixture, phase diagram 2-82622
 - quantum antiferromagnetic spin waves near one dimension 2-77280
 - random antiferromagnetic Ising chain, remanent magnetisation 2-72249
 - random binary alloy, antiferromagnet in random field 2-115963
 - random ferro-antiferromagnet, Heisenberg-Mattis model dynamics 2-92953
 - relaxation processes, magnetoclastic waves, sound absorption meas. 2-77408
 - rhombohedral antiferromagnets with weak spin anisotropy, renormalised field theory 2-104626
 - spin glasses, magnetic susceptibility phenomenological theory 2-98894
 - superconductor, nonmonotonic temp. depend., phenomenological derivation using two-fluid model 2-77277
 - superconductor, one-dimensional antiferromag., ordered state in presence of homogeneous mag. field 2-61648
 - superconductors, coexistence of mag. order and superconductivity 2-61647
 - superparamagnets, ideal, mag. relax., Monte Carlo simulation 2-110610
 - surface ferromagnetism induced by surface amorphization in a layered antiferromagnetic system 2-87514
 - surface polaritons on uniaxial antiferromagnets 2-104600
 - ternary superconductors, magnetism rel. to supercond. props. 2-110517
 - tetrameric antiferromagnetic clusters, hybrid states, Mossbauer spectra 2-82759
 - theory of magnetism, statics and dynamics, book 2-68978
 - thin films, guided polariton dispersion relations (*French*) 2-104263
 - triangular, incommensurate mag. struct., role of dipole-dipole interaction 2-66778
 - type I FCC antiferromagnets, in mag. field, realisation of q=3- and q=4-state Potts models 2-82605
 - uniaxial, surface mag. polaritons 2-71885
 - weak ferromag. moment stimulation by nonreson. mag. and sound pumping (*Russian*) 2-116044
 - weakly anisotropic antiferromagnets, renormalised field theory for Gaussian random fields 2-104625
- antihyperons** see *hyperons*
- antimony**
- see also *nuclei with*
 - amorphous film, crystallisation, film thickness effects 2-97922
 - amorphous film, vacuum deposited, estimation of density changes associated with growth 2-71838
 - bicrystal, dislocation struct., compressibility anisotropy influence 2-103768
 - core-hole lifetimes, electron spectra determ. 2-57256
 - determination in air (Tehran) by neutron activation anal. 2-78162
 - diamond-Sb, ion implanted, defects, elec. cond., EPR study 2-66027
 - diffusion along dislocations in Si 2-61207
 - diffusion profile in n-Si, sheet conductance and tracer studies 2-71730
 - electron energy spectrum, thermal expansion, band struct., pseudopotential method 2-11858
 - evaporated thin films; simulation of oriented crystallisation 2-71821
 - film, crystal structure, electron irradiation effect (*Russian*) 2-66394
 - films, on W(112) and (110) faces, characteristic electron energy losses 2-67164
 - films, thermoelec. power, theoretical models 2-82495
 - magnetoacoustic attenuation at high mag. fields, anomalies 2-110404
 - microclusters, inert gas condensation 2-103969
 - monolayer on GaAs(110), LEED dynamic anal. 2-115110
 - overlayer on GaAs(110), LEED/AES/XPS/TDS characterization 2-87060
 - particles, vacuum evaporation prep., twinning, TEM study 2-91984
 - semimetal, second order phase transition, magnetoacoustic study 2-115828
 - solid, inelastic electron scatt., 4d shell excitation 2-85819
 - steel, austenitic stainless, Sb⁺ ion implantation, martensitic transition, Rutherford backscatt. study 2-76658
 - thermodynamic wave obs. (*Russian*) 2-61498
 - thin film, classical size effect, rel. to surface roughness and struct. (*French*) 2-110507
 - thin films, crystn., time-resolved TEM study 2-53898
 - Al-Sb multilayered film, laser induced crystn. 2-61316
 - BaO-TiO₂-Sb system, phase diagrams, influence of foreign atoms on cryst. lattice 2-66179
 - Bi-Sb, ion implanted, electronic struct., magnetoref. study 2-99095
 - CdS/Sb film, vacuum evaporated, elec. and optical props. 2-61631
 - Cu:¹¹⁹Sb, Mossbauer study of impurity-vacancy interactions 2-86705
 - Fe-Sb layered films, absence of mag. moment, Mossbauer study 2-115592
 - Fe-Si-B, mag. induction, effect of Sb and Sn during secondary recrystn. 2-83244
 - GaAs/Sb, crystals and films, elec. props., isovalent impurities effect 2-82286
 - GaAs/Sb, LPE, Sb distrib. 2-104182
 - GaAs/Sb active layer, effect on (Al,Ga)As DH laser reliability 2-55193
 - GaAs/Sb interface, elastic low-energy electron diff. 2-76842
 - Ge:Au, Sb, compensated and illum., low temp. Hall mobility of electrons 2-77096
 - n-Ge:Sb, 1.5 MeV electron irradi., defect levels, DLTS study 2-92508
 - Ge:Sb, Au, cleaved in He, surface Frenkel defects, elec. cond. study 2-115224
 - n-Ge:Sb, Au, compensated, Sb ionization energy 2-76985
 - n-Ge:Sb, compensated by fast neutron irradi., activated elec. cond. 2-115762
 - Ge:Sb, D⁺ states, electronic struct. and binding energies 2-82280
 - Ge:Sb, defect cluster form. and shaping after high-energy particle irradi. 2-76535
 - n-Ge:Sb, far IR obs. of D⁺ band 2-67035
 - n-Ge:Sb, heavily doped, press. effects on magnetoconductivity (*Russian*) 2-56619
 - Ge:Sb, impurity states fine struct., photoconductivity study 2-87190
 - Ge:Sb, laser induced enhanced solubility, elec. and Rutherford backscatt. study 2-115416
 - Ge:Sb, low-temp. cond., evidence for localisation effects 2-77057
 - Ge:Sb, photo-excited acoustic phonons 2-98225
 - Ge:Sb, temp.-depend. cond. 2-110353
 - Ge:Sb, US attenuation by shallow donors in mag. field 2-56649

antimony continued

- Ge:Sb, uniaxially compressed, biexciton-impurity complexes (*Russian*) 2-82242
 GeO₂:Sb glass optical fibre prepared by vapour-phase axial deposition 2-81088
 In/Sb co-adsorption layers, on W field emitter tips 2-62077
 InP:Sb, LEC single crystal growth, Sb dopant distrib. coeff. 2-93412
 Sb overlayers, on GaAs (110), struct. 2-76862
 Sb-GaSe struct., γ -irrad. effect on photoelectric props. 2-61516
 Sb, in inert gas matrices, Raman and fluorec. spectra, vibr. modes 2-108521
¹²³Sb Mossbauer spectroscopy technique with ¹²¹Te source 2-64201
¹²³Sb ²³¹Sb mol. bands, RKR curves, Franck-Condon factors 2-64966
¹²³Sb-¹⁵⁴Eu-¹⁵⁵Eu, NBS long-lived mixed-radionuclide standards, photon emission rates determ. 2-59579
 Si, Sb diffusion, anomalous conc. profiles due to local precipitation 2-76741
 Si:P, As, Sb, ion implanted, multiphase electron beam annealed, impurity profiles 2-103803
 Si:Sb, ion implanted, dopant redistrib. after flash lamp annealing, He⁺ backscatt. study 2-86936
 Si:Sb, ion implanted, electron beam annealing by multiple-scan method 2-92036
 Si:Sb, ion implanted, metastable supersaturated solid solns. formation during solid phase epitaxy 2-98283
 Si:Sb, laser annealed, all formation and interfacial instability, expt. study and perturbation theory 2-56012
 Si:Sb, laser epitaxy over buried layers 2-56406
 Si:Sb, pipe diffusion and dislocation density 2-110043
 Si:Sb amorphous, sputter depth profiling, mass redistrib. by atomic mixing 2-82974
 SnO₂:F:Sb film, elec. resist. and optical absorpt. and reflection spectra meas. 2-66675
 SnO₂:F:Sb film, spray coated, dopant effects on elec. cond. and optical absorpt. props. 2-72088
 SnO₂:Sb films, deposition by oxidation of tetramethyltin and trimethylantimony, elec. and optical props. 2-78997
 SnO₂:Sb thick films, spray deposited, elec. cond., Hall mobility and optical gap meas. 2-82415
 SnO₂:Sb thin films, spray pyrolysed, X-ray diffr. and AES study 2-104204
 ZnSe:Sb, single cryst. photoluminesc. spectra, impurity effects 2-72541

antimony alloys

see also *antimony compounds*

- Al-Si-Sb alloys, struct. modification with Sb additions (*Chinese*) 2-62130
 Au_{1-x}(Pb_{0.5})_{0.5}Sb_{0.5}, metallic glass spheres, prep. and surface characteristics 2-55851
 Bi-Sb alloy single crystals, investigation of US vel., elastic const. and internal friction 2-71539
 Bi-Sb thin film, longit. magnetoresist. max. (*Russian*) 2-115788
 Bi_{0.9}Sb_{0.1} amorphous film, crystn. under anisotropic He stream, T \leq 4.2K (*Russian*) 2-115586
 Bi_{0.9}Sb_{0.1}, many-valley semicond., elec. cond. anisotropy under tension, HF magnetoplasma study 2-87287
 p-Bi_{0.9}Sb_{0.1} under uniaxial tension, topological electronic transitions 2-66424
 Bi_{1-x}Sb_x alloy, electron Fermi surface comp. depend., magnetoplasma wave study 2-76899
 Bi_{1-x}Sb_x films, semimetal-semicond. transition, thickness depend., resist. and magnetoresist. meas. (*Russian*) 2-82411
 Bi_{1-x}Sb_x, many-valley semicond., helicon propag. 2-115798
 Bi_{1-x}Sb_x, semicond., valence band struct., elec. and thermal cond. study 2-87143
 Bi_{1-x}Sb_x, solid soln., system, Vegard's rule validity 2-65968
 Bi_{1-x}Sb_x, ZAF correction for electron probe microanalysis 2-93851
 Bi₉₀Sb₁₀ thin film, band gap and intergrain barrier activation energies 2-72085
 Cd-Sb, liq. alloys, elec. resist. in cpd. forming conc. range 2-115724
 CeSb, p-f valence mixing, anomalous mag. and transport props. 2-56514
 Cu-Sb, dil., electron irradiated, solutes as nuclei for self-interstitial complexes 2-66061
 Cu-Sb alloys, solid, thermodynamic props. (*German*) 2-88059
 Cu-Sb liq. alloy, activities of oxygen 2-66258
 CuMnSb, elec. cond. meas. 2-104348
 CuPbSb, solid-liquid two-phase system, equilb. microstruct. and interface tensions (*French*) 2-61156
 Cu₂Sb, recrystn. and brittleness threshold temp. 2-99546
 Fe-Sb-Co(Mn)(V)(Ti), dil., impurity pair interactions, resist. and NMR meas. 2-82317
 Fe-Sb-(Ni), ultra-high purity, interactive co-segregation of Sb and Ni at grain boundaries 2-93512
 (Fe_{0.98}Sb_{0.02})_{1-x}(Fe_{0.98}Sn_{0.02}), solid solns., magnetisation, Curie temps. and lattice const. meas. 2-76365
 Ga-Al-Sb system, saturated melt-solid phase interaction 2-66348
 La-Sb-Dy, dilute alloys, magnetostriction, free energy calc., single ion Hamiltonian 2-92987
 Mg-Sb, Krupkowski method for thermodynamic props. 2-76708
 Mn_{1-x}Cr_xSb, mag. phase diagram and struct. 2-104612
 Mn_{1-x}Sn_x, spontaneous magnetostriction and Curie temp. press. depend. meas. (*Russian*) 2-116043
 Nb₂Sb, Raman scatt., phonon linewidth and mag. susceptibility 2-57090
 Ni-Sb, metalloidal additions effect on high-temp. ductility, intergranular embrittlement 2-72839
 Ni₂Sb-NiSb eutectic system alloys undercooling (*Japanese*) 2-116433
 Pb-Bi(Sb) melts, activity coeff. of O 2-67299
 Pb-Sb, discontinuous precip. obs., role of bulk diffusion (*Russian*) 2-88083
 Sb-Cs(Na)(K), elec. and mag. props., transition to semicond. characts. 2-92709
 Sb-Te, liq., absolute viscosity, temp. and comp. depend., Sb₂Te₃ intermetallic behaviour 2-82002
 Sb-Zn, amorphous, form. and crystn. 2-76322
 Sn-Sb, corrosion in deaerated citric acid, Sb effects 2-111364
 Sn-Sb, discontinuous precip. obs., role of bulk diffusion (*Russian*) 2-88083
 SnSb thin films, obliquely vacuum-deposited, elec. cond., defect density and struct. 2-66662
 Zn-Sb, liq. alloys, elec. resist. in cpd. forming conc. range 2-115724
 Zn-Sb system, crystallisation characteristics, metastable states, phase diagrams X-ray diffr. study 2-81935

antimony compounds

see also *antimony alloys*

- alkali halides:SbF₆⁻, IR spectra 2-82842
 graphite-SbCl₃ intercalation cpd., stage-2, commensurate-to-glass phase transition, electron microscopy study 2-110004
 Ag-Sb-Te, ternary system, enthalpy of mixing (*German*) 2-76693
 AgSbSe, film, growth and cryst. 2-115620
 (As_{0.5}S_{0.5})(Sb_{0.5}S_{0.5})_{1-x}, chalcogenide glass, optical gap 2-110802
 As₂S₃:Sb₂S₃ ferroelec., tricit. points, dielec. meas. 2-93127
 As₂S₃:Sb₂S₃, phase transitions, permittivity, polarisation (*Russian*) 2-77461
 Bi₂O₃:Sb₂O₃:BaO(PbO), AC elec. resist. meas. 2-87273
 Bi₂Sb₂S₃ ferroelec., tricit. points, dielec. meas. 2-93127
 Bi₂Sb₂S₃:Sb₂S₃, phase transitions, permittivity, polarisation (*Russian*) 2-77461
 Bi₂Sb₂S₃:Sb₂S₃, uniaxial deform., influence on elec. cond. and dielectric const. 2-109886
 (Bi₂Sb₂S₃)₂(Te₂Se₂)₃, orientated thermoelec. material, Bridgman method prep. technique 2-105061
 Bi₂Te₃:Sb₂Te₃, energy spectrum of solid solutions 2-110239
 Bi₂Te₃:Sb₂Te₃, thermocouple, surface treatment effect 2-110373
 Bi₂Te₃:Sb₂Te₃:GeTe-PbTe system alloys, thermo-EMF, elec. and thermal cond., thermoelec. efficiency 2-56626
 Cd-Sb amorphous film, memory switching obs. 2-66596
 Cd-Sb-Ge system, DTA, microstruct. and microhardness 2-105130
 CeSb_{1-x}Te_x, elec. and mag. props. 2-66523
 Cs₂SbCl₂(Br)₂, doping effects, Mossbauer data and electronic props. 2-61007
 CsSbF₄:SO₄, synthesis and cryst. struct. (*French*) 2-91915
 GaSe-Sb, phase diagrams, immiscibility of liq. phase, expt. study 2-71614
 GaSe-Sb₂Se₃, phase diagrams, immiscibility of liq. phase, expt. study 2-71614
 Ge_{40-x}Sb_{60-x}S₀, chalcogenide glass, optical gap 2-110802
 Ge₁₅Te₈₅Sb₂ glass, hopping cond. at low temp., Ge effects 2-61460
 H₂SbO₃:xH₂O, proton conductor, charact. 2-104054
 RbSbF₄:SO₄, synthesis and cryst. struct. (*French*) 2-91915
 SBH(PO₃)₄:H₂O, synthesis and struct. determ. 2-86631
 Sb-As, solid solutions, anisotropy of resistivity (*Russian*) 2-77090
 Sb-O-Te system, metastable phase vitrification and crystn. 2-103647
 Sb-Te, liquid, electrical cond. meas. 2-92612
 Sb-Te, chemiepitaxial layer formation, during reactive diffusion 2-76849
 Sb-Te-In, Krupkowski method for thermodynamic props. 2-76708
 Sb_{1-x}Bi_{0.5}Te_{0.5}Pb solid soln., doping, carrier density 2-71997
 Sb_{1-x}Bi_{0.5}Te_{0.5}Te_{0.5}Se_{0.5}, solid soln., thermoelectric props., effects of Ge and Cu impurities 2-82385
 SbBr₃ addition cpds, cryst. struct. and CT from NQR data 2-110718
 SbCl₃ addition cpds, cryst. struct. and CT from NQR data 2-110718
 SbCl₃ complexes, with organic donors, coordination state, NQR study 2-75318
 SbCl₃, normal and supercooled liqs., depolarised Raman scatt. 2-72476
 SbCl₃, polycryst., thermodynamic props., NQR method appls. 2-110696
 SbCl₃-aromatic hydrocarbon complexes, single crystals, isotope and Zeeman effects, NQR study 2-77413
 SbCl₃-benzene, activity coeffs., heats of mixing, excess functions 2-92202
 SbF, mol. force const., bond lengths, pot. energy functions, electronegativity anal. 2-75463
 SbF₆-graphite intercalation cpd., ¹⁹F NMR study 2-98976
 Sb₂Ge₂O₇, synthesis, struct. and props. 2-111047
 Sb₂Gd, ESR and photoluminesc. spectra 2-93000
 SbNbO₄, stibiotantalite struct. antiferroelec., ferroelec. and pyroelec., prep. and props. 2-66998
 Sb₂O₃ film, chem. deposition from soln. 2-105094
 Sb₂O₃, vitreous, IR and Raman spectra, valence force field calcs. 2-72503
 Sb₂O₃/MgF₂ broad band semitransparent dielec. reflectors, use of transient assemblies 2-109004
 Sb₂O₃-V₂O₅ system, evidence of mixed valence compounds (*French*) 2-56921
 SbOOH, solid electrolytes for H₂O hydrolysis, characts. and prod. 2-71716
 Sb₂O₃-H₂O, AC proton conduction 2-115451
 Sb₂S₃, amorphous and glassy, struct. rel. to As₂S₃ glass struct. 2-86573
 Sb₂S₃ film, photosensitive, prep. by dip-dry technique, struct. and props. 2-111070
 Sb₂S₃, thin film photoelectrodes, studied by spectroellipsometric and photoelectrochemical techniques 2-98689
 Sb₂S₃, UV and dielec. props. 2-99148
 Sb₂S₃-PbS glass, prep. and props. 2-71367
 SbSBr_{1-x}, ferroelec., tricit. points, dielec. meas. 2-93127
 SbSBr_{1-x}, phase transitions, permittivity, polarisation (*Russian*) 2-77461
 SbSI acicular crystals, prep. and elec. field alignment 2-98508
 SbSI, cryst., phase transitions under press., NQR-NMR obs. 2-110692
 SbSI, cryst. growth from vapour, Plackett-Burman method 2-67203
 SbSI ferroelec., relax. processes, spontaneous polarisation screening 2-110780
 SbSI, ferroelec., temp. depend. of Sb L₁ absorption edge near T_c 2-110975
 SbSI, ferroelec. phase transition, Raman scatt. in strong mag. field 2-57027
 SbSI, maximal equitranslational subgroups of the line groups 2-76356
 SbSI, phonon spectrum, soft modes and order parameter near ferroelec. transition 2-103936
 SbSI, polycrystn., prep. by Czochralski method, piezoelec. props. 2-67267
 SbSI single cryst., ferroelec., low temp. growth 2-77718
 SbSI single cryst., photocond., surface perfection influence 2-104423
 SbSI, soft mode ion paraelec. phase, temp. depend. 2-109943
 SbSI, thermomodulated spectroscopy of band gap region 2-110823
 SbSI-polymer composite, preparation and props. 2-88047
 (Sb₂S₃)(Sb₂Te₃)_{1-x}Fe_x, glassy semicond., spin glass like behaviour 2-56871
 SbSbO₄, stibiotantalite struct. antiferroelec., ferroelec. and pyroelec., prep. and props. 2-66998
 Sb₂Se₃ film, chem. deposition from soln. 2-105094
 Sb₂Se₃ photoelectrochemical cells chemically deposited thin film electrode deposition and behaviour affecting parameters 2-67865
 Sb₂Se₃-x amorphous film, energy gap, composition depend. 2-61337
 SbSe₂S_{1-x}I_x, ferroelec., tricit. points, dielec. meas. 2-93127
 SbSe₂S_{1-x}I_x, phase transitions, permittivity, polarisation (*Russian*) 2-77461

antimony compounds continued

- SbSi, ferroelec. semicond., optical transitions, temp. depend. meas. near phase transitions 2-57109
 SbTaO₄, anomalies of thermal expansion high temp. phase transitions 2-86908
 SbTaO₄, stibiotantalite struct. antiferroelec., ferroelec. and pyroelec., prep. and props. 2-66998
 Sb₂Te₃, anisotropy in optical and elec. props. 2-56587
 Sb₂Te₃, liquid, radial distrib. anal. 2-91751
 Sb₂Te₃, single cryst. growth by hot wall epitaxy 2-93418
 Sb₂Te₃-Bi₂Ge₃, solid solns., energy spectrum 2-76920
 Sb₂Te₃-Se, photoelectron diffr. azimuthal patterns from different at. sites 2-93375
 SeO₂-TeO₂-Sb₂O₃, glass formation at high press. 2-86576
 SiO₂-B₂O₃-Sb₂O₃-Na₂O glasses, electronic and ionic cond. 2-87348
 SnO₂-Sb₂O₃ transparent conductive film, etching in solutions of alkali metal hydroxides 2-99574
 YbTe-Sb₂Te₃, cross-section of Yb-Sb-Te system, expt. study 2-88062
 ZnO-Bi₂O₃-CoO-MnO-Sb₂O₃, ceramic, influence of comp. on dielectric losses 2-87660

antineutrinos see neutrinos**antineutrons see neutrons****antinucleons see nucleons****antiphase boundaries**

- Nimonic PE16, solution treated, grain boundary segregation during neutron irradiat. 2-109844
 nonstoichiometric spinels, antiphase periodic modulation struct. (French) 2-86686
 (Al,Cr)₃BeO₄, laser-quality alexandrite, Cr³⁺ EPR spectrum and antiphase boundaries obs. 2-87583
 Au-Mn, structure, high resolution electron microscope and electron diffr. study of Au₃Mn phase 2-86627
 Au-Mn system, periodic antiphase boundary structs., derived from DO₂₂ struct. 2-81716
 Au-Mn system, two-dimensional antiphase struct., high voltage-high resolution electron microscopy 2-81970
 Au₂₂Mn₆, antiphase struct., one-dimensional, high-voltage high-resolution electron microscopy study 2-60923
 Au₁₅Mn₁₃, superstructure, diffr. studies 2-86628
 (Co_{0.78}Fe_{0.22})₂V alloy, ordered, microstruct. 2-72719
 Cu surface (100), adsorbed Pb, LEED studies 2-98450
 CuAu vacuum deposited films, mech. twinning 2-98492
 CuAu₁₁(II), vacuum deposited ordered thin films, mech. twinning obs. 2-82173
 Cu₃Au, antiphase domain boundaries, electron diffr. study 2-115245
 Fe-Al, pseudoelasticity and slip reversibility, optical and electron microscopy obs. 2-111221
 Fe-Al (30.5 at.%), plastically deformed, ordered, antiphase domain boundary tubes, electron microscopy study 2-72784
 Fe-Si-Al, Sendust, order-disorder transform. and dislocation configuration, TEM study 2-83108
 GaAs surface (001), reconstructed, domain struct., RHEED evidence 2-98408
 Ti₃Al-Nb, as-annealed and creep deformed, superdislocation networks, APB energy role 2-98091
 W surface (110) adsorption of I₂, LEED and Auger study, antiphase boundary model 2-82144

antiphase domains**see also antiphase boundaries**

- troilite, meteoritic phase transitions and domains, TEM obs. 2-117641
 Au-Cd (33 at.%), hexagonal type antiphase domain struct., lattice modulation, X-ray diffr. study 2-65924
 Au-Zn, incommensurate two-dimens. antiphase struct., HVEM study 2-97995
 Au₂Zn, H phase, out of step period 2-71658
 Cu surface (100), adsorbed Pb, LEED studies 2-98450
 Cu-Pd, ordering process during continuous process (Japanese) 2-77820
 CuAu II, modulated struct., antiphase domains, Fourier synthesis 2-81715
 GaAs surface (001), reconstructed, domain struct., RHEED evidence 2-98408

antiprotons see protons**antireflection coatings**

- achromatic, optical refr. index calcs. 2-65336
 dichromatic coatings for pulsed laser fusion appls. at 0.53, 1.06 μ m, damage thresholds 2-65283
 bilayer metallic antireflection mirror 2-114406
 chemically unstable optical glass components, polished surface preservation 2-55368
 designs for mixed two-component deposition, constrained optimisation method 2-70653
 dielectric thin films, composition depth profiling, SIMS, IIR and AES comparisons 2-99287
 double-layer V-type coating, heat treatment influence on spectral performance at 1.06 μ m 2-91023
 fabrication of reflection, antireflection coatings for laser optics, reactive sputtering process (Czech) 2-70634
 glass, antireflection polished, strengthened by ion exchange 2-97134
 glass integral antireflective surfaces, historical development 2-60202
 interference layers calc. using TI-59 calculator (Czech) 2-11411
 interference optical coating synthesis 2-70652
 IR window materials, broad band coatings, optimal design 2-81063
 laser damage thresholds at 532 nm for production-run optical components 2-65284
 laser single-pulse damage thresholds at short wavelengths 2-75612
 laser-induced damage in antireflection coatings for LiNbO₃ crystals 2-65285
 minimum reflection coefficient by inhomogeneous media, homogeneous multilayer approx. 2-114167
 moth eye antireflection surfaces, optical props. 2-91012
 multilayer antireflection and protective coatings on optical items of STK3, STK7 and STK8 glass 2-97149
 multilayer broad band, automatic computer design, refractive index optimisation 2-81048
 optical glass, thin film form. by leaching in acidic soln., Auger study 2-82177
 polymer film deposition in low press. reactive plasma, characteris. and appls., review 2-57287
 residual refl. evaluation using microspectrophotometry 2-75739
 selective optical surfaces for solar energy converters, book 2-112662

antireflection coatings continued

- statistical ray optics appls. 2-90796
 trilinear structures, optical recording mechanisms, expt. study 2-90823
 two-wave, optimal refr. index calcs. 2-65336
 V-type double layer, spectral performance, heat treatment effects 2-81062
 BaF₂, thin film refractive index determ., 1-11 μ m wavelength range 2-87879
 i-C, for Si solar cells, SIMS anal. 2-83492
 C:H amorphous thin films, hard, optical props., antireflection coating for Ge 2-99207
 CO₂ laser optics design, weak refl. influence from anti-refl. coated surfaces 2-90933
 Ge, amorphous solar selective absorber, medium temp. 2-93945
 Na₂O-B₂O₃-SiO₂ gel-derived single layer antireflection films 2-77732
 Se-Te bilayers, struct. changes by laser writing, TEM study 2-91009
 Si solar cells, antireflection coatings design criteria for optimising plasma-assisted CVD nitride films 2-105085
 Si₃N₄ for In_{0.55}Ga_{0.45}As/InP pin and avalanche photodiodes for the 1 μ m to 1.6 μ m wavelength range 2-109080
 SiO₂H, porous antireflection coating for solar cells 2-75659
 SnO₂, reactive high rate sputtering deposition, opt. characteris. 2-57288
 SnO₂/Mo photothermal solar energy converters, solar absorptance and thermal emittance 2-83514
 Ta₂O₅, reactive high rate sputtering deposition, opt. characteris. 2-57288
 Ta₂O₅ sputtered antireflection coating for Si solar cells 2-105564
 TiN films from N₂⁺ implantation of Ti coated Si, elec. and optical props. 2-116286
 TiO₂, reactive high rate sputtering deposition, opt. characteris. 2-57288
 WO₃, reactive high rate sputtering deposition, opt. characteris. 2-57288
 ZnS-Ag-ZnS heat reflecting filter, optimal design 2-81058

API gravity see density**apodisation see acoustic imaging; optical images****apparatus see instrumentation; instruments****apparent porosity see porosity****appearance potential see ionisation potential****appearance potential spectra**

- extended appearance pot. fine struct. for surface analysis, comparison with EXAFS 2-110970
 graphite, unoccupied electronic states 2-115655
 surface structure, extended absorption fine struct. anal., review 2-110097
 C-graphite-like, Auger electron APS, low energy electron contrib. 2-62024
 Cu density of unoccupied electronic states, soft X-ray appearance, pot. spectrosc. obs. 2-11028
 Fe₇₄Cr₂₆P₁₀C₇Si₃, amorphous, appearance pot. spectroscopy, electronic struct. effects 2-105005
 Ho, SXAPS meas. 2-110982
 Ho-Ni, SXAPS meas. 2-110982
 NiO, empty electronic states, inverse photoemission and SXAPS studies 2-61354

appearance potential spectroscopy

- core level binding energy meas., comparison of APS and FRESKA data 2-83430
 pyridine, appearance pots., breakdown curves and metastable peak shapes, time depend. mass spectra 2-90515

Appleton layer see ionosphere**appliances, domestic see domestic appliances****applied mechanics see mechanics****approximation theory**

- see also function approximation; interpolation; least squares approximations**
 alternative techniques to least squares approximations 2-112336
 eclipsing binary stars, approximation of light loss curves via special polynomials (Russian) 2-94779
 elasticity, convergence of approximate solns. for nonlinear incompressible problems (French) 2-89534
 fatigue crack growth data, approx. 2-116647
 Hamilton's principle in approximate dynamics 2-94994
 incompressible finite elasticity, appl. of existence and approx. results for nonlinear mixed problems 2-69021
 incompressible viscous flow, conforming mixed finite element methods 2-75919
 instruments error distributions approximation 2-63960
 multitime asymptotic methods for slowly evolving oscillating systems 2-107092
 Navier-Stokes eqns., anal. of upwind discretisation schemes 2-95021
 nonstationary Navier-Stokes problem, finite element approx. 2-95020
 pseudoplastic transient flow, numerical and expl. simulation methods 2-91492
 seismic sounding, frequency domain mapping approximation of moveout filters with appls. 2-100295
 shell, nonuniform, approx. analytical models in stability problems (Russian) 2-75873
 structure and approx. in physical theories, conf., Osnabruck, Germany (June, 1980) 2-89451
 transport processes, finite-difference approximations and superconvergence for the discrete-ordinate equations in slab geometry 2-95286
 viscoelasticity, asymptotic soln. of stochastic integro-differential eqns. with small parameters 2-109209
 viscoelasticity theory, method of successive approximations appl. 2-81252

APR see acoustic paramagnetic resonance**APW calculations**

- transition metals, cyclotron masses and many-body effects, relativistic APW calc. 2-56426
 transition metals, electronic struct. and soft X-ray emission spectra 2-76911
 transition metals, X-ray absorpt. spectra, K- and L-edges 2-77624
 AgCl, band struct. and density of states, APW-LCAO calc. 2-115663
 BaPb_{1-x}Bi_xO₃, superconductivity, electronic and cryst. struct. effects 2-115938
 CeSn₃, Fermi surface, linearised APW calc. 2-98525
 CoAl, electronic struct. and charge transfer, APW band calc. 2-66430
 Co-MnSn, Heusler alloys, band struct., SAPW calc. 2-82215
 Co-TiAl, Heusler alloys, band struct., SAPW calc. 2-82215
 Co-TiSn, Heusler alloys, band struct., SAPW calc. 2-82215
 β -FeTiH, electronic props., band struct., APW calc. 2-66416
 β -FeTiH, electronic struct. and stability 2-71853
 β -FeTiH, Mossbauer isomer shifts 2-87641

APW calculations continued

- FeTiH₂, Mossbauer isomer shifts 2-87641
 GdNi₂, spin polarised energy band struct. calcs. 2-92449
 KCl, electron struct and X-ray absorption spectra, APW calc. 2-56441
 KCl, electron struct. and X-ray absorpt. spectra, core hole effect in cluster approx. 2-98536
 KCl, optic phonons, ab initio calc. 2-66147
 Kr, BCC-FCC allotropy, F-bands and metallisation 2-56185
 LaNi₂, spin polarised energy band struct. calcs. 2-92449
 LaSn₃, Fermi surface, linearised APW calc. 2-98525
 Li, K absorption spectrum, band struct. and density of states, initial state approx. 2-87901
 NbH₂, band struct., Fermi surface, and optical absorpt. spectra 2-104246
 NbH₂, electronic struct., electron-phonon coupling 2-66444
 NbO, effect of vacancies on electronic struct. 2-61330
 Nb₂Sn, tetragonal, electronic struct., nonorthogonal tight binding and APW calcs. 2-76914
 Ni overlayer on Cu(001), electronic struct. and magnetism 2-104241
 NiSi₂, band struct., UPS study and APW calc. 2-105042
 PtBi, band struct. and optical props. 2-76916
 SCH₃, electronic energy bands and optical props. 2-82224
 TiH₂, electronic struct., APW method and LCAO interpolation 2-61353
 VH₂, band struct., Fermi surface, and optical absorpt. spectra 2-104246
 W (001), chemisorption of Cs, work function lowering by multiple dipole form., full pot. linearised APW calc. 2-72050
 W (001) surface electronic struct., APW and warped muffin-tin calc. 2-61343
 WC, hexagonal, band struct. and partial charges, APW calc. 2-76924
 Xe, BCC-FCC allotropy, F-bands and metallisation 2-56185
 ZrC, energy band struct. and X-ray emission spectra, APW calc. 2-110984
 ZrH₂, electronic struct., electron-phonon coupling 2-66444
 ZrN, energy band struct. and X-ray emission spectra, APW calc. 2-110984

arc discharges *see arcs (electric)***arc furnaces**

- arc voltage requirement variations due to arc movement (*German*) 2-103481
 electricity consumption reduction by preheating scrap with heat recovered from fumes (*German*) 2-73023

arc heaters *see arc furnaces***arc lamps**

- vortex stabilised arcs, AC and DC, energy transport meas. 2-76225
 Fe arc light source for spectroscopy 2-102893
 Xe arc lamp radiation-induced temp. rise in Si 2-56009

arc welding

- coated electrodes heat treatment conditions selection 2-93520
 steel, stress-relieved SAW metal, Nb microalloyed, mech. props. and microstruct. 2-105192
 TIG's underwater role: present and future 2-71286
 TIG welding arc, acoustic control of arc length 2-103542
 Ar-W high pressure arcs, heat transfer in column 2-103541
 Ti alloy, near- α IMI 829, weldment, struct. and transform. characts. 2-116439
 Ti alloy weldments, dissimilar, solute banding effect on transforms. 2-93503

archaeoastronomy *see astroarchaeology***archaeology**

- see also astroarchaeology*
 ancient coins, Cu and Ag absolute determ. using 14 MeV neutrons 2-116741
 archeomagnetic intensity study of Indian potshards from Quebec, Canada 2-111860
 ceramics, ancient, electron probe microanalysis appls. in technological and provenance investigations 2-116737
 ceramics, thermoluminescence dating, grain size distrib. and beta dose-rate 2-100571
 computerised picture processing of photographic negative of Holy Shroud of Turin 2-95495
 nuclear microprobe meas. of F conc. profile, appl. in archaeology and geology 2-100572
 obsidian artifacts fission track dating 2-73720
 Pecos River, Texas, Holocene and present flood record from archaeological/geomorphological evidence 2-78705
 Peking Man, fission track dating 2-70112
 proton induced X-rays study of archaeological artifacts 2-99730
 E Sahara Desert, archaeological sites dating rel. to desertification chronology in Great Sand Sea and Selima Sand Sheet 2-117269
 Ag alloys, Roman, analysis by scatt. and X-ray fluoresc. of monoenergetic gamma-rays 2-116738
 Au items of ancient jewellery, milliprobe and microprobe anal. 2-99729

architectural acoustics

- see also anechoic chambers; echo; noise abatement; reverberation*
 airborne sound insulation in buildings, simplified evaluation technique 2-109121
 ambiphony, electronic manipulation of acoustic factors of closed spaces (*German*) 2-81163
 auditorium reverberation time, subjective preference judgements 2-75775
 automobile passenger compartment, structural-acoustic finite element anal. 2-75780
 central cluster design technique for large multipurpose auditoria 2-86172
 church sound system design 2-79295
 cinema projection room acoustic noise level standardisation (*Russian*) 2-69284
 closed offices, speech privacy study 2-109119
 composite panels, transmitted acoustic intensity measurement 2-60305
 concentric sphere reverberation time analysis 2-70767
 dispersion of localised measurements of reverberation time 2-75776
 dwellings airborne sound isolation, problems in field meas. (*Chinese*) 2-81162
 gypsum wallboard partitions, sound transmission loss for steel stud partitions having cavities filled with glass fiber batts 2-70769
 gypsum wallboard partitions, sound transmission loss using 2x4 in. wood stud partitions 2-70770
 impulse response and other types of room acoustical responses 2-75778
 loudspeaker array design, polar-plot method 2-86174
 loudspeaker coverage by architectural mapping 2-86173
 material properties of building structures, meas. 2-114553

architectural acoustics continued

- multi-purpose, in conservatoire, variable acoustics planning (*German*) 2-75781
 multihall in Mannheim, acoustics problem (*German*) 2-91158
 noise, Kalman's filtering theory under preestablished estimation algorithm form (*Japanese*) 2-97297
 nomographs, use in acoustic propagation and room acoustic, use of nomographs 2-60273
 normal room modes, distribution 2-86175
 orchestral sound, halls and timbre 2-68027
 perception of coloration in sound fields in relation to autocorrelation function 2-73250
 physical principles and applications, book 2-58570
 porous materials, acoustic characts., wave propag., transmission and reflection 2-65423
 prediction of sound transmission through corridors 2-97293
 quantitative rating and optimum design of concert halls 2-70768
 ray tracing technique, error investigation 2-114552
 reverberation times, effect of finite bandwidth 2-60304
 room acoustics, review of reverberation theories (*French*) 2-70766
 room walls, distribution of sound angular incidence 2-75777
 sound fields in rooms, interaural crosscorrelation and listening levels (*Japanese*) 2-91161
 sound impulse meas. and testing, planning of hall acoustics (*German*) 2-91160
 sound reinforcement systems, historical review 2-97294
 sound transmission by IR light for improving speech intelligibility (*German*) 2-91159
 sound transmission loss meas., specimen frame influence 2-114554
 sparse volume array for architectural acoustic measurements 2-55384
 sport hall conversion to present opera, provisional acoustic treatment (*French*) 2-109117
 theatre seats, sound transmission calculations and low-frequency range improvement methods 2-109120
 time delay spectrometry (*Danish*) 2-97298

architectural CAD

- radioactive waste storage facility, computer-aided design 2-64507

architectural computer aided design *see architectural CAD***architecture**

- see also building; civil engineering*
 passive solar architecture 2-57682

arcing *see arcs (electric)***arcing, switches** *see circuit-breaking arcs***arcs (electric)**

- see also arc furnaces; arc lamps; arc welding; circuit-breaking arcs*
 10 kA arc in air, quickly switched off, free burning, breakdown phenomena (*German*) 2-115066
 acoustics meas. of arc voltage applicable to arc welding and arc furnaces 2-55387
 anode activity, small scale, in vacuum arcs 2-115070
 anode of high current stabilised arc, heat flux densities and electric current 2-71276
 arc-fusion splicing of single-mode fibres, optimum splice conditions 2-65417
 atmospheric impulse arc plasma, temp. meas. by ruby laser scatt. 2-115064
 breakdown voltage, vacuum gap volume and config. effect 2-60825
 cathode arcs, spontaneous extinction, instability study 2-86487
 cathode craters, influence of cathode temp. 2-115082
 cathode erosion resistance in high-current vacuum arc regime 2-83233
 channel model, approx. eqns. 2-81605
 circuit breakers, HV, arc behaviour anal. using Cassie, Mayr and Rizk's models (*French*) 2-86491
 circuit for exciting a combined discharge in gaseous media 2-71278
 column, extinction chamber, pinch effect produced by Lorenz forces (*French*) 2-115030
 CRT laser-induced arcing, and arc suppression 2-76221
 DC plasma jet, time resolved meas. of rotational temp. 2-103479
 diffusion vacuum arc, electric characts. 2-97817
 DITE Tokamaks, arcing impurities, cathode erosion rate meas. of vacuum arcs 2-103475
 electric arc furnaces arc voltage requirement variations due to arc movement (*German*) 2-103481
 electric arc plasma jets, supersonic expansion characts. investig. 2-115078
 electrical contacts in air, breaking arc wave form anal. 2-86488
 embedding effect on electrode in dielectric med. 2-103553
 explosive model of arc-discharge cathode spots 2-86493
 free-burning arc, vapour flow, press. probe study 2-97814
 glow discharge treatments, arc prevention 2-97818
 helically magnetic unstable elec. arc, instability growth rates and closed-loop mag. field control 2-103500
 high current vacuum arc, spectral line broadening of ion 2-103497
 high-current vacuum arc with and without externally-applied mag. field, current-flow pattern 2-103498
 high-speed flow, DC props., two-dimens. model 2-103495
 hollow arc cathode in Cs-plasma, props., influence of surface emission props. 2-86495
 hollow arc discharge cathode, electron distrib. and ionisation rate in active zone calc. 2-60828
 hollow cathode arc for metastable inert gas atom beams 2-71282
 hot cathode arc discharges initiation by electron confinement in Penning and magnetron configurations 2-91701
 hot microwave plasma, unipolar arc, diagnostics (*Russian*) 2-60812
 impurity mass transport, carrier effect 2-81604
 ISX-B Tokamak, plasma-limiter interactions, high-speed photographic obs. 2-76142
 JFT-2 Tokamak first wall, plasma parameters related to arc initiation 2-109558
 Knudsen arc, time varying, thermal electron distrib. and ionization rate, anomalous features 2-115086
 metal halide arcs, additive densities estimation from self-reversed emission line contours 2-115084
 metal ion source based on arc discharge 2-107451
 metal layer dynamics in plasma layers near a wall 2-115016
 metallisation, electrode heating efficiency and coeff. of material use (*Russian*) 2-67582
 missile generation due to electrical arcing in high field fusion magnets 2-59531
 MPD arcjets, current distrib. at electrodes 2-97717

arcs (electric) continued

- multichannel surface arc switch 2-109608
- noble gas MHD generator, discharges in inlet region 2-91681
- nonstationary low press. arc cathode anal., magnetoplasma dynamic instability of channel 2-103499
- optical fibre arc-fusion splicing machine 2-81126
- plasma, trace impurities distrib., spectrochemical anal. 2-65764
- plasma arc boundary, RF-method for elec. cond. meas. 2-103471
- plasma expansion in flutestubes and influence of arc structure on elec. cond. meas. 2-103545
- polluted insulator surfaces, AC arc discharges, expt. study 2-71271
- rotating electric arc as spectroscopic light source (*German*) 2-91686
- static voltage gradient as nonlinear one-dimensional Elenbaas-Heller eqn. eigenvalue (*German*) 2-60830
- stationary arc plasma, electron and gas temp. difference, theoretical and expt. study 2-83686
- superconducting magnets protection, using shunted circular grid for electric arc extinguishing (*Czech*) 2-65777
- temperature field measurements of the electric arc plasma in a longitudinal magnetic field 2-76217
- temperature gradients, within electric arc close to cathode (*French*) 2-65781
- tetrafluoromethane, arc discharge, enhanced photoemission from F atoms 2-103487
- thermal conductivity in dissociation region, meas. by holographic interferometry 2-103251
- thermo-field electron emission in arc discharges 2-109613
- TIG's underwater role: present and future 2-71286
- TIG welding arc, acoustic control of arc length 2-103542
- Tokamak vacuum arc behaviour rel. to cathode surface conditions 2-103496
- turbulent arc, set simulation by Monte Carlo methods 2-76216
- vacuum arc, anode surface temp. and spot formation model 2-115075
- vacuum arc, cathode spot vel., expt. and theoretical study 2-76224
- vacuum arc anode, X-ray detection 2-91688
- vacuum arc discharge, reaction to current discontinuity 2-103492
- vacuum arcs, cathode heating 2-115063
- vacuum metal-vapour arc transition to N₂ arc, cathode-spot surface phenomena 2-97811
- vortex stabilised arcs, AC and DC, energy transport meas. 2-76225
- Al-Mo, erosion yields by vacuum arcs in mag. field, temp. depend. 2-74917
- Ar, arc, continuous emission investigated at 255-700 nm 2-65699
- Ar arc, high intensity, studies of anode region 2-91694
- Ar, electric arc discharge in permeable channel with rapid injection of plasma forming gas 2-60815
- Ar, hollow arc discharge cathode, electron distrib. and ionisation rate in active zone calc. 2-60828
- Ar plasma jets, underexpanded, in transitional mode struct. 2-109606
- Ar-W high pressure arcs, heat transfer in column 2-103541
- CO₂ TEA laser, preionizing spark arrays, comparison of transverse and linear geometries 2-55111
- Fe arc light source for spectroscopy 2-102893
- Hg discharge lamp, high press., fundamental longitudinal acoustic reson. obs. 2-91690
- Mn II line transition probabilities, 237 to 357 nm, arc emission meas. 2-80524
- N plasma, quasi-homogeneous stationary, composition at atmos. press. 2-76179
- N₂, freely recovering gas blast arc, temp. decay mechanisms 2-71279
- N₂ post-arc column, high-voltage breakdown simulation 2-97810
- N₂/CO₂ mixtures, double discharge TEA CO₂ laser uniform excitation 2-60058
- N₂-Cu arc discharge near anode, transport coeffs at atmospheric press. 2-103502
- Ne isotope separation in DC arc 2-85829
- SF₆ arc discharge, enhanced photoemission from F atoms 2-103487
- SF₆ arc plasma, optical spectroscopy study, at atm. press. (*French*) 2-76228
- SF₆ axially blown arc, dielec. recovery after current zero, expt. 2-115067
- SF₆ axially blown arc, dielect. recovery after current zero, theoretical 2-115068
- SF₆ axially blown arc, dielect. recovery after current zero, expt. and theoretical comparison 2-115069
- SF₆, freely recovering gas blast arc, temp. decay mechanisms 2-71279
- SF₆-N₂ mixture, arc discharge, thermal and elec. conductivity coeffs., theory and expt. 2-103501
- Ta, surface transfer processes during arc plasma heating and oxidation, mag. field effect (*Russian*) 2-99594
- TiC-Mo, erosion yields by vacuum arcs in mag. field, temp. depend. 2-74917
- Xe isotope separation in DC arc 2-85829

area measurement

- polyethylene resins, phosphorylated, surface area, SEM meas. 2-101386

argon

see also nuclei with

- accelerated projectile fragmentation, computerised track anal. 2-64835
- adsorbed layer on Co₃O₄ powder, study by surface differential diff. meas. 2-82124
- adsorbed monolayer on lamellar halides, two-dimens. condensation, critical temp. 2-66350
- adsorbed on Ag (111), two-dimens. gas phases 2-61293
- adsorbed on Al, local-field effect in optical reflectance 2-104834
- adsorbed on Al(111), photoemission studies 2-62048
- adsorption on CdCl₂, surface homogeneity effect 2-115563
- adsorption on graphite at high temp. 2-98438
- adsorption on Ni (110), electronic binding energies of valence levels, UPS study 2-82437
- adsorption on S (111), effect of lateral interactions 2-56348
- angular distrib. parameters for electron spectrometer calibration 2-85468
- Ar-Cs flowing mixture, Cs droplet removal in a closed-loop MHD generator 2-91518
- arc, continuous emission investigated at 255-700 nm 2-65699
- arc, high intensity, studies of anode region 2-91694
- atom, beam foil excitation, Zeeman quantum beats, cascade effects 2-54937
- atom, diamag. susceptibility, new Thomas-Fermi model test 2-85543
- atom, elec. dipole forbidden inner-shell transitions, electron energy loss obs. 2-75424
- atom, electron impact, characteristic X-ray and bremsstrahlung cross-sections 2-102646
- atom, electron impact excitation near-threshold 2-96738
- atom, electron impact inner shell ionisation, ang. correl. meas. 2-85812
- atom, electron impact ionisation, inner-shell alignment, distorted-wave approx. appl. 2-102635
- atom, electron scatt., inelastic and elastic cross section meas. 2-102628
- atom, L₃ shell electron impact inner-shell ionisation, post-collision interaction 2-102645
- atom, metastable, quenching by O containing compounds, reson. fluoresc. study of reaction prod. 2-59890
- atom, metastable, slow electron impact deactivation, rate const., temp. depend. 2-90719
- atom, photoelectron spectrum, satellite struct. 2-64937
- atom, positrons and electrons elastic scatt. 2-80812
- atom, Rydberg IR optogalvanic spectroscopy 2-59759
- atom, satellite struct. in L X-ray emission spectrum 2-80526
- atomic closed-shell ions, radial electron density moments and X-ray scatt. factors 2-75184
- atoms, Bethe sum rule, contrib. of L+M and K electrons 2-80539
- atoms, positron inelastic scatt., excitation and ionisation meas. 2-75440
- atoms, third-harmonic generation and multiphoton ionisation 2-70205
- atoms and ions, doubly excited states, energy levels, HF calcs. 2-75160
- bombarded Cn, sputtering mechanism 2-105024
- crystal, interatomic forces, cohesive energy and elastic constants. 2-55882
- dense gas, electron transport theory 2-103256
- dense gas and liq., polarisability anisotropy induced light scatt. spectra 2-97701
- desorption on solid Xe, transition state theory rate const. 2-111514
- determination in sputtered films using wavelength-dispersive electron probe microanal. 2-73039
- dielectric recovery time of small pressurized spark gaps 2-103544
- dielectronic satellite spectrum from microballoon core plasma, digital enhancement 2-55765
- dimer, exchange repulsion, ab initio calcs. 2-80463
- dimers, Raman scatt., rot. and vibr. spectra, polarisability 2-70265
- discharges, ionisation waves, crit. current meas. 2-91697
- dusty ionised monatomic gas, relax. zone behind strong normal shock waves, parametric study 2-86433
- elastic electron scatt., cross section data compilation 2-54964
- electric arc discharge in permeable channel with rapid injection of plasma forming gas 2-60815
- electron scatt. angular distrib. 2-70420
- fluid, transient hot wire thermal cond. apparatus 2-71060
- free jet, rot. distrib. of N₂, translational temp. anisotropy effect 2-109383
- freezing line, liq. theory and perturbation theory 2-109960
- gas, breakdown by CO₂ laser radiation near metal surfaces 2-97699
- gas, electron transport, temp. depend. calc. near Ramsauer-Townsend min. 2-103254
- gas, luminous layers in prebreakdown region at low press., Monte Carlo simulation 2-97702
- gas, optical quality of supersonic jets 2-55697
- gas, thermal conduct., power eqn. representation 2-60711
- gas phase thermal diffusivities by a thermal lens technique 2-91576
- hollow arc discharge cathode, electron distrib. and ionisation rate in active zone calc. 2-60828
- ICP plasma, emission of 200-300 nm spectra of Fe 2-85579
- ICP system, 50 MHz, optimisation, for anal. using organic solvents 2-84712
- ICP torch, low Ar consumption, using external air cooling 2-115056
- impurity pump-out at two-ion hybrid reson. in TFR Tokamak plasma 2-109567
- ion corner cube laser, modes 2-80999
- ion laser power meas. in visible region, international intercomparison 2-102771
- ion laser radiation, HF modulation due to stable two-mode oscill. 2-97023
- ionisation sampling resolution and relativistic rise, dE/dx meas. 2-108312
- ionisation wave instabilities in DC discharge rel. to laser parameters 2-97819
- jet, high temp., Ti particle dispersion regularity (*Russian*) 2-60599
- laser induced breakdown at 0.35 μ m 2-103489
- laser parameters influence on mode-locking conditions 2-90951
- Lennard-Jones fluid, Couette flow, shear rate depend. viscosity function (*French*) 2-97497
- liquid, elec. breakdown at cryogenic temp., press. depend. 2-93111
- liquid, electron dynamics meas. (*Russian*) 2-71993
- liquid, electron trapping 2-110410
- liquid, geminate recombination study 2-77138
- liquid, hot-electron thermalisation, density depend. 2-103807
- liquid, low-angle struct. factor away from triple point 2-55827
- liquid, luminescence yield, LET depend. 2-90363
- liquid, mol. dynamics simulation, collision times and durations 2-71321
- liquid, small-angle neutron scatt., van der Waals forces 2-60867
- liquid, spectral density of square-well and hard-sphere fluids through correlation function 2-91735
- liquid 2-71327
- liquid and solid, hot electron emission (*Russian*) 2-87957
- liquid ionisation chamber design for heavy ion detection 2-70034
- low temperature plasma, microwave interactions, nonlinear phenomena (*Russian*) 2-76135
- matrix for naphthalene, phosphorescence spectra, electronic transitions 2-61957
- matrix for Xe(Kr), emission spectra, excitation spectra and lifetimes 2-54795
- metastable atoms, chemi-ionisation reactions 2-72974
- microwave plasma, oscills., noise spectrum, instability (*Russian*) 2-60740
- microwave plasma torch, spectroscopic meas. 2-103478
- mini-arc, dispersed source for absolute calibration 2-86066
- monolayer on Cu (110), electronic and geometric struct., LEED and photoemission study 2-98407
- multilayer physisorption on Ag, mean-field theory 2-87050
- nonpolar fluid, dielectric const., deviation from Clausius-Mossotti; eqn. 2-99023
- particle in Ar fluid, Brownian motion, computer simulation 2-95245
- Penning ionisation formula 2-103267
- photoelectron angular distrib. β parameter near 3s⁻¹4p resonance 2-80551
- Z-pinch, dynamics with D₂ and D₂-Ar mixtures 2-65744

argon continued

- plasma, collisional and radiative model, appl. to ionisation phenomena behind a shock wave 2-114972
- plasma, Cs seeded, relax. processes, radiation and nonMaxwellian electron distrib. effects 2-91594
- plasma, electron-ion recombination and ionisation coeff. calc. 2-91591
- plasma, fast electron beam, ion and electron density distrib. (*Russian*) 2-60762
- plasma, high temp., X-ray spectral line emission 2-71108
- plasma, implosion dynamics 2-103409
- plasma, inductively heated, transient conditions, thermodynamic equilib. and temp. meas. 2-91593
- plasma, laser-produced implosion, diagnosis by Ar X-ray lines 2-86472
- plasma, low temp., effect on C fibre containing ZrO_2 2-67585
- plasma, prod. by shock layers over blunt bodies, radiation emission calcs. 2-81456
- plasma, radiation transport mechanism at shock wave fronts 2-65703
- plasma, self-excited electrostatic waves, instability obs. 2-86400
- plasma, temp., ion velocity, spectral meas. 2-65765
- plasma column, excited at densities, radial variation 2-65688
- plasma in tubes, cleaning and memory effects 2-97749
- plasma jets, underexpanded, in transitional mode struct. 2-109606
- positron-gas cross-section measurements 2-75420
- pulsed discharge, channel form. ab medium pressures, interferometric study 2-71273
- purification in liquid state for time projection chamber 2-70033
- RF excited fully ionised low press. plasma, production 2-115023
- scaling corrections to X-ray scatt. near liquid-vapour critical point 2-98256
- scattered by W surface, differential cross sections 2-87930
- scattering cross sections from electron transport parameters 2-71063
- solid, electron dynamics meas. (*Russian*) 2-71993
- solid, erosion by fast He ions 2-98165
- solid, lattice dynamic props., self-consistent average-phonon eqn. of state 2-81922
- solid, matrix isolated HCl mols., molecular dynamics calcs. 2-102465
- solid, sublimation press. and zero temp. cohesion energy, determ. from sp. ht. data 2-103970
- solid and liquid, hot electron thermalisation following subnanosec. pulse irradi. 2-72015
- submonolayer on graphite, density-functional theory 2-98444
- submonolayer on graphite 2-104153
- submonolayers on Grafoil, struct. and phase transitions, neutron diff. study 2-98488
- subnanosecond optical pulse generator using argon ion laser 2-65249
- substitutional, interaction with He in Mo or W 2-65065
- suppression of Ni surface oxidation, during laser surface treatment 2-83294
- surface, phys. adsorpt. of $H^{35}Cl$, theory 2-92341
- thermionic cathode discharge, forward longitudinal waves, theory 2-97815
- Titan atmosphere, evidence for primordial ^{36}Ar and implications for atmosphere origin 2-112385
- Townsend coeff. determ. at high press. 2-86496
- AR-acetylene-methane liq. mixtures, excess vol. and compressibility, dielec. const. meas. 2-92071
- Ar, collision induced light scatt., three body correl. spectrum 2-80636
- Ar I in ϵ Persei line of sight, UV obs. 2-117716
- Ar II, $3p^4(^4D)5d^2S$ term identification using optical spectroscopy 2-80523
- Ar II, electron impact ionisation cross sections 2-80826
- Ar II dense plasma, emission rays displacement (*French*) 2-91599
- Ar II plasma, level population near $BaTiO_3$ ferroelec. ceramic surface 2-109526
- Ar, liquid and solid scintillators, UV emission time depend. meas. 2-90364
- Ar VI, oscillator strengths, potential model calc. 2-80538
- Ar XI to Ar XV ion lines, extreme UV emission spectra from plasma focus 2-59734
- Ar $^1P_{1/2}$, ground state, thermal energy charge transfer 2-90692
- Ar 1 , 3d-4p transitions in ionic spectra, isotope shifts, laser spectroscopic meas. 2-70193
- Ar 1 , implantation in SiO_2 films, effect on struct. 2-55995
- Ar 1 ion sputtering in Be, Mg, Zn, Cd, at excitation 2-75372
- Ar 1 laser, self-modulation by resonator loss control 2-65266
- Ar 1 low energy scatt. from Mg (0001) surface, interatomic pot. consideration 2-77666
- Ar 1 mobility in Ar, charge exchange cross section 2-55695
- Ar $^{17+}$, electron impact excitation, cross sections, collision strengths 2-70424
- Ar $^{17+}$, H-like parity violating effects in $2^1S_{1/2} \rightarrow 1^2S_{1/2}$ transition 2-54007
- Ar: N_2 (O) $_2$ (CO) impurities, mol. dynamics calc. 2-115154
- Ar: N_2 profile in upper atm. used to find turbopause height and temp. 2-73734
- Ar-Csf, total cross section and small angle differential cross section, semiclassical anal. 2-108659
- Ar-ethane mixture filled proportional counter in avalanche multiplication zone for electrons 2-108251
- Ar-ethane-ethyl alcohol mixture drift tubes, self-quenching streamers obs. 2-70038
- Ar-H $^+$, second interaction virial coeffs. 2-80758
- Ar-H $_2$ mixtures, H $^+$ transfer and isotopic exchange reactions 2-93785
- Ar-Hc, spatial separation of components 2-88392
- Ar-Hc-O $_2$, ion implantation source, source gas composition and ion current spectrum, optimisation by gas mixing 2-69296
- Ar-Hg mixtures, glow discharge plasma, electron kinetic investigations, transport processes 2-115061
- Ar-Hg plasma fluoresc. lamps, radiation prod. efficiency, mol. gas admixture effects 2-76070
- Ar-Hg two phase heat transfer in vertical annulus under transverse mag. field 2-114873
- Ar-HgBr discharge, electron beam energy deposition in mag. guide field, HgBr fluorescence study 2-115059
- Ar-methane mixture, 300.4K; 1-22 MPa, thermal cond., rel. to kinetic theory 2-81438
- Ar-methane proportional counter, deposited energy losses for 40 MeV/n He ions 2-90417
- Ar-N $_2$, collisions with subexcitation electrons, thermalisation, recombination luminesc. 2-73004
- Ar-N $_2$ laser, intense proton beam pumping, kinetic model 2-75561

argon continued

- Ar-N $_2$ laser pumped by intense proton beam 2-114256
- Ar-N $_2$ mixtures, gaseous, viscosities, capillary flow meas. 2-110026
- Ar-N $_2$ van der Waals mol., multichannel rot. predissoc., numerical calcs. 2-59879
- Ar-O $_2$ (N_2)(CO), liquid and plastic cryst. phase, LF Raman spectra 2-116164
- Ar-O(N), VUV discharge line source, excitation mechanism effect on line-width parameters 2-108422
- Ar-organic compound mixtures thermal cond. (*Russian*) 2-55693
- Ar-SF $_6$, recombining arc discharge, decay and re-ignition, appl. to circuit breakers 2-60818
- Ar-SF $_6$ mixtures, contraction of volume discharge initiated by UV radiation 2-86494
- Ar-trifluorobromomethane, compressibility factors calc. from refractive index meas. 2-76058
- Ar-W high pressure arcs, heat transfer in column 2-103541
- Ar-Xe, ionisation coeff. determ. at high press. 2-86496
- Ar-Xe (Kr) photoionisation proportional scintillation chamber, energy transfer 2-64760
- Ar-Xe high-pressure electrical-discharge laser, pulsed lasing mechanism 2-70546
- Ar-Xe-NF $_3$ mixtures, electron attachment const. determ. 2-80809
- Ar+ $^1H(^4He)$ (Li), K-shell ionisation and capture differential cross sections, scaling props. 2-96706
- Ar+Ar, K-shell excitation probabilities meas. 2-54949
- Ar+Ar $^+$, symmetric charge exchange cross section calcs. 2-90685
- Ar+Ar * collisions at thermal energies, differential cross section meas. 2-75380
- Ar+Be $^{4+}$ (B $^{4+}$)(C $^{4+}$), electron capture, cross section meas. 2-102619
- Ar+CO $_2$, collisional excitation cross section meas. 2-90670
- Ar+Ca, Ca principal series line broadening 2-85591
- Ar+Cd(5^1P_1), quenching of Cd excited state, atomic fluoresc. obs. 2-80798
- Ar+Cs collisional narrowing in Cs two-photon transition 2-80827
- Ar+F $_2$, electron detachment cross sections meas. 2-59927
- Ar+H $_2$, vibr. relax. rate consts., test of linear sum rule by trajectory calcs. 2-108687
- Ar+H $_2$, vibr.-rot.-translational energy transfer, state-to-state cross sections, Monte Carlo trajectory calcs. 2-90674
- Ar+H $_2^+$, Z 2 scaling and electron screening effect 2-70150
- Ar+H $_2^+$ (D_2^+), proton and charge transfer, coupling 2-102571
- Ar+H $_2$ O, dissociative excitation, crossed mol. beam and luminesc. study 2-57602
- Ar+H $^+$, electrons ejected from K shell, energy distrib. 2-70406
- Ar+H $^+$ (D^+) electron capture probabilities 2-102609
- Ar+H $^+$ (He^+), L-shell impact ionisation, coupled state calcs. 2-102598
- Ar+H $^{2+}$, transfer ionisation in slow collisions 2-59926
- Ar+HCl, energy transfer, vibr. and translational energies effects 2-102588
- Ar+HCl, vibr. and rot. relax., quasiclassical trajectories on model pot. energy surfaces 2-90673
- Ar+HF, energy transfer, Monte Carlo quasiclassical trajectory study, vibr.-rot. states 2-96684
- Ar+He, cross sections, pot. energy curve 2-54939
- Ar+He ions, charge exchange cross sections, oscillations, average equilib. charge 2-85800
- Ar+He $^+$, excitation cross sections, spectra, Landau-Zener model 2-96711
- Ar+He $^{2+}$, Z 2 scaling and electron screening effect 2-70150
- Ar+K, 4 p-ns and 4 p-nd lines, collisional broadening and shift 2-59897
- Ar+K, 4p $^3P_{3/2-7/2}$ $S_{1/2}$ transition, effect of collisions 2-59732
- Ar+K $^+$ (Li^+) 2-102567
- Ar+K(4P), differential scatt., $^2\Sigma$ potentials, line profile meas. 2-96672
- Ar+K(5P), differential scatt., $^2\Sigma$ potentials, line profile meas. 2-96672
- Ar+Li $^+$, electron loss cross-sections 2-54943
- Ar+Li $^+$, clustering reactions, forward and backward rate coeff., energy depend. 2-83365
- Ar+Li * , Li fine struct. transitions, rate coeff. 2-54938
- Ar+methane, vibr. transitions, vibr.-rot. energy exchange mechanism 2-114086
- Ar+Mg $^+$, collisional excitation mechanism, coupled channel impact parameter approx. 2-54948
- Ar+ $\mu p \rightarrow \mu Ar^{*+} + p$, muon transfer rate meas. 2-59977
- Ar+N $_2$ inelastic scatt., time depend. perturbation theory 2-102590
- Ar+N $_2^+$, charge transfer, vibr., laser induced fluoresc. study 2-80802
- Ar+N $_2^+$, charge transfer, threshold electron-secondary ion coincidence study 2-96717
- Ar+N $_2$ O, N $_2$ O vibr. relax., shock tube study 2-90666
- Ar+N $_2$ (O $_2$), anisotropic well depth parameters, from total differential cross-sections 2-80777
- Ar+NO, NO excited rot. levels, radiative lifetimes and electronic quenching rate const. 2-70343
- Ar+NO, rot. and spin-orbit transitions, IR-UV double reson. 2-75382
- Ar+NO, rot. excitation, interference effects resolution, laser induced fluoresc. 2-102592
- Ar+Na $_2$, classical two-dimensional model for rotational-vibrational atom-diatom inelastic scattering 2-108654
- Ar+Ne $^{2+}$, Kalpha X-ray lines, electron capture rate coeff. determ. 2-65072
- Ar+Ne $^{2+}$, excited projectile states prod., photon emission cross sections 2-75413
- Ar+OCS, OCS linewidth and lineshift, unitary S-matrix theory 2-102537
- Ar+Rb, excitation transfer, atomic fluoresc., two-photon absorpt., quenching 2-70389
- Ar+Rb, impact broadening and shift of nS and nD levels 2-102581
- Ar+S, electron prod., impact parameter depend. 2-54921
- Ar $^+$ +acetylene, excitational dissociation, optical emission from excited fragments 2-105470
- Ar $^+$ +Ar, symmetric charge exchange cross section calcs. 2-90685
- Ar $^+$ +CO, thermal energy charge transfer reactions, laser induced fluoresc. study 2-90683
- Ar $^+$ +H $_2$, low energy charge transfer reactions, time-of-flight study 2-80803
- Ar $^+$ +H $^+$, near-reson. charge transfer, vibr. and electronic energy effects 2-75415
- Ar $^+$ +H $_2$ O, reaction rate consts. and branching ratios, kinetic energy depend. 2-93788
- Ar $^+$ +H $_2$ (N $_2$)(CO)(O $_2$)(CO $_2$)(N $_2$ O)(COS), energy depend., rate consts. meas. 2-88346

argon continued

- Ar⁺ + He, excitation cross sections, spectra, Landau-Zener model 2-96711
 Ar⁺ + inert gas atoms, electron loss cross section meas. 2-102600
 Ar⁺ + Kr(Xe), excitation collisions studied by monitoring resulting luminesc. 2-108675
 Ar⁺ + N₂(CO), charge transfer, spin-orbit states, threshold electron-secondary ion coincidence study 2-96715
 Ar²⁺ + Ar(Kr)(Xe), single electron capture products, energy loss spectra meas. 2-102607
 Ar²⁺ + Na one electron capture by ground and metastable Ar⁺ 2-80808
 Ar⁷⁺ + C-foil, relative level populations expt. study 2-75397
 Ar⁹⁺ + Ne, Ne K Auger electron emission study 2-85795
 Ar⁺ + H⁺, (q=1-5), charge exchange, impact ionisation, cross section, crossed-beam expt. 2-114102
 Ar₂ collisions, trimer form., atom exchange and dissociation. 2-105463
 Ar₂⁺, metastable cluster ion, unimolecular dissociation, temp. depend., mass spectra 2-99650
⁴⁰Ar/³⁹Ar spectral method of geological dating 2-83786
 Ar⁺ + O₂, electronic energy transfer rate constants. 2-114076
 CO-Ar, laser-induced fluorescence, vibr. nonequilibrium effects 2-59838
 CO-Ar, diffusion coeffs., viscosity meas. 2-114960
 CO₂-Ar gas, thermal cond. meas. 2-103250
 CO₂-Ar pulsed 18.4 μm gasdynamic laser, shock-tube driven 2-96896
 Cu(100) + Ar ion, semichannel focusing energy determ. 2-105030
 Fe-Ar liquid segmented calorimeter, performance Monte Carlo simulation 2-75097
 GaAs:Si, Ar, ⁴⁰Ar implant pretreatment, ²⁸Si implanted n layer, carrier mobility and activation efficiency 2-91995
 Gd-Ar film, ion implanted, impurity depth distrib. 2-110215
 H-Ar⁺ plasma, H broadened Lyman-β line, radiation motion effects 2-70188
 H₂O-Ar vapour, enthalpy of mixing, assoc. model 2-86886
 He-Ar, mixture, optical quality of supersonic jets 2-55697
 He-Ar, near-Lorentzian mixture, diffusion coeff. temp. depend. 2-86370
 He-Ar, quasi-Lorentzian mixture, thermal diffusion factor 2-86371
 He-Xe, hollow cathode discharges, VUV study 2-97823
 Hg-Ar discharge, analytical model for low-pressure gas discharges 2-81596
 Hg-Ar-Ne discharge, electron energy distrib., electrokinetic charact. 2-65788
 Hg-Ne-Ar discharge, low pressure, electron energy distrib., plasma basic eqns. 2-65789
 Nb-Ar, O₂ supercond. thin films, ion implantation effects on supercond. props. 2-77226
 Ne-Ar, interatomic pot., Dunham expansion 2-102562
 Ne-Ar, mixture filled proportional counter in avalanche multiplication zone for electrons 2-108251
 Ne-Ar AC discharges, existence regions and discharge modes (German) 2-109614
 O₂-Ar mixture, flow in nozzles, chem. and vibr. disequilibrium effects 2-81381
 Pd-Si:Si-Ar interface, contact resist. stabilization due to ion implantation 2-66635
 Si:Ne, Ar, amorphous, ion implanted, localised defect states and impurity distrib., photocond. spectra study 2-61414
 SiO₂-Ar⁺, ion implanted electron irradiation, antineannealing effect 2-66062
 Sm-Ar film, ion implanted, impurity depth distrib. 2-110215

argon compounds

- Ar complexes with Mg, Ca, Sr and Ba, pot. curve crossing 2-64895
 Ar-H₂ Van der Waals mol., multichannel rot. predissoc. studied by complex-coordinate coupled channel formalisms 2-80745
 Ar-HCl, far IR spectra, temp. depend., intermol. pot. well depths 2-102473
 (ArCO₂)⁺, electron impact ionisation in supersonic mol. beam, appearance pots. 2-108728
 ArD⁺ + H₂ (D₂), deuteron transfer reactions, rate coeff. 2-70409
 ArF excimer laser, spectral tuning obs. 2-60099
 ArF laser, high-pressure UV-preionised discharge-pumped 2-55120
 Ar₂F⁺, form. kinetics, fluoresc. meas. of electron beam excited Ar/F₂, Ar/NF₃ mixtures 2-80708
 Ar₂F⁺ in electron beam excited Ar-NF₃ mixtures, fluoresc. obs. 2-70325
 ArH⁺ IR spectra, vibr.-rot. bands and mol. consts., Dunham coeff. 2-64976
 ArH⁺ + H₂(D₂)(methane)(N₂)(O₂)(CO)(CO₂), proton transfer reactions, rate coeffs. 2-70409
 ArH₂⁺, ion-molecule reactions, rate consts., mass spectrometric study 2-72962
 ArHe, pair pots. and electric dipole moments, ab initio calculations 2-54755
 ArI₃, mol. interactions, struct., mol. complex theory, Raman spectra 2-108656
 ArI₃, mol. interactions, struct., mol. complex theory, Raman spectra 2-108656
 ArLi, spin densities calcs., matrix site effects in ESR spectra 2-75172
 ArLiOH₂, spin densities calcs., matrix site effects in ESR spectra 2-75172
 ArN₂ cluster ions, unimol. and collision induced dissociation. 2-90759
 ArN₂⁺ cluster ions, unimolecular and electron impact dissociation. 2-62380
 Ar.HCl quasisol., rot. vibr. energy level calc. 2-75232
 Ar.HF, anisotropic intermol. pot. obtained from mol. beam spectra 2-80766

armouring (cables) see cable sheathing**aromatic compounds see organic compounds****arrays (antenna) see antenna arrays****arsenic***see also nuclei with*

- adsorption from AsH₃ onto Si (100), UPS study 2-77144
 amorphous, density of states, Matthews-Davis-Elliott even membered ring model 2-61345
 amorphous, effective charges 2-86568
 amorphous, temp. depend. of EXAFS 2-105002
 amorphous, thermal relax., specific heat 2-76702
 amorphous, time-depend. specific heat meas. 2-66250
 atoms, ⁷⁵As, stopping power in He, Ne and N₂, recoil nuclei γ-ray emission study 2-102579
 core effective potentials, ab initio calcs. 2-70140
 determ. in soil extracts, atomic absorpt. spectroscopy 2-73170
 determination in human hair for pollution monitoring, by neutron activation anal. 2-57666

arsenic continued

- diffusion, in Ga melt, calc. from rate of solution 2-110020
 diffusion in polycryst. Si, lateral diffusion length meas. technique 2-104062
 diffusion in Si, spin-on source for deep junction formation 2-76746
 diffusion in Si enhanced by thermal oxidation 2-71720
 diffusion profile in n-Si, sheet conductance and tracer studies 2-71730
 electrochemical doping of Si-SiO₂ MOS n-p junctions, diffusion coeff., C-V plots 2-66287
 electronic band struct., density of state peaks, UPS study 2-98534
 electronic struct., correlation with isoelectronic molecules, c.f. with graphite and Se 2-54772
 films, O₂ adsorption in oxidation, photoemission study 2-92355
 nonstoichiometric solution in Ga, vapour pressure 2-109994
 oxidation kinetics, sublimation, rotating specimens 2-72964
 spectrochemical analysis using automated hydride generator 2-78148
 ASN, a¹II and A¹II states of (σπ*) config., rot. anal. 2-96534
 As II CW laser transition at 6511.7 Å, electron beam excitation of He-As mixture 2-85939
⁷⁵As, perturbed directional correlations meas. in gaseous H₂ ⁷⁵Se/He sources 2-74748
 CdP₂:As, impurity vibr., Raman scatt. study (Russian) 2-77540
 n-Ge:As, 1.5 MeV electron irradiation, defect levels, DLTS study 2-92508
 Ge:As, bound-exciton luminesc. polarisation in longit. mag. field 2-87864
 Ge:As, donor ground state, diamag. and Zeeman shifts, four-wave mixing spectroscopy 2-99096
 n-Ge:As, far IR obs. of D⁻ band 2-67035
 n-Ge:As, heavily doped, press. effects on magnetoelectricity (Russian) 2-56619
 Ge:As, luminescence study of nonequilibrium charge carriers (Russian) 2-104945
 Ge:As, US attenuation by shallow donors in mag. field 2-56649
 Ge:As/Ga, heavily doped by neutron doping, fundamental optical absorpt. edge profile 2-93145
 Si:Ar, ion implanted, metastable supersaturated solid solns. formation during solid phase epitaxy 2-98283
 Si:As, amorphous, line-source electron beam annealing 2-66060
 Si:As, amorphous film, laser induced solid phase epitaxy kinetics, time resolved reflectivity study 2-56384
 Si:As, CVD film, elec. charact., grain size, effects of impurity conc. and heat treatment 2-82487
 Si:As, D⁻ centres, far IR photocond., uniaxial stress and mag. field effects meas. 2-98691
 Si:As, dechanneling by dislocations and stacking faults 2-81845
 Si:As, dopant clustering, generalized model 2-115417
 Si:As, doping during Pd-Si form. at low temp. 2-86698
 Si:As, elemental distrib. anal., SIMS and neutron activation anal. 2-98151
 Si:As, high-dose implanted, CO₂ laser annealing charact. 2-57219
 Si:As, implanted, CO laser annealing 2-86727
 Si:As, implanted and laser annealed, electronic states, IR optical props. 2-57112
 Si:As, ion damaged, undissociated dislocation dipoles and intermediate defects, TEM study 2-71459
 Si:As, ion implantation damage, optical constants anal., ellipsometry expt. and refractive index model study 2-77469
 Si:As, ion implanted, blink furnace annealing 2-62140
 Si:As, ion implanted, defect features 2-103796
 Si:As, ion implanted, electron beam annealing by multiple-scan method 2-92036
 Si:As, ion implanted, laser annealing mechanism 2-61023
 Si:As, ion implanted, laser annealed, bonding defects, Raman scatt. study 2-67066
 Si:As, ion implanted, pulsed X-ray annealing 2-115286
 Si:As, ion implanted, solid state phase annealing with CW Nd:YAG laser (German) 2-105183
 Si:As, ion irradiated, point defect chains, high resolution TEM study 2-71479
 Si:As, ion-implanted, laser and thermal annealing comparison, ion backscatt. and elec. meas. 2-55991
 Si:As, laser beam annealed, defects and elec. props., TEM study 2-109799
 Si:As, range distrib. and thermal annealing props. of low-energy implants 2-115258
 Si:As, scanning electron-beam annealing 2-103818
 Si:As, substitutional impurity clustering, ion channelling study, review 2-71536
 Si:As, supersaturated, ion implanted and laser annealed, heat treatment effects 2-92000
 Si:As, surface layer struct., influence of non-uniformity of laser beam intensity 2-92314
 Si:As, thin layers on conducting boundary, spreading resistance profiles 2-86703
 Si:As diffusion and impurity concentration profiles, Rutherford backscatt. study 2-82019
 Si:As films, heavily doped, thermally and laser annealed, elec. props. 2-115924
 Si:As implanted 4 in wafers, fast annealing using imaging furnace with 6.5 kW Xe arc lamp 2-98123
 Si:As⁺, implanted, pulsed electron beam annealing apparatus and utilisation (Chinese) 2-66059
 Si:As⁺, ion implanted, cryst. damage, spectroscopic ellipsometry study 2-92049
 Si:As⁺ layer, ion implanted, Q switched Nd:YAG laser annealing 2-56015
 Si:As⁺ layers, ion implanted, electron beam annealing, elec. props. 2-92039
 Si:H, As, amorphous film, optical absorption, doping and temp. depend. 2-82945
 a-Si:H, As, ion implanted, absorpt. and photocond. spectra 2-115820
 Si:H, As, amorphous RF sputtered film, pulsed laser annealing 2-86726
 Si:P, As, Sb, ion implanted, multiphase electron beam annealed, impurity profiles 2-103803
 SiO₂:As, neutron activation anal. using coprecipitation method 2-98137
 WSi₂:B,P,As, dopant diffusion 2-92280
 ZnP₂:As, impurity vibr., Raman scatt. study (Russian) 2-77540

arsenic alloys*see also arsenic compounds*

- Fe:As, mag. phase diagram, critical behaviour 2-56862
 Gd-As, dil., As hyperfine interaction, IPAC study 2-92544

arsenic alloys continued

- Ge-As solid soln., dissoc. total diffuse X-ray scatt. meas. 2-65927
 Ni-As, metalloid additions effect on high-temp. ductility, intergranular embrittlement 2-72839
 Pb-Si-Ga-As, phase equilibria, calc. of phase diagrams 2-66170
 Si-As surface alloy, supersaturated, formation by ion implantation and pulsed electron beam annealing 2-81801
 Sn-Si-Ga-As, phase equilibria, calc. of phase diagrams 2-66170

arsenic compounds

see also *arsenic alloys*

- arsines, IR spectra, stretching freq., anharmonicities, and dissoc. energies 2-80588
 chalcogenides, mechanochemical synthesis, explosions (*German*) 2-62053
 poly(2,5-thiophenediyl):AsF₃, prep., struct. and elec. cond., IR spectra study 2-76325
 poly(p-phenylene sulphide):AsF₃, elec. cond., effects of polymer struct., morphology and doping 2-77044
 poly(para-phenylene):AsF₃, electronic props., ESR and ¹³C NMR study 2-82737
 polyacetylene:AsF₃, soliton pinning mode Fourier transform IR study 2-93175
 polyacetylene:AsF₃, solitons, inhomogeneous doping, EPR, DC cond. 2-61531
 polyphenylacetylene:AsF₃, thin films, Schottky barriers, elec. props., doping reactions 2-77212
 Se-Sn-As system, chalcogenide glasses, glass transition temp., mech. and elastic props. 2-109687
 AlF₃-YF₃-GdF₃-CaF₂-SrF₂-BaF₂-NaF₆-PF₆(AsF₆) glass, optical and thermal props. 2-115145
 As-Ge-Si glass, refr. index meas. in IR range using modified GS-5 goniometer (*Czech*) 2-58887
 As-S, melt structure, polymerisation temp., orientation birefringence study 2-65840
 As-S chalcogenide glass, As and S centred paramag. species, photo-ESR data 2-61765
 As-S chalcogenide glass fibres, optical transmission loss spectra, IR region 2-57075
 As-S glasses, Raman inelastic light scatt. 2-104887
 As-S glassy chalcogenide semiconductor films, reversible optical bleaching 2-67138
 As-S-Ag system glass, phase separation and struct. changes on Ag addition to As₂S₃, fractured surface obs. 2-103649
 As-S-Te, semiconductor glass, elec. props. (*Russian*) 2-77039
 As-Se, amorphous struct. far IR reflection spectra study 2-67029
 As-Se-Ge glass, γ -irrad., hardness meas., Ge constant effects 2-56080
 As-Te, homogeneous film, elec. props., optical forbidden band-width 2-110504
 AsCl₃ complexes, with organic donors, coordination state, NQR study 2-75318
 AsCl₃, single cryst., asymmetry parameters Zeeman NQR study 2-110713
 AsF₃ mol. force consts., bond lengths, pot. energy functions, electronegativity anal. 2-75463
 AsF₃ doped polyacetylene, spin and charge excitations, EPR, spin susceptibility and elec. cond. study 2-76943
 AsF₃ doped polyacetylene, elec. cond. mechanism, IR absorption and reflection spectra study 2-77520
 AsF₃ doped polyacetylene, EPR saturation characteristics meas. 2-92991
 AsF₃ doping of polyacetylene, ¹³C NMR study 2-76473
 AsF₃ doping of polyacetylene, Fourier transform IR spectra study 2-93185
 AsF₃-graphite (polyacetylene)(p-polyphenylene) association reaction, thermodynamics and kinetics meas. 2-93775
 AsF₆⁻, force const. calc. using vibr. data 2-54986
 AsF₃-graphite intercalation cpd., ¹⁹F NMR study 2-98976
 AsH₃, interaction with Si (100), UPS study 2-77144
 AsH₃, spectral line broadening and shift, Stark effect 2-108479
 AsH₃, submillimeter spectrum, vibr. and rot. anal., spectroscopic consts. 2-108478
 AsH(PO₃)₂·H₂O, synthesis and struct. determ. 2-86631
 As₂O₃ crystals, crystalloluminescence and temporary mechanoluminescence 2-77594
 As₂O₃+Li₂O (Na₂O)(CaO)(BaO), heat of form. of arsenates meas. 2-88374
 As₂O(SO₄), cryst. struct. determ. (*French*) 2-91890
 (As₂O₃)(SO₄), cryst. struct. refinement (*French*) 2-71408
 As₂(S₂Se₂) glass, EXAFS study 2-91786
 As³⁺ mol., true pot. energy curves, dissociation energy, r-centroids, Franck-Condon factors 2-75205
 As₂S₃-S₂ glass-forming liqs., viscosity and struct. transition 2-61187
 As₂S₃ (As₂Se₃), glassy, interband absorpt. for Coulomb-type random field, multiphonon transitions effects 2-104840
 As₂S₃, amorphous, hot photoluminescence 2-93261
 As₂S₃, amorphous, photodarkening, configuration-coordinate model 2-57033
 As₂S₃, amorphous, photoluminescence decay 2-110906
 As₂S₃, amorphous, thermal relax., specific heat 2-76702
 As₂S₃, amorphous, time-depend. specific heat meas. 2-66250
 As₂S₃, amorphous, time-resolved phonon spectroscopy 2-56140
 As₂S₃, amorphous film, struct. changes due to laser irradiation and thermal treatment 2-86579
 As₂S₃ chalcogenide glass birefringence obs. using 1.44 μ m radiation 2-77484
 As₂S₃ chalcogenide glass, time resolved photoluminescence 2-116253
 As₂S₃, evaporated layer, photoselective solubility rel. to heat treatment (*Russian*) 2-64141
 As₂S₃ film, refractive index changes, permittivity (*Russian*) 2-61864
 As₂S₃ film, vitreous, photodarkening value, press. effect 2-61026
 As₂S₃ glass, EXAFS study 2-91786
 As₂S₃, glassy, photocond. and absorpt. spectra, photoinduced changes (*Russian*) 2-115825
 As₂S₃, glassy and cryst., X-ray luminesc. and thermoluminesc. meas. 2-61993
 a-As₂S₃, obs. of mobility gap in photolum. 2-57166
 As₂S₃, optical fibre investigation for devices used to match planar and cylindrical waveguides 2-97216
 As₂S₃, optically induced localised states, photolum. and EPR 2-57164
 As₂S₃/Ag system, photodoping mechanisms, ESCA studies 2-115147
 As₂S₃-Ag, diffusion controlled sensitivity to illumination, image formation characts. 2-101484

arsenic compounds continued

- As₂S₃-Ag and As₂S₃-Ag systems, transmission spectra of interacting products (*Russian*) 2-62423
 As₂S₃-As₂Se₃ glass IR fibre waveguides 2-114465
 As₂S₃-SiO₂-Si graded-index fresnel lenses for integrated optics, electron-beam direct writing technique 2-86130
 As₂S₃, Raman spectrum, effect of temp. and press. 2-67040
 β -As₂S₃, thermal expansion, compressibility, X-ray diff. study 2-115438
 As₂S₄, optically induced localised states, photolum. and EPR 2-57164
 As₂S_{3-x} chalcogenide glasses, struct. models, bond lengths and angles 2-91805
 As₂(SO₄)₃, cryst. struct. and covalence bonds (*French*) 2-71403
 (As₂S₃)(Sb₂S₃)_{1-x}, chalcogenide glass, optical gap 2-110802
 As₂S₃Se₂ chalcogenide glass birefringence obs. using 1.44 μ m radiation 2-77484
 As₂S₃Se₂ chalcogenide glass birefringence obs. using 1.44 μ m radiation 2-77484
 (As₂S₃)_{1-x}(Tl₂Se)_x, chalcogenide glass film, photoconductivity 2-110399
 As₂Sb_{1-x}Si ferroelec. tricitric. points, dielec. meas. 2-93127
 As₂Sb_{1-x}Si, phase transitions, permittivity, polarisation (*Russian*) 2-77461
 As₂(Se₂Te₂)₃ glass, EXAFS study 2-91786
 AsSe chalcogenide glasses, hole drift mobility near photostructural transformations 2-87280
 As_{0.005}Se_{0.995}, amorphous, crystallisation, scanning calorimetry and X-ray diff. study 2-91780
 As₂Se-GeSe-SnSe, glass, Sn valence states, Mossbauer, optical and electron spectroscopy study 2-71935
 As₂Se₃, amorphous, localised density of states meas. 2-82293
 As₂Se₃, amorphous, transient photoconductivity and photo-induced optical absorption 2-92684
 As₂Se₃ chalcogenide glass birefringence obs. using 1.44 μ m radiation 2-77484
 As₂Se₃, cryst. and amorphous, exciton and pair recomb., ODMR study 2-93067
 As₂Se₃ film, photostructural changes, influence of prep. method 2-99353
 As₂Se₃ glass, EXAFS study 2-91786
 As₂Se₃, glassy, pulse-induced microcosmic geminate excitons, thermal decay 2-61905
 As₂Se₃ thin film, vitreous effect of age, photocond. meas. 2-56645
 As₂Se₃-Ag, diffusion and photodoping, optical edge tracing study 2-71722
 As₂Se₃/Ag(Cu), amorphous, XPS study 2-57249
 As₂Se₃/Au(Pt), vitreous, impurities location and valency, XPS and Mossbauer study 2-76320
 As₂Se₃:Cl(Br)(I)(Ge)(In)(Ti)(Na)(K)(Ag)(Cu), chalcogenide glasses, carrier mobility, transient photocurrent spectra study 2-72024
 As₂Se₃:Ni glass films, photoluminesc. meas. 2-116259
 As₂Se₃-As₂S₃ glass IR fibre waveguides 2-114465
 As₂Se₃-As₂Te₂, AsSe-AsTe, As₂Se₃-S, glass point, activation energy of elec. cond. calc. 2-76312
 As₂Se₃-CdSe amorphous-crystalline heterojunction with built-in interface charge, steady-state transport props. 2-77170
 As₂Se_{3-x} thin film, photoinduced defects, isothermal annealing characts. (*Russian*) 2-103745
 (As₂Se₃)_{100-x}-Ge, glass, elec. cond. and thermoelectric power, adiabatic pot. 2-92610
 As₂SeTe₂, glassy, piezoelec. effects, expt. study 2-57021
 As₂SeTe₂ chalcogenide glass birefringence obs. using 1.44 μ m radiation 2-77484
 As₂Te₃ chalcogenide glass, photoabsorption and photoconductivity 2-82406
 As₂Te₃ glass, EXAFS study 2-91786
 As₂Te_{1-x} amorphous film, energy gap, composition depend. 2-61337
 As₂Te_{1-x} glasses, intrinsically broken 8-N coord. rule, ¹²⁹I Mossbauer study 2-81686
 B₂O₃-Fe₂O₃-PbO-As₂O₃ glass, Fe valence states, comp. dependence, Mossbauer and mag. study 2-104317
 B₂O₃-PbO-As₂O₃, AC elec. resist. meas. 2-87273
 CC AsSe, glassy state, high temp. thermal capacity, 300-600K 2-71665
 Cd-Ge-As glass system, aligned crystallisation, heat transport and interface kinetics 2-71365
 CdSe-As₂Se₃, amorphous-cryst. heterojunction, interface charge, non-steady state transport 2-92736
 Cu-As₂Se₃ glassy films, photoconductivity and optical absorpt. (*Russian*) 2-104516
 Ge-As-Se glass, ion beam deposited, use as optical coating 1 to 16 μ m laser damage 2-65324
 Ge-As-Se glass, optical fibres, plastic clad 2-65385
 GeSe₂-As₂Se₃ glass point, activation energy of elec. cond. calc. 2-76312
 InGaAsP on InP LPE for 1.3 micron high radiance IR LEDs and for photodiodes 2-111101
 InGaAsP/InP high radiance IREDS with emission wavelength 1.3 micron and transmission rate 140 Mbit/s 2-109079
 In₂O₃-As₂O₃ film on InAs, characterisation 2-111348
 (LaO)₄As₂S₃, cryst. struct. determ. (*French*) 2-91886
 Sb-As, solid solutions, anisotropy of resistivity (*Russian*) 2-77090
 Se-As alloy film, amorphous, capacitance changes during struct. relax. 2-91785
 Se-Ge-As chalcogenide glasses, microhardness 2-57446
 Se-Ge-As glass melt, solubility of He 2-98292

art

- oil colour fluorescence, laser induced, oil painting pigment identification 2-99165

articulation (speech) see *speech***artificial hearts** see *artificial organs***artificial intelligence**

- see also *adaptive systems*; *automata theory*; *biocybernetics*; *brain models*; *heuristic programming*; *learning systems*; *neural nets*
 automatic data classification in mass spectroscopy 2-53799
 geophysical prospecting, recognition of hidden mineral deposit using artificial intelligence program 2-117501
 heat transfer problems, artificial intelligence system called KNOWTRAN 2-109159
 multisensor ocean surveillance data fusion system architecture 2-63148
 NASA space missions development, using advanced automation technologies 2-94579
 natural language man-machine dialogue in TULIPS-2 artificial intelligence system 2-114562

artificial intelligence continued

- nervous system functions, general theory (*German*) 2-88493
- stress corrosion cracking, in, expert system to predict risk 2-57544

artificial kidneys see artificial organs**artificial limbs**

- arm, EMG pattern anal. and classification 2-78488
- arm prosthesis, conception and vocal command (*French*) 2-117134
- conference on bioengineering and microtechniques, Besancon, France (Apr. 82) 2-112638
- cybernetic limbs, review 2-105854
- electromyographically controlled elbow locking mechanism for an upper limb prosthesis, hybrid technology appls. 2-88698
- hand, multifunctional prosthetic, sweating effect on myoelec. source, gain-compensated EMG amplifier 2-100156
- knee angle auditory feedback for amputees, gait training device 2-105851
- leg, modular concept in a multi-functional above knee prosthesis 2-100159
- multifunctional control via microcomputer identification of temporal pattern differences in single-site EMG signals 2-83701
- myoelectric hand controller with proportional control 2-68200
- patellar-tendon-bearing prostheses, static weight-bearing patterns of below-knee amputees 2-83591
- Utah artificial arm, development 2-57925

artificial organs*see also prosthetics*

- blood flow control device for extracorporeal circuits 2-57932
- creation and development prospects for electrostimulators, drug dose dispensers and artificial organs 2-78486
- electrohydraulic energy converter for a left heart assist system 2-73396
- electronics in Soviet Union, review 2-78473
- extracorporeal and auxiliary circulation of blood, apparatus design 2-62833
- extracorporeal circulation device, flow through tubes (*French*) 2-94252
- eye, human, electronic artificial vision system (*Spanish*) 2-68195
- heart, elec. to mech. energy electrochemical converter 2-78499
- heart and auxiliary blood circulation systems, actuating devices 2-78497
- heart electromechanical drive unit with rotary/translational motion kinematic converter 2-78498
- heart with pneumatic drive 2-78496
- left ventricular assist device, cam-type elec. motor-driven 2-117139
- linear step motor drive for auxiliary blood circulation equipment and partially implantable artificial heart 2-78500
- lung, flow pulsation and mech. oscill. in augmentation of gas transport through coiled tube 2-73395
- membrane blood oxygenator, type MOST-122, development results 2-78495

artificial satellites

- 1966-63 A, orbit anal. near 15th order reson. and geopotential coeffs. 2-100701
- 1972-05 B, orbital inclination anal. used to find atm. rot. rate 2-100702
- 1974-70 A, orbital inclination changes due to aerodynamic lift 2-73817
- 1976-87A (China 6), orbital decay rel. to atmos. density (*Chinese*) 2-63150
- 1981-6 projects survey (*French, English*) 2-68591
- altimetry and microwave meas. of sea from ERS-1 and aircraft 2-68382
- APPLE, Indian experimental geostationary communication satellite 2-117560
- Argos system appls. 2-111990
- Argos system for data collection and location by satellite 2-112153
- assessing the solar power satellite: the OTA experience 2-83459
- Cluster Compression Algorithm for Landsat image data 2-78273
- concentrating photovoltaic systems for generating power in satellites 2-93909
- concentrating spectrophotovoltaic system for orbital power generation, economic feasibility 2-83494
- Cos-B (ESA) appl. to gamma-ray astronomy, 1975-81 operational experiences 2-68617
- COS-B contrib. to gamma-ray astronomy 2-117797
- Cosmic Background Explorer (COBE) satellite, apl. to meas. of IR and microwave background radiation 2-106478
- crust movement monitoring by satellite methods 2-68592
- Deep Space Network, frequency and timing capabilities 2-63999
- Dynamic Explorer spacecraft ground operations systems 2-58225
- dynamic isotope power systems, features and spacecraft applications 2-80165
- Dynamics Explorer, Fabry-Perot interferometer 2-58176
- Dynamics Explorer, instrumentation and ground operations systems 2-58225
- Dynamics Explorer B, neutral mass spectrometer 2-58178
- Dynamics Explorer mission, spin-scan auroral imaging photometers 2-58226
- Dynamics Explorer program, for magnetosphere/ionosphere, general 2-58224
- Dynamics Explorer-A, Energetic Ion Composition Spectrometer 2-58179
- Dynamics Explorer-A, High-Altitude Plasma Instrument 2-58180
- Dynamics Explorer-A, Plasma Wave Instrument 2-58183
- Dynamics Explorer-A and -B, triaxial fluxgate magnetometer 2-58208
- Dynamics Explorer-B, ion drift meter 2-58181
- Dynamics Explorer-B, vector electric field meas. instrumentation 2-58182
- Earth Resources Satellite-1 (*Japanese*) 2-89108
- electric charge buildup on surfaces, review 2-58223
- electric potential of insulated surfaces of high-voltage vehicles 2-94576
- emergency communication system, use of 1980 November 23 Italian earthquake as design basis 2-117199
- emissions effect on astronomical obs. 2-106562
- environmental effects of space systems 2-88487
- European Space Agency (ESA), report to 24th COSPAR meeting, Ottawa, Canada (May 1982) 2-74177
- Exosat, European X-ray observatory, mission objectives and scientific instruments 2-117566
- Exosat, European X-ray Observatory Satellite, scientific mission 2-94573
- Exosat objectives, hardware and operations schedule 2-117565
- Explorer 19, orbital perturbations due to solar radiation press. 2-117561
- Extreme Ultraviolet Explorer Mission, appl. to EUV sky survey 2-117592
- Extreme Ultraviolet Explorer Mission, planned EUV sky survey 2-106477
- gasdynamics of detonations and explosions, conf., Gottingen, FRG (Aug. 1979) 2-58549
- artificial satellites continued**
- geodetic latitude of a point in space, closed form solution 2-112304
- geopotential 15th order harmonics from resonant orbit anal. 2-57953
- GEOS mission to explore magnetosphere-solar wind interaction 2-63212
- geostationary orbit obtaining from off-nominal low transfer orbit 2-89112
- geostationary reflecting pin-hole experiment using reflecting pin-hole telescope solar beacon 2-94601
- geostationary satellites, visual obs. techniques and results 2-106476
- geosynchronous satellite location program in TRS-80 BASIC 2-117564
- GMS-2 geostationary meteorological satellite, USB Tracking, Telemetry and Command system (*Japanese*) 2-83965
- GOES, data on mesoscale insolation distrib. 2-78190
- GRAVSAT 2-106475
- Ground-based Electro-Optical Deep Space Surveillance system for satellite tracking 2-100746
- Hinotori (ASTRO-A), solar prominence studies (*Japanese*) 2-68587
- Hinotori satellite, high-resolution solar flare X-ray spectra obs. 2-63344
- Hinotori satellite, obs. of soft X-ray Fe line spectra and time vars. from X-class solar flares 2-100851
- HIPPARCOS space astrometry project, simulation of inertial frame determ. using minor planets 2-89115
- intercosmos 10, cylindrical Langmuir probe electron temp. meas., ion current 2-97785
- International Ultraviolet Explorer, first three years (*German*) 2-58255
- International Ultraviolet Explorer (IUE), instrumentation and performance 2-117591
- IR astronomical satellite striated Au solar-shield material bidirectional reflectance distrib. function meas. 2-117559
- IRAS (IR astronomical satellite) (*Dutch*) 2-106474
- ISEE-3 satellite, general characs. of solar type II radio events observed in interplanetary medium 2-94572
- ISIS program, contrib. to ionospheric studies 2-84013
- IUE satellite, parameterisation of motion of IUE resseau grids and spectral formats 2-68616
- Jet Propulsion Laboratory's Scientific Data Analysis System 2-63207
- Kiku-3 Engineering Test Satellite IV, operation and control (*Japanese*) 2-84061
- Kosmos-721, obs. of secondary cosmic rays (excessive radiation) is ionosphere 2-112276
- Lageos laser range data, outliers removal/detect., appl. to observatory sites relative motion 2-100191
- Lageos laser ranging used to determine Orroval-Yarragadee intersite distance 2-100192
- Lageos orbit, semi-major axis secular decrease 2-89104
- LANDSAT based operational land remote sensing satellite program 2-73560
- Landsat-D, Earth resources satellite, spectral band registration by Thematic Mapper 2-112302
- Magsat, remote sensing of Earth magnetic field 2-73731
- Magsat mission 2-100699
- meteorological, on-line processing of high resolu. imagery 2-117467
- meteorological appls. in Japan, 1979 to 1980 (*Japanese*) 2-94532
- Meteosat, meteorological disaster detection 2-68593
- Meteosat data integrated processing, cloud-top height maps 2-78750
- Meteosat-1, vicarious satellite calibration in solar spectral range via calculated radiances 2-112297
- Meteosat-1 radiometer response adjustment by ground processing 2-68590
- Meteosat-2 discharge expts. 2-68594
- Metosat-1 imagery, navigation and deformation modelling 2-68506
- MOS-1 Japanese Marine Observation Satellite program, remote sensing technology development 2-73820
- motion, linear perturbations (*Russian*) 2-84067
- motion of satellite in resonance with rotating planet 2-89119
- NASA 30/20 GHz experimental satellite, effects of rain on system performance 2-106292
- near stationary satellites, orbit differential correction 2-89105
- NOAA-7, remote sensing satellite, effect of subpixel-sized cloud on target discrimination 2-106307
- oceanography, satellite altimetry rel. to precise definition and implementation of geoid 2-68239
- optimum redundant satellite orbit system formulae, communications appl. (*Japanese*) 2-73818
- orbit forecasting and determination accuracy, effect of atm. density fluctuations 2-106472
- orbit improvement from position determ. by photographic obs. 2-100700
- orbit perturbations due to atmospheric drag (*Chinese*) 2-112299
- orbital and attitude prediction accuracy requirements, remote sensing and scientific appl. 2-89107
- orbital motion and perturbing forces rel. to lifetimes (*French*) 2-58222
- orbital parameters, time variation 2-106473
- orbital perturbation in extended phase space due to geopotential (*Chinese*) 2-78936
- orbits uncertainty due to gravity field uncertainty, effect on geomag. survey 2-73437
- orbits with large eccentricities, numerical integration (*Russian*) 2-78930
- oscillations in elliptical orbit plane 2-100716
- OSO-8, principles and observational procedures for study of solar faculae 2-94690
- OTS, attitude control by solar sailing, one year's experience 2-117567
- perturbed motion at triangular libration point 2-117573
- platform for solar activity research, automated and stabilised (*Czech*) 2-63205
- pollution detection in troposphere and stratosphere, satellite-borne research development 2-73181
- Popsat geodetic satellite, earthquake research appl. 2-117482
- position prediction, appl. of extended Kalman filter (*Chinese*) 2-112298
- precise T&F intercomparison between NPL, India and PTB, Federal Republic of Germany via Satellite Symphonie-1 2-89677
- precise time transfer techniques, satellite laser ranging, Indian contribution 2-89671
- remote analysis from space, overview (*Swedish*) 2-100577
- remote sensing, extraction of layer relative humidity, geopotential thickness and atmosphere 2-63101
- remote sensing appl. to climatology, 1980-2000 development trends 2-73821
- remote sensing satellites, meas. of aerosols over oceans 2-117454
- resonant satellites of arbitrary eccentricity and inclination, long period motion 2-117563
- rocket plume detection using satellite-borne submillimetre-wave radiometry at thermospheric altitudes 2-94575

artificial satellites continued

rocket plume radiometry using lab. H_2O jet simulation 2-90520
 rotation, gravit. and dissipative forces effects (*Polish*) 2-78990
 rotation at libration points, appl. of circular restricted three-body problems 2-94584
 Seasat, determ. of sea surface stress by SASS, case study with JASIN data 2-83827
 SEASAT, ocean and atmos. remote sensing system 2-89023
 Seasat altimeter and scatterometer 2-68541
 SEASAT orbit ephemerides for radar altimeter experiment 2-89034
 SEASAT radar altimeter correction for tropospheric propagation 2-89028
 SEASAT radar altimeter obs. off Bermuda for height calibration 2-89026
 SEASAT radar altimeter sea-state related altitude errors 2-89030
 SEASAT radar altimeter time tag bias 2-89032
 SEASAT radar altimeter timing bias estimation 2-89031
 SEASAT radar altimetry, height correction for sea state 2-89029
 SEASAT radar altimetry ionosphere corrections 2-89027
 SEASAT radar altimetry system for ocean and atmos. meas. 2-89024
 SEASAT radioaltimeter height calibration 2-89025
 Seasat-A, scattermeter wind ambiguity removal by direct minimisation 2-112013
 silicon solar satellite power system: a net energy analysis 2-57700
 Sirio-2 Lasso Coordination Centre, expt. scheduling and data processing for time-standard synchronization 2-89695
 Skyhook: another space construction project 2-79323
 solar energy state-of-the-art, future prospects and technology 2-116787
 Solar Mesosphere Explorer, autonomous magnetic attitude control 2-68597
 solar power satellite—an opportunity for third world development 2-83458
 space technical appl., conf., Pentagon City, VA, USA (March 1981) 2-68972
 Space Telescope, proton-induced noise in UV sensitive digicons 2-117590
 spherical balloon satellites orbits, effects of diffuse solar radiation 2-117562
 SPOT remote sensing satellite system, mission objectives and appl. 2-73561
 subsatellite, three-dimensional motion under air drag and oblateness perturbations 2-78940
 tesseral harmonics, effect on motion (*Polish*) 2-94821
 time dissemination capabilities via navigation satellites 2-89676
 time synchronisation via INSAT-1 direct reception system 2-89678
 TIROS meteorological satellite system, historical review and future developments 2-63206
 UOSAT, magnetometer and associated electronics 2-117499
 UOSAT radiation monitoring application 2-117500
 UOSAT satellite-borne Earth imaging system, educational applications 2-117498
 weather and climate techniques development, 1980s state and trends 2-73669
 Br_2 - CO_2 -He solar-pumped electronic-to-vibrational energy transfer lasers 2-80933
 C fibre reinforced plastics, appls. to RF components of satellite payloads (*German*) 2-88052

asbestos

microscopic detection of technically important types of asbestos 2-69248

asdic see sonar**aspherical lenses**

see also aberrations

concave paraboloid monitoring with laser interferometer (*Russian*) 2-84689
 Fresnel lens approximation, simple computer program in BASIC 2-75654
 Fresnel lenses, graded-index, for integrated optics 2-86130
 Fresnel lenses and parabolic mirrors comparison as solar energy concentrators 2-83456
 geodesic components for guided wave optics 2-86137
 geodesic lens fabrication techniques in $LiNbO_3$:Ti waveguides 2-75733
 geodesic lenses printed in glass with ion-exchanged film waveguides 2-65406
 noncontact alignment and spacing of optics 2-102897
 ophthalmic lenses, oblique astigmatic error, power error and distortion minimisation using aspherical surfaces 2-111812
 planar optical waveguide lens design 2-86069
 Schmidt corrector plates, computer program for curve calc. 2-75653
 Schmidt plate realisation by ion exchange in glass 2-75727
 surface shape testing using a laser interferometer 2-97247
 surface testing using computer-generated holograms (*Chinese*) 2-91017
 As_2S_3 - SiO_2 -Si graded-index fresnel lenses for integrated optics, electron-beam direct writing technique 2-86130

association

see also association of liquids; associative ionisation

acetates, protonated, struct. and fragmentations, MINDO/3 calcs., heats of form. 2-113889
 N-acetyloxypyridinium salts, fragmentary exchange, reaction rates and mechanism, IR and NMR obs. 2-83372
 adenosine, vertical ionisation pot., UV PES 2-75354
 alkali iodide clusters stability, secondary ion mass spectrometry 2-70468
 anisotropic chromophores, associate induced linear dichroism, dispersive contribs. 2-108597
 aryl ethylenes, and related cpds., assoc., photochem. reactions, spectrosc. obs. 2-54867
 azo dyes, aggregation effect on visible spectra 2-64992
 benzaldehyde-phenols in carbon tetrachloride, association complexes, dipole moment studies 2-57605
 2,2'-bipyridine, fluoresce. spectrum, role of associate form. and rot. isomerism, ab initio SCF calcs. 2-90604
 butanol+ $SnCl_4$, complex form., vibr., IR absorpt. anal. NMR obs. 2-111486
 carbontetrachloride+triacene charge transfer interaction 2-78092
 9-cyanoanthracene-1,3-dienes, photocycloaddition and adduct photodecomp., spectrosc. 2-83391
 cytidine, vertical ionisation pot., UV PES 2-75354
 dimethyl ether-trichloromethane vapour, enthalpy of mixing, assoc. model 2-86888
 dimethylsulphoxide, solution, dielectric study of mol. interactions 2-99016
 diprotic acids, protonation const., least-squares method 2-57610
 electronic and mol. struct., protonation, MINDO/3 study 2-102391

association continued

formaldehyde, hydration, intermolecular interactions, SCF MO calcs. 2-85526
 free radical-aromatic ligand π complexes, spin density transfer mechanism, struct. effect 2-111491
 hydroxypyrenetrissulphonate, $HClO_4$ soln., dissoci., protonation, rot. diffusion, phasefluorimetric study 2-78119
 ion+molecule theory association reaction collisional stabilisation step, intermediate coupling approach 2-93763
 ions and atoms encased in rings, cages and crypts, mech. stability anal. 2-102378
 isothiocyanates, phenyl and methyl, molecular association, nonlinear dielectric study 2-88342
 lanthanide shift reagents, IR spectra 2-75288
 liquid solution-solid powder closed system, hydration kinetics, appl. to $CaSO_4$ (*French*) 2-109949
 manganese phthalocyanine, complexing ability, IR study 2-57612
 metal complexes, metal-formylhydrazide, synthesis and characterisation 2-110848
 metal phthalocyanines-formic acid, complexing ability, VB and MO calcs., IR obs. 2-90551
 methanol, dil. aqs. soln., hydration struct., Monte Carlo calc. 2-72950
 methyl ion+ $H_2(HD)(D_2)$, isotope exchanges and collisional assoc. 2-105462
 methylphenols, electronic and mol. struct., protonation, MINDO/3 study 2-102391
 molecular complex, assoc. const. determ. from NMR data, effect of instrumental error and conc. 2-105472
 molecular complexes, equilib. const., molar extinction coeff., evaluation from spectrophotometric data 2-57633
 p-nitroaniline, protonation const., spectrophotometric determ. 2-111489
 nucleotide metal ion complexes, binary and ternary, 1H -NMR shift studies 2-108581
 organic molecules, [1,3]dipolar cycloadditions, LCAO-SCF-MO ab initio calcs. 2-111462
 organometallic radicals, spin trapping by quinones, optically active complex form. 2-110645
 paraquat dimer mol., electrochem. behaviour, bielectronic mediation appls. 2-85802
 phenol-formaldehyde, 2nd order condensation, signal averaging, Varytemp NMR investig. 2-85698
 phospholipid bilayer membranes, hydration, free energy, enthalpy and entropy determ. 2-116685
 polyatomic vibr. radiative relax. rates estimation 2-59773
 primitive atmosphere, C and N fixation by lightning 2-63098
 protohaeme, binding of CO , ligand diffusion effects in solvents 2-78282
 pseudoisocyanine chloride, photobleaching, ultrafast transient processes of monomers, dimers and aggregates 2-83393
 4-(2-pyridylazo)-resorcinol, protonation const., spectrophotometric determ. 2-111489
 rhodamine 6G, ethanol soln., assoc., impurities effects. 2-105477
 rhodamine 6G, ethanol solns., associate struct., spectrosc. obs. 2-105478
 rhodamine 6G in aqs. soln., aggregate form. const. and absorpt. spectrum, association forces 2-111485
 salicylic acid, protonation const., spectrophotometric determ. 2-111489
 thymidine, vertical ionisation pot., UV PES 2-75354
 transition metal ion complexes, thermomechanical props. of clustering reactions in gas phase 2-78081
 uridine, methylated, vertical ionisation pot., UV PES 2-75354
 Ag_8 +pyridine, matrix reactions, vibr., IR spectra relationship to SERS 2-111470
 $AlCl_3$, chelation with C-methylated flavonoids, UV spectrosc. obs. 2-75303
 Ar_2 collisions, trimer form., atom exchange and dissoci. 2-105463
 AsF_6 -graphite (polyacetylene)(p-polyphenylene) association reaction, thermodynamics and kinetics meas. 2-93775
 C^+ + H_2 radiative association reaction, rate coeff. reinvestigation 2-58235
 CO_2 + H_2O - H_2CO_3 , hydration, theoretical models for activation by cationic binding sites 2-57600
 $CaTiO_3$, kinetics of formation, hydrothermal conditions 2-111453
 Cl^- + Xe^+ , ion-ion recombination, reaction rates 2-99672
 D_2O , adsorption on montmorillonite, hydration vibr., IR obs. 2-62426
 F_2^+ + Xe 2-80784
 Fe complexes, Fe(II, III)-N,N'-di(2-pyridyl) thiourea, Mossbauer and other spectroscopic studies 2-110735
 H^+ donor-acceptor system association, solvent effects on intermol. interaction (*French*) 2-111488
 $H+Cl$ (F^-), associative detachment reaction 2-114075
 HF, nonideal associated vapour, thermodynamic anal. 2-86374
 HNO_3 photochem. complexation in low temp. matrices, IR obs. 2-67737
 H_2O cluster ions, high mol. wt., form. in expansion of ionised gas mixtures 2-108760
 H_2O dimer form. kinetics in rarefied vapour streams 2-62395
 H_2O -trichloromethane vapour, enthalpy of mixing, assoc. model 2-86887
 $H_2PO_4^-$ + Mg^{2+} (Be^{2+})(Na^+)(Li^+) interactions, ab initio SCF study, model of cation binding to nucleic acid 2-88344
 $He+He$, low energy scatt., 4He bound state 2-88349
 Hg vapour, flash photolysis, dimers and trimers, absorpt. spectra 2-96589
 $HgTi$, $B^+_{2(1/2)}$ state, pulsed laser excitation, decay time, three body association and dissoci. energies 2-108608
 1+1, recombination in liqs., vibr. relax. study 2-105465
 I^+ + $H_2O(D_2O)$, recombination, Monte Carlo classical trajectory method 2-111481
 Kr^+ + F^- , ion-ion recombination, reaction rates 2-99672
 LaB_6/Cu ($Cu-Ni$) system, wetting and the contact reaction 2-71777
 $N+N$, catalysed recomb. on Co and Ni surfaces, N_2 metastable states and vibr. relax. 2-108684
 $NH+propane$, insertion and fragmentation products, press. depend. 2-83352
 NH_3 , formation of H-bonds, temp. effect, pion capture method study 2-65109
 Na halide dimers, equilib. config. and dimerisation energies calc. 2-90726
 Na^+N_2 , energy transfer, mol. bond form., at. alignment and orientation effects 2-105480
 Nb_3Sn , form. kinetics by diffusion method (*Russian*) 2-66301
 NeAr, associative ionisation half reactions, photoionisation cross sections 2-72998
 NeKr, associative ionisation half reactions, photoionisation cross sections 2-72998

association continued

- NeXe, associative ionisation half reactions, photoionisation cross sections 2-72998
 Ni, monocryst, chemisorpt. of benzene, hydrogenation and exchange (*French*) 2-67766
 O atom association rates and airglow excitation mechanisms 2-63157
 O recombination rates in lower thermosphere, effect of gravity waves 2-112187
 P₁₁₀N₁₀₀, chemisorpt. of benzene, hydrogenation and exchange (*French*) 2-67766
 Pu(IV) complex formation, with SO₃ ions, spent fuel extraction appl. 2-64548
 TiCl₄+organic O-containing cpds., complex form., mol. vibr., IR obs. 2-67747
 V complex, VO(IV)-quadridentate naphthalidimine ligands, mag. and spectral props. 2-110849
 Zn vapour, dimerisation in supersonic carrier gas 2-65122

association factor (liquids) see association of liquids**association of gases see association****association of liquids**

see also colloids

- alloy melts, crystal quasiparticle anal. using cluster-variation method 2-103586
 binary alloys, configurational entropy and regular associated model of cpd. forming systems 2-97890
 n-butanol-cyclohexane mixture, US wave vel. and free vol. 2-71573
 chloroform liquid mixtures, association const. det. using US vel. data 2-71575
 complex molecules, assoc. effect on spectral distortion 2-65053
 gelatin, aqueous soln., study of US vel. and associated parameters 2-71577
 melt association degree influence on plane crystn. front stability, micro-component addition effect 2-55870
 N-methylacetamide, deuteration kinetics by stopped-flow multidetector Raman spectrophotometry 2-72490
 organic liquids, flow behaviour, modified Hildebrand eqn. appl. 2-81637
 organic liquids, weakly assoc., orientational correl., depolarised Rayleigh scatt. 2-99138
 PMMA soln. viscosity in good and poor solvents 2-76724
 pyrene in polar solvents, IR intensity enhancement induced by solute-solvent interaction 2-75287
 rhodamine B dimeric states, visible absorpt. spectra 2-72954
 solutions, associated, equilib. const., enthalpy and entropy of association 2-67760
 solutions, associated, vapour-liq. equilibria calc. 2-66190
 starch, aqueous soln., study of US vel. and associated parameters 2-71577
 water, Raman spectra, Fermi reson. band, association model 2-99120
 As₂S₃ glass-forming liqs., viscosity and struct. transition 2-61187
 Cu-Si liq. alloy, cpd. forming, configurational entropy and regular associated model 2-97890
 Hg-Cd-Te liquidus-solidus phase diagram, pair approx. 2-88074
 In-Te, molten, liq. struct., X-ray diff. study 2-115131
 Te-Tl melt, short range order struct. 2-103590
 Tl-Te liq. alloy, cpd. forming, configurational entropy and regular associated model 2-97890

associative ionisation

- 1s² molecular orbital direct ionisation, scaling law 2-90679
 UV 2'S to 5³P transition fine and hyperfine struct. spectra, detected via associative ionisation 2-85831
¹H UV 2'S to 5³P transition fine and hyperfine struct. spectra, detected via associative ionisation 2-85831
 Na, vapour, laser excited, hot electron spectra obs. 2-54818
 Na⁺+Na⁺, associative ionisation, polarisation depend. 2-54947
 Rb+Rb(Sp)(Rb(5s)), ion form. from (8s) state 2-80795
 Rb⁺+Rb, collisional ionis. 2-90681

astatine

- see also nuclei with
 protein-At bond, nature of 2-62549

astatine compounds

No entries

asteroid satellites see planetary satellites**asteroids**

- 1979 VA, Apollo object, discovery account 2-63300
 1982 BB, continuation ephemeris (1982 March-June) 2-58291
 1982 DA, ephemeris continuation (1982 May-Sept.) 2-79005
 1982 DA, independent discovery and ephemeris, (1982 April 1 to May 31) 2-58289
 1982 DB, continuation ephemeris (1982 April-May) 2-58292
 1982 DV, continuation ephemeris (1982 May-June) 2-58293
 1982 DV, fast-moving asteroid, UVB photometry rel. to rot. period and light var. amplitude 2-68654
 1982 DV, rapidly moving asteroid, ephemeris (1982 June 30 to July 30) 2-89184
 1982 DV, UVB photometry (March 19 to 25 1982) 2-58290
 1982 ephemerides (*Russian, English*) 2-89185
 1982 FT, Mars-crossing asteroid, independent discovery report, orbital elements and ephemeris (1982 May 1 to June 20) 2-68653
 1982 FT, semiaccurate posns. (1982 March) 2-68648
 1982 HR, ephemeris continuation (1982 May-July) 2-79004
 1982 HR, fast-moving asteroid, precise positions, orbital elements and ephemeris 2-68652
 1982 HR, fast-moving asteroidal object, discovery, precise positions, orbital elements and ephemeris 2-68650
 1982 RA, fast-moving asteroid, BV photometry, improved orbital elements and ephemeris 2-117625
 1982 RA, fast-moving asteroidal object, discovery and semi-accurate positions (1982 September 13) 2-112368
 1982 RA, fast-moving asteroidal object, positions, orbital elements and ephemeris 2-117623
 1982 RB, fast-moving asteroidal object, discovery and semi-accurate positions 2-112369
 1982 RB, fast-moving asteroidal object, semiaccurate positions (1982 September 14 to 21) 2-117624
 330 Adalberta, lost mirror planet existence doubts, confusion with stellar images 2-100801
 1862 Apollo, diameter and albedo, IR obs. 2-58288
 Apollo asteroids, origin and relation to comets 2-101149

asteroids continued

- Apollo-Amor asteroids as extinct comets, Earth/Venus encounters and asteroid orbit problem 2-112370
 105 Artemis, HD 197999 occultation, min. diameter determ. 2-112371
 astrometry, simulation of HIPPARCOS obs. for inertial frame determ. using minor planets 2-89115
 astrometry (1976-1979) at Uppsala Observatory and Kvistaberg Station, obs. 2-63296
 astrometry in 1978 at Uppsala Southern Station 2-63293
 36 Atalante, rotation period, UVB photometry and lightcurve 2-73887
 celestial mechanics of asteroid zone, effect of motion of Jovian commensurability reson. 2-89170
 Ceres, evidence for water of hydration in clay minerals, obs. 2-73888
 Ceres, topocentric posns., Wroclaw photographic obs. (1980) 2-79001
 classification from optical parameters (*Polish*) 2-106597
 compositional structure of asteroid belt, results from spectrophotometric obs. 2-106598
 Cretaceous-Tertiary boundary event, and extinction of marine plankton 2-94368
 65 Cybele, diameter from AGK3+19°0599 occultation 2-63298
 discoveries and astrometric obs. of asteroids at ESO-La Silla, dependences of stars for catalogue improvement and perturbation studies 2-112349
 discovery of faint Palomar-Leiden asteroids, distrib. 2-117627
 48 Doris, rotation period, UVB photometry and lightcurve 2-73887
 Earth-crossing (Apollo) asteroid population, origin from comets and relation to terrestrial catastrophism 2-79039
 15 Eunomia, occultation by SAO 77636, obs. from South Africa 2-106596
 164 Eva, rotation period and light curve, UVB obs. 2-58286
 fragments produced by catastrophic impacts into basalt targets, rot. 2-58287
 1687 Glarona, positron, visible obs. from ESO, La Silla (1980) 2-63294
 Ground-based Electro-Optical Deep Space Surveillance system, use in astronomy 2-100746
 1024 Hale, positron, visible obs. from ESO, La Silla (1978) 2-63294
 6 Hebe, topocentric posns., Wroclaw photographic obs. (1980) 2-79001
 icy objects, JHK photometry for compositional remote sensing 2-100754
 impact mechanics of the Cretaceous-Tertiary extinction bolide 2-94497
 impact on Earth rel. to Late Mesozoic mass extinctions 2-58055
 IR (JHK) photometry, colour domains for different spectral classes 2-79000
 7 Iris, topocentric posns., Wroclaw photographic obs. (1980) 2-79001
 light scatt. theory for rough surfaced grains 2-89142
 146 Lucina, occultation of AGK3+17°1309, 1982 April 18, obs. from Barcelona and Meudon 2-84139
 146 Lucina, occultation of AGK3+17°1309 on 1982 April 18, obs. 2-68651
 meteor radiants associated with asteroid orbits 2-79044
 Minor Planet Circulars 6345-6424, precise posns., elements, ephemerides, new nos. and names 2-63302
 Minor Planet Circulars 6481-6572, precise posns., elements, ephemerides, new nos. and names 2-63301
 Minor Planet Circulars 6573-6652, precise posns., elements, ephemerides, new nos. and names 2-58294
 Minor Planet Circulars 6643-67750, precise posns., elements, ephemerides and new nos. 2-58295
 Minor Planet Circulars 6751-6838, precise posns., elements, ephemerides, new nos. and names 2-73889
 Minor Planet Circulars 6839-6898, precise posns., elements, ephemerides, and new nos. 2-84141
 Minor Planet Circulars 6899-6988, precise posns., elements, ephemerides, new nos. and names 2-84142
 Minor Planet Circulars 6989-7054, precise posns., elements, ephemerides and new nos. 2-94635
 Minor Planet Circulars 7055-7166, precise posns., elements, ephemerides, new nos. and names 2-100806
 Minor Planet Circulars 7167-7278, precise posns., elements, ephemerides and new nos. 2-117626
 minor planet identities catalogue, identification of unnumbered objects with asteroids (1 to 2297) 2-112347
 102 Miriam, position, visible obs. from ESO, La Silla (1978) 2-63294
 motion, mapping near 3/1 commensurability, origin of Kirkwood gaps 2-78933
 843 Nicolaia, recovery of long-lost object (1981 May) 2-100802
 44 Nysa, colour indices and amplitude at 1981 opposition 2-106595
 occultations of stars during 1982, predictions (*Japanese*) 2-73823
 orbit evolution of non-main belt asteroids in restricted circular N-planet problem 2-84138
 orbit similarities with comets and meteoroids 2-94633
 orbits, three-dimensional motion at 2/1 resonance 2-106594
 Pallas, secular motion, Lagrange planetary eqns. over 700000 years 2-63299
 Pallas, topocentric posns., Wroclaw photographic obs. (1980) 2-79001
 positional observations for 11 asteroids, (1981 February 26 to March 14) 2-100805
 positions from Bordeaux Observatory (1977) used to determine star equatorial coords. errors (*French*) 2-63297
 positrons in March 1980 with ESO Schmidt telescope, La Silla, obs. 2-63295
 16 Psyche, pole coords., rot. direction and period (*Chinese*) 2-79002
 radar backscattering, theory 2-79003
 rotation rates rel. to diameter and type 2-73890
 S-type asteroids, undifferentiated, IR spectral evidence 2-89183
 1009 Sirene, lost minor planet, ephemeris, and predicted magnitudes, (1982 May 11 to August 19) 2-68649
 1009 Sirene, recovery, precise positions and revised ephemeris 2-94634
 size distribution and mass distrib. index 2-84140
 stochastic collisions and rot. instability 2-84118
 1019 Strackee, improved orbit (*German*) 2-100804
 surfaces, Earth-based radar studies 2-106574
 Tautenburg obs. (1972, 1979-80) 2-100803
 three axis ellipsoidal asteroid, light curve calc. method (*Chinese*) 2-78973
 triaxial ellipsoid surfaces, Monte Carlo approach 2-100824
 Trojan type orbits in two grav. centres variable separation system, N-body problem 2-112372
 53 Kalypso, synodic rot. period, colour indices and light curve obs. 2-68647

astigmatism see aberrations**astroarchaeology**

- megalthic lunar sightlines, reassessment of Thom sites 2-117615

astrobiology see *extraterrestrial life*

astrolebes see *meteorite craters*

astrometry

- 0104-408, extragalactic radio source, optical identification and precise position 2-106943
 1982 HR, fast-moving asteroid, precise positions, 1982 April 29 to May 2, and ephemeris 2-68652
 1982 HR, fast-moving asteroidal object, discovery and precise positions, (1982 April 24 to 26) 2-68650
 1982 RA, fast-moving asteroidal object, precise positions, 1982 September 13 to 19, and ephemeris 2-117623
 1982 RB, fast-moving asteroidal object, semiaccurate positions (1982 September 14 to 21) 2-117624
 Abell 779 and 1314, detect. of 110 radiosources, positrons, UHF obs. 2-63693
 absolute reference frame from radiosource positrons 2-68923
 ADS 10279 and 12889, orbital elements, masses and dynamical parallaxes (French) 2-79158
 asteroid positions (1976-1979) at Uppsala Observatory and Kvistaberg Station, obs. 2-63296
 asteroid positions from Bordeaux Observatory (1977) used to determine star equatorial coords. errors (French) 2-63297
 asteroid positrons in March 1980 with ESO Schmidt telescope, La Silla, obs. 2-63295
 asteroids, (1972, 1979-80) 2-100803
 asteroids, discoveries and astrometric obs. at ESO-La Silla, and reference stars dependences 2-112349
 asteroids, in 1978 at Uppsala Southern Station 2-63293
 asteroids, positions of 11 objects, (1981 February 26 to March 14) 2-100805
 asteroids, topocentric posns., Wrocław photographic obs. (1980) 2-79001
 astronomical time measurements, Survey of India 2-84064
 automated inventory techniques 2-58268
 binary stars, photometric and astrometric obs. of close visual binaries 2-58395
 Carlsberg automatic meridian circle, Anglo-Danish collaboration 2-58256
 Case 2, white dwarf, parallax obs. 2-63217
 Coma cluster central region galaxies, D_{25} diameters and positions (French) 2-63643
 39 Comae Berenicis, and field, visual/astrometric binary, parallax obs. 2-63217
 Comet Austin (1982g), discovery posns., magnitude and appearance 2-84167
 Comet Austin (1982g), precise positions, 1982 July 2 to 15, improved orbital elements and corrections to ephemeris 2-94657
 Comet Austin (1982g), precise positions, 1982 June 19, orbital elements and ephemeris 2-89199
 Comet Austin (1982g), precise positions, 1982 June 21 to 23, parabolic orbital elements and ephemeris 2-89201
 Comet Austin (1982g), precise positions, 1982 June 26 and 27, orbital elements and ephemeris 2-89202
 P/Comet Churyumov-Gerasimenko (1982f), recovery and precise positions (1982 May 31 and June 1) 2-79036
 P/Comet d'Arrest (1982e), recovery, precise positions, 1982 April 23 to May 16, and orbital elements 2-73911
 Comet Hartley (1982h), precise positions, 1982 July 15 to 17, and ephemeris 2-94656
 P/Comet Peters-Hartley (1846 VI=1982h), precise positions, 1982 July 11 to 20, orbital elements and ephemeris 2-100832
 P/Comet Tuttle (1980 XIII), positions (1980 December 26 to 1981 January 9) 2-106618
 comets, position meas. from photograph 2-84106
 P Cygni, radio star, comparison of precise optical and radio positions 2-89319
 Cygnus OB2 association, comparison of precise optical and radio positions for member stars 2-89319
 division corrections of divided circle 2-78928
 BV and BW Draconis, eclipsing binaries, light curve, orbit and astrometry, obs. 2-58397
 Earth rotation parameters determ. 2-58261
 equatorial stars, declinations of 100 objects (Russian) 2-78982
 faint stars, parallax, proper motions and UBV obs. 2-63363
 FK4 equator and equinox, orientation from observations of Sun and planets (Russian) 2-106480
 FK4 equinox and equator corrections from Danjon astrolabe obs. of planets (Chinese) 2-63218
 FK4 reference frame rot. from lunar occultations of stars timings 2-58229
 FK5, determ. of equinox and equator 2-68598
 Galilean satellites, 1974-6 posns. from Pulkovo obs. (Russian) 2-79009
 Galilean satellites, astrometry from Leander McCormick Observatory for 1978-9, 1980, 1981 oppositions, obs. 2-73891
 Galilean satellites, photographic positional obs. with long focus astrograph during (1975) (Russian) 2-94636
 Galilean satellites of Jupiter, positions obs. and comparison with Sampson-Lieske theory 2-79010
 general star catalogue compiling method (Chinese) 2-84108
 geostationary satellites, visual obs. rel. to subsatellite position determ. 2-106476
 1687 Glaronia, positron, visible obs. from ESO, La Silla (1980) 2-63294
 Greenwich Obs. Time and Latitude Service, Time Report (April to June 1981) 2-78931
 Greenwich Obs. Time and Latitude Service, Time Report (July to September 1981) 2-100707
 Greenwich time report, Royal Greenwich Observatory Time and Latitude Service, (January to March 1981) 2-68599
 1024 Hale, positron, visible obs. from ESO, La Silla (1978) 2-63294
 HD 149499, white dwarf and main sequence star, distance from parallax obs. 2-106791
 AM Herculis-type eclipsing binary (1114+18), precise position and ephemerides 2-58408
 HH-39, Herbig-Haro object, proper motions and relation to R Monocerotis and (NGC 2261) 2-106841
 Himalia (Jupiter VI), precise posns. (1982 April 29) 2-100811
 Hipparcos space astrometry mission, conf. at Strasbourg, France (February 1982) 2-89462
 HIPPARCOS space astrometry project, simulation of inertial frame determ. using minor planets 2-89115
 Iapetus (Saturn VIII), precise posns. (1982 April) 2-100825
 Jupiter, 1974-6 posns. from Pulkovo obs. (Russian) 2-79009

astrometry continued

- Jupiter, photographic positional obs. with long focus astrograph during (1975) graphic positional obs. with long focus astrograph during (1975) (Russian) 2-94636
 Jupiter astrolabe observations at CERGA Observatory (January 1978-May 1979) (French) 2-100808
 Lalande 21185, red dwarf star, study of intensive 40-yr Sproul plate series 2-79089
 α Lyrae and field, astrometry, parallax obs. 2-63217
 M67, open cluster membership from relative proper motion anal. (Chinese) 2-112518
 Mars, astrolabe observations at CERGA Observatory (February 1980-May 1980) (French) 2-100796
 Merate Observatory time and latitude results, Danjon astrolabe obs. (1981) 2-105882
 Minor Planet Circulars 6345-6424, precise posns. for asteroids and eight comets 2-63302
 Minor Planet Circulars 6481-6572, precise posns. for asteroids and 16 comets 2-63301
 Minor Planet Circulars 6573-6652, precise posns. for asteroids and 18 comets 2-58294
 Minor Planet Circulars 6643-67750, precise posns. for asteroids and 13 comets 2-58295
 Minor Planet Circulars 6751-6838, precise posns. for asteroids and 11 comets 2-73889
 Minor Planet Circulars 6839-6898, precise posns. for asteroids and 14 comets 2-84141
 Minor Planet Circulars 6899-6988, precise posns. for asteroids and 23 comets 2-84142
 Minor Planet Circulars 6989-7054, precise posns. for asteroids and six comets 2-94635
 Minor Planet Circulars 7055-7166, precise posns. for asteroids and 16 comets 2-100806
 Minor Planet Circulars 7167-7278, precise posns. for asteroids and 14 comets 2-117626
 minor planets, astrometric obs., (1980 to 1982) 2-106611
 102 Miriam, position, visible obs. from ESO, La Silla (1978) 2-63294
 modern developments, conf., Vienna (Sept. 1978) 2-53431
 Neptune, astrometric obs., (1980 to 1982) 2-106611
 Nereid, orbital elements from visible obs. 2-112388
 NGC 5548, Seyfert 1.5 galaxy, nucleus radiosources detect. and astrometry, UHF/SHF obs. 2-117740
 843 Nicolaia, recovery posns. of long-lost asteroid 2-100802
 northern PZT stars catalogue, compilation from meridian circle catalogues of 1950's (NPZT₅₀) 2-100758
 northern PZT stars catalogue (NPZT₇₄), meridian circle obs. 2-100759
 Nova 5 in M31, discovery, H and blue magnitudes and precise position 2-117684
 novae in M31, discoveries, precise positions and spectra of four novae 2-112462
 optical interferometer appl. 2-58258
 parallaxes and detection of dark companions: atmospheric limitations 2-58231
 β Persei, precise optical posns. of radiosource (French) 2-58410
 photoelectric astrometry, precise image location methods 2-58267
 Pluto, astrometric obs., (1980 to 1982) 2-106611
 Pluto-Charon system, speckle interferometric obs. (1980 June 5) 2-106612
 PMC 190, new photoelectric meridian circle at Tokyo Astronomical Observatory, instrumental errors determ. 2-100735
 PMC 190, new photoelectric meridian circle at Tokyo Astronomical Observatory, pinhole system for solar and lunar obs. 2-100736
 pole motion determination method in FK4 system 2-106546
 precision solar and sidereal clock, CMOS 2-79536
 PSR 1929+10, apparent proper motion from SHF obs. 2-117610
 pulsars, precise positions determ. from pulse timing obs. 2-68805
 PZT—new concept using Schmidt system 2-58257
 radio astrometry, appl. of specialised complex using three very long baseline interferometers (Russian) 2-100737
 radio sources at 4.755 GHz, astrometry and optical identifications 2-63689
 radio sources of Parkes survey, 2.3 GHz accurate positions and optical identifications 2-79234
 radio sources optical counterparts, choice of 315 stars in 87 areas for meridian obs. in FK4 system (Russian) 2-94581
 radio sources within 30' of Cepheus A catalogue and precise positions 2-106551
 radioastrometry and imaging of radiosources (Russian) 2-78972
 radio source positions in FK4 system, Hamburg program 2-58230
 radiosources, compact, precise positions from SHF/UHF interferometric obs. 2-79233
 radiosources, compact extragalactic, struct. polarisation and astrometry, UHF/SHF obs. 2-112601
 radiosources, optical posns., Herstmonceux-Cambridge program 2-58479
 red variable stars, catalogue of positions (Russian) 2-73986
 reference stars for asteroids positions, dependences for catalogue improvement and perturbation studies 2-112349
 Sagittarius A at galactic centre, apparent proper motion from SHF obs. 2-117610
 Saturn satellites astrometry from Leander McCormick Observatory for 1978-9, 1981 oppositions obs. 2-73891
 Saturn VIII (Iapetus), precise positions (1981 March 1 to 12) 2-89193
 Shanghai Observatory, astrolabe obs., lunar tidal effect on vertical (Chinese) 2-63219
 1009 Sirene, recovery and precise positions, (1982 July 14 and 15) 2-94634
 solar astrometry experiment using reflecting pin-hole telescope solar beacon 2-94601
 solar observations in Washington, 1911 to 1970, comparison with Newcomb's theory (Russian) 2-100709
 star declinations, effect on Potsdam PZT latitude determs. (German) 2-100705
 star equatorial coordinate errors from asteroid positions determ. at Bordeaux Observatory (1977) (French) 2-63297
 stars, meridian observations from Brufield (1969-1975), star position brighter than 11th magnitude 2-100767
 stars (book) 2-112671
 stellar 11 μ m sources, positions from interferometric technique 2-94580
 stellar image deflection by solar gravit. field 2-94591
 stellar parallaxes, external and systematic errors 2-58331
 stellar parallaxes, statistical analysis 2-58264

astrometry continued

- stellar proper motion catalogues, system differences rel. to galaxies (*Russian*) 2-78981
- stellar proper motions, correction for accidental errors (*Russian*) 2-63384
- Sun, positional obs., at CERGA astrolabe in (1980). (*French*) 2-100855
- T Tauri, discrepancy between optical and radio positions 2-89258
- T Tauri stars, mass loss and struct., SHF obs. 2-68753
- time and frequency standards, Shanghai Observatory 2-79525
- time and latitude, Danjon astrolabe obs. at Rio de Janeiro, May 1977 to December 1979 2-100706
- Tokyo Astronomical Obs., Time and Latitude Bulletins (January-March 1982) 2-106481
- Tokyo Astronomical Obs., Time and Latitude Bulletins (July to September 1981) 2-68600
- Tokyo Astronomical Observatory, Time and Latitude Bulletins (October to December 1981) 2-84065
- Uranus, astrometric obs., (1980 to 1982) 2-106611
- Uranus and four satellites, 1980 May positions, ESO La Silla GPO astrograph obs. 2-79024
- Uranus zenith distance residuals in 1979 from Danjon astrolabe, Chile 2-63311
- new variable stars in direction of Sagittarius bright cloud B, astrometric and photometric catalogue 2-112348
- visual binaries, orbital elements, masses from astrometric obs. 2-63513
- visual binary stars, list of new discoveries at Nice 2-100764
- visual binary stars, masses, mass ratios and parallaxes of seven objects from astrometric studies 2-106693
- visual binary stars, new observations and orbits for 25 stars (*Russian*) 2-100993
- visual binary stars measurement, new photographic method 2-74016
- VLBI and radioastrometric source catalogue at JPL 2-58266
- VLBI arc method, astrometric and geodetic appls. 2-58265
- Wolf 294 and field, parallax obs. 2-63217

astronautics see space research**astronomical catalogues**

- see also astrometry
- Abell clusters of galaxies, 1400 MHz survey of 1478 clusters 2-106932
- active extragalactic objects, complete sample from 1411 MHz VLA survey in Virgo 2-78978
- AGK3/SAO stars, for radio sources meridian obs. in FK4 system (*Russian*) 2-94581
- ANS UV photometry, point sources catalogue 2-106553
- Be type stars, H_{α} profile catalogue (*French*) 2-58362
- Bibliographic Star Index sample test (for 1967 and 1977) 2-101152
- SC 12 catalogue, deep radio optical survey near North Galactic Pole 2-106558
- Cassiopeia A, SNR, fast moving condensations radial vel. catalogue 2-106948
- cometary nebulae, 13 new objects (*Russian*) 2-74068
- DDO photoelectric photometric system stellar data 2-63274
- diffuse nebulae and emission-line stars 2-106559
- double galaxies, UVB photometric catalogue 2-106561
- dwarf novae, southern hemisphere and equatorial, alt. 2-100762
- early-type stars, Geneva photometric boxes rel. to interstellar reddening towards galactic poles 2-58327
- emission-line stars and diffuse nebulae in irregular galaxy NGC 6822, catalogue 2-106559
- equatorial stars, declinations of 100 objects (*Russian*) 2-78982
- faint blue objects at high galactic lat., obs. in Palomar Schmidt field centred on (Selected Area 28) 2-100769
- FK4 equator and emission, orientation from observations of Sun and planets (*Russian*) 2-106480
- FK4 equinox and equator corrections from Danjon astrolabe obs. of planets (*Chinese*) 2-63218
- FK4 reference frame rot. from lunar occultations of stars timings 2-58229
- FK5, determ. of equinox and equator 2-68598
- flare stars in γ Cygni region, new discoveries from photographic U-band photometry 2-73862
- flare stars in Orion Nebula, photographic U-band obs. 2-73863
- flare stars in Praesepe region, results of U-band photographic obs. (1972 to 1974) 2-78983
- galactic plane, extended H II regions and mol. clouds, IR sources obs. 2-63273
- galaxies surface photometry, bibliography 2-107031
- galaxy groups with density enhancements (greater than 20) 2-89157
- gamma-ray burst sources (1967 July to 1979 June) 2-106552
- general star catalogue compiling method (*Chinese*) 2-84108
- Geneva photometric boxes, announcement of catalogue (microfiches and mag. tape) 2-100765
- Herbig-Haro objects, 21 new objects (*Russian*) 2-74069
- interstellar absorption band at 220 nm, equivalent width catalogue 2-100760
- far-IR sources in galactic plane, high resolution survey and nature of sources 2-58413
- Large sunspot groups for 1965-1976 AD 2-94627
- LMC member stars, catalogue and radial vels. from objective-prism plates (*French*) 2-100763
- Luminous Stars in Northern Milky Way catalogues, list of named variable stars 2-63277
- Markovian 1400 to 1500, nature and spectral obs. 2-117613
- master list of nonstellar optical astronomical objects 2-58563
- minor planet identities catalogue, identification of unnumbered objects with asteroids (1 to 2297) 2-112347
- minor planets discoveries at ESO-La Silla, precise positions and reference stars dependences 2-112349
- model H II regions 2-68636
- northern PZT stars catalogue, compilation from meridian circle catalogues of 1950's (NPZT₅₀) 2-100758
- northern PZT stars catalogue (NPZT₇₄), meridian circle obs. 2-100759
- Orion Nebula stars down to $m_{\text{vis}}=16$, atlas (book) 2-101145
- Palomar Green survey, obs. of cataclysmic variable candidates 2-106748
- Parkes 2700 MHz survey, resurvey of $\pm 4^\circ$ declination zone 2-89168
- pulsars, northern hemisphere survey 2-63486
- quasar candidates near 3C 345, discoveries and redshifts using slitless spectroscopy 2-106955
- radio close double elliptical galaxies 2-73861
- radio sources, extragalactic, radio obs. of complete sample at 1 Jy at 408 MHz 2-78984

astronomical catalogues continued

- radio sources within $30'$ of Cepheus A catalogue and precise positions 2-106551
- radioastrometric source catalogue at JPL 2-58266
- radio sources, extragalactic objects from 5 GHz survey 2-112350
- red stars near dark cloud L1454, catalogue 2-106560
- red variable stars, catalogue of positions (*Russian*) 2-73986
- SA 29, list of faint blue objects 2-68637
- solar eclipses (1621-1806) 2-100771
- star cluster system of M33, photometry, spectra and catalogue 2-106556
- star magnitude sources for visual photometry of comets 2-94649
- star occultations by Moon (1623-1942) 2-100771
- stars, meridian observations from Brorfelde (1969-1975), star position brighter than 11th magnitude 2-100767
- stars, Odessa Astronomical Observatory catalogue, comparison with Vilnius Observatory and Johnson and Mitchell's catalogues (*Russian*) 2-78980
- stars, red and IR magnitudes in Kron photoelectric photometric system 2-100768
- stars with large expected ang. diameters for each spectral type 2-63276
- stellar open clusters, catalogue and colour-magnitude diagrams rel. to galactic struct. 2-106557
- stellar proper motion catalogues, system differences rel. to galaxies (*Russian*) 2-78981
- stellar radial velocities from Hermonceaux and Kottamia (1964-1971) 2-94628
- stellar spectra, discoveries on southern red-sensitive objective-prism plates 2-100761
- stellar X-ray survey, magnitude limited, rel. to F-type stars X-ray luminosity function 2-112422
- Tokyo PZT star catalogue, positions improvements 2-63272
- variable, microvariable or suspected variable stars detected in Geneva photometry, list 2-100766
- variable stars, newly discovered, in Cygnus, catalogue 2-84109
- variable stars among bright visual binaries, list of 112 objects 2-100770
- variable stars in direction of Sagittarius bright cloud B, catalogue of 621 new objects 2-112348
- variable stars in globular cluster M28 (NGC 6626), magnitudes, periods and positions 2-94626
- Virgo cluster galaxies, parameters 2-63275
- visual binary stars, list of new discoveries at Nice 2-100764
- white dwarfs 2-58272
- X-ray sources, complete sample of high-latit. sky from HEAO 1 A-2 expt. 2-58270
- X-ray sources, extragalactic, medium sensitivity survey rel. to log N-log S relation 2-58271
- 2 XRS catalogue of X-ray sources 2-58273
- Ca II K line profiles/equivalent widths in metallic line stars spectra 2-84111
- H II regions in spiral galaxy NGC 6503, obs. 2-112560
- H α emission objects in region in Vela, search and catalogue 2-78979
- H α emission stars, new discoveries in region of γ Cygni 2-84110

astronomical ephemerides

- 1982, Belgian ephemerides and calendar of events (*French*) 2-58228
- 1982 Astronomical Almanac 2-53438
- 1982 BB, continuation ephemeris (1982 March-June) 2-58291
- 1982 DA, ephemeris continuation (1982 May-Sept.) 2-79005
- 1982 DA, independent discovery and ephemeris, (1982 April 1 to May 31) 2-58288
- 1982 DB, continuation ephemeris (1982 April-May) 2-58292
- 1982 DV, continuation ephemeris (1982 May-June) 2-58293
- 1982 DV, rapidly moving asteroid, ephemeris (1982 June 30 to July 30) 2-89184
- 1982 FT, Mars-crossing asteroid, independent discovery report, orbital elements and ephemeris (1982 May 1 to June 20) 2-68653
- 1982 HR, ephemeris continuation (1982 May-July) 2-79004
- 1982 HR, fast-moving asteroid, orbital elements and ephemeris, (1982 May 6 to 31) 2-68652
- 1982 HR, fast-moving asteroidal object, orbital elements and ephemeris, (1982 April 29 to May 11) 2-68650
- 1982 RA, fast-moving asteroid, improved orbital elements and ephemeris, (1982 September 28 to November 27) 2-11625
- 1982 RA, fast-moving asteroidal object, positions, orbital elements and ephemeris (1982 September 20 to October 10) 2-117623
- 1983 British Astronomical Association Handbook 2-112664
- Abell 41, planetary nebula, nucleus, ultra-short-period binary star ephemeris for times of light minimum 2-94718
- ADS 10279 and 12889, ephemeris for 1981 to 2000 in yearly intervals (*French*) 2-79158
- ADS 10621, ADS 15650, visual doublestars, orbital elements, ephemerides and residuals 2-58394
- V1343 Aquilae (SS 433) moving lines 1981 ephemeris 2-58354
- artificial satellite position precise prediction, appl. of extended Kalman filter (*Chinese*) 2-112298
- asteroids, 1982 ephemerides (*Russian, English*) 2-89185
- Comet Austin (1982g), ephemeris, (1982 August 9 to September 2) 2-94652
- Comet Austin (1982g), ephemeris (1982 September 8 to October 28) 2-112395
- Comet Austin (1982g), improved parabolic orbital elements and corrections to ephemeris, (1982 July 25 to August 29) 2-94657
- Comet Austin (1982g), parabolic orbital elements and ephemeris (1982 July 5 to 30) 2-89199
- Comet Austin (1982g), parabolic orbital elements and ephemeris (1982 June 20 to July 20) 2-89201
- Comet Austin (1982g), parabolic orbital elements and ephemeris (1982 July 10 to August 19) 2-89202
- Comet Austin (1982g), parabolic orbital elements and ephemeris, (1982 August 7 to September 4) 2-100836
- Comet Austin (1982g), visual obs., elements and ephemeris (1982 Aug.-Dec.) 2-106621
- Comet Bowell (1980b) positrons for 1982 March 12 to 1983 January 6 in 20 day steps 2-79041
- P/Comet d'Arrest (1982e), recovery, precise positions, 1982 April 23 to May 16, and orbital elements 2-73911
- P/Comet du Toit-Hartley (1982b, 1982c), ephemeris, (1982 May 1 to July 30) 2-68677
- comet ephemerides calculations from orbital elements 2-100755
- P/Comet Grigg-Skjellerup, orbit from 1947-1977 apparitions and 1982 ephemeris 2-106617

astronomical ephemerides continued

- P/Comet Grigg-Skjellerup (1982a), ephemeris (1982 May 16 to June 30) 2-73913
- P/Comet Grigg-Skjellerup (1982a), mag. estimates and ephemeris continuation (1982 June-Aug.) 2-84168
- P/Comet Halley, ephemeris calc. technique 2-100757
- Comet Hartley (1982h), elliptical orbital elements and ephemeris (1982 July 15 to 30) 2-94656
- P/Comet Neujmin 3, improved elements and ephemeris (1982 May-Aug.) 2-84166
- P/Comet Wolf-Harrington, 1983 to 1985 ephemeris 2-106616
- conference on Moon/planets, celestial mechanics and ephemerides at Namur, Belgium (July 1980) 2-68951
- CSV 5885, 8736, pulsating variable stars, light elements from Sky-patrol-plates obs. elements from Sky-patrol-plates obs. 2-112459
- CSV 6984, new W Ursae Majoris type star, BV photometry, light curve and orbital elements 2-112500
- CSV 8883, 101915, eclipsing binary stars, light elements from Sky-patrol-plates obs. 2-112459
- CW 1103+254, new AM Herculis star, orbital period and polarisation ephemeris 2-84250
- V836 Cygni, eclipsing binary star, revised light elements from photoelectric obs. 2-74023
- BW Draconis, W Ursae Majoris star, new ephemeris from times of photoelectric minima 2-84282
- eclipsing binary stars, periodic ephemerides for 49 systems 2-106809
- ELP 2000, perturbations due to Venus and Mars 2-73870
- ELP 2000 solution for main problem of Moon 2-73869
- Galilean satellites, appl. of E-2 ephemeris to early eclipse obs. 2-79011
- Galilean satellites, ephemeris from Sampson compared with photographic positional obs. during (1975) (*Russian*) 2-94636
- Galilean satellites, photographic observations (1913-1928) and ephemerides corrections 2-112376
- Galilean satellites, Sampson-Lieske theory and ephemeris construction 2-79008
- geostationary satellites positions, prediction techniques rel. to visual obs. 2-106476
- V Gruis, eclipsing binary star, new orbital period and light curve from photometric obs. 2-112495
- AM Herculis-type eclipsing binary (1114+18), photometric, polarisation and spectrum vars. and ephemerides 2-58408
- Jupiter, comparison of ephemeris with photographic positional obs. during (1975) (*Russian*) 2-94636
- Minor Planet Circulars 6345-6424, ephemerides for nine asteroids 2-63302
- Minor Planet Circulars 6481-6572, ephemerides for 113 asteroids 2-63301
- Minor Planet Circulars 6573-6652, ephemerides for six asteroids 2-58294
- Minor Planet Circulars 6643-67750, ephemerides for 117 asteroids 2-58295
- Minor Planet Circulars 6751-6838, ephemerides for asteroids 2-73889
- Minor Planet Circulars 6839-6898, ephemerides for eight asteroids 2-84141
- Minor Planet Circulars 6899-6988, ephemerides for 94 asteroids 2-84142
- Minor Planet Circulars 6989-7054, ephemerides for 67 asteroids and eight comets 2-94635
- Minor Planet Circulars 7167-7278, ephemerides for 114 asteroids 2-117626
- AU Monocerotis, Algol type binary, importance of UVB obs. during January to February (1983) 2-94780
- RW Monocerotis, Algol type binary star, ephemeris from five-colour photometry of primary eclipse 2-94782
- Moon, ephemeride errors and orbit perturbations due to Earth oblateness and planets 2-73871
- Moon, perturbations due to Venus and Mars, errors in ephemerides 2-73872
- 843 Nicolaia, search ephemerides and recovery of long-lost asteroid 2-100802
- UU Ophiuchi, Algol-type binary, light minimum time obs. and new ephemeris 2-100987
- P/Comet Tempel 2 (1982d), ephemeris (1982 May 31 to July 30) 2-73914
- β Persei (Algol), photoelectric minimum timings rel. to new period and ephemeris 2-74024
- Pluto apulse to star, 1982 April 15, probably no occultation 2-63312
- Pluto-Charon system, speckle interferometric obs. rel. to predicted eclipse season onset 2-106612
- WY Sagittae (Nova 1783), eclipsing binary star, orbital period and ephemeris from five eclipse timings 2-89278
- MY Scuti, RR Lyrae star, period determ., linear and parabolic elements 2-100945
- 1009 Sirene, lost minor planet, ephemeris and predicted magnitudes, (1982 May 11 to August 19) 2-68649
- 1009 Sirene, recovery, precise positions and revised ephemeris, (1982 July 20 to September 28) 2-94634
- solar system bodies, anal. of anomalous motions due to violation of equivalence principle 2-68603
- SV Tauri, Algol-type binary system, ephemeris from photoelectric UVB photometry 2-94781

astronomical instruments

- see also *astronomical observations; astronomical techniques; astronomical telescopes; planetaria; radiotelescopes*
- acousto-optical spectrograph for H I line obs., design features and anal. 2-94606
- acousto-optical spectrograph for RATAN-600 radio telescope, appl. to H I 21 cm line obs. 2-94607
- applied optics, conf., Rochester, NY, USA (May 1982) 2-112647
- atmosphere water vapour monitor, for day or night use 2-106543
- automatic photoelectric meridian circle (*Japanese*) 2-68614
- blink comparator at Kiso Observatory, description and performance 2-112332
- C-CD array detectors for imaging in VUV 2-114471
- C-CD detectors, electron bombarded, for VUV 2-114470
- camera window for ultrafast X-ray studies 2-84096
- circular-periscope antenna for radio telescopes, description 2-94610
- Cosmic Background Explorer (COBE) satellite, instrumentation rel. to IR and microwave cosmic background obs. 2-106478
- coude spectrograph instrumental profiles rel. to dispersion 2-106538
- differential variable-star photometry system at the Rothney Astrophysical Observatory 2-112331

astronomical instruments continued

- digital CCD camera, appl. to high time resolution obs. of solar flare, (1980 December 17) 2-100868
- DUMAND, neutrino point source detection prospects (*Polish*) 2-94615
- echelle-interferometer Cassegrain spectrograph, appl. to astronomical spectroscopy 2-106534
- eclipse camera for solar corona obs. 2-112405
- Einstein objective grating spectrometer, calibration and efficiency 2-89146
- electrographic image detector development, far and middle UV sensitive 2-117607
- electron multipliers, continuous channel Mullard units, selection criteria 2-84098
- European Southern Hemisphere Observatory (ESO), equipment and observing facilities (*French*) 2-94594
- Exosat, European X-ray observatory, mission objectives and scientific instruments 2-117566
- flare imaging X-ray imaging spectrometer for solar flare, imaging 2-100743
- gamma ray Burst and Transient Source Experiment prototype 2-58252
- gamma ray spectrometer, balloon-borne equipment 2-64743
- gas scintillation proportional counter camera for X-ray astronomy appl. 2-78951
- gas scintillation proportional counters for Japanese astron. satellite 2-94609
- grating spectrometer and Fabry-Perot interferometer for 1-5 μ m range 2-106536
- HEAO-3 Cosmic Ray Isotope Spectrometer 2-106541
- HEAO-3 high resolution γ -ray spectrometer 2-89151
- heavy ion time of flight spectrometer for space appls., detection efficiency 2-53891
- heliostat and related instruments, principles and practical arrangements 2-100742
- Image Drift Compensation System for solar pointed space telescope 2-106533
- imaging gas scintillation proportional counter for X-ray astronomy 2-78950
- imaging photon counter, low noise 2-58259
- imaging proportional counter with Xe-methane filling 2-108235
- imaging systems, high resolution, for spin-stabilised Probe spacecraft 2-112301
- impact mass spectrometer for Giotto probe, electronic system 2-78955
- infrared astronomy, scientific/military thrusts and instrumentation, conference, Washington, DC (1981 April 21 to 22) 2-84371
- integrated IR arrays, development and evaluation 2-117603
- intensified Si vidicon detector, appl. to direct imaging and photometry 2-73846
- International Solar Polar Mission, accelerator calibration of COSPIN expt. Low Energy Telescope 2-63251
- International Ultraviolet Explorer (IUE), instrumentation and performance 2-117591
- IR cooled grating spectrometer using cylindrical optics for astronomy 2-63252
- IR detectors for low-background astronomy, book 2-112668
- near-IR mapping spectrometer on Galileo Mission rel. to spectral mapping of Jupiter and Galilean satellites 2-112300
- IR photometer for Yunnan 1 m Cassegrain telescope (*Chinese*) 2-84099
- IR photopolarimeter for astronomical obs. 2-117604
- IR spectrometer for expts. with solar occultation using pyroelectric vidicon 2-95493
- IR/optical polarimeter, appl. to determ. of composite interstellar polarisation curves 2-106540
- irisphotometer at Kiso Observatory, description and performance 2-112332
- isophotometer at Kiso Observatory, description and performance 2-112332
- IUE resseau grids and spectral formats, parameterisation of motion as function of time and temp. 2-68616
- Kiso image detection system for photographic plates 2-89154
- laser radiochemical Ga detector 2-78957
- low light level photometer at Royal Greenwich Observatory 2-78976
- maser, 1-CM rutile travelling wave, use in radioastronomical obs. 2-114226
- Michelson interferometer, He-cooled, for far-IR astronomy on GIRL 2-117595
- microphotometer at Kiso Observatory, description and performance 2-112332
- microphotometer automatic digital 2-coord. input of photographic images (*Russian*) 2-78965
- multi-anode microchannel array photon counting detectors, for UV, VUV space and ground-based studies 2-117608
- multichannel information-measurement system 2-80400
- multichannel photometer, appl. to determ. of stellar ang. dias. by lunar occultation technique 2-79078
- multichannel polarimeter, TV guider and minicomputer system (*Japanese*) 2-117601
- neutrino detector using coherent scattering, appl. to low energy solar and cosmic neutrinos 2-78964
- neutrino scintillation detector response to supernova neutrino pulse 2-58370
- optical coating problem, instrum. efficiency 2-73838
- photodiode array appl. in astronomical spectroscopy 2-73847
- photoelectric photometer for National Astronomical Observatory 60 cm Cassegrain telescope 2-117602
- photographic spot sensitometer of AAT, photometric calibration technique 2-106550
- photometer, automatic, for stellar UVBR photometry (*Russian*) 2-78962
- Pickering Racine prisms use 2-63257
- Pioneer Venus, multiprobes subsonic drag determ. from flight data 2-94577
- PMC 190, new photoelectric meridian circle at Tokyo Astronomical Observatory, instrumental errors determ. 2-90735
- PMC 190, new photoelectric meridian circle at Tokyo Astronomical Observatory, pinhole system for solar and lunar obs. 2-100736
- preamplifier for slow-scanning Fourier transform spectroscopy, balloon-borne appls. 2-112334
- satellite electrophotometer, high-speed, two-channel, operating in photon-counting regime, performance (*Russian*) 2-94605
- satellite-borne X-ray burst spectrometer for solar flares obs. 2-112329
- SBG satellite-borne camera, variable star obs. appl. (*Russian*) 2-79113
- selective solar irradiance spectrometer 2-84093

astronomical instruments continued

- solar arrays, nighttime astronomical appl. 2-73843
 solar corona photometers operating at 530.3 nm, comparison of different instruments 2-73837
 Solar Maximum Mission, instrumentation and mission 2-89114
 solar spectroradiometer, design and development 2-63112
 solid state images, conf. (Cambridge, MA, June 1981) 2-79270
 solid-state imaging arrays, appls. in astronomy 2-78963
 Space Telescope digicon, proton-induced noise 2-117590
 spectrograph, low and moderate resolution, for Hale 5.08-m telescope, design and efficiency 2-106539
 spectroheliograph, design 2-84094
 spectrometer for hard X-ray and soft gamma ray telescope, design 2-12326
 standard time sundial with interchangeable gnomons 2-63254
 Torun interferometer meas. of total solar flux at 127 MHz, instrumental errors (*Polish*) 2-78958
 UV and VUV systems, conf., Washington, DC, USA (April 1981) 2-106999
 UV spectrograph, high-resolution, for Space Telescope, progress report 2-117593
 UV spectrograph, rocket-borne instrument with photon-counting MCP 2-112322
 UV spectrometer and polarimeter on Solar Maximum Mission satellite 2-94578
 variable profile antenna, radioastronomical adjustment using radio emission from Moon 2-94596
 velocity modulating camera, appl. to obs. of planetary nebulae in centre of (M31) 2-74042
 visible/IR imaging systems for spacecraft (*Japanese*) 2-89110
 X-ray spectrometers, physical characs. 2-106527
 X-ray spectrometers on Hinotori satellite, appl. to obs. of solar flares soft X-ray spectra 2-100851
 Fe arc light source for spectroscopy 2-102893
 Hgl, solid state detector for X-ray astronomy 2-78953
 InSb detector, 32x32 CCD array, IR astronomy appls. 2-74502
 InSb IR detector evaluation at liq. N₂ and liq. He temps. 2-89152
 X-CO₂, filled position sensitive proportional counter for X-ray astronomy appl. 2-78952

astronomical observations

see also gamma-ray astronomical observations; infrared astronomical observations; radioastronomical observations; ultraviolet astronomical observations; visible astronomical observations; X-ray astronomical observations

- Algol-like binary stars, transient photometric disturbances obs. 2-112483
 V1343 Aquilae, (SS 433), non-stability of precession period from spectroscopic obs. (*Russian*) 2-112468
 V1343 Aquilae (SS 433), law of variation of precession period, (1978 to 1981) 2-112469
 asteroid belt, compositional struct. from spectrophotometric obs. 2-106598
 Binchuan, site testing (*Chinese*) 2-63087
 Cepheid variables, anal. for spectroscopic binaries using simultaneous photometric and radial vel. study 2-100939
 Cepheid variables, short-period, radii and masses from photometric and radial vel. study 2-112452
 Cepheid variables, short-period, simultaneous photometric and radial velocity study 2-63442
 Comet Austin (1982g), UBVR1 photometry, spectrum and total visual magnitude estimates 2-112393
 P/Comet Peters-Hartley (1846 VI=1982h), 1846 and 1982 orbital elements and ephemeris, (1982 July 30 to August 19) 2-100832
 cosmic ray air showers in Tasmania, cooperative obs. rel. to anisotropies in 10¹³ to 10¹⁴ eV primaries (*Japanese*) 2-106454
 cosmic ray intensity diurnal anisotropy, spectral exponent (β) on geomag. disturbed days 2-68577
 cosmic ray intensity diurnal anisotropy, spectral exponent vars. on mag. quiet days 2-68578
 cosmic ray muons, characs. of events observed by Nagoya cosmic ray muon spectrometer (*Japanese*) 2-106463
 cosmic ray muons, energy spectrum meas. via time of flight method (*Japanese*) 2-106464
 cosmic rays, search for high-energy ($\geq 10^{15}$ eV) gamma rays assoc. with gamma ray bursts 2-84349
 E 1405-451, E 1013-477, identification with AM Herculis type cataclysmic variables 2-63378
 European Southern Hemisphere Observatory (ESO), equipment and observing facilities (*French*) 2-94594
 galaxies surface photometry, bibliography 2-107031
 HD 122563, metal-poor giant star, thirteen-colour photometry rel. to N abundance and Rayleigh scatt. 2-73975
 HD 25329, subdwarf star, thirteen-colour photometry rel. to N abundance and Rayleigh scatt. 2-73975
 HDE 283809, B-type star in direction of Taurus dark cloud, photometry and spectrum (*Russian*) 2-112444
 AM Herculis, multiwavelength obs. during low state 2-89299
 HR 7308, peculiar classical Cepheid, UBVR1 photometry 2-106746
 interplanetary low-energy relativistic electrons, Pioneer 10 obs. 2-89089
 interplanetary medium struct. during first STIP interval, 1975 September to October 2-106465
 Jupiter, inner magnetosphere light ion conc. 2-84144
 Kiso Observatory measuring machine facilities 2-112332
 Markaryan 673, 686, spectrophotometric and isodensitometric obs. (*Russian*) 2-101073
 RW Monocerotis, Algol type binary star, photoelectric obs. of primary eclipse in five colours 2-94782
 R Muscae, Cepheid variable, UV, optical and IR obs. 2-89273
 NGC 4151, UV continuum vars., 1978 February to 1980 May, from IUE obs. and comparison with X-ray and optical obs. 2-101063
 NGC 7252 (Arp 226), merged disk galaxies 2-58443
 FU Orionis, pre-main-sequence star, spectral energy distrib. obs. 2-73970
 quasars, spectral components of UV excess 2-63616
 radio observatory (MM wave) site testing in India, atmos. humidity obs. 2-88977
 Royal Greenwich Observatory low light level photometry 2-78976
 S235B, compact H II region, radio, IR and optical obs. 2-89332
 Saturn magnetosphere interaction with Titan 2-68659
 Seyfert I galaxies, spectral components of UV excess 2-63616
 Seyfert galaxies, IR, optical and UV obs. of H line emission 2-74079

astronomical observations continued

- solar ³He-rich events, He and heavy ion spectra rel. to stochastic Fermi accel. model calcs. 2-106442
 solar cosmic ray events, injection onset times of 2 GeV protons, 1 MeV electrons and 100 keV electrons 2-112273
 solar proton event, 1975 September 1, evidence for energetic particle release before optical flare 2-106465
 solar wind MHD fluctuations, statistical props. from Helios-2 obs. 2-100699
 solar wind proton temp. in 1-10 AU range, Voyager obs. 2-100689
 spiral galaxies, early-type, multiaperture UBVR1 photometry for inner (bulge) regions 2-106891
 subgiant CH stars, s-process abundances, C/O ratios and evolutionary status 2-112451
 Sun, obs. of neutrino brightness curve using Cl-Ar neutrino detector (*Russian*) 2-89226
 DF Tauri, T Tauri star, UBVR1 photometry rel. to rapid light vars. 2-100919
 Titan, plasma wake in Saturn's magnetosphere 2-68660
 47 Tucanae, photometry and spectra rel. to anticorrelation of C and N on horizontal branch 2-63541
 Venus, results of Pioneer Venus Orbiter mission 2-68646
 Venus magnetosheath, O⁺ detect. 2-73884
 I Zw 187, simultaneous multispectral obs. of X-ray bright BL Lacertae object 2-63607

astronomical observatories

- Canary Islands site testing in 1979 in JOSO campaign, seeing obs. 2-84091
 Goethe Link Observatory, appls. of microcomputers in observatory automation 2-106524
 Hida Observatory, Japan Domeless Solar Telescope (*Japanese*) 2-117588
 Italy, IR astronomical site testing, precipitable water vapour meas. 2-83900
 Okayama Astrophysical Observatory, mirror aluminization (*Japanese*) 2-117605
 Roque de Los Muchachos, La Palma, solar seeing and atmospheric turbulence meas. 2-73683
 Tautenburg Observatory, 21 years of operation of world's largest Schmidt telescope (*French*) 2-94597
 Tokyo, photoelectric photometry system for 30 cm reflector (*Japanese*) 2-68619
 Tokyo Astronomical Observatory, determ. of instrumental errors of new photoelectric meridian circle (PMC 190) 2-100735
 Tokyo Astronomical Observatory, pinhole system for solar and lunar obs. by new photoelectric meridian circle (PMC 190) 2-100736

astronomical spectra

- see also atmospheric spectra; stellar spectra
 3 μ m emission features in planetary and bipolar nebulae 2-89243
 250 absorption systems, red shift distrib., cosmological implications 2-89403
 0351+026, 250 surrounded by optical nebulosity, similar to M31, obs. 2-89400
 511 keV annihilation line radiation obs. 2-106961
 2345+007, double quasar, redshifts rel. to gravitational lens model 2-68924
 A₁ field, blue objects classification from visible spectra obs. 2-68926
 3A 0557-383, identification as extreme Seyfert galaxy, luminosity, visible spectral obs. 2-58504
 Abell 76, ring galaxy, star formation and metallicity, visible obs. 2-117746
 Abell 98, two-component cluster, internal dynamics, redshift obs. 2-89385
 absorption and emission, use of radio interferometry 2-63258
 active galaxies nuclei, time depend. narrow emission line profile interpretation, emitting regions 2-68922
 active galaxies X-ray sources, identification and X-ray/optical luminosity-redshift relations 2-117795
 AM 064-741, southern ring galaxy, kinematics from photometric and spectroscopic obs. 2-79216
 AO 0235+164, time vars. in redshifted 21 cm absorption spectrum 2-106883
 Arakelian 144 (MGC 10-12-23), spectrophotometry of high surface brightness galaxy 2-89368
 Arakelian 583, high surface brightness, spectrophotometric obs. 2-106908
 Arakelian 144, spectrophotometry of nucleus of galaxy (*Russian*) 2-74106
 Arakelian galaxies of high surface brightness, emission lines spectrophotometry (*Russian*) 2-106925
 asteroids, spectrophotometry rel. to compositional struct. of asteroid belt 2-106598
 B2 1321+31 (NGC 5127), large radio galaxy, spectral index from multifreq. obs. 2-89396
 B335, dark cloud density distrib. from CS EHF obs. 2-68859
 Becklin Neugebauer/Kleinmann Low region, 691 GHz CO line obs. 2-117724
 Becklin-Neugebauer Kleinmann-Low region, H₂, CO and OH line emission modelling 2-106865
 bipolar nebulae, radial vels. and line profiles in stellar wind model 2-74074
 black hole, orbiting radiation source, freq. shifts 2-79139
 black hole, relativistic accretion disc nonthermal emission, model for axisymmetric inhomogeneous sources 2-89138
 Bootes void emission line galaxies, velocities and distances from spectra 2-94828
 bright galaxies redshift, visible spectral obs. 2-63622
 bright galaxies with strong nuclear radio sources, H I distrib. and nature, UHF obs. 2-117785
 3C 120, radio galaxy, spectral index of extended radio struct. 2-68912
 5C 12 catalogue radio sources, spectral index distrib. from deep survey near North Galactic Pole 2-106558
 3C 232, quasar, absorpt. spectrum evidence for nonluminous matter in nearby galaxy (NGC 3067) 2-79201
 3C 249.1 and 3C 232, quasars, spectra anal., UV obs. 2-94854
 3C 351, quasars, intrinsic intensity ratios of broad and narrow lines 2-68918
 3C 445, Paschen α flux and dust extinction, IR obs. 2-84338
 3C 58, supernova remnant spectra and emission props., X-ray obs. 2-79185
 C I in immediate solar vicinity, first detection in UV 2-117734

astronomical spectra continued

- 4C radiogalaxies in poor clusters, red shifts, clustering props. and radio parameters 2-79225
 Carina Nebula, H II region, gas motion from Ca II and Na I lines obs. 2-68869
 Carina Nebula towards HD 93205, interstellar vel. components comp. and physical conditions 2-117720
 Cepheus A, H₂ 2 micron emission obs. 2-89327
 Cepheus OB 3 association, interstellar graphite excess from UV obs. of brightest stars 2-101003
 Ceres, evidence for water of hydration in clay minerals, obs. 2-73888
 Cherenkov line radiation and emission line spectra calc., quasar radiation appl. 2-68927
 clumpy irregular galaxies, search for interstellar CO 2-106920
 clusters of galaxies in Southern Hemisphere photometry and spectra obs. 2-106936
 cold dark clouds, HCN hyperfine anomalies from EHF obs. 2-94812
 cold nebulae IR excess, gas condensation 2-58434
 Comet Austin (1982g), emission line spectrum obs. (1982 August 26) 2-112394
 Comet Austin (1982g), spectroscopic obs., (1982 August 19) 2-112393
 Comet Bowell (1980b), OH and CN prod. rates from IUE and ground-based obs., (April 1982) 2-84165
 Comet Bradfield (1979 X), CO₂⁺ ion presence and prod. mechanism, UV obs. 2-84163
 Comet Bradfield (1979 X), CS and S I emission obs. rel. to CS and S prod. rates 2-73904
 Comet Bradfield (1979 X), identification of CO fourth positive and Cameron bands 2-84170
 Comet Bradfield (1980 XV), head during post-perihelion phase, emission features, visible obs. 2-84169
 comet nuclei, IR line emission from constituent molecules, evaluation 2-89198
 P/Comet Schwassmann-Wachmann 1, colour and CO⁺ emission, visible obs. 2-68668
 Comet Seargent (1978 XV), CO₂⁺ ion presence and prod. mechanism, UV obs. 2-84163
 Comet West (1976 VI), spectrum energy distrib. and flux, visible obs. (Russian) 2-79029
 comets, CS⁺ identification and origin 2-73905
 comets, H₂O IR cooling rel. to photochemical heating theory 2-112389
 comets, intensity and linear polarisation of Na I D₂-line resonantly scattered in cometary atmosphere (Russian) 2-73907
 comets, Λ line profile from solar Λ radiation scatt. in cometary H I atmosphere (Russian) 2-73906
 comets, NH UV and submillimetre line emission intensities 2-68667
 comets' OH fluorescence, UV bands 2-94646
 Corona Austrina, gas and dust survey, UHF obs. 2-106877
 cosmic diffuse background, IR and microwave spectrum obs. via Cosmic Background Explorer (COBE) 2-106478
 cosmic microwave background spectrum, effects of double Compton process 2-68936
 cosmic microwave background spectrum, pregalactic Population III stars 2-106818
 Crab Nebula, abundances and UV spectral obs. 2-68849
 Crab Nebula, filament spectrophotometry 2-101004
 Crab Nebula, supernova remnant, emission spectrum and brightness distrib. model 2-84305
 CTB 80, supernova remnant, spectra and emission props. X-ray obs. 2-79185
 NML Cygni, assoc. H II region and radiosource, spectrum and nature 2-74053
 V1016 Cygni, planetary nebulae, UV variations from spectral obs. 2-101010
 Cygnus A, stellar component and poor cluster, spectroscopy and photographic photometry 2-89381
 Cygnus Loop, monochromatic photographs in forbidden O III and S II emission lines (Russian) 2-101027
 Cygnus Loop, SNR, vel. dispersions, optical spectra obs. 2-68848
 Cygnus Loop, UV spectra rel. to depletion of heavy elements 2-106848
 Cygnus Loop SNR, struct. and spectrum of different nebula parts, VHF obs. 2-74056
 DA 240, giant radio galaxy, radio spectral index and polarisation obs. 2-94836
 DEM 45, 137, 165, 174 and 208, LMC Wolf Rayet ring nebulae, kinematics obs. 2-68779
 diffuse interstellar clouds, methylene and methylene ions absorpt. 2-89323
 DR21(OH), formaldehyde emission obs. 2-68863
 DR 21(OH), molecular cloud/IR source, J=4-3 HCN IR obs. 2-63588
 dwarf galaxies, optical emission spectra rel. to primordial He abundance 2-117828
 IE 1402.3+0416, new BL Lacertae object discovered by Einstein Observatory, optical spectral index 2-94838
 echelle spectrograms, automatic reduction by digital image processing 2-106545
 Egg Nebula (GL 2688), possible planetary nebula precursor, near IR spectroscopy 2-106840
 elliptical galaxies, line strength-colour relation rel. to accuracy of interstellar reddening from H I and galaxy counts 2-106838
 emission frequencies from angle depend. partial freq. redistributions, refined algorithm 2-68608
 emission line galaxies, nuclei, gas characts. and ionising mechanism 2-63629
 emission line spectra objects, reddening relations from VBLUW and UBV photometry 2-101016
 Fairall 9, Seyfert I galaxy, spectra, superimposed Galaxy halo lines, obs. 2-79200
 Fourier transform IR spectrometer for use at Cassegrain focus of astronomical telescope 2-117594
 G206.9+2.3, SNR, radio props. and spectra, continuum UHF obs. 2-89395
 G43.2-0.1, new OH maser source, 1612 MHz obs. (Russian) 2-106946
 galactic centre, broad H₂ emission in IR 2-117758
 galactic centre, gas distribution and velocity field from SHF, UHF, VHF obs. 2-112578
 galactic centre region, confirmation of positron annihilation line time variability 2-106962
 galactic centre region, search for 511 keV line variability 2-58463
 Galactic disk, unresolved X-ray emission, spectrum and disk parameters 2-68892
 galactic gamma-ray line obs. (Japanese) 2-79245

astronomical spectra continued

- galactic halo C³⁺ and Si³⁺, distrib. and galactic struct., UV obs. 2-117722
 galactic halo nature from interstellar lines towards Seyfert galaxies, UV obs. 2-79200
 galactic plane γ -ray emission obs. 2-89151
 galaxies, 21 cm line width depend. on Hubble type rel. to use as extragalactic distance indicator 2-63615
 galaxies, active nuclei nonthermal radiation, optical spectrum shape and variability 2-79207
 galaxies, energy distrib. of spiral and irregular galaxies from UV photometry by OAO 2-74077
 galaxies, image-tube spectrograms of clumpy irregular objects 2-58446
 galaxies, interacting, radial vels., visible obs. 2-58456
 galaxies, spectroscopic characts. and differential redshifts of companion galaxies 2-74078
 galaxies active nuclei, time-dependent X-ray spectra of Compton-cooled plasmas 2-78948
 galaxies behind Virgo cluster, radial vel. meas. (Russian) 2-63656
 galaxies detected in Arecibo 2380 MHz survey, radial vels. meas. 2-101050
 galaxies optical spectra and redshifts, visible obs. 2-101069
 galaxies with UV excesses, spectroscopic obs. (Russian) 2-112566
 Galaxy corona cloud distances from UV lines towards Magellanic Clouds 2-106821
 Galilean satellites, near-IR spectral mapping by Galileo Mission 2-112300
 gamma ray burst of 1974 June 10, spectral anal. 2-58494
 gamma ray burst of 1979 March 5, emission mechanisms spectral and temporal constraints 2-58500
 gamma ray burst source, emission line prod. through graser 2-84073
 gamma ray burst source spectra, evidence for origin from magnetised neutron stars 2-74125
 gamma ray burst sources in 10 keV to 9 MeV range, spectral obs. 2-58487
 gamma ray bursts, power law spectral index from search for assoc. high-energy gamma rays 2-84349
 gamma-ray burst, 1979 May 5, physical processes rel. to line and continuum radiation 2-112609
 gamma-ray bursts, comptonised X-ray source model for burst spectra 2-89410
 gamma-ray sources, high energy spectrum from relativistic plasma 2-73832
 gamma-ray sources, possible effects of positronium negative ion on 0.511 MeV line width 2-106500
 gas-dust systems with nonlocal radiative coupling, spectral line radiation press. 2-63232
 GF 2.4+1.4, ring nebula assoc. with Wolf-Rayet star, photographic and spectroscopic obs. 2-63562
 GGD Herbig-Haro-like objects mol. clouds, mass outflow anisotropy 2-117730
 GL 618, bipolar nebula, early planetary nebula, radial vel. struct., obs. 2-63571
 GL 961, H₂ 2 micron emission obs. 2-89327
 Goldstein region, H I 21 cm obs. by RATAN-600 radio telescope using acousto-optical spectrometer 2-94607
 gyrosynchrotron radiation from mildly relativistic, nonthermal and thermal electrons, spectra and circular polarisation 2-106494
 HBV 475, planetary nebulae UV variations from spectral obs. 2-101010
 HD 36402 in LMC interstellar bubble N51D, UV absorpt. by interstellar gas 2-79178
 HD 44179 (Red Rectangle), 7.7 μ m feature obs. 2-74064
 HE 2-131, very low excitation planetary nebula, C abundance determ. from UV spectrum 2-94817
 Herbig Haro objects, emission line spectra, model and ion abundances, visible obs. 2-63578
 HH 24-27, HH 1-2, Herbig-Haro objects, CO spectra rel. to high-vel. mol. gas 2-112526
 Hydra I galaxy cluster, membership from red shifts 2-101082
 Hyperion, surface comp. and radius from IR spectrophotometry 2-106606
 IC 1727 and NGC 672, interacting galaxies, rot. and mass from spectroscopic obs. (French) 2-58464
 IC 342, Scl galaxy, interstellar gas temp. meas. from NH₃ radio spectrum obs. 2-68629
 IC 443, SNR, knots vel. dispersions, optical spectra obs. 2-68848
 IC 4553, broad OH emission from peculiar galaxy 2-117757
 IC 4997, planetary nebula, physical var. from old spectral obs. 2-68847
 IC 4997, planetary nebula, search for UV variability, UV spectral obs. 2-101011
 IC 5063 (PKS 2048-57), radio elliptical galaxy, IR spectral index of very red nucleus 2-112565
 IC 5146 (S125), emission nebula, H I line emission obs. 2-74043
 IC 5174/75, very large interacting galaxy pair, spectra and redshifts rel. to recent encounter 2-63633
 interstellar 2200 Å hump nature, fine struct. and possible emission from circumstellar shells 2-106853
 interstellar 220 nm feature, due to MgO or SiO₂ 2-84302
 interstellar 3.4 micron absorption feature comparison with laboratory ice+NH₃+methane (propane) mixtures 2-84304
 interstellar 4430 Å band in LMC, central depths rel. to far UV extinction 2-106898
 interstellar absorption band at 220 nm, equivalent width catalogue 2-100760
 interstellar absorption bands at 3.2 and 3.3 μ m, bacterial grain amino acid origin 2-106845
 interstellar C₂, IR absorpt. lines obs. towards τ Ophiuchi 2-63558
 interstellar C, high Rydberg states, populations assoc. with radio recomb. lines 2-74055
 interstellar C I radio recombination lines, influence of low temp. dielectric-like recomb. 2-112314
 interstellar CH towards α Cam and κ Cas, HF obs. 2-117715
 interstellar clouds, formyl-d₁ ion emission regions, models from EHF obs. 2-68860
 interstellar clouds, parameters determined from spectra 2-79193
 interstellar column densities towards O-type stars, depend. on reddening 2-58431
 interstellar cyanodiacetylene in Taurus MC-1, Sagittarius B2 and IRC +10216, rot. temps. 2-63559
 interstellar diffuse bands, high resolution obs. 2-58423

astronomical spectra continued

- interstellar diffuse clouds, CO density towards 14 stars, UV spectral obs. 2-101024
- interstellar ethynyl radical (CCH), detect. of N=3-2 transition in Orion rel. to mol. rot. consts. determ. 2-63556
- interstellar feature near 3.5 μ m, micro-organisms interpretation 2-58429
- interstellar formaldehyde, isotope ratios from 6 cm obs. 2-68850
- interstellar formaldehyde- ^{12}C , ^{13}C , towards galactic centre, $^{12}\text{C}/^{13}\text{C}$ var. with distance 2-89334
- interstellar gas in HD 93206 direction in Carina, IUE obs. 2-74057
- interstellar magnetite and extinction very broad struct. 2-101025
- local interstellar medium, velocity anal. of spectral lines 2-63554
- interstellar medium towards zeta Ophiuchi, B and Be abundance 2-79182
- interstellar Mn II and Fe II lines, UV oscillator strengths and abundances 2-112522
- interstellar molecular clouds, formaldehyde absorpt. meas. 2-112532
- interstellar NH_3 , obs. of (1,1) transition in southern hemisphere mol. clouds 2-106839
- interstellar NH_3 , radio obs. in cold cloud cores 2-106857
- interstellar NH_3 ice detect. in BN object and NGC 2264-IR, obs. 2-117717
- interstellar NH_3 in external galaxies, temp. meas. from radio spectrum 2-68629
- interstellar spectral lines in NGC 5128 globular clusters 2-117731
- interstellar velocity components for different ions towards epsilon and delta Persei 2-89324
- interstellar X-ray line emission from C and O atoms 2-63549
- interstellar Zn II lines, IUE obs. rel. to Zn abundances 2-63555
- Io plasma torus characts. from forbidden line visible obs. 2-58296
- irregular galaxies, optical and H I spectra rel. to global props. 2-101054
- IRS 1, 16, galactic centre ionised gas sources, 2 μ m spectra obs. 2-101091
- IRS 7, galactic centre IR source, spectrum over 2.9 to 3.9 μ m waveband rel. to bacterial grains 2-84347
- IUE low resolution spectra, extraction procedure 2-63259
- IUE SWP camera linearity, correction algorithm 2-112340
- Jupiter, atmosphere, PH_3 , methane- d_1 , and GeH_4 abundances, Voyager IRIS spectra 2-100810
- Jupiter, C/H ratio from Voyager IR spectra 2-89186
- Jupiter, near-IR spectral mapping by Galileo Mission 2-112300
- Jupiter atmosphere, albedo, absorption model and airglow, obs. 2-79006
- Jupiter atmosphere, HCN IR obs. 2-58298
- Jupiter magnetosphere, Na emission of Io origin plasma and motion 2-73893
- Jupiter plasma torus, Fabry-Perot/CCD obs. of forbidden S II and S III emissions 2-112373
- Kazarian 1, 3, 4 and 6, UV excess galaxies, morphology and spectrophotometry obs. 2-58454
- Kazaryan 120, QSO, spectral obs. and anal. 2-117790
- Kepler's SNR, model and shock propag. from visible spectra 2-112530
- Khavtasi 141, interstellar dark cloud complex, H I self-absorpt. obs. rel. to H I content 2-68874
- Kleinmann Low Nebula mag. fields from OH maser UHF obs. 2-117726
- Kleinmann-Low Nebula, NH_3 data interpretation 2-106866
- BL Lacertae objects, emission line lock due to ionised gas absence 2-89376
- line formation, theory of redistrib. and radiative transfer eqns. 2-112313
- LMC2, supernant shell, dynamics and driving mechanism from spectral obs. 2-101014
- LMC supernova remnants, X-ray spectra classification, obs. 2-79177
- Lynds 134N, dark cloud density from CS EHF obs. 2-68859
- Lynds 1529, dark cloud 2-74054
- M101 H II regions, element abundances and electron temps. from visible obs. 2-68889
- M17 SW, molecular cloud/H II region complex, J=4-3 HCN transition, IR obs. 2-63588
- M31, element abundance gradients from supernova remnants and H II regions 2-63618
- M31 central 50 pc, surface brightness distrib. and spectrum, UV obs. 2-112546
- M32 and M81 early type galaxies, vel. dispersion and radial vel., visible obs. 2-63635
- M42 and M43 (Orion nebula), obs. of forbidden O I, O II and O III lines 2-106878
- M51, optical spectrophotometry of nuclear region 2-58451
- M81 nucleus, Seyfert galaxy stellar population from UV continuum spectra 2-117747
- M87, radio spectra from high-resolution studies at long radio wavelengths 2-112562
- M87, vel. dispersion profiles rel. to M/L ratio, vel. anisotropy and presence of massive black hole 2-94835
- Markarian 1066, Seyfert 2 galaxy, visible spectral obs. 2-117750
- Markarian 1400 to 1500, nature and obs. 2-117613
- Markarian 290, Seyfert 1 galaxy, central region struct., visible spectral obs. 2-63627
- Markarian 298(=IC 1182-4), Seyfert 1 galaxy, centre struct., visible obs. 2-117749
- Markarian 325 (NGC 7653), clumpy irregular galaxy, recent star forming activity, visible obs. 2-112554
- Markarian 348, mass, radial vel. and diameter from visible spectra obs. (Russian) 2-68907
- Markarian 509, Seyfert 1 galaxy, spectra, superimposed Galaxy halo lines, obs. 2-79200
- Markarian 509, Seyfert galaxy, emission line profiles anal. 2-89354
- Markarian 558, nucleus parameters from spectral obs. 2-117760
- Markarian 8 and 325, clumpy irregular galaxies, clumpy nature, UV obs. 2-63646
- Markarian galaxies red shift determ., visible obs. 2-74098
- Markaryan 314 (NGC 7468), remarkable galaxy with three bright regions, photometric and spectroscopic obs. 2-101042
- Markaryan 673, 686, spectrophotometric and isodensitometric obs. (Russian) 2-101073
- Markaryan 744, Seyfert galaxy, spectroscopic obs. rel. to internal vel. field 2-101041
- Mars, CO content estimate from spectra anal. 2-106591
- Mars, IR spectra and thermal emission models 2-58282
- Mars, spectral investigations from Viking 2-112365
- meteors, brightness relative to spectral type 2-100841
- methane, microwave spectra, rel. to radioastronomy 2-75280

astronomical spectra continued

- methanol, interstellar detection of torsionally excited state in Orion A 2-63551
- microwave background distortions, Planckian spectra superposition 2-101094
- microwave background produced by thermalisation of starlight by interstellar elongated grains 2-79248
- microwave background spectrum, effects of primordial gas heating by background radiation in presence of heavy elements 2-101046
- microwave background spectrum 2-117806
- molecular cloud CO lines, profiles determ., effect of complete freq. redistribution assumption relaxation 2-117723
- molecular cloud polarised compact IR sources, search for ice absorpt., IR obs. 2-117727
- molecular clouds, radiofrequency lines linear polarisation 2-68604
- molecular clouds emission from birth 2-63599
- molecular clouds near H II regions, J=2-1 CO line, EHF obs. 2-63584
- molecular spectroscopy in astronomy 2-73834
- molecular spectroscopy using diode and combined diode-CO $_2$ lasers 2-63271
- Monoceros Nebulosity, SNR, radio props. and spectra, continuum UHF obs. 2-89395
- N159, H II region in LMC, search for H $_2$ O maser emission 2-94852
- narrow emission line galaxies, X-ray spectrum and time variability 2-74081
- nearby galaxies, general and H I parameters, H I UHF obs. 2-63645
- NGC 1097, hot spots and amorphous nucl. region, spectral visible obs. 2-74102
- NGC 1275, Seyfert galaxy, radio spectrum of nucleus from multifreq. VLBI obs. 2-74080
- NGC 1275, spectra nature and obs. 2-89355
- NGC 1365, Seyfert like nucleus surrounded by H II regions, visible obs. 2-58470
- NGC 1947, elliptical galaxy, dust lane rot., spectral obs. 2-68895
- NGC 1977, assoc. bright rim cloud, abundances/density/temp. from EHF/IR obs. 2-84300
- NGC 2071, reflection nebula, H $_2$ 2 micron emission obs. 2-89327
- NGC 2071, reflection nebula, obs. of broad wings and self-resolved in CO lines 2-58425
- NGC 2440, planetary nebula, ionisation struct., extinction and IR spectra 2-106860
- NGC 253, southern hemisphere galaxy, search for H $_2$ O maser emission 2-94852
- NGC 2841, 5055 and 7331, spiral galaxies, radio continuum, UHF obs. 2-63621
- NGC 2997, hot spot galaxy, structure and dynamics of nucleus 2-89378
- NGC 3067, SB III galaxy, evidence for nonluminous matter, visible/UHF obs. 2-79201
- NGC 3115, absorption line vel. and vel. dispersion profiles in S0 galaxy 2-84316
- NGC 3504, barred spiral galaxy, evidence for predominantly circular internal motions 2-106919
- NGC 3783, Seyfert galaxy, emission line profiles anal., visible obs. 2-89354
- NGC 40 and 7026, planetary nebulae, expansion vel. field 2-84299
- NGC 4151, UV continuous spectrum vars., 1978 February to 1980 May, from IUE obs. 2-101063
- NGC 4388, Seyfert galaxy in Virgo cluster, nucleus emission, visible obs. 2-89374
- NGC 4649, elliptical galaxy with strong UV flux, IUE obs. rel. to stellar content 2-68886
- NGC 4736, spheroidal galaxy, vel. dispersion and radial vel. 2-63635
- NGC 4945, southern hemisphere galaxy, H $_2$ O maser emission obs. 2-94852
- NGC 5253, E-S0 galaxy, IR spectrum of high-excitation optically obscured H II region in galactic nucleus 2-79217
- NGC 5426 and 5427, interacting spiral galaxies, mass distrib. and surface photometry, visible obs. 2-101064
- NGC 5548, Seyfert 1.5 galaxy, radiostructure of nucleus, UHF/SHF/visible obs. 2-117740
- NGC 55, Sculptor group galaxy, spectrum of large shell nebula 2-63575
- NGC 5905, NGC 5908, double spiral galaxy, H I obs. 2-68894
- NGC 6302, poly-polar nebula, wind driven, ionised gas parameters from spectral lines 2-89339
- NGC 6334 interstellar complex, optical spectrum of filamentary shell rel. to struct. and dynamics 2-112535
- NGC 6334 N, molecular cloud, J=4-3 HCN 2-63588
- NGC 6503, spiral galaxy, mass and vel. fields from Ha obs. 2-112560
- NGC 6720 (Ring Nebula), C/O ratio, UV spectral obs. 2-63590
- NGC 6720 (Ring Nebula), ionization structure from UV obs. 2-63553
- NGC 672 and IC 1727, interacting galaxies, rot. and mass from spectroscopic obs. (French) 2-58464
- NGC 6744, spectrophotometry and abundances of H II region in outer arm 2-58422
- NGC 6853, planetary nebulae, C, N, O, Ne abundances from UV spectra anal. 2-89330
- NGC 6905, planetary nebula, search for UV variability, UV spectral obs. 2-101011
- NGC 7027, planetary nebula, H $_2$ intrinsic Q(3)/S(1) line intensity ratio obs. 2-101019
- NGC 7293, planetary nebula, radial vel. and struct., visible obs. 2-74050
- NGC 7538, H II region, assoc. mol. cloud, CN line emission and star form. 2-101008
- NGC 7662, IUE spectra of planetary nebula 2-74061
- North Polar spur, X-ray line emission from C and O atoms 2-63549
- OH 205.1-14.1, unusual OH maser, intensity vars. of left circularly polarised component (1980 to 1982) 2-79238
- OH 351.78-0.54, interstellar OH maser source, radio and IR obs. 2-112600
- OMC-1 temperatures determined from methyl cyanide obs. anal. 2-117719
- Orion B (NGC 2024), compact H II region, recomb. line and continuum map 2-101084
- Orion MC-2, near IR spectroscopy of moderately luminous IR sources IRS 3 and (IRS 4) 2-68851
- Orion Molecular Cloud, vibr. excited cyanoacetylene, rot. transitions detect., EHF obs. 2-117718
- Orion Molecular Cloud, high spectral and spatial resolution obs. of H $_2$ 12.8 μ m emission 2-63576
- Orion Molecular Cloud, polarimetry of H $_2$ IR emission 2-106872
- Orion Molecular Cloud-I, H $_2$ and CO emission model 2-106864

astronomical spectra continued

- Orion Nebula, H₂ emission spectrum in near IR 2-112525
 Orion Nebula, polarisation obs. in continuum and emission lines 2-68873
 Orion Nebula, UV absorpt. by highly ionised atoms, obs. 2-79183
 Orion SiO maser, time var. of vel. struct. of maser emission envelope 2-68875
 h and χ Persei clusters direction, interstellar extinction towards nine stars, UV obs. 2-63580
 ϵ Persei direction, line of sight struct., UV obs. 2-117716
 photodiode array appl. in astronomical spectroscopy 2-73847
 PKS 0215+015, BL Lac object at high redshift, spectrophotometry and polarimetry 2-58442
 PKS 0215+015, optical absorption lines in high redshift BL Lac object 2-112564
 PKS 0254-334, QSO, pair, common absorpt. lines interpretation, visible obs. 2-63703
 PKS 2000-330, emission redshift from AAT IDS obs. 2-117791
 PKS 2152-69, radio galaxy, optical spectrum 2-79211
 PKS 2155-304, relativistically beamed synchrotron radiation from BL Lac object 2-63608
 planetary atmosphere, spectral absorption, line widths and profiles 2-112355
 planetary atmospheres, line form. and emergent radiation, role of scatt. 2-78989
 planetary nebulae, discoveries on southern red-sensitive objective-prism plates 2-100761
 planetary nebulae, Doppler split emission line components, red/blue intensity ratios 2-74063
 planetary nebulae, electron temperature mapping using O III lines 2-74062
 planetary nebulae, extinction from UV spectral obs. 2-79187
 planetary nebulae, forbidden O III expansion vel. meas. rel. to nebulae internal motions 2-89337
 planetary nebulae, integrated fluxes for emission lines in UV spectra 2-106846
 planetary nebulae, IR spectrophotometry of compact objects 2-89342
 planetary nebulae, search for SiO emission at 86.8 GHz, EHF obs. 2-94818
 planetary nebulae, theoretical models of objects of intermediate-to-high excitation 2-84295
 planetary nebulae, [O III] emission line profiles rel. to expansion vels. 2-79197
 planets, UV spectroscopy with rocket-borne instrument with photon-counting MCP 2-112322
 plasma positive ions, metastable states lines used to determine electron temp., charge transfer effects 2-94590
 polar molecules, in interstellar clouds, spectral intensity, electron impact effects 2-112533
 Q2204-408, QSO, He II absorpt. rel. to He ionisation balance in intergalactic medium 2-94837
 Q 0957+561 A, B, UV spectra of double quasar, IUE obs. of variability 2-74123
 QSO absorption features at different emission redshifts 2-106950
 QSO C IV absorption lines, evidence for intervening galaxy hypothesis 2-106963
 QSO candidates from Jodrell Bank 966 MHz survey 2-89406
 QSO close pair, intergalactic H I Lyman α absorption lines 2-84309
 QSOs at large redshift, spectral energy distrib., intervening clouds effects visible obs. 2-68919
 quasar, continuum 3600 Å broad emission feature model 2-89401
 quasar absorption line redshift correl. with emission line redshift due to selection effects 2-58481
 quasar absorption line systems, expulsion vel. correl. with luminosity 2-58480
 quasar candidates near 3C 345, discoveries and redshifts using slitless spectroscopy 2-106955
 quasar emission line regions, isothermal isobaric models 2-117794
 quasar Ly α absorption features and surrounding gas clouds due to winds 2-58482
 quasar low excitation absorpt. lines due to intervening galaxies H I shells 2-89360
 quasar spectra, 3000 Å bump interpretation 2-68921
 quasars, clouds vel. fields and physical conditions from spectra anal. 2-112544
 quasars, emission line regions, reverberation mapping technique 2-78966
 quasars, high redshift, Ly α /H α ratios obs. 2-94856
 quasars, Lyman α absorption lines, large red shift intergalactic clouds 2-117769
 quasars, redshifts from objective-prism survey rel. to clustering 2-79242
 quasars, rotation of gaseous discs, assoc. spectral line calcs. 2-101087
 quasars, search for redshifted formaldehyde, water, NH₃ and O₂, intervening galaxy constraints 2-74100
 quasars, spectral components of UV excess 2-63616
 quasars, time depend. narrow emission line profile interpretation, emitting regions 2-68922
 quasars, X-ray absorption line detectability 2-74124
 quasars absorption line spectra due to high redshift mol. clouds in intervening galaxies 2-84346
 quasars and space density decrease in $z \geq 3.5$ range 2-63700
 quasars compact comparisons, nature and redshifts, visible obs. 2-89399
 quasars with absorption line systems, X-ray emission detect., obs. 2-112604
 quasars X-ray luminosity, relations with optical spectroscopic features 2-89402
 quasars X-ray sources, identification and X-ray/optical luminosity-redshift relations 2-117795
 radiative decay, detectability of decay photons 2-89130
 radiative transfer, angle-averaged redistribution function in the laboratory frame 2-84082
 radio astronomy (*Japanese*) 2-73854
 radio galaxies, very distant, with strong emission lines, redshifts and spectroscopy 2-106917
 radio galaxies in Abell 566, radio spectral indices 2-106934
 radio recombination lines from high emission measure nebulae 2-84294
 radio sources, compact, inverse Compton radiation spectra from relativistic flows 2-74114
 radio sources, compact, spectra of synchrotron radiation from relativistic flows 2-74113
 radio sources, extragalactic, radio two-colour spectral distributions 2-79235

astronomical spectra continued

- radio sources, intermediate-strength, from GB/GB2 1400 MHz surveys, radio spectra and optical identifications 2-106939
 radio sources, model for symmetric struct. and spectra of compact double sources 2-63692
 radio sources, variable, centimetre-wave spectra obs. with RATAN-600 radio telescope 2-101083
 radio sources in X-ray clusters of galaxies, spectral indices 2-112599
 radio sources with hard injection, nonlinear spectra 2-94853
 radiogalaxies, spectral flux distributions and red shift estimates, IR photometry 2-94850
 radio sources, compact flat spectrum sources, variability and polarisation depend. on spectral shape, obs. 2-68913
 radio sources, extragalactic double, hotspot parameters determ. from spectra anal. 2-63265
 Red Rectangle (GL 915), possible planetary nebula precursor, near IR spectroscopy 2-106840
 redshifts of parent galaxies of supernovae, spectrum features, visible obs. 2-101052
 rel. to abundances of interstellar Fe, Ti and H₂ 2-106847
 reverberation mapping technique for quasars and Seyfert galaxies emission line regions 2-78966
 ring nebulae assoc. with Wolf-Rayet stars, Fabry-Perot obs. of stellar wind blown bubbles 2-68853
 Rosette Nebula (NGC 2237-46), H II region, radio props. and UHF continuum obs. 2-89395
 S235B compact H II region, IR spectrum and radio and optical obs. 2-89332
 S-type asteroids, undifferentiated, IR spectral evidence 2-89183
 Sa-type galaxies, H I line profiles obs. rel. to galaxies global props. 2-89366
 HM Sagittae, planetary nebula, UV variations from spectral obs. 2-101010
 Sagittarius A-West, H110 α recomb. line, SHF obs. 2-112602
 Sagittarius-B2, mol. cloud, struct. and component spectra from brightness at SHF, UHF 2-106941
 Saturn, spatially resolved reflectivity from 3000 to 6000 Å obs. 2-73900
 Saturn atmosphere, HCN IR obs. 2-58298
 Saturn atmosphere, methane and NH₃ bands longitudinal variability 2-73901
 Saturn atmosphere albedo, absorption model and airglow, UV obs. 2-79006
 SC galaxies, CO emission depend. on luminosity and star form. rate 2-106903
 Seric 159-03 (2A 2315-428), X-ray galaxy cluster, optical spectra 2-94866
 Seyfert 1 galaxies, clouds vel. fields and physical conditions from spectra anal. 2-112544
 Seyfert 1 galaxies, spectral components of UV excess 2-63616
 Seyfert galaxies, emission-line profiles 2-101056
 Seyfert galaxies, IR, optical and UV obs. of H line emission 2-74079
 Seyfert galaxies, rotation of gaseous discs, assoc. spectral line calcs. 2-101087
 Seyfert galaxies, search for redshifted formaldehyde, water, NH₃ and O₂, intervening galaxy constraints 2-74100
 Seyfert galaxies, type 1, spectra nature and obs. 2-89355
 Seyfert galaxies, variability of emission-line spectra and optical continua 2-106906
 Seyfert galaxies emission line regions, reverberation mapping technique 2-78966
 Sharpless 106, bipolar H II region, internal motions from radial vels. meas. 2-74071
 Sharpless 106, bipolar nebula, compact central nebula line emission 2-68856
 Sharpless 106, H II region, assoc. mol. cloud, CN line emission and star form. 2-101008
 Sharpless 37 molecular cloud; radio and IR obs., energetics 2-63548
 Sharpless 68, mol. cloud boundary, CO isotope selective photodestruction and abundance, obs. 2-68858
 SN 1006, spectrum anal. from X-ray obs. 2-89329
 SN 1980k in NGC 6946, interstellar spectrum 2-74059
 SO galaxies radio continuum props., UHF obs. 2-63634
 spherical galaxies, photometry and spectra rel. to M/L ratios and vel. dispersions determ. 2-94835
 star cluster system of M33, photometry, spectra and catalogue 2-106556
 star formation regions in galactic plane, identification from IR and CO emission spectra 2-112421
 synchrotron radiation, optically thin, spectral polarisation props. 2-112309
 Taurus MC 1, cyanoacetylene (HC₃N) obs. and model 2-63560
 Taurus MC-1, detect. of N=1-0 transition of butadiynyl (C₄H) 2-68867
 Taurus Molecular Cloud 1, detect. of butadiynyl and cyanopropynyl rot. transitions, SHF obs. 2-84297
 Titan, optical and IR spectra rel. to comp. and origin of atmosphere 2-112385
 TMC-1, dark cloud density from CS EHF obs. 2-68859
 triple galaxies in Karachentseva's list, radial vel., absolute magnitude and dimensions, obs. 2-63686
 Tycho's SNR, X-ray spectra, lack of strong Fe emission, model 2-94803
 UV background, procedure for separation of sky brightness 2-84104
 UV galaxies, activity depend. on nucleus and morphology, obs. (*Russian*) 2-94832
 UV objects in control field far from bright galaxies, 250 identifications 2-84344
 UV spectra of astronomical sources, results from International Ultraviolet Explorer (IUE) 2-117591
 Venus atmosphere, aerosol component measured by Venera 11/12 descent vehicles, IR/visible obs. 2-68643
 Venus thermosphere, CO, IR bands first order approx. model 2-112360
 Virgo S galaxy cloud, 21 cm line widths rel. to distance moduli and cluster vel. struct. 2-58476
 W33 continuum source, NH₃ ortho/para ratios from spectral obs. 2-101013
 W51, H II region/mol. cloud, J=4-3 HCN transition obs. 2-63588
 W51 IRS 2, components props., and spectra anal., IR/SHF obs. 2-79227
 W51 NORTH, IR and H₂O maser sources, H₂ emission, IR obs. 2-79228
 W63, supernova remnant, radial vel. field of optical filaments 2-74073
 warm intercloud medium emission, contrib. to diffuse UV background 2-89412

astronomical spectra continued

- X-ray sources, time-dependent X-ray spectra of Compton-cooled plasmas 2-78948
 CO J=1-0 115 GHz obs. of molecular rings in Sb galaxies 2-117756
 CO survey of southern galactic plane, EHF obs. 2-106876
 Eu II, oscillator strengths, astrophysical appls. 2-59747
 Fe interstellar particles, starlight extinction from 195-650 nm 2-94804
 FeO in interstellar mol. clouds and stellar atmospheres, search for J=5-4 transition 2-74045
 Fe₂O₃, interstellar particles, starlight extinction from 195-650 nm 2-94804
 H I, interstellar superheavy, upper limit from γ Cassiopeiae UV spectrum 2-89343
 H I absorption in direction of Sagittarius A, Westerbork obs. 2-89336
 H I line brightness temperature scale 2-63569
 H II regions, bright rims, H α and forbidden N II and O III obs. (French) 2-106852
 H II regions, ringlike, in M101, [S II]/H α and [N II]/H α intensity ratios 2-68900
 H II regions in irregular galaxies giving galaxy evolution and star form. histories 2-117743
 H II regions surrounding O-type stars, emission measures and radii 2-63563
 H, line intensity ratios in moving media 2-84084
 H spectra in quasars and Seyfert galaxies, model of emitting regions 2-63701
 H spectrum gravitational perturbation 2-95167
 H₂, density in interstellar mol. cloud, spectrosc. obs. 2-112534
 H₂, in OMC, vibrationally excited gas motion and distrib. 2-63552
 H₂, v=1 emission, vel., reddening, and temp. structure in Orion molecular cloud 2-63550
 H₂O maser outburst in Orion, nature and line profiles, model (Russian) 2-68877
 H₂O maser survey of Magellanic Clouds, SHF obs. 2-79204
 H₂O masers, high velocity, search in regions of star form. 2-74072
 HOC⁺, microwave spectra obs. 2-70235
 HeH⁺ emission from planetary nebulae and dense clouds 2-78943
 N III 1750 Å transition, collision strength calc. 2-89137
 NS, mol. consts., isotope effects, microwave obs., relevance to radio astronomy 2-90524
 Ni II forbidden lines used for electron density and temp. determ. in nebulae 2-94589
 O III 501 nm forbidden line obs. of Crab Nebula 2-117733
 O III forbidden emission line widths in galactic nuclei 2-84313
 O IV, metastable levels excitation by electron impact, LS coupling and fine struct. transitions 2-80525
 O²⁺, triplet line excitation 2-112540
 OH for IR spectrum, freq., wavelength and line strength, astrophys. appl. 2-90528
 OH, interstellar, IR line emission rel. to cooling of interstellar shocks and masers 2-106874
 OH maser emission assoc. with W49N, distrib. and spectrum of $\pi_{3/2}$ J=3.2 emission 2-79188
 S III forbidden line at 33 microns in Orion Nebula Trapezium region 2-106867
 SO, 86 GHz emission maps of Kleinmann-Low nebula, kinematics 2-106835
 Ti abundance towards high galactic latitude stars, Ti II obs. 2-84301

astronomical spectroscopy *see astronomical spectra; spectroscopy***astronomical techniques**

- see also astrometry; radioastronomical techniques*
 accretion rings and discs in close binaries, nodding motions freq. and amplitude determ. 2-117676
 Ap stars, spectroscopic detect. of surface chemical inhomogeneities in absence of spectrum variability (Russian) 2-100958
 artificial resonant satellites, long period motion determ. by first order semi-analytical method 2-117563
 artificial satellite orbit improvement from position determ. by photographic obs. 2-100700
 asteroid, three axis ellipsoidal, light curve calc. method (Chinese) 2-78973
 atmosphere water vapour measurement, appl. of portable monitor for day or night use 2-106543
 automated inventory techniques, astrometric appls. 2-58268
 automatic image classification 2-89159
 black hole, charged rotating, classical electron self force determ. 2-79444
 canonical systems of differential, equations for multiple reson. conditionally periodic solns. determ. 2-100753
 celestial mechanics, direct method of computing small divisors in planetary theory 2-78934
 Chandrasekhar's X and Y functions solns. in radiative transfer, use of F_q method 2-117611
 closed circuit TV camera appl. to astronomical telescopes 2-73853
 comet ephemerides calculations from orbital elements 2-100755
 P/ Comet Halley, ephemeris calc. technique 2-100757
 comet nucleus observability, effects of dust obscuration 2-78977
 comet position meas. from photograph 2-84106
 comet tail, inclination angle with radius vector, determ. method 2-78974
 cosmic ray muons, energy spectrum meas. via time of flight method (Japanese) 2-106464
 data sets partially overlapping, combination method 2-94619
 Delaunay normalisations appl. to perturbed Keplerian systems, alternatives to expansion in eccentricity powers 2-73824
 density enhancements in redshift space, determ. techniques 2-89157
 differential speckle interferometry 2-73856
 double galaxies, orbital motion determ. method 2-117752
 early/intermediate type stars, use of model atm. method 2-84220
 Earth rotation parameters determ. 2-58261
 echelle spectrogram reduction technique 2-89162
 echelle spectrograms, automatic reduction by digital image processing 2-106545
 eclipsing binaries, elements in freq. domain generalisation to close systems 2-58263
 eclipsing binary stars, appl. of folding method to timings of primary minima of TV Cassiopeiae 2-74022
 eclipsing binary stars, approximation of light loss curves via special polynomials (Russian) 2-94779
 eclipsing binary stars, determ. of epoch of minimum, sliding integrations method (Italian) 2-106549
 emulsion cooling for amateur astrophotography 2-63261
- astronomical techniques continued**
 ethylene in stars, IR heterodyne spectroscopy 2-68635
 extensive air showers, hadron and muon numbers determ., use of multi-group method 2-106330
 extragalactic distance scale methods 2-117768
 faint galaxy photometry using COSMOS, accuracy 2-106913
 field stars contamination of cluster CM diagrams, identification using slitless spectroscopy 2-112341
 future research survey 2-73822
 galactic antimatter cosmic rays detect. technique 2-117609
 galactic halo and disc mass ratio determ. method 2-73860
 galaxies, nearby, distance indicators, use of Cepheid IR photometry 2-84103
 galaxies brightness profiles deconvolution from seeing, appl. to (M32) 2-84320
 galaxies in 3-dimens. space, Monte Carlo simulation 2-58262
 galaxies inner ring structures as distance indicators, ring diameters calibration as quaternary indicators 2-89160
 Galaxy centre black hole, mass upper limit determ. from star tidal disruption 2-112579
 galaxy cluster masses determ. from complete redshift catalogue 2-106930
 galaxy cluster velocity dispersion profile and stream vel. field determ. 2-58471
 galaxy clusters mass determination, potential-estimation method 2-106929
 Galaxy halo metal abundance gradient, determ. methods 2-63269
 galaxy recognition from shape description 2-106895
 gamma-ray astronomy, source imaging via event circle method by balloon-borne Compton telescope 2-89147
 gapped data, power spectrum estimation 2-63263
 general star catalogue compiling method (Chinese) 2-84108
 geostationary satellites, visual obs. techniques and results 2-106476
 geosynchronous satellite location program in TRS-80 BASIC 2-117564
 giant stars, cool, chemical element abundance determ. from synthetic spectra of model atmospheres (Russian) 2-78970
 gravitational lenses detection, use of interfering delay signals, cepstral anal. (Russian) 2-68630
 image correction procedure for distortions due to atm. turbulence 2-100756
 imaging spectroscopy, conf., Los Angeles, CA, USA (Feb. 1981) 2-106998
 inertial frame determ. using minor planets, simulation of HIPPARCOS obs. 2-89115
 intensified video speckle interferometry system, Steward observatory 2-73857
 interstellar reddening determ. from H I and galaxy counts, accuracy and maps 2-106838
 ion composition meas. in space, exptl. techniques 2-94612
 ionisation and excitation equilibria determination in chromosphere 2-117651
 IR extended sources separation from unresolved component 2-63273
 IR heterodyne spectroscopy 2-73858
 IR imaging using multiplex encoding techniques, stellar appl. 2-63262
 IUE data reduction, parameterisation of motion of IUE resau grids and spectral formats 2-68616
 IUE low resolution spectra, extraction procedure 2-63259
 JF photographic photometry, secondary standard sequences near 14 rich clusters of galaxies 2-106819
 JHK photometry for compositional remote sensing of icy objects 2-100754
 Jupiter magnetosphere plasma ion comp. diagnostics, use of plasma resonance lines 2-63231
 Laplacian method modification for orbit computation (Chinese) 2-78937
 late type main sequence stars, method to determine mag. field strength 2-58338
 least squares approximations alternative techniques 2-112336
 line transfer equation determination for radiation in mag. field in non LTE atm. 2-78967
 lunar cartography, selenodetic basis (Russian) 2-73866
 lunar equator, determ. of mean inclination to ecliptic via position angles method (Russian) 2-73867
 lunar sample and meteorite mock-ups prep. 2-100747
 lunar unflooded topography, technique for lava volume estimates on artificial flooding 2-84127
 M-type giants and supergiants, method to account for TiO line blanketing 2-84225
 magnetic Ap stars, algorithms for calc. of Stokes parameters for line emission 2-94747
 mass loss determination from early type stars 2-68740
 maximum entropy principle in two-dimensional spectral analysis 2-112339
 meteorite, terrestrial age of estimation using thermoluminescence data 2-84100
 Michelson stellar interferometer modernisation 2-112342
 Michelson stellar interferometer optical surface and rot. axis alignment using Twyman-Green interferometer 2-112337
 Milne-Eddington atmosphere, vel. fields anal. by spectral line profile bisector 2-100750
 Monte-Carlo simulation of galaxy systems, appl. to static props. of galaxies in supercluster filaments 2-84321
 multiple component galaxy clusters, component/scale length determ. gravit. 2-89385
 neutrinos detection by coherent scattering, appl. to low energy solar and cosmic neutrinos 2-78964
 NGC 7027, planetary nebulae distance determ. from several methods 2-63570
 nonadiabatic eigenmode for pulsations in Cepheid instability strip left hand side, detect. method 2-73998
 numerical computation of stellar evolution, stable numerical methods 2-100912
 numerical simulation of galactic shock waves and corrugation waves, one-dimensional and two-dimensional models 2-101071
 observatory automation, appl. of microcomputers 2-106524
 parallaxes and detection of dark companions: atmospheric limitations 2-58231
 photoelectric astrometry, precise image location methods 2-58267
 photoelectric photometry, performance of high-speed two-channel satellite electrophotometer (Russian) 2-94605
 photogrammetry of the Viking Lander imagery 2-94624
 photographic enhancement of direct astronomical images 2-89163
 photographic image enhancement, λ Orion nebula example 2-89164

astronomical techniques continued

- photography at 1.1 μm 2-68628
 photometric calibration of AAT prime focus spot sensitometer, photographic technique 2-106550
 pinhole observations of Sun and Moon, using PMC 190, new photoelectric meridian circle of Tokyo Astronomical Observatory 2-100736
 planetary atmospheres, techniques for composition, struct. and dynamical processes 2-63270
 planetary image storage and retrieval by BIRP computer system 2-112139
 planetary satellites orbital parameters determination method 2-84107
 planetary surfaces imaging, high resolution imaging systems for spin-stabilised Probe spacecraft 2-112301
 polarimetry, appl. of simultaneous IR/optical polarimeter 2-106540
 pole motion determination method in FK4 system 2-106546
 pulsar period determ., Earth rotation angular vel. vars. effect (*Chinese*) 2-62881
 pulsating stars, appl. of integral method for light curve plotting and mean radius determ. to RR Lyrae star XZ Cygni (*Russian*) 2-94734
 QSO optical luminosity function determ. rel. to redshift 2-117793
 quasar mass estimation using gravitational distortion effect 2-84101
 quasi-periodic dynamic system, strongly perturbed, method for general theory of motion 2-73852
 radiative transfer, comparison of finite difference eqns. 2-89139
 radioresources, extragalactic double, hotspot parameters determ. from spectral anal. 2-63265
 satellite-based images, computerised processing, parallel computer appls. 2-100752
 Saturn, mag. field struct. determ. from charge particle absorpt. signatures 2-106548
 solar flare plasma density from S IV/O IV lines intensity ratio 2-58312
 solar flare spectra, reduction procedure to determine continuum and line emission quantities 2-63260
 solar granulation numerical simulations, basic eqns. and methods 2-68695
 solar magnetic canopy base height determ. method 2-117649
 solar magnetic field vectors determ. from Stokes parameters profiles, influence of magneto-optical effects 2-100878
 solar magnetic flux tubes (unresolved), spectral obs. method 2-68633
 solar models and periods of oscillation, new programme for solar evolution sequences calc. 2-79070
 solar prominence magnetic field vector determination from He D₃ line Stokes profile 2-117612
 solar UV variation determination method involving stratosphere tides meas. 2-63266
 speckle interferometry, phase problem, simple resolving modification 2-94622
 spectral analysis of spiral galaxies, appl. to asymmetric spiral pattern of (NGC 4254) 2-74082
 spectral reflectance meas. by bidirectional and integrating sphere methods 2-78975
 spectral type determination, use of microdensitometry 2-63264
 spectroscopic determination of stellar masses, appl. to α Bootis (Ar cuturus) 2-68769
 spectroscopy, appl. of echelle-interferometer Cassegrain spectrograph 2-106534
 spherical galaxies, M/L and vel. anisotropy determ. method rel. to massive black hole in (M87) 2-94835
 spiral galaxies, colour magnitude relation use as distance indicator 2-89158
 spiral galaxies, use of colour-absolute magnitude relations as distance indicator 2-63653
 star counting, IR method using Fourier deconvolution 2-73855
 star counts, appls. to galactic struct., disc luminosity function and detect. of massive halo 2-63539
 statistical analysis of stellar parallaxes 2-58264
 stellar 11 μm sources, positions from interferometric technique 2-94580
 stellar diameter determ. by photometric obs. during lunar occultation (*Japanese*) 2-68627
 stellar distance measurement, HB distance scale for Orion association B-type stars 2-106692
 stellar microvariability detection from photometric series anal., appl. to XX Camelpardalis (*Russian*) 2-78969
 stellar microvariability detection from photometric series dispersion and power spectral anal. (*Russian*) 2-78968
 stellar photometry and polarimetry, IAU Commission 25 scientific sessions (Montreal, Aug. 1979) 2-94892
 stellar proper motion determ. using plate sequence (*Russian*) 2-78971
 stellar proper motions, correction for accidental errors (*Russian*) 2-63384
 stellar radial velocity measurements, use of Image Photon Counting System 2-106684
 stellar speckle interferometry, isoplanatic patch size 2-112343
 stellar speckle interferometry, object reconstruction method, computer simulation 2-112338
 stellar speckle pattern spatial-temporal statistics meas. at Mauna Kea, Hawaii 2-63267
 stellar spectra digitised rel. to spectral class and luminosity 2-73849
 stellar spectral classification methods, appl. to study of galactic struct. (*Russian*) 2-94705
 Sun, 35 GHz radiation flux density absolute calibration method (*Chinese*) 2-112412
 Sun, coronal magnetic fields above active regions from microwave polarisation reversal 2-106547
 Sun, flare hard X-ray spectrum (10-100 keV) prediction technique 2-94616
 supernovae distance determ. kinematic and dynamical methods rel. to cosmic distance scale 2-63496
 supernovae location inside parent galaxies, new method 2-106757
 telescope, Leoncito, 2.2 m, coude conversion 2-73841
 temperature from spectral distrib. of thermal X-ray and γ -ray sources 2-101092
 three-body problem, elliptical spatial restricted case, periodic orbits construction methods (*French*) 2-106544
 twelfth congress of International Commission for Optics, Graz, Austria (Sept. 1981) 2-68956
 UV background, procedure for separation of sky brightness 2-84104
 UV spectroscopy, instrumentation and performance of International Ultraviolet Explorer (IUE) 2-117591
 UV stellar classification, workshop, Vilspa, Spain (1981 October 26 to 28) 2-84390
 visual binary stars measurement, new photographic method 2-74016

astronomical techniques continued

- wide-field imagery at Canada-France-Hawaii 3.6 m telescope prime focus 2-73839
 H II regions distribution in external galaxies, use of Fourier transforms 2-94618
 NH₃ in stars, IR heterodyne spectroscopy 2-68635
 Sm/Nd ratio determination method using laboratory standard solutions 2-63253
- astronomical telescopes**
see also radiotelescopes
 5 m telescope, optical system config. 2-112330
 Anglo-Australian Telescope, photometric calibration of prime focus spot sensitometer 2-106550
 automatic photoelectric meridian circle (*Japanese*) 2-68614
 automation of telescope observing tasks, appl. of microcomputers 2-106524
 AXAF, X-ray scattering meas. of reflecting surfaces 2-58254
 Canada-France-Hawaii 3.6 m telescope, prime focus wide-field imagery 2-73839
 Carlsberg automatic meridian circle, Anglo-Danish collaboration 2-58256
 closed circuit TV camera appl. 2-73853
 diffraction-limited field optics system throughput for IR and millimetric telescopes 2-84092
 Domeless Solar Telescope at Hida Observatory, Japan (*Japanese*) 2-117588
 European Southern Hemisphere Observatory (ESO), equipment and observing facilities (*French*) 2-94594
 European Southern Observatory telescope projects, image quality considerations 2-94602
 EUV telescopes, multi-frequency, on Extreme Ultraviolet Explorer Mission, appl. to EUV sky survey 2-117592
 EUV telescopes on Extreme Ultraviolet Explorer Mission, appl. to EUV sky survey 2-106477
 focal reducer, flat-field, reflecting 2-73840
 Fourier transform IR spectrometer for use at Cassegrain focus 2-117594
 soft gamma ray telescope, spectrometer design 2-112326
 gamma-ray Compton telescope, balloon-borne, props. and performance 2-89147
 gamma-ray telescope for stratosphere balloon, calibration in 5-50 MeV range 2-112325
 gamma-ray telescope using coded aperture imaging 2-78954
 gamma-ray telescope with aperture coding, resolving power 2-89150
 gamma-ray telescope with arc minute angular resolution, plans 2-94598
 Ground-based Electro-Optical Deep Space Surveillance system for satellite tracking 2-100746
 Hale telescope, efficient low and moderate resolution spectrograph 2-106539
 Hinotori satellite, hard X-ray telescope (*Japanese*) 2-68615
 I2T at Grasse, France, optical interferometer, principles, setting up and use 2-78961
 International Ultraviolet Explorer (IUE), design and performance of Ritchey-Chretien telescope 2-117591
 IR, automatic attitude control system to be used on stratospheric balloons (*Spanish*) 2-84097
 IR astronomical satellite striated Au solar-shield material bidirectional reflectance distrib. function meas. 2-117559
 IR telescope on Spacelab 2, astrophysical objectives 2-63250
 IR telescope with stray-light rejection 2-117596
 IRAS telescope, sunshield and baffle materials, reflectance 2-117597
 Isaac Newton Telescope 2-78956
 large astronomical mirrors, thermal gradient effects in optical testing 2-91016
 large optical telescopes, future designs (*Japanese*) 2-117587
 Leoncito 2.2 m, coude conversion 2-73841
 liquid mirror telescope using rotating Hg pool 2-112327
 mirror, fully segmented, figure control 2-106525
 mirror aluminization at Okayama Astrophysical Observatory (*Japanese*) 2-117605
 mirror surface ripple effects on image quality, astron., telescope performance appls. 2-108994
 mirrors with Al+Al₂O₃ coatings, reflectance in 170-1000 nm range 2-81047
 mirrors with piezoelectric drives, local deform. meas., freq. depend. 2-109000
 MMT, image stacker for high-resolution spectroscopy 2-106537
 moving point source visibility 2-78960
 optical, rotational speed control using 24 V synchronous motors 2-106529
 optical coating problem, instrum. efficiency 2-73838
 optical elements in Earth-mounted and satellite orbital systems, electrostatic dust protection 2-55289
 penetrating power calculation and parameter optimisation 2-78959
 polar axis setting for Tokyo Gakugei Univ. 40 cm reflector (*Japanese*) 2-63248
 position sensitive scintillation detectors for gamma-ray imaging telescope 2-100738
 PZT—new concept using Schmidt system 2-58257
 reflecting pin-hole telescope as solar beacon in solar astrometry expt. 2-94601
 Ritchey-Chretien telescope, UNAM 2 m, optical characts. 2-112323
 Schmidt 14 cm camera, photographic atlas construction (*French*) 2-84112
 Schmidt corrector plates, computer program for curve calc. 2-75653
 Schmidt telescope at Tautenburg Observatory, review of 21 years of operation (*French*) 2-94597
 solar magnetic field telescope, calibration (*Chinese*) 2-84198
 Space Telescope, orbital viewing constraints 2-94599
 Space Telescope, progress report on high resolution UV spectrograph 2-117593
 Space Telescope, proton-induced noise in UV sensitive digicons 2-117590
 Space Telescope project (*German*) 2-100740
 speckle interferometric optical synthesis telescope, imaging 2-58253
 Temos 4, mosaic telescope problem soln. (*French*) 2-94600
 Tokyo, photoelectric photometry system for 30 cm reflector (*Japanese*) 2-68619
 TV guiding system for multichannel polarimeter on 91 cm reflector (*Japanese*) 2-68620
 two-mirror aberration free systems, second mirror figure determ. 2-81044
 hard X-ray telescope spectrometer design 2-112326

astronomy *see astronomy and astrophysics*

astronomy and astrophysics

see also astroarchaeology; astronomical catalogues; astronomical instruments; astronomical observations; astronomical observatories; astronomical spectra; clusters of galaxies; cosmology; extraterrestrial life; galaxies; gamma-ray astronomy; infrared astronomy; intergalactic matter; interplanetary matter; interstellar magnetic fields; occultations; planetaria; radioastronomy; solar system; stars; ultraviolet astronomy; X-ray astronomy

13th regular meeting of division on dynamical astronomy at Boulder, Colorado (January 1982) 2-89431

accretion flows, vortex funnels theory 2-58233

Alfvén surface waves in low- β plasma, existence and appl. to solar atmosphere 2-100732

American astronomers, statistical publication histories 2-94629

American Astronomical Society, 159th meeting, Boulder, Colorado (1982, January 10 to 13) 2-63734

American Astronomical Society, 160th meeting, Troy, New York, USA, (1982 June 6 to 9) 2-89432

angular momentum versus mass universal relationship, density scaling 2-63235

Arabic astrology and astronomy (*Japanese*) 2-68997

Astronomical Science Group of Ireland meeting at Dunsink Observatory, Dublin (December 1980) 2-101116

atomic physics interrelation 2-78949

bibliography (1970-9), book 2-107035

book 2-79300

Centre de Données Stellaires Scientific Meeting at Geneva, Switzerland (December 1981) 2-101113

Cetus, object on Carte du Ciel zone-1°, no.7, Algiers Observatory 1911 plate 2-106563

Chandrasekhar H-function, method of moment and Newton approximants 2-117581

compendium, book 2-89471

Compton heating and cooling and astrophysical jets 2-112318

conference, Astronomical Science Group of Ireland at Armagh, Ireland (June 1980) 2-74150

cosmic chemical memory 2-94630

cosmic discovery, book 2-89483

cosmic gas dynamics, comparative study of computational methods 2-94617

cosmic magnetic fields origin, role of parity nonconservation 2-63227

electron transport in fully ionised H plasmas, appl. to solar flares 2-106493

ESO Quick Blue Survey and ESO (B) Atlas 2-106554

European Space Agency (ESA), report to 24th COSPAR meeting, Ottawa, Canada (May 1982) 2-74177

extragalactic astronomy (book) 2-68986

extragalactic radio reference frame, optical identification of radio source (0104-408) 2-106943

figures of equilibrium, inhomogeneous figures (*Polish*) 2-78932

FK4 equator and equinox, orientation from observations of Sun and planets (*Russian*) 2-106480

flow past infinite porous plate in rotating fluid, effects of mass transfer and free-convection currents 2-106498

flux ejection dynamo effect, contrib. to geomag. dynamo and solar and stellar dynamos 2-100722

gamma-ray survey 2-73822

gyrosynchrotron radiation from mildly relativistic, nonthermal and thermal electrons, simplified expressions 2-106494

historical records, appl. 2-53474

hydromagnetic stability of superposed fluids, generalised theory 2-106499

inertial frame determ. using minor planets, simulation of HIPPARCOS obs. 2-89115

infrared astronomy, scientific/military thrusts and instrumentation, conference, Washington, DC (1981 April 21 to 22) 2-84371

international astronomical meeting, Innsbruck, Austria (1981 September 15 to 18) (*German, English*) 2-84375

kinetic theory 2-89132

Klumpke Roberts, Dorothea (1861-1942), astronomer 2-58584

lore of large numbers, historical and background to Anthropic Principle 2-63793

Lunar Sample Building, storage and aquisition of meteorites, cosmic dust and lunar samples 2-78985

magnetic dynamo action in high-conductivity limit, astrophysical appls. 2-100723

magnetic dynamo theory, impossibility of mean-field dynamos with spherical symmetry of motions 2-100724

magnetic dynamos, basic props. of flux ejection dynamo with small diffusivity 2-106502

magnetic dynamos, flux ejection dynamo with small diffusivity 2-106503

magnetic fields, nonlinear problems, review 2-68613

magnetic monopole occurrence in solar system 2-106519

magnetized plasma turbulence, soliton gas model 2-89134

MHD equilibrium, nonequilibrium of nonsymmetric hydrodynamic topologies 2-112311

MHD equilibrium, theory for helically symmetric fields 2-112310

MHD equilibrium equations with one ignorable coordinate, general integrals 2-58234

molecule form, by implantation in insulators 2-92009

neutrino astronomy, prospects (*Polish*) 2-94615

neutrinos, Dirac and Majorana masses limits 2-59077

nuclei photodisintegration and electrodisintegration 2-64392

observations, contamination artificial satellite emissions 2-106562

personal retrospect and prospect 2-101108

photoelectric photometry in mediocre climate 2-112125

photography 2-89161

physics and astrophysics, problems of special importance and interests 2-94974

physics data handbook 2-58565

plasma, Newcomb stability criterion, boundary-coupled generalisation 2-109494

plasmas, conf., Como, Italy (Aug.-Sept. 1981) 2-58547

polarised light scattering, basic phase matrix 2-89136

radiative transfer, analytic soln. of difference eqns. 2-78946

relativistic astrophysics, tenth Texan symposium (Baltimore, Dec. 1980) 2-112645

seeing deconvolution from galaxies brightness profiles, appl. to (M32) 2-84320

self-exciting dynamo, generalised Cowling theorem 2-76034

astronomy and astrophysics continued

solar seeing, meas. at Roque de Los Muchachos, La Palma 2-73683

Space Telescope research, conf. at Princeton, NJ, USA (August 1979) 2-79284

spectral line formation, theory of redistrib. and radiative transfer eqns. 2-112313

spiral galaxies, inertial frames determined from rot. laws 2-94582

stability criterion for many-parameter equilibrium families 2-89133

static charged perfect fluid sphere, equilib. 2-106507

swept up massive shell, axisymmetric hypersonic MHD flow, time depend. eqns. system 2-84074

time and frequency standards appl. 2-89156

time series through randomly broken windows 2-84102

violent phenomena in the Universe (book) 2-63768

$^{10}\text{B}(\text{d},\text{n})\gamma$, 48-170 keV, γ -rays prod., total cross section meas. 2-54401

$^{10}\text{Be}(\text{d},\text{n})\gamma$, 48-170 keV, γ -rays prod., total cross section meas. 2-54401

$\text{C}^+ + \text{H}_2$, radiative association reaction, rate coeff. reinvestigation 2-58235

He^1 , electron excitation rates calc. 2-90718

$^6\text{He}(\text{He},\text{X})$, 60-160 MeV, ^6He , ^6Li , ^7Be , prod. cross section meas., astrophysical significance 2-54416

$^6\text{Li}(\text{d},\text{n})\gamma$, 48-170 keV, γ -rays prod., total cross section meas. 2-54401

N III 1750 Å transition, collision strength calc. 2-89137

Ni I, oscillator strengths for optical spectral lines (*Russian*) 2-90478

astronomy computing

see also computerised instrumentation

astrometrist system for Earth rotation parameters determ. 2-58261

automatic image classification 2-89159

cosmic gas dynamics, comparative study of computational methods 2-94617

double stars, image, reconstruction using Bates' algorithm 2-112344

echelle spectrograms, automatic reduction by digital image processing 2-106545

flare microwave burst, 1980 December 17, time relation with H α flare from digital CCD camera obs. 2-100868

gyrosynchronous satellite location program in TRS-80 BASIC 2-117564

IUE SWP camera linearity, correction algorithm 2-112340

Jet Propulsion Laboratory's Scientific Data Analysis System 2-63207

LINPOS, and interactive program for stellar line position measurement 2-94623

meteor bodies distribution from radar observations, algorithm (*Russian*) 2-100839

observatory automation, appl. of microcomputers 2-106524

photometric system, microcomputer based, testing on eclipsing binary 44-i Bootis (*Italian*) 2-106535

radio astronomy, algorithm for azimuth aperture synthesis RATAN-600 radio telescope 2-94620

radio astronomy, software struct. of acousto-optical spectrograph 2-94606

satellite-based images, computerised processing, parallel computer appls. 2-100752

Solar Maximum Mission, obs. command program CORMAX 2-112328

solar radiofrequency radiation observation at mm wavelength, instruments and preliminary results (*Japanese*) 2-94603

solar system with two suns and one planet model 2-58275

Space Telescope high resolution UV spectrograph, on-board computer software 2-117593

stellar distances and reddening from UVB photometry reduction 2-112519

stellar speckle interferometry, object reconstruction method, computer simulation 2-112338

stellar spectra digitised rel. to spectral class and luminosity 2-73849

VLBI experiments, software for CS-type computers 2-68634

astrophysics computing

see also computerised instrumentation

galaxies in 3-dimens. space, Monte Carlo simulation 2-58262

galaxy evolution, particle-mesh simulation, on vector and array processors 2-101061

asynchronous motors *see induction motors*

atmosphere, solar *see solar atmosphere*

atmosphere, terrestrial *see terrestrial atmosphere*

atmosphere, upper *see upper atmosphere*

atmospheric acoustics

absorption, low-pass filter characts. 2-75748

boundary layer, acoustic sounding with 'video-pulse radar', freq.-energy corrls. anal. (*Russian*) 2-63139

cosmic infrasound in the atmosphere (*Russian*) 2-106320

diffraction of sound by a noise barrier in the presence of atmospheric turbulence 2-70748

lower E-region, neutral temp. and electron density meas. via vertical HF sounding in presence of acoustic wave 2-100636

earthquake acoustogravitational influence on F-layer electron conc. 2-73777

echosound design and devel. 2-117487

flow-excited cavity tone spectra at low Mach nos. in wind tunnels 2-114523

ground effect analysis, surface wave and layer pot. representations 2-60276

Howe's equation for sound propagation in turbulent atmosphere (*French*) 2-78824

infrasonic pressure variations associated with geomag. activity 2-117397

isothermal atmosphere weak shock wave damping, determ. from dispersive correction (*Russian*) 2-117400

meteor acoustics, classification and nature 2-79045

nonchromatic acoustic radiation vertical propag. in atmosphere, nonlinear effects 2-75749

nonequilibrium acoustic phenomena in atmospheric fog 2-70744

propagation over ground, approx. and expt. results 2-60277

range and detection equipment, anal. of fundamental eqn. (*Russian*) 2-55375

sounding of boundary layer, calc. of freq.-energy corrls. (*Russian*) 2-63138

tropospheric duct excitation by EM field of groundbased source scattered by acoustic wave 2-94473

turbulent flows, acoustics, Euromech 142 report 2-114784

atmospheric boundary layer

acoustic sounding of boundary layer, frequency-energy corrls., calc. (*Russian*) 2-63138

acoustic sounding with 'video-pulse radar', freq.-energy corrls. anal. (*Russian*) 2-63139

aerosol composition in marine and coastal boundary layer, obs. 2-117390

atmospheric boundary layer continued

- aerosol plume generated by a town, model 2-68421
 aerosol size distrib. in marine convective boundary layer 2-58107
 air pollution measurement with new tethered radiosonde design 2-67904
 air pollution transport in valleys (*German*) 2-88936
 air-sea interaction, instruments and methods, book 2-94917
 Joint Airport Weather Studies Project (JAWS) 2-89010
 Alaskan Beaufort Sea coast, sea breeze model 2-112048
 Andaman Sea, evaporation and heat storage in upper 20 m water 2-88904
 Anderson Creek, California, wind prediction model 2-100480
 Antarctic glazed snow surface, sublimation and condensation study 2-117367
 E Antarctica, katabatic winds due to large scale temp. inversions 2-106186
 tropical Atlantic, temp. and dynamics affected by intertropical convergence (*Russian*) 2-88897
 Baltic Sea, internal boundary layers in vertical temp. and humidity profile in nearshore zone 2-68410
 Bay of Bengal, cloud cover rel. to surface long wave radiation, from temp. anal. 2-88903
 W Bay of Bengal, sea surface and atmos. conditions during MONEX 2-78763
 Boulder Atmospheric Observatory, convective boundary layer wind speed and temp. 2-106245
 canopy flow index for two-storey forest 2-78729
 capacity factor of a wind turbine cluster 2-67812
 Chicago, USA, buildings and trees affecting wind obs. 2-112066
 cloudy planetary boundary layer, ensemble cloud-relations testing against numerical data 2-78770
 coastal site wind fluctuations in surface layer (*German*) 2-100421
 cold-air outbreak episode in marine boundary layer 2-73641
 convection oscill. produced by modulated heat input (*Russian*) 2-63032
 convective evolution in FACE experimental area 2-112051
 cooling-tower plume rise models (natural-draft towers) 2-63012
 cumulonimbus rainfall, mountain-generated, on northern Great Plains, USA, seasonal vars. and areal extent 2-100483
 daytime convective boundary layer, vertical vel. field, acoustic Doppler sodar obs. 2-111993
 diffusing cloud in boundary layer, ground-level trajectory 2-94421
 diffusion equation for short-range dispersion from continuous ground-level source, approximate analytical soln. 2-100431
 diffusivity profiles from synoptic reports 2-94420
 dispersion theory for pollution of non-uniform site 2-68403
 diurnal boundary layer development over sloping terrain 2-73640
 diurnal evolution in presence of cloud and fog 2-100522
 drying and cooling rates in marine boundary layer 2-83881
 early morning boundary layer, obs. of temp. struct. parameter 2-78730
 electric field obs. during solar eclipse 2-68432
 electric space charge due to corona discharge beneath thunderstorms 2-78801
 electric space charge in lowest 2 metres 2-117421
 elevated refractive layers over sea for offshore wind conditions 2-68463
 energy-containing eddies in surface layer, 3-D struct. 2-63019
 entrainment into cloud topped marine boundary layer, model 2-73642
 entrainment into cloud-topped marine boundary layer 2-73641
 evaporation rate near Padua over mainland and sea 2-68445
 fair weather tropical marine boundary layer, 3-D model 2-68456
 flow over low hills, appl. of computer model to real terrain 2-100428
 flux-profile models in surface layer 2-68415
 fog formation in salt-laden marine winds 2-83927
 forest canopy boundary layer, turbulent exchange and micrometeorology 2-78722
 GATE tropical boundary layer, effects of deep convection 2-78769
 geotriptic wind over orographically modified terrain (*German*) 2-106207
 global surface temperature correl. with sea level trend over past century 2-83845
 Gotland island (Sweden), wind numerical model 2-94426
 gravity waves detected by obs. of microwave emissions fluctuation 2-63056
 Great Lakes, effects of atmospheric stability on evaporation 2-88919
 Gulf of Alaska, boundary layer response to storms 2-89009
 gust structure in neutral surface boundary layer 2-100479
 hazy atmosphere light extinction scale height features 2-112127
 heating of surface due to radiation absorpt., response function 2-68424
 hills of moderate slope in airflow, 3-D model 2-100506
 humidity mixing ratios, diurnal trends at Padova, Italy 2-78726
 humidity of surface layer air, forecasting procedure 2-73661
 hurricane and tornado vortex boundary layer struct. 2-68420
 hydrocarbon emission by tropical vegetation, MONEX obs. 2-83931
 Indian Ocean equatorial boundary layer characts. 2-88974
 internal boundary layer following change in surface roughness 2-68426
 inversion capped convective boundary layer, mean horizontal wind 2-106259
 IR radiative transfer obs. 2-78727
 Israel, potential evaporation inland distribution 2-78746
 Lake Michigan lake-effect snow storm, boundary layer struct. and horizontal roll convection 2-112038
 laser beam deflection fluctuations in marine boundary layer 2-78840
 lateral dispersion in boundary layer from continuous sources 2-106167
 lateral turbulent diffusion depend. on surface roughness (*Russian*) 2-88950
 lidar (infrared) obs. of cloud and aerosol from space, optical calcs. 2-94500
 light backscattering coefficients, spatial inhomogeneities (*Russian*) 2-58121
 marine atmos. convective mixing velocities off California coast 2-83877
 marine boundary layer, aerosol modelling rel. to atmosphere optical props. 2-117389
 marine boundary layer, aerosol modelling rel. to electro-optical systems performance 2-117455
 marine boundary layer, ang. scatt. and IR extinction coeffs. from modified gamma aerosol distrib. 2-117453
 marine boundary layer, heat exchange through sea surface rel. to mixed layer temp. and thickness 2-117308
 marine boundary layer, meteorological models for optical props. 2-117452
 marine boundary layer, modification of Kondo's formulas for bulk transfer coeffs. of turbulent fluxes 2-117384
 marine boundary layer, preliminary shipboard meas. of optical turbulence 2-117456

atmospheric boundary layer continued

- marine boundary layer, satellite meas. of aerosols optical thickness 2-117454
 marine wind from planetary boundary layer model 2-94456
 measurement of surface wind by obs. of cloud motion in trade wind area 2-112177
 mixed layer growth during daytime, encroachment model 2-100510
 mixing height occurrence in Central Scotland 2-83878
 Mount St. Helens (18 May 1980 eruption), effect on surface temp. 2-100345
 mountain valley temperature inversion breakup 2-94457
 Newhall Pass, California, Santa Ana wind flow from tree deformation anal. 2-78804
 nocturnal boundary layer development (*Chinese*) 2-112091
 nocturnal inversion layer over hilly island 2-68425
 nocturnal stably-stratified planetary layer, low-latitude obs. 2-68413
 ocean atmospheric boundary layers, parameterisation 2-68411
 ocean surface heat budget, effect of marine stratocumulus cloud 2-106231
 ocean surface wind stress and drag coeff. 2-78691
 ocean wave disturbance of surface layer, model (*Russian*) 2-117427
 optical extinction depend. on depth of mixing layer 2-68482
 organochlorine in atmos. of N Atlantic 2-99867
 Pacific Ocean, vars. in tropical sea surface temp. and surface wind fields assoc. with El Nino 2-111931
 paddy field surface layer, Kolmogorov constant for CO₂+wind 2-111994
 parameterisation of height of nocturnal boundary layer 2-63054
 parameterization of nocturnal boundary layer 2-100478
 planetary boundary layer pot. vorticity, eqns. of conservation 2-68427
 planetary boundary layer structure, Rossby Similarity and turbulent formulations 2-100429
 plume dispersion using improved puff algorithm 2-63055
 plumes, source size effect on conc. fluctuations 2-78731
 pollutant dispersal from point source, turbulent-diffusion theory 2-100519
 pollutant long-range transport model 2-94465
 pollutant plume from power station, chem. model 2-62514
 pollution in presence of inversion 2-100434
 prestorm boundary layer obs., single Doppler radar appl. 2-88963
 Puerto Rico trade wind cumulus boundary layer, high order one dimens. model 2-78771
 radiative heating of St. Louis (USA) boundary layer, pollution effects 2-63011
 rough terrain wind and temp. profiles for stable conditions (*Chinese*) 2-112003
 rural atmospheric boundary layer, near-ground wind struct. 2-100491
 saddle wind flow observations 2-78732
 Sargasso Sea, O₂ exchange rate through ocean surface 2-117364
 sea breeze phenomena, non-hydrostatic model 2-73612
 sea breezes of Alaskan Beaufort Sea Coast 2-112047
 sea-breeze blowing over land, boundary layer obs. (*French*) 2-83884
 secondary pollutant formation in boundary layer of England 2-83865
 sensible heat flux determination by optical method 2-68502
 sensitivity analysis of models of convective mixed layer 2-83882
 Shar, India, wind profiles from boundary layer up to 10 km 2-78761
 ship waves in lee of isolated topography, three-dimensional model 2-100474
 similarity function study of stable planetary boundary layer (*Chinese*) 2-112096
 slope wind behaviour, model (*German*) 2-88935
 slope winds induced by surface temps., 2-D linear theory 2-63022
 smoke plume dispersal over sea, aerial photograph obs. (*German*) 2-63060
 snow blizzards, flow and transport of snow, review 2-88926
 sodar-derived boundary layer information appl. in microwave communication 2-78790
 soil heating due to rise in atmos. surface layer temp. 2-73511
 South Park, Colorado, boundary layer local wind system struct. 2-78803
 spectral extinction in tropical regions, due to atmos. aerosol 2-63094
 storm-time boundary layer, STREX program 2-89009
 streamwise heat flux budget in atmospheric surface layer, effect of temp.-press. gradient correl. 2-100427
 structure before and after frontal heavy rain (*Chinese*) 2-88993
 structure parameters of planetary boundary layer, determ. using sodar 2-100432
 superadiabatic surface layer profile relationships 2-100509
 surface layer, Lagrangian turbulent characts. similarity theory const. (*Russian*) 2-117399
 surface layer, microscale temp. fluctuations 2-111997
 temperature, remote meas. by radio acoustic sounding system (*Japanese*) 2-58171
 temperature excursions due to passing clouds 2-78800
 temperature inversion breakup in deep mountain valleys 2-94458
 temperature inversions over Patiala 2-78762
 thunderstorm density current affecting boundary layer winds (*Chinese*) 2-112094
 trace gas concs. in and above tropical boundary layer 2-106275
 trade-wind boundary layer, diurnal vars. 2-112022
 turbulence, technique of Kolmogoroff const. determination 2-68419
 turbulence, third- and fourth-order mixed moments 2-83880
 turbulence in unstable boundary layer, similarity of turbulence characts. 2-100430
 turbulence meas. over vegetated surfaces using drag anemometer 2-63127
 turbulence modelling of atmos. 2-63074
 turbulence over complex terrain 2-68459
 turbulent diffusion, rel. to air pollution, full tensor calcs. 2-99861
 turbulent dispersion from line source, model 2-83879
 turbulent heat flux in convective boundary layer 2-78727
 turbulent structure obs. with kyttoon-mounted US anemometer 2-68418
 unstable surface layer turbulence over suburban area 2-68422
 urban boundary layer model for pollution conc. studies 2-105614
 urban boundary layer numerical models 2-83883
 urban heat islands, present state of knowledge 2-68448
 urban heat islands and pollutant dispersion, models 2-106166
 vegetation cover layer, wind speed and shear stress profiles, phenomenological model 2-78807
 vertical wind shear over USSR (1961-70) 2-106283
 violent valley winds, role of inversion layer in air flow dynamics 2-100470
 Visakhapatnam, India, boundary layer wind and temp. anal. 2-88970
 water surface, layer (*Chinese*) 2-88944

atmospheric boundary layer continued

- water wave generation by wind, Miles' theory 2-68423
- wind energy characts. over heterogeneous terrain, numerical model 2-78733
- wind flow over low arbitrary hills, theoretical model 2-100433
- wind in neutral boundary layer, use of asymptotic similarity theory 2-106168
- wind measurement using marine buoy in STREX program 2-112057
- wind profiles meas. from meteorological tower 2-78728
- wind speed errors measured with cup anemometer due to atm. turbulence effects 2-73649
- wind stress determination over lakes, inverse method using water-level fluctuations 2-106151
- winds in unstable boundary layer, 3-D model 2-117414
- CO₂ exchange through surface of the Black Sea 2-117360
- CO₂ exchange through surface of Indian Ocean 2-117361
- CO₂ flux, eddy covariance meas., heat/water vapour transport effects 2-111999
- CS₂ residence time from free troposphere and boundary layer obs. 2-63029
- NO_x summertime ground-level distrib. rel. to motor vehicle NO emissions 2-67902
- O₃, late evening maxima in surface layer 2-106274
- O₃ secondary pollutant formation in boundary layer 2-83865
- SO₂, air pollution conc. in Athens, Greece 2-68405

atmospheric chemistry

see also *atmospheric composition*

- acid rain, acid-base considerations 2-78266
- aerosol conc. in stratosphere, solar activity depend. 2-83921
- auroral N₂⁺+O→NO⁺+N, rate coeff. from auroral ion comp. anal. 2-73746
- Boston urban plume, NO_x removal and reactions 2-78271
- brominated methanes and ethanes, photochemistry in stratosphere/troposphere from UV absorpt. spectra 2-111600
- chlorofluoromethane (CFC 11 and 12) residence times in stratosphere 2-106208
- dichlorodifluoromethane in Earth's atmosphere sources rel. to observed concs. 2-100453
- ethane, photochem. model at atmos. conc. 2-78797
- ethylene, photochem. model at atmos. conc. 2-78797
- fluoride in rain, study showing pollution and not sea spray as source 2-63013
- formaldehyde, tropospheric distrib. 2-73668
- halocarbon oxidation by OH in atmos., global, hemispheric models 2-68406
- ionosphere, ion recombination coefficient and short wave solar flux 2-73750
- methane chemistry in troposphere, decrease in OH radical concs. rel. to global increase in methane concs. 2-100452
- monsoon rainwater in India, pH rel. to atm. CO₂ chemistry and content 2-68438
- ocean-atmosphere interaction, consequences of warm saline bottom water in ancient ocean 2-68374
- photochemical modelling 2-111985
- photochemistry of troposphere, isotropic multiple scattering and surface albedo effects 2-94419
- pollutant plume from power station, chem. model 2-62514
- polluted atmospheres in vicinity of nuclear power stations, behaviour analysis under low β radiation rates 2-62515
- primitive terrestrial atmosphere, radiative-convective-photochemical models rel. to vertical thermal struct. 2-112135
- rain chemistry in summit area of Kilauea Volcano, Hawaii 2-63036
- raindrop and aqueous aerosol chemistry, review 2-58111
- secondary pollutant formation in boundary layer of England 2-83865
- stratosphere, odd-N chemistry during warming event rel. to NO meas. 2-100455
- stratosphere, odd-N chemistry during winter warming rel. to NO₂ and HNO₃ meas. 2-100456
- stratosphere 2-88979
- stratosphere aerosols, observation and theory 2-106278
- stratosphere composition and temp. model of depend. on solar UV variability 2-63066
- stratosphere S budget, effect of H₂SO₄ evaporation from aerosol layer particles 2-112046
- stratospheric processes 2-111984
- Sweden, SO₂-sulphate transformation 2-94422
- lower thermosphere, effect of gravity waves on O+O₂ comp. 2-112187
- thermosphere metastable species photochem. processes, review 2-89059
- trichlorofluoromethane, atmospheric lifetime from two dimens. model calcs. 2-83533
- upper atmosphere neutral components photoionisation rate coeffs., solar activity depend. 2-106570
- Al³⁺+O₂, cross section, mass spectroscopy 2-105464
- Ba²⁺+O₂ (H₂O), cross section, mass spectroscopy 2-105464
- HNO₃+OH, chem. reaction rate const. temp. depend. 2-78794
- HNO₃+OH, rate consts. stratospheric modelling 2-99657
- H₂O and NO_x, stratosphere seasonal conc. variations 2-88956
- H₂O₂, aqueous phase formation and destruction mechanisms 2-78791
- H₂S production and destruction mechanisms near ground level 2-83872
- NH₃ in early atmosphere, conc. and destruction mechanisms 2-78796
- NO and NO₂ emission effects on O₃ in metropolitan regions 2-62521
- NO in upper atmos., auroral region 2-89056
- NO production by 1908 Tunguska meteor fall, effect on O₃, atmospheric optics and climate 2-106629
- NO_x, mesospheric, distrib., variation and chemistry 2-88957
- N₂O pollutant, atmospheric lifetime from two dimens. model calcs. 2-83533
- NaOH photolysis in upper stratosphere, photodissoc. coeff. 2-100451
- O atom association rates and airglow excitation mechanisms 2-63157
- O₃⁺, reaction paths to water clusters in cold mesosphere 2-100499
- O₃ secondary pollutant formation in boundary layer 2-83865
- OH composition deduced from stratospheric O₃, HNO₃, NO₂, H₂O obs. 2-83890
- OH+HNO₃→NO₃+H₂O, atmospheric reaction channel study (French) 2-88931
- SO₂ conversion to SO₄, in-cloud conversion model 2-100419
- SO₂ removal from atmos. by rain 2-83866
- SO₂ to SO₃ aerosol transformation rate during transport over North Sea 2-83871
- atmospheric chemistry continued**
- Si negative ion chemistry in mesosphere 2-100612
- SiO₃, atmospheric chem. 2-94547
- atmospheric composition**
- see also *atmospheric chemistry; atmospheric structure*
- Abastumani, USSR, gas and aerosol admixtures comp. and origin (Russian) 2-117402
- abundances from neutral mass spectrometer on Dynamics Explorer B 2-58178
- acidity of dew, frost and fog 2-94478
- acidity of Nanjing (China) urban area rain (Chinese) 2-78741
- acidity of Scotland and England's rain 2-83923
- aerosol, conc. and size distrib. for different meteorological conditions (Chinese) 2-112100
- aerosol, size distrib. functions (Chinese) 2-112101
- aerosol composition determ., evaluation of four types of samplers 2-105631
- aerosol composition in Houston, Texas, rel. to atmospheric visibility 2-112124
- aerosol composition in marine and coastal boundary layer, obs. 2-117390
- aerosol conc. in stratosphere, solar activity depend. 2-83921
- aerosol conc. in stratosphere due to tropospheric air mixing 2-112026
- aerosol conc. over S.Pacific, Ross Sea and Antarctica 2-63051
- aerosol concs. meas. with airborne LIDAR system 2-63111
- aerosol IR remote sensing affected by sea foam 2-106346
- aerosol layers in mesosphere, stratification and variability (Russian) 2-88951
- aerosol of Deccan Plateau, India, chem. and size composition 2-83930
- aerosol over Beijing in winter, elemental concs. (Chinese) 2-88989
- aerosol particles, effects of comp. and shape on size distrib., retrieval from ang. scatt. functions 2-58118
- aerosol plume generated by a town, model 2-68421
- aerosol remote sensing, soln. of radiative transfer eqn. 2-117461
- aerosol size distrib. from spectral optical depth obs., linear inversion theory 2-117488
- aerosol variability in stratosphere (Russian) 2-94438
- aerosols, transport of Cl-rich particles into central and eastern United States 2-63062
- aerosols over N.Europe, particle size distrib. obs. 2-63052
- air pollution trace gas concs. in S.Hemisphere 2-106209
- Antarctica ice stable isotope composition 2-117368
- Antarctica snow chem. composition 2-117369
- auroral ion composition used to determine N₂⁺+O→NO⁺+N rate const. 2-73746
- Australia, total urban particle production 2-83529
- Bombay, India, humidity and turbidity parameters 2-68409
- boundary layer, pollution in presence of inversion 2-100434
- boundary layer over paddy field, Kolmogorov constant for CO₂/wind 2-111994
- chlorofluorocarbon conc. in southern hemisphere 2-106209
- chlorofluoromethane (CFC 11 and 12) residence times in stratosphere 2-106208
- crustally derived material in Antarctic ice, of local origin 2-83889
- D-region, ion composition, seasonal var. 2-106405
- DDT in atmos. of N Atlantic 2-99867
- dichlorodifluoromethane in Earth's atmosphere sources rel. to observed concs. 2-100453
- dust conc. in Chandigarh, India 2-93962
- E-region, daytime ion and NO densities, steady-state model 2-78910
- Energetic Ion Composition Spectrometer (EICS) for the Dynamics Explorer-A 2-58179
- Europe, increased atmosphere CO₂ content, effect on climate and Suess effect 2-106304
- F-region O cooling mechanism from momentum transfer collisions with slow electrons 2-100640
- fluoride in rain, study showing pollution and not sea spray as source 2-63013
- fluoride in rainwater, ion-selective electrode measurement methodology 2-62534
- formaldehyde, tropospheric distrib. 2-73668
- formaldehyde determ. in clean air 2-63114
- Greenland and Antarctic snow chem. composition (F⁻, Cl⁻, NO₃⁻, SO₄²⁻) 2-78792
- hail stable isotope concs. described using cloud model 2-117416
- halocarbon and hydrocarbon in tropical areas, MONEX 2-83931
- hazy atmosphere light extinction scale height features 2-112127
- humidity vertical profile determination by microwave radiometry method 2-94530
- hydrocarbon emission by tropical vegetation, MONEX obs. 2-83931
- Indian rainwater chem. comp. 2-112081
- iodomethane conc. in southern hemisphere 2-106209
- ionosphere, high latitude, O⁺ and H⁺ distrib. model 2-106408
- IR emission meas. using balloon-borne cryogenic Fourier transform spectrometer 2-117474
- isotopic composition of European precipitation 2-83929
- magnetopause at subsolar point, energetic ion composition 2-84026
- magnetosphere, ion composition of boundary layer 2-58207
- magnetosphere ion composition, review 2-112262
- mesopause, NO and H₂O concs. from nightglow emissions rel. to noctilucent clouds and radio wave absorpt. 2-112201
- mesopause, positive ion comp. meas. in presence of noctilucent clouds 2-63151
- mesosphere and lower thermosphere, model of temp. and composition 2-68543
- mesosphere O₃, diurnal variation determ. from rockets 2-63061
- mesosphere O₃ concentration variations during total-eclipse, air glow obs. 2-100613
- methane, atmospheric conc. determ. by spectral method (Russian) 2-73703
- methane, global increase in atmospheric concs. between 1978 and (1980) 2-100452
- methane, total column abundance over Siberia (Russian) 2-73703
- methane, trace gas content over coastal inlet of Pacific 2-68388
- methane abundance determ. (Russian) 2-106220
- methane conc. in southern hemisphere 2-106209
- methane in freshly fallen snow, implications for past atmos. 2-83885
- methyl iodide, global distrib. and flux from oceans 2-78795
- moisture determination by TIROS-N infrared imagery 2-88978
- monsoon rainwater over Bhopal, India 2-68437
- Mt. St. Helens, eruption plume chem. and radioactivity 2-58027

atmospheric composition continued

- negative ion composition of stratosphere 2-106256
 negative ion mol. clusters in stratosphere 2-83922
 New York area, sulphur pollutants seasonal variations 2-68407
 nitrate content of rain, increase since 1850 AD 2-99866
 organochlorine in atmos. of N Atlantic 2-99867
 origin and evolution of planetary and terrestrial atmospheres, introduction to problem 2-112357
 particulates generated by Texas road traffic 2-100442
 plasmasphere, O⁺ and H⁺ distrib. model 2-106408
 pollutants, diffusion equation for short-range dispersion from continuous ground-level source 2-100431
 pollutants interregional transport, case studies of measurements versus model predictions 2-99860
 prebiological palaeoatmosphere composition rel. to UV radiation from young Sun 2-73929
 precipitable water meas. by Nimbus 7 microwave radiometry method 2-100587
 precipitation, D/H isotopic comp. in E United States rel. to storm trajectories 2-68444
 primitive atmosphere, C and N fixation by lightning 2-63098
 primitive terrestrial atmosphere, effect of comp. on radiative-convective-photochemical models 2-112135
 primordial atmosphere, comp. rel. to rare gas retention by accreting Earth in solar nebula 2-112353
 rain sampler for subsequent chem. analysis 2-106327
 rainwater, chem. differences of hilltop and valley rain 2-83867
 remote sensing of atmospheric comp., appl. of microwave thermal radiation (*Russian*) 2-94472
 Salt Lake City, Utah, multivariate analysis of particulate sulphate obs. 2-83869
 Samoa windward coast, marine rain pH and Na conc. 2-112030
 Sargasso Sea, O₂ exchange rate through ocean surface 2-117364
 sea salt deposition on ceramic insulators of power lines 2-94463
 Soufriere eruption plume spread, 17-19th April 1979 obs. 2-106058
 South Polar Plateau, heat, aerosol and water vapour transport 2-117423
 Space Shuttle booster rocket contrib. to atmos. aerosol 2-106265
 St. Louis, Missouri, multivariate analysis of particulate sulphate obs. 2-83869
 stratosphere, minor constituents detect. by far IR emission spectroscopy 2-100553
 stratosphere, NO₂ and HNO₃ meas. during warming event at 54°N in February (1979) 2-100456
 stratosphere 2-88979
 stratosphere aerosol and condensation nuclei conc. increase due to Alaid eruption (April 1981) 2-73624
 stratosphere S budget, effect of H₂SO₄ evaporation from aerosol layer particles 2-112046
 stratosphere sulphate layer, implications of COS and CS₂ from eruptions of Mount St. Helens 2-78623
 stratosphere trace constituents as tests of photochemical theory 2-106254
 stratospheric ions, composition meas. 2-94481
 stratospheric O₃ conc. meas. by balloon-borne lidar 2-94505
 stratospheric OH conc. meas. by balloon-borne lidar 2-94505
 sulphate aerosol formation in low-temp. regions of stratosphere 2-78799
 sulphate aerosol layer due to Mt. St. Helens 1980 eruption 2-78798
 sulphate aerosol over Antarctica, residence time 2-117424
 sulphate conc. at Whiteface Mountain, New York, USA 2-78752
 sulphates, O isotope study 2-63025
 lower thermosphere, effect of gravity waves on O+O₂ comp. 2-112187
 thermosphere empirical model, interpretation of O/N₂ ratio var. 2-73733
 thermosphere O profile determ., use of semiconductor detectors 2-68544
 thunderstorms, D content in water vapour entering storm 2-78776
 trace gas conc. in southern hemisphere 2-106209
 trace gas concs. in and above tropical boundary layer 2-106275
 trace gas detection with tunable diode laser spectrometer using sweep integration 2-106325
 trace gases in troposphere and stratosphere, vertical profiles at mid-latitudes 2-63075
 trace-element conc. in soils contributing to atmos. aerosol 2-62912
 troposphere, millimetre-wave absorbers concs. rel. to model for resonant transmittance 2-117394
 turbopause height and temp. in polar region from Ar/N₂ profile 2-73734
 upper atmos. neutral constituent height profile calc. 2-106378
 upper atmosphere, comp. and scale-height vars. rel. to profiles of solar radiation intensity and ion production rate (*Chinese*) 2-100624
 eastern USA, background pollutants arriving from northwest 2-83873
 volcanic aerosol injected into stratosphere by Soufriere volcano 2-106279
 volcanic eruption plume, particle size dists. (from Soufriere) 2-106059
 volcanic eruption plume particulates (Soufriere volcano) 2-106060
 volcanic gases from April 1979 eruption of Soufriere 2-106061
 warm equatorially trapped ions near geosynchronous orbit, composition meas. 2-112235
 C emission to atmosphere from bushfires in intertropical savannah zones 2-112031
 CO abundance determ. (*Russian*) 2-106220
 CO in freshly fallen snow, implications for past atmos. 2-83885
 CO₂ trace gas content over coastal inlet of Pacific 2-68388
 CO₂, atmospheric content effect on world climate 2-117437
 CO₂, climatic problem, ocean-atmosphere interaction role 2-112109
 CO₂, computer-based meas. system, atmospheric and oceanic partial pressure determ. 2-58146
 CO₂ conc. in ice sheet sample air bubbles 2-117481
 CO₂ conc. increase, surface air temp. response 2-112106
 CO₂ concentration effect on ¹³C/¹²C in tree rings 2-78811
 CO₂ concentration rel. to climate, regional scenarios for CO₂-warmed Earth 2-73671
 CO₂, concentrations meas. at Montsouris Observatory, Paris (1877 to 1910) 2-106204
 CO₂ content effect on palaeorainfall and temp. 2-100564
 CO₂ effect on climate, interdisciplinary research and integration 2-63077
 CO₂ evolution from soil, mineralisation process correl. with temp. variation 2-68339
 CO₂ exchange between atm. and surface, aircraft monitoring 2-100512
 CO₂ exchange through surface of the Black Sea 2-117360
 CO₂ exchange through surface of Indian Ocean 2-117361
 CO₂ from fossil fuel combustion, sinks in oceans and biosphere 2-112104
 CO₂ from fossil fuels, partitioning in atmos.-ocean system 2-100527
 CO₂ in boundary layer, flux, eddy covariance meas., heat/water vapour transport effects 2-111999
 CO₂ increase, effect on climate and summer dryness 2-63076

atmospheric composition continued

- CO₂ increase, transient climate response, role of ocean 2-73674
 CO₂ increase monitored at Barrow, Alaska 2-83932
 CO₂ increases, greenhouse effect 2-107081
 CO₂ partial pressure and climate regulation, Gaia hypothesis or geochemistry 2-112085
 CO₂ variation, effect on biosphere life span, control mechanisms 2-73413
 CS₂ residence time from free troposphere and boundary layer obs. 2-63029
¹⁴C, effect of climatic parameters, simulation 2-106174
¹⁴CO₂ monitoring, determ. in air 2-85398
 D vertical distrib., model involving cloud and rain 2-83928
 H₂, trace gas content over coastal inlet of Pacific 2-68388
 HCl, latitudinal concentration variability above 11.5 km 2-78756
 HCl remote sensing by lidar, optoacoustic meas. of specific absorpt. coeffs. at DF laser wavelengths 2-112116
 HF, latitudinal concentration variability above 11.5 km 2-78756
 HNO₃, determ. of total amount above Mont-Louis (*French*) 2-112129
 HNO₃, latitudinal concentration variability above 11.5 km 2-78756
 HNO₃, obs. in South Pole solar IR spectra 2-106647
 HNO₃, stratosphere composition obs. 2-83890
 H₂O and NO₂ stratopause seasonal conc. variations 2-88956
 H₂O conc. variability in mesosphere, microwave emission study 2-78755
 H₂O mixing ratio in mesosphere from 22 GHz water vapour absorption 2-63046
 H₂O, mol. clusters responsible for far IR spectral absorpt. 2-83940
 H₂O, stratosphere composition obs. 2-83890
 H₂O vap. measurement system using Raman lidar 2-68495
 H₂O vapour at vapour Indian radioastronomy sites 2-88977
 H₂O₂, aqueous phase formation and destruction mechanisms 2-78791
 H₂S, ground-level daily variations in France 2-83872
 HSO₄, stratospheric conc. from mass spectra obs. 2-106256
 HTO in atmos., produced by Chinese nucl. bomb tests 2-100526
 Hg in Sweden, meas. of total airborne Hg rel. to possible origin 2-68467
 N atomic density of thermosphere, long-term variations 2-63154
 N emission to atmosphere from bushfires in intertropical savannah zones 2-112031
 NH₃ aerosol, pH control of clouds and precip., atmos. comp. meas. and modelling 2-68402
 NH₃ in early atmosphere, conc. and destruction mechanisms 2-78796
 NHO₂, conc. obs., Los Angeles, USA 2-105624
 NO, altitude distrib. meas. during stratospheric warming 2-100455
 NO in upper atmos. auroral region 2-89056
 NO production by 1908 Tunguska meteor fall, effect on O₃, atmospheric optics and climate 2-106629
 NO, single photon laser-induced fluoresc. detect. for atm. conditions of composition and press. 2-105629
 NO₂ conc. near to Soufriere Volcano April 1979 eruption 2-106062
 NO₂, diurnal and seasonal variations in stratosphere (*French*) 2-88932
 NO₂, stratosphere composition obs. 2-83890
 NO₂, stratospheric conc. from mass spectra obs. 2-106256
 NO₂ in Pacific troposphere, conc. var. from spectral obs., O₃ implications 2-73622
 NO₂, mesosphere conc. increase due to particle precipitation 2-88958
 NO₂, mesospheric, distrib., variation and chemistry 2-88957
 N₂O abundance determ. (*Russian*) 2-106220
 N₂O variability in troposphere, global scale model 2-78793
 Na layer observation, appl. of flashlamp-pumped tunable laser radar system 2-94511
 NaOH, in upper stratosphere, anal. of photolysis 2-100451
 O and N₂ density in upper atmosphere 2-89063
 O in upper atmosphere, meas. using analyzer with semiconductor sensors 2-100584
 O⁺ concentration in ionospheric F₂-layer, approx. soln. of diffusion eqn. 2-112193
 O⁺ ion flux detection from F-region topside soundings 2-83961
 O₂ density of thermosphere controlled by solar activity 2-100607
 O₂ thermosphere conc. derived from MSIS model and observations 2-73743
 O₂/N₂ from Raman scattering using 300 MHz optical discriminator-counter 2-68510
 O₃ abundance, effect of nucl. weapons tests and chlorofluoromethane pollution 2-73623
 O₃, air broadening coeffs. and line strengths in 9 μm region 2-106309
 O₃, altitude profiles of density from SMM UV spectrometer occultation meas. 2-100416
 O₃, anal. of total O₃ concs. for natural and man-made trend variability 2-100454
 O₃ and trace gas content of stratosphere, model of depend. on solar UV variability 2-63066
 O₃ composition, comparison of ground based total O₃ spectrophotometers for meas. 2-106263
 O₃, daily max. levels in St. Louis, forecasting 2-62520
 O₃ global distrib. obs. made with satellite IR radiometer 2-78754
 O₃, global monthly means rel. to solar activity 2-63042
 O₃, heating by solar radiation, effect on surface press. 2-106255
 O₃ in troposphere, conc. increase due to aircraft emissions 2-106172
 O₃, influence of total conc. on global UV radiation at ground level 2-100462
 O₃, late evening maxima in surface layer 2-106274
 O₃ layers, human effects on atmospheric content (*French*) 2-100511
 O₃ over Uccle, Belgium, 1980 Jan. to March mast obs. (*French, Flemish*) 2-68430
 O₃ over Uccle, Belgium, 1980 April-June mast obs. (*French, Flemish*) 2-68431
 O₃ ozonograms made at Uccle, Belgium, Nov. 1980 obs. (*French, Flemish*) 2-88953
 O₃ perturbation due to CO₂ and CFC increases 2-100503
 O₃ profile up to 40 km over Natal 2-63026
 O₃, rocket ozonesonde validation of BUW satellite sensor 2-100568
 O₃ seasonal and meridional variability, 2-D model 2-63065
 O₃ secondary pollutant formation in boundary layer 2-83865
 O₃, stratosphere composition obs. 2-83890
 O₃, time series analysis of Umkehr data from Arosa (Switzerland) 2-63044
 O₃, total content and vertical dists. (1958-79) 2-111986
 O₃ total content in AD 1970 to 1977 period 2-94452
 O₃ total rel. to solar activity 2-63059
 O₃ variability due to solar activity cycle 2-78751
 O₃ variations (1970-74) from backscattered UV obs. 2-106257
 O₃ vertical distrib. and total content, UV DIAL technique 2-106267

atmospheric composition continued

- O₃ vertical distrib. determ. by spacecraft limb-scan technique 2-112145
 O₃ vertical profiles at Uccle, Belgium (*French, Flemish*) 2-88952
 O₃ vertical profiles in equatorial Indian Ocean, MONEX obs. 2-88937
 OH composition deduced from stratospheric O₃, HNO₃, NO₂, H₂O obs. 2-83890
 OH conc. in atmos. rel. to solar activity 2-106210
 OH, in troposphere, decrease in concs. rel. to global increase in methane concs. (1978 to 1980) 2-100452
 OH measurements and calibration using tunable dye laser based absorpt. technique 2-117468
 OH, tropospheric, laser induced fluoresc. meas. influence of rot. relax. 2-94480
 OH+HNO₃→NO₃+H₂O, atmospheric reaction channel study (*French*) 2-88931
 P particulates in NW Atlantic air, sources 2-83874
 Pb concentrations in aerosols in downtown Guatemala City, meas. during February and March (1980) 2-105622
 Pb, Cu, Mg, Al from domestic fires in Nepal Himalayas 2-62527
²²²Rn degassing from W Florida coastal waters, role of winter storm fronts 2-78704
 S emission to atmosphere from bushfires in intertropical savannah zones 2-112031
 SO₂, air pollution conc. in Athens, Greece 2-68405
 SO₂ pollutant residence times (*German*) 2-94425
 SO₂ pollution of Vienna in winter, daily conc. models 2-106170
 SO₂ removal from atmos. by rain 2-83866
 SO₂, single photon laser-induced fluoresc. detect. for atm. conditions of composition and press. 2-105629
 SO₂ to SO₄ aerosol transformation rate during transport over North Sea 2-83871
 Si negative ion chemistry in mesosphere 2-100612
 SiO₃ atmospheric chem. 2-94547
⁹³Zr atmos. conc. due to Chinese nucl. bomb tests 2-100526

atmospheric density *see atmospheric pressure and density*

atmospheric disturbances *see atmospheric movements; thunderstorms*

atmospheric duct *see atmospheric electromagnetic wave propagation*

atmospheric dynamics *see atmospheric movements*

atmospheric electricity

see also atmospheric electromagnetic wave propagation; atmospheric ionisation; atmospheric; aurora; electrojets; ionosphere; lightning; thunderstorms

aerosols, detection by photoelectric charging, appl. to atmospheric particle 2-83901

auroral arc, electrostatic potential distrib. obs. 2-63161

auroral current flow, model predictions of mag. perturbations observed by Magsat in dawn-dusk orbit 2-100631

auroral double layers, current carrying props. rel. to low frequency auroral fluctuations 2-100622

auroral electrojet correlation with mesospheric winds 2-83993

auroral zone, anomalous resist. along field lines 2-73758

Birkeland current densities, relation to interplanetary mag. field and solar wind props. 2-100663

Birkeland current systems, regions 1 and 2, energy coupling 2-106425

Birkeland currents obs. simultaneously by MAGSAT and TRIAD satellites 2-100660

Boulder Country, Colorado, 1967-80 conductivity rel. to air quality 2-83920

bow shock, anal. of surface elec. currents 2-100652

clouds, electrified, atm. vorticity prod. 2-78787

clouds, warm and cold, ions and precipitation charging 2-78773

conference on magnetosphere plasma and electric fields origin at Yosemite, CA, USA (Jan. 1982) 2-107012

corona currents from earthed points in a DC field [atmospheric electricity] 2-106296

cusp region and auroral zone field-aligned currents 2-68561

dayside polar cusps, local transverse elec. fields and energy flux 2-84017

diurnal variation at Kew, England 2-68440

dust movement in point-grid corona discharge, laser anemometry study (*French*) 2-94454

electric potential gradient variations obs. in Hungary 2-78718

electrostatic field correl. with bay disturbances 2-83742

field aligned currents in late afternoon sector 2-106414

field-aligned current response to IMF changes 2-89075

field-aligned currents rel. to auroral electrojets, review 2-58202

ground level space charge layers due to corona discharge 2-78801

Hall current closure in magnetosphere during substorms 2-73800

Harang discontinuity and plasmopause boundary changes 2-106409

Hokuriku winter thunderstorms, electrical structure 2-63034

ionosphere, elec. currents meas. with Saint-Santin radar 2-83999

ionosphere, elec. fields rel. to boundary conditions for MHD waves 2-112198

ionosphere, external current effects anal. from Magsat data using eccentric dipole coordinates 2-100661

ionosphere, longitudinal electrostatic field effects on ionospheric struct. 2-112207

ionosphere, total current through area enclosed by MAGSAT orbit 2-100630

ionosphere E-region interaction with F-region, cond. and plasma density 2-73751

ionosphere elec. current due to sudden commencement preliminary impulse 2-100629

ionosphere elec. currents above Saint-Santin, model 2-84000

ionosphere elect. currents produced by field-aligned currents, calc. 2-106410

ionosphere electric field variations over land, correl. with elec. field var. over oceans 2-78905

ionosphere equivalent currents representing IMF sector effects 2-112219

ionosphere high latitude electric fields var. 2-106403

ionosphere meridional elec. current system in equatorial region 2-100628

ionosphere omega bands, eastward drifting, assoc. current system and mag. disturbance field 2-100645

ionosphere polar cap currents, effect of northward interplanetary mag. field rel. to reverse geomag. disturbance 2-112293

ionosphere quasistationary elec. fields and electron precipitation 2-117520

ionosphere-ground vertical current, var. modulation and influence of polar cap dusk-dawn pot. drop 2-112214

ionospheric technique for modeling mag. perturbations produced by field-aligned current systems 2-100632

atmospheric electricity continued

- lunar daily geomag. variations, seasonal change 2-68260
 magnetosphere, broadband electrostatic noise rel. to MHD stability of turbulent geomag. tail 2-100664
 magnetosphere, elec. and mag. fields during substorms 2-112244
 magnetosphere, elec. field spikes near to plasmashet boundary 2-100659
 magnetosphere, external current effects anal. from Magsat data using eccentric dipole coordinates 2-100661
 magnetosphere, nighttime turbulent elec. fields up to 14 Hz 2-68568
 magnetosphere, two-dimens. model inc. current system 2-89072
 magnetosphere field aligned currents and polar mag. disturbances 2-117532
 magnetosphere field aligned currents distrib. from mag. field obs., correl. with ionospheric phenomena 2-112269
 magnetosphere field-aligned currents deduced from radar ion drift obs. 2-84045
 magnetosphere ionosphere electrical coupling, IMS satellite obs. review 2-112223
 magnetosphere polar cap ULF/lower ELF EM pulsations 2-112260
 magnetosphere whistler ducts, mag. and elec. fields, models (*Chinese*) 2-84015
 magnetotail, elec. field and current generation in presence of conducting ionosphere 2-100654
 magnetotail electric field distrib. depend. on magnetosheath mag. field and plasma flow 2-73785
 Nagycken Observatory, Hungary, observing methods and results 2-78856
 Pc 5 pulsation and associated elec. currents in ionosphere 2-83995
 plasmas sheet, quiet time convection elec. field props. 2-63188
 point discharge currents near large pollution source 2-117405
 polar cap arcs, elec. and mag. field obs. 2-83998
 polar cap electric field, depend. on magnetotail and interplanetary mag. field parameters 2-73789
 polar conductivities of air recording, instrument for 0.01-1.0 Hz geomagnetic pulsations 2-117493
 polar cusps near solstice, field aligned currents, particles and plasma drifts 2-100626
 polar ionosphere, magnetosphere coupling, elec. fields and plasma characts. 2-112221
 radiation belts, equatorially mirroring particles in Mead-Fairfield model, elec. field effects 2-78923
 ring current energy injection mechanism 2-112250
 solar eclipse effect on elec. field close to the ground 2-68432
 space charge power spectra rel. to Aitken nucleus concs. 2-63035
 Sq(H) causes on abnormal quiet days 2-68550
 Sq and assoc. elec. fields during 1965 AD 2-62888
 Sq currents, quiet and active year behaviour 2-105924
 Sq focus latitude during sunspot minimum 2-68551
 static charging and its effects on avionic systems 2-83897
 stratosphere large scale elec. field over Brazil 2-100445
 subsonic probe measurements of middle-atmosphere electrical parameters 2-94544
 supercooled cloud drops collection by planar ice crystals, efficiency, effect of elec. charges 2-78774
 surface layer (lowest 2 metres) space charge obs. 2-117421
 television VHF signal propagation, field due to diffraction and troposcattering 2-117406
 thundercloud electrical model 2-100518
 thunderstorm, elec. field radiated by multiple return strokes 2-63049
 thunderstorm electrification, precipitation related theories, inductive and noninductive 2-78775
 severe thunderstorms of Great Plains, USA 2-63016

atmospheric electromagnetic wave propagation

see also atmospheric light propagation; ionospheric electromagnetic wave propagation; magnetospheric electromagnetic wave propagation; tropospheric electromagnetic wave propagation

, COMSTAR beacon appl. 2-106214

atmospheric microwave propag., fluctuations, scintillation theory 2-58100

boundary layer over coastal sea, elevated refr. layers due to land breeze 2-68463

coherent properties and focusing of wave beams reflected in a turbulent medium 2-90783

conference, atmospheric effects on electro-optical infrared millimeter systems, at San Diego, CA (August 1981) 2-112644

contrast transmittance models for cloud atmospheres 2-117450

diffraction by edge of waves diffracted by previous edge 2-65136

Doppler radar obs. of C_n variability over Poker Flat, Alaska 2-78812

electric breakdown of air due to intersecting pulsed radio beams 2-112023

extinction in visible/IR in fog and snow 2-117388

fading on 23 km links at 9.6, 11.4, 28.8 GHz 2-112034

fires, IR, radar and visible radiation 2-117386

fog and related EM wave prop. characts., survey 2-112087

frequency averaging for beam waves in atmospheric turbulence 2-106213

ground wave propagation, appl. to CCIR reference exponential atmosphere 2-94468

IR attenuation by cirrus clouds 2-117387

IR imaging of battlefield, effect of explosion produced dust clouds 2-117445

IR radiation attenuation, effect of organic aerosols (*Russian*) 2-106312

joint distribution estimation attenuation, cross-polarisation discrimination, satellite-Earth radio paths 2-106215

lightning Sferics, measured spectral amplitude in HF, VHF and UHF bands 2-117398

mesosphere UV absorpt. as measure of O₃ diurnal variations 2-63061

microwave attenuation, relation to rainfall rate statistical distribution in equatorial and tropical climates 2-100414

microwave attenuation beyond 10 GHz, rain profile characterisation using 2nd order approx. 2-94435

microwave mode conversion in troposphere due to lateral inhomogeneity 2-68462

microwave radio meteorology, fading by beam focusing 2-106295

mm-submm wave absorption by ¹⁵N¹⁵N and ¹⁶O¹⁶O 2-59787

outage rates of earth-space RF satellite links, based on attenuation and depolarisation meas. 2-106294

planetary atmospheres, radiowave propagation, inverse refraction problem soln. 2-78815

polarisation, theory of multiple scattering problem in plane layer 2-100719

radar backscatter obs. of equatorial mesosphere, tides 2-63045

atmospheric electromagnetic wave propagation continued

- rain attenuation meas., earth-space path at 12 GHz, CTS beacon appl. 2-112033
- rain attenuation of mm waves, FM/CW radar and artificial rainfall facilities appl. (*Japanese*) 2-94539
- random rain drop size, effect on atmospheric EM wave propagation, comments 2-106217
- reflection of radio waves from a meteor trail containing two kinds of ions 2-117634
- resonant transmittance model for mm-wave propagation, IR modelling techniques appl. 2-112035
- tropopause-lower stratosphere observed by VHF radar 2-88955
- turbulent layer, intensity statistics 2-112117
- unbalanced site diversity data, rain rate propagation statistics, satellite ground stations appl. 2-106216
- VHF vertical incidence backscattered power profiles from stratosphere, turbulence effects 2-63027
- visible/IR transmission through falling and blowing snow 2-117446
- wave tilt of ground wave (geophysics, prospecting method) 2-58155
- windblown dust effect on IR and optical visibility 2-117444

atmospheric electron precipitation

- see also *aurora; radiation belts*
- aurora obs. indicating energy of precipitating particles 2-112190
- auroral electrons precipitation correl. with auroral geomag. field equator, ELF hiss 2-100646
- bremsstrahlung X-ray emission ang. distrib. and polarisation 2-78903
- F-region high-latitude irregularities due to precipitation 2-94553
- flux distribution, struct., dynamics and geomag. field effects 2-83988
- IMF control of high-latitudes during substorm recovery 2-112246
- incoherent scattering plasma lines enhancement due to precipitation H⁺ and secondary electrons 2-84012
- inverted V event narrow bursts responsible for auroral arcs 2-83991
- lower ionosphere, electron flux attenuation 2-112220
- ionosphere, relaxation of monoenergetic electron stream 2-112195
- magnetoconjugate points, precipitation characts. 2-106391
- midlatitude hard electron flux obs. (by Kosmos-348) 2-112212
- onset of mag. substorm and associated electron precipitation 2-100667
- Pc 5 modulation of electron fluxes 2-84006
- quasistationary elec. fields and electron precipitation 2-117520
- radiation belts, pulsations of high energy electrons from precipitating particles anal. 2-106418
- slot region precipitation obs. and cyclotron reson. interaction mechanism 2-100642
- statistical study of precipitating electrons 2-89062
- subionospheric propagation of VLF whistlers, Trimpf effect 2-100643
- substorm evolution studied by electron and proton aurora obs. 2-94548
- suprathermal electron bursts and formation of auroral arcs 2-83994
- X-ray bremsstrahlung emission from precipitating particles 2-84002

atmospheric elementary particle precipitation

- see also *atmospheric electron precipitation; atmospheric proton precipitation*
- alpha-particle precipitation at mag. equator, contrib. to near-Earth UV environment 2-117513
- aurora obs. indicating energy of precipitating particles 2-112190
- auroral ionosphere, energy dissipation by precipitating particles and Joule heating 2-106401
- auroral precipitation bursts, correl. with X-ray rapid burster magnetosphere processes 2-79147
- falling neutron rainbows, wavelength independent fringes 2-100679
- low-energy particles in upper and middle atm., interaction model 2-73813
- magnetosphere charged particles precip., effect of nonadiabatic regions in dipole mag. field 2-112226
- X-ray bremsstrahlung emission from precipitating particles 2-84002
- O atom and ions responsible for N₂⁺ spectral emission 2-100621
- O⁺ precipitation, theory 2-84001
- O⁺ precipitation as energy source to thermosphere, wind and temp. perturbation 2-106377

atmospheric energetics see *atmospheric movements***atmospheric humidity**

- see also *hygrometers*
- aerosol response to relative humidity, implications of aerosol composition in marine and coastal boundary layer 2-117390
- Andaman Sea, evaporation and heat storage in upper 20 m water 2-88904
- anomalous H₂O vapour absorption, implications for radiative convective models 2-106313
- Arabian Sea, tropical depression nature during SW monsoon onset 2-112078
- North Atlantic humidity distribution obs. (*German*) 2-94427
- Baltic Sea, internal boundary layers in vertical temp. and humidity profile in nearshore zone 2-68410
- Belgium, weather (during 1981 AD) (*French*) 2-106203
- Belgium, weather during 1980 AD (*French*) 2-68447
- Bombay, India, humidity and turbidity parameters 2-68409
- boundary layer, moisture corrections for sodar determ. of structure parameters 2-100432
- boundary layer, temp., humidity, wind profiles and turbulent exchange over water surface layer (*Chinese*) 2-88944
- boundary layer at Padova, Italy, humidity diurnal trends 2-78726
- boundary layer humidity effect on CO₂ flux eddy covariance meas. 2-111999
- cloud total water mixing ratio, measuring instrument calibration and performance 2-106358
- clouds, liquid water evaporation rel. to cloud-top entrainment instability observed during AMTEX 2-100475
- clouds, thermodynamic eqn., for deep moist convection 2-100422
- clouds water content, remote sensing using atmosphere microwave thermal radiation (*Russian*) 2-94472
- Delhi, India, heat and humidity islands physical features 2-111601
- determination of vertical profile by microwave radiometry method 2-94530
- dew-point hygrometry, for total precipitable water 2-58163
- evaporation from Padua mainland and nearby sea 2-68445
- forecasting procedure for surface humidity 2-73661
- humidity measurement electric circuits (*German*) 2-112163
- ice crystals, form. by artificial nucleation rel. to supercooled fog dissipation 2-100484
- icing in supercooled water droplet/ice crystal clouds 2-106258
- India, MM wave radioastronomy site testing 2-88977

atmospheric humidity continued

- Israel, potential evaporation inland distribution 2-78746
- layer relative humidity, extraction from satellite sounding radiometer data 2-63101
- marine air, relative humidity from air-water temp. difference 2-106289
- marine boundary layer, surface momentum, heat and moisture fluxes rel. to optical props. 2-117452
- marine boundary layer, temp. and humidity rel. to bulk transfer coeff. of turbulent fluxes 2-117384
- marine boundary layer, wind and relative humidity rel. to aerosol modelling 2-117389
- marine environments, wind speed and relative humidity rel. to aerosol modelling 2-117455
- measurement method for H₂O vap. conc., using Raman lidar 2-68495
- measurement of moisture fields, using satellite microwave and ground level data 2-63126
- measurements from scanning multichannel microwave radiometric meas. 2-73558
- Mediterranean Sea, atmospheric moisture transport and water balance 2-78695
- mesopause, H₂O concs. from nightglow emissions rel. to noctilucent clouds and radio wave absorpt. 2-112201
- Meteosat water vapour imagery for troposphere 2-83919
- Middle East, July lower troposphere, wind humidity and temp. 2-100496
- millimetre wave turbulence measurement, effect of humidity struct. and temp. struct. parameters 2-117395
- moisture content one-channel meas. using self-emission 1.35 cm H₂O line 2-68465
- summer monsoon over India, precipitable water and dew point relations 2-106271
- multifrequency acoustic sounding 2-94508
- precipitable water, determination from IR channel of Geostationary Meteorological Satellite 2-106276
- precipitable water vapour over Italy, IR astronomical site testing 2-83900
- primitive terrestrial atmosphere, stratosphere H₂O content in radiative-convective-photochemical models 2-112135
- psychrometric tables, draft proposal for novel system 2-73714
- Puerto Rico trade wind cumulus boundary layer, high order one dimens. model 2-78771
- remote sensing, moisture sounding at millimetre wavelengths (94/183 GHz) at high altitudes 2-117480
- remote sensing by TIROS-N infrared imagery method 2-88978
- remote sensing of humidity and temp., appl. of meteorological lidar developments 2-106335
- remote sensing of precipitable water by Nimbus 7 microwave radiometry method 2-100587
- severe storm environment, VISSR atmospheric sounder simulation expt. 2-106334
- snow relocation, wind speed, snow concentration and humidity vertical profiles 2-111970
- solar radiation absorption by H₂O, heating, effect on surface press. 2-106255
- stationary front clouds model, including temperature and humidity effects 2-100516
- stratosphere H₂O conc., influence of cumulonimbus 2-112029
- stratosphere water balance and effect of cumulonimbus 2-112025
- thunderstorms, D content in water vapour entering storm 2-78776
- TIROS-N moisture data use in numerical weather prediction 2-100457
- transmittance in 17.5-23.5 μ m band, depend. on humidity (*Russian*) 2-73629
- transport numerical modelling (*Russian*) 2-106218
- tropical easterly waves, four dimensional anal. of condensation during GATE period 2-100466
- tropical storm Agnes transformation into extratropical cyclone, moisture, vorticity and kinetic energy budgets 2-112012
- tropical stratosphere H₂O conc. due to cumulonimbus 2-112028
- troposphere, effect of high humidity on millimetre-wave propag. 2-117392
- troposphere, O₂ and H₂O millimetre-wave spectra rel. to model for atmospheric reson. transmission 2-117394
- troposphere-stratosphere system, heat and moisture exchange, zonally averaged model (*Russian*) 2-73627
- vapour balance equation, appl. to long-range precip. prediction (*Chinese*) 2-88943
- vertical profiling, Fourier spectrometer appls. 2-78878
- water vapour, microwave excess path length estimation by max. likelihood method, multialgorithm program 2-106290
- water vapour content from radiometric meas. 2-117385
- water vapour field assoc. with subsynoptic system, effect on numerical forecasting expt. (*Chinese*) 2-88947
- water vapour measurement, appl. of portable monitor for day or night use 2-106543
- water vapour remote sensing, use of 1.348 cm absorpt. band (*Chinese*) 2-78886
- H₂O conc. variability in mesosphere, microwave emission study 2-78755
- LiCl dew point measuring apparatus, modified, use (*German*) 2-73716

atmospheric ionisation

- see also *atmospheric radioactivity; ionosphere*
- E-region, daytime ion and NO densities, steady-state model 2-78910
- exosphere, contrib. to ions to nonthermal escape mechanisms 2-112359
- F-region, mid-latitude, photoelectrons spectrum rel. to plasma stability 2-106384
- F-region, midlatitude, night-time collapse rel. to occurrence time of equatorial midnight temp. bulge 2-100637
- F-region, nightglow meas. rel. to contrib. of atmospheric movements to maintenance of electron conc. 2-73748
- F-region high-latitude irregularities due to precipitation 2-94553
- ionosphere, electron content at mag. equator 2-106385
- ionosphere, electron density reduction and HF phase path fluctuation during solar eclipses (1980 February 16) 2-106386
- ionosphere hydrated cluster ion formation rates and winter anomaly 2-63168
- low-energy particles in upper and middle atm., interaction model 2-73813
- mesosphere sounding rocket determ. of electron and ion densities 2-63122
- plasmopause-plasmasphere, electron density struct. and dynamics, (1977 July 6 and 14) (*French*) 2-106382

atmospheric ionisation continued

- precipitating protons, ionisation and electron flux determ. method 2-106355
- radio meteor ionisation columns, initial radii meas. determ. method 2-63107
- solar radiation intensity and ion production rate, in upper atmosphere, vertical profiles (*Chinese*) 2-100624
- stratosphere, ion nucleation, potential aerosol source 2-106266
- stratosphere negative ion composition 2-106256
- N₂ photoionisation by 304 Å solar UV 2-89063
- O photoionisation by 304 Å solar UV 2-89063
- O⁺-P state production by electron impact in auroral region 2-89064
- O⁺ diffusion equation in ionospheric F₂-layer, approximate soln. 2-112193
- O₂⁺, reaction paths to water clusters in cold mesosphere 2-100499

atmospheric light propagation

- aerosol, synthetic, aqueous, pulsed clearing by CO₂ laser radiation 2-65279
- aerosol angular scattering functions, effects of particle comp. and shape on size distrib. retrieval 2-58118
- aerosol effects, implications of aerosol composition in marine and coastal boundary layer 2-117390
- aerosol IR backscattering profiles at 10.6 microns 2-100548
- aerosol optical props., information content rel. to size distrib. 2-108787
- aerosol particle light absorpt. meas., photometric and calorimetric techniques 2-53812
- aerosol-scattered background light, spatial-freq. depend., atm. modulation transfer function 2-78836
- aerosols growth to fog, optical props. 2-117451
- aerosols optical thickness over oceans, satellite meas. 2-117454
- blue-green pulse temporal and ang. spreading in clouds 2-94486
- boundary layer, refr. index struct. parameter determ. using sodar 2-100432
- cloud, sub-pixel sized, effect on ground target discrimination from satellite data 2-106307
- cloud optical feedback and climate stability in a radiative-convective model 2-94485
- continuum attenuation in surface layer (*Russian*) 2-100552
- correction factors calc. for light rangefinder meas. 2-100556
- differential spectral reflectance effect on DIAL meas. 2-100545
- emergent radiance in solar spectral range, appl. to vicarious calibration of Meteosat-1 satellite 2-112297
- fires, IR, radar and visible radiation 2-117386
- flux scintillations of incoherent radiation in turbulent atmosphere 2-68490
- fog, effect of aerosol on fog microstruct. 2-117391
- fog microstructure, effect of aerosol 2-117391
- ground reflectance in optically thin atmosphere, Landsat digital counts 2-73553
- haze aerosols, effect on atmospheric light transmission 2-117459
- IR absorption, band model rel. to incoming longwave atmospheric radiation from clear sky 2-100555
- IR laser beam reflected through atm. folded paths, scintillations 2-58124
- irradiance fluctuations in a turbulent medium, universal statistical model 2-94495
- lapse-rate sensing, remote, using atm. refr. over complex terrain 2-63085
- laser, high-energy, interaction with aerosols, vaporisation front, solitary wave 2-83941
- laser back-scatt. in low-atmos., spatial inhomogeneities (*Russian*) 2-58121
- laser backscatter, appl. to three-dimensional vector velocimetry 2-58132
- laser beam atmospheric scintillation space correl. in Shanghai (*Chinese*) 2-68485
- laser beam in turbulent atmosphere, correl. of shifts of optical images 2-117464
- laser beam power fade, system and atmospheric effects 2-100547
- laser beam propagation, ang. scatt. and intensity scintillation meas. 2-117460
- laser beam propagation, meas. of turbulence-induced beam spread and wander at 1.06, 3.8 and 10.6 µm 2-117458
- laser beam propagation, rel. to meteorological lidar developments 2-106335
- laser beam wave front sensing and correction in turbulent atm., different wavelengths use 2-78837
- laser irradiance scintillation suppression in nonlinear defocusing medium 2-78838
- lidar echo from geometrically and optically thin aerosol layers 2-83942
- line-of-sight optical link at 8.5 km range, atm.-induced beam extinction and scintillation influence 2-94489
- long-range laser measurements influence of atmospheric conditions on accuracy 2-100557
- marine atmosphere, ang. scatt. and IR extinction coeffs. from modified gamma aerosol distrib. 2-117453
- marine atmosphere 2-117455
- marine boundary layer, aerosol modelling rel. to atmosphere optical props. 2-117389
- marine boundary layer, meteorological models for optical props. 2-117452
- mesosphere, sunlight extinction and scattering by dust at 60 km 2-112131
- Mie laser radar obs. of convective cell structs., image data processing 2-112149
- modulation transfer functions, effects of turbulence rel. to limiting resolution of electro-optical devices 2-117457
- moving turbulent atmosphere with scatt. thermal nonlinearity, optical beam instability 2-55076
- multimode laser field phase fluctuations in turbulent atm. 2-97052
- multipass laser beam propag. through laboratory-simulated atm. turbulence, irradian. fluctuations, statistical meas. 2-90812
- multiple scattering corrections to Beer-Lambert law, open detector 2-96835
- optical propagation in low visibility weather conditions, integrated approach 2-106316
- optical turbulence, preliminary shipboard meas. 2-117456
- passive optical sounding in homogeneous atm., eqns. (*Russian*) 2-106310
- path-length fluctuations in inhomogeneous medium (*Russian*) 2-100551
- phase functions of natural particles 2-117447
- polarisation of diffuse radiation, iterative radiative transfer code for ocean-atmosphere systems 2-100554
- pulsed ranging accuracy, effect of atm. turbulence 2-112132

atmospheric light propagation continued

- radiometric meas. at sea level, water vapour content determ. 2-117385
 - refraction, numerical computations (*Japanese*) 2-68491
 - Roque de Los Muchachos, La Palma, solar seeing and atmospheric turbulence meas. 2-73683
 - scattering atmosphere, freq. separated waves 2-108794
 - scattering coefficient of forest fire smoke, relation to particulate matter conc. 2-105617
 - scintillation saturation by strong turbulence, plane-wave variance, covariance and spherical-wave covariance 2-55069
 - stratosphere, attenuated solar irradiance meas. rel. to O₂ Herzberg continuum absorpt. 2-100550
 - stratosphere aerosol, obs. of enhanced lidar backscattering over central Europe during (1981) 2-100450
 - sunlight, vertical profiles of radiation intensity and ion prod. rate in upper atmosphere (*Chinese*) 2-100624
 - thermally bloomed oscillating atm. effect on high-power laser beam 2-94491
 - trajectory elongation on paths with localised refr. index inhomogeneities of air 2-106277
 - transmission, conf. (Washington, DC, April 1981) 2-84370
 - transmission variations, implications for field meas. of Earth surface reflectance 2-112142
 - troposphere, radiative flux meas. 2-58119
 - turbidity at Ann Arbor due to Mount St. Helens volcanic cloud 2-78842
 - turbulence modulation noise in optical heterodyne receiver, approx. anal. 2-63095
 - turbulent atmosphere, distrib. of intensity fluctuation 2-63096
 - turbulent atmosphere, phase problem soln. of coherence theory 2-108793
 - UV propagation, influence of cloud amount, horizontal visibility and O₃ on global UV radiation at ground level 2-100462
 - velocity measurement of objects moving beyond turbulent layer, accuracy estimate 2-112876
 - visibility, comparison of lidar and transmissometer over slant and horizontal paths 2-106315
 - visibility in Houston, Texas, rel. to aerosol comp. 2-112124
 - West Germany, winter fog and haze in Meppen 80, optical/physical props. 2-117449
 - wind speed, correlational LIDAR meas., atmosphere transparency fluctuations effects 2-106308
 - CO₂ IR laser beam retroreflected through a turbulent atm., statistical props. 2-100561
 - He-Ne visible laser beam retroreflected through a turbulent atm., statistical props. 2-100561
- atmospheric measuring apparatus**
see also air pollution detection and control; ionospheric measuring apparatus; meteorological instruments
- acoustic range and detection equipment, anal. of fundamental eqn. (*Russian*) 2-55375
 - aerosol samplers, evaluation of four types along roadways 2-105631
 - aethalometer for real-time aerosol absorption meas. 2-112146
 - air pollution measurement with new tethered radiosonde design 2-67904
 - air-sea interaction, instruments and methods, book 2-94917
 - airborne laser fluorosensors, transfer model inc. water Raman scattering 2-112122
 - Aircraft Dropwindsone System in Global Weather Experiment 2-106328
 - automatic all sky scanning radiometer 2-94516
 - buoy used for wind meas. in STREX program 2-112057
 - BUV satellite-borne O₃ sensor, rocket ozonesonde validation 2-100568
 - calorimetric apparatus, appl. to meas. of incoming longwave atmospheric radiation from clear sky 2-100555
 - CCN counters, workshop, Reno, Nevada (Oct. 1980) 2-89439
 - cloud droplet size meas., calibration of light-scatt. counter 2-58162
 - cloud total water mixing ratio, measuring instrument calibration and performance 2-106358
 - Dynamics Explorer mission, spin-scan auroral imaging photometers 2-58226
 - echosonde design and devel. 2-117487
 - electron and proton spectrometer for satellite meas. of magnetosphere 2-73715
 - Energetic Ion Composition Spectrometer (EICS) for the Dynamics Explorer-A 2-58179
 - entomological radar, potential appl. to study of sea-breeze fronts 2-100529
 - EUV imaging spectrometer for thermospheric emissions 2-112147
 - Fabry-Perot interferometer, triple etalon, appn. in meas. of atmospheric absorption lines and stratospheric winds 2-68517
 - Fabry-Perot Interferometer on Dynamics Explorer 2-58176
 - flux-gate direction meter for use with anemometer operating at sea 2-78883
 - Fourier spectrometer appls. 2-78878
 - GMS-2 geostationary meteorological satellite, USB Tracking, Telemetry and Command system (*Japanese*) 2-83965
 - ground based total O₃ spectrophotometers comparison 2-106263
 - haze aerosol measurements, use of lidar 2-117459
 - haze measurement method using dial radiometer 2-94528
 - High-Altitude Plasma Instrument for Dynamics Explorer-A 2-58180
 - intensified CCD for spaceborne spectrographic image-plane detector 2-112148
 - interferometer, fast scanning, for meas. of atmospheric effects on limiting resolution of electro-optical devices 2-117457
 - interferometer imaging sounder for temp. remote sensing, optical system design 2-112159
 - ion drift meters, aperture separation upper limit 2-83949
 - Knollenberg aerosol counter, response meas. 2-94526
 - lightning direction-finding VHF radio receiver system (*Chinese*) 2-78861
 - lightning warning systems, operational comparison 2-106262
 - microchannel plate intensifier for atm. emissions photometric imaging expt. 2-78872
 - millimetre wave turbulence measurement, techniques and instrumentation 2-117395
 - moisture sounding radiometer, millimetre-wave, for high altitude remote sensing 2-117480
 - multiple solid state detectors, energy and primary mass determ. 2-75130
 - neutral mass spectrometer on Dynamics Explorer B 2-58178
 - optical discriminator-counter for atm. O₂/N₂ mol. ratio meas. using photomultipliers 2-68510
 - optical gas analyser, using Pb-salt diode laser, specific density determ. 2-57758

atmospheric measuring apparatus continued

- optical polarisation meas. in near UV, sky scanner system 2-73692
 phase-controlled VHF Yagi antenna design, lower and middle atmospheric structure, dynamics study appl. (*German*) 2-106360
 plasma wave and quasi-static electric field instrument (PWI) for Dynamics Explorer-A 2-58183
 polar conductivities of air recording, instrument for 0.01-1.0 Hz geomagnetic pulsations 2-117493
 radio emission, mm wavelength region meas. apparatus and procedures 2-58099
 rain sampler for subsequent chem. analysis 2-106327
 raindrop size and elec. charge meas. with disdrometer 2-63125
 raindrop size meas. with microphone device (*Japanese*) 2-58170
 raingauges used in mm wave propagation experiment program (*Japanese*) 2-58169
 rocket plume detection using satellite-borne submillimetre-wave radiometry at thermospheric altitudes 2-94575
 rocket plume radiometry using lab. H₂O jet simulation 2-90520
 scanning spectrometer system for atmospheric extinction studies in 350-1100 nm spectra region 2-53848
 solar radiation beneath cloud, meas. by dial radiometer technique 2-94528
 spaceborne scatterometer for ocean surface wind meas. 2-106351
 spectrometer, appl. to Earth surface refl. and Sun+sky irradiance meas. 2-112143
 sulphur particulates and H₂SO₄ airborne measurement apparatus 2-68497
 symmetric double floating probe for vector electric field meas. from DE-B 2-58182
 telephotometer, field testing and data analysis for prototype automated field instrument 2-112186
 telephotometer for meas. of contrast reduction of distant objects 2-68496
 temperature, remote meas. by radio acoustic sounding system (*Japanese*) 2-58171
 triaxial fluxgate magnetometer on Dynamics Explorer-A and -B 2-58208
 tunable diode laser spectrometer using sweep integration for high-sensitivity trace gas detect. 2-106325
 tunable laser radar system, flashlamp-pumped, for atmospheric Na layer obs. 2-94511
 two-dimensional virtual impactor for aerosol particle size meas., expt. and theoretical study 2-111605
 upper atmosphere, Meteor Wind Radar System at Waltair, Nagarpalem field station, meteor echoes 2-117491
 VISSR atmospheric sounder simulation experiment involving severe storm environment 2-106334
 portable water vapour monitor, for day or night use 2-106543
 Wind and Temperature Spectrometer on Dynamics Explorer 2-58177
 CO₂ computer-based meas. system, atmospheric and oceanic partial pressure determ. 2-58146
 O analyzer with semiconductor sensors, upper atmos. appl. 2-100584

atmospheric measuring instruments see *atmospheric measuring apparatus*

atmospheric motion see *atmospheric movements*

atmospheric movements

- see also *atmospheric turbulence*; *wind*
 2-3 week nonlinear resonances (*Chinese*) 2-78735
 adjustment to geostrophy, initial conditions of primitive eqn. model 2-73663
 aerosols, transport of Cl-rich particles into central and eastern United States 2-63062
 air pollution transport in valleys (*German*) 2-88936
 E Antarctica, katabatic winds due to large scale temp. inversions 2-106186
 Arabian Sea, tropical depression nature during SW monsoon onset 2-112078
 Asia, 500 mb daily circulation index (*Chinese*) 2-112090
 SE Asia winter monsoons, tropical motion mid-latitude forcing 2-78767
 tropical Atlantic, temp. and dynamics affected by intertropical convergence (*Russian*) 2-88897
 N Atlantic, zonal index and circulation change (19873-1972) 2-106178
 Atlantic hurricanes development, role of momentum eddy fluxes 2-78768
 Atlantic tropical cyclones, track forecasting 2-73615
 auroral ionosphere, irregularity drift speeds from STARE obs. of long discrete echoes 2-112217
 axisymmetric thermal convection in rot. fluid annulus 2-75956
 balloon ascent through horizontal winds, theory 2-94466
 baroclinic instability of a midlatitude zonal mean state changing with time 2-94476
 baroclinic instability of source-sink driven flow, theory for two-layer rotating fluid 2-103145
 baroclinic wave nonlinear vacillation dynamics 2-117409
 baroclinic waves, finite-amplitude inviscid dynamics at min. critical shear 2-100471
 baroclinically unstable disturbances of atmos., calc. of amplitudes 2-73635
 barotropic disturbances affected by topography and basic flow (*Chinese*) 2-112000
 barotropic model flows, intermittency, waves and predictability 2-78765
 Belgium, climatic variability, effect of general atm. circulation (*French*) 2-73670
 Bermuda, acid rain due to N.America pollution 2-78270
 blocking of global flow, mechanism 2-73631
 blocking of N Hemisphere flow, wave interaction theory 2-73632
 blocking waves dynamics within simple two layer model 2-106238
 boundary layer dispersion theory for non-uniform site 2-68403
 boundary layer flow over low hills, appl. of computer model to real terrain 2-100428
 NE Brazil drought, due to locally direct circulation forced by moist convection 2-78708
 Charney baroclinic instability problem, pulse asymptotics 2-100467
 China, thunderstorm development and convective activity from IR remote sensing 2-78820
 climate experiments with general circulation models, statistical evaluation, parametric time series modelling 2-112112
 cloud-top entrainment instability, obs. during AMTEX 2-100475
 cloudless convective layer with roll vortices, momentum flux and turbulence 2-106228
 cloudy atmosphere thermodynamics, moist convective overturning and saturation point anal. 2-112037
 collision of dipolar vortex states (modons) 2-78758
 atmospheric movements continued
 conference on air pollution long range transport, held at Albany, NY, USA (April 1981) 2-94905
 convection, thermodynamic eqn. for deep cloud convection 2-100422
 convection in a rot. laterally heated annulus, laboratory expts. 2-63031
 convection in rot. laterally heated annulus, laboratory expts. 2-63030
 convection oscill. produced by modulated heat input (*Russian*) 2-63032
 convective clouds, symmetrical CISK in baroclinic flow 2-106244
 convective stability, effects on determ. of sea surface stress by Seasat-SASS 2-83827
 convective stability, extraction from satellite sounding radiometer data 2-63101
 convective storms, jet stream config., 500 mb vorticity advection and low level thermal advection patterns 2-106192
 cooling-tower plume rise models (natural-draft towers) 2-63012
 Coral Sea, low-level trade winds 2-112069
 mid-Cretaceous general circulation and climate 2-106076
 cross-equatorial flow from Australia and the monsoon over China (*Chinese*) 2-88988
 cross-equatorial response to middle-latitude forcing in a zonally varying basic state 2-106221
 cumulus, fair-weather convection, model 2-68416
 cumulus and cumulonimbus vertical transport, energy budgets 2-100436
 cumulus convection effect on midlatitude quasi-geostrophic weather systems 2-73665
 cumulus convective activity of GATE modulated by large scale flow 2-117411
 tropical cyclone development in westerly airstream, model 2-78745
 cyclone formation energetics at middle latitudes 2-100521
 cyclone movements effect on press. and geomag. var. (*Russian*) 2-105919
 daytime convective boundary layer, vertical vel. field, acoustic Doppler sodar obs. 2-111993
 diffusing cloud in boundary layer, ground-level trajectory 2-94421
 diffusion equation for short-range dispersion from continuous ground-level source, approximate analytical soln. 2-100431
 diffusivity profiles from synoptic reports 2-94420
 dispersion of pair of particles, Lagrangian Monte Carlo calc. 2-68458
 dust movement in point-grid corona discharge, laser anemometry study (*French*) 2-94454
 E-region at high latitude, plasma wave amplitudes and turbulence 2-106402
 Earth radiation budget study, use of general circulation model 2-88983
 Earth rotation variations rel. to weather and climate (*Chinese*) 2-112005
 easterly waves over tropical Atlantic, four-dimensional anal. expt. during GATE period 2-100466
 Eliassen-Palm flux for planetary scale movement 2-106237
 energy spectra, strong effects of non-quasigeostrophic dynamic processes 2-106234
 equatorial beta-plane low wavenumber instability 2-112032
 equatorial middle atmosphere, inertial stability 2-78894
 Europe, wintertime zonal circulation 2-68452
 extratropical cyclone producing severe storms, available potential energy budget 2-112017
 F-region, nightglow meas. rel. to contrib. of atmospheric movements to maintenance of electron conc. 2-73748
 F-region collisional drift waves, instability with field-aligned currents 2-100650
 F-region ion drifts in polar cusps region 2-100644
 F-region irregularity velocity characs. 2-106397
 Ferrel cell circulation forcing, importance of zonal momentum and heat eddy transport 2-68446
 S Florida, convection rel. to peninsular-scale forcing 2-112015
 flow averaging procedures for vegetation canopies 2-68501
 flow modelling as internal wave filtration problem (*Russian*) 2-100464
 for vorticity, convergence and winds 2-117386
 forecasting intensity and motion 2-68442
 free oscillations of primitive eqns. of motion in spherical coords. (*Chinese*) 2-78738
 free Rossby waves, anal. of instability at finite amplitude 2-100472
 frontal overrunning and offshore-onshore temp. diff. across central Gulf Coast 2-83915
 GATE period, large-scale energetics of tropical disturbances 2-100437
 GATE tropical boundary layer, effects of deep convection 2-78769
 general circulation, twentieth century changes in winter climatic regions in United States 2-73672
 general circulation, zonal models which are zonal climate models (*Russian*) 2-73626
 general circulation in 1-D energy balance climate model 2-106300
 general circulation model, 60 day integrations used for monthly means dynamic predictability 2-78780
 general circulation model (barotropic), zonal filtering calcs. 2-63021
 general circulation model climate, effect of cloud-radiation feedback 2-78828
 general circulation model of large-scale features 2-68449
 general circulation model radiative transfer scheme 2-68460
 geomagnetic disturbances correl. with Vorticity Area Index 2-106269
 geostrophic wind subject to orographic forcing, theory (*German*) 2-100444
 N Germany, atm. convection, effect of soil moisture and orography (*German*) 2-100498
 global atm. pressure at sea level, primitive eqn. model (*Chinese*) 2-78744
 global circulation, barotropic model with orographic and momentum forcing 2-73636
 global circulation and importance of gravity waves (*Chinese*) 2-112001
 global circulation during FGGE special obs. periods 2-100504
 global Rossby waves, theory and obs. 2-94440
 gravity wave generation by thunderstorms 2-100446
 gravity wave heating, enhanced energy flux 2-83911
 gravity wave propagation, dispersion formula for modal interference 2-73742
 gravity waves, barotropic primitive eqns., computational stability 2-78818
 gravity waves, effect on image of low Sun 2-100560
 gravity waves detected by obs. of microwave emission fluctuations 2-63056
 gravity waves generated by quasi-geostrophic forcing, normal mode initialisation 2-100473
 Great Lakes, effects of atmospheric stability on evaporation 2-88919
 guided acoustic-gravity waves due to auroral electrojets 2-63156
 Hadley cell symmetric baroclinic instability 2-117412
 Hadley circulation, affect of stratosphere on stability of flow (*French*) 2-63063

atmospheric movements continued

- Hadley circulation, scheme for retention during nonlinear normal mode initialisation 2-112009
 hills of moderate slope in airflow, 3-D model 2-100506
 horizontal diffusion in atmos., Lagrangian dynamical theory 2-68404
 horizontal propagation of meteorological disturbances, latent heat release effects 2-68429
 India 1979 monsoon, onset delay, effects of extratropical blocking highs and flow patterns 2-112082
 Indian Ocean cyclone tracks, effect of upwellings and warm seas 2-68372
 Indian Ocean/Arabian Sea, monsoonal low level flows, pot. vorticity 2-78785
 Indian summer monsoon, coarse-mesh GCM studies 2-106176
 Indian summer monsoon, wave type identification 2-100517
 ionosphere, ion energisation by electrostatic H cyclotron waves, appl. to auroral plasma 2-73757
 ionosphere, lunar tides rel. to vars. in A1-absorption at low latit. during solar min. 2-106387
 ionosphere, midlatitude struct. and plasma convection 2-112205
 ionosphere, wave-like oscillation rel. to HF phase path fluctuation during solar eclipses (1980 February 16) 2-106386
 ionosphere auroral zone ions, transverse accel. mechanism 2-106392
 ionosphere gravity wave, Hines dispersion rel. test 2-106406
 ionosphere gravity wave disturbance seen in digital ionogram data 2-73763
 ionosphere-plasmasphere plasma flows, rel. to midlatitude electron density vars. in topside ionosphere 2-112194
 ionospheric inhomogeneities due to neutral gas motion in the dynamo domain (*Russian*) 2-94551
 January angular momentum balance in Oregon State University two level atm. general circulation model 2-106233
 January standing wave pattern, simulation including transient eddies effects 2-106222
 jet stream, low level, assoc. with subsynoptic system, numerical forecasting expt. (*Chinese*) 2-88947
 jet stream formation at low level over China (*Chinese*) 2-112095
 July circulation in semi-arid regions, surface albedo effect 2-106175
 Lake Michigan lake-effect snow storm, boundary layer struct. and horizontal roll convection 2-112038
 large-scale circulation, nonlinear model of long waves 2-68450
 lateral dispersion in boundary layer from continuous sources 2-106167
 liquid natural gas, spills, vapour dispersion simulation 2-99865
 long-period oscill. at 60 to 110 km altitude 2-94546
 long-period thermodynamic oscillations of ocean-atm. system 2-78689
 long-wavelength nonlinear wave propagation equations 2-63067
 Los Angeles Basin, pollutant ventilation and summertime circulation 2-105627
 lunar tide (18.6 year) seen in Japanese air press. data 2-73619
 magnetopause plasma convection due to ion drift waves 2-84044
 magnetosphere, effect of nonadiabatic regions in dipole mag. field on charged particle motion 2-112226
 magnetosphere, polar cap, plasma convection with interplanetary mag. field component 2-68564
 magnetosphere convection causes, review of developments during International Magnetospheric Study 2-112261
 magnetosphere plasma convection rel. to geomag. vars. inside auroral oval, effect of northward interplanetary mag. field 2-112293
 magnetosphere plasma wave research in International Magnetospheric Study 2-112265
 magnetosphere polar cap region convection effect of solar wind and magnetotail parameters 2-73789
 magnetosphere suprathermal region, ion accel. and distrib. due to lower hybrid mode interactions 2-73788
 marine boundary layer, horizontal and vertical transport rel. to aerosols modelling 2-117389
 meridional circulation, two-layer general model of climate 2-94484
 meridional energy transfer in ocean and atmos. (*Russian*) 2-73566
 mesopause, horizontal structure, gravity wave interpretation 2-100500
 mesoscale buoyancy or gravity waves, power spectra study 2-100447
 mesoscale lifting, effects on cumulus cloud model and hail forecasting (*Chinese*) 2-88945
 mesoscale lows over E China, formation and maintenance (*Chinese*) 2-112089
 mesoscale mean flows with turning, stability props. 2-73662
 mesoscale wind variability in lower 5 km of atmos. 2-112065
 mesosphere, gravity wave induced drag and diffusion in momentum budget 2-106373
 mesosphere, gravity waves and diurnal tides, VHF radar obs. 2-83910
 mesosphere, internal gravity waves saturation 2-106374
 mid-latitude ionospheric thermal plasma, dynamic interaction with plasmasphere, review 2-83987
 middle atmosphere slowly modulated sinusoidal wave disturbances, radiative damping 2-106248
 middle atmosphere zonally symmetric Hough modes and meridional circulation 2-106236
 midlatitude mature transient waves, condensational heating effects, GFDL general circulation model anal. 2-78779
 mixed layer depths, obs. comparison with models, use of temp., wind and MOS forecasts 2-78805
 monsoon, fluid dynamics 2-83924
 SW monsoon, instability study of onset-vortex 2-100525
 monsoon climate/general circulation model, with Earth orbit changes 2-117435
 monsoon onset conditions, sensitivity to differential heating 2-117413
 mountainous region atmos. flow and effect of Coriolis force (*Russian*) 2-78759
 mountainous region wind fields, multi-level fine-mesh model 2-63017
 nightglow intensity variations due to vertical motion of atmos. 2-68545
 north hemisphere, ultra long waves oscillation rel. to cold air outbreaks 2-78823
 north hemisphere circulation features by 2-D quasigeostrophic model (*Chinese*) 2-112092
 Northern Hemisphere, barotropic instability of winter zonal flow 2-73633
 Northern Hemisphere, general circulation in summer 2-83902
 Northern Hemisphere winter blocking and cyclogenesis, unified three dimens. instability theory 2-106235
 orographic rain, differential advection model 2-106201
 oscillations of stratosphere due to forced planetary waves 2-73639
 oscillations vertical structure, classical tidal theory formulation 2-63064

atmospheric movements continued

- Pacific atmos. circulation, CO₂ conc. variability study 2-112064
 equatorial Pacific dynamic response to sea surface temp. anomalies 2-117410
 equatorial Pacific Ocean, effect of ocean thermal state on latitude circulation and typhoons freq. (*Chinese*) 2-88941
 Pacific Ocean, tropical, circulation changes and IR emission 2-106249
 N Pacific subtropical high interaction and E Pacific SST (*Chinese*) 2-112093
 Pc 3 micropulsation and Alfvén/magnetosonic wave excitation 2-106427
 planetary vortices, nonlinear hydrodynamic stability 2-100563
 planetary wave propagation in stratosphere and mesosphere, mid-latitude ground-based lidar study 2-106253
 planetary waves, meridional shear effects and critical latitudes 2-106225
 planetary waves, meridional shear effects for nonsingular wind profiles 2-106224
 plasmapause-plasmasphere struct. and dynamics results from ground-based and satellite obs. of whistlers (*French*) 2-106382
 plasmasphere, refilling of geomag. force tubes with thermal plasma after mag. disturbance 2-106383
 plume progress over Ghent, EEC air pollution meas. campaign 2-93964
 plumes, source size effect on conc. fluctuations 2-78731
 pollutant dispersal from point source, turbulent-diffusion theory 2-100519
 pollutant long-range transport model 2-94465
 pollutant long-range transport model 2-100520
 pollutants in coastal environment, plumes convective downmixing 2-78269
 pollutants interregional transport, case studies of measurements versus model predictions 2-99860
 primitive equation global models, dynamics part error detect., use of normal mode initial conditions 2-106200
 primitive terrestrial atmosphere, radiative-convective-photochemical models rel. to vertical thermal struct. 2-112135
 puff growth into Ekman layer 2-105626
 quasigeostrophic fields stability induced by pot. vorticity, appl. to oceans and atm. 2-65569
 radiative convective models, effect of anomalous IR H₂O vapour absorpt. 2-106313
 relative dispersion of particles in atoms, theory 2-68457
 rising buoyant plumes, mean path with allowance for ambient turbulence (*Chinese*) 2-88946
 Rocky Mountains standing wave momentum exchange with ground 2-100507
 Rossby solitons, stability (*Russian*) 2-109347
 rotating Hadley cell, baroclinic instability 2-73634
 rotating thermally driven flows, high vorticity regions 2-81346
 Sahara dust transported eastward by wind 2-68408
 seasonal climatology of large scale atmospheric features 2-106301
 seasonality of circulation response to sea-surface temp. anomalies 2-83903
 semidiurnal tide at equinoxes improved heating rates and wind related influences spectral anal. 2-78764
 severe convective weather, occurrence conditions 2-78819
 ship waves in lee of isolated topography, three-dimensional model 2-100474
 slope plumes induced by surface temps., 2-D linear theory 2-63022
 smoke plume dispersal over sea, aerial photograph obs. (*German*) 2-63060
 Soufriere volcano, ash transport across Atlantic to Africa 2-106056
 South America summertime upper troposphere vorticity budget from cloud wind data 2-106193
 Southern Hemisphere, dispersion of TWERLE balloons released at 150 mb level 2-73644
 Southern Hemisphere eddy statistics, at 500 mb 2-78782
 Southern Hemisphere flows, disturbances, scale selection and energy spectra 2-78781
 Southern Oscillation, role of Pacific sea surface temp. anomalies 2-117410
 Southern Oscillation and influence on oceans 2-100497
 Southern Oscillation rel. to changes in Earth rotation rate 2-58101
 sporadic-E layer dynamics studied by dopplionogram method 2-73711
 springtime reversal of stratospheric circulation at 30 mb level 2-117381
 stationary eddies, heat and momentum horizontal transport 2-100438
 stationary planetary waves forced by topography and diabatic heating 2-117408
 steady state fronts strct., momentum/heat diffusion effects and condensation/surface motion effects 2-78766
 stochastically driven large-scale circulations with multiple equilibria 2-78783
 storm trajectories in E. United States, determ. from D/H isotopic comp. of precipitation 2-68444
 stratified airstream heating, and prod. of vertically propag. waves 2-88982
 stratosphere, equatorial beta plane model, equatorial Kelvin and mixed Rossby gravity waves 2-88980
 stratosphere, planetary waves and transport of trace chemicals 2-78788
 stratosphere, winter high latitude planetary waves from temp. anal. 2-106240
 stratosphere 2-88979
 stratosphere equatorial wave mean flow interaction in equatorial beta plane model 2-88981
 stratosphere fountain postulated from temp. anal. 2-78789
 stratosphere warnings, effect of forced planetary waves in continuous baroclinic shear 2-78778
 stratospheric warming and associated circulation changes, model 2-100501
 subsynoptic scale baroclinic instability 2-106242
 surface layer, meas. of streamwise heat flux budget 2-100427
 Sweden, air movements rel. to possible origins of airborne Hg 2-68467
 symmetric instability due to horizontal shear on equatorial beta plane 2-109282
 synoptic and subsynoptic subtropical weather systems, theory (*Chinese*) 2-78739
 synoptic kinetic energy exchange with sub-synoptic scale motion (*Chinese*) 2-78737
 synoptic wave perturbations during TROPEX 72 and GATE 2-106288
 tetron flights across a ridge, pollutant dispersion calc. appl. 2-111995
 thermal ion flows, transverse acceleration effect on auroral topside ionosphere 2-100651
 thermal plume, air motion measurement techniques comparison 2-106260

atmospheric movements continued

- thermally driven motions in equatorial β -plane, Hadley and Walker circulations during winter monsoon 2-112010
 thermals, simulation 2-106284
 lower thermosphere, effect of gravity waves on O+O₂ comp. 2-112187
 lower thermosphere, gravity wave propagation, study of nightglow variations (*Russian*) 2-73737
 thermosphere, in-situ generated gravity waves as seeding mechanism for equatorial spread-F 2-112215
 lower thermosphere, planetary-scale waves in zonal winds 2-89058
 thermosphere, tidal, gravity and planetary waves, radar obs. over Budrio, Italy 2-100610
 thermosphere global circulation and temp., influence of magnetosphere 2-73738
 thermosphere gravity wave generation by Bay of Bengal cyclone centres 2-117407
 thermosphere gravity wave propagation causing ionosphere electron content perturbations, assoc. TIDs 2-100638
 thermosphere oscills. at midlatitude seen in Doppler spectra obs. 2-100608
 thermosphere semidiurnal propagating tidal modes, assoc. wind and temp. struct. 2-106375
 thermosphere winds at high-latitudes 2-73741
 three dimensional airflow during heavy rainfall and severe convective weather 2-78819
 thunderstorm forecasting, 500 mb cyclonicity effects 2-83918
 tidal winds in mesosphere, obs. from Australia and Japan 2-63047
 tide measurement, O₂ UV absorpt. as main forcing component, method for solar UV variability 2-63266
 tides, effect on wind and temp. var., solar and lunar semidiurnal components 2-106252
 tides, model description and solar diurnal component 2-106251
 topography interaction with long quasi-stationary baroclinic waves 2-106239
 travelling ionospheric disturbances and thermosphere gravity wave, review 2-106379
 tropical circulation over ocean influenced by sea temp. anomalies (*Chinese*) 2-112004
 tropical convection during GATE, review 2-58112
 tropical cyclones over Arabian Sea and Bay of Bengal, trochoidal movement 2-88972
 tropical easterly jet, numerical model of barotropic instability 2-73637
 tropical forcing causing large scale stationary waves 2-100502
 tropical region summer-mean flow 2-73664
 tropical storm Agnes transformation into extratropical cyclone, observed fields and vertical motions 2-112011
 tropical storm Agnes transformation into extratropical cyclone, moisture, vorticity and kinetic energy budgets 2-112012
 tropical waves, basic current latitudinal shear effect 2-63057
 troposphere, enhanced wave propag. rel. to numerical modelling of stratospheric sudden warming 2-100477
 troposphere, planetary waves rel. to Northern Hemisphere geopotential height and temp. patterns 2-100469
 troposphere upper cold low in western North Pacific, movements from GMS satellite data 2-100461
 turbulent diffusion, rel. to air pollution, full tensor calcs. 2-99861
 turbulent dispersion from line source, model 2-83879
 typhoon track forecasting over NW Pacific Ocean, statistical anal. of positioning errors (*Chinese*) 2-88948
 typhoons in Intertropical Convergence Zone, assoc. circulation 2-78822
 ultralong waves predictability in global and hemispheric quasi-geostrophic barotropic models 2-106223
 unstable disturbances in westerly and easterly current (*Chinese*) 2-112002
 upper atmos. movements caused by 2-D motion of Earth's surface 2-112188
 upper atmosphere, dynamical cooling induced by dissipating internal gravity waves 2-73736
 upper atmosphere density perturbation, travelling atm. disturbances and large scale winds effects 2-106376
 upstream blocking, mesoscale obs. 2-88985
 velocity fluctuations, power spectrum at 8 km and 86 km 2-100449
 vertical dispersion parameters estimation in 10 km range 2-78887
 vertical motion, altitude depend. from mass continuity eqn. and thermodynamics 2-68441
 vertical struct. of forced circulation in tropics 2-68451
 vertically averaged meridional momentum transport statistics for January global distrib. 2-112045
 vortex at low latitude in upper atmospheric level over Brazil, METEOSAT IR obs. 2-111992
 Walker circulation in tropics, stability anal. 2-100468
 wave cyclone development, latent heating effects 2-112041
 west wind jet in Southern Hemisphere 2-100443
 wind semidiurnal, oscills. in tropical lower stratosphere 2-68433
 winter zonal circulation in lower stratosphere and upper troposphere 2-88949
 zonal circulation, effect of momentum and heat sources in quasi-geostrophic model 2-73620
 zonal circulation, six-component two-level model (*Russian*) 2-100463
 zonal mean flow of atmos. up to 100 km, 3-D global model 2-73638
 CO diffusion near highways, numerical model 2-112007
 CO₂ in boundary layer, flux, eddy covariance meas., heat/water vapour transport effects 2-111999
 O⁺ diffusion equation in ionospheric F₂-layer, approximate soln. 2-112193
 SO₂, air pollutant long-range transport model (*German*) 2-94424

atmospheric noise *see* **atmospherics****atmospheric optics**

- see also* **airglow**; **atmospheric light propagation**; **sky brightness**; **sunlight**; **twilight**
 aerosol, backscatt. spectra for nonabsorbing accumulative fraction, calcs. 2-117425
 aerosol, optical props. variability of submicron fraction (*Russian*) 2-63090
 aerosol, polydisperse, aqueous, bleaching by 10.6 μ m laser radiation 2-117465
 aerosol cones, and turbidity (1959-70) over China (*Chinese*) 2-88994
 aerosol investigation by expt. transmittance data inversion 2-112118
 aerosol layers, tropospheric, shortwave radiative props. evaluation uncertainties, expt. and numerical errors 2-94490

atmospheric optics continued

- aerosol light scattering and influence on visibility 2-68481
 aerosol optical depths and valid range of Angstrom's formula (*Chinese*) 2-89006
 aerosol plume optical extinction, effect of particle coagulation 2-94487
 aerosol remote sensing, soln. of radiative transfer eqn. 2-117461
 aerosol size distrib. from spectral optical depth obs., linear inversion theory 2-117488
 aerosol spatial-frequency and wavelength-depend. effects on atm. MTF 2-106314
 aerosols, magnetoelectric, disperse content determ. using spectral-transparency method 2-68487
 albedo of Earth due to fractional cloud cover 2-117439
 astrometric parallaxes and detection of dark companions: atmospheric limitations 2-58231
 backscattered UV radiation, multiple scatt. and atm. lower boundary effects 2-112121
 boundary layer mixing depth influence on long path light extinction 2-68482
 boundary layer over coastal sea, elevated refr. layers due to land breeze 2-68463
 California, USA, visibility trends 2-83943
 Canary Islands astronomical site testing in 1979 in JOSO campaign, seeing obs. 2-84091
 cirrus temp. determ. by far IR spectral emission method 2-94529
 cloud effects on blue-green light pulse propagation 2-94486
 cloud shape effect on radiative characs. of clouds 2-63088
 cloud top remote sensing by airborne lidar 2-94502
 cloudbow in cirrostratus 2-68492
 clouds, radiative transfer eqns. for horizontal inhomogeneous media (*Russian*) 2-94493
 conference, atmospheric effects on electro-optical infrared millimeter systems, at San Diego, CA (August 1981) 2-112644
 contrast transmittance estimation, assessment of operational techniques 2-117448
 correction factors calc. for light rangefinder meas. 2-100556
 cumulus albedo and extinction coeff. 2-73685
 dual laser beam propagation for meas. of trace gas conc. (*Russian*) 2-73729
 Eddington-type solar flux calcs. 2-78832
 extinction, particulate spatial distrib. meas. with telephotometer 2-93967
 extinction corrections, smooth temporal var. 2-106317
 fire plume, method for optical effects determ. 2-117479
 geological remote sensing, thermal inertia mapping 2-73728
 gravity waves, effect on image of low Sun 2-100560
 green flash of setting Sun and laser beam propagation study 2-106318
 ground reflectance in optically thin atmosphere, Landsat digital counts 2-73553
 haze light scatt. and colour, theory 2-68483
 hazy atmosphere light extinction scale height features 2-112127
 hourly insolation for a site, calc. from average daily insulations 2-88973
 India, visibility assoc. with Andhi, effect of gravity dust settling 2-112130
 irradiance moments, high-order, of light wave obs. in turbulent air 2-89001
 Italy, IR astronomical site testing, turbidimeter data 2-83900
 laser back-scatt. in low-atmos., spatial inhomogeneities (*Russian*) 2-58121
 laser beam deflection fluctuations in marine boundary layer 2-78840
 laser beam propagation, rel. to meteorological lidar developments 2-106335
 lidar (infrared) obs. of cloud and aerosol from space, optical calcs. 2-94500
 lidar clear atmosphere multiple scattering dependence on receiver range 2-106306
 lidar equation for low visibility meteorological conditions (*Chinese*) 2-68484
 lidar remote sensing of clouds, aerosol, temp. and density satellite multispectral method 2-94501
 lighthouse beam optical phenomena and illusions 2-117440
 low-visibility weather conditions, integrated approach to atmospheric optical propag. 2-106316
 marine atmosphere, ang. scatt. and IR extinction coeffs. from modified gamma aerosol distrib. 2-117453
 marine atmosphere, preliminary shipboard meas. of optical turbulence 2-117456
 marine boundary layer, meteorological models for optical props. 2-117452
 measurement system for polarisation of near UV daylight 2-73692
 mediocre climate, photoelectric photometry possibilities in astronomy 2-112125
 millisecond light pulses in upper atmos., solar activity depend. occurrence 2-83981
 mirage in the laboratory 2-84411
 modulation transfer functions, effects of turbulence rel. to limiting resolution of electro-optical devices 2-117457
 outgoing spectral distrib. as meas. by Salyut-4 2-58123
 planetary albedo calculation 2-112356
 planetary albedo estimates from meteosat data 2-94492
 polarisation of diffuse radiation, iterative radiative transfer code for ocean-atmosphere systems 2-100554
 radiative energy transfer calc. method for general circulation models 2-68460
 radiative relaxation of temp. perturbations theory (*Russian*) 2-73684
 radiative transfer eqn. for vertical inhomogeneous absorpt. case (*Russian*) 2-78833
 rainbow brightness, theory 2-112120
 refractive index meas. in near water regions (*Russian*) 2-58125
 refractive index profile deduction from measured refraction values (*Russian*) 2-63089
 refractometer measurement using helicopter (*Russian*) 2-58126
 remote sensing by thematic mapping atlas. optics effect 2-111924
 remote sensing of atmos. radiation flux by satellite, theory (*Russian*) 2-117463
 satellite images in presence of thin clouds, atm. corrections 2-68486
 scanning spectrometer system for atmospheric extinction studies in 350-1100 nm spectra region 2-53848
 sea surface radiation, polarisation characs. (*Russian*) 2-58122
 seeing as limitation on astrometry of stellar 11 μ m sources 2-94580
 snow optical properties, review 2-89005

atmospheric optics continued

- solar disk obs. by Salyut-6 for vertical temp. and density profiles (*Russian*) 2-58098
- solar eclipse shadow zones on surface of Earth, TIROS-N obs. 2-68489
- solar radiation as albedo function of sea-air system (*Russian*) 2-89003
- spectral properties of radiation in lower atmosphere, investigation by modelling method 2-117462
- stellar images, scintillation wavelength dependence meas. at Mauna Kea, Hawaii 2-73681
- stratocumulus, solar and emitted thermal radiation 2-63020
- sulphate and nitrate aerosols influence on visibility 2-68480
- telephotometer for meas. of contrast reduction of distant objects 2-68496
- transmittance occurrence frequency in several wavelength regions, Ypenburg airfield, The Hague (1977-81) 2-94488
- Tunguska meteor fall, 1908 June 30, anal. of physical, chemical, optical and historical impacts 2-106629
- turbidity and cloud cover rel. to solar spectral measurements in the terrestrial environment 2-73682
- turbidity coefficients evaluation and comparison in semi-rural site 2-73687
- turbulence, path-averaged inner scale meas. by spatial filtering of optical scintillation 2-68401
- turbulent light propagation intensity statistics 2-112117
- ultraviolet albedo variability of Earth at tropical latitudes 2-68488
- UV light scattering of outgoing radiation (*Russian*) 2-58120
- UV scatt. of 58.4 nm reson. radiation field in He geocorona 2-83980
- visibility in Houston, Texas, rel. to aerosol comp. 2-112124
- visibility of aerosols, rel. to cloud base height 2-100559
- visibility statistics obtained from airports in USA 2-68479
- visibility trend data, statistical anal. by ridits and cumulative percentiles 2-63086
- visible horizon calc. as function of altitude 2-107057
- visual contrast, effects of atmosphere and man-made obscurants 2-117443
- water droplets with insoluble absorbing cores, IR absorpt., heat prod. 2-112128
- windblown dust effect on IR and optical visibility 2-117444

atmospheric pollution *see air pollution***atmospheric precipitation**

- see also ice; rain; snow*
- acid precipitation in S. California, spatial vars. 2-62519
- acid rain, acid-base considerations 2-78266
- aurora obs. indicating energy of precipitating particles 2-112190
- chemical composition (F^- , Cl^- , NO_3^- , SO_4^{2-}) of Greenland and Antarctic snow 2-78792
- climatic change determ. using precipitation data 2-83963
- climatic variability in the monthly sums of precipitation in the Northern Hemisphere 2-106282
- clouds, warm and cold, ions and precipitation charging 2-78773
- conference in France (June 1981) 2-84984
- Cooperative Convective Precipitation Experiment 2-100566
- dew acidity 2-94478
- droughts and floods, statistical approach to historical records 2-100485
- floods and droughts, statistical approach to historical records 2-100485
- fluoride in rainwater, ion-selective electrode measurement methodology 2-62534
- fog acidity 2-94478
- forecasts for 12 hour period, radiosonde profile appl. 2-100425
- frost acidity 2-94478
- Great Lakes Basin, precipitation in 1854-1979 period rel. to water resources 2-68397
- hail detection by radar techniques (*Russian*) 2-94525
- hail forecasting, appl. of numerical model of cumulus cloud (*Chinese*) 2-88945
- hail stable isotope concs. described using cloud model 2-117416
- hailstone growth in storms, isotope and layer struct. study 2-117417
- hailstone size distribution data 2-100481
- hailstorm, cloud origin and movement prediction, appl. to Fort Collins storm 2-78723
- Illinois, temp. and precipitation normals (1901-79) 2-83912
- ion precipitation from magnetotail current sheet source 2-84034
- Lake Michigan, lake effect snow storm, precipitation organisation in roll field 2-112038
- Long Island, New York, ionic species concentrations in precipitation rel. to meteorological variables 2-83535
- long-range precipitation prediction, thermodynamic model (*Chinese*) 2-88943
- mathematical models for dry and rainy periods 2-68395
- Mediterranean Sea, atmospheric moisture transport and water balance 2-78695
- global meltwater spike from deglaciation, effects of increased precipitation induced runoff 2-94395
- millimetre-wave propagation through rain and snow, meas. at Ballistic Research Laboratory 2-117392
- monsoon over China rel. to cross-equatorial flow from Australia (*Chinese*) 2-88988
- North America, century of precip. variability along Pacific coast and impact on society 2-73616
- NWS precipitation forecast accuracy (1966-78) 2-111991
- Pacific Ocean, sea surface temp., surface press. and precip. assoc. with El Nino 2-111931
- precipitable water, determination from IR channel of Geostationary Meteorological Satellite 2-106276
- quantities dependence on atm. vertical motion 2-68441
- riming, ice cryst. growth process 2-63070
- E Sahara Desert, pluviats and interpluviats chronology in Great Sand Sea and Selima Sand Sheet 2-117269
- Second Israeli Randomised Cloud Seeding Experiment, results 2-78806
- snow, handbook of principles, processes, management and use 2-89472
- synoptic disturbance with heavy precipitation, numerical forecasting expt. (*Chinese*) 2-88947
- sunspot numbers correl. with weather of United States 2-63068
- suprathermal electron bursts and formation of auroral arcs 2-83994
- Taiwan, eigenvector anal. of precip., anomaly patterns 2-100423
- thunderstorm electrification, precipitation related theories, inductive and noninductive 2-78775
- thunderstorm hailstone growth layers, D content 2-78776
- tropical storm Agnes transformation into extratropical cyclone, moisture, vorticity and kinetic energy budgets 2-112012

atmospheric precipitation continued

- E United States, D/H isotopic of precipitation rel. to storm trajectories 2-68444
- United States, forecast model applied to drought of 1980 AD 2-78721
- United States, twentieth century changes in winter climatic regions 2-73672
- United States monthly precipitation spatial coherence 2-106197
- NE United States storm duration and seasonal precipitation rates 2-100420
- warm clouds precipitation modification, review 2-94428
- warmer Earth, climatic consequences of precipitation trends 2-111983
- W Washington State, USA, diurnal circulation effect on forecasting and precipitation, wind anal. 2-106191
- winter orographic clouds, precipitation augmentation potential 2-88962
- H isotope ratios in precipitation, rel. to climatic significance of H isotope ratios in tree cellulose 2-89000
- O atom and ions responsible for N_2^+ spectral emission 2-100621
- O^+ precipitation as energy source to thermosphere, wind and temp. perturbation 2-106377

atmospheric pressure *see atmospheric pressure and density***atmospheric pressure and density**

- 500 mb geopotential height field, zonally averaged, latit. depend. of variable 2-112008
- 500 mb height, statistical prediction using eigenvectors 2-88960
- 500 mb heights, local predictability 2-88959
- Ahmedabad, India, sea-level press. rel. to lunar tidal var. in ionospheric absorpt. 2-106387
- air-buoyancy correction determ. for accurate weighing 2-69142
- Aleutian low, year averaged latitude, longitude and press. comp. 2-106199
- Azores high, year averaged latitude, longitude and press. comp. 2-106199
- Baltic Sea, Gulf of Gdansk sea level, atm. pressure effect 2-83821
- barometric pressure correlation with E-region critical freq. 2-112070
- Bay of Bengal cyclone centres and atm. press. fluctuations 2-117407
- cyclone, vertical motion, horizontal spiralling wind field rel. to press. field 2-112074
- density in 205-220 km height range from satellite orbital decay (*Chinese*) 2-63150
- fluctuations in pressure due to weak cyclone movements (*Russian*) 2-105919
- geopotential thickness, extraction from satellite sounding radiometer data 2-63101
- global atm. pressure at sea level, primitive eqn. model (*Chinese*) 2-78744
- hydrodynamic pressure field forecasts, evaluation methods 2-100515
- Icelandic low, year averaged latitude, longitude and press. comp. 2-106199
- Indian sea areas, cyclonic storms and depressions in 1979, wind, press. and tracks 2-88965
- infrasonic pressure variations associated with geomag. activity 2-117397
- ionosphere, relation between midnight press. bulge and equatorial midnight temp. bulge 2-100637
- lidar remote sensing of cloud, aerosol, temp. and density, multispectral satellite method 2-94501
- lunar tide (18.6 year) seen in Japanese air press. data 2-73619
- magnetosphere density at geosynchronous orbit deduced from Pc 3-4 obs. 2-68572
- across-mountain range pressure differences, theory 2-83904
- Northern Hemisphere, linear trends in tropospheric geopotential height and temp. patterns 2-100469
- Northern Hemisphere stratosphere, signal of Southern Oscillation 2-106194
- Pacific high, year averaged latitude, longitude and press. comp. 2-106199
- Pacific Ocean, sea surface temp., surface press. and precip. assoc. with El Nino 2-111931
- Pacific Ocean 4-6 day period sea level fluctuation, atm. press. forced 2-111955
- Pacific Ocean winter 700 mb heights rel. to sea surface temp. 2-106182
- seismic wave velocity at Uji campus, Kyoto University, atm. press. effect 2-68299
- Southern Hemisphere eddy statistics at 500 mb, geopotential height, freq./spatial depend. 2-78782
- Southern Plains, USA, wintertime mesoscale cold front temp. and press. anal. 2-94431
- Straits of Gibraltar, wind flow rel. to surface press. pattern 2-100494
- surface layer, effect of temp.-press. gradient correl. on streamwise heat flux budget 2-100427
- surface pressure, Hough diurnal and semidiurnal components 2-106255
- surface pressure variations rel. to radio meteor wind oscils. 2-78892
- Taiwan eigenvector anal. of sea level press. anomaly patterns 2-100423
- thermosphere, density profile calc. from heat budget model 2-94545
- thermosphere, global model of species density using mag. coords. 2-73739
- thunderstorm forecasting, 500 mb cyclonicity effects 2-83918
- topside equatorial ionospheric F₂ wave number spectrum for plasma density fluctuations 2-106404
- tropical atmosphere response to mid-latitude pressure surges 2-78767
- troposphere, geopotential response to thermally driven motions in equatorial β -plane 2-112010
- troposphere, temp. and press. rel. to model for resonant transmittance in millimetre wave region 2-117394
- troposphere and stratosphere, vertical profiles from Salyut solar disc obs. (*Russian*) 2-58098
- UK isobaric patterns rel. to central England temp. and England-Wales rainfall 2-68468
- United Kingdom, grid-point surface press. data rel. to windiness index 2-112072
- W United States, November 13, 1981, press. field and nature 2-94479
- upper atmos. density variations caused by geomagnetic disturbances 2-63158
- upper atmosphere, comp. and scale-height vars. rel. to profiles of solar radiation intensity and ion production rate (*Chinese*) 2-100624
- upper atmosphere density fluctuations effect on artificial satellite orbit forecasting and determ. 2-106472
- upper atmosphere low latitude region, density perturbation during mag. substorm activity 2-106376
- vertical struct. of oscillations classical tidal theory formulation 2-63064
- West Florida Shelf, wind forced sea level variability, and press. 2-111944
- NO_2 single photon laser-induced fluoresc. detect. for atm. conditions of composition and press. 2-105629

atmospheric pressure and density continued

- O₂ density of thermosphere controlled by solar activity 2-100607
- SO₂, single photon laser-induced fluorescence detect. for atm. conditions of composition and press. 2-105629

atmospheric propagation *see atmospheric electromagnetic wave propagation***atmospheric proton precipitation**

- see also aurora; radiation belts*
- auroral proton precipitation and H atom flux, linear transport theory study 2-63162
- auroral protons interaction with thermosphere 2-100611
- auroral zone, proton energy spectra correl. with polar auroral H α emission 2-106393
- incoherent scattering plasma lines enhancement due to precipitation H⁺ and secondary electrons 2-84012
- interaction with atmospheric components, electron flux and ionisation determ. 2-106355
- ionosphere, precipitation due to magnetosphere frontal boundary layer plasma interactions 2-73786
- magnetosphere, precipitation during magnetic storms, equatorial boundary 2-68549
- substorm evolution studied by electron and proton aurora obs. 2-94548
- substorm expansion phase, proton accel. and energy dispersion 2-100668

atmospheric radiation*see also aurora*

- Abastumani Forest Aerosol Experiment, (August 1978), weather conditions, solar and atm. radiation (*Russian*) 2-117401
- aerosol in tropical boundary layer causing spectral extinction 2-63094
- tropical Atlantic, heating of ocean and atmos. by solar IR radiation (*Russian*) 2-88964
- atmospheric turbidity coefficients of semi-rural site, influence of climatic parameters 2-73688
- auroral kilometric radiation, growth rate calcs. 2-84042
- auroral kilometric radiation, theoretical review 2-58206
- auroral kilometric radiation, theory of fine struct. 2-78920
- auroral kilometric radiation generation at high altitudes 2-94554
- Azerbaijani SSR region daily solar radiation distribution characts., aid to practical utilisation 2-100418
- backscattered UV used to determine O₃ variations (1970-74) 2-106257
- balloon mosaic meas., phenomenology and band selection 2-117477
- Bay of Bengal, cloud cover rel. to surface long wave radiation, from temp. anal. 2-88903
- boundary layer IR radiative transfer obs. 2-78727
- bremstrahlung X-ray emission from precipitating electrons, ang. distrib. and polarisation 2-78903
- SE Canada and NE USA, insolation 2-100482
- Cherenkov radiation and longitudinal cascade development of cosmic ray showers 2-117549
- circus temp. determ. by far IR spectral emission method 2-94529
- climatic model feedbacks, radiation effects 2-112105
- cloud, IR radiative transfer through cuboidal cloud array 2-94494
- cloud far IR emissivity in 8-14 μ m range 2-83909
- cloud optical feedback and climate stability in a radiative-convective model 2-94485
- cloud radiative characteristics, effect of cloud shape 2-63088
- clouds, radiative transfer eqns. for horizontal inhomogeneous media (*Russian*) 2-94493
- collectors, annual insolation, simplified calc. method 2-105589
- cuboidal clouds, IR radiation transport modelling 2-78777
- cumulus dimensions, effect on longwave irradiance and heating rate calcs. 2-106230
- data rehabilitation using clear hour analyses 2-106281
- dawnside chorus and energetic electron obs. at geosynchronous orbit 2-68571
- diffusive climatological models, numerical soln., radiation effects 2-78826
- Earth Radiation Budget Experiment (ERBE): an overview 2-94367
- Earth radiation budget study, use of general circulation model 2-88983
- Earth-atmosphere radiation budget, quasi-global sensitivity to clouds 2-78834
- Eddington-type solar flux calcs. 2-78832
- EHF/SHF emission suppression methods for radioastronomical use 2-73848
- emergent radiance in solar spectral range, appl. to vicarious calibration of Meteosat-1 satellite 2-112297
- emergent radiance rel. to aerosol optical thickness, satellite meas. over oceans 2-117454
- estimating solar irradiance and components using various models, performance comparisons 2-100514
- EUV imaging spectrometer for thermospheric emissions 2-112147
- far infrared spectral radiances of troposphere 2-89004
- gamma-rays with E>40 MeV, quasi-periodic vars. 2-89092
- general circulation model climate, effect of cloud-radiation feedback 2-78828
- generalised lambda distrib. for solar radiation data 2-112054
- W Germany, solar radiation observations 2-117433
- global UV radiation at ground level, influence of effective cloud amount, horizontal visibility and total O₃ 2-100462
- greenhouse, half-cylinder type with film cover, incoming solar radiation characts. 2-116783
- greenhouse/dryer, double-block, for year-round operation 2-116784
- ground radiant heat balance depend. on vegetation cover 2-112062
- Hawaii, solar radiation and thin cloud climatology 2-94461
- hiss from magnetosphere, modified by man-made ELF transmissions 2-84039
- hourly diffuse solar radiation estimation from global solar radiation, methods comparison 2-100513
- hourly insolation for a site, calc. from average daily insulations 2-88973
- incident on any flat surface, estimation using simplified relationships 2-105590
- incoming longwave atmospheric radiation from clear sky, theory and obs. 2-100555
- infrared longwave irradiance model 2-112055
- infrared radiative transfer in cloudy atm., parameterisation 2-78835
- insolation mesoscale variability determination from satellite data 2-100482
- IR background, non-LTE high-altitude effects 2-117515
- IR continuum attenuation in surface layer (*Russian*) 2-100552
- IR flux leaving atmosphere, monthly means and interannual changes, statistical estimates 2-112040
- IR imaging, background spatial radiance variations obs. 2-117476
- IR spectral radiance 2-117442
- atmospheric radiation continued**
- longwave radiation over land and water area, seasonal var. 2-106250
- magnetopause plasma wave emissions 2-84021
- magnetosphere diffuse electrostatic emissions due to thermal fluctuations 2-68569
- magnetosphere turbulent elec. fields, up to 14 Hz 2-68568
- magnetosphere VLF emission mechanism 2-68570
- Malaysian Peninsular, solar radiation data statistical presentations for 3 stations 2-83888
- marine atmospheric turbidity and vertical mass loading 2-63093
- marine stratocumulus layers, mean conditions 2-106226
- marine stratocumulus layers, turbulence budgets and general conditions 2-106227
- mean solar radiation in Poland over last twelve years (*Polish*) 2-100439
- mesoscale insolation distribution mapping from GOES data, operational system 2-78190
- microwave emission fluctuations due to gravity waves above boundary layer 2-63056
- microwave thermal radiation from Earth's atmosphere, appl. to remote sensing of atmospheric parameters (*Russian*) 2-94472
- middle atmosphere, radiative heating and cooling algorithms for use in dynamical model 2-112039
- middle atmosphere slowly modulated sinusoidal wave disturbances, radiative damping 2-106248
- millisecond light pulses in upper atmos., solar activity depend. occurrence 2-83981
- multidimensional space, radiative transfer, spherical harmonic method 2-112126
- multidirectional Si photodiode array for solar radiance meas. 2-83973
- near-Earth UV environment, review of obs. 2-117513
- nocturnal boundary layer, radiative cooling effects, model 2-78786
- nocturnal surface inversion, effect of clear air radiative cooling 2-106229
- outgoing spectral distrib. as meas. by Salyut-4 2-58123
- E Pacific insolation value obs. and calcs. 2-94462
- Pacific Ocean, tropical, circulation changes and IR emission 2-106249
- Pacific Ocean cloudiness fluctuations from satellite observed outgoing IR radiation 2-106183
- Peking radiation inversion, occurrence and dissipation, burst characts. 2-78821
- plasmopause plasma density from myriametric radiofreq. radiation obs. 2-73775
- power plant plume effect on radiative transfer, radiation meas. 2-100558
- primitive terrestrial atmosphere, radiative-convective-photochemical models rel. to vertical thermal struct. 2-112135
- radiative convective models, effect of anomalous IR H₂O vapour absorpt. 2-106313
- radiative energy transfer calc. method for general circulation models 2-68460
- radiative interaction in 3-dimens. cloud fields 2-100549
- radiative transfer and 4.3 μ m atmospheric clutter observations 2-117441
- radiative transfer eqn. for vertical inhomogeneous absorpt. case (*Russian*) 2-78833
- radio emission, mm wavelength region meas. apparatus and procedures 2-58099
- remote sensing of atmos. radiation flux by satellite, theory (*Russian*) 2-117463
- remote sensing of temp. profile, IR radiance obs. technique 2-112176
- resonant absorption by water polymers in the atmosphere 2-73651
- satellite radiometer data, extraction of layer relative humidity, geopotential thickness and convective stability 2-63101
- satellite remote sensing, effect of subpixel-sized cloud on radiance and target discrimination 2-106307
- sea surface radiation, polarisation characts. (*Russian*) 2-58122
- shortwave fractional absorbance of non-homogeneous clouds 2-83945
- site-specific clear-day solar irradiance model from long-term irradiance data 2-94467
- solar cells metrology 2-99784
- solar constant variations due to solar activity 2-100860
- solar heating by absorpt. by H₂O, Hough components 2-63048
- solar irradiance and atmospheric transmission meas. at Mauna Loa Observatory 2-89217
- solar irradiation in central United States, haze effect 2-89002
- solar radiation, diffuse, mathematical expression for amount reaching any surface from sky (*Portuguese*) 2-100441
- solar radiation as albedo function of sea-air system (*Russian*) 2-89003
- solar radiation beneath cloud, meas. by dial radiometer technique 2-94528
- solar radiation distribution in natural waters under field conditions 2-78817
- solar UV spectral irradiance, Oct. 1981 to Jan. 1982 obs. 2-100448
- South Pole, surface heat balance study 2-117422
- stratiform water clouds, shortwave radiative props. 2-88984
- stratocumulus clouds, solar and emitted thermal radiation 2-63020
- stratosphere, UV direct and scattered solar flux 2-63043
- stratospheric heating due to absorpt. of solar UV 2-68461
- Sun+sky irradiance at 340 to 2500 nm, meas. via portable field spectrometer 2-112143
- surface temperature excursions due to passing clouds 2-78800
- High Tatra mountains, Czechoslovakia, daily and yearly radiation balance 2-117382
- Thailand, longwave spectral emissivity and cooling potential 2-78843
- thermal winds determination from horizontal gradients of satellite radiance obs. 2-78877
- thermosphere, thermal regime, effect of turbulence and IR radiation 2-83979
- thermosphere O(³P₂) 63 micron emission intensity calc. 2-100617
- troposphere, radiative flux meas. 2-58119
- turbidity coefficients evaluation and comparison in semi-rural site 2-73687
- ultraviolet albedo variability of Earth at tropical latitudes 2-68488
- upper atmosphere outgoing radiation, effects of refl. by natural surfaces 2-78895
- VLF chorus bursts characts. and ionosphere-magnetosphere interaction 2-112210
- VLF emission from lightning, theory 2-68428
- VLF line radiation, ISEE 1 obs. of magnetosphere 2-89078
- VLF magnetospheric emission mechanisms and variations 2-68562
- VLF wave growth and discrete emission triggering 2-89079
- volcanic plume radiative effects, surface temp. effect 2-111907
- water Raman scattering in radiative transfer model for airborne laser fluorosensors 2-112122

atmospheric radiation continued

- X-ray bremsstrahlung emission from precipitating particles 2-84002
- X-ray enhancements in thunderstorms and during lightning activity 2-63028
- soft X-rays due to solar radiation scatt. and fluoresc. 2-89057
- H₂O conc. variability in mesosphere, microwave emission study 2-78755
- NO far IR emissions from auroral upper atmos. 2-89056

atmospheric radioactivity

- see also fallout*
- accidental releases, automated response system WIND 2-54569
- beta-ray background meas. system and obs. at Belgium (*Flemish*) 2-106363
- dispersion and concentrations near reactor complexes, prediction methods 2-57753
- dispersion and deposition risks in Germany (*German*) 2-83532
- dispersion models for ⁸⁵Kr data, statistical evaluation 2-57752
- meteorological data for reactor accident risk calculations 2-54570
- Mt. St. Helens, eruption plume chem. and radioactivity 2-58027
- organ doses due to external γ -irrad. arising from a finite plume in the atm. 2-68153
- resuspended soil aerosols containing Pu activity at Rocky Flats plant 2-57751
- Swedish air monitoring network for particulate radioactivity 2-75058
- ¹⁴C, projected estimate of biosphere content due to nucl. power programme 2-62526
- Pu contamination, airborne detection by α -spectrometry 2-70116
- Rn daughters collected on filter, eqns. for mixed activities 2-101850
- ²²²Rn degassing from W Florida coastal waters, role of winter storm fronts 2-78704
- ²²²Rn, releases from the Geysers geothermal power plant 2-57750
- ²³⁷U fallout from Chinese nuclear weapons test (16th Oct. 1980) (*Italian*) 2-68473

atmospheric spectra

- see also atmospheric optics*
- Abastumani Forest Aerosol Experiment, (August 1978), weather conditions, solar and atm. radiation (*Russian*) 2-117401
- aerosol size spectra from spectral extinction data, linear inversion method 2-94416
- airglow, EUV, spectral obs. during solar active conditions 2-73744
- anomalous H₂O vapour absorption, implications for radiative convective models 2-106313
- aurora, nitrogen and oxygen for UV emission spectra 2-83985
- auroral arc, UV emission spectra 2-83986
- boundary layer spectral extinction due to aerosol in tropical region 2-63094
- Doppler broadening of sunlight scattered from stratospheric winds 2-68517
- far infrared spectral radiances of troposphere 2-89004
- gamma ray observations in energy range 0.3 < E < 5.0 GeV from balloons 2-64743
- haze light scatt. and colour, theory 2-68483
- incoming longwave atmospheric radiation from clear sky, 8 to 14 μ m spectral flux 2-100555
- IR 17.5-23.5 μ m band, transmittance depend. on humidity (*Russian*) 2-73629
- IR absorption spectra of oceanic aerosols 2-83946
- IR background, non-LTE high-altitude effects 2-117515
- IR emission meas. using balloon-borne cryogenic Fourier transform spectrometer 2-117474
- IR solar absorption spectra, diode laser heterodyne spectroscopy 2-73726
- IR spectral emissivity in Thailand 2-78843
- IR spectral radiance 2-117442
- lightning and its spectrum, photographic atlas 2-94918
- limb emission analysis using SPIRE 2.7 μ m data 2-117514
- lower atm. mol. absorpt., optical meas. of atm. winds 2-68478
- mesopause, nightglow emissions rel. to NO and water vapour concs., noctilucent clouds and radio wave absorpt. 2-112201
- methane, 2.3 μ m region line parameters 2-96550
- millimetre wave spectra, appl. to model for resonant transmittance in millimetre wave region 2-117394
- near-Earth UV environment, review of obs. 2-117513
- outgoing spectral distrib. as meas. by Salyut-4 2-58123
- polar auroras, H α emission correl. with proton precipitation zones 2-106393
- solar spectral measurements in the terrestrial environment 2-73682
- solar UV spectral irradiance, Oct. 1981 to Jan. 1982 obs. 2-100448
- stratosphere, minor constituents detect. by far IR emission spectroscopy 2-100553
- stratospheric IR absorption spectra, atlas 2-73680
- Sun+sky irradiance at 340 to 2500 nm, meas. via portable field spectrometer 2-112143
- sunlight, total and spectral solar irradiance measured at ground surface 2-58097
- thermosphere metastable species photochem. processes, review 2-89059
- trace gas detection using tunable IR diode laser method 2-73690
- UV absorption spectra due to O₃ content of stratosphere 2-83944
- water vapour remote sensing, use of 1.348 cm absorpt. band (*Chinese*) 2-78886
- CO₂, atmospheric 4.3 μ m clutter obs., radiative transfer calcs. 2-117441
- CO₂, ν_2 band, absorpt. coeffs., spectral line broadening 2-85657
- HCl, optoacoustic meas. of specific absorpt. coeffs. at DF laser wavelengths 2-112116
- HNO₃, determ. of total amount above Mont-Louis (*French*) 2-112129
- HNO₃, obs. in South Pole solar IR spectra 2-106647
- H₂O clusters responsible for far IR spectral absorpt. 2-83940
- H₂O conc. variability in mesosphere, microwave emission study 2-78755
- H₂O mixing ratio in mesosphere from 22 GHz water vapour absorption 2-63046
- H₂O vapour absorpt. line shape, N₂ broadening, IR continuum absorpt., theory 2-80591
- H₂O, vapour absorpt. line shape, N₂ broadening, IR continuum absorpt., model 2-80592
- H₂O, weak absorpt. lines meas. by time resolved intracavity laser spectroscopy 2-63091
- N⁺, ³S₂ metastable state, radiative lifetime meas. by monitoring spontaneous emission 2-64923
- N₂ LBH bands in the far UV dayglow, self-absorpt. 2-63159
- NO far IR emissions from auroral upper atmos. 2-89056
- NO IR line parameters for upper atm. 2-73732

atmospheric spectra continued

- NO₂ pollutant in atm., conc. determ. from solar radiation transmission spectra 2-93975
- NO₂ in Pacific troposphere, conc. var. from spectral obs., O₃ implications 2-73622
- N⁺(³S) state possible identification of 2145 Å emission feature in aurora 2-63160
- O 1 1304 Å dayglow, Monte Carlo reson. scatt. model with partial freq. redistribution 2-100618
- O 1 5577 Å airglow line, peak emission altitude, Chapman and Barth mechanisms 2-106380
- O 1 5577 Å line emission, solar flare and sunspot numbers effect on nightglow 2-58194
- O 1 forbidden lines used to determine thermosphere winds time depend. var. 2-100609
- O₂ dayglow radiance used to determine O₃ var. in mesosphere due to solar eclipse 2-100613
- O₂ far IR absorpt. spectra (collision induced) 2-78839
- O₂ Herzberg bands, dayglow emissions and backscattered UV spectrum 2-100620
- O₂ in stratosphere, Herzberg continuum absorpt. determ. from solar irradiance meas. 2-100550
- O₂ magnetic dipole IR atmospheric bands 2-96551
- O₂ spectral line parameters, atm. transmission functions calcs. 2-78841
- O₂ UV photoabsorpt. cross-section into ¹ Π_u state 2-63155
- O₃ air broadening coeffs. and line strengths in 9 μ m region 2-106309
- O₃ air-broadening coeffs. in 9 μ m region 2-94496
- O₃ vibrationally excited, UV continuum spectroscopy 2-63092
- O(¹D) 6300 Å emission line shape calcs. appl. to space platform obs. 2-96493
- OH atmospheric band system, line parameters 2-90629
- OH dayglow radiance used to determine O₃ var. in mesosphere due to solar eclipse 2-100613
- OH, tropospheric, laser induced fluoresc. meas. influence of rot. relax. 2-94480
- O(³P₁) 63 micron emission from thermosphere 2-100617
- SO₂ pollutant in atm., conc. determ. from solar radiation transmission spectra 2-93975

atmospheric structure

- see also atmospheric composition*
- auroral ionosphere, electron density irregularities from STARE obs. of long discrete echoes 2-112217
- boundary layer, determ. of struct. parameters using sodar 2-100432
- boundary layer structure before and after frontal heavy rain (*Chinese*) 2-88993
- boundary layer turbulent structure obs. with kytoon-mounted US anemometer 2-68418
- cloud areas, area-perimeter relation rel. to fractals theory 2-88987
- convective cell structures revealed by Mie laser radar obs., image data processing 2-112149
- convective storm structure, vertical wind shear and buoyancy effects 2-112016
- fog microstructure, effect of aerosol 2-117391
- frontogenesis over S. Yangtze in spring, spatial structure (*Chinese*) 2-63015
- Hokuriku winter thunderstorms, electrical structure 2-63034
- ionosphere, effect of large-scale inhomogeneities on reflected wave field struct. 2-112197
- ionosphere, electron density inhomogeneities rel. to radio waves electron gyrofrequency absorpt. 2-112199
- ionosphere, estimation of electron collision frequency in D and E-regions from LF wave propag. 2-112216
- ionosphere, forecasting of height of equatorial F-region 2-112192
- ionosphere, topside, origin of electron density vars. at middle latitudes 2-112194
- ionosphere electron density inhomogeneities, model determ. of volumetric characts. 2-112196
- magnetosphere clefts, geomag. field rel. to diaphragming of cosmic ray particles stream 2-112228
- mesopause, horizontal structure, gravity wave interpretation 2-100500
- millimetre wave turbulence measurement, effect of humidity struct. and temp. struct. parameters 2-117395
- planetary boundary layer structure, Rossby Similarity and turbulent formulations 2-100429
- plasmopause-plasmasphere struct. and dynamics results from ground-based and satellite obs. of whistlers (*French*) 2-106382
- rain areas, area-perimeter relation rel. to fractals theory 2-88987
- see-breeze front at Canberra, radar study of insects 2-100529
- ship waves in lee of isolated topography, three-dimensional model 2-100474
- temperature structure meas., intermittent turbulence effects 2-68414
- turbopause height and temp. in polar region from Ar/N₂ profile 2-73734
- upper atmosphere, single and double layer structs. rel. to solar radiation intensity and ion production rate (*Chinese*) 2-100624
- Na layer observation, appl. of flashlamp-pumped tunable laser radar system 2-94511

atmospheric techniques

- see also air pollution detection and control; geophysical equipment; ionospheric measuring apparatus; ionospheric techniques; meteorological instruments; weather forecasting*
- absorption technique for OH measurements and calibration 2-117468
- acoustic remote sensing of atmosphere and oceans, international symposium, Calgary, Alberta, Canada, (1981 June 22 to 25) 2-94912
- acoustic sounding of boundary layer, frequency-energy correls., calc. (*Russian*) 2-63138
- aerosol absorption meas. using aethalometer 2-112146
- aerosol concentrations meas., relation between light scatt. coeff. and particulate matter conc. in forest fire smoke 2-105617
- aerosol concs. meas. with airborne LIDAR system 2-63111
- aerosol extinction determ. from satellite imagery 2-63120
- aerosol IR remote sensing affected by sea foam 2-106346
- aerosol optical characterisation using computer programs 2-73686
- aerosol particle size distrib., multifilter extm. technique 2-63113
- aerosol particles size measurement, extm. and theoretical study of two-dimensional virtual impactor 2-111605
- aerosol remote sensing, soln. of radiative transfer eqn. 2-117461
- aerosol size distrib., retrieval from ang. scatt. functions, effects of particle comp. and shape 2-58118
- aerosol size distrib. determ. from spectral solar irradiance meas. 2-89048

atmospheric techniques continued

- aerosol size distrib. determ. using solar aureole technique, expt. validation 2-94503
- aerosol size distrib. from spectral optical depth obs., linear inversion theory 2-117488
- aerosol size distrib. meas. by light transmission method 2-112118
- aerosol size spectra from spectral extinction data, linear inversion method 2-94416
- aerosols, backscatt. spectra for nonabsorbing accumulative fraction, calcs. 2-117425
- aerosols optical thickness over oceans, satellite meas. 2-117454
- aerosols sampling along roadways, evaluation of four types of samplers 2-105631
- air impurities: radioactive carbon dating and computerization 2-57747
- air-sea interaction, instruments and methods, book 2-94917
- airglow measurement using downlooking satellite technique 2-73710
- albedo evaluation problems in satellite remote sensing 2-94512
- altitude determination for remote sounding method for atmos. temp. 2-63134
- anemometer and rawinsonde methods for wind in mountainous regions 2-112060
- atmosphere refractometer measurement using helicopter (*Russian*) 2-58126
- balloon (super-press. type), diurnal height change model 2-63123
- bandpass filtering anal., appl. to statistics of climatic fluctuations in central European area 2-68475
- beta-ray background meas. system and obs. at Belgium (*Flemish*) 2-106363
- bistatic lidar, inverse problem of atmospheric particulate props. determ. 2-106350
- boundary layer, acoustic sounding with 'video-pulse radar', freq.-energy correls. anal. (*Russian*) 2-63139
- boundary layer, determ. of struct. parameters using sodar 2-100432
- cirrus temp. determ. by far IR spectral emission method 2-94529
- climate history deduced from borehole temp. gradients 2-88834
- climatic change determ. using precipitation data 2-83963
- climatic division of China, new approach (*Chinese*) 2-88942
- cloud and cloud shadow detection by Landsat digital method 2-94513
- cloud classification by METEOSAT statistical imagery method 2-94531
- cloud cover on global scale, methods for archiving data 2-63100
- cloud cover remote sensing by IR radiometry 2-83960
- cloud droplet observation by airborne holographic method 2-83951
- cloud liq. water content determination by microwave radiometry (*Chinese*) 2-112182
- cloud particles shapes and dimensions determ. method 2-100589
- cloud top remote sensing by airborne lidar 2-94502
- convective rain volume estimation over large area 2-68534
- crosswind velocity measurement using laser-Doppler anemometry 2-106326
- cumulus optical albedo and extinction coeff. and remote sensing application 2-73685
- data acquisition and analysis systems for mm wave rain attenuation program (*Japanese*) 2-58129
- diode laser IR heterodyne spectroscopy 2-73726
- Doppler acoustic system, pollutant dispersion appls. 2-73179
- duststorm monitoring system combining satellite and surface data 2-63130
- electric field meas. methods at Nagycenk Observatory, Hungary 2-78856
- electrical props. meas. using subsonic probe 2-94544
- exosphere temperature determination from O^+ twilight airglow obs. 2-63153
- exotic tracers for atmospheric studies 2-94507
- extensive air showers, hadron and muon numbers determ., use of multi-group method 2-106330
- far IR emission spectroscopy, for minor constituents detect. of stratosphere 2-100553
- fire plume, method for optical effects determ. 2-117479
- flow averaging procedures for vegetation canopies 2-68501
- flux-gate direction meter for use with anemometer operating at sea 2-78883
- forecasting daily max. O_3 levels in St. Louis 2-62520
- formaldehyde determ. in clean air 2-63114
- hadron cascade propagation, diagram method for kinetic eqns. soln. 2-106329
- hail detection by radar techniques (*Russian*) 2-94525
- hail forecasting, appl. of numerical model of cumulus cloud (*Chinese*) 2-88945
- haze measurement method using dial radiometer 2-94528
- heavy metal pollution monitoring by tree bark anal. 2-105615
- heavy rain forecasting methods, appl. to Northamptonshire 2-78879
- height of isobaric surfaces, meas. by radar altimetry method 2-58164
- humidity meas. using multifrequency acoustic sounding 2-94508
- humidity remote sensing, moisture sounding at millimetre wavelengths (94/183 GHz) at high altitudes 2-117480
- humidity vertical profile determination by microwave radiometry method 2-94530
- hygrometry, dew-point method for total precipitable water 2-58163
- insolation mesoscale variability determination from satellite data 2-100482
- integrating sandwich method for atm. particle light absorpt. coeff. meas. 2-112144
- IR and subMM spectroscopy, book 2-112668
- IR emission meas. using balloon-borne cryogenic Fourier transform spectrometer 2-117474
- laser beam remote sensing, appl. of tunable laser radar system to atmospheric Na layer obs. 2-94511
- laser monitoring of reactive atoms. species, optogalvanic wavelength calibration 2-93966
- laser vector velocimetry, three-dimensional atmospheric meas. technique 2-58132
- lidar (infrared) obs. of cloud and aerosol from space, optical calcs. 2-94500
- lidar equation for low visibility meteorological conditions (*Chinese*) 2-68484
- lidar remote sensing of cloud, aerosol, temp. and density, multispectral satellite method 2-94501
- lidar remote sensing of meteorological variables from space platform 2-63105
- light radiation flux and balance determ. by satellite (*Russian*) 2-117463
- lightning direction-finding VHF radio receiver system (*Chinese*) 2-78861

atmospheric techniques continued

- lightning photography and spectroscopy, methods in photographic atlas 2-94918
- limb sounding by Fourier transform spectroscopy, interferogram smearing effect 2-73691
- magnetic activity predictors based on solar wind and IMF parameters 2-84046
- magnetic storm prediction method based on solar wind density obs. 2-84047
- magnetosphere plasma drift meas. from GEOS 2-63149
- Magsat mission 2-100699
- marine atmosphere heat flux determ., bulk aerodynamic technique 2-111950
- mesosphere, ion and electron density determ. by sounding rocket method 2-63122
- meteorological analysis, determ. of latit. depend. of variance of zonally averaged quantities 2-112008
- meteorological anomaly patterns in Taiwan, eigenvector anal. 2-100423
- meteorological lidar developments, review 2-106335
- meteorological map typing technique using obliquely rot. principal components 2-63124
- meteorological shipboard automated instrument system and computing subroutines (*Russian*) 2-63129
- Meteosat appl. to natural disasters detection 2-68593
- Meteosat data integrated processing, cloud-top height maps 2-78750
- Meteosat imagery deformation modelling 2-68506
- methane, atmospheric conc. determ. by spectral method (*Russian*) 2-73703
- microwave multichannel microwave remote sensing, data inversion method 2-58167
- microwave remote sensing, active and passive, book 2-89497
- millimetre wave turbulence measurement, techniques and instrumentation 2-117395
- moisture content one-channel meas. using self-emission 1.35 cm H_2O line 2-68465
- moisture field determination using satellite microwave and ground level data 2-63126
- moisture remote sensing by TIROS-N infrared imagery method 2-88978
- moving maximum entropy anal., appl. to statistics of climatic fluctuations in central European area 2-68475
- multispectral radiometry of desert aerosols from Landsat 2-63041
- numerical forecasting of subsynoptic system, expt. (*Chinese*) 2-88947
- numerical weather prediction, normal mode initialisation rel. to gravity waves generation by quasi-geostrophic forcing 2-100473
- numerical weather prediction, scheme for retaining Hadley circulation during nonlinear normal mode initialisation 2-112009
- ocean atmospheric boundary layers, parameterisation 2-68411
- optical polarisation meas. in near UV, sky scanner system 2-73692
- palaeoclimate determination from gastropod shell $^{18}O/^{16}O$ ratios 2-83967
- passive microwave remote sensing of Earth from space, review 2-106362
- plasma pause VLF emissions detection by geosynchronous satellite 2-112252
- plasma sphere, plasma temp. determ. from thin sheath approx. 2-106354
- plumes, method for optical effects determ. 2-117479
- pollution detection in troposphere and stratosphere, satellite-borne research development 2-73181
- precipitable water meas. by Nimbus 7 microwave radiometry method 2-100587
- precipitating protons, ionisation and electron flux determ. method 2-106355
- precipitation long-range prediction, thermodynamic model (*Chinese*) 2-88943
- precipitation quantities determ. from vertical motions in atm. 2-68441
- prediction models based on primitive eqns., eqns. initialisation approaches 2-112181
- psychrometric tables, draft proposal for novel system 2-73714
- radar study of sea-breeze fronts, results from entomological radar at Canberra 2-100529
- radio emission, mm wavelength region meas. apparatus and procedures 2-58099
- radio meteor ionisation columns, initial radii meas. determ. method 2-63107
- rain attenuation prediction methods for microwave paths in Greece 2-100533
- rain enhancement by modification of cumulus clouds 2-73708
- raindrop size measurement by mm wave propagation method (*Japanese*) 2-58113
- rainfall monitoring by satellite (book) 2-58568
- rainfall rate detection, use of spaceborne microwave radiometers 2-100596
- rawinsonde random meas. errors and effects on derived quantities 2-106333
- refractive index profile deduction from measured refraction values (*Russian*) 2-63089
- remote sensing by microwave multichannel radiometry 2-58166
- remote sensing of atmospheric parameters, appl. of microwave thermal emission (*Russian*) 2-94472
- remote sensing of atmospheric particulates, bistatic lidar appl. 2-106349
- remote-sensing of atmospheric temp., optical system design of interferometer imaging sounder 2-112159
- rocket plume, lab. H_2O jet simulation, radiometric obs. of 752.033 GHz rot. absorpt. line 2-90520
- rocket plume detection using satellite-borne submillimetre-wave radiometry at thermospheric altitudes 2-94575
- satellite remote sensing, iterative radiative transfer code for ocean-atmosphere systems 2-100554
- satellite remote sensing appl. to climatology, 1980-2000 development trends 2-73821
- satellite sounding, extraction of layer relative humidity, geopotential thickness and stability from radiometer data 2-63101
- SEASAT, ocean and atmos. remote sensing system 2-89023
- SEASAT radar altimetry system for ocean and atmos. meas. 2-89024
- semiconducting detectors used for thermosphere O profile 2-68544
- sensible heat flux of boundary layer, determination by optical method 2-68502
- SEPAC Spacelab-1 expts. with particle accelerators, plasma accelerator and charger (*Japanese*) 2-84062
- sequential two-photon-laser-induced fluoresc. method for NO atm. trace level detect. 2-78884
- shuttle lidar resonance fluorescence, Na and K meas. 2-100606
- snow growth in winter storms, airborne obs. technique 2-106353

atmospheric techniques continued

- sodar-derived boundary layer information appl. in microwave communication 2-78790
- solar radiation beneath cloud, meas. by dial radiometer technique 2-94528
- solar spectral irradiance and atmospheric transmission at Mauna Loa Observatory 2-89217
- space technical appl., conf., Pentagon City, VA, USA (March 1981) 2-68972
- spectral-transparency method for magnetoelectric aerosols, disperse content determ. 2-68487
- statistical approach to historical records of flood and drought, results 2-100485
- storm rainfall rate, comparison of radar differential refl. and disdrometer meas. 2-73707
- stratospheric O₃ and OH conc. lidar meas., balloon-borne 2-94505
- stratospheric O₃ data analysis, statistical methods 2-112150
- sulphur particulates and H₂SO₄ airborne measurement apparatus 2-68497
- Sun+sky irradiance at 340 to 2500 nm, meas. via portable field spectrometer 2-112143
- supercooled fog dissipation, appl. of ice crystals form. by artificial nucleation 2-100484
- teletypewriter for meas. of contrast reduction of distant objects 2-68496
- temperature determination using Nimbus-6 data and interactive video-graphics 2-63106
- temperature forecasting at 100 mb level for Concorde, technique 2-112071
- temperature forecasting in Northern Hemisphere, use of automatic group analogue scheme 2-100598
- temperature of Earth surface, by satellite IR radiometry method 2-100586
- temperature profile meas., design of mm wave radiometer (Chinese) 2-78860
- temperature profile reconstruction by remote radiation sensing, basic integral eqn. linearisation 2-68531
- temperature profile retrieval from remotely sensed IR data 2-112176
- temperature remote sensing using TIROS-N microwave instrument 2-89050
- temperature variation determ. 2-73693
- thermal plume, air motion measurement techniques comparison 2-106260
- thermal winds determination from horizontal gradients of satellite radiance obs. 2-78877
- thunderstorm cloud temp. profile meas. by radar technique 2-112178
- thunderstorms and lightning, radar research 2-89047
- tornadoic storm remote sensing by satellite IR method 2-94515
- trace gas conc. meas. by dual beam laser method (Russian) 2-73729
- trace gas detection using tunable IR diode laser method 2-73690
- trace gas detection with tunable diode laser spectrometer using sweep integration 2-106325
- transmission loss prediction in troposcatter communication systems 2-100532
- turbulence in boundary layer, technique of Kolmogoroff const. determination 2-68419
- turbulence meas. over vegetated surfaces using drag anemometer 2-63127
- typhoon track forecasting over NW Pacific Ocean, statistical anal. of positioning errors (Chinese) 2-88948
- UV DIAL ground-based technique for O₃ vertical distrib. and total content meas. 2-106267
- vertical dispersion parameters estimation in 10 km range 2-78887
- visiblity trend data, statistical anal. by ridits and cumulative percentiles 2-63086
- visible spectrum contrast transmittance estimation, assessment of operational techniques 2-117448
- VLF non-thermal plasmapause emission detection by geosynchronous satellite 2-112252
- water vapour measurement, appl. of portable monitor for day or night use 2-106543
- water-vapour conc. and temp. meas. using Raman lidar method 2-68495
- weather and climate techniques development, space obs. appl., 1980s state and trends 2-73669
- weather forecasting, Markov chain model for winter strength in upper Danube region 2-106205
- weather forecasting, short term hydrodynamic scheme 2-100515
- whistler detection using whistler counter (Japanese) 2-58173
- whistler direction-finding system used at Okinawa, Japan (Japanese) 2-58172
- whistlers, meas. of polarisation and intensity, design of radio-receiver system 2-58141
- wind determination at sea surface by obs. of cloud motion 2-112177
- wind meas. by SEASAT microwave instruments 2-89041
- wind meas. by SEASAT microwave scatterometry, atm. attenuation corrections 2-89037
- wind measurement, use of radioactive source emitted particles displaced by air movements (French) 2-100592
- wind measurement accuracy of SEASAT microwave instruments 2-89040
- wind measurement accuracy of SEASAT microwave scatterometry 2-89038
- wind measurement by balloon borne optical interferometry 2-68517
- wind measurement by Doppler sodar, accuracy of method 2-112180
- wind measurement by radar obs. ionospheric drift 2-106356
- wind measurement by satellite, SASS wind ambiguity removal by direct minimisation 2-112013
- wind measurement by SEASAT microwave scatterometry 2-89039
- wind measurement by SEASAT-A microwave scatterometry 2-89036
- wind measurement using marine buoy in STREX program 2-112057
- wind profile meas. by rising balloon method, error anal. 2-112179
- wind rose calc. from large-scale wind (for irregular terrain area) 2-63023
- wind shear detection 2-100417
- wind speed, meas. by SEASAT radioaltimetry method 2-89033
- wind speed determination by satellite microwave radiometry method 2-100599
- wind stress determination over lakes, inverse method using water-level fluctuations 2-106151
- wind vector meas. by SEASAT microwave scatterometry 2-89035
- wind vectors of troposphere by satellite IR imagery method 2-89012
- X-ray methods for aerosol comp. determ. 2-67907
- ¹³CO₂ monitoring, determ. in air 2-85398
- HCl remote sensing by lidar, optoacoustic meas. of specific absorpt. coeffs. at DF laser wavelengths 2-112116

atmospheric techniques continued

- H₂O vapour remote sensing, use of 1.348 cm absorpt. band (Chinese) 2-78886
- H₂O₂ in troposphere, efficiency of collector system 2-78791
- NO₃⁻ content of aerosols, FT IR spectrosc. determ. method 2-99870
- O₃ measurement using satellite IR radiometer method 2-78754
- O₃ profile determ. by satellite limb-scan method 2-112145
- O₃ trend analysis, appl. to search for natural and man-made variability 2-100454
- atmospheric temperature**
see also *atmospheric thermodynamics*
- 850 mb temp., statistical prediction using eigenvectors 2-88960
- annual average temperature, relation to H isotope ratios in tree cellulose and climatic significance 2-89000
- Antarctic Ocean, circulation and climate during last 120 years 2-117325
- Arabian Sea, tropical depression nature during SW monsoon onset 2-112078
- Arctic regions air temperature variations in AD 1980 to 1980 period 2-106185
- arctic tundra energy balance study 2-88998
- N. Atlantic, monthly mean sea surface temp. anomaly classification 2-73647
- North Atlantic, sea surface temp. rise, 1970 to 1980 AD (German) 2-63078
- tropical Atlantic, temp. and dynamics affected by intertropical convergence (Russian) 2-88897
- average air temp. and wind speed meas. equipment with teletypewriter recording (Rumanian) 2-68505
- Baltic Sea, internal boundary layers in vertical temp. and humidity profile in nearshore zone 2-68410
- Bay of Bengal, cloud cover rel. to surface long wave radiation, from temp. anal. 2-88903
- Belgium, weather (during 1981 AD) (French) 2-106203
- Belgium, weather during 1980 AD (French) 2-68447
- Boulder Atmospheric Observatory, convective boundary layer wind speed and temp. 2-106245
- boundary layer, temp., humidity, wind profiles and turbulent exchange over water surface layer (Chinese) 2-88944
- boundary layer, temp. struct. parameter determ. using sodar 2-100432
- boundary layer cooling rate from mixed-layer model 2-83881
- boundary layer profile over rough terrain (Chinese) 2-112003
- boundary layer sensible heat flux, optical determination method 2-68502
- boundary layer temp. inversions over Patiala 2-78762
- boundary layer temp. struct. parameter during early morning 2-78730
- boundary layer temperature effect on CO₂ flux eddy covariance meas. 2-111999
- boundary layer turbulent heat flux 2-78727
- Buffalo, New York, climate influence of Niagara R. ice boom 2-94482
- N. Canada, reconstructed Holocene July temp. departures, eigenvector anal. 2-78846
- Cape Cod Canal, tidal current connection with fog, temp. anal. 2-94429
- NE China, anomalously low summer temp. (Chinese) 2-78743
- China, appl. of surface temps. to climatic division (Chinese) 2-88942
- China, temp. variation in present century (Chinese) 2-112111
- cirrus temp. determ. by far IR spectral emission method 2-94529
- climate change model involving volcanic dust and CO₂ 2-117434
- climate model of seasonal surface temps. 2-100544
- climatic change effect on earthquakes in China 2-88804
- cloud top temperatures, Skylab near-IR obs. rel. to presence of supercooled liquid water drops 2-100476
- cold air activities, lunar influence (Chinese) 2-88992
- cumulonimbus, temp. of tropical clouds tops 2-112024
- daily variation determ. method 2-73693
- upper Danube region, Markov chain model for winter strength 2-106205
- Delhi, India, heat and humidity islands physical features 2-111601
- determination using Nimbus-6 data and interactive video-graphics 2-63106
- diurnal oscillations due to solar tides 2-106251
- Doppler width (temp.) and shift (wind) determ. with Fabry-Perot spectrometer, analytical description 2-83950
- Dresden, E. Germany, monthly air temp. height depend. (German) 2-88933
- Dresden-Elbe river area, urban affects on air temp. (German) 2-88934
- Dynamics Explorer Wind and Temperature Spectrometer 2-58177
- lower E-region, neutral temp. and electron density meas. via vertical HF sounding in presence of acoustic wave 2-100636
- Ekman layer fluctuations over short lead times, optimal prediction 2-83914
- central England, cold spell of December (1981) 2-100530
- central England, temps. rel. to UK isobaric patterns 2-68468
- Central Europe, temp. changes, 1761 to 1980 AD period (German) 2-63079
- exosphere, temperature deduction from twilight O¹ spectral emissions 2-63153
- exosphere, temperature inferred from satellite obs. of N₂ density 2-73739
- extremes forecasting, MOS appl. to Met. Office NWP model 2-83917
- F-region O₂ cooling mechanism from momentum transfer collisions with slow electrons 2-100640
- forecasting in Northern Hemisphere, use of automatic group analogue scheme 2-100598
- forecasting of British weather for gas industry 2-73648
- global heating rate due to O₃ absorpt. of solar radiation 2-117420
- global surface temperature correl. with sea level trend over past century 2-83845
- ground temperature, prediction technique rel. to long-range precip. forecasting (Chinese) 2-88943
- central Gulf Coast, frontal overrunning and offshore-onshore temp. diff. 2-83915
- height profile of atmospheric temp., remote sensing using microwave thermal radiation (Russian) 2-94472
- hemispheric temperature fluctuations of long period from satellite data, energy balance climate model (Russian) 2-73628
- Illinois, temp. and precipitation normals (1901-79) 2-83912
- increase due to CO₂, indirect effect on Earth rot. vel. due to polar cap melting 2-78693
- inversion, quasi-permanent, effects on incoming longwave atmospheric radiation from clear sky 2-100555
- inversion layer, role in origin of violent valley winds 2-100470
- inversion layer breakup in mountain valleys 2-94458
- inversion layer of nocturnal boundary layer (Chinese) 2-112091

atmospheric temperature continued

- inversion layer over hilly island 2-68425
- ionosphere, electron gas cooling rate obs. 2-94555
- ionosphere, seasonal var. in occurrence time of equatorial midnight temp. bulge 2-100637
- ionospheric plasma, induced temperature scattering of EM waves 2-68559
- IR emission meas. using balloon-borne cryogenic Fourier transform spectrometer 2-117474
- Japan, winter temp. since AD 1444 from lake freezing data 2-117438
- Karl-Marx-Stadt, E. Germany, monthly air temp. height depend. (*German*) 2-88933
- NW Kashmir, India, snow cover density var. with temp. and date 2-68393
- Kylen Lake, Minnesota, Late Wisconsin climatic history from glacial and vegetational data 2-78845
- lapse-rate sensing, remote, using atm. refr. over complex terrain 2-63085
- Leh, India, windchill determ. 2-112076
- lidar remote sensing of cloud, aerosol, temp. and density, multispectral satellite method 2-94501
- marine air, relative humidity from air-water temp. difference 2-106289
- marine atmosphere, preliminary shipboard meas. of microthermal fluctuations and optical turbulence 2-117456
- marine boundary layer, temp. and humidity rel. to bulk transfer coeff. of turbulent fluxes 2-117384
- maximum surface temperature from 1000-850 mb thickness lives and cloud cover 2-78810
- measurement of surface temp., satellite IR radiometry method 2-100586
- meridional energy transfer in ocean and atmos. (*Russian*) 2-73566
- mesosphere and lower thermosphere, model of temp. and composition 2-68543
- microwave remote sensing using TIROS-N satellite 2-89050
- Middle East, July lower troposphere, wind humidity and temp. 2-100496
- millimetre wave turbulence measurement, effect of humidity struct. and temp. struct. parameters 2-117395
- Minneapolis-St. Paul urban heat island, temp. adjustment effect on local climate 2-78829
- mixed layer depths, obs. comparison with models, use of temp., wind and MOS forecasts 2-78805
- mm wave radiometer for temp. profile meas. (*Chinese*) 2-78860
- model interpretation workshop, San Diego (March 1981) 2-106993
- Mount St. Helens (18 May 1980 eruption), effect on surface temp. 2-100345
- mountain valley temperature inversion breakup 2-94457
- Nepal, temp obs. during mountain trek in February (1981) 2-100528
- north hemisphere, ultra long waves oscillation rel. to cold air outbreaks 2-78823
- Northern Hemisphere, linear trends in tropospheric geopotential height and temp. patterns 2-100469
- Northern Hemisphere stratosphere, signal of Southern Oscillation 2-106194
- Northern Hemisphere surface air temp. in AD 1881 to 1980 period 2-106184
- ocean-atmosphere coupling in climate model 2-73673
- tropical Pacific, sea surface temp. rel. to cloudiness (*Chinese*) 2-88909
- western N Pacific, short-term climatic variability 2-68476
- palaeoclimate, temp. and rainfall 2-100564
- Peking radiation inversion, wind and temp. effects 2-78821
- polar stratosphere seasonal temperature variability 2-63018
- primitive terrestrial atmosphere, vertical thermal struct. from radiative-convective-photochemical models 2-112135
- profile by thermomicrowave imaging, fundamental integral eqn. linearization 2-73652
- profile reconstruction by remote radiation sensing, basic integral eqn. linearisation 2-68531
- radiative heating of St. Louis (USA) boundary layer, pollution effects 2-63011
- radiative relaxation of temp. perturbations theory (*Russian*) 2-73684
- remote meas. in lower atmosphere, radio acoustic sounding system (*Japanese*) 2-58171
- remote sensing, optical system design of interferometer imaging sounder 2-112159
- remote sensing of humidity and temp., appl. of meteorological lidar developments 2-106335
- remote sensing of temp. profile, IR radiance obs. technique 2-112176
- remote water-vapour conc. and temp. meas. using solar-blind Raman lidar 2-68495
- Roque de Los Muchachos, La Palma, solar seeing and atmospheric turbulence meas. 2-73683
- satellite temperature retrieval, variance ratio, energy loss and regression 2-106118
- severe storm environment, VISSR atmospheric sounder simulation expt. 2-106334
- ship waves in lee of isolated topography, model of wind speed and temp. 2-100474
- soil heating due to rise in atmos. surface layer temp. 2-73511
- solar constant and Earth surface temp. 2-112108
- solar cycle influence of temp. in England during Maunder minimum 2-78753
- solar heating by absorpt. by H₂O, Hough components 2-63048
- solar radiation, absorption by O₃ and H₂O, heating, effect on surface press. 2-106255
- South Polar Plateau, heat, aerosol and water vapour transport 2-117423
- South Pole, surface heat balance study 2-117422
- Southern Plains, USA, wintertime mesoscale cold front temp. and press. anal. 2-94431
- stationary front clouds model, including temperature and humidity effects 2-100516
- stratosphere, model of depend. on solar UV variability 2-63066
- stratosphere, temp. forecasts at 100 mb level for Concorde 2-112071
- stratosphere, winter high latitude planetary waves from temp. anal. 2-106240
- stratosphere fountain postulated from temp. anal. 2-78789
- stratosphere sudden warming, sensitivity studies of numerical models 2-100477
- stratosphere warming event, February 1979, NO altitude distrib. meas. 2-100455
- stratosphere warming event in February 1979, NO₂ and HNO₃ meas. at 54°N 2-100456
- stratosphere/mesosphere warmings in 1980/1, mid-latitude ground-based lidar study of temp. 2-106253

atmospheric temperature continued

- stratospheric temp. sounding, method for estimating geopot. base height 2-63134
- stratospheric warming and associated circulation changes, model 2-100501
- sunspot numbers correl. with weather of United States 2-63068
- surface air temp., inverse correlation with magnetic intensity change 2-78544
- surface air temp. response to CO₂ conc. increase 2-112106
- surface and upper air temps., trends 2-111988
- surface heating due to radiation, response function 2-68424
- surface layer, effect of temp.-press. gradient correl. on streamwise heat flux budget 2-100427
- surface layer, microscale temp. fluctuations 2-111997
- surface temp. effect of Mount St. Helens eruption plume, in NW US 2-111907
- surface temperature and atmospheric CO₂ regulation, Gaia hypothesis or geochemistry 2-112085
- surface temperature excursions due to passing clouds 2-78800
- surface temperature variations rel. to radio meteor wind oscils. 2-78892
- Taiwan, eigenvector anal. of surface temp. anomaly patterns 2-100423
- Tatarski temp. structure parameter meas., intermittent turbulence effects 2-68414
- Tateno, Japan, abnormally cool 1980 summer, temp., sunshine and solar radiation anal. 2-100459
- 1,1,1,2-tetrafluoroethane (refrigerant) pollution and rel. surface temp. rise 2-83875
- thermosphere, heat budget numerical models 2-94545
- thermosphere global circulation and temp., influence of magnetosphere 2-73738
- thermosphere perturbations due to O⁺ precipitation 2-106377
- thermosphere semidiurnal propagating tidal modes, assoc. wind and temp. struct. 2-106375
- thermosphere temp. at mid-latitude, solar and geomag. activity influences 2-73740
- thunderstorm cloud temp. profile meas. by radar technique 2-112178
- tidal effects, solar and lunar semidiurnal components 2-106252
- toradic thunderstorms, satellite observed cloud top height/temp. changes 2-78808
- tropical air temp. interannual variability causing Earth rot. rate changes 2-58101
- tropical stratosphere heating due to solar UV absorpt. by O₃ 2-68461
- troposphere, temp. and press. rel. to model for resonant transmittance in millimetre wave region 2-117394
- troposphere and stratosphere, vertical profiles from Salyut solar disc obs. (*Russian*) 2-58098
- troposphere-stratosphere system, thermodynamic model, temp. oscils. mechanism (*Russian*) 2-73627
- turbopause height and temp. in polar region from Ar/N₂ profile 2-73734
- Uccle, Belgium, averaged mean extremes 2-78813
- United States, climate variability due to 18.6 year lunar atmos. tide effect 2-73619
- United States, correl. with E.Pacific sea surface temp. 2-63050
- United States, forecast model applied to drought of 1980 AD 2-78721
- United States, forecasting of winter temp. climate 2-78720
- United States, objective operational max.-min. temp. forecast errors, synoptic scale and mesoscale contrib. 2-106190
- E United States, temps. rel. to D/H isotopic comp. of precipitation and storm trajectories 2-68444
- United States, twentieth century changes in winter climatic regions 2-73672
- United States winter temperature forecasts, models 2-106198
- urban heat islands, present state of knowledge 2-68448
- urban heat islands and pollutant dispersion, models 2-106166
- vertical distribution, effect of convection (*Russian*) 2-106218
- vertical profiling, Fourier spectrometer appls. 2-78878
- vertical struct. of oscillations classical tidal theory formulation 2-63064
- Visakhapatnam, India, boundary layer wind and temp. anal. 2-88970
- winter temps. in Holland (1634-1975) rel. to solar activity 2-58108
- CO₂ climate change model 2-117436
- CO₂ conc. sensitivity of climate models 2-100541
- CO₂ evolution from soil, mineralisation process correl. with temp. variation 2-68339
- CO₂-warmed Earth, regional climatic scenarios 2-73671

atmospheric thermodynamics

- see also atmospheric temperature*
- Arctic tundra, surface energy balance 2-106298
- SW Asian summer monsoon, onset and maintenance, large scale heat budget role 2-112073
- auroral ionosphere, energy dissipation by precipitating particles and Joule heating 2-106401
- Bay of Bengal cyclones, rainfall and latent heat release from radar obs. 2-68439
- boundary layer, temp., humidity, wind profiles and turbulent exchange over water surface layer (*Chinese*) 2-88944
- NE Brazil drought, due to locally direct circulation atm. heating effects 2-78708
- cloud-top entrainment instability obs. during AMTEX, assoc. heat fluxes 2-100475
- cloudy atmosphere thermodynamics, moist convective overturning and saturation point anal. 2-112037
- convection, thermodynamic eqn. for deep cloud convection 2-100422
- cumulus and cumulonimbus vertical transport, energy budgets 2-100436
- cumulus dimensions, effect on longwave irradiance and heating rate calcs. 2-106230
- Earth radiation budget study, use of general circulation model 2-88983
- F-region, high latitude model including heat flow, ion temp. var. determ. 2-106400
- Ferrel cell circulation forcing, importance of zonal momentum and heat eddy transport 2-68446
- fire plume thermogradients and dynamics, effect on optical props. 2-117479
- frontogenesis, mathematical theory 2-100531
- global climate, effects of polar ice caps in two-dimensional energy balance model (*Chinese*) 2-88999
- global heating rate due to O₃ absorpt. of solar radiation 2-117420
- gravity wave heating, enhanced energy flux 2-83911
- greenhouse effect due to CO₂ increase 2-107081
- heat transport numerical modelling (*Russian*) 2-106218
- heating of surface due to radiation absorpt., response function 2-68424

atmospheric thermodynamics continued

- hemispheric temperature fluctuations of long period from satellite data, energy balance climate model (*Russian*) 2-73628
 ionosphere, precipitating electron flux attenuation rel. to energy deposition in lower ionosphere 2-112220
 latent heat release in conditionally stable atm., CISK approach 2-106244
 magnetosphere, existence of nonadiabatic regions in dipole mag. field 2-112226
 magnetosphere energy flux from solar wind, relation between geomag. activity and solar wind vel. and density 2-112227
 marine atmosphere sensible and latent heat fluxes 2-111950
 marine boundary layer, surface momentum, heat and moisture fluxes rel. to optical props. 2-117452
 marine stratocumulus clouds effect on ocean surface heat budget 2-106231
 marine stratocumulus layers, mean conditions 2-106226
 marine stratocumulus layers, turbulence budgets and general conditions 2-106227
 middle atmosphere, radiative heating and cooling algorithms for use in dynamical model 2-112039
 midlatitude mature transient waves, condensational heating effects, GFDL general circulation model anal. 2-78779
 nocturnal surface inversion, effect of clear air radiative cooling 2-106229
 planetary boundary layer, ensemble cloud relations testing against numerical data 2-78770
 planetary boundary layer, Rossby Similarity and turbulent fluxes 2-100429
 precipitation long-range prediction, thermodynamic model (*Chinese*) 2-88943
 primitive equation system, normal mode initialisation rel. to gravity waves generation by quasi-geostrophic forcing 2-100473
 Puerto Rico trade wind cumulus boundary layer, high order one dimens. model 2-78771
 radiative relaxation of temp. perturbations theory (*Russian*) 2-73684
 radiative transfer calculations in anisotropically scatt. atm., discrete ordinate method, intensity computation 2-78947
 semidiurnal tide at equinoxes improved heating rates and wind related influences spectral anal. 2-78764
 solar heating by absorpt. by H₂O, Hough components 2-63048
 squall line over Korbogo, Ivory Coast, dynamics and thermodynamics 2-100488
 stationary eddies, heat and momentum horizontal transport 2-100438
 steady state fronts struct., momentum/heat diffusion effects and condensation/surface motion effects 2-78766
 stratified airstream heat addition, appl. to orographic rain dynamics 2-88982
 stratosphere sudden warming, sensitivity studies of numerical models 2-100477
 stratosphere warming event, February 1979, NO altitude distrib. meas. 2-100455
 stratosphere warming event in February 1979, NO₂ and HNO₃ meas. at 54°N 2-100456
 stratosphere warnings, effect of distorted polar night vortex 2-78778
 streamwise heat flux budget is atmospheric surface layer, effect of temp.-press. gradient correl. 2-100427
 temperature gradient beneath cloud due to rain evaporation, frontal line devel. (*German*) 2-73650
 temperature oscillations mechanism in troposphere-stratosphere system, thermodynamic model (*Russian*) 2-73627
 thermal forcing due to incoming solar radiation and outgoing IR flux (*Russian*) 2-73628
 thermosphere, thermal regime, effect of turbulence and IR radiation 2-83979
 thermosphere UV heat budget, seasonal effect of NO and O cooling 2-100614
 tropical circulation, anal. of thermally driven motions in equatorial β -plane 2-112010
 tropical storm Agnes transformation into extratropical cyclone, observed fields and vertical motions 2-112011
 tropical storm Agnes transformation into extratropical cyclone, moisture, vorticity and kinetic energy budgets 2-112012
 troposphere, heating rates from radiative flux meas. 2-58119
 turbulent fields, dynamic and thermal, fine struct. 2-78734
 turbulent fluxes over ocean, modification of Kondo's formulas for bulk transfer coeffs. 2-117384
 upper atmosphere, dynamical cooling induced by dissipating internal gravity waves 2-73736
 wave cyclone development, latent heating effects 2-112041
 zonal circulation, effect of momentum and heat sources in quasi-geostrophic model 2-73620
 CO₂ climatic problem, ocean-atmosphere interaction role 2-112109

atmospheric turbulence

- Joint Airport Weather Studies Project (JAWS) 2-89010
 ambient turbulence, effect on mean path of rising buoyant plumes (*Chinese*) 2-88946
 astronomical object image correction procedure for distortions due to atm. turbulence 2-100756
 auroral ionosphere, weak HF electrostatic turbulence obs. 2-106399
 boundary layer, model of mixed layer growth 2-100510
 boundary layer, technique of Kolmogoroff const. determination 2-68419
 boundary layer, temp., humidity, wind profiles and turbulent exchange over water surface layer (*Chinese*) 2-88944
 boundary layer turbulence models 2-63074
 boundary layer turbulence over complex terrain 2-68459
 boundary layer turbulent heat flux 2-78727
 boundary layer turbulent structure obs. with kytoun-mounted US anemometer 2-68418
 boundary layer vegetation cover layer, wind speed and shear stress profiles, phenomenological model 2-78807
 canopy flow index for two-storey forest 2-78729
 capacity factor of a wind turbine cluster 2-67812
 climate theory, fundamental theorems 2-58117
 cloudless convective layer with roll vortices, momentum flux and turbulence 2-106228
 cloudy planetary boundary layer, turbulent kinetic energy buoyancy prod. 2-78770
 coastal site wind fluctuations in surface layer (*German*) 2-100421
 coherent laser radar target statistics, turbulence effects 2-100546
 convection oscill. produced by modulated heat input (*Russian*) 2-63032

atmospheric turbulence continued

- cumulus convective activity of GATE modulated by large scale flow 2-117411
 diffraction of sound by a noise barrier in the presence of atmospheric turbulence 2-70748
 dispersion from line source, model 2-83879
 dispersion of pair of particles, Lagrangian Monte Carlo calc. 2-68458
 Doppler radar obs. of C₂ variability over Poker Flat, Alaska 2-78812
 drag anemometer for meas. of turbulence over vegetated surfaces 2-63127
 dynamics, ageostrophic effects 2-106234
 E-region at high latitude, plasma wave amplitudes and turbulence 2-106402
 EM field propagation through a turbulent layer, intensity statistics 2-112117
 fine structure of dynamic and turbulent fields 2-78734
 flux-gradient relationships during 1976 ITCE 2-68412
 forest canopy boundary layer, turbulent exchange and micrometeorology 2-78722
 frequency averaging for EM beam waves, scintillation index calc. 2-106213
 hierarchic model of turbulence (*Russian*) 2-60513
 intermittent turbulence in measurements of the temperature structure parameter under very stable conditions 2-68414
 ionosphere, plasma turbulence, two-dimensional, relation between Kolmogoroff's theory and direct interaction approx. 2-65726
 ionosphere, vel. shear effect on Rayleigh-Taylor instability 2-100626
 irradiance moments, high-order, of light wave obs. in turbulent air 2-89001
 kinetic energy dissipation rate meas. using ground-based Doppler radar 2-89045
 laser beam atmospheric scintillation space correl. in Shanghai (*Chinese*) 2-68485
 laser beam power fade, system and atmospheric effects 2-100547
 laser beam propagation, ang. scatt. and intensity scintillation meas. 2-117460
 laser beam propagation, meas. of turbulence-induced beam spread and wander at 1.06, 3.8 and 10.6 μ m 2-117458
 laser beam propagation in turbulent atmosphere correl. of shifts of optical images 2-117464
 laser beam wave front sensing and correction in turbulent atm., different wavelengths use 2-78837
 laser irradiance scintillation suppression in nonlinear defocusing medium 2-78838
 lateral dispersion in boundary layer from continuous sources 2-106167
 laws for small-scale turbulence, review (*Russian*) 2-62969
 light flux scintillations of incoherent radiation 2-68490
 light propag., distrib. of intensity fluctuation 2-63096
 long-path laser absorpt. spectrometer, scintillation noise reduction by aperture averaging 2-101464
 magnetosphere, hydromagnetic stability of turbulent geomag. tail 2-100654
 magnetosphere ion cyclotron turbulence in strong plasma inhomogeneity regions, effect on ionosphere 2-84017
 marine boundary layer, meteorological models for optical turbulence parameters 2-117452
 marine boundary layer, modification of Kondo's formulas for bulk transfer coeffs. of turbulent fluxes 2-117384
 marine stratocumulus layers, mean conditions 2-106226
 marine stratocumulus layers, turbulence budgets and general conditions 2-106227
 millimetre wave turbulence measurement, techniques and instrumentation 2-117395
 modulation noise in optical heterodyne receiver, approx. anal. 2-63095
 moving turbulent atmosphere with scatt. thermal nonlinearity, optical beam instability 2-55076
 multimode laser field phase fluctuations in turbulent atm. 2-97052
 multipass laser beam propag. through laboratory-simulated atm. turbulence, irradi. fluctuations, statistical meas. 2-90812
 ocean atmospheric boundary layers, parameterisation of turbulent characts. 2-68411
 optical beam propagation through atm. turbulence, irradi. fluctuations, universal statistical model 2-94495
 optical coherence theory, phase problem soln. for seeing through turbulent atm. 2-108793
 optical pulsed ranging accuracy, effect of atm. turbulence 2-112132
 optical scintillation saturation by strong turbulence, plane-wave variance, covariance and spherical-wave covariance 2-55069
 optical turbulence, effects on limiting resolution of electro-optical devices 2-117457
 optical turbulence, preliminary shipboard meas. 2-117456
 optical turbulence, simultaneous meas. by thermal radiosondes, angle of arrival statistics and image motion obs. 2-73683
 path-averaged inner scale of turbulence meas. by spatial filtering of optical scintillation 2-68401
 planetary boundary layer, Rossby Similarity and turbulent formulations for wind profiles 2-100429
 planetary boundary layer pot. vorticity, eqns. of conservation 2-68427
 planetary gyres, homogenisation of pot. vorticity 2-117327
 Poker Flat, USA, stratosphere/troposphere turbulence spectra from meridional and zonal winds obs. 2-106241
 pollutant dispersal from point source, turbulent-diffusion theory 2-100519
 Puerto Rico trade wind cumulus boundary layer, high order one dimens. model 2-78771
 Richardson number less than unity occurrence below 25 km 2-94460
 sound power radiated in duct in presence of flow (*French*) 2-75768
 space charge with turbulent mixing 2-63035
 stratocumulus at nighttime, turbulence struct. and entrainment 2-68454
 stratosphere, turbulence effect on VHF vertical incidence backscattered power profiles 2-63027
 surface layer, Lagrangian turbulent characts. similarity theory constns. (*Russian*) 2-117399
 surface layer, third- and fourth-order mixed moments 2-83880
 surface layer energy containing eddies, 3-D struct. 2-63019
 surface layer lateral turbulent diffusion expts. (*Russian*) 2-88950
 telescope, static split, atmospheric turbulence meas. appls. (*French*) 2-112086
 thermosphere, thermal regime, effect of turbulence and IR radiation 2-83979
 trajectory elongation on paths with localised refr. index inhomogeneities of air 2-106277

atmospheric turbulence continued

- tropopause height and static stability of troposphere 2-94451
 turbidity coefficients of semi-rural site, influence of climatic parameters 2-73688
 two-dimensional turbulence, spectra 2-62977
 unstable boundary layer turbulence, similarity of characts. 2-100430
 unstable surface layer over suburban terrain 2-68422
 velocity measurement of objects moving beyond turbulent layer, accuracy estimate 2-112876
 wind speed errors measured with cup anemometer due to atm. turbulence effects 2-73649
 CO₂ IR laser beam retroreflected through a turbulent atm., statistical props. 2-100561
 He-Ne visible laser beam retroreflected through a turbulent atm., statistical props. 2-100561

atmospheric wind see wind**atmospherics**

- see also atmospheric electromagnetic wave propagation; whistlers
 ELF hiss at auroral geomag. field equator rel. to auroral electron precipitation 2-100646
 Italy and Norway, obs. of 1-4 kHz EM noise characts. 2-58110
 VLF flux intensity distrib. of atmospheric radio static bursts, parameter estimation 2-78816
 VLF emission from lightning, theory 2-68428

atom-atom collisions

- includes reactive collisions
 alkali atom+inert gas interaction, model pot. calcs. 2-102580
 alkali atoms, photon assisted radiative collisions 2-85594
 alkali metal+alkali metal, spin relax. on the a²Σ⁺ mol. term 2-59892
 alkalike atom+inert gas atom, collisions, van der Waals forces, excited state lifetimes 2-75369
 closed shell atoms, symmetry consideration in Penning ionisation 2-75402
 collisional orientation transfer between hyperfine struct. levels, semiclassical vector model, quantum mech. justification 2-70402
 developments, 1950 to present day, review 2-84430
 driven atoms, collisions in radiation field and spectra 2-90652
 inert gas atom+ground state atom(molecule), ionisation 2-90680
 laser-switched collision processes, diagrammatical anal. 2-55098
 non-Lorentzian line shape charact. 2-102431
 nonlinear resonances in ion spectra, Coulomb broadening 2-113917
 optical collisions rate and fluoresc. spectra 2-54919
 pair-potential calcs. 2-65069
 Ar+Ar, K-shell excitation probabilities meas. 2-54949
 Ar+Ar⁺ collisions at thermal energies, differential cross section meas. 2-75380
 Ar+μp-μAr⁺+p, muon transfer rate meas. 2-59977
 Ar+S, electron prod., impact parameter depend. 2-54921
 Ar⁺+O, electronic energy transfer rate consts. 2-114076
⁷⁵As atoms, stopping power in He, Ne and N₂, recoil nuclei γ-ray emission study 2-102579
 Cd+Ar(Kr), principal series line broadening 2-85591
 Cd+Ar, quenching of Cd excited state, atomic fluoresc. obs. 2-80798
 Cl, nonequilib. recomb. in supersonic nozzles, chemiluminesc. investig. 2-59737
 Cs+Ar collisional narrowing in Cs two-photon transition 2-80827
 Cs+Xe collision, perturber vel. and temp. effects on line profiles 2-54917
 Cs(6¹S_{1/2}) + Cs(6³S_{1/2}) + hν → Cs(5²D_{3/2,3/2}) + Cs(6²P_{1/2}), pair absorpt. in intrinsic vapours 2-54923
 Cu+Fe, K-shell vacancy prod., direct excitation effects 2-75405
 F+Xe 2-80784
 F⁺+Ne, F K-shell X-ray prod., charge state depend. 2-96708
 H+atom (ion), small angle scatt. theory 2-59896
 H+H+hν₀→H₂⁺+hν, recombination via free-to-bound Raman transitions 2-72984
 He+Ar, cross sections, pot. energy curve 2-54939
 He+He, low energy scatt., ⁴He, bound state 2-88349
 He+He, simultaneous excitation to 2¹P state, cross sections 2-85779
 He⁺+H⁺(He⁺)(He²⁺), excitation, charge transfer, ionisation, emission cross section meas. 2-114090
 Hg+Br, collisional de-excitation, ion-pair form. in entrance channel, quenching rate coeff. 2-72973
 Hg+inert gas, interaction pot. determ. on basis of diffusion coeff. temp. depend. 2-108669
 Hg+K(4³P_{1/2}), rainbow scatt. at thermal energies 2-80778
 Hg+Na⁺, excited state pots., rainbow scatt., polarisation effects 2-85776
 I+I, recombination in liq., vibr. relax. study 2-105465
 K vapour, laser excited, collisional processes 2-59914
 K vapour, resonantly laser excited, energy pooling collisions and plasma production obs. 2-75214
 K+Ar, 4 p-ns and 4 p-nd lines, collisional broadening and shift 2-59897
 K+He(Ne), electronic and nuclear spin relax., hyperfine interaction 2-96688
 K+He(Ne)(Ar)(Kr)(Xe), 4p ³P_{3/2}-7s ²S_{1/2} transition, effect of collisions 2-59732
 K+He(Ne)(Kr), excited states, transition cross sections, fluoresc. obs. 2-75408
 K+Ne(Kr)(Xe), Π interaction, pot. param. 2-108677
 K⁺+K high Rydberg state, collision effects 2-59904
 K(4P)+Ar, differential scatt., ²Σ potentials, line profile meas. 2-96672
 K(5P)+Ar, differential scatt., ²Σ potentials, line profile meas. 2-96672
 Kr+Xe(Kr) slow collisions, rot. induced 4f⁶ excitation 2-96705
 Li He, mol. autoionis. electron spectra 2-102582
 Li+He, Li 3S-3P transition relax. spanning short term impact regime to the long term asymptotic regime 2-59915
 Li+inert gas atom, 3²D state quenching, product state specific obs. 2-80796
 Li+Li (He)(Ne), quenching, excitation transfer processes, radiative coeff., collision rate coeff. 2-108418
 Li⁺+He(Ar)(Kr)(Xe), Li fine struct. transitions, rate coeff. 2-54938
 N+He(Ar), VUV discharge line source, excitation mechanism effect on linewidth parameters 2-108422
 N+N, catalysed recomb. on Co and Ni surfaces, N₂ metastable states and vibr. relax. 2-108684
 Na, Rydberg atoms reson. collisions, energy transfer 2-59916
 Na+He, collision-induced coherence in four wave light mixing 2-59902
 Na+He, hyperfine components broadening 2-113913
 Na+inert gas atoms, collision-induced line shifts 2-108681
 Na+inert gas atoms, inelastic scatt. theory, higher-order corrections to impulse approx. 2-54920

atom-atom collisions continued

- Na+Na, microwave-assisted reson. collisional energy transfer, Rydberg states 2-90657
 Na+Na, resonant collision investigation 2-75409
 Na+Ne, model potentials and pseudopotentials 2-59880
 Na⁺+Na⁺, associative ionisation, polarisation depend. 2-54947
 Ne+Ne, transitions between excited states (*Russian*) 2-59900
 Ne⁺ potentials for dissociation, rel. to Ne+Ne collisions 2-67743
 O+Al(Ga)(In)(Tl), reactions in Ar matrix, IR spectra of prods., vibr. 2-96564
 O+He(Ar), VUV discharge line source, excitation mechanism effect on linewidth parameters 2-108422
 Pb+Pb metastable levels 6p² ³P₁ and 6p² ³P₂, collisional quenching, rate const. meas. 2-59888
 Rb, Rydberg levels, rare gas atom quenching cross sections 2-102426
 Rb+H⁺, double K-shell ionisation, single photon emission probability 2-85794
 Rb+He(Ar)(Xe), impact broadening and shift of nS and nD levels 2-102581
 Rb+He(Ne)(Ar)(Rb), excitation transfer, atomic fluoresc., two-photon absorpt., quenching 2-70389
 Rb+inert gas atoms, inelastic scatt. theory, higher-order corrections to impulse approx. 2-54920
 Rb+Rb(5p)(Rb(5s)), ion form. from (8s) state 2-80795
 Rb⁺+Rb, collisional ionis. 2-90681
 Sr+Eu, radiative collision, final-state coherences 2-75377
 Tb+K laser induced collisional energy transfer obs., K fluoresc. meas. 2-90656
 Tl, noble gas collisional broadening, Raman echo meas. 2-85574
 U+U, positron spectra calcs. 2-96690
 Xe+F, mol. form. at beam scatt. study with mag. anal. 2-108738
 Xe+Na, interaction potential determ. from scatt. cross-sectional meas. 2-70390
 Xe+Xe, M-shell excitation, ion-photon and ion-Auger electron coincidence meas. 2-102575
 Xe+Xe, Rydberg atom, state changing, ionisation, electric field effects 2-114096

atom-ion collisions

- includes reactive collisions
 see also charge exchange
 1sσ molecular orbital direct ionisation, scaling law 2-90679
 alignment of beam-foil excited fast (MeV) molecular ions from defined electronic configuration 2-54931
 alkaline earth ions+H⁺, electron capture, model pot. calcs. 2-75414
 alpha-induced K-shell ionisation, binding effect 2-75379
 asymmetric electron capture theory 2-96714
 asymmetric ion atom collisions, coherent Coulomb ionisation of 1sσ mol. orbital 2-102606
 atom+light ion, L-shell ionis., electronic relativistic effects calcs. 2-59898
 binary encounter approx. for ionisation of atoms by collisions with ions, relativistic correction 2-54918
 C H⁺+H collisions, one electron two centre symmetric systems, differential cross sections 2-59928
 charge state distributions and charge-changing cross sections of heavy ions in the energy range up to 10 MeV/u 2-54952
 charge transfer cross sections 2-108697
 close atomic collisions, compound atom model for charge exchange processes 2-54951
 convoy electron prod. 2-77647
 cross sections, atomic expansion method 2-75373
 deuteron-induced K-shell ionisation, binding effect 2-75379
 developments, 1950 to present day, review 2-84430
 energy loss and energy loss straggling of fast heavy ions in matter 2-64818
 experimental aspects of ion-ion collisions, appl. to thermonuclear fusion 2-59925
 forward ion-atom dispersion relations 2-85778
 halogen anion+inert gas atom, elastic scatt. and electron detachment differential cross sections 2-90650
 heavy ion+atom, double-collision processes, scatt. angle depend. 2-102595
 heavy ion+atom, semi-empirical universal scaling law for δ-electron production 2-54945
 heavy ion+atom collisions, information theoretical description of charge-state distributions 2-102576
 heavy ion collisions, high energy electron emission cross section 2-54950
 heavy ion-atom collisions, double to single K vacancy production ratio 2-90678
 heavy ion-atom collisions, emission of δ electrons from inner-shell excitation 2-85793
 heavy ion-atom collisions, superheavy quasiautom form. 2-96674
 inert gas+alkali ion interaction, model pot. calcs. 2-102580
 inner shell alignment, X-ray polarization 2-90677
 inner shell excitation in superheavy quasiautomolecular systems 2-54929
 ion+neutral reactions in drift tubes, energy depend. investig. 2-93784
 ion induced monopole transitions, semiclassical approx. 2-85780
 ion-ion collisions, doubly resonant charge exchange 2-75406
 ionised projectiles traversing inert gases, polycrystalline solids and axial channels in Au, electron capture and loss 2-90661
 joint study programme between USSR and Hungary (*Russian*) 2-85792
 L-shell X-rays by low-energy proton impact, relative intensity ratios 2-96704
 low energy charge transfer collisions, ion-impact ion sources 2-102301
 low energy collisions, reson. process 2-96693
 luminescence, report on spectroscopic and laser investigation 2-96710
 one electron two centre symmetric systems, differential cross sections 2-59928
 preequilibrium distribution of the charge states of fragments of molecular ions in gaseous targets 2-54953
 quasi-one-electron collision systems, state-selective electron capture state selective electron captive 2-90689
 shadow cone formed by ion beam scatt. from atom 2-108674
 slow collisions, at. orbital expansion calcs., curved-line trajectory obs. 2-75376
 supercritical atoms, resonance in positron continuum 2-96726
 superheavy ion+atoms, K-vacancy formation, X-ray and δ-electron emission in quasiautomolecular model 2-85796
 transition amplitude for ion-induced s to s transitions 2-113910
 Ag+H⁺, double-differential cross sections for delta-electrons 2-75401

atom-ion collisions continued

- $\text{Al} + \text{H}^+ (^1\text{He-ion})$, inner shell ionisation cross sections, projectile charge depend, 2-78387
 $\text{Al} + \text{He}^+$, pulsed beam time of flight technique for studying ion-atom scatt. 2-77670
 $\text{Al}^{11+} + \text{H}^+$, stopping power, generalised oscillator strength formulation 2-114080
 $\text{Ar} + ^1\text{H} (^1\text{He}) (^1\text{Li})$, K-shell ionisation and capture differential cross sections, scaling props. 2-96706
 $\text{Ar} + \text{Be}^{11+} (\text{B}^{11+}) (\text{C}^{11+})$, electron capture, cross section meas. 2-102619
 $\text{Ar} + \text{H}^+$, electrons ejected from K shell, energy distrib. 2-70406
 $\text{Ar} + \text{H}^+ (\text{He}^{2+})$, L-shell impact ionisation, coupled state calcs. 2-102598
 $\text{Ar} + \text{He}^+$, Z² scaling and electron screening effect 2-70150
 $\text{Ar} + \text{Li}^+$, electron loss cross sections 2-54943
 $\text{Ar} + \text{N}_2^+$, charge transfer, vibr., laser induced fluoresc. study 2-80802
 Ar^+ + inert gas atoms, electron loss cross section meas. 2-102600
 $\text{Ar}^+ + \text{Kr} (\text{Xe})$, excitation collisions studied by monitoring resulting luminesc. 2-108675
 $\text{Ar}^{21+} + \text{Ar} (\text{Kr}) (\text{Xe})$, single electron capture products, energy loss spectra meas. 2-102607
 $\text{Ar}^{21+} + \text{Na}$ one electron capture by ground and metastable Ar^+ 2-80808
 $\text{Au} + \text{Au}$ ion collisions, threshold behavior of MO X-ray anisotropy spectra 2-59919
 $\text{Au} + \text{C}^{6+} (\text{N}^{5+})$, impact ionisation, $\text{L}_{2,3}$ -subshell alignment 2-102605
 $\text{Au} + \text{H}^+$, L-shell ionisation cross sections Dirac-Hartree-Slater calcs. 2-114093
 $\text{Au} + \text{O}^+$, double-differential cross sections for delta-electrons 2-75401
 Br ion bombardment on light-ion target, L X-rays perturbation 2-77625
 $\text{Br} + \text{Pb}$ superheavy system, δ -electron production rates 2-59893
 $\text{C foil} + \text{H}^+ (\text{He}^+) (\text{He}^{2+})$, convoy electrons dwell-time depend. 2-59922
 $\text{C} + \text{Ni}^{2+}$, double-differential cross sections for delta-electrons 2-75401
 $\text{C}^{6+} + \text{H}$, charge transfer, at. orbital expansion calcs., curved-line trajectory obs. 2-75376
 $\text{C}^{6+} + \text{H} (\text{Is})$, electron capture cross section, Landau-Zener formula 2-114101
 $\text{C}^{6+} + \text{H} (\text{Is}) \rightarrow \text{C}^{5+} (\text{n,l}) + \text{H}^+$, electron capture cross-section, perturbed stationary states calcs. 2-59930
 ^{12}C pojectiles at 250 MeV amu^{-1} , K vacancy prod., relativistic trajectory Monte Carlo method appl. 2-80806
 $^{13}\text{C} + \text{H}^+$, K-shell ionisation accompanying nuclear scatt. 2-65081
 $\text{Ca} + \text{Mg}^{2+}$ collisions, total charge transfer cross section 2-114091
 Cl^- + inert gas atom, electrons detachment energy distrib. 2-90684
 $\text{Cl} \cdot \text{nH}_2\text{O}$ ion mobilities and collision cross-sections in Ar, Kr and Xe 2-91581
 $\text{Cu}^{24+} + \text{Cu} (\text{Ge}) (\text{Ag})$, K-shell vacancy prod. study 2-108694
 $\text{D}^1 + \text{He} (\text{Ne}) (\text{Ar})$, electron capture probabilities 2-102609
 $\text{F} + \text{H}^+$, polarisation pots. and three body induction effects calc. from perturbation theory 2-108676
 $\text{F} + \text{He} (\text{Ne}) (\text{Ar})$, electron detachment cross sections meas. 2-59927
 $\text{Ge} + \text{H}^+ (\pi^+) (\pi^-)$, K-shell excitation and ionis. by relativistic projectiles, channeling obs. 2-59920
 H , ionisation by bare ions with charges 1 to 6 in Glauber approx. 2-96724
 $\text{H-like ion} + \text{bare ion}$, electron capture cross section calcs. 2-90686
 $\text{H} + \text{atom (ion)}$, small angle scatt. theory 2-59896
 $\text{H} + \text{C}^{3+}$, charge transfer, cross section calcs. 2-70412
 $\text{H} + \text{Cl} (\text{F})$, associative detachment reaction 2-114075
 $\text{H} + \text{H}_2^+$, electron ejection cross section; projectile ionisation importance 2-75400
 $\text{H} + \text{H}^+$, asymptotic behavior of charge exchange cross sections (Russian) 2-85804
 $\text{H} + \text{H}^+$, Coulomb interaction, time-depend. Schrodinger eqn. soln. 2-85772
 $\text{H} + \text{H}^+$, electron excitation and charge transfer, 1-20 keV 2-96692
 $\text{H} + \text{H}^+$, interconversion reactions, appl. to auroral protons interaction with thermosphere 2-100611
 $\text{H} + \text{H}^+$ scattering appl. of soln. of time depend. Schrodinger eqn. with trajectory method 2-54944
 $\text{H} + \text{H}^+ (^4\text{He})$ excitation cross section for high and moderate n values 2-80797
 $\text{H} + \text{H}^+ (\text{He}^{2+})$, electron ejection, single differential and total scatt. cross-sections calcs. 2-59921
 $\text{H} + \text{He}^{2+} (\text{Li}^{3+}) (\text{Be}^{4+}) (\text{B}^{5+})$, electron capture investigated at impact velocities 0.3 and 1.4 au 2-114074
 $\text{H} + \text{highly stripped ions}$, electron capture theories 2-54959
 $\text{H} + \text{Li}^{3+}$, electron capture, mol. treatment, impact parameter approx. 2-85797
 $\text{H} + \text{Li}^{3+} (\text{Be}^{4+})$, low impact energy, charge transfer 2-114099
 $\text{H} + \text{Li}^{3+} (\text{Be}^{4+})$, charge transfer cross sections, impact parameter approx. 2-59931
 $\text{H} + \text{O}^{2+} (\text{O}^{3+})$, charge transfer rate consts. 2-102613
 $\text{H}^- + \text{He}$, electron detachment, cross section plane wave form approx. 2-114094
 $\text{H}^+ + \text{Au} (\text{Dy})$, L-subshell ionisation, cross sections, X-ray spectra 2-54941
 $\text{H}^+ + \text{Cs} (\text{Rb}) (\text{K}) (\text{Na})$, single electron capture, attenuation cross sections meas. 2-114077
 $\text{H}^+ + \text{H}$, close coupling calcs., electron transfer cross sections 2-80805
 $\text{H}^+ + \text{H}$, elastic scatt. at 15 to 200 keV 2-108672
 $\text{H}^+ + \text{H}$, electron capture at high energies, continuum distorted wave and second Brinkman-Kramers approx. 2-96718
 $\text{H}^+ + \text{H}$, electron capture differential cross section 2-65085
 $\text{H}^+ + \text{H}$, total cross sections for bombarding energies of 1 to 50 keV 2-114073
 $\text{H}^+ + \text{H} (\text{D})$, charge transfer collisions within energy range 0.1-150 eV 2-90659
 $\text{H}^+ + \text{H} (\text{Is})$, charge exchange, three-centre atomic expansion method 2-85803
 $\text{H}^+ + \text{He}$, electron capture cross sections, second Born approx. 2-114103
 $\text{H}^+ + \text{He}$ differential scattering at $E_{\text{cm}} \leq 0.5$ eV, orbiting struct. meas. 2-80801
 $\text{H}^+ + \text{He} (\text{Ne}) (\text{Ar})$, electron capture probabilities 2-102609
 $\text{H}^+ + \text{Mg}$, H^+ form., ang. distrib., differential cross sections meas. 2-96722
 $\text{H}^+ + \text{Ne}$, K shell ionisation, electron capture, cross section meas. 2-54940
 $\text{H}^+ + \text{Ti} (\text{Cr}) (\text{Co}) (\text{Ni}) (\text{Cu}) (\text{Zn})$, K-shell X-ray prod. cross section meas. in energy range 300-2400 keV 2-90492
 $\text{H}_2^+ + \text{Ar}$, Z² scaling and electron screening effect 2-70150
 $\text{H}_2^+ + \text{metal atoms}$, electron capture transitions 2-102603

atom-ion collisions continued

- $\text{HCl}^+ + \text{Xe}$, charge exchange reactions, rate coeffs., selected ion flow study 2-88341
 $\text{H}^* + \text{N}^{4+} (^0\text{I}^+)(\text{Ar}^{4+})$, charge exchange, impact ionisation, cross section, crossed-beam expt. 2-114102
 $\text{He ions} + \text{He} (\text{N}) (\text{Ne}) (\text{Ar})$, charge exchange cross sections, oscillations, average equilib. charge 2-85800
 He , stopping power of protons and alpha particles 2-70386
 $\text{He}^+ - \text{Xe}$, charge transfer reaction, combined drift-tube and beam luminesc. study 2-96971
 $\text{He} + \text{Ar}^+$, excitation cross sections, spectra, Landau-Zener model 2-96711
 $\text{He} + \text{B}^{9+} (\text{C}^{10+}) (\text{N}^{11+}) (\text{O}^{12+}) (\text{F}^{13+}) (\text{Ne}^{14+}) (\text{H-like}) (\text{He-like}) (\text{Li-like})$ ions, one-electron capture cross sections 2-96723
 $\text{He} + \text{C}^{6+} (\text{F}^{8+})$, electron capture into selective state, energy spectra meas. 2-102608
 $\text{He} + \text{F}^{8+} (\text{F}^{9+})$, radiative electron capture processes, X-ray prod. cross sections 2-96725
 $\text{He} + \text{H}^- (\text{D}^-)$, electron detachment cross sections meas. 2-59927
 $\text{He} + \text{H}^+$, He excitation, Glauber cross sections 2-80800
 $\text{He} + \text{He}^{2+}$ collisions, quasispherical states, calc. using diabatic MO basis set 2-70384
 $\text{He} + \text{Kr}^+ (\text{Xe}^+) (\text{I}^+) (\text{N}_2^+)$, electronic and vibronic transitions, translational energy spectroscopy 2-54935
 $\text{He}^+ + \text{Ar}$, excitation cross sections, spectra, Landau-Zener model 2-96711
 $\text{He}^+ + \text{Dy} (\text{W}) (\text{Au}) (\text{Pb}) (\text{U})$, M to L shell X-ray yields ratio 2-59592
 $\text{He}^+ + \text{H}^+$, close coupling calcs., electron transfer cross sections 2-80805
 $\text{He}^+ + \text{He}$, scatt. cross sections meas., charge transfer cross section meas. 2-75410
 $\text{He}^+ + \text{He}^+$, charge transfer cross sections 2-96682
 $\text{He}^+ + \text{Ne}$, density matrix of the 1 3p determ. 2-96712
 $\text{He}^{2+} + \text{Ar}$, transfer ionisation in slow collisions 2-59926
 $\text{He}^{2+} + \text{H}$, one and half centred calcs. of ionisation and charge transfer 2-54955
 $\text{He}^{2+} + \text{H-like ions}$, charge transfer cross sections, Coulomb projected Born approx. 2-90687
 $\text{He}^{2+} + \text{He}$, charge exchange, time-dependent HF theory appl. 2-90658
 $^4\text{He} + \text{Au} (\text{Bi})$, L-subshell ionisation cross sections meas. 2-54942
 $\text{I} + \text{I}$, electronic shell struct. influence on heavy ion elastic scatt. 2-114079
 $\text{Kr} + \text{Kr}^+ (\text{Kr}^{2+})$, symmetric reson. charge transfer, drift tube study 2-108696
 $\text{Kr}^+ + \text{F}$, ion-ion recombination, reaction rates 2-99672
 $\text{Kr}^+ + \text{inert gas atoms}$, charge transfer cross section meas. 2-102601
 $\text{Li atom} + \text{ion collisions}$, state-selective electron capture 2-90689
 $\text{Li} + \text{H}^+ (\text{He}^{2+})$, electron capture and ionisation cross sections calcs. 2-54956
 $\text{Li} + \text{He}^{2+}$, electron transfer, single and double, cross-sections 2-65086
 $\text{Li} + \text{He}^{2+}$ collisions, absolute cross sections for one electron capture into excited projectile states 2-59929
 $\text{Li}^+ + \text{Ar} (\text{Kr}) (\text{Xe})$, clustering reactions, forward and backward rate coeff., energy depend. 2-83365
 $\text{Li}^+ + \text{He}$, excited quasispherical state form., autoionisation, electron spectra 2-59894
 $\text{Li}^{3+} + \text{H}$, charge exchange calcs. 2-102610
 $\text{Li}^{3+} + \text{H}$, electron transfer collisions at low and intermediate energies 2-80804
 $\text{M}^+ + \text{N}$, excited state charge-exchange cross sections, ODMR 2-102611
 $\text{Mg}^+ + \text{Ar}$, collisional excitation mechanism, coupled channel impact parameter approx. 2-54948
 $\text{N}^{4+} + \text{atom}$, L-shell vacancy rearrangement probabilities on $\text{K}\alpha$ X-ray satellites, at. number depend. 2-96709
 $\text{N}_2^+ + \text{Ar}$, charge transfer, threshold electron-secondary ion coincidence study 2-96717
 $\text{N}_2^+ + \text{He}$, electronic and vibronic transitions, translational energy spectroscopy 2-54935
 $\text{Na} + \text{H}^+$, polarised proton and N^- source, target optical orientation (Russian) 2-102311
 $\text{Na} + \text{H}^+$, electron capture collisions 2-102615
 $\text{Na}^+ + \text{Na}$, Rydberg to Rydberg charge transfer 2-65083
 $\text{Na}^+ + \text{Na}^+$, molecular states preparation in ion-atom crossed beam expt. laser excitation 2-65080
 $\text{Ne}^+ + \text{H}^+ (\text{He}) (\text{Li})$, K-shell ionisation and capture differential cross sections, scaling props. 2-96706
 $\text{Ne} + \text{F}^{8+}$, excited states, electron excitation and capture, X-ray spectra 2-75418
 $\text{Ne} + \text{F}^{14+}$, inner-shell excitation, quasispherical charge transfer, K-Auger emission 2-75416
 $\text{Ne} + \text{Ne}^{9+} (\text{Ar}^{10+})$, Ne K Auger electron emission study 2-85795
 $\text{Ne}^+ + \text{O}$, close coupling calcs., electron transfer cross sections 2-80805
 $\text{Ne}^{2+} + \text{Xe}$, excited ions lifetime meas. long-lived ions preparation, selective electron capture appl. 2-102616
 $\text{Ne}^{2+} + \text{Xe}$, electron capture excitation from metastable ion at 40 keV 2-96719
 $\text{Ne}^+ + \text{He} (\text{Ne}) (\text{Ar}) (\text{methane}) (\text{Xe})$, Kalpha X-ray lines, electron capture rate coeff. determ. 2-65072
 $\text{Ne}^+ + \text{He} (\text{Ne}) (\text{Ar})$, excited projectile states prod., photon emission cross sections 2-75413
 Ni , K-shell ionisation by protons, deuterons and alpha particles at low projectile energies 2-102632
 $\text{Ni} + \text{Ni}$ ions, delta electrons and continuous X-ray generation 2-96721
 $\text{O} + \text{N}_2^+ \rightarrow \text{NO}^+ + \text{N}$, rate coeff. from auroral ion comp. anal. 2-73746
 $\text{O}^{3+} + \text{H}$, charge exchange, rot. coupling matrix, ab initio CI calcs. 2-85799
 $\text{Pb} + \text{H}^+$, ionisation, anisotropy of Pb $\text{L}_{2,3}$ subshell X-ray emission line 2-75407
 $\text{Si}^+ + \text{H}^+$, charge transfer ionisation at thermal energies, reaction rates 2-59923
 $\text{Sn} + \text{U}^{40+}$, projectile charge state distrib., target thickness depend., inner shell vacancy prod. 2-75399
 $^{88}\text{Sr} + \text{H}^+$, K-shell ionisation probability meas. 2-114092
 $\text{U} + \text{H}^+$, L-shell ionisation cross sections Dirac-Hartree-Slater calcs. 2-114093
 $\text{U}^{41+} + \text{inert gas target}$, highly charged inert gas recoil ion prod. 2-114097
 $\text{Xe} + \text{Ne}^{2+}$, initial to final state-selective 1-electron capture cross-sections meas. 2-90690
 $\text{Xe} + \text{Xe}^+ (\text{Xe}^{2+})$, symmetric reson. charge transfer, drift tube study 2-108696

atom-ion collisions continued

Xe⁺+Cl⁻, ion-ion recombination, reaction rates 2-99672
 Y+H⁺(³He-ion), inner shell ionisation cross sections, projectile charge depend. 2-70387

atom-molecule collisions

see also atom-molecule reactions; molecular rotational-vibrational energy transfer
 angular momentum decoupling approx. survey 2-108678
 atom+diatom, translational-rotational energy transfer, classical formalism 2-90665
 atom+diatomic molecule, electronically elastic collision, energy loss 2-65073
 atom+diatom collision, state densities and time delay 2-85763
 classical two-dimensional model for rotational-vibrational atom+diatom inelastic scattering 2-108654
 excited rot. levels, radiative lifetimes and electronic quenching rate const. 2-70343
 extended wave packet dynamics appl. atom-diatom mol. scatt. 2-102569
 inert gas atom+diatomic molecule, vibr.-rot. relax. 2-70396
 inert gas atom+ground state atom(molecule), ionisation 2-90680
 inert gas atom alkali halide molecules, dissociation, ionisation, momentum model 2-114098
 left-right asymmetry in rot. inelastic differential cross-sections, origin 2-96700
 methane+Ar, vibr. transitions, vibr.-rot. energy exchange mechanism 2-114086
 monatomic ions, charge stripping spectra 2-54780
 propensity rules for rot. inelastic collisions 2-102591
 quantum gas, triple-collision operator with bound states 2-103238
 rotational energy transfer, m_l selection rule 2-70403
 rotationally inelastic collisions, origins of power law behaviour 2-85777
 stopping power in He, Ne and N₂, recoil nuclei γ -ray emission study 2-102579
 three-dimens. model system, collision induced dissociation, calcs. 2-85775
 Ar+CO₂, collisional excitation cross section meas. 2-90670
 Ar+H₂, vibr. relax. rate consts., test of linear sum rule by trajectory calcs. 2-108687
 Ar+H₂, vibr.-rot.-translational energy transfer, state-to-state cross sections, Monte Carlo trajectory calcs. 2-90674
 Ar+H₂⁺, Z² scaling and electron screening effect 2-70150
 Ar+HCl, vibr. and rot. relax., quasiclassical trajectories on model pot. energy surfaces 2-90673
 Ar+HF, energy transfer, Monte Carlo quasiclassical trajectory study, vibr.-rot. states 2-96684
 Ar+He⁺, Z² scaling and electron screening effect 2-70150
 Ar+N₂, inelastic scatt., time depend. perturbation theory 2-102590
 Ar+N₂(O₂), anisotropic well depth parameters, from total differential cross-sections 2-80777
 Ar+NO, rot. and spin-orbit transitions, IR-UV double reson. 2-75382
 Ar+NO, rot. excitation, interference effects resolution, laser induced fluorescence 2-102592
 Ar+Na₂, classical two-dimensional model for rotational-vibrational atom-diatom inelastic scattering 2-108654
 Ar*, quenching by O containing compounds, reson. fluoresc. study of reaction prod. 2-59890
 B+epoxide, chemiluminesc. obs., vibr. distrib. 2-57619
 CO+atom, hyperthermal collisions, mol. anharmonicity, time correl. function 2-85783
 CO+He(Ne), vibr. relax. rate coeff., ab initio calcs. 2-59906
 CO₂+atom, hyperthermal collisions, mol. anharmonicity, time correl. function 2-85783
 CO₂+He(Ne), vibr.-rot. energy transfer, cross sections, rate consts. calcs. 2-96695
 Ca+H₂(N₂)(CO)(CO₂)(methane), collisional relax., rate consts. for quenching meas. by modulated laser induced fluoresc. technique 2-96680
 Cd+N₂(H₂)(CO)(CO₂), quenching of Cd excited state, atomic fluoresc. obs. 2-80798
 Cl+H₂, semiempirical method of modelling pot. energy surfaces for generalised TST and appl. to kinetic isotope effects 2-62376
 CsCl+He(Ne)(Ar)(Kr)(Xe), rot. inelastic cross sections, long-range pots. 2-96699
 CsF+He(Ne)(Ar)(Kr)(Xe), rot. inelastic cross sections, long-range pots. 2-96699
 F+D₂, reactant-product angular momentum coupling, classical mechanical theory appl., Franck-Condon transition 2-72971
 F+H₂, collinear reactive scatt., hyperspherical description 2-105467
 H+CO, dissociation in interstellar shock heated regions 2-68861
 H+H₂, Balmer alpha emission 2-75375
 H+H₂, dissociation in interstellar shock heated regions 2-68861
 H+H₂, kinetic field pot., Morse function, pot. energy surface 2-85770
 H+H₂, molecular dissociation, collision induced, cross sections, appl. to mol. clouds 2-90653
 H+H₂ ($\mu=0,1$), quasiclassical trajectory calcs. on H₂ pot. energy curve from force field data 2-102570
 H+H₂, pot. energy surface, near Hartree-Fock calc. 2-59891
 H₂+H(F) reactive collisions, 3-dimens., reson. energies, semiclassical calcs. 2-111478
 H₂+H(He)(Ne)(Kr)(Xe), relativistic correction to interaction coeffs. 2-75202
 H₂+He(Ne), van der Waals pot. hypersurfaces, bond dist. depend. 2-59882
 He+¹B, aniline, collision induced vibr. relax. 2-70399
 He+CO, integral and differential cross sections, use of nondiagonal matrix Green functions 2-70383
 He+CO total differential cross sections, space-fixed sudden approx. 2-80779
 He+CO₂, collision induced IR absorpt., frame distortion mechanism 2-80590
 He+CO(HCl), polarisation transitions, cross sections, close-coupling study 2-80781
 He+H, inelastic scatt., time depend. perturbation theory 2-102590
 He+H(D₂), collision spectrosc., triatomic mol. orbital promotion model 2-96691
 He+I₂, vibr. relax., Morse type pots., quantum mechanical study 2-80787
 He+NO, rot. and spin-orbit transitions, IR-UV double reson. 2-75382
 he+p-H₂, rovibr. excitation calcs. 2-75383
 He+PH₂, transition between rot. states, phase modulated semiclassical sudden approx. 2-70378

atom-molecule collisions continued

He*+HCl, H polarisation and ionisation 2-70439
 Hg+HgBr (Br), collisional de-excitation, ion-pair form. in entrance channel, quenching rate coeff. 2-72973
 Hg*+CO (NO), electronic to vibr. energy transfer, isotope effects 2-102593
 I₂+He(Xe), rotationally inelastic transitions, rate consts., laser induced fluoresc. 2-85786
 I(⁵P_{1/2}) emission at 1.3 μ m, collisional enhancement by CF₃I, C₂F₄I, i-C₃F₇I and n-C₃F₇I 2-59739
 KCl+He(Ne)(Ar)(Kr)(Xe), rot. inelastic cross sections, long-range pots. 2-96699
 Kr+N₂(O₂), anisotropic well depth parameters, from total differential cross-sections 2-80777
 Kr*, quenching by O containing compounds, reson. fluoresc. study of reaction prod. 2-59890
 Li+F₂, excited atom system, pot. surface for weakly bound electron in coulombic and point pot. field 2-108411
 Li+NO₂(Cl₂)(F₂), chemi-ionisation reactions 2-72968
 Li+O₂, reaction in presence of He or Ar, energy transfer mechanism 2-72977
 Li₂, B¹ Σ state, quenching and vibr. energy transfer 2-80789
 LiH-He, translational-rotational energy transfer, classical formalism 2-90665
 Li₂*+Xe, rot. inelastic cross sections, vel. depend. 2-108685
 N₂+atom, hyperthermal collisions, mol. anharmonicity, time correl. function 2-85783
 N₂+H(He)(Ne)(Kr)(Xe), relativistic correction to interaction coeffs. 2-75202
 Na/Na₂ free jet expansion, laser induced fluoresc., dimer form. and excitation energy transfer 2-85726
 Na+H₂, pot. energy surfaces and nonadiabatic couplings calc. using eight config. diatomics-in-mol. formalism 2-102572
 Na+N₂(CO), Na(3p²P) quenching at low temps. 2-102597
 Na₂+Na(K), effective cross sections of excitation transfer 2-54925
 Na₂+Ne, rotationally inelastic scatt., angularly reduced 2-114085
 Na*+H₂(D₂), electronic to vibr.-rot. and translational energy transfer process, ang. distrib. 2-85791
 Na*+N₂, energy transfer, mol. bond form., at. alignment and orientation effects 2-105480
 O+CO₂, vibr. energy transfer, cross sections, infinite order sudden calcs. 2-85784
 O+I₂, supersonic at. beam reactive scatt. 2-105474
 O+ICI, supersonic O at. beam reactive scatt. 2-105475
 O+N₂, reaction rate const. meas. in discharge flow reactor 2-111472
 OCS+He(Ar), linewidth and lineshift, unitary S-matrix theory 2-102537
 O(³P₂)+H₂O(CH₃)(H₂)(N₂O) quenching, O(³P₂) yields by time resolved fluoresc. 2-105492
 Rb+H₂(N₂), fine struct. transitions meas. 2-54922
 Rb+N₂, quenching, depolarisation, electronic and nuclear spin polarisation 2-90660
 Tl+Co₂, Tl line broadening and shift accompanying Tl photodissoc. 2-96503
 Tl+Tl collisional de-excitation effects on Tl photodissociation laser efficiency 2-96938
 Xe+CO₂, thermal energy collisions, change in m_l 2-80782
 Xe(³P₂)+HCl, XeCl form., vibr. enhancements, rate const. determ., fluoresc., 2-72966
 Xe*, quenching by O containing compounds, reson. fluoresc. study of reaction prod. 2-59890

atom-molecule reactions

see also atom-molecule collisions
 acetaldehyde+O(³P), prod. distrib., mol. beam-laser induced fluoresc. study 2-116689
 alkali atom+tetrahaloethylene, reaction, anomalous chemiluminesc. 2-62400
 atom-molecule exchange reactions, cross section, impact parameter bands 2-111480
 chemical reaction study in crossed at. and mol. beams 2-72949
 collinear exchange reactions, quantum mech. calcs. 2-62381
 collision induced dissociation, Wigner distrib. trajectory method 2-83367
 distorted wave Born approx. transition amplitude 2-88354
 methylmercury halides+Xe(³P₂)(Xe(³P₁)), dissociation excitation rate consts. meas. 2-116693
 Mu+Cl₂→MuCl+Cl, kinetic isotope effect, pot. energy surface 2-57598
 pot-surface calcs., diatomics in molecule method 2-57607
 reaction probability, kinematic effects, trajectory calcs. 2-83363
 Ag+pyridine, matrix reactions, vibr., IR spectra relationship to SERS 2-111470
 Ar+H₂O, dissociative excitation, crossed mol. beam and luminesc. study 2-57602
 Ar+Kr(Xe), excitation collisions studied by monitoring resulting luminesc. 2-108675
 Ar*, quenching by O containing compounds, reson. fluoresc. study of reaction prod. 2-59890
 B+epoxide, chemiluminesc. obs., vibr. distrib. 2-57619
 B+epoxide, reaction rate const. meas. 2-57596
 Ba+N₂O(₂), chemiluminescence of BaO*, vibr. transitions 2-93797
 Ba+N₂O(₂) in solid Ar, visible chemiluminescence, thermoluminescence 2-99682
 Ba+N₂(N₂O), nascent metastable products, chemiluminescence study 2-93796
 Ba+NO₂((NO)₂), beam chemiluminesc., excitation functions 2-67734
 Br+trimethylsilane, kinetics and equilib. in very low press. reactor 2-93757
 Ca+F₂, chemiluminesc. reaction, product vibr., product alignment depend. 2-83348
 Ca+H₂(N₂)(CO)(CO₂)(methane), collisional relax., rate consts. for quenching meas. by modulated laser induced fluoresc. technique 2-96680
 Ca(¹P₁)+HCl(Cl₂) (carbon tetrachloride), reactivity, atomic reagent approach geometry effect, chemiluminescence 2-111476
 Cl+H₂, semiempirical method of modelling pot. energy surfaces for generalised TST and appl. to kinetic isotope effects 2-62376
 Cl+HO₂, rate const. and branching ratio, temp. depend. 2-105459
 Cl+methyl chloroform, reaction kinetics, time resolved reson. fluoresc. 2-105448
 Cl+O₂, O formation in secondary reaction, chemiluminesc. detection 2-78074
 D+Cl₂→DCI+Cl, kinetic isotope effect, pot. energy surface 2-57598

atom-molecule reactions continued

- D+H₂, activation energy, temp. depend. 2-62393
 D+HCl, reaction kinetics, infinite-order-sudden method 2-88348
 D+HCl reaction, abstraction vs. exchange study 2-83357
 F+acetaldehyde (ethylene oxide) reactions, vibr. spectra of free radicals prod. in solid Ar 2-105453
 F+D₂, reactant-product angular momentum coupling, classical mechanical theory appl., Franck-Condon transition 2-72971
 F+H₂, collinear reactive scatt., hyperspherical description 2-105467
 F+H₂, kinetic field pot., Morse function, pot. energy surface 2-85770
 F+H₂, collinear reactions, S-matrix propag. along Delves' radial coordinate 2-62382
 F+HD(H₂)(D₂), collinear reactive scatt. resons. 2-111469
 F₂+Ga(In), product form. rate, excited states, chemiluminescence obs. 2-83359
 F₂+Mu(H)(D)(T), collinear reactions, semi- and quasi-classical probabilities calcs. 2-105473
 H+C₂H, reactive scatt. classical dynamics 2-72982
 H+Cl₂→HCl+Cl, kinetic isotope effect, pot. energy surface 2-57598
 H+formaldehyde, rate const., pot. energy surface, transition state theory, ab initio CI calcs. 2-72980
 H+H₂, exchange reactions, cross section, impact parameter bands 2-111480
 H+H₂, kinetic isotope effects, transition state theory, quantum calcs. 2-88347
 H+H₂, quasiperiodic trajectories embedded in continuum, adiabatic anal. 2-111466
 H+H₂O, reaction rate enhancement, quasiclassical trajectory study 2-88338
 H+H₂(MuH), collinear reactive scatt., reson. widths, quasiclassical model 2-93767
 H+XY and X+HY where X and Y are halogen atoms, semiempirical pot. energy surfaces 2-99644
 H₂+ethynyl radical→H₂+C₂H₂ reaction rate const., ab initio determ. 2-83358
 H₂+F, cross sections, opacity functions, quasiclassical trajectory calcs. 2-83362
 H₂+F(H), dynamical instability, external perturbations in laser fields 2-99666
 H₂+O(D), vibr., rot. distrib., pot. energy surface, quasiclassical trajectory calcs. 2-83361
 HF+Ba(Sr), state to state reaction dynamics studied using laser induced fluoresc. 2-105458
 He*+HCl, H polarisation and ionisation 2-70439
 Hg+HgBr(Br), collisional de-excitation, ion-pair form. in entrance channel, quenching rate coeff. 2-72973
 HgX₂+Xe(P₃)(Xe(P₁)), X=Cl, Br, I, dissociation excitation rate consts. meas. 2-116693
 Kr*, quenching by O containing compounds, reson. fluoresc. study of reaction prod. 2-59890
 Li+FH, endothermic reaction, vibr. threshold, pot. energy surface 2-99658
 Li+NO₂(Cl₂)(F₂), chemi-ionisation reactions 2-72968
 Li+O₂, reaction in presence of He or Ar, energy transfer mechanism 2-72977
 LiCl+He→LiHe⁺+Cl+e, chemical exchanges, mechanism, cross-section determ. 2-57604
 Mg+N₂O, quenching, cross sections, kinetics, chemiluminescence 2-111496
 Mg*+N₂O(O₂), reactions undersingle collision conditions, MgO laser fluoresc. study 2-80714
 Mu+H₂(D₂), kinetic isotope effects, transition state theory, quantum calcs. 2-88347
 N+NO₂ reaction rate const. determ. using reson. fluoresc. in discharge flow system 2-105452
 Na_n+Cl(Br)(I), metal cluster oxidation, chemiluminescence study 2-99681
 Na*+H₂(D₂), electronic to vibr.-rot. and translational energy transfer process, ang. distrib. 2-85791
 Na*+N₂, energy transfer, mol. bond form., at. alignment and orientation effects 2-105480
 O+B₂, supersonic O beam, reactive scatt. study 2-83376
 O+H₂O→2OH, energy partitioning, OH rot. relax. 2-57601
 O+H₂S, supersonic O beam, heat of form., reactive scatt. study 2-83375
 O+H₂S (ethylene), translational energy threshold functions 2-72953
 O+I₂, supersonic at. beam reactive scatt. 2-105474
 O+IBr, supersonic O beam, reactive scatt. study 2-83377
 O+ICI, supersonic O at. beam reactive scatt. 2-105475
 O+N₂, reaction rate const. meas. in discharge flow reactor 2-111472
 O+N₂*→NO⁺+N, rate coeff. from auroral ion comp. anal. 2-73746
 O+tetrafluoroethylene, CF₂ triplet prod., vibr. distrib. and relax. 2-70393
 O(P)+H₂, collinear exact quantum transmission coeff. correction to transition state theory 2-72976
 O(P)+H₂, pot. energy surfaces, quantum and quasiclassical reaction probabilities 2-72975
¹⁸O+¹⁶O₂ (ν=0) exchange reaction dynamics on pot. energy surface for ground-state O₂ 2-78071
 SOCl₂+Mg*(Ca*), chemiluminesc. and chemiionising reactions absolute cross sections 2-83381
 SiHCl₃+O₂(O₃), UV photolysis in solid Ar, IR spectrum 2-88365
 Xe(P₂)+HCl, XeCl form., vibr. enhancements, rate const. determ., fluoresc. 2-72966
 Xe*, quenching by O containing compounds, reson. fluoresc. study of reaction prod. 2-59890
 Xe*+IBr reaction, steric effect, photodissoc. polarisation obs. 2-111477

atom probe field ion microscopy

- airlock for resistively heatable specimen 2-89863
 direction-distance analysis, emitter shape model (French) 2-95558
 electron microscopy, microscope-computer interactions and atomic resolution and spectroscopy, conf., Atlanta, GA, USA (Aug. 1981) 2-107013
 engineering materials investig. using atom-probe techniques 2-109642
 steel, Cr-Mo, FIM obs. 2-67285
 steel, Cr-Mo, temper embrittlement, atom probe anal. 2-67471
 steel, stainless, austenitic, grain boundary segregation of B, atom probe microanalysis 2-72701
 Al, pure, imaging by FIM 2-55885
 Al-Cu, aged, imaging by FIM 2-55885
 Co Nb (0.96 at.%) alloy, solute segregation to stacking faults, atom probe FIM obs. 2-105163

atom probe field ion microscopy continued

- Cu-Fe alloys, solid soln. to precip. hardening transition, mech. props. 2-105172
 GaP (111), surface comp., atom probe FIM study 2-92326
 Mo, adsorbed CO dissociation, pulsed voltage and pulsed laser atom-probe study 2-76828
 Si, adsorption of O₂, pulsed laser atom-probe study 2-110129
 TiC field emitter, field emission ion and electron microscopy, AES and atom-probe studies 2-115520
- atom-surface impact
 see also sputtering
 alkali halide single crystal surface, inelastic He beam scatt. 2-99254
 alloys and multicomponent targets, sputtering-material removal rate 2-110108
 atomistic or molecular processes on clean surfaces: recent advances 2-110130
 beam scattering from corrugated surfaces, quasi-hard wall model 2-62040
 beam-surface diffra., hard-wall approx., iterative calc. method 2-57241
 borate glasses, surface anal. by fast atom bombardment mass spectrometry 2-83424
 Debye-Waller factor, angular and temp. depend. 2-110106
 Debye-Waller factor 2-56322
 energy and angular distrib. of scattered atoms 2-99257
 energy and spatial redistrib. of particle flux after scattering, theory 2-99249
 gas-surface scattering distributions according to the hard-spheroid model 2-57237
 graphite, adsorbed Xe layer, bound state resonant scatt. of atoms 2-87935
 graphite surface (0001), atomic vibr., He atoms scatt. study 2-56324
 graphite surface (0001), He atoms specular inelastic selective adsorp. obs. 2-57235
 hard corrugated wall, two-dimensional, atom-surface impact 2-62034
 inelastic atom-surface scattering, theory, 3-D treatment 2-82978
 inert gas atom-surface inelastic scatt. on metal surface, electron-hole pair excitation 2-77686
 inert gas metastable atom scatt. from solid surfaces 2-99261
 isotropic metal, cascade processes, thermal and shift peaks effects (Russian) 2-71525
 iterative solution for realistic potentials 2-99267
 low energy ion scatt. from solid surfaces, neutralisation effects 2-77663
 low energy limit of reflection and sticking coeffs., long range forces 2-111006
 luminescence, report on spectroscopic and laser investigation 2-96710
 metal surface, interaction with charge or atom, complex self energy 2-87933
 metal surface, ion and atom interaction, excitation probability in time-depend. external pot. 2-77673
 metal surface, sticking and inelastic scatt., electron-hole pair creation mechanism 2-99258
 metals, bubble nucleation and growth, low temp., by He bombardment 2-76536
 metastable atom reflection at surface, quantum theory 2-99260
 normalized distorted-wave Born approximation for soft potentials in atom-surface scattering 2-82988
 reactive scatt., energy dissipative trajectory theory 2-93348
 RF cavities, electron emission reduction by electron, photon or He impact 2-116306
 scattering of atomic and mol. beams from surfaces, review 2-105034
 sputtered atoms degree of positive ionisation periodicity in thermal spikes 2-77658
 sputtering process, excited neutral atoms formation 2-77656
 sputtering process, excited sputtered atoms kinetic energy determ. 2-77737
 surface charge density calc. for low energy atom diffra. 2-111010
 UVA atom-surface interaction potential zero-energy reflection coeffs. 2-87934
 Ag+Se⁺(Te⁺), secondary electron emission yields 2-77649
 Al, pulsed He⁺ beam scatt., time of flight technique 2-77670
 Ar⁺ ion sputtering in Be, Mg, Zn, Cd, at. excitation 2-75372
 Au, surface (110), reconstructed, He diffra. calc. 2-116321
 Au+H⁺(He⁺), secondary electron emission yield meas. 2-77650
 C and carbides, chemical reaction and sputtering 2-111490
 C-foil+O⁺(S⁺), fast ion excited Rydberg states 2-75392
¹²C pojectiles at 250 MeV amu⁻¹, K vacancy prod., relativistic trajectory Monte Carlo method appl. 2-80806
 Cs, backscattering of thermal H atoms, H⁻ production 2-82987
 Cs, D⁰ reflected particle charge states for grazing incidence 2-77646
 Cu, cascaded surfaces and negative ion emission 2-99277
 Cu, surface (001), He beam impact, order, disorder, nucleation and energy changes 2-98399
 Cu-He interaction pot. determ. by atomic beam scatt. 2-99266
 Cu(110), corrugation profile determ. by the scatt. 2-104455
 F+Si surface, reaction, gas phase products anal. 2-83409
 GaAs surface, (110), He atom diffra., theoretical anal. using He-surface potentials 2-77685
 He adsorp. on different vacuum flashed W surfaces, energy and tangential momentum accommodation coeff. 2-76805
 He atom, interaction with metal surface first-order theory, perturbation calc. 2-77672
 He beam scatt. from LiF corrugated surface, quasi-hard wall model 2-62040
 He, metastable, refl. from solid surfaces 2-82979
 He⁺ ion-surface scatt. at grazing incidence, reson. coherent excitation, ang. depend. 2-77644
 He superfluid surface, adsorption and atom scatt. 2-110068
 KCl, surface phonon dispersion rel. meas. using He atomic beam 2-66143
 Li, surfaces (100) and (110), BCC, H atom-cluster interactions, ab initio CI calc. 2-116325
 LiF, He atom-surface impact, attractive corrugated hard wall model, convergent perturbative soln. 2-99251
 LiF, inert gas metastable atom scatt. from solid surfaces 2-99261
 LiF surface (001), inelastic scatt. of Ne atoms 2-57239
 LiF surface phonon dispersion rel. meas. using He atomic beam 2-66143
 Lu-Fe alloy, recoil mixing produced by atom beams, simulation using computer code 2-76518
 Mg (0001) surface, interatomic pot. considerations in low energy Ar⁺ scatt. 2-77666

atom-surface impact continued

- NaCl, inert gas metastable atom scatt. from solid surfaces 2-99261
 NaCl, surface (001), H atom beam coherent elastic scatt., bound state resonance, Morse pot. 2-116324
 NaF, He atom-surface impact, attractive corrugated hard wall model, convergent perturbative soln. 2-99251
 NaF, surface phonon dispersion rel. meas. using He atomic beam 2-66143
 Ne adsorpt. on different vacuum flashed W surfaces, energy and tangential momentum accommodation coeff. 2-76805
 Ne beam scatt. from LiF corrugated surface, quasi-hard wall model 2-62040
 Ni (110), He scatt., energy depend. and softness of pot. 2-87931
 Ni (110) surface, outer-shell electronic processes in Ne⁺ collisions 2-77665
 Ni (110) surfaces, S and N covered, N₂⁺ mol. ion dissoc. 2-78069
 Ni, D⁰ reflected particle charge states for grazing incidence 2-77646
 Ni surface (001), disordered O and CO adsorbate layers, He scatt. study 2-98445
 Ni surface (110), He diffraction, incident energy depend., soft exponential pot. 2-99255
 Pt (111), adsorbed CO, scatt. cross sections for thermal He and H₂ beams 2-105027
 Pt surface, stepped, He and H₂ beam scatt., refraction effects 2-93359
 Pt surface (111), clean and adsorbate covered, He beam scatt. 2-99259
 Pt surfaces (111) and (997), clean and O covered, thermal He atom scatt. (German) 2-87001
 Re surface, nuclear spin relaxation of alkali metal atoms 2-98991
 Si, surfaces (111) and (100), ionization and desorpt. kinetics, atomic beam interaction study 2-115566
 Si(111), charge density calc. for low energy atom diff. 2-111010
 W, surface inelastically scattered Ar atoms, differential cross sections 2-87930
 W, surfaces (001), low energy He atom reflection, calc. 2-69850
 ZnO film, c-axis orientation, energetic atom bombardment influence 2-98476

atomic absorption spectroscopy

- automated hydride analysis, low concentration of toxic elements determ. 2-78148
 combined-discharge spectral lamps, high intensity, for at. absorpt. spectrosc. 2-79687
 compensation signal calc. of optical compensation modulation (Chinese) 2-69255
 determination of trace quantities by atomic absorpt. spectrophotometry 2-116767
 escape factor (self absorption effects), calcs. 2-79682
 gelatin, photographic, trace metal determ. by atomic absorpt. spectroscopy 2-74542
 graphite furnace for electrothermal at. absorpt. spectrometry, TaC coating (Japanese) 2-112995
 hollow cathode lamps, regenerated, appl. in at. absorpt. spectrosc. 2-95480
 ion storage for high precision spectroscopy 2-90741
 laser torch, atomisation and thermodynamic equilb. of matter 2-107414
 plasma, computerised diagnostics from self-reversed absorpt. spectra 2-76200
 programmable calculator appls. and limitations 2-93855
 RF electrodeless discharge lamps, high intensity, for at. absorpt. spectrosc. 2-79688
 sediment Pb and Cd conc. determination by at. absorpt. spectrometry method 2-68536
 sources with selective modulation of emission spectrum 2-62439
 spectrophotometers, recent developments in hardware and software 2-64088
 spectrophotometry, appln. to chemical analysis of minerals and metals 2-64087
 Zeeman atomic absorption instrumentation 2-78165
 As, determ. in soil extracts, atomic absorpt. spectroscopy 2-73170
 Cu-Ni alloy film deposition by RF sputtering, rate and chem. composition (Japanese) 2-87982
 DyC₃, atomisation energy, electrothermal AAS meas. 2-109967
 GaAs:Ge crystal, doping profiles, atomic absorpt. spectra meas. 2-109823
 Ga_{1-x}In_xAs:Ge LPE layers, doping profiles, atomic absorpt. spectra meas. 2-109823
 Gd in nuclear fuels, anal. techniques for quality control (German) 2-96089
 Pb, isotope shift in 6p² ³P₀-6p7s ³P₁ 283.3-nm line 2-90480

atomic beam electric resonance

No entries

atomic beam magnetic resonance

- ¹⁶⁵Ho, hyperfine structure meas. in metastable states 2-113903
^{43,44}K, ground state HFS, atomic beam mag. reson. coupled with laser pumping 2-54790
 Rel, high-lying metastable states, hyperfine structure and isotope shift 2-113904

atomic beams

- see also atom-molecule reactions; atom-surface impact; atomic beam electric resonance; atomic beam magnetic resonance; particle velocity analysis; plasma-beam interactions
 chemical reaction study in crossed at. and mol. beams 2-72949
 conference, Cambridge, MA, USA (Aug. 1980) 2-68959
 deceleration, monochromatisation and trapping in laser waves 2-64929
 high-flux beam production using helium-temp. beam source 2-101492
 inert gas atom beams from hollow cathode arcs 2-71282
 laser isotope separation, atomic sources produced by electron-beam evaporation and cathode sputtering 2-65101
 neutral atom beams, 1-2 MeV/amu, plasma heating appl. 2-55753
 production, using laser-induced ablation, anal. 2-96776
 relativistic beams kinematics 2-70447
 resonant light diffraction 2-96832
 scattering from corrugated surfaces, quasi-hard wall model 2-62040
 SIMS anal., atom beam source (German) 2-95519
 slowing down by reson. laser beam, theory 2-108431
 spectroscopy on localised and cooled ions 2-70450
 three-level atoms, laser field interactions, precision study 2-59763
 Ca, appln. for meas. Ramsey fringes using transitions in the visible and 10 μ m spectral regions: experimental methods using dye lasers 2-58891
 Ca beam, metastable level transitions for freq. sub-mm wavelength standards 2-107293
 Cs atomic beam freq. standard, beam profile 2-107305

atomic beams continued

- D, Balmer α -line, collinear laser spectroscopy, metrological appl. 2-95485
 H, atomic beam, Doppler shifted emission spectra, appl. to plasma diagnostics 2-80520
 H atoms, parity nonconservation expts. in RF cavities, theory 2-90725
 H, Balmer α -line, collinear laser spectroscopy, metrological appl. 2-95485
 H beam, electron elastic scatt., spin-exchange effects meas. 2-85809
 H, metastable atomic beam source by optical pumping 2-90743
 H neutral beam, high power, characterisation by Doppler spectroscopy 2-74573
 H, polarised at. beam target 2-75085
 H, Stark resonance, review 2-70185
 H-atom beam, cold, obtained using microwave discharge 2-107449
 H+O²⁺(O³⁺), charge transfer rate consts. 2-102613
 Mg beam, metastable level transitions for freq. sub-mm wavelength standards 2-107293
 N³⁺, metastable state, collision-induced ionisation, time of flight study 2-114095
 Na at. beam, resonant light diffraction 2-96832
 Na atomic beam, velocity distrib. deform. by reson. laser radiation press. 2-108429
 Na, optical pumping, alignment and orientation of hyperfine levels 2-54813
 Na, radiative slowing down and velocity monochromatisation in laser beam (Russian) 2-85840
 Na, Ramsey fringes, stimulated reson. Raman tungsten obs. 2-64897
 Na⁺+CO, (3²P) state quenching, stereochem. effects, expt. and calcs. 2-108605
 Na⁺+N₂, energy transfer, mol. bond form., at. alignment and orientation effects 2-105480
 Nbl, atomic beam, radiative lifetime, time-resolved laser induced fluoresc. 2-90473
 O+B₂, supersonic O beam, reactive scatt. study 2-83376
 O+H₂S, supersonic O beam, heat of form., reactive scatt. study 2-83375
 O+I, supersonic at. beam reactive scatt. 2-105474
 O+IBr, supersonic O beam, reactive scatt. study 2-83377
 O+ICl, supersonic O at. beam reactive scatt. 2-105475
 W atomic beam laser excitation for lifetime meas. in configuration (5d+6s)⁶p 2-54806
 Xe, atomic beams, elastic electron scatt., spin polarisation 2-102627
 Xe+F, mol. form. at. beam scatt. study with mag. anal. 2-108738

atomic clocks

- see also frequency measurement; time measurement
 Deep Space Network, frequency and timing capabilities 2-63999
 frequency activities overview at National Physical Laboratories, New Delhi, India 2-89658
 frequency standards, reliability, serviceability and performance 2-89661
 frequency standards, use of optical pumping by lasers 2-89683
 gravitation and relativity theory test appls. 2-63884
 international atomic time stability and accuracy 2-79537
 international atomic time TAI 2-63986
 international time and freq. comparison by orbiting H maser clock 2-64000
 LASSO experiment and its operational organization 2-89670
 LF time signals for time and frequency dissemination system of moderate accuracy, sophistication and cost 2-89673
 mono-ion oscillator as potential ultimate laser frequency standard 2-89681
 non-synchronicity of at. and gravitational clocks indicating violation of strong equivalence principle 2-69058
 NRC primary time standards, performance 2-63988
 optical frequency standards, appl. of laser cooling of atoms 2-63998
 precise T&F intercomparison between NPL, India and PTB, Federal Republic of Germany via Satellite Symphonie-I 2-89677
 precise time transfer techniques, satellite laser ranging, Indian contribution 2-89671
 precision time-keeping, modern methods, evolution of TAI and UTC 2-89668
 primary caesium clock development, review, satellite time comparison techniques and NRC 2-89672
 Shuttle experiment to demonstrate high-accuracy global time and frequency transfer 2-101387
 synchronization, Lasso experiment scheduling and data processing at the Sirio-2 Lasso Coordination Centre 2-89695
 T/F comparisons, precise international, ground and satellite TV systems 2-89674
 time and frequency in Japan 2-89664
 time and frequency meas., conf., New Delhi, India (Feb. 1981) 2-95306
 time and frequency meas., recent activities at Radio Research Laboratories 2-89657
 time and frequency standards, Shanghai Observatory 2-79525
 timekeeping, rel. to Earth's daily rotation 2-69126
¹³³Ba⁺, hyperfine struct. determ. rel. to microwave freq. standard possibilities 2-65105
¹³³Ba⁺, hyperfine struct. determ. rel. to microwave freq. standard possibilities 2-65105
 Cs based devices, realisation of improved clock performance 2-63984
 Cs beam atomic clock with laser optical pumping as potential freq. standard 2-95307
 Cs beam freq. standard at radio research laboratories, Tokyo 2-63991
 Cs beam freq. standard NRLM-II 2-63990
 Cs beam frequency standard, optically-pumped 2-53720
 Cs beam primary freq. standards, improved performances with new-design resonators 2-63995
 Cs beam time and frequency primary standards in Federal Republic of Germany 2-63987
 Cs frequency standard realisation, CO, laser phase-locking 2-102844
 Cs, global time scale matching through transportation of clocks (German) 2-112856
 Cs, primary, design construction and performance 2-53719
 Cs primary clocks with 'exclusive flop-out' beam optics 2-69124
 H maser, NASA NR model characs. 2-80924
 Rb atomic frequency standard, optically pumped 2-89684
 Rb miniature high performance freq. standard, design and performance 2-89686
 Rb, satellite-borne, sapphire lamp development and appl. 2-89685
⁸⁷Rb optically pumped passive freq. standard, hyperfine freq. shifts caused by buffer gases 2-101380

atomic clusters

- alkali metal clusters, binding energy, cryst. growth, HMD method 2-115158
 alkali metal salts, polyatomic secondary ion form, and emission 2-77680
 crystal, ordered, cluster figures prob. weights calc. 2-91833
 electron diffractograms, computer-aided reconstruction of image contrast 2-55816
 electron impact ionisation obs. of cluster props. 2-90757
 isotropic solid, cascade processes, thermal and shift peaks effects (*Russian*) 2-71525
 K clusters, pseudopot. CI calcs. 2-59984
 pentagonal symm., role in nonclassical crystallography 2-65904
 small metal atom clusters, electrochem. props., rel. to surface enhanced Raman scatt. 2-116173
 spherical atomic clusters, geometric struct., computer algorithm 2-80859
 Ag_n+pyridine, matrix reactions, vibr., IR spectra relationship to SERS 2-111470
 Ar_n⁺, metastable cluster ion, unimolecular dissoc., temp. depend., mass spectra 2-99650
 ArN₂⁺ cluster ions, unimolecular and electron impact dissoc. 2-62380
 Au₁₁ cluster compound, STEM obs. 2-114146
 Cu, chemisorption of H, small cluster model and embedding theory based on orbital localization 2-61291
 Cu clusters, electronic struct., SCF calcs. 2-85855
 Cu clusters, inadequacy of symmetry restricted HF theory in determ. s- and d-like ionisation pots. 2-102668
 Cu clusters, symmetry breaking and ionis. from 3d and 4s shells 2-59985
 Cu₂ cooled metal clusters, laser spectroscopy 2-108762
 Cu₂ supersonic cluster beam, laser photoionisation 2-108761
¹⁵¹Eu atoms and mols. in solid Ar, matrix isolation and Mossbauer study 2-54807
 H atom infinite chain, ground-state energy and mag. susceptibility, ab initio correlated calc. 2-80864
 He, muonic, metastable state quenching, clustering 2-65115
 Li BCC cluster, CNDO/BW method calc. 2-55003
 Li, binding energy, Huckel mol. orbital approx. 2-108758
 Li, CNDO/CW study of different crystallographic structs. 2-59988
 Li clusters, pseudopot. CI calcs. 2-59984
 Na clusters, pseudopot. CI calcs. 2-59984
 Na₃, supersonic expansion characterisation, laser induced atomic fluoresc. meas. 2-59986
 Na_n+Cl(Br)(I), metal cluster oxidation, chemiluminescence study 2-99681
 Ni clusters, inadequacy of symmetry restricted HF theory in determ. s- and d-like ionisation pots. 2-102668
 Ni₄ cluster, X α LCAO and X α scatt. wave calc. comparison 2-96786
 Pb clusters, formation by adiabatic expansion and ionisation pot. meas. 2-85854
 Pt aggregates in Y-type zeolites, at. struct., hydrocarbon adsorpt. and decomposition effects 2-65123
 Pt, electronic struct., SCF-X α -SW MO calc., rel. to catalytic activity 2-61546
 Sb₄ in inert gas matrices, Raman and fluoresc. spectra, vibr. modes 2-108521
 Si adatoms on W surfaces, atomic processes, direct obs. by FIM 2-115570
 Xe_n⁺ microclusters, Coulomb explosions, computer simulation 2-90755
 Zn vapour, dimerisation in supersonic carrier gas 2-65122

atomic collision processes see *atomic inelastic collisions; elastic scattering of atoms and molecules*

atomic electric moment

- alkali atoms, semiempirical pseudopot., use in calc. static electric dipole polarisability 2-114122
 electric-quadrupole radiation, possibility of observing higher polarisation moment relax. 2-108733
 interatomic dipole moment of two atoms, solvent effects, theory (*Russian*) 2-113908
 transition dipole moments calc. by biexcited CI method (*French*) 2-108407
 two-level atom with variable transition freq., dynamics in reson. light wave field 2-108841
 Br, chemisorption and dibromide form. on Pd (111) 2-66364
⁴³Ca metastable 3d4s ¹D₂ state, laser RF double reson. HFS meas. 2-96756
 F⁻, dipole hyperpolarisability, HF, CI and GTO calcs. 2-70149
 H⁺+He, charge transfer collision, elec. dipole moment 2-54958
¹¹⁵In, 8p¹P_{1/2} and 8p³P_{1/2} levels HFS meas. 2-96757
 Li BCC cluster, CNDO/BW method calc. 2-55003

atomic electron configuration interactions see *atomic electron correlations*

atomic electron correlations

- alkaline earth ions isoelectronic with alkali metal atoms, hyperfine interactions 2-90738
 density functional theory from HF densities, appl. to H through to Ar calcs. 2-108406
 Dirac-Fock SCF method for generalised configurational average energy 2-96471
 direct configuration interaction method, diagrammatic construction 2-80495
 Downward Robb algorithm, combinatorial aspects, unitary group approach to CI treatment 2-80422
 exchange energy density functional calcs., gradient expansion 2-96414
 explicitly correl. CI studies using spherical Gaussians 2-102366
 extended geminal models, electron correl. energy calc. 2-102398
 first row atoms, statistical ang. correl. coeff. 2-75154
 ions, chemical and ionisation pots., electron correlations 2-54775
 positron-atom system, energy spectrum investigated within Bohr's atomic model 2-59975
 Si isoelectronic series, ground config. forbidden lines, config. interaction effects 2-85592
 transition dipole moments calc. by biexcited CI method (*French*) 2-108407
 Ar, satellite struct. in L X-ray emission spectrum 2-80526
 Ba, Rydberg states, config. interaction calcs. 2-90462
 Be, dipole polarisability, perturbation study, CI calcs. 2-54774
 Ca, Rydberg series, electronic struct., CI calcs. 2-108408
 Cr atom and ions, valence state structs., electron correl. effects 2-108399
 Cs, 3p_{1/2} level study by XPS 2-102654
 F, electron affinity, electron correl. SCF, GTO, CI calcs. 2-113895
 F⁻, dipole hyperpolarisability, HF, CI and GTO calcs. 2-70149

atomic electron correlations continued

- F⁻ dipole polarisability, electron correl. effects, MBPT CHF calc. 2-113893
 He, Coulomb correlation in 2'S, 2'S, 2'P and 2'P states 2-59714
 He, first-order interaction energy, intra-atomic correl. effects anal. 2-80769
 He, ground state, struct., exact 1-electron model 2-80445
 Li, surfaces (100) and (110), BCC, H atom-cluster interactions, ab initio CI calc. 2-116325
 Li-like ions, 1s2p² configuration, multiplet splitting and radiationless transition, relativity effects 2-108419
 Mg, X-ray photoelectron spectra, shake-up satellites calcs. 2-59765
 O atom and ions, valence state correl. energies, third-order quasideterminate many-body perturbation theory calc. 2-80491
 N IV, 2p 3d ³F^o and 2s 4f ¹F^o configuration mixing 2-70189
 Na, X-ray photoelectron spectra, shake-up satellites calcs. 2-59765
 Na⁺+CO, (3²P) state quenching, stereochem. effects, expt. and calcs. 2-108605
 Ne, extended geminal models, electron correl. energy calc. 2-102398
 Ne ionisation pot., electron correl. SCF, GTO, CI calcs. 2-113895
 O atom and ions, valence state correl. energies, third-order quasideterminate many-body perturbation theory calc. 2-80491
 Pd, correlation energy, relativistic effects, CI calcs. 2-108397
 S II, bound state energies calc., effect of configuration interaction 2-59942
 S IV, electric dipole transition probabilities calcs., appl. to solar transition zone 2-89210
 Ti, ²F⁻³F energy separation, correlation and HF calcs. 2-54776
 Ti atom and ions, valence state structs., electron correl. effects 2-108399
 Ti II, singly ionised, spectrum and term system, configuration interaction and ionisation energy 2-64904
 V atom and ions, valence state structs., electron correl. effects 2-108399

atomic electron impact excitation

see also *electron spectra*

- angular correlations meas. in electron impact inner shell ionisation 2-85812
 asymmetric (e,2e) collisions, high energy, interpretations 2-108705
 atom-electron elastic and inelastic scatt., correl. and polarisation 2-96731
 atomic orientation, attractive and repulsive forces 2-102637
 atoms, Compton defects and asymmetries, electron impact spectra, Hartree-Slater calc. 2-90425
 Born-approx. electron ionisation cross section, oscillator strengths, proton stopping power calc. 2-96644
 clusters, electron impact ionisation obs. of cluster props. 2-90757
 correlation effects in electron-atom scattering, review 2-70428
 cross section calc. program, momentum transfer formalism 2-108717
 developments, 1950 to present day, review 2-84430
 double ionisation and excitation, semiclassical approx. calcs. (*Russian*) 2-54967
 effective cross-section meas. (*Spanish*) 2-85811
 electron-ion collisions at medium energies, L² basis and resonance averaging 2-108721
 electron-ion collisions at medium energies, radiative coupling effect 2-108722
 electron-photon coincidence theory 2-102638
 electronic and atomic collisions, conf., Gatlinburg, TN, USA (July 1981) 2-90640
 free-free transitions in a laser field 2-59756
 gaseous positronics—past, present, and future 2-75419
 heavy atoms, electron excitation, light emission, integrated state multipoles 2-54968
 inert gases, secondary light emission by migrating electrons in weak elec. field 2-109453
 ions, electron impact excitation rates 2-59939
 large atoms, positron interactions, theory 2-75423
 large molecules, positron interactions, theory 2-75423
 local exchange and correlation potentials for electron scattering at solid surfaces 2-105019
 model atom, free-free electron scatt., photon absorpt., soft-photon approx. 2-75438
 momentum space approach, ab initio calcs. 2-108704
 multiply charged ions, electron impact ionisation via autoionisation states with inner-shell vacancy 2-80815
 positron atom scatt. at intermediate energy 2-75439
 positron lifetime spectra, positronium form. 2-75422
 positron lifetime spectra in rare gas, calc. program 2-90715
 positron-gas cross-section measurements 2-75420
 quantum beats, spin-orbit coupling, electron-photon ang. correls. 2-114109
 relativistic plane-wave Born approx. calcs. 2-108715
 resonance laser radiation field, elastic and inelastic electron-atom scatt., ground state-doublet reson. (*Russian*) 2-54963
 small atoms, positron and positronium interactions 2-75421
 thin target foils, electron impact, K-shell ionisation, bremsstrahlung and electron-electron bremsstrahlung 2-75404
 transition metal atoms, electron impact ionisation, excitation autoionis. effects 2-59945
 transition metal oxides, electron energy loss study of K near-edge fine struct. of O 2-104248
 Ar, electron scatt., inelastic and elastic cross section meas. 2-102628
 Ar, electron impact, characteristic X-ray and bremsstrahlung cross-sections 2-102646
 Ar, electron impact excitation near-threshold 2-96738
 Ar, electron impact inner shell ionisation, ang. correl. meas. 2-85812
 Ar, metastable, slow electron impact deactivation, rate const., temp. depend. 2-90719
 Ar, positron inelastic scatt., excitation and ionisation meas. 2-75440
 Ar⁷⁺, electron impact excitation, cross sections, collision strengths 2-70424
 Ar-N₂, collisions with subexcitation electrons, thermalisation, recombination luminesc. 2-73004
 Au, atom, transversely pol. electrons scatt., Röntgenbremsstrahlung emission asymmetry 2-85585
 B, electron-impact excitation cross section, 1900-4000 Å region 2-70423
 Ba III, resonance line excitation in electron-atom collisions 2-108720
 Be-like ions, electron impact excitation cross sections calc. 2-114112
 C²⁺, electron impact excitation cross sections calc. 2-114112
 C³⁺, inelastic scatt., excitation, relativistic Born cross sections 2-114116
 Ca III, resonance line excitation in electron-atom collisions 2-108720

atomic electron impact excitation continued

- Cd II, electron impact excitation cross-sections meas. for $5s^2 \ ^2D_{5/2}$ ($5p \ ^2P_{3/2}$) states 2-85816
 ^{110}Cd , Hanle effect for electron impact excitation 2-54809
 Cs, electron impact excitation, oscillator strengths and cross section calcs. 2-59940
 Fe $^{15+}$, electron impact ionisation via autoionisation states with inner-shell vacancy 2-80815
 Ga $^{1+}$, electron impact excitation to 4^1P level, absolute emission cross sections 2-90720
 GaI and GaII, 13-500 eV electron impact excitation, autoionising transitions, ejected electron spectrum 2-75211
 H, electron dispersion relations 2-59934
 H, electron elastic scatt. and impact excitation cross sections calcs. 2-90710
 H, electron impact 1s-nf excitation, Glauber cross-sections calcs. 2-90716
 H, electron impact 2S excitation, 54.4 and 100 eV cross-section calc. method 2-85820
 H, electron impact excitation of $n=2$ level 2-54965
 H, electron impact excitation, orientation, alignment, scatt. amplitudes, Fano-Macek parameters 2-114111
 H, electron impact excitation of 2P state, electron-photon angular correl. meas. 2-114115
 H, electron or positron impact excitation, second order eikonal cross sections 2-85814
 H, electron scatt., Coulomb interaction, time-depend. Schrodinger eqn. soln. 2-85772
 H, electron scatt., momentum space approach, ab initio calcs. 2-108704
 H, electron scatt. in laser field 2-102634
 H, electron scattering calcs. at energies between 13.6 and 60 eV including $n=3$ levels 2-96732
 H, Lyman and Balmer decrements, appl. to astronomical spectra 2-84084
 H, positron impact, charge transfer cross-sections calcs. 2-59946
 H, positron scatt., Fock-Tani representation 2-90712
 H, positron scatt., s-wave, positronium form. 2-75441
 H-like ions, scaled collision strengths for $\Delta n \geq 1$ transitions (for $n \leq 5$) 2-108716
 He, Compton defects and asymmetries, electron impact spectra, Hartree-Slater calc. 2-90425
 He, electron Compton scatt., ejected electron cross-section, impulse profile calcs. 2-65095
 He, electron impact excitation, cross sections, Coulomb-project Born approx. 2-90717
 He, electron impact excitation of 2^1P state at low-energy 2-96737
 He, electron impact excitation, 1P line radiation, polarisation fraction 2-96745
 He, electron impact ionisation, triple differential cross sections 2-85815
 He, electron impact ionisation, cross sections, second Born approx. 2-85817
 He, electron scattering, complex optical pots., dispersion eqn. calcs. 2-80810
 He excited state Doppler-free spectroscopy using colour centre laser and electron impact excitation 2-54792
 He I, electron excitation rates calc. 2-90718
 He neutral lines, electron impact broadening and shift, convergent calcs. 2-80823
 He plasma discharge, electron beam excitation, population mixing rate consts. determ. 2-114969
 He, positron inelastic scatt., excitation and ionisation meas. 2-75440
 He-like ions, electron impact excitation, Coulomb-Born-Bely approx. 2-96742
 He(3^1P), electron impact excitation meas. at large scatt. angles 2-65093
 Hg, electron impact excitation, integrated state multipoles, light emission 2-54969
 Hg, electron impact excited $6^1S_0 \rightarrow 6^1P$, transition using stepwise electron and laser excitation, isotope specific anal. 2-80819
 Hg, excitation by forward scatt. electrons, polarisation of $6^3P_1 \rightarrow 6^1S_0$ line 2-85813
 K, electron impact excitation of lowest autoionising states 2-80820
 K III electron impact excitation from ground state 2-80824
 Kr, autoionising states obs. using low energy electron impact excitation and ejected electron spectroscopy 2-64932
 Kr, electron and positron scatt., total cross section meas. 2-114114
 Kr, electron impact excitation, electron-photon angular correl. 2-80818
 Kr, electron impact excitation, correl. effects near ionisation threshold 2-96741
 Kr, monoenergetic electron impact excitation above ionisation threshold, 22 to 26 eV, broadband photon yield 2-90714
 Li, electron and positron impact excitation differential cross sections 2-102644
 Li, electron impact excitation of lowest autoionising states 2-80820
 LiF, electron impact excitation of ultrasoft X-ray transitions (Russian) 2-59741
 Li(2^2P), electron impact excitation, cross sections, oscillator strengths 2-102640
 Mn, behaviour of Raman resonance scattering across the K X-ray absorption edge 2-102423
 Mn octet states, electron impact excitation 2-108719
 N III 1750 Å transition, collision strength calc. 2-89137
 N $^{3+}$, electron impact excitation cross sections calc. 2-114112
 Na, electron impact, hyperfine struct. and zero-field quantum beats 2-108714
 Na, electron impact excitation of lowest autoionising states 2-80820
 Na I, radiative decay of autoionisation states (Russian) 2-80546
 Na $^{+}$, electron impact excitation of optical transitions 2-70422
 Na, electron interactions, model potentials and pseudopotentials 2-59880
 Na $^{+}$ KLL Auger transition rate, S matrix calcs. 2-85604
 Na $^{+}$, radiative transition probabilities and level excitation cross-sections 2-113935
 Na-like ions, electron impact ionisation rate, ionisation cross section, excitation-autoionisation contrib. 2-102636
 Na(3^3P), electron impact excitation, density matrix calcs. 2-102647
 Ne, Compton profile, electron scatt. study and impulse approx. 2-114110
 Ne, electron impact excitation, electron-photon ang. correls. 2-75445
 Ne, electron interactions, model potentials and pseudopotentials 2-59880
 Ne, electron scatt., 10-100 eV, model pot. calcs. 2-96746
 Ne, electron scatt., cross sections, matrix effective pot. formalism 2-85810
 Ne, electron scatt., negative ion resonances, eigenchannel anal. 2-59941

atomic electron impact excitation continued

- Ne, KLL Auger transition rate, S matrix calcs. 2-85604
 Ne, positron inelastic scatt., excitation and ionisation meas. 2-75440
 Ne $^{2+}$, electron impact excitation cross sections calc. 2-114112
 O IV, metastable levels excitation by electron impact, LS coupling and fine struct. transitions 2-80525
 O $^{4+}$, electron impact excitation cross sections calc. 2-114112
 Rb, electron impact excitation 2-70427
 S III, forbidden transitions, electron impact excitation rate coeff. 2-59942
 S IV, electron impact collision strengths 2-89210
 S XII, electron collisional excitation, radiative lifetimes, energy level calcs. 2-108723
 Sb solid, inelastic electron scatt., 4d shell excitation 2-85819
 Si I, collisional excitation cross sections 2-114117
 Si $^{11+}$, dielectronic recombination cross sections 2-59944
 Si $^{9+}$, electron impact excitation cross sections determ., fine struct. transitions, oscillator strengths 2-65094
 Sm atom, oscillator strengths and electron impact excitation cross section (Russian) 2-102435
 Sm, oscillator strengths and electron excitation cross sections 2-85593
 Sm spectral lines, electron-impact excitation, effective cross sections, 3700-6000 Å 2-59943
 Sr III, resonance line excitation in electron-atom collisions 2-108720
 Te, solid, inelastic electron scatt., 4d shell excitation 2-85819
 transition metals, 3d, L_{23} edge, EELS 2-108636
 W $^{71+}$, inelastic scatt., excitation, relativistic Born cross sections 2-114116
 Xe, electron and positron scatt., total cross section meas. 2-114114
 Xe, electron impact excitation, electron-photon angular correl. 2-80818
 Zn, electron impact excitation, decay of autoionised state, postcollisional interaction effect 2-54966
 Zn level slow electron impact excitation special features 2-80825
- atomic electron impact ionisation**
see also electron spectra
 asymmetric (e,2e) process at low and intermediate energies 2-108713
 atoms and ions, electron impact ionisation threshold 2-75443
 Born-approx. electron ionisation cross section, oscillator strengths, proton stopping power calc. 2-96644
 classical theory of near-threshold ionisation 2-80822
 continuum process calc. program, using model pots., Breit-Pauli Hamiltonian, R-matrix 2-90431
 correlation effects in electron-atom scattering, review 2-70428
 double ionisation and excitation, semiclassical approx. calcs. (Russian) 2-54967
 (e,2e) reaction theory 2-108712
 electron-ion collisions at medium energies, L^2 basis and resonance averaging 2-108721
 electron-ion collisions at medium energies, radiative coupling effect 2-108722
 inert gas atoms and molecules, partial electron impact ionisation cross sections 2-90713
 inner-shell ionisation by ultra relativistic electron impact, density effect search 2-70426
 light atoms, electron impact K-shell ionisation, PWBA cross sections 2-114118
 light atoms and ions, cross section and rates for electron impact ionisation 2-101146
 positive ions, electron impact ionisation 2-59917
 positron-atom impact ionisation, threshold law 2-80816
 quasielastic electron knockout in atoms, molecules and solids, wave functions 2-102630
 threshold law based on Coulomb dipole theory 2-102643
 Ag, electron impact, K-shell ionisation, relativistic effects, plane wave Born approx. 2-85818
 Ar, electron impact ionisation, inner-shell alignment, distorted-wave approx. appl. 2-102635
 Ar L_{23} shell electron impact inner-shell ionisation, post-collision interaction 2-102645
 Ar, positron inelastic scatt., excitation and ionisation meas. 2-75440
 Au, electron impact K shell ionisation cross section, plane wave Born approx. 2-80821
 Cl like ions, electron impact ionisation cross sections 2-80826
 Cs $^{+}$, electron impact single, double, triple and quadruple ionisation, absolute cross-section meas. 2-102631
 Cs, electron impact ionisation, D^+ prod. via autoionising states 2-70431
 Fe(XVII) to (XXVI), electron impact ionisation rate coeff. and cross sections 2-70421
 H, breakup and electron impact ionisation, Coulomb eikonal amplitude 2-114113
 H, electron dispersion relations 2-59934
 H, electron impact ionisation, second Born treatment 2-80814
 H, electron impact ionisation calc. 2-102633
 H, electron impact K shell ionisation cross section, plane wave Born approx. 2-80821
 H, electron scattering calcs. at energies between 13.6 and 60 eV including $n=3$ levels 2-96732
 H, Lyman and Balmer decrements, appl. to astronomical spectra 2-84084
 H-like atoms, laser-modified angular distribution of Compton electrons 2-96739
 H $^{+}$, positron impact ionisation in presence of laser field 2-75442
 He, electron impact autoionisation, double and triple differential cross sections 2-96740
 He, electron impact ionisation, triple differential cross section meas. 2-54970
 He, electron impact ionisation, second Born treatment 2-80814
 He, electron impact ionisation, intermediate energy 2-90721
 He, electron impact ionisation, low energy triple differential cross-section meas. 2-102642
 He, near-threshold electron impact ionisation cross sections 2-102639
 He, positron inelastic scatt., excitation and ionisation meas. 2-75440
 He $^{+}$, electron impact ionisation, triple differential cross sections 2-80817
 Hg, electron impact, K-shell ionisation, relativistic effects, plane wave Born approx. 2-85818
 K, 4s electron momentum distrib., electron coincidence spectroscopy 2-102641
 Kr gas, electron irradi., electrons energy degradation, Monte Carlo calc. 2-96743
 Kr, highly ionised, spectroscopy for Tokamak plasmas 2-97767

atomic electron impact ionisation continued

- Li, electron impact ionisation cross-section calcs. 2-108718
 Mg, electron impact double ionisation cross sections 2-75444
 Mg, electron impact ionisation, inner-shell alignment, distorted-wave approx. appl. 2-102635
 Mg, resonance phenomena and post-collision effects (*Russian*) 2-108724
 Na, 4s electron momentum distrib., electron coincidence spectroscopy 2-102641
 Na-like ions, electron impact ionisation rate, ionisation cross section, excitation-autoionisation contrib. 2-102636
 Ne, electron scatt., negative ion resonances, eigenchannel anal. 2-59941
 Ne, positron inelastic scatt., excitation and ionisation meas. 2-75440
 Ni, electron impact K shell ionisation cross section, plane wave Born approx. 2-80821
 Ni, K-shell ionisation by protons, deuterons and alpha particles at low projectile energies 2-102632
 O, double ionisation from electron impact, cross section determ. 2-96744
 Sn, electron impact K shell ionisation cross section, plane wave Born approx. 2-80821
 Xe, ionisation yield due to electron impact 2-70425

atomic electron scattering *see* **atomic electron impact excitation; atomic electron impact ionisation; elastic scattering of electrons by atoms and molecules**

atomic emission spectroscopy

- DC plasma jets system, R&D and QA appl. 2-73028
 emission spectrochemical analysis, fixed time integration method (*Japanese*) 2-78159
 inductively coupled plasma, spectral characts., generator freq. effects 2-89817
 laser excited, trace element anal. appls. 2-83437
 microspectral analyser, ablation of solid samples in laser beam use in spectrometry 2-69263
 organic compounds, detection limit lowering in spectrographic determ. 2-111529
 Rydberg series, spectrum anal. from MQDT, computer program 2-64905
 Rydberg states, study using pulse generator, variable duration, with fast rise-time (*French*) 2-74470
 skimmed inductively coupled Ar plasma appls. 2-95481
 Gd in nuclear fuels, anal. techniques for quality control (*German*) 2-96089
 Hg, sequential two-photon laser-induced fluoresce. detect. 2-99737
 N, fluoresce. detect. induced by two-photon absorpt., lifetime and quenching rate meas. 2-70176
 O, fluoresce. detect. induced by two-photon absorpt., lifetime and quenching rate meas. 2-70176

atomic energy *see* **nuclear power**

atomic excited states

see also **atomic metastable states; atomic resonant states**

- alkali metal+inert gas system, optically pumped, evolution of spin orientation, numerical simulation 2-96516
 alkali metal atoms, spin polarisation, hyperfine coupling collisional breaking effects 2-90486
 alkaline earth+inert gas atom, collisions, van der Waals forces, excited state lifetimes 2-75369
 alkaline earth atoms, core and valence excited states, electronic relaxation influence 2-90447
 alkaline earth atoms, two electron Rydberg states 2-70160
 atom-electron impact excitation, atomic orientation, attractive and repulsive forces 2-102637
 atomic and surface physics, conf., Salzburg, Austria, Feb. 1982 2-89455
 atomic collisional excitation, alignment and orientation coordinate frame 2-114088
 atomic electron impact excitation, quantum beats, spin-orbit coupling, electron-photon ang. correls. 2-114109
 atoms and ions, ion accelerator study of props., review 2-96478
 classification and calculation, wave function determ. 2-85568
 closed shell atoms, symmetry consideration in Penning ionisation 2-75402
 coherent decay of collisionally autoionizing atoms 2-70407
 conference, Cambridge, MA, USA (Aug. 1980) 2-68959
 diiodomethane, photolysis, yield of $I(^2P_{1/2})$ 2-96689
 electron impact 2S excitation, 54.4 and 100 eV cross-section calc. method 2-85820
 excited atomic gas, binding energies and interatomic distances (*Russian*) 2-70158
 heavy atoms, electron excitation, light emission, integrated state multipoles 2-54968
 highly excited atomic states, radiative transition probabilities (*Russian*) 2-108428
 highly excited atoms, intense circularly polarised EM radiation effects 2-90483
 inert gas atom+ground state atom(molecule), ionisation 2-90680
 monatomic ions, charge stripping spectra 2-54780
 multilevel system excitation, supersensitivity, adiabatic switching on of resonant radiation (*Russian*) 2-96867
 multiphoton absorpt., linewidth, fluoresce. fluctuations 2-102453
 neutron impact, electronic excitation 2-90724
 one-electron atom excited states in strong external fields 2-70161
 one-electron atoms, hydrogenic levels, excited states ordering and numerology 2-64893
 optically dense medium, optimal freq. range for atomic excitation 2-113944
 photoionisation cross sections, multiple minima, dipole matrix elements 2-54816
 plasma impurities, radiative processes, book contrib. 2-71120
 quantisation and instability rules (*Russian*) 2-102408
 rare earth elements, photoionisation cross section meas. from excited states rel. to laser isotope separation 2-64939
 rare earth elements and ions, Rydberg states calc. using model pot. method 2-64891
 ruby, electronic Raman transition and phosphorescence, zero phonon lines, pure dephasing 2-93251
 Rydberg atomic states, radiation and polarisation characts. 2-59720
 Rydberg atoms, collisions 2-90663
 Rydberg atoms, probes for space research and QED (*French*) 2-96490
 Rydberg atoms and radiation 2-70159
 Rydberg atoms in resonant cavity, blackbody radiation absorpt., Bose statistics, Brownian motion 2-90494
 Rydberg states, optical line broadening, inelastic collisions effects 2-96508
 spin-orbit contribution to isotope, isomer shifts (*Russian*) 2-96480

atomic excited states continued

- spontaneous emission, vacuum turn off obs. 2-60054
 sputtered excited states formation, unified model 2-93356
 sputtering, excited neutral atom formation, inelastic energy transfer, statistical model 2-62032
 strongly excited atomic system, collective electronic state 2-113902
 superfluorescent cascades, altered branching ratios and relax. oscillations 2-102455
 Zeeman coherence relax., reson. radiation capture effects 2-90474
 Ag I radiative lifetimes 2-64919
 Ag II radiative lifetimes 2-64919
 Ar and Ar ions, doubly excited states, energy levels, HF calcs. 2-75160
 Ar, Rydberg IR optogalvanic spectroscopy 2-59759
 Ar⁺ ion sputtering in Be, Mg, Zn, Cd, at. excitation 2-75372
 Au, sputtering, atomic excitations, optical spectrometry study 2-77689
 Aul, radiation lifetimes of excited n²D (n=6-8) states 2-64921
 Ba, 6snd ²D₂ Rydberg states, tensor polarisabilities, quantum beat spectra 2-114136
 Ba, excited state, autoionisation, spectra 2-90487
 Ba I atoms, highly excited, hyperfine struct. and isotope shifts meas. 2-102653
 Ba, lifetime perturbations in Rydberg sequences, Zeeman effect and hyperfine struct. meas. 2-59722
 Ba odd isotopes, perturbed 6sns ¹S₀ and ³S₁ Rydberg states, isotope shifts meas. 2-96510
 Ba, perturbation of 6sns ¹S₀ sequence by 5d7s ³P₀ state by lifetime meas. 2-59748
 Ba, perturbed 6sns ³S₁ Rydberg states, hyperfine struct. 2-102666
 Ba, Rydberg states, config. interaction calcs. 2-90462
 Ba, Rydberg states, electron densities, isotope shifts 2-75213
 Ba, Rydberg states, hyperfine struct., singlet-triplet mixing 2-90463
^{33,17}Ba, mnsn Rydberg states level shifts induced by hyperfine interaction 2-64943
 Be, wave function determ. 2-85568
 C³⁺, inelastic scatt., excitation, relativistic Born cross sections 2-114116
 C-foil + Ar⁺ (Kr⁺), relative level populations expt. study 2-75397
 C-foil + Ga⁺ (Ti⁺), relative level excitation study 2-75398
 C-foil + O⁺ (S⁺), fast ion excited Rydberg states 2-75392
 Ca fluoresce. polarisation due to coherence in Ca₂ photodissoc. (*French*) 2-96498
 Ca, Rydberg states quantum defects, dynamical contribs. 2-85518
⁴²Ca, mnsn Rydberg states level shifts induced by hyperfine interaction 2-64943
¹¹⁰Cd, Hanle effect for electron impact excitation 2-54809
 Cs D₂ line intra-Doppler resonances in selective specular refl. profile 2-54805
 Cs, electron impact excitation, oscillator strengths and cross section calcs. 2-59940
 Cs, excited 4d atomic, control of 4f wavefunction collapse 2-70155
 Cs, multiple minima in photoionisation cross sections 2-54820
 Cs, Rydberg atom in mag. fields, Landau limit of spectrum 2-59721
 Cs Rydberg atoms in magnetic fields, at. spectrum Landau limit 2-85573
 Cs, Rydberg-Rydberg interactions in dense systems 2-90649
 Cu, polarisation intermodulated excitation (POLINEX) spectroscopy 2-59729
 Cu, sputtering, atomic excitations, optical spectrometry study 2-77689
 D, excited state from mol. dissoc., translational energy distrib. 2-70429
⁶⁶ErII, lifetime meas. using fast-beam laser-modulation spectroscopy 2-108423
 Ga, sputtering, atomic excitations, optical spectrometry study 2-77689
 p-Ge:B(Al)(Ga), impurity states, oscillator strengths, quadrupole moments 2-104303
 H discharge, low density, potential step development, laser resonance scatt. study 2-91687
 H, electron impact excitation of 2P state, electron-photon angular correl. meas. 2-114115
 H, excited state, Rayleigh-Schrodinger perturbation theory 2-108355
 H, excited state from mol. dissoc., translational energy distrib. 2-70429
 H, higher energy level calcs. (*Russian*) 2-85569
 H highly excited, diabatic energy levels in high mag. fields, scaling laws 2-102407
 H plasma, population inversion between the recombining ground and first excited states 2-71074
 H, Rydberg IR optogalvanic spectroscopy 2-59759
 H, Rydberg series, quadratic Zeeman effect, Sturman functions appl. 2-80534
 H, s-wave, excited states, with 2λr+2λ²r² perturbation pot. 2-70154
 H⁺, high-lying doubly excited states props. 2-64892
 H⁺+N⁺(0s⁺)(Ar⁺), charge exchange, impact ionisation, cross section, crossed-beam expt. 2-114102
 He, Coulomb correlation in 2¹S, 2³S, 2¹P and 2³P states 2-59714
 He, electron impact excitation, cross sections, Coulomb-project Born approx. 2-90717
 He excited state Doppler-free spectroscopy using colour centre laser and electron impact excitation 2-54792
 He plasma discharge, electron beam excitation, population mixing rate consts. determ. 2-114969
 He, polarisation intermodulated excitation (POLINEX) spectroscopy 2-59729
 He, relativistic wave functions for non-penetrating Rydberg states 2-80510
 He, Rydberg IR optogalvanic spectroscopy 2-59759
 He⁺, double excited states 2-70156
 He+Ar⁺, excitation cross sections, spectra, Landau-Zener model 2-96711
 He+Kr⁺(Xe⁺)(I⁺)(N⁺), electronic and vibronic transitions, translational energy spectroscopy 2-54935
 He⁺+Ar, excitation cross sections, spectra, Landau-Zener model 2-96711
 He⁺+H⁺(He⁺)(He⁺), excitation, charge transfer, ionisation, emission cross section meas. 2-114090
 He⁺+Ne, density matrix of the I 3p determ. 2-96712
⁴He, fine structure of Rydberg states in intervals nF-nG, n=5,6 2-65107
⁴He, 6¹P₁ state, hyperfine struct., radiative lifetime, fluoresce. obs. 2-108424
 Hg, electron impact excitation, integrated state multipoles, light emission 2-54969
 Hg vapour, UV reservoir states quantum yield and lifetime, dimer form., luminesc. 2-113926
 Hg+K(4²P_{3/2}), rainbow scatt. at thermal energies 2-80778
 Hg+Na⁺, excited state pots., rainbow scatt., polarisation effects 2-85776

atomic excited states continued

- Hg*+CO (NO), electronic to vibr. energy transfer, isotope effects 2-102593
- In, Rydberg states, electric field ionisation 2-102652
- ¹¹⁵In, 8p^{1/2} and 8p^{3/2} levels HFS meas. 2-96757
- K vapour, laser excited, collisional processes 2-59914
- ⁴⁰K, energy levels, isotope shifts, two-photon spectra 2-54824
- K+He(Ne)(Kr), excited states, transition cross sections, fluoresc. obs. 2-75408
- K*+K high Rydberg state, collision effects 2-59904
- Kr III, beam-foil level lifetimes 2-96511
- Kr, monoenergetic electron impact excitation above ionisation threshold, 22 to 26 eV, broadband photon yield 2-90714
- Kz, B II_u state excitation, laser induced fluoresc. 2-108416
- Li, electron and positron impact excitation differential cross sections 2-102644
- Li, relativistic wave functions for non-penetrating Rydberg states 2-80510
- Li, Rydberg IR optogalvanic spectroscopy 2-59759
- Li⁺, 3489 Å optical transition using beam-foil spectroscopic technique 2-80511
- Li+F₂, excited atom system, pot. surface for weakly bound electron in coulombic and point pot. field 2-108411
- Li+inert gas atom, 3²D state quenching, product state specific obs. 2-80796
- LiF, electron impact excitation of ultrasoft X-ray transitions (*Russian*) 2-59741
- Li+He(Ar)(Kr)(Xe), Li fine struct. transitions, rate coeff. 2-54938
- Li(2²P), electron impact excitation, cross sections, oscillator strengths 2-102640
- M⁺+N, excited state charge-exchange cross sections, ODMR 2-102611
- Mg, sputtering, atomic excitations, optical spectrometry study 2-77689
- Mg+N₂O, quenching, cross sections, kinetics, chemiluminescence 2-111496
- Mg⁺+Ar, collisional excitation mechanism, coupled channel impact parameter approx. 2-54948
- Mn octet states, electron impact excitation 2-108719
- Mn, resonant photoemission 2-90489
- Na, 1s photoabsorption spectrum 2-90468
- Na, atomic beam, optical pumping, alignment and orientation of hyperfine levels 2-54813
- Na, excited 34d state; electric field ionisation 2-90485
- Na, excited state lifetimes, optoelectronic cross-correl. determ. 2-90477
- Na, excited states, photoionisation Stark spectra 2-70183
- Na, laser spectroscopy, thermionic detector construction 2-58906
- Na Rydberg atom, high-resolution field ionisation 2-96479
- Na, Rydberg atoms reson. collisions, energy transfer 2-59916
- Na+Na, microwave-assisted reson. collisional energy transfer, Rydberg states 2-90657
- Na⁺+Na, Rydberg to Rydberg charge transfer 2-65083
- Na⁺+CO, (3²P) state quenching, stereochem. effects, expt. and calcs. 2-108605
- Na⁺+N₂, energy transfer, mol. bond form., at. alignment and orientation effects 2-105480
- Na⁺+Na*, associative ionisation, polarisation depend. 2-54947
- Nd I and Nd II, excited levels lifetimes and oscillator strengths 2-113930
- Ne, photoionisation from ground and excited states, autoionisation states 2-80547
- Ne, polarisation intermodulated excitation (POLINEX) spectroscopy 2-59729
- Ne, Rydberg IR optogalvanic spectroscopy 2-59759
- Ne, wave function determ. 2-85568
- Ne+F⁺, excited states, electron excitation and capture, X-ray spectra 2-75418
- Ne+Ne, transitions between excited states (*Russian*) 2-59900
- Ne⁺+He(Ne)(Ar), excited projectile states prod., photon emission cross sections 2-75413
- O III, EUV line photoexcitation by He II Lyman α 2-89213
- O ions, fast, foil-excited Rydberg states 2-102577
- O, two-photon excitation in acetylene-O₂ flame 2-96526
- O⁺, triplet line excitation 2-112540
- O⁺, beam foil excited, optical decay of high l Rydberg states 2-75204
- Pr, double-vacancy excitations in L atomic levels, X-ray absorpt. spectra 2-70168
- Rb, electron impact excitation 2-70427
- Rb, induced three-photon light scatt. upon excitation near resonant transitions 2-75229
- Rb, Rydberg levels, rare gas atom quenching cross sections 2-102426
- Rb+Rb(5p)(Rb(5s)), ion form. from (8s) state 2-80795
- Rb*+Rb, collisional ionis. 2-90681
- S, excited state, flash photolysis study from UV dissociation of CS₂ 2-59719
- Sm, double-vacancy excitations in L atomic levels, X-ray absorpt. spectra 2-70168
- Sr, 5 sns ¹S₀ and 5 snd ¹D₂ Rydberg series absolute energy level determ. 2-85606
- Sr, Rydberg states, hyperfine struct., singlet-triplet mixing 2-90463
- ⁸⁷Sr, msns Rydberg states level shifts induced by hyperfine interaction 2-64943
- Tl, sputtering, atomic excitations, optical spectrometry study 2-77689
- Tl, electronically excited, photodissoc., UV absorpt. spectrum 2-90471
- W atomic beam laser excitation for lifetime meas. in configuration (5d+6s)6p 2-54806
- W⁷¹⁺, inelastic scatt., excitation, relativistic Born cross sections 2-114116
- Xe discharge, ns and nd Rydberg states, spectroscopic study using laser excitation and optogalvanic detection 2-113899
- Xe, Rydberg states, optical lines shifts and broadenings, collision effects 2-113933
- ¹³⁵Xe, ground and excited atomic levels, hyperfine struct. determ. by level-crossing optogalvanic spectroscopy 2-70180
- Zn, sputtering, atomic excitations, optical spectrometry study 2-77689

atomic explosions see nuclear explosions**atomic fine structure**

- aC-Stark-shift-induced photoelectron spin polarization in resonant multiphoton ionization 2-108599
- I, spectral and relax. charact. investigation using a photodissociative I laser 2-113934
- interstellar medium, far-IR fine struct. lines interpret., review 2-94621

atomic fine structure continued

- light atoms, analysis of fine-structure excitation energies in Dirac-Fock and perturbation theories 2-75455
- Ba, even-parity levels, optogalvanic study 2-90469
- C III, wavelengths, fine struct. and decay times meas. using beam-foil technique 2-64898
- F, analysis of fine-structure excitation energies in Dirac-Fock and perturbation theories 2-75455
- Ga, np^{1/2,3/2} Rydberg series, dye laser study 2-114123
- H, average value evaluation 2-84422
- H, fine structure by nonperturbative, nondivergent method 2-54978
- He, energy level high precision meas. 2-59956
- He, relativistic wave functions for non-penetrating Rydberg states 2-80510
- He, Rydberg states, optical pot. anal. 2-113901
- He, Zeeman splitting of 5876 Å line 2-70184
- ⁴He UV 2²S to 5²P transition fine and hyperfine struct. spectra, detected via associative ionisation 2-85831
- ⁴He, fine structure of Rydberg states in intervals nF-nG, n=5,6 2-65107
- ⁴He UV 2²S to 5²P transition fine and hyperfine struct. spectra, detected via associative ionisation 2-85831
- In, np^{1/2,3/2} Rydberg series, dye laser study 2-114123
- Kr⁺+O₂(CO)(N₂O)(OCS), fine struct. state depend. reactivity 2-1025471
- Li, relativistic wave functions for non-penetrating Rydberg states 2-80510
- Li⁺, laser-microwave spectroscopy 2-64902
- Li-like ions, 1s2p² configuration, multiplet splitting and radiationless transition, relativity effects 2-108419
- Li*+He(Ar)(Kr)(Xe), Li fine struct. transitions, rate coeff. 2-54938
- N IV, wavelengths, fine struct. and decay times meas. using beam-foil technique 2-64898
- N, metastable ²P state, EPR spectrum 2-64901
- Na, Pachen-Bach effect of D-lines under high mag. field 2-80531
- O IV, metastable levels excitation by electron impact, LS coupling and fine struct. transitions 2-80525
- O V, wavelengths, fine struct. and decay times meas. using beam-foil technique 2-64898
- Rb+H₂(N₂), fine struct. transitions meas. 2-54922
- Sr⁹⁺, electron impact excitation cross sections determ., fine struct. transitions, oscillator strengths 2-65094
- Sm, tensor polarisability determ. by quantum beat spectroscopy 2-59744
- Sr²⁹⁺, F-like ions, 2s²2p⁵-2s2p⁶ transitions obs. 2-102403
- Y³⁰⁺, F-like ions, 2s²2p⁵-2s2p⁶ transitions obs. 2-102403
- Yb, tensor polarisability determ. by quantum beat spectroscopy 2-59744
- atomic fluorescence**
- coherent and incoherent at. photon scatt. factors meas. using radioactive γ-ray sources 2-64907
- coherent fluorescence radiation following photoexcitation and photoionization 2-80553
- coherently driven atom, fluoresc., squeezed states, sub-Poissonian photon statistics 2-90852
- collisional orientation transfer between hyperfine struct. levels, semiclassical vector model, quantum mech. justification 2-70402
- collisional redistribution, dressed atom approach 2-90472
- collisions in presence of laser radiation, time depend. and asymptotic wave function 2-108680
- conical emission angle, atomic vapours excited by nearly resonant laser beams 2-70177
- cooperative states and reson. fluorescence 2-85588
- dressed atoms, collisional effects in resonance fluorescence 2-59742
- driven atoms, collisions in radiation field and spectra 2-90652
- electron impact excitation, effective cross-section meas. (*Spanish*) 2-85811
- gases, cooling or heating through energy transfer using lasers 2-102440
- heavy atoms, electron excitation, light emission, integrated state multipoles 2-54968
- laser-induced fluorescence in spectroscopy, dynamics, and diagnostics 2-108417
- modulated Hanle signals in partially coherent fields 2-70199
- multilevel atom under two-photon reson. conditions, fluoresc. spectrum 2-64945
- multiphoton absorpt., linewidth, fluoresc. fluctuations 2-102453
- optical collisions rate and fluoresc. spectra 2-54919
- Stark M_J-E_J interf. effects in crossed mag. and elec. fields 2-70179
- three-atom system, incoherently and continuously pumped, cooperative radiation, photon correl. 2-80527
- three-level atom, resonance fluoresc. spectrum numerical results 2-85587
- three-level atoms, identical pair, resonance fluorescence, cooperative and interference effects 2-59740
- three-level atoms, laser field interactions, precision study 2-59763
- three-level systems, laser-excited fluoresc., saturation parameters 2-114966
- two level atoms, incoherently driven Dicke model, fluoresc., photon bunching and antibunching effects 2-113924
- two-atom cooperative system, reson. fluoresc. and absorpt. spectrum, dispersion forces effect 2-96500
- two-atom fluoresc. spectrum with finite detuning 2-108420
- two-atom resonance fluorescence, power broadening and two-photon correls. 2-54798
- two-atom resonance fluorescence including the dipole-dipole interaction 2-64909
- two-atom system coherently driven by laser field, reson. fluoresc. intensity correlations 2-96501
- two-level atom, reson. fluoresc., detuning effect 2-54799
- two-level atom, resonance fluorescence., classical and quantum mech. approaches 2-113922
- two-level atoms, collective reson. fluoresc., S-conserving theory 2-85928
- two-level atoms, nonresonance effects in fluorescent Dicke model, semiclassical and quantal results 2-64908
- two-level atoms, reson. fluoresc. delayed spectrum 2-102428
- two-level systems, laser-excited fluoresc., saturation parameters 2-114966
- Ar, electron impact, characteristic X-ray and bremsstrahlung cross-sections 2-102646
- Ar+S, electron prod., impact parameter depend. 2-54921
- Ar⁺+Kr(Xe), excitation collisions studied by monitoring resulting luminesc. 2-108675
- Ar*, quenching by O containing compounds, reson. fluoresc. study of reaction prod. 2-59890

atomic fluorescence continued

- BaI, hyperfine struct. in 6p5d configuration and isotope shifts in transitions 6s5d-6p5d, fluoresc. spectra 2-96758
¹³⁷Ba⁺, ground-state hyperfine splitting precision determ. by ion-storage technique 2-65106
 Ca fluoresc. polarisation due to coherence in Ca₂ photodissoc. (*French*) 2-96498
 Cd, photoionisation prod. alignment 2-70207
 Cd+Ar(N₂)(H₂)(CO)(CO₂), quenching of Cd excited state, atomic fluoresc. obs. 2-80798
 Cl, two-photon absorpt., laser induced fluoresc. 2-54797
 Cs D₂ line profile obs. using a CW semiconductor laser 2-113940
 Cs vapour luminescence study under resonant laser excitation 2-53854
 Cu, in inert gas matrix, fluoresc. spectrosc. and photoprocesses 2-85577
 Cu, polarisation intermodulated excitation (POLINEX) spectroscopy 2-59729
 Fe^{IV}+Ne, F K-shell X-ray prod., charge state depend. 2-96708
 Fe atoms in Ar matrices, visible and near IR fluoresc. spectra 2-102419
 Fe I, cascade quantum beats, fluorescence obs. 2-102425
 H, excitation cross sections relevant to neutral beam diagnostics 2-80364
 H, photodissociation of H₂, Lyman- α line by fluoresc. Doppler obs. 2-54800
 He, polarisation intermodulated excitation (POLINEX) spectroscopy 2-59729
 He⁺-Xe, charge transfer reaction, combined drift-tube and beam luminesc. study 2-99671
 Hg, 6³P₁ state, hyperfine struct., radiative lifetime, fluoresc. obs. 2-108424
 Hg, electron impact excitation, integrated state multipoles, light emission 2-54969
 Hg, sequential two-photon laser-induced fluoresc. detect. 2-99737
 I(5²P_{1/2}) emission at 1.3 μ m, collisional enhancement by CF₃I, C₂F₃I, I-C₂F₃I and n-C₃F₇I 2-59739
 K, shuttle lidar resonance fluorescence meas. in mesosphere 2-100606
 K vapour, resonance four-photon parametric superluminesc. obs. for two-photon pumping 2-108853
 K vapour, resonantly laser excited, energy pooling collisions and plasma production obs. 2-75214
 K+He(Ne)(Kr), excited states, transition cross sections, fluoresc. obs. 2-75408
 K+Rb laser induced collisional energy transfer obs., K fluoresc. meas. 2-90656
 Kr⁺, quenching by O containing compounds, reson. fluoresc. study of reaction prod. 2-59890
 Kz, B II, state excitation, laser induced fluoresc. 2-108416
 Li+Li (He)(Ne), quenching, excitation transfer processes, radiative coeff., collision rate coeff. 2-108418
 LiF, electron impact excitation of ultrasoft X-ray transitions (*Russian*) 2-59741
 Mn, behaviour of Raman resonance scattering across the K X-ray absorption edge 2-102423
 N, fluoresc. detect. induced by two-photon absorpt., lifetime and quenching rate meas. 2-70176
 Na atomic beam, velocity distrib. deform. by reson. laser radiation press. 2-108429
 Na, collision-perturbed, with doublet excited states, near reson. scatt. 2-96499
 Na, D-line, fluoresc. linewidth as function of spectral irradiance 2-80528
 Na, Doppler-shift laser spectroscopy, fluoresc. spectra interpretation 2-96502
 Na, shuttle lidar resonance meas. in mesosphere 2-100606
 Na⁺, electron impact excitation of optical transitions 2-70422
 Na-Hg vapour, fluorescence quantum efficiency meas. for 253.7 nm radiation 2-85586
 Na₃, supersonic expansion characterisation, laser induced atomic fluoresc. meas. 2-59986
 Nb I lifetime meas. rel. to solar Nb abundance 2-112406
 Nbl, atomic beam, radiative lifetime, time-resolved laser induced fluoresc. 2-90473
 Ne, polarisation intermodulated excitation (POLINEX) spectroscopy 2-59729
 O, fluoresc. detect. induced by two-photon absorpt., lifetime and quenching rate meas. 2-70176
 O₂, two-photon excitation in acetylene-O₂ flame 2-96526
 O⁺, beam foil excited, optical decay of high l Rydberg states 2-75204
 O(³D₂)+H₂O(CH₃)(H₂)(N₂O) quenching, O(³P_j) yields by time resolved fluoresc. 2-105492
 Pb, L₁, L₂ and L₃ subshells, X-ray fluoresc. yields and Coster-Kronig transition probabilities 2-70114
 Pd, L subshell photoionisation cross-section determ. 2-80550
 Pt, radiative lifetimes meas. for odd parity levels using laser excited technique 2-102433
 Rb vapour, resonance four-photon parametric superluminesc. obs. for two-photon pumping 2-108853
 Rb+He(Ne)(Ar)(Rb), excitation transfer, atomic fluoresc., two-photon absorpt., quenching 2-70389
 Rh I lifetime meas. rel. to solar Rh abundance 2-112406
 S, two-photon induced fluoresc. and reson.-enhanced photoionisation 2-113923
 Si^{III}, transition energies, lifetimes and fluoresc. yields 2-59738
 Sn, L subshell photoionisation cross-section determ. 2-80550
 Sr+Eu, radiative collision, final-state coherences 2-75377
 U II fluorescence studies, laser induced, by U photoionisation 2-96524
 W atomic beam laser excitation for lifetime meas. in configuration (5d+6s)^{6p} 2-54806
 Xe+Xe, M-shell excitation, ion-photon and ion-Auger electron coincidence meas. 2-102575
 Xe⁺, quenching by O containing compounds, reson. fluoresc. study of reaction prod. 2-59890
 Zr sputtered atoms, CW laser induced fluoresc. spectroscopy 2-80529
 Zr, sputtered-atoms surface normal vel. distrib. for light-ion irradiation 2-77651
 ZrI radiative lifetimes, time resolved laser induced fluoresc. 2-80542

atomic fluorescence spectroscopy see *atomic emission spectroscopy***atomic forces**

- alkali metal cations, solution, pot. energy function models 2-59886
 n-alkanes, soln. and gas phase, intramolecular interactions, polarisabilities, light scatt. 2-55698
 amines, primary, soln., dielectric loss, microwave spectra (*German*) 2-66985

atomic forces continued

- atomic photoemission, proton affinities and pot. energies calcs. 2-59755
 atomic radiative interactions (*Russian*) 2-108437
 benzene, isotope and derivatives, vibrationally excited, visible and IR obs. 2-63769
 collision-induced polarisability, at. susceptibility rel. to dispersion forces in light wave field (*Russian*) 2-108438
 cyclohexanols, saturated, OH rotamers, γ -alkyl substituent effects 2-90513
 diphenylmethane type system, intramol. interfragment interaction 2-114066
 ethyl chloride, multiquantum excitation in intense IR field, intermode intramol. interaction role 2-114053
 excited atomic gas, binding energies and interatomic distances (*Russian*) 2-70158
 heavy ion-atom collisions, superheavy quasimom. form. 2-96674
 interatomic dipole moment of two atoms, solvent effects, theory (*Russian*) 2-113908
 intramolecular interactions, linear regression models appl. rel. to NQR 2-90569
 ion-atom interaction potential and ion mobilities 2-91584
 LiX 65N extracting agent, 3-dimens. mol. struct. calcs. 2-90645
 low energy collisions, reson. process 2-96693
 methyl alcohol, multiquantum excitation in intense IR field, intermode intramol. interaction role 2-114053
 mixtures, interatomic pots. calcs. 2-90642
 organic and organometallic mol., geminal interaction of atoms in Y-C-M groups 2-108562
 resonance fluorescence, collective atomic effects, scaling factor 2-102427
 ribonuclease A cryst., conformation, temp. depend., laser-Raman spectra and X-ray diff. 2-73190
 singular interatomic pots., Regge pole positions and residues, energy depend. 2-75367
 tertiary alcohols, rotamers, OH stretching freqs., solvent effects 2-54831
 trifluoromethyl derivatives, geometry, intramolecular interactions, NDDO calcs. 2-64878
 two-electron atoms, electron dynamics in double excited states 2-65067
 two-identical ion system, electron energy and interaction pot., Thomas-Fermi calcs. 2-90452
 Ar, collision induced light scatt., three body correl. spectrum 2-80636
 ArI₂, mol. interactions, struct., mol. complex theory, Raman spectra 2-108656
 ArI₂, mol. interactions, struct., mol. complex theory, Raman spectra 2-108656
 Ca+Ar(Kr), principal series line broadening 2-85591
 Cs, Rydberg-Rydberg interactions in dense systems 2-90649
 F₂ group, two- and three-body electrostatic interactions in odd configurations 2-113846
 H, atomic, spin polarised, decay kinetics, dipole-dipole interaction, Bose condensation region attainment 2-59887
 H⁺, high-lying doubly excited states props. 2-64892
 H-H(He⁺), polarisabilities, oscill. strengths, interaction, coeffs. calcs. 2-80763
 He, first-order interaction energy, intra-atomic correl. effects anal. 2-80769
 He-He(Li⁺), polarisabilities, oscill. strengths, interaction, coeffs. calcs. 2-80763
 He-methane, thermal diffusion meas., interaction parameters 2-102565
 He⁺-He⁺(H), polarisabilities, oscill. strengths, interaction, coeffs. calcs. 2-80763
 He, pair polarisabilities, non-local contrib. 2-108657
 I+I, electronic shell struct. influence on heavy ion elastic scatt. 2-114079
 I+Kr(Xe), interaction pots., crossed-beam meas. 2-108661
 K+Ne(Kr)(Xe), II interaction, pot. param. 2-108677
 Li⁺-Li⁺(He), polarisabilities, oscill. strengths, interaction, coeffs. calcs. 2-80763
 Ne₃, interaction, exchange repulsion nonadditivity 2-96673

atomic hyperfine structuresee also *Lamb shift*

- alkali atoms, hyperfine splittings shift due to blackbody radiation 2-64910
 alkali metal atoms, spin polarisation, hyperfine coupling collisional breaking effects 2-90486
 alkaline earth ions isoelectronic with alkali metal atoms, hyperfine interactions 2-90738
 atom, CC Cs D₂ line intra-Doppler resonances in selective specular refl. profile 2-54805
 atoms and ions, ion accelerator study of props., review 2-96478
 collisional orientation transfer between hyperfine struct. levels, semiclassical vector model, quantum mech. justification 2-70402
 He, muonic, hyperfine struct. interaction meas. 2-70456
 inner shell atomic energy levels, hyperfine splitting, screening corrections 2-70153
¹⁰⁹Ag HFS optical pumping, ground state 2-70198
 Ba I atoms, highly excited, hyperfine struct. and isotope shifts meas. 2-102653
 Ba, lifetime perturbations in Rydberg sequences, Zeeman effect and hyperfine struct. meas. 2-59722
 Ba odd isotopes, perturbed 6sns ¹S₀ and ³S₁ Rydberg states, isotope shifts meas. 2-96510
 Ba, perturbed 6sns ³S₁ Rydberg states, hyperfine struct. 2-102666
 Ba, Rydberg states, hyperfine struct., singlet-triplet mixing 2-90463
 Ba⁺, hyperfine splittings shift due to blackbody radiation 2-64910
⁵¹Li⁺ Ba, msns Rydberg states level shifts induced by hyperfine interaction 2-64943
 BaI, hyperfine struct. in 6p5d configuration and isotope shifts in transitions 6s5d-6p5d, fluoresc. spectra 2-96758
¹³⁵Ba⁺, hyperfine struct. determ. rel. to microwave freq. standard possibilities 2-65105
¹³⁷Ba⁺, ground-state hyperfine splitting precision determ. by ion-storage technique 2-65106
¹³⁷Ba⁺, hyperfine struct. determ. rel. to microwave freq. standard possibilities 2-65105
 Ca beam, metastable level transitions for freq. sub-mm wavelength standards 2-107293
⁴³Ca, hyperfine structure anal. of 4s4p configuration and nucl. quadrupole moment 2-114124
⁴³Ca metastable 3d4s ¹D₂ state, laser RF double reson. HFS meas. 2-96756

atomic hyperfine structure continued

- ⁴³Ca, msns Rydberg states level shifts induced by hyperfine interaction 2-64943
 Cd, photoionisation prod. alignment 2-70207
 Cs D₂ line hyperfine struct. determ. using high-resolution spectroscopy 2-53854
 Cs D₂ line profile obs. using a CW semiconductor laser 2-113940
 Cs, hyperfine splittings shift due to blackbody radiation 2-64910
 D, muonic, hyperfine transitions via reson. d,d' formation at 34K 2-85844
 F, hyperfine components of spin-orbit splitting, direct absorpt. meas. 2-80518
 Fr, hyperfine field trends in isotope series 2-75201
 Fr isotopes, nuclear mag. moments, relativistic many-body perturbation theoretic investigation 2-70152
 H, ²S_{1/2} hyperfine level selection tin zero mag. field 2-96755
 H, ground state, hyperfine splitting, rel. to quantum theory teaching 2-107040
 H, hyperfine splittings shift due to blackbody radiation 2-64910
 H I λ line in solar corona, effect of hyperfine struct. on Hanle effect 2-94697
 H, Lamb shift for n=2 (*Russian*) 2-96509
 He, energy level high precision meas. 2-59956
 He, muonic, hyperfine struct. interval and Zeeman effect 2-70452
³He, 2 ³S-5 ³P transition nonlinear UV-laser intermodulated fluoresce. spectroscopy 2-95487
³He UV 2 ³S to 5 ³P transition fine and hyperfine struct. spectra, detected via associative ionisation 2-85831
⁴He, 2 ³S-5 ³P transition nonlinear UV-laser intermodulated fluoresce. spectroscopy 2-95487
⁴He UV 2 ³S to 5 ³P transition fine and hyperfine struct. spectra, detected via associative ionisation 2-85831
 Hg, 6¹P_{1/2} state, hyperfine struct., radiative lifetime, fluoresce. obs. 2-108424
 Hg, excitation by forward scatt. electrons, polarisation of 6¹P_{1/2}-6¹S₀ line 2-85813
 Hg⁺, hyperfine splittings shift due to blackbody radiation 2-64910
 Ho, hyperfine structure meas. in metastable states 2-113903
 I, ¹P_{1/2}-³P_{3/2} Raman transition, cross-section and hyperfine struct. 2-96487
¹³³In, 8p²P_{3/2} and 8p²P_{1/2} levels HFS meas. 2-96757
 K, efficiency of isotopically selective laser excitation, hyperfine splitting of levels 2-70438
 K+He(Ne), electronic and nuclear spin relax., hyperfine interaction 2-96688
^{43,44}K, ground state HFS, atomic beam mag. reson. coupled with laser pumping 2-54790
 La II, HFS in low even configurations, interpretation 2-59955
¹³⁹La II, 5d² and 5d6s levels, HFS constant meas. 2-59954
 Li⁺, laser-microwave spectroscopy 2-64902
 Mg beam, metastable level transitions for freq. sub-mm wavelength standards 2-107293
 Na, atomic beam, optical pumping, alignment and orientation of hyperfine levels 2-54813
 Na D lines perturbed by He, hyperfine components broadening 2-113913
 Na, D-lines, forward scatt. of reson. radiation as function of applied mag. field 2-70195
 Na, electron impact, hyperfine struct. and zero-field quantum beats 2-108714
 Na, forward scatt. of reson. radiation in presence of mag. field 2-75456
 Na, freq. depend. polarisation of light scatt. near D2 reson. line 2-85595
^ANa, A=20-24, 31, radioactive isotopes, elec. quadrupole moments and isotope shifts meas. 2-84954
 Ne, 2p²nd configs., Zeeman patterns, level crossings and splittings 2-75336
 Pb, isotope shift in 6p² ³P₀-6p7s ³P₀ 283.3-nm line 2-90480
 Pb, isotope shifts and HFS laser spectroscopic meas. 2-70194
 Rb D₂ line, 780.0 nm, broadening and shift const. meas. by foreign gases, m ag-scanning method 2-59752
⁸⁷Rb D₁ and D₂ lines, consts. for broadening and shift by inert gases 2-64920
 Rb+N₂, quenching, depolarisation, electronic and nuclear spin polarisation 2-90660
⁸⁷Rb hyperfine transitions meas., frequency standard appl. 2-107306
⁸⁷Rb, hyperfine-structure resonances, line shapes, phase and freq. shifts 2-80516
⁸⁷Rb optically pumped passive freq. standard, hyperfine freq. shifts caused by buffer gases 2-101380
 Rel, high-lying metastable states, hyperfine structure and isotope shift 2-113904
 Sc II hyperfine struct. obs. 2-59953
 Sr, Rydberg states, hyperfine struct., singlet-triplet mixing 2-90463
⁸⁷Sr, msns Rydberg states level shifts induced by hyperfine interaction 2-64943
⁸⁷Sr, Rydberg state, hyperfine induced perturbation, high-resolution two photon spectra 2-59769
¹²⁵Te II, 5p²6p config. hyperfine struct., effective-operator interpretation 2-75454
⁸⁹Y, ground and excited atomic levels, hyperfine struct. determ. by level-crossing optogalvanic spectroscopy 2-70180
¹⁷¹Yb⁺, electrostatically confined, optical pumping double reson. microwave obs. 2-80521
 Zn atomic spectrum, isotope shifts and hyperfine struct. 2-113916
 Zr, Lande g-factors, multimode saturation reson. in optogalvanic spectroscopy 2-85578

atomic inelastic collisions

- see also atom-atom collisions; atom-ion collisions; atom-molecule collisions; atom-molecule reactions; atomic electron impact excitation; atomic electron impact ionisation; beam foil spectra; ionisation of atoms
¹³⁹La(n,x), laser beam effect (*Russian*) 2-101896
 alkali metal + inert gas system, optically pumped, evolution of spin orientation, numerical simulation 2-96516
 alkali metal atoms, spin polarisation, hyperfine coupling collisional breaking effects 2-90486
 angular momentum in intense laser field 2-80785
 astrophysically abundance elements ionisation equilib., radiative recomb. and collisional ionisation 2-68610
 atom + negatively charged particles, excitation, ionisation 2-75378
 atom + rigid rotor scatt., rot. rainbows, IOS approx. and exact classical trajectory calcs. 2-96681

atomic inelastic collisions continued

- atom-ellipsoid scatt. quantum theory, model for atom-molecule inelastic collision 2-90662
 atomic, molecular and solid state theory, and computational quantum chemistry, conference, Flagler Beach, FL, USA (March 1981) 2-79267
 atomic and surface physics, conf., Salzburg, Austria, Feb. 1982 2-89455
 atomic collisional excitation, alignment and orientation coordinate frame 2-114088
 atoms and ions undergoing Brownian motion, nonlinear light absorption calc. (*Russian*) 2-70197
 charged particle impact, threshold fragmentation 2-102583
 charged particle scatt. in laser field, variational formulation and low-freq. approx. 2-96689
 charged-particle scattering in the presence of an amplitude-modulated laser field 2-114100
 coherent decay of collisionally autoionizing atoms 2-70407
 collision kernels and laser spectroscopy 2-70388
 collisions in presence of laser radiation, time depend. and asymptotic wave function 2-108680
 conference, Cambridge, MA, USA (Aug. 1980) 2-68959
 distorted wave Born approx., symmetry props., coherence parameters effects 2-114061
 dressed atom approach to line broadening 2-59753
 effective cross section inequalities for elastic and inelastic processes 2-114078
 electronic and atomic collisions, conf., Gatlinburg, TN, USA (July 1981) 2-90640
 emission spectra of colliding atoms 2-59726
 energy transfer in gases 2-59899
 generalised second-order Coulomb phase shift functions 2-53598
 high z-systems, Coulomb collisions, review 2-70391
 in solids conf., Lyon, France (July 1981) 2-68949
 inner-shell excitation and ionisation studies 2-58556
 ion-clusters, collisions with atoms and condensed matter, vicinage effects 2-75489
 isotropic solid, cascade processes, thermal and shift peaks effects (*Russian*) 2-71525
 laser collision-induced gain enhancement 2-96881
 laser induced collisional energy transfer 2-70404
 light scattering collisional redistrib. of radiation in strong laser field, dynamics 2-59895
 molecular ions, molecular struct., and interaction with matter, conference, Haifa, Israel (Jan. 1981) 2-53410
 molecular model, appl. of quantum chemistry 2-114072
 neutron impact, electronic excitation 2-90724
 pair production, atomic cross-section parametrisation 2-70385
 physics data handbook 2-58565
 quasi-elastic collisions of atoms, long range contribution 2-80773
 Rydberg atoms, collisions 2-90663
 Rydberg states, optical line broadening, inelastic collisions effects 2-96508
 spectral line broadening, quantum mech. theory 2-108635
 time-dependent rate equations, general matrix method calcs. (*French*) 2-85773
 (n,n), small angle scatt., atomic electron screening effects 2-113469
 Ar, collision induced light scatt., three body correl. spectrum 2-80636
 C2p²(¹S₀), excited state, collisional quenching, UV obs. 2-59736
 Ge+H⁺(π^+)(π^-), K-shell excitation and ionis. by relativistic projectiles, channeling obs. 2-59920
 H, atomic, spin polarised, decay kinetics, dipole-dipole interaction, Bose condensation region attainment 2-59887
 H, excitation cross sections relevant to neutral beam diagnostics 2-80364
 H, heavily particle impact excitation, asymptotic total cross-section calcs. 2-90655
 H-like ions, excitation and ionisation mechanism, role of autoionising states 2-65684
 H + negatively charged particles, excitation, ionisation 2-75378
 H⁺+He⁺ 2-54955
 Li⁺+Li, two photon optical ionising collisions 2-70206
 Mg sequence, n=3 singlet complex, short range interactions involving plunging configurations 2-65074
 N⁸⁺, metastable state, collision-induced ionisation, time of flight study 2-114095
 Na, high lying atomic states, high resolution spectroscopy and collision studies 2-102418
 Na, vapour, laser excited, hot electron spectra obs. 2-54818
 Na⁸⁺ recoil ions produced by impact of U ions, electron capture 2-65072
 Xe, Rydberg states, optical lines shifts and broadenings, collision effects 2-113933
- atomic magnetic moment**
 see also gyromagnetic ratio
 closed shell atoms, radial electron density moments and X-ray scatt. factors 2-75184
 closed shell atoms and ions of high nuclear charge, electric and mag. susceptibilities, shielding factors 2-96774
 transition cross-sections, Bethe formula and Rosenbluth eqn. 2-65104
 Ar, diamag. susceptibility, new Thomas-Fermi model test 2-85543
 Fr, hyperfine field trends in isotope series 2-75201
 Fr isotopes, nuclear mag. moments, relativistic many-body perturbation theoretic investigation 2-70152
 H-like ions, spectrum, dipole and quadrupole moments in superstrong mag. field 2-113912
 He, muonic, hyperfine struct. interval and Zeeman effect 2-70452
 He-like ions, spectrum, dipole and quadrupole moments in superstrong mag. field 2-113912
 Kr, diamag. susceptibility, new Thomas-Fermi model test 2-85543
 Ne, diamag. susceptibility, new Thomas-Fermi model test 2-85543
 Xe, diamag. susceptibility, new Thomas-Fermi model test 2-85543
- atomic mass**
 see also isotopes; mass spectra; nuclear mass
 attenuated mean fission fragment, nuclear charge and at. mass 2-64819
 gamma-ray scattering, elastic, at. no. depend. of scatt. cross sections of 0.145 MeV γ -rays 2-54352
 macroscopic-microscopic model, at. masses and nucl. ground-state deformations 2-70436
 minerals, rock-forming, thermal capacity, rel. to mean at. wt. 2-104013
 Ag, Faraday constant accuracy improvement, NBS research 2-58776
- atomic metastable states**
 inert gas ion beams, singly charged, metastable fraction meas. 2-89861
 inert gas metastable atom scatt. from solid surfaces 2-99261

atomic metastable states continued

- ion storage for high precision spectroscopy 2-90741
 laser collision-induced gain enhancement 2-96881
 one electron capture by ground and metastable Ar^+ 2-80808
 photoionisation and state selected polarised Ne^+ ($2p^{3/2}P_{3/2}$) 2-96518
 plasma positive ions, metastable states lines used to determine electron temp., charge transfer effects 2-94590
 reflection at surface, quantum theory 2-99260
 transitions and lifetimes meas., X-ray and beam-foil time-of-flight spectra 2-113920
 Ar transient conditions in inductively heated plasmas: thermodynamic equil. and temp. meas. 2-91593
 Ar^{2+} beam, metastable state ($3p^1D$) fraction determ. 2-113809
 $\text{Ar}+\text{H}_2\text{O}$, dissociative excitation, crossed mol. beam and luminesc. study 2-57602
 $\text{Ar}(^3P_{0,2})$, metastable atoms, chemi-ionisation reactions 2-72974
 Ar^* , quenching by O containing compounds, reson. fluoresc. study of reaction prod. 2-59890
 Ar^*+O , electronic energy transfer rate consts. 2-114076
 Ba , even-parity levels, optogalvanic study 2-90469
 C^{2+} , ground and metastable states, photoionisation cross section calcs. 2-102447
 $\text{C}2p(^1S_0)$, excited state, collisional quenching, UV obs. 2-59736
 Ca beam, metastable level transitions for freq. sub-mm wavelength standards 2-107293
 Ca, oscillator strengths meas. for transitions from metastable 3P levels 2-113931
 $\text{Ca}+\text{H}_2(\text{N}_2)(\text{CO})(\text{CO}_2)(\text{methane})$, collisional relax., rate consts. for quenching meas. by modulated laser induced fluoresc. technique 2-96680
 ^{40}Ca metastable $3d4s\ ^1D_2$ state, laser RF double reson. HFS meas. 2-96756
 $\text{Ca}^*+\text{SOCl}_2$, chemiluminesc. and chemiionising reactions absolute cross sections 2-83381
 Cs^* , multiphoton ionisation, reson. effects 2-96522
 Ga^* , electron impact excitation to 4^1P level, absolute emission cross sections 2-90720
 H, $2^3S_{1/2}$ hyperfine level selection tin zero mag. field 2-96755
 H, electron elastic scatt. by metastable $2s$ state 2-102629
 H isoelectronic sequence, $2E1$ and $M1$ radiative decay rates 2-102436
 H, metastable, Lamb shift and molecular moments meas., spin polarised protons prod. 2-54778
 H, metastable atomic beam source by optical pumping 2-90743
 H thyratron, metastable species form. 2-54936
 He, glow discharge, excitation const. determ. for He^2S level 2-71274
 He, metastable, refl. from solid surfaces 2-82979
 He, muonic, metastable state quenching, clustering 2-65115
 He-Cd mixture hollow cathode discharge, population density meas. 2-71284
 $\text{He}+\text{N}_2$, Penning ionis., intermediate Rydberg states obs. 2-65082
 ^4He -alkali metal plasmas, He and free electron mag. reson. signal separation 2-113915
 He^* , multiphoton ionisation, reson. effects 2-96522
 He^*+HCl , H polarisation and ionisation 2-70439
 He^*+He^+ , charge transfer cross sections 2-96682
 $\text{He}^+(2S)$ ions, electric field quenching, radiation polarisation 2-114029
 Hg, metastable, diffusion coeffs. in inert gases, temp. depend. 2-97693
 Hg, metastable states, wall losses, kinetic theory 2-113906
 Hg+inert gas, interaction pot. determ. on basis of diffusion coeff. temp. depend. 2-108669
 ^{165}Ho , hyperfine structure meas. in metastable states 2-113903
 Kr, metastable, laser mag. reson. 2-65021
 Kr^* , quenching by O containing compounds, reson. fluoresc. study of reaction prod. 2-59890
 Li^+ , 2S excitation energies, coordinate rotated TDHF calcs. 2-102383
 Li^+ , laser-microwave spectroscopy 2-64902
 Mg beam, metastable level transitions for freq. sub-mm wavelength standards 2-107293
 MgI, oscillator strengths from metastable 3P levels, expt. determ. 2-96506
 $\text{Mg}^*+\text{N}_2\text{O}(\text{O}_2)$, reactions undersingle collision conditions, MgO laser fluoresc. study 2-80714
 $\text{Mg}^*+\text{SOCl}_2$, chemiluminesc. and chemiionising reactions absolute cross sections 2-83381
 N, metastable 2P state, EPR spectrum 2-64901
 N^+ , 2S metastable state, radiative lifetime meas. by monitoring spontaneous emission 2-64923
 N_2^+ , electron impact dissoc. recombination, metastable N yield 2-96752
 N^{**} , metastable state, collision-induced ionisation, time of flight study 2-114095
 NbI, atomic beam, radiative lifetime, time-resolved laser induced fluoresc. 2-90473
 Ne, double velocity selective optical pumping (French) 2-64930
 $\text{Ne}^{2+}+\text{Xe}$, electron capture excitation from metastable ion at 40 keV 2-96719
 $\text{Ne}(^3P_0)$, de-excitation kinetics, time resolved absorpt. spectra, temp. studies, quenching kinetics 2-113925
 O IV, metastable levels excitation by electron impact, LS coupling and fine struct. transitions 2-80525
 O^+ , ground and metastable states ion mobilities meas. in He, Ne 2-109451
 O^{2+} , ground and metastable states ion mobilities meas. in He, Ne 2-109451
 Pb+Pb metastable levels $6p^2\ ^3P_1$ and $6p^2\ ^3P_2$, collisional quenching, rate const. meas. 2-59888
 ReI, high-lying metastable states, hyperfine structure and isotope shift 2-113904
 Sc II hyperfine struct. obs. 2-59953
 Sr, metastable 3P level transition oscill. strength meas. 2-85567
 TI M1 transition absorpt. line, inert-gas broadening 2-113938
 Xe long-lived excited atoms, autoionising resonances in photoionisation 2-54814
 Xe, metastable, laser mag. reson. 2-65021
 Xe+Xe, Rydberg atom, state changing, ionisation, electric field effects 2-114096
 Xe^* , quenching by O containing compounds, reson. fluoresc. study of reaction prod. 2-59890
 Xe^*+IBr reaction, steric effect, photodissoc. polarisation obs. 2-111477

atomic orbitals see atomic structure

atomic orbitals calculations

- see also *GO calculations*; *GTO calculations*; *STO calculations*
 alkaline earth atoms, core and valence excited states, electronic relaxation influence 2-90447
 electron densities, atomic orbitals, molecular orbitals representation, plotting program, in FORTRAN 2-64862
 FORTRAN program for the integral of three spherical harmonics 2-54745
 inner-shell photoelectron spectroscopy, correl. effects 2-96521
 negative ions, anal. radial orbitals, Groups II, III and IV 2-64868
 Newtonian and fluid-dynamical viewpoint of pseudopotentials 2-75157
 organic compounds, chemical shifts ^{13}C , EHT and GIAO calcs. 2-85557
 overlap integrals of atomic orbitals with arbitrary quantum number in mol. systems of coordinates 2-75143
 polyatomic molecules, localised atomic orbitals for atoms in molecules 2-54760
 rare earth elements, inner-shell electron binding energy calcs. (Chinese) 2-108348
 slow ion+atom collisions, at. orbital expansion calcs., curved-line trajectory obs. 2-75376
 transition metal atoms, minimal-basis-adapted pseudopot. 2-113859
 As, core effective potentials, ab initio calcs. 2-70140
 BH_3 , generalised localised at. orbitals in closed shell mol. 2-54761
 $\text{C}^{6+}+\text{H}$, charge transfer, at. orbital expansion calcs., curved-line trajectory obs. 2-75376
 Cl containing compounds, Cl atom and orbital population from ^{35}Cl NQR freq. and X-ray emission spectra 2-108565
 Ga, core effective potentials, ab initio calcs. 2-70140
 Ge, core effective potentials, ab initio calcs. 2-70140
 He I and isoelectronic sequence, Fock expansion for S-states, first terms (French) 2-54762
 N, transition in fourth spectrum 2-96472
 N_2H_2 , generalised localised at. orbitals in closed shell mol. 2-54761
- atomic polarisability**
 alkali atoms, semiempirical pseudopot., use in calc. static electric dipole polarisability 2-114122
 atom-in-molecule polarisabilities, modified CNDO/2 calcs. 2-96458
 atoms and ions with valence config. (nd) 10 where n=3 and 4, multipole polarisability and shielding factors 2-85836
 collision-induced polarisability, at. susceptibility rel. to dispersion forces in light wave field (Russian) 2-108438
 conference, Cambridge, MA, USA (Aug. 1980) 2-68959
 hydrogenic donors in mag. field, ground state electrical polarisability 2-64912
 measurement using trajectories in inhomogeneous elec. field, theory 2-102707
 Rb, spin polarisation by laser driven two photon and excimer transitions 2-64946
 static, norm-conserving pseudopot. calc. 2-59952
 Ba, $6snd\ ^1D_2$ Rydberg states, tensor polarisabilities, quantum beat spectra 2-114136
 Be, dipole polarisability, perturbation study, CI calcs. 2-54774
 Be isoelectronic series, optimal geometric approx., uncoupled HF calcs. 2-113868
 Be, quadrupole polarisability, finite-field many-body perturbation theory 2-90440
 Cd, photoionisation prod. alignment 2-70207
 Cu, polarisation intermodulated excitation (POLINEX) spectroscopy 2-59729
 F^- , dipole hyperpolarisability, HF, CI and GTO calcs. 2-70149
 F^- dipole polarisability, electron correl. effects, MBPT CHF calc. 2-113893
 H polarisation as a result of He^*+HCl ionisation collisions 2-70439
 H-H(He^+), polarisabilities, oscill. strengths, interaction, coeffs. calcs. 2-80763
 He, dipole polarisabilities, MC TDHF theory calcs. 2-96447
 He isoelectronic series, optimal geometric approx., uncoupled HF calcs. 2-113868
 He, polarisation intermodulated excitation (POLINEX) spectroscopy 2-59729
 He-He, interaction dipole polarisabilities, MC TDHF theory calcs. 2-96447
 He-He(Li^+), polarisabilities, oscill. strengths, interaction, coeffs. calcs. 2-80763
 $\text{He}^+ \cdot \text{He}^+(\text{H})$, polarisabilities, oscill. strengths, interaction, coeffs. calcs. 2-80763
 HeI, term energies, electrostatic intervals, semiclassical formulation 2-85517
 He(2^3S) atoms, meas. of spin polarization of an optically pumped ensemble 2-113946
 Hg, excitation by forward scatt. electrons, polarisation of $6^3P_1-6^1S_0$ line 2-85813
 $\text{Li}^+-\text{Li}^+(\text{He})$, polarisabilities, oscill. strengths, interaction, coeffs. calcs. 2-80763
 Na vapour targets, optical pumping by single-freq. CW ring dye laser, polarisation 2-114054
 Na+H $^+$, polarised proton and N $^-$ source, target optical orientation (Russian) 2-102311
 Ne, polarisation intermodulated excitation (POLINEX) spectroscopy 2-59729
 Ni(CO) $_4$, atomic, bond and mol. polarisabilities, quantum mech. calc. 2-90731
 Sm, tensor polarisability determ. by quantum beat spectroscopy 2-59744
 Yb, tensor polarisability determ. by quantum beat spectroscopy 2-59744
 Yb $^+$, ionisation energies, polarisability, transition probability, one-electron spectrum anal. 2-80519
- atomic positron scattering** see *atomic electron impact excitation*; *atomic electron impact ionisation*; *elastic scattering of electrons by atoms and molecules*
atomic power see *nuclear power*
atomic reactors see *fission reactors*
atomic resonant states
 aligned atoms in intense oscillating RF fields, resonance shifts 2-54791
 atom+atom collisions, non-Lorentzian line shape charact. 2-102431
 electron scattering in reson. laser radiation field, ground state-doublet reson. (Russian) 2-54963
 fast heavy ions reson. coherent excitation in Au crystals 2-76537
 light induced atomic rotation and magnetic resonance (Russian) 2-80522
 nonlinear resonances in ion spectra, Coulomb broadening 2-113917

atomic resonant states continued

- resonance fluorescence, collective atomic effects, scaling factor 2-102427
resonant multiphoton ionisation, laser field correl. function 2-102452
semiclassical time delay resonances and Siegert poles 2-113932
three-level atoms, identical pair, resonance fluorescence, cooperative and interference effects 2-59740
two-atom cooperative system, reson. fluoresc. and absorpt. spectrum, dispersion forces effect 2-96500
two-atom system coherently driven by laser field, reson. fluoresc. intensity correlations 2-96501
two-level atom, deflection and internal dynamics dressed by reson. standing wave 2-59758
two-level atom, reson. fluoresc., detuning effect 2-54799
two-level atom with variable transition freq., dynamics in reson. light wave field 2-108841
two-level atoms, nonresonance effects in fluorescent Dicke model, semiclassical and quantal results 2-64908
two-level atoms, reson. fluoresc. delayed spectrum 2-102428
two-level atoms resonant interaction with two light waves 2-113947
velocity selective optical pumping, light shift effect, expt. study (French) 2-113942
Wannier ridge two-electron wave functions, nodal struct. 2-102364
Br IX, VIII, resonant transition, UV obs. 2-85580
Ca, high-resolution optical Ramsey resonances obs., frequency standard appl. 2-102409
Cd atom, elastic electron scatt. cross section, resonances obs. 2-108710
Cl⁷⁺, resonant dielectronic recombination cross sections 2-102578
Cs, continuous spectrum, autoionisationlike resons. 2-96517
Eu, photoionisation cross-section, giant reson. 2-102448
H, resonant two-photon transition rates 2-85610
He, Rydberg states, optical pot. anal. 2-113901
He⁺ ion-surface scatt. at grazing incidence, reson. coherent excitation, ang. depend. 2-77644
Hg atom, elastic electron scatt. cross section, resonances obs. 2-108710
Hg, optical pumping, reson. radiation transport 2-113905
K vapour, resonance four-photon parametric superluminesc. obs. for two-photon pumping 2-108853
K vapour, resonantly laser excited, energy pooling collisions and plasma production obs. 2-75214
Kr, 4s4p⁵p reson., spin-orbit branching ratios and angular asymmetry param., photoionisation cross section 2-70203
Li atomic K-shell, absolute photoabsorpt. cross section 2-70201
Li, autoionising states in low lying triplet excited reson., saddle point technique 2-64933
Mg, doublet P shape reson., second order propagator calc. 2-80509
Na atomic beam, velocity distrib. deform. by reson. laser radiation press. 2-108429
Na I, radiative decay of autoionisation states (Russian) 2-80546
Na + Na, resonant collision investigation 2-75409
Rb vapour, resonance four-photon parametric superluminesc. obs. for two-photon pumping 2-108853
²³⁵U^m, internal conversion, lifetime and spectra, laser irradi. effect 2-74746
Xe, 5s5p⁶p reson., spin-orbit branching ratios and angular asymmetry param., photoionisation cross section 2-70203
Xe long-lived excited atoms, autoionising resonances in photoionisation 2-54814
Zn atom, elastic electron scatt. cross section, resonances obs. 2-108710
Zr, Lande g-factors, multimode saturation reson. in optogalvanic spectroscopy 2-85578

atomic scattering factors *see crystal atomic structure; crystallography; lattice dynamics*

atomic spectra

- see also atomic fluorescence; atomic hyperfine structure; atomic spectral line breadth; atomic structure; beam-foil spectra; conversion electron spectra; radiative corrections; Russell-Saunders coupling; Stark effect; Zeeman effect*
aligned atoms in intense oscillating RF fields, resonance shifts 2-54791
alkali metal atoms, photoionisation spectra, Stark effect theory 2-90475
alkaline earth atoms, two electron Rydberg states 2-70160
atomic energy level and Grotian diagrams, VI to Cr XXIV, book 2-63757
atomic relativistic beams kinematics 2-70447
atoms, Compton defects and asymmetries, electron impact spectra, Hartree-Slater calc. 2-90425
atoms and ions, ion accelerator study of props., review 2-96478
bremsstrahlung spectrum 2-59725
cascade emission after laser beam excitation 2-96491
closed shell atoms, radial electron density moments and X-ray scatt. factors 2-75184
continuum Rayleigh scatt. of atoms in intense laser beams 2-70208
degenerate backward four-wave mixing in at. lines, polarisation and ang.-momentum dependences 2-75634
driven atoms, collisions in radiation field and spectra 2-90652
emission spectra of colliding atoms 2-59726
energy level and transition arrays distrib. in atomic spectra, configurations with more than open subshells 2-70169
excited electron orbit collapse and atomic spectra 2-102400
fast magnetic-resonance scanning, Z signal study under harmonic freq. modulation 2-58871
field theoretical methods in chemical physics, book 2-94932
free ions, quantitative VUV absorpt. spectroscopy 2-70175
Gaspar potential, appl. to atomic and ionic spectra 2-80515
H-like heavy ions, polarisation of vac. in spectra 2-85611
highly ionised atoms, spectra, review (Japanese) 2-113914
Hund's rule explanation for atomic spectra 2-70128
inert gas atoms counting by resonance ionisation spectroscopy 2-64899
ion storage for high precision spectroscopy 2-90741
level crossing in the 1s² 2s² 2p^{N-1} 4l and 1s² 2s 2p^N 3l' configurations 2-85597
light induced atomic rotation and magnetic resonance (Russian) 2-80522
line formation, theory of redistrib. and radiative transfer eqns. 2-112313
many-electron atomic systems, ang. momentum eigenstates, unitary group formalism 2-64896
model atom, free-free electron scatt., photon absorpt., soft-photon approx. 2-75438
model atom in mag. and laser field, harmonic oscill. soln. 2-96430
multiphoton bound-bound transitions 2-96527
multiphoton free-free transitions 2-59771
N-level atoms, scattered light spectra, multicomponent struct. 2-96513

atomic spectra continued

- Na I D₂-line resonant scatt. in cometary atmosphere, intensity and linear polarisation (Russian) 2-73907
nonlinear radiative processes, UV inert-gas halogen laser study 2-65002
nonlinear resonances in ion spectra, Coulomb broadening 2-113917
O I, form. of resonance triplet and intercombination doublet in solar chromosphere 2-112398
O III, EUV line photoexcitation by solar He II Lyman α 2-89213
one-electron atom excited states in strong external fields 2-70161
optogalvanic spectroscopy, alignment effects 2-64900
physics data handbook 2-58565
plasma positive ions, metastable states lines used to determine electron temp., charge transfer effects 2-94590
quantum optics, conference, Cetniewo, Poland (Sept. 1981) 2-89428
relativistic many-body theory, eqn. of motion approach 2-96477
resonance EM field effect on autoionisation states (Russian) 2-64934
Rydberg atomic states, radiation and polarisation characts. 2-59720
Rydberg atoms, probes for space research and QED (French) 2-96490
Rydberg atoms in resonant cavity, blackbody radiation absorpt., Bose statistics, Brownian motion 2-90494
Rydberg series, spectrum anal. from MQDT, computer program 2-64905
solar spectrum, multiplet line profiles under LTE conditions rel. to photosphere physical conditions (Russian) 2-73925
stored ions, microwave spectra, motional side band resonances, theoretical and expt. study 2-90470
three level system, population trapping and dispersion 2-54786
three-level atom, resonance fluoresc. spectrum numerical results 2-85587
three-photon resonant medium, optical bistability and reversed switching effect 2-102849
transition amplitude for ion-induced s to s transitions 2-113910
two electron ions, atomic struct. theory and quantum electrodynamics 2-113849
two-atom cooperative system, reson. fluoresc. and absorpt. spectrum, dispersion forces effect 2-96500
two-electron atom, absorpt. spectra, correl. effects 2-70118
two-level atom, mag. reson. signal in rapid freq. scanning conditions 2-70171
two-level atoms, probe spectroscopy 2-102437
two-level system energy level shift induced by laser pulse train (Chinese) 2-96505
two-photon-induced spin-orbit transitions 2-64924
UV 2'S to 5³P transition fine and hyperfine struct. spectra, detected via associative ionisation 2-85831
X-ray energy levels, relativistic SCF calcs. 2-113921
XUV radiation source, by anti-Stokes scatt. of atoms 2-69265
?gH, AlI³-Xe²⁺ system oscillator strength comparison with solar photo-sphere 2-70186
Al I, L-shell absorpt. spectrum 2-85576
Al I, lifetimes, MQDT calcs., mixing coeffs. appls. 2-102438
Al II, spin-forbidden lines, oscillator strength calcs. 2-85590
Al V to Al IX ion lines, extreme UV emission spectra from plasma focus 2-59735
Al vapour, photoabsorpt. cross section near first ionisation limit 2-59764
Ar, collision induced light scatt., three body cor. spectrum 2-80636
Ar dielectronic satellite spectrum from microballoon core plasma, digital enhancement 2-55765
Ar II, 3p⁶(¹D)5d⁵S term identification using optical spectroscopy 2-80523
Ar II dense plasma, emission rays displacement (French) 2-91599
Ar, Rydberg IR optogalvanic spectroscopy 2-59759
Ar, satellite struct. in L X-ray emission spectrum 2-80526
Ar XI to Ar XV ion lines, extreme UV emission spectra from plasma focus 2-59734
Ar⁺, 3d-4p transitions in ionic spectra, isotope shifts, laser spectroscopic meas. 2-70193
Au, gamma ray incoherent scatt. at 662 keV 2-80543
B, electron-impact excitation cross section, 1900-4000 Å region 2-70423
B I lifetimes, MQDT calcs., mixing coeffs. appls. 2-102438
Ba, Ba⁺ and Ba²⁺, 4d subshell photoabsorpt. spectra 2-113918
Ba, even-parity levels, optogalvanic study 2-90469
Ba, excited state, autoionisation, spectra 2-90487
Ba II, J-dependent isotope shift in the 5d²D₃ doublet 2-80540
Ba, Rydberg states, electron densities, isotope shifts 2-75213
Ba⁺ VUV autoionisation-pumped laser 2-70551
Ba⁺, msns Rydberg states level shifts induced by hyperfine interaction 2-64943
Be, photoionisation studied using CI theory, energy levels and oscillator strengths 2-102444
Be, spectroscopic parameters, V^N and V^{N-1} potential results in many-body calcs. 2-75206
Be-like ions, spin-orbit elec. dipole transitions 2-96497
Bi, 6³D_{3/2} state, radiative lifetime, absorpt. spectra 2-96486
Bi I IR emission spectrum in PbS region 2-75209
Br IX, VIII, resonant transition, UV obs. 2-85580
C, high Rydberg states, populations assoc. with radio recomb. lines, interstellar appl. 2-74055
C I interstellar radio recomb. lines, influence of low temp. dielectronic-like recomb. 2-112314
C II and C III, spin-forbidden lines, oscillator strength calcs. 2-85590
C III, wavelengths, fine struct. and decay times meas. using beam-foil technique 2-64898
C IV resonance lines profiles in hot stars spectra, observational test of temp. struct. in stellar atmospheres (Russian) 2-112435
CA II in solar chromosphere above sunspot umbra 2-100883
¹²C, A=12-14, K-series muonic X-ray energies determ. 2-74728
¹⁴C, meas. in CO₂, tunable diode laser sensitivity spectroscopy 2-65103
C2p²(³S₀), excited state, collisional quenching, UV obs. 2-59736
Ca, 4s6s S to 4s4p³P transition probability, visible obs. 2-70173
Ca, at. beam, high-resolution optical Ramsey resonances obs., frequency standard appl. 2-102409
Ca, autoionisation state excitation and electronic decay 2-80545
Ca II K_{1/2}/K_{3/2} asymmetry used for chromosphere struct. anal. 2-68689
Ca in presence of inert gases, electric-quadrupole transitions, photoabsorpt. studies 2-90467
Ca XIX and Ca XVIII lines in solar flares, comparison of line ratios with current theory 2-94694
Ca XVIII and Ca XIX lines in solar flares, comparison of line ratios with current theory 2-94694
CaI, electric quadrupole transition, oscillator strength and inert gas induced broadening 2-90466

atomic spectra continued

- ⁴³Ca, msns Rydberg states level shifts induced by hyperfine interaction 2-64943
 Cd V, UV and X-ray spectra of 4d⁷5s-5d⁵5p transitions 2-96496
 CdV, UV and X-ray spectra of 4d⁸4d⁵5p transitions 2-96495
¹¹⁰Cd, Hanle effect for electron impact excitation 2-54809
 Cl I ²D-²P transitions, vac. UV, oscil. strengths 2-59733
 Cl I ³d-4p transitions in ionic spectra, isotope shifts, laser spectroscopic meas. 2-70193
 Cl-like ions, electric dipole transition energies, wavelengths and oscillator strength for E1 transitions 2-72921
 Co, energy levels, Co I to Co XXVII 2-74171
 Co I, absolute oscillator strengths for lines between 2276 Å and 9357 Å rel. to solar Co abundance 2-112315
 Co, transition probabilities, decay branching ratios (*French*) 2-54789
 Co-like ions spectra, 40-95 Å 2-85582
 Cr I, oscillator strengths for Fraunhofer lines (*Russian*) 2-75216
 Cr IV, energy levels and ionisation energy 2-80468
 Cr XIX-XXIII, high resolution spectra in wavelength interval 2.18 to 2.24 Å from inner-shell transitions 2-64906
 Cr²²⁺ in laboratory plasma, X-ray spectra (*Russian*) 2-108415
 Cs, Balmer emission lines and photoabsorpt. spectra 2-80534
 Cs, continuous spectrum, autoionisationlike resons. 2-96517
 Cs, Rydberg atom in mag. fields, Landau limit of spectrum 2-59721
 Cs Rydberg atoms in magnetic fields, at spectrum Landau limit 2-85573
 Cu, in inert gas matrix, fluoresc. spectrosc. and photoprocesses 2-85577
 Cu, polarisation intermodulated excitation (POLINEX) spectroscopy 2-59729
 D, Balmer α-line, collinear laser spectroscopy, metrological appl. 2-95485
 Eu II, line intensity meas. and oscillator strengths 2-59746
 Eu II, oscillator strengths, astrophysical aspects 2-59747
 F, hyperfine components of spin-orbit splitting, direct absorpt. meas. 2-80518
 Fe, 200-300 nm spectrum, emission by ICP Ar plasma 2-85579
 Fe, effective Lande factor of mag. effective line 2-73941
 Fe group, two and three-body electrostatic interactions in odd configurations 2-113846
 Fe I, relative oscillator strengths meas. 2-59728
 Fe I 532 nm line formation in solar magnetic field (*Chinese*) 2-84198
 Fe, soft X-ray line spectra and time vars. in solar flares from Hinotori satellite obs. 2-100851
 Fe XIV 530.3 nm emission line polarization in solar corona 2-112407
 Fe²¹⁺, dielectronic recombination, forbidden 2s-3d transition, plasma 2-103284
 FeV, 3d³-3d⁴ transition, J-fine intensity sums in spectra 2-54788
 Gal and Galf, 13-500 eV electron impact excitation, autoionising transitions, ejected electron spectrum 2-75211
 H atoms, trapping sites in Ar and Ne matrices 2-69256
 H, Balmer α-line, collinear laser spectroscopy, metrological appl. 2-95485
 H glow discharge-Co₂ laser interaction, spectroscopic aspects 2-97812
 H highly excited, diabatic energy levels in high mag. fields, scaling laws 2-102407
 H I Balmer α and β lines from thermosphere 2-100611
 H I Lα line in solar corona, effect of hyperfine struct. on Hanle effect 2-94697
 H I Lyman α, scatt. in comets H I atmospheres (*Russian*) 2-73906
 H, induced transitions, roles of damping and T invariance 2-64911
 H, line intensity ratios in moving media 2-84084
 H Lyman α excitation in Jovian aurora, study of H₂ fluoresc. spectrum, 1200 to 1700 Å 2-63237
 H, magnetic field effect, energy levels, oscillator strengths, calc. on CRAY-1 computer 2-96483
 H, pionic, low energy scatt. parameter and energy shift connection 2-96778
 H plasma, oscillator strengths, photoionisation cross sections emission spectra 2-103449
 H, Rydberg IR optogalvanic spectroscopy 2-59759
 H spectrum gravitational perturbation 2-95167
 H spectrum including Lamb shift effects, stochastic phase space formulation and non-potential interactions 2-95051
 H thyratron, metastable species form. 2-54936
 H-like ions, spectrum, dipole and quadrupole moments in superstrong mag. field 2-113912
 He, Compton defects and asymmetries, electron impact spectra, Hartree-Slater calc. 2-90425
 He, energy levels and Lamb shift investig. 2-75208
 He excited state Doppler-free spectroscopy using colour centre laser and electron impact excitation 2-54792
 He I 4471 Å overlapping line Stark profiles appl. to stars 2-68726
 He II lines Stark broadening, ion-radiator dynamic effects 2-80536
 He, polarisation intermodulated excitation (POLINEX) spectroscopy 2-59729
 He, Rydberg IR optogalvanic spectroscopy 2-59759
 He-like ions, spectrum, dipole and quadrupole moments in superstrong mag. field 2-113912
 He-like ions, Z=6-20, Lyman-α and dielectronic satellite spectra 2-70167
 He+Ar⁺, excitation cross sections, spectra, Landau-Zener model 2-96711
 He+C⁶⁺(O⁸⁺), electron capture into selective state, energy spectra meas. 2-102608
 He+Kr⁺(Xe⁺)(I⁺)(N₂⁺), electronic and vibronic transitions, translational energy spectroscopy 2-54935
 He⁺+Ar, excitation cross sections, spectra, Landau-Zener model 2-96711
 He⁺+H⁺(He⁺)(He²⁺), excitation, charge transfer, ionisation, emission cross section meas. 2-114090
 He, 2 ³S-³P transition nonlinear UV-laser intermodulated fluoresc. spectroscopy 2-95487
 He UV 2³S to 5³P transition fine and hyperfine struct. spectra, detected via associative ionisation 2-85831
 He⁺, stored ions, microwave spectra, motional side band resonances obs. 2-90470
 He, 2 ³S-³P transition nonlinear UV-laser intermodulated fluoresc. spectroscopy 2-95487
 He(2³S), in He-N₂ afterglow, Penning ionisation, charge transfer, kinetic model 2-96716
 Hg, optical pumping, reson. radiation transport 2-113905
 Hg vapour, saturation spectroscopy and reson. degenerate four-wave mixing at 546.1 nm 2-64993

atomic spectra continued

- Hg vapour, UV reservoir states quantum yield and lifetime, dimer form., luminesc. 2-113926
 Hg(6³P), optical pumping, quenching, visible triplet radiation transport 2-113948
 I, ²p_{1/2}-²p_{3/2} Raman transition, cross-section and hyperfine struct. 2-96487
 In VI, spectrum obs. 200 to 450 Å, 4d⁸, 4d⁷ 5p config. levels 2-54793
 K, 4s electron momentum distrib., electron coincidence spectroscopy 2-102641
 K I, non-LTE level populations in solar spectrum (*Russian*) 2-79065
 K III electron impact excitation from ground state 2-80824
 K-Cs mixtures, blue asymmetry of K reson. lines by Cs atoms 2-75207
 K+He(Ne)(Ar)(Kr)(Xe), 4p ²P_{3/2}-7s ²S_{1/2} transition, effect of collisions 2-59732
 KLu(MeOAlO₂)₂, (Me=Mo,W), Nd³⁺ and Er³⁺ ion spectra in crystal fields, Stark struct. 2-76999
 K(4P)+Ar, differential scatt., ³Σ potentials, line profile meas. 2-96672
 Kr II, 4p⁵5p config., lifetime and transition probabilities meas. 2-102434
 Kr II, transition probabilities 2-96507
 Kr, matrix isolated in Ar, emission spectra, excitation spectra and lifetimes 2-54795
 KrI, transition probabilities 2-96507
 Li, photoionisation studied using CI theory, energy levels and oscillator strengths 2-102444
 Li, Rydberg IR optogalvanic spectroscopy 2-59759
 Li, solvated, far IR spectrum, INDO calcs. 2-108413
 Li vapour, two-photon laser 2-65208
 Li⁺ excited at state, 3489 Å optical transition using beam-foil spectroscopic technique 2-80511
 Li-like ions, radiative transition rates and wavelengths, MCDF-EAL calc. 2-54803
 Mg sequence, n=3 singlet complex, short range interactions involving plunging configurations 2-65074
 Mn, behaviour of Raman resonance scattering across the K X-ray absorption edge 2-102423
 Mn II line transition probabilities, 237 to 357 nm, arc emission meas. 2-80524
 Mo XVI spectra, 40-95 Å 2-85582
 N I, N II, N III, spin-forbidden lines, oscillator strength calcs. 2-85590
 N III 1750 Å transition, collision strength calc. 2-89137
 N IV, 2p 3d ¹P^o and 2s 4f ¹P^o configuration mixing 2-70189
 N IV, wavelengths, fine struct. and decay times meas. using beam-foil technique 2-64898
 N IV in solar chromosphere-corona transition zone, EUV obs. rel. to electron press. 2-106639
 N V resonance doublet in early-type stars, Copernicus UV obs. 2-117681
 N⁴⁺(²S) state possible identification of 2145 Å emission feature 2-63160
 Na, 1s photoabsorption spectrum 2-90468
 Na, 4s electron momentum distrib., electron coincidence spectroscopy 2-102641
 Na, atomic beam, optical pumping, alignment and orientation of hyperfine levels 2-54813
 Na coherence effects in resonant four-wave mixing spectroscopy 2-59745
 Na D lines perturbed by He, hyperfine components broadening 2-113913
 Na, excited states, photoionisation Stark spectra 2-70183
 Na, high lying atomic states, high resolution spectroscopy and collision studies 2-102418
 Na, matrix isolated, visible spectra 2-108414
 Na⁺, radiative transition probabilities and level excitation cross-sections 2-113935
 Na-Ne discharge tube, optogalvanic spectroscopic expts. (*Chinese*) 2-65775
 Nb I lifetime meas. rel. to solar Nb abundance 2-112406
 Nb IV, UV spectra 2-70174
 Nb V, one-electron spectrum, term anal. 2-96489
 Nb VI, spectrum, config. level structs. calcs. 2-102422
 Nb VIII, transitions 4p⁴4d-5p, 4f anal. 2-113911
 Nb XV spectra, 40-95 Å 2-85582
 Nd I and Nd II, excited levels lifetimes and oscillator strengths 2-113930
 Ne, high lying atomic states, high resolution spectroscopy and collision studies 2-102418
 Ne IX, He-like ion, in solar corona, X-ray line ratios obs. 2-106640
 Ne, polarisation intermodulated excitation (POLINEX) spectroscopy 2-59729
 Ne, Rydberg IR optogalvanic spectroscopy 2-59759
 Ne²⁺+Xe, electron capture excitation from metastable ion at 40 keV 2-96719
 Ni I, oscillator strengths for optical spectral lines (*Russian*) 2-90478
 Ni II, transition probabilities and collision strengths 2-94589
 O I, O III, spin-forbidden lines, oscillator strength calcs. 2-85590
 O IV, metastable levels excitation by electron impact, LS coupling and fine struct. transitions 2-80525
 O IV in solar chromosphere-corona transition zone, EUV obs. rel. to electron press. 2-106639
 O V, solar diagnostic line ratios for flare electron densities 2-89215
 O V, wavelengths, fine struct. and decay times meas. using beam-foil technique 2-64898
 O VII, He-like ion, in solar corona, X-ray line ratios obs. 2-106640
 O²⁺, triplet line excitation 2-112540
 O(1D) 6300 Å emission line shape calcs. appl. to space platform obs. 2-96493
 Pb, isotope shift in 6p² ³P₀-6p² ³P₀ 283.3-nm line 2-90480
 Pb, isotope shifts and HFS laser spectroscopic meas. 2-70194
 Pb, L₁, L₂ and L₃ subshells, X-ray fluoresc. yields and Coster-Kronig transition probabilities 2-70114
 Pd I radiative lifetimes and oscillator strengths, appl. to solar photosphere abundance 2-64903
 Pr, double-vacancy excitations in L atomic levels, X-ray absorpt. spectra 2-70168
 Rb, absorpt. data using tunable dye lasers 2-113919
 Rb I, 3d subshell absorpt., spectra, multiconfig. anal. 2-54785
 Rb, optical Ramsey resonance investigation using ultrahigh spectral resolution dye laser spectrometer 2-79677
 Rb+H⁺, double K-shell ionisation, single photon emission probability 2-85794
 Rb+He(Ar)(Xe), impact broadening and shift of nS and nD levels 2-102581
⁸⁷Rb, hyperfine-structure resonances, line shapes, phase and freq. shifts 2-80516

atomic spectra continued

- ⁸⁷Rb optically pumped passive freq. standard, hyperfine freq. shifts caused by buffer gases 2-101380
 Rh I lifetime meas. rel. to solar Rh abundance 2-112406
 S IV, electric dipole transition probabilities calcs., appl. to solar transition zone 2-89210
 S⁺, 3d-4p transitions in ionic spectra, isotope shifts, laser spectroscopic meas. 2-70193
 S²⁺ ions, He-like, 2¹P₁-1¹S₀ and 2³P₁-1¹S₀ transitions, wavelength determ. 2-96488
 Sc II hyperfine struct. obs. 2-59953
 Se IV, V and VI, energy levels, lifetimes, f-values, beam-foil spectra 2-102596
 Si I, collisional excitation cross sections 2-114117
 Si III, spin-forbidden lines, oscillator strength calcs. 2-85590
 Si VI to Si X ion lines, extreme UV emission spectra from plasma focus 2-59735
 Sm, double-vacancy excitations in L atomic levels, X-ray absorpt. spectra 2-70168
 Sm spectral lines, electron-impact excitation, effective cross sections, 3700-6000 Å 2-59943
 Sn XX, XXI, XXII, spectrum obs. in extreme UV, 20 to 85 Å 2-54794
 Sr, 2- and 3-photon reson. ionisation, electron 2-75224
 Sr I, 3d subshell absorpt., spectra, multiconfig. anal. 2-54785
 Sr, resonant double photoionisation 2-102446
 Sr XII spectra, 40-95 Å 2-85582
 Sr²⁰⁺, F-like ions, 2s²2p²-2s2p³ transitions obs. 2-102403
⁸⁷Sr, msns Rydberg states level shifts induced by hyperfine interaction 2-64943
⁸⁵KrSr I, II, isotope shifts, Doppler-free optogalvanic spectroscopy 2-108425
 Ta, gamma ray incoherent scatt. at 662 keV 2-80543
 Te I, UV and visible spectrum 2-59731
 Ti, first spectrum, effective interactions calcs. 2-80517
 Ti I, relative oscillator strength meas. 2-59727
 Ti II, singly ionised, spectrum and term system, configuration interaction and ionisation energy 2-64904
 Ti, parity nonconservation, relativistic many-body theory 2-85566
 TII, electronically excited, photodissoc., UV absorpt. spectrum 2-90471
 U, gamma ray incoherent scatt. at 662 keV 2-80543
 U+U, positron spectra calcs. 2-96690
 W I and II lines, oscillator strengths 2-54802
 Xe discharge, ns and nd Rydberg states, spectroscopic study using laser excitation and optogalvanic detection 2-113899
 Xe, matrix isolated in Ar, emission spectra, excitation spectra and lifetimes 2-54795
 Y IV, spectrum and energy levels, 300-5000 Å 2-75210
 Y XIII spectra, 40-95 Å 2-85582
 Y¹⁰⁺, F-like ions, 2s²2p²-2s2p³ transitions obs. 2-102403
 Yb, gamma ray incoherent scatt. at 662 keV 2-80543
 Yb⁺, ionisation energies, polarisability, transition probability, one-electron spectrum anal. 2-80519
 Zn absorption and dispersion study of 4s4p ³P-4p² ³P multiplet 2-85598
 Zn atomic spectrum, isotope shifts and hyperfine struct. 2-113916
 Zn, electron impact excitation, decay of autoionised state, postcollisional interaction effect 2-54966
 Zn V, 3d⁸-3d⁷4p transitions, UV spectra 2-70172
 Zr, beam-foil spectra for 15-160 MeV, from 6 to 60 nm 2-96492
 Zr, Lande g-factors, multimode saturation reson. in optogalvanic spectroscopy 2-85578
 Zr XIV spectra, 40-95 Å 2-85582

atomic spectral line breadth

- adiabatic two-photon absorption, time development in low intensity regime 2-75227
 atom+atom collisions, non-Lorentzian line shape charact. 2-102431
 atoms, double resonance via continuum states: ionization quantum beats 2-64944
 cooperative states and reson. fluorescence 2-85588
 density expansion of spectral lineshapes 2-59750
 dressed atom approach to line broadening 2-59753
 ion beams Auger electron spectra, reduction of Doppler broadening, refocusing props. of parallel-plate electrostatic analysers 2-64165
 lambda-systems, three-level, laser field excitation, population trapping, ultranarrow Raman lineshapes 2-102420
 multiphoton absorpt., linewidth, fluoresc. fluctuations 2-102453
 multiplet line profiles and non-LTE factors in solar photosphere (*Russian*) 2-79064
 nonlinear resonances in ion spectra, Coulomb broadening 2-113917
 O I, form. of resonance triplet and intercombination doublet in solar chromosphere 2-112398
 optical resonances with subnatural linewidths, prod. mechanism 2-64931
 photoionisation cross section reson., pseudo-bound-state methods comparison 2-102442
 plasma, computerised diagnostics from self-reversed absorpt. spectra 2-76200
 plasmas, atomic spectral line broadening (*Russian*) 2-71119
 relativistic gas, line absorpt. profile, Doppler broadening 2-75218
 resonance fluorescence, collisional redistribution, dressed atom approach 2-90472
 Rydberg states, optical line broadening, inelastic collisions effects 2-96508
 semiclassical time delay resonances and Siegert poles 2-113932
 Stark width and slip, periodic depend. on nucl. charge number 2-113927
 supermultiplet Stark line widths variation 2-108421
 supernarrow spectral line detect. using double-mode laser frequency resonances 2-64127
 two-atom resonance fluorescence, power broadening and two-photon corrs. 2-54798
 two-level atoms, probe spectroscopy 2-102437
 two-level system, absorpt. line broadening in radiation field, nonimpact theory 2-90481
 Ar L₁ shell electron impact inner-shell ionisation, post-collision interaction 2-102645
 C IV resonance lines profiles in hot stars spectra, observational test of temp. struct. in stellar atmospheres (*Russian*) 2-112435
 C VI line in dense plasma, Stark profile calcs. 2-103453
 C¹⁺, Auger transition lineshape, CO⁺ Coulomb explosion influence 2-78068
 Ca beam, metastable level transitions for freq. sub-mm wavelength standards 2-107293

atomic spectral line breadth continued

- Ca+Ar(Kr), principal series line broadening 2-85591
 CaL, electric quadrupole transition, oscillator strength and inert gas induced broadening 2-90466
 Cs D₂ line intra-Doppler resonances in selective specular refl. profile 2-54805
 Cs D₂ line profile obs. using a CW semicond. laser 2-113940
 Cs I, 852.11 nm reson. line, Stark width and shift 2-102429
 Cs, Rydberg atom in mag. fields, Landau limit of spectrum 2-59721
 Cs+Xe collision, perturber vel. and temp. effects on line profiles 2-54917
 Cu II, radiative lifetimes and transition probabilities 2-75217
 Cu, resonant satellite photoemission, super-Coster-Kronig decay 2-102443
¹⁶¹ErII, lifetime meas. using fast-beam laser-modulation spectroscopy 2-108423
 Fe I 557.6 nm solar line shift and asymmetry 2-100881
 Fe I lines in solar spectrum, equivalent widths rel. to internally consistent scale of oscillator strengths 2-58247
 Gd, oscillator strength of spectral line λ=451.966 nm 2-64926
 H atoms, parity nonconservation expts. in RF cavities, theory 2-90725
 H, Balmer-alpha line emission and atom energy in ion-source discharge 2-70190
 H, Cherenkov line radiation and emission line spectra calc., quasar radiation appl. 2-68927
 H I, Balmer line formation in YY Orionis stars envelopes using multi-level atom 2-89260
 H I Balmer α line profile in β Lyrae, image isoon obs. (1974-5) 2-106806
 H, Laporte's rule, expt. test, mixing of parity doublet 2-54804
 H, plasma, Stark broadening, relax. theory 2-76196
 H, Stark broadening, exponential approx. 2-75215
 H-Ar⁺ plasma, H broadened Lyman-β line, radiation motion effects 2-70188
 H_K, 1S state, strong interaction shift and width 2-59976
 He discharge afterglow, high press., reaction kinetics theory 2-71281
 He glow discharge, AC Stark effect on 4713 Å line 2-85589
 He ion broadening and shift in hot plasma, quasistatic, adiabatic and impact calcs. 2-81445
 He neutral lines, electron impact broadening and shift, convergent calcs. 2-8823
 He, solar 584 angstrom reson. line 2-68701
 He-like ions, multiply charged, reson. photoabsorpt. characts. 2-113949
 He-like ions, optical pumping rel. to gain at X-ray wavelengths 2-70536
 Hg, excitation by forward scatt. electrons, polarisation of 6³P₁-6¹S₀ line 2-85813
 Hnα lines in plasma, quasi-static stark profile 2-102430
 I absorption line width determ. in I switch parameter optimisation 2-60181
 K+Ar, 4 p-ns and 4 p-nd lines, collisional broadening and shift 2-59897
 K+He(Ne)(Ar)(Kr)(Xe), 4p ²P_{3/2}-7s ²S_{1/2} transition, effect of collisions 2-59732
 K*+K high Rydberg state, collision effects 2-59904
 Li, D line broadening by inert gas perturbers 2-64925
 Li, KVV Auger spectrum, line-shape, many-body effects 2-80555
 Mg beam, metastable level transitions for freq. sub-mm wavelength standards 2-107293
 Mgl, laser-excitation technique for the measurement of absolute transition probabilities of weak atomic lines 2-70191
 Mo ions, unresolved transition arrays, soft X-ray spectra, appl. to plasma diagnostics 2-85584
 N-He(Ar) VUV discharge line source, excitation mechanism effect on linewidth parameters 2-108422
 Na D lines perturbed by He, hyperfine components broadening 2-113913
 Na, D-line, fluoresc. linewidth as function of spectral irradiance 2-80528
 Na, laser absorption spectroscopy, distortion lineshapes 2-64918
 Na, theoretical KLL and KLM Auger spectra 2-102449
 Ni I lines in solar spectrum, central intensities and oscillator strengths (*Russian*) 2-90478
 O III forbidden emission line widths in galactic nuclei 2-84313
 O-He(Ar) VUV discharge line source, excitation mechanism effect on linewidth parameters 2-108422
 O(II) 6300 Å emission line shape calcs. appl. to space platform obs. 2-96493
 Pd ions, unresolved transition arrays, soft X-ray spectra, appl. to plasma diagnostics 2-85584
 Rb D₂ line broadening and shift by inert gases, const. meas. 2-64922
 Rb D₂ line, 780.0 nm, broadening and shift const. meas. by foreign gases, m ag.-scanning method 2-59752
⁸⁷Rb D₁ and D₂ lines, const. for broadening and shift by inert gases 2-64920
 Rb+He(Ar)(Xe), impact broadening and shift of nS and nD levels 2-102581
⁸⁷Rb hyperfine transitions meas., frequency standard appl. 2-107306
⁸⁷Rb, hyperfine-structure resonances, line shapes, phase and freq. shifts 2-80516
 Ti, line broadening and shift by CO₂ accompanying TII photodissoc. 2-96503
 Ti M1 transition absorpt. line, inert-gas broadening 2-113938
 Ti, noble gas collisional broadening, Raman echo meas. 2-85574
 transition metals, 3d, L₂₃ edge, EELS 2-108636
 W I and II lines, oscillator strengths 2-54802
 Xe, autoionising resonances in photoionisation, level positions, lifetimes and line-shape parameters 2-54814
 Xe II, Stark widths and broadening of homologous rare-gas ions 2-70181
 Xe III, 5p¹ ground configuration, transition probabilities for forbidden lines, Auger transitions 2-64927
 Xe, Rydberg states, optical lines shifts and broadenings, collision effects 2-113933
¹⁷¹Yb⁺, electrostatically confined, optical pumping double reson. microwave obs. 2-80521

atomic structure

- see also atomic electron correlations; atomic excited states; atomic fine structure; atomic orbitals calculations; atomic polarisability; atomic spectra; nuclear screening; Russell-Saunders coupling; triplet state
 1s²2s²2p^k configurations, (k=1-5) energy intervals calcs. 2-102379
 alkali metal atoms ground and excited states, Schrodinger eqn. soln. by cubic spline method 2-64854
 alkaline earth atoms, two-electron Rydberg states 2-70160
 astronomy and atomic physics interrelation 2-78949

atomic structure continued

- atom, infinite without electron repulsion, Thomas-Fermi-von Weizsacker eqn. anal. 2-102384
- atomic, molecular and solid state theory, and computational quantum chemistry, conference, Flagler Beach, FL, USA (March 1981) 2-79267
- atomic and molecular systems, ionisation pot., electron affinities, MBPT, resolvent operator approach 2-54741
- atomic energy level and Grotrian diagrams, VI to Cr XXIV, book 2-63757
- atoms, Compton defects and asymmetries, electron impact spectra, Hartree-Slater calc. 2-90425
- atoms in elec. field, continuum eigenfunction expansions and resonances: a simple model 2-84416
- bound states, quantum light calcs. using Schwinger var. principle 2-102369
- Breit interaction, local density approx. 2-108335
- closed shell atoms, radial electron density moments and X-ray scatt. factors 2-75184
- closed shell systems, MBPT, resolvent operator approach 2-54746
- compressed atoms, electron distrib. at high temps., Thomas-Fermi equation 2-80477
- Coulomb and atomic wave functions, relativistic recoil and spin corrections 2-85523
- degenerate atomic states, symmetry decomposed reduced transition operators, generation and use 2-80412
- density functional theory from HF densities, appl. to H through to Ar calcs. 2-108406
- density matrix energy functional, approx. 2-80427
- Dicke model, transition probabilities, Green function method 2-64914
- Dirac-type eqns., linear expansion method 2-54750
- divergent perturbation, Pade approximants, generalised Euler transformation 2-101203
- electron density theory 2-108334
- electron momentum distributions and atomic $\langle r^n \rangle$ expectation values 2-108337
- exact quantum-mechanical states of a model atom in a uniform magnetic field and in a laser field 2-59951
- exchange energy density functional calcs., gradient expansion 2-96414
- expectation values for atoms 2-70130
- field theoretical methods in chemical physics, book 2-94932
- first row atoms, electronic struct. in electronic host systems 2-102358
- first row atoms, statistical ang. correl. coeff. 2-75154
- first-row atoms, average electron densities, piecewise exponential decay 2-80435
- first-row atoms and ions, electron electron density, charge density function 2-70124
- ground state electronic extracule densities 2-80446
- Hartree Fock atomic energies, Z^{-1} and $N^{-1/3}$ expansions 2-70123
- heavy atoms, electron energy shift, self-energy correction 2-75153
- Hund's rule explanation for atomic spectra 2-70128
- hydrogenic limit of many-electron atoms 2-59700
- independent particle model 2-70129
- internal degrees of freedom of atoms and mols., cooling using reson. radiation 2-54808
- ions, energy rel. to low-order ionisation pots. and dimag. susceptibility 2-96416
- isoelectronic atoms, total electronic energy, Z expansions, \bar{V}_{en} and \bar{V}_{ee} determ., electron affinities, ionisation pot. 2-96419
- kinetic and exchange energy functionals, relationship between terms in gradient expansion 2-80439
- level crossing in the $1s^2 2s^2 2p^{N-1} 4l$ and $1s^2 2s^2 2p^N 3l'$ configurations 2-85597
- level set topologies and convexity relations for Hamiltonians with linear parameters 2-59677
- model atom in mag. and laser field, harmonic oscill. soln. 2-96430
- modulated Hanle signals in partially coherent fields 2-70199
- momentum space wave function estimation 2-96417
- multidimensional many-body theory, van Vleck formalism 2-54739
- multipole expansions method, exponent range overflow, counteraction 2-64853
- neutral atoms, Thomas-Fermi-Dirac energy density functional, shell struct. 2-80476
- non-relativistic two-electron atom in ground state 2-90435
- nonlinear radiative processes, UV inert-gas halogen laser study 2-65002
- one-electron atom excited states in strong external fields 2-70161
- one-electron atoms, hydrogenic levels, excited states ordering and numerology 2-64893
- open shell systems, MBPT, resolvent operator approach 2-54747
- open-shell atoms, RPA to one-body transition matrix elements 2-70125
- orbital configs., two-body operator matrix elements, unitary group approach 2-101202
- Pade type variational functions, convergence behaviour 2-85521
- parametric fits in the atomic d shell 2-85515
- periodic table of elements, monotonic trend of periodicity, Thomas-Fermi theory 2-70120
- perturbation at large order, conf. proceedings of international workshop (March 1981) 2-53412
- pionic very heavy atom anomalies, level shifts and widths of 3d states 2-59972
- plasma Stark widths, regularities and similarities 2-97715
- positronium, Balmer-energy difference corrections 2-114137
- probabilistic description of the electron motion in the Coulomb field of nucleus 2-80417
- quadratic response functions within the time-dependent Hartree-Fock approximation 2-96429
- quasi-classical Coulomb dipole matrix elements 2-102363
- radially restricted Thomas-Fermi theory 2-85514
- rare earth elements, inner-shell electron binding energy calcs. (Chinese) 2-108348
- rare earth elements and ions, Rydberg states calc. using model pot. method 2-64891
- rare earth multiply charged ions, electron states (Russian) 2-90428
- Rb, spin polarisation by laser driven two photon and excimer transitions 2-64946
- roothaan-Hartree-Fock atomic wave functions Slater basis-set expansions for $Z=55-92$ 2-68976
- S-matrix poles calc. using Schwinger variational principle 2-113852
- second-row atoms, density basis functions, appl. to mol. electron population anal. 2-64849
- spin orbit coupling consts. calc. using universal systematic sequence of even tempered exponential type basis set 2-54742

atomic structure continued

- strongly excited atomic system, collective electronic state 2-113902
- theoretical chemistry, conf., Colorado, USA (June 1981) 2-107002
- Thomas-Fermi eqn., modified variational soln. 2-96420
- Thomas-Fermi-Dirac-Weizsacker atom charge oscils. and photoabsorption 2-113881
- transition metals of period IV and V, valence state, one-center param. depend. 2-90443
- trivial off-diagonal Hellmann-Feynman formulas 2-64848
- two electron ions, atomic struct. theory and quantum electrodynamics 2-113849
- two level atoms, incoherently driven Dicke model, fluoresc., photon bunching and antibunching effects 2-113924
- two-electron atom, absorpt. spectra, correl. effects 2-70118
- two-electron atoms, electron dynamics in double excited states 2-65067
- two-electron atoms, variational method for three body problem 2-108336
- two-electron atoms and ions, effective lower bound to eigenvalues 2-54748
- two-electron single-photon transition probabilities 2-59751
- Wannier ridge two-electron wave functions, nodal struct. 2-102364
- Weizsacker term correction, theory 2-59716
- X-ray energy levels, relativistic SCF calcs. 2-113921
- Ar and Ar ions, doubly excited states, energy levels, HF calcs. 2-75160
- Ar, Bethe sum rule, contrib. of L+M and K electrons 2-80539
- $Ar^{+2} 2p_{3/2}$ ground state, thermal energy charge transfer 2-90692
- Ba II, J-dependent isotope shift in the $5d^2D_3$ doublet 2-80540
- Ba, Rydberg states, electron densities, isotope shifts 2-75213
- $^{135,137}Ba$, mns Rydberg states level shifts induced by hyperfine interaction 2-64943
- Be, antisymmetrised geminal power function, energy optimisation 2-80410
- Be, ground state, HF energy, corrections to an incomplete basis set 2-108366
- Be, idempotent density matrices from X-ray diffr. struct. factors 2-54752
- Be, second order correl. energies, variational SCF calcs. 2-113860
- Be-like ions, spin-orbit elec. dipole transitions 2-96497
- Bi I IR emission spectrum in PbS region 2-75209
- C^{+4} ground state, inner-shell photoionisation cross section calcs. 2-102447
- Ca, Rydberg series, electronic struct., CI calcs. 2-108408
- ^{43}Ca , mns Rydberg states level shifts induced by hyperfine interaction 2-64943
- Cd V, UV and X-ray spectra of $4d^5 5s^2 5p$ transitions 2-96496
- CdV, UV and X-ray spectra of $4d^4 4d^5 5p$ transitions 2-96495
- Co, energy levels, Co I to Co XXVII 2-74171
- Cr atom and ions, valence state structs., electron correl. effects 2-108399
- Cr IV, energy levels and ionisation energy 2-80468
- Cr IV, parametric fits in the atomic d shell 2-85515
- Cs, $3p_{3/2}$ level study by XPS 2-102654
- Cs, radiative lifetimes, Coulomb approx. 2-113936
- Cu II, radiative lifetimes and transition probabilities 2-75217
- FI isoelectronic sequence, $2s^2 2p^1 2s^{m-1} 2p^{n+1}$ intersystem transitions 2-80530
- Fe group, two and three-body electrostatic interactions in odd configurations 2-113846
- Fe I, cascade quantum beats, fluorescence obs. 2-102425
- Fe I to XXVI, energy levels, data compilation 2-94925
- Fe, superposition errors, contracted basis set investigation 2-85537
- Gd, energy levels, isotope shifts and electronic configs. 2-113875
- H atom, conformational Kepler problem quantisation appl. 2-95085
- H atom, ground-state energy with polynomial perturbation 2-64864
- H atom ground state eigenvalue, spline method numerical treatment 2-85522
- H atom in high laser fields, space translation method validity using dipole approx. 2-96448
- H atom Kowalewski basis, quantum analogue 2-63855
- H, average value evaluation 2-84422
- H, Balmer-alpha line emission and atom energy in ion-source discharge 2-70190
- H bounded atom, hypervirial-perturbational treatment 2-95087
- H glow discharge-Co₂ laser interaction, spectroscopic aspects 2-97812
- H, higher energy level calcs. (Russian) 2-85569
- H I, multi-level atom model rel. to spectral line form. in envelopes of YY Orionis stars 2-89260
- H, in mag. field, semiclassical perturbation theory calcs. 2-59696
- H, integral of motion in weak mag. field (Russian) 2-108338
- H, magnetic field effect, energy levels, oscillator strengths, calc. on CRAY-1 computer 2-96483
- H oscillator, four-dimens., wave function expansion 2-85516
- H plasma, oscillator strengths, photoionisation cross sections emission spectra 2-103449
- H, quadratic Zeeman effect symmetry on Fock hypersphere 2-90476
- H, semiclassical quantisation in crossed electric and mag. fields 2-79414
- H, spectrum gravitational perturbation 2-95167
- H, Stark effect, WKB soln. 2-113929
- H^{+} , ground-state energy determ. Feshbach-Rubinow method 2-75156
- H^{+} , $H(1s)$, charge exchange, three-centre atomic expansion method 2-85803
- $H_2 + C^{+}(N^{+})(O^{+})$, atomic ground state, charge transfer cross sections 2-75417
- He, Compton defects and asymmetries, electron impact spectra, Hartree-Slater calc. 2-90425
- He, energy levels and Lamb shift investig. 2-75208
- He, ground state, HF energy, corrections to an incomplete basis set 2-108366
- He, ground state, struct., exact 1-electron model 2-80445
- He, ground state, use of rational functions as variational functions 2-80431
- He, ground state, wave functions, variational marginal amplitudes 2-80414
- He I and isoelectronic sequence, Fock expansion for S-states, first terms (French) 2-54762
- He isoelectronic series, energy and transition probabilities correl. wave functions calcs. 2-113874
- He, isoelectronic series, S state, eigenvalues of two-dimensional Schrodinger eqn. 2-54749
- He, S, P, D states, mass polarisation effect and oscill. strengths 2-59697
- He, second order correl. energies, variational SCF calcs. 2-113860
- He, wavefunction, quality assessment using quantum Monte Carlo method 2-80411
- He⁻, double excited states 2-70156

atomic structure continued

- He⁺, backscattering from Pb, Sn, Al targets, equilib. charge state distrib. 2-54957
 He-like atoms in strong mag. field, HF calcs. 2-102377
 He-like systems, binding energies in mag. fields 2-75176
 Hel, term energies, electrostatic intervals, semiclassical formulation 2-85517
 In VI, spectrum obs. 200 to 450 Å, 4d⁸, 4d⁷ 5p config. levels 2-54793
 K, 4s electron momentum distrib., electron coincidence spectroscopy 2-102641
 K, radiative lifetimes, Coulomb approx. 2-113936
 Kr, 4s4p⁵ reson., spin-orbit branching ratios and angular asymmetry param., photoionisation cross section 2-70203
 Kr II, 4p⁵ 5p config., lifetime and transition probabilities meas. 2-102434
 Kr²⁺ 2P_{1/2} ground state, thermal energy charge transfer 2-90692
 Kr⁺+O₂(CO)(NO)(OCS), charge exchange, electronic state effects 2-90691
 Li, idempotent density matrices from X-ray diffr. struct. factors 2-54752
 Li isoelectronic series, ionisation pots., transition freqs., perturbation theory, HF method 2-113937
 Li(S), electronic states, multiconfigurational coupled-cluster theory 2-80416
⁶Li, isotope shift, two-photon spectra 2-54823
⁷Li, isotope shift, two-photon spectra 2-54823
 Mo, matrix isolation, ESR study 2-70296
 Mo, superposition errors, contracted basis set investigation 2-85537
 N₂+C²⁺(N²⁺)(O⁺), atomic ground state, charge transfer cross sections 2-75417
 Na, 4s electron momentum distrib., electron coincidence spectroscopy 2-102641
 Na, density meas. using radiation trapping 2-102374
 Na, high lying atomic states, high resolution spectroscopy and collision studies 2-102418
 Na Thomas-Fermi-Dirac energy density functional, shell struct. 2-80476
 Nb VI, spectrum, config. level structs. calcs. 2-102422
 Ne, electron impact excitation, electron-photon ang. correls. 2-75445
 Ne ion, 1s2s2p³ configuration, Auger transition 2-85605
 Ne, self-alignment of 5d_{5/2}-level, hollow cathode discharge 2-54810
 Ne to Si and Ar, exact hydrogenic Compton profiles 2-59687
 Ni, superposition errors, contracted basis set investigation 2-85537
 O⁺, ground and metastable states ion mobilities meas. in He, Ne 2-109451
 O²⁺, ground and metastable states ion mobilities meas. in He, Ne 2-109451
 OI, isoelectronic sequence, 2s²2p²-2s²m¹2pⁿ⁺¹ intersystem transitions 2-80530
 Pd, superposition errors, contracted basis set investigation 2-85537
 Pr, double-vacancy excitations in L atomic levels, X-ray absorpt. spectra 2-70168
 Rb, radiative lifetimes, Coulomb approx. 2-113936
 Rb⁺, photodetachment, cross section meas., multichannel quantum defect anal. 2-54821
 S II, bound state energies calc., effect of configuration interaction 2-59942
 S XII, electron collisional excitation, radiative lifetimes, energy level calcs. 2-108723
 Se IV, V and VI, energy levels, lifetimes, f-values, beam-foil spectra 2-102596
 Si, valence electron calcs. using effective core pot. 2-96411
 Sm, double-vacancy excitations in L atomic levels, X-ray absorpt. spectra 2-70168
 Sm, electronic struct., X-ray emission spectra 2-87910
 SmB₆, electronic struct., X-ray emission spectra 2-87910
 Sm₂O₃, electronic struct., X-ray emission spectra 2-87910
 SmS, electronic struct., X-ray emission spectra 2-87910
 SmSe, electronic struct., X-ray emission spectra 2-87910
¹¹³Sn, M4 transition, chem. variation, inner electron shells role (Russian) 2-95973
 Sr, 5sns ¹S₀ and 5snd ¹D₂ Rydberg series absolute energy level determ. 2-85606
 SrLaCoO₄, ⁵⁷Fe, emission and absorption Mossbauer spectra, electronic structure 2-77434
⁸⁷Sr, msns Rydberg states level shifts induced by hyperfine interaction 2-64943
 Ti atom and ions, valence state structs., electron correl. effects 2-108399
 V atom and ions, valence state structs., electron correl. effects 2-108399
 Xe, 5s5p⁶ reson., spin-orbit branching ratios and angular asymmetry param., photoionisation cross section 2-70203
 Xe discharge, ns and nd Rydberg states, spectroscopic study using laser excitation and optogalvanic detection 2-113899
 Xe II, Stark widths and broadening of homologous rare-gas ions 2-70181
 Xe²⁺ 2P_{1/2} ground state, thermal energy charge transfer 2-90692
 Y IV, spectrum and energy levels, 300-5000 Å 2-75210
 Zn V, 3d⁸ 3d⁴ 4p transitions, UV spectra 2-70172

atomic structure, crystals *see crystal atomic structure***atomic weight** *see atomic mass***atoms**

- see also exotic atoms; helium atoms; hydrogen neutral atoms; positronium*
 No entries

attaching *see joining processes***attenuation** *see absorption; dispersion (wave); scattering; transmission***attenuation measurement**

- fibre optic attenuation meas. with aid of microprocessor 2-114483
 joint distribution estimation attenuation, cross-polarisation discrimination, satellite-Earth radio paths 2-106215
 microwave attenuation standards, UK improvements 2-101382
 optical fibre attenuation measurements, reduction of spatial and wavelength variations of launch spot 2-65365
 optical fibre attenuator calibration, pyroelectric substitution method using PVF₂ detector 2-86108
 optical fibre cable fault location using modified reflectometry techniques 2-64097
 optical fibres, measurement principles and anal. and measuring apparatus (French) 2-70677
 rain 12 GHz CTS beacon meas. over earth-space path 2-112033

attenuators*see also waveguide attenuators*

- flowing gas lasers, pulsed, active attenuation of acoustic disturbances 2-90911

attitude control

- IR telescopes on stratospheric balloons (Spanish) 2-84097
 OTS, solar sailing, one year's experience 2-117567
 satellite orbital and attitude prediction accuracy requirements, remote sensing and scientific appl. 2-89107
 Solar Mesosphere Explorer, autonomous magnetic attitude control 2-68597

audio acoustics

- see also audio recording; audio systems; hearing; speech*
 cumulative spectra, tone bursts and apodisation 2-86187
 pitch, practically perfect performance 2-60318
 pitch, terminology: use of 'practically perfect pitch' 2-60317
 sound reinforcement systems, historical review 2-97294
 speech articulation index factor, used to define understandability of speech in auditorium (German) 2-97296
 subjectively-perceived frequency response in small and medium-sized rooms 2-109156

audio discs *see video and audio discs***audio equipment**

- see also gramophones; loudspeakers; microphones; pick-ups; video and audio discs*
 ambiphony, electronic manipulation of acoustic factors of closed spaces (German) 2-81163
 cinematographic, quality control during development (Russian) 2-69289
 Hi-Fi stereo, hearing sensitivity exp., output balancing appl. (Italian) 2-88551
 vibration meas. in audio components by laser vibrometer 2-89703

audio recording*see also video and audio discs*

- analog magnetic recording techniques (Japanese) 2-91197
 dynamic-range requirement for subjectively noise-free reproduction of music 2-109152
 electret microphones for tape recorders 2-102995
 feature cine film dubbing console 2-109133
 FeRRIT, 35 mm/17.5/16 mm audio recorder/reproducer, audio post production appl. 2-101480
 film soundtrack recording, reduction of electrostatic power dissipation in galvanometer (Russian) 2-58951
 film/video, sound dubbing system, HTV, Welsh/English languages 2-101479
 intermodulation distortion in sound channels in music recording, TV, cinematography appl. (Russian) 2-64155
 Nellie, noise reduction system 2-102978
 photographic sound recording, early glass discs 2-69279
 post-production dubbing by computer-assisted digital sound mixer 2-109134

audio systems*see also acoustic devices; acoustic equipment*

- photographic sound reproduction principles, system components and implementation 2-109135

auditory activity *see hearing***auditory perception** *see hearing***Auger effect**

- adsorbates, AES and UPS studies 2-110133
 adsorbates and small condensed mols. containing O and N, X-ray excited Auger spectra 2-83433
 adsorption of CO, decomposition and oxidation of surface carbide 2-62432
 aero gas turbines, corrosion prevention by organometallic cpd. additives 2-116623
 AES, as local probe for solid surfaces, review 2-82963
 AES, high resolution studies of solids, theoretical developments, review 2-110991
 AES, normalisation of electron images for beam current fluctuations and sample topography 2-73044
 AES, optimum beam incident voltage, expt. study 2-73042
 AES, review 2-83439
 AES, surface anal., experimental aspects, review 2-110102
 AES of solid surface, microcomputer based data acquisition and control system 2-116304
 atom-solid energy shift and relax. of multiple hole levels 2-64942
 atomic mixing, ion bombardment induced, sputtering assessment 2-98166
 atomic standard for calibration of differentiation of AES 2-107474
 Auger and X-ray charact. 2-92396
 autoionising states, Auger decay in external electric field 2-85599
 backscattering factor in quantitative Auger spectroscopy 2-105011
 bound exciton recombination, Auger processes effects 2-76931
 brass, surface cleaning by scratching, AES study 2-57528
 brass coatings, diffusion formed, AES study 2-87105
 chemisorbed species, Auger lineshapes, effect of hole-hole correlations 2-87919
 composition depth profiling with AES, depth depend. of depth resolution 2-105013
 core level photoelectron spectroscopy for surface crystallography 2-77694
 core-valence-valence Auger lineshapes 2-87917
 covalent and ionic systems Auger induced decomposition/dissociation 2-76834
 covalent systems, localised Auger final states 2-82266
 degenerate semiconductor, p-type, Auger recomb. process, four-band Kane model 2-115782
 dielectric thin films, composition depth profiling, SIMS, IIR and AES comparisons 2-99287
 double crystal monochromator, performance and appl. in energy region 800-4500 eV 2-84758
 electron energy distrib. and line scans, smoothing 2-107457
 electron-ion collisions at medium energies, radiative coupling effect 2-108722
 elements Nb-Te, core-hole lifetimes, electron spectra determ. 2-57256
 energy distribution meas. of secondary, Auger and reflected electrons with cylindrical mirror analyser (German) 2-101499
 epitaxial layers, AES, RHEED and TEM characterisation techniques 2-92419
 fast ion beams, reduction of Doppler broadening, refocusing props. of parallel-plate electrostatic analysers 2-64165
 fly ash particulates, insulating, micron size, electron beam effects in AES studies 2-92034
 foil, electron scattering physics 2-72586
 foils, electrodeposited, ESCA signal intensity dependence on surface area (roughness) 2-110098

Auger effect continued

- glass, Auger signal decay due to Na desorpt. and diffusion, theory 2-77634
- graphite, intercalated, CKVV Auger lineshape, screening effects, cluster model 2-77635
- graphite intercalation cpd., with alkali metals, C KVV Auger line shape and X-ray emission 2-87920
- graphite intercalation cpds., C_6C_8 and C_6Li , Auger line shape, final state rule 2-105012
- graphite ion implantation damage, impurity profile, Raman, Auger and electron microscopy study 2-81834
- group III arsenide MBE layers, composition, substrate temp. effect 2-87098
- high energy beam surface probes, ion and electron 2-110987
- high-resolution vibrational electron energy-loss spectroscopy of solid surfaces, apparatus 2-89869
- III-V semiconductor epitaxial layers, chem. interface width and struct., Auger meas. technique 2-87086
- III-V semiconductor lasers, band-to-band Auger recombination, theory 2-96951
- Inconel 600, 625, ion eroded, erosion yields, topographical changes and depth profile anal. 2-77661
- Inconel 600 surfaces, H₂ and CO adsorpt. behaviour under laser-induced thermal desorpt. 2-66357
- internal ion-surface collisions, conf., Feldkirchen-Westerham, Fed. Rep. of Germany (Sept. 1980) 2-74161
- inner-shell photoelectron spectroscopy, correl. effects 2-96521
- internal conversion coeffs., electron exchange effect calcs. 2-90490
- ion beam sputtering for depth profiling in AES, cover up of particles by substrate material 2-93344
- ion neutralisation at surface Auger processes 2-93357
- ion-induced Auger electron emission from solids, review 2-82990
- line shapes for solids and mols., final state rule 2-105012
- linear alkanes, localised Auger final states 2-77632
- many-valley semiconductors, compensated, Auger processes involving bound carriers, theory (*Russian*) 2-115785
- metal target, kinetic ion-electron emission, review 2-77648
- metallic elements, density functional calcs. of Auger and XPS shifts 2-93370
- metallic films, chemically deposited, struct., precipitation etching (*German, English*) 2-116663
- metallic superlattice superconductivity and magnetism 2-92819
- metallic surfaces investigation by ATR and Auger spectroscopy and electrical resistance meas. 2-72078
- metals, Auger and X-ray photoemission shifts, embedded-atom calcs. 2-54822
- metals, Auger spectra, intensity distrib. (*Russian*) 2-77631
- 5d metals, bremsstrahlung excited Auger electron spectra 2-105035
- metals and alloys, X-ray excited Auger spectra, Fermi energy and dipolar barriers, review 2-116329
- methane, Auger transition rates calcs., nonspherical pot. effect 2-90633
- microanalysis, theoretical detection capabilities comparison between SIMS and AES 2-83432
- microbeam analysis, conf., Vail, CO, USA (July 1981) 2-68961
- microcomputerised data collection 2-84741
- microscopy, high resolution scanning, backscatt. effects, expt. study 2-73043
- MIS and MIM multilayer thin film systems, interfacial reactions, AES study 2-92291
- multinary III-V alloy semiconductor lasers, long wavelength, band-to-band Auger effect 2-55146
- narrow gap semiconductor, internal photoeffects, quantum efficiency, model 2-104418
- nematic homeotropically aligned cell in DC elec. field, alignment deterioration and surface props. meas. 2-115133
- Nimonic alloy PE 16, ion eroded, erosion yields, topographical changes and depth profile anal. 2-77661
- optical glass, thin film form. by leaching in acidic soln., Auger study 2-82177
- poly(ethylene oxide), surface struct., Auger spectroscopy study 2-71785
- polyethylene, surface struct., Auger spectroscopy study 2-71785
- polyethylenes, localised Auger final states 2-77632
- scanning Auger electron microscopy, high spatial or high energy resolution 2-101504
- scanning Auger microscopy, software 2-113061
- Schottky barrier heights, contactless meas. using secondary electrons 2-115855
- semiconductors, Auger recombination, minority carrier lifetime, impurity and phonon scatt. effects 2-87299
- semiconductors, band-to-band Auger recombination, Green's function formalism 2-115778
- semiconductors, radiative transitions between exciton sub-bands 2-99155
- SIMS equipment Ribet MIQ 156, improvements and appls. 2-95529
- solar energy conversion technologies, solid-gas interface meas. techniques, review 2-87044
- solar energy conversion technologies, surface analytical techniques, review 2-88412
- solids, core level spectra, electronic relax. effects 2-92713
- spectroscopy electron gun control, 0-2 kV/200 μ A linearly variable supply 2-111524
- spectrum data processing system 2-89698
- sputtering, rate meas. using laser optical technique, SIMS and AES correlations 2-93354
- stainless steel, SUS 304, Ti-coated surface, Auger anal. (*Japanese*) 2-92320
- steel, 304 stainless, sputter deposited, oxide and sulphide scales, AES and SEM studies 2-88272
- steel, austenitic, Cr-Ni, surface (100), water vapour adsorpt., AES studies 2-66343
- steel, austenitic stainless, Cr-Mn, low-Ni, intergranular Li penetration 2-111371
- steel, austenitic stainless, SCC behaviour, effect of surface modification 2-116595
- steel, austenitic stainless, surface activity, co-segregation behaviour of non-metallic elements with metallic elements, AES study (*Japanese*) 2-83126
- steel, austenitic stainless, surface segregation, AES obs. 2-83288
- steel, C, type ASTM A533-B, fracture surfaces, solute segregation distrib., Auger anal. 2-80120
- steel, constructional, low-temp. oxide film, form. after polishing, Auger spectra obs. 2-57539

Auger effect continued

- steel, high-C, segregation of Si on austenite grain boundaries and austenite/carbide interfaces 2-105161
- steel, nitrided, AES eval. of nitrides 2-93681
- steel, Si-Al bearing electrical, internal oxidation and mag. props., annealing conditions influence 2-77274
- steel, stainless, surface props. in molten and quenched conditions (*French*) 2-98389
- steel, stainless 304, Raman spectroscopy combined with ion bombardment to depth profile oxide films 2-77505
- steel, surface layers formed by friction, AES and X-ray emission spectra study (*Russian*) 2-93635
- surface (111) and stepped surface (755), adsorbed K and K₂O monolayers, LEED, AES and TDS 2-56365
- surface analysis by electron and ion beam methods, conf., Newcastle, NSW, Australia (Feb. 1981) 2-106995
- surface imaging in LEED instruments 2-55813
- surface layers, Auger sputtering profiles, quantitative interpretation 2-82962
- surface microanalysis by AES 2-73041
- surface modifications due to preferential sputtering 2-110103
- surface physics, conference, Varna, Bulgaria (Sept.-Oct. 1980) 2-89468
- surface relaxation determ. by ion bombardment Auger spectroscopy 2-93352
- surface science, conference, Liverpool, England (April 1981) 2-58538
- surface spectroscopy review, for semiconductor characterisation 2-78158
- surface struct. determ. by surface EXAFS 2-105003
- TCNQ salt, Cu-TCNQ semicond. films, AES, XPS, and IR refl. study 2-93302
- thin films and interfaces, combined UPS and Auger anal. apparatus 2-116341
- thin passive films, comparison of AES and XPS anal. 2-78004
- transition metal nitride surface films, prep. and characterisation 2-82165
- transition metal oxides, interatomic Auger transitions, rel. to metal oxidation 2-82965
- transition metal oxides, surface oxidation state, Auger studies 2-72581
- transition metal surface, adsorbed molecules, AES study 2-110136
- 5d transition metals, final state screening systematics, bremsstrahlung excited Auger spectra 2-99209
- Type 304, sensitised, low-temp., intergranular fracture and grain boundary chem. 2-105328
- ultrahigh vacuum apparatus for combined low-energy electron diffraction, Auger spectroscopy, MeV ion scattering, and nuclear microanalysis 2-89733
- UV photoelectron spectroscopy and Auger anal. in same apparatus 2-84749
- X-ray-excited Auger and photoelectron spectroscopy, review 2-99299
- X-ray-induced Auger electron spectroscopy, detection sensitivity for surface atoms 2-83423
- Ag, Auger MNN spectra and electron localisation 2-93334
- Ag film, growth on Pd, AES and electron microscopy study (*French*) 2-71839
- Ag film on GaAs {001}, Auger lineshape variation during epitaxial growth 2-87916
- Ag films growth on Si(100) and (111), LEED, AES and angle-resolved UPS study 2-92413
- Ag surface, (110), (100) and (111), work function, Auger and LEED study 2-77155
- Ag surface, adsorbed O₂, UPS, XPS and AES studies 2-76803
- Ag VPE growth on Ag(Cu), Auger line shape anal. 2-110186
- Ag-GaAs (001), Ag MBE growth and interfacial diffusion, AES, LEED and SEM study 2-93432
- Ag-GaAs Schottky diodes formation on Kelvin, AES and LEED characterised surfaces cleaned by ion bombard. 2-87391
- Ag-Pd, AES depth profile anal., peak overlap and electron escape depth influence 2-110992
- Ag-Pd (16 wt.%), sputter behaviour, influence of ion energy and incidence angle on Auger depth profiles 2-82972
- Ag-Si phase, interdiffusion form., surface struct. anal. by quantitative AES 2-67159
- AgF-LaF₃ reversible interface, Auger depth profiling and impedance study 2-71807
- Al (111), ion bombarded, secondary electron energy resolved angular distrib. 2-93349
- Al (111) surfaces, CO exposed, Auger electron spectroscopy, electron beam stimulated chemisorption 2-82088
- Al alloys, corrosion-preventing coatings, surface studies 2-83266
- Al film, evaporated, oxidation studied by AES, EELS and electron stimulated desorpt. 2-76855
- Al films, vacuum deposited, effects of impurities on emittance 2-98317
- Al foil + (H⁺)(H₂⁺), inner shell ionisation by ion bombardment 2-75391
- Al, oxide coatings, corrosion protection Auger and XPS study 2-83268
- Al, oxide film chem. composition, influence on surface props., SIMS, XPS, AES 2-104208
- Al, scanning Auger electron spectroscopy 2-101504
- Al surface, autoionisation of colliding Ne projectiles, Auger electron energy distrib. 2-57231
- Al surface, inert gas ion impact, Auger emission study 2-77684
- Al/AIN coatings, sputter deposition prep. using pulsed gas processes, characterisation and mech. props. 2-83021
- Al/Sn, liquid system, oxidation, Auger electron spectroscopy 2-93658
- Al-Al₂O₃-graphite composite system, threshold switching characs. correl. with fracture path 2-105331
- Al-Cu layer, evaporated, interface elec. resist. and Auger profiling 2-77160
- Al-Mg, oxide formation, Mg diffusion, Auger and SEM study 2-82009
- Al-Si compounds, XPS study of silicates, Auger parameter rel. to refractive index 2-99740
- Al-Sn, liquid system, oxidation, Auger electron spectroscopy 2-93658
- Al,Ga_{1-x}As-GaAs heterostructure grown by LPE, Auger electron spectra (*Chinese*) 2-66388
- Al₂O₃, dense, steam-enhanced impurity segregation 2-111116
- β Al₂O₃-Na₂O, segregation to surface, electron induced, AES and XPS 2-115422
- Al(100), electron spectroscopic study of CO adsorption 2-76819
- Ar L₂ shell electron impact inner-shell ionisation, post-collision interaction 2-102645
- Ar + H⁺(He⁺)(Li), K-shell ionisation and capture differential cross sections, scaling props. 2-96706
- Ar + S, electron prod., impact parameter depend. 2-54921

Auger effect continued

- Au, accurate determ. of Auger electrons and photoelectrons energies 2-82964
 Au, Auger electron spectroscopy, relative intensity meas. 2-62441
 Au epitaxial growth on Ag(111), ion scatt., Auger and LEED study 2-82160
 Au surface, adsorbed O₂, UPS, XPS and AES studies 2-76803
 Au-Cu sputtered surface, AES, quantitative anal., backscattering correction factors 2-57221
 Au-Si phase, interdiffusion form., surface struct. anal. by quantitative AES 2-67159
 Au-Si:H, amorphous, interface reactions, AES study 2-110176
 B, polycrystalline, oxidation, AES and EELS studies 2-77963
 Ba and Ba compounds, photoelectron, Auger, and ionisation loss spectra 2-83003
 Be (0001) surface, single cryst., Auger electron spectroscopy study of initial stages of oxidation 2-78002
 Be, atomic excited states, wave function determ. 2-85568
 Bi_{1-x}Sb_x, resonance shock ionisation in mag. field (*Russian*) 2-56618
 C, graphite-like, Auger electron APS, low energy electron contrib. 2-62024
 C⁺, Auger transition lineshape, CO⁺ Coulomb explosion influence 2-78068
 C-film adsorbed on Ir, study by Auger electron spectroscopy and thermionic emission 2-66332
 C-foil+Al³⁺(Si²⁺(P³⁺)(S²⁺)(Cl⁺), absolute L-shell Auger electron yield meas. 2-75393
 CO, chemisorbed on Ni (100), C(KVV) Auger line shape 2-108643
 Co, valence Auger spectrum, MS Xalpha calcs. 2-80739
 Cd film, UV photoelectron spectroscopy and Auger anal. in same apparatus 2-84749
 Cd surface oxidation, study by photoelectron and Auger spectroscopy 2-83265
 Cd_{0.5}Hg_{0.5}Te, anodic oxide layers, interface struct., SIMS-AES XPS investig. 2-104208
 CdI₂, Auger interaction of donor-acceptor pairs with luminesc. centres, photoluminesc. and photocond. study 2-93270
 CdS thin film, single source evaporation, characterisation 2-83042
 CdS-CuInSe₂, solar cells, annealing and interface effects, EELS, AES, SIMS and XPS study 2-83491
 CdS-CuInSe₂, solar cell, interface formation, comp. and stability, XPS, EELS and AES study 2-111554
 CdTe (110) vacuum cleaved surfaces, photoenhanced oxidation (*Japanese*) 2-116577
 CdTe-Au electroless contacts, phys. props., Rutherford backscatt. and AES anal. 2-110168
 CdTe-metal interface, Schottky barrier form., XPS, UPS, AES, LEED, I-V and C-V meas. 2-115861
 CdTe-metal interfaces, Fermi level pinning 2-66618
 Co, Auger MVV and L_{2,3}VV spectra meas. 2-77633
 Co monolayer on Cu, mag. exchange splitting, photoemission, LEED and Auger study 2-98870
 Co₃O₄-CoO, spray pyrolysed Co black, high temp. selective absorber 2-67891
 CoSi₃ (100) and CoSi₂ (110), interaction with O₂, LEED, AES, and UPS STUDY 2-104162
⁵⁷CoCl₂, frozen aq. soln., electron capture, Auger cascades, Mossbauer study 2-87644
 Cr (100), chemisorption of Cl and surface chloride form., struct. and kinetic study 2-66366
 Cr (110), chemisorption of CO, EELS and AES study 2-57225
 Cr black, selective solar absorber, optical response, high temp. substrate oxidation 2-99840
 Cr compounds, maximal-valent, L₃MM Auger transitions under ion bombard. 2-105028
 Cr, electron energy loss spectra for clean and oxidized surfaces 2-56663
 Cr film interaction with Si, bilayer silicide form. 2-86949
 Cr, surface (110), chemisorpt. of O and initial oxidation 2-115567
 Cs overlayer on Si(100) 2x1, plasmon excitation obs., AES, EELS, LEED and UPS 2-115542
 Cu (100), adsorption and coadsorption of Cs and O₂, LEED, AES, and work function meas. 2-82140
 Cu (110)-Ni surface alloy, adsorption of O₂ and reaction with H₂ and CO 2-104161
 Cu (111), O₂ chemisorption, UPS, EELS, LEED, AES and work function meas. 2-87072
 Cu, accurate determ. of Auger electrons and photoelectrons energies 2-82964
 Cu, Auger electron spectroscopy, relative intensity meas. 2-62441
 Cu, benzimidazole passivated, Auger anal. 2-88265
 Cu foil, electrodeposited, AES and ESCA, effects of surface roughness 2-78155
 Cu, growth of Pb and Sn monolayers and ultrathin films 2-71829
 Cu, resonant photo- and Auger emission at 3p threshold 2-108434
 Cu surface, Auger neutralisation mechanism in secondary ion emission 2-67179
 Cu surface (100), adsorbed Pb, LEED studies 2-98450
 Cu, thin film, inelastic mean free paths of Auger electrons 2-93335
 Cu, VPE growth on Cu, Auger line shape anal. 2-110186
 Cu/Ni thin films, interdiffusion, Auger study 2-82035
 Cu/Sn bimetallic thin film, interdiffusion and intermetallic phase form. 2-115473
 Cu-Al, surface electronic states, Tamm state, photoemission, LEED and Auger study 2-98712
 Cu-Cr, failure anal., impurity segregation, Auger spectra study 2-83205
 Cu-In, low energy ion bombard. enhanced diffusion, segregation, and phase transforms. 2-82991
 Cu-Ni, failure anal., impurity segregation, Auger spectra study 2-83205
 Cu-Ni, high temp. sputtering, ion-enhanced diffusion, grain boundary erosion (*Japanese*) 2-116317
 Cu-Ni, sputter-enhanced diffusion at high temps. 2-92279
 Cu-Ni, surface (110), CO adsorption 2-56362
 Cu-Ni alloy, in seawater, AES study of corrosion mechanism 2-93662
 Cu-Ni multilayer films, interdiffusion, Auger electron depth profiling 2-82038
 Cu-Ni substitutional alloy, XVV Auger effect, theory 2-77630
 Cu-Pd alloys, effects of alloying and chemisorpt. on Auger line shape 2-77142
 CuInS₂, electron-beam induced effects, Auger spectroscopy study 2-103824
 CuO, resonant photo- and Auger emission at 3p threshold 2-108434

Auger effect continued

- Cu₂O, resonant photo- and Auger emission at 3p threshold 2-108434
 Cu₂S-Zn₂Cd_{1-x}S film struct., Cd and Zn cross diffusion, AES, ESCA and atomic absorpt. spectra study 2-66299
 F, multiply-ionised atoms, K-shell Auger rates 2-96525
 Fe epitaxial growth on W(110), periodic lattice distortions, LEED and Auger study 2-82170
 Fe, intergranular fracture, cathodic pots., effect of S and Sb 2-57469
 Fe overlayer growth on Ag(110), LEED and AES studies 2-98489
 Fe overlayer on Pt(111), mag. behaviour, photoemission, LEED and Auger study 2-110611
 Fe, solid, role of adsorption on wetting, by liq. Pb alloys (*French*) 2-71771
 Fe surface, P covered, segregation, XPS, AES and EELS study 2-92221
 Fe²⁺, transition probability, dielectronic recombination rate coeffs., HF calcs. 2-108679
 Fe-Co monocryst. alloy, surface comp., ion bombardment and annealing effects, Auger study 2-71782
 Fe-Cr, passive film, ESCA, AES and SIMS study 2-111366
 Fe-Ni, passive film exam. by AES 2-57513
 Fe-P alloys, fracture mode and toughness, C effects 2-57484
 Fe-Sb(Ni), ultra-high purity, interactive co-segregation of Sb and Ni at grain boundaries 2-93512
 Fe-Si-Al nonoriented electrical sheet, oxide film form. and props., effect on material quality, AES obs. (*German*) 2-105386
 Fe₂(As₁₅Te₃₇Si₂₇Sb₂₇)_{1-x} film, sputtered, phys. props. 2-92421
 Fe₂B₁₈-Be₂, ferromagnets, Auger CVV spectra as probe of electronic struct. 2-76906
 FeCo and Fe_{0.5}Co_{0.5}Cr_{0.7} films, polycryst., subjected to X-irrad., magnetisation (*Russian*) 2-66876
 Fe_{1-x}Mn_xTi, hydrogenation and oxidation characts., Mn additive effect, subsurface role 2-76690
 Fe₁₂Ni₄Cr₁₄P₁₂B₆, thin passive films, comparison of AES and XPS anal. 2-78004
 FeO_x, quantitative AES anal. 2-57662
 GaAs cylindrical cryst., O₂ adsorpt., orientation depend. 2-110146
 GaAs, cylindrical sample, adsorpt. of O₂, orientation depend., AES meas. 2-115565
 GaAs epitaxial films, activated, photoemission, surface purity and perfection effect 2-72608
 GaAs, MBE grown (100) autoepitaxial films and substrates, struct. and comp. and surfaces 2-56383
 GaAs substrate cleaning procedures, AES study 2-88237
 GaAs substrate for MBE, thermal removal of surface C 2-116572
 GaAs, surface composition and etching in Cl₂ ion beam 2-61262
 GaAs, thermally oxidised, interface comp. studies using Auger depth profiling 2-78154
 GaAs:Mg(Ca), MBE, doping behaviour, reflection electron diffr. and AES study 2-92386
 GaAs:Sn, nucleation effects during MBE growth 2-76845
 GaAs/Sb interface, elastic low-energy electron diffr. 2-76842
 GaAs-Ag interface, formation, struct., electronic states 2-104485
 GaAs-Ga interface formation, electronic props., photoemission LEED and Auger study 2-98744
 n-GaAs-metal interfaces, physical characts., AES study (*Chinese*) 2-66634
 GaAs-Si₃N₄ interface quality improvement by surface treatment and annealing 2-110487
 Ga_{1-x}In_xAs_{1-y}P_y LED, spontaneous emission efficiency and nonradiative recombination meas. at 1.58 μm 2-116220
 GaP Schottky barrier, struct. model and elec. characteristics and AES study 2-110170
 GaSe, layered semicond., oxidation, XPS and AES study 2-57502
 GaSe-SnO₂ heterostructure, depth profile, XPS and AES study 2-61299
 GdCo amorphous RF sputtered films, substrate bias effect on film composition and mag. props. 2-56900
 Ge, diffraction grating, high-density laser-induced transient plasma, picosecond dynamics 2-77628
 Ge epitaxial film on Si(100), RF sputter deposition, struct. and elec. meas. 2-66386
 Ge, HCl gas phase etching, surface form. processes, AES, RHEED and electron microscopy obs. 2-99570
 Ge, recombination mechanisms, photoconductivity and IR absorption 2-115780
 Ge-GeS interface struct., LEED, HEED and Auger spectra study 2-71809
 HF, Auger energies, Green's function methods 2-102543
 heterostructure photoanode, energy diag. and photoelectrochem. props. 2-98747
 Hf, surface nitride films, Auger and X-ray charact. 2-92396
 n-(Hg,Cd)Te, degenerate, two-band Auger recombination lifetime 2-93336
 Hg_{0.5}Cd_{0.5}Te, photoconductivity lifetime, recombination below 20K 2-92683
 Hg_{0.5}Cd_{0.5}Te, surface anodic oxide film composition, ion beam effects, XPS study 2-71832
 p-Hg_{1-x}Cd_xTe, electron irrad. and annealed, carrier lifetime, Auger recombination mechanism 2-56610
 Hg_{1-x}Cd_xTe, plasma anodised, interface study 2-104489
 In, surface oxidation, study by photoelectron and Auger spectroscopy 2-83265
 In-Pb, surface comp., ion sputtering effect, AES study 2-82985
 In_{0.5}Ga_{0.5}As, concentrated, laser recrystn., solute redistribution, AES study 2-56014
 p-InGaAsP diode lasers, radiative and Auger recomb. rates meas. 2-102792
 InGaAsP lasers, Auger recomb. rate 2-114276
 InGaAsP lasers, interband Auger recomb. 2-80967
 In_{1-x}Ga_xAs_{1-y}P_y lasers and LEDs, Auger recombination 2-55160
 In_{1-x}Ga_xAs_{1-y}P_y laser, facet degradation and passivation, AES study 2-90920
 InGaAsSb lasers, interband Auger recomb. 2-80967
 In₂O₃/Sn film, transparent conductive, prep. by pyrolysis method 2-111091
 InP (110), ion bombardment and etching effects, EELS and AES study 2-110099
 InP, annealing encapsulants, AES and SIMS study 2-116584
 InP, electron stimulated interaction with water vapour, Auger and EELS study 2-76786
 InP, inclusions 2-71433

Auger effect continued

- InP surface, prepared by various cleaning methods, anal. by AES 2-88389
- InP, surface composition and etching in Cl_2 ion beam 2-61262
- InP, surface etching kinetics of H plasma, Auger spectra study 2-93637
- InSb, Auger recombination rate during intense laser pulse, carrier density depend., reflectivity study 2-67158
- InSb, LPE regrowth by CW laser annealing, expt. study 2-56029
- InSb MOS structure, interface characterization 2-87411
- $\text{In}_{2-x}\text{Sn}_x\text{O}_{3-y}$ coating on Kapton substrate, electron beam damage, Auger and secondary emission study 2-81826
- $\text{In}_{2-x}\text{Sn}_x\text{O}_{3-y}$ -GaAs:Be heterojunction solar cell, AES and EBIC evaluation 2-78214
- Ir film on n-Si, silicide form., AES study 2-86951
- Ir-V film, contact reaction with Si 2-86950
- KCl, electron-induced sputtering 2-99236
- K_2O monolayer on Pt(111) and stepped (755) surfaces, LEED, AES and TDS studies 2-56365
- LaB_6 surface, coadsorption of Cs and O_2 , work function change and Auger study 2-87068
- Li, autoionising states in low lying triplet excited reson., saddle point technique 2-64933
- Li, KVV Auger spectrum, line-shape, many-body effects 2-80555
- Li, surface reaction with CO_2 , C KVV Auger electron spectrum 2-111511
- MgO , surface struct., ionic bonding, He diff., Auger and LEED study 2-86996
- Mn overlayer on Cu(100), LEED, AES and UPS study 2-87111
- Mo, Auger MNN spectra and electron localisation 2-93334
- Mo, etching using carbon tetrachloride/ O_2 mixture gas 2-62273
- Mo film, sputtered, plasma etching in NF_3 gas mixtures 2-105350
- Mo, nitridation by low energy N_2^+ ion bombardment, surface pretreatment depend. 2-111349
- Mo, polycryst. N_2 adsorpt. and NH_3 desorp. AES obs. 2-67157
- Mo, sintered sheet, electron beam welded, bend props. 2-116509
- Mo-Si (111) interface reactions, synchrotron UPS and AES studies 2-110173
- MoSi_3 film, sputtered, plasma etching in NF_3 gas mixtures 2-105350
- $\text{Mo}(100)$, change in surface polarisability with oxidation, XPS of physisorbed Xe 2-77451
- N_2^+ + Al(Cu)(Mo)(Ni) surfaces, nitridation reaction in low kinetic energy region, Auger effect 2-99706
- Na, theoretical KLL and KLM Auger spectra 2-102449
- Na^+ KLL Auger transition rate, S matrix calcs. 2-85604
- NaCl, electron-induced sputtering 2-99236
- NaNO_2 , N KVV Auger line shapes, XES and photoelectron data 2-59818
- $\text{Na}\beta$ -alumina surface study using XPS and Auger methods 2-92329
- Nb, photoemission studies of clean and oxidised surfaces 2-77695
- Nb/Pb thin film Josephson junctions, tunnelling barrier struct., Auger and XPS study 2-115956
- Nb/Pb-In thin film Josephson junctions, tunnelling barrier struct., Auger and XPS study 2-115956
- Nb $_2$ Al film, sputter deposited on SiO_2 , AES anal. 2-92383
- Nb $_2$ Ge RF sputtered films, surface struct., rel. to supercond. transition temp. 2-61264
- Nb $_2$ Si $_3$ film, phys. and elec. props. 2-104193
- Nb $_2$ Sn, photoemission studies of clean and oxidised surfaces 2-77695
- Ne, atomic excited states, wave function determ. 2-85568
- Ne ion, $1s2s2p^3$ configuration, Auger transition 2-85605
- Ne, KLL Auger transition rate, S matrix calcs. 2-85604
- Ne^{2+} neutralisation at surface Auger processes 2-93357
- Ne^+ + ^4He (^3He) (^2He), K-shell ionisation and capture differential cross sections, scaling props. 2-96706
- Ne^+ F^{9+} , inner-shell excitation, quasiresonant charge transfer, K-Auger emission 2-75416
- Ne^+ + Ne^{9+} (Ar^{9+}), Ne K Auger electron emission study 2-85795
- Ni (100), H_2 and CO coadsorpt., electron spectroscopy study 2-76827
- Ni (100), photon stimulated desorption of CO and NO, multi-electron excitations 2-104156
- Ni (110), chemisorption of Cl 2-56346
- Ni (110), N_2^+ implantation, AES, LEED, EELS and secondary electron spectra study 2-92014
- Ni (111) surface, clean and O-adsorbed, high energy ion scatt. study 2-62039
- Ni, accurate determ. of Auger electrons and photoelectrons energies 2-82964
- Ni catalyst for methanation reaction, use of single crystals. 2-83412
- Ni, chemisorption of O_2 under equil. conditions, 850°C, AES study 2-61289
- Ni film interaction with Si, bilayer silicide form. 2-86949
- Ni, grain boundary segregation of S and Cl, high resolution scanning AES and SIMS obs. 2-93518
- Ni, passive oxide films, electrochem. and surface analytical techniques 2-88260
- Ni surface, (110), adsorbed O, atomic structure, LEED, AES, EELS and work function study 2-66329
- Ni surface, low energy He^+ scatt., Auger neutralisation model 2-82992
- Ni surface, O_2 and H_2 adsorption kinetics, surface struct. effects, Auger, LEED and work function meas. 2-87066
- Ni, thin film, inelastic mean free paths of Auger electrons 2-93335
- Ni vicinal surfaces, oxidation of C 2-78137
- Ni-S, intragranular S segregation, SEM and AES study (French) 2-109998
- Ni/Cr thin-film structures, sputter depth profiles obtained from emission of Auger electrons and X-rays 2-77682
- Ni-Cr, oxidation and reduction, scanning Auger and XPS study 2-83278
- Ni-Fe, surface (100), oxidation 2-116612
- Ni-Fe (25 at.%), ESCA studies, surface prep. treatments, oxidation effects 2-83295
- Ni-Fe (25 at.%), ESCA studies, anodic dissolution, passivation effects 2-83296
- Ni-Pt interaction with Si 2-86953
- Ni-Pt sputtered coating, AES, quantitative anal., backscattering correction factors 2-57221
- Ni-Si, interfacial cpd. form. and electronic struct., photoemission and AES study 2-82036
- NiCrAl-Zr alloys, oxidation features, AES study 2-88273
- NiO growth, and dissoln. on Ni (100), temp. effects 2-83404
- NiPd, depth resolution in ion bombardment SIMS 2-99284
- NiPt, depth resolution in ion bombardment SIMS 2-99284

Auger effect continued

- NiSi, AES depth profiling, ion bombardment effects 2-99234
- NiSi, composition changes due to Ar^+ ion bombardment, AES meas. 2-103866
- Ni $_2$ Si, ion and electron irradi., near-surface segregation, TEM and electron diff. study 2-86883
- Pb film, UV photoelectron spectroscopy and Auger anal. in same apparatus 2-84749
- PbO-SiO_2 , reduced surface layers, slow-electron spectroscopic study 2-105017
- $\text{PbSi}_{1-x}\text{Se}_x$ laser threshold and recombination 2-90897
- PbSnTe diode laser, lifetime mechanisms, tunnelling currents and laser threshold 2-80956
- PbSnTe, lifetime calcs. for Auger recomb. rel. to laser and IR detector performance 2-77081
- $\text{Pb}_{1-x}\text{Sn}_x\text{Te}$ laser threshold and recombination 2-90897
- Pd (110), chemisorpt. of Cl 2-56346
- Pd, chemisorption of CO, segregated P effect 2-115557
- Pd islands, interaction of CO and O_2 thermal desorp. and AES studies 2-56361
- Pd surface (100), initial oxidation, LEED, EELS and AES studies 2-56314
- Pd/Si system, intrinsic and Si-stabilised oxides, Auger and UPS study 2-67160
- Pd-Au interface, low temp. alloying, AES study 2-71810
- $_{84}\text{Po}$, probabilities of KMM Auger transitions 2-59767
- Pt (110) chemisorpt. of Cl 2-56346
- Pt (111), chemisorption from polar solvents, superlattice form., LEED, AES and mass spectra study 2-92354
- Pt (111), SO_2 desorp. kinetics, AES study 2-105509
- Pt film interaction with Si, bilayer silicide form. 2-86949
- Pt growth, on Rh, and evolution of interface under thermal treatment 2-81252
- Pt, sputter deposition on ZrO_2 ceramic, interfacial reaction, Auger line shape and factor anal. 2-83429
- Pt surface, adsorbed O_2 , UPS, XPS and AES studies 2-76803
- Pt, surface (110), nonreconstructed, prep., thermal stability and adsorpt. characts. 2-115515
- Pt surface (321), kinked, adsorpt. of CO 2-61292
- Pt-n-GaAs Schottky interface, effects of surface treatments 2-98743
- Pt-Ni, surface composition, oxidation, surface segregation, AES and photoemission study 2-66330
- Pt-Ni alloys, layer-by-layer calcs. of alloy comp. 2-82087
- Pt-S, adsorption/desorption of effect of CO, effect of S layer, AES and temp. programmed desorption study 2-66369
- $\text{Pt}_{0.99}\text{Cu}_{0.01}$, surface segregation and surface electronic interactions, UPS and AES study 2-66612
- $\text{Pt}_{10}\text{Ni}_{90}$, surface (111) composition determ. by AES, XPS and ion scatt. spectroscopy 2-98410
- PtPd, depth resolution in ion bombardment SIMS 2-99284
- PtSi, AES depth profiling, ion bombardment effects 2-99234
- PtSi, composition changes due to Ar^+ ion bombardment, AES meas. 2-103866
- Pt(110), clean and with adsorbed CO and NO, surface phase study 2-86985
- Re(0001), adsorption of benzene studied by thermal desorp., Auger spectra and LEED between 100 to 300K (French) 2-110141
- Rh film on n-Si, silicide form., AES study 2-86951
- Rh, surface (111), oxidation, impurity effects, EELS and AES studies 2-111353
- $\text{Rh}_{0.95}\text{Cu}_{0.05}$, surface segregation, AES study 2-110108
- Ru catalyst for methanation reaction, use of single crystals. 2-83412
- RuO_2 film, reactively sputtered, electronic struct. 2-110515
- RuO_2 films, reactive sputtering and electronic struct., AES, photoemission and optical absorpt. study 2-82502
- Sb overlayer on GaAs(110), LEED/AES/XPS/TDS characterization 2-87060
- Sb surface oxidation, study by photoelectron and Auger spectroscopy 2-83265
- Si (111) surface, H adsorption, departure from stable SiH_3 phase 2-76838
- Si (111)7 \times 7, SEXAFS studies of I adsorpt. 2-83417
- Si (111)(2 \times 1)-Au system, interface form., low energy EELS and AES study 2-104174
- Si, Auger line chemical shifts, $\text{KL}_{2,3}\text{L}_{2,3}$ transition 2-90491
- Si, heavily doped, recombination mechanisms 2-98666
- Si, interband Auger recomb. rate, carrier density depend. 2-77088
- Si oxidation EELS and AES of ultrathin oxide films 2-83252
- Si, polycrystalline, grain boundaries, chem., compositional and elec. props. 2-76458
- Si, reactive ion beam etching, using a 26-cm electron-cyclotron-resonance ion source 2-74572
- Si, screening effects on Auger lineshapes 2-87918
- Si surface, (100), O_2 adsorption, Auger and ionisation electron spectra study 2-92365
- Si surface, passivation by Au and Ag monolayers, LEED, Auger and photoemission anal. 2-83259
- Si surface (100), Ag film growth, LEED and AES study 2-56397
- Si surface (111), Ag adsorption, struct. and electronic props., LEED and AES study 2-82092
- Si surface cleanliness control by TEM (Russian) 2-99573
- Si, UHV-deposited thin films, laser cleaning of (100), (110) and (111) surfaces 2-83250
- Si-F, A amorphous films, photoelec., and optical props. Schottky barrier solar cell form. 2-83480
- Si-Ga, doping during MBE, AES and isothermal desorp. spectra study 2-109819
- Si-H, amorphous film, interfacial electronic struct. and density of states 2-66601
- n-Si:H, amorphous film, interaction with metal electrodes, AES meas. 2-87389
- n-Si:H, amorphous film, interaction with metal electrodes, AES meas. 2-87390
- Si:H amorphous, oxidation, UPS and Auger study 2-83260
- Si:Ne, Ar, amorphous, ion implanted, localised defect states and impurity distrib., photocond. spectra study 2-61414
- Si/Pt-Si, contact reaction, Auger electron spectroscopy study 2-72058
- Si/PtSi/Ti-W-Al system, compound form. and interdiffusion, SEM, X-ray, Auger and microprobe studies 2-71740
- Si-Al-O system compounds, chem. state plots, line energies ESCA study 2-83425

Auger effect continued

- Si-O-N systems, quantitative Auger microanal. 2-82164
 Si-silicide interfaces, electronic struct., review 2-115847
 SiC single cryst., XPS, AES and friction studies 2-93633
 SiC sputtered film, composition and homogeneity, sputter-Auger line shape anal. 2-104202
 Si_3N_4 film, plasma deposited, chem. characterisation by Auger signal decomposition 2-110990
 Si_3N_4 film form. on Si(100) by low energy ion implantation, characterisation 2-92375
 Si_3N_4 film in MNOS struct., stoichiometry variation rel. to memory traps 2-82163
 Si_3N_4 film stability, stoichiometry deviation effect 2-115632
 Si_3N_4 plasma deposited, characterisation by AES with N sputtering 2-110185
 $\text{Si}_3\text{N}_4\text{-H}$, amorphous plasma deposited film, AES and EELS study 2-71816
 SiO, ion bombardment induced electronic states (*Japanese*) 2-93345
 SiO MBE films on GaAs, deposition conditions, Auger anal., and elec. characts. 2-87116
 SiO₂ film, reaction with Al, AES and EELS study 2-98474
 SiO₂ laser-induced CVD 2-67221
 SiO₂ reactive ion beam etching, using a 26-cm electron-cyclotron-resonance ion source 2-74572
 SiO₂ scanning Auger electron spectroscopy 2-101504
 SiO₂ solid phase reduction in presence of Al layer, diffusion barriers, Auger study 2-82034
 SiO₂ ultra thin film growth kinetics in MOS structs., Auger and EELS study 2-87112
 $\text{SiO}_2\text{-Al}_2\text{O}_3\text{-Fe}_2\text{O}_3\text{-CaO-MgO-Na}_2\text{O}$ basalt glass, surface conc. profile, AES study 2-93333
 SiO₂, electron Auger spectra for various stoichiometric composition 2-116305
 $\text{Si}_2\text{O}_3\text{-N}$ film, pyrolytic CVD, chem. characterisation by Auger signal decomposition 2-110990
 Si(100) and (111), surface electronic struct. changes induced by ion bombard., LEED and AES study 2-82983
 Si(100) with adsorbed H, stimulated H^+ desorption correlation with localised state 2-115551
 Si(111), adsorption of Ti, secondary electron spectroscopy 2-87015
 Si(111), laser induced oxidation 2-99568
 Si(111), stepwise oxidation and nitridation study 2-88246
 ^{63}Sm , probabilities of KMM Auger transitions 2-59767
 Si surface oxidation, study by photoelectron and Auger spectroscopy 2-83265
 Sn-In(Pb), surface comp., ion sputtering effect, AES study 2-82985
 Sn-Pb alloys, equilib. surface composition, Auger spectroscopy 2-82104
 SnO₂Sb thin films, spray pyrolysed, X-ray diffr. and AES study 2-104204
 SnO₂(110), surface reconstruction effects on work function and surface cond. 2-115857
 Sn,Pb_{1-x} ($x=0.998, 0.03$), equilibrium surface composition 2-115516
 Ta metals, nitrides and oxynitrides, artifacts observed during Auger profiling 2-78005
 TaC, ion bombardment, surface comp. changes, Auger spectrosc. obs. 2-93804
 Ta₂O₃-Ta interface profile, Auger and sputter depth profiling study 2-104175
 TaSi₂ layers, coverage on Si/SiO₂, surface struct., ion-implant profiles surface anal. study 2-82094
 Tb, Fe_{1-x} amorphous RF sputtered films, magneto-optic props. 2-72459
 Te, adsorbed layer on W(110), multiple commensurate-incommensurate transitions, LEED study 2-115560
 Th(111) chemisorption of O₂, CO and CO₂, electron spectroscopic studies 2-56337
 Ti coatings, vapour-deposited, exposed in MACROTOR and MICROTOR 2-92392
 Ti gettering efficiency in respect to C and N in Li 2-80177
 Ti metals, nitrides and oxynitrides, artifacts observed during Auger profiling 2-78005
 Ti, surface nitride films, Auger and X-ray charact. 2-92396
 Ti-Al alloy, Cl migration under electron bombardment, AES 2-86935
 Ti-Fe film, composite cathode sputtered, struct. and comp., expt. study 2-56390
 TiB₂, thin film, plasma-ion sputtering 2-82156
 TiC coatings deposited onto graphite and Mo by electron beam evaporation, charact. 2-71825
 TiC field emitter, field emission ion and electron microscopy, AES and atom-probe studies 2-115520
 TiC, ion bombardment, surface comp. changes, Auger spectrosc. obs. 2-93804
 TiN film, Cu diffusion 2-98502
 TiO₂:H electrodes, SIMS and AES anal. 2-57655
 Ti epitaxial growth on Cu(100), LEED, AES, UPS and EELS studies 2-56398
 $\alpha\text{-U}$, chemisorption of O₂, CO₂ and CO, electron spectroscopic studies 2-56337
 U, oxidation in O₂ and CO₂, surface spectroscopy 2-80059
 U-Ti alloys, bonding, Auger spectra study 2-65920
 V (100) surface struct., O₂ and CO adsorption, LEED and Auger study 2-71783
 V compounds, maximal-valent, L₃MM Auger transitions under ion bombard. 2-105028
 V, hydrogen permeation, surface impurity layer effects 2-85241
 W (100), adsorption of Se, AES, LEED, work function, and thermal desorption meas. 2-66362
 W (100), chemisorption and physisorption of acetylene at 80K 2-56344
 W film, plasma-enhanced CVD, elec. resist. and film stress 2-93434
 W metals, nitrides and oxynitrides, artifacts observed during Auger profiling 2-78005
 W polycrystalline surface, Auger neutralization of multiply charged rare gas ions 2-99265
 W surface (100), adsorption of Te, binding states, LEED, Auger and work function study 2-82146
 W surface (100), C₂H₂, Cl₂ and I₂ thermal desorption, Auger spectra study 2-87067
 W surface (100), chemisorption of S, Auger, TDS, LEED and work function study 2-82147
 W surface (110) adsorption of I₂, LEED and Auger study, antiphase boundary model 2-82144
 W wire, splitting, knife-edge compression test 2-116536

Auger effect continued

- WC, ion bombardment, surface comp. changes, Auger spectrosc. obs. 2-93804
 W₂O₃ film, adsorbed layers, excess current noise, Auger study 2-82496
 Xe atom, multiple hole levels and Auger spectra 2-64942
 Xe III, 5p⁴ ground configuration, transition probabilities for forbidden lines, Auger transitions 2-64927
 Xe, ionisation yield due to electron impact 2-70425
 Xe-Kr adsorbed bilayer on Pd, interlayer diffusion, photoemission and Auger study 2-104081
 Y, Auger MNN spectra and electron localisation 2-93334
 ZnO film, electronic props., defects, morphology and adsorp. depend. 2-104515
 ZnTe, bound exciton time decay, radiative and nonradiative transition rate study 2-76932
 Zr gettering efficiency in respect to C and N in Li 2-80177
 ZrO₂-Y₂O₃, thermoionic cathode, Auger electron spectroscopy 2-110113

Auger electrons *see Auger effect***Auger recombination** *see Auger effect; electron-hole recombination***Auger showers** *see cosmic ray showers and bursts***Auger spectra** *see Auger effect***Auger spectroscopy** *see Auger effect***augmented plane wave calculations** *see APW calculations***AURORA**

- see also airglow; atmospheric electron precipitation; atmospheric proton precipitation; atmospheric spectra*
 breakup, low energy protons accel. and energy dispersion rel. to electrons 2-100668
 discrete arc events, 3-D model 2-68573
 electric current flow, model predictions of mag. perturbations observed by Magsat in dawn-dusk orbit 2-100631
 electron density in polar ionosphere rocket obs. (*Japanese*) 2-73779
 electron precipitation, relaxation of monoenergetic electron stream in ionosphere 2-112195
 electron precipitation at equatorward boundary of diffuse aurora 2-73770
 emission used to determine auroral electrons energy spectrum 2-73699
 extremely high latitude aurora, occurrence and categorisation 2-83984
 field-aligned current systems, mag. perturbations modelling technique 2-100632
 ground illuminance, nocturnal levels, in auroral regions, Skibotn valley 2-83982
 inverted V arc, electrostatic potential distrib. obs. 2-63161
 inverted V auroral arc, model including effects of electrostatic turbulence 2-68553
 inverted V event narrow bursts responsible for auroral arcs 2-83991
 ionosphere characterization using optical remote-sensing techniques 2-94549
 IR background, non-LTE high-altitude effects 2-117515
 low frequency auroral fluctuations, role of current carrying props. of double layers 2-100622
 magnetopause and magnetosheath particle processes deduced from aurora obs. 2-112190
 magnetosphere field aligned currents rel. to auroral phenomena 2-112269
 microchannel plate intensifier for atm. emissions photometric imaging expt. 2-78872
 nitrogen and oxygen for UV emission spectra 2-83985
 occurrences statistics differing from substorm pattern 2-89060
 oval, rel. to polar cap, in northward interplanetary mag. field 2-68546
 plasma, double layers and solitary wave obs. 2-71191
 polar cap arc morphology and classification 2-73747
 polar cap arc occurrence 2-83997
 polar cusp F-region ion drift studied by 7320 Å emissions 2-100644
 proton and electron aurora study of substorms 2-94548
 proton precipitation and H atom flux, linear transport theory study 2-63162
 pulsating, correlation with X-ray burster magnetosphere processes 2-79147
 radar aurora, double layer struct. and current struct. 2-106381
 radar aurora, STARE obs. of long discrete echoes 2-112217
 radio aurora during irregular micropulsation burst 2-68554
 SAR event of March 5/6 1981, photometric obs. 2-78896
 substorms, decimeter radiowave propagation on transpolar paths 2-106415
 suprathermal electron bursts and formation of auroral arcs 2-83994
 undulations on equatorward boundary of diffuse aurora 2-83983
 UV spectra of active auroral arc 2-83986
 X-ray bremsstrahlung emission from precipitating particles 2-84002
 He emission at 5876 angstroms 2-112191
 N⁺, ³S₂ metastable state, radiative lifetime meas. by monitoring spontaneous emission 2-64923
 N₂⁺, auroral emission at low latitude due to O precipitation 2-100621
 N₂⁺+O-NO⁺+N, rate coeff. from auroral ion comp. anal. 2-73746
 NO far IR emissions from auroral upper atmos. 2-89056
 NO IR line parameters for upper atm. 2-73732
 N⁺(³S) state possible identification of 2145 Å emission feature 2-63160

auroral ionisation *see aurora***austenitic stainless steel**

- abrasive wear, comparison of types 304 and 316 2-105345
 abrasive wear, electrochem. polarisation influence 2-88198
 ageing, dimensional changes (*Russian*) 2-67385
 ageing with γ' precipitation, intermittent reaction (*Russian*) 2-67346
 alloy development, review 2-105115
 amorphous, crystn. behaviour, effect of heavy ion irradi. 2-81676
 annealed, subcrit. crack growth and instability, mechanism of initiation 2-57438
 cast, creep, effect of thermal ageing and grain size 2-105196
 cathodically H charged, type 316L, martensitic transitions at crack tip 2-111313
 cold worked, 20%, tensile props. correl. in type 316 2-72714
 cold worked, Ti modified, tensile props., irradi. in high flux isotope reactor 2-72764
 cold-worked type 310, neutron irradi., swelling under electron irradi., reactor conditioning effect 2-109837
 commercial, electron irradi., void swelling 2-103820
 compatibility with Li₂P₂ eutectic 2-11372
 corrosion, intergranular, influence contribs. 2-57511
 corrosion behaviour, of high-Mo Cr-Ni steels 2-57509

austenitic stainless steel continued

- corrosion fatigue crack growth in NaCl soln., stress ratio effect on type 304 2-111361
 corrosion fatigue props., tested at 20 kHz 2-57510
 corrosion in Li test loop for type 304 2-72867
 corrosion in liquid Li for 10000 hr. of type 316 and 304 2-80169
 corrosion in molten LiF-LiCl-LiBr of type 316 2-80174
 corrosion inhibition expts. in liq. Li 2-80171
 corrosion rate in boiling HNO_3 , effect of cooling rate and plastic deform. 2-88264
 corrosion resistance, effect of high temp. low cycle fatigue 2-78018
 corrosion scales, elevated-temp., erosion rate 2-67570
 crack growth, subcrit., effect of severity of notch-root radius 2-83206
 crack initiation in constant extension rate tests in pure water of type 304 2-77955
 crack tips prod. by SCC and hydrogen embrittlement, HVEM obs. 2-77978
 creep, deform. kinetic theory 2-115341
 creep, high temp., mech. props., influence of C and N 2-105246
 creep, steady-state, effect of prior creep 2-105248
 creep and plastic strains at 593°C, under step stress changes, ageing effects 2-99509
 creep constitutive equations, evaluation under repeated multiaxial loading 2-116515
 creep crack, moving singularity growth anal. with $(\Delta T)_c$ and C^* integrals 2-109236
 creep fracture, effect of vacuum environment, 600°C (*Japanese*) 2-72815
 creep fracture model after neutron irradi. and He injection 2-88173
 creep of type 304 steel, dislocation substruct. rel. to power law breakdown 2-67454
 creep properties, depend. on thermomech. pretreatments 2-93607
 creep-fatigue, mechanistic approach to creep-dominated failure 2-88183
 creep-fatigue behaviour, Type 316 2-57440
 Cr-Ni(MoTiAl), austenitic, potentiodynamic curves 2-83286
 current oscillations induced by presence of chloride ions in type 303 2-77974
 cyclic loading influence on Li corrosion behaviour 2-80172
 cyclic strain hardening, during fatigue, elevated temps. 2-93530
 deformation mechanism maps, in high temp. creep range 2-83218
 deformation-induced transformation, effect of strain rate and strain state 2-77886
 deformation-induced transformation, effect of strain rate and strain state 2-77887
 degradation of props. during irradi., preirrad. microstruct. development in type 316 2-69865
 depth selective conversion electron Mossbauer spectra with proportional counter 2-99003
 diffuse necking in sheet tensile specimens 2-116496
 diffusion of ^{59}Fe , lattice and grain boundary 2-104048
 duplex austenite-ferrite alloys, weld metal microstructures, heat treatment, TEM, EDS study 2-67406
 duplex scale formation kinetics, influence of O_2 partial press. 2-116590
 dynamic response of fusion reactor components with temperature-dependent properties in type 316 2-69838
 dynamic testing, for large reactor structs. on AISI 304 and AISI 316 2-74825
 electron irradiation, with 1 MeV electrons, of soln. treated FV548, void nucleation and growth 2-103819
 embrittlement, by liq. Cu and liq. braze alloys 2-67516
 fast reactor fuel cladding, failure due to fuel adjacency 2-80089
 fatigue, long-life, of type 316 at temps. up to 593°C 2-105342
 fatigue, under different atmospheres, effect of He implantation 2-77905
 fatigue and creep fracture combined at 650°C (*Japanese*) 2-77923
 fatigue crack growth law 2-111322
 fatigue crack growth of surface cracks 538°C (*Japanese*) 2-111288
 fatigue crack propag. in vacuum and air in type 316 2-72803
 fatigue crack propagation, influence of neutron irradi. 2-111272
 fatigue fracture mode, effect of strain waveform (*Japanese*) 2-72814
 fatigue life, high temp. containing irradi. induced He, type 316 2-72801
 fatigue properties, effects of Li environment 2-80170
 fatigue strength, low cycle, evolution method at elevated temps. (*Japanese*) 2-105412
 fatigue testing, extrapolation of fatigue life in type 316 2-78037
 fatigue threshold, effects of environment, stress ratio and defect size (*Japanese*) 2-111287
 fatigue thresholds, mixed mode 2-99519
 fatigue under H and He bombardment in type 316 2-72802
 fatigue-creep interactions, failure mode 2-99522
 FBR, core materials, type 316 stainless steel development 2-90232
 fractographic anal. rel. to corrosion fatigue mech. of type 304 2-88267
 fretting wear, from 20 to 650°C in air 2-88211
 fuel pin cladding, neutron irradiated, energy dispersive X-ray spectrometry, STEM anal. 2-69709
 fusion reactor first walls, creep fatigue, design limits for type 316 steel 2-80218
 fusion reactor material, irradi. in EBR-II and HFIR, swelling, microstruct. development and He effects 2-108109
 fusion reactor material, irradiated in EBR-II and HFIR, swelling and microstruct./microchem. evolution 2-108110
 fusion reactor material, simultaneous ion bombardment, neutron irradi. and stress/temp. cycling 2-108113
 fusion reactor materials, fatigue test under irradiation, from cyclotron 2-85238
 fusion reactor materials, pot. for using rapid solidification for improved irradi. performance 2-108107
 grain boundary multiple special contacts (*Russian*) 2-115251
 grain boundary segregation of B, atom probe microanalysis 2-72701
 grain boundary structure after annealing 2-67382
 H embrittlement (*French*) 2-105327
 H recycling props. in fusion reactor 2-74934
 haematite, suspended, deposition rate in boiling water system under BWR conditions 2-77979
 heat treated weldments, quantitative anal. of δ -ferrites, σ - and M_2C , carbide phases 2-88307
 high flux reactor irradi., microstruct., TEM study on types 316, 347 2-80118
 high-strength, delayed fracture, fractographic investigation 2-111308
 hydrogen embrittlement, α' -martensite form. and TEM obs. of microcracks 2-99512
 hydrogen induced phase transform. under X-irrad. (*Japanese*) 2-77821
 impregnation of H during friction in H_2SO_4 , influence on wear 2-67555

austenitic stainless steel continued

- intergranular corrosion, struct. influence 2-72876
 intergranular SCC, below 100°C, review 2-116593
 internal friction peaks, of 18/8 cold worked and/or H charged steel 2-56086
 ion irradiation made effects on void form. 2-86756
 ion-irradiated, void swelling and microchem. segregation 2-11181
 irradiation induced creep in 09Kh16Ni5M3B steel 2-102062
 liquid metal embrittlement of type 316 in LMFBFRs 2-80088
 long-term, creep rupture properties, 550 to 700°C, type 316 2-99564
 low-temperature sensitisation of type 304, in BWR welds 2-80119
 marine applications, evaluation of ASTM A276 type XM19 2-105382
 mechanical hysteresis in low-cycle fatigue, electrolytic H influence 2-88289
 microcrack growth in grain boundaries, at the surface of smooth specimens in high temp. creep (*Japanese*) 2-111289
 microstructure, dual ion-irrad., influence of He injection rate 2-109853
 microstructure, in situ obs. of heavy-ion damage 2-86754
 Mo alloyed, passivation, surface composition 2-77984
 Mossbauer effect, in Cr-Mn and Cr-Ni austenites, electron density and charge distrib. 2-99002
 multiple heat treatment effect on sensitization (*Japanese*) 2-105194
 neutron and ion irradiated, precip. and cavity form. 2-86735
 neutron irradi., type 316, increased He content effect on void form. and solute segregation 2-109846
 neutron irradi. at 55°C, effect on mech. props. in type 316 2-69866
 neutron irradiated, 14 MeV, strengthening and microstruct. alterations, determ. by microhardness 2-103848
 neutron irradiated, microstruct. and rel. to creep and hardening, in type-348 2-105231
 nonuniform plastic flow in tension, discontinuous straining effects 2-62141
 nuclear reactor constructional materials, liq. Na influence on strength, calc. method 2-96112
 oxidation in CO_2 coded reactors 2-64483
 partially martensitic, deformation mode effect on sensitisation 2-67423
 phase transformations, H-related 2-111298
 pitting in the atmos., airborne contaminants effect of types 130, 304, 316 2-77973
 plate, local and integral strain behaviour, elastic plastic anal. for X6NiCr1811 steel 2-65535
 PM steel, oxide inclusions effect on mech. props. and annealing 2-67422
 powder, hot ductility effect of Pb and Bi 2-88129
 precipitation reactions, effect of stabilising additions 2-72699
 precipitation strengthened, flow localisation and shear band form. 2-105252
 radially solidified, B doped, pre-irrad. spatial distrib. and stability of boride particles in the 316 2-85211
 radiation induced evolution, neutron spectra effects on type 316 2-109845
 radiation-induced recrystallisation, annealing twins absence 2-105187
 Raman spectroscopy combined with ion bombardment to depth profile oxide films 2-77505
 rapidly solidified, high Ti stabilised, mech. props. and struct., irradi. effects 2-72765
 rapidly solidified, path A prime candidate alloy, microstruct. after Fe and He ion irradi. 2-108115
 rapidly solidified, path A prime candidate alloy, neutron irradi., microstruct. 2-108112
 rapidly solidified Al_2O_3 dispersion strengthened, microstruct., path A alloys in type 316 2-88094
 refinement, for corrosion resist. improvement 2-72870
 scale phase composition and steel structure changes during oxidation at 1100°C 2-62284
 SCC behaviour, effect of surface modification 2-116595
 SCC in NaCl soln., potentiostatic method (*Japanese*) 2-105376
 sensitisation, controlled purity alloys 2-116600
 sensitisation, model, expt. evaluation 2-82651
 sensitised, corrosion fatigue, crack growth and AE behaviour, SEM obs. (*Japanese*) 2-83281
 sensitised, stress corrosion cracking in high temp. water, effect of fluid flow 2-88259
 steel, 316 plates, effects of C and N on corrosion resist. to liq. Li 2-105370
 steel, austenitic stainless, Nb-stabilised, neutron irradiated, void-swelling and precipitation 2-105154
 steel needles, austenitic stainless, corrosion on ringer soln. (*Japanese*) 2-78007
 strain limit at elevated temperatures, creep tests 2-105255
 strengthened by phase strain hardening and ageing 2-72741
 strengthening, by low temp. deform. 2-105182
 strengthening and weakening of austenite during hot deformation 2-72734
 stress corrosion cracking, gamma ray effects (*Japanese*) 2-57533
 stress corrosion cracking, intergranular, in Na_2SO_4 soln., affect of dissolved O 2-88258
 stress corrosion cracking, intergranular, susceptibility effects of comp., thermodynamic model 2-93659
 stress corrosion cracking test, using notched round bar specimen, in H_2SO_4 -NaCl soln. (*Japanese*) 2-83280
 stress corrosion cracks, TEM study 2-88266
 structural, high temp., high cycle fatigue strength, procedure for estimating 2-62368
 structure, effect of cold working and annealing 2-67370
 surface activity, co-segregation behaviour of non-metallic elements with metallic elements, AES study (*Japanese*) 2-83126
 surface blistering in fusion reactor under neutron irradi. 2-54659
 surface hardening and microstruct. changes, influence of US vibr. 2-99538
 surface segregation, AES obs. 2-83288
 swelling, effect of solid transmutation products 2-108111
 swelling and microstructure, fission-fusion correl. 2-85222
 TEM observations of crack tip-cavity interactions 2-71521
 tensile properties, high temp., of type 316 2-105270
 thermal and electrical conductivity of standard ref. material SRM-735, anomalous behaviour 2-104343
 thermal fatigue cracking, appl. of low cycle fatigue data 2-88153
 thermal shock fatigue, Type 304 and 316 steels 2-57443
 thin-walled tubes, state variable anal. of elastic deform. 2-57398
 Ti effect on microstructs. changes rel. to void swelling in type 316 2-86741

austenitic stainless steel continued

- tritium charged, helium embrittlement at ambient temp. 2-111312
 type 304, dual-ion bombarded, crit. cavity sizes 2-109860
 type 304, dual-ion bombarded, crit. cavity sizes 2-109861
 Type 304, sensitised, low-temp., intergranular fracture and grain boundary chem. 2-105328
 Type 304, shock-loaded, transform. mechanism and α' -martensite morphology 2-93509
 Type 304, Te implantation effect on creep rate and oxidation resist. 2-93576
 type 316, first wall material evaporation in ICF reactor utilising gas protection 2-74920
 type 316, first wall materials vaporisation and melting in fusion devices 2-74919
 Type 316, fusion radiation damage simulation expt., He-to-DPA ratio calcs. 2-85230
 Type 316, in-reactor fatigue expt., dynamic irradiation effect on crack propagation 2-88309
 type 316, protection plate for INTOR divertor collector plate 2-74903
 type 316, secondary ions ejected by D^+ , He^+ ion bombardment, energy anal. 2-93355
 Type 316, stress/strain relation, modified Hollomon eqn., grain size depend. 2-67453
 Type 316 irradiation, miniature tensile specimen testing 2-88312
 type AISI 316L, structural material for fusion reactor appl., Ta protective coatings 2-74911
 Types 304 and 316, dual ion bombarded, He partitioning to extended defects 2-86755
 unirradiated high temp. fatigue in vacuum, comparison with V-Cr-Ti (15, 5 wt.%) 2-72805
 unutilised, creep crack growth in air and Na 2-111264
 unstable fracture, theoretical and expt. study with soft tensile testing machine 2-111262
 US inspect. using horizontally polarized shear waves 2-111445
 void nucleation, during HVEM irradiation, effect of implanted He 2-109834
 void swelling, 1.1 MeV N-ion irradiation, TEM study 2-109854
 void swelling, during HVEM irradiation. 2-109835
 void swelling in type 316 under long time proton irradiation. 2-102038
 volumetric inspection of moderately thick specimens by multifrequency eddy currents 2-62297
 weld metal, carbide form. at 649°C 2-67345
 weld solidification structure, and transform behaviour, effect of quenching 2-99412
 welded joint, stress corrosion cracking in boiling $MgCl_2$ soln. (Japanese) 2-72868
 weldment, US testing by transmitter-receiver type longitudinal-wave angle-beam probe 2-78040
 weldments, 316 and 347, US inspection of fatigue cracks 2-67671
 wire, austenite-martensite transform. induced by torsional strain, mag. obs. 2-72696
 yield strength changes during fission or fusion irradiation, microstruct. origins in type 316 2-71507
 Al vapour-diffused coating 2-105385
 Al-, Mo-containing, corrosion fatigue props. at 20 kHz 2-57510
 C-precipitation influence, at low-temp, impact strength, corrosion, austenite stability in types AISI 302, 304, 316, 347 2-57508
 Ca-Ni-Mo-Mn, Mo distrib. during long-term holding between 554 and 654°C (French) 2-72700
 Cr-Mn, low-Ni, intergranular Li penetration 2-111371
 Cr-Mn uniaxial tensile props., Li exposure influence 2-80178
 Cr-Ni, combined shock loading and high-speed deform. effects 2-99560
 Cr-Ni-Mo (15, 15, 1 wt.%), DIN 1.4970, precipitation behaviour (German) 2-67343
 Cr-Ni-Nb weldable stainless steels, hot ductility characts. and solidification behaviour (Japanese) 2-77815
 Cr-Ni-Ti(Al), austenitic, rel. between struct., internal stress, and creep rate 2-83177
 He bubble form., influence of temp., stress and time 2-108114
 He embrittlement, high temp. in-beam simulation of type DIN 1.4970 2-71519
 He embrittlement, microstruct. aspects in type 316 2-71518
 Mn diffusion in Cr-Ni steels 0Kh16N15M3B and 1Kh 18N10T 2-71695
 Mn, irradiation with 46 MeV Ni^{10+} , microstruct. before and after 2-92051
 Mn-Cr, electron irradiation, swelling behaviour, influence of He 2-109836
 Sb^+ ion implantation, martensitic transition, Rutherford back scatt. study 2-76658

austenitic steel

- see also austenitic stainless steel
 a high-strength, fatigue limit, grain size and γ -phase stability influence 2-72822
 austenitic weld, mechanised in-service US inspection in nuclear plants 2-99620
 baionitic transformation kinetics, US treatment effect (Russian) 2-67325
 constructional, fine-grained austenite struct. formed in α - γ recrystall., stability (Russian) 2-67376
 crack growth, in gaseous corrosion environments 2-83285
 cyclic strength and damping capacity, effect of stability of austenite struct. in deform. 2-111307
 deformation induced martensitic transform. and transform. induced plasticity 2-83116
 diffusivity and solubility of H_2 , electrochemical determ. in type 304 (Japanese) 2-104064
 fatigue, low-cycle, 800°C, dislocation configuration, TEM and SEM study (French) 2-88190
 fatigue crack propagation expts. (Japanese) 2-57462
 grain boundary dislocations, spreading, yield stress depend. 2-66011
 grain size determ., by US backscattering 2-62328
 high Mn, non-magnetic plate for fusion reactor structure 2-69835
 high-C, segregation of Si on austenite grain boundaries and austenite/carbide interfaces 2-105161
 high-speed, hydroextruded, austenitic grain size 2-111197
 Laves phase scale precipitation of type 0Kh16N15M3B following neutron irradiation. 2-54509
 low C, supercooled austenite, abnormal decomp. 2-72666
 Ni-Ti, a high-strength, fatigue limit, grain size and γ -phase stability influence 2-72822
 oxidation, edge-on TEM obs. of metal-oxide interface 2-72889
 precipitation hardened, LMFBR materials, neutron irradiation effects 2-107950
 precipitation hardening, carbides and nitrides (French) 2-67361

austenitic steel continued

- rolling in anomalous-plasticity temp. range 2-99464
 solid solution, LMFBR materials, neutron irradiation effects 2-107950
 steel, austenitic cutting tool heat treatment, for austenite grain size meas. as hardness assessment method (German) 2-57476
 strain hardening, depend. on struct. parameters 2-77844
 strongly radioactive, X-ray microanal. of C diffusion (French) 2-67786
 supercooled austenite, decomp. products morphology changes during continuous cooling, HTMT influence 2-105159
 supercooled austenite precipitation after forced austenitization, kinetics (Russian) 2-93516
 ultimate strength determ., reliability of NDT methods of type 30KhGSA 2-93742
 weld and overlay testing using longitudinal waves 2-83331
 welding material, NDT, combined methods (German) 2-116661
 Cr-Mn 2-82109
 Cr-Mn(Ni), Mossbauer spectra, rel. to C and N incorporation 2-104751
 Cr-Ni, surface (100), water vapour adsorption, AES studies 2-66343
 Ni, hot deform., substruct. effect on austenite strength 2-72735
 Ni-Cr (30.30 wt.%), high temp. carburisation correl. with creep-rupture props. 2-62265
 Ni-Cr austenite steel, stable oxide film formation in N_2O_4 coolant 2-113627
 Ni-Cr-(Mn), P segregation during austenitisation, effect on cracking and embrittlement 2-57357
 Ni-Mo, strength increase by γ - α transition cycles during slow heating (Russian) 2-105225
 Ni-Mo, strengthened by phase strain hardening and hydroextrusion, mech. props. 2-72715

autoionisation

- see also Auger effect
 acetylene, autoionising Rydberg series, photoionisation study 2-70351
 alkali metal clusters, photoionisation and fragmentation in supersonic mol. beams 2-102547
 alkaline earth atoms, two electron Rydberg states 2-70160
 aqueous solutions, free energies, electron transfer, photoelectron obs. 2-110009
 atomic physics conference, Cambridge, MA, USA (Aug. 1980) 2-68959
 atoms, laser induced autoionisation, spontaneous emission effect 2-70200
 atoms, resonance EM field effect on autoionisation states (Russian) 2-64934
 atoms and molecules, bound states, predissociation, autoionisation, photon as catalyst effect 2-75361
 Auger decay of autoionising states in external electric field 2-85599
 Born-approx. electron ionisation cross section, oscillator strengths, proton stopping power calc. 2-96644
 coherent decay of collisionally autoionizing atoms 2-70407
 ethylene, angle resolved PES as a function of photon energy using synchrotron radiation 2-85740
 free ions, quantitative VUV absorpt. spectroscopy 2-70175
 laser-induced autoionisation, relax. effects 2-102441
 multiphoton ionisation spectra, autoionisation resonance narrowing 2-85600
 multiply charged ions, electron impact ionisation via autoionisation states with inner-shell vacancy 2-80815
 organic gas phase negative ions, IR multiphoton photodetachment 2-85750
 positron-atom system, energy spectrum investigated within Bohr's atomic model 2-59975
 quasimolecular potential curve reconstruction from emitted electron spectra (Russian) 2-54915
 Rydberg series, spectrum anal. from MQDT, computer program 2-64905
 tetracene, photoemission data, carrier photoproduction autoionization mechanism 2-67196
 transition metal atoms, electron impact ionisation, excitation autoionisation effects 2-59945
 Al vapour, photoabsorpt. cross section near first ionisation limit 2-59764
 Ba, excited state, autoionisation, spectra 2-90487
 Ba, Rydberg states, config. interaction calcs. 2-90462
 Ba⁺ VUV autoionisation-pumped laser 2-70551
 Be, photoionisation studied using CI theory, energy levels and oscillator strengths 2-102444
 CO₂, autoionisation reson. studied using triply differential photoelectron spectroscopy 2-96648
 Ca, autoionisation state excitation and electronic decay 2-80545
 Cd, photoelectron spectra, autoionising reson. profiles 2-96520
 Cs, continuous spectrum, autoionisationlike resonances 2-96517
 CsI spectral continuum, laser induced autoionising-like resonances 2-96650
 Fe¹³⁺, electron impact ionisation via autoionisation states with inner-shell vacancy 2-80815
 Fe¹³⁺ plasma, dielectronic recombination via autoionisation states 2-103283
 GaI and GaII, 13-500 eV electron impact excitation, autoionising transitions, ejected electron spectrum 2-75211
 H-like ions, excitation and ionisation mechanism, role of autoionising states 2-65684
 H₂, vibrational autoionisation, photoelectron spectrosc. obs. 2-90638
 He, electron impact autoionisation, double and triple differential cross sections 2-96740
 He-like ions, multiply charged, reson. photoabsorpt. characts. 2-113949
 K, efficiency of isotopically selective laser excitation 2-70438
 K, electron impact excitation of lowest autoionising states 2-80820
 Kr, autoionising states obs. using low energy electron impact excitation and ejected electron spectroscopy 2-64932
 Kr, dimer, relative photoionisation cross section 2-70346
 Li atomic K-shell, absolute photoabsorpt. cross section 2-70201
 Li, autoionising states in low lying triplet excited reson., saddle point technique 2-64933
 Li, electron impact excitation of lowest autoionising states 2-80820
 Li He, mol. autoionisation, electron spectra 2-102582
 Li, photoionisation studied using CI theory, energy levels and oscillator strengths 2-102444
 Li⁺ + He, excited quasimolecular state form., autoionisation, electron spectra 2-59894
 Mg, resonance phenomena and post-collision effects (Russian) 2-108724
 N₂⁺ (A to X) and N₂⁺ (B to X) fluoresc. excitation spectra by photon impact 2-96622
 NH₃, multiphoton ionisation, mass anal., photoelectron spectra 2-90624
 NO, electron-impact excitation to long-lived Rydberg states 2-90723

autoionisation continued

- Na, electron impact excitation of lowest autoionising states 2-80820
 Na I, radiative decay of autoionisation states (*Russian*) 2-80546
 Na vapour, efficient tunable optical freq. tripler at autoionisation-like resonance 2-81025
 Na-like ions, electron impact ionisation rate, ionisation cross section, excitation-autoionisation contrib. 2-102636
 Na₂, autoionising Rydberg states, optical-optical double reson. obs. 2-59829
 Na₂, autoionising Rydberg states, ionisation pot. determ. 2-70352
 Ne, photoionisation and state selected polarised Ne⁺(2p⁵P_{3/2}) 2-96518
 Ne, photoionisation from ground and excited states, autoionisation states 2-80547
 Ne⁺, autoionisation produced in collisions with Al surface 2-57231
 O₂, electron-impact excitation to long-lived Rydberg states 2-90723
 PO in C₂H₂/air flame, two-photon ionisation processes 2-102549
 Pt (III), adsorbed CO, photoemission reson. enhancement via autoionisation obs. 2-77700
 SO₂, autoionisation states, vibr., mol. beam photoionisation mass spectrometry 2-80644
 Xe long-lived excited atoms, autoionising resonances in photoionisation 2-54814
 Zn absorption and dispersion study of 4s4p ³P-4p² ³P multiplet 2-85598
 Zn, electron impact excitation, decay of autoionised state, postcollisional interaction effect 2-54966

automata theory

- see also *stochastic automata*
 physical Universe, cellular automata models 2-95698

automatic frequency control

- digital, acoustic and vibration measuring systems appl. (*German*) 2-95368
 optical fibre heterodyne communication systems—an electronic automatic frequency control system 2-81115

automatic gain control

- multichannel analog recorders, digital AGC for seismic signals 2-73712
 plastic scintillation probe, automatic gain control stabilisation (*Spanish*) 2-64791

automatic test equipment

- autocollimation instrument, deviations from rectilinear surfaces meas. 2-63975
 autoranging capacitance meter for range 100 pF to 1000 μF 2-74462
 BWR solid state safety system self-testing 2-85200
 digital balanced instrument for f_T and β₀ meas., bipolar transistors testing appl. (*Chinese*) 2-69156
 electronic artificial reverberator, design (*Spanish*) 2-97333
 grain size measurement with X-rays, SOL-X on-line NDT method 2-105394
 industrial atmospheres automatic surveillance by computerised centralised IR spectrometer (*French*) 2-62528
 instrumented impact test machine 2-78029
 microhardness test unit for high-temp. strength materials under high-temp. cyclic loading 2-99635
 mobile automatic installation for testing metering vessels 2-63977
 motion meas. system for clinical gait anal., automated 2-105812
 Narda Model 7000 A Analyser system, microprocessor-controlled microwave tester (*German*) 2-112925
 optical fibre/cable ATE, attenuation and pulse broadening, core/cladding diam., numerical aperture 2-81135
 polymer films, creep and life testing apparatus 2-62317
 pulse-echo US imaging system with adaptive learning network signal processing methods 2-81191
 seismic prospecting, system for automatic testing of PROGRESS digital stations (*Russian*) 2-94535
 stability checking for DRON-2 diffractometer 2-74479
 static tensile testing system, automated 2-67702
 thermophysical low-temp. meas. control, microcomputer-based system 2-53773
 ultrasonic testing system, automatic, for fission reactors 2-107974
 unknown impedance meas. in automatic tester 2-64062
 US inspection of adhesive bonded struct. 2-78043

automatic testing

- chamber preamplifiers/amplifiers system 2-70104
 flat specimens, fatigue cracks obs. expt. and data processing automation 2-72899
 flaw location for automated US testing, comparison of 3 methods 2-83322
 flaw type, position and dimension charact. by transit time locus curves of US inspection (*German*) 2-62335
 laser-resonator alignment testing, comprehensive control using software system 2-108908
 microcomputer-based system for instrumented impact testing 2-78038
 specular metal surfaces, dent and scratch detect. using optical-digital technique 2-109085
 surface cracks in steel slabs at red heat, picture processing appl. (*Japanese*) 2-105409
 test points selection, for automatic checking of meas. facilities 2-63957
 US testing, and recording system for welds utilising microcomputer 2-62332

automobiles

- automobile engine using hydrogen storage technology, mixture formation and combustion 2-83443
 cooperative international liquid hydrogen automotive progress report 2-73166
 Daimler-Benz hydride vehicle project 2-57742
 passenger compartment, structural-acoustic finite element anal. 2-75780
 pressure sensor appl., differential membrane (*German*) 2-53748

autoresonant accelerators see *collective accelerators***avalanche diodes**

- see also *avalanche photodiodes*; *IMPATT diodes*
 No entries

avalanche photodiodes

- digital fibre-optic system error rate evaluation using an avalanche photodiode 2-109060
 AlGaAs-GaAs superlattice avalanche photodiode, multilayer detector for low noise appls. 2-53841
 AlGaAsSb-GaSb, multilayer avalanche photodiode low noise detector for 1.3 μm fibre optic systems 2-53833
 GaAs-AlGaAs avalanche photodetector, single-carrier-type dominated impact ionisation 2-84701

avalanche photodiodes continued

- Ge, detectors for digital optical fibre systems in 1.2 to 1.55 μm range 2-55352
 Ge, for long wavelength optical fibre systems, review 2-81117
 Hg_{1-x}Cd_xTe avalanche planar photodiode, bandgap spin-orbit splitting reson. effects 2-115719
 InGaAlAs-InGaAs, multilayer avalanche photodiode low noise detector for 1.3 μm fibre optic systems 2-53833
 InGaAs-InP, for long wavelength optical fibre systems, review 2-81117
 In_{0.53}Ga_{0.47}As/InP heterostruct. avalanche photodiodes, deep levels 2-110284
 InP-InGaAsP planar heterostructure avalanche photodiodes, multiplication noise 2-56675

avalanches, carrier see *impact ionisation***avalanches, electron** see *electron avalanches***avalanches, electron-hole** see *impact ionisation***avionic systems** see *aircraft instrumentation***Avogadro's number** see *constants***axicons** see *lenses***axiomatic field theory**

- 1+1 dimensional spin models, O(2) and O(3), mass gap, Monte Carlo calcs. 2-89899
 (1/√|g_{μν}|^{1/2})₂ model, analytic interpolation and Borel summability, finite vol. approx. 2-74586
 λφ⁴ theory, quartic self-coupling const., curvature effects in closed Einstein Universe 2-89601
 λφ⁴ theory in curved space, trace anomalies 2-74584
 σ model, four dimens., static axially symmetric solns. 2-107519
 σ model, linear, Martinielli-Parisi expansion 2-89908
 σ model, nonlinear, infinitesimal Backlund transform., generalised symm. 2-79748
 σ models, nonlinear, on symm. spaces, large N limit 2-95607
 σ models, nonlinear supersymm., quantum nonlocal conserved charges 2-95579
 σ models, strong coupling vs. large N 2-53943
 Φ₂⁴ theory, divergent perturbation series 2-53922
 Φ₂⁴ critical behaviour from Ising model massive continuum limit 2-53954
 φ⁴ euclidean scalar field theory on four and three dimensional lattice, continuum limit 2-95619
 φ⁴ theory, effective pot. calc. 2-53969
 φ⁴ theory, massive, coupling const., temp. depend. calc. 2-101554
 (φ⁶)₃ field theory, fixed point structure at large N 2-53957
 φ⁶ field system, finite temp. behaviour 2-95593
 abelian gauge theories and spin systems, massless phases and symmetry restoration 2-53926
 Abelian gauge theory, Euclidean path-integral representation 2-107532
 abelian lattice gauge theories, duality and θ parameter, CP violation 2-79742
 Abelian lattice models, duality transforms., algebraic formulation 2-107484
 algebraic field theory, localisation 2-101511
 asymptotic freedom scales for any single plaquette action 2-79744
 atomic mechanics, hadronic generalisation, interior strong problem, bimolecular genotypic Hilbert space formulation 2-113111
 atomic mechanics, hadronic generalisation, modular isotopic Hilbert space formulation for exterior strong problem 2-113256
 axially symmetric gravitational two-body problem 2-95171
 Backlund transformation for axially symmetric SU(N) Bogomolny eqns. 2-95660
 Backlund transformations and lattice systems with G-gauge symmetries 2-74603
 bag fusion in SU(2) Yang-Mills matter and colour deconfinement 2-84847
 bags, non-gauge lattice models 2-69427
 baryons, loop average in large N limit 2-69420
 bilocal lattice fermion fields, relativistic partial difference eqn. 2-113128
 bilocal lattice meson fields, relativistic partial difference eqn. 2-113127
 Callan-Symanzik γ meson function in 1/N_c expansion 2-79829
 chiral bag model, ρ-meson coupling 2-64298
 classical SU(2) gauge theory, axially symmetric solns. 2-53956
 compact QED in three space-time dimensions, expansion near weak coupling 2-113202
 compact QED with an extended lattice action 2-89897
 composite quarks and Cabibbo mixing 2-59128
 CP₁ model, instanton contribution for spherical and periodic boundary conditions 2-101557
 CP₂^{N-1} model with quarks on lattice, lattice fermion, pion mass, PCAC 2-69338
 CP^{N-1} model, large-N limit, quantum fluctuations round topological singularities 2-69352
 CP^{N-1} models, finite action solns. 2-69326
 CP^{N-1} theory, in two dimens., dense instanton gas, statistical mech. 2-53990
 critical lattice model, correl. functions, renormalisation group study 2-58996
 curved space-time, axiomatic quantum field theory 2-59005
 disorder variables and local kink operators, euclidean functional integral approach 2-53953
 dual chiral models, SU(2) invariant, in low coupling limit 2-101604
 duality-transformed Wilson loop operator 2-107500
 Eguchi-Kawai lattice gauge model, in SU(N), N=2, 3, 4, 5, 10, Monte Carlo calc. 2-101542
 Euclidean, Feynmann n-graphs, upper bounds, Holder inequality estimate 2-84576
 Euclidean (QED) construction via lattice gauge theory, boundary conditions, vol. depend. 2-59089
 Euclidean field theories, classical solns. 2-54001
 Euclidean field theories, phase cell cluster expansion 2-107489
 Euclidean fields, infrared singularities caused by gauge fixing 2-54004
 Euclidean Green function, generating functional, Legendre transform., cluster irreducibility 2-74610
 Euclidean path integral representation of massive vector field 2-59027
 Euclidean theory, sample path continuity, measures weak compactness 2-101526
 excited glueball states in four-dimensional SU(3) lattice gauge theory 2-107633
 Faddeev-Popov formula, nonperturbative modification 2-107538
 Fermi systems, structure results for Segal quantisation 2-112731

axiomatic field theory continued

- fibre bundle description of gauge theory, holonomy group and spontaneous symmetry breaking 2-74596
- four-dimensional Z_2 lattice gauge theory linearisation 2-84799
- free massless scalar theory, two-dimens., indefinite metric formulation 2-79754
- Froissart bound of elastic scattering amplitude, saturation 2-113120
- $g\phi^4$ theory, Green function in instanton field 2-107549
- gauge and spin field hamiltonians in the finite lattice approach 2-53950
- gauge theories, non-Abelian axial anomalies, nonperturbative proof 2-84808
- general self-dual spin models in two dimensions 2-107253
- generalised Villain models, Migdal recursion relations 2-107543
- geometric analyses of ϕ^4 fields and Ising models 2-107496
- glueball mass, in $SU(2)$ lattice gauge theory, Monte Carlo calc. 2-107635
- Hamiltonian lattice gauge theories, gauge-invariant variational methods 2-95627
- Hamiltonian $U(N)$ lattice gauge theory, $N=\infty$ phase transition absence 2-95628
- Harrison-Neugebauer-type transformations for instantons, multicharged monopoles as limits 2-95623
- heat kernel lattice gauge theory, phase transition at large N 2-89900
- Heisenberg model in 2-dimens. with x-y like anisotropy, unit topological charge instanton config. 2-53952
- Higgs fields on finite volume, lower bound 2-107495
- higher Legendre transforms, relationship to Bethe-Salpeter kernels and r-field projectors 2-74595
- HKX transformations, new representation 2-89602
- homology theory of lattice fermion doubling 2-113099
- instanton gas parameters in the double well model 2-101573
- integrable field theories, conf., Tvarminne, Finland (Mar., 1981) 2-84388
- interface between QFT and stat. mech. 2-95663
- Ising model, two-dimens., Green's functions 2-53996
- Kalb-Ramond particles, massless, dynamical stability 2-101556
- Klein-Gordon eqn. with cubic nonlinearity, localised excitations study 2-95587
- Klein-Gordon equation, high-energy asymptotic expansion and Regge trajectories for even power pot. 2-95599
- large- N lattice gauge theory, reduction of dynamical degrees of freedom 2-69333
- large- N lattice group theory, random surface counting 2-53965
- large- N lattice QCD with fundamental and adjoint action terms 2-79759
- large- N lattice QCD with mixed fundamental adjoint action, phase struct. 2-64276
- lattice, Lorentz transform. 2-53929
- lattice boson field theory, soliton doubling 2-79769
- lattice colouring, solutions to triangle equations with variables on faces 2-107510
- lattice fermions, equivalence of degeneracy regularisations 2-95616
- lattice fermions, IR regularisation, rel. to δ -vacua 2-69354
- lattice fermions, numerical study using stochastic method 2-89909
- lattice field theory, equilibrium approach 2-95268
- lattice gauge field theory invariance, energy-momentum dispersion of glueballs 2-107515
- lattice gauge field topology 2-101509
- lattice gauge fields, nonAbelian, Bianchi identity 2-95635
- lattice gauge theories, alternative actions 2-107485
- lattice gauge theories, four-dimens., Monte Carlo simulation fast algorithm 2-64214
- lattice gauge theories, Monte Carlo calcs. 2-54003
- lattice gauge theories, torus magnetic-flux free energy inequalities and confinement 2-79747
- lattice gauge theories, with $SU(3)$ subgroup gauge, phase struct. 2-89904
- lattice gauge theories 2-53991
- lattice gauge theories with fermions on lattice, strong-coupling limit 2-101549
- lattice gauge theory, compact $U(1)$ in four dimens., Monte Carlo simulation 2-69355
- lattice gauge theory, continuum limit results 2-89907
- lattice gauge theory, free energy density bands 2-107512
- lattice gauge theory, Hamiltonian, spacelike Wilson loops, deconfining roughening transition 2-69353
- lattice gauge theory, large N limits as classical mechanics 2-79427
- lattice gauge theory, mean-field approx. 2-89901
- lattice gauge theory, microcanonical ensemble formulation 2-101544
- lattice gauge theory, mixed, phase diagram for large N 2-101516
- lattice gauge theory, Monte Carlo calcs., review 2-53916
- lattice gauge theory, Monte Carlo calcs., vectorisation for CYBER 205 computer 2-95590
- lattice gauge theory, Monte Carlo simulation, review 2-79733
- lattice gauge theory, off-axis plaquette-plaquette correl. functions 2-107536
- lattice gauge theory, quasiclassical approx. bridging gap between strong and weak coupling regions 2-89886
- lattice gauge theory, roughening transition 2-53993
- lattice gauge theory, $SU(2)$, $SO(3)$, $Z(2)$, mean field soln. with corrections 2-69337
- lattice gauge theory, $SU(3)$ discrete subsets, Monte Carlo simulation 2-95612
- lattice gauge theory 2-95668
- lattice gauge theory universality at large N 2-113100
- lattice gauge-Higgs system, magnetic monopole, mag. charge distrib. 2-59034
- lattice model of space-time 2-112754
- lattice QCD, axial current matrix element evaluation, quenched approx. 2-101560
- lattice QCD, large- N , mean field approx., chiral symm. breaking 2-89903
- lattice QCD, quark-antiquark state in strong-coupling limit 2-84851
- lattice QCD with fermions, high temp. behaviour 2-95750
- lattice quantum field theory, lattice action near continuum limit 2-101551
- lattice R-gauge theories 2-95652
- lattice regularisation and continuum theories 2-95662
- lattice Schwinger model and anomalies 2-101562
- lattice $SU(2)$ gauge theory, finite temp. Monte Carlo study 2-53994
- lattice theories, truncation algorithms, exact real-space renormalisation group 2-69342
- lattice theories of fermions, criterion for chiral symmetry 2-84806
- lattice theory, massless fermions, doubling elimination 2-95638

axiomatic field theory continued

- lattice versions of quantum field theory models in two dimensions 2-101517
- lattice Yang-Mills theories, infinite vol. limit for pressure 2-84785
- lattice Yang-Mills theory, fermionic determinant 2-53977
- locality and the structure of particle states in gauge field theories 2-101577
- locally gauge-invariant four-fermion models on a lattice 2-107502
- massive Thirring model, multi-extended objects excitation 2-84807
- massive Thirring model thermodynamics for weak sine-Gordon coupling regime 2-74373
- massless lattice models, renormalisation group based convergent expansion 2-95664
- massless scalar fields with trivial S-matrix 2-113097
- massless Schwinger model on lattice, via local Monte Carlo algorithm 2-107508
- metric tensor determ. from Riemann tensor, extension to electrovac fields 2-95149
- Migdal recursion formula, potential-moving derivation, differential renormalisation, duality 2-79749
- mixed $SO(3)$ $SU(2)$ lattice gauge theories, phase structure, monopoles 2-53949
- modified Eguchi-Kawai model 2-107535
- modified lattice gauge theory, order parameters 2-95626
- Nielsen-Ninomiya theorem for lattice models of non-selfinteracting chiral fermions 2-107492
- non-abelian gauge symmetry, two-dimensional model 2-84788
- non-abelian gauge theories, local observables 2-59009
- non-local field theories, canonical constants of motion 2-95581
- noninteracting Bose and Fermi fields, Euclidean lattice thermodynamics, finite size effects 2-89902
- nonlinear σ model, $1/N$ expansion, Borel summability 2-107497
- nonselfadjoint systems, non-Euclidean and non-Desarguesian geometries 2-95054
- nonstandard analysis, appl. to path integrals and generalised functions 2-113123
- $O(3)$ lattice, topological charge 2-101514
- $O(3)$ lattice spin model, Z_2 vortices, Monte Carlo calc. in two dimens. 2-89898
- $O(N)$ Heisenberg spin operator, collective field in Hamiltonian and Lagrangian approach 2-74617
- $O(N)$ lattice models, $N=2,4$, two dimens., Monte Carlo calcs. 2-53997
- $O(N)$ model, $1/N$ expansion, spontaneous symmetry breaking 2-64231
- off-axis glueball masses, strong coupling expansions from lattice gauge theory 2-95782
- one dimensional quantum Ising model with transverse mag. field, first integrals 2-53988
- $P(\Phi)$ model, three body asymptotic completeness 2-107491
- periodic QED models, $U(1)$ gauge group with mixed actions, phase structure 2-84839
- perturbative QCD, conf., Tallahassee, FL, USA (March 81) 2-53409
- phase diagrams for low temperature $P(\phi)$, quantum field models 2-95665
- photon propagator singularity in axial gauges 2-89929
- pion in nuclear physics and QCD 2-54065
- Potts model, first-order phase transitions 2-58717
- pure $SU(2)$ lattice gauge theory, glueball masses, Monte Carlo method 2-69339
- QCD, glueball mass spectrum, lattice Monte Carlo calc., $SU(2)$ gauge theory 2-59108
- QCD, massless 4-D and lattice, long range chiral structure, Monte Carlo study 2-101647
- QED, Hamiltonian formulation in superaxial gauge 2-113199
- quantum gravity in $1+1$ dimensions with zero cosmological constant, exact soln. 2-79457
- quarkless $SU(2)$ lattice gauge theory, strong coupling expansion, phase transition, effective action 2-59041
- quenched Eguchi-Kawai model, Monte Carlo 2-107534
- quenched Eguchi-Kawai model, phase transition 2-113130
- quenched Eguchi-Kawai model, spontaneous symmetry breaking 2-84798
- radiation planckoon, geometric model 2-95646
- random Gibbs fields on lattice, compactness and maximal Gibbs state 2-84548
- random lattice field theory, general formulation 2-107499
- real self-dual Yang-Mills theory, infinite parameter symmetry group 2-95615
- real-space renormalisation group, thinning high-frequency modes, adiabatic method 2-95637
- recent progress, conf. Bad Honnef, Germany (Sept. 1980) 2-53432
- relativistic electron theory, axialisation (Rumanian) 2-113094
- relativistic fields, manifold-based, CPT and gravit. induced thermal states 2-107483
- relativistic strings path integral 2-84877
- renormalisation group eqns. and renormalisation scheme specification 2-107537
- RP^2 spin model in 2-dimens., phase transition, numerical evidence 2-53960
- scalar model, non-renormalizable field theory, high-temp. expansion 2-69320
- scattering in lattice gauge theories 2-53998
- self-dual $SU(2)$ gauge fields on Euclidean space, soliton solns. 2-95597
- snoidal kinks in ϕ^4 field system, statistical mechanics, renormalisation effects 2-101566
- $SO(3)$ lattice gauge theory, defect melting 2-95617
- $SO(3)$ lattice gauge theory, monopoles, vortices, confinement 2-89896
- spinor electrodynamics, generalised commutation relations 2-79737
- static axially symmetric self-dual gauge field eqns., soln. generation techniques 2-84795
- static axially symmetric self-dual gauge field eqns. for arbitrary group, complete integrability 2-53945
- static axially symmetric self-dual gauge fields, algebraic construction 2-84796
- static Euclidean anti-self-dual $SU(2)$ Yang-Mills eqns. perturbation 2-79772
- static monopole and geodesics 2-58997
- statistical mechanics of quarks and hadrons, conf., Rielefeld, Germany (Aug. 1980) 2-53423
- Strocchi-Wightman, free field case 2-95582
- strongly coupled lattice QCD, baryons in effective lagrangian, $SU(3)$ pot. 2-101644
- $SU(2)$ adjoint Higgs model 2-95788
- $SU(2)$ lattice gauge theories, asymptotically free scaling onset 2-107544

axiomatic field theory continued

- SU(2) lattice gauge theories, interquark pot., Monte Carlo evaluation 2-95753
- SU(2) lattice gauge theory, continuum limit estimates near crossovers 2-95611
- SU(2) lattice gauge theory, first order phase transition 2-69335
- SU(2) lattice gauge theory, potential and restoration of rot. symm., Monte Carlo simulation 2-101598
- SU(2) lattice gauge theory, Z_2 mag. monopoles 2-59047
- SU(2) lattice gauge theory dynamics, monopoles and vortices 2-79745
- SU(2) lattice gauge theory with quarks, mean field anal., coupling constant 2-69336
- SU(2) monopoles, Corrigan-Goddard conditions for n monopoles, exact solns. 2-79764
- SU(2) Yang-Mills theory in (1+1) dimensions, finite-lattice method 2-53944
- SU(2)-invariant lattice theories, local and global invariance, algebraic struct. 2-69327
- SU(2)-SO(3) lattice gauge theory, 2nd order deconfining transition, continuum limit 2-79743
- SU(3) glueball mass numerical estimation 2-84857
- SU(3) lattice gauge theory predictions for low- Q^2 phenomenology 2-54074
- SU(3) lattice QCD, hopping parameter expansion, meson and quark masses 2-69410
- SU(3) lattice QCD, meson spectrum, quark masses, analytic calc. 2-89939
- SU(3)XSU(2)XU(1)XU(1) model, low-energy softly-broken supersymmetry 2-101546
- SU(4) lattice gauge theory, Monte Carlo algorithm vectorization 2-53927
- SU(6) lattice gauge theory, phase transition, Monte Carlo study 2-69344
- SU(N) gauge theory, Wilson line 2-84866
- SU(N) gauge theory couplings on asymmetric lattices 2-89905
- SU(N) invariant chiral model, instanton type soln. 2-95693
- SU(N) lattice gauge theories, boson representation 2-58995
- SU(N) lattice gauge theory with a generalized Villain's action 2-69321
- SU(n)/ Z_n XSU(n)/ Z_n spin system, phase struct. in two dims. 2-101518
- SU(N)/ Z_n lattice gauge theories, phase transitions in 4 space-time dims. 2-107541
- supersélection rules, local aspects 2-101510
- supersymmetric lattice gauge theories 2-84789
- supersymmetric Liouville action renormalisation and 3D Ising model critical exponent 2-79762
- supersymmetric particles with internal symmetries and control charges 2-79770
- supersymmetric theories, renormalisation procedure for effective pot. evaluation 2-101545
- suppression factor in SU(2)-SO(3) lattice gauge system 2-107557
- Thirring model, indefinite-metric quantum field theory 2-79756
- Thirring model, stability props. of meron-type solns. 2-101552
- three-dimensional O(N) theories, vacuum stability 2-84840
- two-dimensional Ising model, scaling limit and Osterwalder-Schrader axioms 2-74338
- two-dimensional non-abelian spin models, vortex condensation 2-79765
- two-variable relativistic tensor harmonics 2-53930
- U(1) compact gauge theory, in four dims., plaquette-plaquette correls., Monte Carlo study 2-79758
- U(1) problem, role of instantons 2-84781
- U(∞) chiral, 2-dimens. spin system, roughening phenomenon 2-59059
- U(N) gauge theories on lattices, $N=\infty$ master field for strong coupling 2-59012
- U(N) lattice gauge theories, two-dimens., partition function complex zeros 2-59045
- U(N) lattice gauge theory, planar random surfaces on lattice 2-101550
- U(N) one-dimensional chiral models, $N=\infty$ limit study 2-84805
- unified field theory in projective theory of relativity 2-95192
- vacuum medium props. in non-Abelian gauge theory 2-95730
- vacuum periodicity in instanton angle, chiral perturbation theory and fractional topological charge 2-101645
- variation principle, field manifolds and ideals 2-113143
- variation principle, symmetry and conservation law, M_1 framework 2-113144
- vector-like gauge theories with massless fermions, phase structure 2-53946
- Wadia's model of lattice gauge theory, elimination of phase transition 2-101558
- weak interactions and dispersion relations in localised axiomatic field theory 2-89918
- Wilson loop functionals and related eqns. for irregular paths, renormalisation 2-95588
- Wilson loops in lattice gauge theory, rigorous perimeter law upper bound 2-101559
- Yukawa theory, compositeness conditions, finite temp. effects 2-69346
- Z_2 gauge model on small three-dimens. lattice, partition function 2-89906
- Z_2 symmetric spin system, non-universality 2-107513
- $Z_N \times Z_N$ invariant vertex lattice model, partition function 2-113137
- Z_p lattice gauge model, phase struct. in presence of θ parameter, dyonic condensation 2-79741
- zitterbewegung and the Klein paradox for spin-zero particles 2-84417
- $\rho^+ \rightarrow \pi^+ \pi^0$ in SLAC lattice QCD theory 2-69455

backscatter

- see also particle backscattering*
- Arcibo incoherent backscatter meas., effect of antenna near field effects 2-84095
- atmospheric aerosol, backscatt. spectra for nonabsorbing accumulative fraction, calcs. 2-117425
- continuous differentiable surfaces, backscatt., anal. methods comparison 2-107124
- diffuse vegetation layer over a smooth surface, radar oblique backscatter and bistatic scatter 2-73557
- diode laser feedback effects due to Rayleigh backscattering from optical fibre 2-75570
- electromagnetic wave scattering by dielectric spheroids, comparison theoretical, exp. results 2-108769
- fibre loss measurement using optical time domain reflectometer 2-101449
- fibre optic temperature distribution sensor using time-domain reflectometry 2-91076

backscatter continued

- ionosphere, STARE obs. of long discrete echoes 2-112217
- laser backscatter, appl. to three-dimensional vector velocimetry 2-58132
- laser radar equation in the small-angle approximation 2-90969
- multimode optical fibres, mode conversion effects on backscattering meas. 2-97191
- ocean surface wind vector determ. from radar backscatter meas. 2-106371
- optical beam phase conjugation by stimulated backscatt., review 2-70621
- optical fibre attenuation coeff. meas. using backscattering method (*French*) 2-70691
- optical fibre backscatter signature simulations, computer-generated 2-95447
- optical fibre cable fault location using modified reflectometry techniques 2-64097
- phase conjugation with weak scatterers, backscatt. effect 2-90990
- random media, transient phenomena, diffusion theory, exps. using latex spheres 2-65171
- randomly nonhomogeneous media, backscatt., statistical theory 2-102697
- Seasat-SASS scatterometer, backscatter coeffs. rel. to sea surface stress determ. 2-83827
- SHF scattering at sea surface at small grazing angles, characts. 2-73653
- single-mode optical fibres, determ. of structural parameter variations by time-domain reflectometry 2-81089
- snow, Atmospheric Sciences Laboratory-MMTRN model for near millimetre wave backscatter 2-117393
- snow, falling, near-millimetre wave backscatter cross sections 2-117396
- stratosphere aerosol, obs. of enhanced lidar backscattering over central Europe during (1981) 2-100450
- water droplet, light backscatt. and glory effect visualisation 2-79308
- CO₂ laser fusion target optical diagnostics using backscatt. light 2-109589
- backward wave oscillations** *see backward wave tubes; electromagnetic oscillations*
- backward wave tubes** *see also carcinotrons*
No entries
- bagging** *see packaging*
- balance (physiological)** *see mechanoreception*
- balanced amplifiers** *see differential amplifiers*
- balanced input amplifiers** *see differential amplifiers*
- balances** *see also weighing*
automatic microbalance based on F117 photogalvanometer 2-74387
direct reading balance with new arrest mechanism (*Japanese*) 2-64021
dynamic weight detector for milligram particles using piezoelectric pick-up 2-69141
electronic, method for high accuracy meas. of mass 2-53739
electronic top loading, used for powder coherent strength meas. by tensile rupture test method (*Japanese*) 2-64022
fission reactor fuel, destructive analysis, meas. and shearing machine 2-107973
fission reactor fuel pin weighing machine, for Fuels and Materials Examination Facility 2-107976
manufacturing accuracy determ., for precision level-arm balances 2-58791
modified beam microbalance of Gulbransen type 2-63982
plasma etch and deposition monitoring using quartz cryst. microbalance 2-111095
strain-gauge, capacitive transducer linearisation 2-58809
strain-gauge, dynamic interference compensation 2-58808
torsion balance for gravitation and cosmology studies 2-53655
torsion scale for meas. of small gravitational field gradients 2-74386
- ball lightning** *see lightning*
- ballistics** *see also impact (mechanical); military equipment*
armour penetration ballistics studies, multiple ruby laser system for high speed photography 2-103131
layered target, hypervelocity jet effects 2-69007
metal targets, semi-infinite, penetration by deforming projectiles 2-89525
Rafael Terminal Ballistics Laboratory-facility and capability, review 2-75909
ruby laser photographic system, model in flight appl. (*Chinese*) 2-89837
steel projectile, spherical, transverse impact on fluid-filled cylindrical tubes 2-103017
- balloons** *see also aircraft*
air pollution measurement with new tethered radiosonde design 2-67904
anemometer for tethered balloon 2-73713
atmosphere, rising balloon motion in horizontal winds 2-94466
atmospheric mosaic meas., phenomenology and band selection 2-117477
Burst and Transient Source Experiment prototype for gamma ray astronomy 2-88252
kytoon-mounted US anemometer system 2-68418
meteorological super-press. balloon, diurnal height change model 2-63123
stratospheric, automatic attitude control system for IR telescopes (*Spanish*) 2-84097
- band gap** *see energy gap*
- band model of magnetism** *see also Hubbard model*
alloys, random muffin-tin, itinerant electron magnetism, multiple scatt. theory 2-104570
Anderson model, extended periodic, coexistent ferromagnetism and supercond. 2-92811
antiferromagnet, conduction electron self-localised state in strong mag. field 2-61388
bis-methylammonium copper tetrachloride, spin wave instability, subthreshold parallel pumping 2-110574
correlated hybridised bands in one dimension, exact results 2-56523
diamagnetism band structure calcs. 2-82557
ferro- and antiferromagnetism, spin fluctuation theory of coexistence 2-104569
ferromagnet, itinerant electron, Curie-Weiss law spin susceptibility, electron-phonon interaction mechanism 2-61687
ferromagnetic jellium model, surface characteristics, var. technique 2-72134
ferromagnetic semiconductor, critical shift of cond. bound bottom 2-77255
ground state of systems with strong Hund coupling 2-66754

band model of magnetism continued

- Hubbard model, local moments 2-82606
- Hubbard model with strong correlation; the equivalent hamiltonian (*Russian*) 2-92437
- itinerant electron magnets, magnetovol. effects, crit. temp. press. depend. calc. 2-66886
- itinerant electron magnets, spin correlations 2-115964
- itinerant electron system, mag. phase transitions 2-66753
- itinerant electron systems with local mag. moments, paramag. state, static props. 2-98837
- itinerant ferromagnet, press. depend. of mag. props. 2-87502
- itinerant ferromagnets, random, percolation limit, mean field scaling relations 2-66756
- itinerant magnetism, Anderson model 2-92853
- itinerant magnetism, two-band model 2-94955
- itinerant-electron ferromagnet, electron-phonon interaction effects 2-92855
- localised electron magnetism rel. to paramag. wave function of completely itinerant electrons 2-115965
- metals, magnetic surface states, angle resolved photoemission studies 2-66604
- specific heat and mass renormalisation 2-66828
- spin glass, itinerant model, mag. impurity conc. depend., paramag-spin glass transition 2-82609
- Stoner model, magnetovolume effects and Gruneisen parameters 2-56817
- superconductors, anisotropic, SDW state coexistence, energy gap struct. and nonmag. impurity effects calc. 2-87443
- surface and interface mag. props. 2-66772
- transition metals, BCC and FCC, mag. phase diagram at zero temp. 2-66817
- transition metals, energy band calcs. of magnetism 2-66749
- transition metals, ferromag., strong short range mag. order above Curie temp. 2-110594
- transition metals, local moments and magnetic ordering 2-77289
- Ce compounds, magnetic exchange interactions 2-92894
- CeAl₃, electronic struct. and mag. props. 2-66752
- Co(S₂Se_{1-x})₂, metamagnetic transition, mag. props. 2-92904
- Cr alloys, spin density wave state, Landau theory 2-66757
- Cr, spin density wave states, tight-binding approx. 2-66751
- Cr-V(Mn), spin density wave states, tight-binding approx. 2-66751
- CrSi, dil. alloys, first order phase transition from paramag. to commensurate SDW state 2-116003
- ErFe₂, spin polarised photoemission probing of magnetism 2-67184
- Fe (001) film, surface states, surface magnetisation, electron spin polarisation 2-61540
- Fe, ferromagnetic transition, character 2-56872
- Fe, magnetism, fluctuating local band theory 2-82558
- Fe-Co, BCC, mag. moments and lattice consts., band theory 2-72133
- FeTi, spin polarised photoemission probing of magnetism 2-67184
- HfNi₂Si₂, magnetic susceptibility and electrophys. props. (*Russian*) 2-104575
- K₂CuF₄, spin wave instability, subthreshold parallel pumping 2-110574
- La₂NiO₄, coexistence of localised and itinerant 3 d electrons, lattice const. meas. 2-66755
- NbPd₃, itinerant ferromagnetism study 2-66750
- Ni, density functional calculation of magnetic susceptibilities 2-66782
- Ni, ferromagnetic transition, character 2-56872
- Ni, magnetism, fluctuating local band theory 2-82558
- Ni₃Al, weak itinerant ferromag., magnetocrystalline anisotropy 2-92900
- Ni_{1-x}Fe_x (100), spin polarised photoemission probing of magnetism 2-67184
- TiBe₂, weak itinerant antiferromag., SDW pairing soln. 2-92854
- U(Fe_{1-x}Mn_x)₂, effective Curie-Weiss const., susceptibility and magnetisation meas. 2-72165
- VPd₃, itinerant ferromagnetism study 2-66750
- ZrCo₂Si₂, magnetic susceptibility and electrophys. props. (*Russian*) 2-104575
- ZrNi₂Si₂, magnetic susceptibility and electrophys. props. (*Russian*) 2-104575

band-pass filters

- see also vocoders
- multiple bandpass filters applied to computed tomographic images 2-68146
- SAWD and optical fibres appls. (*French*) 2-86200
- thin film magnetometric sensor, noise characterisation (*French*) 2-95419
- turbine rotor bore ultrasonic waveforms, advanced signal processing 2-75588

band structure

- see also band structure of crystalline metals and alloys; band structure of crystalline semiconductors and insulators; band structure of semimetals; band theory models and calculation methods; Brillouin zones; conduction bands; degenerate semiconductors; electron energy states of amorphous solids; electron energy states of liquid metals; electron energy states of liquid semiconductors; energy gap; Fermi surface; many-valley semiconductors; valence bands
- alkali graphite intercalation cpds., σ -electron energy bands, secondary electron spectroscopy study 2-93337
- American Vacuum Soc. conf., Anaheim, USA (Nov. 1981) 2-79275
- Bloch electrons in mag. field, dimensionality and props. of wave functions 2-76880
- conduction electrons, nonlinear magnetisation, mag. susceptibility, electron band struct. (*Russian*) 2-98908
- crystalline solids, complex band struct., surface states, Green's function, eigenvalue method 2-82206
- crystallography, cryst. struct., book 2-112666
- diamagnetic, cryst. electrons in mag. field, second order perturbation for general periodic pots. 2-71852
- energy-momentum band structure, angle-resolved UPS obs. 2-111019
- exciton Bose condensation, electron-hole gas ground state, spin states, screening, and band struct. effects 2-92476
- Falicov-Kimball model, spinless, with hybridisation, alloy analog approx. 2-104218
- ferroelectrics, vibronic, nonlinear optical props. (*Russian*) 2-81017
- graphite intercalation compounds, electronic props., review 2-98518
- graphite intercalation compounds, low dimensional conductor, review of phys. props. (*Japanese*) 2-82202
- Green's function calc. of bulk and surface electron states, layer-by-layer KKR scheme 2-98523
- intercalation compounds, conf., Trieste, Italy (July 1981) 2-74165
- Kronig-Penney crystal model, forbidden energy bands 2-104221

band structure continued

- metal hydrides, Advanced Study Institute, Rhodes, Greece (June 1980) 2-74142
- mixed valence compounds, phonon anomalies rel. to electronic struct. 2-56115
- mixed valence systems, classification of states at Fermi energy 2-56422
- nitrides, electronic structs. rel. to electrophys. props. 2-76894
- one dimension, exact results for hybridized, correlated bands 2-56523
- one-dimensional conductors, phase diagram, band filling effect 2-98545
- Peierls-Frohlich problem and potentials with a finite number of gaps 2-92435
- photoelectron spectroscopy, angle resolved UV, electronic band struct. determ. 2-111020
- poly(p-phenylene), band struct., density of states, valence effective Hamiltonian study 2-98515
- poly(p-phenylene sulphide), band struct., density of states, valence effective Hamiltonian study 2-98515
- polycenes, infinite, band struct. investig. 2-87128
- polymeric conductors, electronic struct. and lattice architecture 2-92439
- polymers, elec. cond., bond gaps, valence effective Hamiltonian study 2-76890
- polymers, simple, band struct. changes on lowering the translational symm. 2-110228
- polymers, symmetry groups, electron energy bands, irreducible representations 2-109690
- spontaneous radiation of relativistic electrons under planar channeling and band structure of transverse energy 2-56056
- superlattice band structures, moment eqns. in Wigner formulations 2-104222
- (TMTSF)₂ClO₄, reflectance spectrum, 30 to 290K, band parameters 2-87815
- (TMTSF)₂X series, band struct. and props. 2-92438
- transition metals, energy-momentum band structure, angle-resolved UPS obs. 2-111019
- FeNb₂Se₁₀, one-dimensional, band struct. calc. 2-82201
- Fe_{1-x}Nb_xSe₁₀, electronic struct., tight binding calc. 2-98517
- β -FeTiH, electronic props., band struct. APW calc. 2-66416
- β -FeTiH, electronic struct. and stability 2-71853
- Hg_{3-x}AsF_{6-x}, quasi-one-dimensional incommensurate, Fermi surface 2-110229
- NbO, effect of vacancies on electronic struct. 2-61330
- NbSe₃, one-dimensional, band struct. calc. 2-82201
- (Sn)_x, cryst. struct., prep., band struct., Fermi surface and Meissner effect (*Japanese*) 2-82212
- (SnBr₂)_x, electronic struct. and props. (*Japanese*) 2-66417
- (Sn)_x, electronic struct. and props. (*Japanese*) 2-66417

band structure of crystalline metals and alloys

- for band structure of semiconductor alloys see band structure of crystalline semiconductors and alloys or electron energy states of amorphous solids
- 4d transition metals, positron wave function, anisotropy 2-62011
- alloys, BCC, disordered, electronic density of states, self-consistent cluster CPA calc. 2-115639
- Auger spectra, intensity distrib. (*Russian*) 2-77631
- composition modulated alloys, electronic struct., CPA calc. 2-104224
- elect. struct., symposium, Gaussig, Germany (Apr. '81) 2-68968
- electron energy in field of periodic perturbing pot. (*Russian*) 2-61332
- electronic struct. and magnetism 2-104241
- heavy rare earth metals, narrow bandwidths in model for 5d electrons 2-56431
- interatomic corrls. of valence electrons, Hubbard model 2-110274
- Invar, magnetovolume effects, molecular orbital study 2-66884
- Invar, XPS of valence and shell electrons, temp. variations (*Russian*) 2-67192
- metals, muffin-tin pot., non self consistent, model of self-consistency simulation 2-98522
- metals, pseudopot. theory, density functional formalism 2-115637
- rare earth alloys, core-level spectroscopy, 4f count determ., 4f hybridisation 2-83006
- rare earth metals, compact inner shell approx. calcs. (*Russian*) 2-87136
- rare-earth metals, relativistic 2p excitation energy calcs. 2-115686
- transition metal alloys, magnetovolume effects, molecular orbital study 2-66884
- transition metal surface kink electronic structure 2-56666
- transition metals, band struct., model Hamiltonian calc. 2-92450
- transition metals, cubic, tetragonal shear moduli calcs. 2-115328
- transition metals, cyclotron masses and many-body effects, relativistic APW calc. 2-56426
- transition metals, electronic struct. and soft X-ray emission spectra 2-76911
- transition metals, ground state props. calc. method 2-115643
- transition metals, ionic potentials calc. from resonance model, S-matrix theory appl. 2-76879
- transition metals, model pseudopotentials, OPW calcs. (*Russian*) 2-56433
- transition metals, total energy computation by model electron density functional 2-61384
- transition metals, X-ray absorpt. spectra, K- and L-edges 2-77624
- transition metals and intermetallic cpds., electron-phonon coupling parameter, theoretical determs. 2-104269
- Wannier functions, model Hamiltonian 2-56474
- Ag, electronic energy bands, KKRZ calc. 2-76910
- Ag, electronic struct., non-muffin-tin and relativistic interaction effects 2-61341
- Ag film on Al(100), electronic structure, XPS study 2-115647
- Ag-Pd, electronic struct. atomic approx. 2-104244
- AgMg, electronic energy bands, Fermi surface 2-92448
- Al, electronic energy bands, KKRZ calc. 2-76910
- Al thin films, polycryst., correl. between struct. and elec. props. (*Russian*) 2-66663
- AlLi, electronic energy bands, Fermi surface 2-92448
- Au (111), spin polarised photoemission, band struct., workfunction effects 2-99301
- Au, electronic struct., non-muffin-tin and relativistic interaction effects 2-61341
- Au-Ni, core hole satellites in XPS 2-57260
- Be, electron momentum distrib., Compton profiles, Hartree-Fock calc. 2-92447
- Be, electronic and struct. props., HF ab initio calc. 2-82218
- Be, X-ray spectrum near Raman band, electronic struct. calc. 2-72577
- Ce, α - γ transition, construction of electronic state for γ phase 2-56189

band structure of crystalline metals and alloys continued

- CeAl₂, electronic struct. and mag. props. 2-66752
 CeAl₃, electronic struct., XPS and bremsstrahlung isochromat spectroscopy 2-56434
 CePd₃, f-states, optical refl. study 2-77550
 CeSn₃, mixed valent props. 2-56506
 α -Ce_{0.9}Th_{0.1}, ground state studied by resonant photoemission 2-56496
 Co, minority spin bands, inverse photoemission study 2-116293
 CoAl, electronic struct. and charge transfer, APW band calc. 2-66430
 Co₂MnSn, Heusler alloys, band struct., SAPW calc. 2-82215
 Co₂TiAl, Heusler alloys, band struct., SAPW calc. 2-82215
 Co₂TiSn, Heusler alloys, band struct., SAPW calc. 2-82215
 Cr, electronic structure model using mag. state and electron occupancies correl. 2-104237
 Cu, band structure, angle resolved photoemission spectra, triangulation analysis 2-61342
 Cu, electronic energy bands, KKRZ calc. 2-76910
 Cu, electronic struct., non-muffin-tin and relativistic interaction effects 2-61341
 Cu, photoemission, band struct. depend. damping 2-99295
 Cu-Al(Ni), electronic struct. atomic approx. 2-104244
 α -Cu-Zn(Ga)(Al)(Ge), electronic struct., piezoref. study 2-57052
 CuAl, electronic energy bands, Fermi surface 2-92448
 Cu_{0.9}Al_{0.1}, bulk and surface electronic struct. 2-104238
 Fe, Compton profiles, effect of BCC-FCC phase transition 2-82949
 Fe, ferromagnetic, single particle and collective excitations, EELS study oxidation effects 2-76915
 Fe, optical absorption anomaly (Russian) 2-61928
 Fe, positron annihilation spectra, k-p interpolation scheme 2-116296
 Fe-Al, electronic struct., KKR-CPA calc. with muffin-tin pot. model 2-66431
 Fe-Al (45 at %) film, electronic struct., X-ray emission spectra study 2-61338
 Fe-Co, BCC, mag. moments and lattice consts., band theory 2-72133
 Fe-Mn, electron struct. and mag. state, CPA calc. (Russian) 2-87135
 Fe-Ni, ferromagnetic state, electronic struct., electron-magnon interaction effects 2-82217
 FeCo, energy band struct. and optical props. due to order-disorder transition 2-82220
 FeRh, electronic band struct., and mag. order, antiferromag.-ferromagnetic transition 2-82595
 FeRh, paramag., ferromagnetic and antiferromag., band struct., muffin-tin calc. 2-82216
 Fe₂Si_{1-x}Al_x, elec. resist. and band struct., density of states at Fermi level 2-61440
 Gd, magneto-optical props. in interband absorpt. region (Russian) 2-61877
 Gd-Ge, mag. props., interband mixing effect (Ukrainian) 2-77261
 Gd-La alloys, band struct., elec. resistivity and mag. moment 2-76912
 GdNi₂, spin polarised energy band struct. calcs. 2-92449
 In-Cr dilute superconducting alloy, tunnelling, localised excited states 2-72122
 Ir, band struct. calc. and photoemission anal. 2-82214
 LaNi₅, spin polarised energy band struct. calcs. 2-92449
 Li, K absorption spectrum, band struct. and density of states, initial state approx. 2-87901
 Li, total energy calc. method 2-71898
 Mn, electronic structure model using mag. state and electron occupancies correl. 2-104237
 Mn overlayer on Cu(100), LEED, AES and UPS study 2-87111
 Na, band struct., variational cellular method calcs. 2-110233
 Nb-Mo alloy, energy band struct., depend. on alloy pots. 2-115648
 Nb₂Sn, cubic, electronic struct., nonorthogonal tight binding calc. 2-76913
 Nb₂Sn, tetragonal, electronic struct., nonorthogonal tight binding and APW calcs. 2-76914
 Ni, core hole satellites in XPS 2-57260
 Ni, energy bands, semiempirical study 2-110234
 Ni, ferromagnetic, band struct. calc., optical absorpt., photoemission and magneto-optical data anal. 2-66434
 Ni, minority spin bands, inverse photoemission study 2-116293
 Ni, UV isochromat spectra, k-conservation effect 2-72562
 Ni-Cu, ordered alloys, magnetisation and electronic struct. calc. 2-82576
 Ni-Pd alloys, electronic struct. calc. by self-consistent KKR-CPA method 2-56432
 Ni₃Al, de Haas-van Alphen effect and band struct. 2-66422
 Ni_{3-x}Fe_x (100), spin-dependent density of states, spin-polarised photoemission meas. 2-83004
 Ni_{0.86}Mn_{0.14}, optical cond. meas. 1 to 4.9 eV, rel. to electron struct. (Russian) 2-99147
 NiSi₂, band struct., UPS study and APW calc. 2-105042
 Ni₂Si, self-consistent energy bands and bonding 2-66436
 Pd alloys, dil., correlation between band struct. and hydride formation 2-98516
 Pd-Al, electronic struct., KKR-CPA calc. with muffin-tin pot. model 2-66431
 Pd-Ge, glassy and cryst., electronic struct., AES and XPS study 2-82213
 PtBi, band struct. and optical props. 2-76916
 Re, electronic struct. and X-ray emission, relativistic calcs. 2-98532
 Rh (100), surface electronic struct., density of states, self consistent local orbital calc. 2-61339
 Rh, dielec. function, empirical band calc. 2-66435
 Rh, electronic energy bands and optical props. KKR calc. 2-66432
 Ru-Cr, X-ray fluorescence, K-emission band struct. (Russian) 2-116300
 Ru-Fe, X-ray fluorescence, K-emission band struct. (Russian) 2-116300
 Sn and intermetallic cpds. with Fe, Co and Ni, electron struct., X-ray and X-ray electron spectra obs. (Russian) 2-67153
 surface, thermionic emission, theory, band struct., electron electron interactions 2-67183
 Th, band structure, thermorefectance study 2-104239
 ThPd₃, f-states, optical refl. study 2-77550
 TiBe₂, weak itinerant antiferromag., SDW pairing soln. 2-92854
 UNi_{5-x}Cu_x, band struct., photoemission study 2-104240
 UPd₃, f-states, optical refl. study 2-77550
 V, band struct., XPS, NMR and sp. ht. studies 2-104243
 V, normalised wave functions, Green's function method (Russian) 2-115642
 V, X-ray absorpt. spectra and electronic struct. 2-67150
 V₂Ge(Al), electronic struct., X-ray study (Russian) 2-110235
 VPt system, bandstruct. study 2-104242
 V₂Pt, band struct., XPS, NMR and sp. ht. studies 2-104243

band structure of crystalline metals and alloys continued

- VS₂ (V₂Si), band struct., LCAO EHT calc. 2-82219
 V₂Si, band struct., photoemission with synchrotron radiation (Japanese) 2-93377
 V₂Si, cubic, electronic struct., nonorthogonal tight binding calc. 2-76913
 W (001) surface electronic struct., APW and warped muffin-tin calc. 2-61343
 W (011), valence band struct., angle-resolved XPS, synchrotron radiation, direct transitions and phonon effects 2-61340
 Zr₂Hf_{1-x}V_x, struct. nonstable supercond. Laves phase, electron spectrum peculiarities (Russian) 2-66433
- band structure of crystalline semiconductors and insulators**
see also conduction bands; energy gap; valence bands
 ab initio atom cluster model 2-115641
 acenes, electronic struct., ab initio interpretation of XPS data 2-90444
 alkali halides, electronic structure study 2-110248
 corundum, electronic energy levels by CNDO method, small cluster calc. 2-110243
 crystal Hamiltonian, Fourier expansion, spatial symm. 2-71847
 crystalline and amorphous, evidence for common origin of Urbach tails 2-71862
 diamond, band structure, first principles calc. using localised basis set 2-110236
 diamond structure, continuity chords of bands 2-82205
 direct gap semiconductors, edge luminesc. 2-57185
 disordered semiconducting alloys, CPA theory 2-87129
 ferroelectrics, band structure and VUV optical props., Kramers-Kronig anal. 2-110883
 graphite, band struct., Fermi surface, KKR calc. 2-82228
 graphite, electronic phase transition, resistance magnetoresistance study 2-87306
 graphite, Hall effect, trigonal warping, energy bands 2-87305
 graphite, unoccupied electronic states 2-115655
 graphite acceptor intercalate, stage 1 model, electronic struct., optical and energy loss props., LCAO calc. 2-61346
 graphite surface, electronic struct., ab initio atom cluster model 2-115641
 heterojunction, equilibrium electrostatic potential and energy band diagram calc. model 2-92739
 ice, amorphous and cryst. state, electronic struct., X-ray emission study 2-87907
 II-IV-V₂ compounds, bond structure of pseudodirect bandgap systems, review 2-66448
 II-IV-V₂, semiconductor applications in optoelectronics (German) 2-116219
 II-VI semiconductors, (110) surfaces, angle-resolved photoelectron spectroscopy, valence band struct. (Japanese) 2-116339
 III-VI layered semiconductors, band struct. and electron-phonon interaction (Japanese) 2-82231
 III-VI semiconductors, chem. bond characts. 2-76919
 inert gas crystals, band struct., adiabatic separation of outer and inner electrons (Russian) 2-98514
 insulators, magnetic interaction between local mag. moments 2-115996
 IV-VI semiconductor, spectrum in field of reson. light wave 2-77466
 IV-VI semiconductors, phase transitions and optical props. 2-91861
 magnetic Γ_8 subbands of diamond-like semicond., Luttinger method, perturbation theory calc. 2-56436
 many valley semicond., band structure parameters 2-115661
 material properties relevant to modern semiconductor elements (German) 2-98533
 neighbour strand interactions, self-consistent electrostatic field calcs. 2-92440
 nitride interstitial phases, thermal and elec. cond. characts. rel. to electron energy spectrum 2-71987
 optical props., 0.5 to 9.5 eV, electronic struct. 2-57125
 paraffinyls, electronic struct., ab initio interpretation of XPS data 2-90444
 perovskites, cubic d-band, electronic density-of-states and partial-density-of-states functions 2-76889
 piezoelectric semiconductor film, surface phonon amplification, nonparabolicity effect 2-76795
 polar semiconductors, complex dielec. const. of free carriers, quantum theory 2-110799
 poly(p-xylylene), photocond. and vacuum UPS study 2-77113
 polyacetylene, soliton excitations and polarons 2-115673
 polydiacetylene, electronic excited state, Raman study 2-72484
 quantum processes in semiconductors, book 2-68982
 quantum transport in a non-parabolic band (German) 2-56612
 α -quartz, electronic struct., cyclic cluster calc. 2-61393
 rare earth trihydrides, RH₃, electronic phase transitions, excitonic insulator model 2-87151
 semiconductor, band gaps, position depend., formation when placed in mag. field 2-92454
 semiconductor, space-charge capacitance, quantum effects 2-77080
 semiconductor film, polycrystalline, Hall mobility interpretation 2-61360
 semiconductors, degenerate, US propagation, band struct. effect 2-86800
 semiconductors, magnetic interaction between local mag. moments 2-115996
 semiconductors, Mossbauer isomer shift and band struct. 2-93091
 solar cell, liquid-junction, illuminated semiconductor-electrolyte interface, steady-state model 2-116802
 TCNQ stack, electronic struct. depend. on-electronic charge, Hubbard model 2-71863
 TCNQ stack, numerical approach to band structure 2-98537
 (TMTSF)₂X, (X=PF₆, AsF₆) band struct. and Fermi surface, tight binding calc. 2-115660
 transition metal oxides, electron energy loss study of K near-edge fine struct. of O 2-104248
 TTT₁₃, reflection spectra (Russian) 2-57047
 zinc-blende materials, band structure, tight binding calc. 2-66443
 AgCl, band struct. and density of states, APW-LCAO calc. 2-115663
 Ag₂Cl(Br), electronic struct. calcs. 2-110249
 Al_{1-x}Ga_x-As, Γ -X-junction position, effect of alternating axial press. meas. 2-66449
 Al_{1-x-y}Ga_xIn_yAs, pseudopot. band struct., CPA calc. 2-115657
 α -Al₂O₃, electronic struct., extended tight-binding calc. 2-110241
 Ar monolayer on Cu (110), electronic and geometric struct., LEED and photoemission study 2-98407
 BN, cryst. and band struct., EELS obs. 2-109874

band structure of crystalline semiconductors and insulators continued

- BaF₂, electronic struct., cluster calc. by multiple scatt. X α method 2-61350
- BaPb_{1-x}Bi_xO₃, superconducting film, FR sputtered, supercond. and optical props. 2-66690
- BaPb_{1-x}Bi_xO₃, superconductivity, electronic and cryst. struct. effects 2-115938
- BaTiO₃, electronic spectra of TiO₆⁸⁻ clusters 2-93222
- Bi₂GeO₂₀, Bi₂SiO₂₀, two-photon interband absorpt. spectra rel. to band struct. 2-116203
- Bi_{1-x}Sb_x, semicond., valence band struct., elec. and thermal cond. study 2-87143
- BiSeI(Br), band struct., pseudopotential calcs. 2-71860
- Bi₂Te₃Sb₂Te₃, energy spectrum of solid solutions 2-110239
- Bi₂TiO₂₀, local levels in forbidden band 2-71899
- Bi₂XO₂₀ (X=Ge, Si) energy levels in forbidden zone (*Russian*) 2-61930
- On Ru(0001), adsorbate band dispersions, photoelectron spectra study 2-66446
- CaF₂, electronic struct., cluster calc. by multiple scatt. X α method 2-61350
- CaTiO₃, electronic spectra of TiO₆⁸⁻ clusters 2-93222
- Cd₃As₂, band struct. parameters, determ. from effective mass carrier density depend meas. 2-61356
- CdCr₂Se₄(S₄), occupied d-band position, photoemission determ. 2-83005
- CdGa₂S₄, band struct., linear optical characts., effective carrier masses, pseudopotential calc. 2-61355
- Cd_{1-x}Hg_xSe mixed cryst., Γ point band struct. parameter, elec. and thermomagnetic studies 2-76923
- Cd_{1-x}Hg_xSe, US attenuation and vel. meas. near zero-gap state 2-92118
- Cd_{0.7}Mn_{0.3}Te, valence band, XPS and UPS studies 2-93369
- CdP₂, tetragonal, energy band struct. 2-92463
- CdP₄, CdP₂, Cd₃P₂, electronic struct., X-ray spectral investig. 2-82221
- CdS, dipole selection rules, reflection spectra, group representation 2-93226
- CdSn_{1-x}Ge_xP₂ solid solns., photoactive absorpt. and radiative recomb. anisotropy 2-92690
- CdTe, angle resolved photoelectron spectroscopy of Cd 4d core level (*Japanese*) 2-116340
- CdTe, band struct., nonlocal pseudopot. calc. 2-110245
- CdTe, non-parabolic band effect on two-photon absorpt. 2-104910
- CdTe, two-photon absorption coeffs., band structure calcs. 2-65293
- CdTe, valence band, XPS and UPS studies 2-93369
- CdTi_{1-x}Se_x-CdTi_{1-x}Te_x, phase equilibria 2-71616
- Cr-C, X-ray emission and photoelectron spectra meas. 2-87906
- CuCr₂S₄, spinel, spin polarised electronic band struct. 2-71861
- CuCr₂Se₄(Te₄), spin-polarised electronic band struct. 2-104245
- CuFeS₂, electronic struct., X-ray emission and XPS study and X α calc. 2-92455
- CuGa_{1-x}In_xS₂ solid solns., growth and props. 2-83017
- CuGaSnSe₂, energy gap values, temp. var., optical refl. study 2-56438
- CuInSe₂, amorphous and crystalline, optical props. 2-87889
- CuInTe₂ single cryst., photocond. and electronic struct., impurity levels 2-115814
- p-CuO:Li, conduction and valence band edge positions, photoelectrochem. determ. 2-56440
- Cu₂O, cryst., struct. factors, Coulomb and Slater pots., cryst. field theory 2-86630
- DyS, bulk and surface valence states 2-104247
- Eu chalcogenides, undoped ferromag., real spin 7/2, density of states and band edge shift 2-76885
- EuB₆, K emission and absorpt. spectra, band struct. 2-87900
- Eu₂O₃, Coulomb (or strong) correlation effects in band structure 2-98538
- EuO(S), conduction band states, effect of electron-magnon interaction 2-66439
- EuS, bulk and surface valence states 2-104247
- β -FeTiH, Mossbauer isomer shifts 2-87641
- FeTiH₂, Mossbauer isomer shifts 2-87641
- Ga_{1-x}Al_xSb, LPE layers, photolum. study, cond. band minimum determ. 2-98540
- GaAs, band struct., nonlocal pseudopot. calc. 2-110245
- GaAs, band struct., photoemission with synchrotron radiation (*Japanese*) 2-93377
- GaAs, electronic bands, critical points in first Brillouin zone 2-56435
- GaAs, high field transport and impact ionization, band struct. depend. 2-77070
- GaAs, impact ionization and high field transport, band struct. depend. 2-77069
- GaAs, two-photon absorption coeffs., band structure calcs. 2-65293
- GaAs:Ge, N superlattice alloy, impurity sheet doped, band struct. 2-110242
- GaAs-AlGa_{1-x}As quantum well heterostructure lasers, band struct., high press. effects 2-85971
- GaAs-AlAs (001) superlattice, electronic band struct. 2-61572
- Ga_{0.49}In_{0.51}As, conduction band Γ -L separation, UPS study 2-61344
- Ga_{1-x}In_xAs_{1-y}P_y lattice matched to InP, band struct., disorder bowing calc. 2-98541
- GaP:O, point defect electron states, enfeeblid O bonding and metastability 2-61351
- GaP-AlP(100) superlattice band struct. 2-110460
- GaS(Se), uniaxially deformed, absorpt. and photoluminesc. spectra, energy bands 2-67081
- Ga₂(Se₃)(Te₃), random defect semicond., electronic props. 2-115653
- GaSb, reverse-biased tunnel diode, temp. coeff. of tensor sensitivity 2-87374
- Gd₂(MoO₄)₃, band structure and VUV optical props., Kramers-Kronig anal. 2-110883
- Ge, band struct., nonlocal pseudopot. calc. 2-110245
- Ge, donor-bound multiexciton complexes, density-functional method 2-82245
- Ge, electronic bands, critical points in first Brillouin zone 2-56435
- Ge, hot hole cyclotron resonance (*Russian*) 2-82720
- Ge, magnetic Γ_8 subbands, Luttinger method perturbation theory calc. 2-56436
- Ge, self-consistent pseudopotential calc. for electronic struct. 2-71859
- Ge, uniaxially stressed, electron-hole liquid props. 2-104259
- Ge-Se(Te), amorphous and cryst., electronic struct., density of states, pseudopotential methods 2-61345
- GeS, core level line widths, XPS study 2-57263
- GeS, electroreflexion spectra, changes under ion bombardment 2-82876
- GeSe, core level line widths, XPS study 2-57263

band structure of crystalline semiconductors and insulators continued

- GeTe, cubic and rhombohedral, band struct. 2-92468
- GeTe, fundamental energy gap calc. 2-92458
- He, mol. cryst., excess electron bands, mol. tight-binding method 2-82204
- He, mol. cryst., hole bands, mol. tight-binding method 2-82203
- HfH₂, FCC-FCT phase transition, electronic theory 2-71641
- HfSe₂(Te₂), optical transitions, symm. depend., refl. spectra 2-57120
- Hg_{1-x}Cd_xSe, band struct., interband magnetoabsorpt. meas. 2-77494
- Hg_{1-x}Cd_xSe, band structure peculiarities from interband magnetoabsorpt. 2-92466
- HgCdTe, physics and chemistry, workshop, Minneapolis, MN, USA (Oct. 1981) 2-89437
- Hg_{1-x}Cd_xTe, bandgap spin-orbit splitting resonance, band structure effects 2-115719
- Hg_{1-x}Cd_xTe, disordered, band struct., CPA calc. 2-87138
- Hg_{1-x}Cd_xTe, disordered complex bound struct., CPA calc. 2-87129
- Hg_{1-x}Cd_xTe, electronic struct., localised orbital calc. 2-87139
- Hg_{1-x}Cd_xTe, electronic struct., UPS study and virtual cryst. breakdown 2-87942
- Hg_{1-x}Cd_xTe, impurity-to-band tunnelling 2-87179
- Hg_{1-x}Cd_xTe, n-channel, 2D-subband 2-92465
- Hg_{1-x}Mn_xTe, elec. optical and mag. props. 2-87140
- HgSe and HgS_xSe_{1-x}, band struct., interband magnetoabsorpt. meas. 2-77494
- HgSe, band structure peculiarities from interband magnetoabsorpt. 2-92466
- HgSe, far IR magnetotransmission, cyclotron and spin-flip resons. 2-57066
- HgTe, magnetic Γ_8 subbands, Luttinger method perturbation theory calc. 2-56436
- HgTe, press. induced semicond.-metal transitions, energy band struct. 2-82234
- HgTe:Mg, conduction band struct., Hall effect and magnetoresist. study 2-115662
- In compounds, electronic struct., photoelectron spectroscopy studies 2-62051
- In halides, valence band struct., XPS study 2-71865
- n-InAs-GaSb superlattice, cyclotron resonance and Shubnikov de Haas study 2-87131
- In_{1-x}Ga_xAs_{1-y}P_y, LPE system, alloy scattering mobility and energy gap evaluation by dielectric model 2-82485
- In_{1-x}Ga_xAs_{1-y}P_y, LPE layer, energy gap and alloy scatt. mobility, meas. and dielec. model 2-98542
- InP, two-photon absorption coeffs., band structure calcs. 2-65293
- InSb, band struct., nonlocal pseudopot. calc. 2-110245
- InSb, band struct. calcs., hydrostatic press. effects 2-92457
- InSb, band struct. parameters, exciton magnetoabsorption study 2-115659
- n-InSb, ESR, uniaxial stress enhanced 2-98940
- n-InSb, far IR studies of bound and free carriers as function of hydrostatic press. 2-93238
- n-InSb film, surface phonon amplification, non-parabolic band struct. effect 2-110126
- p-InSb, free and bound hole excitations, intraband transitions, magneto-optical studies 2-93165
- InSb, n-channel, 2D-subband 2-92465
- n-InSb, quantum oscils. in magnetoacoustic attenuation 2-77132
- InSe, uniaxially deformed, absorpt. and photoluminesc. spectra, energy bands 2-67081
- In₂Te₃, random defect semicond., electronic props. 2-115653
- IrO₂, optical props., 0.5 to 9.5 eV, electronic struct. 2-57125
- KC₈, intercalation compound, cryst. and band struct., Fermi surface, de Haas-van Alphen effect 2-82227
- KCl, electron struct. and X-ray absorption spectra, APW calc. 2-56441
- KCl, electron struct. and X-ray absorpt. spectra, core hole effect in cluster approx. 2-98536
- KMF₃, M=Mn, Fe, Co, Ni, Cu, multiplet struct. in reflection spectra 2-110980
- KMgF₃, electronic energy band struct. 2-82225
- K,Rb_{1-x}Ag_x, indirect small gap semiconductor, electronic props. 2-92473
- KTaO₃, two-photon interband absorpt. spectra rel. to band struct. 2-116203
- Kr, crystal, band struct., Gaussian OPW calc. 2-61349
- Kr monolayer on Cu (110), electronic and geometric struct., LEED and photoemission study 2-98407
- LaB₆, band struct., photoemission with synchrotron radiation (*Japanese*) 2-93377
- LaB₆, K emission and absorpt. spectra, band struct. 2-87900
- LaB₆, supercond., electronic struct., phonon modes, Eliashberg function, muffin tin approx. 2-66698
- β -La₂S₃:Nd, Ce, efficient energy transfer from band excitation to Nd³⁺ 2-67102
- La_{2/3}TiO₃, n-type semicond. electrodes, photocond. 2-77116
- La₂Ti₂O₇, n-type semicond. electrodes, photocond. 2-77116
- Li-Fe-S system, elec. cond. and electronic struct., XPS study 2-104371
- LiC₆, intercalation compound, band struct., self consistent extended muffin tin calc. 2-82229
- LiCl, energy band calcs., self interaction correction, density of states 2-66445
- Na₂WO₄, electronic struct., photoemission study 2-115656
- Nb halides, electron struct. (*Russian*) 2-66441
- NbH₂, band struct., Fermi surface, and optical absorpt. spectra 2-104246
- NbH₂, electronic struct., electron-phonon coupling 2-66444
- Nb₂S₃(Se₂)(Te₂), Fermi surface, band struct. and elec. cond., LCAO calc. 2-115658
- Nd_{2/3}TiO₃, n-type semicond. electrodes, photocond. 2-77116
- Nd₂Ti₂O₇, n-type semicond. electrodes, photocond. 2-77116
- Ne, crystalline, cond. bands, OPW calc. (*Russian*) 2-115654
- Ni complex, cis-octahedral Ni(II) diamines, single cryst. electronic spectra, at 10K 2-82874
- Ni silicides, electronic struct., photoemission study 2-110247
- NiMnCrO₄ spinel valence struct., X-ray spectroscopic determ. 2-115652
- NiO, empty electronic states, inverse photoemission and SXAPS studies 2-61354
- NiO, narrow band insulators, electronic props. 2-87137
- NiPS₃, electronic states, reflectivity, optical absorpt., XPS 2-57246
- OsF₆, energy levels, vibronic coupling, IR and visible study 2-116189
- P, black, electronic struct., self-consistent pseudopot. calc. 2-66437

band structure of crystalline semiconductors and insulators continued

- Pb_{1-x}Ge_xTe, band edge struct. transform. due to ferroelectric transition 2-92456
- Pb_{1-x}Ge_xTe, band struct., cyclotron reson. study 2-56439
- Pb_{1-x}Ge_xTe, C_{2v}-phase, band struct. 2-92467
- PbMg_{1/3}Nb_{2/3}O₃, reflectivity, dielectric const., electrooptic effect., vacuum UV reflection spectra obs. 2-61924
- PbMo_{0.8}S_{0.2}, charge transfer and 4d orbital splitting of Mo atom 2-76918
- PbO, rhombic, energy band struct. 2-98539
- (PbSe)_{1-x}(SnTe)_x, influence of In on props. 2-110238
- Pb_{0.85}Sn_{0.15}Te solid soln. epitaxial films, absorpt. edge obs., 100 to 300K, band struct. model (*Russian*) 2-61913
- Pb_{1-x}Sn_xTe ($x=0.59$ to 1), valence bonds energy separation, Hall coeff. meas. 2-72010
- Pb_{1-x}Sn_xTe, band struct. dispersion low and parameters (*Russian*) 2-61358
- n-Pb_{1-x}Sn_xTe, Fermi surface and cond. band, Shubnikov-de Haas study 2-115644
- Pb_{1-x}Sn_xTe:In, band struct. at high In conc., elec. cond. press. depend. study 2-82230
- Pb_{1-x}Sn_xTe(Se) solid soln., carrier g-factor longitudinal and transverse components, band gap depend. 2-76903
- PbTe epitaxial layer, optical four-wave mixing 2-93315
- PbTe-Pb_{1-x}Sn_xTe, superlattice, interband optical absorpt. (*Japanese*) 2-116179
- PbTiO₃, electronic spectra of TiO₆⁸⁻ clusters 2-93222
- PbTiO₃, reflectivity, dielectric const., electrooptic effect., vacuum UV reflection spectra obs. 2-61924
- PdH, dipole force tensor, relationship to electronic struct. 2-109735
- PdH_{0.6}, XPS/UPS study of electronic struct. 2-72600
- Pr₂Ti₂O₇, n-type semicond. electrodes, photocond. 2-77116
- Pr₂Ti₂O₇, n-type semicond. electrodes, photocond. 2-77116
- PtWO₃, hypothetical electrode material band struct. and electronic density of states 2-66447
- RP(RS), band struct., calc. and X-ray emission and absorpt. spectra study 2-110246
- RuCl₃, ESCA spectrum and band struct. 2-99298
- RuO₂ film, reactively sputtered, electronic struct. 2-110515
- RuO₂ films, reactive sputtering and electronic struct., AES, photoemission and optical absorpt. study 2-82502
- Sb₂Te₃, Bi₂Ge₃, solid solns., energy spectrum 2-76920
- ScH₂, electronic energy bands and optical props. 2-82224
- Se, monoclinic, anisotropy in reflectivity and band struct. 2-61925
- Se_{1-x}Te_x, energy gap, photoacoustic study 2-76603
- Si (100) inversion layers, subband splitting, uniaxial stress and substrate bias effects 2-56701
- Si, complex band struct., surface states, Green's function, eigenvalue method 2-82206
- Si, donor-bound multiexciton complexes, density-functional method 2-82245
- Si, effective mass of electrons and holes, and intrinsic conc., temp. depend. 2-98528
- Si, electronic bands, critical points in first Brillouin zone 2-56435
- Si, energy depend. of electron angular distrib. during channelling (*Russian*) 2-71530
- Si, energy struct. changes after As ion bombard. 2-92057
- p-Si, interband electronic Raman scatt. calcs. 2-104883
- Si surface electronic struct. of 1×1 and 7×7 reconstructions, UPS study 2-98715
- Si, surface state bands of 2×1 reconstruction; angle-resolved photoemission study 2-98714
- Si, uniaxially stressed, electron-hole liquid props. 2-104259
- Si:As(P), implanted and laser annealed, electronic states, IR optical props. 2-57112
- SiC, 6H- and 15R-types, two-photon interband absorpt. spectra rel. to band struct. 2-116203
- SiC, polytypes, band structure, electroreflection meas. 2-104851
- n-SiC:P, Fermi level, Fermi-Dirac distrib. and activity coeff. 2-92452
- SiO₂, surface electronic struct. tight binding calc., UV photoelectron spectroscopy, and EELS study 2-82226
- SiO₂, vitreous and crystalline, UV reflectance spectrum 2-93224
- SmB₆, K emission and absorpt. spectra, band struct. 2-87900
- SmB₆, mixed valence cpd., small energy gap, electron tunnelling and IR spectrum 2-56442
- SmS, bulk and surface valence states 2-104247
- SmS_{1-x}O_x, local electronic struct. 2-56488
- α -Sn, band struct., nonlocal pseudopot. calc. 2-110245
- SnO₂ (110), surface electronic struct., tight-binding calc. 2-110250
- SnS₂(Se₂), angle-integrated photoemission, band struct. 2-67189
- p-SnTe, MIS structure, field effect studies 2-104491
- SrF₂, electronic struct., cluster calc. by multiple scatt. X α method 2-61350
- SrTiO₃, electronic spectra of TiO₆⁸⁻ clusters 2-93222
- TaS₂ (2H), intercalation cpds., mag. susceptibility and band struct. 2-104251
- Te, anisotropic semicond., band shapes, effect of relativistic operators 2-92459
- Ti-H, X-ray emission spectra, meas., bonding, hybridised states 2-87905
- TiH₂, electronic struct., APW method and LCAO interpolation 2-61353
- TiH₂, FCC-FCT phase transition, electronic theory 2-71641
- TiN, electronic struct., photoemission study 2-104249
- TiS, electronic charge density and bonding in NiAs-type solid 2-76921
- TiS₂(Se₂), optical transitions, symm. depend., refl. spectra 2-57120
- TiSe₂(S₂) (1T), p-d gaps, relativistic corrections 2-110240
- TiTeO₄, struct. and mag. props. 2-86634
- Tl compounds, electronic struct., photoelectron spectroscopy studies 2-62051
- Tl halides, valence band struct., XPS study 2-71865
- Tl₂Mo₂Se₆, 1-D supercond., electronic struct., SCF scatt.-wave X α calc. 2-92461
- TmS, bulk and surface valence states 2-104247
- VH₂, band struct., Fermi surface, and optical absorpt. spectra 2-104246
- VO₂, thick films, screen printing prep. and elec. cond. thermal switching props. 2-111104
- V₂O₅, single crystal, anisotropy of X-ray emission spectra and electronic struct. 2-62019
- V₂O₅, X-ray absorpt. spectra and electronic struct. 2-67150
- VS, electronic charge density and bonding in NiAs-type solid 2-76921
- VS₂(Se₂), intercalated with transition metals, X-ray absorpt. spectra and electronic struct. 2-67150
- VSi₂ (V₃Si), band struct., LCAO EHT calc. 2-82219

band structure of crystalline semiconductors and insulators continued

- WC, hexagonal, band struct. and partial charges, APW calc. 2-76924
- WO₃ films, evaporated and annealed, electronic struct., UPS study 2-115651
- Xe, crystal, band struct., Gaussian OPW calc. 2-61349
- YB₆, supercond., electronic struct., phonon modes, Eliashberg function, muffin tin approx. 2-66698
- Y₂O₃-In₂O₃-Fe₂O₃, superhigh freq. props., Fe and In ions electron struct. influence (*Russian*) 2-66442
- YbS, bulk and surface valence states 2-104247
- (Zn,Cd_{1-x})₃P₂ solid soln., electronic struct., X-ray emission spectra and XPS study 2-110986
- ZnCr₂Se₄ spinel, reflectance spectra, band struct. 2-87811
- ZnO, valence band struct. (*Chinese*) 2-92451
- ZnTe, tetragonal, valence band, X-ray emission spectra and pseudopot. study 2-57218
- Zn₃P₂, Zn₃P₂, electronic struct., X-ray spectral investig. 2-82221
- Zn₃P₂, AC photocond., spectral response 2-77109
- Zn₃P₂, band structure model of absorpt. coeff. and photovoltaic props. 2-82222
- ZnSe, angle resolved photoelectron spectroscopy of Zn 3d core level (*Japanese*) 2-116340
- ZnSe, band struct., nonlocal pseudopot. calc. 2-110245
- ZnSe, non-parabolic band effect on two-photon absorpt. 2-104910
- ZnSe, two-photon absorption coeffs., band structure calcs. 2-65293
- ZnTe, angle resolved photoelectron spectroscopy of Zn 3d: core level (*Japanese*) 2-116340
- ZrC, energy band struct. and X-ray emission spectra, APW calc. 2-110984
- ZrC,N_{1-x}, band struct., elec. cond., Fermi energy, carrier density and mobility, two-band model 2-66438
- ZrH₂, electronic struct., electron-phonon coupling 2-66444
- ZrH₂, FCC-FCT phase transition, electronic theory 2-71641
- ZrN, electronic struct., photoemission study 2-104249
- ZrN, energy band struct. and X-ray emission spectra, APW calc. 2-110984
- ZrS₂, optical transitions, symm. depend., refl. spectra 2-57120
- ZrSe₂ (S₂), p-d gaps, relativistic corrections 2-110240

band structure of semimetals

- transport props. of various semimetal systems, comparison 2-98535
- two-dimensional, electronic phase transitions in strong mag. field, correlation effects (*Russian*) 2-71897
- As, electronic band struct., density of state peaks, UPS study 2-98534
- Bi, magnetotripping in quantising mag. fields 2-116048
- Bi:Sb, ion implanted, electronic struct., magnetoref. study 2-99095
- Bi:Sn, magnetoreflection study, band struct. 2-87747
- Sb, electron energy spectrum, thermal expansion, band struct., pseudopotential method 2-71858
- ZrTe₅, electronic struct., elec. props., absence of phase transition 2-87142
- ZrTe₅, electronic struct. calcs. 2-110232

band theory models and calculation methods

- see also APW calculations; band model of magnetism; band structure; cellular method; free-electron approximation; Hubbard model; KKR calculations; k.p. calculations; Kronig-Penney model; muffin-tin potential; nearly-free-electron approximation; OPW calculations; pseudopotential methods; relativistic band structure calculations; tight-binding calculations
- band gaps and asymptotic behaviour of continued fraction coefficients 2-71846
- covalent crystal, dynamical aspects of correlation corrections 2-71895
- crystal Hamiltonian, Fourier expansion, spatial symm. 2-71847
- crystal harmonics, props., transferable integrals in deformation density approach to crystal calcs. 2-66418
- diamond structure, continuity chords of bands 2-82205
- dielectric matrix scheme for fast convergence 2-76881
- dilute systems, bond and site CPAS comparison 2-92434
- dilute three-dimensional systems, energy levels, eigenfunction localisation 2-66420
- direct-gap crystals, three-photon absorpt. 2-97079
- disordered media, wave evolution, density matrix approach 2-104214
- disordered semiconducting alloys, CPA theory 2-87129
- fast band theory, multiple scatt. approach 2-115636
- Green's function calc. of normalised wave functions (*Russian*) 2-115642
- HCP and FCC structures, s-band energies 2-110226
- heavy rare earth metals, narrow bandwidths in model for 5d electrons 2-56431
- heterostructures, reduced Hamiltonian method with evanescent states and transfer matrices 2-110462
- hubbard model with strong correlation; the equivalent hamiltonian (*Russian*) 2-92437
- incommensurate systems, dynamical equations, superspace symm. 2-66138
- integral evaluation, analytic tetrahedron method 2-87122
- Jahn-Teller systems with A15 struct., lattice dynamics, thermodynamic model 2-61422
- layered ultra-thin coherent struct., electronic states (*Chinese*) 2-98519
- localised states in solids, selection rules, appl. to band calcs. 2-115687
- metals, pseudopot. theory, density functional formalism 2-115637
- metals, total energy calc. method 2-71898
- metals, zone integration method for joint densities of states 2-110230
- metals and alloys, elect. struct., symposium, Gaussig, Germany (Apr. '81) 2-68968
- narrow band system, Hubbard sub-band struct., cohesive energy 2-66419
- neighbour strand interactions, self-consistent electrostatic field calcs. 2-92440
- one-dimensional composite lattice, Bloch wave vectors addition theorem 2-82207
- phthalocyanine, β -metal free single cryst., TSC 2-77085
- semiconductors, deep impurities and complex band struct., Γ_1 states model 2-92515
- singular energy bands, interpolation in vicinity of degeneracies 2-104225
- transition metal, electronic structure model using mag. state and electron occupancies correl. 2-104237
- transition metals, band struct., model Hamiltonian calc. 2-92450
- transition metals, ground state props. calc. method 2-115643
- Be, positron annihilation photons and positron lifetime, band theoretical calcs. 2-104995
- Eu₂O₃, Coulomb (or strong) correlation effects in band structure 2-98538

band theory models and calculation methods continued

- Pb_{1-x}Sn_xTe, band struct. dispersion low and parameters (*Russian*) 2-61358
 SmS_{1-x}O_x, local electronic struct. 2-56488
bands (kink) see kink bands
bandwidth compression
 see also companders; vocoders
 airborne reconnaissance, conf., San Diego, CA, USA (Aug. 1981) 2-74146

Bardeen-Cooper-Schrieffer theory see BCS theory

barium

see also nuclei with

- abundance in R Coronae Borealis stars 2-63434
 atom, 4d¹⁰ subshell photoionisation cross section 2-70204
 atom, 6snd ¹D₂ Rydberg states, tensor polarisabilities, quantum beat spectra 2-114136
 atom, even-parity levels, optogalvanic study 2-90469
 atom, excited state, autoionisation, spectra 2-90487
 atom, lifetime perturbations in Rydberg sequences, Zeeman effect and hyperfine struct. meas. 2-59722
 atom, perturbation of 6sns ¹S₀ sequence by 5d7d ³P₀ state by lifetime meas. 2-59748
 atom, perturbed 6sns ³S₁ Rydberg states, hyperfine struct. 2-102666
 atom, Rydberg states, config. interaction calcs. 2-90462
 atom, Rydberg states, electron densities, isotope shifts 2-75213
 atom, Rydberg states, hyperfine struct., singlet-triplet mixing 2-90463
 film adsorbed on Re, work function, elec. props. (*Russian*) 2-61560
 ion VUV autoionisation-pumped laser 2-70551
 odd isotopes, perturbed 6sns ¹S₀ and ³S₁ Rydberg states, isotope shifts meas. 2-96510
 photoelectron, Auger, and ionisation loss spectra 2-83003
 pressure induced superconductivity 2-56764
 X-ray emission lines used as calibration standards in soft X-ray region 2-105006
 Ba, Ba⁺ and Ba²⁺, 4d subshell photoabsorpt. spectra 2-113918
 Ba I atoms, highly excited, hyperfine struct. and isotope shifts meas. 2-102653
 Ba II, J-dependent isotope shift in the 5d²D₂ doublet 2-80540
 Ba III, resonance line excitation in electron-atom collisions 2-108720
 Ba stars, spectral classification 2-63400
 Ba⁺, hyperfine splittings shift due to blackbody radiation 2-64910
 Ba²⁺, 4d¹⁰ subshell photoionisation cross section 2-70204
 Ba²⁺, effect on fatty acid monolayer compressibility at air-water interface 2-104145
¹³⁷Ba, msns Rydberg states level shifts induced by hyperfine interaction 2-64943
 Ba+HF, state to state reaction dynamics studied using laser induced fluorescence 2-105458
 Ba+N₂O(O₃), chemiluminescence of BaO*, vibr. transitions 2-93797
 Ba+N₂O(O₃) in solid Ar, visible chemiluminescence, thermoluminescence 2-99682
 Ba+NO₂(N₂O), nascent metastable products, chemiluminescence study 2-93796
 Ba+NO₂((NO)₂), beam chemilumines., excitation functions 2-67734
 Ba⁺+O₂ (H₂O), cross section, mass spectroscopy 2-105464
 BaI, hyperfine struct. in 6p5d configuration and isotope shifts in transitions 6s5d-6p5d, fluoresc. spectra 2-96758
 Ba(NH₃)₆ solution, elec. resist., quenching effect (*Russian*) 2-115726
¹³⁵Ba target prep. on thick backings by heavy-ion sputtering technique 2-108178
¹³⁵Ba⁺, hyperfine struct. determ. rel. to microwave freq. standard possibilities 2-65105
¹³⁷Ba⁺, ground-state hyperfine splitting precision determ. by ion-storage technique 2-65106
¹³⁷Ba⁺, hyperfine interactions 2-90738
¹³⁷Ba⁺, hyperfine struct. determ. rel. to microwave freq. standard possibilities 2-65105
 KCl:Ba²⁺, positron annihilation study 2-67145
 KCl:Ba²⁺, X-ray irradi., H₂O ntype defects, ESR study 2-110641

barium alloys

see also barium compounds

- Ba-Sr, liquid, elec. resist. and thermopower 2-82311
 Ba-Zn alloys, liq. 2-72670
 BaCuSn₂, cryst. struct., stability criteria (*German*) 2-65925
 Ca-Sr-Ba, alloying behaviour, cryst. struct., stoichiometry and phase diagrams 2-109746
 CeBe₁₃, mixed-valence cpd., paramag. neutron spectra meas. 2-104577

barium compounds

see also barium alloys

- Ba₂NaNb₂O₁₅, rotational striations CC Ba₂NaNb₂O₁₅, rotational striations and diffusion 2-115157
¹³⁷BaCl₂.2H₂O, NQR freq. and apparent spin-spin relax. times, coherent mode obs. 2-108558
 BPNN ceramics, transparent, photoacoustic spectroscopy exam. in 300 to 700 nm range 2-62442
 dicalcium barium acrylate, ferroelastic phase transition, lattice const. and birefringence 2-92187
 dicalcium barium propionate, short-range order, optical transform study 2-98044
 perovskite ferroelectrics, γ-ray effects on dielectric and electro-optical props. (*Russian*) 2-61809
 AlF₃-YF₃-GdF₃-CaF₂-SrF₂-BaF₂-NaF₃-PF₆(AsF₆) glass, optical and thermal props. 2-115145
 Al₂O₃-BaAl₂O₄ system, phase relations relevant to hexagonal BaAl₂O₉ 2-57338
 (Ba,Sr)TiO₃ films on Si substrate, ferroelec. behaviour 2-66996
 BaAl₂Si₂O₁₀.4H₂O, Edingtonite, thermal expansion in region of structural phase transformations 2-76714
 BaAl₂Ti₂O₁₀, powder prep. and densification for fabrication 2-93478
 BaAl₂Ti₂O₁₀-CaTiO₃-CaZrTi₂O₇ ceramic, devel. and testing as high level nuclear waste form 2-107956
 BaAs₃, elec. cond. and mag. props. 2-92907
 BaBe₆, ¹¹B chem. shifts and quadrupole coupling consts. 2-87607
 Ba₂(B₂O₆)₃, cryst. struct. determ. (*Chinese*) 2-109750
 BaBrF₃, mixed dihalides, temp. depend. of dielec. behaviour, 100-600K 2-66968
 BaCa(CO₃)F, huanghoite, lattice parameters and stacking faults, electron diff. study (*Chinese*) 2-91903
 BaCe(CO₃)F, huanghoite, superstruct., X-ray diff. study (*Chinese*) 2-91904
 BaCe₂(CO₃)₃F₂ and related fluorocarbonates, cryst. struct., disorder stacking and intergrowth, X-ray study (*Chinese*) 2-91905
 BaCl₂:Sn, absorpt. spectra of S²⁻-configuration Sn ion 2-77553
 BaCl₂-PVC, DC elec. cond. and glass transition temp. meas. 2-98639
 BaClO₄, ³⁵Cl NQR investig. 2-110702
 Ba(ClO₃)₂.H₂O, crystalloluminescence and mechanoluminescence spectra 2-110947
 Ba(ClO₄)₂.3H₂O, EPR and optical absorpt. of ClO₄ 2-93012
 Ba₂CoFeF₉, cryst. struct., cationic ordering, X-ray diff. study (*French*) 2-86646
 BaCo₂Ti₂Fe₂O₁₀, magnetocryst. anisotropy temp. depend., ferromag. reson. and magnetisation study 2-56849
 BaCrO₃, 14-layer polypolyte, cryst. struct. 2-55910
 BaEr₂F₈, self-activated laser crystal, three-micron stimulated emission of Er³⁺ obs. 2-85976
 BaF, potential energy curves and dissociation energy 2-70163
 BaF₂, electronic struct., cluster calc. by multiple scatt. Xα method 2-61350
 BaF₂ epitaxial films, MBE growth on Si substrate MIS capacitance and mass spectra study 2-76861
 BaF₂, heat capacity, 3 to 25K, Debye and Einstein model contribs. 2-110007
 BaF₂, high-temp. mean square displacements 2-66139
 BaF₂, IR wavelength modulation spectroscopy of laser window materials 2-60191
 BaF₂, IR window materials for CO₂ laser, absorpt. coeffs, photoacoustic spectroscopy 2-70633
 BaF₂, impurity and interstitial clustering 2-86884
 BaF₂, impurity effects on lattice parameter, microhardness and refractive index 2-98140
 BaF₂, optical films, mechanical props. 2-82191
 BaF₂, Raman scattering efficiencies for Γ-phonons 2-57100
 BaF₂, rare earth doped and hydrolyzed, mol. centres, Raman spectra study 2-104873
 BaF₂, solid, inelastic electron scatt., 4d shell excitation 2-85819
 BaF₂, thermal neutron irradiated, point defects study 2-65985
 BaF₂, thermo-optical coeff. and thermal expansion, temp. depend. 2-61884
 BaF₂ thin film refractive index determ., 1-11 μm wavelength range 2-87879
 BaF₂:Ho³⁺ single cryst., fluoresc. and excitation spectra 2-61943
 BaF₂:La³⁺, thermal depolarisation studies 2-61817
 BaF₂(Y,R)₂F₃ (R=rare earth) system, phase diagrams and phase struct. 2-109954
 BaF₂-MnF₂-GaF₃, ternary system, identification of 4 new structural types (*French*) 2-55948
 BaF₂-MnF₂-RF₃ (R=Dy, Ho, Er, Tm, Yb, Lu, Y), glass form., quenching, IR study (*French*) 2-91808
 BaF₂-Pb_{1-x}Sn_xTe heterojunction, defect form. 2-92374
 BaF₂-ThF₄-ZnF₂-YbF₃, glasses, stabilization and IR transmission, DTA study 2-97929
 BaFe₂O₁₀ and BaFe₂O₇, ⁵⁷Fe spin echo NMR spectra in domains and domain walls 2-104742
 BaFe₂O₁₀:Gd(Dy)(Ho)(Er)(Yb), dopant effects on mag. props. 2-92968
 Ba_{1-x}Fe_xS₄, Mossbauer spectra, mag. and elec. props. 2-66962
 Ba_{1-x}Fe_xS₄, phase relationships 2-62105
 Ba₂FeS₄, cryst. struct., 2-D array of FeS₄ tetrahedra, X-ray diff. obs. 2-60941
 BaFeSi₃O₁₀, gillespite, Fe²⁺ Mossbauer spectra, mag. relax. effects 2-61793
 Ba₂Gd₂F₂₁, solid electrolyte, ionic cond. 2-92273
 Ba₂Al₆(Ga₂)O₁₂, cryst. struct., X-ray and electron diff. study 2-81760
 BaGeO₃-Al₂O₃-CaF₂-MgF₂-Eu³⁺, glass, spectral-luminescence, IR and Raman study 2-72553
 BaH, potential energy curves, Franck-Condon factors 2-70164
 BaHfO₃, thermodynamic stability investig. using EMF method with CaF₂-type electrolyte 2-81983
 Ba_{1-x}La_xCoO₃, mag. clusters, hysteresis and susceptibility study 2-61739
 Ba_{0.7}La_{0.3}F_{2.3}, solid electrolyte, ionic cond. 2-92273
 Ba_{0.75}La_{0.25}Nd_{0.05}F_{2.25}, solid electrolyte, ionic cond. 2-92273
 BaLaNiO₄, and oxygen network stabilisation (*French*) 2-61759
 BaMnF₄, incommensurate transition, phason light scatt. 2-76660
 BaMnF₄, magnetoelectric phenomena, freq. depend. 2-66888
 BaMnF₄, phase transitions, specific heat 2-76661
 BaMnF₄, submillimeter dielec. spectra, 85 to 300K 2-110744
 BaMnO₄, reson. Raman spectra of vibr. 2-85670
 Ba(MnO₄)₂, reson. Raman spectra of vibr. 2-85670
 Ba₂(MnO₄)₃, lattice, factor group anal. 2-116196
 Ba₂(MnO₄)₃, Raman spectra of vibr. 2-85670
 BaMoO₄, periodic precip. in SiO₂ gel, elec. and mag. fields effects 2-93397
 BaMoO₄-La₂(MoO₄)₃, phase diagram, structural characteristics of BaLa₂(MoO₄)₃ 2-77809
 BaMo(W)O₄, scheelite struct., cation diffusional mobility, solid phase synthesis appl. 2-86923
 Ba(NH₃), NH₃ diffusion and H⁺ shift, PMR obs. 2-82735
 Ba(NO₃)₂, dry impregnation with MoO₃ on Al₂O₃, cryst. struct. 2-109761
 Ba(NO₃)₂, ionic-mol. crystals, US absorpt. 2-56100
 Ba(NO₃)₂, stacking faults and dislocations due to liquid inclusion presence 2-91989
 Ba(NO₃)₂.H₂O, pyroelectric cryst., struct., neutron diff. study 2-86635
 Ba₂NaNb₂O₁₅, crystal growth and characterization, high SH output power (*Chinese*) 2-77717
 Ba₂NaNb₂O₁₅ crystals, ferroelec. domains and laser freq. doubling 2-114367
 Ba₂NaNb₂O₁₅, photoluminesc. spectra, theoretical interpretation 2-57175
 Ba₂NaNb₂O₁₅, tetragonal-incommensurate ferroelastic transition 2-76659
 BaNb₂O₆ single crystals, flux growth, X-ray diff. obs. of columbite struct. 2-99313
 Ba(Nb₂Ti_{0.84}Sn_{0.16-x})O₃, semicond. ceramics, space-charge-limited currents and dopant cond. influence, firing procedure effect (*Russian*) 2-56607
 Ba₂Nd_{1-x}CoO₃, mag. clusters, hysteresis and susceptibility study 2-61739
 BaO, photoelectron, Auger, and ionisation loss spectra 2-83003
 BaO-B₂O₃-SiO₂, liquid-phase separated, chem. stability and microhardness 2-105336
 BaO-CaO-Sc₂O₃, system, cryst. struct. and phase diagrams, X-ray diff. study 2-91921

barium compounds continued

- BaO-PbO-P₂O₅-Nd₂O₃, glass, separation of luminescence-quenching processes 2-104964
 BaO-SrO-Na₂O-Nb₂O₅ system, cryst. growth and electromech. characts. 2-87693
 BaO-SrO-Sc₂O₃ system, cryst. struct. and phase diagrams, X-ray diffr. study 2-81921
 BaO-TiO₂-Nb₂O₅ (Sb), (La) system, phase diagrams, influence of foreign atoms on cryst. lattice 2-66179
 BaO-TiO₂-B₂O₃-SiO₂ glasses, Ti ion structs., mag. props. and EPR spectra 2-92858
 BaO+As₂O₃, heat of form. of arsenates meas. 2-88374
 Ba(OH)₂·8H₂O, aq. soln., tract. etchant for plastic detectors 2-64785
 Ba₃(PO₄)₂·Eu, luminophors, luminescent processes 2-82891
 Ba₃P₂O₁₈·9H₂O, preparation and props. 2-72643
 Ba(Pb, Bi)₂O₃, ceramic supercond., transition temp., prep. conditions 2-82509
 BaPb_{0.7}Bi_{0.3}O₃ films, grain boundary Josephson junction network props. meas. 2-87452
 BaPb_{0.73}Bi_{0.27}O₃ films, grain boundary junctions, max. DC Josephson current, temp. depend. meas. 2-92832
 BaPb_{1-x}Bi_xO₃, cryst. growth from molten KCl solvent and supercond. props. 2-77719
 BaPb_{1-x}Bi_xO₃, electronic struct. study 2-110432
 BaPb_{1-x}Bi_xO₃, fabrication and supercond. props., boundary layer Josephson junctions appl. 2-82530
 BaPb_{1-x}Bi_xO₃ solid soln., microstruct. and supercond. 2-110518
 BaPb_{1-x}Bi_xO₃ superconducting film, FR sputtered, supercond. and optical props. 2-66690
 BaPb_{1-x}Bi_xO₃ superconducting films, RF sputtering prep. 2-83019
 BaPb_{1-x}Bi_xO₃ supercond. ceramics, thermodynamic props. 2-92820
 BaPb_{1-x}Bi_xO₃ superconductivity, electronic and cryst. struct. effects 2-115938
 BaPb_{1-x}Bi_xO₃ supercond. props., effect of O²⁻ conc. 2-115939
 (Ba_{0.75}Pb_{0.16}Na_{0.10}K_{0.04}(Mn,Fe,Al)_{0.8}(O,OH)₁₆), cryst. struct., symm. and cation displacements 2-65928
 BaPbO₃-BaBiO₃ system, Hall EMF, elec. cond., and supercond., 2.5 to 300K 2-61645
 Ba(Pt(Cn))₂·yH₂O, luminesc., mag. field effects 2-82899
 BaPt₃S₃, synthesis and struct. (German) 2-86637
 Ba₂Re₆S₁₁, synthesis, cryst. struct., and mag. props. 2-55940
 BaS phosphors, cryst., colour centres, stimulated IR spectra 2-104875
 BaS:Bi phosphors, delocalisation of impurity-electron excitations 2-77574
 BaS:Cu,Er phosphors, electroluminesc., spectral characteristics 2-67122
 BaS:Cu(Bi) phosphors, thermally stimulated conductivity 2-72006
 BaS:Bi phosphors, Na effect on luminescence 2-72543
 BaS-SnS systems, ¹¹⁹Sn Mossbauer spectra, chemical isomer shifts (French) 2-61799
 BaS(BaSe), optic phonon IR reflection spectra and cryst. growth, expt. study 2-99117
 BaSO₄, barite, morphological lattice and reciprocal crystal 2-115169
 BaSO₄, growth rate in suspension, influence on inhibitor conc. 2-116352
 Ba₂SiO₄, vibr., isotope shift, IR and Raman study 2-77507
 Ba₂Sm_{1-x}CoO₃, mag. clusters, hysteresis and susceptibility study 2-61739
 Ba(Sr)(Ca)(Zn_{1/3}Nb_{2/3})O₃-PbTiO₃-PbZrO₃ elec. and optical props. 2-82795
 Ba(Sr)(M_{1/3}Nb_{2/3})O₃-PbZrO₃-PbTiO₃ (M=Pb, Ca, Sr) elec. and optical props. 2-82794
 Ba_{0.9}Sr_{0.6}Nb_{0.4}O₃:Pr³⁺, inverse Raman spectra 2-104877
 Ba₂Sr_{1-x}Nb₂O₆, low freq. dielec. spectra, 20 to 200°C 2-61830
 Ba₂Sr_{1-x}Nb₂O₆, photorefractive and photoelec. props., ferroelec. polarisation 2-110394
 Ba₂Sr_{1-x}Nb₂O₆:Ce(Sr,Nb₂O₇), photoluminescence, thermoluminescence and photocd. 2-110908
 Ba₂(Sr_{1-x}Nb₂O₇)₂:O₃-PbZrO₃-PbTiO₃ elec. and optical props. 2-82796
 Ba₂Sr_{1-x}O₆, ferroelectric, dielec. and optical props. in fund. absorption region 2-77481
 Ba_{0.95}Sr_{0.05}Pb_{0.75}Bi_{0.25}O₃ superconducting films, RF sputtering prep. 2-83019
 (BaSr)TiO₃, planar capacitors in SHF range, capacity and dielectric loss angle meas. 2-58845
 Ba_{2-x}Sr_xTiSi₃O₈, crystal growth and SAW props. 2-87970
 BaTiAl₂(Ga₂O₁₂), cryst. struct., X-ray and electron diffr. study 2-81760
 BaTiO₃:Mn²⁺, spin-spin relax. study 2-77407
 BaTiO₃, coupled surface waves (French) 2-87003
 BaTiO₃, Curie temp. shift in appl. mag. field 2-110787
 BaTiO₃, deformed, light emission during pulsed repolarisation 2-72555
 BaTiO₃, dielec. props. near ferroelec. transition, domain struct., mag. field effects 2-104825
 BaTiO₃ dielectrics, flux sintered 2-88033
 BaTiO₃, electro-optic cryst., photorefractive effect, holographic study (German) 2-57057
 BaTiO₃, electronic spectra of TiO₆⁸⁻ clusters 2-93222
 BaTiO₃, ferroelec., dielec. const. crit. exponent, diffused-phase-transition 2-110781
 BaTiO₃, ferroelec., domains and grain boundaries, SEM EBIC imaging technique 2-116132
 BaTiO₃, ferroelec., photorefractive materials, phase conjugation, real time optical processing and dynamic holography appl. 2-65312
 BaTiO₃ ferroelec. ceramic surface 2-109526
 BaTiO₃, ferroelec. transition Debye-Waller factor and thermal expansion coeff. 2-57024
 BaTiO₃, ferroelec. transition role of polar phonons in chemical bond, Fourier spectroscopy 2-57028
 BaTiO₃, ferroelec.-paraelec. transition, displacive-order-disorder crossover 2-104819
 BaTiO₃, ferroelec.-paraelec. transition, theory 2-116130
 BaTiO₃, ferroelectric transition in superintense laser field 2-61081
 BaTiO₃, ferroelectric transition in alternating elec. field (Russian) 2-61846
 BaTiO₃, ferroelectric film, prep. from solns. of metal alcohols 2-72635
 BaTiO₃, ferroelectrics, glasslike props. at low temps. 2-110778
 BaTiO₃, hot pressed ceramics, internal stresses, Curie temp. 2-88017
 BaTiO₃, low-temp. phase transition in strong elec. field 2-116129
 BaTiO₃, optical props. in vibronic model 2-110815
 BaTiO₃, phase transition, bound symm. (French) 2-87714
 BaTiO₃, phase-conjugating mirror with CW gain 2-90993
 BaTiO₃, photorefractive cryst., coherent oscillation by self-induced gratings 2-65310

barium compounds continued

- BaTiO₃ photorefractive crystal based CW phase-conjugate resonator, spatial and temporal props. 2-108971
 BaTiO₃ piezoelectric, ceramic, mech. strength 2-77907
 BaTiO₃, polarisation in cubic phase 2-87734
 BaTiO₃ semiconductor ceramics, positive temp. coeff. of resist. under reduced atm. 2-82720
 BaTiO₃ sputtered films, energy anal. of high-energy neutral atoms 2-87927
 BaTiO₃, tetragonal, oblique phonons, polarised Raman scatt. meas. 2-56123
 BaTiO₃, thermoluminesc. and absorpt. spectra 2-93290
 BaTiO₃:Al, acceptor doped, nonstoichiometry 2-77042
 BaTiO₃:U, ceramic, room temp. elec. resist. and permittivity meas. 2-57003
 BaTiO₃:Y₂O₃ (Nb₂O₅), elec. props., phase composition, valence state of cations 2-110347
 BaTiO₃-Bi₂TiO₅ low temp. sintered ceramics, microstruct. and elec. props. 2-88035
 BaTiO₃-R₂O₃·3TiO₂ (R=La, Pr, Nd, Sm), formation of BaR₂Ti₄O₁₂, dielec. props. 2-71417
 BaTiO₃-SrTiO₃ ceramic mixture, reaction rates 2-77789
 BaTiO₃(100) surface, dynamic lattice characts., LEED study 2-115528
 Ba_{1-x}U_xTiO₃ ceramic, U doping and sintering atmos. effects on elec. and dielec. props. 2-116107
 BaVS₃, stoichiometric, phase transitions at 240K and 80K, X-ray diffr. study 2-61125
 BaWO₄, cryst. growth from Na₂WO₄ melt, nucleation mechanism, and kinetics induction period meas. 2-91836
 BaWO₄, crystal growth from melt, diffusion controlled, activation parameters, DTA 2-65891
 BaWO₄, solubility in metal chloride melts, crystallisation 2-86874
 BaX₂ (X=Br,ClO₄), hydration, quadrupole moments of ionic nuclei NMR obs. 2-54882
 Ba₂XF₆, X=Si,Ge, struct. and characterisation (German) 2-60955
 BaZnGeO₄, cryst. struct. of room temp. phase 2-65937
 Ba_{4-x}Zr_{2+x/2}F₁₆, diffusion and rotation of F, NMR study (French) 2-66925
 Bi₂O₃-BaO system, rhombohedral phase, cryst. struct., superlattice existence, electron microprobe study 2-60947
 CaWO₄-BaWO₄:Eu²⁺ phosphor, luminesc. props. 2-57150
 CsBa(NH₂)₃, synthesis and NH₄CdCl₃-type cryst. struct., X-ray study (German) 2-98019
 HfF₄-BaF₂-LaF₃(ThF₄) glasses, polarised Raman scatt. study 2-57086
 K₂Ba₂Si₆O₂₀, cryst. struct., X-ray diffr. study 2-103695
 (K_{0.90}Ba_{0.35})(Ti, Fe, Mg)_{0.16}, cryst. struct., symm. and cation displacements 2-65928
 KCl:BaTiO₃ composite crystals. dielect. props. under DC biasing fields 2-104790
 K₂O-BaO-B₂O₃ glass, microhardness 2-105335
 (La, Ba)_{1-x}(Mn_{2-x}Mn_{1-x})₄O₁₂, indirect exchange interactions, and Jahn-Teller distortions, neutron diffr. study 2-66800
 La_{2-x}Ba_{2-x}Zn_{2-x}O₁₀, cryst. struct. (French) 2-81750
 La₂O₃-BaO-B₂O₃ and La₂O₃-BaO-PbO-B₂O₃ system glasses, very pure, absorpt. curve and colour 2-93227
 Nd_{1-x}Ba_{2-x}Zn_{2-x}O_{10-2x}, cryst. struct. (French) 2-81750
 P₂O₅-SnO₂-BaO, Mossbauer and IR spectra quadrupole splitting 2-104767
 Pb_{1-x}Ba_xGeO₉, polymorphism, cryst. struct., and dielec. props. 2-109754
 SeF₆-BaF₂-YF₃(ThF₄)(NaF), glass, phys. props. (French) 2-91809
 SiO₂-B₂O₃-Al₂O₃-BaO, pyroceramic, low temp. thermal cond. 2-110054
 SiO₂-Na₂O-CaO-BaO glass, microindentation hardness 2-93582
 (Sr,Ba,Ca)Nb₂O₆, diffuse ferroelec. phase transition, optical and dielec. props. study 2-61844
 Sr_{1-x}Ba_x(Nb₂O₆), ferroelectric thermal cond. and permittivity 2-115477
 Sr_{1-x}Ba_xNb₂O₆, use in amplifying CW phase conjugate mirror 2-75632
 (Sr,Ba_{1-x})_{1-x}(Nb₂O₆), cerium-doped, as holographic recording medium (Russian) 2-60035
 Sr₂Ba_{1-x}Nb₂O₆, poled, dielec. props. rel. to pyroelec. detection 2-110777
 Sr₂Ba_{1-x}Nb₂O₆, pyroelec. large area high speed detectors for UV 2-101458
 SrO-BaO-Al₂O₃-TiO₂-SiO₂ system, crystallised-glass materials, isomorphous substitutions, X-ray diffr. study 2-71615
 SrSiO₃-BaGeO₃, solid solutions, phase reactions, IR spectra 2-72693
 Th/Ba fluoride multicomponent glasses, extended IR absorpt 2-61854
 ThF₄-BaF₂-MnF₂, spin glasses, AC susceptibility, local anisotropy 2-92876
 ZnF₂-BaF₂-DyF₃(HoF₃), spin glasses, AC susceptibility, local anisotropy 2-92876
 ZrF₄-BaF₂-LaF₃(ThF₄) glasses, polarised Raman scatt. study 2-57086
 ZrF₄-BaF₂-YbF₃(GdF₃), fluoride glass, prep., optical and physical props. 2-102891
 ZrF₄-BaF₂-(BaCl₂), glasses, mixed cond. as function of temp. 2-115832

Barkhausen effect

- Block wall motion nonlinearity, onset of chaotic regime and Barkhausen noise anal. 2-61733
 coercivity, domain wall proving numerical model 2-92964
 eddy current distrib. due to Barkhausen regions in conducting sheets with bar domains, theory 2-77324
 ferromagnet, Barkhausen coercivity, domain wall motion 2-82639
 ferromagnetic materials, magnetic phase transform. control using Barkhausen effect and hysteresis loop 2-116677
 irreversible magnetising properties in amorphous and crystalline material, propag. props. 2-87539
 losses due to Barkhausen switching in conducting sheets with bar domains, theory 2-77323
 metallic glass tape, ferromag., localized struct. variation detection by acoustic emission 2-71361
 noise stress meas., acoustic method 2-83318
 soft magnetic materials, mag. loss model 2-82655
 Co-Fe-Nb alloy, magnetisation reversal and Barkhausen effect 2-72277
 Fe whiskers, Barkhausen jump field distrib. 2-87540
 Fe-Si (3 wt.%), grain oriented, Barkhausen noise meas. 2-87537
 Fe-Si (3 wt.%), magnetisation reversal propag., Barkhausen expts. 2-82656
 Fe-Si bicrystalline sample, magnetisation reversal dynamics 2-72259

Barnett effect *see gyromagnetic effect; magnetisation*

barometers

digital portable barometer-thermometer (*French*) 2-79568
microbarograph, thermally compensated by electronic system 2-68516

barometric pressure *see atmospheric pressure and density*

barrages *see dams*

barrel distortion *see aberrations*

barretters *see thermistors*

baryon-baryon interactions

see also baryon-baryon scattering; hyperon-nucleon interactions; nucleon-nucleon interactions
No entries

baryon-baryon scattering

see also baryon-baryon interactions; hyperon-nucleon scattering; nucleon-nucleon scattering
resonances in baryon-baryon and pion-deuteron scatt. 2-69481

baryon decay

see also baryon hadronic decay; baryon leptonic decay; hyperon decay
B-L and nucleon decays in the subquark model 2-64301
baryon→baryon μ e, in composite quark and lepton model 2-95804
baryon number violating nucleon decay, chiral lagrangian 2-59144
charm particles, lifetime, experimental results review 2-101714
exotic bosons, contrib. to B- and L-violation, proton decay, neutron oscils., ν mass 2-107582
general supersymmetric grand unification, proton decay, one-loop contribs. 2-107580

grand unified theories 2-113195
neutron beta-decay, review 2-69460
neutron DD β -decay, Goldberger-Treiman relation, chiral symmetry breaking corrections 2-69611

nucleon decay, weak interactions and symmetries, review 2-59097
proton decay, B-L nonconservation in SO(10), E(6) and SU(5) GUTs 2-101715

proton decay, cosmological baryon prod. vs. intermediate mass scales 2-89426

proton decay, CP nonconservation effects in SU(5) model 2-64258
proton decay, fully confined events at Kola Gold Field, mean lifetime estimate 2-107659

proton decay, inclusive decay rate in deuteron, nuclear effects 2-95830
proton decay, lifetime and branching ratio, bag model calc. in SU(5) GUT 2-95827

proton decay, Lorentz invariance violation 2-69458
proton decay, non exponential law 2-79873

proton decay, parity conservation and selection rules, even G parity mesons 2-113182

proton decay and fundamental length hypothesis in gravitation theory 2-58676

proton decay and horizontal symmetry 2-54151
proton decay and SU(5) grand unified model 2-79802

proton decay in SO(10) \times SO(10) \times grand unified extended technicolour models 2-95727

proton decay in SU(3) \otimes SU(2) \otimes U(1) supersymmetric ground unified theory 2-101615

proton decay in supersymmetric SU(5) GUT 2-101617
proton decay in supersymmetric SU(5) model 2-79800

proton decay operator anal. in SU(7) grand unified theory 2-84821
proton lifetime in SO(10) supersymmetric GUT 2-101622

proton stability, review of limits and expt. prospects 2-79868
proton supersymmetric decay, enhancement factors 2-95829

radiative weak decay, single- and two-quark transition amplitudes 2-95844

SU(2) \times SU(2) \times U(1) \times U(1) \times left-right symmetric GUT, proton lifetime, quark-lepton mass ratio 2-95721

SU(3) \times SU(2) \times U(1) supersymmetric GUT, proton decay 2-64248

SU(3) \times SU(2) \times U(1) supersymmetric model, masses, p decay, conservation laws, spontaneous breakdown 2-101599

SU(5) and SO(10) GUTs superheavy particles, $\sin^2\theta_w$, and proton lifetime 2-113192

super-cosmology, supersymmetric theories, baryon asymmetry, proton decay 2-68945

supersymmetric flavour unification model SU(11), invisible axion and proton decay 2-95726

supersymmetric SU(5) model, ordinary SU(5) predictions, proton decay mode 2-107594

$\Delta^+(1232)\rightarrow p\gamma$, radiative width from Coulomb excitation (*Russian*) 2-64324

$n\rightarrow p e^+ \bar{\nu}$, baryon and lepton number violation by electroweak instantons 2-54027

NN \rightarrow ex, nucleon decay and neutron oscil. inside nucleus, nuclear effects 2-54150

$p\rightarrow e_1^+(\mu_1^+)+$ mesons in SU(8) model 2-95712

$p\rightarrow$ hl, SO(10) grand unified models, symm. breaking 2-79797

$P\rightarrow K^+ \bar{\nu}$, supersymm. models calc. 2-74684

$p\rightarrow \bar{\nu} K^0$, decay in supersymmetric SU(5) model 2-113184

$p\rightarrow \omega e^+$, lifetime in static bag model, branching ratio in SU(5) GUT 2-79871

$p\rightarrow \pi^+ e^+$, in nuclei, Fermi motion and secondary particle collisions, intranuclear cascade model 2-74686

$p\rightarrow \pi^+ e^+$, intensity, ang. and energy distrib., nuclear effects (*Russian*) 2-95831

$p\rightarrow \pi^+ e^+$, lifetime in static bag model, branching ratio in SU(5) GUT 2-79871

H-H oscillations, double proton decay and grand unified theories 2-89924

baryon hadronic decay

asymptotic $[\Delta I]=1/2$ rule derivation 2-89962

charm baryons, hadronic decay from e^+e^- , P-odd effects (*Russian*) 2-64325

charmed baryons, weak EM decays, quark model 2-74685

hyperon decays, nonleptonic, gluon exchange contrib. 2-95828

parity violation, SU(6) broken diquark model 2-79870

$B^0\rightarrow B\gamma$, strange baryons, dimension-five effective operators calc. 2-74691

$\Delta^0\rightarrow N\pi$, partial rate, quark model calc. 2-74683

$\Lambda\rightarrow N\pi$, strangeness-changing nonlepton decay 2-74648

$N^*\rightarrow N\pi$, partial rate, quark model calc. 2-74683

$\Omega\rightarrow AK$ ($\Xi\pi$), nonleptonic decays in relativistic composite model with QCD effects 2-54149

$\Xi\rightarrow\Lambda\pi^+$, α asymm. parameter 2-79874

$\Xi\rightarrow\Lambda\pi^+$, α -parameter determ. 2-59146

baryon hadronic decay continued

$\Xi\rightarrow\Lambda\pi^+$, branching ratio, rel. to, $\Xi\rightarrow\pi\pi^+$ 2-79875

$\Xi\rightarrow\pi\pi^+$, branching ratio, rel. to, $\Xi\rightarrow\Lambda\pi$ 2-79875

$\Xi\rightarrow\Lambda\pi^0$, asymmetry parameter meas. 2-54152

baryon interactions *see baryon-baryon interactions; lepton-hadron interactions; meson-baryon interactions; photon-hadron interactions*

baryon leptonic decay

Ω^- , nonleptonic strangeness-changing decay 2-74648

$p\rightarrow e^+ \gamma$, radiative proton decay in SU(5) GUT, 3q annihilation 2-79795

baryon mass

see also hyperon mass

ground-state spin- $1/2$ baryon masses in relativistic quark-diquark model 2-84883

hadrons containing heavy quark, masses from QCD sum rules 2-79820

lattice gauge theories with fermions on lattice, strong-coupling limit 2-101549

lowest-lying baryon and meson states masses in SU(2) Yang-Mills theory 2-53944

naive nonrelativistic quark model hybrid, pion effects, baryon mass, mag. moment 2-101676

proton and Δ -isobar masses, nonperturbative power correction effect in QCD (*Russian*) 2-54079

proton mass-radius symmetry rel. to electron 2-107651

quark-gluon coupling strength estimation from baryon masses 2-69424

p/e mass ratio, empirical formula 2-69438

qqq bound-state masses, potentials test 2-95806

baryon photoproduction

see also hyperon production; neutron production; proton production
 γN , charmed hadron inclusive photoproduction in VDM (*Russian*) 2-74694

baryon production

see also baryon photoproduction; hyperon production; neutron production; proton production

$\pi^- d\rightarrow N^*\pi^0$ (p), 3.65 GeV, $\Delta(1232)$ and $N^*(1688)$ forward prod. (*Russian*) 2-89974

cosmic baryon number, contrib. of primordial black holes 2-79255

grand unified theories, cosmological baryon prod. vs. intermediate mass scales 2-89426

recombination mechanism for baryon prod. in quark jets 2-101745

suppressed production of some bottom and top hadrons 2-69361

$\Delta(1232)$, electroproduction, pol. e, P violation, in electroweak theories 2-74695

e^+e^- , multiple baryon-antibaryon creation (*Russian*) 2-79902

e^+e^- →baryons, model survey 2-64335

e^+e^- →baryons, quark fragmentation, Monte Carlo model 2-54196

e^+e^- collisions, polarised and unpolarised, 30-150 GeV, polarised baryon prod. 2-69479

e^+e^- →hX, charm baryon prod. and decay, P-odd effects (*Russian*) 2-64325

e^+e^- →hadrons, baryon-antibaryon production in quark and gluon jets 2-59122

hh, multiquark resonant states 2-54198

$K^-d\rightarrow\Xi^- p\pi^0$ ($\pi^+\pi^-$), 1.45, 1.65 GeV/c, dibaryon resonance prod. 2-79909

KN, dd Δ isobar prod. at high energies, EM mechanism (*Russian*) 2-101773

IN, deep inelastic scatt., baryon prod. and diquark fragmentation 2-95852

NN, baryonium, NN and dibaryons, expts. review 2-54219

NN, dd Δ isobar prod. at high energies, EM mechanism (*Russian*) 2-101773

NN(NN), dibaryon reson. existence 2-54200

NN $\rightarrow\pi^0(\eta)(\Delta)$, 2 GeV, obs. in relativistic nucleus collisions 2-101919

$\nu N\rightarrow X$, charmed baryon weakly inelastic prod., dual model (*Russian*) 2-95816

$p\pi\rightarrow p\pi\pi^-$, 500-1000 MeV, total cross-section, dibaryon resonance existence (*Russian*) 2-101761

pp, 540 GeV/c, search for open 'top' baryonic states 2-59190

pp, 7.3 GeV/c, inclusive baryon and meson reson. prod. cross sections 2-69488

pp→ ΔN , single- Δ prod. contrib. to inelasticity parameters 2-74701

pp→ $\Delta(1232)\Delta(1236)$, 7.2-12.0 GeV, one pion exchange anal. 2-59177

pp→ Λ , 540 GeV, strangeness prod. yields 2-101767

$Li(p,\Delta^+)$, 1.04 GeV, cross section, Δ -N interaction, Glauber calc. 2-64402

πN , dd Δ isobar prod. at high energies, EM mechanism (*Russian*) 2-101773

baryon resonances

see also hyperon resonances

$\pi^- d\rightarrow N^*\pi^0$ (p), 3.65 GeV, $\Delta(1232)$ and $N^*(1688)$ forward prod. (*Russian*) 2-89974

baryon-vector-meson couplings in quark model with chromodynamics 2-54095

baryonium internal color transitions in the L=0 state 2-101649

charmed, hadronic decay from e^+e^- , P-odd effects (*Russian*) 2-64325

dibaryon masses in MIT bag model with centre-of-mass correction 2-84864

dibaryon reson. masses (*Russian*) 2-54124

dibaryon resonance spectra, diquark cluster model, with jj coupling scheme 2-95780

dibaryons, colour electric instabilities 2-101816

diprotion, 4D_2 state, N/D anal. through pp, π^+d and ND channels 2-79786

multiquark charm hadrons, mass spectra, MIT bag model, with SU(4) flavour symm. 2-84884

NN bound state widths, rel. to optical pot. 2-59133

single quark transition model for resonance electroproduction 2-101738

SU(2) \times SU(2) \times SU(2) \times SU(2) symmetry scheme for new particles 2-54106

suppressed production of some bottom and top hadrons 2-69361

$\Delta(1232)$, electroproduction, pol. e, P violation, in electroweak theories 2-74695

Δ magnetic moment from radiative πN scatt. 2-59254

Δ resonance amplitudes, in $\pi N\rightarrow\gamma\gamma N$, Lagrangian field theory calc. 2-107684

Δ -isobar mass, nonperturbative power correction effect in QCD (*Russian*) 2-54079

$\Delta^+(1232)\rightarrow p\gamma$, radiative width from Coulomb excitation (*Russian*) 2-64324

$\Delta^0\rightarrow N\pi$, partial rate, quark model calc. 2-74683

baryon resonances continued

- $e^+e^- \rightarrow hX$, charm baryon prod. and decay, P-odd effects (*Russian*) 2-64325
 $\gamma d \rightarrow pn$, 180-600 MeV, differential cross section meas. in dibaryon reson. energy range 2-59328
 $\gamma p \rightarrow \pi^+ n$, 0.96-1.1 GeV, polarised target asymmetry, nucleon resonance radiative decay 2-64347
 hh, multi-quark resonant states 2-54198
 $K^- d \rightarrow \Sigma^0(\pi^+\pi^-)$, 1.45, 1.65 GeV/c, dibaryon. resonance prod. 2-79909
 KN, dd Δ isobar prod. at high energies, EM mechanism (*Russian*) 2-101773
 $\Lambda(1405)$, K matrix fit, s-wave N/D amplitudes 2-101609
 $N \rightarrow \Delta(1232)$, EM transition form factor, πN dynamics 2-113277
 $N^* \rightarrow N\pi$, partial rate, quark model calc. 2-74683
 NN, baryonium, NN and dibaryons, expts. review 2-54219
 NN(NN), dibaryon reson. existence 2-54200
 $NN \rightarrow \pi^0(\eta)(\Delta)$, 2 GeV, obs. in relativistic nucleus collisions 2-101919
 NN resonance in the quark model 2-84844
 np total cross section, $l=1$ dibaryon reson. effect 2-69485
 $\nu N \rightarrow X$, charmed baryon weakly inelastic prod., dual model (*Russian*) 2-95816
 Ω^- , nonleptonic strangeness-changing decay 2-74648
 p, 335-950 MeV/c, resonant structure search 2-101755
 $pn \rightarrow pp\pi^+$, 500-1000 MeV, cross section, search for dibaryon resonances 2-101756
 $pn \rightarrow pp\pi^+$, 500-1000 MeV, total cross-section, dibaryon resonance existence (*Russian*) 2-101761
 pp , 7.3 GeV/c, inclusive baryon and meson reson. prod. cross sections 2-69488
 pp (pn) forward scatt., amplitude anal. 2-59171
 $pp \rightarrow \Delta N$, single- Δ prod. contrib. to inelasticity parameters 2-74701
 $pp \rightarrow \Delta(1236)\Delta(1236)$, 7.2-12.0 GeV, one pion exchange anal. 2-59177
 $pp \rightarrow pp$, 1.2-1.7 GeV/c, diproton resonances, phase-shift soln. 2-79908
 $\pi^- d$, 120, 138 MeV, elastic scatt., tensor polarisation, rel. to dibaryon resons. 2-101764
 $\pi^+ d \rightarrow p\pi^+ n$, three-body calc. in Δ -resonance region 2-74776
 $\pi N \Delta$ system, procs. in chiral bag model 2-59118
 $^3H(\pi, \pi)$, 219-294 MeV, polarised d, iT_{11} meas., dibaryon reson. effects study 2-85097
 NN, dd Δ isobar prod. at high energies, EM mechanism (*Russian*) 2-101773
 πN , dd Δ isobar prod. at high energies, EM mechanism (*Russian*) 2-101773

baryon scattering see *baryon-baryon scattering; lepton-hadron scattering; meson-baryon scattering; photon-hadron scattering*

baryon spin and parity

- see also *hyperon spin and parity*
 neutron spin rotation, vacuum torsion effect 2-54046
 neutrons, unique spin and isospin determ., from $SU(3)_{\text{flavour}} \times SU(2)_{\text{spin}} \times SU(3)_{\text{colour}}$ assignments 2-74628

baryons

- see also *baryon resonances; baryon spin and parity; hyperons; nucleons*
 bag model, review 2-79840
 baryonic current sum rules and chiral symmetry breaking 2-59066
 color electric instabilities 2-101816
 cosmic density constraints 2-117829
 cosmological baryon asymmetry in grand unified gauge models 2-101614
 cosmological baryon number creation and CP violation 2-63720
 cosmological baryon prod. and neutrino masses in $SU(2)_L \times SU(2)_R \times U(1)_{B-L}$ gauge theory 2-84825
 cosmology, baryon symm., based on grand unified theories, Universe evolution 2-117838
 diquarks in baryons from $\bar{p}d$, pd , π^-d collisions 2-101768
 early Universe, baryon excess contrib. from grav. interaction after Planck time 2-68946
 early Universe, free quark-baryon ratio, time development 2-68941
 elementary particle properties review 2-89481
 form factor, non-renormgroup contrib., double log. suppression (*Russian*) 2-95840
 loop average in large N limit 2-69420
 magnetic moment, in variable pressure bag model 2-113242
 magnetic moment and structure 2-95916
 magnetic moments, QCD enhancement and quenching effect 2-54157
 magnetic moments, quark model and spectrum generating $SU(3)$ fits 2-113275
 magnetic moments in broken $SU(6)$ symmetry model 2-54161
 mass spectra, $(56, 0^+)$ states, quark-diquark contrib. 2-74674
 mass splitting in quark model with broken symmetry 2-69439
 matrix model, large N, baryons, WKB wave functions 2-74616
 minimally extended $SU(5)$ model, cosmological baryon generation 2-68943
 multicolour chromodynamics 2-107629
 octet, quark fragmentation function, spin correlations 2-107645
 parity violating weak Hamiltonian, baryon matrix elements, nonleptonic weak reactions 2-95737
 primordial Universe, baryon asymmetry and density perturbation effects 2-79251
 quantum logic explanation 2-58637
 quark and diquark fragmentation into mesons and baryons 2-113240
 relativistic effects for quarks within hadrons 2-95779
 strongly coupled lattice QCD, baryons in effective lagrangian, $SU(3)$ pot. 2-101644
 $SU(5)$ hierarchical supersymmetric model, baryon generation, cosmological consequences 2-79798
 $SU(N)$ chiral (QCD) $_2$, massless baryons and anomalies, chiral limit 2-69414
 super-cosmology, supersymmetric theories, baryon asymmetry, proton decay 2-68945
 superheavy monopoles and baryon asymmetry 2-59083
 universal baryon asymmetry generation in supersymmetric $SU(5)$ model 2-79800
 Universe baryon asymmetry in axion GUT model, invisible axions, Higgs field 2-68942
 Universes baryon asymmetry using models with composite quarks and leptons 2-68944

barysphere see *Earth core*

basicity see *pH*

bathymetry

- SW Atlantic, bottom topography and mag. anomalies (*Russian*) 2-62945

bathymetry continued

- N Atlantic ocean basin and continental margin, bathymetric profiles and trans-Atlantic Geotraverse 2-58035
 Azores-Biscay Rise, struct. and origin of crust 2-88855
 Barbados Ridge complex, bathymetric and seismic survey rel. to interpretation of accretionary wedge 2-94355
 bottom profile evolution, appl. of heat cond. eqn. with moving heat source 2-73537
 Ceduna Terrace, off South Australia, submarine valleys discovery, origin and age 2-117287
 continental slope and rise off NE Newfoundland, bathymetric var. of sediments geotechnical props. 2-78639
 Guinea coastal marginal plateau, geology and bathymetry (*Russian*) 2-88829
 Haifa Bay, E.Mediterranean Sea, bathymetric profile rel. to seiches 2-117307
 Hellenic trench, bathymetric obs. by Sea-Beam and submersible rel. to tectonics 2-94350
 Kane fracture zone (N. Atlantic), crust struct. and isostatic compensation 2-68315
 Lake Superior, seismic refl. study of recessional moraines rel. to regional deglaciation 2-94405
 laser, short-pulse high-repetition-rate CuBr, suitable for bathymetry 2-90917
 E Mediterranean ridge, Sea-Beam bathymetric obs. rel. to tectonic strain distrib. synthesis 2-100369
 E Mediterranean Sea, bathymetric and geological evidence concerning compressional tectonics 2-94354
 Mediterranean Sea, bottom relief in Tunis-Sardinia Strait and Vavilov volcano area 2-83807
 mid-oceanic ridges, ocean bottom relief and gravity anomalies rel. to crustal struct. 2-117263
 Middle America Trench as example of subduction zone, study of bathymetry and tectonics 2-94351
 multibeam bathymetric swath survey systems 2-106366
 ocean floor depth-age relation, comparison of discrete and continuous intrusion models for plates thermal struct. 2-106023
 S Pacific, seamounts search in Cook-Austral region 2-100367
 East Pacific Rise (21°N), crust struct. and sea-floor topography 2-62926
 Red Sea crust, geology and topology (*Russian*) 2-83783
 Reykjanes Ridge, sonar study of midocean ridge struct. 2-62943
 Romanche transform fault on Mid-Atlantic Ridge, morphology and tectonics 2-83798
 Sea of Crete and Hellenic arc, fault systems geometry rel. to synthesis of tectonic development 2-94352
 seabed undulations, ocean wave energy refl. 2-106130
 seamount detection using satellite altimetry 2-100583
 topographic features, underwater sound scatt. model 2-117311
 Wilkes fracture zone, bathymetry and geomag. leading to struct. and tectonic implications 2-58018

batteries see *cells (electric); primary cells; secondary cells; solar cells*

Bauschinger effect

- polymers, anisotropic, yield hypothesis (*German*) 2-72776
 steel, sized, alternating plastic deform., elec. contact method and hardness meas. 2-57427
 Cu-Fe, containing α -Fe particles, back stress hardening and static and dynamic hardening 2-67358
 Fe-Al, pseudoelectricity and slip reversibility, optical and electron microscopy obs. 2-111221
 α - β Ti-Mn alloy, fatigue crack propag., plastic zone sizes and strain partitioning 2-72835

Bayard-Alpert gauges see *ionisation gauges*

Bayes methods

- architectural noise, Kalman's filtering theory under preestablished estimation algorithm form (*Japanese*) 2-97297
 cross-correlation flowmeter, technique development using signal processing 2-114958
 earthquake prediction statistics, urn model, Bayesian model equiv. 2-68273
 entropy and Bayes' theorem (*French*) 2-89646
 multisensor ocean surveillance data fusion system architecture 2-63148
 X-ray qualitative analysis, Bayesian method of composition and state determ. (*Russian*) 2-84750

bays (magnetic) see *geomagnetic variations*

BCS theory

- see also *many-body problems*
 A15 superconductors, atomic disorder rel. to superconductivity 2-56769
 A=224 to 260, even nuclei static props., HF+BCS calcs. 2-54291
 anisotropic superconductors with variable density of states, normal impurities effect, generalised BCS theory 2-98795
 antiferromagnetic-superconductors, one-dimensional, ordered state in presence of homogeneous mag. field 2-61648
 delocalisation theory, effective Hamiltonian, appl. to BCS theory 2-87169
 excitonic superconductor design, BCS theory 2-87444
 one-dimensional solids, structurally unstable, Peierls and spin Peierls transitions 2-98632
 small- κ superconductors, energy gap and vortex creation energy 2-72126
 strong-coupling superconductors, thermal cond. and charge relax. 2-104539
 superconducting film, phonon-induced nonequib. states, kinetic eqn. study 2-82519
 superconductor, quasiparticle-injected, Bose-Einstein condensation of excitons 2-56768
 $^A U(n, f)$, A=233,235, thermal, internal excitation energy at scission point 2-59432
 ^{A}Yb , A=161, 163, 165, 167, rotationally perturbed wave functions test 2-79959

beam choppers

No entries

beam-foil spectra

- alignment of beam-foil excited fast (MeV) molecular ions from defined electronic configuration 2-54931
 biacetyl($-\dot{d}_0$), A_α from $A_\beta(\pi^*$ from n) transition, laser excitation spectroscopy: 2-70223
 fast-ion bombardment of thin foils, projectile Rydberg atoms and convoy electrons obs. 2-54946

beam-foil spectra continued

- foil + $H^+(H_2^+)(H_3^+)(D^+)(D_2^+)(D_3^+)(HD_2^+)(HeH^+)$, beam foil level excitation, foil thickness depend. 2-75390
- heavy ion-atom collisions, emission of δ electrons from inner-shell excitation 2-85793
- heavy ions exiting C-foils, equilib. charge-state distrib. 2-96707
- molecular dissociation in thin foils, optical obs. 2-54934
- molecular ion dissociation in foils, quantitative anal. 2-54932
- molecular ions, molecular struct., and interaction with matter, conference, Haifa, Israel (Jan. 1981) 2-53410
- thin target foils, electron impact, K-shell ionisation, bremsstrahlung and electron-electron bremsstrahlung 2-75404
- Al foil + $(H^+)(H_2^+)$, inner shell ionisation by ion bombardment 2-75391
- Ar II, beam foil excitation, Zeeman quantum beats, cascade effects 2-54937
- C foil + $H_2^+(H_3^+)$, convolv electrons dwell-time depend. 2-59922
- C foil + $H_2^+(He^+)(He^{++})$, convolv electrons dwell-time depend. 2-59922
- C foil + $H^+(He^+)(Ti^{4+})(U^{4+})(H_2^+)(H_3^+)$ 2-75389
- C-foil + $Al^+(Si^+)(P^+)(S^+)(Cl^+)$, absolute L-shell Auger electron yield meas. 2-75397
- C-foil + $Ar^+(Kr^+)$, relative level populations expt. study 2-75397
- C-foil + $Cl^+(Fe^+)(Cu^+)(Br^+)$, projectile K X-ray emission, target thickness depend. 2-75394
- C-foil + $Ga^+(Ti^+)$, relative level excitation study 2-75398
- C-foil + He^+ , HeI 3d²D alignment, depend. on ion current density 2-75395
- C-foil + He^+ beam interaction, quantum beat study 2-75396
- C-foil + $O^+(S^+)$, fast ion excited Rydberg states 2-75392
- C + $H^+(H_2^+)(H_3^+)$, Balmer emission yields meas. 2-114089
- CO^+ , beam-foil excited ions, Auger electron spectrometry 2-78068
- $H_2^{13}C^+$ beam foil interaction, atomic polarisation 2-69636
- H_2^+ traversing ultra thin C foils, form. of bound and unbound mol. states 2-54930
- $3p^2P$ He I transition following tilted-foil excitation, alignment, orientation and optical polarisation parameters 2-70405
- HeH^+ , molecular dissociation in thin foils, optical obs. 2-54934
- Kr III, beam-foil level lifetimes 2-96511
- Li^+ excited at. state, 3489 Å optical transition using beam-foil spectroscopic technique 2-80511
- N, transition in fourth spectrum 2-96472
- $^{15}N^+$ beam foil interaction, atomic polarisation 2-69636
- O ions, fast, foil-excited Rydberg states 2-102577
- O^{7+} , beam foil excited, optical decay of high l Rydberg states 2-75204
- P^{n+} (n=12, 13), transitions and lifetimes meas., X-ray and beam-foil time-of-flight spectra 2-113920
- Se IV, V and VI, energy levels, lifetimes, f-values, beam-foil spectra 2-102596
- Zr, beam-foil spectra for 15-160 MeV, from 6 to 60 nm 2-96492

beam-foil spectroscopy

- fast molecular ions passage through thin foils, collisional effects 2-80843
- heavy ions behind foils, empirical formula for average equilibrium charge-state 2-114087
- matching of Doppler shift to linear dispersion of a monochromator 2-69260
- Al, polarisation wake wavelength meas. 2-80776
- C, energy loss of H_2^+ traversing ultra-thin foils, cluster effects 2-81855
- C, molecular state of H_2^+ traversing ultra-thin foils 2-81856
- C, polarisation wake wavelength meas. 2-80776
- $Ne^{2+} + Xe$, excited ions lifetime meas. long-lived ions preparation, selective electron capture appl. 2-102616

beam handling equipment

- see also particle beam diagnostics
- 10 kHz 10MW average power neutralised Li ion beam injector 2-96308
- accelerator cavity resonator, RF EM field, finite element method calcs. 2-85457
- Adone wiggler facility 2-59589
- axial symmetric cavities, nonsymmetric modes, PRUD code for calc. 2-113798
- bent cylindrical mirror appl. to X-ray beam lines 2-85434
- beta-ray monochromator, current regulator for magnetic lens 2-107447
- bremsstrahlung monochromator for photo-nuclear expts. 2-64726
- circular accelerator, beam extraction system 2-113771
- converging guide tubes, neutron gain 2-108198
- cyclotron, superconducting, neutron therapy appl., RF cavity struct. 2-96340
- cyclotron, superconducting magnet model, design 2-96341
- cyclotron RF beam burst phase shift corrector 2-75087
- effective length measurement of pulsed quadrupole lens (Chinese) 2-108206
- electron beam acceleration in radial line system, excited by external pulse generator 2-70023
- fast matched pulsing magnet 2-64075
- glass, float, X-ray mirror reflectivities from 3.8 to 50 keV 2-84755
- grating/crystal monochromator for spectral range 5 eV to 5 keV 2-84760
- harmonic coils, injection and extraction, for RIKEN SSC 2-85459
- high current injection channel for linear accelerator 2-102286
- high-current electron beam propag. through metal channel 2-64842
- inhomogeneous-field stripper for field ionization detection and analysis of fast beams of highly excited atoms 2-79713
- injection bending magnet, for RIKEN SCC, design and model study 2-85429
- ion beam source focusing using inverse reflex tetrode, expt. study 2-89855
- ion flux characterisation prod. by saddle-field neutral beam source 2-53893
- light ion beam time-compression, tapered transmission-line accelerator 2-96307
- linear voltage ramp generator for three-stage bunching system 2-75089
- MA1-MA2 system for beam anal. and transport at IFIN (Rumanian) 2-90341
- magnetic inflection channel for RIKEN SSC, model study 2-85458
- magnetised Fe lenses, nonlinear focusing effects on muons 2-64735
- MFTF long pulse neutral beams, instrumentation system 2-74985
- molecular spectroscopy, multi-tube collimators driven at high press. 2-84738
- monochromator design for soft X-ray range 2-84761
- National Synchrotron Light Source VUV and soft X-ray beam lines, performance characts. 2-85435

beam handling equipment continued

- neutral beam injector control system low inductance coaxial shunt resistor appl. 2-109538
- neutral-beam injection, beam-forming elements 2-76147
- Ohio University beam swinger facility 2-102316
- Particle Beam Fusion Accelerator magnetically insulated transmission lines combined into disc feed 2-96309
- periodically varying waveguide, transverse wake force 2-85451
- permanent magnet system with quasisegmented and trapezoidal ring struct., planar multipole field (Chinese) 2-80365
- radiation resistant magnets, review 2-96356
- RF accelerating system, numerical example 2-113778
- RF system for cyclotron, resonant freq. reduction method using ceramic vacuum capacitor (Chinese) 2-59573
- RIKEN SCC, sector magnet trim coils, model test (Japanese) 2-64716
- RIKEN SCC, sector magnet trim coils configurations, current optimisation (Japanese) 2-64715
- RIKEN SSC, sector magnet design, pole final design (Japanese) 2-64714
- RIKEN SSC, sector magnet design, TRIM code (Japanese) 2-64713
- RIKEN SSC, sector magnet structural anal. by finite element method (Japanese) 2-64717
- RIKEN SSC, vacuum system design (Japanese) 2-64721
- RIKEN SSC system 2-85461
- RIKEN SSC, RF resonator, design study and model test (Japanese) 2-64720
- stripline magnetic modulators for lasers and accelerators 2-97024
- superconducting magnet design for accelerator 2-113791
- superconducting solenoid, proton beam induced quench 2-90338
- surface waves excitation by relativistic electron beam in irised waveguide 2-64736
- synchrotron radiation instrumentation, conf., Ithaca, NY, USA (July 1981) 2-84369
- Tesla-transformer type relativistic electron beam generators, design charts 2-79715
- thyratron nanosecond pulse generator based on strip line 2-85441
- toroidal grazing incidence monochromator for ACO storage ring beam line 2-86081
- transmission X-ray mirror using soap films 2-84754
- transport system for RIKEN SSC 2-85460
- undulator for SPEAR in spectral range 200-1000 eV 2-85439
- VUV storage ring, diamond turned mirrors for synchrotron radiation 2-86070
- wiggler and undulator magnets for synchrotron radiation, overview 2-85438
- X-ray microbeam, computer-controlled steering, for speech research 2-57938
- X-ray mirror reflectivities from 3.8 to 50 keV 2-84756
- X-ray scattering beam line at National Synchrotron Light Source 2-84764
- C stripper films prep. and characterisation 2-108173
- C stripper foils, laser treated, prep. and tests 2-108174
- C stripper foils, procedure for rapid evaluation 2-108175
- C, stripper foils, recent development work and meas., review 2-108176
- Co segmented rare earth multipole magnets, perturbation effects 2-102296

beam handling techniques

- see also mass spectroscopy; particle beam diagnostics; particle optics
- 200 GW light ion beam power transport for fusion reactor ignition 2-90303
- achromatic quadrupole lenses as probe-forming lens for high-energy ions 2-95544
- ACO storage ring, beam line design and performance with toroidal grating monochromator 2-86080
- atomic hydrogen, high-flux beam production using helium-temp. beam source 2-101492
- axial symmetric cavities, nonsymmetric modes, PRUD code for calc. 2-113798
- beam-beam interaction dynamics 2-113775
- bending, using single cryst. surfaces, computer simulation 2-79717
- bent cylindrical mirror appl. to X-ray beam lines 2-85434
- BESSY experimental facility, status report 2-85415
- betatron, modified, integer reson. study 2-113784
- betatron, modified, transverse beam dynamics 2-113783
- bunch diffusion due to RF noise 2-113799
- CERN, some astonishing ideas, bending magnet Fe-concrete cores (French) 2-113785
- charged particle beams, underlying theory 2-59591
- charged particle bunching in self-radiation fields, theory (Russian) 2-114174
- charged particle in Penning trap, precision spectroscopy 2-74578
- charged particle steering by bent single crystals, possible appl. 2-80359
- CHESS, Cornell High Energy Synchrotron Source, current status 2-85414
- circular accelerator, beam extraction system 2-113771
- circular accelerator and storage rings, single beam coherent instabilities 2-113772
- cluster production by slit-throat nozzle, computer simulation 2-85456
- coaxial coupled linac structure 2-64703
- colliding beams coherent instability 2-85452
- converging guide tubes, neutron gain 2-108198
- cooling electrons capture by cool protons 2-85455
- CRYEBIS, advanced multicharged ion source, expt. results and improvements 2-102292
- cyclotron RF beam burst phase shift corrector 2-75087
- cyclotrons, radial-longitudinal coupling and focusing complementarity 2-85427
- edge penetration by radiation through collimation system 2-96348
- electrode extraction system for prod. of intense ion beams 2-80369
- electron beam bunching by uniform mag. fields 2-80367
- electron beam generation from bulk gas discharge 2-79716
- electron beam ion source instability modification by longitud. kinetic effects 2-102294
- electron beam ion sources, linear electrostatic instability 2-102293
- electron beam storage in annular dielec. channels, theory 2-85430
- electron beam system, compact 36 kJ, for KrF laser pumping 2-90935
- electron cooling 2-113790
- electron linacs, appl. to storage ring RF systems and linear colliders 2-113763
- electron storage ring at 10 to 100 MJ, theory 2-90329

beam handling techniques continued

- electron storage rings, synchrotron radiation and electron beam dynamics 2-113770
- electron-positron beam radiative polarisation in bent single crystals (*Russian*) 2-109875
- electrostatic accelerator, voltage conditioning 2-96331
- EMP produced by nuclear explosion, simulation aid by electron pulse direct injection into air 2-96357
- European Hybrid Spectrometer, SPS H2 beam characts. 2-108211
- FN tandem modifications for quantitative ^{10}Be meas. 2-64704
- grazing-incidence mirror system, props. and performance 2-84762
- high intensity negative ion beams, USSR research 2-54710
- hollow cathode and ion accelerator system for high current ion sources 2-80373
- ICF target expts., high energy small emittance accelerator utilisation 2-108171
- intense ion beams, very low emittance, generation method, inertial confinement fusion driver appls. 2-96359
- intense ultrarelativistic electron beams in vacuum, image-field focusing 2-85453
- ion, collective acceleration by relativistic electron beams (*Russian*) 2-54693
- ion acceleration in high current nonrelativistic electron beam injected into neutral gas 2-80888
- ion acceleration mech. by nonmagnetised high current electron beam 2-85463
- ion beams, intense pulsed, propag. across mag. field 2-85445
- IR beam port for SRS at Daresbury 2-85437
- Klein ERNA, table-top synchrotron radiation source 2-113780
- LALAGE program for TM_{010} modes of cylindrically symmetrical multicell structures 2-102290
- linear voltage ramp generator for three-stage bunching system 2-75089
- low-energy ion beam transport, periodic focusing structure 2-75088
- LURE, French synchrotron radiation facility, status report 2-85417
- magnetic fringe-field neutron beam depolarisation 2-102300
- magnetic multipole lens, third order transfer matrix 2-102295
- mapping Karlsruhe nucl. microprobe, elemental conc. mapping 2-99725
- Melbourne scanning proton microprobe developments 2-95543
- MFTF, neutral beam aiming and calorimetry 2-80282
- microanalysis using charged particle accelerators, conf., Namur, Belgium (Sept. 1981) 2-94883
- MINIMAFIOS multicharge ion source, expt. characts. (*French*) 2-90334
- multiple Bragg refl. use in bent single crystal from neutron monochromatisation 2-97860
- multiple relativistic electron beams, injection and propagation into pre-formed plasma channels 2-96334
- National Synchrotron Light Source VUV and soft X-ray beam lines, performance characts. 2-85435
- negative ion beam formation, transport and acceleration 2-80372
- neutral beam injectors, D^+ prod. by double electron-capture, appl. to plasma heating 2-81500
- neutron guide tube gain for remote finite source 2-90335
- neutron optics, fundamental aspects, review 2-54700
- nonlinear orbit dynamics 2-113773
- Ohio University beam swinger facility 2-102316
- particle accelerators, computerised data acquisition and monitoring system 2-108327
- periodically varying waveguide, transverse wake force 2-85451
- phase adjusted focusing laser accelerator, stability measures (*Chinese*) 2-96332
- phase-adjusted focusing laser accelerator, phase adjustment (*Chinese*) 2-108170
- proton synchrotron, ultrahigh energy, bunched beam longitudinal instability, current loading 2-113786
- pulsed power bibliography 2-94940
- quadrupole probe-forming systems of ion microprobe, real and parasitic aberrations 2-96820
- radial ion diode for generating intense focused proton beams 2-96351
- RAYITO accelerator, designed to investigate electron-beam control and uniform excitation of large volume lasers, characterisation 2-96335
- relativistic charged particles, high efficiency bunching using magnetic paths 2-102313
- relativistic electron beam, high power, autocorrelation expt. 2-113038
- relativistic electron beam equilibria with non-circular cross section 2-113797
- relativistic electron beam ring formation in conducting cavity 2-113808
- relativistic electron beams, helical, theory of generation 2-107452
- relativistic protons dechannelisation in elastically deformed single crystal 2-61047
- RF accelerating system, numerical example 2-113778
- RF phase-drift compensator for neutron time-of-flight meas. 2-96398
- RFQ, beam energy spread reduction by debuncher (*Chinese*) 2-108207
- RIKEN SSC beam orbit calc. programs, ACCEL, INJECT, INJHARM, EXTRACT, EXTHARM (*Japanese*) 2-64719
- Russian quadruplet, rotational misalignments 2-108197
- slow positron beam production, efficiency meas. 2-74569
- stochastic cooling 2-113789
- storage ring, synchrotron radiation source, modified Wadsworth monochromator theory 2-86078
- storage rings, electrons polarisation using free electron laser 2-64711
- stored electron beam polarisation 2-113776
- SURF II, toroidal grating monochromator design 2-86077
- SURF II facility at NBS, status report 2-85412
- SURF-II storage ring, beam line for X-ray lithography 2-85436
- synchronous transfer of beam in the BPS (*Chinese*) 2-108205
- synchrotron magnet, method of generating undulatory signal in scatt. field of gaps 2-85465
- synchrotron radiation instrumentation, conf., Ithaca, NY, USA (July 1981) 2-84369
- synchrotron X-radiation sagittal focusing with curved crystal 2-84753
- synchrotrons, space charge force compensation using RF quadrupole 2-75091
- tagged photon facility 20-70 GeV at CERN 2-96347
- tagged photons, production using bremsstrahlung beam from synchrotron 2-85464
- tandem injector, beam bunching, calc. program 2-64729
- target preparation of biological specimens for SPIEX meas. 2-100166
- thick insulating sample microbeam anal., thin foil technique appl. 2-95536
- transmission X-ray mirror using soap films 2-84754

beam handling techniques continued

- transverse head-tail effect, finite synchrotron oscill. freq. influence 2-64725
- transverse optical klystron expt. in Adone 2-102806
- two-dimensional beam-beam interaction integrability 2-85454
- undulator for SPEAR in spectral range 200-1000 eV 2-85439
- UVSOR facility at IMS 2-85419
- variable phase focusing, expt. study (*Russian*) 2-113806
- wide bandpass monochromators for synchrotron radiation 2-84752
- wiggler and undulator magnets for synchrotron radiation, overview 2-85438
- X-ray scattering beam line at National Synchrotron Light Source 2-84764
- e^+e^- storage ring design 2-113779
- e^+e^- colliding-beam storage rings, luminosity optimisation 2-113774
- C deposition apparatus to produce long-lived stripper foils for JAERI tandem accelerator 2-96344
- C stripper foil lifetimes, temp. influence 2-75090
- CS primary clocks with 'exclusive flop-out' beam optics 2-69124
- N_2^+ ion beam trajectories, direct obs. during deceleration 2-102709
- Na atom beam, radiative slowing down and velocity monochromatisation in laser beam (*Russian*) 2-85840
- Ne $^+$ beam bending by Si surfaces, computer simulation 2-79717
- beam-trapping** *see self-trapping*
- bearings (machine)** *see machine bearings*
- behavioural sciences** *see social and behavioural sciences*
- bells**
see also musical instruments
- Temple Bells, distribution of sound pressure levels (*Japanese*) 2-91178
- Temple Bells, variation in frequency distribution (*Japanese*) 2-91177
- bending**
see also bending strength; buckling; stress analysis; torsion
- alloy, dissipative properties under cyclic tension-compression, static tension effect 2-99631
- bar, straight cantilever, nonlinear bending, Cauchy-type problem 2-114650
- beam, space-curved, finite deformation 2-60412
- beam, thin-walled T, forced flexural vibrs. 2-81284
- beam bending, descending branch, strain diagrams (*Ukrainian*) 2-103060
- beam column critical compressive stress to second order 2-91291
- beam lamina, structural deflection, rate, statistical props. 2-60421
- beam of sectionally const. cross section, thermal stress and deflection 2-81230
- beams, finite element for study of coupled bending-prevented torsion 2-97374
- beams, rectangular, shape change during plastic bending (*Russian*) 2-60419
- beams, rigid-plastic, dynamic flexure under conc. load 2-60431
- beams, rigid-plastic, stepped, simply supported, under dynamic press. loading, optimal design 2-60395
- beams, rotating, nonlinear planar bending, theoretical and expt. investigation 2-70850
- beams, thin-walled open section, free vibr. with unconstrained damping 2-97427
- beams and rods, elastic, non-linear theory, finite element representation 2-109194
- bimodulus composite materials, laminated plates, behaviour 2-97385
- block, rectangular, incompressible, anisotropic, bending into elliptical shell 2-75857
- cellular materials, two-dimens., mechanics 2-91247
- composite materials, bending displacement, computer aided design (*Japanese*) 2-72770
- composite shell, three-layer, stress/strain state of boundary-layer type 2-60427
- contact problems for the elastic beam 2-114671
- crack propagation, modified strain-energy density criterion 2-103103
- cytosine, electron diff. data, cryst. bending effect 2-60965
- deflection of circular piezoelectric bending elements with passive substrate plate (*German*) 2-109197
- elastic plate on rigid substrate, bifurcation 2-60423
- elastic plate-strip, crack at joint 2-55496
- elastic plates theories via orthogonal polynomials 2-91253
- elliptic ring sector, pure bending 2-103066
- epoxy resins, round notched, subjected to plane strain bending, internal fracture and surface morphologies 2-67534
- fabric reinforced woven hybrid composites, elastic props. 2-83152
- fibre, optical coated with UV-cured polyurethane acrylate, microbending loss, correl. with sub- T_g annealing of coating 2-60251
- fibre optic strain gauge based on microbending losses 2-91079
- fibre reinforced composite, stress concentration at an edge noncoincident with reinforcement direction 2-65486
- fibre reinforced composite plates, circular, reinforcement optimisation 2-81249
- fibre-optic cables, loose-sheathed, cold-induced losses 2-114442
- fibres, plastic transparent monocryst., fatigue test instrument for four-point bending conditions 2-91098
- finned heat exchanger tubes, natural frequency correction for stiffening 2-91297
- fusion material, irradi., miniaturised disc bend test development 2-88316
- graphite/glass fibre reinforced epoxy var. in acoustic emission 2-72916
- heated elastic plate, approximate finite deflection anal. by boundary element method 2-81226
- hyperstatic thermoelastic structures, deflection 2-114649
- J-estimating procedure for a solid subjected to bending loads 2-114734
- LWR fuel rod ridging, closed-form math. soln. 2-64467
- membrane locking and reduced integration for curved elements 2-103030
- metal beam under bending and tension, rheological effects, steady state creep law (*Polish*) 2-81247
- multilayer laminated plates, thin and thick, hybrid-stress eight-node elements 2-86212
- multilayer shell, inclined, isoparametric triangular finite element 2-91273
- multilayer thin films on thick substrate, internal stress formula 2-66404
- nonlinearly elastic rods, large buckled states under torsion, thrust and gravity 2-55462
- nonmetallic structural materials, brittle, strength testing 2-72910
- optical dispersion-free single-mode doubly clad fibres with small pure bend losses 2-114451
- optical fibre cables, high performance, using V-grooved cylindrical units, limiting of micro-bending losses 2-102945
- optical fibre output divergence adjustment device 2-65380

bending continued

- optical single-mode fibre, microbending loss in pure-bend loss regime 2-109047
- optical single-mode two- and three-layer W-type waveguides, losses due to bending, microbending 2-70674
- photographic emulsion grain properties, deform. effects on development centres, sensitometric effects 2-116712
- piezoelectric circular bending plates deflection (*German*) 2-109198
- pipe, circumferentially cracked, fracture instability 2-62220
- pipe, noncircular bending, thin-shell anal. 2-65485
- pipe, slit thin-walled, nonlinear bending calcs. (*German*) 2-103053
- pipes, circumferentially cracked, bending failure by flattening 2-65534
- plate, cantilever, thick, flexure anal. 2-97400
- plate, circular, reinforced with stiff rings, contact problem 2-91342
- plate, clamped circular large deflection analysis under conc. load at centre 2-60425
- plate, elastic, thick, stability under thrust 2-91235
- plate, elastic freely supported, bending stiffness optimal distrib. 2-60410
- plate, large inextensional deform., eqns. of motion 2-89537
- plate, plastic, circular, under press., strain distrib. determ. for biaxial stress tests 2-91282
- plate, rectangular, orthotropic, clamped along the contour, bending anal. 2-114681
- plate, thin, large displacement bending and post buckling analysis, finite element models 2-109212
- plate, thin, unbounded, stability near hole, pure bending in its phase (*Russian*) 2-91270
- plate, thin elastic, flexural motions, nonlinear theory, boundary layer solns. 2-103051
- plate, variable thickness, stress state eqns. 2-65474
- plate bending, hybrid displacement method, numerical stability (*German*) 2-55469
- plate bending hybrid model with shear effect 2-81242
- plate bending studies using reflection moire methods 2-103126
- plate deflection theory, boundary value problems 2-53524
- plate deflection theory, numerical integration methods 2-91242
- plate in impulsive mechanical loading, dynamic bending 2-65494
- plate static and dynamic flexure, grating techniques of slope and curvature meas. 2-103132
- plate theories, refined, numerical methods 2-114669
- plate transient bending problem, boundary integral eqn. soln. (*French*) 2-109196
- plate-bending triangular element, stiffness matrix formulation 2-103061
- plates, anisotropic, rectangular, in flexure, deflection and stress anal. 2-97406
- plates, anisotropic, with curvilinear holes, flexure, survey 2-55456
- plates, bending, frictionless contact (*French*) 2-55516
- plates, bent, with cracks, complex stress intensity factor meas. using method of caustics 2-103134
- plates, circular, variable thickness, clamped, large deflections 2-103064
- plates, clamped skew sandwich, finite deflection analysis 2-114676
- plates, elastic, distributed control 2-97367
- plates, flat, thermal bending anal. by boundary integral eqn. method 2-75865
- plates, including effects of transverse shear and normal strains 2-60440
- plates, orthotropic, with transverse shear deform., stiffness matrix of rectangular element (*Chinese*) 2-103056
- plates, orthotropic sandwich, large thermal bending and thermal buckling 2-75872
- plates, polygonal, large deflections, conformal transform. appl. 2-75866
- plates, rectangular, in compression, finite out-of-plane deformation formulation 2-91276
- plates, rectangular finite stress fields analysis (*German*) 2-109199
- plates, sandwich, with complex boundary conditions, bending, finite Fourier series method 2-114682
- plates, thick, numerical anal. by segmentation method based on refined higher order theory 2-103059
- plates, thick, rectangular, laminated, composite, non-linear bending 2-70849
- plates, thin, energy method in nonlinear theory 2-109180
- plates, thin, multilayer, bending and buckling 2-97390
- plates, transversally isotropic, lying on elastic base, free vibrs., taking account of shear deform. 2-65513
- rectangular cantilever crystal plates, stresses under transverse loading 2-97430
- refractories, acoustic emission and deformation-fracture behaviour under three-point bend test 2-62230
- reinforced plastic, short beam bending, plane problem of hereditary elasticity 2-55443
- rod, elastic, inhomogeneous, energy anal. 2-112704
- rod, reinforced, viscoelastic, compressed and stretched, stability 2-55464
- rods, elastic, flexural instabilities 2-91271
- sandwich beam, nonlinear compressive and tensile stress/strain curves determ. method 2-91346
- semi-elliptic cracks, crack tip stress intensity factors, crit. review 2-91317
- shell, cylindrical, containing an axial part-through crack, line-spring model appl. 2-103104
- shell, cylindrical, elastoplastic, supporting power WRT pure bending (*Russian*) 2-65489
- shell, cylindrical, with circular hole, compression, torsion and bending, stress anal. 2-55438
- shell, shallow spherical, states of uniform twisting and shearing, circular hole effects 2-55445
- shell, spherical, fluid-filled, under a point load, large deflection 2-103027
- shell, thin, shallow, spherical, nonaxisymm. equilib. modes, asymptotic anal. 2-60432
- shells, cylindrical, under pure bending and pressure, nonaxisymm. longit.-transverse bending 2-109207
- simulation, of thin sheets using biharmonic equation electrical analyser (*German*) 2-70885
- steel, 40 Kh, fracture structure and energy content in bending, notch direction effect 2-67546
- steel, C, fatigue life estimation, under combined bending and torsional stresses (*Japanese*) 2-72816
- steel, critical crack opening measurement, fulcrum position determ. 2-116641
- steel, fatigue and inelastic deformation under nonuniform stressed state 2-116545
- steel, low C, cold forming, bendability, tensile props. and particle struct. 2-88128

bending continued

- steel, low C, crack resist. determ. in brittle crack propag. from impact bend test results 2-72908
- steel, low-alloy, crack resist. determ. in brittle crack propag. from impact bend test results 2-72908
- steel, low-alloy, mech. props., rare earth elements effect 2-72773
- steel, medium C, mech. props. in dynamic deform., struct. and ultrasonic vibrs. influence 2-72772
- steel, mild, hollow cylinders, strength of surface layer 2-57434
- steel, multicycle loading with inhomogeneous states of strain, damping and failure 2-99625
- steel, stainless, pipe, circumferentially cracked fracture instability 2-62221
- steel structures, limit analysis in presence of shear, load-carrying factor 2-111229
- steel structures, limit analysis of rigid-plastic frames, shear force influence 2-75863
- superconductors for supercond. magnets, mechanical props. and strain effects, review 2-67469
- surface crack, empirical stress intensity factor eqn. 2-65515
- surface flaws, semi-elliptical, interaction under tension and bending 2-86224
- tabular icebergs, reson. flexure motion in ocean waves 2-88906
- test for tension and compression stress-strain curves 2-105401
- thermo-viscoelastic rods, acceleration and shock wave propag. and decay 2-81268
- thermoplastic, temp. rise under reversed bending stresses, math. model and test results 2-83227
- thin rhombic plate, flexural stiffness determ., optical holography meas. 2-55521
- thin-walled cylindrical shells with reinforcing stringers, upper crit. loads rel. to stability loss 2-81265
- work-hardening beams and plates, elastic springback after elastic-plastic pure bending 2-55436
- work-hardening rectangular plate, springback after biaxial pure bending 2-55437
- Al₂O₃, fracture, crack-tip plasticity, electron channelling study 2-88170
- Cd, Hg_{1-x}Te, mech. props. in four-point bending, lower yield stress 2-115336
- Cu, tough-pitch, fatigue crack growth rate comparison between in-plane bending and cyclic torsion (*Japanese*) 2-62198
- Cu₆₀Zr₄₀ metallic glass, bend testing, heat treatment effect on mech. props. 2-88322
- GaAs-GaAlAs curved rib waveguides, bending loss minimisation, ion beam milling fabrication 2-75676
- Ni-Fe-Cr alloy tubes, prestrained, creep rupture bending test 2-62184
- Ni-Ti (45 wt.%) plate, shape-memory effect, thermomechanical treatment influence (*Russian*) 2-72761
- P₂O₅-doped graded-index multimode fibre, microbending losses 2-114448
- Si, bent, strain conc. factors around holes and inclusions, X-ray topography study 2-98189
- Si:BF₃⁺, ion implanted, wafer bending and stress, thermal annealing effect, X-ray topography 2-115311
- SiC, fracture parameters evaluation, controlled flaw method (*French*) 2-88293
- SnO₂ bent cryst., high resolution electron microscope and electron diffr. images 2-76402
- ZnSe, melt-grown crystals, mech. props. during flexure, prep. conditions influence 2-57404

bending of light see gravitation; light

bending strength

- biological tissue bending and shearing deform. anal. 2-105739
- bone, immature canine, structural props. determ. from bending tests, biphasic growth process 2-62662
- caisson structure, thin-walled, bending (*Russian*) 2-114684
- ceramic particle-PMMA composite, optimum strength 2-105280
- chevron notch three point bend fracture toughness specimen 2-91351
- composite shell, cylindrical, supporting power under axial compression, prep. influence 2-60476
- composite shell, three-layer, stress/strain state of boundary-layer type 2-60427
- concrete, silicate ceramic, porosity and mech. props. 2-57424
- elastohydrodynamic analysis of head to flexible disk interface phenomena 2-91312
- fabric reinforced laminates, flexural deform., transverse cracks, ply-delamination (*Japanese*) 2-57464
- fibre reinforced composites, tensile strength relationship with flexure strength 2-83168
- fibre reinforced single- and two-ply rectangular plates, laminates, bimolecular material, transient response 2-88119
- formaldehyde copolymer, serviceability, effect of radiation 2-83223
- glass, strengthening, by combined etching and ion exchange 2-72860
- glass fibre reinforced plastics, in-plane stiffness and strength props. 2-67409
- glass fibre reinforced plastics, mech. props. at low temps. 2-77864
- glass fibre reinforced polyester, flexural stress relaxation (*Japanese*) 2-111219
- glass fibre reinforced polyester resins, water and H₂SO₄ influence, determ. by radioactive tracer technique (*German*) 2-67593
- glass filament, bending strength meas. using transverse bend method 2-105263
- glass shell, cylindrical, carrying capacity prediction from NDT under external press. 2-57573
- graphite fibre reinforced epoxy laminates, US and mech. charact. 2-78041
- graphite/glass fibre reinforced composites, hybrid effects in bending stiffness 2-88132
- kaolin, mech. strength rel. to specific surface 2-57403
- miniature discs, bending, ductility equipment, in fast neutron environment 2-74830
- optical fibres, high strength, in protective coatings, microbending losses and static-fatigue life 2-81112
- paint coatings on metals, protective properties, inhibitors influence 2-67655
- plates, rectangular finite stress fields analysis (*German*) 2-109199
- PMMA, notched specimens, glassy, plastic deform. and fracture due to bending 2-116531
- PMMA, serviceability, effect of radiation 2-83223
- polyamide, serviceability, effect of radiation 2-83223

bending strength continued

- polycarbonate, notched specimens, glassy, plastic deform. and fracture due to bending 2-116531
- polycarbonate, serviceability, effect of radiation 2-83223
- polyester resin, unsaturated, flexural stress relaxation (*Japanese*) 2-112119
- polyester resins, isophthalic acid type, water and H_2SO_4 influence, determ. by radioactive tracer technique (*German*) 2-67593
- polyethylene, serviceability, effect of radiation 2-83223
- polystyrene, serviceability, effect of radiation 2-83223
- PVC, notched specimens, glassy, plastic deform. and fracture due to bending 2-116531
- quartz single cryst., fracture toughness, room temp. (*Japanese*) 2-67507
- sapphire single cryst., fracture toughness, room temp. (*Japanese*) 2-67507
- shell, cylindrical, elastoplastic, supporting power WRT pure bending (*Russian*) 2-65489
- shell, cylindrical, longit. divided, stability and load-carrying capacity under compression 2-97409
- shell, cylindrical, stability under external press. and nonuniform heating 2-97408
- steatite ceramics, extruded, texture effects, glass phase influence 2-111117
- steel, alloy type Ck 15, fatigue charact., nitriding effects (*German*) 2-57475
- steel, austenitic cutting tool heat treatment, for austenite grain size meas. as hardness assessment method (*German*) 2-57476
- steel, austenitic stainless, subcrit. crack growth, effect of severity of notch-root radius 2-83206
- steel, case hardened, fracture behaviour evaluation by means of fracture mechanics values (*German*) 2-83204
- steel, Cr-Mo, high strength, delayed fracture strength, influence of residual stress due to surface treatment (*Japanese*) 2-72810
- steel, die, hardened with vanadium carbonitride, props. 2-111211
- steel, ductile crack initiation and notched bend specimens 2-111314
- steel, high speed, prods. produced by powder metallurgy 2-77776
- steel, high-speed, effect of determ. under superplasticity conditions 2-62176
- steel, high-speed, struct. and props., Ce addition effect 2-111242
- steel, impact bending fatigue testing, evaluation of dynamic stress intensity factor (*Japanese*) 2-111285
- steel, low C, smooth specimens, surface crack propag. in plane bending fatigue 2-77898
- steel, stainless 316L, fibre reinforced bioglass, processing and static mech. props. 2-57412
- steel, tensile, hot hardness and fatigue props. of type E36 in as-rolled condition (*French*) 2-62214
- steel, tool, high speed, S 6-5-2 and S 10-4-3-10, cooling during hardening process, effects on toughness (*German*) 2-57367
- varnish coatings on metals, protective properties, inhibitors influence 2-67655
- Al alloy 2024-T3, fatigue life, resolution into crack initiation and propag. components 2-93596
- Al alloys, impact bending fatigue testing, evaluation of dynamic stress intensity factor (*Japanese*) 2-111285
- Al, isoaxial bicrystals, fatigue crack initiation along primary slip bands in grain boundary affected region (*Japanese*) 2-105302
- Al_2O_3 ceramics, reaction with saturated steam 2-111334
- Al_2O_3 , effects of Cr_2O_3 additions on sintering and mech. props. 2-99375
- Al_2O_3 , sintered, variable microstruct., strength meas. (*French*) 2-88154
- Al_2O_3 , sintered and fusion cast, and ruby and sapphire, fracture induced photon emission, appl. to fracture mechanics 2-93293
- Al_2O_3 suspension, high conc., rheology and binding props. 2-88042
- B filament reinforced Ti, fibre-matrix chem. interactions at high temp. composite strength 2-77783
- Be, multiaxial stress-fracture criterion, use of notched beams 2-116555
- C fibre reinforced Al, chopped fibres, prod. by powder metallurgy, dry wear (*Japanese*) 2-105344
- C fibre reinforced Al-Si, TiC barrier coating effect on reaction between components 2-99373
- C fibre reinforced plastics, Young's modulus, heating temp. depend. 2-77866
- C fibre reinforced plastic, non-linear stress-strain effects in flexural wrinkling 2-77870
- $CaO-TiO_2-ZrO_2$ system multiphase ceramics for bushing prod., mech. props. 2-67478
- $Ca_3(PO_4)_2$ ceramic, dense, mech. props., prosthetic appl. 2-57409
- Cu, wrought, engng. fatigue props. review 2-88161
- Fe-P-C amorphous wires, prod. by in-rotating-water spinning, mech. props. 2-57317
- Hf, neutron irradi., dimens. stability, strength, hardness 2-80155
- Mo, sintered sheet, electron beam welded, bend props. 2-116509
- $Si_3N_4-Al_2O_3-Na_2O$, hot-pressed β -sialon, oxidation effect on room temp. strength 2-93629
- $Si_3N_4-Al_2O_3-Na_2O$, hot-pressed β -sialon, fracture strength and Weibull distrib. 2-93631
- SiC ceramics, neutron irradi. and proof tested, flexural strength 2-115307
- SiC fibre reinforced glass, flexural strength and elastic modulus 2-83151
- SiC filament reinforced Ti, fibre-matrix chem. interactions at high temp. composite strength 2-77783
- SiC multifilament reinforced Al, prep. and characts. 2-77941
- SiC, residual stresses and CNTD process scaling to larger specimen sizes 2-72657
- SiC yarn reinforced lithium aluminosilicate glass-ceramic, high strength and toughness 2-105298
- SiC-AlN solid solutions, hot pressed, comp. and props. 2-88037
- Si_3N_4 ceramic, prep. props. and appls., comp. contrib. 2-116420
- Si_3N_4 , hot press, uniaxial tensile and flexural stress rupture strength 2-57453
- Si_3N_4 , hot pressed, bending strength (*Japanese*) 2-67436
- Si_3N_4 , SiC, hot pressed or reaction-bonded, effect of laser radiation 2-83174
- Si_3N_4 , SiC, SiAlON, sintered microstruct. and property charact. 2-57323
- Si_3N_4 , sintered, hot isostatic pressing, effect on mech. props. (*Japanese*) 2-67266
- $Si_3N_4-Y_2O_3-SiO_2$, strengthening by post-fabrication heat treatment 2-83131
- SiO_2 , optical fibres, static fatigue failure probability rel. to localised bending 2-81133
- WC-Co cemented carbide, bend deform. up to 1273K 2-57432

berkelium

- see also nuclei with
- ^{249}Bk , metal, vapour press. and thermodynamics 2-104022

berkelium compounds

No entries

beryllium

- see also nuclei with
- abundance in interstellar medium towards zeta Ophiuchi, UV obs. 2-79182
- atom, antisymmetrised geminal power function, energy optimisation 2-80410
- atom, dipole polarisability, perturbation study, CI calcs. 2-54774
- atom, ground state, HF energy, corrections to an incomplete basis set 2-108366
- atom, ground state electronic extracule densities 2-80446
- atom, idempotent density matrices from X-ray diff. struct. factors 2-54752
- atom, quadrupole polarisability, finite-field many-body perturbation theory 2-90440
- atom, second order correl. energies, variational SCF calcs. 2-113860
- atom, self-consistent field equations based on the variation principle using the square of the Hamiltonian 2-75182
- atom, spectroscopic parameters, V^N and V^{N-1} potential results in many-body calcs. 2-75206
- atomic excited states, wave function determ. 2-85568
- atoms, photoionisation studied using CI theory, energy levels and oscillator strengths 2-102444
- beam exit window materials effect on detection sensitivity in PIXE anal. 2-99717
- bending test for tension and compression stress-strain curves 2-105401
- chemisorption, of atomic H, on (0001) surface, mixed basis set calcs. 2-110138
- diffusion of ^{76}Se , ^{35}S , and ^{32}P , layer-by-layer radiometric anal. (*Russian*) 2-61202
- diffusion of C, dislocation damping 2-56262
- electric quadrupole interaction and its temp. variation at ^{100}Rh in Be metal 2-56987
- electrical resist. meas. in basal plane (*Russian*) 2-87222
- electron momentum distrib., Compton profiles, Hartree-Fock calc. 2-92447
- equations of states derived from shock wave expts., theoretical anal. 2-71602
- film, struct., condensation rate effects, supercond. transition temp. (*Russian*) 2-98477
- foils, high purity, prep. by vapour deposition 2-108195
- heat deposition meas. in ZING-P' pulsed spallation neutron source 2-102028
- high press. α - β transition at $T=0$ 2-71628
- impact response, hypervelocity, cratering 2-77894
- inhomogeneities, density and dimensions, very cold neutron spectrometry 2-102047
- mass absorption coeff. and range of beta particles 2-75135
- metallic, core expansion calcs. 2-81709
- metallic, electronic and struct. props., HF ab initio calc. 2-82218
- monolayer, electronic struct. calc. method 2-115844
- multiaxial stress-fracture criterion, use of notched beams 2-116555
- neutrons moving through matter, phonon analogue of Cherenkov radiation (*Russian*) 2-115322
- oxidation, of (0001) surface, single cryst., Auger electron spectroscopy study of initial stages 2-78002
- positron annihilation photons and positron lifetime, band theoretical calcs. 2-104995
- protons in Be, Al, Ti, V, Fe, Co, Ni, Cu, Zn, Mo, Rh, Ag, Sn, Ta, Pt, Au, stopping power meas. 2-64820
- reshock and release behaviour 2-71563
- sample prep. for accelerator radiometric dating by BeO reduction evaporation 2-112155
- shock compressed, strain rate effects 2-71541
- shock compression study 2-71562
- shock wave data interpretation with elastic viscoplastic model 2-71556
- shock wave propagation at small impact stresses 2-71564
- structure factors, primary and secondary extinction correction 2-109742
- superconducting thin film, transition temp., vapour deposition procedure effects (*Russian*) 2-98782
- total energy calcs., lattice const. 2-87168
- wire, elastic moduli and linear expansion coeffs. of axial textures (*Russian*) 2-76560
- X-ray scattering from polycryst., spectroscopic anal. 2-116297
- X-ray spectrum near Raman band, electronic struct. calc. 2-72577
- $Al_3Ga_{1-x}As_x$, acceptor states, photoluminesc. study 2-104931
- Be isoelectronic series, optimal geometric approx., uncoupled HF calcs. 2-113868
- Be target, Ar^+ ion sputtering, at. excitation 2-75372
- Be^{2+} , energy and transition probabilities correl. wavefunctions calcs. 2-113874
- Be^{3+} , electron elastic scatt., s-, p- and d-wave phase shifts 2-108709
- Be-like ions, electron impact excitation cross sections calcs. 2-114112
- Be-Si MIS solar cell, with textured surface, large active area 2-88443
- $Be^{2+}+H_2PO_4^-$ interactions, ab initio SCF study, model of cation binding to nucleic acid 2-88344
- $Be^{4+}+H$, electron capture investigated at impact velocities 0.3 and 1.4 au 2-114074
- $Be^{4+}+H$ low impact energy, charge transfer 2-114099
- $Be^{4+}+H(1s)$, charge transfer cross sections, impact parameter approx. 2-59931
- ^{10}Be , low energy neutron interaction, total and inelastic cross sections 2-92048
- ^{10}Be production by neutrinos generated in gravit. collapse of stars, rel. to Galaxy ^{10}Be abundance (*Russian*) 2-106686
- ^{10}Be profile in N. Pacific water column, use for radioactive dating 2-78701
- ^{10}Be deposition rate in oceans, evidence for constancy from Mn crusts 2-111920
- $^{10}Be/^{10}B$ ratio meas. with FN tandem 2-64704
- Cu/Be electron multipliers, rejuvenation 2-69294
- $Ga_{1-x}Al_xAs$, Be-GaAs p-p-n solar cells, Be diffused doping and elec. props. meas. 2-105557
- GaAs/Be, ion channelling, electronic stopping power, SIMS study 2-103867
- GaAs/Be, MBE layers, photoluminescence, excitonic features 2-116229

beryllium continued

- GaAs:Be, p-type doping in metalorganic VPE, hole conc. and cond. 2-105089
 GaAs:Be MBE layers, photoluminescence, bound exciton lines 2-116228
 GaAs:Be(Si), channelling depth distrib. as function of implant energy and fluence 2-98125
 GaAs:Si-GaAs:Be n-i-p-i superlattice, tunable band gap, theory and expt. study 2-110458
 Ga_{1-x}In_x-P:Be, MBE growth using Pb flux and elec. characterisation 2-87987
 Hg-Mn stars, Be abundances from near UV spectra 2-112448
 In_{0.53}Ga_{0.47}As, Be⁺ ion implantation 2-55989
 In_{0.5}Ga_{0.5}As:Be, Si, ion implanted, n⁺ layers, sheet resist., electron mobility and conc. 2-66022
 InP:Be, ion implanted, migration during annealing, SIMS study 2-98143
 InP:Be, ion implanted, annealing behaviour obs. 2-98135
 InP:Be, Zn, Cr, Se, doping profiles, SIMS anal. 2-103806
 InP:Fe, Be⁺ ion implanted, semi-insulating, photoluminesc. meas. 2-99168
 In_{2-x}Sn_xO₃-GaAs:Be heterojunction solar cell, AES and EBIC evaluation 2-78214
 Si:B, trap levels, DLTS study 2-56472
 Si:Be, atom and carrier depth distrib. 2-92018
 TiO₂-Be electrodes physical props. anal. during photoassisted oxidation of water 2-73127

beryllium alloys

see also *beryllium compounds*

- Al-Be, temp. and degree of deform. effect on deform. resist. 2-105203
 Al-Be alloys, Be dispersion strengthened, high-temp. creep (*Japanese*) 2-77879
 Al-Be alloys, Be dispersion strengthened, work hardening and recovery in high temp. creep (*Japanese*) 2-77880
 Al-Ti-Be, grain refinement, Be-enhanced 2-83086
 Be-Cu-Fe, phase relations in Be rich section 2-11146
 Be-Mo-Zr amorphous alloy, ⁹Be NMR line breadth and Knight shift 2-104720
 Be-Nb-Zr amorphous alloy, ⁹Be NMR line breadth and Knight shift 2-104720
 CeBe₁₃Er, ESR thermal broadening 2-61762
 Ce₂La_{1-x}Be₁₃, mixed valence and Kondo behaviour, lattice const. elec. resist. susceptibility 2-56515
 Ce₂La_{1-x}Be₁₃, thermal expansion temp. driven valence change 2-56226
 Cu-Be, AE generated during tensile deform (*Japanese*) 2-105232
 Cu-Be, dil., electron irradiated, solutes as nuclei for self-interstitial complexes 2-66061
 Cu-Be, multistage twinning of tetragonal two-phase blocks formed during ageing, γ particle distrib. (*Russian*) 2-67348
 Cu-Be, TEM obs. of microstruct. evol. in simulated ion irradiated alloys 2-86745
 Cu-Be (1.4 wt.%), discontinuous precip., secondary reaction 2-105149
 Cu-Be (2 wt.%), quenched and aged, struct. and props. after deform. to large strains 2-93569
 Cu-Be (2 wt.%) alloy strips, residual stress profiles along rolling direction, X-ray diff. obs. 2-67367
 Cu-Be system, local vibr. levels, effect of long range stress fields, neutron scatt. study 2-71599
 Cu-Be-Co (13.1, 0.2 at.%), rapid solidification effect on ageing (*Japanese*) 2-105137
 Cu-Be-Ni (2 wt.%, 0.30 wt.%), ageing characts. (*Chinese*) 2-62147
 Fe₂B_{8-x}Be, ferromagnets, Auger CVV spectra as probe of electronic struct. 2-76906
 Gd₂Ce_{1-x}Be₁₃, cond. electron lattice relax. due to Ce ion 2-72350
 Gd₂R_{1-x}Ce₁₃, R = La, Y, Lu, cond. electron lattice relax. due to Ce ion 2-72350
 Ni-Be, multistage twinning of tetragonal two-phase blocks formed during ageing, γ particle distrib. (*Russian*) 2-67348
 Ni-Be (lat.%), radiation induced homogeneous precip., HVEM obs. 2-83124
 PrBe₁₃, Van Vleck paramagn., cryst. field effects, magnetisation, resist. and NMR 2-72140
 TiBe₂, low-temp. specific heat, elec. cond., susceptibility 2-92934
 TiBe₂, nearly ferromag., Ti NMR study 2-87609
 TiBe₂, weak itinerant antiferromag., SDW pairing soln. 2-92854
 TiBe_{2-x}M_x (M = Cu, Ag, Au, Fe), magnetisation meas. in high and low fields 2-56839
 Ti₅₀Be₄₀Zr₁₀, specific heat, superconducting T_c 2-87448

beryllium compounds

see also *beryllium alloys*

- BeF₂/BeF₃⁻, struct. changes, second order phase transition 2-75142
 BeF₃, soft X-ray monochromator crystal, stability in synchrotron radiation 2-84759
 fluoride melts of U, Th, Be, Li mixtures specific elect. cond. meas. 2-56235
 two-component, cryst. binding 2-86620
 2BeO.Li₂O in liq. Li, thermodynamic stability 2-80176
 Be complex, tetrakis(dimethylmethylphosphonate)Be(II), ligand exchange, PMR obs. 2-70278
 Be complex, tetrakis(methylmethylphenylphosphinate)Be(II), ligand exchange, PMR obs. 2-70278
 Be⁹⁺ + Ar(H₂), electron capture, cross section meas. 2-102619
 Be₂C-graphite-UC₂ reactor fuel material, enthalpy and sp. ht. meas. at 1980K 2-115428
 BeAlF₆, struct. and pot. energy surfaces, ab initio MO studies 2-54757
 BeAl₂O₄:Cr³⁺, alexandrite, ground state absorpt. determ. over tunable lasing region, 830 to 690 nm 2-60088
 BeAl₂O₄:Cr³⁺, alexandrite, excited-state absorpt. in lasing wavelength region 2-85973
 BeAl₂O₄:Cr³⁺, alexandrite, laser freq. tuning 700 to 800 nm, spectroscopic characts. 2-114288
 BeAl₂O₄:Cr³⁺ (alexandrite) lasers, physics and performance 2-80974
 Be₃Al₂(SiO₄)₆ crystal monochromator, performance and appl. in energy region 800-4500 eV 2-84758
 Be₃Al₂Si₆O₁₈:Cr, emerald cryst., MM wave quantum amplification 2-93329
 Be₂C in liq. Li, thermodynamic stability 2-80176
 BeCO₂ in liq. Li, thermodynamic stability 2-80176
 BeCl₂, electronic ground states, dissociation energies 2-70375
 BeCl₂, in acetonitrile, solvation, ⁹Be NMR 2-80665
 BeF, bonding and consequent unusual progression of vibr. spacings, VB calcs. 2-80489

beryllium compounds continued

- BeF, potential energy curves and dissociation energy 2-70163
 BeF₂, ³B₂ and ³A₂ states, electronic splitting 2-85532
 BeF₂-NdF₃ based glasses, absorpt. and emission spectra of Nd³⁺, at. struct. computer simulation 2-57149
 BeFH, fragment matrix extraction for diatomics-in-molecules from ab initio calcs. on diatomics 2-75170
 BeH molecule, vibrational smearing of deform. density, Hartree-Fock-Slater SCF calc. 2-80559
 BeH⁺, pot. energy curves and spectroscopic consts. for X'¹Σ⁺ and A'¹Σ⁺ states 2-102416
 BeH₂, coupled cluster singles and doubles method 2-54738
 BeH₂, electron relax., INDO calcs. (*German*) 2-85555
 BeH₂, geometry, dipole moments, pseudopotentials, FSGO calcs. 2-102372
 BeN, low-lying electronic states, ab initio calcs. 2-80505
 BeN⁻, low-lying electronic states, ab initio calcs. 2-80505
 Be₂N₂ in liq. Li, thermodynamic stability 2-80176
 Be(NO₂)₂, dry impregnation with MoO on Al₂O₃, cryst. struct. 2-109761
 Be(NO₂)₂ in liq. Li, thermodynamic stability 2-80176
 BeO film growth by reactive ionised cluster beam deposition technique, thin film device appls. 2-83039
 BeO in liq. Li, thermodynamic stability 2-80176
 B-BeO, tetragonal-packed crystal structures, theory 2-97968
 BeO, thermostimulated exoelectron emission, UV and laser irradiat. effects 2-99307
 BeSO₄·4H₂O, and BeSO₄·4D₂O, Raman and IR activity (*French*) 2-116184
 Be₂SiO₄, vibr., isotope shift, IR and Raman study 2-77507
 Cr³⁺-BeAl₂O₄, alexandrite, laser, narrowband, tunable, meteorological LIDAR appls. 2-114311
 Ho₂O₃-BeO, phase equilibrium study 2-66168
 (NH₄)₂BeF₄, commensurate-incommensurate polar transition, dielectric hysteresis (*Russian*) 2-82799
 Sm₂O₃-BeO, phase equilibrium study 2-66168
 TiBe₂, possibility of p-state superconductivity 2-104524
 Y₂O₃-BeO, phase equilibrium study 2-66168

Bessel differential equation see *Bessel functions*

Bessel functions

- EM wave scattering coeffs. of cylindrical or spherical body, complex Bessel functions appl. 2-55050
 integrals involving Bessel functions, hyperviral calc. 2-53563
 integration, computer program, HANKEL 2-63804
 lossy magnetoplasma, transmitted impulse response by convolution method 2-91623
 multimode optical fibres calc., Helmholtz scalar equation solution (*German*) 2-91056
 pair summatory eqns. with kernels in form of Bessel functions, solution 2-95029
 sum rules for products of Bessel functions with appl. to plasma physics 2-97751

beta-decay

see also *beta-decay theory; beta-ray spectra; nuclear electron capture*

- A = 104-114 mass excess, α and β /EC decay Q-values from ⁵⁸Ni(⁵⁸Ni,X) 2-113354
 A = 144-150, proton rich nuclei with N ≈ 82, beta decay studies 2-95977
 biological chirality origin, rel. to β -decay, expts. 2-88505
 biological chirality origin, rel. to β -decay, theory 2-88506
 double beta decay, neutrino mass question, formalism 2-59295
 double beta decay, neutrino mass question, props. 2-59296
 double beta processes, lepton number conservation test 2-59292
 fission products, β -decay props. using statistical model 2-54326
 fission products, beta decay properties from a statistical model 2-101849
 Gamow-Teller and M1 states including Δ -hole excitation, RPA calc. 2-79979
 Gamow-Teller reson. 2-54318
 laser enhancement, electron shielding effect 2-54321
 laser enhancement theory, approximation 2-54322
 (n,p) small-angle reactions, 60 MeV, isovector and Gamow-Teller strength 2-64401
 neutrinoless double β -decay, pion double charge exchange contrib. 2-54328
 neutrinoless double- β decay in SU(2)×U(1) theories 2-95975
 neutrinoless double-beta decay and muonium-antimuonium transitions 2-69440
 neutrinos, Dira and Majorana masses limits 2-59077
 neutron β -decay anal. 2-59293
 neutron beta-decay, review 2-69460
 neutron DD β -decay, Goldberger-Treiman relation, chiral symmetry breaking corrections 2-69611
 nuclear β -decay, ν_e mass meas. exptl. results on weak interaction 2-79775
 orbital K-electron shakeoff 2-54325
 PCAC condition in quark model, G_A/G_V for vector mesons and $\omega\rho\pi$ coupling constant 2-95786
 pionic and $\Delta(1232)$ degrees of freedom in nuclei, review 2-59339
 pseudo-Dirac neutrinos, neutrino oscillations, neutrinoless double β -decay 2-59084
 s-process theory of nucleosynthesis in stars, slow neutron capture 2-100914
 spectra and effective energies, code in BEDE-1 code 2-113425
 stellar weak interaction rates for A = 21 to 60 nuclei 2-117663
 T = 1/2 mirror nuclei in 2s-1d shell, ang. momentum, J^π, sum rule anal. 2-113368
 weak interactions and symmetries, reviews 2-59097
 (e,e'), inelastic scatt. at low energy, mag. transitions and mag. polarisability of nuclei 2-54360
⁴⁰K-⁴⁰Ca, isobar-hole excitations in quenching of transition 2-69610
 (p,n) on Li,C,Mg,Cl,Ca, 5-200 MeV, isovector effective interaction strength ratio, energy depend. 2-59358
^AAg, A = 116-121, total β -decay energies, mass systematics, atomic mass excess, β - γ coincidences 2-113418
¹Al, A = 25, 29, beta decay, γ -spectra and branching ratios 2-107810
^AAl, A = 31, 32, beta-decay half lives, from ⁹Be(⁴⁰Ar, X) 2-101846
²⁴Al, ²⁴Al^m, β^+ -decay and weak transitions, analog states 2-59294
²⁸Al, β -decay, ²⁸Si transition energy 2-90020
⁷⁸As-⁷⁸Se, β^+ decay, γ -rays spectroscopy 2-69597
¹²B β -decay asymmetry as fast neutron spin analyser from ¹²C(\bar{n} ,p) 2-90080
¹⁴⁴Ba β -decay, T_{1/2}, ¹⁴⁴La levels, J^π, transitions 2-113421

beta-decay continued

- ¹¹Be β -decay, ¹¹B levels, γ -transitions, branching ratios 2-113419
¹¹Be first forbidden β -decay, β - ν and β - γ correlations, meson exchange effects 2-113420
²¹⁴Bi-²¹⁴Po, level scheme anal. (French) 2-95918
²¹⁴Bi-²¹⁴Po, populated levels obs. by γ - γ coincidences in ²¹⁴Po (French) 2-95919
⁷¹Br-⁷¹Se, mass-separated nuclide decay study 2-101845
⁴Cd, A=119, 121, total β -decay energies, mass systematics, atomic mass excess, β - γ coincidences 2-113418
¹³⁵Ce-¹³⁵La, excited nuclear states study by X-ray and conversion electron spectroscopy (Russian) 2-64370
¹⁴¹Ce, radiative β -decay 2-54319
³¹Cl decay, β -delayed protons, half life 2-64376
⁵⁶Co, β^+ decay, Fermi-Gamow-Teller mixing, T invariance test in V-A model 2-90055
^{Cs} β -active superdense nuclei search from Ta(p,X) 2-95909
¹³³Cs, half life calc. on basis of human metabolism 2-101848
¹⁴¹Cs β -decay, ¹⁴¹Ba levels, J⁺, transitions 2-113422
¹⁴⁵Cs β -decay, spectra and branching, ¹⁴⁵Ba levels, J⁺, transitions 2-90060
¹⁴⁷Dy, neutron deficient isotope, EC and β^+ decay, ¹⁴⁶Tb γ -decays 2-69612
¹⁴⁷Dy-¹⁴⁷Tb, single-proton states study 2-54240
¹⁴⁷Eu-¹⁴⁷Gm, nuclear states characs. and diluting transition props. (Russian) 2-64369
¹⁵²Eu-¹⁵²Gd, ¹⁵²Gd, radioactive decay, gamma-gamma coincidence studies 2-74747
²²⁸Fr decay scheme and K=0 bands in ²²⁸Ra 2-101844
⁶⁸Ga, positron polarization meas. 2-108325
¹⁴³Gd, complex beta-decay schemes 2-79984
¹⁴³Gd, ϵ/β^+ decay, branching ratio anomalies and evidence for structures in β -decay strength 2-54327
^{H-H} oscillations, double proton decay and grand unified theories 2-89924
³H, β -decay, atomic effects and neutrino mass calc. (Chinese) 2-90053
³H, β -decay and muon decay, neutrino mass and mixing effects (Russian) 2-95836
³H β -spectrum, mol. structure effect and neutrino mass determ. 2-79983
⁴Hf, A=162, 163, β^+ decay, ^{162,163}Lu level schemes 2-90058
¹⁶³Ho-¹⁶³Dy, electron capture β -decay, ν_e mass upper limit 2-85001
¹³²In-¹³²Sn, GT β^- transition, excited states from $\gamma\gamma$ coincidence 2-95964
¹⁸⁶Ir-¹⁸⁶Os, magnetic dipole and elec. quadrupole moment study 2-84953
⁴⁹K β -decay, ⁴⁹Ca resonances and transitions 2-59297
⁷⁷Kr, mass difference meas. using beta-endpoints 2-84945
¹³⁰La β^+ decay, ¹³⁰Ba levels, J⁺ and transitions 2-90021
¹⁴⁰La beta-decay, ¹⁴⁰Ce levels 2-59282
¹⁴¹Lu, A=162-172, β^+ decay strength functions 2-84999
¹⁴¹Lu, A=181, 182, β -decay, ¹⁴¹Lu, ^{181,182}Hf levels, J⁺, transitions 2-69609
¹⁶⁵Lu-¹⁶⁵Yb, decay scheme from gamma-rays 2-107795
¹⁷³Lu β^+ decay, ¹⁷³Yb levels (Russian) 2-85506
¹⁷⁶Lu, half-life, γ - γ coincidence meas. 2-64375
⁴Mg, A=29, 30, beta-decay half lives, from ⁷Be(⁴⁰Ar, X) 2-101846
¹⁶N(0⁻) beta decay, meson exchange currents effects 2-54323
⁴Na, A=27, 28, beta-decay half lives, from ⁷Be(⁴⁰Ar, X) 2-101846
²²Na, positron polarisation meas. 2-108325
²³Na, beta decay, γ -spectra and branching ratios 2-107810
⁹⁹Nb-⁹⁹Mo, level half-life and transition probability from delayed $\beta\gamma$ coincidence 2-95971
¹⁰⁴Nb-¹⁰⁴Mo, beta-decay half life meas. 2-95976
¹⁸Ne β^+ decay, ¹⁸F deexcitation γ -rays, 0⁺→0⁻ branch ft value 2-90056
²⁵Ne, beta-decay half lives, from ⁷Be(⁴⁰Ar, X) 2-101846
¹⁴O 0⁺-¹⁴N 0⁺ superallowed β^+ -decay, ft value meas. 2-107796
¹⁹O β^- decay, β -branching, ¹⁹F levels, γ -branching, γ -energies 2-69608
²²O, beta-decay half lives, from ⁷Be(⁴⁰Ar, X) 2-101846
²⁸Pg β^+ decay, ²⁸Si levels and γ -transitions 2-69607
³⁶P decay, half life, ³⁶S levels, J⁺ and transitions 2-90059
^{Pb}-²¹¹Tl, A=194-196, decay props. study using γ -ray spectroscopy 2-85002
⁵⁸Pd 21/2⁺ spin gap isomer, beta delayed proton emission from ⁵⁸Ni(⁴⁰Ca, X) 2-90005
¹⁴⁹Pm decay, ¹⁴⁹Sm and N=87 nuclei, particle-hole and intruder-hole bands, transitions 2-113323
^{Rb} β -active superdense nuclei search from Ta(p,X) 2-95909
⁴Rb, A=75, 77, mass difference meas. using beta-endpoints 2-84945
⁴Rb, A=93-100, β -delayed neutron emission to excited states in Sr isotopes 2-95978
⁸⁷Rb, half-life obs. 2-54329
⁹¹Rb, beta-delayed neutron meas., excited 0⁺ states in ⁹⁴Sr 2-69542
^{Ar}^{m.s.}, A=95, 97, β^+ and γ transitions 2-84998
¹⁰⁹Sb β^+ decay, ¹¹²Te, ¹⁰⁹Sb, value, ¹⁰⁹Sn levels and transitions 2-113416
¹²⁹Sb, β -decay, from ¹²⁹U(n,f), ¹²⁹Te levels 2-107812
⁴⁰Sc beta-decay to proton and α -particle unbound states in ⁴⁰Ca 2-85000
^{As}, A=85-88, ground-state decay branchings using gas-phase rapid chem. system 2-74750
¹³⁶Sm, neutron deficient isotope, EC and β^+ decay, ¹³⁶Pm γ -decays 2-69612
¹³⁹Sm-¹³⁹Pm, decay props. study from γ -ray, β^+ and internal conversion electron spectroscopy 2-54324
^{As}, A=106, 108, β^+ decay, In levels 2-90054
¹²⁹Sn, β -decay, from ¹²⁹U(n,f), ¹²⁹Sb levels 2-107812
^{Sr}, decay characteristics of neutron deficient isotopes, Q _{β} measurements, mass excess values 2-113424
⁸⁹Sr decay, probability for 909 keV γ emission 2-74745
⁹⁰Sr, half life calc. on basis of human metabolism 2-101848
¹⁸⁰Ta^m, production cross-section, β -decay, capture, from ¹⁸⁰Hf(p,n) 2-107811
¹⁵¹Tb, EC+ β^+ decay, ¹⁵¹Gd excited states and transitions 2-90017
¹⁵³Tb, β^+ decay, ¹⁵³Gd levels and γ -ray transitions 2-95962
¹⁶⁰Tb-¹⁶⁰Dy, nuclear orientation in Tb metal 2-54320
⁴Te, A=128, 130, double β -decay, lepton number conservation 2-74749
⁴Te-⁴Xe, A=128, 130, double beta decay, ν_e mass meas. 2-113415
^{119m}Te-¹¹⁹Sb, 153 and 270 keV transitions characters, 2-107793
²³⁵U, thermal-neutron fission products decay, beta-ray spectra calc. 2-85109
⁴Xe β^+ decay, A=123, 125, ^{123,125}I internal conversion electron spectra 2-84997
¹²²Xe-¹²²I-¹²²Te, decay scheme and periods, energies, intensities of transitions 2-64373

beta-decay continued

- Y, decay characteristics of neutron deficient isotopes, Q _{β} measurements, mass excess values 2-113424
¹⁶²Yb, β^+ decay, ¹⁶²Tm levels excitation 2-95955
¹⁷⁹Yb β -decay, ¹⁷⁹Lu levels, J⁺, transitions 2-69609
^{Zr}, decay characteristics of neutron deficient isotopes, Q _{β} measurements, mass excess values 2-113424
⁹⁹Zr-⁹⁹Nb, level half-life and transition probability from delayed $\beta\gamma$ coincidence 2-95971
beta-decay theory
see also beta-decay; beta-ray spectra
 double β^+ rel. to e⁻→ β^+ conversion (Russian) 2-107807
³H beta-decay, axial vector test 2-79982
^{Re}, A=186, 188, nuclear beta transitions, role of induced interactions 2-107809
¹⁷⁰Tm, nuclear beta transitions, role of induced interactions 2-107809
beta-particles *see beta-rays*
beta-radiation *see beta-rays*
beta-ray absorption
see also electron absorption
 Ag, mass absorption coeff. and range of beta particles 2-75135
 Al, mass absorption coeff. and range of beta particles 2-75135
 Be, mass absorption coeff. and range of beta particles 2-75135
 Cu, mass absorption coeff. and range of beta particles 2-75135
 Pb, mass absorption coeff. and range of beta particles 2-75135
beta-ray angular distribution
see also beta-ray spectra
 No entries
beta-ray detection and measurement
see also beta-ray spectrometers; radioactivity measurement
³H-solute conc. monitoring using encapsulated plastic scintillator 2-73400
 backscatter and transmission factors meas. using TLDs 2-64686
 characteristic amplitudes of beta-ray spectra measured using scintillation detectors 2-85486
 dosimetry intercomparison programme, conf., Grenoble, France (Oct. 1980) 2-89458
 fallout beta-ray activity AD 1976-1980 2-69995
 internal conversion electron meas. using dE/dn plus E-counter system 2-96370
 liquid scintillation counting of tritiated compounds, determ. of accurate counting efficiency 2-54733
 needle corona counter with preamplification gap for β -rays 2-96382
 phoswich detector for beta-gated gamma coincidence counting 2-75116
 pion-induced β -activity in extended foils, 2D meas., cancer treatment dosimetry appl. 2-73369
 proportional counter for laser fusion target compression meas. 2-75118
 radiochromatographic anal. of mixtures labelled with soft β -emitting isotopes 2-67783
 streamer chamber tracks digitisation using CCD image sensor and video digitiser 2-75103
 Triton-X-100 wavelength shifter in Cherenkov counting system, scintillant behaviour 2-85482
 β activity in mass separator collector, distrib. meas. using multichannel system 2-64826
¹⁴⁴Ce, specific activity determ. by 4 π β - γ coincidence method (Chinese) 2-59654
 Ge, high-purity single crystals, C content and distrib. 2-70052
 MgO detector based on controlled secondary electron emission 2-108270
 U rocks, simultaneous U, Ra determ. using scintillation detectors (Chinese) 2-63109
beta-ray effects
see also electron beam effects
 brain, tumours induced in rabbits by chronic local irradiation using implanted sources (Russian) 2-105778
 chromosome aberrations in myelocaryocytes of rats chronically exposed to ³HOH (Russian) 2-105776
 cutaneous lesions in albino rats, severity (Russian) 2-57863
 enzymes in liver and brain, effects of chronic ingestion of tritiated water in mice 2-57868
 haemopoiesis, mouse, recovery at later times after long-term external (¹³⁷Cs) and internal (³H) irradiation (Russian) 2-105770
 lymphoid organs, cell dynamics upon long-term administration of ³HOH (Russian) 2-105774
 Makrofol KG fission track detector sensitivity to damage by radiations 2-96385
 medullary haemopoiesis, changes in rats prod. by chronic exposure to ³HOH and ¹³⁷Cs γ -rays (Russian) 2-111744
 myelocaryocyte chromosome aberrations, freq. in rats during chronic ³HOH and γ -ray exposure (Russian) 2-111743
 residual damage after termination of long-term exposure to HTO and external γ -radiation, rat expts. (Russian) 2-88609
 RNA turnover in WI-38 fibroblasts and HeLa cells, effects of growth state and ³H labelling level 2-62696
 single crystals, β - γ induced ang. correl., nucl. quadrupole interaction invest. 2-110313
 NaCl:Ti(Tl) prep., beta-radiation thermolum. dosimetry 2-102272
⁹⁰Y beta-rays, toxicity on inhalation of relatively insoluble fused aluminosilicate particles by mice 2-68071
beta-ray polarisation
 No entries
beta-ray scattering *see beta-ray effects; collision processes; energy loss of particles; particle backscattering; potential scattering; transport processes*
beta-ray spectra
see also beta-decay theory
 Ge, high-purity single crystals, C content and distrib. 2-70052
³H containing mol., mol. structure effect on chemical shift 2-79983
¹³⁹Sm-¹³⁹Pm, decay props. study from γ -ray, β^+ and internal conversion electron spectroscopy 2-54324
²³⁵U, thermal-neutron fission products decay, beta-ray spectra calc. 2-85109
beta-ray spectrometers
see also beta-ray spectra; electron spectrometers
 Ge spectrometer calibration from nuclear data 2-75096
beta-rays
see also electrons
 No entries
beta spectrometers *see beta-ray spectrometers*
betatrons
 cyclic inductive accelerator of electrons 2-85423

betatrons continued

- defectscopy, electron accelerator applicability (*Czech*) 2-62318
- high current beam injection into modified betatron accelerator 2-109607
- modified betatron, integer reson. study 2-113784
- modified betatron, transverse beam dynamics 2-113783
- photon neutron attenuation function meas. from electron accelerator-defectoscope 2-67709
- variable energy betatron, X-ray energy variation method 2-54696

Bethe-Salpeter equation

- Euclidean Green function, generating functional, Legendre transform., cluster irreducibility 2-74610
- higher Legendre transforms, relationship to Bethe-Salpeter kernels and r -field projectors 2-74595
- higher-order irreducible vertex parts, mol. appls. 2-80437
- Legendre transformations and equations for Green's functions 2-53985
- light cone behaviour, operator product expansion analysis 2-107505
- light scattering, multiple, in random inhomogeneous media 2-85894
- massive Thirring model, multi-extended objects excitation 2-84807
- meson decay width calc. by composite field theory (*Chinese*) 2-107547
- meson-nucleus scatt., covariant single-hole optical pot. model 2-74777
- off-shell relative momentum definitions in relativistic theory 2-69620
- overlap integral, quark mass depend. (*Chinese*) 2-53982
- QCD, EM transition form factor of 1^{++} meson, large momentum behaviour (*Chinese*) 2-79827
- quark and meson fields, dynamic theory 2-95789
- relativistic confinement 2-69357
- relativistic effects for quarks within hadrons 2-95779
- three body bound state, Bethe-Salpeter wave function light cone behaviour 2-69341
- two-particle equations for fermions in models with trilinear interaction 2-95647
- vector mesons, with natural J^P , unified Bethe-Salpeter wave functions, mass 2-74609
- $K^0 \rightarrow \pi\mu\nu$, ($\pi^+ \mu^-$) atom creation (*Chinese*) 2-107657
- $(K^+ \mu^-)$ atom, Coulomb disintegration cross sections and decay rate (*Chinese*) 2-107546
- Λ resonances, Bethe-Salpeter treatment under harmonic confinement 2-89935
- np - dy , field theoretical approach, P invariance, relativistic effects (*Russian*) 2-59175
- pd backward scatt., polarisation, relativistic effects, Bethe-Salpeter eqn. 2-107681
- π , wave function and EM form factor, large momentum behaviour, QCD and renormalisation theory 2-59148
- $(\pi^+ \mu^-)$ atom, Coulomb disintegration cross sections and decay rate (*Chinese*) 2-107546
- πN , separable Bethe-Salpeter eqn. kernels 2-84911
- qq bound state, annihilation vertex, relativistic Bethe-Salpeter model, renormalisation 2-101539
- $qq\bar{q}\bar{q}$ baryonium states, Bethe-Salpeter relativistic theory 2-107487
- Σ resonances, Bethe-Salpeter treatment under harmonic confinement 2-89935

Bethe-Uhlenbeck equations *see quantum statistical mechanics***bevatrons** *see synchrotrons***bicrystals**

- anisotropic, stress conc. on grain boundary, finite element anal. 2-115577
- α -brass, two-phase bicrystal factors affecting interface sliding 2-103776
- current-voltage characteristics, saturation region, bicrystal parameters determ. 2-61562
- grain boundaries, computer mole. dynamics study, coupled sliding and migration, 3D simulation 2-103780
- interface diffusion parameters, asymptotic expansions (*Russian*) 2-92370
- interface modes, size of boundary effects, theory 2-98423
- interphase boundaries theory, geometric parameters use 2-71808
- thin bicrystalline plates, oscillatory depend. of magnetoresist. (*Russian*) 2-61613
- tilt bicrystal, symmetrical deform., model and exptl. confirmation 2-71469
- Ag film, bicryst., gas bubble growth 2-115607
- Ag, struct. of large-angle $\Sigma=13$ [001] twist grain boundary 2-71470
- Al, bicrystal grown from melt, crystal boundary behaviour (*Japanese*) 2-104173
- Al bicrystals, fatigue cracks initiation along grain boundaries 2-72844
- Al, isooxial bicrystals, fatigue crack initiation along primary slip bands in grain boundary affected region (*Japanese*) 2-105302
- Al-Si, bicrystal grown from melt, crystal boundary behaviour (*Japanese*) 2-104173
- Au film on Pd(001) expt. evidence for nucleation of partial dislocations 2-71455
- Au, grain boundary struct. width, var. with misorientation angle and boundary plane 2-76460
- Au, struct. of large-angle $\Sigma=13$ [001] twist grain boundary 2-71470
- Bi, bicrystal dislocation struct., compressibility anisotropy influence 2-103768
- Cd, bicrystal, grain boundary sliding with and without slip (*Japanese*) 2-103782
- CdS, single and bicryst. growth from vapour, polarity influence 2-57279
- GaAs bicrystals, electron tunnelling through grain boundaries 2-66624
- Ge, tilt type, symmetrical deform., exptl. confirm. of model 2-71469
- Nb, grain boundary corrosion, correlation with grain boundary energy 2-88278
- Nb, peak effect near $H(c_1)$, crit. current meas. 2-77245
- γ - γ /Ni-Al-(Ti) two phase bicrystal, morphological crystallographic features 2-87076
- NiO, relative energies of (011) tilt boundaries 2-55982
- PbS/PbSe bicryst., planar dechannelling at misfit dislocations 2-109870
- Sb bicrystal dislocation struct., compressibility anisotropy influence 2-103768
- Ta, single and bicrystals, work hardening and deformation (*Russian*) 2-105179
- W bicrystals, grain boundary fracture 2-83198
- Zn bicrystal dislocation struct., compressibility anisotropy influence 2-103768

biexcitons *see excitonic molecules***big-bang theory** *see cosmology***bimetallic strips** *see bimetals***bimetallic wire** *see bimetals***bimetallic**

- thermobimetal, thermomech., deform., mech., and normal motions (*Bulgarian*) 2-99507
- Cu/Ni bilayer system, interfacial diffusion coeffs. meas. during diffusion induced grain boundary migration 2-71739
- Cu/Sn bimetallic thin film, interdiffusion and intermetallic phase form. 2-115473
- Mo-W bilayer film, solid state disilicide form., annealing and ion implantation effects 2-92371

binaries (stellar) *see binary stars***binary adders** *see adders***binary stars**

- see also cataclysmic binary stars; eclipsing binary stars; X-ray binary stars*
- β 1164, orbital elements 2-100980
- γ -ray burst source (1979 March 5) neutron star accretion mechanism (*Chinese*) 2-79246
- A, Am and Ap spectroscopic binaries, composite spectra (*French*) 2-79106
- AB 6, binary WR star in SMC, mass ratio, visible spectral obs. 2-89264
- Abell 41, planetary nebula, nucleus, identification as ultra-short-period binary star 2-94718
- accreting white dwarf systems, secular evolution rel. to Type I supernovae 2-112439
- accretion flows, vortex funnels theory 2-58233
- accretion rings and discs in close binaries, nodding motions freq. and amplitude determ. 2-117676
- ADS 10279 and 12889, orbital elements, masses and dynamical parallaxes (*French*) 2-79158
- ADS 10621, ADS 15650, visual doublestars, orbital elements, ephemerides and residuals 2-58394
- ADS 1156, orbital elements 2-100980
- ADS 3182 and 3483, revised orbital elements (*French*) 2-106794
- Ae/Be binary stars, period distrib. and period-rot. vel. rel. anal. 2-74031
- λ Andromedae, RS Canum Venaticorum star, H α photometry 2-89305
- λ Andromedae, RS CVn star, Balmer line profiles from different model chromospheres 2-79155
- λ Andromedae, RS CVn-like star, UV and optical spectrum obs. rel. to atmospheric inhomogeneities 2-58347
- R Aquarii, binary long period variable, model involving companion photosphere under circumstellar shell 2-58350
- ϵ Aquilae, orbital parameters from spectroscopic/photometric data 2-94789
- V1343 Aquilae (SS 433), nutation and pseudoregular precession, 6-day periods 2-63432
- UX Arietis, RS Canum Venaticorum star, UBVR photometry during 1981 2-94784
- astrometry (book) 2-112671
- α Aurigae (Capella), X-ray spectrum obs. rel. to coronal struct. and UV emission 2-112485
- BD+22°669, spectroscopic binary, orbit and mass, possible Hyades member, spectral obs. 2-63503
- Be stars, long-term radial vel. vars. 2-84239
- binary gravitating system, sudden loss of mass 2-107045
- black hole+normal star, stellar radiation freq. shift 2-79139
- 28 Canis Majoris, Be star, photometric and spectroscopic periods differences, obs. 2-100934
- α Canis Majoris (Sirius), review of white dwarf Sirius B (*French*) 2-73972
- RS Canum Venaticorum stars, electron-cyclotron masers as source of radio bursts 2-112312
- RS Canum Venaticorum stars, MK standards, visible energy distrib. and temp. 2-74012
- RS Canum Venaticorum stars, photometric obs. 2-100990
- RS Canum Venaticorum stars, spots effect on radii and luminosity 2-73953
- RS Canum Venaticorum stars, tidal coupling with differentially rot. convective envelopes 2-58382
- RS Canum Venaticorum stars and related objects, coordinated radio and H α survey 2-112503
- RS Canum Venaticorum stars starspots heat flow in convective zone 2-73954
- RS Canum Venaticorum stars wave like distortion in light curve, anal. 2-63505
- α Caris Majoris, Am star, CNO abundances from visible obs. 2-68759
- Case 1, red+white dwarf, period and mass, visible obs. 2-68810
- α Centauri A and B, individual X-ray sources, coronal emission, obs. 2-58336
- Cepheid variables, anal. for spectroscopic binaries using simultaneous photometric and radial vel. study 2-100939
- Cepheids, binary detection and occurrence from vel. curves 2-89279
- Cepheids, characteristics from B-type companions, uvby β photometry 2-68796
- close binary stars, five colour band UV photometry 2-63514
- close binary systems of high eccentricity, tidal evolution 2-89304
- close visual binary stars, photometric and astrometric obs. 2-58395
- 39 Comae Berenicensis, and field, visual/astrometric binary, parallax obs. 2-63217
- FK Comae Berenicensis, coalescing binary, mass transfer, H α obs. and anal. 2-116765
- common envelope binaries of blue supergiant+neutron star, evolution and mass loss rates 2-63538
- components, forced oscillations, toroidal modes due to varying gravit. pot. 2-106786
- conference on stellar evolution-mass loss relations, Trieste, Italy (Sept. 1980) 2-63746
- convective auto-oscill. of stellar interiors 2-63520
- ϵ Coronae Borealis, HgMn star, absorpt. line symmetries from line profile meas. 2-63431
- V470 Cygni, ellipsoidal variable, orbit, photometry anal. 2-89302
- detached close binary systems, period changes due to anisotropic mass ejection 2-74017
- differential speckle interferometric study 2-73856
- double stars, image, reconstruction using Bates' algorithm 2-112344
- 29 Draconis, probable new RS Canum Venaticorum star, BV photometry and light var. characts. 2-58405
- DK Draconis, RS CVn star, starspot evidence from photometric obs. 2-112487

binary stars continued

- duplicity in Cloudfcroft occultation summary (December 1978 to March 1980) 2-112305
 equations of motion, of binary systems with variable masses 2-68831
 evolution and mass loss 2-89248
 evolution of close binary stars, bifurcation points for medium-mass binaries 2-106782
 evolution of compact binary star systems, theoretical anal. 2-68812
 evolution of mass-accreting or mass-losing stars, stable numerical computation methods 2-100912
 F, G and K-type stars, components luminosity classes determ. from space and ground-based spectrophotometry 2-100898
 formation and hardening, effect on galactic nuclei and globular cluster evolution 2-94798
 formation and hardening, effect on stellar system energy increase and decrease 2-94797
 formation mechanisms, reviews 2-79163
 G9-8, G40-26, common proper motion pair, confirmation of flare activity on G9-8 by photoelectric photometry 2-73990
 gamma-ray sources, high energy spectrum from relativistic plasma 2-73832
 81 and χ Geminorum, orbits of spectroscopic binaries from photoelectric radial vels. 2-112507
 HD 111980 and 149414, halo cool subdwarf binaries, spectroscopic orbits and comp. obs. 2-100922
 HD 115968, spectroscopic binary, radial vel. determ. and spectral type 2-74021
 HD 136905, new RS Canum Venaticorum variable star, spectroscopic and photometric obs. 2-58407
 HD 149499, white dwarf and main sequence star, distance from parallax obs. 2-106791
 HD 181602, spectroscopic binary, orbit from radial vel. obs. 2-68825
 HD 185151, RS CVn star, chromospheric activity from visible obs. 2-100975
 HD 189178, spectroscopic binary, orbital elements for primary component 2-106811
 HD 208095, spectroscopic binary masses from visible spectra obs. 2-74028
 HD 26337, new RS Canum Venaticorum variable star, spectroscopic and photometric obs. 2-58406
 HD 33708, binary star orbit 2-106805
 HD 78616 (E4-81), visual binary star, identification as new β Cephei star 2-94736
 HD 80077, B2 supergiant spectroscopic binary, luminosity and period, visible obs. 2-100923
 HD 81410, new RS Canum Venaticorum binary star, BV photometry and orbital elements 2-79168
 HD 8357, RS CVn star, optical variability determ. 2-94778
 HD 86161, WR star with neutron star comparison, mass and orbit, visible obs. 2-73983
 HD 90657, WN4+O4-6 Wolf-Rayet binary, orbital elements and masses 2-106716
 HDE 283809, B-type star in direction of Taurus dark cloud, red giant companion model for IR excess (*Russian*) 2-112444
 V644 Herculis δ Scuti star, orbital motion from radial vels. meas. (*French*) 2-58396
 HR 1206, HR 5637, composite spectrum stars in southern hemisphere, objective-prism discoveries 2-79077
 HR 1883, spectroscopic binary, primary giant, orbit and mass 2-63528
 HR 3626, double-lined spectroscopic nature revealed 2-106808
 HR 4006 (G3.5 III), spectroscopic binary star, radial vel. orbit 2-106815
 HR 465, spectrum of Ap star near rare-earth min. phase 2-106719
 HR 5049, binary Co Ap star, pulsations and orbit determ. 2-106742
 HR 7024, spectroscopic binary orbit, radial vel. obs. 2-79169
 HR 7275, photometric period for RS CVn-type binary 2-84270
 Hyades, binary evidence from colour-magnitude diagram 2-112516
 Hyades late type stars, X-ray sources identification as binaries 2-112516
 Kepler problem for explosive binaries (*Polish*) 2-94792
 EH Librae, δ Scuti star, period variation and orbital motion, photometric obs. (*Chinese*) 2-63439
 mass loss effect on evolution of interacting close binaries 2-68833
 mass loss effects on evolution during various evolutionary stages 2-68832
 massive common envelope binary stars, evolution and mass loss 2-63537
 misaligned binaries, Roche potential and critical lobe 2-89300
 neutron star collision and r-process nuclei ejection 2-106779
 O-type binary stars, effects of mass loss on evolution 2-63536
 OB type runaway stars, compact companions, theoretical light curve 2-106697
 orbit evolution-mass relation taking mass loss into account 2-68835
 orbital perturbations on passage of gravit. wave 2-68813
 EQ Pegasi, red dwarf binary flare star, detect. of microwave emission from both components 2-68775
 II Pegasi, RS Canum Venaticorum type star, UBV photometry during (1981) 2-106798
 XY Persei, visual binary and antilflare star, photographic investigation of light variability (*Russian*) 2-73984
 95 Piscium, orbital elements 2-100980
 planetary nebulae with close binary nuclei, corrections to ang. momentum loss 2-89259
 polarisation variation modeling, effects of orbital eccentricity 2-63524
 precession of gaseous stars in close binaries 2-89245
 PSR 0655+64, new binary pulsar, orbital elements from timing obs. 2-63486
 PSR 1913+16, binary pulsar, evolution history, mag. field and period constraints 2-68799
 PSR 1913+16 (pulsar+compact star) general relativity test and gravit. radiation evidence 2-63498
 PSR 1913+16 quasiperiodic binary system, grav. radiation calc. 2-100989
 pulsating stars, effect of rot. and tidal distortions on periods of small adiabatic oscillations of stellar models 2-106675
 quasiperiodic binary, grav. radiation calc. 2-100989
 red dwarf-neutron star binaries as gamma-ray burst sources, rel. to IR scans of source regions 2-68932
 reflection effect, penetration and circulation currents in irradiated spherically symmetric stellar atmospheres 2-112433
 EY Sagittarii, visual binary and supposed Cepheid variable, photometric obs. 2-94739
 α Scorpii, IUE obs. rel. to mass loss rate from supergiant component 2-58334

binary stars continued

- semidetached binaries, conservative mass transfer calc. using response functions 2-112490
 short-period binary stars, discovery of light vars. in five stars 2-112496
 speckle interferometry, accuracy 2-58269
 speckle interferometry observations, separations 2-63525
 speckle interferometry of 169 binaries at KPNO 2-117709
 spectroscopic binaries in NGC 2516, radial vels. 2-106793
 spectroscopic binary stars, distrib. of masses of primary components and orbital semi-major axes (*Russian*) 2-100992
 spectroscopic binary stars in Scorpius OB 1 association, radial vel. studies of three new massive binaries 2-112493
 spectroscopic binary stars with luminous cool primaries and hot companions, BVRI obs. 2-100985
 spin nutation due to general relativistic and quadrupole effects 2-58383
 subgiant CH stars, mass transfer binary star model for s-process abundances and C/O ratios 2-112451
 synchronisation between orbital and rot. motions, mag. field role 2-94787
 T Tauri, double star detect. and model, speckle interferometry obs. 2-74019
 V711 Tauri (HR 1099), far UV obs. at quadrature rel. to props. of outer atmosphere 2-63499
 V711 Tauri (HR 1099), RS Canum Venaticorum star, BV photometry and light curve, January and February, (1982) 2-112499
 V711 Tauri (HR 1099), RS Canum Venaticorum star, H α emission obs. 2-63511
 θ^2 Tauri (HR 1412), spectroscopic binary and δ Scuti star, photoelectric obs. 2-79121
 traps for protostellar and interstellar debris 2-68669
 uniformly synchronously rotating component, linear adiabatic oscills. 2-63506
 vA 771, spectroscopic binary, orbit and possible membership of Hyades, visible obs. 2-63503
 vB 166, spectroscopic binary, orbit and possible membership of Hyades, visible obs. 2-63503
 γ Velorum, IR spectrum of Wolf-Rayet system 2-112467
 γ Velorum (WC8+O9 I), radio emission obs. at 2 cm rel. to mass loss rate 2-63476
 α Virginis, line profile var. due to rot. and β Cephei pulsation effects, visible obs. 2-63459
 visual binaries, orbital elements, masses from astrometric obs. 2-63513
 visual binaries, orbits and parameters from statistical anal. 2-79163
 visual binaries in Hyades, implications for mass-luminosity relation and cluster distance 2-68811
 visual binaries with late type giant primaries, uvby β photometry rel. to models/isochrones 2-100978
 visual binary stars, list of new discoveries at Nice 2-100764
 visual binary stars, masses, mass ratios and parallaxes of seven objects from astrometric studies 2-106693
 visual binary stars, position angles+separation from visible interferometric obs. (*Russian*) 2-68830
 visual binary stars, revised orbits of 25 stars (*Russian*) 2-100993
 visual binary stars measurement, new photographic method 2-74016
 visual binary systems with variable stars components, list of 112 objects 2-100770
 visual double stars, absolute magnitudes and errors, uvby β photometry obs. 2-68818
 visual doubles, numbers, IDS incompleteness and intrinsic fraction 2-100973
 white dwarf, accreting in binary system, evolution model up to Type I supernova 2-63482
 white dwarf binary system, discovery 2-79165
 white dwarf binary systems, accretion rate rel. to new model for Type I supernovae 2-63484
 wide binaries separation, effect of field star encounters 2-63501
 wide binary, supergiant+main sequence stars, winds interactions, shock fronts anal. 2-112489
 Wolf-Rayet systems, mass loss effects on evolution 2-68833
 Wolf-Rayet binary stars, conservative and non-conservative evolutionary computations 2-63480
 Wolf-Rayet binary systems, reason for absence of assoc. X-ray pulsars (*Russian*) 2-106750
 Wra 977 (4U 1223-62), B1.5 supergiant, spectroscopic orbit 2-106814
 X-ray induced winds, hydrodynamics models 2-94700
 Mg II 2800 Å resonance line emission 2-100896

binding energy

- see also lattice energy; nuclear binding energy; nuclear forces
 adsorbed species, vibr. spectra overtones 2-87005
 adsorption of thiophene, butene and H₂S on MoS₂, binding energies 2-105500
 alkali halide doubly charged cluster, energy surface and stability 2-80863
 alkali metal clusters, binding energy, cryst. growth, HMD method 2-115158
 alkali metal ions core binding energies from Dirac-Fock calcs. combined with atomic binding energies 2-85832
 alkali metal-alkaline earth alloys, disordered, heat of form., density functional pseudopot. formalism 2-104283
 alkali metals, vacancy energy characts. from effective pair pots. (*Russian*) 2-60974
 atom+light ion, L-shell ionis., electronic relativistic effects calcs. 2-59898
 atoms, ground state, binding energies, recursion theory 2-75155
 BCC transition metals, vacancy clusters, binding energies and electronic struct., tight binding calc. 2-109789
 binary compounds, preferential sputtering, at. mass and surface binding energy effects 2-87232
 Breit interaction, local density approx. 2-108335
 calcium malonate, Ca(II) ion binding, ab initio calcs. 2-64857
 chalcogenide crystals, relative stability and structural phase transitions 2-98270
 chemisorption, localized spin-orbital theory 2-56339
 cohesion parameters applic. to wetting and adhesion, review 2-104119
 complexes core binding energy, XPS study, ligand group shift 2-85735
 core ionisation in metal-metal-bonded complexes, relax. effects 2-97986
 core level binding energy meas., comparison of APS and FRESKA data 2-83430
 Coulomb and atomic wave functions, relativistic recoil and spin corrections 2-85523
 determination of binding energies of electrons in L shell 2-53453

binding energy continued

diamond, ground state, electron correlation and binding energy calc. 2-61380
 diatomic molecules, bonding within local spin density approx. 2-113873
 diatomic solids, mixed, interionic pot. and cryst. props. 2-65916
 electric dipole and electron in mag. field, binding energy calc. 2-101236
 excited atomic gas, binding energies and interatomic distances (*Russian*) 2-70158
 formate, Ca(II) ion binding, ab initio calcs. 2-64857
 halide ions core binding energies from Dirac-Fock calcs. combined with atomic binding energies 2-85832
 (HCl)₂, geometry, force consts., moments, ab initio SCF calcs. 2-80454
 heavy atoms, electron energy shift, self-energy correction 2-75153
 inert gas solids, lattice dynamics and thermodynamic props., zero point motion and three body effects 2-109941
 inner shell excitation in superheavy quasimolecular systems 2-54929
 inner-shell photoelectron spectroscopy, correl. effects 2-96521
 Invar, XPS of valence and shell electrons, temp. variations (*Russian*) 2-67192
 ionic crystal, surface charge effects on electrostatic energy 2-81708
 jellium sphere, virial theorem generalisation, appl. to semi-infinite electron gas 2-110272
 jellium surface, chemisorption, universal binding energy relationship 2-61285
 ketenimine, struct., electronic props., force consts., inversion barrier, non-empirical calcs. 2-64858
 2,6-lutidine-water mixtures, wetting transition, capillary parameters meas. 2-71775
 mesic molecules, adiabatic expansion conversion in three-body problem (*Russian*) 2-59980
 metal surface positron binding calcs. 2-98707
 metallic elements, density functional calcs. of Auger and XPS shifts 2-93370
 metals, Auger and X-ray photoemission shifts, embedded-atom calcs. 2-54822
 metals, total energy calc. method 2-71898
 methyl lithium clusters, binding energies, geometry, ab initio SCF STO calcs. 2-96787
 MO bonding-antibonding charact., core electron binding energies and valence-shell ionisation pot. 2-75141
 monolayer films, phase transitions, energy heterogeneity effect 2-104155
 narrow band system, Hubbard sub-band struct., cohesive energy 2-66419
 narrow gap semiconductor, binding energy of charged impurity centres, effect of large lattice polarisability 2-92532
 narrow gap semiconductors, pseudopotential approach to total energy calcs. 2-92500
 non-local corrections to total, ionisation, and single particle energies, local spin density approx. 2-66469
 nonconducting solids, comparison of results of ESCA study using spectrometers of different constructions 2-57656
 polyethylene chain, breaking energy with missing H atom 2-115153
 radiation strength of optical coatings, depend. on chem. binding energy of struct. defects 2-90966
 rare earth elements, inner-shell electron binding energy calcs. (*Chinese*) 2-108348
 rare earth sesquioxides, cubic, lattice and binding energies 2-60916
 rare earth trifluorides, lattice self-pots., photoelectron spectroscopic determ. 2-62042
 rare gas crystals, binding energy, zero isotherms, and elastic consts. from model attractive pot. (*Russian*) 2-55879
 semiconductors, polar, excitons and polarons, bounding energies, local density approx. 2-61367
 soap bubble rafts, pot. and force law between different-size bubbles 2-98390
 stainless steel, electron irradiated, void swelling 2-61039
 superlattice alloy, impurity sheet doped, band struct. 2-110242
 tetraphenylphosphonium complexes, ESCA chem. shift and low binding energy satellites 2-75352
 transition adatoms on transition metals, and of simple chemisorption theory 2-92346
 transition metal complexes, charge distrib., 2-parameter relation calcs., XPS data 2-75165
 transition metal cyanide complexes, ESCA chem. shift and low binding energy satellites 2-75352
 transition metal ion-H₂O(amine) complexes, semiempirical CNDO calc., σ -donor ability of H₂O 2-80482
 transition metal metallic glasses, binding energy of metalloid atoms 2-91806
 transition metals, vacancy clusters, electronic struct., binding energy, atomic relax. 2-87174
 TTF-TCNQ, partial ionicity, cohesion, charge corals. 2-109733
 W (100) face, unreconstructed and H reconstructed, W4f core level shift study 2-92711
 μ^- inclusive capture rate calc. in heavy nuclei 2-101881
 Ag (111), I, monolayer, core electron spectroscopy 2-72604
 Ag alloy, dilute, impurity d-bands and core level binding energy shifts 2-56482
 AgCl-AgBr mixed cryst., interionic pot. and cryst. props. 2-65916
 Al (111), overlayer of O, position, electronic and binding props. 2-82135
 Al, interatomic pair pot. calcs. 2-91865
 Al, interatomic pots. and electronic props., ab initio calc. 2-56460
 Al, liquid, 3p electron density of states 2-82199
 Al surface (111), O chemisorption, quantum chem. cluster model 2-110127
 Al, vacancy energy characts. from effective pair pots. (*Russian*) 2-60974
 Ar crystal, interatomic forces, cohesive energy and elastic constants. 2-55882
 As atoms in Ga solutions, vapour pressure 2-109994
 As₂Te_{1-x} amorphous film, energy gap, composition depend. 2-61337
 Au alloy, dilute, impurity d-bands and core level binding energy shifts 2-56482
 Au+H⁺ L-shell ionisation cross sections Dirac-Hartree-Slater calcs. 2-114093
 Au₂, binding energies, equilib. distances and vibr. freq. calc. using density matrix method 2-114128
 B₂, energy differences using an accurate local density functional, spin-flip energies calc. using Alpha approx. 2-70122
 Be, electronic and struct. props., HF ab initio calc. 2-82218
 Be, metallic, core expansion calcs. 2-81709
 Be, total energy calcs., lattice const. 2-87168
 Bi₂O₃ thin films, characterisation by XPS 2-62043

binding energy continued

C_{1s}, adventitious, binding energy of C_{1s} electrons, energy ref. in electron spectroscopy 2-92328
 C fibre surfaces, XPS and heat treatment effects 2-99296
 C₂, energy differences using an accurate local density functional, spin-flip energies calc. using Alpha approx. 2-70122
 CO₂, CK and OK emission spectra, core state vibr. excitations and symmetry breaking 2-70276
 Cd, relaxed orbital binding energy calcs. 2-80833
 CdS, two-photon magnetospectroscopy of A-exciton states 2-104260
 Ce, binding energies of 4f electrons in metallic rare-earth materials 2-56462
 CePd₃, electronic struct. from resonant photoemission and optical reflectivity spectra 2-66498
 Cr, electron energy loss spectra for clean and oxidized surfaces 2-56663
 Cs, 3p_{3/2} level study by XPS 2-102654
 Cs halides core binding energies, XPS 2-85744
 CsAu, binding energies, equilib. distances and vibr. freq. calc. using density matrix method 2-114128
 Cu (100) chemisorbed CO, XPS satellite struct. 2-83007
 Cu alloy, dilute, impurity d-bands and core level binding energy shifts 2-56482
 Cu, chemisorption of H, small cluster model and embedding theory based on orbital localization 2-61291
 Cu chromite catalysts, XPS struct. elucidation and correl. with catalytic activity 2-105038
 Cu, interionic pot. and stacking fault energy 2-66016
 Cu stepped surfaces, interaction with H, pairwise-additive model 2-56349
 Cu-Au, X-ray diffuse scatt. and ordering energy (*Russian*) 2-77618
 Cu(100), surface core-electron binding energy shifts 2-104460
 Eu, and its alloys, binding energies of 4f electrons in metallic rare-earth materials 2-56462
 Fe (110) surface, exchange splitting, binding energies 2-77149
 Fe impurity atom binding energies and bound-free transition matrix elements in H plasma 2-71233
 Fe surface (100), coadsorption of CO and H₂ 2-56363
 GaAs, deep levels, optical matrix elements and cross sections, impurity superlattice model 2-56467
 GaAs, shallow donor binding energies, effect of band non-parabolicity 2-98581
 GaAs-Ga_{1-x}Al_xAs, quantum well struct., energy spectrum of donors, effective mass theory 2-56664
 GaAs-Ga_{1-x}Al_xAs:H multiple quantum wells, impurity photoluminescence 2-104955
 GaAs-GaAlAs quantum wells, exciton binding energy 2-115668
 Ge, donor-bound multiexciton complexes, density-functional method 2-82245
 Ge, lattice consts. and bulk moduli, self-consistent pseudopot. calc. 2-109741
 Ge:Sb, D⁻ states, electronic struct. and binding energies 2-82280
 Ge-Sn system, electronic theory for binding forces and phase diagrams (*Japanese*) 2-72672
 H binding to isotopic He surfaces, long-range model and scaling rels. 2-80413
 H, critical positron mass, lower bound for binding 2-75474
 H⁺ solvation by methanol and diethyl ether, SCF calcs. 2-62379
 H₂, binding energy origin, Bohr orbit model and Ruedenberg's theory 2-84424
 HBr, valence orbitals, electron momentum distrib. and binding energies 2-102533
 HI, valence orbitals, electron momentum distrib. and binding energies 2-102533
 (H₂O)₂, monolayer cluster on AgI hexagonal substrate, Monte Carlo studies 2-110140
 He-like systems, binding energies in mag. fields 2-75176
 He, liquid, scaling approximation for the elementary diagrams in hypernetted-chain calculations 2-82054
 Hg_{1-x}Cd_xTe, shallow donor binding energies, effect of band non-parabolicity 2-98581
 In, vacancy energy characts. from effective pair pots. (*Russian*) 2-60974
 InAs-GaSb quantum wells, exciton binding energy 2-115668
 InP, shallow donor binding energies, effect of band non-parabolicity 2-98581
 Kr crystal, interatomic forces, cohesive energy and elastic constants. 2-55882
 Li, atomic cluster, binding energy, Huckel mol. orbital approx. 2-108758
 Li, atomic cluster, CNDO/BW study of different crystallographic structs. 2-59988
 Li BCC cluster, CNDO/BW method calc. 2-55003
 Li, chemisorption of H, localized spin-orbital theory 2-56339
 Li isoelectronic series, ionisation pots., transition freqs., perturbation theory, HF method 2-113937
 Li, total energy calc. method 2-71898
 LiH, correl. energy, pot. energy surface, Green's function Monte Carlo method 2-96468
 NaCl, cohesive props., ab initio pseudopot. calc. 2-109738
 Na₂O-Li₂O-SiO₂, glass, energetics, from acoustic meas. 2-71590
 Na₂O-SiO₂, glass, energetics, from acoustic meas. 2-71590
 Ne crystal, interatomic forces, cohesive energy and elastic constants. 2-55882
 Ne-inert gas dimens., photoionisation cross sections, ionisation pot., dissociation energies, binding energies 2-70349
 Ni (100) and (111), chemisorption of H, binding props., effective medium theory calc. 2-82137
 Ni silicides, electronic struct., photoemission study 2-110247
 Ni₃Al phase, binding energy and thermodynamic stability calc. (*Russian*) 2-91863
 NiO, anion-anion interionic pot., covalency influence 2-54782
 NiPS₃, electronic states, reflectivity, optical absorpt., XPS 2-57246
 Ni₃Si, self-consistent energy bands and bonding 2-66436
 Pd alloy, dilute, impurity d-bands and core level binding energy shifts 2-56482
 PdH_x, electronic and cohesive props., localised theory 2-82291
 Pt, chemisorption of CO, 4f surface core level shifts, soft XPS study 2-67195
 Pt surface (111), clean and with chemisorbed CO, surface 4f core level binding energy shifts 2-87359
 Pt, surface (997), double step form, and destruction dynamics, O₂ induced, He beam scatt. study 2-115513
 (SN), chain, ab initio struct. calcs. 2-104282
 Sb₂Se_{1-x} amorphous film, energy gap, composition depend. 2-61337

binding energy continued

- Si adatoms on W surfaces, atomic processes, direct obs. by FIM 2-115570
 Si, donor-bound multiexciton complexes, density-functional method 2-82245
 Si, lattice consts. and bulk moduli, self-consistent pseudopot. calc. 2-109741
 Si, total energy calcs. 2-66470
 Si:H, amorphous, electronic states and total energies 2-66429
 Si:Li, d states, electronic struct. and binding energies 2-82280
 Si:S⁺(Se⁺)(Te⁺), multivalley spin splitting of 1s(T₂) states 2-77000
 Si-Ge system, electronic theory for binding forces and phase diagrams (Japanese) 2-72672
 Si-Sn system, electronic theory for binding forces and phase diagrams (Japanese) 2-72672
 Si, Ge_{1-x} amorphous film, energy gap, composition depend. 2-61337
 Si(111)-Ni interfaces and thin films, valence photoemission study 2-105044
 α -Sn, lattice consts. and bulk moduli, self-consistent pseudopot. calc. 2-109741
 ThO₂, 4f-photoelectron intensities and satellites 2-82998
 TiN, electronic struct., photoemission study 2-104249
 TiO₂, Ar sputtered, photoemission studies 2-116330
 Ti epitaxial growth on Cu(100), LEED, AES, UPS and EELS studies 2-56398
 TmSe(Te)(S), surface effects on core level binding energies 2-115843
 U+H⁺, L-shell ionisation cross sections Dirac-Hartree-Slater calcs. 2-114093
 UNi_{4-x}Cu_x, band struct., photoemission study 2-104240
 UO₂, 4f-photoelectron intensities and satellites 2-82998
 USb₂Te_{1-x}, core level binding energies and heat of formation, UPS study 2-67193
 W (110), chemisorption of H, photoemission and electron stimulated desorption study 2-87049
 W, surface (110), NH₃ adsorpt. and decomposition, XPS study, core level binding energy interpretation using eqv. core approx. 2-115558
 Xe crystal, interatomic forces, cohesive energy and elastic constants. 2-55882
 Yb, and its alloys, binding energies of 4f electrons in metallic rare-earth materials 2-56462
 Zn, relaxed orbital binding energy calcs. 2-80833
 ZrN, electronic struct., photoemission study 2-104249

Bingham plastics and solids *see rheology***biocoustics**

- see also biological effects of acoustic radiation; biomedical ultrasonics; hearing; sonar*
 acoustical characts. of biological tissue, frequency dependence meas. using resonator method 2-94106
 atmospheric attenuation of ultrasonic freqs., meas. significance for echolocation by bats 2-70745
 bacterial cultures, growth rate meas. using US interferometry 2-73399
 breath sounds, development of a system for meas. and anal. 2-117026
 bushcricket, Hemisaga (Sageneae), ear acoustics 2-100003
 dolphin dispersion by underwater US wave generation 2-78355
 echo-mechanocardiograms, methods and results 2-68204
 echolocating Atlantic bottlenose dolphins, acoustic emission monitoring 2-78354
 echolocating bat, Eptesicus fuscus, low-frequency hearing sensitivity 2-111701
 echolocation clicks, observations from free-swimming dolphins in a tank 2-73269
 Eustachian tube sonometry, classification of spectral patterns obtained 2-78402
 fish tag compass, acoustic transponding, trials 2-111815
 frequency selectivity of monkey's auditory system 2-94068
 gelatin, aqueous soln., study of US vel. and associated parameters 2-71577
 heart sound spectra, 1st, rel. to mitral-leaflet closing vel. 2-83613
 levitation, use in analysis of biological materials comprising micron-size particles in a more compressible host liquid 2-78510
 lung, adventitious sounds, freq. anal., pulmonary diagnosis appl. 2-117028
 mammalian soft tissues, US scatt., time-freq.-domain anal., 1D phantom studies 2-73298
 microwave-induced acoustical resonances in biological models 2-105760
 myocardial elastic props., 3D finite element reconstructions from 2D echocardiograms 2-94101
 oesophageal probe for heart and temp. monitoring during anaesthesia 2-68183
 phonocardiography, digital filter design [phonocardiography application] (German) 2-111759
 phonopneumography, freq. anal. of breath sounds 2-57875
 phonopneumography, microcomputer-based analysis of recorded breath sounds 2-62826
 renal failure, acute, US characterisation, rabbit expts. 2-100043
 respiratory sounds, automatic recognition (Japanese) 2-62707
 thoracic wall phonocardiogram recording and correlation 2-94129
 US backscattering, coeffs. evaluation for excised human tissues, principles and techniques 2-68226
 US backscattering coefficients evaluation for excised human tissues 2-68045

biocommunications

- see also biocybernetics; hearing; learning systems; speech*
 echolocating bat, Eptesicus fuscus, low-frequency hearing sensitivity 2-111701

biocontrol

- see also biocommunications; biocybernetics*
 accommodative oscillation, enhancement of average accommodative response, simulation study 2-116908
 blood flow, regional, during physical stress, regulation mechanism and modelling (Russian) 2-62658
 eye, accommodative and vergence controllers, quantitative theory of control sharing 2-78331
 eye movement position signal, physiological measure 2-57815
 Gaia hypothesis for atmospheric CO₂ and climate regulation, biological control model 2-112085
 human movements, computer optimisation 2-57768
 neuromusculoskeletal control system models, practical activation and retention of locomotion constraints 2-88492
 ocular accommodation and vergence, control theory approach 2-116911

biocontrol continued

- oculomotor system as a model for the study of neuronal interaction processes 2-57814
 orthostatic trial, passive, haemodynamic regulation (Russian) 2-62659
 postural control loop, math. modelling and simulation 2-105632
 prosthesis and orthosis control using temporal pattern differences in single-site EMG signals 2-83701
 weakly coupled oscillators, n:m phase locking 2-83558
- biocybernetics**
see also artificial intelligence; brain models; learning systems; machine systems; neural nets
 cardiac biopotentials and problems of medical cybernetics and electrocardiology (Russian) 2-62807
 human visual system at threshold, multiplication noise, probit estimation of parameters 2-99967
 physiological oscillators intercoupled via pure time delays, mode anal. 2-83538
 primate retina, model for temporal organisation of X- and T-type receptive fields 2-99947
 spontaneously beating cardiac cells stimulation by elec. current pulses, phase locking fine structure 2-84539
 striated muscle mechanics, system theoretical description 2-73291
 thermodynamic model for the transport and exchange of bodies dissolved in blood (French) 2-73182
 visual image, model of encoding in cerebral cortex 2-99946
 Ca turnover during skeletal muscle contraction, construction, mathematical study and numerical simulation of model 2-67990
- biodiffusion**
 alveolar-capillary diffusion and ventilation-perfusion inhomogeneity, math. model 2-67927
 archipelago, lateral diffusion, effects of impermeable patches on cell membrane diffusion 2-111644
 bacteriorhodopsin, lateral and rot. diffusion in lipid bilayers 2-111634
 DNA, light-induced diffusion, theory and automated expt. (Russian) 2-88587
 eggs, mouse, effect of microvilli on lateral diffusion meas. using fluoresce. photobleaching recovery 2-94010
 global bifurcation diagram in ecological interacting and diffusion systems 2-95284
 haemoglobin, tracer diffusion coeff. determ. by pulsed field gradient NMR 2-105640
 leukocyte, PMN, migration towards casein in elec. field, chemotactic force, bowling alley technique 2-62576
 lipid bilayers, molecular motions, lateral and transverse diffusion 2-78303
 lung, diffusing capacity adjustment to work, characts. 2-116949
 lung, extravascular pulmonary space, longitudinal diffusion rel. to parameter estimates 2-83594
 lung, hindrance to diffusive gas mixing in hyperbaric environments 2-78359
 lung, normal, regional diffusing capacity during a slow exhalation 2-111720
 lung, rabbit, ¹⁴CO₂ exchange, role of perfusion and diffusion 2-78377
 lung, single-breath CO diffusing capacity meas., improved accuracy and precision 2-78470
 membranes, lateral diffusion coeffs. interpretation 2-93999
 membranes, lateral diffusion of lipids 2-105683
 membranes, nonplanar, mol. diffusion theory 2-93998
 monomolecular layers, insoluble, dynamical props. under press. (French) 2-62646
 mononucleosomes, polyion diffusion, doppler shift spectrosc. investig. 2-66263
 muscle, frog, appl. of pulsed-gradient ³¹P NMR to meas. of cellular diffusion rates of P compounds 2-73213
 polyion diffusion in low ionic strength buffers, electrolyte polarisation effects obs. 2-66264
 pulmonary capillaries, gases transport, equilib. constants arising in the O₂ dissociation curve 2-116898
 pulmonary diffusing capacity for CO, independence from alveolar CO conc. 2-73276
 red blood cells, transient effects on initial oxygenation rate 2-83554
 ribosomes, Artemia, diffusion coeff. meas. by quasi-elastic light scatt. 2-83722
 tracheal epithelium, posterior, canine, diffusion barriers to passive lipid uptake 2-116899
 US irradiation, rectified diffusion and acoustic microstreaming by bubbles 2-57846
 CO, binding to protohaeme, ligand diffusion effects in solvents 2-78282
 O₂ concentration profiles in capillaries and living tissues when axial diffusion is considered 2-111610
 O₂, facilitated transport with membranes in diffusion path 2-73205
 O₂ transport in skeletal muscle, mathematical model 2-116899
 O₂ uptake by red blood cell, factors defining rate 2-83555
- bioelectric phenomena**
see also bioelectric potentials; biomagnetism
 airway smooth muscle, evidence for an Na⁺ electrogenic pump 2-78322
 alamethicin in octanol/dioxane, voltage-dependent pore former, struct. and dipolar props. 2-111616
 arrhythmogenic mechanisms in a network of coupled excitable elements 2-88494
 associative learning retention in nudibranch mollusk, primary changes of membrane currents 2-78324
 aural electrical field of the isolated frog nerve 2-57795
 axon, giant, crayfish, ionic current rel. to Na⁺ channel gating 2-73221
 axons, giant, squid, gating currents associated with K⁺ channel activation 2-67992
 bacteria, killing with elec. pulses of high field strength 2-68044
 bacterial growth detect. by impedance technique 2-117167
 bilayer phospholipid membranes, props. of conductivity channels induced by α -staphylo toxin 2-67966
 biopotential of heart, tissue, brain, limb and lung, conf., Tokyo, Japan (Aug. 1981) 2-63741
 biological materials, piezoelectric effects 2-88561
 biological systems, coherent electric vibrs., computer anal. 2-99932
 bladder, toad, Na⁺ transport and flux ratio through apical Na⁺ channels 2-88516
 blood conductivity at time of coagulation, recording with a biactive clamp, temp. effects (French) 2-116900
 bone displacement induced by applied voltage, holographic study on rats 2-62652
 bone electrical properties and healing using pulsed EM fields 2-83622

bioelectric phenomena continued

bone growth stimulation by elec. or mag. fields, historical development (*German*) 2-100081
 brainstem electrical stimulation, effect on mechanographic meas. of rat locomotor activity 2-105867
 cardiac arrival time analyser 2-78505
 cardiac cells response to periodic electrical stimulation 2-62591
 cardiac defibrillation thresholds with transventricular simple-capacitor discharge, dog expts. 2-94017
 cardiac echo-interval shortening with increasing prematurity, computer model 2-88496
 cardiac stroke volume meas., expt. evaluation of impedance and EM methods in dogs 2-117112
 cartilage, articular, oscillatory compressional behaviour and electromech. props. 2-62665
 cell growth inhibition by PT electrodes at low current levels 2-94008
 cells, mouse, in monolayer culture, elec. pulse-induced fusion 2-94103
 cellular impedance measurement by transient technique 2-62880
 cerebral electrical impedance phethysmogram, effect of electrode size on blood flow contrbs. 2-117119
 cerebroside and phospholipid-cerebroside membranes, phys. parameters 2-57785
 Chara corallina, single excitable cells, effects of S-band microwaves on elec. activity 2-100050
 computerised impedance tomography using nonlinear reconstruction 2-73391
 conference on bioengineering and microtechniques, Besancon, France (Apr. 82) 2-112638
 cytochrome c, anhydrous film, percolative elec. cond. obs. 2-99875
 cytoskeleton dynamics, Frohlich wave self-focusing 2-88520
 dental enamel membranes, impedance as a predictor of permeability, meas. method 2-117168
 dielectric properties of animal tissues in vivo, radio and microwave freqs. 2-94018
 dielectric properties of tumor and normal tissues at radio through microwave frequencies 2-62717
 dipalmitoyl phosphatidyl ethanolamine, Langmuir-Blodgett film, elec. props. meas. 2-116891
 dry human compact, elec. relax. props. at infralow freqs. 2-116982
 electro-osteo stimulation, techniques and clinical appls. (*German*) 2-117128
 electrophysiological methods, limits of usefulness in neuron dendritic length estimation 2-105871
 epithelial transport and metabolism, influence of cellular and paracellular conductance patterns 2-73212
 exactable biological membrane, chaos in self-sustained oscill. under sinusoidal stimulation 2-62570
 haematocrit, determ. by impedance meas. (*German*) 2-117142
 haemoglobin multilayers, LF elect. props. 2-73184
 Halobacterium halobium, mutant selection method by control of transmembrane ion fluxes 2-111827
 heart, dialysed single cells, reversal of current through Ca channels 2-88524
 heart, normal and abnormal elec. activation, phase analysis of equilib. cardiac imaging patterns 2-94198
 impedance cardiography, stroke vol. meas. 2-100136
 impedance plethysmograph, simple design 2-83677
 impedance plethysmography, automatic cardiac output determ. 2-57911
 impedance pneumography, methods of filtering heart-beat artefact from breathing waveform of infants 2-68182
 impedance spectroscopy as an aid in cardiac surgery (*German*) 2-83697
 ion repulsion within membranes 2-99911
 ion-sensitive microelectrode, triple-barrelled for simultaneous meas. of two extracellular ion activities 2-117166
 ionic conductivity of bilayer membranes of cerebroside and 2-57787
 α -keratin fibres thermally stimulated depolarized currents, correl. walk model 2-88498
 kidney, human, ion regulatory function in prolonged space flights 2-62787
 leucocytes, human, effects of HV pulses on in vitro viability 2-99915
 leukocyte, PMN, migration towards casein in elec. field, chemotactic force, bowling alley technique 2-62576
 lipid bilayer membranes, irreversible damage in elec. breakdown state 2-57788
 lipid bilayers, voltage-dependent conductance rel. to alamethicin dipole moment 2-73203
 lung, elec. props. and ion flow, regional differences in excised canine airways 2-73220
 mammalian central neuron, transient outward current, blocking by 4-aminopyridine 2-111654
 mammalian thalamic neurons, in vitro electrophysiology 2-83560
 mammalian tissues, dielec. props. from 0.1 to 100 MHz, summary of recent data 2-62676
 membrane, artificial, containing amphotericin B, excitable props. in presence of cationic blockers 2-67964
 membrane, elec. excitable, variance of conductance fluctuations 2-78315
 membrane, voltage-current characts. of ionic channels, study on basis of transmembrane current harmonics 2-67967
 membrane ion flow, rel. to density of fixed charges at channel opening 2-99910
 membrane potential and resistance, automatic voltage adjuster for single microelectrode recorder 2-68211
 membranes, flat lipid, elec. capacitance, phasic transition effect 2-99907
 membranes, flat lipid, electrostriction and elastic modul 2-99909
 membranes, interaction rel. to charged components redistrib. 2-111629
 mesenteric capillary contractility, low and high magnification simultaneous presentation of microscopic specimens 2-57946
 microwave radiometric method for living tissue semiconductor props. meas., tumour location appl. 2-111818
 mitochondria, rat liver, elimination with negative aero-ions of respiration changes during stress 2-111639
 modelling biological processes in active semiconducting medium 2-105635
 mollusc brain single neuron, quasi-electrostatic influence, trace phenomena, rel. to intracellular excitation 2-57794
 molluscan neurone, bifurcation of periodic activity, from periodic activity 2-83557
 muscle, over-the-skin elec. stimulation parameters 2-57939
 muscle, thin filament regulated, activation by Ca^{2+} ion, nearest-neighbour lattice statistics 2-116903

bioelectric phenomena continued

muscle excitation-contraction coupling, rel. to slow inward Ca^{2+} currents 2-99934
 muscle fibre conduction vel., meas. using a gradient threshold zero-crossing method 2-117108
 muscle stimulation, over-the-skin, elec. parameters 2-57921
 myelinated nerve fibre, anal. of certain errors in voltage-clamp meas. 2-117164
 myeloma cells, mouse, saline-treated, elec. determ. of viability 2-100165
 myocardial conduction vel., electrode system for in vitro determ., canine expts. 2-117162
 myosin rod amino acid sequence, matching of periodic charge distrib. with cross-bridge spacings in muscle 2-111617
 nerve active membranes, elec. network modelling 2-105688
 neuroblastoma cell membrane patches, single Ca^{2+} -activated nonselective cation channels 2-62569
 neuromuscular junctions, frog, numerical anal. of voltage-clamp technique 2-111647
 neuron Cl^- conductance, activation by hyperpolarisation 2-116902
 neuron with NC-dendrites, theoretical input voltage-current charact. on uniform shift of clamped pot. of soma 2-67983
 neurons, mammalian sympathetic-ganglion, acetylcholine noise 2-105689
 neurons, perfused, inward ion current kinetics, effect of transmembrane osmotic press. gradient 2-105690
 pain electrostimulation under analgesia, computer based test setup (*German*) 2-62845
 pancreatic acini basal surface, single-channel currents in isolated plasma membrane patches 2-105686
 Paramaecium caudatum, conjugating pair, elec. coupling and ciliary coordination 2-78313
 permissivity, complex, of human tissue at microwave freqs. 2-99936
 phospholipid vesicle membranes, elec. breakdown by diffusion pot., evaluation technique 2-67965
 photosynthesis, primary processes, charge transfer 2-57789
 photosynthetic membranes, electrochromic response of carotenoids 2-99912
 plants, high voltage electrical environmental effects 2-62589
 protein systems, elec. field effects on kinetics 2-111723
 regeneration of lost limbs by electrical stimulation 2-88687
 renal microvilli membrane vesicles, modifier role of internal H^+ in activating Na^+/H^+ exchanger 2-105687
 retinal Muller cells, photo-induced changes in extracellular K^+ conc. rel. to transrenal pot. generation 2-57801
 S-shaped V-I charact. mechanism of the human body 2-83561
 skeletal muscle, Na^+ channel blocking rel. to proton binding 2-94001
 skeletal muscles, canine, force response to elec. stimulation 2-57837
 skin resistivity measurement using an annular tetrapolar electrode 2-83723
 spasticity modulation: prolonged suppression of a spinal reflex by elec. stimulation 2-88531
 spherical conductor, 2 dipoles determ. from surface pot. meas., isolated heart appl. 2-73412
 spike and wave discharges, effects of post-ictal depression 2-67988
 tissue permittivity in vivo meas. using coaxial line sensor and network analyser 2-105879
 tongue, dog, active ion transport, possible role in taste 2-62642
 transcutaneous electrical nerve stimulation, review 2-100155
 Valonia ventricosa cells, excitation and hyperpolarisation response 2-105673
 ventricular arrhythmias, computer simulation: ventricular bigeminy 2-88495
 ventricular vulnerability to fibrillation, estimation through T-wave time series anal. 2-88534
 vertebrate sympathetic neurons, intracellular Ca^{2+} activation of fast voltage-sensitive K^+ current 2-73222
 VLF impedance-meter, cutaneous impedance appl. (*French*) 2-68213
 wave phenomena realtime assessment, algorithms for travelling wave detect. 2-62878
 wound healing, skin batteries and natural elec. fields 2-83562
 Ca^{2+} , similarity of unitary currents in 3 different species 2-105685
 Ca^{2+} -dependent current activation of cells, depression by residual Ca^{2+} ions 2-99929
 K^+ and Cl^- channels in calf cardiac sarcolemma 2-105693

bioelectric potentials

see also *contact potential*; *electrocardiography*; *electroencephalography*
 action potentials, repetitive propagation rel. to myelin sheath struct. destabilisation 2-111648
 amplifier, universal instrumentation, with DC compensation path, bioelec. signal meas. (*German*) 2-100164
 auditory brainstem responses, distorted, digital inverse filtering 2-68184
 auditory event-related pots., selective attention, effects of frontal cortex lesions 2-94063
 auditory evoked potential audiometry, fundamentals 2-117027
 auditory evoked potentials, acoustic adaptation time constants appl., cat expts. 2-62628
 auditory evoked potentials, computing-routine for logarithmic display 2-83675
 auditory evoked potentials, scalp distrib., overlapping sources and involvement of auditory cortex 2-111697
 auditory evoked potentials, scalp distrib., evaluation of reference electrode sites 2-111696
 auditory evoked potentials as indices of cerebral specialisation of function 2-62627
 auditory evoked potentials from human midbrain, slow brain stem responses 2-111695
 auditory evoked response, middle latency, distortion prod. by analogue filtering 2-94229
 auditory frequency-following potentials, human, lock-in anal. 2-62629
 auditory frequency-following response, man, contributing generator 2-94079
 auditory nerve, human, intracranially recorded pots., comparison with scalp recorded brainstem 2-94078
 body surface potentials, cardiac electropot semi-automatic processing rel. to LV time intervals 2-88682
 brain potentials, spatiotemporal organisation, mnemonic modelling by real-time disc system (*Russian*) 2-99939
 brainstem, derived acoustic responses by means of pure-tone masking 2-94076
 brainstem audiometry in neonates and children, reference values and characts. 2-73264

bioelectric potentials continued

- brainstem auditory, visual and somatosensory evoked pots. in leukodystrophies 2-111698
 brainstem auditory evoked pot., human, click polarity inversion effects 2-73261
 brainstem auditory evoked pot., sources rel. to parameters bilateral asymmetry 2-73265
 brainstem auditory evoked pot., waveform anal. 2-94064
 brainstem auditory response to binaural delayed stimuli in man 2-73262
 brainstem auditory response to tone pips, results in normal and hearing-impaired subjects 2-116936
 brainstem auditory responses, scalp recorded, human, comparison with intracranially recorded auditory nerve pots. 2-94078
 brainstem auditory responses to pure tone stimuli, power spectral anal. 2-94077
 brainstem responses when masking with wide-band and high-pass filtered noise 2-68025
 cardiac Purkinje fibre action pot., simulation of repolarisation events 2-88528
 cat auditory cortex responses to FM of tones 2-116931
 characean cells, vacuolar pot., effects of 20-300 MHz EM radiation 2-100049
 checkerboard reversal pattern and flash VEPs in dialysed and non-dialysed subjects 2-62603
 chloroplasts, photosynthetic membrane, illuminated by short flashes, elec. processes 2-105675
 colour-evoked potentials, multivariate anal. 2-73232
 colour-word (Stroop) test and localisation of interference by brain pots. 2-57823
 conference on medical phys., Varenna, Italy (Jun.-Jul. 79) 2-89448
 cortical potentials associated with voluntary foot movement in man 2-94015
 crayfish antennule to water current stimuli, temporal-structure change of impulse train in mechanoreceptors 2-100014
 diaphragm EMG during negative lower torso press. in quadriplegic men 2-73219
 dichoptic visual-evoked response, anal. of temporal freq. effect 2-94025
 digital bio-signal processing (*Japanese*) 2-62806
 digital low-pass differentiation for biological signal processing 2-117109
 digital processing, basis (*Japanese*) 2-83670
 digital processing of bio-signals, basis, filter design (*Japanese*) 2-111805
 digital signal processing, basis (*Japanese*) 2-83712
 Donnan potential measurements in extended hexagonal polyelectrolyte gels such as muscle 2-73217
 electro-oculographic records, automatic anal., audio-vestibular diagnosis appl. 2-73390
 electrocochleography, use of miniaturized needle electrode 2-117126
 electrometric detectors, model and preliminary results, respiratory monitoring appl. 2-117120
 electromyographically controlled elbow locking mechanism for an upper limb prosthesis, hybrid technology appls. 2-88698
 electronic synapse, voltage independence 2-99931
 EMG, classification by pattern-recognition method 2-83694
 EMG, kinesiological system for computer-controlled recording and processing of muscle action pots. of walking subjects 2-78471
 EMG, quantitative evaluation of various signal processing techniques 2-62814
 EMG, quantitative index independent of contraction force 2-111809
 EMG, single-site microcomputer identification of temporal pattern differences, prosthesis and orthosis appl. 2-83701
 EMG, surface, during muscle fatigue, dT-dl. anal. 2-62580
 EMG, system for quantification 2-117157
 EMG, use for wt. sensation quantification (*Japanese*) 2-62855
 EMG and skin temp. training for primary dysmenorrhea 2-78293
 EMG as quantitative meas. of muscle mech. output 2-67991
 EMG of small intestine, computerised anal. of spike burst activity 2-78503
 EMG parameters, evaluation for anal. and quantification of hemiparesis 2-62578
 EMG pattern analysis and classification for a prosthetic arm 2-78488
 EMG power spectrum and cond. vel., changes in fatigue of sustained max. efforts 2-78323
 EMG responses, independently controlled, in treadmill locomotion by cats 2-78314
 EMG signal frequency spectrum anal., clinical diagnosis appls. (*Italian*) 2-73389
 EMG signals in normal and pathological conditions, simulation model for study 2-67989
 EMG silent period parameters for clenched jaw muscles in man, computer-based anal. 2-62579
 EMG to force processing, eccentric-concentric contractions on a spring-flywheel set up 2-62585
 EMG to force processing, elec. analogue of Hill muscle model 2-62854
 EMG to force processing, estimation of model parameters for human triceps surae muscle 2-62584
 EMG to force processing, Hill muscle model parameters estimation 2-62583
 EMG-force relationships in skeletal muscle 2-94013
 EMG-level muscle model for fast arm movement to target 2-94090
 epicardial potentials inversely computed from body surface maps of humans, numerical procedure 2-88533
 epileptic seizures, EEG recording, removal of EMG artefact by digital filtering 2-94220
 ERG, local, of primates, fractional recording and component anal. 2-57948
 ERG, local, primate, derivative of red mechanism field sensitivity 2-99976
 ERG a-wave slope as a measure of photoreceptor activity 2-57802
 event-related potentials to visual and auditory events in young infants 2-62600
 functional diagnostic instruments, state of the art and future trends 2-62824
 guinea pig auditory cortex, augmentation of evoked potentials after exposure to intensive noise 2-116932
 impulsive vibrations, whole-body, slow vertex pots. evoked in recumbent men 2-111712
 inferior colliculus in man, sound evoked potentials 2-111693
 intraretinal recordings of slow elec. responses to steady illumination, rhesus monkey obs. 2-57810
 ionic channel density of excitable membranes as bifurcation parameter 2-67973

bioelectric potentials continued

- lambda responses and visual signal detect. 2-94029
 laser speckle visual evoked response, contrib. of central retina 2-105698
 lipid bilayer membranes, charged, interaction problem 2-78318
 magnetically shielded room to measure very low biomagnetic and bioelectric fields (*German*) 2-111655
 masseter EMG in man during sustained isometric contraction, effect of acoustic masking on silent period 2-62630
 measurement devices testing, Soviet development 2-62809
 membrane potential of isolated smooth muscle cell, single microelectrode voltage clamping 2-62879
 membranes, flat bilayer, with const. surface charge, interaction 2-99908
 mollusk neurons, pot. depend. of fast K current inactivation, transition state theory use 2-78319
 multichannel signal processing based on logic averaging 2-88672
 muscle, striated, average electrostatic pot. between filaments, rel. to simple Donnan pot. 2-73218
 muscle fibres, skeletal, intra- and extracellular action potentials, volume conductor model 2-67985
 muscle spindles, β motor stimulation effects on interpretation of signals 2-94081
 myoelectric artificial hand, sweating effect, gain-compensated EMG amplifier 2-100156
 myoelectrically controlled externally powered orthosis for the upper extremities (*German*) 2-94249
 nerve membrane, anal. of potential fluctuation at critical state 2-88532
 nerve pulse propagation model 2-73224
 nerve tonic activity of vagus and depressor nerves, component analysis of electrograms by computer 2-78317
 neuro-ophthalmology system based on a PET computer for evoked response, EOG and ERG tests 2-117121
 neurosynaptic junction, impulse response anal., electrical cct. model 2-94021
 pattern reversal evoked potential amplitudes: life span changes 2-62602
 peak detection algorithm of biological signals 2-117102
 phospholipid bilayer membranes, temp. dependence of rupture pot. 2-67968
 phospholipid membranes, proton permeability and elec. breakdown after UV irradi. 2-99924
 photosynthetic membrane, electrogenic props. reconstruction of isolated preps. of reaction centres 2-78311
 plant stem, variable elec. signal form, depend. on const. elec. field 2-99930
 protoplasm drop membrane of Chara cells, pot. depend. EMF and conductance 2-78316
 R-G cone difference signal, primates, chromatic adaptation and flicker-freq. effects 2-116916
 R-G cone difference signal identification in corneal electroretinogram of primates 2-116917
 retinal late-receptor pot., human, clinical use in dyschromatopsia 2-99950
 rotatory evoked cortical potential meas. in man (*German*) 2-62641
 scotopic spectral sensitivity development, visually evoked cortical-potential amplitude meas. 2-57819
 severed nerves, long-term neuroelec. signal recording, rabbit expts. 2-78320
 skin, deform. pots. spread 2-83559
 skin potential monitor and display system 2-68185
 sleep-wake patterns characts. rel. to sudden infant death syndrome, spectral analysis 2-62819
 somatosensory evoked potentials, short latency, median nerve stimulation 2-94084
 somatosensory evoked potentials, short latency, peroneal nerve stimulation 2-94085
 somatosensory evoked potentials, subcortical, prevertebral recording in man 2-68030
 somatosensory evoked pots., central conduction time obs. for humans aged 10 to 79 2-111711
 somatosensory evoked pots. in man, interference approach to study 2-94083
 somatosensory evoked spinal and scalp-recorded potentials following posterior tibial nerve stimulation in man, short latency 2-111710
 somatosensory potentials, early, finger stimulation, non-cephalic reference recording 2-94086
 spatially localised interactive neural populations, stability and dynamics of excitatory sets 2-83556
 streaming potential rel. to electromech. response in physiologically-moist bone 2-105691
 synaptic potentials of auditory neurons on exposure to sound clicks, cross-correl. anal. 2-68021
 thoracic impedance cardiograms, surface mapping 2-68180
 tibial nerve, posterior, stimulation, origin of evoked far-field subcortical pots. 2-68031
 trigeminal evoked potentials in the cat 2-111653
 ventricular myocardial action pot., simulation using math. model 2-88529
 visual cell plasma membrane, fast photoinduced change in conductivity 2-78330
 visual evoked cortical pot., human, rel. to chromatic modulation of sinusoidal grating 2-94033
 visual evoked potential, blur induced changes 2-111660
 visual evoked potential, human, revelation of cortical components by binocular stimulation 2-67996
 visual evoked potential dependence on stimulated retinal area change rel. to different pattern displacements 2-111664
 visual evoked potentials, computer processing utilising digital filtering techniques 2-57916
 visual evoked potentials, electrophysiological evidence of adaptation to coloured filters 2-99945
 visual evoked potentials, short latency, in man 2-111665
 visual evoked potentials, steady state, in the alert primate 2-116913
 visual evoked potentials, stress-induced shifts of dipole generators 2-62613
 visual evoked potentials in albinos, efficacy of pattern stimuli in detecting misrouted optic fibres 2-94028
 visual evoked potentials in hemiparkinsonism 2-94030
 visual evoked potentials in monkey brain, opponent colour responses (*Japanese*) 2-116912
 visual evoked potentials rel. to eye dominance 2-62601
 visual pattern-evoked potentials and Bloch's law 2-99960
 visual receptor potential in early dark adaptation, lateral effects on retina 2-68008

bioelectric potentials continued

- visually evoked pots., LED implant in frontal sinus of cat 2-62607
- visually evoked response, effect of accommodation 2-73230

bioenergy conversion

- arid land plants, fuel biomass sources 2-57732
- Austrian national economy, significance of unconventional energy sources (*German*) 2-73045
- biomass for electric utility applications 2-73134
- biomass sources, chemical conversion and end fuel products 2-62500
- continuous microbial production of hydrogen gas 2-83520
- corn stover acid hydrolysis, kinetic parameters determ. 2-57731
- energy production and pollution in Netherlands up to 2000 AD (*Dutch*) 2-88481
- energy sources, new and renewable, information sources, book 2-58564
- engine fuels from biomass, possibilities 2-83517
- Euphorbia lathyris resources and potential 2-99752
- glucose decomposition at high temperature, mild acid, and short residence times 2-57730
- methane gas from wastes—state of the art 2-116773
- organic photosemiconductor, model systems for primary photoprocess in photobiology (*Russian*) 2-62574
- organic recycling, effect on energy, employment and environmental problems 2-73089
- photoelectric conversion by bacteriorhodopsin 2-67868
- power generation appls. 2-67893
- sewage treatment plants energy consumption, absorption heat pump utilisation of energy yielded (*German*) 2-88410
- solar energy conversion through biomass schemes, present day feasibility 2-78185
- solar technologies for the year 2000 and beyond 2-73088
- transport-fuel production from protein-extracted grass and lucerne 2-78177
- wood gasification to liquid fuels, research and development aspects 2-78176
- H₂ photorevolution and waste water treatment by agar-entrapped cells of *Rhodospseudomonas palustris* and *Rhodospirillum rubrum* 2-99821

biographical dictionaries *see biographies***biographies**

- Alfred Wegener, contribs. to physics of atmosphere 2-63790
- Alfred Wegener (1880-1930), biographical account on 100th birthday and 50th anniversary of death 2-63789
- biological macromols., X-ray studies, review 2-63794
- Compton, Arthur Holly (1892-1962) 2-63792
- Gallileo, biographical notes, math. claims and contribs. to scientific rationalisation (*Italian*) 2-68994
- Keeler, James E., observations of gap in Saturn's A-ring 2-106610
- Klumpke Roberts, Dorothea (1861-1942), astronomer 2-58584
- Michelson, Albert A., conf. (Potsdam, April 1981) 2-89430
- Pierre Curie and the role of symmetry in physical laws 2-84429
- Rona, Elizabeth (1890-1981), contributions to radioactivity research and appl. 2-63791
- Rowland, Henry, A., review of career 2-74189
- Rushton, W.A.H., vision and neurophysiology contributions 2-63795
- Rushton, William, recollections of and contributions to neurophysiology and vision (1925-52) 2-63796
- Urey, Harold C. (1893-1981), theories on origin of the Moon 2-112678

biological cybernetics *see biocybernetics***biological effects of acoustic radiation**

- see also biomolecular effects of radiation; cellular effects of radiation*
- airborne ultrasound, effects on humans, subjective study 2-94107
- bushcricket, *Hemisaga* (Saganae), acoustics 2-100003
- central nervous system excitability change due to noise induced hearing loss 2-105706
- CHO cells, in vitro US effects rel. to gas content, freq., radical scavengers and attachment 2-88586
- Drosophila melanogaster* females, US effects on longevity and reproductive capacity 2-116985
- eggs, *Drosophila*, effects of pulsed US 2-100048
- gaseous microbubbles, acoustically induced shear stresses 2-62678
- hearing loss, noise-induced, rel. to temporal integration 2-116937
- human auditory system, special criteria for impulse noise 2-100044
- hyperthermia local therapy for cancer, physical principles, RF and US heating 2-73199
- impulse noise and continuous noise anal., integrating sound level meter 2-100045
- mammalian cell lysis induced by US, rel. to exposure vessel, systems comparison 2-100182
- mammalian cell lysis induced by US, rel. to exposure vessel, tube rot. explanation 2-100183
- Peridinium depressum, photoregulation of US stimulated bioluminescence 2-111735
- plasma Angiotensin II changes with noise exposure rel. to temporary threshold shift 2-111728
- Salmonella typhimurium* bacteria, mutagenic pot. of pulsed US 2-105757
- schoolchildren and noise, 4 kHz dip, tone screening in 14391 children 2-68023
- short-duration signals, effect on human ear (*German*) 2-94108
- skeletal muscle, US effect on microvascular haemodynamics, rat expts. 2-68047
- tumour, in vitro multicellular system, US induced nuclear aberrations 2-88585
- tumour treatment by US, high intensity LF exposure of hamster fibrosarcomas 2-68046
- US effect on biological structures, free radical participation, pseudomonomol. kinetics 2-100047
- US hyperthermia in malignant brain tumours treatment, tissue damage threshold and thermal dosimetry 2-62679
- US in medicine and biology, conf., Brighton, England (Jul. 82) 2-101123
- US irradiation, implications of bubble dynamics 2-57845
- US irradiation, rectified diffusion and acoustic microstreaming by bubbles 2-57846
- US used in medicine, safety and biological effects, review, book contrib. 2-111729
- US-induced cell killing, temp. dependence, role of membrane fluidity 2-100046

biological effects of gamma-rays

- see also biomolecular effects of radiation; cellular effects of radiation*
- Artemia salina (L.), γ -irrad. effects on survival (*Russian*) 2-105781
- bone marrow, stromal elements in patients with Hodgkin's disease, radiosensitivity to γ -rays (*Russian*) 2-111741

biological effects of gamma-rays continued

- cardiovascular system, canine, response to ^{60}Co γ -irrad. 2-105795
- cell division rel. to circadian rhythm in radiation-induced mitotic delay 2-88618
- cells, algorithm for determ. of proximity distrib. from dose-averaged lineal energies 2-105804
- chromatin DNA, replicating, ^{137}Cs γ -ray induced thymine base damage 2-105801
- cilia, regeneration in heavily irradiated sea urchin embryos 2-68077
- death, causes and their contrib. to life shortening in intact and ovariectomised mice 2-94126
- diploid fibroblasts, human, plateau-phase, characterisation of rapid recovery from γ -ray damage 2-88625
- DNA, γ -irrad. damage repair in rat cerebellar neurons and 9L brain tumour cells 2-105794
- DNA, radiolytic pathways: influence of chem. and conformational factors 2-88624
- DNA, single-strand-breaks in mice lymphocytes, repair γ - and UV-irrad. (*Russian*) 2-57860
- DNA bases, injured liver, slow elimination in α -irrad. old mice 2-78387
- DNA from old rat tissues, circular dichroism spectrum similarity to γ -irrad. DNA 2-105785
- DNA strand breakage, ionising radiation induced, sensitivity of active and inactive chromatin 2-68060
- DNA strand breaks rejoining after γ -irrad., in cultured fish cells 2-68062
- DNA-protein complexes in Ehrlich ascites carcinoma cells, radiation-induced dissociation 2-105788
- DNA-tryptophan complex, effect of UV and γ -radiation (*Russian*) 2-57862
- E. coli cells, induction of reversions to prototrophy by neutrons and γ -rays (*Russian*) 2-116990
- Ehrlich ascites tumour cells, non-additivity of effects of neutron- and γ -irrad. (*Russian*) 2-105777
- erythrocyte membrane, effect of hyperthermia and ionising radiation 2-105791
- exonuclease, membrane-bound, γ -radiation-releasable, Arrhenius plot behaviour 2-62701
- fibroblasts, Chinese hamster, prod. of chromosome aberrations by γ -rays and neutrons 2-94112
- fibroblasts, human, ornithine decarboxylase activity inhibition rel. to DNA repair synthesis 2-68080
- fish, cultured cell line, resistance to γ -irrad. 2-88629
- gustatory tissue response during photon and neutron radiotherapy, quantitative dose-response relationships 2-117014
- haemopoiesis, mouse, recovery at later times after long-term external (^{137}Cs) and internal (^3H) irradiation (*Russian*) 2-105770
- haemopoietic system, rabbit, changes in DNA pyrimidine clusters immediately after irradiation (*Russian*) 2-105767
- hearts of beagles, irradiated with fractionated fast neutrons or photons, pathological changes 2-68074
- high dose nonuniform exposure of rats, 2-factor mode (*Russian*) 2-57858
- jejunal crypt cells, mouse, dose-survival characteristics, ^{60}Co γ -irrad. 2-68068
- jejunum, of two warm-blooded vertebrates, radiation induced changes in goblet cell kinetics 2-68070
- jejunum, postnatally developing, of Swiss albino mice, goblet cell kinetics after prenatal irradiation 2-68069
- kidney cells, mouse, repair of sublethal and pot. lethal damage after irradiation 2-68063
- lipid multilayers, gamma-irrad. effects 2-94116
- liver mitochondria, rat, changes in electroneutral Ca^{2+} - H^{+} metabolism after irradiation (*Russian*) 2-105766
- liver mitochondrial fractions, influence of whole-body γ -irrad. 2-62698
- LL cells, ionising radiation, nature and repair of potentially lethal damages (*Russian*) 2-57854
- luciferase, inactivation by pulsed ionising radiation, real-time kinetic study 2-105798
- lung, canine, normal, comparison of neutron RBE values rel. to γ -rays 2-68043
- lung, dose-rate dependence of damage after total body irradiation, mouse expts. 2-88613
- lung, early and late toxicity in mice 2-88631
- Lupinus albus L., effects of acute irradiation on vegetative shoot apex and general morphology 2-78389
- Lupinus albus L., effects of acute irradiation on floral development 2-78390
- lymphocytes, human peripheral blood, ^{60}Co γ -ray exposure rel. to sister chromatid exchange freq. (*Russian*) 2-88605
- lymphocytes, rat, kinetics of long-term γ -irrad. (*Russian*) 2-57857
- lymphocytes of rat and human peripheral blood, nuclear DNA supercoiled struct. changes 2-83610
- lymphoma cells, mouse, DNA repair and replication expts. 2-88611
- marrow, autologous reconstitution rel. to high-dose total-body irradiation, dog expts. 2-62699
- medullary haemopoiesis, changes in rats prod. by chronic exposure to ^3H and ^{137}Cs γ -rays (*Russian*) 2-111744
- melanoma, malignant, human, in vitro cellular radiosensitivity 2-117010
- melanoma, Nail human, transplanted into nude mice, radiosensitivity: repair, reoxygation and dose fractionation 2-111752
- muscle, smooth, effect of ionising irradiation on physiological activity of cyclic adenosine monophosphate 2-117016
- myelocytic leukemia, acute, effect of fractional vs. unfractionated total body irradiation, rat expts. 2-68066
- myelokaryocyte chromosome aberrations, freq. in rats during chronic ^3H and γ -ray exposure (*Russian*) 2-111743
- parotid saliva, human, effects of ^{60}Co γ -ray therapy 2-62700
- Pinus silvestris, radiosensitivity of generative and vegetative organs in autumn and spring time (*Russian*) 2-116995
- prenatal ^{60}Co irradiation, effects on postnatal neural, learning and hormonal development in squirrel monkeys 2-88628
- pulmonary alveolar macrophage colony-forming cells, radiosensitivity obs. 2-88626
- pulmonary surfactant system, sequential effects of irradiation 2-100063
- residual damage after termination of long-term exposure to HTO and external γ -radiation, rat expts. (*Russian*) 2-88609
- small intestine lysosomal enzymes, modifications after ^{60}Co γ -irrad., rat expts. 2-111740
- spleen cell suspensions from heavily irradiated mice, toxicity 2-62695
- splenocytes, autoantigens excretion test for evaluation of functional changes (*Russian*) 2-88602
- spores of *Bac. subtilis*, low temp. rel. to survival after γ -irrad. (*Russian*) 2-88608

biological effects of gamma-rays continued

- thymocytes, mouse, damage and repair of superhelical DNA after irradiation (Russian) 2-88595
 thymocytes, mouse, supercoiled DNA repair after ^{60}Co γ -irrad. in fractions differing in radiosensitivity 2-105790
 thymocytes, rat, chromatin struct. change on γ -irrad. (Russian) 2-57853
 thymus, rat, combined effect of ^{239}Pu and γ -irradiation on nucleic acid metabolism (Russian) 2-88597
 thymus cells, rat, γ -irrad. effects on DNA-dependent RNA polymerase activity 2-111750
 transuranic radionuclides in nuclear power plant environs, concentrations and distribution 2-59503
 whole-body γ -ray exposure, very low dose, acute non-stochastic effect, thymidine equiv. serum factor 2-83606
 yeast, radiation-generated aq. electron-type damage rel. to recombinational repairs pathway 2-94118
 yeast cells, ploidy influence on RBE of densely ionising radiation (Russian) 2-88599

biological effects of ionising particles

- see also *biomolecular effects of radiation; cellular effects of radiation*
 alopecia, effects of heavy ions on rabbit tissues 2-57866
 alpha-irradiated Chinese hamster V79 cells, G2 delay, cell recovery period 2-88627
 amino acids, optically active, effect of longitudinally polarised protons 2-62691
 beta-irradiation, cutaneous lesions, severity in albino rats (Russian) 2-57863
 brain, proton irradiation injuries, study in expt. animals by ^{99m}Tc penetration techniques (Russian) 2-111813
 brain, tumours induced in rabbits by chronic local irradiation using implanted sources (Russian) 2-105778
 cataractogenesis, effects of heavy ions of rabbit tissues 2-83605
 cell nucleus, ^{10}B dosage in neutron capture therapy, analytical calc. 2-105803
 cell struct. irradiation, damage, heavy charged particle stochastic track concept study (Russian) 2-57855
 chest walls, post-mastectomy, late skin changes following twice-weekly electron beam radiation 2-68067
 chromosome aberrations in myelocarcinocytes of rats chronically exposed to ^3HOH (Russian) 2-105776
 coronary artery, mouse, late effects of heavy charged particles on fine struct. 2-105805
 desorption, fast heavy ion induced, rel. depend. 2-94127
 DNA, biologically active, inactivation by hydrated electrons 2-105789
 electron internal irradiation, quality coefficient 2-57871
 electron microscopy, biomolecular, resolution rel. to electron irradiation susceptibility 2-117175
 electron microscopy, frozen hydrated specimens, thermal and radiation damage 2-83720
 enzymes in liver and brain, effects of chronic ingestion of tritiated water in mice 2-57868
 foot skin reaction, mouse, dose dependence of pion RBE values rel. to X-rays 2-78391
 haemopoiesis, mouse, recovery at later times after long-term external (^{137}Cs) and internal (^3H) irradiation (Russian) 2-105770
 HZE particles, role in space flight, results from space and ground-based expts. 2-62793
 irradiation facility for radiobiological expts. with protons from cyclotron 2-117145
 low radiation doses effects, underlying biophysics principles (German) 2-68054
 luciferase, inactivation by pulsed ionising radiation, real-time kinetic study 2-105798
 lymphocytes, human, microdosimetry of α -particle irradiation 2-88612
 lymphoid organs, cell dynamics upon long-term administration of ^3HOH (Russian) 2-105774
 medullary haemopoiesis, changes in rats prod. by chronic exposure to ^3HOH and ^{137}Cs γ -rays (Russian) 2-111744
 myelocarcinocyte chromosome aberrations, freq. in rats during chronic ^3HOH and γ -ray exposure (Russian) 2-111743
 parotid salivary function in cancer patients after electron beam treatment 2-68065
 protein crystals, electron radiation sensitivity 2-117018
 proteins, dark field TEM, sources of image instabilities 2-117173
 residual damage after termination of long-term exposure to HTO and external γ -radiation, rat expts. (Russian) 2-88609
 RNA turnover in WI-38 fibroblasts and HeLa cells, effects of growth state and ^3H labelling level 2-62696
 skin, fractionated irradiation with X-rays or accelerated C ions, hamster expts. 2-68073
 skin, rat, residual damage 1 year after exposure to X-rays or accelerated heavy ions 2-88622
 spinal cord, rat, response to single and fractionated doses of accelerated heavy ions, rel. to X-rays 2-88620
 synaptosomes, irradiation by high energy electrons, Ca accumulation and retention 2-68076
 yeast cells, evidence for DNA double-strand breaks as critical lesions on ionising particle irradiation 2-68072
 yeast cells, ploidy influence on RBE of densely ionising radiation (Russian) 2-88599
 ^{90}Y beta-rays, toxicity on inhalation of relatively insoluble fused aluminosilicate particles by mice 2-68071

biological effects of microwaves

- see also *biomolecular effects of radiation; cellular effects of radiation*
 acoustical resonances induced by microwaves in biological materials 2-105760
 athermal submm-microwave biological effects, review 2-88592
 atria, spontaneously beating, rat, effects of 2.45 GHz microwave irradiation 2-100051
 behaviour temporally defined, of rodents: comparative effects of pulsed and CW 2.8 GHz microwaves 2-100052
 biochemical and haematological effects of acute in vivo exposure of rats, 2450 MHz irradiation 2-105764
 blood-brain barrier, microwave hyperthermia-induced alterations, rat expts. 2-88589
 blood-brain barrier permeation in rats during exposure to 2450 MHz microwaves 2-111734
 cell survival at elevated temps. rel. to microwave irradiation 2-68052
 cerebral cortex, awake cats, effects of weak AM microwave fields on Ca^{2+} efflux 2-111730

biological effects of microwaves continued

- Chara corallina, single excitable cells, effects of S-band microwaves on elec. activity 2-100050
 chromatophores of Rhodospirillum rubrum, microwave photolosses obs. 2-57848
 clinical radiofrequency hyperthermia by magnetic-loop induction 2-62721
 embryos, preimplantation, mice, lack of effect of 2.45 GHz microwave irradiation on development 2-100054
 genetic effects rel. to microwave irradiation of procaryotic and eucaryotic cells 2-68053
 haemoglobin, possible effects of 10^{11} Hz radiation on O_2 affinity 2-111733
 hyperthermia, local, using microwaves for therapy, expts. with various applicators 2-105761
 hyperthermia, localized, in cancer treatment 2-83629
 liquid crystal thermometry of cells during hyperthermal microwave irradiation 2-100163
 localised microwave hyperthermia meas. in thorax phantom 2-78385
 mammalian cells, microwave cytotoxicity, nonthermal effects at high power levels 2-88590
 microwave bioeffects, heat transfer in surface-cooled objects subject to microwave heating 2-116885
 microwave heating principles, applications and safety aspects (Dutch) 2-95372
 mitochondria, rat liver, MM wave irradiation effects on ATP synthesis and Ca^{2+} transport 2-88591
 nerve vitality, pulse microwave effects, frog expts. 2-105765
 phospholipid vesicles, multimellar, fluoresce. depolarisation studies of phase transition after microwave irradiation 2-111732
 RE-insect interaction applied to pest control (Spanish) 2-62682
 RF hazards to the radio amateur 2-83630
 safety standards for microwaves, biological effects of low level RF energy 2-57850
 spermatogenic epithelium, mouse, effects of 2.45 GHz microwave radiation and heat 2-57851
 synaptosomes, LF AM microwave field irradiation, effects on Ca^{2+} efflux rate 2-111731
 temperature patterns, prod. by 434 MHz irradiation, influence of bone, phantom expts. 2-62683
 thyroid and adrenal axes hormones, acute in vivo exposure of rats 2-68051
 tissue spheres, temperature profiles due to microwave heating 2-105762
 weight reduction in mice offspring after in utero exposure to 2450 MHz CW microwaves 2-100055

biological effects of radiation

- see also *biological effects of acoustic radiation; biological effects of gamma-rays; biological effects of ionising particles; biological effects of microwaves; biological effects of ultraviolet radiation; biological effects of X-rays; biomolecular effects of radiation; cellular effects of radiation; dosimetry; radiation therapy*
 A-bomb survivors, mortality from causes other than cancer and in early entrants during 1950-1978 2-117013
 abdomen, rat, delayed pathology after irradiation (Russian) 2-105779
 agricultural plant seeds, stability of stimulatory effect of preirradiation (Russian) 2-116996
 beneficial effects of low-level radiations 2-57872
 blood flow rate over sacral region in rabbits, He-Ne laser influence (Chinese) 2-100056
 blood plasma, dog, K and Na ions content after radiation and heat exposure (Russian) 2-57843
 body weight estimation, radiobiological expts. appl. (Russian) 2-88700
 bronchus, rat, morphological changes after single inhalation of $^{239}\text{PuO}_2$ (Russian) 2-116994
 central nervous system, tolerance to photon irradiation, endocrine complications in radiotherapy patients 2-111739
 circular cylinder, near-field absorpt. from elec. and mag. line sources, biological heating appl. 2-100053
 conference on biological effects and medical uses of elec. and mag. fields, London, England (May 1982) 2-79285
 conference on fractionation and dose-time relations in radiobiology and radiotherapy, Leiden, Netherlands (Oct. 81) 2-63737
 death dynamics in irradiation, mouse populations, math. models (Russian) 2-88491
 endocrine system of female rats, response to ^{75}Se -selenomethionine (Russian) 2-62688
 eye, laser radiation permissible exposure normalisation 2-83661
 fusion neutrons, tumour induction in Rhesus monkeys after total body irradiation 2-57844
 geological specimens containing natural radioactivity, radiological hazards to collectors 2-105808
 human exposure to EM fields, standards (Japanese) 2-116987
 hypothalamus, rat, catecholamine deficiency at later times after irradiation (Russian) 2-88594
 interactions from several agents, dose-effect relationships and isoeffect curves 2-117015
 intestine, small, mouse, comparison of damage caused by X-rays and fission neutrons, rel. to age (Russian) 2-88601
 irradiation exposure and risks in the community (German) 2-100041
 low-level ionising radiation, hazards to humans 2-78398
 lung cancer risk, BEIR III estimates, failures and critique 2-68056
 lymph nodes affected by Hodgkin's disease, response to radiation exposure (Russian) 2-73300
 magnetic field, 800 Hz, effects on male mice obs. 2-83596
 magnetic fields, rapid rise-time, effect on ECG in rats 2-116980
 magnetic-loop induction hyperthermia, thermal distrib. in phantoms and animals 2-99904
 malignant neoplasms among atomic bomb survivors following radiation therapy 2-83602
 mammals, ionising radiation chronic exposure: equivalent doses, dose rates and exposure times (Russian) 2-105780
 mammary carcinogenesis, fission neutron irradiation, genetic component, rat expts. 2-88583
 marine dinoflagellate, laser-induced bioluminescence 2-105755
 membrane populations, interactive FORTRAN program to simulate radiation response 2-100067
 metabolism, basal, in mouse progeny, rate after irradiation (Russian) 2-88604
 monotone dose-response probabilities after long-term toxicant exposure, anal. method 2-68057
 nasopharyngeal carcinoma, max. likelihood estimation of dose-response parameters for therapeutic operating charact. anal. 2-117058

biological effects of radiation continued

- neutron irradiation, cell damage at reduced dose rates 2-94102
 nuclear fission products, clinical aspects and pathogenesis of acute damage resulting from exposure (*Russian*) 2-62687
 occupational exposure to ionising radiation, low level, epidemiological methods for assessing risks, review 2-117146
 ocular tissues, laser radiation interaction mechanisms, human exposure limits implications 2-100059
 parotid gland, human, effect of ionising radiation on intraductal press. 2-78393
 pelvic region arterial changes following bladder carcinoma treatment (*Russian*) 2-111742
 pre-natal radiation exposure, consequences for post-natal development, review 2-105787
 proton movement, light-driven, kinetics in model membranes containing bacteriorhodopsin 2-68049
 pulmonary tumours in Syrian hamsters following inhalation of $^{239}\text{PuO}_2$ 2-57865
 radiation exposure and radiation risk to population (*German*) 2-111725
 radioisotope researches and appls., 30 years progress, review 2-58554
 review of radiobiology for radiotherapy (*Japanese*) 2-117011
 RF emission effects on human organism (*Spanish*) 2-68050
 RF hazards to the radio amateur 2-83630
 RF irradiation using 13.56 MHz generator, heating patterns in pig thorax and abdomen and large phantoms 2-100057
 small populations at risk and the linear hypothesis 2-94110
 Soviet radiobiology 1966-80, review of developments (*Russian*) 2-74190
 space flight, manned, radiation risk and protection 2-62792
 taste and salivary function, long-term effects of radio therapy 2-111751
 testis, mouse, radiation dose and biological effects from $\text{Na}_2\text{H}_3\text{PO}_4$ 2-73302
 thresholds in radiobiology 2-111754
 thymus, rat, combined effect of ^{239}Pu and γ -irradiation on nucleic acid metabolism (*Russian*) 2-88597
 thyroid morphofunctional changes after administration of ^{131}I alone or in combination with ^{45}Ca (*Russian*) 2-116997
 Tribolium, hyperthermic radiosensitisation, rel. to temp. and heating duration 2-94119
 United Nations Scientific Committee on the Effects of Atomic Radiation, review of work 2-73301
 vegetable, germination and growth near UHV transmission line 2-116981
 ^{252}Cf irrads. effects, dys hormonal processes, pathogenetic role in rats (*Russian*) 2-57859
 ^{237}Np , effects of gonads of rats and their progeny (*Russian*) 2-105782
 ^{239}Pu , dominant lethal and ovarian effects in female mice 2-117001
 ^{239}Pu , monomeric, effects on foetal rabbit 2-111747
 $^{239}\text{PuO}_2$, inhalation effects, morphometric study of rat and hamster lung 2-62693
 Rn emissions from U mill tailings, health effects 2-73303

biological effects of ultraviolet radiation

- see also *biomolecular effects of radiation; cellular effects of radiation*
 bacterial plasmids, mechanism of inactivating effect of laser UV radiation 2-111736
 bacteriophages, MS2 and T7, inactivating effect of laser and conventional UV light sources 2-57870
 blood kinin level after one exposure to intense UV radiation in rabbits 2-62685
 blood kinin level during long-term UV exposure in rabbits 2-62686
 blood serum irradiated with UV, biological action mechanism, free radical products 2-100062
 capsid protein synthesis in infected mouse cells, UV-enhanced reactivation and infectious centre formation 2-83604
 ceruloplasmin, human, UV laser radiation effect 2-78394
 conference on radiation research, Salt Lake City, USA (Apr. 82) 2-112652
 DNA, single-strand breaks formed by ps laser UV irrads. 2-116986
 DNA, single-strand-breaks in mice lymphocytes, repair γ - and UV-irrads. (*Russian*) 2-57860
 DNA synthesis, semiconservative, in ICR frog cells exposed to monochromatic UV and photoreactivating light 2-105797
 DNA-tryptophan complex, effect of UV and γ -radiation (*Russian*) 2-57862
 E. Coli, UV-induced mutation hotspots rel. to DNA damage hotspots 2-94117
 E. coli K12 AB2480 DNA, broad spectrum near UV damage 2-78397
 erythema in normal human skin, consistency of studies 2-73306
 erythrocyte membranes, use of circular dichroism spectroscopy in mol. phototoxicity study 2-116999
 fish cells, cultured, UV-irrads., photoreactivation and excision repair of thymine dimers 2-105796
 haemocyanin, Limulus polyphemus, UV laser radiation effect 2-78394
 Halobacterium halobium suspension, inhibiting effect of blue and UV light on photo-induced pH changes 2-57849
 laser applications in biology, conf., Tbilisi, USSR (Nov. 1980) 2-94902
 mammalian chromatin DNA, radioimmune assay of induction and removal of UV lesions 2-88630
 mutagenesis, specificity in lac promoter of M13lac hybrid phage DNA 2-88615
 NHK 3025 cells, hematoporphyrin derivative treated, photodynamic membrane damage 2-62689
 nucleic acid bases, high-power UV laser radiation effect, two-stage photodecomposition 2-100066
 nucleic acid components, high intensity UV exposure, two-photon photochemistry 2-99900
 origin of life rel. to primitive Sun UV and X-ray emission 2-105880
 phospholipid membranes, proton permeability and elec. breakdown after UV irrads. 2-99924
 skin, rat, UV irrads. effect on tissue respiration (*Russian*) 2-57861
 skin, UV induced optical and struct. changes in hairless mice 2-68055
 skin cancer in mice due to UV and suppressor T lymphocytes 2-105809
 skin hazards, occupational, from UV exposures 2-117000
 tumour cells, HeLa, ultrashort UV laser pulse action 2-100064
 tyrosinase, mushroom, UV laser radiation effect 2-78394
 V-79 cells with normal and BrdUrd-substituted DNA, UV-induced sister chromatid exchanges 2-105799
 viruses, mechanism of inactivating effect of laser UV radiation 2-111736
 vitamin D₁ synthesis in human skin rel. to solar UV spectra 2-99897
 yeast, photoprotection from lethal action of UV light 2-105786

biological effects of ultraviolet radiation continued

- yeast cells, lethal effect of high-intensity 266 nm UV laser radiation 2-100065
 yeast cells, specific damage by high-intensity UV radiation 2-78386
- biological effects of X-rays**
 see also *biomolecular effects of radiation; cellular effects of radiation*
 alkaline phosphatase activity of growing rat bone, effect of 50 kV X-ray irrads. 2-57867
 antibody enhancing helper T cells 2-68058
 antibody forming cells precursors, X-irrads. effects meas. by in vitro limiting dilution assay 2-111749
 bacterial spores, cell conc. effects on radiation sensitivity 2-83608
 bone marrow cultures of RF mice, lethal and physiologic effects of total body irrads. 2-117008
 brain tumour, cyclic responses of cultured 9L cells to radiation 2-105806
 cellular radiobiological and phys. props. of neutrons from a 4 MV Van de Graaff generator, rel. to X-rays 2-88582
 CHO cells, differential cytotoxic effects of hyperthermia below and above 43°C, alone or combined with X-irrads. 2-67960
 CHO cells, effect of hyperthermia on repair of radiation-induced DNA strand breaks 2-94111
 CHO cells, viable and nonviable, postirrads. growth kinetics 2-88619
 chromosomal aberrations in 2 mouse lymphoma sublines of different radiosensitivity 2-117007
 diploid fibroblasts, synchronous human, X-ray inhibition of DNA synthesis during S phase 2-88633
 diploid Syrian hamster cells, discrimination of slow growth from non-survival 2-117005
 DNA cross-linking with chromosomal proteins induced by X-rays, thermal enhancement 2-88621
 DNA double strand breaks in Ehrlich ascites tumour cells, centrifugation obs. 2-117153
 DNA double strand breaks in Ehrlich ascites tumour cells, rel. to cell death 2-117006
 DNA double-strand breaks generated by X-ray damage in Chinese hamster cells 2-94114
 Drosophila melanogaster embryo developmental responses to localised X-irrads. 2-94124
 E. Coli, Cherenkov-induced photoreactivatable damage 2-88623
 ear, thermal enhancement of radiation damage in mice, differential effect of prior heat treatment 2-105664
 embryos, 2-cell, mouse, X-irrads. in vitro: cleavage, blastulation, cell kinetics, and foetal development 2-117012
 erythrocyte membrane proteins, human, radiation-induced struct. changes 2-88632
 feeder cells and cell survival in spheroids and monolayers 2-68064
 femoral CFU-S repopulation after low-dose whole-body X-irrads. in mice 2-94125
 follicular dendritic cells in lymph nodes after X-irrads., mouse expts. 2-111748
 foot skin reaction, mouse, dose dependence of pion RBE values rel. to X-rays 2-78391
 globular proteins, comparative investigation of radiation oxidation and X-ray chemiluminesc. 2-111745
 granulocytic progenitor cells of blood and bone marrow, response to low X-irrads. doses, dog expts. 2-88616
 haemopoietic stem cells, in vitro repopulation after irrads. 2-73304
 hepatocytes, rat, repair of X-irrads.-induced DNA damage (*Russian*) 2-88593
 immune competence, recovery following sublethal X-irrads. of young and old mice 2-88617
 intestine, mouse, increased hyperthermal response after prior X-irrads. 2-105660
 intestine, small, mouse, comparison of damage caused by X-rays and fission neutrons, rel. to age (*Russian*) 2-88601
 lens epithelium and radiation cataract, nuclear fragmentation of meridional row cells 2-105807
 leukocytes, human, X-ray induced cell cycle delay, differential response within the first post-stimulation G₁-phase 2-83611
 life-shortening and carcinogenesis in mice after neonatal irrads. 2-62694
 lung, dose-dependent increase in wt., mouse expts. 2-111753
 lung, thoracically irrads. mice, dose-dependence of damage appearance time 2-117002
 lymphocytes, human peripheral blood, in vitro radiosensitivity obs. 2-94123
 lymphocytes, human, math. model resolving X-ray survival curves into 6 components 2-68059
 lymphoid organs cellularity and immune response of mice at later times following irrads. (*Russian*) 2-105773
 lymphomas, cultured lines, rapid killing by X-rays and by bleomycin 2-105793
 mammalian cells, 4 lines, responses to hyperthermia and/or radiation 2-73305
 mammalian cells, radiation-enhanced cytotoxicity of misnadazole 2-62697
 mammalian cells, X-ray-induced chromosome damage; improved meas. of its effect on colony-forming ability 2-83607
 marrow stromal cells in culture, X-irrads. rel. to prostaglandin E release 2-94121
 melanoma cells, human, fraction size and repair of potentially lethal radiation damage 2-78396
 melanoma xenografts, malignant, human, in vitro cellular response to X-irrads. 2-57869
 mutation of V79 cells, persistent hypersensitivity induction 2-94128
 nephropathy in rats, rel. to dietary protein, histologic exam. 2-94122
 nervous system tumours in rats 2-68061
 oncogenic transformation by X-rays in C3H 10T $\frac{1}{2}$ cells, hyperthermic modulation 2-68075
 oocytes at meiotic stages in Chinese hamster, cytogenetic effects of X-irrads. 2-78395
 origin of life rel. to primitive Sun UV and X-ray emission 2-105880
 ovary, adult dog, short- and long-term radiation response to whole-body X-irrads. and leukocytes transfusion 2-94113
 parotid radiosensitivity changes, rel. to glandular circadian rhythms, rat expts. 2-88614
 proteins and viruses, method to increase lifetimes under X-ray exposure 2-117155
 radiobiology conference, Amsterdam, Netherlands (Feb. 1982) 2-101118
 radiosensitivity of mice with mutation at loci W, Ph 2-105792

biological effects of X-rays continued
 skin, fractionated irradiation, with X-rays or accelerated C ions, hamster expts. 2-68073
 skin, pig, effect of field size on reaction 2-88610
 skin, rat, residual damage 1 year after exposure to X-rays or accelerated heavy ions 2-88622
 spinal cord, rat, response to single and fractionated doses of accelerated heavy ions, rel. to X-rays 2-88620
 spinal cord, residual injury after treatment with X-rays or neutrons 2-105783
 tail, mouse, dose-response expts. for necrosis induction 2-111738
 tail, mouse, epidermal kinetics and ultrastruct. of tolerance to radionecrosis 2-94120
 Tridacnidae stamen hairs, effects of dose fractionation after high and intermediate doses 2-105800
 tumour induction in Rhesus monkeys after total body irradiation 2-57844
 tumour vascular function, effects of hyperthermia, radiation and adriamycin combinations 2-117009
 tumours, local heating and X-irradiation, rel. to metastatic spread in mice 2-105661
 yeast, wild type and repair deficient, comparison of radiosensitivity in various phases 2-83609

biological fluid dynamics

see also bioheology; haemodynamics

biomedical fluid flow-rate sensor for meas. and control 2-62830
 cetecean hydrodynamic drag, bioenergetic method for evaluation (*Russian*) 2-83581
 cetaceans, slip on swell waves (*Russian*) 2-83582
 cochlea, dynamical motion, mathematical hydroelastic model 2-68022
 collapsible tube, math. model of unsteady behaviour 2-86340
 conference, Aachen, Germany (March 1980) 2-68969
 decubitus ulcer formation rel. to interstitial fluid flow 2-88565
 diving physiology implications on bubble nucleation in aq. media 2-55637
 elastic vessels, general soln. for flow and stress phenomena 2-83585
 fluid mechanics, basic research needs review 2-60518
 gastric liquid emptying, appl. of gravitational clustering anal. 2-116968
 head, human, fluid-filled spheroidal and spherical shells as models, mathematical modelling techniques appl. 2-116942
 hydrobionics, expt. obs. and methods (*Russian*) 2-83705
 hydrobionts, frictional resistance under unsteady conditions of motion (*Russian*) 2-83583
 intracranial pressure, epidural meas. using silicone rubber-lined press. transducer (*Japanese*) 2-94225
 membranes elastic tubes, fluid-filled, elastic jumps 2-65649
 Reynolds number, viscosity and inertia effects in swimming and flying organisms 2-62645
 sporting swimming, telemetric arrangement for studying flow conditions of boundary layer (*Russian*) 2-83706
 spray aiming in bombardier beetles: jet deflection by the Coanda effect 2-73290
 therapeutic device implantation techniques, fluid power technology appl. 2-117137
 urodynamics, principles and methods of clinical investigations 2-94244

biological macromolecules *see macromolecules; molecular biophysics*

biological sciences *see biology*

biological specimen preparation

corneal endothelium, prep. method for accurate in vitro assessment by optical microscopy 2-88699
 cryofixation, simple procedures for evaluation 2-83713
 cryosection preparation for analytical electron microscopy 2-117176
 cryosectioning process 2-83716
 cryoultramicrotomy, evidence against melting and use of low temp. cement for specimen orientation 2-83715
 electron microscopy, frozen hydrated specimens, thermal and radiation damage 2-83720
 electron microscopy, negative staining, electron radiation-induced changes in images 2-89871
 electron microscopy, surface activation of C film supports 2-117172
 electron microscopy, three-dimensional structure of proteins 2-100184
 electron microscopy, wrapping phenomenon in air-dried and negatively stained preparations 2-113078
 fibrinogen, α -chain extensions obs. by electron microscopy specimen preparation technique 2-73195
 freeze-dryer for SEM study of human colon 2-73401
 freeze-fracturing at low temperatures. 1. A device for fracturing biological specimens at 77-10K under high vacuum 2-84605
 freezing damage with freeze substitution using moth antennae as test objects 2-83718
 laser-induced micromass spectrometry of bioorganic molecules and biological specimens 2-100180
 mammalian tissue, cryoprep. for X-ray microanal. in STEM 2-83714
 microcrystals, molecular arrangement visualization method 2-117174
 muscle, smooth, freeze-substitution and isothermal freeze-fixation studies to elucidate ice formation pattern 2-83717
 muscle structure investigation, cryo-methods and image anal. 2-83719
 negative staining, of protein cryst. struct. 2-73408
 negative staining C film technique, appl. to high mol. wt. proteins 2-117165
 plant tissue, freezing using polymeric cryoprotectant 2-84603
 target preparation of biological specimens for SPIKE meas. 2-100166
 thermitase, negative staining to reveal struct. 2-73408
 viruses, enveloped, freeze fracture, freeze etching, critical point drying, review 2-57942
 visualisation of nucleoid of living bacteria by immersion technique 2-84606

biological techniques and instruments

see also biological specimen preparation; biomedical equipment; biomedical measurement; microelectrodes; specimen preparation
 acoustic levitation, use in analysis of biological materials comprising micron-size particles in a more compressible host liquid 2-78510
 acoustic transducing fish tag compass, trials 2-111815
 amplifier, universal instrumentation, with DC compensation path, physiological research appl. (*German*) 2-100164
 analytical ion microscopy of biological tissue, review 2-111830
 articular joints, technique for meas. of instantaneous in vitro contact stress distrib. 2-105865
 autofluorography of labelled macromols. on 2D gels, rapid electronic method 2-78515
 autoradiographic procedure for quantitative densitometry of neurotransmitter receptors 2-62862

biological techniques and instruments continued

autoradiography, α -active nuclei microdistrib. determ. for human lung tissue 2-68223
 autoradiography, collection of large cryo-sections without using adhesive tape 2-105876
 autoradiography, microanatomical localisation of fissionable elements in histological sections using Lexan replicas 2-68218
 autoradiography of chick embryo using [3 H]thymidine, technique for improved resolution 2-62859
 autoradiography of plant cells, scintillator effect on exposure time 2-57945
 autoradiography using CR-39, inhaled Rn decay product microdistrib. determ. for various tissues 2-68221
 bacteria, magnetotactic, mag. moments, light scatt. study 2-83708
 bacteria numbers estimation, turbidity multichannel instrument using scanning He-Ne laser system 2-117178
 bacterial cultures, growth rate meas. using US interferometry 2-73399
 bibliography of microscopic equipment, methods and appls. 2-58577
 bicycling, pedal loading meas., instrumentation system 2-88706
 binocular vision, single, technique to meas. accommodative convergence, heterophoria and AC/A 2-94255
 biomechanics cinematography, kinematic anal. procedures 2-117149
 biomolecule obs. on picosecond timescale using streak camera and CW dye laser 2-101487
 biotelemetry system for the monitoring of cervical motility in baboons 2-94266
 biplane cineradiograms, 3-D positions and motions of large numbers of spherical radiopaque markers meas. 2-68205
 bladders, urinary, collapsed, mouse, screening by optical matched filtering 2-57933
 blood, human red cells, cryopreservation 2-62850
 blood, segmentation of peripheral cells, quantitative determ. of colour differences (*German*) 2-57947
 blood cell electrophoresis meas. using microcomputer, cancer early detection appl. 2-117127
 blood conductivity at time of coagulation, recording with a biactive clamp, temp. effects (*French*) 2-116900
 body weight estimation, radiobiological expts. appl. (*Russian*) 2-88700
 bone strain measurements and anal., in vivo, accuracy enhancement 2-117170
 bridge amplifiers, single-electrode for intracellular membrane impedance meas., capacitance problems soln. 2-100176
 Buckle transducer, appl. and evaluation in knee ligament force meas. 2-105878
 cardiac arrival time analyser 2-78505
 cardiachometer, data processing and storing, field-portable, microprocessor-controlled 2-111816
 cardiovascular system, pulsatile mech. and math. model 2-117169
 cells, living, meas. of stress required to induce deformation and separation 2-88705
 cellular impedance measurement by transient technique 2-62880
 centrifugation at reduced speed, determ. of DNA double strand breaks 2-117153
 cervical motility in baboons, chronically implanted transducer appls. 2-94265
 chest radiography in rabbits, expt. stand 2-88701
 chromatography coupled with electrochemistry appl. 2-73398
 cinematography, high-speed, anal. of laryngeal biomechs. of deaf speakers 2-117151
 cinematography, integrative role in biomechs. research 2-117150
 circular dichroism spectroscopy, use in erythrocyte membrane phototoxicity study 2-116999
 circulatory system, modular, mock, programmable electronic control unit 2-100188
 cloud-chamber techniques, advances rel. to W value meas. of tissue-equiv. gas 2-62870
 coaxial multibarrelled micropipettes, construction method 2-62861
 colorimeter, analytic, La Jolla, human chromatic discrimination meas. appls. 2-78511
 compression plate fixation in vivo, quantitative assessment using sheep radii 2-62852
 cone spectral sensitivity, estimation methods 2-99973
 conference, 12th International Quantum Electronics, Munich, Germany (1982) 2-79268
 contact radiometric meas. of internal temps. of bodies 2-89814
 CR-39 polycarbonate foils for biological systems dosimetry appl. 2-59562
 cross-correlation anal., evaluation of auditory neurons activity on exposure to sound clicks 2-68021
 cryo-jaw, clamp for in vitro rheology studies on horse digital flexor tendons 2-117158
 cryo-presentation, long-term storage of biological specimens 2-68206
 cryogenic, Helsinki University of Technology, Low Temperature Laboratory 2-89721
 cryomicroscopy and radiation damage, conf., Schloss Ringberg am Tegernsee, Germany (Nov. 1981) 2-112655
 cylindrical holographic stereogram, appl. to 3-D dynamic motion anal. of human body 2-105872
 defibrillator, ultrahigh-energy H₂ thyatron/SCR bidirectional waveform device 2-83726
 delayed light imaging, plant stress early detect. appl. 2-78514
 dendritic length estimation, limits of usefulness of electrophysiological methods 2-105871
 dental enamel membranes, impedance as a predictor of permeability, meas. method 2-117168
 dew-point temperature, automatic sensor, sweating meas. appl. 2-111823
 diameter transducer for direct dynamic meas. of trachea 2-73403
 dielectric parameter measurement of biological materials, using spiral resonators (*Russian*) 2-95402
 dielectric spectrometer for relax. process obs. in biological objects 2-78501
 dielectric spectroscopy, time-domain precautions in use with biological and other lossy dielectrics 2-88708
 digital autoradiography of human living cells, MWPC identification of DNA repair deficient cells 2-100187
 digital processing of bio-signals, basis (*Japanese*) 2-83712
 DNA, molecular modification, fast heavy ion induced descript. mass spectrometry 2-100170
 DNA-molecule, double-strand, direct imaging 2-73194
 dye laser, sub-pico second, transparent media characterisation 2-108873
 ECG spectral anal. for arrhythmias detect. in isolated guinea pig hearts 2-117163

biological techniques and instruments continued

- echo-mechanocardiograms, methods and results 2-68204
 echocardiograms, 2D, 3D finite element reconstructions for myocardial elastic props. estimation 2-94101
 elastic modulus calibration and resultant loads for long bone cross-sections 2-62853
 elastic modulus measurement method for cylindrical bilayer lipid membranes 2-68201
 electrical determination of viability in saline-treated mouse myeloma cells 2-100165
 electrical stimulation, over-the-skin, parameters comparison for different normal muscles and subjects 2-57939
 electrode based on C fibre 2-78504
 electron energy loss analysis, use in muscle studies using parallel collection 2-83728
 electron micrographs of chromatin fibres, Fourier analysis and optical diff. 2-111826
 electron microscopy, biological applications, review 2-117177
 electron microscopy, conf., Durban, South Africa (Dec. 1981) 2-84382
 electron microscopy, conference, Kyoto, Japan (May 1981) 2-68953
 electron microscopy, fibroblast, critical-point-dried cultured, partial specific thickness meas. by energy anal. 2-73409
 electron microscopy, low-dose, reconstruction of weak phase-amplitude objects, statistical analysis 2-101500
 electron microscopy, negatively stained specimen, electron radiation-induced changes in images 2-89871
 electron microscopy, quantum-noise-limited images, detection of objects 2-113065
 electron microscopy, surface activation of C film supports 2-117172
 electron microscopy, three-dimensional structure of proteins 2-100184
 electron microscopy and cell biology conference, Canberra, Australia (Feb. 1982) 2-107008
 electron microscopy appls. 2-84748
 electron microscopy functional site mapping, for biological macromolecules 2-99892
 electron microscopy of biomols., 3D struct. determ. from 2D crystals. 2-100178
 electron microscopy technique for retinal cells study, Nissl staining 2-62858
 electron microscopy use for direct imaging 2-83729
 electronic noise, appl. to mammalian olfaction discrimination mechanisms 2-116939
 electrophysiological methods, limits of usefulness in neuron dendritic length estimation 2-105871
 electrostimulation of pain under analgesia, computer based test setup (*German*) 2-62845
 EM, contrast variation method, discrimination of protein and nucleic acids 2-94262
 EM, high resolution applied to chem. problems, conf., New York, USA, (Aug. 1981) 2-94904
 EMG, system for quantification 2-117157
 EMG, use for wt. sensation quantification (*Japanese*) 2-62855
 EMG to force processing, elec. analogue of Hill muscle model 2-62854
 epidemiological methods for assessing risks from low level occupational exposure to ionising radiation, review 2-117146
 ERG, local, of primates, fractional recording and component anal. 2-57948
 erythrocyte deformability, procedure for determ. (*German*) 2-117141
 evoked cortical responses, classification using features from single EEG records 2-78506
 fibre interferometer for minute biological displacements meas. 2-73411
 fibre optic densitometer, 2D, for autoradiogram grain density quantitation 2-105870
 fluorescence analysis, 2-colour, identification of B-cell subpopulations appl. 2-88519
 fluorescence correlation spectroscopy and total internal refl., determ. of surface binding rates of nonfluoresc. mols. 2-94258
 fluorometer, pulsed, of primary photosynthesis processes in higher plants 2-99921
 fly wingbeat frequency meas., microprocessor-based instrument 2-117179
 foot-switch, inexpensive but durable, for telemetered locomotion studies 2-57937
 Fourier transform IR absorbance subtraction, functional group spectroscopy of peptides 2-116882
 Fourier transform IR spectroscopy for low temp. photolysis and recomb. kinetics obs. 2-116881
 freshwater mussel tissue, α -emitter distrib. meas. by α -track autoradiography 2-68219
 genetics, cryogenic preservation, effects on struct. 2-62573
 haematocrit, determ. by impedance meas. (*German*) 2-117142
 hair, human, heavy metal pollution monitoring, by neutron activation anal. 2-57666
 hair and arteries anal. using Amsterdam proton microbeam 2-95549
 Halobacterium halobium, mutant selection method by control of transmembrane ion fluxes 2-111827
 hearing threshold measurement by bone cond., contrib. to international standardisation 2-68225
 heart rate frequency modulation technique to increase LF content of cardiovascular signals 2-88703
 Heidelberg proton microprobe 2-95542
 hemeproteins, EPR crystallography, direction cosines 2-83710
 histology, analytical, use of SIMS, review (*French*) 2-111825
 holographic interferometry obs. of protein electrophoretic mobility 2-78512
 human respiratory tract deposition using multimodal aerosols 2-111824
 hydrobionics, expt. obs. and methods (*Russian*) 2-83705
 hyperthermia for microvascular studies, uniform thermal field 2-111820
 IMAGIC, interactive image anal. software system for electron micrographs 2-71301
 immunosensors, nonlabeling and labeling, chemical amplification 2-83668
 impedance technique for bacterial growth detect. 2-117167
 implantation telemetry, review (*Japanese*) 2-57941
 in-vivo lung counting, Ge planar detectors array appl. 2-85481
 inhomogeneous object reconstruction from microwave scattered field meas. 2-105815
 insect eye, mechanical model 2-88712
 INSTRON 1122, behaviour under cyclic testing over a small displacement range 2-83312
 intracortical capacitor electrodes, evaluation by implantation in cerebral cortex of rhesus monkey 2-62857
 ion induced mass spectrometry role in biochemistry 2-100169

biological techniques and instruments continued

- ion-sensitive microelectrode, triple-barrelled for simultaneous meas. of two extracellular ion activities 2-117166
 ipsilateral acoustic reflex, detection technique 2-111821
 irradiation facility for radiobiological expts. with protons from cyclotron 2-117145
 joint rotation measurement, errors in centre and angle for humans 2-117171
 kallikrein-like activity demonstration, microscopical method 2-73407
 laser applications in biology, conf., Tbilisi, USSR (Nov. 1980) 2-94902
 laser Doppler anemometer, computer-controlled real-time meas. of intracellular protoplasm flow (*Russian*) 2-117140
 laser Doppler microscope for blood flow vel. meas. 2-94261
 laser Doppler velocimeter with optical fibre pickup, pulsatile blood flow high-resolution meas. 2-83704
 laser fluorescence—absorption measuring device, oxidation-reduction state meas. of living tissue 2-111819
 laser fluorimeter for direct cardiac metabolism investigation 2-100177
 laser microspectrofluorometry of photopigments in vivo 2-99901
 laser optometry as measure of eye's ability to accommodate to information displays 2-88702
 laser projection microscope system for fast stop-motion photography of biol. objects 2-105860
 laser scanner microscope, ultrafast, performance tests 2-111831
 laser uses in biomedicine, book 2-63765
 laser-induced micromass spectrometry of bioorganic molecules and biological specimens 2-100180
 LED implant in frontal sinus of cat, visually evoked pots. 2-62607
 LEDs as expt. visual stimulators 2-62874
 left ventricular heat production, hybrid device for meas. 2-99905
 LF used mag. field effects on cells, system for in vitro effects investigation 2-117147
 light microscopic specimens, low and high magnification simultaneous presentation, mesenteric capillary obs. 2-57946
 linear step motors for medical apparatus and medical-biological research instruments 2-78516
 lingual vibrotactile sensitivity research instrumentation, modification for elimination of tongue clamping procedure 2-111828
 lipophilic fluorescein derivatives, prep., spectral props., appl. to plasma LDL 2-67953
 liquid crystal thermometry of cells during hyperthermal microwave irradiation 2-100163
 liquid scintillation counter, alternative uses in lab. anal., biological research appl. 2-105875
 lung sections, fissionable radionuclides spatial distrib. determ. using LEXAN 2-68220
 macromolecular crystallography, fiber diffraction data, phasing using isomorphous replacement and layer line splitting 2-97834
 macromolecular crystallography, phase problem, determinantal soln. using stereochem. information 2-97833
 macromolecules, anomalous X-ray scatt., use of synchrotron radiation 2-68224
 magnetically shielded room to measure very low biomagnetic and bioelectric fields (*German*) 2-111655
 marine invertebrate tissues, fixation procedure for ultrastruct. preservation 2-73406
 material image analysis (*Italian*) 2-105858
 Maxwellian view optical system, calibration of retinal illuminance 2-62873
 mechanical testing of small mammal spine joints 2-62876
 mechano-electric transducer for fish respiratory movement recording (*Chinese*) 2-62844
 mechanographic method for meas. of muscle tone in conscious rats 2-105866
 mechanographic method for rat locomotor activity meas., effects of dopaminergic drugs and elec. stimulation 2-105867
 metalloproteins, zero-field splitting consts., CW microwave saturation determ. 2-70302
 microcalorimeter, heat cond. batch, computer simulation for deconvolution by D-B finite element technique 2-117161
 microcalorimeter, optimised differential heat cond. soln., for thermal kinetic meas. 2-117160
 microcomputer-controlled laboratory for meas. of visual discrimination learning in rodents 2-62877
 microelectrode, single, clamping of membrane pot. of isolated smooth muscle cell 2-62879
 microelectrode lowering, single unit discrimination, computer automation 2-62865
 microphotometer, modified, for direct densitometry of gels 2-78502
 micropipette puller design form of heating filament, effects of filament width on tip 2-105868
 microprobe PIXE, appl. to 2D elemental maps of mouse macrophages 2-95541
 microscopic equipment, methods, appls. and related topics, list of publications 2-53449
 microscopy, molluscan neurons morphology visualisation 2-62864
 microwave radiometric method for living tissue semiconductor props. meas., tumour location appl. 2-111818
 microwave sensor for measuring small movement of biological subject 2-88710
 modular analogue isolator for signal isolation in nuclear power plants 2-85177
 multichannel commutator, electrical contact with conscious freely moving rats 2-62860
 multielectrode array for simultaneous recording of field pots. and unit activity 2-62849
 multielectrode fabrication for simultaneous recording of nerve impulses using IC techniques (*Japanese*) 2-62856
 multiplexed time-lapse photomicrography of cultured cells 2-73404
 multitracer autoradiography technique for imaging myocardial flow and metabolism 2-88711
 muscle tissue in soln., macromolecular movements, X-ray diffraction technique (*French*) 2-62575
 muscles and organs, simple equipment meas. biomech. quantities 2-83725
 myocardial conduction vel., electrode system for in vitro determ., canine expts. 2-117162
 myocardial infarct size, quantification with multipinhole and rotating-slanthole tomography 2-62851
 nasal flow in unrestrained domestic rabbits, meas. instrument, olfactory research appl. 2-111817
 nerve fibre velocity spectrum estimation by computer 2-57949

biological techniques and instruments continued

- nerve tonic activity of vagus and depressor nerves, component analysis of electrograms by computer 2-78317
- neurons, single, activity detect. in multiunits, real-time computer method (*Japanese*) 2-83711
- NMR B_0 shimming using tune and match circuit 2-69223
- NMR imaging of lung water, rat expts. 2-105877
- NMR line-shape relaxation correlations, improved characterisation of malignant and healthy tissue 2-93990
- NMR measurements of DNA and RNA, relax. rates meas. by time-shared Redfield 214 pulse method 2-57940
- NMR method, direct high-resolution, in vivo cation transport appl. 2-94257
- NMR method using lanthanide shift reagent, appl. to aq. solns. of amino acids and nucleotides 2-111814
- NMR of circulating dog's blood 2-68210
- nuclear microprobe, elemental characterisation of human glia and glioma cells 2-68202
- nuclear microprobe, tissue section elemental mapping at cellular resolution 2-99920
- nuclear track detectors appl. in biology and medicine 2-68217
- operator visual sensitivity fluctuations rel. to readings variation 2-68016
- optical CARS microscope using picosecond dye lasers, biological appl. 2-112971
- optical finger movement monitor 2-117148
- optical microscope stage, controlled-temp., for extended obs. of living materials (*French*) 2-57944
- optical microscopy, animal cell adhesion to glass, study by disturbed total internal reflection 2-57935
- optical radiation focusing onto microscopic objects, theory 2-86031
- optoelectronic displacement transducer for the neurophysiological lab. 2-105869
- organic scintillator neutron spectrometer suitable for in-phantom studies, dosimetry appl. 2-68228
- oscillating sphere magnetic microheometer for meas. of viscoelastic props. of biological secretions 2-68208
- oscillometric method for indirect meas. of press. in human finger, model expt. 2-68215
- oscillometric method for indirect meas. of press. in human finger, correl. study 2-68216
- phase-contrast microscopic technique, appl. to meas. of X-ray-induced chromosome damage in mammalian cells 2-83607
- phase-locked loop meas. of sarcomere length with high time resolution 2-78509
- phospholipid multilayer, oriented monodomains, polarized Raman spectra 2-73207
- phospholipid vesicle membranes, elec. breakdown by diffusion pot., evaluation technique 2-67965
- photoacoustic spectroscopic imaging, laser-induced, for intraocular melanoma localisation 2-100181
- photoetched microelectrodes, meas. of mouse spinal neurons spontaneous activity 2-62586
- photographic quidensitometry, chromosome image study 2-62867
- photometric trace analysis of Mg and Mo in biological systems 2-69232
- photometry, comparative kinetic anal. of light scatt. and absorpt. appl. to bovine rod outer segments 2-62846
- physiology laboratory, use of computer-oscilloscope combination 2-100172
- PIXE and other methods comparison in biliary and urinary calculi anal. 2-68203
- PMR of regionally ischemic canine heart, signal enhancement effect 2-105874
- point-projection imaging, of unstained ferritin clusters 2-94263
- potential locking unit for cell membrane (*Russian*) 2-83703
- power output estimation method for wheelchair locomotion, validity 2-57934
- precision manipulator for neurophysiological investigation of animal brains using microelectrode with step motor drive 2-78517
- preferential looking techniques, rel. to infant visual acuity underestimation 2-100186
- pressure distribution, dynamic, beneath human foot, meas. system 2-105863
- pressure-volume-flow relations meas. in isolated rabbit hearts, sensors and actuators development 2-100189
- protein crystallography, RESTRAIN, restrained least squares refinement program 2-68207
- protein labelling with ^{125}I , airborne levels 2-62777
- proteins, X-ray diff. study, multiwavelength method with synchrotron radiation 2-65806
- proteins and viruses, method to increase lifetimes under X-ray exposure 2-117155
- proton microprobe, appl. to trace element anal. of biological samples 2-100168
- proton nuclear activation, trace elements anal. in biological samples appl. 2-83707
- pulmonary circulation, realtime ECG-gated simultaneous beat-to-beat evaluation of haemodynamic parameters 2-88580
- pulsed tunable dye-laser microspectrofluorometer 2-105859
- quasi-elastic light scattering, appl. to *Artemia* ribosomes sedimented in a CsCl density gradient 2-83722
- radiographic biplane system for 3D stiffness props. determ. of intact human lumbar spine 2-68272
- radiolabelled microspheres method for rat muscle blood flow meas. 2-111822
- rapid-freeze clamp, stimulator-regulated, for terminating cardiac metabolic processes 2-78508
- Rayleigh spectroscopy of biological objects, physical principles 2-100179
- resistivity technique, 4-electrode, cardiac muscle appl. 2-88704
- respiratory exchanges meas. of different sized animals, automatic and continuous gas sampling, indirect calorimetry 2-62866
- respiratory mechanics meas. in anaesthetised animals, single-breath method 2-117156
- RNA molecules, single- and double-stranded, improved visualisation by STEM 2-73193
- rotating grid technique for visual vergence limits meas. 2-105856
- scanning CARS microscope construction, onion skin cell images 2-97111
- scanning electron microscopy autoradiography using emission and polymer track detectors 2-68222
- scanning proton microprobe appl. to biology and medicine 2-100167
- scattering tomography, expt. technique 2-62750
- scotopic ERG, simulation with electronic model 2-99959

biological techniques and instruments continued

- secondary-ion microscopy, tissue localisation of stable and radioactive nuclides 2-83709
- sensors development trends (*German*) 2-112884
- shadow photographic recording of living plankton large samples 2-53868
- skin bioengineering, conf., Cardiff, Wales (July 1979) 2-79283
- skin resistivity measurement using an annular tetrapolar electrode 2-83723
- solid-state nuclear track detectors, conf., Bristol, England, Sept. 1981 2-58532
- speech, subglottal pressure during vowels, validation of indirect meas. 2-117154
- spherical conductor, 2 dipoles determ. from surface pot. meas., isolated heart appl. 2-73412
- spin imaging equipment for small animal experiments 2-73397
- spot measurement phase modulation microscope, microbiology appl. 2-69250
- SQUID-gradiometers, optical coupling, appl. to biomagnetic meas. (*German*) 2-117152
- STEM, heavy atom imaging 2-100185
- stem cell number determ. method using irradi. bone marrow (*Russian*) 2-105857
- STEM images, stand alone image processing system 2-113075
- stereological analysis system, automated, for trabecular bone 2-73314
- stereotaxic method, appl. to intracalicular light responses in intact in vivo cat eyes 2-94035
- stereotaxic system, independent coordinated positioning of microelectrodes 2-62863
- strain gauge expt. method for determ. of whole long bone sectional props. 2-105864
- strain gauge measurement method for muscular action study (*German*) 2-88709
- strain gauge system isolated from elec. ccts. using optocouplers, heart perimeters measurement in animal research (*Spanish*) 2-68214
- strain recordings of bone in vivo, automatic zero strains compensation 2-117159
- superconducting susceptometer for high-accuracy routine operation 2-101429
- systems analogue mime for colour vision and vision disorders in humans 2-94260
- telemetric arrangement for studying flow conditions of boundary layer in sporting swimming (*Russian*) 2-83706
- telescope system astigmatism and field curvature correction, psychophysical meas. 2-105873
- TEM, dark field, sources of image instabilities 2-117173
- temperature control system, programmable, for biological materials 2-100175
- thermal conductivity measurement of living tissues, pulse-decay method 2-62871
- thermodilution technique for cardiac output meas. during artificial ventilation 2-73402
- thickness measurement of biological structures, computer aided 2-100173
- time-lapse phase contrast cinemicroscopy of cells in vitro, improved temporal and spatial resolution 2-73405
- tissue permittivity in vivo meas. using coaxial line sensor and network analyser 2-105879
- treadmill, rot., or continuous meas. of anterior-posterior forces during walking 2-83727
- trypsinogen, bovine, intramol. reorientation, $^{199\text{m}}\text{Hg}$ perturbed ang. correl. obs. 2-67938
- TV ophthalmoscope for analysing images of retina and choroid 2-100174
- TV pupillometer, solid-state, vision research appl. 2-62875
- US analysis of Young's modulus of cortical bone 2-83724
- US backscattering, coeffs. evaluation for excised human tissues, principles and techniques 2-68226
- US echometer for early detection of pregnant pigs (*Spanish*) 2-62868
- US irradiation of mammalian cells, lysis induction rel. to exposure vessel, systems comparison 2-100182
- US irradiation of mammalian cells, lysis induction rel. to exposure vessel, tube rot. explanation 2-100183
- US measurement and imaging method, blood flow in human heart 2-62661
- UV spectroscopy of DNA, far- and vacuum-, prospects and difficulties 2-94259
- VDU instrument for meas. of visual contrast, spatial and temporal resolution 2-73410
- video camera, digital scanning, for motion tracking of humans and monkeys 2-68229
- video/microscope densitometric system for cellular and nuclear props. study 2-111829
- vision, field expts., instrument for simultaneous meas. of line of sight, vergence and pupil diameter (*German*) 2-94256
- visual research, silent substitution method 2-68227
- vitamin D-metabolites from human plasma and mass spectrometric analysis by fast heavy ion induced desorption 2-100171
- VLF impedance-meter, cutaneous impedance appl. (*French*) 2-68213
- voltage adjuster, automatic, for single microelectrode recording of membrane pot. and resistance 2-68211
- voltage-clamp meas. of myelinated nerve fibre, anal. of certain errors 2-117164
- voltage-clamp technique, frog neuromuscular junctions appl., numerical anal. 2-111647
- wave phenomena realtime assessment, algorithms for travelling wave detect. 2-62878
- X-ray crystallography, atomic coordinates, RMS errors calc., proteins appl. 2-99876
- X-ray fluorescence analysis, in situ meas. of bone Sr content 2-62869
- X-ray microanalysis, transmission stage for Cambridge Stereoscan 600 2-57943
- X-ray microbeam, computer-controlled steering, for speech research 2-57938
- Br determ. in blood serum using PIXE spectrometry 2-78163
- C fibre microelectrodes for neuroscience research 2-68212
- Ge well counter for blood flow meas. by microsphere technique 2-62847
- ^3H -soluble conc. monitoring using encapsulated plastic scintillator 2-73400
- Hgl₂ detector unit, implantable and externally powered, for radioisotope studies in small animals 2-57936
- ^{228}Ra injected into mice, method to determ. dose delivered to bone and marrow sites 2-105784
- $^{99\text{m}}\text{Tc}$ penetration techniques, appl. to brain proton irradi. injuries (*Russian*) 2-111813

biology

- see also *biological fluid dynamics; biological techniques and instruments; biophysics; blood; cardiology; ecology; evolution (biological); medicine; physiology; zoology*
 educational films, photomicrography device with TV finder system (*Russian*) 2-58948
 insects in sea-breeze front at Canberra, radar study 2-100529
 IR spectroscopy over 2.9 to 3.9 μm waveband in biochemistry and astronomy, implications 2-84347
 lecithin-water lamellar system, rheological props. (*French*) 2-68033
 ocean bottom seismograph recordings, effect of biological activity 2-57996
 plankton extinctions and radiations in Late Proterozoic and Early Cambrian 2-78702
 self-assembly processes with interacting bonds, math. model, biological systems appl. 2-83540
 thermodynamics, implications of entropy in expanding Universe rel. to maintenance of life 2-117836
 tree cellulose, climatic significance of H isotope ratios 2-89000

biology computing

- see also *computerised instrumentation; computerised signal processing*
 bio-signals, basis of digital processing (*Japanese*) 2-83712
 biomolecular aggregates, non-bonded interaction energy calculation 2-62848
 biplane cineradiograms, 3-D positions and motions of large numbers of spherical radiopaque markers meas. 2-68205
 bone, zero strain, automatic compensation of in vivo recordings 2-117159
 brain potentials, spatiotemporal organisation, mnemonic modelling by real-time disc system (*Russian*) 2-99939
 cardiac echo-interval shortening with increasing prematurity, computer model 2-88496
 cardiachometer, data processing and storing, field-portable, microprocessor-controlled 2-11816
 cells, CHO, Cd transport and distrib. model 2-73214
 circulatory system, human, digital computer model, aerial combat appl. 2-116962
 echo-mechanocardiograms, methods and results 2-68204
 electron micrograph analysis computer system 2-107462
 electron micrographs, image reconstruction, EM computer program system 2-113076
 electrostatic potential molecular surfaces, computer graphics representations 2-105642
 EMG silent period parameters for clenched jaw muscles in man, computer-based anal. 2-62579
 eye and contact lens movement meas. using motion picture camera 2-111766
 human movements, computer optimisation 2-57768
 macromolecules, hydrodynamic parameter evaluation, FORTRAN IV program 2-99881
 membrane populations, interactive FORTRAN program to simulate radiation response 2-100067
 motion meas. system for clinical gait anal., automated 2-105812
 nerve tonic activity of vagus and depressor nerves, component analysis of electrograms by computer 2-78317
 nervous system, microcomputer network in living organisms (*Hungarian*) 2-94016
 neurons, single, activity detect. in multiunits, real-time computer method (*Japanese*) 2-83711
 POKER-CAMP, program for calc. of detector responses and phantom organ doses in γ -fields 2-59670
 protein structures, computer-generated schematic diagrams 2-93989
 STEM, digital image processing 2-107464
 TEM, conventional, nonlinear high resolution computer image processing 2-113073
 TEM image recording and processing, on-line 2-107465
 thickness measurement of biological structures, computer aided 2-100173
 Ca turnover during skeletal muscle contraction, construction, mathematical study and numerical simulation of model 2-67990

biomagnetism

- auditory evoked cortical mag. fields in unshielded rooms (*German*) 2-111713
 auditory evoked magnetic fields in human brain right hemisphere 2-94088
 bacteria, magnetotactic, mag. moments, light scatt. study 2-83708
 bacterial growth rate, effects of LF mag. field 2-83599
 biomedical measurement, extremely low current, in completely magnetically shielded room (*German*) 2-68098
 bone growth stimulation by elec. or mag. fields, historical development (*German*) 2-100081
 chloroplasts, mag. oriented, field conc. and temp. depend. of fluoresc. polarisation 2-100040
 cortical magnetic fields, auditory evoked, influence of stimulus intensity 2-73266
 ECG, effect of rapid rise-time mag. fields in rats 2-116980
 environmental power frequency magnetic fields and suicide 2-83598
 eye movements, SQUID magnetometer for meas. 2-94218
 haemoglobin, metamagnetic props. 2-105709
 irradiation by 800 Hz mag. field, effects on male mice obs. 2-83596
 LF used mag. field effects on cells, system for in vitro effects investigation 2-117147
 magnetically shielded room to measure very low biomagnetic and bioelectric fields (*German*) 2-111655
 magnetotactic bacteria, review 2-116941
 measurement, using SQUIDS, Helsinki University of Technology, Low Temperature Laboratory 2-89721
 MEG and EEG auditory responses to tone, click and white noise stimuli 2-111694
 mitochondria of liver and heart, detect. of new paramag. centres by EPR 2-57792
 nerve stimulation using rapid rise-time mag. fields, prototype stimulator 2-83623
 neurons, clonal line, ^3H -noradrenaline potentiation by low-intensity pulsed mag. fields 2-62675
 photosynthetic reaction centres, anisotropic mag. interactions of primary radical ion pair 2-116893
 plant leaves, mag. modulation of fluoresc. intensity, primary photosynthetic reactions 2-78310
 red blood cells, HGMS 2-88518

biomagnetism continued

- skeletal muscles, human, mag. signals, SQUID magnetometer study 2-94087
 SQUID-gradiometers, optical coupling, appl. to biomagnetic meas. (*German*) 2-117152

biomass conversion see *bioenergy conversion***biomechanics**

- see also *biological fluid dynamics; biorheology*
 abdominal wall, rabbit, mech. props. of specimens from different anatomical positions 2-100032
 abdominal wall, rabbit, mech. props. of specimens rel. to length, width and fibre orientation 2-100033
 accommodative mechanism of human eye, math. model, mech. considerations 2-99962
 acetabular components in total hip arthroplasty, axisymmetric model 2-105725
 acetabular region, stress distrib. after total joint replacement, cement thickness and metal backing effects 2-105717
 acetabular region, stress distrib. before and after total joint replacement 2-105716
 ambulation of normal men, LF self-generated vibr. 2-116958
 animal ambulatory motion, visual interpretation 2-83568
 aortic heart valve, stress anal. 2-116967
 apexcardiogram, left ventricular press. and wall stress: inter-relationships, dog expts. 2-83590
 appatites, elastic props. 2-83150
 arm: resistance, speed of movement and forearm position rel. to elbow flexors recruitment 2-57834
 arm movement, planar, dynamic interactions between limb segments 2-94092
 arterial compliance in man, in vivo obs. 2-116944
 arterial walls, dynamic response in vivo 2-105726
 articular joints, technique for meas. of instantaneous in vitro contact stress distrib. 2-105865
 backbones, fish, mech. props. in lateral bending and tension 2-100028
 ballistocardiography, 3D responses to changes of posture 2-116943
 bicycling, pedal loading meas., anal. and results 2-88564
 bicycling, pedal loading meas., instrumentation system 2-88706
 bioglass ceramic coated metal implants, loaded total hip prosthesis model (*German*) 2-88692
 biological materials, piezoelectric effects 2-88561
 body stress problems 2-116961
 bone, biomechanical research, review 2-88574
 bone, compact, couple stress effects, transient study, torsion 2-62664
 bone, compact, micropolar and couple stress elasticity in bending 2-100029
 bone, cortical, US anal. of Young's modulus 2-83724
 bone, functional adaptation mechanism, analytical model 2-62663
 bone, human, mech. impedance, drilling tests 2-116957
 bone, human, single osteons and cortical microsamples, strain and freq. dependence of shear storage modulus 2-62650
 bone, human, stresses and struct., neutron diff. obs. 2-62660
 bone, human compact, creep under various specimen storage and test conditions 2-94099
 bone, human compact, factors affecting creep props., 2-116965
 bone, human tibia, torsional stress anal. by finite element method 2-94097
 bone, immature, material props., canine expts. 2-88576
 bone, immature canine, structural props. determ. from bending tests, biphasic growth process 2-62662
 bone, mech. behaviour, effect of moisture 2-83593
 bone, physiological-moist, streaming potential rel. to electromech. response 2-105691
 bone, zero strain, automatic compensation of in vivo recordings 2-117159
 bone displacement induced by applied voltage, holographic study on rats 2-62652
 bone remodelling, mech. adaptive, sheep expts. 2-105715
 bone strain measurements and anal., in vivo, accuracy enhancement 2-117170
 bone strength, effects of hypokinesia in primates, space flight appl. 2-62644
 bones, long, modelling and struct. anal. 2-88571
 bones, long, whole, strain gauge expt. method for sectional props. 2-105864
 cancellous bone from proximal tibial epiphysis, props. and anisotropic model 2-88577
 cartilage, articular, oscillatory compressional behaviour and electromech. props. 2-62665
 cartilage elastometer for orthopaedic operations 2-100139
 cells, living, meas. of stress required to induce deformation and separation 2-88705
 chest wall mechanics and ventilation, changes during sleep in normal adolescents 2-73275
 chromaffin granule membrane, tensile strength obs. 2-100021
 cinematography, 3D technique for movement anal. 2-88707
 cinematography, integrative role in biomechs. research 2-117150
 cinematography, kinematic anal. procedures 2-117149
 closed loop problems in biomechs., classification system 2-105719
 closed loop problems in biomechs., optimisation approach 2-105720
 cochlea, pseudo-resonance, asymptotic theory 2-116933
 compact bone, human, couple stress effects, dynamical study 2-88575
 conference on bioengineering and microtechniques, Besancon, France (Apr. 82) 2-112638
 coronary artery disease, echocardiographic study of vel.-strain relationship 2-117025
 cortical bone, spiral fracture, sheep expts. 2-116956
 cortical bone remodelling, rel. to in vivo strains, review 2-105713
 cylindrical holographic stereogram, appl. to 3-D dynamic motion anal. of human body 2-105872
 dash running, theory extension 2-116974
 dynamic exercise, short-term, max. leg force and power output 2-78379
 elastic modulus calibration and resultant loads for long bone cross-sections 2-62853
 elastic modulus measurement method for cylindrical bilayer lipid membranes 2-68201
 elbow joint, muscles across, biomech. anal. 2-62648
 EMG, quantitative index independent of contraction force 2-111809
 EMG to force processing, eccentric-concentric contractions on a spring-flywheel set up 2-62585
 EMG to force processing, elec. analogue of Hill muscle model 2-62854

biomechanics continued

- EMG for force processing, estimation of model parameters for human triceps surae muscles 2-62584
 EMG to force processing, Hill muscle model parameters estimation 2-62583
 EMG-force relationships in skeletal muscle 2-94013
 EMG-level muscle model for fast arm movement to target 2-94090
 exercising: energy cost, muscle activity and O_2 consumption in the disabled 2-88560
 eye, localisation during tracking on steady background and during steady fixation on moving background 2-83569
 eye sclera, deform. characts. 2-94098
 femur, human, crit. review of biomech. stress anal. 2-83587
 femur, state of stress, 3D finite element analysis and expt. meas. 2-100037
 finger joint force predictions rel. to joint replacement design 2-100034
 finger tendons, kinematic anal. of role 2-105730
 fish, lateral line stimulation patterns rel. to rigidity 2-88573
 fly flight, visual cues for landing reflex 2-83570
 fly wingbeat frequency meas., microprocessor-based instrument 2-117179
 foot, human, biomechanical model, biplanar radiographs of bone locations 2-62671
 foot, human, piezoelec. method of vertical contact stress meas. 2-100141
 foot, system for meas. of dynamic press. distrib. beneath 2-105863
 foot-ground pressure, comparative display of dynamic data by data compression method 2-100137
 forearm mechanical behaviour in response to transient perturbations 2-94091
 fracture site properties monitoring with external fixation, finite element and expt. analysis 2-62821
 gait, human, normal and pathological, 3D multi-segmental anal. of energetics 2-88570
 gait, human, peak dynamic force obs. 2-88562
 gait, human, practical evaluation of differentiation techniques for anal. 2-99871
 gait, human, simulation with aid of simple mech. model 2-105733
 gait, human swing leg motion, anal. and synthesis, clinical appls. 2-88563
 gait analysis, conductive rubber footswitch 2-117118
 gait analysis, normal and pathological, camera speeds 2-83626
 gait initiation process, biomech. study 2-68036
 gait patterns in children with cerebral palsy, angle-angle diagrams in monitoring and quantification 2-117099
 gait training device, auditory feedback of knee angle for amputees 2-105851
 Hall effect transducer for apexcardiography and sphygmography 2-117125
 head, human, local deforms. dynamics on impact 2-116966
 head injury criteria, current controversies in stipulation 2-88566
 healing of canine radii and ribs, biomech. behaviour 2-105722
 heart, right ventricle in diastole, passive stress/strain relation 2-105723
 heart muscle, biomechanical indicators of energy expenditure 2-100018
 Hill equation, fitting to data, statistical approach 2-78280
 hip implant, total, geometry effects on femoral stress distrib. 2-62841
 hip joint, English prosthesis, in vivo force obs. 2-94250
 hip joint total prosthesis, stress/strain analysis of Ti net cement construction (German) 2-88691
 hip joint total replacement, acetabular subchondral bone influence on stress distrib. 2-62840
 hip prosthesis, total, failure prediction and load transmission characts. of bone cement interface 2-62838
 hip stem of Ti alloy, geometry effect on circumferential strains in proximal femur 2-62842
 hypogravity, physiological responses, effect of physical fitness and training 2-62784
 implantable composites, controlled press. appl. for bone growth stimulation 2-62837
 intervertebral motion segment, cyclic loading 2-62669
 joint motion description for humans, meas. errors effect 2-62670
 joint rotation measurement, errors in centre and angle for humans 2-117171
 joints, human, microcontinuum approach to lubrication 2-116978
 jumping, methods of impact absorpt. when landing, humans 2-94095
 kinematic analysis, calibration and performance of a 3D TV system 2-105862
 kinesiological EMG system for computer-controlled recording and processing of muscle action pots. of walking subjects 2-78471
 knee, human, quantitative method for assessing malalignment and joint space loss 2-117067
 knee, simulation study of spatial kinematic articulation (French) 2-116946
 knee function and patient mobility, continuous assessment technique 2-83673
 knee joint forces, anatomical considerations 2-57840
 knee joints, human, effects of rot. on lubrication characts. during normal articulation 2-116979
 knee ligament force meas., appl. and evaluation of Buckle transducer 2-105878
 left ventricular work and power: circumferential, radial and longitudinal components 2-105734
 leg dynamics in torsion, human, identification 2-105721
 ligament, canine medial collateral, time and history-depend. viscoelastic props. 2-62666
 locomotion, human, dynamics and coordination of torso motions, math. model 2-62654
 locomotion, practical activation and retention of constraints in neuromusculoskeletal control system models 2-88492
 locomotion, telemetered studies, inexpensive but durable foot-switch 2-57937
 lumbar intervertebral discs, bulging expts. on human cadavers 2-116972
 lumbar intervertebral joint, human, intact and injured, static mech. props. 2-116973
 lumbar spine, effect of posture on strength 2-94094
 lumbar vertebral segment and nuclear prosthesis, in vitro study (French) 2-116945
 lung, human, elasticity model 2-78360
 lung, inflation-deflation manoeuvres, bulk modulus rel. to relative vol. 2-105748
 lung, mechanical properties during acclimatisation to altitude 2-111716
 lung, mouse, degassing effects on mech. props. of normal, hyperoxic, and irradiated lungs 2-78366

biomechanics continued

- mechano-electric transducer for fish respiratory movement recording (Chinese) 2-62844
 mechanogram recording technique for respiratory activity establishment in babies 2-78462
 mechanographic method for meas. of muscle tone in conscious rats 2-105866
 mechanographic method for rat locomotor activity meas., effects of dopaminergic drugs and elec. stimulation 2-105867
 membranes, flat lipid, electrostriction and elastic moduli 2-99909
 metacarpophalangeal joint, forces due to elevated fluid press. 2-100027
 mitral-leaflet closing vel., rel. to 1st heart sound spectra 2-83613
 moment of inertia of living body and body segments, human subjects in standing, sitting postures 2-100017
 motion meas. system for clinical gait anal., automated 2-105812
 movement modelling, human, computerised simulation of whole body dynamics 2-116947
 movements, human, computer optimisation 2-57768
 muscle, cardiac, contraction model 2-116867
 muscle, human, force-velocity relationship, training-induced alterations 2-73287
 muscle, skeletal, mech. behaviour in small oscills. 2-100031
 muscle, whole, stretch characts. 2-116977
 muscle contraction and kinetics of crossbridge attachment 2-105742
 muscle contraction for mechanical transients, sliding-filament cross-bridge ensemble model 2-68037
 muscle contractions, cat, slow changes and Wiener anal. of nonlinear summation 2-83586
 muscle fibres, single, intersarcomere dynamics during fixed-end contractions, quantitative model 2-111715
 muscle force prediction in locomotion, physiologically based criterion 2-62655
 muscle force waveform study using population stochastic model of skeletal muscle 2-111650
 muscle mechanical output, myoelec. signal as quantitative meas. 2-67991
 muscle relaxation dynamics after serrate tetani of different duration 2-111714
 muscle tension and press. maintenance, role of fascia 2-78363
 muscle tissue, stretching and twisting, stress tensor 2-68039
 muscles and organs, simple equipment meas. biomech. quantities 2-83725
 muscular action measurement, use of strain gauge meas. method (German) 2-88709
 myocardial elastic props., 3D finite element reconstructions from 2D echocardiograms 2-94101
 myocardial fibre stresses, approx. formulas 2-105752
 nausogenic properties of various dynamic and static force environments 2-62789
 ocular avascular compartment, volume elasticity in vivo and post mortem 2-73272
 oesophageal motions induced by the cardiovascular system 2-73297
 optical finger movement monitor 2-117148
 optoelectronic displacement transducer for the neurophysiological lab. 2-105869
 optoelectronic position-feedback controlled test-subject-tracking meas. carriage for gait anal. 2-78407
 osteonal remodelling, stimulation by fatigue damage, hypothetical mechanism 2-105714
 osteonic lamellae, single, tensile props. technical problems and expt. results 2-88569
 osteons, single, human, strain dependence of dynamic Young's modulus 2-62651
 osteosynthesis and fractured ribs, biomech. expts. (German) 2-94089
 parachutist dynamics, computer simulation and parameter study 2-57841
 patello-femoral contact stresses determ. using press. sensitive film 2-62667
 peribronchial stress anal. utilising concentric shells of parenchyma 2-105751
 phospholipid bilayer membranes, neutral, interactions between 2-62565
 phospholipid bilayers, lateral compressibility obs. 2-62566
 planar joint movement, error in kinematic parameters, expt. design optimisation 2-105740
 postural attitude and strength capabilities of Indian workers 2-100016
 posturography, appl. of math. models 2-83674
 precordial LF vibr. meas. system, development of optical transducer, heart disease diagnosis appl. (Japanese) 2-117047
 pressure transducer for meas. under foot during function 2-83679
 radius, sheep, quantitative assessment of compression plate fixation in vivo 2-62852
 random body movements, quantification by Doppler radar device 2-117048
 running, mech. energy changes and O_2 cost 2-94096
 saccadic eye movements, multipulse control 2-57813
 seated buttock, model expt. of stress distrib. 2-105737
 shock absorption in the human locomotor system, rel. to low back pain 2-88568
 skeletal allometry and locomotion in Australopithecus afarensis, Lucy's limb study 2-88572
 skeletal muscles, canine, force response to elec. stimulation 2-57837
 skin, deform. pots. spread 2-83559
 skin, human, uniaxial tension, in vivo obs. 2-83592
 skin bioengineering, conf., Cardiff, Wales (July 1979) 2-79283
 skin vibrations of singer's face, neck, larynx and sternum, holographic interferometry meas. 2-78882
 spinal and pelvic movements meas., repeatability of a TV/computer system 2-94150
 spinal column, human, and its musculature, struct. anal. for forces determ. 2-93979
 spinal rotation in Friedreich's ataxia, projected surface area index influence 2-62673
 spine, human musculoskeletal system considerations 2-116960
 spine, intact human lumbar, three-dimens. stiffness props. determ. using biplane radiographic system 2-62872
 spine, stress distrib. model, 3D surgical simulation 2-116959
 spine joints of small mammals, mech. testing 2-62876
 standing balance rehabilitation, video aid 2-68192
 standing-up of a healthy subject and a paraplegic patient 2-88567
 stereoradiographic measurement system for human body 3D position and mobility description 2-105821
 still walking, mechs. and energetics 2-78372
 stomatopod smashing limb, calcified cuticle, comp. and struct. features 2-100025

biomechanics continued

- striated muscle, system theoretical description 2-73291
- tachographic gait records of normal and lower extremity handicapped human subjects, pattern recognition 2-100036
- thrombosis, deep vein, periodic external compression as prophylaxis, numerical studies 2-105743
- thrombosis, deep vein, periodic external compression as prophylaxis, expts. 2-105744
- tibia, human, mech. resonances in vitro 2-116955
- tibial plateau prosthesis design, performance considerations 2-62843
- tibial prosthesis, stresses at PMMA-bone interface, model variables and fixation post length effects 2-62835
- tissue bending and shearing deform. anal. 2-105739
- trabecular bone, multi-axial strength tests 2-62668
- trabecular bone, porous foam model, loading 2-62548
- treadmill, rot., or continuous meas. of anterior-posterior forces during walking 2-83727
- treadmill locomotion by cats, independently controlled EMG responses 2-78314
- upper extremity, quantitative kinematic linkage model 2-62672
- urinary bladder, pig, series-elastic props. of smooth muscle strips 2-116964
- ventricular contraction, models based on time-varying elastance, review 2-94093
- ventricular function, regional, assessment by segment work 2-73296
- vertebral motion under static load, kinematic anal. 2-105745
- vertebral motion under static load, simulation study 2-105746
- walking, biomech. anal. for normal and diseased humans 2-62649
- walking, kinematic prediction of intersegment loads and power for leg joints 2-62653
- walking, method for studying spinal and pelvic movements using computerised TV system 2-94148
- walking, normal and prosthetic gait, variation of mech. energy levels 2-105741
- weight-bearing patterns, static, of below-knee amputees using patellar-tendon-bearing prostheses 2-83591
- weight-lifting motion, cyclic, model simulating human performance 2-62674
- wheelchair locomotion, power output estimation method, validity 2-57934
- wrist kinematics, normal, in vivo study 2-116970
- Ca turnover during skeletal muscle contraction, construction, mathematical study and numerical simulation of model 2-67990

biomedical applications of computing *see medical computing***biomedical electronics**

- see also electrocardiography; electroencephalography; microelectrodes; patient monitoring; patient treatment; prosthetics; sensory aids*
- aids for the handicapped, problems and methods used in development (German) 2-88689
- artificial vision system, electronic human eye (Spanish) 2-68195
- automatic blood cell classifying system (Japanese) 2-105861
- biochips, implanted electronic systems, practical realisation, problems encountered (Czech) 2-68196
- biopotential mes. devices testing, Soviet development 2-62809
- biotelemetry, aspects of new systems, review (Japanese) 2-57887
- blood cell electrophoresis meas. using microcomputer, cancer early detection appl. 2-117127
- C-CD, eye movement measurement and meas. resolution 2-94156
- cancer cell diagnosis, computerised picture processing appl. (Japanese) 2-105848
- digital filters, design for biomedical signal processing 2-117117
- digital radiography and other imaging techniques, developments 2-100094
- Doppler demodulator, freq. shift max. freq. follower, amplitude correction 2-68081
- dynamic orometer as aid to profoundly deaf in mastering speech reproduction patterns 2-78483
- electrocardiogrammultigraphimeter as a basic instrument for developing effective personal computing in cardiology 2-100151
- EMG signal frequency spectrum anal., clinical diagnosis appls. (Italian) 2-73389
- engineering aid for the visually disabled 2-62834
- Japan, 1979 and 1980 (Japanese) 2-94245
- metallic foreign bodies location, electronic instrument 2-68107
- microelectronic visual and tactile devices to aid speech and understanding in the deaf 2-78489
- micropower pulse frequency modulator for use in an optically isolated catheter system for sensor voltage meas. 2-88645
- microstrip loop radiators for medical applications 2-105811
- monitoring, comparator circuit for alarm using single op-amp 2-78461
- optically powered human body implants 2-68198
- physically handicapped, electronic rehabilitation aids, developments in India 2-78487
- physiological simulator:ECG, blood press., foetal press. and impedance respiration appl. 2-83671
- pulmonary arterial pressure monitoring in ambulatory patients, using portable recorder 2-117122
- radio pills provide health data coupling link to suitable receiving system (Spanish) 2-68104
- semiconductor detectors, suitability for imaging appls. 2-59598
- sensory prosthesis devices, electronically controlled, for the physically handicapped (Japanese) 2-94251
- Soviet Union, review 2-78473
- taste perception threshold, digital electro-gustometer for meas. (Polish) 2-111807
- telemetric systems (Japanese) 2-57889
- telemetry, review of recent developments (Japanese) 2-57886
- tomography equipment development, image reconstruction technique, HEADTOME system (Japanese) 2-105849
- X-ray diagnostic set with image intensifier, electronic brightness stabiliser 2-78411

biomedical engineering

- see also biomedical electronics; biomedical equipment; orthotics; patient treatment; prosthetics; sensory aids*
- conference, Hanover, USA (March 1982) 2-58553
- conference, Houston, USA (Sept. 1981) 2-53428
- conference on bioengineering and microtechniques, Besancon, France (Apr. 82) 2-112638
- corneas, human, preservation by low temp. techniques (French) 2-117105
- magnetically completely shielded room for extremely low current mag. meas. (German) 2-68098

biomedical engineering continued

- review of biophysics and bioengineering, book 2-93978
- speech technology, implications for biomedical engng., review 2-111806
- undergraduate education rel. to 'real' engineers prod. 2-74184

biomedical equipment

- see also biomedical electronics; biomedical measurement; orthotics; prosthetics; radiography; radioisotope scanning and imaging; sensory aids*
- ambulatory ECG Holter monitoring instruments, ECG distortions 2-57912
- ambulatory ECG systems, freq. response and ST segment reproducibility evaluation methods 2-83688
- Anger tomographic scanner, computerised, development for positron imaging 2-78445
- Anger-camera, linearity meas., results with and without a corrector 2-62751
- anthropomorphic breast phantoms for US imaging system performance assessment and ultrasonographers training 2-88637
- apnea monitor, neonatal, multi-microcomputer based 2-62820
- apnea monitors, 1982, review 2-105846
- arrhythmia monitor, high performance microprocessor based 2-94240
- audiometer, computerised automatic apparatus 2-62708
- az eszestestszamalo detektorozmogatast vezelo elektronikanak tovabfejlesztése (A whole body counting moving detector with electronic control) (Hungarian) 2-111779
- biomedical fluid flow-rate sensor for meas. and control 2-62830
- biopotential mes. devices testing, Soviet development 2-62809
- blood, mean flow meas. system 2-94227
- blood pressure monitors, automatic, noninvasive: analogue/manual adaptation of Dinamap (TM) 2-83672
- body surface maps, signal anal. and display with a microcomputer mapping system 2-100145
- breast phantom, anthropomorphic, containing intermediate-sized scatterers, US appl. 2-100074
- cancer treatment using localised hyperthermia, practical considerations 2-62724
- cardiac arrhythmia simulator, microprocessor based 2-62813
- cardiographic equipment produced by Medior works 2-83682
- cardiovascular nuclear medicine, auxiliary moving image system, multi-phase dynamic colour display 2-94197
- cartilage elastometer for orthopaedic operations 2-100139
- clinical radiofrequency hyperthermia by magnetic-loop induction 2-62721
- colorimeter, analytic, La Jolla, human chromatic discrimination meas. appls. 2-78511
- compensating filters for high energy X-rays 2-83647
- Compton scatter imaging system, sensitivity, appls. 2-79723
- computer technology in medical X-ray apparatus 2-62741
- computerised tomography, high-speed multi-slice X-ray technique, CVCT scanner development 2-111793
- computerised tomography, theoretical foundations and practical realisation in Soviet Union 2-78426
- computerised tomography scanner, 4-MV, for radiation therapy, prototype system 2-94180
- computerised tomography scanner for radiotherapy planning dosimetry 2-68130
- computerised tomography tubes, life increase method 2-94165
- conductive rubber footswitch for gait anal. 2-117118
- CR-39 plastic track detector appl. for protons, ³He and ⁴He ions detection 2-64783
- CT heart scanning, ECG gated, use of 4th generation scanners 2-111794
- digital display medical temperature monitor (Rumanian) 2-62802
- digital radiography, conf., Stanford, CA, USA (Sept. 1981) 2-94891
- digital radiography, Xe ionisation chamber 2-68127
- digital scintillation camera for single photon computerised tomography appl., concepts and design 2-73343
- digital subtraction angiography implementation with synchrotron X-ray beam 2-73319
- digital subtraction angiography unit, evaluation 2-105831
- Dinamap non-invasive blood press. monitor, clinical evaluation in pre-term neonates 2-68178
- Doppler radar device, appl. to random body movements quantification 2-117048
- Doppler ultrasound and its use in clinical meas., book 2-89494
- dosimeter calibration in absorbed dose units using thermoluminescent dosimeters (Russian) 2-62769
- dye laser, sub-pico second, transparent media characterisation 2-108873
- dynamic orometer as aid to profoundly deaf in mastering speech reproduction patterns 2-78483
- dynamic radiography: a new technique for epicardial imaging using microprocessor controlled system 2-111788
- ECG assembly for patient monitoring 2-105847
- ECG electrodes, importance in cardiac exams. 2-83684
- ECG lead, virtual and personalised, P-wave enhancements 2-94241
- ECG leads, no. necessary for body surface mapping 2-88676
- ECG microprocessor-based data acquisition, reduction and anal. system, design, implementation 2-94242
- ECG signal data compression using high-speed computer processor 2-57913
- ECG signal portable late potential averager device using microprocessor 2-94239
- ECG simulator, portable 2-117114
- ECG simulator, programmable, for instrument testing and evaluation 2-62812
- ECG spectral resonances, computer graphic display 2-94243
- ECG ST-segment analyser, compact, microprocessor-based, for the operating room 2-100138
- echocardiograph, M-mode, microcomputerised, with VTR recording 2-100080
- echocardiographic computerised tissue characterisation system 2-94143
- EEG recorder programme tester 2-117104
- electrocardiogrammultigraphimeter as a basic instrument for developing effective personal computing in cardiology 2-100151
- electrode with Si₃N₄ film (Japanese) 2-62805
- electrodes, circular dispersive, anal. and control of current distrib., electro-surgery appl. 2-78466
- electromedical instrumentation in India, review 2-117113
- electrometric detectors, model and preliminary results, respiratory monitoring appl. 2-117120
- electromyograph, M-42, His bundle ECG recording appl. 2-83685

biomedical equipment continued

electron beam applicator for intraoperative therapy, dosimetric props. 2-68164
 electronic colour generator for visual tests 2-68187
 electronically collimated gamma camera, reconstruction algorithms comparison 2-73320
 electrophysiological lead system, apparatus for mag. induced interfering voltage meas. (*German*) 2-72797
 electrostimulators, drug dose dispensers and artificial organs, creation and development prospects 2-78486
 electrosurgical circular dispersive electrodes, distrib. equiv.-circuit models 2-78482
 electrosurgical equipment development and problems 2-78480
 emission tomographic instruments, single photon: figures of merit obs. 2-78440
 endoscopes, rigid, image quality assessment model 2-111771
 ERG stimulator microprocessor based 2-73384
 erythrocyte aggregometer for rapid quantification of aggregation using IR transillumination (*German*) 2-111770
 ferromagnetic contact ring, appl. to eye movement meas. 2-88643
 fibre bundle scanner for laser photocoagulation treatment 2-81106
 fibre optic endoscopes, review of evolution 2-94147
 fiberoptic endoscopy and lasers for medical use 2-78406
 fluorescent X-ray source, rigid, for monoenergetic radiation studies in radiographic imaging 2-78424
 fluoroangiographic pictures, computerised elaboration (*Italian*) 2-73315
 fluorophotometer, solid state, for ophthalmic appls. 2-94149
 foot, system for meas. of dynamic press. distrib. beneath 2-105863
 functional diagnostic instruments, state of the art and future trends 2-62824
 fundoscopic systems, comparison of magnification 2-111765
 gait training device, auditory feedback of knee angle for amputees 2-105851
 gamma camera, gated computer-aided, evaluation using dynamic phantom 2-94193
 gamma camera, single rotating head, for emission computed tomographic images, performance characts. 2-100107
 gamma cameras, Anger-type, routine quality control testing 2-94196
 gamma-therapeutic units, tissue-air relations (*Russian*) 2-62735
 GAMMATOM-1, single photon tomographic system performance 2-73328
 grid elimination during intensified fluoroscopy and photofluoro spot imaging 2-105830
 Hall effect transducer for apexcardiography and sphygmography 2-111725
 head fixation device for reproducible position alignment in transmission CT and positron emission tomography 2-94164
 HEADTOME, hybrid emission tomograph for brain 2-78435
 HEADTOME II, hybrid emission computerised tomography for brain 2-73334
 heated humidifiers for patients on ventilatory support, temp. control 2-88684
 heavy ion beam CT, imaging with a multiplane multiwire proportional chamber 2-117083
 hemibody and total body irradiators, fixed, single source: review of dosimetry 2-83655
 HF surgical instruments, technical scope and safety problems (*German*) 2-88683
 hyperthermia system, localised current field, for use with ¹⁹²Ir interstitial implants 2-83700
 hyperthermia systems, theoretical comparison of temp. distrib. comparison 2-62731
 image quality, conf., San Diego, CA, USA (Aug. 1981) 2-107000
 images, anal. automation 2-62702
 immunosensors, nonlabeling and labeling, chemical amplification 2-83668
 impedance plethysmograph, simple design 2-83677
 intercostal retractometer for estimation of intrapleural pressure changes in infants 2-111804
 IR optometer, for accommodation objective continuous meas. in human eye (*German*) 2-100083
 IR reflectance system for ambulatory characterisation of left ventricular function 2-94151
 kinesiological EMG system for computer-controlled recording and processing of muscle action pots. of walking subjects 2-78471
 laminar emission camera, Ge 2-73324
 lantern for colour perception testing 2-100084
 laser uses in biomedicine, book 2-63765
 linear accelerator, energy calibration with photonuclear reactions 2-88657
 linear accelerator, use in spectroscopic studies of ¹⁹⁷Ir decay 2-85407
 linear accelerator photon beam, 15 MV, contamination by electrons and scattered photons 2-105829
 linear step motors for medical apparatus and medical-biological research instruments 2-78516
 local and regional hyperthermia, microwave/radiofrequency system clinical evaluation 2-62722
 lung density, clinical system for in vivo meas. using Compton scatt. 2-94173
 M-mode echocardiographic system for cardiac parameters derivation 2-83614
 mammary radiography in Finland, equipment quality control: dose and image quality 2-83631
 mammography, X-ray generator performance and unnecessary dose 2-105828
 mass spectrometer, quadrupole gas analysers (*German*) 2-57881
 Mbq display for an isotope calibrator 2-73351
 Medisor CT 0100/0150 and general principles of computerised tomography 2-62757
 metal foil based multiple radiography 2-111789
 metallic foreign bodies location, electronic instrument 2-68107
 micropower pulse frequency modulator for use in an optically isolated catheter system for sensor voltage meas. 2-88645
 microprocessor based instruments, review 2-83686
 microstrip antennas, developments and trends towards bandwidth increase 2-68108
 microwave and radiofrequency applicators thermal effectiveness and safety evaluation 2-62718
 microwave and RF hyperthermia, applicators 2-62730
 microwave antenna, embedded, insulated, for hyperthermia 2-62732
 microwave hyperthermia direct contact dielectrically loaded applicators design and operation eval. 2-62719

biomedical equipment continued

microwave system, computer-controlled for local tumour hyperthermia 2-111768
 mirror device to plot topometric schemes for preradiation preparation of patients (*Russian*) 2-62739
 motion meas. system for clinical gait anal., automated 2-105812
 multicrystal camera, appl. to planar imaging of positron-emitting radionuclides 2-117063
 multipole applicators for regional and whole-body hyperthermia 2-73311
 multilayer positron emission computed tomographs, slice shield collimators evaluation 2-73344
 needle electrode, miniaturized, use in electrocochleography 2-117126
 nerve stimulation using rapid rise-time mag. fields, prototype stimulator 2-83623
 nerve stimulators, transcutaneous, for pain relief, elec. output characts. 2-100154
 neuro-ophthalmology system based on a PET computer for evoked response, EOG and ERG tests 2-117121
 neutron-transmission CT scanning system 2-94161
 NMR imager, Aberdeen, calibration for proton spin-lattice relax. time meas. 2-100088
 nuclear medicine, computer interface for several cameras and two computers using differential analogue transmission 2-117065
 nuclear medicine, data acquisition and processing unit (*French*) 2-68122
 nuclear medicine camera, Ge rot. laminar emission system 2-78433
 nuclear medicine coded-aperture imaging with rotating slit apertures and rotating collimators 2-83641
 nuclear medicine collimator for regional cerebral blood flow meas. using ¹³³Xe inhalation 2-68139
 nuclear medicine collimators, multi-slit focused, design and construction for opposite detect. arrangement 2-73349
 nuclear medicine instrumentation performance and quality control including gamma cameras 2-94194
 nuclear probe, computerised, nonimaging, assessment of left ventricular press.-vol. relationships 2-83653
 nuclear science and power systems conf., San Francisco, CA, USA (Oct. 1981) 2-58528
 nuclear track detectors appl. in biology and medicine 2-68217
 oesophageal probe for heart and temp. monitoring during anaesthesia 2-68183
 optical fibre applications to diagnosis, treatment and research 2-57884
 optical instrumentation appl. in medicine, conf., San Francisco, CA, USA (March 1981) 2-94888
 optical transducer development for precordial LF vibr. meas. system, heart disease diagnosis appl. (*Japanese*) 2-117047
 optics applications, review 2-55059
 optoelectronic position-feedback controlled test-subject-tracking meas. carriage for gait anal. 2-78407
 PETT VI, positron computed tomograph with CsF detectors, performance study 2-73336
 PETT VI multislice positron emission tomograph, engineering aspects 2-73326
 pH-sensitive radio pill for ingestion and implantation 2-57885
 phantom material for radiotherapy X-ray and γ -ray beam calibrations 2-83658
 phantoms for meas. of low contrast resolution and comparison of several CT scanners 2-117080
 photo-coupled biomeas. system with liq. cryst. optical modulator (*Japanese*) 2-117045
 photofluorographic camera coupled with image intensifier, MTF meas., performance for clinical appl. 2-73346
 photomultipliers for positron CT in nuclear medicine 2-90374
 photosilamat, exposure settings determ. 2-88644
 physiotherapeutic device for medical treatment with EM fields (*Bulgarian*) 2-83618
 piezoelectric polymers as peripheral pulse sensors 2-83689
 plesiotherapy applicators, curved, using ²²²Rn, discrepancies in depth doses 2-111796
 pneumatic tourniquets used in surgery, complications and improvements 2-88686
 Positologica, positron computerised tomography dedicated to head studies, electronic system 2-100091
 positron camera, large-area stationary, using wire chambers 2-78430
 positron computed tomographs, rotational 2-78436
 positron computed tomography: present and future design alternatives 2-78438
 positron computerised tomography, dual rectangular photomultiplier tube 2-117081
 positron emission tomograph with BGO crystal, performance study 2-73340
 positron emission tomography: instrumentation perspectives 2-111780
 positron emission tomography of brain, four ring camera system 2-73338
 positron imaging, hybrid scanner 2-78429
 positron scanner, hybrid, preliminary biodistrib. studies 2-73318
 positron scanning, multicryst., for quantitative studies with positron-emitting radioisotopes 2-78428
 positron tomograph, dynamic, for heart studies, medical criteria for desing 2-73329
 positron tomographic ring detector, one-dimensional scintillation camera appl. 2-73323
 positron tomography, technique for providing pseudo-continuous detector ring 2-73321
 precordial pressure, dynamic instrumentation for meas. 2-117103
 pulsed X ray detection in medical tomography, use of CdTe 2-83652
 quartz crystal blood pressure transducer (*German*) 2-88669
 radiation therapy, phys. and engng., review (*Japanese*) 2-111775
 radiofrequency hyperthermia systems safety and regulatory considerations in United States of America 2-62726
 radiographic and fluoroscopic table, general-purpose 2-100113
 radiographic intensifying screens, image quality and intensifying factor 2-73352
 radiographic localisation grid for transluminal angioplasty 2-105834
 radiographic scatter reduction, design of rot. aperture cones 2-83644
 radiographic screen resolution, significance in treatment verification 2-100108
 radiographic screen-film systems, Wiener spectrum evaluation, entropy method 2-57894
 radiographic system with dual memory for time subtraction digital fluoroscopy 2-83634

biomedical equipment continued

- radiography anticatter grids, Monte Carlo simulation studies of performance 2-83649
 radioisotope collimator, rot. slant-hole, performance in myocardial perfusion abnormalities detect. 2-83637
 radioisotope scanner, developing countries appl. 2-78431
 radioisotope scanning system, ultra-high-sensitivity, appl. to long-term tracer distrib. patterns investigation 2-78432
 radiotherapy beam compensator design and patient contour plotting, microcomputer-based system 2-68131
 radiotherapy treatment planning, inexpensive simulator based CT scanner 2-117082
 rare-earth intensifying screens, significance for dose reduction in X-ray diagnosis 2-78448
 respiration monitor for use with CT body scanning and other imaging techniques 2-105816
 RF coil designs for NMR zeugmatographic imaging 2-117053
 RF surgery equipment, technical possibilities and hazards in use (*German*) 2-100153
 RF surgical equipment: appls., technical possibilities and safety problems (*German*) 2-73392
 safety in medical instrumentation 2-117107
 safety of medical electrical equipment and BS5724 2-100140
 scanned film radiography system with computer assisted exposure 2-111787
 scanning proton microprobe appl. to biology and medicine 2-100167
 scintigram images, resolution degradation due to respiratory movement (*Japanese*) 2-68141
 scintillation camera characts. and test conditions, performance standards 2-94195
 scintillation camera imaging with low-energy isotopes: ^{125}I , ^{131}Cs 2-78441
 scintillation cameras, quality control using a minicomputer 2-62752
 scintillation counter appls. to CT 2-80395
 Simtrac angiography high-press. injector, functional evaluation 2-78413
 single photon emission CT system, camera-based 2-94171
 single photon imaging: new instrumentation and techniques 2-78437
 single-photon emission tomography with a 12-pin-hole collimator 2-105820
 skin potential monitor and display system 2-68185
 slit catheter system, new diagnostic method for limb compartmental press. meas. 2-83693
 speech, relation to written text, synchronising device as lip reading aid for deaf 2-78484
 sphygmomanometer, systolic blood press. meas., errors 2-89504
 spirometer, rot. vane, computerised, cardio-pulmonary assessment appl. 2-117123
 spirometry system, microcomputer based, remote pulmonary function anal. 2-73385
 SPL hearing meter for threshold meas. 2-68090
 SQUID mag. susceptometer, appl. to medical diagnostics 2-62713
 stereological analysis system, automated, for trabecular bone 2-73314
 stereoradiographic measurement system for human body 3D position and mobility description 2-105821
 strain gauge US therapeutic exposimeter 2-111760
 Super-PETT, positron emission transaxial tomograph, data acquisition aspects 2-73339
 surgical drill, improved, design and performance 2-117129
 taste perception threshold, digital electro-gustometer for meas. (*Polish*) 2-111807
 telephone ECG monitoring in real time by means of a microcomputer based terminal 2-83690
 temperature measurement instrument using non-contacting technique, heart surgery appl. (*German*) 2-111811
 therapy accelerators, beam alignment tests 2-78418
 thermoelectric cooling in medicine, Peltier effect based devices 2-78474
 thermometers, testing 2-117115
 thermoprobe, sheathed micro, for local temp. meas. in tissue 2-78472
 tissue substitutes and phantoms in 98 USA medical centres, review 2-83676
 toposcope for freq. and phase indication, EEG appl. 2-94223
 transducer for lower limb orthotic loads meas. 2-100158
 TV monitor with electrochemical recording of thermograms, Soviet Ruby-3 model 2-62729
 TV/computer system, repeatability in spinal and pelvic movements meas. 2-94150
 UNICON, a universal nuclear imaging construct 2-111781
 US B-mode imaging, annular array system for high resolution breast echography 2-68094
 US B-scanner with multi-line array 2-68095
 US diagnostic and therapeutic technology, status and development trends 2-62705
 US Doppler devices, evaluation using a moving string test target 2-88636
 US Doppler gain calibration, proposed standard target 2-100073
 US hydrophones, comparison of two calibration methods, medical diagnosis appl. 2-117037
 US hydrophones, miniature, angular response 2-94132
 US in medicine, review 2-78404
 US in medicine and biology, conf., Brighton, England (Jul. 82) 2-101123
 US lens, annular focus, for local hyperthermia treatment of small tumours 2-94139
 US phantom for simple calibration and evaluation of scanners 2-100075
 US scanners, 'small parts', review, book contrib. 2-111762
 US scanners, review 2-88641
 US scans identification system 2-88635
 US tomographic volumetry system, automatic gallbladder appl. (*Japanese*) 2-78403
 US transducer, optically activated, for real-time diagnostic imaging 2-117042
 US transducers for use in ophthalmologic diagnostics, computer-aided quality assurance (*German*) 2-88638
 US transesophageal phased array for imaging the heart 2-117023
 VCG system with temporal dimension, directional reference and display of component loops 2-94226
 vectorcardiographic lead systems, McFee and Frank, evaluation using a numerical inhomogeneous torso model 2-78463
 video aid to rehabilitation of standing balance 2-68192
 X-ray diagnostic equipment, radiation quality improvement 2-78412
 X-ray image recognition, automatic systems, comparative analysis 2-78410

biomedical equipment continued

- X-ray intensifying screens, efficiency improvement by special design 2-78423
 X-ray tube focal spot sizes rel. to angiography 2-105827
 X-ray tube focal spots alignment for spectral meas. 2-68132
 CO₂ laser fibre optics appls. 2-100085
 CO₂ laser surgery 2-83628
 CdS DRM-2 semiconductor sensor for use in clinical radiometry (*Russian*) 2-62738
 CdTe detector, miniature, evaluation in left ventricular function monitoring 2-105818
 ^{57}Co marker system for central venous press. line localisation 2-62761
 HgI₂ gamma-radiation detectors development, appl. in nuclear medicine for blood flow meas. 2-73322
 Si strain gauges for mechanical variables meas. in biomedicine, stability problems (*Czech*) 2-62803
 Si(Li) multi-element detector for coronary arteries non-invasive imaging 2-70061
- biomedical measurement**
 see also *biological techniques and instruments; biomedical equipment; electrocardiography; electroencephalography; radiography; X-ray apparatus*
 accommodation in human eye, objective continuous meas. using IR optometer (*German*) 2-100083
 acoustic imaging, recent developments, theory and practice 2-65437
 air-borne US, appl. to biomedical meas. 2-68088
 antiproton in vivo density meas., radiography, biomedical appls. 2-68117
 arterial haemodynamics including bifurcation influence, comparison with flow pattern noninvasive meas. 2-57836
 arteries, great, vel. profiles visualisation 2-88673
 bio-signals, digital processing (*Japanese*) 2-62806
 biopotential meas. devices testing, Soviet development 2-62809
 blood, mean flow meas. system 2-94227
 blood flow measurement, electromag., theory 2-81414
 blood flow velocity quantitative meas., double beam Doppler US method 2-100078
 blood pressure and flow meas. instrumentation development 2-78479
 blood pressure transducer, quartz crystal (*German*) 2-88669
 blood serum, Br determ. by ^{125}I excited X-ray fluoresc. anal. 2-68123
 bone phantoms, factors affecting in vivo X-ray fluoresc. meas. of Pb 2-68112
 book, medical phys. and physiology meas. 2-63761
 breath sounds, development of a system for meas. and anal. 2-117026
 cardiac output, automatic determ. using impedance plethysmography 2-57911
 cardiac output, technique for continuous meas. based on temp. variations 2-73388
 cardiac stroke volume meas., expt. evaluation of impedance and EM methods in dogs 2-117112
 cardiac stroke volume measurement by impedance cardiography 2-100136
 cardiac time varying parameters, unconstrained, sensitivity to errors in meas. afterload and preload 2-73386
 cardio-pulmonary assessment using computerised rotating vane spirometer 2-117123
 cellular specimens, pattern recognition in optical microscopy (*Japanese*) 2-62715
 cerebral electrical impedance pethysmogram, effect of electrode size on blood flow contribs. 2-117119
 chromatography coupled with electrochemistry appl. 2-73398
 circulation measurement technique, indicator dilution using a fluoresc. indicator 2-117044
 contact angle, optical comparator meas., optometry appl. 2-105810
 coronary obstructions, objective meas. by digital image processing 2-111786
 defibrillator analyser, microprocessor-based 2-57930
 Doppler ultrasound and its use in clinical meas., book 2-89494
 dynamic studies, practical appl. of deconvolution techniques 2-94189
 ear canal volume, evaluation of tympanometric estimates 2-88640
 electrical bioimpedance of heart, tissue, brain, limb and lung, conf., Tokyo, Japan (Aug. 1981) 2-63741
 eye and contact lens movement meas. using motion picture camera 2-111766
 eye movement measurement using a ferromag. contact ring 2-88643
 eye movement measurement using CCD image sensors, meas. resolution 2-94156
 eye movements, SQUID magnetometer for meas. 2-94218
 eye quantum efficiency determ. method, radiology appl. 2-73312
 flow microfluorocytometry and fluoresc. polarisation (*Japanese*) 2-62728
 fluoroangiographic pictures, computerised elaboration (*Italian*) 2-73315
 foetus, human, Doppler US meas. of blood flow 2-83612
 foetus, human, method for controlled sound stimulation, heart rate response determ. 2-117029
 foot, human, piezoelec. method of vertical contact stress meas. 2-100141
 foot-ground pressure, comparative display of dynamic data by data compression method 2-100137
 fracture site properties monitoring with external fixation, finite element and expt. analysis 2-62821
 gait analysis, conductive rubber footswitch 2-117118
 gait analysis, normal and pathological, camera speeds 2-83626
 gallbladder, automatic volumetry system using US tomography (*Japanese*) 2-78403
 haematocrit determination, optical method 2-83627
 hearing aid insertion gain meas. 2-117031
 human body, rigid, motion correction in moire topography 2-68099
 impedance spectroscopy as an aid in cardiac surgery (*German*) 2-83697
 implantation telemetry, review (*Japanese*) 2-57941
 inter pupillary distance meas. by chromostereopsis 2-88546
 intracranial pressure, epidural meas. using silicone rubber-lined press. transducer (*Japanese*) 2-94225
 intraocular lens edge meas., noncontact profiling with focal spot and fringe projection techniques 2-57922
 joint motion description for humans, meas. errors effect 2-62670
 left ventricular afterload parameters, automatic estimation procedure using a systemic vascular bed model 2-100149
 left ventricular haemodynamics and chamber dimensions, computer-graphic anal. 2-100148
 loudness balance, alternate binaural, response factors in choice of reference ear 2-73308
 lumbar spine movements, meas. by 3D X-ray anal. 2-94169

biomedical measurement continued

- lung, single-breath CO diffusing capacity meas., improved accuracy and precision 2-78470
- lung, specific conductance meas. using forced airflow oscill. in mech. ventilated human subjects 2-73382
- lung density, clinical system for in vivo meas. using Compton scatt. 2-94173
- lung density, in vivo meas., influence of certain phys. and physiological factors 2-94174
- lung phantom, Si meas. by neutron inelastic scatt. 2-94178
- lung water determination by NMR imaging expts. 2-105877
- magnetic fields, strong, HF, mapping probe, hyperthermia appl. 2-95408
- magnetic measurement, extremely low current, in completely magnetically shielded room (German) 2-68098
- magnetic signals from human skeletal muscles, SQUID magnetometer study 2-94087
- mechanical variables, stability problems for Si strain gauges (Czech) 2-62803
- mechanoogram recording technique for respiratory activity establishment in babies 2-78462
- microbeam analysis, conf., Vail, CO, USA (July 1981) 2-68961
- micropower pulse frequency modulator for use in an optically isolated catheter system for sensor voltage meas. 2-88645
- microwave thermography for temp. profile meas. inside human body, noninvasive (Japanese) 2-100082
- moire topography, fringe visibility and exposure time enhancement, moving human body meas. appl. 2-95449
- moire topography, living human body quantitative meas. appl. review 2-95448
- monitoring, comparator circuit for alarm using single op-amp 2-78461
- motion meas. system for clinical gait anal., automated 2-105812
- muscle fibre conduction vel., meas. using a gradient threshold zero-crossing method 2-117108
- nerve conduction velocity meas. techniques 2-117116
- neutron activation analysis of total body Ca, effect of slow neutron absorpt. 2-73348
- NMR imaging in medicine 2-88647
- object sectional contour, accuracy of contact-free plotting using an optic range finder (Russian) 2-73309
- optical biotelemetry, review (Japanese) 2-57888
- optoelectronic position-feedback controlled test-subject-tracking meas. carriage for gait anal. 2-78407
- oral Zn absorption, simple blood sample method 2-68114
- orthosis, lower limb, transducer for loads meas. 2-100158
- oscillometric method for indirect meas. of press. in human finger, correl. study 2-68216
- phonopneumography, freq. anal. of breath sounds 2-57875
- phonopneumography, microcomputer-based analysis of recorded breath sounds 2-62826
- photo-coupled biomeas. system with liq. cryst. optical modulator (Japanese) 2-117045
- photon scattering method for trabecular bone mineral density meas. 2-68125
- photon-counting system, ultra-high sensitivity, blood luminesc. meas. appls. 2-117043
- phototherapy in newborn jaundice, meas. and monitoring 2-105814
- plethysmographic venous exploration using a strain gauge, press.-vol. diagram (French) 2-117106
- posturography, appl. of math. models 2-83674
- precordial LF vibr. meas. system, development of optical transducer, heart disease diagnosis appl. (Japanese) 2-117047
- pressure transducer for meas. under foot during function 2-83679
- psychophysics threshold meas. with variable threshold, integrating staircase method (German) 2-62620
- pulmonary capillary blood flow estimation, multiple breath method viability 2-83667
- pulmonary capillary blood flow estimation, single breath method viability 2-83666
- pulse recording, analytical comparison of transcutaneous methods 2-62815
- pyroelectric sensor for the measurement of pressure and cardiac output (Spanish) 2-68179
- renal blood flow, determ. by math. interpretation of radionephrograms (Russian) 2-73316
- respiratory flow measurement by inductance pneumography 2-83680
- respiratory signals, neonatal, quantitative anal. of periodicity 2-78468
- respiratory sounds, automatic recognition (Japanese) 2-62707
- saliva samples, use in total body water determ. by ^3H dilution 2-100093
- scoliosis evaluation by laser scanning of body cross sections (Japanese) 2-62727
- skin vibrations of singer's face, neck, larynx and sternum, holographic interferometry meas. 2-57882
- sleep-wake patterns characts. rel. to sudden infant death syndrome, spectral analysis 2-62819
- soft tissue motion, meas. using correl. between A-scans 2-100072
- speech, auditory reception threshold meas., comparison between two methods 2-117032
- spinal and pelvic movements meas., repeatability of a TV/computer system 2-94150
- systolic blood press. meas. using sphygmomanometer, errors 2-89504
- tachographic gait records of normal and lower extremity handicapped human subjects, pattern recognition 2-100036
- taste perception threshold, digital electro-gustometer for meas. (Polish) 2-111807
- teeth root surfaces, meas. of corrosion products from dowels with proton microprobe 2-100090
- temperature measurement instrument using non-contacting technique, heart surgery appl. (German) 2-111811
- thermistor catheter for core temp. meas. 2-94228
- thermocouple thermometry in microwave fields 2-68101
- thermoprobe, sheathed micro, for local temp. meas. in tissue 2-78472
- time and frequency systems, transducers for biotelemetry 2-83721
- tissue, small displacements and deformations, US meas. 2-68096
- tissue permittivity in vivo meas. using coaxial line sensor and network analyser 2-105879
- tutorial short courses at nuclear science conf., San Francisco, CA, USA (Oct. 1981) 2-79264
- US volume measurements, comparison of prolate ellipsoid method and parallel planimetric area method 2-117020
- vitamin D-metabolites from human plasma and mass spectrometric analysis by fast heavy ion induced desorption 2-100171
- biomedical measurement continued**
- vocal cord vibration, automated anal. from ultra high-speed films using angular bend function (Japanese) 2-117046
- walking, method for studying spinal and pelvic movements using computerised TV system 2-94148
- wave phenomena realtime assessment, algorithms for travelling wave detect. 2-62878
- X-ray fluorescent excitation anal., low level tracers quantification 2-62743
- C, total body, meas. by counting neutron inelastic scatt. γ -rays 2-83650
- Ca, total body neutron activation anal., calibration and normalisation 2-73347
- Fe content, meas. in human body, in-vivo, γ -rays nuclear reson. scatt. appl. 2-68111
- Si strain gauges application to pressure and force measurement in biomedicine (Czech) 2-57917
- Xe in expired air, breath-by-breath radioabsorptometric assay 2-100092
- biomedical phenomena**
- see also *biomagnetism*
- hypothermia, effects on spinal mechanisms, clinical neurology and neurosurgery appls. 2-62581
- biomedical ultrasonics**
- abdominal tissues, US characterisation via digital anal. of backscatt. waveforms 2-62710
- acoustic power radiating from linear array transducer, meas. using He-Ne laser light 2-81181
- air-borne US, appl. to biomedical meas. 2-68088
- anthropomorphic breast phantoms for US imaging system performance assessment and ultrasonographers training 2-88637
- aortic regurgitation, assessment by pulsed Doppler US 2-68091
- arterial stenosis, on-line classification of severity by Doppler US signals anal. 2-117022
- arteriography, computerised, new technique for carotid bifurcation imaging 2-78401
- attenuation coeffs., tissue differentiation, liver appl. (French) 2-94105
- B-scanner with multi-line array 2-68095
- bibliography from 1.1.71 2-63773
- bibliography from 1.1.71 2-94939
- bibliography from 1.1.72 2-112674
- blood flow velocity quantitative meas., double beam Doppler US method 2-100078
- blood pressure and flow meas. instrumentation development 2-78479
- breast cancer ultrasonic imaging 2-68089
- breast echography, high resolution, annular array system 2-68094
- breast phantom, anthropomorphic, containing intermediate-sized scatterers 2-100074
- broadband US transducers construction, expt. obs. (German) 2-117021
- cardiac examination, non-invasive methods 2-83695
- cardiac volume estimation by 2D echocardiograms recorded from 1 extracorporeal port 2-94131
- carotid arterial disease, computerised pattern recognition using pulsed Doppler US 2-94138
- cerebrovascular assessment using a Doppler carotid scanner and real-time freq. anal. 2-62704
- clinical hyperthermia systems engineering problems and solutions 2-62829
- computer-aided tomography, correction method for refraction effect 2-94134
- computerised tomography, effects of diffr. and refr. 2-117039
- computerised tomography, reconstruction algorithm for body sections with opaque obstructions 2-62706
- conference, Brighton, England (July 82) 2-101123
- conference on medical phys., Varenna, Italy (Jun.-Jul. 79) 2-89448
- conference on phys. and engng. in medical imaging, Pacific Grove, USA (Mar. 82) 2-107017
- contrast echocardiography, 2D, videodensitometric data processing 2-117034
- contrast echocardiography, review 2-117033
- coronary artery disease, echocardiographic study of vel.-strain relationship 2-117025
- developments in medical imaging techniques 2-100094
- diagnostic and therapeutic technology, status and development trends 2-62705
- diffraction scanning of the thyroid 2-94136
- digital signal processing, US scanner (German) 2-68082
- Doppler blood vel. signals in normal subjects, comparison of methods of recording and anal. 2-117035
- Doppler blood vel. waveform, estimation method 2-117036
- Doppler demodulator, freq. shift max. freq. follower, amplitude correction 2-68081
- Doppler devices, evaluation using a moving string test target 2-88636
- Doppler gain calibration, proposed standard target 2-100073
- Doppler human foetal heart rate records, improvement by signal correl. 2-68087
- Doppler studies of the breast 2-94135
- Doppler techniques, review of current status, book contrib. 2-111761
- Doppler ultrasound and its use in clinical meas., book 2-89494
- Doppler ultrasound monitoring of peripheral blood vessels 2-57880
- Doppler US, principal component factor anal. in carotid artery disease detect. 2-68086
- Doppler US arterial signals, appl. of CCD transversal filters for real-time spectral anal. 2-68093
- Doppler waveforms, online identification and quantification 2-68085
- dynamic scans identification system 2-88635
- echo data, developments in computer processing 2-88634
- echocardiograms, 2D sector scans, computerised reconstruction of 3D images of pulsating left ventricle 2-83617
- echocardiograms, ECG synchronised 2D, on-line digital storage and image treatment 2-94141
- echocardiograms, M-mode, computer assisted anal. 2-100068
- echocardiograph, M-mode, microcomputerised, with VTR recording 2-100080
- echocardiographic 2D images sequence, approach to optimal threshold selection 2-100069
- echocardiographic computerised tissue characterisation system 2-94143
- echocardiographic images, computer processing for automated edge detect. of left ventricular boundaries 2-94142
- echocardiographic imaging, 3D resolution 2-100071
- echocardiographic sector scans, computerised enhancement techniques 2-83615

biomedical ultrasonics continued

- echocardiography, computer supported meas. of 2D images 2-83616
 echocardiography, new techniques, review, book contrib. 2-111764
 echocardiology, directly heated photothermographic paper appl. 2-68084
 echoencephalography, technique and clinical significance 2-94130
 echography, static and real time, US exposure 2-100130
 electronic scanning ultrasonic diagnostic equipment 2-78477
 fatty liver and cirrhosis diagnosed by US texture discriminant analysis 2-57878
 foetus, human, Doppler US meas. of blood flow 2-83612
 gallbladder, automatic volumetry system using US tomography (*Japanese*) 2-78403
 grey-scale echography, static, pitfalls in use 2-68083
 hydrophones, comparison of two calibration methods, medical diagnosis appl. 2-117037
 hydrophones, miniature, angular response 2-94132
 hyperthermia, US-induced, for treatment of human superficial tumours 2-117024
 hyperthermia delivery system using scanning, focused US 2-62712
 hyperthermia local therapy for cancer, physical principles, RF and US heating 2-73199
 hyperthermia production for cancer therapy: a review of fundamentals and methods 2-62716
 imaging techniques survey 2-78400
 integrated analog multiplexer for array transducers used in ultrasound diagnosis (*German*) 2-94133
 integrated image diagnosis method using scintigrams and echograms (*Japanese*) 2-105826
 intraocular melanoma localisation by laser-induced photoacoustic spectroscopic imaging 2-100181
 lens, annular focus, for local hyperthermia treatment of small tumours 2-94139
 liver, acoustic attenuation coeff. slope estimates variation, diagnostic appl. 2-100076
 liver, diffuse disease, US characterisation, relative importance of freq. content in A-scan signal 2-94137
 M-mode echocardiographic system for cardiac parameters derivation 2-83614
 M-mode omnidirectional recordings obtained from 2D echocardiography 2-117019
 mass screening system for breast cancer detect. 2-78478
 mobility aid for the blind 2-68097
 moving interfaces tracking, digital technique 2-94140
 phantom for simple calibration and evaluation of scanners 2-100075
 phase-only reconstruction in acoustical imaging, anal. and processing 2-117040
 physiotherapy, production and use of optical, electrical and US energy 2-78399
 piezoelectric ceramics, appl. in diagnostic ultrasound transducers 2-88639
 placental US images, in vivo, characterisation using digital techniques 2-68092
 power determination, μ W range, using laser interferometry 2-91193
 progress in medical US, reviews and comments, book 2-107023
 pulsed Doppler blood flow meas., accuracy calcs. 2-111758
 PPDF transducers, US appls. in medical, underwater and NDT areas 2-91201
 radioactivity of human body, use of US in meas. 2-62709
 resolution enhancement of 2D sonograms 2-62711
 review of US and its various modes of use 2-88641
 review of US imaging 2-117038
 review of US in medicine 2-78404
 safety and biological effects, review, book contrib. 2-111729
 scanners, 'small parts', review, book contrib. 2-111762
 soft tissue, acoustic vel. and attenuation const. meas. by ultrasonic CT 2-78513
 soft tissue motion, meas. using correl. between A-scans 2-100072
 soft tissue US attenuation tomography corrected by simulation of refraction 2-57877
 soft tissues pathology, xerography and ultrasonography comparison (*French*) 2-68119
 Soviet Union, biomedical electronics review 2-78473
 spleen, stochastic freq.-domain tissue characterisation 2-78405
 stereology, quantitative, and radiological image anal.: computerised tomography and US 2-83642
 strain gauge US therapeutic exposimeter 2-111760
 telemetry for obstetrics and gynecology (*Japanese*) 2-57873
 telemetry of foetal signals (*Japanese*) 2-57874
 tissue, small displacements and deformations, US meas. 2-68096
 tissue characterisation and quantitative US scatt. imaging, methods and approaches 2-117041
 tissue differentiation, review, book contrib. 2-111763
 tissue US attenuation anisotropy effects on computerised tomography 2-57876
 transducer, optically activated, for real-time diagnostic imaging 2-117042
 transducers for use in ophthalmologic diagnostics, computer-aided quality assurance (*German*) 2-88638
 transesophageal phased array for imaging the heart 2-117023
 trends in medical electronics in Japan, 1979 and 1980 (*Japanese*) 2-94245
 turbulence, US meas. by pulsed Doppler method employing freq. tracking, arterial disease appl. 2-100079
 two-dimensional echocardiograph processing, noise insensitive thresholding method 2-94144
 US electronics, conf., Tokyo, Japan, Dec. 1980 2-79274
 velocity of propagation, meas. from US pulse-echo data 2-100077
 volume measurements, comparison of prolate ellipsoid method and parallel planimetric area method 2-117020
 wide frequency range miniature hydrophone for the measurement of pulse ultrasonic field 2-78476

biomembrane transport

- see also osmosis*
 alamethicin in octanol/dioxane, voltage-dependent pore former, struct. and dipolar props. 2-111616
 alveolar-capillary membrane, modelling of mass transfer (*Russian*) 2-62568
 archipelago, lateral diffusion, effects of impermeable patches on cell membrane diffusion 2-111644
 associative learning retention in nudibranch mollusk, primary changes of membrane currents 2-78324
 axon, squid, delayed kinetics of K^+ channels, superposition 2-62577

biomembrane transport continued

- axonal membrane, squid, charged macromolecular site dissoc., appl. to nervous cond. 2-62572
 bilayer membranes, anion-selective ionic channels appearance during phasic transitions 2-99926
 bilayer phospholipid membranes, props. of conductivity channels induced by α -staphyloxylin 2-67966
 bladder, toad, Na^+ transport and flux ratio through apical Na^+ channels 2-88516
 cardiac Purkinje fibres, fluctuations in membrane current driven by intracellular Ca^{2+} 2-94009
 chloroplasts, photosynthetic membrane, illuminated by short flashes, elec. processes 2-105675
 dental enamel membranes, impedance as a predictor of permeability, meas. method 2-117168
 dipole molecules in membranes, energy profile 2-99906
 eggs, mouse, effect of microvilli on lateral diffusion meas. using fluoresce. photobleaching recovery 2-94010
 electrically excitable membrane, variance of conductance fluctuations 2-78315
 electro-osmotic stability in animal cells, unified model of morphologically active membrane coat 2-99925
 excitable properties of an artificial membrane containing amphotericin B in presence of cationic blockers 2-67964
 flat lipid membranes, elec. capacitance, phasic transition effect 2-99907
 gramicidin A transmembrane channel orientation, vesicle IR dichroism study 2-93997
 Halobacterium halobium, mutant selection method by control of transmembrane ion fluxes 2-111827
 ion flow, rel. to density of fixed charges at channel opening 2-99910
 ion repulsion within membranes 2-99911
 ionic channel density of excitable membranes as bifurcation parameter 2-67973
 ionic conductivity of bilayer membranes of cerebrosides and 2-57787
 kidney medullary layer, pig, channel-forming protein of an Na , K-ATPase prep. 2-111643
 lateral diffusion coeffs. interpretation 2-93999
 lateral diffusion of lipids through biomembranes 2-105683
 lipid bilayers, molecular motions, lateral and transverse diffusion 2-78303
 lipid bilayers, voltage-dependent conductance rel. to alamethicin dipole moment 2-73203
 liver mitochondria, rat, changes in electroneutral Ca^{2+} - H^+ metabolism after γ irradi. (*Russian*) 2-105766
 metastable equilibrium with random local fluctuations, dynamic receptor pattern generation in fluid mosaic membrane 2-111645
 mitochondria, bovine heart, protein inducing channel K^+ cond. in bilayer lipid membranes 2-99923
 mollusk neurons, pot. depend. of fast K current inactivation, transition state theory use 2-78319
 multistate models, linear network representation 2-73202
 muscle cell, isolated smooth, membrane pot., single microelectrode voltage clamping 2-62879
 muscle fibres, skeletal, intra- and extracellular action potentials, volume conductor model 2-67985
 myelinated nerve fibre, anal. of certain errors in voltage-clamp meas. 2-117164
 nerve active membranes, elec. network modelling 2-105688
 neuroblastoma cell membrane patches, single Ca^{2+} -activated nonselective cation channels 2-62569
 neurons, mammalian sympathetic-ganglion, acetylcholine noise 2-105689
 neurons, perfused, inward ion current kinetics, effect of transmembrane osmotic press. gradient 2-105690
 nonplanar membranes, mol. diffusion theory 2-93998
 orientational waves in cell membranes 2-105684
 pancreatic acini basal surface, single-channel currents in isolated plasma membrane patches 2-105686
 phospholipid membranes, proton permeability and elec. breakdown after UV irradi. 2-99924
 proton movement, light-driven, kinetics in model membranes containing bacteriorhodopsin 2-68049
 protoplasm drop membrane of Chara cells, pot. depend. EMF and conductance 2-78316
 purple membrane of Halobacterium halobium, IR spectrum rel. to proton conduction mechanism 2-94003
 renal microvillus membrane vesicles, modifier role of internal H^+ in activating Na^+ - H^+ exchanger 2-105687
 sarcoplasmic reticulum, coupling of water and ion fluxes in K^+ -selective channel 2-93996
 secretory protein translocation across membranes, role of docking protein 2-88515
 skeletal muscle, Na^+ channel blocking rel. to proton binding 2-94001
 tracheal epithelium, canine, nonelectrolyte permeability 2-78305
 tracheal epithelium, posterior, canine, diffusion barriers to passive lipid uptake 2-116896
 vesicles, inside-out, from human red cell membranes, Ca^{2+} -activated K^+ channel 2-73215
 vesicles, inside-out, of human red blood cells, all-or-none response of Ca^{2+} -dependent K^+ channel 2-73216
 visceral pleural fluid movement, influence of alterations in Starling forces 2-73282
 visual cell plasma membrane, fast photoinduced change in conductivity 2-78330
 voltage-current characts. of ionic channels, study on basis of transmembrane current harmonics 2-67967
 yeast cells, direct high-resolution NMR studies of Na^+ transport 2-94257
 Ca^{2+} channels in cardiac cultures, channel props., patch clamp obs. 2-88525
 Ca^{2+} , similarity of unitary currents in 3 different species 2-105685
 K^+ and Cl^- channels in calf cardiac sarcolemma 2-105693
 K^+ channels, Ca^{2+} -activated and light-dependent, selectivity for monovalent cations 2-94011
 O_2 , facilitated transport with membranes in diffusion path 2-73205

biomembranes

- see also biomembrane transport; lipid bilayers*
 antibody-bound membranes, chemical amplification of immunosensors 2-83668
 axonal membrane, squid, charged macromolecular site dissoc., appl. to nervous cond. 2-62572

biomembranes continued

- bacteriorhodopsin in purple membrane, photoselection and circular dichroism 2-67969
- basilar membrane, nonlinear model, 2-tone interactions 2-68026
- basilar membrane, two-tone suppression response of nonlinear model 2-57830
- basilar membrane frequency-response functions, relationship to causality, linearity, time-translation invariance and minimum-phase behaviour 2-83575
- basilar membrane vibration phases 2-83576
- chlorophyll-protein complex, photosynthetic membrane, triplet state, fluorescence study 2-78291
- chromaffin granule membrane, tensile strength obs. 2-100021
- cochlea, cat, basilar membrane tuning 2-78351
- cytokinesis in animal cells, viscoelastic model 2-57793
- L- α -dipalmitoylphosphatidylcholine, lamellar liposomes, biomembranes, phase transition study 2-78304
- dipalmitoylphosphatidylcholine vesicles, small, unilamellar, photon correl. spectroscopy study of stability 2-111632
- erythrocyte membrane, effect of hyperthermia and ionising radiation 2-105791
- erythrocyte membrane, extensional flow from cell body to elastic tether, anal. 2-99917
- erythrocyte membrane, extensional flow from cell body to elastic tether, expt. 2-99918
- erythrocyte membrane proteins, human, radiation-induced struct. changes 2-88632
- erythrocyte membrane submitted to a bending stress, spin label study of mol. struct. 2-105667
- erythrocyte membranes, use of circular dichroism spectroscopy in mol. phototoxicity study 2-116999
- erythrocytes, intact, determ. of fluoresc. polarisation of membrane probes, scatt. artifacts 2-111641
- exactable biological membrane, chaos in self-sustained oscill. under sinusoidal stimulation 2-62570
- exonuclease, membrane-bound, γ -radiation-releasable, Arrhenius plot behaviour 2-62701
- fatty acids, spin labelled, covalently attached to boundary of intrinsic membrane protein, EPR, chemical exchange 2-105655
- fluid trapping beneath deformable fluid cell membranes 2-111642
- fluidity rel. to heat killing of cells 2-94002
- gamma-gamma directional correlation study of model membranes 2-73204
- impedance measurement by intracellular single-electrode bridge amplifiers, capacitance problems solns. 2-100176
- interaction rel. to charged components redistrib. 2-111629
- lipid bilayer, model membrane, mol. dynamics simulation 2-67974
- lipid bilayers, acyl chain motion, statistical mechanical model 2-78301
- lipid bilayers, multilamellar and vesicle systems, mol. motion, NMR line breadth 2-78302
- lipid monolayers phase transitions theoretical model 2-78300
- lipid multilayers, gamma-irrad. effects 2-94116
- lipid-water systems, phasic transition models, evaluation by optical analogy 2-57776
- microviscosity, extraction from translational and rot. diffusion coeffs. 2-62567
- nerve membrane, anal. of potential fluctuation at critical state 2-88532
- neuron membrane models, brief review 2-105692
- NHK 3025 cells, hematoporphyrin derivative treated, photodynamic membrane damage 2-62689
- phase transitions, first order, pseudo-crit. props., statistical mechanics theory 2-67975
- phasic transitions in biological membranes and model liq. cryst. systems 2-67963
- phospholipid membranes, kinetics of lens formation 2-57786
- phospholipid multilayer, oriented monodomains, polarized Raman spectra 2-73207
- phospholipid vesicle membranes, elec. breakdown by diffusion pot., evaluation technique 2-67965
- phospholipid vesicles, multilamellar, fluoresc. depolarisation studies of phase transition after microwave irrad. 2-111732
- phospholipid vesicles, size distribution, photon correlation spectroscopic study 2-67970
- photoreceptor membranes, rhodopsin mols. aggregation on exposure to damaging action of light 2-111737
- photosynthetic, electrogenic props. reconstruction of isolated preps. of reaction centres 2-78311
- photosynthetic membranes, electrochromic response of carotenoids 2-99912
- potential and resistance, automatic voltage adjuster for single microelectrode recording 2-68211
- radiation response of membrane populations, interactive FORTRAN program for simulation 2-100067
- retinal photoreceptors, intact vertebrate, lamellar structure, verification of phases 2-62596
- rhodopsin, photoreceptor membrane multilaminar films, photon-correlation spectroscopy combined with integrated optics study 2-88500
- rhodopsin molecule in photoreceptor membrane, photodamage, oxidation of SH groups 2-99894
- rod outer segment birefringence bands rel. to daily disc membrane synthesis 2-111668
- sarcoplasmic reticulum, lipid-protein interactions rel. to ionophore A23187, EPR and fluoresc. obs. 2-67930
- sarcoplasmic reticulum, liq. diff. anal., solvent electron contrast variation 2-62559
- surface charge density, membrane potential and slat flux 2-62431
- tearful membrane-inner hair cell impact, relation to sensitization and masking of HF tone burst by LF tone 2-83574
- tympenic membrane of human auditory system, transfer charact., elec. modelling 2-100001
- US-induced cell killing, temp. dependence, role of membrane fluidity 2-100046
- vesicles, light scatt. appls. 2-87805
- vesicles, two dimens., Monte Carlo study 2-105668
- viruses, enveloped, freeze fracture, freeze etching, critical point drying, review 2-57842
- viscoelastic membrane surface flow in viscous fluids, red blood cell mech. appls. 2-111635
- visual cell photoreceptor membrane, struct. change due to light damage, small-angle X-ray investig. 2-105759

biomolecular effects of radiation

- see also biological effects of (type of radiation)
- see also photosynthesis
- alanine, secondary ion emission, time of flight mass spectra 2-99241
- amino acids, optically active, effect of longitudinally polarised protons 2-62691
- bacterial plasmids, mechanism of inactivating effect of laser UV radiation 2-111736
- bacteriophage T4B, 70 GeV proton irrad., microdosimetric anal. (Russian) 2-88603
- bacteriophages, MS2 and T7, inactivating effect of laser and conventional UV light sources 2-57870
- bacteriorhodopsin photocycle, procedure for testing kinetic models 2-73196
- beta-decay, rel. to origin of biological chirality, expts. 2-88505
- beta-decay, rel. to origin of biological chirality, theory 2-88506
- biochemical effect of laser radiation 2-100058
- biorganic solids, ion induced desorpt. of mols., conf., Uppsala, Sweden (June 1981) 2-94884
- blood kinn level after one exposure to intense UV radiation in rabbits 2-62685
- blood kinn level during long-term UV exposure in rabbits 2-62686
- blood serum irradiated with UV, biological action mechanism, free radical products 2-100062
- carboxymyoglobin ligand photodissociation, kinetics and temp. dependence 2-68048
- ceruloplasmin, human, UV laser radiation effect 2-78394
- chlorophyll a and its analogues, photophys. of complexes with π -acceptors 2-67947
- chlorophyll a layers, mobility of photogenerated holes 2-67948
- chlorophyll fluorescence, light induced, photoinhibition of intact Bryopsis chloroplasts illuminated under anaerobic conditions 2-111636
- chromatin DNA, replicating, ^{137}Cs γ -ray induced thymine base damage 2-105801
- conference on radiation research, Salt Lake City, USA (Apr. 82) 2-112652
- deoxyribonuclease I, bovine pancreatic, effect of dilution on thermal neutron induced inactivation 2-105753
- desorption, fast heavy ion induced, rel. depend. 2-94127
- desorption yields for high and low energy primary ions 2-98430
- DNA, γ -irrad., radiolytic pathways: influence of chem. and conformational factors 2-88624
- DNA, biologically active, inactivation by hydrated electrons 2-105789
- DNA, light-induced diffusion, theory and automated expt. (Russian) 2-88587
- DNA, molecular modification, fast heavy ion induced desorpt. mass spectrometry 2-100170
- DNA, radiation damages in wheat seedlings, hybridisation method study (Russian) 2-57852
- DNA, single-strand breaks formed by ps laser UV irrad. 2-116986
- DNA from old rat tissues, circular dichroism spectrum similarity to γ -irrad. DNA 2-105785
- DNA-tryptophan complex, effect of UV and γ -radiation (Russian) 2-57862
- electron microscopy, biomolecular, resolution rel. to electron irradiation susceptibility 2-117175
- ergosterol, desorption, fast heavy ion induced 2-98429
- ergosterol, desorption yield as function of fast heavy ion beam angle of incidence 2-87058
- erythrocyte membranes, use of circular dichroism spectroscopy in mol. phototoxicity study 2-116999
- etiolated bean leaves, illumination at low temp., fluoresc. lifetime spectra 2-111618
- globular proteins, comparative investigation of radiation oxidation and X-ray chemiluminesc. 2-111745
- glycylglycine, desorption, fast heavy ion induced 2-98429
- haematoporphyrin, laser excitation, energy transfer, appl. to phototherapy 2-62681
- haemocyanin, Limulus polyphemus, UV laser radiation effect 2-78394
- haemoglobin, possible effects of 10^{11} Hz radiation on O_2 affinity 2-111733
- haemopoietic system, rabbit, changes in DNA pyrimidine clusters immediately after γ -irrad. (Russian) 2-105767
- ion induced mass spectrometry role in biochemistry 2-100169
- laser applications in biology, conf., Tbilisi, USSR (Nov. 1980) 2-94902
- luciferase, inactivation by pulsed ionising radiation, real-time kinetic study 2-105798
- lymphoid cells, mol. mechanisms of interphase death, RNAs of irrad. rat thymocytes (Russian) 2-105772
- nucleic acid bases, high-power UV laser radiation effect, two-stage photodecomposition 2-100066
- nucleic acid components, high intensity UV exposure, two-photon photochemistry 2-99900
- nucleic acids in HeLa tumour cells, rate of synthesis, ultrashort UV laser pulse action 2-100064
- peptides, desorption of chromophore ions under laser irrad. (Russian) 2-105763
- phospholipid vesicles, multilamellar, fluoresc. depolarisation studies of phase transition after microwave irrad. 2-111732
- photosynthetic reaction centres, anisotropic mag. interactions of primary radical ion pair 2-116893
- protein crystals, electron radiation sensitivity 2-117018
- protein systems, elec. field effects on kinetics 2-111723
- proteins and other substances, aq. solns., macroscopic fluctuations rel. to cosmo-geophys. factors 2-111746
- proteins and viruses, method to increase lifetimes under X-ray exposure 2-117155
- retinol, all-trans, photodissoc. processes, biphotonic origin 2-116718
- rhodopsin, conversion on light irrad., orientational changes of absorbing dipole of retinal 2-62614
- rhodopsin molecule in photoreceptor membrane, photodamage, oxidation of SH groups 2-99894
- rhodopsin molecules, aggregation on exposure of photoreceptor membranes to damaging action of light 2-111737
- tyrosinase, mushroom, UV laser radiation effect 2-78394
- valine, energetic ^{60}Co ion bombardment, desorbed secondary ion yield as function of ionic charge state 2-99242
- valine film, secondary ion emission as function of primary ion velocity 2-99245
- virus capsid destruction by laser radiation 2-100060
- viruses, mechanism of inactivating effect of laser UV radiation 2-111736

biomolecular effects of radiation continued

- vitamin D₃ synthesis in human skin rel. to solar UV spectra 2-99897
- glycylglycine, desorption yield as function of fast heavy ion beam angle of incidence 2-87058

biomolecules *see macromolecules; molecular biophysics***bionics** *see biocybernetics***biophysics**

- see also aerospace biophysics; biological fluid dynamics; biomechanics; cardiology; cellular biophysics; haemodynamics; hearing; molecular biophysics; speech; vision*
- amplification and adaptation in regulatory and sensory systems 2-105634
- Arctic, central, bioluminescence under ice in spring 2-78696
- EM absorption, postresonance, in man and animals 2-111726
- entropy decreases in biosystems, theory of sources 2-78278
- Frohlich nonthermal excitations in biological systems 2-105633
- homing instinct in animals, possible methods (*Japanese*) 2-94267
- laser beam broadening in dense biological tissue scatt. media 2-94104
- neutrons, secondary, prod. by high-energy bremsstrahlung in C, N, O and tissue, energy spectra 2-62677
- physical fields of biosystems 2-78277
- pion capture probabilities in tissues and tissue-equivalent materials 2-73299
- pions⁺, absorpt. within O₂-containing organic compounds, energy spectra of emitted particles, therapy appl. 2-111727
- pions⁺, energy deposition spectra calc. from pion nucleus interaction data 2-116984
- prolate spheroidal models exposed to near fields of elec. small apertures, absorpt. characts. 2-100042
- review of biophysics and bioengineering, book 2-93978
- tissue-equivalent cloud chamber gas mixture, ionisation distribts. calc. 2-88584
- vegetation surfaces at Rocky Flats, Colorado, importance of Pu contamination 2-78458
- Whitehead-Heisenberg ontology, mind, matter, quantum theory, relativity, interrelationships 2-58585
- ²¹⁰Pb ions and insoluble particles, differential retention in rat nasal mucosa 2-83664

bioreology

- alveolar-capillary diffusion and ventilation-perfusion inhomogeneity, math. model 2-67927
- artery wall, mass transport 2-73293
- articular cartilage, equilib. water partition 2-105712
- blood, viscoelastic law with relax. time (*French*) 2-68034
- blood and othr particulate suspensions, flow through narrow tubes, 3-layer semi-empirical model 2-105747
- blood flow velocity measurement using laser Doppler microscope 2-94261
- blood plasma lipoprotein microviscosity rel. to risk of contracting ischaemic heart disease 2-100019
- blood suspension, pipe flow, unsteady, numerical study 2-55648
- cartilage poroelasticity, strain energy and viscous loss 2-105727
- cervical mucus, bovine, flow permeation anal. 2-73271
- collagen fibres, viscoelastic model 2-105718
- contact lens deformation, effects on tear film pressures induced during blinking 2-88535
- cryo-jaw, clamp for in vitro rheology studies on horse digital flexor tendons 2-117158
- cytokinesis in animal cells, viscoelastic model 2-57793
- erythrocyte aggregator for rapid quantification of aggregation using IR transillumination (*German*) 2-111770
- erythrocyte deformability, procedure for determ. (*German*) 2-117141
- erythrocyte membrane, extensional flow from cell body to elastic tether, anal. 2-99917
- erythrocyte membrane, extensional flow from cell body to elastic tether, expt. 2-99918
- erythrocyte membrane, viscoelastic behaviour 2-100020
- erythrocyte membrane submitted to a bending stress, spin label study of mol. struct. 2-105667
- erythrocytes, aggregation kinetics in disease 2-105671
- erythrocytes, reduced filtrability due to plasma protein interactions 2-105672
- erythrocytes, sedimentation under gravity, comparison with suspension of rigid spheres 2-105670
- erythrocytes migration, Fåhrus-Lindquist effect mechanism (*Russian*) 2-83584
- femur, proximal, human, effect of age on blood flow 2-62647
- fluid trapping beneath deformable fluid cell membranes 2-111642
- inhaled aerosols: lung deposition and clinical appls. 2-83588
- ligament, canine medial collateral, time and history-depend. viscoelastic props. 2-62666
- liver, rheology of normal and modified tissue (*French*) 2-68035
- lung, capsular and intra-alveolar fluid press. comparison 2-111718
- lung, extravascular pulmonary space, longitudinal diffusion rel. to parameter estimates 2-83594
- lung, normal, regional diffusing capacity during a slow exhalation 2-111720
- lung, pig, hypoxic vasoconstriction and fluid filtration 2-78374
- lung, pores of Kohn, size rel. to transpulmonary and vascular press. 2-73286
- lung, rabbit, ¹⁴CO₂ exchange, role of perfusion and diffusion 2-78377
- lung, single-breath CO exchange, CO diffusing capacity meas., improved accuracy and precision 2-78470
- lung, total lymph flow and fluid compartmentation in oedematous dogs 2-78381
- lung fluid and protein exchange, effects of different size microemboli 2-78368
- lung surfactant, lipid fluidity: monolayers of saturated and unsaturated lecithins 2-78371
- lungs of awake newborn lambs, hypercapnia effect on net fluid filtration 2-78367
- membrane microviscosity, extraction from translational and rot. diffusion coeffs. 2-62567
- microcirculation, interaction of fluid movement and particle diffusion across capillary walls 2-88578
- monomolecular layers, insoluble, dynamical props. under press. (*French*) 2-62646
- mucociliary transport, coordination in human trachea and intrapulmonary airways 2-78373
- mucus-lined tubes, resistance to steady and oscill. flow, canine trachea appl. 2-116952

bioreology continued

- myocardium, regional flow estimation using CT, stochastic formulation 2-100104
 - neutrophils, human, rheology rel. to physicochemical factors 2-99919
 - osmoregulation and interstitial fluid press. changes in humans during water immersion 2-73284
 - particles flow along a deformable tube 2-105738
 - peristaltic transport of a 2-layered model of physiological fluid 2-105724
 - peristaltic transport of a power-law fluid with variable consistency 2-116971
 - phage T2 DNA solns., hydrodynamic props., investigation using a rot. viscometer 2-67929
 - phospholipid vesicle tether formation, surface viscosity meas., anal. 2-67971
 - phospholipid vesicle tether formation, surface viscosity meas., expts. 2-67972
 - Poiseuille flow of micropolar fluid with non-zero couple stress at boundary, blood flow appls. 2-105711
 - protein adsorption, from sheep's blood, Fourier transform IR obs. 2-100015
 - pulmonary blood plasma filtration in reptiles 2-73289
 - pulmonary capillary blood flow estimation, multiple breath method viability 2-83667
 - pulmonary capillary blood flow estimation, single breath method viability 2-83666
 - pulmonary gas exchange during HF ventilation, dog expts. 2-116954
 - pulmonary vascular tone rel. to dV_a/dQ matching in obliterative pulmonary hypertension 2-73278
 - red blood cell mechanics, viscoelastic membrane surface flow in viscous fluids 2-111635
 - red blood cell motion in shear flow, theoretical model 2-100026
 - rheoencephalographic signals, frequency-domain analysis, patient monitoring appl. (*Chinese*) 2-83665
 - secretion viscoelastic props. meas. using oscillating sphere mag. micrometer 2-68208
 - serum albumin, borine, temp. depend. of viscosity 2-116948
 - spermatozoa self propulsion in the cervical canal, microcontinuum anal. 2-94006
 - synovial fluids, human, rheology 2-94100
 - tear film, human, Marangoni convection 2-78358
 - tissues with nonuniform blood flow distribts., transient temp. profiles 2-116887
 - visceral pleural fluid movement, influence of alterations in Starling forces 2-73282
 - viscoelastic behaviour, model for biological materials 2-100030
- Biot-Savart law** *see electromagnetism*
- biothermics**
- antifreeze capabilities of beetle (*Rhagium* sp.) 2-105663
 - aortic nerve stimulation in rabbits under hyperthermia 2-62562
 - autoradiography, collection of large cryo-sections without using adhesive tape 2-105876
 - biopolymer denaturing, enthalpy rel. to low temp. heat capacity of helix and coil macromols. 2-67956
 - blood, human red cells, cryopreservation 2-62850
 - blood conductivity at time of coagulation, recording with a biactive clamp, temp. effects (*French*) 2-116900
 - blood erythrocytes and plasma, dog, K and Na ions content after radiation and heat exposure (*Russian*) 2-57843
 - blood-brain barrier, microwave hyperthermia-induced alterations, rat expts. 2-88589
 - brain cooling, rapid, in free-running hamster, *Mesocricetus auratus* 2-78298
 - brown adipose tissue thermogenesis suppression during lactation 2-93992
 - burned patients, use of IR radiation to reduce heat loss, phantom expts. 2-68100
 - cancer, biology of local heat therapy 2-88510
 - cancer detection and treatment enhancement using passive microwave thermography and microwave heating 2-105813
 - cancer patients therapy using combined local hyperthermia and irradiation 2-62725
 - cancer treatment using localised hyperthermia, practical considerations 2-62724
 - carboxymyoglobin ligand photodissociation, kinetics and temp. dependence 2-68048
 - cardiac output, technique for continuous meas. based on temp. variations 2-73388
 - cell freezing induced geometry changes, effect on dose from internal isotopes decay 2-67982
 - cell survival at elevated temps. rel. to microwave irradiat. 2-68052
 - cellular freezing damage, unilamellar liposomes as a model system 2-73210
 - chloroplasts, mag. oriented, field conc. and temp. depend. of fluoresc. polarisation 2-100040
 - chloroplasts, pea, picosec. fluorimetry of 685 to 732 nm bands at low temp. 2-105676
 - CHO cells, differential cytotoxic effects of hyperthermia below and above 43°C, alone or combined with X-irrad. 2-67960
 - CHO cells, effect of hyperthermia on repair of radiation-induced DNA strand breaks 2-94111
 - CHO DNA polymerases α and β , effect of hyperthermia 2-88521
 - circular cylinder, near-field absorpt. from elec. and mag. line sources, biological heating appl. 2-100053
 - clinical hyperthermia systems engineering problems and solutions 2-62829
 - clinical hyperthermia trials: design principles and practice 2-62720
 - clinical radiofrequency hyperthermia by magnetic-loop induction 2-62721
 - clinical thermometers, testing 2-117115
 - cold-specific feeding response of rats to cold exposure, energy density of body wt. change 2-78294
 - collagen, temp. stability rel. to biological functions 2-67958
 - colon tumour, human, responses to hyperthermia of oxidic and hypoxic cells 2-105681
 - conference on bioengineering and microtechniques, Besancon, France (Apr. 82) 2-112638
 - conference on radiation research, Salt Lake City, USA (Apr. 82) 2-112652
 - corneas, human, preservation by low temp. techniques (*French*) 2-117105
 - cryo-presentation, long-term storage of biological specimens 2-68206
 - cryofixation, simple procedures for evaluation 2-83713
 - cryosectioning process for tissue prep. 2-83716

biothermics continued

- cryosurgery, appl. to otolaryngology 2-62828
 cryoultramicrotomy, evidence against melting and use of low temp. cement for specimen orientation 2-83715
 cytoplasm, primitive motile system, information-thermodynamical model 2-99927
 dew-point temperature, automatic sensor, sweating meas. appl. 2-111823
 diathermy optimisation and cancer treatment using hot transfer principles 2-73198
 dielectric properties of tumor and normal tissues at radio through microwave frequencies 2-62717
 digital display medical temperature monitor (*Rumanian*) 2-62802
 dipalmitoyl phosphatidylcholine monolayer stability, temp. lung surfactant appl. 2-78297
 DNA cross-linking with chromosomal proteins induced by X-rays, thermal enhancement 2-88621
 ear, thermal enhancement of radiation damage in mice, differential effect of prior heat treatment 2-105664
 ecosystem, stationary community, number of species rel. to temp. 2-67957
 egg incubation temperature rel. to sex determ. in Alligator mississippiensis 2-73200
 EM dosimetry in a sitting rhesus model at 225 MHz, thermal meas. 2-111798
 embryos, preimplantation, mice, heat stress, comparison with microwave irradiation 2-100054
 epidermis of human skin, pyroelec. and piezoelec. sensor layer 2-100013
 erythrocyte membrane, effect of hyperthermia and ionising radiation 2-105791
 exonuclease, membrane-bound, γ -radiation-releasable, Arrhenius plot behaviour 2-62701
 finger skin temperature after a finger-cooling test, rel. to air temp. and smoking 2-116886
 finite element analysis of temperature distribution in human torso 2-99902
 sword-fish, brain temp. maintenance by exothermic tissue 2-105665
 foods, diffusivity, temp. depend., meas. by transient method 2-75832
 freezing, numerical stability of finite element solns. 2-67962
 freezing damage with freeze substitution using moth antennae as test objects 2-83718
 frostbite, animal models 2-62563
 frozen hydrated specimens for electron microscopy, thermal and radiation damage 2-83720
 genetics, cryogenic preservation, effects on struct. 2-62573
 hairy caterpillar, thermal insulation for ectotherm 2-67961
 heart surgery, non-contacting temp. meas. technique (*German*) 2-111811
 heat flow in human torso, 2D time dependent model 2-93993
 heat flow in human torso, numerical modelling using finite element method 2-93994
 HeLa cells hyperthermal effects on nucleoids sedimentation in sucrose gradients 2-88522
 homeothermic response to reduced ambient temperature in a scarab beetle 2-105666
 hyperthermia, local, using microwaves for therapy, expts. with various applicators 2-105761
 hyperthermia, localized, in cancer treatment 2-83629
 hyperthermia, theoretical comparison of temp. distrib. prod. by several systems 2-62731
 hyperthermia, whole-body, simulations of various modes in normal subjects 2-93980
 hyperthermia delivery system using scanning, focused US 2-62712
 hyperthermia for microvascular studies, uniform thermal field 2-111820
 hyperthermia local therapy for cancer, physical principles, RF and US heating 2-73199
 hyperthermia production for cancer therapy: a review of fundamentals and methods 2-62716
 hyperthermia system, localised current field, for use with ^{192}Ir interstitial implants 2-83700
 hypothermia, effects on spinal mechanisms, clinical neurology and neurosurgery appls. 2-62581
 insulation, superficial shell, in resting and exercising men in cold water 2-111627
 intestine, mouse, increased hyperthermal response after prior X-irrad. 2-105660
 intravascular temperatures of arms and legs of men during submax. exercise 2-78296
 α -keratin fibres thermally stimulated depolarized currents, correl. walk model 2-88498
 left ventricular heat production, hybrid device for meas. 2-99905
 lipid bilayer membranes, ion adsorption isotherm in internal field compensation conditions 2-57782
 liquid crystal thermometry of cells during hyperthermal microwave irradiation 2-100163
 living tissue thermal dosimetry and heat transfer 2-62564
 local and regional hyperthermia, microwave/radiofrequency system clinical evaluation 2-62722
 localised microwave hyperthermia meas. in thorax phantom 2-78385
 low temperature survival of frogs 2-78299
 magnetic-loop induction hyperthermia, thermal distrib. in phantoms and animals 2-99904
 mammalian cells, 4 lines, responses to hyperthermia and/or radiation 2-73305
 mammalian tissue, cryoprep. for X-ray microanal. in STEM 2-83714
 medical imaging techniques survey 2-78400
 membrane fluidity rel. to heat killing of cells 2-94002
 microcalorimeter, heat cond. batch, computer simulation for deconvolution by D-B finite element technique 2-117161
 microcalorimeter, optimised differential heat cond. soln., for thermal kinetic meas. 2-117160
 microstrip loop radiators for medical applications 2-105811
 microwave and radiofrequency applicators thermal effectiveness and safety evaluation 2-62718
 microwave and RF hyperthermia, applicators 2-62730
 microwave bioeffects, heat transfer in surface-cooled objects subject to microwave heating 2-116885
 microwave cancer therapy, blood flow effects on temp. distrib. from invasive antenna array 2-100087
 microwave hyperthermia, deep heating technique 2-68106
 microwave hyperthermia, embedded insulated antenna 2-62732
 microwave hyperthermia direct contact dielectrically loaded applicators design and operation eval. 2-62719

biothermics continued

- microwave irradiation of phantoms, influence of bone on temp. patterns 2-62683
 microwave thermography, appl. to estimation of subcutaneous temp. profiles in human body 2-68105
 microwave thermography for temp. profile meas. inside human body, noninvasive (*Japanese*) 2-100082
 multipole applicators for regional and whole-body hyperthermia 2-73311
 muscle, smooth, freeze-substitution and isothermal freeze-fixation studies to elucidate ice formation pattern 2-83717
 neonates, thermal management, clinical appraisal 2-105850
 neurogenic rat cell line, effect of hyperthermia in vivo 2-111626
 numerical modelling in diffusion convection, conference, Sunderland, England (May 1981) 2-89466
 ocular lens opacification in cold cataracts, identification of scatt. elements responsible 2-62597
 oesophageal probe for heart and temp. monitoring during anaesthesia 2-68183
 oesophageal temperatures, prediction from core temps. measured at other sites in man 2-67959
 oncogenic transformation by X-rays in C3H 10T $^{1/2}$ cells, hyperthermic modulation 2-68075
 orthopaedic cutting operations, temp. elevations, bovine expts. 2-105662
 phospholipid bilayer membranes, temp. dependence of rupture pot. 2-67968
 phospholipid bilayers, press. induced phase transitions, Landau phenomenological theory 2-105669
 plant tissue, freezing using polymeric cryoprotectant 2-84603
 proteins, atomic displacements, temp. depend., local nonharmonic pots. 2-57777
 radiofrequency hyperthermia, clinical experience 2-62723
 radiophysical method for detecting temp. anomalies of human internal organs 2-117050
 rapid-freeze clamp, stimulator-regulated, for terminating cardiac metabolic processes 2-78508
 respiratory exchanges meas. of different sized animals, automatic and continuous gas sampling, indirect calorimetry 2-62866
 respiratory heat transfer in cold water and during rewarming 2-88514
 RF hyperthermia by magnetic-loop induction for human cancer therapy 2-111772
 RF irradiation using 13.56 MHz generator, heating patterns in pig thorax and abdomen and large phantoms 2-100057
 ribonuclease A cryst., conformation, temp. depend., laser-Raman spectra and X-ray diff. 2-73190
 roentgenographic correlations in unaltered breast (*Russian*) 2-62734
 skin, port-wine stain model, temp. behaviour during Ar laser coagulation 2-111628
 skin and subcutaneous tissue, 2-D steady state temp. distrib., finite element anal. 2-57784
 skin burns, role of contact resistance 2-93991
 skin temperature and EMG training for primary dysmenorrhea 2-78293
 snakes, IR 'vision', heat sensitive pit organs 2-73201
 spermatogenic epithelium, mouse, effects of 2.45 GHz microwave radiation and heat 2-57851
 spores of *Bac. subtilis*, low temp. rel. to survival after γ -irrad. (*Russian*) 2-88608
 SW diathermy, exposure to operator and patient 2-68102
 sweating effect on myoelec. artificial hand, gain-compensated EMG amplifier 2-100156
 temperature control system, programmable, for biological materials 2-100175
 thermal conductivity measurement of living tissues, pulse-decay method 2-62871
 thermistor catheter for core temp. meas. 2-94228
 thermocouple thermometry in microwave fields 2-68101
 thermomodulation technique for cardiac output meas. during artificial ventilation 2-73402
 thermoelectric cooling in medicine, Peltier effect based devices 2-78474
 thermoprobe, sheathed micro, for local temp. meas. in tissue 2-78472
 thermoregulatory influences on common carotid blood flow in the dog 2-116950
 thermoregulatory set-point, mouse, lack of change due to obesity 2-88511
 thermotolerance induction and evidence for a well-defined, thermotropic process in Chinese hamster cells 2-88513
 thermotolerance kinetics, mouse foot obs. 2-88512
 tissue spheres, temperature profiles due to microwave heating 2-105762
 tissues with nonuniform blood flow distrib., transient temp. profiles 2-116887
 Tribolium, hyperthermic radiosensitisation, rel. to temp. and heating duration 2-94119
 tumor local hyperthermia using a computer-controlled microwave system 2-111768
 tumour, hyperthermia effect on hypoxic cell fraction 2-99903
 tumour vascular function, effects of hyperthermia, radiation and adriamycin combinations 2-117009
 tumours, local heating and X-irrad. rel. to metastatic spread in mice 2-105661
 TV monitor with electrochemical recording of thermograms, Soviet Ruby-3 model 2-62729
 US hyperthermia in malignant brain tumours treatment, tissue damage threshold and thermal dosimetry 2-62679
 US lens, annular focus, for local hyperthermia treatment of small tumours 2-94139
 US-induced cell killing, temp. dependence, role of membrane fluidity 2-100046
 US-induced hyperthermia for treatment of human superficial tumours 2-117024
 ventilation and acid-base balance in desert iguanas, effects of temp. 2-78295
 water crystallisation, grapevine tissue, possible mechanism of process, ^1H NMR obs. 2-111615
 water crystallisation in plant tissues 2-57783

biote see *mica*

biotransport

- see also *biodiffusion; biological fluid dynamics; biomembrane transport; cellular transport and dynamics; neurophysiology*
 alveolar-epithelial solute and water transport props., effects of lung inflation 2-111646

biotransport continued

- artery wall, mass transport 2-73293
 conference on medical phys., Varenna, Italy (Jun.-Jul. 79) 2-89448
 lung, Bohr-Haldane effect rel. to steady-state gas exchange 2-116897
 mucociliary transport, coordination in human trachea and intrapulmonary airways 2-78373
 perfluorocarbon, use in O_2 and CO_2 transport, STO-3G calcs. 2-88527
 peristaltic transport of a 2-layered model of physiological fluid 2-105724
 peristaltic transport of a power-law fluid with variable consistency 2-116971
 polar transport mechanism for biological pattern formation 2-73187
 pulmonary capillaries, gases transport, equilib. constants arising in the O_2 dissociation curve 2-116898
 pulmonary gas exchange during HF ventilation, dog expts. 2-116954
 radioisotope transport in the human intestine, math. model, dosimetric considerations (*Russian*) 2-88490
 tongue, dog, active ion transport, possible role in taste 2-62642

bipolar integrated circuits

- 1/f noise correlation expts., absence of temp. fluctuations 2-72039
 junction-isolated bipolar IC heterojunction laser driver for optical communications 2-70706
 Si low pressure epitaxy for bipolar VLSI 2-87993

bipolar transistor circuits

- Used for general papers and papers where use of bipolar transistors is significant
 head amplifiers for high energy appl. of Si detectors 2-64795

bipolar transistors

- see also bipolar integrated circuits
 base-emitter voltage transistor characteristics for temperature sensing 2-101414
 digital balanced instrument for f_T and β_F meas. (*Chinese*) 2-69156
 Lubistor, lateral, unidirectional, bipolar-type insulated-gate transistor, characts. 2-56674
 phototransistor, monolithic integration with GaAlAs buried heterostruc. laser 2-60259
 three dimensional transient finite element model of semiconductor transport eqns. 2-71962
 Si film on Si_3N_4/SiO_2 double insulating layer, CW laser recrystallisation, bipolar transistor fabrication 2-82154
 Si, monolithic hot electron structures, current transport meas. 2-82371

bipoles see network analysis; network synthesis

birefringence

- see also flow birefringence; Kerr electro-optical effect; light polarisation; magneto-optical effects; mechanical birefringence; optical constants; optical rotation
 trans-4-alkyl(4-cyanophenyl)-cyclohexanes, nematogenic homologous series, orientational order 2-109665
 alkylene glycol terephthalate copolymers with mesogenic p-oxygenzoate units, thermal transitions 2-61139
 bis(tetradecylammonium) zinc chloride, phase transitions, room temp. to 438K, thermal, dielec., and optical meas. 2-56176
 bis-propylammonium tetrachloro-zincate, second order ferro-paraelastic phase transition, birefringence 2-61124
 bistable twisted nematic liquid crystal boundary layer display, optical props. 2-86546
 butoxybenzylidene heptylaniline, smectic-A-smectic-C transition, mag. birefringence determ. of tilt susceptibility 2-115411
 chain light-filter, birefringent, basic theoretical formulae (*Russian*) 2-60221
 cholesterics, thermomechanical coupling expt. 2-60883
 cholesteryl benzoate (laurate), refr. indices, densities, polarisabilities, and mol. order 2-60876
 crystal surfaces, uniaxial, Brewster and pseudo-Brewster angles, optical property determ. appls. 2-75516
 crystalline polymers, birefringence meas. using far-IR interferometry 2-95465
 crystals with anisotropic point, polarised beam multiple-beam selective interference 2-65163
 cubic crystals, optical anisotropy induced by spatial dispersion 2-77485
 4-cyano-4'-pentybiphenyl-hexamethylbenzene, isotopic to nematic transition, substrate surface effects, birefringence study 2-115408
 dicalcium barium acrylate, ferroelastic phase transition, lattice const. and birefringence 2-92187
 dielectric, optical property determ. method 2-107376
 discotic mesophase, Freedericksz transition, phys. parameters meas. 2-76286
 dispersive birefringent filter theory, very narrow band pass width 2-109020
 dralon fibre of dog-bone cross-sectional shape, birefringence, interferometric meas. 2-91049
 E-glass fibres, struct. sensitive meas. rel. to prep. conditions 2-93484
 elastomers, transparent, degree of crystallinity under stretching (*Russian*) 2-67465
 elliptical-core single-mode fibre, polarisation mode dispersion due to thermal-stress-induced birefringence 2-86111
 fibre, high birefringence, polarisation holding 2-75695
 fibre, single-mode, birefringent, stimulated four-photon mixing, stress-induced freq. tuning 2-114358
 fibre, single-mode, single-loop polarisation stabilisation 2-97209
 fibre birefringent networks, inline single mode 2-97222
 fibre optic gyroscopes, birefr. and polarisation effects 2-75690
 fibre optic ring resonator, closed-loop, birefr. effect on reson. freq. 2-97213
 fibres, acoustically induced birefr. 2-109058
 fibres, monomode, coiled, Faraday rot., isolator, filter and mag. sensor appls. 2-75712
 fibres, single-mode, birefringent transmission bandwidth, polarisation-mode coupling influence 2-109056
 filters for dye laser tuning (*Chinese*) 2-97026
 FT machine, polarimetric density meas., expt. approach 2-109599
 garnet layers, refractive index dispersion, dark m-lines method 2-82946
 hexamethylbenzene, high temp. phase transition, birefringence and optical path difference study 2-71634
 iso-index diffraction materials, figure of merit 2-81057
 Jones matrix method, extended, off-axis light transmission through birefr. networks 2-75512
 laser polarisation, bistable behaviour obs., intracavity birefr. explanation 2-97050
 linearly single polarisation fibres with zero polarisation mode dispersion, optimum waveguide struct. 2-65374

birefringence continued

- low-dimensional magnetic systems, magneto-optical effects, review (*Japanese*) 2-82831
 Lyot depolariser, white light depolarisation by birefr. cryst. 2-75660
 3-methyl-4-nitropyridine-1-oxide, mol. crystal, nonlinear-optical props. obs. 2-65304
 monocrystals, birefringence of channelled γ -quanta 2-93149
 nematic liq. cryst., tilt bias angle determ. by Rayleigh line intensity ang. distrib. 2-91764
 nematic liq. cryst. film, optically induced birefringence, laser beam self focusing 2-55281
 nematic liquid cryst., hydrodynamic instability, convective struct., defects 2-71349
 nematic liquid crystals, optical uniaxial birefringence meas. 2-104844
 nonlinear crystals, uniaxial and biaxial, single ultrashort pulse duration meas. by second harmonic method 2-55267
 nonlinear viscoelastic polymer, unloading process, birefringent effect 2-109201
 optical fibre development, low and high-birefr., polarisation props. 2-65372
 optical fibres, twisted single mode, circular birefr., scatt. light meas. 2-60248
 optical waveguides, planar, graded-index, critical ray-like propag. modes 2-91044
 optically active birefringent crystal, coupled-mode analysis of light propag., linearly polarised eigenmodes 2-55062
 perovskite struct. $ABCl_3$ crystals, phase transition sequence, thermodynamic description 2-103983
 (perylene) $_2$ AsF $_6$, PF $_6$, polarisability and absorpt. tensor orientation 2-87810
 plexiglass, acrylic, optical wedge fabrication 2-114407
 polymer molecules, thermoelectric birefringence, expt. upper limit 2-86366
 poly(α -L-glutamic acid) in N,N-dimethylformamide, electrooptical props. and conformation, electric birefringence study 2-80856
 poly(γ -benzyl-L-glutamate), orientation behaviour in electric field 2-71335
 polycarbonate glassy polymers, time depend. birefringence during stress relax. and recovery 2-72448
 polydisperse equivalent spheres, elec. birefr. evaluation of particle size distrib. 2-70507
 polyethylene films, crystalline, struct. mol. mobility, photoelasticity and torsion pendulum obs. (*Russian*) 2-110813
 polypropylene fibre, multiple skin, refractive index and birefringence variations, interferometric meas. 2-91048
 polystyrene glassy polymers, time depend. birefringence during stress relax. and recovery 2-72448
 polyvinylidene fluoride-trifluoroethylene copolymer, ferroelec., refractive index and birefringence meas. 2-57038
 rare earth iron garnets, magneto-optic anisotropy, many-sublattice model 2-72465
 rectangular cross section optical waveguide, variational analysis, birefr. effect 2-55325
 refractive index dispersion, dark m-lines method 2-82946
 ring fibre interferometer, nonlinear phase nonreciprocity 2-112969
 Rochelle salt, deuterated, optical indicative and birefringence props., 42 to 318K (*Russian*) 2-61869
 rod, viscoelastic, impulsive loading method, isochromatic fringe pattern obs. of shock waves 2-60492
 rod out segments, modelling birefringence change correlated with metarhodopsin II formation 2-94036
 side-tunnel fibre, polarisation-maintaining optical waveguide scheme 2-114453
 sodium octylbenzene sulphonate-pentanol-decane-water, microemulsion struct., mag. and elec. birefr. meas. 2-73018
 testosteronepropionate in soln., circular dichroism and optical rotatory dispersion, Kramers-Kronig transforms 2-70314
 tetramethylammonium tetrachlorozincate, incommensurate phase, optical birefringence study 2-82819
 tunable birefringent filters, review 2-55306
 tunable narrow band birefringent filters for visible spectrum, wavelength stability and control 2-109021
 twin-cored optical fibres finite difference method anal. 2-86105
 AgGaS $_2$, piezooptical, electrooptical and birefringence consts., meas. in visible region (*Russian*) 2-77490
 As $_2$ S $_3$ chalcogenide glass birefringence obs. using 1.44 μ m radiation 2-77484
 As $_2$ S $_3$ Se $_2$ chalcogenide glass birefringence obs. using 1.44 μ m radiation 2-77484
 As $_2$ S $_3$ Se $_2$ chalcogenide glass birefringence obs. using 1.44 μ m radiation 2-77484
 As $_2$ Se $_3$ chalcogenide glass birefringence obs. using 1.44 μ m radiation 2-77484
 As $_2$ Se $_3$ Te $_2$ chalcogenide glass birefringence obs. using 1.44 μ m radiation 2-77484
 Bi $_2$ GeO $_{20}$ photorefractive crystals, four-wave mixing expt., interference between signal and its conjugate 2-90972
 Bi $_2$ GeO $_{20}$ photorefractive crystals, phase-conjugate wavefront reflectivity, spatial-freq. depend. 2-90992
 Bi $_2$ SiO $_{20}$, elliptical birefringence obs. and interpretation 2-67018
 Bi $_2$ (Te $_{1-x}$ S $_x$), uniaxial crystal, reflectance meas. of optical consts. 2-57041
 CaCO $_3$, calcite 2X2 optical bypass switch controlled by liq.-cryst. cells 2-60257
 CaCO $_3$ calcite plate fabrication, monitoring of linear displacement between ordinary, extraordinary rays 2-114481
 CaCO $_3$ plate optic axis determ. equipment (*French*) 2-58874
 CdGa $_2$ S $_4$ crystals, spatial dispersion effects 2-72446
 CdS, dispersive birefringent filter theory 2-109020
 Fe $_2$ Zn $_2$, Fe $_2$, dil. Ising antiferromag., crit. behaviour, random field effects 2-66854
 GaP crystal with induced anisotropy, anisotropic Bragg diff. of light by ultrasound 2-61873
 Hg $_2$ Cl $_2$, Hg $_2$ Br $_2$, production of light polarisers 2-109009
 KD $_2$ PO $_4$, Pockels effect, image storage tube appls. (*Czech*) 2-82826
 K $_2$ SeO $_4$, phase transform. Raman study 2-72481
 K $_2$ ZnCl $_4$, phase transform. Raman study 2-72481
 α -LiIO $_3$, stimulated Raman scatt., multimode lattice vibr. excitation obs. 2-65300
 LiNbO $_3$, single crystal, optical uniformity, expt. study 2-86065
 Mn $_2$ Zn $_2$ F $_2$, dil. Ising antiferromag., crit. behaviour, random field effects 2-66854

birefringence continued

- N₂ gas, mag. birefr., Cotton-Mouton const. meas. 2-91587
 Na_{0.5}Bi_{0.5}TiO₃, single crysts., birefringence changes during phase transitions 2-57046
 NaIO₄ single crysts., growth and characterisation 2-62056
 NaMnCl₃, mag. phase diagram, paramagnetic-antiferromag. transitions circular birefringence study 2-82596
 Ni₃B₂O₇Br_{1-x}Cl_x, elec. and thermal props. near ferroelectric transition 2-66555
 O₂ gas, mag. birefr., Cotton-Mouton const. meas. 2-91587
 PbBi₂Nb₂O₈, ferroelasticity, Curie temp., birefringence and spontaneous strain 2-81876
 PbDAsO₄, ferroelec., birefringence and transition temp. 2-72447
 PbHAsO₄, ferroelec., birefringence and transition temp. 2-72447
 PbHPO₄, ferroelec., birefringence and transition temp. 2-72447
 Rb₂CrCl₄, linear birefringence and spin correlations 2-93148
 Rb_{1-x}(NH₄)_xH₂PO₄, mixed crysts., competing structural orderings and transitions to glass 2-56192
 Rb₂ZnBr₂(Cl₄), phase transform. Raman study 2-72481
 Rb₂ZnCl₄, optical props. changes at successive phase transitions 2-77476
 Tb₂(MoO₄)₃, spontaneous shear strain meas. and free energy expression 2-72433
 YAG, single cryst., Czochralski grown, dislocations and inclusions, birefringence study (*Chinese*) 2-109709
 YIG:Bi thin films, waveguide type optical isolator appls., magneto-optical props. (*Japanese*) 2-81076
 ZnSe cubic monocrystals, natural birefringence, cause (*French*) 2-82821

bismuth

see also nuclei with

- amorphous film, crystn. under gaseous He stream, T≤4.2K (*Russian*) 2-115586
 atom, 6³D_{3/2} state, radiative lifetime, absorpt. spectra 2-96486
 atoms, incoherent photon scatt. cross sections 2-75220
 bicrystal dislocation struct., compressibility anisotropy influence 2-103768
 Bridgman and zone-levelling cryst. growth, preferred orientation, effect of growth mode 2-111055
 charge carrier drift in external fields, sound amplification, I-V nonlinearity, review (*Russian*) 2-115826
 crystal growth from melt, effect of container shape on (111) plane orientation 2-86597
 cyclotron resonance, nonlinear effects (*Russian*) 2-82721
 electric field gradient, strong ^{206,208}Po probe atom depend. 2-56532
 electrical resist., charge carrier scatt. under high hydrostatic press. 2-56588
 electrical resistivity, thermal cond. and thermopower meas., 1.5 to 50K 2-92607
 electron radiation damage, electron microscopic study 2-61036
 etching of cleavages in NHO₃ propionic acid solns. 2-109782
 film, elec. cond., grain boundaries effect 2-82491
 film, elec. resist., size effects, TCR meas. 2-66678
 film, electron concentration and density of states, modelless calc. 2-92780
 film, evaporated, elec. resistivity, temp. depend. 2-92792
 fusion reactor appls., corrosion and compatibility 2-69864
 high pressure transition, meas. by manganin press. gauge 2-89735
 interface with liquid ⁴He, transient heat transfer, light induced enhancement 2-92431
 layer, vapour deposited, photolithography and optical characs. control for photography 2-89846
 liquid, electronic density of states, Green's function and perturbative calcs. 2-71854
 liquid, optical absorpt. 2-87813
 liquid, static struct. factor rel. to effective pair pot. 2-60868
 liquid, struct. factor, neutron diff. study 2-71332
 magnetoacoustic attenuation coeff. versus temp. curve, anomalous peak 2-110403
 magnetoplasma wave cross-modulation (*Russian*) 2-56627
 magnetoresistance rel. to temp. meas. in 4K region (*French*) 2-64031
 magnetostriction in quantising mag. fields 2-116048
 microclusters, inert gas condensation 2-103969
 microcylinders, flux quantisation effect in tilted mag. field (*Russian*) 2-98670
 molecule, laser induced fluoresc. of 0-6, 1-6 and 0-5 bands of transition AO₂⁺.XO₂⁺ 2-54889
 nonlinear absorption of shear sound (*Russian*) 2-98203
 plate, surface effect on transverse magnetoresist. (*Russian*) 2-56624
 quantum EM excitations 2-104408
 quantum energy levels, cond. electron density of states (*Russian*) 2-82208
 range profiles of ³He and ⁶Li ions 2-66089
 semimetal, second order phase transition, magnetoacoustic study 2-115828
 small particles vapour deposited onto NaCl substrate, height determ. 2-98483
 superconducting amorphous film, SAW, acoustoelec. attenuation 2-56783
 superconducting films, thermodynamic fluctuations of order parameter, review 2-98809
 target, plasma prod. by laser irr., gasdynamic processes 2-115039
 thin film, as grown, lattice distortion energy spectra, thickness depend. 2-87415
 thin film, avalanche crystallisation (*Russian*) 2-61131
 thin film, classical size effect, rel. to surface roughness and struct. (*French*) 2-110507
 thin film, longit. magnetoresist. max. (*Russian*) 2-115788
 thin film, resistivity and energy gap variation with film thickness 2-92791
 thin films, magnetoresist. anomalies in quantum correction region (*Russian*) 2-66574
 thin wires, size effects, resist., magnetoresist., and thermoelec. power meas. 2-92632
 thin wires, transverse magnetoresist. in high elec. and quantum mag. fields (*Russian*) 2-56614
 whiskers, I-V curves at 4.2K (*Russian*) 2-56576
 BaS:Bi phosphors, delocalisation of impurity-electron excitations 2-77574
 BaS:Bi phosphors, thermally stimulated conductivity 2-72006
 Bi, deformed, electron-electron interaction effect in temp. depend. of elec. cond. (*Russian*) 2-104352
 Bi 1 IR emission spectrum in PbS 2-75209
 a-Bi:H films, elec. and supercond. props. (*Russian*) 2-82506
 Bi:Sb, ion implanted, electronic struct., magnetoref. study 2-99095

bismuth continued

- Bi:Sn, magnetoreflection study, band struct. 2-87747
 p-Bi:Sn, transverse magnetoresistance and Hall effect 2-77093
 Bi-BiCl₃, liq. state, mag. susceptibility meas. 2-92857
 Bi-SiO₂, cermet films, elec. and optical props., H addition effects 2-82505
 Bi⁺He ions, L-subshell ionisation cross sections meas. 2-54942
 Bi₂, A-X band system, lifetimes, transition moment 2-65051
 Bi₂, CW laser, optically pumped, hyperfine struct. 2-96914
 Bi₂, laser, optically pumped by Cu vapour laser, large gain 2-85946
²¹²Bi, isotopic generator, medical appl. 2-78446
 CaS:Bi excitation mech. of Bi³⁺ luminesc. centres, luminesc., TSC and photocond. meas. 2-67103
 InSb:Bi epitaxial layer, Bi distrib., temp. depend. 2-104183
 InSb:Bi solid soln, Bi donor level form., X-ray struct. study 2-115702
 LiLaP₂O₇:Bi³⁺ luminescence of broad band emitters, concentration quenching 2-77575
 Pb/Bi/Jn oxide-Pb/Bi tunnel junction, quasiparticle mixer and other appls. 2-98812
 Pb_{1-x}Sn_xTe:Bi, narrow band gap semicond., galvanomag. and optical props., Cd solubility and diffusion (*Russian*) 2-92666
 Si:Bi, ion implanted, impurity redistrib. after Nd laser pulse irr. 2-115265
 Si:Bi, ion implanted, metastable supersaturated solid solns. formation during solid phase epitaxy 2-98283
 Si:Bi, range profile, Rutherford backscattering and SIMS meas. 2-98138
 Si:Bi, scanning electron-beam annealing 2-103818
 SiO₂:Bi, laws of growth on Si, X-ray spectra 2-77960
 YIG:Bi single cryst., polar Kerr rotation spectra (*Chinese*) 2-77482
 YIG:Bi thin films, waveguide type optical isolator appls., magneto-optical props. (*Japanese*) 2-81076
 YLuBiIG epitaxial films, Bi content and growth-induced anisotropy 2-93457
 ZnSe:Bi, single cryst. photoluminesc. spectra, impurity effects 2-72541

bismuth alloys

see also bismuth compounds

- Pb-Bi alloys, temp. dependence of Young's modulus 2-72747
 Al-Bi alloys, directionally solidified, occurrence of aligned microstructs. 2-111164
 Bi-Al-Pb, ternary phase diagram, computer calc. (*Korean*) 2-67289
 Bi-In melts, thermodynamic activities by Knudsen cell-mass spectrometry 2-67296
 Bi-Sb alloy single crystals, investigation of US vel., elastic const. and internal friction 2-71539
 Bi-Sb thin film, longit. magnetoresist. max. (*Russian*) 2-115788
 Bi-Sn(Te), dilute alloys, anomalous magnetoresistivity in quantising mag. field 2-92664
 Bi-Th alloys, cryst. struct. and heats of formation, X-ray and metallographic study 2-91873
 Bi₇Sb₃ amorphous film, crystn. under gaseous He stream, T≤4.2K (*Russian*) 2-115586
 Bi₉Sb₁₀, many-valley semicond., elec. cond. anisotropy under tension, HF magnetoplasma study 2-87287
 p-Bi₉Sb₁₀, under uniaxial tension, topological electronic transitions 2-66424
 Bi_{1-x}Sb_x alloy, electron Fermi surface comp. depend., magnetoplasma wave study 2-76899
 Bi_{1-x}Sb_x films, semimetal-semicond. transition, thickness depend., resist. and magnetoresist. meas. (*Russian*) 2-82411
 Bi_{1-x}Sb_x, many-valley semicond., helicon propag. 2-115798
 Bi_{1-x}Sb_x, semicond., valence band struct., elec. and thermal cond. study 2-87143
 Bi_{1-x}Sb_x solid soln., system, Vegards rule validity 2-65968
 Bi_{1-x}Sb_x, ZAF correction for electron probe microanalysis 2-93851
 Bi₁₀Sb₁₀ thin film, band gap and intergran barrier activation energies 2-72085
 CeBi, p-f valence mixing, anomalous mag. and transport props. 2-56514
 Cu-Bi (0.1 at.%), grain boundary embrittlement as function of boundary struct. 2-115246
 Cu-Bi(Ag), tilt grain boundaries with substitutional impurities, atomistic study 2-115247
 Fe-Co-Bi, amorphous film, magnetisation, Mossbauer study 2-72263
 Hg-Bi, dil., expanded fluid, thermoelec. power, transition from liq. semicond. to plasma state 2-82387
 Hg-Bi, dilute liq. alloys, thermodynamic and elec. props., density and vol. of mixing 2-61171
 In Bi, dil., US attenuation in supercond. and intermediate states 2-77229
 In-Bi alloys, US vel. and internal friction investigation 2-71585
 Li-Bi, impurity solubility, dislocation and deformation effects, ESR study (*Russian*) 2-103996
 Li-Pb-Bi, liq. breeds blanket material, candidate studies 2-75001
 Mg-Bi, Krupkowski method for thermodynamic props. 2-76708
 MgBi, molten, short range order and conc. fluctuations 2-91757
 Mn-Bi, magnetostrictive materials, US induced irreversible changes in magnetisation 2-82640
 Mn-Bi amorphous films, crystn. 2-98480
 MnBi thin films, polycryst., with perpendicular anisotropy, domain wall coercivity 2-72310
 Na-Bi, molten alloy, chem. pot. and related thermodynamic props. 2-92235
 e-Pb-Bi film, alloy evaporation prep. and comp. control 2-105077
 e-Pb-Bi film, alloy evaporation prep., film comp. control 2-111077
 Pb-Bi film, Josephson junction counter-electrode, strain distrib., X-ray study 2-82179
 Pb-Bi films, strain relax. meas. on Si substrates 2-82189
 Pb-Bi(Sb) melts, activity coeff. of O 2-67299
 PtBi, band struct. and optical props. 2-76916
 Zn solid/Zn-In(Bi)(Sn)(Pb) liquid, equil. struct. transitions of solid-liq. interface 2-93487
 Zn-Bi, molten, surface tension, rel. to thermodynamic enthalpy and activities, eqns. 2-61260
 Zn-Bi alloys, molten, density and surface tension 2-61259

bismuth compounds

see also bismuth alloys

- garnet films, magneto-optical props., thermomagnetic recording (*Russian*) 2-61715
 layer-structured ferroelectric ceramics, dielectric and piezoelectric props. 2-61122
 Ag-Bi₂Ti₂O₁₀:Al, local levels in forbidden band of Bi_{1/2}Ti₂O₁₀ 2-71899

bismuth compounds continued

- Al₂O₃-ZrO₂-Bi₂O₃ refractories, thermal shock resist., Bi₂O₃ effect 2-93623
- BGO scintillator based gamma ray detector, characts. 2-108276
- Bi₂SiO₂₀, photorefractive materials, phase conjugation, real time optical processing and dynamic holography appl. 2-65312
- BaPb_{1-x}Bi_xO₃, supercond. ceramics, thermodynamic props. 2-92820
- BaPb_{1-x}Bi_xO₃, supercond. props., effect of O²⁻ conc. 2-115939
- BaTiO₃-Bi₂Ti₂O₁₂ low temp. sintered ceramics, microstruct. and elec. props. 2-88035
- Bi-BiCl₃ liq. state, mag. susceptibility meas. 2-92857
- Bi₁₂ [A^{1/3} B^{2/3} V^{1/3}]/O₂₀ (A=Fe, Co, Ga, B=P, As, V, Bi), sillenite struct., tetrahedral environment of cations A and B (French) 2-91913
- α-BiAsO₄, Roseveltite, cryst. struct., X-ray diffr. study 2-81736
- Bi₃-xCa_xFe₂-xIn_xFe_{3-x}V_xO₁₂, magneto-optical Kerr rotation (Chinese) 2-110819
- BiCl₃, polycryst., thermodynamic props., NQR method appls. 2-110696
- BiCl₃-n(π-) donor complexes, NQR study 2-108567
- Bi₂(Co_{0.5}V_{0.5}(Bi_{0.5})₂)O₂₀, trivalent cation tetrahedral sites, ESR study (French) 2-82706
- Bi₂Dy_{1-x}FeO₃ orthoferrite monocrysts., magnetooptic props. meas. 2-82828
- BiF, dissoc. energies and pot. energies curves 2-70373
- BiFeO₃, spiral mag. ordering, neutron diffr. study 2-110569
- Bi₂(Fe_{0.5}V_{0.5}(Bi_{0.5})₂)O₂₀, trivalent cation tetrahedral sites, ESR study (French) 2-82706
- Bi₂(Ga_{0.5}V_{0.5}(Bi_{0.5})₂)O₂₀, trivalent cation tetrahedral sites, ESR study (French) 2-82706
- BiGeO₂₀ resonators, influence of polarising field 2-87681
- Bi₁₂GeO₂₀ crystals, four-wave mixing, appl. to real-time double-exposure holographic interferometry 2-114214
- Bi₂GeO₂₀ crystals, real-time image subtraction in four-wave mixing 2-102752
- Bi₂GeO₂₀ detector suitability for imaging appl. 2-59598
- Bi₂GeO₂₀, drift mobility of photo-induced charge carriers, temp. depend. 2-110396
- Bi₂GeO₂₀, elec. field distrib., space charge density, tranverse electrooptic effect 2-104852
- Bi₂GeO₂₀ energy levels in forbidden zone (Russian) 2-61930
- Bi₂GeO₂₀, four-wave mixing, phase conjugate wavefront generation, refl. hologram 2-60174
- Bi₂GeO₂₀, luminesc. excitation by piezoelec. prod. ultrasound 2-82932
- Bi₂GeO₂₀, photogalvanic effects in impurity induced absorption region 2-110389
- Bi₂GeO₂₀, photoluminescence spectra, effects of annealing, Al doping, X-ray and γ-ray irradi. (Russian) 2-61936
- Bi₂GeO₂₀, photorefractive materials, phase conjugation, real time optical processing and dynamic holography appl. 2-65312
- Bi₂GeO₂₀ photorefractive crystals, four-wave mixing expt., interference between signal and its conjugate 2-90972
- Bi₂GeO₂₀ photorefractive crystals, phase-conjugate wavefront reflectivity, spatial-freq. depend. 2-90992
- Bi₂GeO₂₀, Raman spectra meas. 2-116199
- Bi₂GeO₂₀, sillenite-type non linear crystals, deep localised centres 2-110362
- Bi₂GeO₂₀, single cryst., vac. UV refl. spectra 2-72520
- Bi₂GeO₂₀, single crystal, interaction of piezoelectric and nonequilibrium photoinduced carriers 2-87688
- Bi₂GeO₂₀, transient energy transfer between writing beams during hologram form. 2-60043
- Bi₂GeO₂₀, two-photon interband absorpt. spectra rel. to band struct. 2-116203
- Bi₂GeO₂₀-Cr, light induced charge transfer processes, optical absorption and EPR 2-99159
- Bi₂GeO₃, computer controlled growth method (Japanese) 2-105055
- Bi₂GeO₆, luminescence 2-87863
- Bi₂GeO₆, phonon spectra, Raman scatt. study 2-77526
- Bi₂GeO₁₂ crystal and photomultiplier tube optical coupling, Monte Carlo calcs. 2-75110
- Bi₄GeO₁₂ detector array for coded aperture X-ray telescope 2-78954
- Bi₄GeO₁₂ detector for continuously rotating positron computed tomograph, basic characts. 2-73337
- Bi₄GeO₁₂ detectors for positron emission tomography 2-73338
- Bi₄GeO₁₂ scintillation detector, energy resolution meas. from 1 to 50 MeV 2-64764
- Bi₄GeO₁₂ scintillation detectors for positron emission tomograph 2-73340
- Bi₄GeO₁₂ shielded HgI₂ solid state detector for X-ray astronomy 2-78953
- Bi₂GeO₂₀(SiO₂₀), nonlinear piezoelectricity 2-87680
- Bi₂Ge_{1-x}Si_xO₂₀ single crystals with low sound speed, Czochralski growth methods 2-62058
- BiI₃, deep level photoluminescence (Russian) 2-93153
- BiI₃, IR photoluminescence due to lattice defects (Russian) 2-93274
- BiI₃, photodecomp., struct. and transmittance, effect of illum. 2-87101
- BiI₃Gd, ESR and photoluminesc. spectra 2-93000
- BiI₃Gd, luminescence spectra (Russian) 2-61974
- BiI₃-BiCl₃, phase diagram, eutectic point, crystn. range 2-99405
- Bi₂La₂WO₆Pr(Sm)(Eu)(Tb)(Dy)(Er), luminesc. props. 2-82900
- Bi₂₄-La₂WO₆, cryst. struct., electron microscopy lattice imaging method 2-60943
- BiLi₃, atomisation energies determ. 2-60710
- BiLi₃, atomisation energies determ. 2-60710
- BiLi₃, atomisation energies determ. 2-60710
- BiLi₃FeO₁₂ garnet magneto-optical cryst., doped, near IR absorpt. reduction obs. 2-72473
- BiNbO₄, stibiotantalite struct. antiferroelec., ferroelec. and pyroelec., prep. and props. 2-66998
- Bi₂O₃, role in sintering process of NiZn ferrites 2-88041
- Bi₂O₃ thin films, characterisation by XPS 2-62043
- Bi₂O₃-BaO system, rhombohedral phase, cryst. struct., superlattice existence, electron microscope study 2-60947
- Bi₂O₃-M₂O₃, melt, M=Si, Ti, Ge, Zn or Cd, solubility of Pt 2-71652
- Bi₂O₃+MoO₃, solid-state reaction kinetics and mechanism 2-83374
- (Bi₂O₃+V₂O₅)-SiO₂ flux, HO₂ solubility determ. by thermogravimetric method, applic. to R₂Si₂O₇ single cryst. growth 2-105059
- BiP_{0.4}NdP_{0.6}O₁₄, prep. and props. of solid solutions 2-72611
- Bi₂Ru₂O₇-Pb₂Ru₂O₆ thick film resistors, particle size effect on cond. props. 2-104367
- Bi₂S₃ thin film, semicond. liq. junction solar cell and chalcogenide props. 2-78212

bismuth compounds continued

- Bi₂Sb₂, resonance shock ionisation in mag. field (Russian) 2-56618
- BiSbO₄, anomalies of thermal expansion high temp. phase transitions 2-86908
- BiSbO₄, stibiotantalite struct. antiferroelec., ferroelec. and pyroelec., prep. and props. 2-66998
- Bi₂Sb_{1-x}SI_x ferroelec., tricrit. points, dielec. meas. 2-93127
- Bi₂Sb_{1-x}SI_x, phase transitions, permittivity, polarisation (Russian) 2-77461
- Bi₂Sb_{1-x}SI_x, uniaxial deform., influence on elec. cond. and dielectric const. 2-109886
- (Bi₂Sb_{1-x})₂(Te₂Se_{1-x})₃, orientated thermoelec. material, Bridgman method prep. technique 2-105061
- Bi₂Se₃ amorphous film, atomic distrib. study 2-91751
- Bi₂Se₃, semicond., optical absorption spectra meas. 2-78212
- Bi₂Se₃(Cd), transport props. and plasma resonance 2-98646
- Bi₂Se₃Cd(In) monocrystals, struct. non-homogeneity visualisation using holographic interferometry 2-115216
- Bi₂Se₃Sn, doping effect on transport and optical props. 2-92015
- BiSe(Br), band struct., pseudopotential calcs. 2-71860
- Bi₂Se₃(Te₂), liquid, radial distrib. anal. 2-91751
- Bi₂Si_{1-x}Ge_xO₂₀, single crystal, optical desort. 2-110894
- Bi₂SiO₂₀ crystals, optical data anisotropic recording processes 2-85908
- Bi₂SiO₂₀ crystals, vol. holographic recording, polarisation characts. 2-102751
- Bi₂SiO₂₀, elliptical birefringence obs. and interpretation 2-67018
- Bi₂SiO₂₀, energy levels in forbidden zone (Russian) 2-61930
- Bi₂SiO₂₀, IR quenching of photocond. and holographic data storage 2-87335
- Bi₂SiO₂₀, NQR relax., transverse and longit., temp. depend. 2-110697
- Bi₂SiO₂₀, optical fibre sensor, electric field intensity and voltage meas. 2-65369
- Bi₂SiO₂₀, photogalvanic effects in impurity induced absorption region 2-110389
- Bi₂SiO₂₀ photorefractive crystals, collinear Bragg diffr. 2-97080
- Bi₂SiO₂₀, pulsed and steady-state photocond. and TSC meas. in MIM struct. 2-92695
- Bi₂SiO₂₀, Raman spectra meas. 2-116199
- Bi₂SiO₂₀, sillenite-type non linear crystals, deep localised centres 2-110362
- Bi₂SiO₂₀ single-crystal film, LPE growth, optically activated planar optical switch appls. 2-116391
- Bi₂SiO₂₀, two-photon interband absorpt. spectra rel. to band struct. 2-116203
- Bi₂SiO₂₀-Cr, light induced charge transfer processes, optical absorption and EPR 2-99159
- Bi₂SiO₂₀-Nd³⁺ single crystals, energy level spectroscopic study 2-67110
- Bi₂SiO₂₀-Nd(Fe), edge absorpt. spectrum, optical heterogeneities, X-ray spectral microanalysis 2-67091
- BiTaO₄, anomalies of thermal expansion high temp. phase transitions 2-86908
- BiTaO₄, stibiotantalite struct. antiferroelec., ferroelec. and pyroelec., prep. and props. 2-66998
- Bi₂Te₃, dislocation-induced US absorpt. and elec. props. 2-92115
- Bi₂Te₃, single crystal, plastic deform., dislocation slip systems obs. 2-86672
- Bi₂Te₃, thermoelec. props., elec. resist. and phase transitions meas. up to 9 GPa hydrostatic press. 2-87309
- Bi₂Te₃ thin film based vacuum thermopile for meas. very weak continuous radiant energy (French) 2-95473
- Bi₂Te₃CdCl₂(Te) crystal growth using directional crystallisation apparatus for growing complex solid solns. (Russian) 2-72609
- Bi₂Te₃Sn, doping effect on transport and optical props. 2-92015
- Bi₂Te₃-based alloy, deform. and recrystn., influence of second phase particles Al₂O₃ and ZrO₂ 2-83170
- Bi₂Te₃Bi₂Se₃(Sb₂Te₃) thermocouple, surface treatment effect 2-110373
- Bi₂Te₃Sb₂Te₃, energy spectrum of solid solutions 2-110239
- Bi₂Te₃Sb₂Te₃-GeTe-PbTe system alloys, thermo-EMF, elec. and thermal cond., thermoelec. efficiency 2-56626
- BiTel, thermophysical props. 2-82386
- Bi₄Te₁₀ thin cryst., two-dimens. cond. and magnetocond. 2-71985
- Bi₂(Te_{1-x}S_x), uniaxial crystal, reflectance meas. of optical consts. 2-57041
- Bi₂TeSe, heat treatment influence on props. 2-72721
- Bi₂TiNbO₆ piezoceramic, form. and props. 2-11122
- Bi₂TiO₂₀, local levels in forbidden band 2-71899
- Bi₂TiO₂₀, photogalvanic effects in impurity induced absorption region 2-110389
- Bi₂TiO₂₀, piezoelec., temp. modulated spectroscopy near absorption edge 2-99100
- Bi₂TiO₂₀, sillenite-type non linear crystals, deep localised centres 2-110362
- Bi₂TiO₁₂, layer struct., grain oriented ferroelec. ceramics, liq. phase sintering 2-77788
- Bi₂TiO₄, single domain single crystals, electromech. behaviour 2-87690
- Bi₂Ti_{1-x}W_xO₂₀, ceramic ferroelectricity, permittivity and losses 2-87701
- BiVO₄, ferro- to paraelectric transition at high-pressure and temp. 2-98274
- BiVO₄, ferroelastic phase transition, Brillouin scatt. study 2-116200
- BiVO₄, Raman scatt. spectra (Russian) 2-61914
- BiVO₄Gd³⁺, EPR spectra, g-factor, spin Hamiltonian monoclinic symmetry (Russian) 2-93001
- Bi₂WO₆, ceramics, grain oriented, fabrication 2-77790
- Bi₂WO₆, polymorphism, differential dilatometry and DTA study 2-60913
- Bi₂WO₆, powders, obtained in presence of fused salts, morphology 2-97971
- BiYIG, film, bubbles, mag. props. 2-72315
- (Bi₂Lu)₂Fe₂O₁₂ bubble film, mag. props., FMR study 2-72317
- Cs₂Bi₂Cl₄(Br₄), doping effects, Mossbauer data and electronic props. 2-61007
- CsBi(MoO₄)₂, phase transition, uniaxial press. effects, permittivity study 2-109982
- Eu-Bi₂Si₄, cryst. struct. refinement (French) 2-71404
- GeO₂-Bi₂O₃-Ti₂O₃, glass formation, optical appl. 2-77847
- GeO₂-Bi₂O₃-TiO₂, formation compositions, two-phase glass separation 2-91810
- InSb-InBi solid solns., grown by MBE, charact. 2-104190
- (K⁺ Bi³⁺ Bi³⁺) pyrochlore, thermally induced cation migration, structural study 2-66285
- KBi(CrO₃)(Cr₂O₇)H₂O, cryst. struct. determ. (French) 2-91883
- NaBi(MoO₄)₂, electrography studies 2-67026

bismuth compounds continued

- $\text{Na}_0.5\text{Bi}_{0.5}\text{TiO}_3$, ferroelectric, structural phase transitions, X-ray diff. study 2-67002
 $\text{Na}_0.5\text{Bi}_{0.5}\text{TiO}_3$, phase transition props. (*Russian*) 2-61841
 $\text{Nd}^{3+}\text{BiCl}_4$ glass, stimulated emission cross-sections meas. 2-90899
 $\text{PbBi}_2\text{Nb}_2\text{O}_9$, ferroelectric, Curie temp., birefringence and spontaneous strain 2-81876
 $\text{PbBi}_2\text{Nb}_2\text{O}_9$, layer struct., grain oriented ferroelec. ceramics, liq. phase sintering 2-77788
 $\text{Pb}_3\text{Bi}_2(\text{PO}_4)_2\text{O}_2$, Czochralski growth, cryst. struct., X-ray diff. study 2-91922
 $\text{PbO-Bi}_2\text{O}_3$, prep. and electrophysical props. of compounds 2-72619
 $\text{PbS-Bi}_2\text{S}_3$ system, synthetic PbS -rich homologues, microscopic study 2-115253
 $\text{Sb}_1\text{Bi}_{0.5}\text{Te}_{1.5}$: Pb solid soln., doping, carrier density 2-71997
 $\text{Sb}_{1.433}\text{Bi}_{0.575}\text{Te}_{2.5}\text{Se}_{0.15}$, solid soln., thermoelectric props., effects of Ge and Cu impurities 2-82385
 $\text{Sb}_2\text{Te}_3\text{-Bi}_2\text{Ge}_3$ solid solns., energy spectrum 2-76920
 $\text{SiO}_2\text{-PbO-Bi}_2\text{O}_3$ glass, surface cond. meas. 2-87363
 $\text{TiBiTe}_2\text{-2PbTe}$ cross section, solid soln. form., physicochem. and electro-phys. props. 2-57337
 $(\text{Y,Bi})_2(\text{Fe,Ga})_2\text{O}_{12}$ film, two-layer, bistable mag. bubble domain wall dynamics 2-66880
 $(\text{YBiCa})_3(\text{FeSi})_2\text{O}_{12}$, bubble film, growth induced anisotropy, FMR 2-72316
 $(\text{Y,TmBi})_3(\text{FeGa})_2\text{O}_{12}$ (110) garnet film with orthorhombic anisotropy, replication of bubble states 2-72312
 $\text{ZnO-Bi}_2\text{O}_3\text{-CoO-MnO-Sb}_2\text{O}_3$, ceramic, influence of comp. on dielectric losses 2-87660
 $\text{ZrO}_2\text{-Y}_2\text{O}_3\text{-Bi}_2\text{O}_3$, Bi_2O_3 effect on elec. and mech. props. 2-67265

Bitter patterns see **magnetic domains**

bitumen see **materials**

BL Lacertae-type objects

- AO 0235+164, time vars. in redshifted 21 cm absorption spectrum 2-106883
 3C 371, N galaxy-BL Lacertae object, X-ray light curve anal. 2-112543
 central activity, review (*Polish*) 2-94844
 IE 1402.3+0416, new BL Lacertae object, discovery by Einstein Observatory 2-94838
 energy production, massive oscillators as possible sources 2-58241
 evolution from H β luminosity calcs. 2-106894
 extended radio struct., UHF/SHF obs. 2-74115
 extended radio structure 2-94839
 IC 5063 (PKS 2048-57), radio elliptical galaxy, BL Lacertae object model for very red nucleus 2-112565
 IR polarimetry and photometry of 18 objects 2-89379
 JHK photometry, power law continuum implications for dust and gas 2-89376
 BL Lacertae, expansion props., SHF obs. 2-84326
 BL Lacertae, flux and polarisation obs. and model 2-117745
 Markarian 421 and 501, CCD photometry 2-101029
 Markarian 501, hard X-ray/ γ -ray, obs. anal. 2-74087
 nonthermal radiation, optical spectrum shape and variability 2-79207
 photometric observations and structure 2-74085
 PKS 0215+015, BL Lac object at high redshift, spectrophotometry and polarimetry 2-58442
 PKS 0215+015, optical absorption lines in high redshift object 2-112564
 PKS 2155-304, relativistically beamed synchrotron radiation 2-63608
 properties in radio and IR bands (*Polish*) 2-106922
 radiation origin from elliptical galaxy nuclei black holes 2-117745
 radio sources, variable, obs. with RATAN-600 radio telescope 2-101083
 radio variability in short term, UHF obs. 2-63625
 spectral polarisation props. of optically thin synchrotron radiation, theory 2-112309
 structure models based on SHF obs. 2-68923
 VHF survey at 102 MHz 2-74108
 X-ray sources, SHF obs. 2-79244
 I Zw 187, simultaneous multispectral obs. 2-63607

black holes

see also **gravitational collapse**

- α -model accretion disk for load emission-line region 2-84310
 2A 1822-371, compact X-ray binary, orbital vel. and mass of compact component 2-112502
 acceleration radiation and the generalized second law of thermodynamics 2-58380
 accretion disc, model with equatorial accretion 2-63495
 accretion flow, X-ray heated, stability and time depend. 2-117575
 accretion flow, X-ray heated, steady flow region 2-117574
 accretion of spheroidal dust shells, gravitational radiation 2-117703
 accretion types and late stages of stellar evolution 2-100960
 alpha disk model of thin accretion disk 2-79137
 applications to general physics 2-94767
 V1343 Aquilae (SS 433), accretion disc models involving black hole or neutron star 2-63474
 V1343 Aquilae (SS 433), early type star+black hole/neutron star accretion disc 2-63471
 3C 449, cD galaxy, double jet model with orbiting massive object at centre 2-79226
 charged, gravitational field effect on proper energy of charged particles (*Russian*) 2-58251
 charged particles interaction in strong gravitational and mag. fields 2-74008
 charged rotating, classical electron self force determ. 2-79444
 charged rotating, vacuum polarisation near event horizon 2-112482
 charging, limit and pair production effects 2-89294
 collision of two black holes, two-sheeted model 2-84492
 cosmic ray antiprotons from primordial black holes 2-84351
 Cygnus X-1, Compton-cooled feedback mechanism for high and low spectral states 2-63529
 Cygnus X-1, hard X-ray spectrum obs. 2-74015
 definitions, area theorem 2-112768
 distortion by external fields, evolution 2-68809
 dyon, rotating, Kerr-Newman metric, black hole soln. 2-79447
 dyon black holes and thermodynamics in Tomimatsu-Sato-Yamazaki space-time 2-106774
 Einstein space, static, thermal propagator 2-74292
 entropy-to-energy ratio for bounded systems, universal upper bound 2-107198
 evaporation, radiating metric description 2-74009
 event horizon area, Weyl geometry 2-106770

black holes continued

- extreme Reissner-Nordstrom black holes, spin-3/2 perturbations anal. using O(2) supergravity theory 2-100972
 Feynman's path-integral method and Hawking evaporation (*Chinese*) 2-100971
 formation, gravothermal aspects of evolution of stars and Universe 2-100726
 formation and evaporation in insulated box 2-74290
 in galactic nuclei, effect of black holes on structure and evolution of nuclear discs 2-94833
 galactic nuclei, pancake detonation of stars by black holes 2-63654
 galactic nuclei massive black holes, accretion discs MHD flows and radio jets 2-89141
 galaxies active nuclei, characts. of gravit. radiation bursts from black holes 2-106504
 Galaxy centre black hole, mass upper limit 2-112579
 galaxy nuclei, existence in our Galaxy 2-63671
 general relativity, multi-soliton solns. of Einstein eqn. and Tomimatsu-Sato metric 2-100728
 general relativity theory, black holes, review 2-63774
 geodesic motion validity near black holes 2-58248
 geometrically thin accretion discs, inner edge struct. 2-94593
 globally hyperbolic space-times, black hole theory 2-89295
 globular clusters, characts. of gravit. radiation bursts from black holes 2-106504
 globular clusters with massive central black hole, stellar dynamics and galactic tides 2-63540
 gravitational radiation suppression from stars falling into black holes 2-89292
 Hawking evaporation and space-time structure, Vaidya metric 2-117705
 Hawking evaporation of Dirac particles for Kerr-Newman holes (*Chinese*) 2-106769
 Hawking radiation from black holes, rel. to entropy in expanding Universe 2-117836
 Hawking radiation in four dimensional static Riemann spacetime (*Chinese*) 2-79138
 HDE 226868 (Cygnus X-1), optical spectrum obs. rel. to radial vels. and orbital elements 2-112486
 Jordan theory, stationary spherically symm. solns., black holes 2-84497
 Kerr black hole, gravit. radiation theory 2-107201
 Kerr black hole, gravitational radiation induced by particle falling along Z-axis 2-79143
 Kerr black hole, nearby massless fields, low-frequency solns., analytic props. 2-79144
 Kerr black hole, relativistic particle nongeodesic motion, radiation emission 2-53623
 Kerr black hole, uncharged ergosphere, shape and size transforms. 2-79141
 Kerr metric, boson bound states (*Chinese*) 2-112481
 Kerr Newman metric, photons radial motion 2-63497
 Kerr-Newman dyon space-time, test particle motion 2-107205
 Kerr-Newman space-time, Hawking evaporation of Dirac particles 2-91940
 Kerr-NUT solns., superposition, symm. axis, regularity conditions anal. 2-101267
 BL Lacertae objects radiation origin from elliptical galaxy nuclei black holes 2-117745
 M87, presence of massive black hole rel. to M/L and vel. anisotropy determ. 2-94835
 massive black hole at Galaxy nucleus, upper mass limit 2-63670
 massive black holes, theory of steady accretion disks 2-100913
 massive black holes in extragalactic double radio sources, accretion disc origin for particle beams 2-63699
 massive oscillators as cosmic energy sources 2-58241
 metric outside rotating charged object in vector graviton field (*Chinese*) 2-84083
 MXB 1728-34, periodic emission from black hole accretion disc 2-89297
 neutrino interactions during gravit. collapse, Dirac formalism 2-74010
 nonthermal emissions and phase transitions from rot. black hole 2-74291
 optically thick accretion, critical points 2-89293
 orbiting radiation source, freq. shifts 2-79139
 orbiting vorticity free rings, metric 2-68807
 oscillating, pulsar model 2-94764
 parity nonconservation in black holes, rel. to cosmic magnetic fields origin 2-63227
 particle creation in asymptotically flat space-time containing shell-focusing singularities 2-106521
 particle emission, general covariance, accelerated frames and particle concept 2-84081
 particle falling towards black hole, radiation emission 2-53621
 perturbed Schwarzschild black holes scatt. gravitationally through small angle, leading resistive effects 2-84496
 Population II X-ray sources, trapped line radiation 2-106957
 pregalactic Population III stars, dark remnants prod. 2-106818
 primordial black holes, evaporation rel. to cosmic baryon number 2-79255
 primordial black holes, explosion rate near Solar System, upper limit, from γ -ray obs. 2-89409
 primordial black holes and the era of superheavy-particle dominance in the early Universe 2-74138
 PSR 1913+16 (pulsar+compact star) general relativity test and gravit. radiation evidence 2-63498
 quantum fields in curved space, book 2-84398
 quasar masses rel. to accretion onto massive black hole 2-89405
 radiating fluid sphere, late stages of naked singularity collapse 2-112770
 radio galaxies, synchrotron radiation from relativistic flows in compact radio sources 2-74113
 rate of formation in thermal box 2-94768
 relativistic accretion disc nonthermal emission, model for axisymmetric inhomogeneous sources 2-89138
 relativistic Keplerian ring line profiles (*Chinese*) 2-112430
 rotating, in mag. field, special relativity calc. 2-112701
 rotating black holes and uniform mag. fields 2-117701
 rotating dyon black hole, exact soln. 2-53632
 scalar wave scattering in static space-times 2-69066
 Schwarzschild black hole in external gravit. field 2-106771
 Schwarzschild space-time, vacuum polarisation by massive scalar field 2-117706
 Schwarzschild sphere, radius passage meas. 2-117704
 specific entropy and sign of energy 2-112320

black holes continued

- spherical accretion, multiple Compton scatt. effect on temp. and emission spectra 2-58379
- spherical accretion with e^+e^- pair prod., constraints on gamma-ray emission 2-68808
- spherically accreting black holes, synchrotron radiation 2-79136
- spherically symmetric, imbedded in mag. field, conducting medium accretion 2-11272
- spherically symmetric accretion, electron pair production 2-100720
- spin-1/2 particles in the presence of a Heavisidian field, rot. black hole and neutrinos 2-69069
- spontaneous generation from quantum field, rel. to Second Law of Thermodynamics 2-53629
- stability criterion for many-parameter equilibrium families 2-89133
- stars, axisymmetric nonrotating, general relativistic collapse, numerical calc. 2-106773
- static black hole, mag. fields and accretion discs 2-106772
- stress-energy tensor renormalisation in black hole space-times with boundaries 2-79142
- supercritical accretion discs, physical props. 2-84262
- supermassive black holes formation, appl. of numerical relativity 2-100727
- supermassive Schwarzschild black holes as active galactic nuclei precursors 2-117739
- time synchronization system in a two-station search for primordial black-holes 2-79541
- vacuum rearrangement in strong electric and grav. fields, e^+e^- creation at stars (*Russian*) 2-107609
- X-ray emission on supercritical accretion 2-84077

blast waves *see shock waves***bleaching, optical** *see optical saturable absorption***blending**

- ThO₂-UO₂, mixed oxide fuel, at. homogeneity evaluation 2-85136
- UO₂-PuO₂, mixed oxide fuel, at. homogeneity evaluation 2-85136

Bloch walls *see magnetic domain walls***blood***see also haemodynamics*

- alveolar-capillary membrane, modelling of mass transfer (*Russian*) 2-62568
- antibody enhancing helper T cells, X-irrad. effects 2-68058
- automatic blood cell classifying system (*Japanese*) 2-105861
- blood conductivity at time of coagulation, recording with a biactive clamp, temp. effects (*French*) 2-116900
- brain-blood barrier, microwave hyperthermia-induced alterations, rat expts. 2-88589
- brain-blood barrier permeation in rats during exposure to 2450 MHz microwaves 2-111734
- breast diaphanography, colour rel. to blood conc. 2-111767
- erythrocyte aggregometer for rapid quantification of aggregation using IR transillumination (*German*) 2-111770
- erythrocyte deformability, procedure for determ. (*German*) 2-117141
- erythrocyte membrane, effect of hyperthermia and ionising radiation 2-105791
- erythrocyte membrane, extensional flow from cell body to elastic tether, anal. 2-99917
- erythrocyte membrane, extensional flow from cell body to elastic tether, expt. 2-99918
- erythrocyte membrane, viscoelastic behaviour 2-100020
- erythrocyte membrane proteins, human, radiation-induced struct. changes 2-88632
- erythrocyte membrane submitted to a bending stress, spin label study of mol. struct. 2-105667
- erythrocyte membranes, use of circular dichroism spectroscopy in mol. phototoxicity study 2-116999
- erythrocytes, aggregation kinetics in disease 2-105671
- erythrocytes, intact, determ. of fluoresc. polarisation of membrane probes, scatt. artifacts 2-111641
- erythrocytes, reduced filtrability due to plasma protein interactions 2-105672
- erythrocytes, sedimentation under gravity, comparison with suspension of rigid spheres 2-105670
- erythrocytes and plasma, dog, K and Na ions content after radiation and heat exposure (*Russian*) 2-57843
- erythrocytes migration, Fareus-Lindquist effect mechanism (*Russian*) 2-83584
- extracorporeal circulation, vital parameters monitoring, conf., Nijmegen, Netherlands (Mar. 1980) 2-74163
- femur, proximal, human, effect of age on blood flow 2-62647
- fibrinogen, α -chain C-terminal regions, struct. organisation and localisation 2-78284
- fibrinogen, α -chain extensions obs. by electron microscopy specimen preparation technique 2-73195
- flow measurement, electromag., theory 2-81414
- flow through narrow tubes of blood and other particulate suspensions, 3-layer semi-empirical model 2-105747
- fluoroangiographic pictures, computerised elaboration (*Italian*) 2-73315
- granulocytic progenitor cells of blood and bone marrow, response to low X-irrad. doses, dog expts. 2-88616
- haematocrit, determ. by impedance meas. (*German*) 2-117142
- haematocrit determination, optical method 2-83627
- haemoglobin, normal and abnormal, human, H NMR investigation of proximal histidyl residues 2-99895
- haemopoiesis, mouse, recovery at later times after long-term external (¹³⁷Cs) and internal (³H) irrad. (*Russian*) 2-105770
- haemopoietic cells, repair capacity after total body irrad. with different dose rates and fractionations 2-78392
- human blood erythrocytes, imaginary refractive index spectrum reconstruction 2-75518
- instrumentation development for haemodynamic meas. 2-78479
- kinin level after one exposure to intense UV radiation in rabbits 2-62685
- kinin level during long-term UV exposure in rabbits 2-62686
- Korotkov tone, infinite origin 2-83595
- leucocytes, human, effects of HV pulses on in vitro viability 2-99915
- leukemia cell proton NMR during differentiation 2-105682
- leukocyte, PMN, migration towards casein in elec. field, chemotactic force, bowling alley technique 2-62576
- leukocytes:mn⁺ suspensions, H NMR relax. 2-116895
- leukocytes, human, X-ray induced cell cycle delay, differential response within the first post-stimulation G₁-phase 2-83611

blood continued

- luminescence measurement using ultra-high sensitivity photon counting system 2-117043
- lymphocytes, human peripheral blood, in vitro radiosensitivity obs. 2-94123
- lymphocytes, human, irrad. and unirrad., culture media rel. to proliferation, chromosome dosimetry appl. 2-62690
- lymphocytes, human, math. model resolving X-ray survival curves into 6 components 2-68059
- lymphocytes, human, microdosimetry of α -particle irrad. 2-88612
- lymphocytes, human peripheral blood, ⁶⁰Co γ -ray exposure rel. to sister chromatid exchange freq. (*Russian*) 2-88605
- lymphocytes, rat, kinetics of long-term γ -irrad. (*Russian*) 2-57857
- lymphocytes, segmentation of peripheral cells, quantitative determ. of colour differences (*German*) 2-57947
- lymphocytes of rat and human peripheral blood, nuclear DNA supercoiled struct. changes after γ -irrad. 2-83610
- lymphopoiesis, math. model for postirrad. dynamics study (*Russian*) 2-116993
- microcirculation, interaction of fluid movement and particle diffusion across capillary walls 2-88578
- microwave irradiated rats, acute in vivo exposure at 2450 MHz, biochem. and haematological effects 2-105764
- myocardium, regional flow estimation using CT, stochastic formulation 2-100104
- neutrophils, human, rheology rel. to physicochemical factors 2-99919
- oral Zn absorption, simple blood sample method 2-68114
- pipe flow, unsteady, numerical study 2-55648
- plasma Angiotensin II changes with noise exposure rel. to temporary threshold shift 2-111728
- plasma lipoprotein microviscosity rel. to risk of contracting ischaemic heart disease 2-100019
- platelets, aggregation effects on suspension light transmittance 2-96836
- Poiseuille flow of micropolar fluid with non-zero couple stress at boundary, blood flow appls. 2-105711
- progenitor cells in human blood and bone marrow, radiation sensitivity obs. 2-94115
- protein adsorption, from sheep's blood, Fourier transform IR obs. 2-100015
- protein aqueous solns., Fourier transform IR spectra obs. 2-116883
- pulmonary blood plasma filtration in reptiles 2-73289
- pulmonary capillary blood flow estimation, multiple breath method viability 2-83667
- pulmonary capillary blood flow estimation, single breath method viability 2-83666
- red blood cell mechanics, viscoelastic membrane surface flow in viscous fluids 2-111635
- red blood cell suspensions, O₂ diffusivity investig. 2-88523
- red blood cells, HGMS 2-88518
- red blood cells, human, impedance meas. by transient technique 2-62880
- red blood cells, transient effects on initial oxygenation rate 2-83554
- red cell flow velocity measurement using laser Doppler microscope 2-94261
- red cell Na⁺ permeability, hypertension-associated, racial differences 2-88526
- red cells, human, cryopreservation 2-62850
- serum, Br determ. by ¹²⁵I excited X-ray fluoresc. anal. 2-68123
- serum irradiated with UV, biological action mechanism, free radical products 2-100062
- space flight, haematological and immunological changes in crew 2-62788
- spin-lattice relax. time for healthy subjects and for patients with malignant blood disease 2-94155
- T lymphocytes, recovery from radiation damage in thymectomised mice (*Russian*) 2-116989
- T-lymphocytes, mouse, elimination of radiation-induced migration defects (*Russian*) 2-105771
- thrombi, in vivo scintigraphy with ¹¹¹In-labelled platelets 2-83635
- tissues with nonuniform blood flow distrib., transient temp. profiles 2-116887
- trace analysis of Ag, Cu, Cd, Pb and Tl by isotope dilution surface ionisation mass spectrometry (*Japanese*) 2-93983
- US used in medicine, safety and biological effects, review, book contrib. 2-111729
- vesicles, inside-out, from human red cell membranes, Ca²⁺-activated K⁺ channel 2-73215
- vesicles, inside-out, of human red blood cells, all-or-none response of Ca²⁺-dependent K⁺ channel 2-73216
- viscoelastic law with relax. time (*French*) 2-68034
- vitamin D-metabolites from human plasma and mass spectrometric analysis by fast heavy ion induced desorption 2-100171
- whole-body γ -ray exposure, very low dose, acute non-stochastic effect, thymidine equiv. serum factor 2-83606
- Br determ. in serum using PIXE spectrometry 2-78163
- DNA, single-strand-breaks in mice lymphocytes, repair γ - and UV-irrad. (*Russian*) 2-57860
- ¹¹¹In labelled platelets, PAC obs., labelling mechanism 2-78416
- O₂ concentration profiles in capillaries and living tissues when axial diffusion is considered 2-111610
- O₂ uptake by red blood cell, factors defining rate 2-83555
- ⁹⁰Sr-⁹⁰Y toxicity, haematological studies, femoral CFUs kinetics and spleen cells mitogen response 2-117017

blood circulation *see haemodynamics***blood dynamics** *see haemodynamics***blood flow** *see haemodynamics***blood platelets** *see blood***blue brittleness** *see brittleness***boilers**

- BOR-60, Na-water interaction processes in micromodule steam generator 2-90266
- combined heat pump-boiler system performance optimisation (*Italian*) 2-78241
- concentrating solar steam boiler design (*Rumanian*) 2-99765
- gas turbine, open cycle, efficiency improvement and superiority of steam injection 2-81208
- Inconel alloy 600, stress corrosion cracking in PWR boilers 2-80124
- induced vibration analysis probe for steam generator tube-to-support clearance meas. 2-64583
- industrial plants, CO₂ corrosion in water/steam cycle (*Hungarian*) 2-99589
- licensing aspects of steam generator repair programs 2-102132

boilers continued

- LMFBR boilers, duplex tubes and Foster-Wheeler-type tubesheet, development project results 2-90241
- LWR, steam generator tube profile data reduction 2-102141
- multifrequency-multiparameter eddy current anal. method for PWR steam generator tubes 2-69795
- natural circulation steam generators for LWR and HWR, circulation ratio 2-102114
- NOx removal technique from coal fired boiler by dry system (*Japanese*) 2-57634
- once-through steam generator in Integrated Type Marine Reactor, two-phase flow stability anal. (*Japanese*) 2-71007
- power station boiler furnaces heat flux measurement devices 2-81212
- pulse echo ultrasound for steam generator tube to support gap measurement 2-64584
- PWR steam generator, circulation ratio and carry-under determination 2-108054
- PWR steam generator, response to scram at 50% load and open grid transient 2-108056
- PWR steam generator, thermal measurements 2-108055
- PWR steam generator denting, cost benefit anal. 2-69796
- radiation levels at Point Beach PWR power station, refuelling shutdown chemistry test results 2-108100
- reflux capsule steam generator for sodium-cooled reactors 2-102115
- solar powered central receiver, quadratic optimal control 2-57687
- solar powerplant steam generator surface incident radiant energy computation 2-116782
- solvent-refined coal solids produced by liquefaction processes, combustion charact. evaluation 2-99755
- steam generator model testing 2-113690
- steam generator replacement at Surry Power Station: ALARA aspects 2-102277
- steam generator replacement at Surry Power Station 2-102129
- steam generator replacement through the side of the containment building 2-102131
- steam generator tube performance 2-113706
- steam generator tubes, forced convection, density-wave oscillations 2-55565
- steam generator tubing, critical heat flux-induced temp. oscills., thermal modeling 2-70939
- steam power stations with atmospheric fluidised-bed combustion boilers limestone consumption reduction methods 2-71028
- supercritical once-through steam generator, variable pressure operation, two phase flow in furnace wall tube (*Japanese*) 2-86326
- Surry-A steam generator, research program at Hanford 2-102133
- test results from a solar boiler for saline water distillation 2-67826
- Turkey Point steam generator repair program 2-102130
- He heated steam generators for HTR, layout, stresses, design (*German*) 2-102180
- SO₂ formation kinetics in oil-fired power station boilers 2-83345

boiling

- see also boiling point*
- absorption type chillers, solar-powered, boiling experiments (*Japanese*) 2-116843
- benzene, tube boiling, heat transfer coeffs., critical heat flux 2-91419
- channel, uniformly heated, force of convection boiling, limited exited quality study 2-91216
- critical heat flux expt. performed in high press. boiling water facility 2-70835
- ebullimetric apparatus, vapour pressure reference values, benzene and hexafluorobenzene 2-58771
- ethanol-n-heptane, vapour-liquid equilibria, ebulliometric technique 2-98252
- ethanol-n-nonane, vapour-liquid equilibria, ebulliometric technique 2-98252
- film boiling heat transfer, low-quality and subcooled, high-temp. results 2-64609
- film boiling on horizontal plate 2-114624
- flow, boiling in uniformly heated vertical tubes, critical heat flux, dimensionless groups 2-109405
- fluid, on surface of porous coating capillary hysteresis (*Russian*) 2-60363
- forced convection boiling heat transfer data correl. 2-70814
- forced convection boiling in electrically heated coil with heat flux tilt toward outside of coils 2-109313
- forced convection boiling in oscillating accel. field, critical heat flux 2-113680
- Freon, film and transient boiling, effect of porous coatings on heat exchange 2-60535
- Freon 113, flow boiling system, dryout heat flux and entrained drop size 2-91512
- Freon 113, impinging jets, forced convection boiling, burnout heat flux 2-70935
- graphite, solid-liquid-gas triple point, sublimation and boiling curve 2-61116
- heat transfer in boiling on finned surfaces 2-75837
- heat transfer in narrow rectangular space, bubbles influence 2-109171
- heat-generating boiling pools, heat transfer from vertical at inclined boundaries 2-114803
- high speed boiling outside tube bundle using high speed photography 2-70834
- individual bubbles growth and departure at a wall 2-55638
- isooctane, tube boiling, heat transfer coeffs., critical heat flux 2-91419
- liquids, existence of two transition boiling curves 2-70836
- magnetite scale in steam generator tubes, thermophysical props., operating parameters effect 2-75835
- microbubbles nucleation and stabilisation in liqs. 2-55639
- nucleate boiling, surface conditions effect 2-60382
- nucleate boiling mechanism, correl. of data on heat transfer and elementary characteristics 2-75842
- nucleate boiling on nonisothermal surfaces, stability of heat transfer 2-75839
- nucleation in boiling of liquids 2-75843
- nucleation sites in boiling 2-75841
- phenomena within a narrow gap 2-90262
- in porous bed, parametric calcs. 2-97353
- porous bed drying 2-55652
- refrigerant 12, forced convection boiling in uniformly heated vertical tubes, critical heat flux 2-70837
- refrigerants boiling on tubes covered with porous coatings, heat transfer 2-75838

boiling continued

- saturated liq. film, forced convection boiling heat transfer from cylinder 2-75952
- steam generator tubing, critical heat flux-induced temp. oscills., thermal modeling 2-70939
- subcooled boiling in pipes, heat transfer and hydrodynamics 2-91420
- theory of boiling discontinuity 2-60380
- transient swelling during pool boiling 2-91220
- tubes supporting nucleate boiling, temp. effect of deposits of steel corrosion products 2-75836
- turbulent non-equilibrium dispersed flow, boiling, heat transfer 2-55559
- two phase flow pressure drop accompanied by boiling inside circular tubes, stochastic model 2-97624
- two-phase noise diagnosis in nuclear power plants 2-69766
- two-phase wet steam in evaporator tube, boiling crisis 2-91417
- vertical slotted channels, effect of elec. field in heat exchange during boiling (*Russian*) 2-60531
- water, boiling, critical heat flux determ. 2-60538
- water, film and transient boiling, effect of porous coatings on heat exchange 2-60535
- water, flow boiling heat transfer enhancement with polymer additives 2-55567
- xylene, tube boiling, heat transfer coeffs., critical heat flux 2-91419
- H in pipes, film boiling, heat transfer in plug regime 2-60534
- H₂O, impinging jets, forced convection boiling, burnout heat flux 2-70935
- He two-phase channel flow, hydraulic charact. calcs. 2-103200
- ⁴He, liquid, superheating limits, homogeneous nucleation temp. 2-115481
- ⁴He-Ge interface, transient heat transfer and onset of film boiling 2-115482
- Na forced convection, wall heat transfer coeff. for condensation and boiling 2-97635
- Xe, liquid, vapour nuclei curvature effect on surface tension 2-115505

boiling point

- see also boiling: heat of vaporisation*
- n-alkene-n-alkyne mixtures, intermol., interactions, thermodynamic and optical props. (*German*) 2-85764
- multicomponent mixtures, true boiling points determ., laboratory device 2-58815

bolometers

- composite bolometers, evaluation at 0.4K 2-53834
- cryogenic bolometers, responsivity, thermal props., noise, nonequilibrium theory 2-64046
- fibre interferometer, phase oscillation due to light impulse, bolometer appl. 2-89806
- Fourier transform spectroscopy, slow scanning, bolometer-preamplifier for balloon-borne appls. 2-112334
- frequency response in liq. ⁴He 2-61225
- fusion plasma diagnostics, new bolometer for use in noisy EM environment 2-112989
- limiting detectivity 2-95375
- low-temperature bolometers with freq.-charact. correction, noise variance depend. on lag correction 2-89815
- microbolometer for far IR detection 2-112974
- superconducting, Al+O₂ 2-89808
- thermistor bolometer using positive temp. coeff. ceramic element 2-107405
- thin film, with high sensitivity and thermal loading capacity (*German*) 2-79578
- Tokamak edge diagnostics, ion trapping and Langmuir probes and bolometer techniques 2-86477
- Ge low temperature bolometers for spectroscopy, sensitive in 1 to 50 μ m region 2-101462

Boltzmann equation

- see also transport processes*
- Boltzmann-Fokker-Planck eqn., numerical soln. 2-84566
- Coulomb condensate of nonlinear Poisson-Boltzmann eqn., unified theory 2-58747
- dense fluids, entropy maximisation, irreversible thermodynamics, kinetic eqns. 2-84523
- dilute hard-sphere gas, self-diffusion, shear viscosity and heat cond. calcs. 2-81432
- dilute spatially homogeneous gas, projection method for Boltzmann energy eqns. 2-55690
- electrical double layer theory, nonlinear Poisson-Boltzmann eqn. soln. for inner problems 2-74366
- electron relaxation, weakly ionised hydrogen plasma 2-109458
- energy albedo, Pade approximants 2-84565
- energy albedo calc. for finite slab 2-84564
- entropy and Bayes' theorem (*French*) 2-89646
- equilibrium approach of Boltzmann eqn. soln., comments 2-63942
- equilibrium relaxation from Boltzmann eqn. with isotropic cross sections 2-89622
- fast electron energy deposition in mag. field, diffuse beam approx. 2-114176
- ferroelectric and non-ferroelectric materials, origin of photo-EMF 2-110379
- gas, Boltzmann eqn. for steady flow, Hilbert expansion 2-109439
- H theorem extension 2-79509
- hard ellipsoid model, Enskog-Boltzmann eqn. 2-103244
- hard particle models, kinetic eqns., initial-value problem non-uniqueness 2-84515
- hard-sphere gas, vel. distribution, large energy behaviour calc. 2-103237
- heat conduction equation for semibounded body, solution 2-91211
- heavy-ion reactions, anisotropic three-fluid model 2-85094
- hydrodynamic plasma solutions, of Boltzmann equation 2-71896
- hydrodynamical model eqns. for nuclear matter penetrated by particle (*Russian*) 2-90038
- hyperbolic distribution in statistical physics 2-86368
- inscattering operator, finite dims., eigenvalues and eigenfunctions 2-107270
- intermolecular forces of infinite range, rel. to Boltzmann eqn. 2-53702
- Lattice thermal conductivity, phenomenological model 2-98352
- linear Boltzmann collision operator, time evolution props. 2-65677
- linearised Boltzmann eqn., probabilistic representation of solutions 2-95281
- liquid-metal-NH₃ solns., current-voltage drop charact., nonlinearity origin 2-115767
- Maxwell-like model, approach to equilb. Boltzmann eqn. soln. 2-84569
- Maxwellian molecules, Boltzmann eqn. soln. 2-79507

Boltzmann equation continued

- metals, electromigration jellium model 2-82039
 modified moment method and irreversible thermodynamics 2-107282
 molecular crystals, US relax., Boltzmann eqn. approach 2-56099
 molecule, simulated, displacement following stochastic process, Boltzmann eqn. derivation 2-63899
 molecule-surface impact, velocity correlation, boundary conditions 2-91572
 noisy nonlinear maps, spectral anal. 2-89625
 nonlinear, entropy time derivatives calc. 2-101300
 nonlinear, transition kernels 2-84568
 nonlinear transport problems 2-60729
 nonspherical bodies, Boltzmann eqn. of H-theorem, two-dimens. 2-63815
 nonstandard approach, Loeb and classical solns. 2-53701
 normal metal point contacts, non-Ohm's law behaviour 2-87375
 one-body response formulas and generalised Boltzmann equations 2-53659
 orbitron device, electron density distrib. and ionisation efficiency, Boltzmann eqn. calc. 2-84644
 Padé approximants, appl. to energy deposition in spherical geometry, emissivity estimates 2-58750
 Padé approximants for linear Boltzmann eqn., finite slab albedo and radiative heat flux const. calc. 2-86203
 particle and radiation leakage importance, definition, anal. and interpretation 2-96064
 particle transport theory, nonlinear integral evolution problem solns. 2-58751
 persistent scattering models, nonlinear Boltzmann eqn. 2-84567
 piezoelectric doped semicond., acoustoelectric amplification threshold, scattering effects, calc. 2-98701
 plasma, linear fluctuation spectrum, Boltzmann eqn. calc. with collisions 2-65690
 plasma, magnetised, EM wave, propag., electron distrib., quantum mech. collisionless Boltzmann eqn. 2-97746
 polyatomic gases, H-theorem 2-76055
 polymers, statistical mech., Boltzmann eqn. approach 2-84555
 radiation damage, slowing down approx. to Boltzmann eqn., appls. to recoil atoms 2-66041
 radiation transport, sensitivity theory using Boltzmann eqn. (*Spanish*) 2-69111
 Rayleigh gas, one-dimensional long-time tail in vel. correlations 2-55692
 relativistic plasmas, Boltzmann theory, hydromagnetic wave propag. 2-81467
 relativistic plasmas, hydromag. waves, energy transport, Boltzmann theory 2-86470
 semiconductors, electron transient response, Boltzmann eqn., Monte Carlo technique 2-61458
 semiconductors, hot carrier galvanomag. effects in high mag. fields, Boltzmann eqn. calc. 2-110371
 semimetals, variational method 2-110337
 shock waves in gas dynamics, shock profile soln. of Boltzmann eqn. 2-114846
 short-range interactions and irreversibility in statistical mechanics (*French*) 2-95677
 sodium polystyrene sulphonate, activity coeffs., Poisson-Boltzmann eqn. numerical soln. 2-104023
 solution for H neutral atom transport in H plasma 2-114981
 solution method for arbitrary irregular geometries 2-90200
 sputtering from spike, nonlinear Boltzmann eqn. calc. 2-77654
 stationary solutions in unbounded domains 2-112847
 statistical description incompleteness and irreversibility desorption (*Russian*) 2-103240
 swarm parameters calc. in SF₆ and SF₆ mixtures 2-103273
 swarm parameters determ. in O₂ and dry air 2-103246
 ternary semicond., carrier scatt. mechanisms, Boltzmann eqn. calc. 2-115744
 Tjon-Wu equations, generalised, struct. 2-63890
 transport parameters calc. in SF₆ for non-equilibrium medium 2-103274
 uniform gas Boltzmann eqn., semidivergence of Legendre expansion 2-107277
 Ag, film, electron transmission and backscattering, Boltzmann eqn. model (*French*) 2-77643
 Al, film, electron transmission and backscattering, Boltzmann eqn. model (*French*) 2-77643
 Ar gas, electron transport, temp. depend. calc. near Ramsauer-Townsend min. 2-103254
 Cu, film, electron transmission and backscattering, Boltzmann eqn. model (*French*) 2-77643
 Cu-3d transition metal dil. alloys, residual resist. calc. using exact soln. of linearised Boltzmann eqn. 2-98618
 GaAs, hot photoexcited electrons, theoretical study 2-82367
³He, superfluid, B-phase, shear viscosity, Landau parameters effect 2-104098
 Hg discharge positive column, electron energy distrib. meas. and Boltzmann eqn. calc. 2-76227
 In_{1-x}Ga_xAs_{1-y}P_y, low field mobility and thermoelectric power, scatt. mechanisms 2-82362
 K, CDW state and residual resist. anisotropy 2-82316
 N₂O₂, air-like mixture, three-body attachment coeff., Boltzmann eqn. calc. 2-90693
 Ni, alpha particle implanted, stopping power and radiation damage distrib., Boltzmann eqn. calc. 2-76548
 Si(100) surface inversion layer, electron mobility, memory function and Boltzmann eqn. approaches 2-56699

Boltzmann-Vlasov equation see *Vlasov equation*

bond angles

- alkali metal antimonites, IR spectra isolated in N₂ matrix, bond angles estimation 2-80595
 alkali metal arsenites, IR spectra isolated in N₂ matrix, bond angles estimation 2-80595
 alkali metal phosphites, IR spectra isolated in N₂ matrix, bond angles estimation 2-80595
 barrelene, struct., gas phase electron diff. obs. and force field calcs. 2-85806
 N-benzene sulphonyl DL- α -alanine, cryst. and mol. struct., X-ray study 2-99882
 bis (4,4-dimethyl-2,5-cyclohexadiene-1-ylidene), crystal and mol. struct., bond lengths and angles 2-98058
 3-bromopropene, mol. struct., conformers, gas-phase electron diff. 2-75431

bond angles continued

- 2,2'-cyclocytidine hydrochloride, cyclonucleoside cryst. and mol. struct., X-ray study 2-99883
 cycloocta-1,5-dienyl acetylacetonato platinum tetrafluoroborate, cryst. and mol. struct., X-ray study 2-98053
 10,10-dimethylphenothiosilene, cryst. struct. 2-98064
 diphenylarsenous acid, cryst. and mol. struct. 2-103740
 1,1-diphenylethanes, S₀, S₁- and T₁-state, geometrical and electronic struct., bond lengths and angles (*German*) 2-90429
 ferrites, spinel-type, hyperfine mag. field, press. effect 2-104780
 hexafluoroazomethane, struct., vibr., normal coordinate anal., electron diff., IR and Raman obs. 2-113981
 hexafluorobut-2-ene-d₄(d₂), struct., vibr., normal coordinate anal., electron diff., IR and Raman obs. 2-113981
 imidazo (3,4-d)-(1,2,4)-triazene-3 (4H)-thione, cryst. and mol. struct., X-ray study 2-98054
 ketenimine, struct., electronic props., force consts., inversion barrier, non-empirical calcs. 2-64858
 methyl isothiocyanate, microwave spectrum, bond angle, rovibr. energy levels 2-85642
 10-methyl-10-chloromethylphenothiosilene, cryst. struct. 2-98064
 monobromobenzene in nematic liq. cryst., r_s struct., ¹³C satellites in PMR spectrum 2-54873
 organic compounds, estimation of wide-line PMR second moment, group geometry anal. 2-103571
 organic substances, H-bonds in polymorphic modifications 2-97988
 oxyhaemoglobin, human, Fe-O-O bond 2-67936
 phenylbenzoates, substituted, conform. anal., NDDO calc. 2-59961
 polyacetylene, geometry change on charge transfer, cryst. orbital calcs. 2-109689
 polyatomic molecules, free, fluoresc. polarisation 2-70327
 polyphenylene oxide, cond. and conformational anal., dopant intercalation model 2-77045
 polyphenylene sulphide, cond. and conformational anal., dopant intercalation model 2-77045
 silicates, bonding, computational quantum chemistry study 2-97980
 4-spirotetrahydrofuryl-2'-2-spirocyclohexyl-1,2,3,4-tetrahydroquinoline and nitroxyl radical formed in oxidation, cryst. and mol. struct. 2-98062
 standard basis sets with polarisation functions 2-80429
 ternary oxides, tetrahedral, trends in matrix isolated IR spectra 2-80598
 trifluoroacetylfluoride, mol. struct., torsional barrier, gas phase electron diff. 2-75432
 trifluoromethyl derivatives, geometry, intramolecular interactions, NDDO calcs. 2-64878
 1-triphenylphosphazo-1-dimethyl-amino-2,2-dicyanoethylene, cryst. struct. and spectral study 2-98061
 tris(trimethylsilyl)methane, struct., gas phase electron diff. study 2-114106
 As₂S₃, chalcogenide glasses, struct. models, bond lengths and angles 2-91805
 B(OTeF₃), cryst. struct., X-ray diff. study 2-81737
 α -BiAsO₄, Roseevite, cryst. struct., X-ray diff. study 2-81736
 CaSO₄·2H₂O, gypsum, cryst. struct., neutron diff. refinement 2-65931
 Cs₂S₈, synthesis and cryst. struct. (*German*) 2-55941
 Ge, amorphous, evaporated, struct. study by neutron diff. 2-86566
 H₂S, bond length and angle, ab initio calcs., uniform basis sets 2-80451
 HfSiO₄, cryst. struct. refinement 2-115185
 Li, B-O₁₂, X₂ (X=Cl, Br) 2-66917
 LiPn, cryst. struct., bond angles, X-ray diff. study (*French*) 2-103711
 Mo-Mo quadruple bonds in cpds, SCF-X α -SW calcs. and PES 2-85736
 Na₂Ca₂Al₁₀Si₁₀O₄₀, cryst. struct., X-ray diff. method 2-115188
 Na₂Li₂Fe₂F₁₂, garnet cryst. struct., bond lengths and angles, X-ray diff. study (*German*) 2-91936
 PF₅, quadratic force fields, symmetry bending consts. and bond angles 2-90734
 SOBr₂, mol. struct. gas phase electron diff. study 2-114107
 SOF₄, quadratic force fields, symmetry bending consts. and bond angles 2-90734
 Si, amorphous, anneal stable, Raman scatt. study 2-57084
 a-Si CVD films, anneal-stable, struct. order, Raman scatt. study 2-81679
 SiO₂ glass, thermodynamic, struct. and dynamical props., mol. dynamics study 2-76321
 SiO_x amorphous films, reactively sputtered, struct. and props., IR spectra study 2-66397
 W-W quadruple bonds in cpds., SCF-X α -SW calcs. and PES 2-85736

bond lengths

- alkanes, C-H stretching vibrs., overtone spectra obs. using laser photoacoustic spectroscopy 2-102463
 alkenes, C-H stretching vibrs., overtone spectra obs. using laser photoacoustic spectroscopy 2-102463
 apatites, rare-earth containing, mag. props. 2-92875
 barrelene, struct., gas phase electron diff. obs. and force field calcs. 2-85806
 N-benzene sulphonyl DL- α -alanine, cryst. and mol. struct., X-ray study 2-99882
 bis (4,4-dimethyl-2,5-cyclohexadiene-1-ylidene), crystal and mol. struct., bond lengths and angles 2-98058
 9,9'-trans-bis-telluraxanthenyl, cryst. and mol. struct. 2-98060
 3-bromopropene, mol. struct., conformers, gas-phase electron diff. 2-75431
 d-camphor, carbonyl stretching mode, Raman and IR spectra, high press. and temp. effects 2-67057
 carbon tetrachloride, struct. by neutron diff. 2-55848
 carbonyl cyanide, geometries calc. using ab initio gradient program, bond lengths, electronic struct., force consts. 2-113858
 o-carboranyl-substituted allyl anion, CNDO/2 calc. 2-90457
 chalcides, melting point relations 2-92161
 -chloro-2,4-dimethyl-1,2-dihydro-1,5,2,3-phosphoxadiazole, gas phase electron diff. 2-90703
 2,2'-cyclocytidine hydrochloride, cyclonucleoside cryst. and mol. struct., X-ray study 2-99883
 cycloocta-1,5-dienyl acetylacetonato platinum tetrafluoroborate, cryst. and mol. struct., X-ray study 2-98053
 3,5-diamino-1,2,4-dithiazolium salts, struct., vibr., IR obs. 2-108516
 diatomic molcs., mol. force consts., bond lengths, pot. energy functions, electronegativity anal. 2-75463
 diatomic systems, HF Slater wave functions calc. 2-96441
 dicyanodiazomethane, geometries calc. using ab initio gradient program, bond lengths, electronic struct., force consts. 2-113858
 10,10-dimethylphenothiosilene, cryst. struct. 2-98064

bond lengths continued

- 1,1-diphenylethanes, S_0 , S_1 - and T_1 -state, geometrical and electronic struct., bond lengths and angles (*German*) 2-90429
 DMSO, bond lengths, S d orbital, geometry optimisation, ab initio calcs. 2-96444
 EXAFS determination using linear phase functions 2-77623
 glyoxime, mol. struct., ab initio HF STO-3G calc. 2-96431
 halides, melting point relations 2-92161
 (HCl)₂, geometry, force consts., moments, ab initio SCF calcs. 2-80454
 hexafluoroazomethane, struct., vibr., normal coordinate anal., electron diff., IR and Raman obs. 2-113981
 hexafluorobut-2-ene-d₆(d₂), struct., vibr., normal coordinate anal., electron diff., IR and Raman obs. 2-113981
 hexakis(2,6-di-tert-butyl-4-biphenyl)ethane, central bond length calcs. 2-59703
 hexaphenylethane, central bond length calcs. 2-59703
 hexaphenylisomelamine and hexaphenylmelamine, cryst. and mol. struct. 2-103742
 III-VI semiconductors, chem. bond characts. 2-76919
 imidazo (3,4-d)-(1,2,4)-triazene-3 (4H)-thione, cryst. and mol. struct., X-ray study 2-98054
 ketenimine, struct., electronic props., force consts., inversion barrier, non-empirical calcs. 2-64858
 11-(methoxycarbonyl)-cyclohept[a]azulenylium tetrafluoroborate, MCD and IR absorpt. spectra 2-75337
 10-methyl-10-chloromethylphenothiosilene, cryst. struct. 2-98064
 microwave spectroscopic consts., equil. bond lengths and rot. consts., CI calcs. 2-102467
 organic compounds, estimation of wide-line PMR second moment, group geometry anal. 2-103571
 organic compounds, struct., rot. barriers, STO-3G MO calcs. 2-108350
 organic substances, H-bonds in polymorphic modifications 2-97988
 organosiloxanes, intermolecular distances and mol. environment in cryst. state 2-97987
 oxides, melting point relations 2-92161
 1-phenylphosphathyne, microwave spectra, bond length determ. 2-85641
 polyacetylene, bond lengths, bond strengths and electron-lattice coupling calc. 2-76625
 polyacetylene, geometry change on charge transfer, cryst. orbital calcs. 2-109689
 polyatomic molecules, free, fluoresc. polarisation 2-70327
 riding model correction for thermal motion effects in struct. determ. 2-96768
 silicates, bonding, computational quantum chemistry study 2-97980
 4-spirotricyclic-2'-2'-spirocyclohexyl-1,2,3,4-tetrahydroquinoline and nitroxyl radical formed in oxidation, cryst. and mol. struct. 2-98062
 standard basis sets with polarisation functions 2-80429
 sulphides, cation-S bond-valence/bond-length parameters 2-65914
 telluraxanthene, cryst. and mol. struct. 2-98060
 tetrafluoromethane hot mol., anharmonic shrinkage effects, electron diff. study 2-102625
 tetrafluoromethane hot mol., thermal expansion, electron diff. study 2-102624
 transition adatoms on transition metals, and of simple chemisorption theory 2-92346
 trifluoroacetylfluoride, mol. struct., torsional barrier, gas phase electron diff. 2-75432
 trifluoromethyl derivatives, geometry, intramolecular interactions, NDDO calcs. 2-64878
 1-triphenylphosphazeno-1-dimethyl-amino-2,2-dicyanoethylene, cryst. struct. and spectral study 2-98061
 tris(trimethylsilyl)methane, struct., gas phase electron diff. study 2-114106
 X-ray emission spectra, vibr., pot. energy surfaces, bond lengths and force consts. 2-65003
 Ag₂I₂F₂·2.5H₂O, cryst. struct. 2-65929
 Ag₂TiS₂, disordered stage II, c-axis parameters, X-ray study 2-109772
 ArI₂, mol. interactions, struct., mol. complex theory, Raman spectra 2-108656
 Ar₂I₂, mol. interactions, struct., mol. complex theory, Raman spectra 2-108656
 As₂S₃ x chalcogenide glasses, struct. models, bond lengths and angles 2-91805
 B(OTeF₂)₃, cryst. struct., X-ray diff. study 2-81737
 α-BiAsO₄, Roseveltite, cryst. struct., X-ray diff. study 2-81736
 C atomic arrangement by X-ray diff., radial distrib. anal. 2-81673
 C, prep. by low-temp. reduction of PTFE, radial electron density distrib. meas. 2-76308
 CCN⁺, microwave spectroscopic consts., equil. bond lengths and rot. consts., CI calcs. 2-102467
 CO chemisorption on Ni(100), vibr. freq. and ionisation pot., generalised valence bond methods 2-66370
 C₂O⁺, isomers, bond lengths, ab initio SCF calcs. 2-113862
 COS, cryst. struct. at 90K, neutron powder diff. study 2-65939
 CaFe₂O₄(FeO), n=1,2,3, cryst. struct., bond lengths 2-103716
 CaSO₄·2H₂O, gypsum, cryst. struct., neutron diff. refinement 2-65931
 CdGeAs₂, chalcopyrite, elastic behaviour, US wave vel. study 2-61052
 Co complexes, low spin Co (III) porphyrins, bond lengths, EXAFS obs. 2-85689
 CoFe₂O₄, bonding, EXAFS study 2-99226
 Cs₂S₂, synthesis and cryst. struct. (*German*) 2-55941
 Cu, radial distrib. functions, refl. EELS study 2-105020
 CuFe₂O₄, bonding, EXAFS study 2-99226
 Cu(en)₂⁺, exchanged Y zeolite, X-ray absorpt. obs. 2-93324
 F₃NO(PO), photoelectron spectra, bond struct., Xα approx. 2-54769
 Fe(110), H₂ adsorption, pair interaction energy, embedded cluster formalism 2-92356
 H, metallic, structure and screening at high press. 2-76961
 H₂, molecular, structure and screening at high press. 2-76961
 H₂ potential curve, electron exchange parameter effects, X_α-SW calcs. 2-90450
 H₂+H pot. energy surface, near Hartree-Fock calc. 2-59891
 H₂+He(Ne), van der Waals pot. hypersurfaces, bond dist. depend. 2-59882
 HIO₃, cryst., phase transition under press., NQR investig. 2-110694
 H-S, bond length and angle, ab initio calcs., uniform basis sets 2-80451
 HfTiNbO₃, localisation of H, cryst. struct., neutron powder diff. obs. 2-60937
 H₂SiO₄, cryst. struct. refinement 2-115185
 IF₇, struct, vibr. assignment, and intramol. forces, pseudopot. SCF-MO studies 2-75171

bond lengths continued

- In₂WO₆, cryst. struct., relation to fluorite struct., X-ray diff. study 2-81726
 K₂FeO₄, cryst. struct. study 2-103701
 KIO₃, cryst., phase transition under press., NQR investig. 2-110694
 LiD₃(SeO₃)₂, ferroelec., cryst. struct., neutron diff. study 2-81733
 LiH, dipole moment, polarisabilities, electric field gradients and nuclear screening, bond length depend. 2-54763
 Li₂P₂S₆, synthesis, cryst. struct. and vibr. anal., X-ray diff. study (*French*) 2-103714
 MnCl₂-graphite intercalation cpd., charge transfer and islands, X-ray diff. study 2-91932
 MnFe₂O₄, bonding, EXAFS study 2-99226
 Mo-Mo quadruple bonds in cpds., SCF-X_α-SW calcs. and PES 2-85736
 Mo₂, bonding, spin-polarised cellular multiple scatt. calcs. 2-80448
 NF₃, photoelectron spectra, bond struct., Xα approx. 2-54769
 (NH₄)₂Sn(HPO₃)₂, cryst. struct., X-ray study, block-diagonal least squares method 2-81727
 (NH₄)₂[Pt(OH)₆], cryst. struct., least squares refinement, X-ray diff. study (*German*) 2-81730
 Na₂Ca₂Al₁₀Si₁₀O₄₀, cryst. struct., X-ray diff. method 2-115188
 Na₂La(MoO₄)₂, cryst. struct. and interat. distances 2-103731
 Na₂La(WO₄)₂, cryst. struct. and interat. distances 2-103731
 Na₃Li₂Fe₂F₁₂, garnet cryst. struct., bond lengths and angles, X-ray diff. study (*German*) 2-91936
 Na₂Tb(WO₄)₂, cryst. struct. and interat. distances 2-103731
 Na₂[Co(NCS)₄]·8H₂O, cryst. struct. 2-65933
 Ni complex, Ni₂ en EDTA·4H₂O, cryst. struct. 2-98031
 Ni, radial distrib. functions, refl. EELS study 2-105020
 Ni, surface (111), adsorbed acetylene, full dynamical LEED anal. 2-115521
 NiO, O-O interactions, covalency effects 2-59686
 NiO, superposition errors, contracted basis set investigation 2-85537
 PF₃, photoelectron spectra, bond struct., Xα approx. 2-54769
 PdH, superposition errors, contracted basis set investigation 2-85537
 Rb(H_{0.4}SD_{0.55})₂PO₄, cryst. struct., bond lengths, neutron diff. study 2-91908
 Rie compounds, bond length determ. from X-ray absorption spectroscopy 2-77619
 SF₆ hot mol., anharmonic shrinkage effects, electron diff. study 2-102625
 SF₆ hot mol., thermal expansion, electron diff. study 2-102624
 SF₆, mol. struct. param., temp. depend. 2-102658
 SOBr₂, mol. struct. gas phase electron diff. study 2-114107
 SiF₄ hot mol., anharmonic shrinkage effects, electron diff. study 2-102625
 SiF₄ hot mol., thermal expansion, electron diff. study 2-102624
 SiO₂, vitreous, free energy of structural models, bond lengths and energies 2-97924
 Si(001), 2×1 struct. reconstruction, LEED anal. 2-110121
 TmAl₂Ga_{2-x}, cryst. struct. study 2-55889
 UO₂ complexes with Schiff bases, spectral props. 2-80586
 W-W quadruple bonds in cpds., SCF-X_α-SW calcs. and PES 2-85736
 ZnFe₂O₄, bonding, EXAFS study 2-99226

bonds (adhesive) see adhesion

bonds (chemical)

- see also binding energy; bond angles; bond lengths; crystal binding; hydrogen bonds; intermolecular forces; lattice energy
 acetaldehyde free radicals in solid Ar, IR vibr. spectra prod. from F atom reaction 2-105453
 acetamide, solvent effect on amidic bond, PMR study 2-70291
 adenosine, vertical ionisation pot., UV PES 2-75354
 AES, as local probe for solid surfaces, review 2-82963
 alanine (-d_α), CH stretching vibr. circular dichroism, localised MO calcs. 2-108448
 alanine (-d_α), CH stretching vibr. circular dichroism and fixed partial charge calcs. 2-108447
 alkali metal salts, polyatomic secondary ion form. and emission 2-76780
 alkaline earth oxides, elastic moduli and covalency correlations 2-86772
 alkenes, free radical addition, charge transfer and spin transfer during chemical bond form., MO anal. 2-99646
 allene, integrated IR intensities, bond polar parameters 2-108496
 amines, primary long-chain systems, Raman spectroscopic study of mol. interaction 2-114003
 2-amino-4, 6-dichloropyrimidine, bond and mol. polarisability, struct. 2-59965
 2-aminoanthraquinone-PVA covalent bonding, linear dichroism spectra obs. 2-54886
 benzene, integrated IR intensities, bond polar parameters 2-108496
 benzoid hydrocarbons, individual Kekule valence structs., graph-theoretical approach 2-80486
 benzoid systems, individual Kekule valence structs., graph-theoretical approach to pseudodegenerate states 2-80487
 bis(trifluoromethyl)disulphide mol. struct. by gas electron diff. 2-70416
 bond-oriental wavefunctions, bonding, charge transfer, UB anal. 2-64851
 chemisorption bond making and breaking 2-98431
 complexes, thermomechanical props. of clustering reactions in gas phase 2-78081
 computerised pattern recognition, model and computation method 2-54753
 18-crown-6, mol. mechanics, struct. flexibility, ligand specificity and macrocyclic effect 2-109777
 18-crown-6-alkali complexes, mol. mechanics, struct. flexibility, ligand specificity and macrocyclic effect 2-109777
 crystallography, cryst. struct., book 2-112666
 crystals, electron density distrib. and bonds, X-ray diffractometry investig. 2-60834
 cyclo-octatetraene, in liq. cryst. solvents, bond shift kinetics, dynamic NMR meas. 2-90572
 cyclopentadienylindium, electronic struct., CNDO calcs., dipole moment and orbital energies 2-90453
 cyclopropane, struct. and vibr. anal., ab initio HF calcs. 2-59688
 cyclopropyl radical, struct. and vibr. anal., ab initio HF calcs. 2-59688
 cytidine, vertical ionisation pot., UV PES 2-75354
 diamond: Sn, cordency and compression effects on isomer shift of impurities 2-56989
 diamond, bond polarizabilities, transferability from saturated hydrocarbons 2-70443
 diatomic molecules, bonding within local spin density approx. 2-113873
 diatomic molecules, chem. bonds, pot. energy functions 2-102568

bonds (chemical) continued

N,N-diphenylthiourea, NMR and IR studies of solvent effect 2-75325
 dipicrylamine salts with organic and inorganic cations, prep. and mol. configurations 2-113987
 dislocation cores, Peierls reconstruction 2-65994
 dislocation vibration entropy 2-55970
 double zeta pseudopotentials, pseudo-FSGO calcs. 2-102371
 electrical power and H_2 generating, carrier recomb. at grain boundaries and liq. interfaces, chem. control 2-111573
 electronegativity of positive ions in the density functional theory 2-70166
 ethane, IR intensity anal. following zero and first order approx. 2-80625
 ethane- d_6 , IR intensity anal. following zero and first order approx. 2-80625
 ethyl phenylpropionates, p-substituent effect, IR and ^{13}C chem. shift study 2-75283
 ethyl trans-cinnamates, p-substituent effect, IR and ^{13}C chem. shift study 2-75283
 ethylene, double zeta pseudopotentials, pseudo-FSGO calcs. 2-102371
 ethylene, integrated IR intensities, bond polar parameters 2-108496
 fluoroethylene, ionisation, binary (e,2e) energy spectra, Green's function study, chemical bond 2-80730
 glass coated by Sn and organic long chain mols., chemical bond nature, Mossbauer spectra 2-99009
 glassy semiconductors, book 2-68974
 graded interface region, electronic struct., giant replicate cell approach 2-110447
 grain boundary embrittlement, role of chem. bonding 2-56073
 Group IIB halide mol. complexes, struct. NQR obs. 2-85696
 hexafluoroethane, IR intensity anal. following zero and first order approx. 2-80625
 hydrocarbons, atoms and bonds props. 2-80415
 hydrocarbons, IR intensities, C-H bond characterisation 2-80614
 hydrocarbons, saturated, bond polarizabilities, transferability to diamond 2-70443
 II-VI semiconductors, electronic surface states, review 2-110411
 intermetallic phases, valence rules 2-81697
 internal strain tensor, bond-bonding parameter, X-ray study 2-91864
 ionic crystal, localized effective charge parameter, strain depend. 2-97984
 lanthanide metals, bond hybrids and structs. 2-96418
 mercuric derivatives of amide thiols, vibr. spectra and struct. (French) 2-96542
 metal film on semiconductor, interface chem. reaction and diffusion 2-86954
 metal substituted carbonic anhydrases, spectroscopic investigation, binding sites 2-111613
 metal-semiconductor interface interaction studied by soft X-ray photoemission spectroscopy 2-110051
 metals, chemisorbed atoms, surface bond energy estimation 2-82117
 methane, electronic energy and bond-stretching force const. calc. using single-centre min. basis set 2-70148
 methanol monolayers, H^+ in electron stimulated desorpt. 2-87020
 methyl thiocyanide, produced by glow discharges, thermal props. (German) 2-56227
 N-methylacetamide, solvent effect on amidic bond, PMR study 2-70291
 N-methylthiourea, NMR and IR studies of solvent effect 2-75325
 MO bonding-antibonding charact., core electron binding energies and valence-shell ionisation pot. 2-75141
 multiple bonding as a screening phenomenon 2-114127
 naphthyl polyenes, electrical cond. process compensation effect 2-61469
 nitrides, two-component, binding classification, spatial correlation of valence electrons 2-115174
 nitrosylhalides, halogens effect on bond props. 2-102659
 nonalternate hydrocarbons, individual Kekule valence structs., graph theoretical approach 2-80488
 nonbenzoid hydrocarbons, individual Kekule valence structs., graph theoretical approach 2-80488
 organic compounds, bond order, charge densities from ab initio mol. wavefunctions 2-64844
 organic molecules, $1/3$ /dipolar cycloadditions, LCAO-SCF-MO ab initio calcs. 2-111462
 organic sulphide cpds., d orbital participation in bonding, positron lifetime meas. 2-85834
 organic sulphonic cpds., d orbital participation in bonding, positron lifetime meas. 2-85834
 organic-inorganic intercalation cpds., low dimensional, photopolymerization 2-92584
 organoleadamines, primary, second and tertiary, normal coord. anal. 2-75237
 organotin compounds, diamag. susceptibilities semiempirical calcs. 2-56819
 oxides, sputtering, mol. form. mechanisms 2-99271
 phenyl-S bonds, substituent effects transmission CNDO/C calcs. 2-90459
 PMMA-polymethyl acrylate copolymers, benzene soln., chain motion, elementary processes 2-93107
 poly(aspartic acid), ^{13}C NMR study of struct. 2-104717
 polyacetylene, bond alternation, electronic correl. effects 2-56455
 polyacetylene, bond lengths, bond strengths and electron-lattice coupling calc. 2-76625
 polydiacetylene conjugated solution, Raman photoselection 2-82864
 polyenes, finite, correl. states, exact PPP results 2-75190
 polyethylene chain, breaking energy with missing H atom 2-115153
 polyethylene mechanical degradation, free radicals and end groups from chain scission 2-90751
 polymer solids and composites, ^{13}C NMR 2-87606
 polymer-metal interface chem. interactions, correlation with adhesion 2-78132
 prolyl residues, struct. characts., review 2-73189
 PTFE, X-ray damaged, improved adhesion of Ni films, XPS study 2-76872
 pyrogermanates, struct., IR and Raman vibr. spectroscopy 2-87759
 pyrosilicates, struct., IR and Raman vibr. spectroscopy 2-87759
 rare earth ethylsulphates, high press. phase transition mechanism 2-76666
 rare earth orthophosphates, vibr. props. of PO_4^{3-} (German) 2-81907
 rare earth silicides, Si K_α emission spectra, energy shift, cryst. struct. effects 2-99227
 semiconductors, phonon and struct. energy ab initio calc. methods, review 2-76612
 silicide-Si interface electronic states and microstruct. 2-87412

bonds (chemical) continued

steel, mild, diffusion bonding, in situ obs. using photoemission electron microscope 2-110177
 steel, surface layers formed by friction, AES and X-ray emission spectra study (Russian) 2-93635
 stopping powers, metallic bond effects on mean excitation energies 2-92064
 strontium tartrate tetrahydrate, X-irradiated, ESR 2-82718
 styrene-acrylonitrile copolymers, sequence distrib. and intramol. excimer formation 2-77562
 subband physics with real interfaces, review 2-61610
 tetrafluoromethane, IR intensity anal. following zero and first order approx. 2-80625
 thiazylhalides, halogens effect on bond props. 2-102659
 thymidine, vertical ionisation pot., UV PES 2-75354
 transition metal cluster chemistry and implications for hydrogen embrittlement, alloy behaviour and metal catalysts 2-91832
 transition metal complexes with 4-cyanopyridine N-oxide, struct., vibr., mag. moments, IR study 2-77518
 transition metal dichalcogenides, struct. rel. to lubrication performance 2-109901
 transition metal layered chalcogenophosphates, effect of bond ionicity on Li electrochemical intercalation 2-71392
 transition metals sulphides, first and second row, electronic struct., SCF-SW-Xalpha cluster calcs. 2-70143
 trifluoromethylgermanes(- d_3), IR and Raman spectra, force consts., normal coordinate anal., bonds 2-70266
 2,4,6-trifluoropyrimidine, bond and mol. polarisability, struct. 2-59965
 uridine, methylated, vertical ionisation pot., UV PES 2-75354
 Al cluster, CO adsorpt. 2-87057
 Al-GaAs(110) interface, possibility of adatom cluster formation 2-61555
 Al-Si compounds, XPS study of silicates, Auger parameter rel. to refractive index 2-99740
 α -Al $_2\text{O}_3$, electronic struct., extended tight-binding calc. 2-110241
 Al-O-Al, linkage stability in zedites, MO STO-3G calcs. 2-64871
 As_2S_3 film, refractive index changes, permittivity (Russian) 2-61864
 $\text{As}_2(\text{SO}_4)_3$, cryst. struct. and covalence bonds (French) 2-71403
 As_2Se_3 thin film, photoinduced defects, isothermal annealing characts. (Russian) 2-103745
 As_2Te_3 amorphous film, energy gap, composition depend. 2-61337
 At-protein bond, nature of 2-62549
 AuBr_4^- , bond order from Raman intensity data 2-59962
 AuCl_4^- , bond order from Raman intensity data 2-59962
 B fibre reinforced Al and Al-Cu-Mg-Mn, hot pressing, reaction between fibres and matrix 2-83068
 $\text{B}_2\text{O}_3\text{-Na}_2\text{O-PbO(CdO)}$ glasses, press. induced struct. changes, ESR study 2-110637
 BaTiO_3 , ferroelec. transition role of polar phonons in chemical bond, Fourier spectroscopy 2-57028
 Be, electronic and struct. props., HF ab initio calc. 2-82218
 BeF, bonding and consequent unusual progression of vibr. spacings, VB calcs. 2-80489
 $\text{Bi}_{1-x}\text{Sb}_x$ solid soln., system, Vegard's rule validity 2-65968
 CC Cr-C, X-ray emission and photoelectron spectra meas. 2-87906
 CH, bond functions for ab initio calcs., MCSCF calcs. 2-96438
 CO_2 , structural parameters determ. by gas electron diffr., chemical binding effect 2-96730
 CdGeAs_2 , chalcopyrite, elastic behaviour, US wave vel. study 2-61052
 $\text{CdK}_2(\text{SO}_4)_3 \cdot 6\text{H}_2\text{O} \cdot \text{VO}^{2+}$, Tutton salts, EPR spectra, multiple trapping sites 2-61755
 $\text{Cd}(\text{NH}_4)_2(\text{SO}_4)_3 \cdot 6\text{H}_2\text{O} \cdot \text{VO}^{2+}$, Tutton salts, EPR spectra, multiple trapping sites 2-61755
 ClF_3 , electronic struct. and bonding, reaction energy, extensive RHF ab initio calcs. 2-96433
 Co complex, CO_2/CO , where L=ethyne, propyne and butyne, electronic struct., CNDO/2 calcs. 2-96455
 Co complexes, $\text{Co(II)-8-quinolines}$, dihydrates and adducts, IR absorpt. spectra 2-110866
 $\text{CsCdF}_6 \cdot \text{Mn}^{2+}(\text{Ni}^{2+})$, spin transfer parameters, core electrons effects 2-87627
 Cs_3Sb , solid compound semiconductor, chemical bonding, ^{133}Cs -NMR spectra 2-56957
 Cu-Au system, L1, struct., covalent contrib. to bond energy, order-disorder transitions 2-76359
 Cu_2 , nature of bonding, SCF calcs. 2-96413
 $\text{Cu}_2\text{Mg}_{1-x}\text{Fe}_x\text{O}_4$, spinel ferrites, ionic-covalent bonding, X-ray diffr. and absorption chemical shift stud y 2-65919
 $\text{CuO-CaO-P}_2\text{O}_5$ glass, IR absorpt. spectra, CuI addition influence 2-116213
 $\text{Cu}_2\text{Zn}_{1-x}\text{Fe}_x\text{O}_4$, spinel ferrites, ionic-covalent bonding, X-ray diffr. and absorption chemical shift study 2-65919
 Fe complex, (cyclobutadiene)iron tricarbenyl, bonding, photoelectron spectra and photoionisation, Xalpha SW calcs. 2-102382
 Fe-B, refractory layer, powder boriding, photoelectron spectra, thermodynamic studies 2-93471
 Fe-Ni-Co powders obtained by decomp. of carbonyls, Co content influence on phase comp. 2-67294
 FeS_4^{2-} cluster, radial densities calc. by multiple scatt. Xalpha method, bonding, Mossbauer isomer shift data 2-96450
 GaAs (110), formic acid adsorption EELS study 2-98454
 GaAs, bonding, charge density anal., X-ray diffr. study 2-81710
 GaAs surface state reduction by plasma growth of oxyfluorides 2-110427
 GaAs:Cr, semi-insulating, EPR of extended defects 2-87590
 $\text{Ga}_2\text{In}_{1-x}\text{P}_{1-x}$, internal strain determ. using Vegard's law 2-103709
 GaP:O, point defect electron states, enfeebled O bonding and metastability 2-61351
 (Ge, Sn)-Se system, glass form. and vibr. props. 2-86578
 Ge:Sn, cordency and compression effects on isomer shift of impurities 2-56989
 Ge-S glasses, local order, ESR study 2-65865
 Ge-Se, amorphous, valence and inner shells, XPS study 2-116332
 H_2^+ , ground state, pot-curve, covalent bond anal. 2-102414
 H_2^+ traversing ultra thin C foils, form. of bound and unbound mol. states 2-54930
 HDO in solid hydrates, Raman and IR intensity features of vibr. modes 2-108513
 HF, Bonding energetics, total and kinetic energies, relation to H_2 and F_2 2-59963
 H_2MoO_3 solid state struct., H attachment study 2-98014
 H_2NO , protonated and deprotonated ions, ligand in complexes, SINDO/1 calcs. 2-85548

bonds (chemical) continued

- H₂NOH, protonated and deprotonated ions, ligand in complexes, SINDO/1 calcs. 2-85548
 HNSO, force field, vibr. freq., ab initio CI and basis set calcs. 2-75195
 H₂O, double zeta pseudopotentials, pseudo-FSGO calcs. 2-102371
 H₂O₂, struct., bonding, IR matrix isolation spectra 2-96560
 H₂SiSi and its isomers, stability and bonding, generalised valence bond pot. study, SCF MO calc. 2-64884
 HfTe₂As, low-dimensional cond., Hall effect and transverse magnetoresist. 2-92663
 Hg_{1-x}Cd_xTe, surface electronic struct. and cation bonds, tight binding calc. and UPS study 2-110428
 ICl₄, bond order from Raman intensity data 2-59962
 In compounds, electronic struct., photoelectron spectroscopy studies 2-62051
 InP-metal interface, Fermi level pinning and chem. struct., XPS study 2-110475
 InSe, press. induced nonlayer struct., X-ray diffr. study 2-103713
 Ir film on n-Si, silicide form., AES study 2-86951
 Ir tape, covered by graphite monolayer, adsorpt. of K 2-115569
 K zeolites, quantum chemical study of physico-chemical props. 2-65917
 KCu(CN)₂, coordination bonds, spin-lattice relax., NQR study 2-110712
 KNbO₃, ferroelec. transition role of polar phonons in chemical bond, Fourier spectroscopy 2-57028
 LaB₆ surface, Cs thermal desorption, discrete binding states 2-87069
 LaCrO₃:Sr(Ti) perovskite, IR spectra assignments and interpret. 2-93231
 Li zeolites, quantum chemical study of physico-chemical props. 2-65917
 LiNbO₃, elec. field induced ionic displacement and bonding electron redistrib., modulation X-ray diffr. study 2-81718
 LiNd(PO₃)₃, IR spectra 2-72469
 LiTaO₃, elec. field induced ionic displacement and bonding electron redistrib., modulation X-ray diffr. study 2-81718
 MnBr₂, Mn²⁺ 3d shells, effective occupation number calc. 2-92503
 Mn₂(CO)₁₀, cryst. struct., bonding, charge density 2-55901
 MnCl₂, Mn²⁺ 3d shells, effective occupation number calc. 2-92503
 MnF₂, Mn²⁺ 3d shells, effective occupation number calc. 2-92503
 Mo surface (100), adsorpt. of CO, high resolution EELS study 2-71794
 Mo₂, bonding, spin-polarised cellular multiple scatt. calcs. 2-80448
 N₂, liquid, internol. electron density distrib., diffr. anal. 2-91750
 NH, bond functions for ab initio calcs., MCSCF calcs. 2-96438
 NH₂, containing compounds, isolated N-H stretching freq. 2-90506
 N₂O⁺, A state, predissociation, bond-breakage mechanism, UV obs. 2-90637
 Na zeolites, quantum chemical study of physico-chemical props. 2-65917
 Na₂O-CaO-SiO₂ glass, bonding props., XPS study 2-93367
 Na₂O-Li₂O-SiO₂ glass, energetics, from acoustic meas. 2-71590
 Na₂O-SiO₂ glass, energetics, from acoustic meas. 2-71590
 NbCl₅, Cl₃ NQR spectrum, 4.2 to 480K, coupling constants 2-56968
 NbCl₅, Nb³⁺ NQR spectrum, 4.2 to 480K, coupling constants 2-56969
 NbO₂, struct. transition, role of polar phonons Fourier spectroscopy 2-57028
 NbS₂-2H and intercalated, Raman scatt. spectra 2-87792
 Nd₂(SO₄)₃·8H₂O complexes in soln., optical absorpt. spectra 2-70270
 Ni (100), adsorption of N₂ and CO, photoemission study 2-56335
 Ni (111), adsorption of water, preadsorbed O effect of azimuthal ordering 2-104157
 Ni, adsorption of N₂, HF cluster model calc. 2-56334
 Ni complexes, Ni(II)-8-quinolines, dihydrates and adducts, IR absorpt. spectra 2-110866
 Ni silicides, electronic struct., photoemission study 2-110247
 Ni sputter deposited on polymer surfaces, XPS study of 'hot' atom interactions 2-93805
 Ni surface, chemisorbed CO(N₂), SCF-X α SW model cluster calcs. 2-61278
 Ni/Si systems, chem. bonding and charge redistrib., valence band and core level correlations 2-82223
 Ni(CO)₄, atomic, bond and mol. polarisabilities, quantum mech. calc. 2-90731
 Ni(CO)₃N₂, synthesis and kinetics in liq. Kr, indication of Ni-N₂ bond energy 2-80834
 OGeF₂, bonds, mean amplitude of vibr. calcs. 2-64949
 OH, bond functions for ab initio calcs., MCSCF calcs. 2-96438
 ONOF, vibr. pot. function and struct. by normal coordinate anal. 2-108495
 OSiF₂, bonds, mean amplitude of vibr. calcs. 2-64949
 Pd/Si system, chem. bonding and charge redistrib., valence band and core level correlations 2-82223
 Pd-Ge, liq., thermodynamic props. rel. to bonding and short-range order 2-91756
 PdBr₄²⁻, bond order from Raman intensity data 2-59962
 PdC, bonding, all electron ab initio calculations 2-75140
 PdCl₄²⁻, bond order from Raman intensity data 2-59962
 Pt (111), adsorption of methylacetylene, propylene and 2-butenes, surface structs., LEED study 2-71804
 Pt surface (321), kinked, adsorpt. of CO 2-61292
 Pt/Si system, chem. bonding and charge redistrib., valence band and core level correlations 2-82223
 Pt-Ge, liq., thermodynamic props. rel. to bonding and short-range order 2-91756
 PtBr₄²⁻, bond order from Raman intensity data 2-59962
 PtCl₄²⁻, bond order from Raman intensity data 2-59962
 Pt(111) cryst. surface, butane and pentane adsorpt. and bonding, O treatment and D preadsorpt. effect 2-71793
 RGa₂, X-ray absorpt. spectrum study 2-77621
 RP(RS), band struct., calc. and X-ray emission and absorpt. spectra study 2-110246
 Re surface, nuclear spin relaxation of alkali metal atoms 2-98991
 Re(0001), adsorption of benzene studied by thermal desorpt., Auger spectra and LEED between 100 to 300K (French) 2-11041
 Rh film on n-Si, silicide form., AES study 2-86951
 RhF, Rh-F coupling const. and Rh shielding in Rh square planar complex 2-75320
 Sb₂Se₃, amorphous film, energy gap, composition depend. 2-61337
 Se₂, binding calc. 2-54737
 ScH, electronic states, d bond, multiconfigurational SCF/CI calcs. 2-80497
 Se, ion plated on α - brass, adhesion and interface chemistry 2-66405
 Se(CN)₂, HeI valence PES, broken symm. effects 2-90627
 Si, surface (111), Mott insulator model 2-115839
 Si surface (111), reconstructed, electronic struct. in vacancy model 2-87360

bonds (chemical) continued

- Si:N, low energy implantation, material composition, oxidation resist. and elec. characts. 2-86694
 Si:Sn, cordency and compression effects on isomer shift of impurities 2-56989
 Si-Ni(Cr) interface, chem. bonding and density of states, UPS and LCAO calc. 2-110476
 Si-Pr(Pd)(Ni) interface bonding, XPS study 2-110477
 Si-SiO₂ junction, interface electronic struct. 2-110485
 SiC:H, amorphous film for a-Si solar cell, props. and struct. 2-104978
 Si₃C₂F₆ thin film, amorphous, prep. by reactive sputtering in tetrafluoromethane (Japanese) 2-115596
 Si₃Ge_{1-x}, amorphous film, energy gap, composition depend. 2-61337
 Si₃N₄ film, plasma deposited, chem. characterisation by Auger signal decomposition 2-110990
 Si₃N₄ film stability, stoichiometry deviation effect 2-115632
 Si₃N₄:H CVD film, chem. bonding changes and elec. effects 2-115930
 Si₃N₄:H films, H conc., N-H absorption cross section, nuclear recoil method 2-71491
 SiO₂, vitreous, planar rings, energy minimisation argument and Raman spectra 2-91790
 SiO₂-Al₂O₃ amorphous thin films, coordination and bond character of cations 2-99228
 SiO₂-P₂O₅, gels and glasses, mixed bonds, spectrosc. obs. 2-76314
 SiO₂-TiO₂, glass, X-ray spectral study of chem. bond character 2-105007
 SiO₂-TiO₂, gels and glasses, mixed bonds, spectrosc. obs. 2-76314
 SiO₂, electronic and optical props., dielec. function 2-56458
 Si₃O₂N₂ film, pyrolytic CVD, chem. characterisation by Auger signal decomposition 2-110990
 Sn and intermetallic cpds. with Fe, Co and Ni, electron struct., X-ray and X-ray emission spectra obs. (Russian) 2-67153
 Sn chalcogenides, Mossbauer spectra, secondary periodicity 2-77430
 Sn-O amorphous system, bonding struct. and lattice dynamics, Mossbauer study 2-104770
 SnMn₂C-CuMn₃N, perovskite, local effects and short range magnetic interactions (French) 2-72137
 SrTe₂O₈, ferroelastic state 2-66109
 Ti-H, X-ray emission spectra, meas., bonding, hybridised states 2-87905
 TiN₂-TiB₂, system reaction, polythermal cross-sections 2-105133
 TiS, electronic charge density and bonding in NiAs-type solid 2-76921
 TI compounds, electronic struct., photoelectron spectroscopy studies 2-62051
 UO₂, XPS evidence for 5f bonding participation 2-80729
 V oxides, oxidised surface state model, appl. to catalysis 2-82419
 VC₂O₄, quadrupole effects and chem. bonding 2-110723
 VS, electronic charge density and bonding in NiAs-type solid 2-76921
 VS₂ (V₂Si₂), band struct., LCAO EHT calc. 2-82219
 W₂(CO₆H₃)₁₀, band struct., second order Jahn Teller effect 2-70467
 WS₂, compounds, chem. bonding, XPS and X-ray emission study 2-91862
 XeF, at beam scatt. study with mag. anal. 2-108738
 ZnCr₂Se₄ spinel, reflectance spectra, band struct. 2-87811
 ZnRb₂(SO₄)₆·6H₂O·VO₂²⁺, Tutton salts, EPR spectra, multiple trapping sites 2-61755
 ZrC, energy band struct. and X-ray emission spectra, APW calc. 2-110984
 ZrN, energy band struct. and X-ray emission spectra, APW calc. 2-110984
 ZrO₂, structural chemistry 2-97977

bone

- acetabular region, stress distrib. after total joint replacement, cement thickness and metal backing effects 2-105717
 acetabular region, stress distrib. before and after total joint replacement 2-105716
 acetabular subchondral bone influence on stress distrib. after total hip replacement 2-62840
 alkaline phosphatase activity of growing rat bone, effect of 50 kV X-ray irradi. 2-57867
 arthrography of the higher extremities (German) 2-68136
 articular joints, technique for meas. of instantaneous in vitro contact stress distrib. 2-105865
 backbones, fish, mech. props. in lateral bending and tension 2-100028
 biomechanical research, review 2-88574
 cancellous bone from proximal tibial epiphysis, props. and anisotropic model 2-88577
 capsular ligament lesions, X-ray diagnostics (German) 2-68135
 cell growth inhibition by PT electrodes at low current levels 2-94008
 chromosome aberrations in myelocytocytes of rats chronically exposed to ³HOH (Russian) 2-105776
 clamps, external, comparative study of behaviour, rigidity optimisation (French) 2-117133
 collagen-mineral orientation relationships in bone 2-105644
 compact, micropolar and couple stress elasticity in bending 2-100029
 compact bone, human, couple stress effects, dynamical study 2-88575
 conduction thresholds, changes with vibrator contact area 2-94069
 conference on bioengineering and microtechniques, Besancon, France (Apr. 82) 2-112638
 cortical, US anal. of Young's modulus 2-83724
 cortical bone, spiral fracture, sheep expts. 2-116956
 cortical bone remodelling, rel. to in vivo strains, review 2-105713
 couple stress effects in compact bone, transient study, torsion 2-62664
 displacement induced by applied voltage, holographic study on rats 2-62652
 dry human compact, elec. relax. props. at infralow freqs. 2-116982
 elastic modulus calibration and resultant loads for long bone cross-sections 2-62853
 elbow joint, muscles across, biomech. anal. 2-62648
 electrical properties and healing using pulsed EM fields 2-83622
 electro-osteo stimulation, techniques and clinical appls. (German) 2-117128
 femoral CFU-S repopulation after low-dose whole-body X-irrad. in mice 2-94125
 femoral stress distribution total hip implant geometry effects 2-62841
 femur, human, crit. review of biomech. stress anal. 2-83587
 femur, human, material props. and strength behaviour of compact bone tissue (German) 2-105710
 femur, proximal, human, effect of age on blood flow 2-62647
 femur, state of stress, 3D finite element analysis and expt. meas. 2-100037

bone continued

foot, human, biokinematical model, biplanar radiographs of bone locations 2-62671
 fracture site properties monitoring with external fixation, finite element and expt. analysis 2-62821
 fractures, treatment by pulsed mag. field, elec. and mag. fields prod. 2-83620
 fractures, treatment by pulsed mag. field, elec. and mag. fields prod. 2-83621
 functional adaptation mechanism of bone tissue, analytical model 2-62663
 granulocytic progenitor cells of blood and bone marrow, response to low X-irrad. doses, dog expts. 2-88616
 growth stimulation by elec. or mag. fields, historical development (*German*) 2-100081
 healing of canine radii and ribs, biomech. behaviour 2-105722
 hip prosthesis, total, failure prediction and load transmission characts. of bone cement interface 2-62838
 human compact, creep under various specimen storage and test conditions 2-94099
 human compact, factors affecting creep props., 2-116965
 immature, material props., canine expts. 2-88576
 implantable composites, controlled press. appl. for bone growth stimulation 2-62837
 joint motion description for humans, meas. errors effect 2-62670
 joints, human, microcontinuum approach to lubrication 2-116978
 knee joint, arthrography (*German*) 2-68137
 knee joint forces, anatomical considerations 2-57840
 knee joints, human, effects of rot. on lubrication characts. during normal articulation 2-116979
 long, whole, strain gauge expt. method for sectional props. determ. 2-105864
 long bones, modelling and struct. anal. 2-88571
 lumbar intervertebral discs, bulging expts. on human cadavers 2-116972
 lumbar intervertebral joint, human, intact and injured, static mech. props. 2-116973
 lumbar spine, effect of posture on strength 2-94094
 lumbar spine movements, meas. by 3D X-ray anal. 2-94169
 lumbar vertebral segment and nuclear prosthesis, in vitro study (*French*) 2-116945
 lymphopoiesis, math. model for postirrad. dynamics study (*Russian*) 2-116993
 marrow, autologous reconstitution rel. to high-dose total-body irrad., dog expts. 2-62699
 marrow, rat, dynamics of CFUc content during long-term fractionated irrad. (*Russian*) 2-88598
 marrow, stromal elements in patients with Hodgkin's disease, radiosensitivity to γ -rays (*Russian*) 2-111741
 marrow and thymus, rat, injury caused by combined irrad. (*Russian*) 2-116992
 marrow colony-forming cells, temporal and spatial response after ^{226}Ra incorporation in mice 2-62692
 marrow cultures of Rf mice, lethal and physiologic effects of total body irrad. 2-117008
 marrow, lymphocytes, rat, kinetics of long-term γ -irrad. (*Russian*) 2-57857
 marrow plasma cells of dogs with acute radiation sickness (*Russian*) 2-88607
 marrow stromal cells in culture, X-irrad. rel. to prostaglandin E release 2-94121
 mechanical behaviour, effect of moisture 2-83593
 mechanical impedance of human bone, drilling tests 2-116957
 metacarpophalangeal joint, forces due to elevated fluid press. 2-100027
 microwave irradiation of phantoms, influence of bone on temp. patterns 2-62683
 mineral orientation in rabbit femur, small-angle X-ray scatt. study 2-62556
 models for use in radiotherapy dosimetry 2-68148
 myelokaryocyte chromosome aberrations, freq. in rats during chronic ^3HOH and γ -ray exposure (*Russian*) 2-111743
 orthopaedic cutting operations, temp. elevations, bovine expts. 2-105662
 osteonal remodelling, stimulation by fatigue damage, hypothetical mechanism 2-105714
 osteonic lamellae, single, tensile props. technical problems and expt. results 2-88569
 osteons, single, human, strain dependence of dynamic Young's modulus 2-62651
 osteosynthesis and fractured ribs, biomech. expts. (*German*) 2-94089
 patello-femoral contact stresses determ. using press. sensitive film 2-62667
 periapical bone lesions, dental radiographs, colour conversion for improved diagnosis 2-68142
 periodontal bone, pathologic changes detect. by digital subtraction of radiographs 2-111792
 piezoelectric effects 2-88561
 progenitor cells in human blood and bone marrow, radiation sensitivity obs. 2-94115
 radius, bone mass determ. by automated processing of CT images 2-73359
 radius, sheep, quantitative assessment of compression plate fixation in vivo 2-62852
 remodelling, mech. adaptive, sheep expts. 2-105715
 shear storage modulus of human single osteons and cortical microsamples, strain and freq. dependence 2-62650
 skeletal allometry and locomotion in *Australopithecus afarensis*, Lucy's limb study 2-88572
 space flight effects, anal. by quantum concept of bone remodelling 2-62791
 spinal column, human, and its musculature, struct. anal. for forces determ. 2-93979
 spine, human musculoskeletal system considerations 2-116960
 spine, intact human lumbar, three-dimens. stiffness props. determ. using biplane radiographic system 2-62872
 spine, stress distrib. model, 3D surgical simulation 2-116959
 spine joints of small mammals, mech. testing 2-62876
 stem cell number determ. method using irrad. bone marrow (*Russian*) 2-105857
 strain measurements and anal., in vivo, accuracy enhancement 2-117170
 streaming potential rel. to electromech. response in physiologically-moist bone 2-105691
 strength, effects of hypokinesia in primates, space flight appl. 2-62644

bone continued

stresses and struct., neutron diff. obs. 2-62660
 structural properties of immature canine bone, bending tests, biphasic growth process 2-62662
 tibia, human, mech. resonances in vitro 2-116955
 tibia, human, torsional stress anal. by finite element method 2-94097
 tibia, non-union treatment by pulsed-mag. field therapy, mag. and elec. fields prod. 2-83619
 tibial prosthesis, stresses at PMMA-bone interface, model variables and fixation post length effects 2-62835
 trabecular, automated stereological analysis system 2-73314
 trabecular, multiaxial strength tests 2-62668
 trabecular bone, porous foam model, loading 2-62548
 trabecular bone mineral density meas., photon scatt. method 2-68125
 vertebral motion under static load, kinematic anal. 2-105745
 vertebral motion under static load, simulation study 2-105746
 zero strain, automatic compensation of in vivo recordings 2-117159
 Pb, X-ray fluoresc. meas., factors affecting sensitivity 2-68112
 ^{226}Ra injected into mice, method to determ. dose delivered to bone and marrow sites 2-105784
 ^{226}Ra , retention in human soft tissue and bone, rel. to ICRP 20 alkaline earth model 2-73381
 Sr content, in situ meas. by X-ray fluoresc. anal. 2-62869
 $^{99\text{m}}\text{Tc}$ -MDP dose and distrib. in various bones and tissues 2-94214

Boolean algebra

see also *Boolean functions*; *formal logic*

climate change, application of Boolean logic 2-100540

Boolean functions

analytical representation and interpretation (*Czech*) 2-74194

Boolean lattices see *Boolean algebra***bootstrap models** see *bootstrapping***bootstrap theory** see *bootstrapping***bootstrapping**

hadron gas to quark matter, bootstrap eqn. 2-64271

phase transition in hadronic matter with internal symmetry 2-64306

quark-gluon plasma, bag model and bootstrap description 2-64272

radiating fluid sphere, late stages of naked singularity collapse 2-112770

two-body inelastic scatt., cross-section, dual statistical bootstrap model 2-74669

Universe expansion from analytic eqn. of state from state. bootstrap model 2-94876

bootstraps see *bootstrapping***borate glasses**

see also *borosilicate glasses*

alkali borate glasses and melts, microstruct., X-ray scatt. study 2-91794

borosilicate glass with antireflective surface, strength and fatigue 2-83209

glass, microhardness 2-105335

glassmelts, bubble rise 2-97629

Mossbauer and IR spectra quadrupole splitting 2-104767

near IR absorption of H_2O , OH group vibr. bands 2-99125

NMR studies of struct., review 2-104713

optical spectral probe using photochem. hole burning of dye mols. 2-108974

single-component, struct. in glass transition region, temp. depend. 2-103656

solid state track detectors for high energy heavy ions 2-59624

structural modification, EPR and NMR study 2-103642

surface anal. by fast atom bombardment mass spectrometry 2-83424

viscosity, temp. depend. at const. struct. temp. 2-104047

B_2O_3 glass melt, Na and B vaporisation 2-81939

B_2O_3 glasses, isotopically substituted, Raman spectra study 2-87756

B_2O_3 glasses and melts, microstruct., X-ray scatt. study 2-91794

B_2O_3 vitreous films, mol. orientation, Raman spectra study 2-87757

$\text{B}_2\text{O}_3\text{-Al}_2\text{O}_3\text{-Fe}_2\text{O}_3$ based glasses, Fe coordination, Mossbauer study 2-103641

$\text{B}_2\text{O}_3\text{-BaO-Sb}_2\text{O}_3$ and $\text{B}_2\text{O}_3\text{-PbO-As}_2\text{O}_3(\text{Sb}_2\text{O}_3)$, AC elec. resist. meas. 2-87273

$\text{B}_2\text{O}_3\text{-Fe}_2\text{O}_3\text{-PbO-GeO}_2(\text{CaO})(\text{As}_2\text{O}_3)$ glass, Fe valence states, comp. dependence, Mossbauer and mag. study 2-104317

$\text{B}_2\text{O}_3\text{-K}_2\text{O-Ti}_2\text{O}_3$ (14, 1 mol.%) glass, Ti^{3+} centre interaction with laser radiation (*Russian*) 2-105009

$\text{B}_2\text{O}_3\text{-Li}_2\text{O-LiCl}$ glasses, chem. durability 2-93647

$\text{B}_2\text{O}_3\text{-LiF(LiCl)(Li}_2\text{O)}$ glasses, ionic cond., ^7Li , ^{11}B , and ^{19}F NMR study 2-93022

$\text{B}_2\text{O}_3\text{-Na}_2\text{O}$ glass/ PbO film interaction, UV spectra and cation conc. profile meas. 2-86945

$\text{B}_2\text{O}_3\text{-Na}_2\text{O-Na}_2\text{SO}_4$ system, synthesis and cond. of glasses (*French*) 2-56248

$\text{B}_2\text{O}_3\text{-Na}_2\text{O-PbO(CdO)}$ glasses, press. induced struct. changes, ESR study 2-110637

$\text{B}_2\text{O}_3\text{-NaF}$ glass systems, optical basicity study 2-82812

^{11}B NMR reson., satellites and shoulders 2-110662

$\text{CaO-B}_2\text{O}_3\text{-V}_2\text{O}_5\text{-Fe}_2\text{O}_3$ glass, Mossbauer and ESR studies 2-66963

$\text{xCr}_2\text{O}_3\text{-(1-x)B}_2\text{O}_3\text{-PbO}$ glasses, EPR and mag. susceptibility studies 2-98946

$\text{CuO-B}_2\text{O}_3\text{-K}_2\text{O}$ glass, ^{11}B NMR and mag. susceptibility 2-104587

$(\text{CuO})_x(\text{B}_2\text{O}_3\text{PbO})_{1-x}$ glasses, EPR study of mag. behaviour 2-110631

Fe-containing, elec. cond. 2-110406

$\text{K}_2\text{O-B}_2\text{O}_3\text{-Ti}^{3+}$ glass, luminesc. study 2-67105

$\text{K}_2\text{O-B}_2\text{O}_3\text{-Al}_2\text{O}_3$, Al^{3+} with non-bridging O, density, refr. index and microhardness determ. 2-109684

$\text{La}_2\text{O}_3\text{-BaO-B}_2\text{O}_3$ and $\text{La}_2\text{O}_3\text{-BaO-PbO-B}_2\text{O}_3$ systems, very pure, absorpt. curve and colour 2-93227

$\text{Li}_2\text{O-B}_2\text{O}_3$ glasses, non-classical Li diffusion, elec. cond. meas. 2-98333

$\text{Li}_2\text{O-LiCl-B}_2\text{O}_3$ system glasses, struct., glass transition and density meas. 2-91793

$(^6\text{Li}/^7\text{Li})\text{-}0.3\text{B}_2\text{O}_3$, mixed isotope ionic elec. cond. 2-110035

$\text{MgO-B}_2\text{O}_3$ glass, phase relations, NMR and X-ray diff. study 2-98247

$\text{Na}_2\text{O-B}_2\text{O}_3\text{-SiO}_2$ glass, internal friction (*Japanese*) 2-83161

$\text{Na}_2\text{O-Al}_2\text{O}_3\text{-B}_2\text{O}_3$ glass, tetrahedral B, NMR spectra 2-97932

$\text{Na}_2\text{O-B}_2\text{O}_3$, fluctuation of ionic current induced by mech. stress, rel. to internal friction 2-92274

$\text{Na}_2\text{O-B}_2\text{O}_3$ phase-separated glasses, fracture toughness to Young's modulus relationship 2-93609

$\text{Na}_2\text{O-B}_2\text{O}_3\text{-CeO}_2\text{-}3\text{Nb}_2\text{O}_5\text{-(Al}_2\text{O}_3)$ porous glass ceramic 2-77811

$\text{Na}_2\text{O-B}_2\text{O}_3\text{-SiO}_2\text{-Nb}_2\text{O}_5$ glass props., Nb_2O_5 influence 2-71648

Ni-Cr-Si-B coatings formed in air, props. of glass-metal coatings (*Russian*) 2-77966

borate glasses continued

- PbO-B₂O₃, comp. depend. of fracture toughness, Vickers hardness and fracture surface energy 2-72793
 PbO-B₂O₃ glasses, microstruct. charact. by phys. prop. meas. 2-91800
 PbO-B₂O₃ phase separated glass, matrix composite with dispersed crystalline or glass particles, indentation hardness (*Japanese*) 2-67509
 PbO-B₂O₃ phase-separated glasses, fracture toughness to Young's modulus relationship 2-93609
 PbO-ZnO-B₂O₃, critical load for median crack initiation in Vickers indentation 2-111279
 PbO-ZnO-B₂O₃ glass, relation of K_{IC} to median crack indentation load in Vickers indentation (*Japanese*) 2-67508
 SiO₂-B₂O₃ optical fibres, refr. index dispersion 2-81107
 V₂O₅-B₂O₃-P₂O₅ glasses, electronic cond. and dielec. relax. rel. to struct. 2-61471

Bordoni effect

- internal friction and microdeformation, due to intrinsic props. of dislocations 2-77862
 internal friction peak interpretation 2-81891

boron

see also nuclei with

- abundance in interstellar medium towards zeta Ophiuchi, UV obs. 2-79182
 adsorbed O, excited states of sputtered mol. O₂ 2-77657
 amorphous film, internal stress, Young's modulus and thermal expansion meas. 2-82187
 atom, electron-impact excitation cross sections, 1900-4000 Å region 2-70423
 atom, self-consistent field equations based on the variation principle using the square of the Hamiltonian 2-75182
 chemical vapour codeposition with Si, thermodynamic model 2-87990
 coatings on Cu, 316 stainless steel, Mo, Ta, graphite for fusion device, thermal fatigue props. 2-74909
 determination, in coastal seawater, coulometric method 2-99855
 diffusion in 1 Si, enhancement by thermal oxidation 2-56258
 diffusion in Si, Si₃N₄ directly masked film effect 2-56260
 diffusion in Si by laser pulse irradi. (*Chinese*) 2-71717
 diffusion in SiC during annealing, surface B distrib. 2-56305
 fast ions reson. coherent excitation in Au crystals 2-76537
 fibre (aluminised) reinforced plastic, orthogonally reinforced, fracture anisotropy under low-cycle loading 2-116539
 fibre encapsulation, in situ investig. in CVD reactor 2-77782
 fibre reinforced Al, acoustic emission and longevity under steady load 2-93619
 fibre reinforced Al, alloying influence on solubility of fibres, energy calc. 2-66237
 fibre reinforced Al, dynamic elastic modulus with solid-state chem. interaction 2-83158
 fibre reinforced Al, fracture and strength charact., chemical action effect (*Russian*) 2-72795
 fibre reinforced Al, interface struct. and strength 2-77942
 fibre reinforced Al, work of fracture, effect of isothermal exposure and thermal cycling 2-57472
 fibre reinforced Al alloy, hot pressing pressure calc. 2-72656
 fibre reinforced Al and Al-Cu-Mg-Mn, hot pressing reaction between fibres and matrix 2-83068
 fibre reinforced Al-epoxyphthalate matrix composite, mech. props. 2-116488
 fibre reinforced Ti alloy; heat-resistant, diffusion-effected interaction 2-88029
 fibres, SiC coated, tensile strength as function of coating thickness 2-77950
 fibres, strength charact., changes during annealing (*Russian*) 2-72796
 filament reinforced Ti, fibre-matrix chem. interactions at high temp. composite strength 2-77783
 film, self-supporting, focusing adjustment for electron bombardment system (*Chinese*) 2-62067
 first wall coatings by plasma CVD 2-74910
 glass fabric reinforced plastic, orthogonally reinforced, fracture anisotropy under low-cycle loading 2-116539
 ion implantation, H/D isotope exchange, local mixing model 2-56048
 ions, depth distrib., exptl. results 2-61008
 isotope targets prepared by vapour deposition 2-108179
 liquid metal ion source, C needle emitter appl. 2-89854
 mapping in minerals and rocks using CR-39 polycarbonate plastic detector 2-68522
 metallic vapour-quenched thin film with Al type cryst. struct. 2-110214
 molecule, energy differences using an accurate local density functional, spin-flip energies calc. using Xalpha approx. 2-70122
 molecule, HF Slater wave functions calc. 2-96441
 molecule, spin-spin interaction, vibr. and rot. const., UV obs. 2-90565
 polycrystalline, oxidation, AES and EELS studies 2-77963
 steel, stainless, austenitic, grain boundary segregation of B, atom probe microanalysis 2-72701
 surface modification by H ion erosion 2-93655
 vapour deposited coatings, ion implantation, temp. cycling effects 2-74924
 Ag-Si layer struct., B implantation depth profiles 2-103804
 Al-B, interstitial solid solution, energy of mixing 2-92216
 Al-SiO₂-Si, B-ion implanted MOS structure, radiation defect spectra study by TSC method 2-66646
 B¹ lifetimes, MQDT calcs., mixing coeffs. appls. 2-102438
 B⁺, implantation in SiO₂ films, effect on struct. 2-55995
 B³⁺, energy and transition probabilities correl. wavefunctions calcs. 2-113874
 B⁴, electron elastic scatt., s-, p- and d-wave phase shifts 2-108709
 a-B:H, ESR study, annealing effects on signal intensity and linewidth 2-87591
 β-B₂W₂, grown by electron-beam zone refining, distrib. patterns 2-76480
 B-Al composite, heat deposition meas. in ZING-P⁺ pulsed spallation neutron source 2-102028
 B-Al composite periodically laminated medium, harmonic wave propag. 2-60447
 B+epoxide, chemiluminesc. obs., vibr. distrib. 2-57619
 B+epoxide, reaction rate const. meas. 2-57596
 B⁺+H₂→BH⁺+H reaction, crossed-beam study 2-105454
 B⁵⁺+H₂, electron capture investigated at impact velocities 0.3 and 1.4 au 2-114074
 Bq⁺+He, one-electron capture cross sections 2-96723
 boron continued
 BCl₃, harmonic pot. function 2-85767
 B₂O, glass melt, Na and B vaporisation 2-81939
¹⁰B¹¹B, low energy rang distrib. in amorphous and crystalline Si 2-66090
 BiC, first wall coatings by plasma CVD 2-74910
 GaAs-B, depth profiling using spectroscopic ellipsometry 2-79647
 GaAs-B, electron irradiated, IR study of annealing 2-56033
 GaAs-B, unintentional and intentional doping 2-98132
 GaAs-B⁺ ion implanted, lattice damage profile, multilayer anal., ellipsometry study 2-92059
 GaP-B, electron irradi., interstitials, IR study 2-103747
 GaP-B grown by LEC technique, IR absorpt. band, resonant and gap modes 2-99157
 Ge-B, Al, Ga, residual acceptor impurity distrib., photothermal ionisation spectroscopy study 2-81807
 Ge-B, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
 p-Ge-B, impurity states, oscillator strengths, quadrupole moments 2-104303
 Hg_{0.8}Cd_{0.2}Te:B⁺, ion implantation, IR reflectivity study 2-116191
 Hg_{1-x}Cd_xTe:B, ion implantation, elec. cond., annealing effects, SIMS study 2-66026
 NaBO₂·2SiO₂ glass melt, Na and B vaporisation 2-81939
 Ni:B, solid state track autoradiography study of B distrib. 2-92016
 predeposition process and profile simulation Si:B 2-98136
 Si:B, Li, sharp line donor-acceptor pair recombination luminesc. 2-104928
 Si:Au, B, counterdoped, anal. of transient photocond. 2-66584
 Si:B, bulk and SOS struct., ion implanted, doping profile, thermal distribution, computer simulation 2-66033
 Si:B, codeposition from Si and B, influence of traces of water vapour 2-111080
 Si:B, defect-impurity complexes, ion channelling study 2-71534
 Si:B, diffusion doped, CW CO₂ laser irradi., sheet resistance depend. on power density and scanning vel. (*Chinese*) 2-109827
 Si:B, electron irradi., B interstitial, capacitance bridge meas. 2-56034
 Si:B, electron irradi., defect accumulation kinetics and point defect annihilation 2-98153
 Si:B, elemental distrib. anal., SIMS and neutron activation anal. 2-98151
 Si:B, heavily doped, defect formation under electron irradi. 2-103822
 Si:B, high-dose implanted, CO₂ laser annealing charact. 2-57219
 Si:B, IR absorption spectrum 2-77503
 Si:B, interstitial B negative-U props., EPR 2-71908
 Si:B, ion implantation damage, optical constants anal., ellipsometry expt. and refractive index model study 2-77469
 Si:B, ion implantation in 100 MeV range 2-81805
 Si:B, ion implanted, B diffusion and segregation obs. in dry O₂ ambient 2-92281
 Si:B, ion implanted, radiation damage production 2-61009
 Si:B, laser beam annealing, recrystn. 2-103812
 Si:B, measurement of sheet resistivity of shallow diffused layers for profiling by four-point probe technique 2-98650
 Si:B, point defects, negative-U props., expt. study 2-71918
 Si:B, polycrystalline, B⁺ ion implantation, heat treatment effects 2-103795
 Si:B, polycrystalline, on SiO₂, elec. resist., CW laser and furnace annealing effects 2-61025
 Si:B, polycrystalline, quantitative doping using ion implantation process 2-92002
 Si:B, proton irradi., impurity distrib. and diffusion 2-61203
 Si:B, quantitative impurity anal. by photolum. technique 2-57180
 Si:B, SIMS anal., matrix ion species induced sensitivity factors for calibration 2-95531
 Si:B, SIMS depth profiling, physico-chemical state 2-99286
 Si:B, strain-split two-level acceptor ground state, US relax. study 2-71592
 Si:B, submicrometer-linewidth doping and relief definition by laser-controlled diffusion 2-98122
 Si:B, supersaturated, ion implanted and laser annealed, heat treatment effects 2-92000
 Si:B, thermally evaporated, near-surface layer impurity distrib., photoluminesc. study 2-110902
 Si:B, UV investigation of acceptor ground state, distrib. of splittings 2-98577
 Si:B, Fe, quenched-in trap level at E_c+0.45 eV 2-104291
 Si:B epitaxial layer, lattice parameter determ. by means of asym. Bragg refls. 2-97851
 Si:B films, plasma deposition using laser microreaction 2-56375
 Si:B ion implanted, electron beam annealing by multiple-scan method 2-92036
 Si:B p-n junction, BN non-cond. layer, photovoltaic obs. 2-77164
 Si:B radial position sensitive detectors fabrication and charact. 2-70058
 Si:B thin film, polycrystalline, elec. props., use as sensor (*German*) 2-87427
 Si:B⁺, inhomogeneous implanted surface layers studied by X-ray rocking curves meas. 2-92315
 a-Si:F, B and a-Si:C, B films, cathodic deposition, charact. 2-88011
 Si:Fe, Fe donor activity on heat treatment, elec., DLTS and EPR meas. 2-71911
 p-Si:Fe, interstitial Fe and Fe-acceptor pairs, DLTS and Hall effect study 2-66476
 Si:H, amorphous, ESR lineshape, g-factors, temp. depend. 2-77373
 Si:H, amorphous film, NMR study 2-110686
 a-Si:H, IR absorption spectra, effects of annealing 2-99156
 Si:Mn, B, Mn²⁺B⁺ pairs, EPR study 2-110628
 p-Si:Mn²⁺B⁺, DTA and electron beam anal., doping effects (*German*) 2-92010
 n-Si:P, B ion implanted, deep level profiles 2-98571
 Si:P, compensated, ion implanted, epitaxial regrowth obs. 2-92388
 Si:P amorphous sputtered solar cell, dopant impurity effects 2-62475
 Si:Pb solar cells, effect of back-surface B implantation 2-88433
 Si:C, Al epitaxial layers, lattice deformation and perfection, X-ray study 2-92406
 Si:C, B 2-115302
 SiO₂:B, glass, solid state track autoradiography study of B distrib. 2-92016
 SiO₂:B, variations of surface concs. with oxide content 2-82098
 Ti-B, combustion under ultrasonic vibrs., capillary flow effects 2-116700
 WSi₂:B,P,As, dopant diffusion 2-92280

boron alloys

- see also boron compounds
- Fe₂Co₇₀Si₁₅B₁₀ (Fe₄₀Ni₄₀P₁₄B₆), glassy, free vol., positron annihilation study 2-104987
- rare earth-Pd alloy, B addition effects on lattice size 2-71396
- Al-B(C) interstitial solns., interaction parameters anal. 2-98307
- B-Fe(Ni), phase comp. and cryst. struct. meas. 2-88055
- B₇₀Fe₄₀Ni₄₀, metallic glass, He ion irradi., sputtering and blistering 2-76521
- Co-B, phase comp. and cryst. struct. meas. 2-88055
- Co-B and Co-B-Si(Ti)(Mo)(Mn), amorphous alloys, Curie temp. and mag. thermal expansion, press.-depend. meas. 2-72323
- Co-Fe-Si-B amorphous ribbons, with induced mag. anisotropy, influence of applied tensile stress on power loss 2-82686
- Co-Si-B with and without group IV-VIII transition metals, amorphous wire prod. by melt spinning into rotating water, mech. props. 2-105104
- CoB amorphous alloys, hyperfine field, mag. anisotropy, domain walls, NMR study 2-104714
- Co_{1-x}B_x, metallic glass, struct., neutron diffr., Mossbauer and EXAFS study 2-103640
- Co_{100-x}B_x, metallic glasses, structural investigation 2-86571
- Co_{70.3}Fe_{4.7}Si₁₅B₁₀, amorphous, crystn., Mossbauer and X-ray diffr. study 2-103636
- Co₅₈Ni₁₀Fe₅Si₁₇B₁₆, amorphous, annealing effects and short range ordering 2-82588
- Co₅₈Ni₁₀Fe₅Si₁₇B₁₆, surface conditions influence in mag. props. 2-82593
- Co₅₈Ni₁₀Fe₅Si₁₇B₁₆, amorphous ferromag. alloys, anal. of coercivity 2-87538
- Co₅₈Ni₁₀Fe₅Si₁₇B₁₆ ribbons, domain pattern annealing effect 2-92978
- Cr-MgO-B, struct. and mech. props. 2-72783
- Cr(Mo)(W)-Gd-B, phase comp. and cryst. struct. 2-116426
- EuRh₂B₂, itinerant mag. ordering 2-104578
- Fe-B, amorphous, elastic moduli, hardness and density 2-99472
- Fe-B, amorphous, heat treatment conditions influence on crystn. and struct. (Russian) 2-65868
- Fe-B, amorphous and cryst., electron irradi., vacancies, elec. cond. study 2-92038
- Fe-B, quenched from liq state, crystn., microstruct. and hardness 2-111166
- Fe-B (19.1 wt.%), amorphous, structural transitions under thermomagnetic treatment (Russian) 2-61130
- Fe-B metallic glass, mag. domains and composition behaviour, neutron scatt. study 2-104651
- Fe-B metallic glass ribbons, mag. hyperfine field distrib., Mossbauer study 2-104763
- Fe-B metallic glasses, comparison of struct. meas. 2-91807
- Fe-B metallic glasses, crystn., calc. and calorimetric meas. 2-71369
- Fe-B metallic glasses, rare earth additives, mag. props. study 2-87498
- Fe-B metallic glasses, secondary ion emission, sensitivity by factors, matrix effect 2-99289
- Fe-B metallic glasses, transition metal substituted, mag. props. and thermal stability 2-87497
- Fe-B-Cr(Co)(Ni), metallic glasses, crystn. behaviour 2-71368
- Fe-B-Si amorphous ribbon, crystn., domain struct. and magnetisation study 2-71363
- Fe-B-Si metallic glass, crystn. kinetics, DSC study 2-71364
- Fe-B-Si-C alloy, amorphous, effect of field annealing angle on mag. props 2-82671
- Fe-B-Si-C amorphous ribbon, mag. props., deleterious effect of Al 2-87525
- Fe-B-Si-C(Co), Metglas 2605, magnetostriction and mag. anisotropy, meas. using magnetisation loops under stress 2-77352
- Fe-B-Si-C(Co), Metglas 2605, Mossbauer and magnetoelastic coupling 2-77432
- Fe-B-Si(Cr) metallic glass ribbon, elec. resist. free volume depend. 2-110322
- Fe-Bi-Si metallic glass, form. and mag. props. 2-103648
- Fe-Cr-B amorphous Invar alloy, Curie temp. and high field susceptibility, press. effects 2-72322
- Fe-Mn-P-B-Al alloys, amorphous, evidence for spin-glass phase transition 2-72218
- Fe-Ni-B based amorphous ferromags., aging effects on mag. props. 2-98909
- Fe-Ni-B metallic glass, mag. domains and composition behaviour, neutron scatt. study 2-104651
- Fe-Ni-B-Si amorphous alloys, spin glass, mag. viscosity 2-72217
- Fe-Ni-Co-B-Si-Al, amorphous, initial permeability and long-time stability, freq. depend. 2-72258
- Fe-Ni-Mo-B amorphous alloys, struct. relax., permeability aftereffect and elec. resist. meas. 2-87550
- Fe-Ni-Mo-B ferromag. metallic glasses, mag. and neutron diffr. meas. 2-116027
- Fe-Ni-P-B based metallic glasses, Mossbauer study under press. 2-72385
- Fe-Si-B, mag. induction, effect of Sb and Sn during secondary recrystn. 2-83244
- Fe-Si-B amorphous wires, produced by in-rotating-water spinning method, mech. props. 2-111233
- Fe-Si-B metallic glasses, substituted, saturation magnetisation 2-87481
- Fe₂Au_{0.8-x}B_{0.2}, amorphous films, mag. and transport props. 2-72296
- FeB, compositional and chem. state, XPS study 2-77706
- α,β-FeB, Mossbauer spectra 2-61803
- Fe_{1-x}B_x, amorphous, electronic struct. 2-66427
- Fe_{1-x}B_x, amorphous, spin waves, inelastic neutron scatt. study 2-72179
- Fe_{1-x}B_x, amorphous, sputtered and liquid quenched, hyperfine field, Mossbauer study 2-104760
- Fe_{1-x}B_x, glass, crystn. kinetics, Mossbauer and DSC study 2-103632
- Fe_{1-x}B_x, metallic glass, atomic struct., Mossbauer study 2-103639
- Fe_{1-x}B_x, short range struct., pair distrib. functions, Lennard-Jones pot. 2-103624
- Fe_{100-x}B_x, metallic glass, electrochem. corrosion and Mossbauer spectra, composition and processing parameters effects 2-93640
- Fe_{100-x}B_x, metallic glasses, hyperfine fields and local environment 2-104320
- Fe₂B, high-press. Mossbauer study 2-56994
- Fe₂B₂, crystalline to amorphous phase transform. by ion bombardment 2-103629
- Fe₈₀B₂₀ alloy glass, partial radial distrib. functions calc., X-ray and neutron diffr. 2-91814
- Fe₈₀B₂₀, amorphous, aging effects on mag. props. 2-98909
- Fe₈₀B₂₀, amorphous, crystn., annealing, elec. resist. meas. 2-55853

boron alloys continued

- Fe₈₀B₂₀, amorphous, electronic props., struct. related effects, EELS study 2-67163
- Fe₈₀B₂₀, amorphous, irradiated, structural relax. 2-55864
- Fe₈₀B₂₀, amorphous alloy, ion irradi. effects, conversion electron Mossbauer spectra study 2-61043
- Fe₈₀B₂₀ metallic glasses, response to irradiation with 800 MeV protons 2-80188
- Fe₈₀B₂₀, Metglasses, thermomagnetic treatments 2-88110
- Fe₈₁B₁₉ metallic glass, struct. factor, time of flight neutron diffr. study 2-103644
- Fe₈₂B₁₈ metallic glass, as-quenched, low-temp. relax. under tensile stress, dilatometric obs. 2-91812
- Fe₈₃B₁₇, amorphous struct. formation on laser irradi. 2-82960
- Fe₈₄B₁₆, amorphous, mag. excitations, neutron diffr. study 2-115992
- Fe₈₅B₁₅, amorphous, struct. and crystn. study by Mossbauer spectroscopy (Russian) 2-93075
- Fe₈₇B₁₃, amorphous, magnetization and magnetoresist. in high mag. fields 2-61740
- Fe₈₇B₁₃, amorphous films, spin glass behaviour and non-ergodicity, FMR study 2-98897
- Fe₈₈B₁₂, amorphous, mag. hyperfine interactions, Mossbauer study 2-82764
- Fe₈₈B₁₂, amorphous, mag. ordering temp., hyperfine fields, Mossbauer study 2-104755
- Fe₈₈B₁₂, amorphous film, sputtered ferromag., Mossbauer investig. 2-66957
- Fe₈₉B₁₁, Be₂ ferromagnets, Auger CVV spectra as probe of electronic struct. 2-76906
- Fe₈₉B₁₁, C₂, glassy, crystallisation, magnetisation 2-55862
- Fe₈₉B₁₁(Fe₇₉B₂₁)(Fe₆₀Ni₂₅B₁₅), metallic glasses, AC magnetisation props. meas. cryst. precipitates effect 2-72851
- Fe₉₀B₁₀Mo₂, amorphous, crystn., annealing, elec. resist. meas. 2-55853
- (Fe_{0.98}La_{0.02})₈₀R₂₀La_{1-x} (R=Pr, Nd, Sm, Gd, Tb, Dy, Ho, Er), amorphous, exchange interactions 2-72185
- Fe₉₁B₉Si₄Si₄ glass, spin and energy analysed secondary electron emission 2-87921
- Fe₉₁B₉Si₄Si₄, metallic glass, struct. relax., effect of quench rate 2-81683
- FeBSiC metallic glass, creep and homogeneous plastic flow 2-105257
- Fe₉₃B₁₃Si₃C₂, amorphous, Mossbauer study 2-99013
- Fe₉₃B₁₃Si₃C₂, Metglas 2605SC, at. rearrangements and cryst. transforms, Mossbauer study 2-103655
- Fe₉₄B₁₄Si₄C_{1.5}, metallic glass, crystn. kinetics study using thermoelec. power meas. 2-86575
- Fe₉₆B₁₅Si_{5-x}Ge_x, amorphous, Curie temp. and crystn. behaviour 2-87496
- Fe₉₇B₁₂Si₆, Metglas, ferromag. reson. absorpt. and ferromag. antireson. transmission meas. 2-72353
- Fe_{98-x}Co_xB₂₀ (Fe_{80-x}Cr_xB₂₀), amorphous, crystn., Mossbauer study 2-103633
- (Fe_{0.9}Co_{0.1})₇₈B₂₂ and (Fe_{0.9}Co_{0.1})₇₂Si₂₈B₂₆ glasses, ⁵⁷Fe substitution effects, Mossbauer study 2-110738
- Fe₉₉Co₁₈B₁₄Si₄, metallic glass, atomic site environments, spin echo NMR study 2-72376
- Fe₉₉Co₁₈B₁₄Si₄, Metglas 2605CO, transverse field annealed, transverse susceptibility and magnetisation 2-72268
- (Fe_{0.96}Co_{0.04})₇₅Si₁₅B₁₀, amorphous, zero-magnetostriction induced mag. anisotropy, formation kinetics meas. 2-72189
- Fe₉₇Co₇₀Si₁₅B₁₀, amorphous struct., X-ray diffr. study 2-65866
- Fe₉₇Co₇₀Si₁₅B₁₀, amorphous zero magnetostriction alloy, mag. aftereffect 2-72290
- Fe₉₉M₁B₁₇, amorphous alloy, (M=transition metal), mag. and stress annealing 2-87554
- Fe₉₉M₁B₁₇, M=transition metal, metallic glass, Mossbauer and corrosion studies 2-104769
- Fe₉₉M₁B₁₇, metallic glasses, (M=transition metal), mag. after-effect meas. 2-87549
- (Fe_{0.9}M_{0.1})₇₅P₁₆B₆Al₃, (M=Ni, Mn), amorphous, mag. props. meas. 2-92880
- (Fe_{0.64}Mn_{0.36})₇₅P₁₆B₆Al₃, spin glass, irreversible response study 2-104594
- (Fe_{0.64}Mn_{0.36})₇₅P₁₆B₆Al₃, spin glass, temp.-field phase diagram 2-104619
- (Fe_{0.65}Mn_{0.35})₇₅P₁₆B₆Al₃, amorphous, ferromagnetism collapse 2-104618
- (Fe_{1-x}Mn_x)₇₅P₁₆B₆Al₃, amorphous, spin correl. near ferromag.-spin glass crossover point 2-72268
- Fe₉₈Mo₂B₂₀, Metglasses, thermomagnetic treatments 2-88110
- (Fe₉₃Mo₇)₈₀B₁₀P₁₀, amorphous, mag. excitations, neutron diffr. study 2-115992
- (Fe_{0.25}Ni_{0.75})₇₅B₂₅, high-press. Mossbauer study 2-56994
- (Fe_{1-x}Ni_x)₇₅B₂₅, amorphous, magnetisation and crysts. 2-72266
- (Fe_{1-x}Ni_x)₈₀B₂₀, amorphous hyperfine fields, magnetisation, Mossbauer study 2-104764
- Fe₉₈Ni₄₀B₂₀, amorphous, in-core, reactor irradiated, props. 2-102047
- Fe₉₈Ni₄₀B₂₀, amorphous, neutron irradi. and annealed density changes 2-109850
- Fe₉₈Ni₄₀B₂₀, Co₇Fe₁₅Si₅ and Co₇Fe₁₅Ni₂₀(SiB)₂₀, amorphous, crystn. in RF mag. field, Mossbauer study 2-103634
- Fe₉₈Ni₄₀B₂₀, metallic glass, short-range ordering during structural relax. 2-71359
- Fe₉₈Ni₄₀B₂₀, metallic glass, rel. between struct. relax. and sp. ht. 2-72750
- Fe₉₈Ni₄₀B₂₀, metallic glass, diffusion rates of Au 2-104057
- Fe₉₈Ni₄₀B₂₀, metallic glass, Vitrovac 0040, crystallisation, TEM obs. 2-116474
- Fe₉₈Ni₄₀B₂₀, surface conditions influence in mag. props. 2-82593
- Fe₉₈Ni₄₀B₂₀ amorphous alloys, influence of heating on mag. props. 2-87535
- (Fe_{0.9}Ni_{0.1})₈₀B₂₀, glass, mag. props. and crystn., Mossbauer study 2-104754
- Fe₉₉Ni₁₈P₁₆B₆, amorphous, mag. phase transition, magnetisation and DC susceptibility meas. 2-56857
- Fe₉₉Ni₁₈P₁₆B₆, amorphous, critical mag. behaviour, mag. order disorder transition 2-66821
- Fe₉₉Ni₁₈P₁₆B₆, amorphous, struct. relax., Mossbauer study 2-72383
- Fe₉₉Ni₁₈P₁₆B₆Si₁₀ amorphous alloy, ferromag. resonance, neutron effects 2-87597
- Fe₉₉Ni₁₈P₁₆Cr₁₂P₁₂B₆, Metglas, heat treatment effect on internal friction 2-62151
- Fe₉₉Ni₁₈P₁₆Cr₁₂P₁₂B₆, thin passive films, comparison of AES and XPS anal. 2-78004
- Fe₉₉Ni₁₈P₁₆Cr₁₂P₁₂B₆, metallic glass, mag. hyperfine field distrib., Mossbauer study 2-87640

boron alloys continued

- Fe₃₂Ni₃₆Cr₁₄P₁₂B₆ metallic glass, crystn., hardness and tensile deformation meas. 2-91784
- Fe₃₂Ni₃₆Cr₁₄P₁₂B₆ metallic glass ribbons, P conc. meas. using neutron generator (*Russian*) 2-99742
- Fe₃₂Ni₃₆Cr₁₄P₁₂B₆ amorphous and polycryst., He ion bombardment 2-103586
- Fe₃₂Ni₃₆Cr₁₄P₁₂B₆ metallic glass, hydrogen embrittlement 2-116599
- (Fe_{1-x}Ni_x)₇₈₋₇₉-Cr₁₀Si₂₀B₁₂ glass, magnetisation, crystn. and microstruct. 2-77322
- Fe₄₀Ni₃₈Mo₂B₁₃ metallic glass, crystn., TEM study 2-65867
- Fe₄₀Ni₃₈Mo₂B₁₃ amorphous, elastic moduli, hardness and density 2-99472
- Fe₄₀Ni₃₈Mo₂B₁₃ amorphous, ion implantation, He bubble and blister formation 2-115314
- Fe₄₀Ni₃₈Mo₂B₁₃ metallic glass, struct. evolution during crystallisation 2-109682
- Fe₄₀Ni₃₈Mo₂B₁₃ metallic glass ribbon, elec. resist. free volume depend. 2-110322
- Fe₄₀Ni₃₈Mo₂B₁₃ Metglas MB 2826, internal stresses and spin texture, Mossbauer study 2-87634
- Fe₄₁Ni₆₉P₁₄B₆ amorphous, elec. resist. near ferromag. transition 2-87218
- Fe₄₀Ni₄₀P₁₄B₆ amorphous, ferromag. phase transition, mol. field theory 2-72225
- Fe₄₀Ni₄₀P₁₄B₆ amorphous activation energy of crystallisation 2-81681
- Fe₄₀Ni₄₀P₁₄B₆ amorphous, press. distrib. under compression to 250 kbar, fluorescence study 2-83171
- Fe₄₀Ni₄₀P₁₄B₆ amorphous mag. alloys, correlation between power loss and viscosity field 2-87523
- Fe₄₀Ni₄₀P₁₄B₆ amorphous ferromag. alloys, anal. of coercivity 2-87538
- Fe₄₀Ni₄₀P₁₄B₆ amorphous, mag. anisotropy and atomic short-range order, Mossbauer study 2-104607
- Fe₄₀Ni₄₀P₁₄B₆ amorphous films, STEM obs. of crystn. 2-109688
- Fe₄₀Ni₄₀P₁₄B₆ metallic glass, rotational and alternating loss 2-87536
- Fe₄₀Ni₄₀P₁₄B₆ metallic glass ribbons, P conc. meas. using neutron generator (*Russian*) 2-99742
- Fe₄₀Ni₄₀P₁₄B₆ Metglasses, thermomagnetic treatments 2-88110
- Fe₄₀Ni₄₀P₁₄B₆ Metglas 2826, early crystn. behaviour, nucleation mechanisms 2-93500
- Fe₄₀Ni₄₀P₁₄B₆ Metglas 2826, crystn. kinetics, effect of tensile stress 2-103652
- Fe₄₀Ni₄₀P₁₄B₆ amorphous, electron state of Fe (*Russian*) 2-76905
- Fe_{80-x}Ni₁₅P_{20-y}B_y amorphous ferromag. alloys, mag. aftereffect spectra 2-56894
- Fe₈₀Ni_{80-y}P₁₄B₆ amorphous alloy, mag. props. study, phase diagram 2-110580
- Fe₈₀Ni_{80-y}P₁₄B₆ amorphous alloys, ferromag-spin glass transition, ferromag. resonance study 2-110648
- Fe₈₀Ni_{80-y}P₁₄B₆ ESR study in reentrant phase 2-72331
- Fe₈₁Ni₈₀P₁₄B₆Al₁ amorphous, elec. resist. near ferromag. transition 2-87218
- (Fe,Ni)_{1-x}75P₁₆B₆Al₁ amorphous, spin wave and scaling law anal., magnetisation meas. 2-92888
- Fe₄₀Ni₄₀Si₁₄(P₁₄)B₆ metallic glass, positron annihilation, electron irradiation and heat treatment effects 2-104992
- Fe₂Ni₂Si₂B₆ amorphous spin glass, mag. props., Mossbauer effect meas. 2-104765
- Fe_{78-x}R₁₀Si₁₀B₁₂ R=Re, Ru, Os, Ir, Pd, Pt, metallic glass, thermal stability 2-109681
- Fe₇Si₂B_{25-x} glass, crystn., Mossbauer study 2-103637
- Fe_{80-x}Sn₁₅B₂₀ amorphous ferromagnet, Sn and Fe hyperfine fields, Mossbauer study 2-92552
- Fe₄₀Ni₄₀P₁₄B₆ metallic glasses, response to irradiation with 800 MeV protons 2-80188
- GdFeB and GdCoB amorphous thin films, mag. props. 2-72298
- Ho_{1-x}Er_xRh₁₀B₆ superconductivity and magnetism 2-72098
- Ho_{1-x}Lu_xRh₁₀B₆ superconductivity and mag. props., μ SR meas. 2-72101
- Ho(Rh_{0.3}Ir_{0.7})₈B₄ mag. struct., superconducting T_c 2-104585
- LaB₆-Co(Ni) systems, wetting and contact reactions 2-77780
- Li-B anode for molten salt thermal cell, discharge characteristics meas. 2-93882
- Li-B film, electron diff. study 2-110182
- Mg-B interstitial solns., interaction parameters anal. 2-98307
- Mn_{1-x}Cr_x(Fe₂)₂B₆ Invar like props. 2-72174
- Mo-B dilute alloys, nature of planar faults 2-81800
- (Mo₄₀Ru₄₀U₄₀100-x)B₆ metallic glasses, low temp. sp.h.t. 2-104019
- (Mo₄₀Ru₄₀Si₁₇)_{100-x} metallic glass, inertial confinement fusion target material appl., characts. 2-87104
- Ni-B amorphous mag. props. 2-92967
- Ni-B alloy glasses, positron annihilation, comparison with Compton scatt. 2-104991
- Ni-Cr-Si-B coatings formed in air, props. of glass-metal coatings (*Russian*) 2-77966
- Ni-Mn-Si-B amorphous, micromag. props. 2-116010
- Ni₈₀B₂₀ glass, partially crystallised, shear bands interactions with crystals, TEM study 2-71372
- Ni₄₀Fe₄₀B₂₀ amorphous, spin-depend. elastic electron scatt. 2-116311
- Ni₄₀Fe₄₀B₂₀ amorphous, electron momentum distrib., positron annihilation 2-103626
- Ni₃Fe_{80-x}B₂₀ metallic glass, surface B composition, ¹⁰B(n, α)⁷Li nuclear reaction meas. 2-104121
- Ni₃₈Fe₄₀Mo₂B₁₈ Metglas 2826MB, stripe domain dragging by temp. gradient 2-72254
- (Ni₉₃Fe₇)₉₀10B₁₀ amorphous, magnetization, annealing influence 2-104660
- Ni_{78-x}R₁₀Si₁₀B₁₂ R=Re, Ru, Os, Ir, Pd, Pt, metallic glass, thermal stability 2-109681
- Ni₇₀Ti₂₀3B₆ τ -phase crystals, Czochralski growth and cryst. props. 2-111062
- Pd-B alloys, phase relations, X-ray diff., DTA and resist. meas. (*German*) 2-83098
- Pr₃(Fe₈₀B₂₀)_{1-x} amorphous, crystn. and mag. moments study 2-71362
- Rh_{92-x}Si₈ glasses, struct., mech. and elec. props. 2-103650
- Si-Ge-B amorphous film, glow discharge deposited, elec. cond., optical absorpt. and EPR study 2-71965
- Ti-Al-Zr-V-Mo-B sheet, elastic props. anisotropy and texture hardening (*Russian*) 2-116502
- TiB₂-W(Mo)(Cr), sintering and props. 2-111109
- U-W-B, phase constitution, X-ray diff. photographs 2-83095

boron compounds

- see also boron alloys
- alkali halides: BH₄⁻ (BD₄⁻), vibr. studies by IR and Raman spectra 2-82841
- B₂O₃, vitreous, continuous random network model 2-60890
- boracites, symmetry related prop. tensors, pyroelectric and ferroelectric props. 2-99064
- borates, classification and crystal-chemical role of mol. water, thermal decomp. 2-78088
- boronated graphite, photoelectron spectra (*Japanese*) 2-83009
- burnable neutron absorbers, containing B, appl. 2-80101
- ceramic powders, explosive compaction 2-83069
- Al/SiO₂-B₂O₃/Au thin film struct., elec. cond. and field electron emission, theoretical model (*French*) 2-72076
- Al-BN coatings, plasma deposited, residual stresses, growth process influence (*Russian*) 2-77755
- Al-BN plasma spray deposited composite coatings, props. 2-83231
- Al₂O₃-B₂C annular burnable absorber, fabrication, development, appl. 2-80100
- Al₂O₃-B₂C burnable poison, gas release, swelling, high fluence effects 2-80099
- B subhalide clusters, stability, valence state index 2-85857
- B^{q+}+Ar(H₂), electron capture, cross section meas. 2-102619
- BBT₃, B K photoabsorpt. spectra 2-80649
- B₂C, hot pressed, mech. props., effect of porosity and grain size 2-116543
- B₂C, irradiated, crack propag. induced by swelling and thermal gradients 2-77912
- B₂C-Al₂O₃ burnable poison appl., in PWRs 2-80098
- BCl₃ addition to 1-bromopropane producing dissociation under CO₂ laser irradi. (*Chinese*) 2-59866
- BCl₃ and their cations, struct. and energies, MNDO calcs., mass spectra 2-113884
- BCl₃, B K photoabsorpt. spectra 2-80649
- BCl₃ isotopically selective dissociation in strong IR laser field (*Chinese*) 2-65057
- BCl₃ laser isotope separation products, IR absorpt. study 2-70437
- BCl₃ laser isotope separation by multiphoton absorpt. 2-72990
- BCl₃ molecule, fluorescence excited by intense IR laser radiation, pulse optical-acoustic-optimal effect (*Chinese*) 2-75338
- BCl₃, selective UV photolysis using KrF laser for phosgene impurity reduction 2-88372
- BCl₃, vibrational excited state relaxations, IR double resonance absorpt. investig. (*Chinese*) 2-75254
- B₂Cl₄ and their cations, struct. and energies, MNDO calcs., mass spectra 2-113884
- B₂Cl₄ and their cations, struct. and energies, MNDO calcs., mass spectra 2-113884
- BD₄⁻, anharmonicity connection and mol. consts. calcs. 2-90500
- BD₄⁻ ion isolated in alkali halides, Raman spectra at 80K 2-116186
- BF₃ implantation in SiO₂ films, effect on struct. 2-55995
- BF₃ low energy doping during Si MBE 2-92003
- BF₃, B K photoabsorpt. spectra 2-80649
- BF₃, electron impact, shape resonance enhanced vibr. excitation 2-65099
- BF₃, vibr.-relax., ultrasonic absorpt. meas. 2-65077
- BF₃-dimethyl ether, electron donor acceptor complex, He I photoelectron spectra 2-90623
- BF₃-N₂ gas laser, increased power output by BF₃ addition 2-114244
- B₂F₆ isomerisation, pot. energy surfaces calc. ab initio using double-zeta basis sets 2-102411
- BF(OH)₂ conformations, stabilities, STO calcs. 2-113857
- BH₄⁻ electron density, pseudomolecular expansion 2-60931
- BH₄⁻, A¹H-X²⁺ band system, high-resolution obs. 2-114009
- BH₄⁻, spin-orbit coupling consts., ab initio calcs. using universal even tempered basis set of exponential functions 2-96415
- BH₃, generalised localised at. orbitals in closed shell mols. 2-54761
- BH₃+D₂, UV-laser photochemistry, rate consts. meas., reaction mechanism 2-62413
- BH₃+triorganyl borane, exchange reactions, ¹¹B NMR obs. 2-108577
- BH₄⁻, anharmonicity connection and mol. consts. calcs. 2-90500
- BH₄⁻ ion isolated in alkali halides, Raman spectra at 80K 2-116186
- B₂H₁₂²⁺, icosahedral struct., nucl. spin statistics, vibr. spectra 2-90573
- B₂H₆ isomerisation, pot. energy surfaces calc. ab initio using double-zeta basis sets 2-102411
- B₂H₆+acetylene, reaction paths, MNDO calcs. 2-93777
- BH₃CO, dissociation process, ab initio study 2-88355
- BH₃D₂+B₂H₆, UV-laser photochemistry, rate consts. meas., reaction mechanism 2-62413
- BH(NH₂)₂, microwave spectra and mol. struct. 2-108475
- BN, cryst. and band struct., EELS obs. 2-109874
- BN, cryst. phases containing ¹⁰B, radiation damage by (n, α) reactions 2-115306
- BN, electrical cond. meas., 700 to 1400°C 2-92618
- BN film, low temp. double plasma MOCVD technique 2-99349
- BN, graphitlike, interlayer reaction energy and relative stability of various cryst. modifications 2-65972
- BN, hardness load depend., structural state, fracture, cracks 2-83229
- BN, hexagonal film, low temp. deposition by CVD 2-71841
- BN, high-temp. stability in O₂, cryst. struct. influence 2-72858
- BN, pyrolytic, high press. and high temp. effect 2-105167
- BN, thermodynamic props., at. no. depend., synthesis method selection 2-66259
- BN with C impurity, ESR signals after high-temp. shock compression, reverse phase transitions, paramag. centres form. 2-56931
- B₃N₂H₄ photoelectron spectrum, theoretical models calcs. 2-80722
- B₃N₂H₄ radical, photoelectron spectrum, theoretical models calcs. 2-80722
- BO, open-shell orbital optimization, coupled perturbed HF and quadratically, convergent SCF calcs. 2-54773
- BO, zero-field splitting of ¹¹B mol. states, ab initio multi-config. wavefunction calcs. 2-96464
- BO ion, pot. energy curves, CAS SCF calcs. 2-80513
- BO+O₂ reaction kinetics studied by laser induced fluoresc. 2-72952
- BO₂, density matrix treatment, atomisation energies, equilib. distances and ionisation pot. 2-80500
- B₂O, electronic struct. and mol. topology, ab initio calcs. 2-54764
- B₂O₂, electronic struct. and mol. topology, ab initio calcs. 2-54764
- B₂O₃ encapsulant, effect of water content on purity and stoichiometry of LEC GaAs 2-103674
- B₂O₃ glasses, isotopically substituted, Raman spectra study 2-87756
- B₂O₃ glasses and melts, microstruct., X-ray scatt. study 2-91794

boron compounds continued

- B₂O₃, photoelectric cross sections 2-96514
 B₂O₃, vitreous, struct. study 2-109679
 B₂O₃, vitreous films, mol. orientation, Raman spectra study 2-87757
 B₂O₃-BaO-Sb₂O₃ and B₂O₃-PbO-As₂O₃(Sb₂O₃), AC elec. resist. meas. 2-87273
 B₂O₃-Li₂O-LiCl amorphous fast ionic conductor, crystallisation effects on cond. 2-115454
 B₂O₃-Na₂O-Na₂SO₄ system, synthesis and cond. of glasses (*French*) 2-56248
 B₂O₃-NaF glass systems, optical basicity study 2-82812
 B₂O₃-SiO₂ gels, crystn. rel. to glass prep. 2-76309
 B₂O₃-SiO₂ glass, dynamic fatigue study using small scale indentation flaws 2-88186
 B(OTeF₃)₃, cryst. struct., X-ray diffr. study 2-81737
 BP, phase transition and shock compression 2-71627
 BaF₂:La, Raman spectra between 300 and 1400K 2-99129
 CaO-B₂O₃-V₂O₅-Fe₂O₃, glass, Mossbauer and ESR studies 2-66963
 xCr₂O₃-(1-x)B₂O₃-PbO glasses, EPR and mag. susceptibility studies 2-98946
 (CuO)₂(2B₂O₃.PbO)_{1-x} glasses, EPR study of mag. behaviour 2-110631
 HC₆BSiO₅, quadrupole lines dipolar struct., ¹¹B NMR study 2-110658
 La₂O₃-PbO-B₂O₃ fluxed-melt system, solubility and relative supersaturation 2-93400
 MgO-B₂O₃ glass, phase relations, NMR and X-ray diffr. study 2-98247
 Na₂O-B₂O₃-SiO₂ gel-derived single layer antireflection films 2-77732
 Na₂O-B₂O₃-SiO₂-Nb₂O₅ glass props., Nb₂O₅ influence 2-71648
 Ni-BN plasma spray deposited composite coatings, props. 2-83231
 Ni-Cr-BN plasma spray deposited composite coatings, props. 2-83231
 Si:BF₃⁺, ion implanted, wafer bending and stress, thermal annealing effect, X-ray topography 2-115311
 Si:BF₃⁺ single cryst., pulsed laser irradiated, ion implanted, F conc. profile 2-115263
 Si-B compounds, high elec. field effect 2-92639
 SiO₂-B₂O₃-Al₂O₃-BaO, pyroceramic, low temp. thermal cond. 2-110054
 t, extinction coeff. determ. 2-80579
 ZnO-B₂O₃-Li₂O-H₂O system, crystallisation, characterisation by X-ray diffr. 2-103962

borosilicate glasses

- actinide valences 2-55854
 BS-12 glasses, Ag-activated luminesc. 2-116240
 composition profile, near surface, SIMS study 2-115144
 field stimulated exoelectron emission 2-77714
 nuclear waste, alteration under hydrothermal conditions 2-107946
 optical, antireflective surfaces for high-energy laser optics formed by neutral soln. processing 2-70641
 oxynitride glass form. by ammonolysis of porous borosilicate gels 2-57326
 photochromic glass, spectral response of high excitation intensity 2-99149
 preparation by hot pressing of gels 2-76309
 Pyrex, static fatigue, functional depend. of failure time on stress 2-67503
 Pyrex borosilicate glass, time depend. erosion by glass beans, computer simulation 2-67552
 shock wave compression up to 170 kbar 2-71559
 solarisation, effect of fining agents 2-99572
 B₂O₃-SiO₂ glass, dynamic fatigue study using small scale indentation flaws 2-88186
 B₂O₃-SiO₂-Na₂O-Fe₂O₃ glasses, phase separation, mixed valence effect 2-92210
 BaO-B₂O₃-SiO₂, liquid-phase separated, chem. stability and microhardness 2-105336
 BaO-TiO₂-B₂O₃-SiO₂ glasses, Ti ion structs., mag. props. and EPR spectra 2-92858
 GeO₂-B₂O₃-SiO₂ fibre composition and radiation hardness 2-114438
 GeO₂-B₂O₃-SiO₂:Ce fibre composition and radiation hardness 2-114438
 K₂O-B₂O₃-SiO₂ glass, temp. derivative of elec. resist. near transition temp. 2-76730
 K₂O-B₂O₃-SiO₂ glasses and melts, microstruct., X-ray scatt. study 2-91794
 K₂O-B₂O₃-SiO₂ glass, phase separation and structon types, DC elec. resist. meas. 2-76729
 Li₂O-SiO₂-B₂O₃ glass ceramics, piezoelec. reson. meas., crystal resonators appl. 2-82786
 NaBO₂.2SiO₂ glass melt, Na and B vapourisation 2-81939
 Na₂O-B₂O₃-Al₂O₃-SiO₂-CuCl glass, CuCl microcrystals growth kinetics obs. 2-103661
 Na₂O-B₂O₃-GeO₂-SiO₂ system glass, microstruct. evolution 2-91795
 Na₂O-B₂O₃-SiO₂ glass, multiple scatt. in medium where single scatt. has a cooperative character 2-65169
 Na₂O-B₂O₃-SiO₂ glass form. kinetics, from alkoxides in soln. 2-76316
 Na₂O-SiO₂-B₂O₃ glass, phase separation, Raman spectroscopy study 2-92212
 Na₂O-ZnO-B₂O₃-SiO₂ glasses, chem. durability, effect of Zn²⁺ adsorption 2-93648
 SiO₂-B₂O₃ system, glass form. by gel process from metal alkoxides 2-88048
 SiO₂-B₂O₃-K₂O-Na₂O glass, leaching characts., surface roughness and surface area effects 2-93650
 SiO₂-B₂O₃-Na₂O microporous glass, swelling in water rel. to heat treatment 2-111209
 SiO₂-B₂O₃-Sb₂O₃-Na₂O glasses, electronic and ionic cond. 2-87348
 ZrO₂-B₂O₃-SiO₂ glasses, leachability, immobilisation of radioactive wastes 2-102046

Borrmann effect *see* X-ray crystallography; X-ray diffraction**Bose-Einstein statistics** *see* quantum statistical mechanics**Bose gas** *see* boson systems**boson fluids** *see* boson systems**boson systems**

- see also* liquid helium-4; quantum statistical mechanics
 abnormal occupation in boson matter 2-54295
 Anderson-Hubbard model elementary excitations, Bose excitations in paramagnetic media 2-61694
 attractive Bose liquids, particle and pair condensation 2-89612
 axisymmetric solitary waves in Bose condensate 2-101180
 Bethe Ansatz model of magnetism 2-66744
 binary mixture, ground-state props., Jastrow wave functions in hypernetted chain approx. 2-98382
 Bose fluids, normal fluid density and 1-particle Green function 2-95232
 Bose-Einstein ferromagnetism 2-82608
 boson fluid, ground-state wave function struct. 2-98362

boson systems continued

- boson fluid mixtures, stability 2-98379
 classical quantum crossover in large n-limit 2-101309
 cluster expansion, bimodality and long-range order 2-112808
 cosmic strings and domain walls in models with Goldstone and pseudo-Goldstone bosons 2-89425
 crystals, quantum field-theoretical treatment 2-56107
 degenerate, canonical transform, extended convolution approx. 2-74317
 dynamic renormalisation group 2-79464
 electron conductivity in random potential, supersymmetry in localisation theory (*Russian*) 2-58758
 excitation spectrum and structure factor for interacting bosons 2-112813
 excitation spectrum of Bose system and Babichenko model (*Chinese*) 2-95220
 exciton-exciton interaction freq. averaging, NMR use in exciton spectroscopy (*Russian*) 2-71884
 free boson gas condensate structure 2-95229
 free boson systems, condensation 2-58697
 ground state, spatial and energetic struct. (*Russian*) 2-56284
 hydrodynamic model at T=0 2-79469
 interpolating integral eqns. method for quantum fluids 2-115487
 lambda transition, microscopic theory 2-89609
 local boson mode interactions with local electronic system with finite Fermi level 2-98556
 many-boson systems, fractional parentage coeffs., calc. 2-79468
 metal, electron-hole pair excitation, localized dynamics perturbations, boson approx. 2-76948
 metals, localised dynamic perturbations, fermion versus boson description 2-82193
 mixtures, variational theory at T=0K 2-71769
 momentum distribution in interacting Bose fluid 2-53657
 n-level quantum system, boson representation for SU(n) generators 2-90850
 non-Fock linear boson systems and their applications in two-dimensional models 2-95649
 normal form expansion of operators, algebraic approach 2-95233
 population struct. of ideal boson gas 2-107060
 pressure study during interactions through mean field pot. 2-101310
 quantum field theory, higher effective actions 2-89888
 quasiprobabilities for Bose functions, conduction identities 2-107129
 reduction of a Boson subsystem up to the lowest order 2-58695
 relativistic Bose gas in even-dimensional space, thermodynamic behaviour 2-95228
 relativistic ideal Bose condensation and related matters 2-64274
 Rydberg atoms in resonant cavity, blackbody radiation absorpt., Bose statistics, Brownian motion 2-90494
 spatial Bose condensation, cluster size distrib. 2-101312
 two-dimensional, quasi long range order 2-107230
 weakly interacting, density distrib. in external pot. 2-53660
 H, quantum mechanical second virial coeff., effect of internal variables (*French*) 2-95224
 T-H spin polarised matrix, variational theory of T=0K 2-71769

bosons

- see also* alpha particles; boson systems; deuterons; gravitons; intermediate bosons; meson resonances; mesons; photons
 Kerr metric, boson bound states (*Chinese*) 2-112481
 limiters in ISX-B Tokamak, operational history 2-74900
 Schwinger W(3) group, boson representations, mass formula 2-69360
 SU(N) lattice gauge theories, boson representation 2-58995
 supersymmetric theories, indices, triality and UV divergences 2-89920
 unification of fermions and gauge bosons 2-11318
 wave function classification by Lie superalgebra chains (*Chinese*) 2-95692

boundaries *see* boundary layers; boundary value problems; grain boundaries; metal-insulator boundaries; semiconductor-insulator boundaries; semiconductor-metal boundaries**boundary-elements methods**

- Biot's linear consolidation theory method 2-91526
 elastic/viscoplastic problems using boundary elements 2-114673
 elastoplastic anal. of axisymmetric bodies, formulation 2-91261
 elastostatic problems, 2-dimens., boundary-element investig. 2-115330
 geometrically nonlinear elastostatics formulation 2-91240
 heated elastic plate, approximate finite deflection anal. by boundary element method 2-81226
 liquid metal fast breeder reactors, potential fluid flow problems, appl. 2-80148
 magnetostatics, boundary elements method 2-55007
 NDT related stress problems, displacement discontinuity method appl. 2-103121
 plane intersections of 3D boundary element mesh, stress contour plotting, PP3D-COUPE program 2-101168
 plates, flat, thermal bending anal. by boundary integral eqn. method 2-75865
 singular solns. requirement, stresses computation from boundary quantities 2-91239
 singularities treatment in 2-D domains using boundary integral equation method 2-89523

boundary layer flow *see* boundary layers**boundary layer turbulence**

- see also* atmospheric boundary layer
 ablating surface, cooled with swirled-film, mass transfer 2-70925
 aerofoil, two dimens., turbulent boundary layer development with supercrit. flow at low Reynolds number 2-103157
 aerosol particles from turbulent gas streams, thermophoretic deposition 2-60628
 airfoil, near-wake, mean velocity and turbulent struct. meas. 2-55589
 airfoil thickness and Reynolds number influence on separation 2-97605
 airfoil trailing edge, turbulent boundary layer, Navier-Stokes eqn. 2-65574
 boundary layer, stratified, turbulent, heat-and-mass transfer (*Ukrainian*) 2-60530
 channel and boundary layer flow predictions, low Reynolds number turbulence model 2-65644
 coherent struct., visualisation by quadrant anal. 2-91408
 coherent structure in turbulent shear flow, research prospects 2-81326
 compressible turbulent boundary layers, data compilation 2-81330
 compressible turbulent flow, free shear layer reattachment 2-65575
 coordinate transformation 2-70924
 cubic body immersed in turbulent boundary layer, flow pattern and press. distrib. meas. 2-86272

boundary layer turbulence continued

dissipative dynamical system, intermittency 2-70928
 film, liq., irregular flow down vertical column, curvature effect on flow stability 2-55668
 flat plate, symmetric turbulent wake development 2-114813
 flow past circular cylinder, contrib. to free-stream turbulence effect 2-55552
 flow separation pattern, comparison using FEM and FDM 2-81324
 flow through gap in wall mounted roughness element 2-65579
 freestream turbulence, boundary layer struct. on circular cylinder 2-91407
 fully developed turbulent pipe flow, drag reduction and random surface renewal 2-86333
 gas bubble, motion in liq., unsteady drag at large Reynolds number 2-60609
 glancing shock wave-turbulent boundary layer interaction 2-65618
 heat transfer between fluidised beds of large particles and immersed surfaces, mechanistic theory 2-114890
 heated boundary layer, density and vel. statistics meas. 2-109303
 hemisphere immersed in turbulent boundary layer, time-averaged aerodynamic forces 2-86271
 high speed turbulent models at rough wall boundary layers 2-91403
 hot-wire anemometer meas. corrections, appl. to boundary-layer flow 2-114952
 incompressible separated flow, laminar and turbulent boundary layers, heat, mass and momentum transfer (*German*) 2-81335
 incompressible turbulent boundary layer, two dimens., method of integral relations appl. 2-91411
 incompressible turbulent flow over flat plate, boundary layers, heat transfer 2-55554
 incompressible turbulent flows, micropolar fluid model 2-75942
 incompressible wall turbulent boundary layer flow characts. and heat transfer meas. 2-75941
 instantaneous structure of mildly curved turbulent boundary layers, diffusion process 2-55551
 inviscid subsonic boattail flow, finite element anal. 2-70979
 laminar-turbulent boundary layer transition, vel. fluctuations distrib., skewness coeff. 2-109278
 laminarescent, relaminarizing and retransitional flows, review 2-114773
 longitudinal diffusivity in rectangular channels, turbulence, aspect ratio 2-97530
 low Reynolds number turbulent boundary layers 2-60526
 molar momentum and heat transfer, universal relations 2-103164
 near wall flow structure in stream with initial swirl 2-55553
 Newtonian and drag reducing fluids simplified theory of near wall turbulent layer 2-91405
 noise, influence of polymer addition (*French*) 2-75767
 non-Newtonian turbulent boundary layer, mass and heat transfer 2-75828
 plumes, conc. fluctuations and fluxes in turbulent boundary layer 2-70926
 porous media, thermally-driven cavity flow, horizontal boundary layer struct. 2-91534
 pressure driven 3D turbulent boundary layers, direct force wall shear meas. 2-97526
 Preston tube calibrations and direct force floating element meas. in turbulent boundary layer 2-97519
 reactive material injection, combustion 2-114778
 Reynolds stress in boundary layers and wakes, high resolution LDA meas. 2-109298
 Reynolds stress tensor in shock wave-turbulence interaction 2-97589
 Reynolds stresses and mean flow field meas. in 3-D pressure driven boundary layer 2-91404
 Reynolds-number dependence of the structure of a turbulent boundary layer 2-109301
 shear flows, two-dimensional, vorticity and scaling laws calc. 2-65580
 shear stresses determ. on outlet and inlet sides of rot. channel using turbulence energy eqn. 2-114779
 shock wave interaction, scaling at compression corners 2-109365
 slender cylinders, turbulent boundary layers anal. 2-97527
 solar collectors, air heating, plate-type, flow passage geometry optimisation 2-78253
 spanwise correl. of temp. 2-97525
 stalled airfoils, turbulent separation, viscous-inviscid interaction method 2-114774
 stratified fluid, boundary mixing 2-109391
 surface roughness, short length, effect on turbulent boundary layer 2-75943
 surface with viscoelastic coating, turbulent boundary layer calc. 2-60522
 temp. derivative skewness model 2-91409
 thermal turbulent boundary layer under strong adverse press. gradient near separation 2-114782
 thermohaline system, double-diffusive, mixed layer development 2-78260
 three dimensional turbulent channel flow, mean vorticity and covariance soln. 2-109297
 three-dimensional, nomogram 2-114780
 tornado-type wind energy system flow anal. within the tower using numerical model 2-75945
 transonic flow, boundary layer shock-wave interaction at high Reynolds number 2-70982
 transonic turbulent separated flow, Navier-Stokes eqn. 2-109355
 2Dturbulent boundary layer flow, wall turbulence, turbulent burst model 2-97523
 turbulent flow separation, review 2-60525
 turbulent plane jet interacting with small amplitude waves, mean flow characts. 2-65628
 unsteady flow, vel. and turbulence profile meas. 2-109299
 unsteady turbulent boundary layers, with flow reversals, models comparison 2-60524
 unsteady turbulent boundary-layer data compilation 2-55555
 unsteady turbulent shear flows, conf., Toulouse, France (May 1981) 2-58545
 viscous diffusion simulation for extension of surface vorticity method to boundary layer and separated flows 2-70911
 wake and turbulent boundary layer, confluent region 2-86275
 wakes, turbulence model of two dimens. calcs. 2-97552
 water, flow beneath stagnant film, Reynolds ridge form. 2-65604
 water 2-55562
 water heated surface, free convection inception 2-81209

boundary layer turbulence continued

wave-turbulent current interaction investig. 2-65665
 CO₂-N₂, turbulent mixing of relaxing gases in a supersonic nozzle 2-60521

boundary layer turbulent flow *see boundary layer turbulence***boundary layers**

see also atmospheric boundary layer; boundary layer turbulence
 adaptive grids appl. to fluid-flow problems with asymptotic solns. 2-91415
 airfoils in transonic flowfield, shock waves, finite difference scheme calcs. 2-70980
 axisymmetric multicomponent boundary layer, boundar-valaue prob., well-posedness 2-65564
 bistable twisted nematic liquid crystal boundary layer display, optical props. 2-86546
 blunt-nosed body in nonuniform hypersonic gas stream, convective heating 2-86298
 bubble condensation in immiscible liquid, noncondensable gases effects 2-114804
 cambered valve leaflets that maximise initial rate of closure 2-109285
 chemically reactive gas condensation on horizontal tube, heat and mass transfer in boundary layer 2-60672
 circulation by perfect noncompressible fluid round a Zukovski profile, resolution by digital calculator (*Croatian*) 2-65565
 combined convection on a vertical permeable surface for different Prandtl numbers 2-60642
 combustor flow modelling 2-75959
 compressible flat plate boundary layers, 3D spatial stability, heat transfer effect 2-109364
 compressible laminar boundary layer, oscillations, heat transfer and skin friction 2-86258
 compressible nonisothermal flow, boundary layer with surface reaction, appl. to wall jet (*French*) 2-55628
 compressible swirling stagnation-point boundary layer for a rotating sphere 2-65563
 convection in porous container with fault-like geometry, initial and boundary conditions effect 2-71024
 Couette flow with mixed interpolation finite elements anal. 2-86257
 Couette to Taylor vortex flow transition, boundary and fluctuation effects 2-70908
 curved pipe secondary flow boundary-layer collisions, electrochemical meas. 2-114902
 cylindrical tube of varying radius, stationary flow, Newtonian two-fluid model 2-109414
 diffusion with a moving boundary, fixed domain method 2-109307
 dusty fluid, laminar two phase boundary layer flow over flat plate 2-81382
 dusty gas, two dimens. stagnation point flow near oscillating plate 2-97618
 Ekman boundary layer, evolution of disturbances 2-55538
 Ekman layer on a porous plate in slip flow 2-97596
 elastico-viscous fluid rotating unsteady flow past an infinite plate with const. suction or injection 2-81377
 elliptical cone, compressible laminar boundary layer, heat transfer coeff. 2-75927
 endwall boundary layer flows and losses in an axial turbine stage 2-86274
 ethyl alcohol, laminar boundary layer, heat and mass exchange with vaporisation and combustion 2-60503
 Falkner-Skan eqn. soln. 2-114777
 Faraday-type combustion MHD generator, non-uniform Hall parameter effects on electrode voltage drop 2-76207
 flat plate boundary layers, waves and flow transitions 2-70909
 flat plate flow, drag and heat transfer with arbitrary viscosity temp. depend. 2-55572
 flat plate moving at high Mach numbers, unsteady boundary-layer induced pressures 2-81323
 flow around flat plate close to plane surface, vortex shedding, turbulence 2-75970
 flow in multiply-connected domains 2-70893
 flow separation in shear-layer driven cavities 2-97484
 fluid dynamics research, contrib. to aircraft design 2-70966
 fluid mechanics, basic research needs review 2-60518
 fluid motion model near solid surface 2-75944
 formation on density discontinuities 2-60523
 free convection effects on oscillatory flow in Stokes problem 2-106510
 free convection flows under non-uniform gravity, integral method 2-91389
 free convection from inclined cylinder 2-55584
 free convection laminar flow, with transverse mag. field, time-depend. suction appl. 2-60663
 free stream above turbulent spots generated in laminar boundary layer, potential flow signature 2-70903
 free-surface flow past oscillating singularities at resonant frequency 2-97572
 frost form. on vertical cylinder in free convective flow 2-91437
 gas mixture concentration and temp. meas. using heterodyne holographic interferometry 2-80910
 Görtler vortices stability in boundary layers 2-91459
 Graetz problem with third kind boundary condition, analytic soln. for eigenvalues and coeff. 2-70898
 heat generating fluid, heat transfer along a porous cylinder, convection 2-70945
 heat transfer from a rotating cylinder under forced convection 2-103162
 heat transfer from saturated and superheated atm. for containment anal. 2-113711
 heat transfer in rarefied gas between parallel plates, boundary conditions effect 2-97597
 heat transfer in scraped thermal boundary layer on rot. cylinder, optical study 2-114608
 heat transfer to air from a yawed cylinder, independence principle 2-55564
 n-hexane, laminar boundary layer, heat and mass exchange with vaporisation and combustion 2-60503
 horizontal plate, free convection fluctuating boundary layer 2-114812
 hydrobionts, frictional resistance under unsteady conditions of motion (*Russian*) 2-83583
 hypersonic shock-layer flow numerical solution, laminar, transitional and/or turbulent speeds 2-86301

boundary layers continued

incompressible flow at high Reynolds no., elliptic-vortex method for approx. Navier-Stokes eqn. 2-97487
 incompressible fluid, flow past a body, marginal separation 2-114781
 infinite flat nonconductivity porous plate, Rayleigh's problem for MHD with suction 2-86353
 inflated buildings, two dimens., cross wind effect on boundary layers 2-70927
 Kaplun's optimal co-ordinates 2-55539
 laminar, two dimens. flow, Prandtl boundary layer eqns. at zero point friction 2-109274
 laminar boundary layer, estimates of errors incurred in asymptotic representations of isolated wave packet 2-109277
 laminar boundary layer, porous medium, blowing, heat transfer, conjugation problem 2-60502
 laminar boundary layer flow on isothermal moving flat sheet and moving cylinder, effect of air props. 2-70897
 3-D laminar boundary layer in symmetry planes of blunt bodies with large injection 2-60501
 laminar boundary layer with blowing or suction along vertical wall, combined natural and forced convection 2-109276
 laminar cavity flow, high Rayleigh number convection investigation 2-91444
 laminar corner flow charact. anal. 2-97502
 laminar diffusion flame, on vertical flat plate burner, elliptic field calcs. 2-70899
 laminar flow, boundary layer, coordinate transformation 2-70924
 laminar flow, over hemispherical headforms, separation bubble, cavitation inception 2-60593
 laminar flow along a porous vertical wall, boundary layer thickness anal. 2-103144
 laminar flow into a suction slot, separation region meas. 2-109273
 laminar incompressible flow, boundary layers, unsteady mixed convection 2-91448
 laminar incompressible flow, large Reynolds number, wake flowfield development calc. 2-70896
 laminar incompressible flow, over solid plate with heat source, heat transfer in boundary layer 2-91442
 laminar separation bubble, cavitation gaseous microbubble growth anal. 2-60631
 laminar unsteady boundary layer accelerated flow past vertical porous limiting surface 2-55536
 laminar vortex-sink flow of compressible fluid (*German*) 2-97580
 laminar-turbulent transition, active control 2-75930
 laser anemometer meas. of boundary layer susceptibility to planar and three dimens. disturb. (*Russian*) 2-114942
 laser Doppler anemometer, flow investig. in vortex chamber (*Russian*) 2-114938
 laser Doppler anemometer investig. of laminar boundary layer stability (*Russian*) 2-114943
 laser double focus method appl. to turbomachine complex flow processes obs. (*German*) 2-81415
 linear stability equations for compressible laminar boundary flows 2-79782
 liquid, horizontal layer, free-convection flow struct., boundary condition 2-70933
 liquid dispersion modelling, hydrodynamic instability factors (*Ukrainian*) 2-60506
 liquid flow about sphere, velocity field characteristics, polymer additives effect 2-60499
 longitudinal flow boundary layer in intersection of cylindrical surface and a plane 2-60495
 magnetic field compression in viscous boundary layer 2-68702
 magnetogasdynamic flow near flat plate, boundary layer flow due to free convection 2-75950
 mean flow induced by internal gravity-wave packets, dissipative processes effect 2-55603
 MHD, unsteady boundary layer free convection flow past vertical porous plate 2-65653
 MHD boundary layer on wedge, Hall and ionslip currents effects 2-55673
 MHD flow induced by harmonic oscillations of insulated infinite flat plate 2-60666
 mixed convection in a wall plume 2-81336
 natural convection adjacent to vertical isothermal hot plate with high surface to ambient temp diff. 2-91425
 natural convection in vertical and inclined air layers, thermal boundary conditions effects 2-114808
 natural convective boundary layer, high Prandtl fluid, saturated porous media 2-55583
 non-Newtonian dilatant fluids, laminar boundary layer struct. 2-86310
 nonisothermal objects, laminar free convection boundary layer heat transfer 2-55540
 nonlinear critical layers and their development in streaming-flow stability 2-75929
 nonlinear wall roughness effects on high Reynolds no. stability 2-109287
 nonstationary potential flow of liq. with moving boundaries, numerical soln. (*Russian*) 2-75926
 nozzles with different contraction shapes, discharge coeff. meas., boundary layer 2-65633
 Orr-Sommerfeld problem for boundary-layer flows, asymptotic anal. 2-70905
 oscillating lifting surface, boundary layer flow, visualisation study 2-109425
 outflow boundary conditions, Euler and Navier-Stokes equations 2-97485
 perfect incompressible fluid flow through bounded region, Euler's eqn. soln. 2-55549
 plane irrotational motion in presence of wall (*French*) 2-95014
 plastic medium dynamic problems, boundary layer 2-114680
 plate, heat transfer in laminar boundary layer, temp. depend. physical props. effect (*German*) 2-114762
 plates, reacting, orderly system distributed along a stream, conc. field 2-81402
 polymer solution, drag reducing, boundary layer of a body of revolution 2-81365
 porous media, thermally driven cavity flows, boundary layer structure near corners 2-55659
 power law fluid flow, higher order boundary-layer approx. (*French*) 2-109275
 power-law fluids, axisymmetric stagnation point flow and mass transfer 2-81367

boundary layers continued

pseudo-shock waves, with upstream boundary layers, modified diffusion model 2-70986
 quadrupole in pot. flow, model problems 2-65609
 Rayleigh-Bernard convection, side wall effect on pattern formation 2-114795
 rotating disc, boundary layer thickness, variational calc. 2-75968
 rotating flow over a disc sector 2-103180
 saline water, laminar buoyancy-driven flow near melting ice surface, transport meas. 2-70901
 saline water, laminar buoyancy-induced flows near melting ice surface 2-70900
 saturated liq. film, forced convection boiling heat transfer from cylinder 2-75952
 sedimentation beneath inclined walls, kinematic wave theory 2-97630
 semiinfinite nonconducting wall in mag. field, MHD boundary layer 2-114924
 shock layer flow around general bodies, boundary layers, Navier-Stokes eqn. soln. 2-70923
 shock wave propag., vaporisation heat and mass transfer 2-114849
 shock wave reflection from an inclined plane isothermal wall 2-75997
 shock waves reflected interaction with boundary layer in the high enthalpy reservoir 2-60576
 shock-wave boundary-layer interaction, turbulence amplification 2-97588
 sidewall effects in two-dimens. subsonic and transonic wind tunnels 2-114776
 simultaneous melting-condensation on vertical wall anal. 2-91439
 singularities in solns. of eqns. of boundary layer on moving surface 2-55537
 singularity initiating a boundary-layer collision 2-70904
 slender body spinning, Magnus forces, vortex model 2-70955
 slightly buoyant flow induced by submerged point head source motion, asymptotic soln. 2-109317
 sphere rotating in fluid, boundary layer eqn. solns. 2-81342
 sphere rotating in viscous fluid in cylindrical tube 2-97556
 sporting swimming, telemetric arrangement for studying flow conditions of boundary layer (*Russian*) 2-83706
 steady viscous flow of two differentially rotating immiscible fluids 2-114821
 stellar atmospheres, boundary layer struct. rel. to thermally sustained stellar winds 2-63367
 Stokes flow drag on flat annular ring 2-91489
 Stokes flow in rectangular well, free convection and boundary layer function 2-75963
 supersonic boundary layer on cooled surface, laminar to turbulent transition 2-75931
 Taylor vortices and its boundary condition, local amplitude eqn. 2-109335
 theory for fine particle deposition in two-dimensional boundary layer flows and application to gas turbines 2-86273
 thermal boundary layer, diffusion controlled, mass and heat transfer 2-65577
 thermal laminar boundary layer with const. press. gradient 2-91390
 thermal Marangoni effect in infinite liquid column, velocity distrib. 2-114914
 thermomicropolar fluid, free convection flow past plate, laminar boundary layer 2-103142
 thin airfoils, potential flow, Pade approx. appl. 2-70902
 thin profile trailing edge, supersonic flow, boundary layer, flow separation 2-75995
 transitions, three dimens. aspects 2-81329
 translating drop in elec. field, heat and mass transfer 2-91428
 turbulent flows, acoustics, Euromech 142 report 2-114784
 2-D turbulent offset jet-boundary interaction 2-65632
 turbulent shear flows, conf., Toulouse, France (May 1981) 2-58545
 turbulent spot in laminar boundary layer, wall pressure fluctuations meas. 2-75928
 unsteady boundary layer, three-dimens., freely interacting with external stream 2-65562
 unsteady boundary layer on rotating disk in counter rotating fluid 2-109331
 unsteady heat transfer in laminar non-Newtonian boundary layer over a wedge 2-81334
 unsteady incompressible boundary-layer flow over a rotating sphere 2-103143
 unsteady slow flows over a cooled flat plate 2-86277
 upstream boundary-layer state effect on shock interaction at compression corners 2-114851
 viscous flow, development near sharp trailing edge on bodies, flow separation 2-55550
 viscous flows, boundary and free shear layers, Navier Stokes eqns., computation technique 2-65557
 viscous fluid, MHD fluctuating flow past a permeable bed 2-71037
 vortex, confined, laminar boundary layer near rotating end wall 2-97565
 vortices, longitudinal, in boundary layer 2-114818
 wall jet, electrically conducting fluid, vel. and thermal boundary layers 2-86317
 wall shear stress determ. from velocity profile meas. in outer part of boundary layer 2-60504
 water, flow beneath stagnant film, Reynolds ridge form. 2-65604
 water, laminar boundary layers, heated, stability, minimum critical Reynolds number estimation 2-109272
 water, natural convection across tilted rectangular enclosures, aspect ratio effects 2-114809
 water waves, wind generated, laminar boundary layer flow model, nonlinear theory 2-114830
 Hg, flow in vertical annuli, free convection heat transfer 2-55563
 water, flow in vertical annuli, free convection heat transfer 2-55563

boundary-value problems

see also *initial value problems*

acoustic and EM oscils. theory, integral eqn. methods for boundary-value problems (*German*) 2-101189
 anisotropic elastic solid, initially stressed, disturbance propag. due to normal press. over boundary 2-114659
 axially symmetrical, vectorial wave beams 2-114162
 axisymmetric multicomponent boundary layer, boundar-valaue prob., well-posedness 2-65564
 bars and plates, optimal design problems regularisation 2-95010
 beam, vibrating, with nonhomogeneous boundary conditions, linear partial differential eqn. soln. 2-55493

boundary-value problems continued

- boundary-value soln., mixed, of thermoelasticity, thermal crack and contact problems 2-81233
- composite, directionally reinforced, stress distrib. in components 2-62158
- composite elastic media, boundary-value problems in two dimens., interior, exterior solns. 2-103042
- convective heat transfer, asymptotic solution (*German*) 2-81339
- cracked elastic body, two-dimens. static problems, singular integral eqns. method 2-97455
- curvilinearly fibre reinforced composites, stress anal. 2-114643
- cylinder, hollow, transversely isotropic, stresses and deform. under ring and radial loads 2-91241
- cylinder, one class of nonquasielliptic eqns. (*Russian*) 2-79369
- diffusion equation, nonlinear, asymptotic behaviour of solns. 2-91590
- diffusion equations, one-dimens., free boundary-value problem, nonlinear integral eqn. reduction 2-56243
- dissipative bodies, weak solns., stability and uniqueness 2-74210
- eddy current flow around cracks in thin plates, boundary integral method 2-55037
- eddy current problem, in ZD, hybrid finite element-boundary integral formulation 2-55036
- elastic bodies contact, dual finite element analysis 2-60485
- elastic layers, physical nature 2-91245
- elastic spherical body and acoustic medium, nonstationary interaction 2-55485
- elastic-plastic boundary-value problems, finite element soln. for capturing failure states 2-91278
- elasticity, constrained problems, finite element methods 2-79362
- elasticity, difference methods for elliptic partial differential equations with nonunique solutions 2-95012
- elasticity theory, linear, three-dimens., boundary functions, dual variational problems 2-63821
- elasticity theory, two-dimens. boundary value problems (*Polish*) 2-79365
- elasticity theory under conformal mappings, correspondence of solns. (*Russian*) 2-79371
- electric fields, cylindrically symmetrical, static and steady-state, determ. using variation method (*Hungarian*) 2-85858
- ellipsoids of rotation, unclosed, pot. theory, boundary-value problem soln. (*Ukrainian*) 2-58593
- EM wave transformations, boundary-value problems 2-96812
- Euler and Navier-Stokes equations, outflow boundary conditions 2-97485
- fluid dynamics, inviscid eqns., boundary approx. 2-114751
- Fokker-Planck eqn., eigenvalue and definite evolution operator soln. 2-89641
- free bounding problems solution, Stefan problem 2-70820
- freezing of porous medium with water supply, model and existence theorems (*French*) 2-114627
- Froissart-Martin bound for complex scatt. angles 2-95137
- geodesy, linear boundary value problem, general formulation 2-105888
- geodesy, soln. of continuous and discrete boundary value problems (*Russian*) 2-100194
- heat conduction, steady-state problems, direct analysis using counter-variational principle (*Russian*) 2-65444
- heat conduction nonlinear boundary-value problem solving analytical methods 2-60354
- Helmholtz equation exterior problems, Galerkin-Petrov method 2-94977
- homogeneous anisotropic cylindrical body, two-dimens. static thermoelasticity, boundary value problem soln. representation 2-81224
- hyperelastic compressible isotropic solid, finite plane deformation 2-97373
- ideal incompressible nonhomogeneous liquid bounded by free surface, solvability of initial boundary value problem (*Russian*) 2-91375
- incompressible liquid, turbulent flow around disk, boundary conditions, numerical calcs. 2-91410
- inhomogeneity, two-dimens., elastic moduli, analytic soln. in complex form 2-112705
- inner-flow regions with closed streamlines at high Peclet numbers, mass and heat transfer 2-114607
- isotropic half-space under torsion, mixed boundary value problem 2-65482
- magnetic fields created by current dipoles embedded in conducting space, boundary integral formulation 2-90770
- magnetostatics, 3D mag. vector problem, point iterative algorithm 2-55013
- magnetostatics, 3D problem, Fredholm integral eqn. 2-55012
- magnetostatics, 3D problem, vector pot. formalism 2-55011
- magnetostatics, linearised scalar pot. formulation, discrete parametric boundary problem 2-55010
- MHD waves propag. in ionosphere, boundary conditions 2-112198
- micropolar elastostatics, linearized theory, field eqns., boundary conditions, force/couple stresses 2-74212
- Minkowski world, in three dimens., boundary-value problem for minimum surface 2-69063
- motor vehicle passenger compartment, acoustic resonance anal., boundary-integral equation method 2-81161
- multilayer plate contact problem, matrix method of mixed boundary value soln. (*Ukrainian*) 2-103111
- nonlinear boundary value problems in transport processes, monotone method 2-69110
- nonlinear filtration flows, boundedness and convergence 2-81392
- nonlinear heat conduction eqn. with moving boundary condition, convergence of difference schemes (*Chinese*) 2-109158
- nonlinear vibrating string, characterisation of breakdown points 2-89524
- nonstationary potential flow of liq. with moving boundaries, numerical soln. (*Russian*) 2-75926
- numerical solution of flow near the rotor of a wind turbine 2-91406
- one-dimensional transient heat conduction with temp.-dependent generation and conductivity 2-75824
- panel, cylindrical, under axial compression, nonlinear deform. 2-81267
- perfect conductor, EM scattering calc. method 2-80878
- permeable boundary models for computational gas dynamics 2-112712
- plane anisotropic elastostatic boundary-value problems, singular integral eqns. soln. 2-114644
- plane elastostatic problems with discontinuously prescribed boundary values, integral eqn. soln. 2-107095
- plane e.m. wave, high frequency diffraction by perfectly conducting circular with narrow slit (*Japanese*) 2-90773
- plane wave diffraction by an infinite set of hard and soft parallel half planes 2-55044
- plasticity, two-dimensional processes, boundary-value problem uniqueness theorem, local determinacy hypothesis 2-114678

boundary-value problems continued

- plate, anisotropic, with elliptical hole, elasticity theory, second boundary-value problem 2-97369
- plate, unbounded, reinforced by infinite homogeneous damaged stringer, discrete interaction 2-81292
- plate deflection theory, boundary value problems 2-53524
- plate deflection theory, numerical integration methods 2-91242
- plate transient bending problem, boundary integral eqn. soln. (*French*) 2-109196
- plates, sandwich, with complex boundary conditions, bending, finite Fourier series method 2-114682
- point charge forced normal to elastic dielectric half-space, axisymm. boundary value problem 2-55020
- point defect computer simulation, boundary conditions 2-55966
- potential field around a thin oblate body of revolution, uniform asymptotic solns. 2-91380
- proton Compton scatt., model-independent dispersion approach 2-69472
- relativistic electron beam injection into plasma, induced field dynamics 2-109536
- Ritz method use in theory of general charact. oscils. 2-114161
- rotating flexible rod vibr., uniform real-variable asymptotic approx. 2-89528
- rotational incompressible non-viscous flows through multiply connected domains 2-60547
- rough surface interface, bilateral boundary conditions for mean EM field 2-114159
- Runge-Walsh theorems for boundary value problems (*German*) 2-101156
- scalar diffraction inverse problem 2-58660
- shaft, elastic axisymm. hollow, optimisation of torsional rigidity 2-114648
- shell, cylindrical, nonlinear problems, choice of main soln. (*Ukrainian*) 2-81221
- shell, nonuniform, approx. analytical models in stability problems (*Russian*) 2-75873
- Signorini's problem for half-space, contact boundary extremal props. 2-79367
- stationary problem with strongly varying coefficients, numerical soln. 2-114605
- steady-state oscillations of elastic media, external boundary problem for spherical cavity in halfspace 2-73479
- Stefan problem, inverse problems of determining boundary regimes 2-114610
- Stokes problems, c-complete systems, boundary methods 2-89538
- strip, elastic, equilib. problem, generalised formulation 2-58613
- strip, elastic, moving across rigid step, numerical soln. 2-109252
- supercritical transonic trailing-edge flow 2-109361
- thermal radiowave radiation of a plane surface with small sloping irregularities, brightness temps. 2-85867
- thermoviscoelasticity, boundary-value problems, soln. construction and investigation 2-60404
- thin elastic shell, functional construction 2-79366
- three dimensional thermoelastic problems, boundary conditions effect 2-114647
- traction problem in non-linear elasticity with sufficiently small strains, strain energy integral bound 2-69018
- variational method, electrostatics appl. 2-114149
- vibration of circular crack in elastic layer under three-dimens. loading 2-55494
- water waves, free boundary problems 2-91471

bowing see bending**brain**

- see also neurophysiology
- alpha wave detector, using 741 op amps for monitoring brain activity (*Spanish*) 2-100142
- asynchronous cortical input and asthenopia 2-111662
- auditory brainstem responses, distorted, digital inverse filtering 2-68184
- auditory cortex freq. mapping 2-105707
- auditory evoked cortical mag. fields in unshielded rooms (*German*) 2-111713
- auditory evoked magnetic fields in human brain right hemisphere 2-94088
- auditory evoked potential audiometry, fundamentals 2-110727
- auditory evoked potentials as indices of cerebral specialisation of function 2-62627
- auditory evoked potentials from human midbrain, slow brain stem responses 2-111695
- auditory frequency-following potentials, human, lock-in anal. 2-62629
- auditory frequency-following response, man, contributing generator 2-94079
- blood flow, local, in vivo mapping by Xe-enhanced CT 2-83651
- blood flow, regional, determ. by ^{133}Xe -inhalation and γ -camera 2-62745
- blood flow, regional, errors in determ. by Xe enhanced computerised tomography 2-62759
- blood flow, regional, non-invasive meas. using ^{133}Xe (*German*) 2-88648
- blood flow, regional, nuclear medicine collimator for meas. using ^{133}Xe inhalation 2-68139
- blood flow, total and regional, quantitative non-invasive method for cerebrovascular disease 2-94200
- blood flow and metabolism, regional tissue, 3D quantitative meas. using ^{15}O and positron emission tomograph 2-94201
- blood flow determ. using positron emission meas. of fluoromethane kinetics 2-62753
- blood flow during rest and cognitive activity, sex and handedness differences 2-116969
- blood-brain barrier, microwave hyperthermia-induced alterations, rat expts. 2-88589
- blood-brain barrier permeation in rats during exposure to 2450 MHz microwaves 2-111734
- Bragg's peak irradiation of intracranial targets, physicotopographic prep. (*Russian*) 2-111773
- brainstem, derived acoustic responses by means of pure-tone masking 2-94076
- brainstem audiometry in neonates and children, reference values and charact. 2-73264
- brainstem audiometry, visual and somatosensory evoked pots. in leukodystrophies 2-111698
- brainstem auditory evoked pot., human, click polarity inversion effects 2-73261
- brainstem auditory evoked pot., sources rel. to parameters bilateral asymmetry 2-73265
- brainstem auditory evoked pot., waveform anal. 2-94064

brain continued

- brainstem auditory response to binaural delayed stimuli in man 2-73262
 brainstem auditory response to tone pips, results in normal and hearing-impaired subjects 2-116936
 brainstem auditory responses, scalp recorded, human, comparison with intracranially recorded auditory nerve pots. 2-94078
 brainstem auditory responses to pure tone stimuli, power spectral anal. 2-94077
 brainstem electrical stimulation, effect on mechanographic meas. of rat locomotor activity 2-105867
 brainstem responses when masking with wide-band and high-pass filtered noise 2-68025
 cat auditory cortex responses to FM of tones 2-116931
 cerebrovascular assessment using a Doppler carotid scanner and real-time freq. anal. 2-62704
 checkerboard reversal pattern and flash VEPs in dialysed and non-dialysed subjects 2-62603
 Clare-Bishop neurons, responses to 3D movement of a light stimulus 2-68001
 colour-word (Stroop) test and localisation of interference by brain pots. 2-57823
 computerised tomography images, automated pattern extraction and 3D construction (*Japanese*) 2-57896
 cooling, rapid, in free-running hamster, Mesocricetus auratus 2-78298
 cortex, frontal, effects of lesions on event-related pots. during auditory selective attention 2-94063
 cortical magnetic fields, auditory evoked, influence of stimulus intensity 2-73266
 cortical magnification factor in rhesus, reason for anisotropy 2-57812
 cortical potentials associated with voluntary foot movement in man 2-94015
 dichoptic visual-evoked response, anal. of temporal freq. effect 2-94025
 DNA, γ -irrad. damage repair in rat cerebellar neurons and 9L brain tumour cells 2-105794
 dot pattern orientation assignment, optimisation mechanisms 2-68017
 echoencephalography, technique and clinical significance 2-94130
 electrical bioimpedance of heart, tissue, brain, limb and lung, conf., Tokyo, Japan (Aug. 1981) 2-63741
 electrical impedance phethysmogram, effect of electrode size on blood flow contris. 2-117119
 enzymes in liver and brain, effects of chronic ingestion of tritiated water in mice 2-57868
 epilepsy, cellular mechanism of neuronal synchronisation 2-99940
 sword-fish, brain temp. maintenance by exothermic tissue 2-105665
 functional imaging future in radionuclide studies 2-94190
 functional mapping of organ systems, computer methodology, symposium, New Orleans, LA, USA (1981) 2-63742
 guinea pig auditory cortex, augmentation of evoked potentials after exposure to intensive noise 2-116932
 HEADTOME, hybrid emission tomograph for brain 2-78435
 HEADTOME II, hybrid emission computerised tomography for brain 2-73334
 hippocampal electrophysiological correlates of an avoidance behaviour in the cat 2-67987
 hypothalamus, rat, catecholamine deficiency at later times after irrad. (*Russian*) 2-88594
 image perception, brain function exam. possibilities 2-78344
 inferior colliculus in man, sound evoked potentials 2-111693
 laser speckle visual evoked response, contrib. of central retina 2-105698
 magnetic measurement, extremely low current, in completely magnetically shielded room (*German*) 2-68098
 mammalian superior colliculus, representation of auditory space 2-111707
 mammalian thalamic neurons, in vitro electrophysiology 2-83560
 mental chronometry rel. to brain event onset and offset, EEG waveform anal. 2-78327
 mesencephalon, deep, of blinded frogs, light -sensitive units 2-94039
 microwave imaging of cerebral edema 2-94153
 microwave irradiation of awake cats with weak AM field, effect on cerebral cortex Ca^{2+} efflux 2-111730
 mollusc brain single neuron, quasi-electrostatic influence, trace phenomena, rel. to intracellular excitation 2-57794
 multiplane positron tomographs designed for brain imaging, performance evaluation 2-73325
 neuroradiology, magnification technique and additional oblique projections using Angioskop A and Koordinat 3D 2-78414
 neurotransmitter receptors, quantitative densitometry, autoradiographs procedure 2-62862
 olfactory bulb neurons, self excitation, turtle expts. 2-73270
 optic tectum, *Xenopus*, stripe projection of compound eye 2-62609
 pattern reversal evoked potential amplitudes: life span changes 2-62602
 photon irradiation tolerance, endocrine complications in radiotherapy patients 2-111739
 photosensitive epilepsy, interhemispheric differences, intermittent photic stimulation 2-62605
 photosensitive epilepsy, interhemispheric differences, pattern sensitivity thresholds 2-62604
 positron camera system for emission tomography 2-73338
 precision manipulator for neurophysiological investigation of animal brains using microelectrode with step motor drive 2-78517
 primate visual cortex, columnar architecture and computational anatomy, segmentation and feature extraction via spatial frequency coded difference mapping 2-83567
 proton irradiation injuries, study in expt. animals by ^{99m}Tc penetration techniques (*Russian*) 2-111813
 retinal on and off pathways, central connections, rhesus monkey obs. 2-88541
 rheoencephalographic signals, frequency-domain analysis, patient monitoring appl. (*Chinese*) 2-83665
 spike and wave discharges, effects of post-ictal depression 2-67988
 stereotactic neurosurgery, 3-D digital signal processing 2-62744
 striate cortex, cat, spatio-temporal organisation of receptive fields 2-73233
 tectal processing of visual signals from caudalmost part of frog visual field 2-57808
 trigeminal evoked potentials in the cat 2-111653
 tumour, cyclic responses of cultured 9L cells to radiation 2-105806
 tumours induced in rabbits by chronic local irrad. using implanted sources (*Russian*) 2-105778
 US backscattering coefficients evaluation for excised human tissues 2-68045

brain continued

- US hyperthermia in malignant brain tumours treatment, tissue damage threshold and thermal dosimetry 2-62679
 visual cortex, cat, contrast gain control 2-99957
 visual cortex, cat, intracortical microstimulation of neurons 2-67997
 visual cortex, cat, neurons tuned to direction of motion, effect of positional disparity 2-99963
 visual cortex, macaque, orientation and direction selectivity of cells 2-67999
 visual cortex, macaque, spatial freq. selectivity of cells 2-68000
 visual cortex, primary of cats, columnar organisation of spatial sensitivity 2-57803
 visual cortex activation recorded by dynamic emission computerised tomography of inhaled ^{133}Xe 2-62746
 visual cortex damage leading to retinal cell loss 2-105701
 visual cortex development of embryo after removal of one eye 2-57805
 visual evoked cortical pot., human, rel. to chromatic modulation of sinusoidal grating 2-94033
 visual evoked potential, blur induced changes 2-111660
 visual evoked potential, human, revelation of cortical components by binocular stimulation 2-67996
 visual evoked potential dependence on stimulated retinal area change rel. to different pattern displacements 2-111664
 visual evoked potentials, steady state, in the alert primate 2-116913
 visual evoked potentials in monkey brain, opponent colour responses (*Japanese*) 2-116912
 visual evoked potentials rel. to eye dominance 2-62601
 visually evoked pots., LED implant in frontal sinus of cat 2-62607
 visually evoked response, effect of accommodation 2-73230

brain models

- see also *learning systems; neural nets*
 local brain structures, model of systems of synchronous and asynchronous communication (*Russian*) 2-99938
 neocortical interactions, statistical mechanics basic formulation 2-99872
 optimal association with partly missing key vectors 2-111652
 potentials, spatiotemporal organisation, mnemonic modelling by real-time disc system (*Russian*) 2-99939
 short term memory, mathematical model 2-57796
 synaptic long-term memories, neuronal model 2-57799
 thought process, evolutionary regeneration model 2-99935
 visual image, model of encoding in cerebral cortex 2-99946

brass

- 70/30, mechanism of ductile fracture in tensile test (*Japanese*) 2-111282
 α , single crystals, deform. behaviour and dislocation vel., microcinematographic study 2-116495
 α -brass grain growth 2-88106
 abrasion, SEM obs. of worn surfaces 2-67568
 annealed FCC, twin boundaries, orientation and struct. (*Russian*) 2-103779
 bicrystal, α - β , two-phase, factors affecting interface sliding 2-103776
 binary brasses, effects of exchange and correlation on stability 2-56450
 coatings, diffusion formed, AES study 2-87105
 creep rheological study in single and two phase alloys near stoichiometric composition 2-62174
 deformation localisation in tension 2-77892
 diffusion galvanising kinetics 2-11377
 diffusion-induced grain boundary migration 2-103783
 equibaxial stretching textures 2-88103
 grain boundary multiple special contacts (*Russian*) 2-115251
 Hume-Rothery systems, cpd. form and s-d reson. role, terminal solubilities 2-116423
 intercrystalline internal adsorption, α -brass based alloys 2-61148
 laser surface hardening, acoustic emission monitoring of α/β brass 2-67602
 plastic deform. and stress-strain rel. for various corner angles 2-72759
 Portevin-Le Chatelier effect rel. to solid solubility (*Japanese*) 2-105235
 powder, atomised, prod. and characters. 2-67251
 sheet, 70/30, plastic yield behaviour 2-111239
 surface cleaning by scratching, AES study 2-57528
 vibration-hardening treatment, influence of polymer-containing oil media, mech. chars. 2-99603
 wear, SEM study 2-67571
 X-ray fluorescent anal. radioisotope induced, for industrial appl. (*Bulgarian*) 2-88385

Bravais lattice see *crystal atomic structure***brazing bonding** see *brazing***brazing**

- see also *soldering*
 ceramic to metal brazed rectangular insulator for neutral beam accelerators 2-59541
 vacuum brazing machine power and coolant switching unit 2-74396
 Nb-Zr (1 wt.%) alloy, fatigue failure in various struct. states 2-99547
 Ni-Cr alloy, brazed ring, geom. parameters selection, tolerable stresses 2-99640

breakage see *fracture***breakdown (electric)** see *electric breakdown***breakdown diodes** see *avalanche diodes; Zener diodes***breeder reactors** see *fission reactors***bremsstrahlung**

- see also *electron radiation; gamma-ray spectra; gamma-rays; X-ray emission spectra; X-rays*
 atomic bremsstrahlung spectrum 2-59725
 atoms, photoeffect, high energy tip bremsstrahlung, radiative corrections 2-90484
 bounded plasma, bremsstrahlung radiation emission, fluctuation theory 2-55716
 bulk media, gamma-ray spectra and energy loss, fluoresc., bremsstrahlung and annihilation effects 2-90311
 charged particle scatt. in laser field, variational formulation and low-freq. approx. 2-96689
 charged particle scatt. in mag. and laser fields, nonlinear bremsstrahlung 2-95136
 charged-particle scatt. on mag. and laser field, nonlinear bremsstrahlung 2-89569
 coherent bremsstrahlung and channelling radn., theory 2-104984
 coherent bremsstrahlung at low energies 2-82950
 collisionless inverse bremsstrahlung, magnetised plasmas 2-109543
 detection using pyroelectric detectors 2-90406

bremsstrahlung continued
 diamond, electron irradi., coherent bremsstrahlung and channeling radiation meas. 2-77614
 double layer scatterers, albedo charact. of bremsstrahlung 2-67708
 electron bremsstrahlung polarisation effect on nucleus in const. external field 2-69643
 electron cyclotron reson. discharge, microwave heated, X-ray bremsstrahlung meas. 2-114983
 electron-positron pair angular distribution meas. in bremsstrahlung beam 2-85504
 free-free Gaunt factors for electrons, bremsstrahlung in Cs plasma 2-71104
 gamma ray point sources, optical thickness against nonthermal electron bremsstrahlung 2-74127
 graphite, unoccupied electronic states 2-115655
 induced bremsstrahlung radiation in plasma 2-97716
 Kumakhov radiation rel. to bremsstrahlung, electron beam divergency 2-103872
 laser-target interaction, plasma prod., effect of target material on absorpt. meas. 2-60776
 magnetic bremsstrahlung gain, quantum theory, appl. to electron lasers 2-90853
 5d metals, bremsstrahlung excited Auger electron spectra 2-105035
 neutron star magnetosphere, longitudinal waves generation by mag. drift mechanism 2-117699
 neutrons, secondary, prod. by high-energy bremsstrahlung in C, N, O and tissue, energy spectra 2-62677
 plasma, magnetized, high energy electron component cooling 2-76084
 plasma, relativistic electron-electron Bremsstrahlung, QED calc. 2-76090
 plasma, X-ray bremsstrahlung and characteristic line emission, calc. for Maxwellian electron distrib. 2-76197
 plasma bremsstrahlung, collective effects (*Chinese*) 2-76134
 plasma impurities, radiative processes, book contrib. 2-71120
 plasma turbulent, Manley-Rowe relation for induced bremsstrahlung radiation 2-109515
 pulsed emitters, energy spectra, regularisation method appl. 2-65145
 spectra in Maxwellian plasma at relativistic temperatures 2-106513
 tagged photons, production using bremsstrahlung beam from synchrotron 2-85464
 thin films, X-ray spectra optimisation for quantitative anal. 2-69303
 thin target foils, electron impact, K-shell ionisation, bremsstrahlung and electron-electron bremsstrahlung 2-75404
 5d transition metals, final state screening systematics, bremsstrahlung excited Auger spectra 2-99209
 tunnel structures, photon emission, expt. study 2-82471
 X-ray transition radiation in plates, influence of multiple scatt. 2-77613
 e^-e^+ collisions, bremsstrahlung processes, geometric beam factors (*Russian*) 2-95814
 $e^-e^+ \rightarrow e^-e^+ \gamma$, large impact parameter cut-off 2-95812
 $e^-e^+ \rightarrow \gamma X$, influence of macroscopic factors on bremsstrahlung 2-113261
 Ar, electron impact, characteristic X-ray and bremsstrahlung cross-sections 2-102646
 Au, atom, transversely pol. electrons scatt., Röntgenbremsstrahlung emission asymmetry 2-85585
 Au, electron channelling radiation and coherent bremsstrahlung 2-71531
¹²C(p,p), bremsstrahlung spectrum and time delay, multidetector coincidence study 2-85044
¹²C(p,p), list-mode study of bremsstrahlung spectra near reson. and time delays 2-90100
 CeAl₃, electronic struct., XPS and bremsstrahlung isochromat spectroscopy 2-56434
 Co, minority spin bands, inverse photoemission study 2-116293
 GaAs, surface states, intrinsic unoccupied, bremsstrahlung isochromat spectroscopy study 2-98713
 Ge(Li) detector, use for meas. of scattered photon energy spectra in a bremsstrahlung beam 2-85493
⁶Li(e,e), bremsstrahlung cross-section, sum rule, nucleon symm. effect 2-64396
 Ni (100), direct transitions in isochromat spectra 2-87913
 Ni, minority spin bands, inverse photoemission study 2-116293
 Ni+Ni ions, delta electrons and continuous X-ray generation 2-96721
 Si surface barrier detector, response to 100-600 keV monoenergetic electrons 2-108252
 Ti, bremsstrahlung isochromat spectra, density of unfilled electronic states 2-104982
 TiC, bremsstrahlung isochromat spectra, density of unfilled electronic states 2-104982
 TiN, bremsstrahlung isochromat spectra, density of unfilled electronic states 2-104982
 TiO, bremsstrahlung isochromat spectra, density of unfilled electronic states 2-104982
 W, polycrystalline, UV-bremsstrahlung, recording apparatus 2-87891

bridge circuits

see also bridge instruments
 active AC bridge for low temp. meas. (*Polish*) 2-95376
 dilatometer using bridge cct. for capacitance meas. 2-112889
 displacement transducers, based on reactive sensors, in transformer ratio bridge circuits 2-79560
 low-noise RF capacitance bridge transducer for studying displacement of a pendulum 2-95354
 rotating components, contactless strain meas. using AC current bridges 2-65552
 temperature meas., establishment of fixed points below 13.81K using mutual inductance bridges (*Polish*) 2-95377
 TEXTOR, poloidal field thyristor amplifier with improved power factor 2-69941
 TEXTOR toroidal field power supply system commissioning tests 2-69942

bridge instruments

see also bridge circuits
 admittance meas. using bridge sampling methods, 250 kHz to 5 GHz range 2-101427
 digital balanced instrument for τ_T and β_0 meas., bipolar transistors testing appl. (*Chinese*) 2-69156
 electrical measurements and standards, progress in instrumentation (*Rumanian*) 2-74382
 low-power AC bridge for high resolution remote resistance thermometry 2-64029
 magnetoresistive Permalloy mag. field sensor 2-112933
 MM-wave complex impedance bridge, 94 GHz 2-74467

Bridgman method *see crystal growth from melt*

brightness

see also sky brightness
 1982 DV, fast-moving asteroid, UVB photometry rel. to rot. period and light var. amplitude 2-68654
 1982 RA, fast-moving asteroid, BV photometry, (1982 September 22) 2-117625
 A0538-66, X-ray transient, UV spectra anal. 2-94770
 A 1367, spiral-rich cluster of galaxies, luminosity function from photographic photometry 2-106937
 Abell 1763, galaxy cluster, X-ray emission meas. rel. to cluster mass to radius of 1.4 Mpc 2-68909
 asteroids, IR (JHK) photometry 2-79000
 Cassiopeia A, young supernova remnant, radio flux var. meas. (*Russian*) 2-63593
 cloud brightness var. with height, airborne meas. 2-106286
 Comet Austin (1982g), total visual magnitude, coma diameter and tail length estimates, (1982 August 7 to 26) 2-112393
 Comet Austin (1982g), total visual magnitude, coma diameter and tail length estimates (1982 August 28 to 30) 2-112394
 Comet Austin (1982g), total visual magnitude, coma diameter and tail length estimates (1982 September 4 to 20) 2-117631
 Comet Austin (1982g), total visual magnitude and coma diameter estimate (1982 June 26) 2-89202
 Comet Austin (1982g), total visual magnitude estimates and coma diameter (1982 July 2 and 3) 2-94655
 Comet Austin (1982g), visual magnitude estimate, (1982 August 2) 2-100836
 Comet Bowell (1980b), JHK photometry and total visual magnitude estimates, (1982 May 25 to July 10) 2-94654
 Comet Bowell (1980b), total visual magnitude estimate (1982 April 23) 2-73912
 Comet Bradfield (1979 X), CS and S emissions obs. rel. to production rates 2-73904
 P/Comet du Toit-Hartley (1982b, 1982c), magnitudes from red-sensitive exposure, (1982 May 1) 2-68677
 P/Comet Grigg-Skjellerup (1982a), total visual magnitude estimates (1982 May 14 to 27) 2-79038
 P/Comet Grigg-Skjellerup (1982a), total visual magnitude estimates, (1982 April 20 to May 12) 2-89200
 P/Comet Gunn, total magnitude estimates (1982 May 22 and 23) 2-79037
 P/Comet Halley, magnitude limit from unsuccessful search, (1981 December 18) 2-63318
 P/Comet Halley, nucleus brightness and props. 2-100837
 P/Comet Halley (1910 II), Bobrovnikoff's photometric power-law solns. 2-68673
 P/Comet Halley (1910 II), light curve anal. and predictions for next return 2-112391
 P/Comet Halley 2-2-68670
 P/Comet Schwassmann-Wachmann 1, new outburst, visual magnitude estimates, (1982 April 13 to 15) 2-63317
 P/Comet Schwassmann-Wachmann 1, total visual magnitudes and coma diameters (1982 April 16 to 20) 2-68676
 comets; gas component/visual brightness at large heliocentric distances (*Russian*) 2-79031
 comets, brightness rel. to core-mantle model of cometary nuclei (*Russian*) 2-73908
 comets, contrib. of dust grains formed by condensation to integral brightness (*Russian*) 2-94647
 comets, L_a isophotes from solar L_a radiation scatt. in cometary H I atmosphere (*Russian*) 2-73906
 comets, magnitude sources for visual photometry 2-94649
 comets in 1981, Agassiz Station obs. of magnitudes 2-94650
 cosmological redshift-magnitude relation perturbation in inhomogeneous relativistic model, redshift eqns. 2-89418
 Crab Nebula, supernova remnant, emission spectrum and brightness distrib. model 2-84305
 Crab Nebula, young supernova remnant, radio flux var. meas. (*Russian*) 2-63593
 dielectrics, brightening using diffr. grating 2-110806
 IE 1402.3+0416, new BL Lacertae object discovered by Einstein Observatory, X-ray flux meas. 2-94838
 Earth, calculated radiances in solar spectral range rel. to vicarious satellite calibration of (Meteosat-1) 2-112297
 Earth, spectral radial intensity rel. to design of spectrally agile staring sensor system 2-112161
 Earth background spatial radiances obs. using IR, staring sensor 2-117476
 elliptical galaxies, ellipticity effect on photometric profiles 2-63644
 elliptical galaxies, two-component dynamical model rel. to central luminosity cusps 2-106820
 flocculi in sunspot groups, brightness variations assoc. with mag. fields 2-84201
 fluorescent lighting, light intensities at corneas of working radiologists 2-94109
 galactic and zodiacal light surface brightness measurements with the Atmosphere Explorer Satellites 2-94644
 galactic centre 'point' radio source, apparent variability rel. to ionised gas clouds (*Russian*) 2-101074
 galactic radio brightness distribution used for SNR search 2-106947
 galaxies, depend. of Tully-Fisher relation on Hubble type rel. to use of 21 cm line width as distance indicator 2-63615
 galaxies, early-type, radio luminosity function and luminosity-size correl. 2-106910
 galaxies, late-type, optical and H I study of low surface brightness galaxies 2-94834
 normal galaxies, models for far-IR emission 2-63619
 galaxies, multiaperture BV photometry of southern objects 2-106918
 galaxies, orbital masses and mass-luminosity ratios from homogeneous sample of double galaxies 2-101043
 galaxies, reliability of Zwicky magnitude scale in estimation of blue luminosity 2-68899
 galaxies, surface brightness of S0 and spiral galaxies rel. to apparent flattening 2-68903
 galaxies, surface photometry and luminosity distrib. for eight edge-on galaxies 2-101040
 galaxies active nuclei, struct. and luminosity of black hole accretion discs 2-94833

brightness continued

- galaxies surface brightness profiles, isothermal models for phase space struct. of $r^{1/4}$ galaxies 2-112563
- galaxies surface photometry, bibliography 2-107031
- galaxy clusters, X-ray surface brightness distrib. rel. to clusters substructure 2-106938
- gamma-ray bursts, log N-log S curve meas. by SIGNE expts. 2-89407
- Geminid meteor stream, 1980, shower rates and magnitude distrib. from visual obs. 2-106630
- geostationary satellites, visibility and apparent magnitude rel. to visual obs. 2-106476
- HID lamps nonequilibrium vaporization effects during warmup 2-95436
- illumination systems quality estimation using luminous field integral characs. (Czech) 2-64085
- intense impulse discharge, spectral brightness meas. 2-103469
- interstellar masers brightness temp. determ. 2-58437
- lighting parameters effects on eye performance assessment, influence of task detail, task eccentricity and observer age 2-73240
- Lyrid meteor stream, magnitudes of brightest meteors during intense return, (1982 April 22) 2-68679
- M31, H I intensity contour maps from high-resolution obs. 2-112559
- M31 central 50 pc, surface brightness distrib. and spectrum, UV obs. 2-112546
- M32, elliptical galaxy, deconvolution of brightness profile from seeing 2-84320
- M 31 bulge, far UV surface brightness distrib. rel. to hot evolved stars and star form. rate 2-63632
- meteors, brightness relative to spectral type 2-100841
- monochrome and colour displays perceptibility calc. under various illumination conditions 2-78341
- NGC 4151, Seyfert galaxy, new brightening, approximate B-magnitudes (1982 June 9 to August 19) 2-112561
- NGC 5408, irregular galaxy, X-ray emission from star formation burst 2-106911
- NGC 5963, low surface brightness spiral galaxy, mass-to-light ratio 2-101031
- NGC 7814, edge-on spiral galaxy, surface photometry rel. to light, colour and mass distrib. in disc, and spheroid 2-89365
- nonconventional optical systems and the brightness theorem 2-90799
- office lighting contrast rendering gauge 2-95438
- OH 205.1-14.1, unusual OH maser, intensity vars. of left circularly polarised component (1980 to 1982) 2-79238
- Orion B (NGC 2024), compact H II region, recomb. line and continuum map 2-101084
- FU Orionis, pre-main-sequence star, spectral energy distrib. obs. rel. to decrease in brightness 2-73970
- partially coherent sources, radiant intensity 2-75519
- photocopying, light source brightness determination (Russian) 2-97136
- planetary microwave brightness temp., vertical struct. effects, lunar regolith appl. 2-58277
- planetary nebulae, radio emission evolution rel. to radio distance scale 2-106873
- planetary nebulae in centre of M31, luminosity function from velocity modulated photographs 2-74042
- pulsed image-converter tube attachment for brightness meas. in IR range 2-95432
- quasars, high redshift, correl. between L_{ya}/H_{α} ratio and continuum spectral index 2-94856
- quasi-stellar objects, luminosity and density evolution in rotating mag. superstars model 2-106952
- radiance simulation and scene discrimination errors 2-79667
- radio sources, extragalactic, radio two-colour spectral distributions 2-79235
- radio sources, variable, flux densities obs. with RATAN-600 radio telescope 2-101083
- radio sources in X-ray clusters of galaxies, radio power at 102.5 MHz 2-112599
- rocket plume detection using satellite-borne submillimetre-wave radiometry at thermospheric altitudes 2-94575
- Sa-type galaxies, global H I mass-luminosity ratios from H I obs. 2-89366
- Sagittarius-B2, mol. cloud, struct. and component spectra from brightness at SHF, UHF 2-106941
- Saturn atmosphere, Lyman α dayglow rel. to eddy mixing coeff. 2-112387
- semiconductor source luminance law $L(P, \theta)$ determ., near field technique (French) 2-107382
- Seyfert galaxies, variability of emission-line spectra and optical continua 2-106906
- 1009 Sirene, lost minor planet, ephemeris and predicted magnitudes, (1982 May 11 to August 19) 2-68649
- small objects of random luminance, detect. in pulse noise background 2-105705
- SN 1572, young supernova remnant, radio flux var. meas. (Russian) 2-63593
- Sn/Na halide lamps in ceramic envelopes, characts. features 2-95437
- solar corona, brightness and electron density distrib. struct. near maximum of (cycle 21) 2-106643
- spicule brightness distribution measured during partial solar eclipse 2-117652
- spiral galaxies, components of pairs and isolated, mean surface brightness 2-63630
- spiral galaxies, edge-on, surface photometry rel. three-dimensional light and mass distrib. 2-89364
- spiral galaxies, mass and luminosity distrib. rel. to Tully-Fisher relation 2-58450
- stellar surface brightness parameter from VRI_c system transform. 2-73960
- Sun, microwave bursts, assoc. mag. field, electron energy and brightness temp. 2-94683
- supernova remnants, effects of metal-rich ejecta on X-ray luminosities 2-112527
- supernova remnants, radio emission-diameter relation rel. to cosmic ray accel. 2-106432
- thermal radiowave radiation of a plane surface with small sloping irregularities, brightness temps. 2-85867
- Titan, brightness temperature from 415 μm obs. 2-100815
- turbulent radio jets, synchrotron brightness distrib. 2-89391
- X-ray diagnostic set with image intensifier, electronic brightness stabiliser 2-78411

brightness continued

- X-ray sources, extragalactic, log N-log S relation and luminosity functions from complete sample 2-58270
- X-ray sources, extragalactic, log N-log S relation from Einstein Observatory survey 2-58271
- Zodiacal light, search for short term vars. by Helios space probes 2-89197
- zodiacal light, stability of brightness and polarisation from min. to max. of solar cycle (1974 to 1981) 2-89196
- H I line brightness temperature scale 2-63569
- H_2O maser in nucleus of southern galaxy NGC 4945, luminosity meas. 2-94852
- Nd:glass laser amplifier with spatial filters and final disc stage, exit-beam brightness restriction 2-86020
- ZnS:Mn:Ac electrolum. thin film device, Mn^{2+} emission saturation 2-116265
- ZnS:Mn electrolum. films grown by at. layer epitaxy, ageing process 2-116264

Brillouin scattering *see Brillouin spectra***Brillouin spectra**

- see also stimulated Brillouin scattering*
- benzene, Brillouin spectra, vibr. dynamics, heat capacities meas. 2-72511
- benzil, annealed and unannealed, critical behaviour, simultaneous Brillouin correl. light scatt. 2-110878
- benzil, cryst. phase transition, acoustic phonon mode, Brillouin scatt. study 2-56175
- Brillouin-Mandelstam scatt., review 2-67069
- carbon tetrachloride, vibr. relax., spontaneous Brillouin scatt. 2-59784
- condensed matter, Brillouin scatt., review 2-82873
- cyclohexane, Brillouin spectra, vibr. dynamics, heat capacities meas. 2-72511
- cyclohexane, liq., vibr. relax time, temp. depend., US props., Brillouin scatt. 2-103902
- diamantane, 35K struct. phase transition light scatt. study 2-61918
- diamond, photoelasticity, elec. field induced ionic contribs. 2-67020
- dimethyl, cryst. struct. and elastic props. at 293K and 110K 2-60967
- 1,2-difluorotetrachloroethane, Brillouin scatt. in glass transition region 2-61915
- epoxy resin monomers, unreacted DGEBA type, local order investig. by light scatt. 2-93212
- ferromagnetic film, Brillouin scatt. from magnons, Stokes-anti-Stokes asymm. 2-116202
- ferromagnetic layers, Brillouin scattering from spin waves (German) 2-104903
- fluid, density correl. function, Brillouin scatt., nonequilibrium fluctuations 2-104899
- fluid, nonequilibrium steady state with large temp. gradients, light scatt. 2-104901
- fluid, nonequilibrium steady state with small temp. gradient, light scatt. 2-104900
- hexatriacontane, elastic props. and phase transitions 2-92078
- layered semiconductors, Brillouin scattering meas. using microprocessor-controlled Fabry-Perot interferometer 2-79655
- Mandel'shtam-Brillouin component recording method 2-107423
- methane hydrate, acoustic vel. from Brillouin spectra obs. 2-109909
- methane- $d_0(-d_4)$ single crystals, elastic and photoelastic consts., Brillouin scatt. obs. 2-66103
- oligobutene, polymeric liquid, Brillouin scatt., ultrasonic and hypersonic relax. data 2-61916
- pentacosane, elastic props. and phase transitions 2-92078
- 1,5- and 2,4-pentanediol, viscoelastic liqs., struct. relax., Brillouin light scatt. 2-72514
- plasma, double-pulse CO_2 laser-planar target interaction, Brillouin backscatt. meas. 2-91601
- plasma, laser-target interaction, Brillouin scattering, spatial struct. and coherence props. meas. 2-91600
- PMMA, low temp. glass transition temps., Brillouin scatt. obs. 2-61140
- PMMA, oriented, Brillouin spectroscopy 2-72516
- PMMA, thermal phonon softening and crazing under tensile stress, Brillouin scatt. study 2-110877
- cis-polyacetylene, doped, electronic and vibrational struct., finite model 2-76891
- polybutadiene, hypersonic relaxation, Brillouin scatt. obs. 2-66136
- polyethylene terephthalate film, mechanically deformed, orientation effect, Brillouin scattering effects 2-87803
- polyisoprene, hypersonic relaxation, Brillouin scatt. obs. 2-66136
- polymers, one-dimens. cond., electronic struct., ab initio SCF LCAO calc. 2-76892
- polypropylene, drawn films and extruded rods, photoelastic and elastic consts., Brillouin scatt. study 2-83148
- superconducting-normal multifilm struct., electron states calc. (Chinese) 2-92825
- tetrachloromethane, Brillouin spectra, vibr. dynamics, heat capacities meas. 2-72511
- tetrachloromethane-trichloromethane, liq. mixtures, vibr.-energy transfer, Brillouin scatt. study 2-57114
- tetracyanoethylene, Brillouin scatt. study of elastic and photoelastic consts. 2-99141
- di-[tetramethyl ammonium] copper tetrachloride, modulated structs., lattice excitations, Brillouin spectroscopy 2-92121
- TGS, ferroelec. transition, depolarisation field, Brillouin spectra line breadth study 2-67068
- TGS, ferroelec. transition, polarisation relax. time, high press. Brillouin scatt. study 2-87802
- TGS, gamma-irrad., Mandel'shtam-Brillouin light scatt. 2-110879
- sym-triazine, ferroelectric phase transition, Brillouin and Rayleigh scatt. 2-61917
- water, supercooled, sound velocity anal., Brillouin light scatt. study 2-76597
- water-ethanol, supercooled, sound velocity anal., Brillouin light scatt. study 2-76597
- Ag_3AsS_3 , proustite, phase transition, Raman and Brillouin scatt. study 2-103986
- $\text{Ba}(\text{NO}_3)_2$, ionic-mol. cryst., US absorpt. 2-56100
- BiVO_4 , ferroelastic phase transition, Brillouin scatt. study 2-116200
- CS_2 , liq., induced Mandel'shtam-Brillouin scatt., restoration of amplitude and phase of laser signal liquid, Raman scattering 2-87807
- $\text{Ca}(\text{NO}_3)_2\text{-KNO}_3$ mixture, hypersonic relax., Brillouin scatt. study, transverse mode obs. close to Rayleigh line 2-71591

Brillouin spectra continued

- CdS, Brillouin scatt. study of stationary electro-acoustically amplified acoustic flux 2-77541
 CdS crystals, effect of using variable rise-time optical pulses on acoustic domains, freq. spectra 2-82823
 CdS-ZnS(ZnSe)(ZnTe), acoustoelectric domains, Brillouin scatt. 2-82408
 CsNiF₃, acoustic phonon vel., elastic coeff., refractive index, Brillouin scatt. study 2-86812
 Cu₂Te hexagonal, lattice vibrs. symmetry, Mandelstam-Brillouin scatt. 2-115374
 D₂, fluid and solid, meas. under high press. by Fabry-Perot interferometer (Japanese) 2-64104
 D₂O, supercooled, sound velocity anal., Brillouin light scatt. study 2-76597
 Fe film, ferromag., Brillouin light scatt. by spin waves 2-66872
 GaAs, resonant Brillouin scatt. under uniaxial stress 2-77542
 GaAs, SAW generation by photoexcitation, Brillouin spectra detected 2-98413
 GaS, elastic props. under high pressure, by Brillouin scattering 2-72517
 GaS, layered compound, elastic const. and compressibility 2-86773
 GaSe_{1-x}S_x, layered semiconductors, Brillouin scattering meas. using microprocessor-controlled Fabry-Perot interferometer 2-79655
 He, liquid, pressurised, high freq. first sound meas. near lambda point 2-92303
 Hz, fluid and solid, meas. under high press. by Fabry-Perot interferometer (Japanese) 2-64104
 KCN, X_{1-x} mixed crystals, (X = Cl, Br, I), Brillouin scatt. and rot-translational coupling 2-110876
 KH₂PO₄ type ferroelec., instabilities in coupled acoustic and optical modes (Japanese) 2-86806
 K₂SeO₄, ferroelec. incommensurate transition, Brillouin scatt. study 2-66997
 Li₂SO₄, solid electrolyte, Brillouin spectra, 899-1120K, elastic constants 2-104897
 Mg₂SiO₄, forsterite, single cryst., Brillouin scatt. meas. up to 40 kbar 2-57115
 (NH₄)₂ZnCl₄, ferroelec. phase transitions, light scatt. study 2-110830
 Pb(NO₃)₂, ionic-mol. cryst., US absorpt. 2-56100
 Rb₂ZnCl₄, elastic behaviour, temp. depend., commensurate-incommensurate transition, Brillouin spectra study 2-61053
 Rb₂ZnCl₄, incommensurate state, elastic stiffness const. temp. depend., Brillouin scatt. 2-115360
 SiO₂ film, on Si (001) substrate, surface Brillouin scatt., strong interf. effects 2-72518
 SiO₂, fused, evidence for struct. contrib. to phonon lifetimes 2-76628
 Sr(NO₃)₂, ionic-mol. cryst., US absorpt. 2-56100
 Xe hydrate, acoustic vel. from Brillouin spectra obs. 2-109909

Brillouin zones

see also band structure

- cubic lattice, Brillouin zone, irreducible wedge tetrahedral subdivision 2-76897
 density of states, generalised two-zone model 2-71849
 diamond structure, continuity chords of bands 2-82205
 f.c.c. crystal, deform. pot. and operator associated with {110} screw dislocation 2-76569
 finite sum approximations to Brillouin zone integrals with symmetrized plane waves 2-104215
 graphite intercalation compound with K, Rb, Cs, phonon branches, neutron spectra study 2-76618
 integral evaluation, analytic tetrahedron method 2-87122
 mag. exchange splitting, photoemission, LEED and Auger study 2-98870
 organic conductors, librins, review 2-86802
 AgInTe₂, force const. and phonon freq., spectral moment calc. from sp. ht. data 2-98224
 p-Bi_{0.9}Sb_{0.1} under uniaxial tension, topological electronic transitions 2-66424
 CS₂, solid, intermol. modes, neutron and Raman scatt. studies 2-98211
 CdGa₂S₄, band struct., linear optical charact., effective carrier masses, pseudopotential calc. 2-61355
 Cu-Al, surface electronic states, Tamm state, photoemission, LEED and Auger study 2-98712
 Cu₃Au, Fermi surface, de Haas-van Alphen meas. 2-104229
 CuInS₂, force const. and phonon freq., spectral moment calc. from sp. ht. data 2-98224
 Cu(110) with adsorbed Xe, commensurate-incommensurate transition, PES study 2-104154
 Fe (110) surface, exchange splitting, binding energies 2-77149
 FeRh, paramag., ferromagnetic and antiferromag., band struct., muffin-tin calc. 2-82216
 Ga_{1-x}Al_xAs epitaxial layers and single crystals, anharmonicity and disorder-induced effects, Raman study 2-67052
 GaAs, piezo-optical coeffs., dispersion dependences 2-116151
 GaP, piezo-optical coeffs., dispersion dependences 2-116151
 Hg₂(Cl,Br)_{1-x}, Raman scatt. on acoustic soft mode from Brillouin zone boundary (Russian) 2-57097
 K, open orbits, rel. to high-field magnetoresistance 2-87227
 K solid, spin density, analytic tetrahedron method 2-87123
 Li-Mg, thermo-EMF meas. (Russian) 2-82326
 Mg (0001), surface electronic struct., angle-resolved photoemission study 2-115845
 Na solid, spin density, analytic tetrahedron method 2-87123
 NiPS₃, electronic states, reflectivity, optical absorpt., XPS 2-57246
 P, black, electronic struct., self-consistent pseudopot. calc. 2-66437
 Pb_{1-x}Ge_xTe, C_{3v}-phase, band struct. 2-92467
 Pt (100) surface, clean and S saturated electronic struct., UPS study 2-77145
 RbVF₄, structural phase transitions, sp. ht., optical and X-ray diffr. studies 2-115403
 Rh, electronic energy bands and optical props. KKR calc. 2-66432
 Se, trigonal, monoclinic and amorphous, Compton profiles and autocorrelation functions, HF and OPW calc. 2-87892
 Si surface electronic struct. of 1×1 and 7×7 reconstructions, UPS study 2-98715
 Si, surface state bands of 2×1 reconstruction, angle-resolved photoemission study 2-98714
 SiC, phonon dispersion, atomic force const. 2-86808
 Th, band structure, thermoreflectance study 2-104239
 TiSe, inelastic neutron scattering, selection rules (Russian) 2-92119

Brillouin zones continued

- TmSe single cryst., inelastic neutron scatt. studies 2-55956
 W (011), valence band struct., angle-resolved XPS, synchrotron radiation, direct transitions and phonon effects 2-61340
- bristles** see fibres
- brittle-ductile transitions** see ductile-brittle transition
- brittle fracture**
 see also ductile-brittle transition; notch brittleness
 alloy, structural, cracked, loading cyclicity effect on failure resist. 2-99630
 alloys, fracture and flow in fusion reactor environment 2-85223
 aluminosilicate glasses, devitrified, contact strength in impact, rel. to type of defectiveness 2-99557
 bimaterial incompressible body, plane strain interfacial fracture anal. 2-55498
 brittle solids, decrease in durability in cyclic tests, phenomenological model 2-60478
 ceramics, thermal shock resistance, influence of size factor 2-62194
 composite structures, plate, with crack in transverse compression 2-109248
 continuous damage theory, statistical aspects 2-81288
 crack advance by double kink nucleation 2-57451
 crack energy density concept as fundamental fracture mechanics parameter 2-75899
 crack formation, rel. between max. stress and macroscopic surface energy 2-97448
 crack nucleation, environmentally induced 2-105277
 cratering experiment calcs. with bedded crack model, computer simulation 2-72790
 creep fracture, aggressive environments 2-83201
 crystal size determ., electron microscopy 2-98013
 curved bodies, elastically and geometrically identical, rough contact, failure due to brittle fracture 2-97470
 curved thermal crack growth, in bounded brittle two-phase solid 2-97452
 cylinders, energy conditions for brittle failure, heating (Russian) 2-60473
 cylinders and spheres, energy conditions for brittle failure, cooling (Russian) 2-55506
 diamond, laser radiation effect on morphological and phys. charact. (Russian) 2-71497
 energy conditions for brittle fracture, strength of ductile materials (Russian) 2-75905
 epoxy resin, expt. K-value determ., appl. to brittle fracture (Japanese) 2-111402
 epoxy resins, round notched, subjected to plane strain bending, internal fracture and surface morphologies 2-67534
 fibre reinforced composite, num. expt. and comput. algorithm 2-60475
 fibre reinforced composite with rigid curvilinear crack and interface crack, antiplane deform. 2-97456
 fracture instability, semibrittle, inclined yield strip, continuum dislocation model 2-86786
 fragment size prediction in dynamic fragmentation 2-70866
 grain boundary embrittlement, role of chem. bonding 2-56073
 laminated, brittle strength calc., computer algorithm, stress conc. role 2-60474
 macrocrack theory, models of class M_T 2-65537
 metals, cubic, brittle fracture surface energy, evaluation by lattice dynamical method (Chinese) 2-61059
 metals, fracture, method for fibrous content estimation 2-93703
 microstructural features, computational models 2-76694
 Nimonic PE16, solution treated, grain boundary segregation during neutron irradi. 2-109844
 nylon monofilaments, oriental, tensile failure obs. by quantitative fractography 2-93723
 PMMA, fracture, complete longevity isotherm calc. 2-93627
 PMMA plates, brittle fracture in tension, static field radiated by abrupt crack-arrest 2-56077
 polybutadiene, filled elastomer, fracture, electron and positive ion emission time correlations meas. 2-116345
 polycrystal, grain boundary and transgranular competing mechanisms, theory (Russian) 2-99515
 polymer, highly-crosslinked, fractography, Preston's analysis of stries form. 2-71551
 polymer fibre, oriental, tensile failure obs. by quantitative fractography 2-93723
 polymer with submicrocracks, deform. props. and macroscopic breakdown kinetics, dislocation model 2-62209
 polymers, coke filled, strength and deform. props. 2-83188
 polymers, fracture, complete longevity isotherm calc. 2-93627
 polypropylene, EPDM modified, struct.-property relations under tensile and impact tensile stress (German) 2-67533
 propellant, solid, shock-induced instability due to crack-like defects 2-78106
 reactor fuel behaviour, fracture mech. props. influence 2-85145
 sintered materials, brittle fracture microstruct., comparative investig. by SEM and replica TEM 2-67695
 spheres, energy conditions for brittle failure, heating (Russian) 2-60473
 stability criteria for fracture in compression of brittle bodies 2-114727
 steel, 10MnNi2Mo, eval. of mech.-metallurgy (Czech) 2-67514
 steel, alloy, fracture behaviour, effects of comp. variations and ageing treatments in air and H₂ 2-67522
 steel, alloy, high strength, H stress cracking, effect of P conc. 2-77938
 steel, austenitic stainless, fatigue, under different atmospheres, effect of He implantation 2-77905
 steel, austenitic stainless 316, He embrittlement, microstruct. aspects 2-71518
 steel, C, type ASTM A533-B, fracture surfaces, solute segregation distrib., Auger anal. 2-80120
 steel, constructional, cold brittleness eval. using fracture mech. criteria 2-99555
 steel, Cr type, H impregnation behaviour and embrittlement resist., microplastic deformation influence 2-99552
 steel, Cr-Mo, segregation of embrittling elements to prior austenite grain boundaries 2-93517
 steel, fracture toughness tests, J_{IC} meas. in transition region (Japanese) 2-111400
 steel, leaded, brittle fracture cause 2-111310
 steel, low alloy, heat improved, brittle fracture, fractographic parameters meas. (Russian) 2-88157
 steel, low alloy, high strength, fracture, effect of thin film form. 2-67470

brittle fracture continued

- steel, low alloy, mech. props., struct. and failure, influence of controlled rolling 2-72831
 steel, low C, crack resist. determ. in brittle crack propag. from impact bend test results 2-72908
 steel, low C, structural, fracture toughness in grain coarsened region of weld heat-affected ones 2-62190
 steel, low-alloy, crack resist. determ. in brittle crack propag. from impact bend test results 2-72908
 steel, low-alloy, detachment cleavage study 2-116519
 steel, low-alloy, H embrittlement in long-term strength tests 2-67539
 steel, low-alloy, unstable crack propag. and arrest during cyclic loading 2-116548
 steel, low-C, determ. of plastic surface energy 2-83178
 steel, pressure vessel, thick-walled, brittle-failure resist. 2-99626
 steel, stainless, austenitic Cr-Ni, combined shock loading and high-speed deform. effects 2-99560
 steel, stainless, high-strength, delayed fracture, fractographic investig. 2-111308
 steel, stress intensity factors during brittle crack propagation and at arrest in ESO specimens (*Japanese*) 2-77916
 thermal loads influence on brittle solid fracture 2-91333
 thermally activated crack growth in brittle solid, lattice trapping effect 2-66115
 Tokamak first wall, irradi. creep, swelling erosion and embrittlement effects 2-69828
 Type 304, sensitised, low-temp., intergranular fracture and grain boundary chem. 2-105328
 Zircaloy-2, oxygen embrittlement on long-term exposure to fission product oxides 2-69707
 Al-Al₂Pt₃, unidirectionally solidified eutectic, microstruct. and mech. props. 2-116434
 B fibre reinforced Al, interface struct. and strength 2-77942
 BN, hardness load depend., structural state, fracture, cracks 2-83229
 Cu thin plates, cleavage strength 2-83228
 Fe, Armco, unstable crack propag. and arrest during cyclic loading 2-116548
 Fe, fracture mode and ductility on testing at cathodic potentials, P and S segregation effects 2-93679
 Fe, intergranular fracture, cathodic pots., effect of S and Sb 2-57469
 Fe-B layers, effects of annealing (*Korean*) 2-62150
 Fe-Cr (0-15 wt.%), mech. props. changes by fast neutron irradiation 2-67504
 Fe-Si (3.25 wt.%), quasibrittle fracture nucleation under strain twinning conditions (*Russian*) 2-62193
 MgO, single cryst., wear props., roles of brittle microfracture and plastic flow 2-62235
 Mo sheet, SIMS analysis of oxygen on brittle fracture surface 2-99581
 NbC, single cryst., prep. struct. and mech. props. 2-98108
 Ni-base superalloy, Inconel X-750, fatigue and creep crack growth at elevated temps., effect of environment 2-99536
 Ni-Cu, Monel 400, liq. metal and H embrittlement, influence of grain boundary P conc. 2-77930
 PbO-B₂O₃ glasses, comp. depend. of fracture toughness, Vickers hardness and fracture surface energy 2-72793
 Si, brittle fracture crit. stress, ion implantation and surface treatments effect 2-81882
 Si Czochralski wafers, heat treated, brittle and ductile, fracture and yield stresses meas. 2-92091
 Ti, cavitation erosion behaviour, nitriding effects 2-111331
 Ti-Al-V (6, 4 wt.%), cavitation erosion behaviour, nitriding effects 2-111331

brittle materials *see* **brittleness****brittleness**

- see also brittle fracture; embrittlement; hydrogen embrittlement; liquid metal embrittlement; notch brittleness*
 aggregate materials, notch sensitivity in fracture testing 2-99611
 aluminosilicate glass, crystallised, of distilled water, effects on microhardness and microbrittleness 2-99525
 aluminosilicate glasses, devitrified, contact strength in impact, rel. to type of defectiveness 2-99557
 brittle, thermal shock testing, fluidised bed as quenching medium, charact. obs. 2-116655
 cantilever beam, brittle, fracture under lateral impact load 2-91348
 ceramic, brittle, thermal shock testing, fluidised bed as quenching medium, charact. obs. 2-116655
 ceramics, brittle, inertia as a factor in dynamic strength 2-111277
 corrosion resistance high temperature coatings, Si role 2-116586
 crack formation, rel. between max. stress and macroscopic surface energy 2-97448
 crack tip, dislocation-free zone 2-56079
 cracks propagation, by cavitation 2-103087
 curved thermal crack growth, in bounded brittle two-phase solid 2-97452
 damage theory of brittle materials 2-91335
 fracture and defects, mechanics of brittle materials (*French*) 2-86780
 glass fibre reinforced plastics, interface strength, temp. depend. (*Japanese*) 2-57419
 glass polymers, tensile strength elevation by entanglements 2-93621
 glass-ceramic, fatigue anal. brittle materials using indentation flaws 2-83211
 hysteresis in abrasive wear 2-67559
 limiting equilibrium, brittle body with rectangular crack 2-86232
 martensitic transformation toughening mechanics in brittle materials 2-88080
 metals with BCC lattice, fracture after cooling, cold brittleness (*Russian*) 2-77902
 microstrength meas. of brittle materials 2-93743
 nonmetallic structural materials, brittle, strength testing 2-72910
 optical blanks from brittle materials, diamond drilling 2-91102
 sand-cement mortar, acoustic emission and longevity under steady load 2-93619
 short rod chevron notch specimen for fracture toughness testing of brittle materials, compliance calibration 2-67679
 steel, constructional, cold brittleness eval. using fracture mech. criteria 2-99555
 steel, Cr-Mn-Si, deform. under high pressure, effect on temper brittleness 2-67391
 steel, low-alloy, cold brittleness threshold, strain rate effect 2-99558
 steel, low-alloy, hardness and brittleness of nitrided case 2-62282

brittleness continued

- steel, Ni-Co-Mo-Ti, maraging, heat treatment for service life improvement 2-72739
 steel, stainless and structural, nitriding, saturation with H 2-62283
 steel, tempered, pseudo-intercrystalline brittleness mechanism 2-67502
 uniaxial tension, compression and plane problems, continuous damage theory appl. 2-91336
 Al alloy, precipitation hardened, pseudo-intercrystalline brittleness mechanism 2-67502
 B fibre reinforced Al, acoustic emission and longevity under steady load 2-93619
 Cr-MgO-B, struct. and mech. props. 2-72783
 Cu₂Sb, recrystn. and brittleness threshold temp. 2-99546
 Cu₂Si and Cu₃Si, recrystn. and brittleness threshold temp. 2-99546
 α -Fe, rolled or hydroextruded, dislocation struct., brittleness and impact toughness meas. (*Russian*) 2-93560
 Fe-Si-Al, dil. alloy, mech. props., elec. cond. and mag. losses meas. 2-83217
 NiAl, recrystn. and brittleness threshold temp. 2-99546
 Si Czochralski wafers, heat treated, brittle and ductile, fracture and yield stresses meas. 2-92091
 TiC-Al₂O₃, condensates, microhardness and microbrittleness 2-77904
 ZnS:Cu₂S single crystal, microbrittleness, impurity effects 2-83210

broadband amplifiers *see* **wideband amplifiers****broadcasting**

- see also radio broadcasting; television broadcasting*
 digital audio signal processing by microcomputer 2-81165
 microelectronics appls., general discussion 2-69271
 time and frequency meas., conf., New Delhi, India (Feb. 1981) 2-95306

bromine

- see also nuclei with*
 adsorbed on Si (111), surface registration, X-ray standing waves determ. 2-104151
 blood serum, Br determ. by ¹²⁵I excited X-ray fluoresc. anal. 2-68123
 chemisorption and dibromide form. on Pd (111) 2-66364
 diatomic molecules thermal dissociation with bound electron excited states 2-93764
 fission products, short-lived, gas-phase chem. separation 2-75450
 halogenation of Pb surfaces, UV photoelectron spectra 2-73013
 ion+atom collisions, information theoretical description of charge-state distributions 2-102576
 ion bombardment on light-ion target, L X-rays perturbation 2-77625
 molecular beam, lobular scatt. from graphite covered Pt foil 2-99269
 molecule, angular distrib. param., mol. effects, PES using synchrotron radiation 2-70332
 molecule, B¹¹H(0_g⁺) state, spontaneous predissociation 2-80746
 molecule, diffusion through porous quark 2-66294
 molecule, two-photon processes, δ -approx. (reflection) method 2-102560
 polar fluid, extended RISM eqn. appl. 2-97896
 polyacetylene:Br, amorphous film, elec. and optical props. 2-110511
 polyacetylene, Br₂ doped, ¹H NMR spin-lattice relax. rate, freq. and temp. depend. meas. 2-77406
 polyacetylene, Br₂ doped, elec. cond. mechanism, IR absorption and reflection spectra study 2-77520
 polyacetylene, Br doped, XPS and elec. cond. study 2-93368
 polyacetylene, Br substituted, synthesis and EPR, dynamic nucl. polarisation and Raman study 2-76474
 AgCl:Br⁻, band-gap-irrad., luminesc. centres, ODMR and level-anticrossing spectra 2-56980
 As₂Se₃:Br, chalcogenide glasses, carrier mobility, transient photocurrent spectra study 2-72024
 Br ions bombarding thin C targets, L-shell vacancies and radiative electron capture 2-75412
 Br⁻, adiponitrile solns., ionisation energies, photoelectron study 2-80727
 Br⁻, diffusion coeffs. in inert gases, test of generalised Einstein relation 2-67074
 Br+Ca, surface reaction, chemical equilb., desorpt. and reaction kinetics (*German*) 2-78123
 Br+Hg, collisional de-excitation, ion-pair form. in entrance channel, quenching rate coeff. 2-72973
 Br+Na, metal cluster oxidation, chemiluminescence study 2-99681
 Br+Pb superheavy system, δ -electron production rates 2-59893
 Br+trimethylsilane, kinetics and equilb. in very low press. reactor 2-93757
 Br¹²⁺+C-foil, projectile K X-ray emission, target thickness depend. 2-75394
 Br₂ in Ar, binary collision trajectories calc. using efficient computer algorithm 2-108686
 Br₂, steady-state saturated photodissoc. in high-power Ar⁺ laser radiation field 2-96663
 Br₂²⁺, ab initio interaction polarisability and pair pot. 2-75179
⁷⁹Br₂ in Ar and Kr matrices photochemical dynamics, IR spectra and relax. dynamics 2-102475
 Br₂-CO₂-He solar-pumped electronic-to-vibrational energy transfer lasers 2-80933
 Br₂+Hg, collisional de-excitation, ion-pair form. in entrance channel, quenching rate coeff. 2-72973
 Br₂+O, supersonic O beam, reactive scatt. study 2-83376
⁷⁹Br₂ in Xe matrices, photochemical dynamics, radiative lifetime meas. 2-96621
 He-Br₂ discharge, positive column at-state densities and electron densities 2-60816
 KCl:Br, dielec., sp. ht. and thermal cond. 2-86960
 KCl:Br⁻, X-ray irradi., H₂ type defects, ESR study 2-110641
 (SN)₂:Br, elec. cond. and magnetoresist. meas., 0.2 to 4.2K 2-92586
 Si, with chemisorbed Br, X-ray standing wave anal. 2-82128
 ZnS:Cu, Br phosphor, electroluminesc. and lattice const. meas. 2-93283

bromine compounds

- bromide in Arabian Sea 2-111967
 graphite-Br₂ intercalation cpd., struct. phase transitions, Raman scatt. study 2-86863
 intercalation compounds with graphite, phonons, inelastic neutron scatt. study 2-56105
 intercalation compounds with graphite, sp. hts., 1.5 to 6K 2-98305
 BrCl, B¹¹H(0_g⁺) manifold, laser-induced fluoresc. obs. 2-114030
 BrF₃⁺, mean amplitudes of vibr. calcs. 2-59775
 BrO₃⁻+O⁻, EPR spectra obs. 2-59827

bromine compounds continued

BrO_4^{2-} radical anions form. by attachment of O^- to bromate in solid matrix, EPR spectra obs. 2-59827
 $\text{H}+\text{XY}$ and $\text{X}+\text{HY}$ where X and Y are halogen atoms, semiempirical pot. energy surfaces 2-99644

Brownian motion

see also colloids

ϕ^4 -kinks, diffusion const., quantum corrections 2-112817
 adiabatic elimination for systems with nonconst. damping coeffs. 2-101320
 aerosol particles from turbulent gas streams, thermophoretic deposition 2-60628
 anisotropic Erickson fluid, flow of fibre suspension between coaxial cylinders, Couette flow stability 2-65566
 atoms and ions undergoing Brownian motion, nonlinear light absorption calc. (Russian) 2-70197
 boson operator representation 2-112820
 Brillouin peaks diffusion mode coupling 2-81310
 Brownian macroparticles, mutual diffusion coeff. second order conc. corrections 2-107236
 Brownian-Bessel process, skew product representation for calculation of semigroup densities 2-69091
 chemical kinetics, generalized Brownian motion in a double-well potential 2-67727
 classical and quantum mechanics, comparison, for teaching purposes 2-112676
 classical electrodynamical noise, equations of state, Schwinger renormalisation group 2-84533
 colloids, heavy impurity dynamics, Brownian motion 2-79476
 correlation functions factorisation for Brownian motion of coupled dipoles 2-101322
 coupled translational and rotational diffusion in liquids 2-53669
 deep inelastic collisions, approach to irreversibility 2-54347
 diffusion coeff. determ. by fluoresc. correlation spectroscopy 2-95243
 diffusion dynamics and related general EM pot. 2-95240
 diffusion in surface layers, review 2-104140
 disordered 1-D anharmonic chain, soliton dynamics, Korteweg de Vries model 2-107121
 equilibrium measure and Brownian escape process 2-95244
 fission, Brownian motion model 2-59323
 fluid of Brownian spheres, self-diffusion, hard-core interaction 2-79506
 Fokker-Planck eqn. reduction to diffusion eqn. and radiation boundary condition 2-101304
 Fokker-Planck equation, nonlinear interaction of harmonic oscillators 2-107242
 fractional Brownian motions and eigenfunction expansion 2-79475
 gauge-invariant Brownian motions and nonrelativistic quantum mechanics 2-107159
 generalized Brownian functionals 2-101335
 hard sphere suspension, self diffusion of interacting Brownian particles 2-92246
 harmonic oscillator with mass $M=389$ kg, meas. of Brownian noise 2-53654
 holographic determ. of Brownian particle motion RMS vel. (Russian) 2-75545
 impurity diffusion rate, validity of Brownian-motion theory, phonon modes 2-76748
 interacting Brownian particles, diffusion coeffs. calcs. 2-101355
 large particle in inhomogeneous field, Brownian motion 2-101333
 Lennard-Jones fluid, Brownian motion study, Stokes law 2-63896
 mechanical models of Brownian motion 2-95249
 molecule, algorithm for Brownian dynamics simulations 2-63902
 motion in convex ring and quasi-concavity 2-107235
 non-linear stochastic processes in presence of multiplicative noise, time behaviour 2-112816
 non-Markoffian theory of activated rate processes 2-101331
 Non-Markovian macroscopic dynamics 2-101315
 nonspherical body, rot. Brownian motion, rel. to dielec. relax. 2-58705
 nuclear fission rate, Brownian motion, Fokker-Planck eqn. soln. 2-54452
 nuclear fission rate, Brownian motion study 2-54451
 particle in uniform field, Fokker-Planck eqn., kinetic boundary layer 2-84520
 polyethylene, electron irradi., micro-Brownian motion of segments, electron diff. study 2-86580
 polymer, nonlinear stress in oscillatory shear fields, repetitive motions 2-109904
 polymer chain solns., Lagrangian tricritical theory near θ -point 2-92151
 polymethylene chains, ring closure dynamics, reaction rates, Brownian motion 2-59982
 polystyrene, disperse system, interacting Brownian particles, diffusion, light scatt. 2-72512
 quantising magnetic field, quasiclassical model 2-58710
 quantum dynamical semigroups, path integrals and stationary phase approx. 2-95230
 random walk in an inhomogeneous medium with local impurities 2-58708
 relaxation of interacting classical Brownian particles 2-63898
 rotational, 2-D, cosine potential, angular vel., orientational correlation functions 2-58715
 rotational degrees of freedom, effect on friction force and vel. autocorrelation function 2-89626
 Rydberg atoms in resonant cavity, blackbody radiation absorpt., Bose statistics, Brownian motion 2-90494
 sedimentation, micro-computer educational expt. (Japanese) 2-58580
 sine-Gordon system, kinks, Brownian motion and diffusion const. 2-84530
 spherical Brownian particle motion, infinite plane wall effect 2-58704
 square-well fluid, self-diffusion coeff. analytical expression 2-81995
 steady absorption of Brownian particles by a sphere 2-95237
 stochastic processes, Maday's gain-spread theorem and free electron laser appl. 2-102807
 stochastic processes, systematic adiabatic elimination 2-107233
 superionic conductor, thermopower, Brownian particle model 2-66282
 susceptibilities in cosine pot. with appl. of dipole rot. in const. external field 2-89618
 suspension, Brownian particle dynamics, Langevin approach 2-63900
 suspension, dilute, rheological behaviour, shear rate depend. of flow $\dot{\gamma}$ 2-79620
 suspension of dipolar Brownian particles in electric field, transport and relaxation 2-79505
 Taylor dispersion phenomena, general theory 2-74327

Brownian motion continued

thermally activated escape rate in presence of long-time memory 2-101359
 transport coefficients of interacting Brownian particles 2-74319
 turbulent diffusion, stochastic vel. field construction 2-109309
 Ar particle in Ar fluid, Brownian motion, computer simulation 2-95245

Brownian movement see *Brownian motion*

brush discharges see *brushes; discharges (electric)*

brushes
 discharge, charge transfer meas. technique 2-115080
 thermomechanical effects on sliding surfaces, conf., Columbus, USA (June 1981) 2-101124

brushgear see *brushes*

bubble chambers
 BEBC, holographic techniques appl. 2-108299
 BEBC internal picket fence based on proportional tubes, performance study 2-64757
 cameras for fast cycling bubble chambers 2-108278
 CERN rapid-cycling bubble chamber, practical aspects of holography 2-108289
 freon bubble chamber, holographed charmed candidates 2-108282
 freon bubble chamber, holographic techniques 2-108280
 H rapid-cycling bubble chamber HOLEBC, holographic instrumentation 2-108283
 high-resolution, charm particle lifetime meas. appl. 2-64788
 HOBBC, heavy liq. holographic bubble chamber 2-108279
 HOLEBC, bubble chamber with classical optics 2-108285
 HOLEBC, dye laser light for high-resolution classical photography 2-108930
 HOLEBC, rapid cycling bubble chamber, holography 2-108284
 HOLEBC and RCBC, future program of charm physics with EHS appls. 2-108286
 HOLMES project for scanning and measuring HOBBC bubble chamber holograms 2-108297
 holograms scanning and measuring device 2-108296
 holographic bubble chamber, scanning and measuring high energy interaction holograms 2-108295
 holographic bubble image measuring device 2-108298
 holographic imaging technique 2-108292
 holography and high-resolution techniques workshop, Strasbourg, France, Nov. 1981 2-107018
 lexan bubble chamber, charm particle decay products reconstruction 2-108225
 optical fiducial volume trigger system 2-108293
 particle detection techniques, bubble chamber holography 2-70065
 photonics and holography 2-108836
 rapid cycling bubble chamber, holographic method tests 2-108290
 rapid-cycling bubble chamber, high-resolution camera 2-108288
 rapid-cycling bubble chamber, Scotchlite holography test 2-108281
 RCBC using classical optics, high resolution tests 2-108287
 recording arrangement for bubble chamber holography 2-108291

bubble nuclei see *nuclear density*

bubble point see *boiling point*

bubble points see *bubbles*

bubbles
 see also foams
 acoustic wave propag. in liquid with gas bubbles, nonlinear props. study 2-71582
 air bubble curtain in water, effect on acoustic wave propag., history and theory 2-75750
 air bubble curtains in water effect on acoustic wave propag., expt. 2-75751
 air bubble rising axially in a tube, viscoelastic effect 2-55644
 air bubbles, size and rise velocity meas. in liquids 2-60608
 amorphous soap bubble raft, plastic flow anal. using inter-bubble pot. 2-98391
 attached water jet, at curved wall, acoustic wave effects (Japanese) 2-91506
 backscattering from bubbles in siloxane liq., Mie and model predictions, glory rays 2-75525
 biological tissues, rectified diffusion and acoustic microstreaming by bubbles 2-57846
 biophysical implications of bubble dynamics 2-57845
 boiling heat transfer in narrow rectangular space, bubbles influence 2-109171
 boiling outside tube bundle using high speed photography 2-70834
 breaking wind waves in deep water, bubble clouds, role in air-sea gas transfer 2-58083
 bubble and packed bubble columns, with downcomers, hydrodynamic and mass transfer characts. 2-109394
 bubble ring cavitation on hemispherical headforms 2-86313
 bubble water flow past supercavitating wedge, compressibility effects 2-71008
 butane, rapid evaporation at the superheat limit 2-109173
 butane droplet, evaporative instability at the superheat limit 2-56167
 carboxymethylcellulose, aq. soln., bubble dynamics, rheological model 2-60610
 cavitation, desinent, effect of short and laminar separation bubbles 2-65623
 cavitation bubble collapse, study of light emission and shock waves produced 2-70740
 cavitation bubble dynamics, laser prod., acoustic emission study 2-55646
 cavitation bubble dynamics, vortex rings and jet formation 2-55642
 cavitation bubble pressure in unsteady regimes 2-55627
 circulation system, gas bubble driven, turbulence, vel. field meas. 2-65661
 condensation in immiscible liquid, noncondensable gases effects 2-114804
 deformation in high-velocity gas injection 2-91513
 diving physiology implications on bubble nucleation in aq. media 2-55637
 dynamics, review and some recent results 2-55641
 fission gas release, thermal reservoir under transient heating 2-102041
 fission gas release from UO_2 , effects of irradi.-induced resolut. 2-107951
 fission reactor fuel, oxide, swelling and gas release during fast temp. transients 2-90223
 flotation of sphere and cylinders by pendant bubbles or liquid-liquid interfaces (French) 2-92308
 fluid sphere in non-Newtonian fluids, surfactant effect on terminal vel. and mass transfer 2-103190
 fluidised bed, bubble behaviour meas. with probe 2-71047

bubbles continued

fluidised bed, evolution of inhomogeneous state 2-60639
 fluidised beds, gas flow, bubble clouds and wakes, three-phase model 2-71025
 foam formation hydrodynamics from a viscous fluid with bubbles 2-114869
 gas bubble, motion in liq., unsteady drag at large Reynolds number 2-60609
 gas bubble behaviour during water electrolysis 2-99685
 gas bubble implosion and fragmentation 2-97603
 gas bubble motion in vibr. cylindrical vessel containing two layer liq. 2-60630
 gas bubbles in compressible fluids, oscils., boundary stability 2-76012
 gas bubbles in incompressible liq., radial oscil. 2-91525
 gas bubbles in liquid in weightless conditions, ensemble evolution 2-114888
 gas bubbles stability in liq. gas soln. 2-55640
 gas cavitation nuclei, evolution, generation and regeneration 2-91129
 gas-liquid mixtures, acoustic nonlinearity of bubbles 2-60612
 gas-liquid two-phase flow, slug flow to bubbly flow pattern conversion 2-103201
 glassmelts, bubble rise 2-97629
 glycerine, using bubble vel. meas. with fibre optic laser Doppler meter (*Russian*) 2-114351
 growth and collapse of bubbles near deformable surfaces 2-55645
 heat-generating boiling pools, heat transfer from vertical at inclined boundaries 2-114803
 hydroxyethylcellulose, aq. soln., bubble dynamics, rheological model 2-60610
 ideal incompressible fluid, cavitation bubble collapse 2-55626
 impulse due to vapour bubble near boundary 2-97632
 individual bubbles growth and departure at a wall 2-55638
 interactions with each other and with obstacles, collapse 2-103195
 interphase transport and velocity of dense bubble swarm in homogeneous liq. and porous medium 2-114895
 inviscid liquid, rise of cylindrical bubble 2-103198
 laminar flow, over hemispherical headforms, separation bubble, cavitation inception 2-60593
 laminar separation bubble, cavitation gaseous microbubble growth anal. 2-60631
 laser-produced bubble collapse, shock waves, shadowgrams and holographic interferometric study 2-91521
 light scatt., Mie theory, physical optics approx. 2-60619
 liquid metal two-phase flow pattern, transverse mag. field effect, fusion reactor heat exchanger 2-80307
 liquid motion, hydrodynamic effects in shock wave propag. 2-60611
 liquid-bubble dispersion, virtual mass effect 2-60615
 liquid-bubble mixture flow local velocity meas., using hot-wire anemometers (*German*) 2-81426
 liquid-gas flows, bubble interaction study 2-60616
 liquid-gas soln., bubble stability in closed vol., expt. and theory 2-115399
 liquid-gas soln., isothermal bubble evolution, statistical rate theory of interfacial transport 2-86973
 liquids, adsorbed solutes, bubble motion, surface activity 2-60617
 liquids, boiling and cryogenic, acoustic cavitation and vapour bubble dynamics 2-55623
 liquids, bubble dynamics study 2-60614
 liquids, pure, bubble coalescence, flow and deform. soln. 2-60618
 measurement of bubble size distribution, sewage aeration tanks model appl. (*German*) 2-81427
 metal, gas bubbles, pressurized, strain contrast in TEM 2-71307
 metals, bubble nucleation and growth, low temp., by He bombardment 2-76536
 microbubbles nucleation and stabilisation in liqs. 2-55639
 migration in rot. liq. filled sphere 2-97637
 migration inside a liq. drop in a space laboratory 2-57312
 neutron detection by superheated drop nucleation 2-54726
 nonspherical bubble collapse, expt. and asymptotic study 2-55643
 nuclear fuel, bubble-bubble forces, effect on coalescence 2-102048
 nuclei in cavitating flows 2-55624
 ocean, wave-produced bubbles obs. by side-scan sonar 2-68375
 oscillating bubble interaction with neighbouring free surface, asymptotic study (*French*) 2-55649
 particle movement in a vertically oscillating liquid 2-114872
 polyacrylamide, aq. soln., bubble dynamics, rheological model 2-60610
 polyethylene oxide, aq. soln., bubble dynamics, rheological model 2-60610
 polymer soln., viscoelastic liq., bubble, surface tension driven oscils. 2-60581
 profiles, power series solns. 2-97640
 pseudoplastic liq., viscous non-Newtonian, influence of different parameters on freq. bubble form. (*French*) 2-91487
 radial motion wave eqns. for spherical gas-filled bubble in a compressible liquid 2-70739
 research in Bangalore in the 1950s and 1960s 2-79337
 shock wave refraction in gas bubble layer in a liq. 2-60575
 single-phase flow in bent channels, laminar and turbulent flow, forced convection visualisation study 2-75951
 soap bubble rafts, pot. and force law between different-size bubbles 2-98390
 sound radiation from a plate, influence of bubble layer 2-114533
 spherical bubble dynamics in incompressible liquid, Rayleigh Plesset eqn., non-Newtonian behaviour 2-71019
 steam flow, nucleation and bubble growth in heated channel, void fraction 2-91515
 steel, austenitic stainless, neutron irradiat., type 316, increased He content effect on void form. and solute segregation 2-109846
 steel, austenitic stainless 316, He embrittlement, microstruct. aspects 2-71518
 superheated liq., vapour bubbles growth, heat transfer eqn. 2-109319
 surface active material concentration, bubble motion under action of gradient 2-114884
 thermal boundary layer, diffusion controlled, mass and heat transfer 2-65577
 thermocapillary flows around hemispherical bubbles 2-102157
 time averaged separation bubble, scaling parameters 2-97604
 transfer of momentum, mass, and heat in bubble columns (*German*) 2-86278
 turbulent separation bubble, discrete-vortex simulation 2-97557
 turbulent two-phase pipe flow, phase distrib. mechanism 2-71018

bubbles continued

two-phase bubbly flow, flow struct. wave props. fluctuation meas. 2-60613
 two-phase inclined pipeline flow, bubbly and slug regimes, press. drop study 2-97621
 two-phase medium, physical model and eqn. of motion, random particle or bubble motion 2-114887
 vapour bubbles in boiling liquid, growth and collapse 2-109396
 vapour bubbles in fluid experiencing acoustically created radial pulsations, resonance props. 2-114870
 vent pipe exit, bubble form., hydrodynamics 2-71017
 vibrating vessel with liquid containing compressible sphere, finely disperse inclusions motion 2-91520
 viscoelastic fluid flow past rigid spheres and spherical bubbles 2-60553
 water, alkaline, electrolysis, growth rate, departure radius and population of O₂ bubbles 2-99684
 water drop, internal optical field induced by laser action at 0.69 μm , vapour bubble growth 2-97046
 Ag film, bicryst., gas bubble growth 2-115607
 H bubble, nuclei effect on inception of bubble and sheet cavitation on axisymmetric bodies 2-60591
 He bubble growth in Ni at dislocations, kinetics and phys. mechanisms 2-109826
 He form. in metals, swelling 2-109788
 He, formation in austenitic stainless steel, influence of temp., stress and time 2-108114
 He, in dual-ion bombarded type 304 stainless steel, crit cavity sizes 2-109860
 He, in dual-ion bombarded Type 304 stainless steel, crit. cavity sizes 2-109861
 He-filled bubbles, neutral density, stereo photography of 3D fluid motion in engine cylinder 2-60674
 Nb and Nb-Zr, He bubble behaviour, alloying effects 2-86742
 Nb, irradiated by He ions, bubble evolution, blistering cut-off mechanism (*French*) 2-76515
 Ni alloys, C/O gas bubble form., thermodynamic requirements 2-105116
 Ni, cavities depth distrib. induced by 20 keV He ion irradiat. 2-86748
 V and V-Ti, He bubble behaviour, alloying effects 2-86742

buckling

aircraft skin structs., sonic fatigue life estimation at room and elevated temps. 2-65428
 bar, prismatic, vertical axis, elastically fixed at lower end, stability 2-114688
 beam, planar curved, loaded by co-planar conc. forces, nonlinear elastic analysis 2-60407
 beam, rotating Timoshenko, transverse buckling 2-86218
 beam column critical compressive stress to second order 2-91291
 beam models, elastic, nonlinear, planar, computational post-buckling anal. 2-60434
 beams and rods, elastic, non-linear theory, finite element representation 2-109194
 cantilever, unsymmetric cross section, combined torsional and flexural buckling under normal loads 2-114689
 cantilevered pipes dynamic behaviour while conveying fluid near crit. vel. 2-91290
 cellular materials, two-dimens., mechanics 2-91247
 cellular structure, wavelength selection, thermoconvection in porous materials 2-70954
 column, heavy, with end load, primary mode stability boundary and higher buckling modes 2-55468
 column, perfect viscoelastic, dynamic stability 2-81262
 column under axial impact, dynamic buckling 2-81263
 columns and plates, anal. by influence function 2-114700
 composite cylindrical shells, deform. under combined dynamic loading 2-91286
 composite panels buckling behaviour 2-114693
 cross ply laminated circular cylindrical panels, buckling and vibr. 2-97429
 cylinders, reinforced plastics, buckling anal. 2-97412
 cylindrical shells, axially compressed stiffened, vibrs., effect of geometrical imperfections 2-65507
 elastic buckling fundamental mechanics, catastrophe theory contrib. 2-114698
 FASOR—a program for stress, buckling and vibration of shells of revolution 2-70855
 fibre reinforced plastic, filament-wound disc, rot. strength, tensile stress, cracking and buckling failures (*Japanese*) 2-57465
 frame, critical load factor, buckling modes, stability functions 2-60433
 frames, rigidly jointed, non-linear elastic limit state anal. 2-70858
 general structures, creep induced buckling 2-114692
 glass shell, cylindrical, carrying capacity prediction from NDT under external press. 2-57573
 hingeless circular arches, critical centrally-directed pressure values 2-74216
 ideally fibre-reinforced elastic strip under tension, instability 2-72760
 laminate, finite element analysis of instability related delamination growth 2-62196
 nonlinearly elastic rods, large buckled states under torsion, thrust and gravity 2-55462
 nuclear components, structural anal., practical anal. of ratcheting 2-113585
 orthotropic shallow spherical shells, dynamic buckling 2-109211
 panel, cylindrical, under axial compression, nonlinear deform. 2-81267
 pipe, circular, propagation pressure for local buckling 2-60439
 plate, annular, buckling rel. to deep-drawing process 2-91284
 plate, elastic, buckling under lateral compression, asymptotic theory 2-55460
 plate, polar orthotropic annular, buckling under uniform inplane compressive forces 2-55467
 plate, thin, large displacement bending and post buckling analysis, finite element models 2-109212
 plate assemblies, prismatic, elastic and elasto-plastic, local instability numerical anal. 2-109193
 plates, laminated, composite, bifurcation and post-buckling anal. via reduced basis technique 2-55463
 plates, orthotropic sandwich, large thermal bending and thermal buckling 2-75872
 plates, rectangular, in compression, finite out-of-plane deformation formulation 2-91276

buckling continued

- plates, rectangular, simply supported, elastic stability under locally distributed edge forces 2-103068
 plates, thin, multilayer, bending and buckling 2-97390
 polyester shells, pressurised, circular cylindrical, postbuckling behaviour, theory 2-70857
 polyester shells, pressurised, circular cylindrical, postbuckling behaviour, expt. 2-70879
 post buckling behaviour, instability of dual eigenvalue fourth-order systems 2-114699
 post buckling range, quasi viscous method for equilb. state direct calc. (German) 2-109213
 rectangular Mindlin plates, buckling 2-114694
 rod, linear viscoelastic, compressed, nontrivial solns. 2-103070
 rod, prestressed, spatial bifurcation 2-103071
 rods and shells, characts. of discrete schemes 2-81266
 rubber, rotational sliding, second order stresses, seizure and buckling, frictional torque meas. 2-99565
 shell, cylindrical, longit. divided, stability and load-carrying capacity under compression 2-97409
 shell, cylindrical, stability under external press. and nonuniform heating 2-97408
 shell, cylindrical axially compressed, with random axisymm. imperfections, buckling, reliability calc. 2-81261
 shell, cylindrical three-layered anisotropic, elastic stability problem (Ukrainian) 2-81260
 shell, elastic, buckling under multiple critical load, initial imperfection influence 2-55461
 shell, nonuniform, approx. analytical models in stability problems (Russian) 2-75873
 shell, saddle-shaped hyper, acting like arch, buckling 2-75870
 shell, spherical, short-range external press. crit. parameter determ. 2-97410
 shell, thin convex elastic, local buckling (Russian) 2-109214
 shells, cylindrical, stringer stiffened, dynamic axial plastic buckling 2-65497
 shells, cylindrical axially stiffened, mode interaction, stringer axial stiffness, torsional rigidity and eccentricity effects 2-91289
 shells, shallow saddle-shaped hyper supported by shear diaphragms under uniform load, stability (German) 2-75869
 shells, shallow saddle-shaped supported by shear diaphragms under uniform load, nonlinear anal. (German) 2-75871
 shells, truncated conical, with variable modulus of elasticity under periodic compressive forces, dynamic instability 2-60435
 shells of revolution with a filler, dynamic problems, model analytical solns. 2-97411
 soft ferromagnetic elastic plates, coupled magnetomech. eqns. 2-116045
 static structural analysis, algorithms 2-114691
 steel, containment, buckling research, NRC programme 2-96233
 steel, martensitic, for mag. fusion reactors, buckling induced stresses 2-113730
 steel, thin walled struct., local buckling, plastic mechanisms 2-62169
 steel cylinders, with reinforced circular cutouts, buckling, area replacement method calc. 2-96107
 thick plate buckling FEM 2-114690
 thin walled structures, expt. determ. of uniaxial compression charact. 2-91283
 torus, full, eight-coil, superconducting, magnetoelastic buckling, finite element anal. 2-103047
 two-hinged circular arch under external gas pressure, initial postbuckling analysis 2-74217
 viscoelastic rod, buckling (French) 2-70847
 Al plates, collapse behaviour 2-65477
 C fibre reinforced epoxide, kinking and compressive failure under superposed hydrostatic press. 2-67501

budgeting

- He-Ne frequency-stabilised laser design and construction project for students 2-94968

building

see also architecture; civil engineering

- gypsum wallboard partitions, sound transmission loss for steel stud partitions having cavities filled with glass fibre bats 2-70769
 gypsum wallboard partitions, sound transmission loss using 2X4 in. wood stud partitions 2-70770
 housing, heat pump installations (French) 2-62490
 stationary structural system parameter estimation from non-stationary random vibration data, locally stationary model 2-97271

bulk density *see density***bulk diffusion** *see diffusion in solids***bundling** *see packaging***burning** *see combustion***burnout** *see combustion***burst noise** *see random noise***bushes** *see bushings***bushings**

- PLT, high voltage RF coaxial vacuum bushing design considerations 2-74953
 CaO-TiO₂-ZrO₂ system multiphase ceramics for bushing prod., mech. props. 2-67478

business *see commerce***BWT** *see backward-wave tubes***C invariance**

- charge conjugation and internal space-time symmetries 2-89587
 dyon field topology and mag. charge relation 2-95602
 free neutron charge, expt. limit 2-95685
 grand unified models, broke charge-conjugation invariance constraint on baryon asymmetry 2-64257
 nuclear forces, charge asymmetry, $\pi^0\eta'$ mixing role 2-107763
 relativistic framework, C invariance, rel. to internal space-time symm. 2-101532
 Schwinger-Dyson eqn. for finite electron propagator, from C invariance 2-84833
 symmetry breaking interactions 2-79776
 $Z^0 \rightarrow l^+l^-$ charge and helicity asymms., Weinberg model calc. 2-107611
 $^2\text{H}(d,n)^3\text{He}$, charge symmetry violation in low energy interaction 2-107921
 $^2\text{H}(d,p)t$, charge symmetry violation in low energy interaction 2-107921

cable insulation

see also insulating oils

- heat and radiation resistant cable for LMFBR appl. 2-69763
 heat resistant rubbers development for power cables and conductors 2-67273
 inorganic material insulated flexible triaxial cable for fast breeder reactor 2-69747
 polymer cable insulation, aging, for equipment qualification, in nuclear reactors 2-107961
 polymeric insulating material degraded under specified conditions, radiation induced conductivity 2-110397
 power cables, loss-of-coolant-accident test proof for Leibstadt nuclear power station (French, German) 2-54691
 MgO insulated nuclear instrument cable, gamma radiation and temp. effects 2-69765
 SiO₂ insulated nuclear instrument cable, gamma radiation and temp. effects 2-69765

cable jointing

- optical fibre butt joint alignment sleeve 2-75710
 optical fibres, OF 150 opt. fibre time-domain reflectometer, loss and distance meas. appl. 2-79650
 single mode 62.4 km optical fibre link, low-loss splicing 2-97200
 single mode fibre low loss splicing, core alignment method using UV-excited fluorescence of Ge doped silica core 2-97202

cable sheathing

- heat resistant rubbers development for power cables and conductors 2-67273

cable sheaths *see cable sheathing***cables (electric)**

- see also coaxial cables; power cables; submarine cables; superconducting cables; telecommunication cables; underground cables*
 inorganic material insulated flexible triaxial cable for fast breeder reactor 2-69747

CAD

see also architectural CAD; computer-aided analysis; interactive systems; power system CAD

- antireflection coating multilayer broad band, automatic computer design, refractive index optimisation 2-81048
 CIELAS, Cambridge interactive electron lens anal. system, appls. computer-aided analysis electron lenses electron optics electron microscopes CAD 2-65149
 composite materials, bending displacement, computer aided design (Japanese) 2-72770
 composite materials, CAD, reliability concept (Japanese) 2-72647
 computer code for designing wind and solar powered desalting plants 2-67832
 diamond anvil under stress, CAD study 2-112917
 dies used in pressure die casting process computer aided thermal design analysis 2-65455
 electron beam lithographic system performance, computerised optimisation using damped least squares method 2-75506
 electrostatic modelling of electron-beam-generator/vacuum-diode interface 2-95389
 glass selection automation in optical system calc. 2-108986
 glow discharge electrode design allowing for polarisation and space charge effects 2-91709
 interference layers calc. using TI-59 calculator (Czech) 2-114411
 laminate, materials design using programmable calculators and personal computers (Japanese) 2-78065
 lens automatic design, selection of damping factor 2-55293
 luminaire reflectors CAD, new method for optimising candlepower distribution 2-97144
 magnetic field, numerical computation, conf., Chicago, USA (Sept. 1981) 2-53411
 membranes, cable reinforced, initial equilb. soln. methods, implementation 2-91231
 mirror and reflective prism optical system, computer calc. of vector triad 2-109001
 MTF calculation with HP-85, HP-9845 computers 2-114200
 nuclear power plant simulator, role expansion to include engineering design aid 2-102016
 optical multilayer coating system numerical design, refr. index as variable 2-70657
 optical system parameters, computer use for tolerances calc. 2-114404
 Schmidt corrector plates, computer program for curve calc. 2-75653
 universal pre- and post-processing system, for finite element analysis 2-107932

cadmium

see also nuclei with

- abundance in waters of Baffin Bay and Canadian Arctic Archipelago 2-83850
 air pollution in Germany, deposition and emission sources (German) 2-78825
 Arctic Ocean, Zn, Cd, Cu, Al vertical profile obs. 2-62997
 atom, elastic electron scatt. cross section, resonances obs. 2-108710
 atom, Hanle effect for electron impact excitation 2-54809
 atom, near threshold double photoionisation 2-85602
 atom, photoelectron spectra, autoionising reson. profiles 2-96520
 atom, photoionisation prod. alignment 2-72027
 atom, relaxed orbital binding energy calcs. 2-80833
 bicrystal, grain boundary sliding with and without slip (Japanese) 2-103782
 Black Sea, Cd and Ag concs. in upper water layers 2-117362
 coatings on Fe, H absorption during electrodeposition and H charging 2-77993
 core-hole lifetimes, electron spectra determ. 2-57256
 correction factors in neutron flux meas., by In foil method, in H₂O and D₂O 2-69996
 diffusion in GaAs:Te, influence on defect struct. 2-103762
 dislocation mobility, elec. current effect 2-109808
 electrical resist. anisotropy meas. 2-98617
 electrodeposit on Cu wire, surface roughness and max. deposition rate, periodic reverse current effect 2-116705
 electron emission during elastoplastic deform. (Russian) 2-57276
 electron-phonon coupling, inelastic neutron scatt. 2-56129
 film, laser-photodeposited, optically induced microstructures, TEM and SEM obs. 2-98486
 film, laser-photodeposited, stimulated surface plasma wave scatt. and periodic struct. growth 2-87108
 film, UPS and Auger anal., use of combined study apparatus 2-116341

cadmium continued

- laser action on Cd atomic lines at 508.6, 643.8 nm, based on CdI_2 photo-dissoc. 2-55136
 liquid, mag. susceptibility calcs. 2-98843
 liquid, nearly-free-electron-phonon interaction and elec. resist. temp. depend. 2-98610
 liquid, surface tension, temp. depend., 325-800°C 2-104120
 Magela Creek, N.Territory, Australia, natural trace metal concs. 2-88930
 morphological stability, of vapour grown single crystals 2-115170
 North Sea, trace metal concs. 2-8699
 optical scales and grids of Ni, Cu, and Cd, physical development on iron oxalate emulsions 2-107440
 phonon dispersion calc. 2-61088
 phonon spectra and cryst. struct. 2-115370
 pollution of Denmark coastal waters by heavy metals 2-78698
 positron trapping meas., 80 to 330K 2-67143
 secondary cells, Ni/Cd, active material for positive electrodes, optimisation 2-116796
 sediment metal conc. determination by at. absorpt. spectrometry method 2-68536
 $\text{AgBr}:\text{Cd}^{2+}$, photoresponse and photoelectron lifetime 2-56641
 Be target, Ar^+ ion sputtering, at. excitation 2-75372
 $\text{Bi}_2\text{Se}_3(\text{Cd})$, transport props. and plasma resonance 2-98646
 $\text{Bi}_2\text{Se}_3\text{Cd}$, struct. non-homogeneities, holographic interferometric study 2-115216
 $\text{CaS}:\text{Ce,Cd}$, phosphors, luminescence emission and decay, quenching 2-77584
 Cd II, CW laser oscillations in electron beam created plasma 2-102783
 Cd II, electron impact excitation cross-sections meas. for $5s^2\ ^2D_{5/2}$ ($5p\ ^2P_{3/2}$) states 2-85816
 Cd V, UV and X-ray spectra of $4d^75s-5d^75p$ transitions 2-96496
 $\text{Cd}+\text{Ar}(\text{N}_2)(\text{H}_2)(\text{CO})(\text{CO}_2)$, quenching of Cd excited state, atomic fluorescence obs. 2-80798
 CdII segmented hollow cathode lasers 2-114251
 CdV, UV and X-ray spectra of $4d^7-4d^65p$ transitions 2-96495
 CuInTe_2Cd , elec. props., hole mobility and conc., annealing effects 2-87279
 $\text{GaAs}^{114}\text{Cd}$, ion channelling, electronic stopping power, SIMS study 2-103867
 $\text{GaAs}:\text{Cd}$, positron annihilation at low temp. 2-62009
 $\text{GaAs}:\text{Zn}$, Cd, hot photoluminescence spectrum and polarisation 2-82894
 He-Cd high power and long lifetime laser, monomode output (*Chinese*) 2-55184
 He-Cd ion lasers with transverse RF discharge excitation 2-86002
 He-Cd laser, noise characteristic 2-70543
 He-Cd laser line at 4416 Å, effect of non-uniform mag. field 2-90876
 He-Cd lasers, electrophotography appl. 2-74536
 He-Cd lasers, noise, influence of the Penning process 2-114242
 He-Cd mixture hollow cathode discharge, population density meas. 2-71284
 He-Cd⁺ hollow-cathode laser, high-voltage 2-86001
 He-Cd⁺ positive column laser discharge Cd(II) excited states, electron and Penning excitation rates 2-60817
 He-Cd⁺ transverse HF discharge laser, 441.6, 537.8 and 636.0 nm transitions 2-70544
 Hg-Cd amalgam, metastability breakdown detection (*French*) 2-88362
 n-InAs:Cd, ion implanted, photo-EMF, spectral response 2-92697
 InAs:Cd,Te, donor-acceptor pair form., annealing, elec. cond. and Hall coeff. study 2-61404
 InGaAsP:Cd, acceptor impurities, photoluminescence study 2-99189
 $\text{In}_1\text{-Ga}_{1-x}\text{As}_y\text{-P}_{1-y}$, P-cd junction laser, SEM EBIC study 2-102821
 $\text{In}_1\text{-Ga}_x\text{P}_{1-x}\text{Cd}$, epitaxial film, photo-, electro- and cathodoluminescence involving deep levels 2-116258
 InP:Cd, diffusion profiles, p-n homojunction form. 2-110038
 InP:Cd, VPE growth and photolum. characterisation 2-88002
 InSb:Cd, deep levels in band gap, photocond. study 2-115706
 NaCl:Ca (Sr)(Mn)(Pb)(Cd), mech. strengthening and impurity precip. 2-88093
 NaCl:Cl⁻, Pb, clustering processes, use of Pb^{2+} as optical probe 2-57131
 NaCl:Cl⁻, microhardness and bulk density meas., precip. and impurity-dislocation interactions 2-115345
 Ni, electrodes in Ni/Cd cells, plastic bonded high rate, internal resistance 2-116798
 Ni-Cd batteries, hermetically sealed, data, maintenance and use (*Croatian*) 2-88424
 Ni-Cd cells, impedance and mass transport kinetics 2-78199
 Ni-Cd secondary cells, characts. guide 2-62469
 $\text{Pb}_{1-x}\text{Sn}_x\text{Te}:\text{Cd}$, photoconductivity kinetics 2-104427
 n-Pb_{1-x}Sn_xTe:Cd, elec. cond., photocond., and elec. cond. transitions 2-115759
 $\text{Pb}_{1-x}\text{Sn}_x\text{Te}:\text{Cd}$, narrow band gap semicond., galvanomag. and optical props., Cd solubility and diffusion (*Russian*) 2-92666
 $\text{Pb}_{1-x}\text{Sn}_x\text{Te}:\text{Cd}$, photoluminesc. study 2-93279
 $\text{Pb}_{1-x}\text{Sn}_x\text{Te}:\text{Cd}$, photoluminescence study 2-104958
 Te:Cd, charge carrier governed temp. depend. of EFG for ^{111}Cd , TDPAC meas. 2-56982

cadmium alloys

see also cadmium compounds

- electroplated coatings on high speed steels, endurance and corrosion resistance 2-57537
 Al-Cu, Mn, Ti, Cd and Zr impurities effect on ageing, electron microscopy study (*Russian*) 2-93539
 Al-Li-Cu-Zr-Cd system alloys, microstruct.-prop. rels. 2-111210
 Au-Cd (33 at.%), hexagonal type antiphase domain struct., lattice modulation, X-ray diffr. study 2-65924
 Au-Cd dilute alloys, low-temp. specific heat calcs. 2-61165
 Au-Cd martensite, TEM lattice imaging study, twinning dislocations 2-71472
 Au-Cd, high resolution images by high-voltage electron microscopy 2-81636
 Cd-Ag, peritectic cooling curves interpret. 2-105118
 Cd-Ag, warm deform. and texture strengthening 2-111199
 Cd-Au, dil. liq., EMF and vapour press. values, equi. and second law of thermodynamics confirmation 2-81981
 Cd-In, liq., vapour press. and calorimetric meas. 2-67298
 Cd-Mg, molten, short range order and conc. fluctuations 2-91757
 Cd-Ni powders, predetermined comp., electrodeposition 2-72653
 Cd-Pb submicron eutectic thin-film struct. 2-104186
 Cd-Sb, liq. alloys, elec. resist. in cpd. forming conc. range 2-115724

cadmium alloys continued

- Cd-Zn eutectic alloys, etch pit generation, chemical, electrolytic and ion beam methods 2-88252
 CdMn, hexagonal, spin glass behaviour 2-66861
 $\text{Cd}_1\text{-Zn}_x$, elastic consts., temp. depend., compressibility, Debye temp., US meas. 2-99468
 Cu-Cd, electrocrystn. on (111) plane of Cu single cryst. 2-62085
 Cu-Cd, struct. of alloy obtained on Fe single crystals by electrolysis (*Polish*) 2-67283
 Cu-Cd film on Cu (111), struct., electrolyte effect 2-61312
 $\text{Cu}_3\text{Cd}_{10}$, cryst. struct. (*German*) 2-76367
 HF^{111}Cd , ^{111}Cd probe nuclei elec. field gradient temp. depend., TDPAC study 2-104326
 Hg-Cd, dil., expanded fluid, thermoelec. power, transition from liq. semi-cond. to plasma state 2-82387
 Hg-Cd, dilute liq. alloys, thermodynamic and elec. props., density and vol. of mixing 2-61171
 In-Cd, shape memory behaviour and FCC to FCT transform. 2-93502
 Li-Cd, impurity solubility, dislocation and deformation effects, ESR study (*Russian*) 2-103996
 Mg-Cd alloys, ordering energy, pseudopot. calc. 2-103687
 Mg-Li-Al-Cd, superplastic deform., effect on struct. and props. 2-62180
 Mg-Li-Cd-Al system, isothermal section in Mg-rich range 2-99398
 Mg-Zn-Cd, wrought MA15, cyclic crack resist. of metal and weld joint 2-99556
 Na-Cd, liquid, conc. fluctuations, press. effect, EMF meas. 2-91758
 Pb-Cd-Zn ternary system, microstructures of eutectic and near-eutectic specimens 2-111162
 Pd-Cd system, phase stability thermodynamic studies 2-99391
 Pd-Cd system, phase stability, struct. studies 2-99392
 Zn-Cd, creep rate, pulse current freq. and external mech. stresses effects (*Russian*) 2-77875

cadmium compounds

see also cadmium alloys

- cadmium arachidate in contact with rough metal surfaces, monolayers, surface IR and Raman vibr. spectra 2-96562
 CdS, thin evaporated films, optical and elec. props. 2-61624
 CdTe light pipe modulator, for broadband space communications at 10 μm 2-81069
 chalcogenides, mechanochemical synthesis, explosions (*German*) 2-62053
 conductor-insulator-semiconductor organic solar cells, development, features and characts. 2-83499
 $\text{Hg}_{0.75}\text{Cd}_{0.25}\text{Te}$ anodic oxidation 2-111344
 near-IR emitters as radiation-to-light convertors for nucl. environments 2-113825
 oxalate trihydrate, dislocation etching and dissolution mechanism 2-109797
 solar cells, Mexican research and development, current status and applications 2-111562
 spot size effects in picosecond luminescence experiments 2-104953
 sulphides, IR matrix isolation spectra 2-75284
 $\text{AgCl}:\text{CdCl}_2$, point defects, hypernetted chain eqns. for lattice gas model, solns. 2-61015
 Au/n-CdTe Schottky diode, elec. props. meas. 2-77184
 Au-CdS Schottky structure, deep levels obs., anal. of admittance spectroscopy method 2-115701
 $\text{B}_2\text{O}_3\text{-Na}_2\text{O-CdO}$ glasses, press. induced struct. changes, ESR study 2-110637
 $\text{Bi}_2\text{O}_3\text{-CdO}$, melt, solubility of Pt 2-71652
 $\text{BiTe}_2\text{CdCl}_2$, crystal growth using directional crystallisation apparatus for growing complex solid solns. (*Russian*) 2-72609
 C-CdS-metal, switching struct., with potential barrier, elec. characts. 2-87407
 CC CdTe high voltage photovoltaic cells composition and structure, modulated reflectance study 2-99786
 $\text{Ca}_{10-x}\text{Cd}_x(\text{PO}_4)_6\text{F}_2$, cryst. cell dimensions and site occupancy factors, X-ray study 2-109767
 CaI_2 , maximum degree of order polytypes, theory for inequivalent OD layers 2-97974
 $\text{Ca}_{10-x}\text{Sr}_x(\text{PO}_4)_6(\text{VO}_4)_x(\text{OH})_{2-x}$, struct., isotope effects, IR obs. 2-57104
 Cd (II) complex, 5-benzylthio-1,2,4-triazole, IR obs. 2-113991
 Cd complex, 2-amino- and 2-ethylamino-1,3,4-thiadiazole complexes, IR and Raman obs. 2-54848
 Cd complex, di(ethylammonium) cadmium tetrachloride, $\text{D}_{2h}^{18}\text{-D}_{2h}^{15}$ struct. transition, Raman obs. 2-104870
 Cd Hg Te SPRITE-a TED infra-red detector for high performance thermal imaging systems 2-91090
 Cd II complex, Cd(4-cyanopyridine N-oxide) (NCS)₂, struct., vibr., mag. moments, IR study 2-77518
 Cd-Ge-As glass system, aligned crystallisation, heat transport and interface kinetics 2-71365
 Cd-Hg-Te system, eutectic microstructures obs. 2-111155
 Cd-Pb-Se-Te system, liquidus surface 2-105132
 Cd-Sb amorphous film, memory switching obs. 2-66596
 Cd-Sb-Ge system, DTA, microstruct. and microhardness 2-105130
 $\text{Cd}_{1-x}\text{Ag}_x\text{Cr}_2\text{Se}_4$, photomagnetisation obs. (*Russian*) 2-56912
 CdAs₂, vitreous, IR absorption spectra 2-110834
 CdAs₂, band struct. parameters, determ. from effective mass carrier density depend meas. 2-61356
 Cd_3As_2 , far IR reflectivity meas. 2-93210
 Cd_3As_2 , sp. ht., 1.7 to 30K 2-86901
 Cd_3As_2 , spin-flip resonances, subMM magnetospectroscopy 2-93167
 n-CdAs₂, ultrathin films, effective mass, effect of size quantisation 2-98526
 CdBr₂, maximum degree of order polytypes, theory for inequivalent OD layers 2-97974
 CdBr₂, optical consts. and polarisation depend. reflection spectra meas. 2-87729
 $\text{CdBr}_2:\text{Cu}^+$, impurity level and photoionisation processes, photocond. meas. 2-56638
 $\text{Cd}(\text{BrO}_4)_2\cdot\text{H}_2\text{O}$, cryst. struct., X-ray diffr. study 2-60933
 $\text{CdBr}_2\cdot\text{H}_2\text{O}$, solid, elec. and electrochemical props., dehydration effects 2-71708
 CdCO_3 , optical consts. and polarisation depend. reflection spectra meas. 2-87729
 $\text{CdCl}_2\cdot\text{O}_3\cdot\text{H}_2\text{O}$, gel-grown, kinetics of etching and dissoln. 2-98099
 CdCl₂, adsorption of N₂ and Ar, surface homogeneity effect 2-115563
 CdCl₂, cleavage faces, TEM investig. by surface decoration 2-66328
 CdCl₂, N₂ adsorption isotherm crossing 2-56341

cadmium compounds continued

- CdCl₂·Cu²⁺, impurity level and photoionisation processes, photocond. meas. 2-56638
 CdCl₂-CuCl photorecording glass, colloidal darkening mechanism 2-97135
 CdCl₂·2.5H₂O, purification, by distillation and sublimation in vacuum 2-77720
 Cd₂Co₂Fe₂O₄, mag. props. and lattice dynamics, Mossbauer effect study 2-77426
 CdCr₂In₂-S₂As₂ dil. insulating system, mag. phase diagram 2-110591
 CdCr₂S₄ crystal, ferromag. resonance, nonstoichiometry effect 2-104709
 CdCr₂Se₄, effect of light on mag. after effects 2-87553
 CdCr₂Se₄, ferromag. semicond., cathodoluminesc. study 2-87876
 CdCr₂Se₄, hot carrier influence on Raman spectra (*Russian*) 2-72498
 CdCr₂Se₄, photomagnetisation of Landau-Lifshitz domain struct. (*Russian*) 2-87750
 CdCr₂Se₄, s-conduction band splitting, photoluminesc. study 2-87849
 CdCr₂Se₄, single crystals, production of ohmic contacts 2-77179
 CdCr₂Se₄, single crystal growth, chemical transport reaction 2-99328
 CdCr₂Se₄, single cryst. growth from soln. in melts in different salts 2-111046
 CdCr₂Se₄In₂, Ag defect single cryst. growth, elec. and mag. characts., dopant influence 2-91842
 CdCr₂Se₄(S₂)₂, occupied d-band position, photoemission determ. 2-83005
 CdCu₂Fe₂O₄, mag. props., hyperfine interaction, Mossbauer study 2-116103
 CdD, arc emission spectrum, A²Π-X²Σ⁺ system, rot. anal., spin splitting, vibr. and rot. depend. 2-64994
 CdF₂·Yb, energy transfer, reson. effects 2-72549
 CdF₂·Eu, defect chem., site selective spectrosc. obs. 2-104918
 CdF₂·Eu, localised impurity excited states degenerate with cond. band, absorpt., cond., thermoluminesc., and ESR study 2-56473
 CdF₂·Eu³⁺, insulating, thermally stimulated relax. 2-67129
 CdF₂·Gd(Eu), insulating single cryst., electronic cond. 2-98657
 CdFe₂O₄, cubic spinel system, Mossbauer spectrum, electronic props. 2-104775
 CdGa₂S₄, band struct., linear optical characts., effective carrier masses, pseudopotential calc. 2-61355
 CdGa₂S₄, cathodolum. obs. in spontaneous and stimulated regimes 2-116209
 CdGa₂S₄ crystals, spatial dispersion effects 2-72446
 CdGa₂S₄, electroabsorption, luminescence studies 2-61875
 CdGa₂S₄, semicond., excitation states in optical spectra obs. 2-110890
 CdGa₂S₄, semicond., localised states, impurity absorption and photocond. spectra 2-110298
 CdGa₂S₄, ternary semicond., electronic spectrum in region of fundamental absorption edge 2-57123
 CdGa₂S₄, uniaxially deformed, long wave absorption edge 2-104836
 CdGa₂Te₄, amorphous film, structural ordering, effect of group I metal impurities 2-87114
 CdGa₂Te₄(Ag) film, polycryst. and amorphous, elec. cond. and Hall effect meas. 2-82490
 CdGeAs₂, carrier scatt. mechanisms, Boltzmann eqn. calc. 2-115744
 CdGeAs₂, chalcopyrite, elastic behaviour, US wave vel. study 2-61052
 CdGeAs₂, efficient multikilowatt mid IR difference freq. generation 2-102868
 CdGeAs₂(P₂), vitreous, IR absorption spectra 2-110834
 CdGeAs₂(P₂), vitreous, IR absorption spectra 2-110834
 Cd₂(GeO₄), crystal struct. from diffractometric data 2-76400
 Cd₂(GeO₄), crystal struct. from diffractometric data 2-76400
 CdGeP₂, nonlinear cryst., refractive index, temp. depend. 2-61856
 CdGeP₂, prep. and struct., vapour transport method 2-93392
 CdGeP₂·Ga, photopleochroism spectrum, imbedded n-p junction depth effect 2-61523
 Cd₂Hg_{1-x}Se mixed cryst., Γ point band struct. parameter, elec. and thermomagnetic studies 2-76923
 Cd₂Hg_{1-x}Se, US attenuation and vel. meas. near zero-gap state 2-92118
 Cd₂HgTe electronically scanned photovoltaic hybrid detector array for 8-14 μm band 2-64107
 CdHgTe IR detectors for scanned arrays, SPRITE detector 2-91089
 Cd_{0.17}Hg_{0.83}Te, narrow-gap semicond., dielec. const. anomaly 2-93099
 Cd_{0.17}Hg_{0.83}Te, anodic oxide layers, interface struct., SIMS-AES XPS investig. 2-104208
 Cd₂Hg_{1-x}Te (0≤x≤1) thin films, laser epitaxy and annealing (*Russian*) 2-105070
 Cd₂Hg_{1-x}Te and related materials, self-diffusion and impurity diffusion 2-110033
 Cd₂Hg_{1-x}Te, brittle to plastic transition, microhardness and optical transmission 2-86783
 p-Cd₂Hg_{1-x}Te, characterisation of MBE grown layers 2-110198
 Cd₂Hg_{1-x}Te, compositional uniformity, directed crystn. from melt 2-76333
 Cd₂Hg_{1-x}Te, crystal, size effect, Hall coeff. temp. depend. 2-115802
 Cd₂Hg_{1-x}Te, growth by pressurised cast-recrystallise-anneal technique 2-111068
 Cd₂Hg_{1-x}Te high quality epitaxial films, growth by sputter deposition 2-116362
 p-Cd₂Hg_{1-x}Te, hole conc. routine characterisation, Hall coeff. and bulk cond. meas. 2-82351
 Cd₂Hg_{1-x}Te IR detector developments 2-107406
 n-Cd₂Hg_{1-x}Te layers, MBE growth, struct. and elec. props. 2-99340
 Cd₂Hg_{1-x}Te, MBE growth and elec. characterisation 2-93431
 Cd₂Hg_{1-x}Te, MBE growth 2-93433
 Cd₂Hg_{1-x}Te, mag. field induced Mott transition (*Russian*) 2-87147
 Cd₂Hg_{1-x}Te, mech. props. in four-point bending, lower yield stress 2-115336
 Cd₂Hg_{1-x}Te, narrow gap, absorption coeff. and optical band gap 2-116146
 n-Cd₂Hg_{1-x}Te, photoconductivity relax. study 2-104426
 Cd₂Hg_{1-x}Te, photoluminescence 2-93278
 Cd₂Hg_{1-x}Te sputtered epitaxial layers, structural and elec. props. 2-92424
 Cd₂Hg_{1-x}Te, microhardness 2-105294
 Cd₂Hg_{1-x}Te, elec. behaviour of impurities, Hall effect and minority carrier lifetime meas. 2-77091
 CdH₂Se₂, spinel to rocksalt, type struct. transition, electron microscopy and diff. study 2-76651
 CdI molecular laser action at 475, 656 nm based on CdI₂ photodissoc. 2-55136
 CdI₂, Auger interaction of donor-acceptor pairs with luminesc. centres, photoluminesc. and photocond. study 2-93270
 CdI₂, layered, intercalation with organic cpds., NQR investig. 2-110717

cadmium compounds continued

- CdI₂, melt-grown single crystal, polytypism, X-ray diffraction study 2-111051
 CdI₂, photodissociation to obtain CdI, Cd laser transitions 2-55136
 CdI₂, polytypism, mag. field effects during solution growth, X-ray study 2-109751
 CdI₂, single cryst., NQR obs. in rot. reference frame, line narrowing 2-110701
 CdI₂, single cryst. purification and growth by zone refining, X-ray diff. obs. of polytypism 2-93415
 CdI₂·Ni²⁺(Co²⁺), phonon side bands in absorpt. spectra 2-99161
 Cd(II) complex, 2-aminobenzothiazole cadmium, conductometric, IR and Raman study 2-110867
 Cd(II) mixed metal complexes with Ni(II), chem. anal., spectra, EPR study 2-110630
 CdInAlS₄ single crystals, far-IR absorpt. spectra 2-99126
 CdIn₂Cr₂S₄, spin glass, microwave mag. reson. study, 4.2 to 300K 2-66908
 CdIn₂S₄, fundamental absorpt. edge meas., doping effects 2-61927
 CdIn₂S₄, semicond., neg. resist., resistive state transitions 2-92637
 CdIn₂S₄ spinel, lattice thermal expansion, 28 to 685°C 2-104033
 CdIn₂S₄·In₂S₃ solid soln., vaporization chemistry and thermodynamics 2-116720
 CdIn₂Se₄, α- and β-polytypes, optical props. in region of fundamental absorption edge 2-93223
 CdIn₂Se₄, photoluminescence spectra, radiative recombination 2-57165
 CdIn₂Se₄, semicond., lattice const. and thermal expansion, X-ray diff. study 2-92240
 n-CdIn₂Se₄/aqueous polysulphide photoelectrochem. cell, expt. study 2-116838
 Cd₂KCl₄·4H₂O, cryst. struct., X-ray diff. study, least squares refinement (*French*) 2-81740
 CdK₂(SO₄)₂·6H₂O·VO²⁺, Tutton salts, EPR spectra, multiple trapping sites 2-61755
 Cd₂MgCl₆·12H₂O, cryst. struct. determ. (*French*) 2-55919
 (Cd_{1-x}Mn_x)₃As₂, Landau levels, cyclotron effective mass and effective g-factor 2-110269
 (Cd_{1-x}Mn_x)₃As₂, Shubnikov-de Haas effects 2-98677
 Cd_{1-x}Mn_xSe, electric-dipole spin reson. of bound electronic states 2-110820
 Cd_{1-x}Mn_xSe, exciton and phonon spectra, photoluminesc. and Raman scatt. study 2-110942
 Cd_{1-x}Mn_xSe, stimulated spin-flip Raman scatt., laser emission obs. 2-114287
 Cd_{0.7}Mn_{0.3}Te, valence band, XPS and UPS studies 2-93369
 Cd_{1-x}Mn_xTe, 'antiferromag. phase', neutron scatt. studies 2-92868
 Cd_{1-x}Mn_xTe, absorpt. edge temp. depend. 2-61903
 Cd_{1-x}Mn_xTe, absorption edge pinning, transmission and piezotransmission meas. 2-72443
 Cd_{1-x}Mn_xTe, exciton luminescence spin splitting (*Russian*) 2-61976
 Cd_{1-x}Mn_xTe, semimag. semicond., photoluminescence band excitation spectra 2-82898
 Cd_{1-x}Mn_xTe, semimagnetic, Raman scatt. by phonons and magnons 2-77531
 Cd_{1-x}Mn_xTe, simple excitons in intermediate mag. held, energy levels calc. 2-61365
 Cd_{1-x}Mn_xTe, spin glass versus antiferromagnetic clustering 2-82613
 Cd_{1-x}Mn_xTe, spin-flip Raman scatt. 2-110870
 Cd_{1-x}Mn_xTe, Zeeman effect of mag. excitations, Raman scatt. study 2-67048
 Cd_{1-x}Mn_x(TeSe), EPR and mag. susceptibility 2-98954
 CdMoO₄, crystal, photocond. and luminesc. 2-66591
 CdMo₂S₃, supercond. crit. props., depend on hexagonal cell vol. 2-61643
 Cd(NH₄)₂(SO₄)₂·6H₂O·VO²⁺, Tutton salts, EPR spectra, multiple trapping sites 2-61755
 Cd(NH₄)(4-chloropyridine)Ni(CN)₂, Hofmann type complexes of pyridine derivatives, IR and Raman spectra 2-85664
 Cd(NH₄)(4-methylpyridine)Ni(CN)₂, Hofmann type complexes of pyridine derivatives, IR and Raman spectra 2-85664
 Cd₂Nb₂O₇, ferroelectrics, glasslike, props. at low temps. 2-110778
 CdNi₂Cl₆·12H₂O, X-ray cryst. struct. determ. (*French*) 2-55918
 CdO, contacts, annihilation of defects, study by elec. resist. meas. 2-116418
 CdO·ZnO·P₂O₅, glasses, elec. conduction at high elec. fields, Poole-Frenkel effect 2-56599
 α-Cd₂(OH)₂(SO₄)₂, cryst. struct. study (*French*) 2-76368
 Cd₂(OH)₂(SO₄)₂·H₂O, cryst. struct. (*French*) 2-65932
 CdP₂, tetragonal, energy band struct. 2-92463
 CdP₂, vitreous, IR absorption spectra 2-110834
 CdP₂, wide band semiconductor, two-photon and two-step transitions 2-108934
 CdP₂As₂, impurity vibr., Raman scatt. study (*Russian*) 2-77540
 CdP₂, CdP₂, Cd₂P₂, electronic struct., X-ray spectral investig. 2-82221
 Cd₂P₂, far IR reflectivity meas. 2-93210
 Cd₂P₂ layer, ohmic contact for p-CdTe using pulsed laser heating 2-115890
 Cd₂Pb_{1-x}S_x film, growth kinetics, chem. deposition from aq. soln. 2-110191
 CdRCr₂TA₂O₇ (R=rare earth), electrophysical props. 2-87645
 CdS, ac. cond. inhomogeneities, acoustic meas. 2-77131
 CdS anodes, polycrystalline, photoetching by cysteine 2-99814
 CdS based power density meter for holography 2-95434
 CdS, bixcitons, luminescence assisted two-photon spectroscopy study 2-76933
 CdS, Brillouin scatt. study of stationary electro-acoustically amplified acoustic flux 2-77541
 CdS, chlorinated, press. quenched, AC conductance and phase angle anomalies 2-82359
 CdS, clean and adatom treated surface props. 2-110115
 CdS, colloidal, surface photochem., rel. to adsorbed methylviologen 2-83394
 CdS, cryst., bistability and hysteresis, phase conjugation by six-photon mixing 2-60176
 CdS, cryst. defects, high resolution TEM study 2-60991
 CdS crystal, group vel. of light meas. near exciton absorpt. bands, Rozhdestvenskiy hook method 2-112875
 CdS crystals, effect of using variable rise-time optical pulses on acoustic domains, freq. spectra 2-82823
 CdS crystals, optical transmission modulation mechanisms caused by acoustic domains 2-82824

cadmium compounds continued

- CdS DRM-2 semiconductor sensor for use in clinical radiometry (*Russian*) 2-62738
 n-CdS, deep level transient spectroscopy of electron traps 2-115693
 CdS, defects lattice imaging by electron microscopy 2-65983
 CdS, dipole selection rules, reflection spectra, group representation 2-93226
 CdS direct-gap crystals, three-photon absorpt. 2-97079
 CdS, dispersive birefringent filter theory 2-109020
 CdS, dye-desensitised, photoconductive process 2-87332
 CdS, electro-acoustic current fluctuations 2-98702
 CdS, electro-acoustically active, AC and DC cond. 2-77128
 CdS, electron irradi., exciton reflection spectra and photo EMF, elec. field effects 2-82877
 CdS epitaxial layer preparation in $\text{Cd}(\text{CH}_3)_2\text{-(CH}_3)_2\text{S-H}_2$ system 2-87996
 CdS epitaxial layers grown by H_2 transport from elements, photolum. props. 2-99172
 CdS epitaxially grown layers, deep level transient spectroscopy of carrier traps 2-115692
 CdS, evaporation kinetics of thin crystals and films on vacuum annealing, comp. changes meas. 2-110157
 CdS, excited states of bound excitons, photolum. and magneto-optical spectroscopy 2-116238
 CdS, exciton luminescence and electron-hole plasma near acoustic instability 2-87865
 n-CdS, exciton refl. spectrum, inversion layer effect 2-116207
 CdS, excitonic polariton and excitonic mol. dispersion curves, two-photon Raman scatt. 2-87159
 CdS, excitons and polaritons in mag. field, theory and two-photon Raman scatt. study 2-104258
 CdS, F^+ centres and oxygen radicals, impurities effect 2-93006
 n-CdS, field-induced exchange stiffness and dispersion, spin-flip Raman spectra 2-93194
 CdS film, oriented, grown on glass and InP substrates by thermal decomposition of organometallic cpds. 2-67224
 CdS films, chemical bath deposited, elec. resist. increase obs. by laser annealing 2-98766
 CdS films, chemisorption of O_2 , XPS study 2-99292
 CdS films, RF sputtered, struct. and elec. resist., deposition dependence meas. 2-105073
 CdS films reactive DC sputtering on glass substrate in Ar and H_2S atmosphere 2-105072
 CdS, free exciton momentum relax. (*Russian*) 2-104257
 CdS, green electrolum. and photolum. study 2-72558
 CdS, heavily doped, exciton absorption band broadening, Green's function calc. 2-77558
 CdS, high resistivity, semi-insulating, thermoelectric props., influence of deep traps, TSC study 2-66577
 CdS, high-temp. superconductivity, transition temp. calcs. 2-87436
 CdS, hot wall epitaxial growth, elec. props. 2-93430
 CdS, impurity content evaluation by Hall effect analysis 2-115789
 CdS, kinetic behaviour of O_2 radicals ESR and elec. meas. 2-87589
 CdS laser screen radiation characts. at 300K 2-70573
 CdS, lattice attenuation meas. by acoustic domains 2-98218
 CdS, luminescence study of cooperative defect behaviour (*Russian*) 2-87853
 p-CdS, metastable states, photoluminescence 2-104425
 CdS, modulation of refr. index during excitation on absorpt. edge 2-116142
 CdS, neg. photocapacitance and photoconductivity 2-104428
 CdS nonlinear cryst. refractive index, temp. depend. 2-61856
 CdS nonradiative processes and defects, obs. by acoustic spectroscopy 2-53446
 CdS, optically pumped semiconductor platelet lasers 2-65236
 CdS, optically pumped semiconductor platelet lasers, tunable CW laser action 2-114290
 n-CdS, photoanodic dissolution, rot. ring-disc electrode study 2-57500
 CdS photoelectrochem. cell, effect of sputtered RuO_2 overlayers on CdS electrode 2-111571
 CdS, photoluminescence, effects of polishing etchant composition 2-93271
 CdS, photoplastic, dislocation breakaway obs. 2-98110
 CdS, piezoelec., US luminesc., freq. depend. meas. 2-61994
 CdS, piezoelectric interaction of elastic waves with carriers 2-115827
 CdS, plastically deformed, light propag. obs., dislocations effect 2-67024
 CdS platelet laser, optically pumped 2-55191
 CdS, polarisation interference filters, narrow band and wide field-of-view 2-97160
 CdS polycrystalline film, photoconductivity meas. 2-66674
 CdS powder particle perfection, fused CdCl_2 and Na_2S_3 solvent effects 2-105066
 CdS, radiative transitions between exciton sub-bands 2-99155
 CdS, recharge-enhanced transforms. of donor-acceptor pairs and clusters 2-61390
 CdS, recomb. radiation spectra of electron-hole plasma 2-116255
 CdS, recrystallised, stacking faults 2-103784
 CdS, refl. spectrum, additional boundary conditions, linear response theory 2-77548
 CdS semiconductive single crystals, CdII line spectrum emission 2-82929
 CdS, shock induced defects and transition 2-71555
 CdS, single and bicryst. growth from vapour, polarity influence 2-57279
 CdS single crystal, electroacoustic interaction, nondegenerate, at sum and difference freqs., mechanism 2-92706
 CdS single crystal deep red emitters, as radiation-to-light converters for nucl. environments 2-113826
 CdS single crystals grown from vapour phase, impurities and hexagonal spiral pits 2-76342
 CdS sintered films, for CdS/CdTe solar cell 2-88016
 CdS solar cells, deep trap levels obs. by capacitance meas. 2-88431
 CdS, solid particles, excitons, luminesc. and Raman excitation study 2-77570
 CdS soln. growth using Te as solvent 2-93398
 CdS sprayed thin film, optical reflectance and transmittance 2-110969
 CdS, thermal neutron irradi., optical anisotropy of red luminesc. centres 2-93268
 CdS thin film, reflectivity spectra near excitonic transition 2-82878
 CdS thin film, single source evaporation, characterisation 2-83042
 CdS thin film, work function, surface pot., annealing effects (*Russian*) 2-87373
 CdS thin films, elec. props., In doping and Ag contact effects 2-66672

cadmium compounds continued

- CdS, thin films, inhomogeneity, optical transmission, refr. index 2-62001
 CdS thin films, radiative and nonradiative recomb. times 2-92789
 CdS, three-photon absorpt. coeffs. 2-65295
 CdS, two-photon magnetospectroscopy of A-exciton states 2-104260
 CdS, Wannier exciton ionised donor complex, excited states stability 2-92477
 CdS, Wannier-Mott excitons, wave functions and normal-incidence refl. 2-82244
 CdS, wavefront conjugation by degenerate four- and six-photon mixing 2-90994
 CdS, wavefront reversal during degenerate six-photon interaction 2-108966
 CdS, wurtzite struct., donor electronic Raman scatt., band struct., perturbation calc. 2-82862
 CdS:Ag, Ag solid solubility meas. 2-56200
 CdS:Ag ultrasonic diffusion-layer transducers, stability of parameters over 10 year period 2-114594
 CdS:Cu, Cl, sintered layers, absorpt. and photoluminescence spectra 2-110928
 CdS:Cu, electron irradi. prod. defects interaction with impurities, elec. and optical props. study 2-56035
 CdS:Cu, photochemically active IR centres, luminesc. and excitation spectra, polarisation characts. 2-61970
 CdS:Cu,Cl, point defect luminescence anal. (*Russian*) 2-87869
 CdS:Cu photoelectrochemical cells, energy conversion and storage 2-116841
 CdS:Hg crystal, optical absorpt. and luminesc. (*Russian*) 2-104841
 CdS:In film, heavily doped, elec. transport props. 2-72090
 CdS:In film, low resist., prep. by spray pyrolysis 2-71842
 CdS:In(Sb) film, vacuum evaporated, elec. and optical props. 2-61631
 CdS: Ni^{2+} , optical spectra, isotope splitting const. 2-57163
 CdS:O, grown from melt, O content, activation anal. 2-86702
 CdS:Te film, vacuum deposited, dark cond. and photocond. meas., doping effects 2-61623
 CdS:V(Cr)(Co)(Ni)(Cu), excited state lifetimes, 4 to 300K, luminesc. study 2-57162
 CdS/Cu₂S thin film solar cell, freq. depend. capacitance studies 2-88430
 CdS/Cu₂S thin film solar cells, trapped holes depth depend., photocapacitance study 2-93905
 CdS/Cu₂S solar cells, reactive sputtering, apparatus surface conditioning effects 2-83020
 CdS/Cu₂S thin film solar cells, fabrication trends and problems review 2-78223
 n-CdS/n-InP/p-InP heterostructure solar cell, growth and evaluation 2-88452
 CdS/polysulphide photoelectrochem. cells, stability against photocorrosion, effect of added salts 2-57715
 CdS:Al-Au interface, Schottky barrier modulation, soft XPS study 2-110442
 CdS-Au Schottky diode, $C^{-2}=f(V)$ charact., deep electron trap and interface states effect 2-115860
 CdS-CdSe, struct. and phase comp. of precp. and films 2-110191
 CdS-CdSe films, impurity photocond. line spectra, donor mol. concept 2-115822
 CdS-CdTe, LPE growth of CdTe on CdS polar face from Cd soln. 2-57311
 CdS-Cu, interface form., Schottky barriers, interdiffusion and chem. processes, XPS study 2-77182
 CdS-Cu₂S heterojunction solar cell, Cu diffusion effects, theoretical anal. 2-73115
 CdS-Cu₂S heterojunction solar cells, Cd anodic sulphurization and RF sputtering, MIS struct. for interface state determ. 2-78229
 CdS-Cu₂S heterojunction solar cell, lateral photovoltaic effect 2-83470
 CdS-Cu₂S solar cell, physics of operation and performance 2-111553
 CdS-Cu₂S solar cell, photovoltaic props., cathodolum. spectrum 2-116823
 CdS-Cu₂S solar cells, anal. of dispersion in the measured capacitance 2-99808
 CdS-Cu₂S solar cells preparation and anal. 2-78220
 CdS-Cu₂S thin film solar cells, electron affinity difference 2-67858
 CdS-Cu₂S thin film solar cells, review 2-105568
 CdS-Cu₂S heterojunction, electron and hole traps, deep level transient spectroscopy 2-115873
 CdS-CuInSe, solar cells, annealing and interface effects, EELS, AES, SIMS and XPS study 2-83491
 CdS-CuInSe, solar cell, interface formation, comp. and stability, XPS, EELS and AES study 2-111554
 CdS-CuS thin film heterojunction solar cell, fabrication 2-116833
 CdS-electrolyte contacts, surface-sensitive photoelectric effects 2-61585
 CdSe-G interface, X-ray photoemission spectra of band discontinuities 2-82447
 CdS-InP RF sputtered solar cell, comparison with $\text{In}_{2-x}\text{Sn}_x\text{O}_{3-y}$ -InP cell 2-57714
 CdS-InP(CuInSe₂) solar cells with CdS window layer, high efficiency operation, review 2-105570
 CdS-Mg phthalocyanine heterojunction solar cells, photoelec. props. 2-83490
 CdS-Michlers ketone mixture binder layers, electrophotographic characts. 2-107433
 CdS-p-Si solar cell, single source evaporation prep. and efficiency meas. 2-116800
 CdS-ZnS, electroabsorption spectra, effective masses 2-77491
 CdS-ZnS(ZnSe)(ZnTe), acoustoelectric domains, Brillouin scatt. 2-82408
 CdS-ZnTe thin film photovoltaic cells, optical and elec. props. meas. 2-116824
 CdS(Se), elliptical polarization of acoustic shear waves 2-109912
 CdSSe, optically pumped semiconductor platelet lasers, tunable CW laser action 2-114290
 CdSSe platelet laser, optically pumped 2-55191
 CdSe_{0.9}Se_{0.1}, coherent excitation of excitons, self-induced transparency 2-108972
 CdSe_{0.9}Se_{0.1}, multikilovolt picosecond optoelectronic switching 2-56651
 CdSe_{0.9}Se_{0.1}, picosecond photocond. for ultrafast optoelectronic switching 2-115807
 CdS_{1-x}Se_x, diffusion of chalcogen 2-61201
 CdS_{1-x}Se_x, Te, isoelectronic impurity-exciton interactions, visible spectra study 2-61395
 CdS_{1-x}Se_x epitaxial layers grown by H_2 transport from elements, photolum. props. 2-99172
 CdS_{1-x}Se_x mixed crystal photoconductive films for electrophotographic recording (*German*) 2-87342

cadmium compounds continued

- n-CdS, Se_{1-x} electrodes in photoelectrochem. cells, photoluminesc. and electroluminesc. props. meas. 2-93925
 CdS, Se_{1-x} fluorescence line narrowing, localised exciton states, and spectral diffusion 2-82909
 CdS, Se_{1-x} sprayed thin films, struct. props. and optical band gap 2-110199
 CdS, Se_{1-x} thin film, growth on CdS substrate by solid-state diffusion, composition control 2-71813
 CdS, Te_{1-x} solid soln. films, vacuum deposited, condensation diagram and phase changes meas. 2-110208
 CdSb, γ -irrad., X-ray scatt. near K-absorpt. edge (*Russian*) 2-62015
 CdSb, IR reflection spectra meas. 2-57108
 CdSb single-crystal rods, diamond drilling of optical blanks 2-91102
 CdSb, symm. density of states peaks, photomodulated absorpt. (*Russian*) 2-71851
 CdSe, absorpt. edge shift, EM wave polarisation effect (*Russian*) 2-104925
 CdSe, clean and adatom treated surface props. 2-110115
 n-CdSe, electrodeposited, Fermi level pinning, low-field electrolyte electrorefl. spectra 2-57059
 n-CdSe, etched and anodised electrochem. electrode, capacitance-voltage studies 2-66633
 CdSe, evaporation kinetics of thin crystals, and films on vacuum annealing, comp. changes meas. 2-110157
 CdSe, excitonic luminesc. spectra, surface elec. field effect 2-82919
 CdSe, heteroepitaxial films, struct. charact. 2-92381
 CdSe, high density electron-hole plasma cooling 2-87312
 CdSe, ion implantation postgrowth defects, cathodoluminescence study 2-99196
 CdSe, laser evaporated neutral components, energy distrib. 2-67156
 CdSe, luminescence from electron-hole plasma 2-87868
 CdSe, modulation of refr. index during excitation on absorpt. edge 2-116142
 CdSe nonlinear cryst. refractive index, temp. depend. 2-61856
 CdSe, optical absorpt. saturation near fundamental edge 2-114387
 CdSe, optically pumped semiconductor platelet lasers, tunable CW laser action 2-114290
 CdSe, phase spectra of refl. light in exciton reson. region 2-104911
 CdSe, photocond., struct. and defect levels 2-115811
 n-CdSe, photoelectrochem. determ. of minority carrier diffusion length 2-115777
 CdSe platelet laser, optically pumped 2-55191
 CdSe polycrystalline thin film transistor, conductivity behaviour 2-56735
 CdSe single crystal deep red emitters, as radiation-to-light converters for nucl. environments 2-113826
 CdSe soln. growth using Te as solvent 2-93398
 CdSe, spot size effects in picosecond luminescence experiments 2-104953
 CdSe, spray-pyrolysed thin film, photoelectrochem. solar cell performance meas. 2-93924
 CdSe sprayed films, struct., optical and photocond. props. 2-98698
 CdSe surface barrier devices, I-V characts. including recomb. effects 2-82459
 CdSe, temp. depend. of EFG, TDPAC study 2-93072
 CdSe thin film, electrooptical modulation parameters (*Russian*) 2-61874
 CdSe thin film, resist. modification during O_2 or CO thermal desorption (*French*) 2-98773
 CdSe:Cr thin film transistor, SIMS depth profiling, high spatial resolution 2-104207
 CdSe: Ni^{2+} , optical spectra, isotope splitting const. 2-57163
 CdSe/polysulphide photoelectrochem. cells, stability against photocorrosion, effect of added salts 2-57715
 CdSe-Al-Au interface, Schottky barrier modulation, soft XPS study 2-110442
 CdSe-As $_2$ Se $_3$, amorphous-crystalline heterojunction with built-in interface charge, steady-state transport props. 2-77170
 CdSe-As $_2$ Se $_3$, amorphous-cryst. heterojunction, interface charge, non-steady state transport 2-92736
 CdSe-electrolyte contacts, surface-sensitive photoelectric effects 2-61585
 CdSe-p $^+$ -n-Si tunnel junction solar cell photoanode props. meas. 2-88427
 CdSe-ZnS, phase diagram, DTA and X-ray phase anal. 2-72676
 CdSe-ZnSe thin film electrodes, photoelectrochem. performance meas. in aq. polysulphide electrolyte 2-78230
 CdSe-ZnSe-CdS, fusibility diagrams calc. 2-86843
 CdSe(CdSe) $_{1-x}$ (Te $_2$) electroplated layers, growth and photoelectrochem. solar cell appl. 2-105580
 CdSe $_{1-x}$ Se $_x$ films, soln. grown, struct. and optical props. 2-56388
 n-CdSe $_{0.65}$ Te $_{0.35}$ photoelectrochemical solar cell, expt. study 2-105579
 n-CdSe $_{0.65}$ Te $_{0.35}$, photoelectrochemical solar cells, cell performance 2-111566
 CdSe, Te_{1-x} ($0 \leq x \leq 1$) thin films, laser epitaxy and annealing (*Russian*) 2-105070
 p-CdSiAs $_2$ crystals, H $^+$ irradiated, elec. props. study 2-76527
 CdSiP $_2$, Hall study of electrically active centres (*Russian*) 2-56623
 CdSiP $_2$, intrinsic defect effect on elec. props. 2-61481
 CdSiP $_2$:Mn $^{2+}$, ESR spectrum 2-82708
 CdSnAs $_2$, melt-grown crystals, surface polarity effect on electrical props. 2-115852
 CdSnAs $_2$ films, prop. by LPE 2-72634
 CdSnAs $_2$ single crystals, and p-n junctions, photosensitivity spectra 2-92689
 p-CdSnAs $_2$:Ga, transport coeffs., temp., field, and press. depend. 2-77061
 CdSnAs $_2$ -GaSb heterojunctions, LPE fabrication and props. 2-92743
 CdSn, Ge $_{1-x}$ P $_x$ solid solns., photoactive absorpt. and radiative recomb. anisotropy 2-92690
 CdSnO $_4$ films, dip coatings, prep. technique 2-105096
 CdSnO $_4$ transparent cond. film, planar magnetron sputtering 2-105074
 Cd $_2$ SnO $_4$ layers, sol-gel process prep. 2-77792
 CdSnP $_2$, melt-grown crystals, surface polarity effect on electrical props. 2-115852
 CdSnP $_2$:Cu photopleochroism spectrum, imbedded n-p junction depth effect 2-61523
 CdTe (110) surface, angle-resolved photoelectron spectroscopy, valence band struct. (*Japanese*) 2-116339
 CdTe (110) surface, kinematical anal. of LEED intensities (*Japanese*) 2-115512
 CdTe (110) vacuum cleaved surfaces, photoenhanced oxidation (*Japanese*) 2-116577
 CdTe, Ag diffused, degradation of elec. and optical props. 2-115751
 CdTe, angle resolved photoelectron spectroscopy of Cd 4d core level (*Japanese*) 2-116340

cadmium compounds continued

- p-CdTe, annealed in various atmospheres, carrier traps, TSC study 2-66478
 CdTe, anomalous struct. in far IR spectrum 2-99109
 CdTe, appl. to pulsed X ray detection in medical tomography 2-83652
 CdTe, band struct., nonlocal pseudopot. calc. 2-110245
 CdTe, bipolar photo-Hall effect and photocond. meas., defect model 2-115812
 CdTe, brittle to plastic transition, microhardness and optical transmission meas. 2-86783
 CdTe, bulk grown and epitaxial samples, minority carrier diffusion length 2-115776
 CdTe, CdSe, CdS, film deposition on mica, effect of island sublayers of Ag 2-88005
 CdTe, clean and adatom treated surface props. 2-110115
 CdTe crystal covered with electrodeless Au film, characterization 2-87081
 CdTe, DLTS study of deep electron traps 2-92516
 n-CdTe, deep level transient spectroscopy of electron traps 2-115693
 CdTe, defect annealing, dynamic obs. at lattice resolution 2-91978
 CdTe, defect imaging using TEM 2-71460
 CdTe, defects evaluation using simple cathodolum. technique 2-77597
 CdTe, deposition by spray pyrolysis, for solar cell appl. 2-71828
 CdTe detector suitability for imaging appl. 2-59598
 CdTe detectors, α -particle polarisation effects obs. 2-85497
 CdTe detectors at room temp., present status 2-90366
 n-CdTe, electron mobilities at low temps., theory 2-87253
 CdTe, epitaxial growth on PbTe, by close-spaced technique 2-88001
 CdTe epitaxial layers, charact. and annealing behaviour of deep levels 2-104288
 CdTe epitaxially grown layers, deep level transient spectroscopy of carrier traps 2-115692
 CdTe Faraday modulator for CH $_3$ OH laser, Faraday rot. meas. in Tokamaks 2-97788
 CdTe film, heteroepitaxial, MBE growth on InSb (001) 2-56374
 CdTe films, DC elec. props. Poole-Frenkel eqn. 2-110510
 CdTe films, large grained (111)-oriented, quasi-rectoax growth and solar cell appl. 2-105079
 CdTe, free excitons at room temp., photoelectrochemical study 2-115670
 CdTe, high resolution lattice imaging TEM study 2-76401
 CdTe, hot wall epitaxial growth, elec. props. 2-93430
 p-CdTe, imperfection anal. by photoHall effect and bipolar photocond. meas. 2-77114
 CdTe intracavity modulator for freq.-switchable CO $_2$ laser 2-60093
 CdTe, irradiation produced secondary defects, effect of cryst. polarity 2-115291
 CdTe, LPE growth on CdS polar face from Cd soln. 2-57311
 CdTe, Li diffusion, internal elec. field effects in dissociative mechanism 2-115462
 CdTe, light scatt. by inhomogeneities, IR absorpt. and etching meas. 2-77543
 CdTe, MBE growth 2-93433
 CdTe, MBE growth and elec. characterisation 2-93431
 CdTe MSM and MISIM radiation detectors, elec. field intensity distrib. 2-77200
 CdTe, magnetoluminescence, electron and hole g-factors, Zeeman effect 2-99193
 CdTe metal Schottky barrier contacts, exptl. study 2-72057
 CdTe, modified solvent evaporation cryst. growth and characterisation 2-111050
 CdTe modulator crystals, absorpt. coeff. meas. at 10.6 μm 2-116140
 CdTe, n- and p-type, photoelectrochem. determ. of minority carrier diffusion length 2-115777
 CdTe, non-parabolic band effect on two-photon absorpt. 2-104910
 CdTe, obliquely deposited film, substructure, piezoelectric charge, high-voltage photo-emf 2-87433
 p-CdTe, ohmic contacts with Au or Cd $_3$ P $_2$ layers by pulsed laser heating 2-115890
 CdTe, positron lifetimes, systematic study 2-57207
 CdTe, relaxation-case, photoconductivity 2-66589
 CdTe, shallow acceptors, photoluminesc. study 2-57172
 CdTe, single crystals, grown from vapour, X-ray topography study (*German*) 2-60993
 CdTe, thermoelectric power, effects of bipolar photoconductors, photo-Hall effect meas. 2-87310
 CdTe thin-film solar cells, status as emerging materials PV technologies 2-57712
 CdTe, two-photon absorption coeffs., band structure calcs. 2-65293
 CdTe, valence band, XPS and UPS studies 2-93369
 CdTe: ^{111}In , ion implanted, annealing 2-98126
 CdTe:Cl, electroabsorption spectra, effective masses 2-77491
 CdTe:Cu(Ag), acceptor levels, elec. and photoluminescence study 2-110296
 CdTe:In, MBE growth, effects of doping on electron conc. and photolum. 2-76846
 CdTe:Li, In, donor acceptor pairs, luminesc. excitation spectra 2-57154
 CdTe:Mn, bound exciton luminesc. spectra, giant spin splitting 2-93266
 CdTe:Mn, deep impurity centre spin relax., exciton interactions 2-61760
 CdTe:Mn, photo-induced spin glass 2-87513
 CdTe:P, doped by ion implantation, cathodoluminesc. 2-67124
 CdTe-Au electroless contacts, phys. props., Rutherford backscatt. and AES anal. 2-110168
 CdTe-Au(Cd $_3$ P $_2$), ohmic contact form. by pulsed laser heating 2-104483
 CdTe-Cu $_3$ As, p-n heterojunction phototransducers 2-104478
 CdTe-Cu(Ag) solid soln., supersaturated, carrier decay process kinetics 2-92649
 n-CdTe-electrolyte interfaces behaviour modification by surface etching 2-77177
 CdTe-Ge system, phase diagram, determ. by DTA and X-ray diffr. (*Japanese*) 2-105122
 CdTe-metal interface, Schottky barrier form., XPS, UPS, AES, LEED, I-V and C-V meas. 2-115861
 CdTe-metal interfaces, Fermi level pinning 2-66618
 p-CdTe-Te film, mol. beam deposited, props. 2-104192
 CdTe-TeO $_2$ epitaxial layer, interface struct., high resolution TEM study 2-56367
 (CdTe) $_{1-x}$ (ZnSe) $_x$ powders, photoacoustic spectroscopy meas. 2-92464
 n-CdTe:(In), deep levels, DLTS study 2-87176
 CdTe, Se $_{1-x}$, semiconducting cmpds., laser induced formation 2-115593
 CdTe(110), surface atomic struct., LEED 2-76252
 CdTe $_2$ Se $_4$, sp. ht. and thermodynamic props. 2-81973
 CdTe $_2$ Se $_4$ -CdTe $_2$ Te $_4$, phase equilibria 2-71616

cadmium compounds continued

- CdTe_{1-x}Te_x/Au, Hall coeff., thermo-EMF, cond. type, temp. depend., doping effects 2-56615
- CdWO₄/Ni²⁺, electronic ligand-field spectrum meas. 2-72526
- Cd₂X₂O₇ (X=Ta, Nb, Sb), vibr., force fields, IR and Raman study, normal coordinate anal. (*French*) 2-110869
- Cd_{1-x}Zn_xAs₂, Shubnikov de Haas oscils. 2-92673
- Cd_{1-x}Zn_xS films, electron bombardment evaporation, visible absorpt. spectra meas. 2-72572
- Cd_{1-x}Zn_xS films evaporated by electron bombardment, struct. study 2-71834
- Cd_{1-x}Zn_xS mixed crystal photoconductive films for electrophotographic recording (*German*) 2-87342
- Cd_{1-x}Zn_xS-Cu₂S thin film solar cell with improved ternary cpd. layer 2-116821
- Cd_{1-x}Zn_xS chemically sprayed thin films for solar cells, carrier density depend. on Zn conc. 2-115928
- Cd(3-methylpyridine)₂Ni(CN)₄, Hofmann type complexes of pyridine derivatives, IR and Raman spectra 2-85664
- Cd(4-methylpyridine)₂Ni(CN)₄, Hofmann type complexes of pyridine derivatives, IR and Raman spectra 2-85664
- Cr₂Te₃-Zn₂Cd₃S heterojunction photoelectronic converters with improved parameters 2-116807
- Cu₂-CdS photoconverters, electron microprobe analysis and degradation 2-73113
- CuInSe₂ grown onto CdS by molecular beam epitaxy, resistivity control using ion gauge beam flux monitor 2-99344
- Cu₂S/(Cd,Zn)S solar cells, fabrication and characterisation, SEM study 2-73122
- Cu₂S/CdS sprayed solar cells photovoltaic performance 2-78221
- Cu₂S-CdS heterojunctions, elec. and optical props. 2-99354
- Cu₂S-CdS thin film solar cells, sputter deposited, fabrication and characts. 2-67850
- Cu₂S/Cd_{1-x}Zn_xS/CdS evaporated back-wall bifilm solar cells, growth and conversion efficiency meas. 2-105563
- Fe_{1-x}Cd_xCl₂, dilute antiferromagnet, Raman scatt. from magnons, Ising cluster model 2-61893
- (Hg,Cd)Te, carrier lifetime rel. to wafer processing parameters 2-72001
- (Hg,Cd)Te, optical phase conjugation by degenerate and spin-resonant four-wave mixing 2-102879
- (Hg,Cd)Te, photochemical oxidation 2-111345
- n-(Hg,Cd)Te, degenerate, two-band Auger recombination lifetime 2-93336
- Hg-Cd-Te liquidus-solidus phase diagram, pair approx. 2-88074
- Hg-Cd-Te phase diagram and thermodynamic props. anal. 2-88073
- Hg_{1-x}Cd_xMn_{1-x}Te, semimag. semicond., magneto-optical studies 2-99097
- Hg_{1-x}Cd_xSe, band struct., interband magnetoabsorpt. meas. 2-77494
- Hg_{1-x}Cd_xSe, band structure peculiarities from interband magnetoabsorpt. 2-92466
- HgCdTe, CW degenerate four-wave mixing, large optical nonlinearities 2-108938
- HgCdTe epitaxial layers, Shubnikov-de Haas effect (*French*) 2-61486
- HgCdTe photoconductors, effect of diffusion and drift on generation-recombination noise 2-87324
- HgCdTe, physics and chemistry, workshop, Minneapolis, MN, USA (Oct. 1981) 2-89437
- HgCdTe, transport props. rel. to acceptor levels 2-92633
- Hg_{0.9}Cd_{0.1}Te, carrier lifetime meas. by population modulation spectroscopy 2-92658
- Hg_{0.9}Cd_{0.1}Te, photocond. props. 4.2 to 300K, recombination mechanisms (*French*) 2-61508
- Hg_{0.9}Cd_{0.1}Te-anodic oxide interface, photoelec. and field effect props. 2-87398
- Hg_{0.95}Cd_{0.05}Te IR detector, for large biasing fields, thermal noise 2-107399
- Hg_{0.9}Cd_{0.1}Te, anodic oxidation, electrochemical and XPS study 2-77964
- n-Hg_{0.9}Cd_{0.1}Te, magnetotransport meas. in extreme mag. quantum limit 2-92669
- Hg_{0.9}Cd_{0.1}Te, mercury vapour press. at liquidus temp. 2-66184
- Hg_{0.9}Cd_{0.1}Te, photoconductivity lifetime, recombination below 20K 2-92683
- Hg_{0.9}Cd_{0.1}Te, surface anodic oxide film composition, ion beam effects, XPS study 2-71832
- Hg_{0.9}Cd_{0.1}Te:B⁺(Al³⁺), ion implantation, IR reflectivity study 2-116191
- Hg_{0.95}Cd_{0.05}Te, Hall coeff. phase transition under hydrostatic press. 2-92674
- Hg_{1-x}Cd_xTe, annealing and ion implantation damage, Rutherford backscatt. and channelling study 2-86763
- Hg_{1-x}Cd_xTe, anodic oxidation mechanism, expt. study 2-72853
- Hg_{1-x}Cd_xTe, bandgap spin-orbit splitting resonance 2-115719
- Hg_{1-x}Cd_xTe, bulk vacancy electron states, tight binding calc. 2-87178
- Hg_{1-x}Cd_xTe, cleaved (110) surface room temp., evaporation stability, XPS and UPS study 2-87040
- Hg_{1-x}Cd_xTe crystals, second phase investig. 2-92225
- Hg_{1-x}Cd_xTe, deep level defect traps, DLTS study 2-87175
- Hg_{1-x}Cd_xTe, differentiation of low temp. recomb. processes, photocond. lifetimes meas. 2-115813
- Hg_{1-x}Cd_xTe, disordered complex bound struct., CPA calc. 2-87129
- Hg_{1-x}Cd_xTe, elec. cond., magnetoresist. and Hall effect, temp. depend. meas. 2-77049
- p-Hg_{1-x}Cd_xTe, electron irradi., carrier lifetime, annealing effects 2-56610
- n-Hg_{1-x}Cd_xTe, electron mobilities at low temps., theory 2-87253
- Hg_{1-x}Cd_xTe, electronic struct., localised orbital calc. 2-87139
- Hg_{1-x}Cd_xTe, electronic struct., UPS study and virtual cryst. breakdown 2-87942
- Hg_{1-x}Cd_xTe film growth by laser included evaporation and deposition 2-87989
- Hg_{1-x}Cd_xTe, isothermal epitaxial growth, elec. props. optimisation 2-93452
- n-Hg_{1-x}Cd_xTe, mag. freeze-out modification due to reson. levels 2-92670
- Hg_{1-x}Cd_xTe, magnetoresist. anomaly in extreme quantum limit, 1.4 to 4.2K 2-92668
- Hg_{1-x}Cd_xTe, metalorganic CVD epitaxial growth 2-88000
- Hg_{1-x}Cd_xTe, n-channel, 2D-subband 2-92465
- p-Hg_{1-x}Cd_xTe, narrow gap low carrier conc., elec. props. 2-77047
- Hg_{1-x}Cd_xTe native oxide reduction by CVD SiO₂ 2-111516
- p-Hg_{1-x}Cd_xTe, nonradiative recomb. at deep impurity levels 2-92527
- Hg_{1-x}Cd_xTe, photo-Hall meas. of high-density photoexcited electrons 2-92700
- Hg_{1-x}Cd_xTe, photoluminescence spectrum meas. 2-87844

cadmium compounds continued

- Hg_{1-x}Cd_xTe, plasma anodisation, MIS structure fabrication 2-57505
- Hg_{1-x}Cd_xTe, plasma anodised, interface study 2-104489
- Hg_{1-x}Cd_xTe, precipitation and phase stability 2-86879
- Hg_{1-x}Cd_xTe, quasi-local acceptor level spectrum 2-87188
- Hg_{1-x}Cd_xTe, recrystallised skin junctions, electron beam induced currents study 2-86895
- Hg_{1-x}Cd_xTe, resonant states, influence on optical props., three-band Koster-Slater model 2-56468
- Hg_{1-x}Cd_xTe, shallow and deep defect levels, alloy broadening, pseudopot. theory 2-87177
- Hg_{1-x}Cd_xTe, shallow donor binding energies, effect of band non-parabolicity 2-98581
- Hg_{1-x}Cd_xTe, solid soln., plasma reflectance spectra meas., effect of damaged surface layer 2-67064
- Hg_{1-x}Cd_xTe, surface and interface electronic props. derived from III-V cpds. theory 2-87355
- Hg_{1-x}Cd_xTe, surface electronic struct. and cation bonds, tight binding calc. and UPS study 2-110428
- Hg_{1-x}Cd_xTe, third-order optical susceptibility, four-wave mixing study 2-114354
- Hg_{1-x}Cd_xTe wafers, metallographic obs. of compositional inhomogeneities 2-114111
- Hg_{1-x}Cd_xTe, zero-gap semiconductor, cond. study 2-104380
- Hg_{1-x}Cd_xTe, zero-gap semicond., cond. and Hall coeff., anomalous temp. depend. 2-115757
- Hg_{1-x}Cd_xTe:B, ion implantation, elec. cond., annealing effects, SIMS study 2-66026
- Hg_{1-x}Cd_xTe:Mg, ion implanted, elec. and optical props. from IR refl. spectra 2-116218
- Hg_{1-x}Cd_xTe-CdTe ion implanted epilayers, elec. and optical props. 2-115927
- Hg_{1-x}Cd_xTe-CdTe LPE layers, electron mobility near zero band-gap crossing 2-87426
- Hg_{1-x}Cd_xTe-native oxide MIS struct., elec. props. meas. 2-87399
- HgTe-CdTe lattice matched Schottky barrier heterojunction, metal organic CUD epitaxial growth and elec. props. meas. 2-87366
- HgTe-CdTe superlattice, band structure, envelope-function approx. 2-104472
- InSb-CdTe heterojunctions, photomemory effect 2-92693
- KCdF₃, cryst. struct. study 2-98016
- K₂Cd₂(SO₄)₃, elastic and piezoelec. props. 2-66993
- K₂O-BaO-B₂O₃ glass, microhardness 2-105335
- LiNbO₃-CdSe film, alternating field acoustoelectronic effect, CdSe cond. effects 2-72033
- LiNbO₃-CdSe multilayer struct. with periodic-array contacts, freq. doubling 2-92705
- p-Mn_{1-x}Cd_xTe crystal, elec. cond., Hall effect and photocond. meas. 2-87263
- NaBO₂-CdO(Cd₂B₂O₇), phase diagrams, DTA, X-ray phase anal. and IR spectra study 2-66174
- NaCd(HCO₃)₂, cryst. growth and struct. characterisation, etching, X-ray diff. and IR study 2-91920
- Pb₂Cd_{1-x}I₂ crystal, interlayer interactions, Raman phonon spectra (*Russian*) 2-104893
- PbS-CdS composite films, solution-grown, spectral selectivity meas., solar absorber appl. 2-105596
- RbCdCl₃, cubic, lattice parameters, temp. variation, thermal expansion coeff. 2-98310
- RbCr_{1-x}Cd_xCl₄, mag. props. study 2-87505
- RuO₂-CdS Schottky barrier photovoltaic device 2-56633
- Si-CdS(Zn,Cd_{1-x}S) heterojunction solar cell, elec. props. 2-115875
- p-Si-CdSe junction, sputter deposited, elec. props. 2-98736
- n-Si-SnO₂-n-CdSe electrolyte tandem junction solar cells 2-105556
- Tl₂Te-Zn(Cd)Te, phase equilibria, degree of dissociation 2-72678
- Zn,Cd_{1-x}S/Cu₂S single crystal photovoltaic solar cell preparation and performance characts. 2-78222
- (Zn,Cd_{1-x})₂P₂ solid soln., electronic struct., X-ray emission spectra and XPS study 2-110986
- ZnCd₂Mn²⁺, electrolum. and photolum. props. 2-57184
- Zn_{1-x}Cd_xS:Ag phosphor layer on SiO₂ and Zn₂SiO₄:Mn particles 2-110952
- Zn_{1-x}Cd_xS:Cu, Al cathodoluminescent phosphor, saturation obs. at high current density 2-116273
- Zn,Cd_{1-x}S, localised exciton states (*Russian*) 2-82243
- Zn,Cd_{1-x}S-Cu₂S single crystal photovoltaic cell, optimum performance 2-116822
- Zn,Cd_{1-x}S-Cu₂S structure., Cd and Zn cross diffusion, AES, ESCA and atomic absorpt. spectra study 2-66299
- ZnS,CdS_{1-x}Ag(Yb)(Ni), phosphor, visible image formation from IR radiation 2-77563
- ZnSe-Zn_{1-x}Cd_xTe heterojunction, photocond. spectral response, theory and expt. 2-98733

caesium

see also nuclei with

- ¹³⁷Cs concentrations in northern Alaskan eskimos, 1962-79: effects of ecological, cultural and political factors 2-68173
- adlayer on reconstructed Ir, Pt and Au surfaces, structure, LEED study 2-115509
- adsorbed layers on Ge (111) surface, EELS obs. 2-72585
- adsorbed on W, displacement by Sm 2-104164
- adsorbed on W, indirect interaction 2-71806
- adsorption by Cr epitaxial film on W (110), effect on work function, two-stage phenomenon (*Russian*) 2-61298
- adsorption on Cu (100), LEED, AES, and work function meas. 2-82140
- anharmonic phonons 2-92122
- atom, 3p_{1/2} level study by XPS 2-102654
- atom, Balmer emission lines and photoabsorpt. spectra 2-80534
- atom, continuous spectrum, autoionisationlike resons. 2-96517
- atom, D, line profile obs. using a CW semicond. laser 2-113940
- atom, electron impact excitation, oscillator strengths and cross section calcs. 2-59940
- atom, ground state, two-photon ionisation cross sections calcs. 2-54815
- atom, hyperfine splittings shift due to blackbody radiation 2-64910
- atom, multiple minima in photoionisation cross sections 2-54820
- atom, radiative lifetimes, Coulomb approx. 2-113936
- atomic beam freq. standard, beam profile 2-107305
- atomic clock, primary, design, construction and performance 2-53719
- atomic clocks, global time scale matching through transportation of clocks (*German*) 2-112856

caesium continued

- atomic clocks with 'exclusive flop-out' beam optics 2-69124
 atomic radiative-collisional lasers, high power 2-108863
 atoms, multiphoton processes, collision induced 2-96528
 atoms, Rydberg-Rydberg interactions in dense systems 2-90649
 backscattering of thermal H atoms, H⁻ production 2-82987
 beam atomic clock with laser optical pumping as potential freq. standard 2-95307
 caesiated surfaces and negative ion emission from Cu sample 2-99277
 chemisorption on W (001), work function lowering by multiple dipole form., full pot. linearised APW calc. 2-72050
 clocks, laboratory and industrial standards, stability internat. atomic time appl. 2-79537
 coadsorption with O₂ on LaB₆, work function change and Auger study 2-87068
 Cumbria environmental radioactivity, sea spray actinide enrichment in West Cumbria 2-111802
 D₂ line hyperfine struct. determ. using high-resolution spectroscopy 2-53854
 droplets removal from Ar-Cs flowing mixt. in a closed-loop MHD generator 2-91518
 electron elastic scatt. angular distrib. 2-102621
 excited 4d atomic, control of 4f wavefunction collapse 2-70155
 frequency standard, optically-pumped, light shifts effect evaluation 2-53720
 frequency standard realisation, CO₂ laser phase-locking 2-102844
 intercalated in graphite, C₆Ca, Auger line shape, final state rule 2-105012
 inverted negative ion sputter source 2-108172
 liquid, internal energy and entropy, Gibbs-Bogolyubov variational technique 2-56221
 liquid, structure factors, X-ray study 2-60870
 molecule, binding energies, equilib. distances and vibr. freq. calc. using density matrix method 2-114128
 molecule, dissoci. energy, fluoresc. spectra 2-80703
 molecule, double reson. polarisation spectroscopy 2-65027
 molecule, rot. lines meas. by Doppler free polarisation spectroscopy and ODR, fluoresc., mol. const., pot. energy curves 2-80689
 monolayer on Mo with adsorbed H, negative H ion production by sputtering 2-99253
 overlayer on Si(100) 2X1, plasmon excitation obs., AES, EELS, LEED and UPS 2-115542
 plasma, free-free Gaunt factors for electrons, bremsstrahlung 2-71104
 primary clocks performance, Canadian (NRC) research 2-107310
 pseudopotential elastic const. calcs. (Chinese) 2-109880
 radioactive release from ion-exchange wastes, during solidification 2-64502
 Rydberg atom in mag. fields, Landau limit of spectrum 2-59721
 Rydberg atoms in magnetic fields, at. spectrum Landau limit 2-85573
 Rydberg states, millimetre, wave spectroscopy, appln. to freq. metrology 2-58918
 seawater chemical composition (U, K, Rb, Cs) alteration due to hydrothermal circulation 2-68386
 sorption and desorption by particulate nucl. grade graphite 2-74796
 supersonic jet for D⁺ production by double electron capture 2-54702
 surface, H⁻ production by proton scatt., theoretical model 2-93351
 thermal desorption from LaB₆, discrete binding states 2-87069
 thick film oxidation, multiplet struct. in photoemission studies 2-72596
 thin film, neutralisation of 50-230 keV H ions 2-111015
 vapour, adsorp. on LiNbO₃, effect on thermionic emission 2-72595
 vapour, D₂ line intra-Doppler resonances in selective specular refl. profile 2-54805
 vapour, luminescence study under resonant laser excitation 2-53854
 vapour laser system, IR, tunable, based on stimulated electronic Raman scatt. effect (Chinese) 2-90871
 vapour tunable electronic Raman laser at 16 μ m 2-75557
 work function by Thomas-Fermi-Dirac method 2-82429
 Ag-O-Cs, S1 photocathode, surface resist. meas. 2-87940
 Ar plasma, Cs seeded, relax. processes, radiation and nonMaxwellian electron distrib. effects 2-91594
⁴³Ca, msns Rydberg states level shifts induced by hyperfine interaction 2-64943
¹⁴⁴Ce, specific activity determ. by 4 π B- γ coincidence method (Chinese) 2-59654
 Cs I, 852.11 nm reson. line, Stark width and shift 2-102429
 Cs⁺ source of spin-polarised slow electrons based on Fano effect 2-79711
 Cs⁺ conductance in compressed water at 25°C 2-81998
 Cs⁺, electron impact single, double, triple and quadruple ionisation, absolute cross-section meas. 2-102631
 Cs⁺ ion source on COALA ion microprobe for negative ion SIMS 2-95538
 Cs-CsF(CsCl)(CsI), liq., enthalpies and entropies of mixing, calorimetry study 2-86877
 Cs-O mixed film coadsorp. on Nb (110), work function and thermal stability (Russian) 2-104166
 Cs+Ar collisional narrowing in Cs two-photon transition 2-80827
 Cs+H⁺, single electron capture, attenuation cross sections meas. 2-114077
 Cs+Xe collision, perturber vel. and temp. effects on line profiles 2-54917
 Cs₂, laser induced IR fluorescence 2-70329
 Cs₂, selective laser photolysis 2-99696
¹²⁸Cs, positron emitter for medical applic., cyclotron prod. 2-110784
¹³³Cs, transverse optical pumping, parametric resonance in zero field under two-freq. action 2-113943
¹³⁷Cs and ²³⁹Pu in Greenland ice sheet cores as fallout records 2-69994
¹³⁷Cs body burden from radioactive fallout, long term study 2-73377
¹³⁷Cs, conc. in Baltic Sea and Skagerrack (summer and autumn 1979) 2-105611
¹³⁷Cs, fallout radionuclide, transport through Saguenay Fjord fluvial-marine system 2-99856
¹³⁷Cs pollutant concentration in Irish Sea 2-105608
 Cs*, multiphoton ionisation, reson. effects 2-96522
 Cs(6S_{1/2}) + Cs(6S_{1/2}) + h ν — Cs(5D_{3/2,1/2}) + Cs(6P_{1/2}), pair absorpt. in intrinsic vapours 2-54923
 H⁺-Cs, plasma, charge exchange, population inversion, laser characts. 2-108861
 K-Cs mixtures, blue asymmetry of K reson. lines by Cs atoms 2-75207
 KCl-Cs, dielec., sp. ht. and thermal cond. 2-86960

caesium continued

- Li-Cs plasma, dense, supercooled, recomb. and Li level population calcs. 2-81448
 reflected particle charge states for grazing incidence of D⁺, D₂⁺ and D⁰ 2-77646
 Sr-Cs mixture, two-photon atomic ionisation, radiative collision influence 2-96523
caesium alloys
 Cs₂Sn₃, semiconductor, electrophys. props. 2-110346
 Cs-In, phase diagram, cryst. struct., liquid immiscibility, X-ray diff. study 2-66176
 Cs-K solid solns., elastic-stiffness constants under pressure 2-98182
 Cs-Rb solid solns., elastic-stiffness constants under pressure 2-98182
 Cs-Sb, elec. and mag. props., transition to semicond. characts. 2-92709
 Cs-Tl molten alloys, reflectances meas. 0.65-4.5 eV 2-67076
 Cs_{1-x}K_x solid solns., eqn. of state, pseudopot. scheme calc. 2-109946
 Cs_{1-x}Rb_x solid solns., eqn. of state, pseudopot. scheme calc. 2-109946
 Hg-Cs, liq., anomalous electronic props., higher order correl. effects 2-104340
 Hg-Cs, liq. alloys, molar vol. and thermal expansion coeff. meas. 2-109879
 K-Cs, liquid, thermodynamic calcs. 2-98308
 KCs, liq., heat and entropy of mixing, Gibbs-Bogolyubov variational technique 2-56221
 Na-Cs, Cs 5p absorpt. edge 2-110979
 Na-Cs, molten alloy, chem. pot. and related thermodynamic props. 2-92235
 Na-Cs, liq. alloy, partial struct. factors calc. 2-60869
 Na-Cs liquid alloys with atomic size mismatch, conc. fluctuation 2-81965
 NaCs, liq., heat and entropy of mixing, Gibbs-Bogolyubov variational technique 2-56221
 RbCs, liq., heat and entropy of mixing, Gibbs-Bogolyubov variational technique 2-56221
caesium clocks see *atomic clocks*
caesium compounds
 see also *caesium alloys*
 halides core binding energies, XPS 2-85744
 intercalation compound with graphite, phonon branches, neutron spectra study 2-76618
 intercalation compounds with graphite, σ -electron energy bands, secondary electron spectroscopy study 2-93337
 sulphonate salts, solid, mol. reorientation, NMR spin-lattice relax. 2-72368
 TCNQ salt, Cs₂(TCNQ)₃ cryst., polarised IR reflection spectra meas. 2-93171
 C₆Ca, graphite intercalation cpd., vibr. density of states 2-81909
 CeBO₃, preparation from CeO₂ and B₂O₃, characterisation 2-72645
 Cs-CsF(CsCl)(CsI), liq., enthalpies and entropies of mixing, calorimetry study 2-86877
 Cs₂AgAuCl₆, high press. Mossbauer study of ¹⁹⁷Au, electrical cond. 2-61794
 CsAl₁₇, cryst., vibr., normal coord. anal. IR and Raman obs. 2-57102
 CsAlSiO₄, high temp. thermal stability 2-62108
 CsAlSi₃O₈, high temp. thermal stability 2-62108
 CsAlSi₃O₈, ¹³⁷Cs immobilisation, possible host 2-64477
 CsAsO₄, IR spectra isolated in N₂ matrix, bond angles estimation 2-80595
 CsAu, binding energies, equilib. distances and vibr. freq. calc. using density matrix method 2-114128
 Cs₂AuCl₆, high press. Mossbauer study of ¹⁹⁷Au, electrical cond. 2-61794
 CsBa(NH₃)₂, synthesis and NH₄CdCl₃-type cryst. struct., X-ray study (German) 2-98019
 Cs₂BiCl₆ ceramic, ferroelastic transitions, DTA, X-ray, dielec. and TSC meas. (French) 2-109889
 Cs₂Bi₂Cl₆(Br)₂, doping effects, Mossbauer data and electronic props. 2-61007
 CsBi(MoO₄)₂, phase transition, uniaxial press. effects, permittivity study 2-109982
 CsBr, additively coloured, illumination effect, 200-300 nm 2-57645
 CsBr, F centre pairs, exchange effects in ODESIR 2-56981
 CsBr single crystal, optical fibres, CO₂ laser power transmission 2-81085
 CsBr single-crystal IR fibres, cryst. growth, mech. and optical props. 2-102947
 CsBr, surface phonon polariton, far IR dielec. const. determ. in reststrahlungband, laser spectroscopy 2-99085
 CsBr, X-ray irradiat., colloid form., optical props. 2-56030
 CsBr:Ag⁺, far UV spectra, fluorescence and optical bleaching studies 2-110901
 CsCN, phonons in rotator phase 2-109921
 CsCdF₃, fluoropervskites, 3rd and 4th order elastic const. 2-98181
 CsCdF₃:Gd, EPR of Gd³⁺ centres 2-110635
 CsCdF₃:Mn²⁺(Ni²⁺), spin transfer parameters, core electrons effects 2-87627
 CsCl, additively coloured, illumination effect, 200-300 nm 2-57645
 CsCl, aqueous soln., enthalpy of dilution 2-105497
 CsCl, crystals and aq. solns., optical dispersion and molar refractivities 2-110795
 CsCl crystals and aqueous solns., four-wave mixing 2-102865
 CsCl, direct radiative recombination of core-hole highly excited states 2-87911
 CsCl, high press. compressibility and MoeLwyn-Hughes parameters 2-58040
 CsCl, luminesc. above the phase-transition temp. 2-116242
 CsCl, piezoluminescence study 2-87870
 CsCl, X-ray irradiat., colloid form., optical props. 2-56030
 CsCl:Ag⁺, far UV spectra, fluorescence and optical bleaching studies 2-110901
 CsCl-RbBr film, secondary ion emission as function of primary ion velocity 2-99245
 CsCl+He(Ne)(Ar)(Kr)(Xe), rot. inelastic cross sections, long-range pots. 2-96699
 CsCl+K⁺, differential cross sections for ion-dipole scatt., intermol. pot. calc. 2-70381
 CsCoBr₃, propagating domain walls, inelastic neutron scatt. study 2-104599
 Cs₂Cr₂Cl₆, exchange interactions, neutron scatt. study 2-66803
 Cs₂Cr₂Cl₆(Br)₂, optical absorpt. and Zeeman study 2-98871
 α -CsCuCl₃, Jahn-Teller distorted struct. 2-55893

caesium compounds continued

- CsCu_2Cl_3 , solid electrolyte, cond. and struct. props. 2-82016
 $\text{CsCu}_2\text{M}_2\text{O}_{21}$ ($\text{M}=\text{Nb, Ta}$), intergrowth of hexagonal and perovskite-like str. 2-65962
 $\text{Cs}_2\text{Cu}_2\text{Se}_4$, fragment framework struct. (*German*) 2-65958
 Cs_2AsO_4 crystals, Nd:YAG laser radiation freq. doubling (*Chinese*) 2-65299
 CsD_2PO_4 , critical props., dielectric const., Ising model 2-67007
 CsD_2PO_4 , ferroelec., static and dynamic crit. props. of dielec. const. 2-61813
 CsD_2PO_4 , para, ferro, and antiferroelectric phases, vibr. Raman and IR study 2-77508
 CsD_2PO_4 , polarisation fluctuation relax. time near transition point, US dispersion study 2-82770
 CsD_2PO_4 , quasi-one-dimens. H-bonded ferroelec., phase diagram, anisotropic compressible Ising model 2-87709
 $\text{CsDy}(\text{MoO}_4)_2$, thermal expansion coeffs., X-ray studies (*Russian*) 2-61178
 CsF , aq. soln., diffusion coeff. at 40°C 2-115444
 CsF detector suitability for imaging appl. 2-59598
 CsF , effective charges and ionicity 2-71389
 CsF , lattice dynamics, effect of second order deform. dipole moment 2-76622
 CsF scintillation detector for multislice positron emission tomograph 2-73326
 CsF scintillation detectors for PETT VI positron computed tomograph 2-73336
 CsF-Ar , total cross section and small angle differential cross section, semi-classical anal. 2-108659
 $\text{CsF+He}(\text{Ne})(\text{Ar})(\text{Kr})(\text{Xe})$, rot. inelastic cross sections, long-range pots. 2-96699
 $\text{Cs}_2\text{FeCl}_4 \cdot \text{H}_2\text{O}$, Heisenberg antiferromag., sp. ht. and mag. susceptibility, 1 to 30K 2-104630
 $\text{CsFeCl}_2 \cdot 2\text{H}_2\text{O}$, nucl. relax., effect of diffusive solitons 2-110675
 CsFeF_4 , elec. field gradient, polarisable point charge model and Mossbauer spectra 2-115721
 CsGeO_3 , cryst. struct., lattice energy, X-ray diffr. study (*German*) 2-86643
 CsH , laser induced fluoresc. doublet, vibr.-rot. levels near dissoc. limit 2-70324
 CsH , $X^1\Sigma^+$ state, laser induced fluoresc. spectrum, pot. energy curve, avoided crossing region 2-108607
 CsH_2AsO_4 , ferroelec., nonlinear electromechanical parameters, second harmonic generation 2-104814
 CsH_2PO_4 , critical props., dielectric const., Ising model 2-67007
 CsH_2PO_4 , ferroelec., static and dynamic crit. props. of dielec. const. 2-61813
 CsH_2PO_4 , one-dimens. ferroelec., crit. slowing down, dielec. meas. 2-77458
 CsH_2PO_4 , paraelectric, -OHO- vibrs. in Raman spectra 2-93207
 CsHSO_4 , ferroelastic phase transition 2-86855
 $\text{CsH}_3(\text{SeO}_3)_2$, ^{77}Se high resolution NMR 2-61779
 $\text{Cs}_2\text{HgBr}_4(\text{Cl}_4)(\text{I}_4)$ wafers, dielec. permittivity temp. depend. 2-66974
 CsI , additively coloured, illumination effect, 200-300 nm 2-57645
 CsI crystal, dissolution mechanism 2-66228
 CsI , desorption, fast heavy ion induced 2-98429
 CsI , desorption yield as function of fast heavy ion beam angle of incidence 2-87058
 CsI doped AgI-CuI solid soln., influence of Cs^+ ion on co-ionic cond. 2-71713
 CsI , elec. cond. behind shock wave front, semicond. props., liq. and solid phases 2-77065
 CsI , optical losses in middle IR band, influence of microinclusions 2-87800
 CsI photocathodes, quantum efficiency 2-75113
 CsI photodissociation, Cs atom orientation depend. on exciting light parameters 2-70362
 CsI spectral continuum, laser induced autoionising-like resonances 2-96650
 CsI:Na , tunnelling recomb. luminesc., time evolution 2-72550
 CsI:Na^+ , exciton- Na^+ interactions, photoluminesc., ODMR and mag. circular pol. study 2-61366
 CsI:SO_4^{2-} , cryst., SO_4^{2-} conc. and separation factors, spectrophotometric meas. 2-57132
 CsI:Ti , photoconductivity, thermoluminescence and TSC 2-82404
 CsI_2O_3 , NQR frequencies, temp. and press. depend., compressibility, thermal expansion calc. 2-93050
 $\text{Cs}_2\text{-K}_2\text{-BiCl}_6$ solid soln., phase transitions and cryst. struct. 2-81948
 CsKr satellite bands, semiclassical inversion 2-96678
 CsKr , selective laser photolysis 2-99696
 $\text{Cs}_2\text{La}(\text{N}_3)_6$, IR and Raman spectra, mag. susceptibility 2-87767
 CsLiSO_4 , phase transitions by quadrupole perturbed ^7Li NMR 2-110661
 $\text{CsMg}_{1-x}\text{Co}_x\text{Cl}_3$, disordered ID antiferromag., Raman scatt. from Co^{2+} excitations 2-67039
 $\text{CsMg}_{1/2}\text{Sc}_{1/2}(\text{In})(\text{Ce})(\text{Gd})(\text{Ho})(\text{Er})(\text{Tm})$ thermoluminescence and energy storage 2-99198
 $\text{CsMnCl}_3(\text{Br})_2(\text{I})_2$, photoluminescence lifetime and intensity 2-110940
 $\text{CsMnCl}_2 \cdot 2\text{D}_2\text{O}$, hot magnon sideband in fluorescence spectrum 2-82918
 $\text{CsMnCl}_2 \cdot 2\text{H}_2\text{O}$, quasi-one-dimens. antiferromag., phase spin-flop transition to intermediate state (*Russian*) 2-56874
 CsMnF_3 , pure, exciton dynamics and energy transfer, fluorescence meas. 2-99171
 CsMnF_3 , spin wave interaction with nuclear spin subsystem (*Russian*) 2-61703
 CsMnFeF_6 , highly frustrated, very low field susceptibility 2-87482
 $\text{Cs}_2\text{Mo}_2\text{O}_9$, polymorphism study, DTA, high-temp. X-ray diffr. (*French*) 2-55877
 CsNO_2 , mol. struct. by gas phase electron diffr. 2-90705
 CsNO_3 , electron diffr. patterns., struct. 2-75435
 CsNO_3 , gamma-irradiation effect on cryst. struct. 2-115288
 CsNO_3 , single cryst., Raman scatt. study 2-77511
 $\text{Cs}_2\text{NaBi}_2\text{Y}_2\text{-Cl}_6$, optical centre conc. effects on electron lattice coupling, optical props. study 2-57151
 $\text{Cs}_2\text{NaErCl}_6$, fluoresc. spectra and lifetimes 2-110922
 $\text{Cs}_2\text{NaErCl}_6\text{Er}^{3+}$, optical absorpt. spectra and crystal field anal. 2-82882
 $\text{Cs}_2\text{NaHoCl}_6$, enhanced nucl. spin antiferromag. ordering 2-104589
 $\text{Cs}_2\text{NaHoF}_6$, elpasolite, hyperfine splitting meas. by enhanced Ho^{165} NMR 2-61775
 $\text{Cs}_2\text{NaLaCl}_6$, Ln=Pr, Tb, Tm, enhanced NMR spectra 2-82738

caesium compounds continued

- $\text{Cs}_2\text{NaYCl}_6\text{Eu}^{3+}$, optical emission spectra and cryst. field anal. 2-104934
 $\text{Cs}_2\text{NaYCl}_6\text{Pr}^{3+}$, optical emission spectra and cryst. field anal. 2-104935
 $\text{Cs}_2\text{Nd}(\text{N}_3)_6$, IR and Raman spectra, mag. susceptibility 2-87767
 $\text{Cs}_2\text{Nd}(\text{N}_3)_6$, IR and Raman spectra, mag. susceptibility 2-87767
 $\alpha\text{-CsNd}(\text{PO}_3)_4$, struct. and luminesc. props. 2-65948
 $\text{CsNdP}_2\text{O}_{12}$, cryst. and glass, room temp. fluoresc., laser material use 2-93240
 CsNiF_3 , acoustic phonon vel., elastic coeff., refractive index, Brillouin scatt. study 2-86812
 CsNiF_3 , ferromag., transverse spin fluctuations, neutron inelastic scatt. study 2-56836
 CsNiF_3 , specific heat meas. rel. to spin solitons 2-92925
 CsNiFeF_6 , highly frustrated, very low field susceptibility 2-87482
 CsNiFeF_6 , spin glass props. 2-87515
 CsNpF_6 , parametrisation of optical spectrum 2-99115
 $\text{Cs}_2\text{NpO}_2\text{Cl}_4$, cryst., electronic struct., charge transfer transitions 2-82853
 $\text{CsNpO}_2(\text{NO}_3)_3$, cryst., electronic struct., charge transfer transitions 2-82853
 Cs_2O_3 , low temp. specific heat 2-92227
 Cs_2O activation layers thickness on negative electron affinity Si cathodes 2-57270
 Cs_2O , low temp. specific heat 2-92227
 CsOsO_4N , cryst. struct., coord. number, X-ray diffr. study (*French*) 2-81724
 CsPbCl_3 , sp. ht. near struct. phase transitions 2-81976
 $\text{CsRHP}_2\text{O}_{10}$ ($\text{R}=\text{rare earth}$), preparation, composition and stability 2-72644
 $\text{CsR}(\text{PO}_3)_4$ ($\text{R}=\text{rare earth}$), preparation, composition and stability 2-72644
 CsRPaO_{12} crystals ($\text{R}=\text{rare-earth ions}$), growth, struct., IR spectra 2-98023
 CsReO_4 , temp. and enthalpies of melting 2-103950
 Cs_2S_2 , synthesis and cryst. struct. (*German*) 2-55941
 Cs_2Sb , solid compound semiconductor, chemical bonding, ^{133}Cs -NMR spectra 2-56957
 $\text{Cs}_2\text{Sb}_2\text{Cl}_6(\text{Br}_3)$, doping effects, Mossbauer data and electronic props. 2-61007
 Cs_2SbF_3 crystals, superior phase transition (*Russian*) 2-103987
 $\text{CsSbF}_2\text{SO}_4$, synthesis and cryst. struct. (*French*) 2-91915
 Cs_2SiO_3 , cryst. struct., lattice energy, X-ray diffr. study (*German*) 2-86643
 CsTiF_4 , struct. and mag. studies, antiferromagnetism, X-ray and neutron diffr. study 2-65966
 $\text{Cs}_2\text{Ti}_2\text{-xO}_4$, non-stoichiometric, sheet struct., electron microscopy study (*French*) 2-86645
 Cs_2UF_6 , tetragonal cryolite-type lattices 2-71419
 Cs_2UF_6 , thermochemical investigation, heat of form. 2-73006
 $\text{Cs}_2\text{UO}_2\text{Cl}_4$, polarised IR absorpt. spectrum 2-104874
 $\text{Cs}_2(\text{UO}_2)_2\text{F}_4(\text{OH})_2$, vibr. and electronic spectra meas. 2-72488
 $\text{Cs}_2(\text{UO}_2)_2\text{F}_8 \cdot 2\text{H}_2\text{O}$, vibr. and electronic spectra meas. 2-72488
 $\text{Cs}_2\text{UO}_2\text{P}_2\text{O}_7$, prep. and struct. 2-86632
 CsVCl_3 , one-dimens. Heisenberg antiferromag., mag. and neutron scatt. study 2-66774
 CsVO_3 , X-ray emission spectra, second coord. sphere effects 2-90567
 $\text{Cs}_2\text{V}_2\text{P}_2\text{O}_{16}$, cryst. struct., X-ray diffr. study 2-65970
 $\text{Cs}_2\text{W}_2\text{O}_9$, polymorphism study, DTA, high-temp. X-ray diffr. (*French*) 2-55877
 $\text{CsYb}_2\text{F}_{10}$, cryst. struct., X-ray study (*French*) 2-76392
 $\text{Cs}_2\text{ZnCl}_4\text{-Ni(II)}$, polarised electronic spectra at temps. between 300 and 10K 2-77557
 $\text{Cs}_2[\text{NpCl}_4\text{O}_2]$, cryst. struct. determ. 2-91896
 $\text{Cs}_2[\text{UO}_2(\text{MoO}_4)_2]$, solid-phase synthesis, composition determ. 2-72618
 $\text{GeI}_2\text{-CsI}$ system, cryst. structs., DTA and X-ray diffr. study (*French*) 2-109766
 LiCsSO_4 , ferroelastic transition, elastic const., acoustic softening 2-98188
 LiCsSO_4 , ferroelec., elastic const. near phase transition, US vel. study 2-56066
 $\text{MgCl}_2\text{-LiCl}(\text{CsCl})$ binary melts, surface tension (*Japanese*) 2-76782
 $\text{MnPS}_3\text{-Cs}^+$ intercalated, IR and Raman vibr. study 2-87769
 $\text{UO}_2\text{WO}_6\text{-Na}_2(\text{K}_2)(\text{Rb}_2)(\text{Cs}_2)\text{WO}_4$, solid-phase synthesis, struct., IR and luminesc. spectra 2-87752

caesium generators see plasma diodes**caesium plasma diodes see plasma diodes****calcium****see also nuclei with**

- Andaman Sea, Ca, Mg and fluoride concs. of seawater 2-63000
 atom, $4s6s^2\text{S}$ to $4s4p^1\text{P}$ transition probability, visible obs. 2-70173
 atom, $5p^1\text{P}^o$, level, Hanle effect and density depend. 2-113941
 atom, fluoresc. polarisation due to coherence in Ca_2 photodissoc. (*French*) 2-96498
 atom, metastable levels transitions, frequency sub-mm wavelength standards appl. 2-107293
 atom, oscillator strengths meas. for transitions from metastable ^3P levels 2-113931
 atom, Rydberg states quantum defects, dynamical contrbs. 2-85518
 atomic beam, high-resolution optical Ramsey resonances obs., frequency standard appl. 2-102409
 atoms, autoionisation state excitation and electronic decay 2-80545
 atoms, inner-shell ionisation by ultra relativistic electron impact, density effect search 2-70426
 determination in waste water by radionuclide X-ray fluoresc. anal. 2-78164
 film, polycrystalline, elec. cond. meas. 2-82478
 isotope shift meas. by two-photon spectroscopy 2-64915
 lattice dynamics, coherent neutron scattering from polycrystals 2-56120
 molecule, transition moments, pot. energy curves, green and red spectra 2-85629
 neutron activation analysis, total body, in humans, calibration and normalisation 2-73347
 neutron activation analysis of total body Ca, effect of slow neutron absorpt. 2-73348
 plasma, BLACKJACK 5 pulse generator, Al(Ca)(Ti) imploding plasma expts. 2-91640
 reactivity, atomic reagent approach geometry effect, chemiluminescence 2-111476
 Rydberg series, electronic struct., CI calcs. 2-108408
 seawater, Ca distrib. in World Ocean 2-73594

calcium continued

- thin film, elec. cond. and defect density, annealing study 2-77206
 Ca II circumstellar lines in red giant hybrid atmosphere stars 2-79092
 Ca II in Carina Nebula, motion and densities, spectral obs. 2-68869
 Ca II in chromosphere, vel. oscills. phase differences between two lines 2-58313
 Ca II ionisation and excitation equilibria in chromosphere 2-117651
 Ca II $K_{\text{H}}/K_{\text{H}}$ asymmetry used for chromosphere struct. anal. 2-68689
 Ca II K-emission line width model 2-84216
 Ca II lines in late type giant stars, chromospheric, photoelectric measures 2-89250
 Ca II optically thick lines in quiescent solar prominence 2-58311
 Ca III, resonance line excitation in electron-atom collisions 2-108720
 Ca in presence of inert gases, electric-quadrupole transitions, photoabsorp. studies 2-90467
 Ca isotope targets prepared by vapour deposition 2-108179
 Ca XIX and Ca XVIII lines in solar flares, comparison of line ratios with current theory 2-94694
 Ca XV to XVIII in solar corona active regions, plasma diagnostics use 2-63332
 Ca XVIII and Ca XIX lines in solar flares, comparison of line ratios with current theory 2-94694
 Ca²⁺ efflux from cerebral cortex, awake cats, effects of weak AM microwave fields 2-111730
 Ca²⁺ hydration shells, nonadditive effects 2-80457
 Ca²⁺, intercalation in InSe and GaSe, prep. and elec. props. 2-66549
 Ca²⁺, similarity of unitary currents in 3 different species 2-105685
 Ca-Ca(AlCl₃)₂-SOCl₂ cell, performance and safety meas. 2-78195
 Ca²⁺-dependent current activation of cells, depression by residual Ca²⁺ ions 2-99929
 Ca+Ar(Kr), principal series line broadening 2-85591
 Ca+Br, surface reaction, chemical equilb., desorpt. and reaction kinetics (*German*) 2-78123
 Ca+Cl, desorpt. kinetics, dissoc. and recombination rate consts., temp. depend. (*German*) 2-78124
 Ca+Cl, surface reaction, chemical equilb., desorpt. and reaction kinetics (*German*) 2-78123
 Ca+F₂, chemiluminesc. reaction, product vibr., product alignment depend. 2-83348
 Ca+H₂(N₂)(CO)(CO₂)(methane), collisional relax., rate consts. for quenching meas. by modulated laser induced fluoresc. technique 2-96680
 Ca+Mg²⁺ collisions, total charge transfer cross section 2-114091
 Ca²⁺+H₂O interactions pseudopotentials representation 2-75366
 Ca₂ photodissoc. coherence effect rel. to Ca at. fluoresc. polarisation (*French*) 2-96498
 CaI, electric quadrupole transition, oscillator strength and inert gas induced broadening 2-90466
 Ca(NH₃)₆ solution, elec. resist., quenching effect (*Russian*) 2-115726
⁴³Ca, hyperfine structure anal. of 4s4p configuration and nucl. quadrupole moment 2-114124
⁴³Ca metastable 3d4s ¹D₂ state, laser RF double reson. HFS meas. 2-96756
⁴⁵Ca, thyroid morphofunctional changes after administration of ¹³¹I alone or in combination with ⁴⁵Ca (*Russian*) 2-116997
 Ca*+SOCl₂, chemiluminesc. and chemionising reactions absolute cross sections 2-83381
 GaAs:Ca, MBE, doping behaviour 2-92386
 KCl:Ca, with Z-centres, narrowband IR luminesc. and absorpt. spectra obs. 2-116245
 KCl:CaO²⁺, Ca²⁺, X-irrad., EPR and thermoluminesc. glow curves 2-56919
 NaCl:(Ca³⁺)(Sr²⁺), irradiated crystals, IR props. 2-99127
 NaCl:Ca, aggregation phenomena during isothermal annealing 2-76486
 NaCl:Ca, Pb. clustering processes, use of Pb²⁺ as optical probe 2-57131
 NaCl:Ca (Sr)(Mn)(Pb)(Cd), mech. strengthening and impurity precip. 2-88093
 NaCl:Ca²⁺, low temp. soln. hardening due to lattice distortion around impurity-vacancy pairs 2-98077
 NaCl:Ca²⁺, MFP of dislocations, NMR study 2-109807
 NaCl:Ca²⁺, microhardness and bulk density meas., precip. and impurity-dislocation interactions 2-115345
 NaCl:Ca²⁺ single crystal, microindentation and flow limit, doping effect (*Russian*) 2-71552
 NaCl-KCl:Ca mixed crystals, etching studies of non-dislocation pits 2-76482
 NaF:Ca²⁺, γ -ray irrad. F₍₁₁₎ centres, optical absorption spectra study 2-76976
 NaF:Ca²⁺, γ -ray irrad., colour centres and interstitials, luminesc. spectra 2-110960
 NaI:Ca, thermal depolarisation 2-93104
 YIG:Ca film, mag. dichroism study of Fe⁴⁺ centres 2-72461
 YIG:Ca garnets, rapid diffusion processes 2-71719
 YIG:Tm,Ca,Ge,Ne layers, ionimplanted, annealing effects on cryst. and mag. props. 2-77333

calcium alloys

- see also calcium compounds
 Al-Ca, Gibbs energy and heat of form., solid electrolyte galvanic cell meas. 2-110011
 Al-Ca-Zn superplastic alloy matrix-metallic glass composite, fabrication feasibility using vac. hot pressing 2-99372
 Ca-Pd, phase diagrams and intermetallic phase cryst. struct., X-ray and DTA study 2-109955
 Ca-Sr-Ba, alloying behaviour, cryst. struct., stoichiometry and phase diagrams 2-109746
 Ca_{1-x}Al_x, metallic glass, elec. cond. 2-98612
 Ca₂Al_{1-x} metallic glasses, electronic struct., photoemission and soft X-ray spectra 2-104234
 Ca₂Cu, with trigonal-prismatic coordination, struct. study 2-103692
 CaIrSn₄ (110) surface, scanning tunnelling microscopy study 2-86987
 CaNi₅ alloy, gaseous atmosphere effect on exoelectron emission from H cracked surfaces (*Japanese*) 2-77713
 CaNi₅ alloy long-term test and stability for H₂ storage application 2-105601
 CaNi₅, H₂ and D₂ desorpt. isotherms meas., H₂ storage appl. 2-105506
 CaNi₅H_x, cryst. struct., hydriding, X-ray diffr. study 2-91875
 MgCa, metallic glass, struct. stability 2-65863
 Pb-Ca-Sn, phase diagram, Pb rich corner 2-105123

calcium compounds

- see also calcium alloys
 amphibole schist, Fe²⁺ and Fe³⁺ conc. determ. by Mossbauer spectroscopy 2-99738
 brittle, thermal shock testing, fluidised bed as quenching medium, charact. obs. 2-116655
 CaCl₂·6H₂O heat storage system for off-peak energy supply and solar heating 2-83519
 CaI_{0.7}H₂O, cryst. struct. determ., X-ray and neutron diffr. data 2-55897
 calcite cleavages, dynamic etching 2-66004
 copper calcium acetate hexahydrate, linear chain complex, EPR spectra, temp. depend. 2-61756
 crystal size determ., electron microscopy 2-98013
 dicalcium barium acetate, ferroelastic phase transition, lattice const. and birefringence 2-92187
 dicalcium barium propionate, ferroelectric transitions, ESR study 2-66999
 dicalcium barium propionate, short-range order, optical transform study 2-98044
 dicalcium lead propanate, two-sublattice model, piezoelec. and elastic props. 2-87675
 dicalcium lead propionate, ferroelectric transitions, ESR study 2-66999
 dicalcium strontium acetate, ferroelastic phase transition, lattice const. and birefringence 2-92187
 dicalcium strontium propanoate, two-sublattice model, piezoelec. and elastic props. 2-87675
 dicalcium strontium propionate, ferroelectric transitions, ESR study 2-66999
 dicalcium strontium propionate, switching transients 2-110785
 fluoride, colouring by neutron and gamma radiation 2-103816
 formate, Ca(II) ion binding, ab initio calcs. 2-64857
 homophthalate dihydrate, cryst. struct. 2-98052
 malonate, Ca(II) ion binding, ab initio calcs. 2-64857
 mica reinforced cellular soda-lime glass composite, fabrication, mica dehydration effect 2-93485
 oxalate, precipitation, nucleation and growth kinetics, temp. effect 2-76336
 oxalate monohydrate, dissolution kinetics, const. comp. study 2-76681
 oxalate trihydrate, growth morphology rel. to urinary stone research 2-76335
 pCC (5/CaO·3Al₂O₃)₂ cryst., vibr. Raman spectra 2-116187
 phosphates, crystallisation, homopolymer additive effect 2-76341
 Shirasu volcanic glass-CaO-MgO system, glass form. composition range, props. (*Japanese*) 2-88049
 sulphides, IR matrix isolation spectra 2-75284
 Synroc-B, powder prep. and densification for fabrication 2-93478
 tris-sarcosine calcium chloride, brominated, dielec. props., press. and temp. depend. 2-61820
 tris-sarcosine calcium chloride, ferroelastic phase transition, US study 2-66194
 AlF₃-CaF₂-NaF (LiF) system, computer anal. of phase diagrams and thermodynamic props. 2-67308
 AlF₃-YF₃-GdF₃-CaF₂-SrF₂-BaF₂-NaF-PbF₆-(AsF₆) glass, optical and thermal props. 2-115145
 Al₂O₃-CaO melt, solidification and vitrification 2-72686
 alkali metal oxide-CaO-Al₂O₃-SiO₂ glass, liq.-liq. phase separation, struct. interpretation, alkali aluminate complex form. 2-103973
 B₂O₃-Fe₂O₃-PbO-CaO glass, Fe valence states, comp. dependence, Mossbauer and mag. study 2-101017
 BaAl₂Ti₄O₁₆-CaTiO₃-CaZrTi₂O₇ ceramic, devel. and testing as high level nuclear waste form 2-107956
 BaGeO₄-Al₂O₃-CaF₂-MgF₂:Eu²⁺, glass, spectral-luminescence, IR and Raman study 2-72553
 BaO-CaO-Sc₂O₃ system, cryst. struct. and phase diagrams, X-ray diffr. study 2-91921
 Bi_{1-x}Ca_xFe_{2-x}ln_yFe_{3-x-y}V₂O₁₂, magneto-optical Kerr rotation (*Chinese*) 2-110819
 BiYIG, film, bubbles, mag. props. 2-72315
 (Ca,Zn)S phosphors, phosphorescence decay, trapping levels, luminescence process 2-61942
 Ca (NO₃)₂, dry impregnation with MoO on Al₂O₃, cryst. struct. 2-10976
 Ca ferrite:PbF₂, mag. props., substitution effects (*Japanese*) 2-62240
 Ca-Si-Al-O-N system, study of CaO-SiO₂-AlN section (*French*) 2-57339
 Ca-YbO, bivalent Yb form. 2-111468
 Ca₂Al₂Ge₂O₁₂:Cr³⁺, broad-band emission 2-104914
 Ca₃Al₂(OH)₄, IR spectra, H-bonds 2-96570
 Ca₂Al₂P₂Si₂O₁₅, crystal struct. and chem. formula confirmation 2-91902
 CaAl₂Si₂O₆-Ca₂Al₂SiO₇, anorthite-gehlenite system, crystn. of glass-forming melts 2-71371
 Ca₂Al₂SiO₂-Ca₂SiO₃, nucleation and cryst growth from melt. 2-72614
 CaAs₂, elec. cond. and mag. props. 2-92907
 CaB₆, B chem. shifts and quadrupole coupling consts. 2-87607
 CaBr ² Σ -radical, microwave rot. spectra, unresolved hyperfine struct. investig. 2-90519
 CaBr radicals, mol. beams and IR-RF double reson. studies 2-59835
 CaCO₃ addition effect on AlN sintering 2-105109
 CaCO₃, calcite, acoustic emission pulse generation during surfacing of dislocations (*Russian*) 2-56320
 CaCO₃, calcite, anomalous transmission of thermally scattered X-rays 2-110973
 CaCO₃, calcite, etch pits, symmetrical and asymmetrical, eccentricity on cleavage 2-55974
 CaCO₃, calcite, etch pits orientation on cleavage faces 2-60992
 CaCO₃, calcite, high order CARS and coherent Stokes Raman spectra (*Chinese*) 2-108948
 CaCO₃, calcite, IR photoacoustic spectra, specular and diffuse refl. effects 2-110832
 CaCO₃, calcite, phonons and mixed polaritons, hyper-Raman scatt. study 2-61900
 CaCO₃, calcite, polariton hypercombination scatt. spectra, anharmonism effects (*Russian*) 2-56449
 CaCO₃, calcite, rhythmic crystn. in agar gel, impurity addition effect 2-55867
 CaCO₃, calcite 2x2 optical bypass switch controlled by liq.-cryst. cells 2-60257
 CaCO₃ calcite plate fabrication, monitoring of linear displacement between ordinary, extraordinary rays 2-114481
 CaCO₃, high order CARS and CSRS spectroscopy 2-60169
 CaCO₃, nucleation rate, crystallisation kinetics 2-71384

calcium compounds continued

- CaCO₃ plate optic axis determ. equipment (*French*) 2-58874
 CaCO₃¹⁰Po, radiation effects, EPR obs., rel. to paleodose determ. 2-78652
 CaCO₃Pb¹⁺, EPR spectrum, Raman spin lattice relax., hyperfine interaction effect 2-61761
 Ca_{1-x}Cd_x(PO₃)₆F₂, cryst. cell dimensions and site occupancy factors, X-ray study 2-109767
 CaCe₂(CO₃)₂F₂ and related fluorocarbonates, cryst. struct., disorder stacking and intergrowth, X-ray study (*Chinese*) 2-91905
 CaCl₂ Σ -radical, microwave rot. spectra, unresolved hyperfine struct. investig. 2-90519
 CaCl₂ electric deflection obs. of ground state dipole moment 2-80844
 CaCl₂ optical spectra at sub-Doppler resolution 2-75257
 CaCl₂ radicals, mol. beams and IR-RF double reson. studies 2-59835
 CaCl₂ transport through Nucleopore membranes, flows and activation energy 2-84560
 CaCl₂ X²⁺ ground state, hyperfine struct. studied by mol. beam and laser RF double reson. 2-70306
 Ca³⁵Cl, A¹¹ excited state hyperfine struct. 2-85839
 CaCl₂ solns., densities rel. to salt effect on vap.-liq. equil. 2-71538
 CaCr₂O₄-Ca₂Fe₂O₇, phase equilibria, under reduced partial pressure of O₂ 2-88075
 CaD, EELS study, surface states 2-110998
 CaF₂ potential energy curves and dissociation energy 2-70163
 CaF₂ prod. in chemiluminesc. Ca + F₂ reaction, vibr. and alignment 2-83348
 CaF₂ radicals, mol. beams and IR-RF double reson. studies 2-59835
 CaF:Eu³⁺, annealing temp. and dopant conc., site selective spectroscopy, defect chemistry 2-104917
 CaF₂ anion Frenkel defects, entropy of formation, quasiharmonic calc. 2-98074
 CaF₂ crystal, phonon focusing obs. by luminesc. phonon detector 2-61871
 CaF₂ crystals, etch traces and dislocation motion 2-66003
 CaF₂, Czochralski growth system, melt temp. effects on crystallisation rate 2-87964
 CaF₂, Czochralski growth system, mech. instability effects on crystallisation rate 2-87965
 CaF₂ doped, dipolar thermally stimulated depolarisation, theory 2-93106
 CaF₂ electronic struct., cluster calc. by multiple scatt. X α method 2-61350
 CaF₂ entropy change in fast-ion transitions 2-71640
 CaF₂ epitaxial films, MBE growth on Si substrate MIS capacitance and mass spectra study 2-76861
 CaF₂ films, thermoluminescence and thermally stimulated exoelectron emission, γ -ray irradi. effects 2-57191
 CaF₂ fluorite, thermoluminescence rel. to pretreatment history 2-72566
 CaF₂ HF longitudinal-acoustic phonon lifetime calcs. 2-109930
 CaF₂ high-temp. mean square displacements 2-66139
 CaF₂ IR laser-induced desorption of H₂O and hydrocarbons from optical surface 2-115530
 CaF₂ IR wavelength modulation spectroscopy of laser window materials 2-60191
 CaF₂ IR window materials for CO₂ laser, absorpt. coeffs, photoacoustic spectroscopy 2-70633
 CaF₂ impurity and interstitial clustering 2-86884
 CaF₂ laser window material, stress-induced birefr. and thermal lensing expts. 2-61870
 CaF₂ laser window materials, optical distortion and far field meas. 2-97041
 CaF₂ natural, TL phosphors, self-dose and fading in environmental radiation monitoring 2-96315
 CaF₂ nuclear spin diffusion of rare ⁴³Ca spin species 2-92915
 CaF₂ optical films, mechanical props. 2-82191
 CaF₂ planar channelled positron radiation characts. 2-81852
 CaF₂ Raman scattering efficiencies for Γ -phonons 2-57100
 CaF₂ rare earth doped and hydrolyzed mol. centres, Raman spectra study 2-104873
 CaF₂ single cryst., temp. depend. indentation deform. processes 2-76565
 CaF₂ surface-to-bulk optical absorpt., 1.3 μ m laser rate calorimetry and photoacoustic meas. 2-58921
 CaF₂ thermal neutron irradiated, point defects study 2-65985
 CaF₂ thermo-optical coeff. and thermal expansion, temp. depend. 2-61884
 CaF₂ UV laser window material, low-level losses 2-97161
 CaF₂ vac. deposition for Si/CaF₂/Si epitaxial struct. 2-115612
 CaF₂ window material for HF/DF chemical lasers 2-81040
 CaF₂Dy, gamma-irrad., laser heating in thermolum. dosimetry 2-104971
 CaF₂Eu³⁺ crystal, scatt. of terahertz phonons, luminesc. detection and piezoelectroscopic obs. 2-103926
 CaF₂Eu³⁺ two photon luminescence excitation and freq. spectrum 2-110937
 CaF₂H, contr. of H zero-point vibr. to F transferred hyperfine consts. nearest neighbour to H₂⁰ centre 2-76627
 CaF₂H⁰ ESR spectrum 2-98938
 CaF₂La³⁺, thermal depolarisation studies 2-61817
 CaF₂Mn, EPR rigid lattice dipolar broadening 2-104689
 CaF₂O₂ X-irrad., O centre, EPR and ENDOR study 2-61764
 CaF₂Pr³⁺, optically detected NMR, hole burning 2-72379
 CaF₂Re³⁺, point group crystal field and superposition model 2-92538
 CaF₂Sm³⁺, acoustic phonon-impurity interaction, luminesc. study 2-93269
 CaF₂Tb³⁺ single cryst., fluoresc. spectrum 2-61945
 CaF₂Tm, thermoluminesc. response characts. to X- and γ -rays, 2-hit traps 2-67127
 CaF₂Tm³⁺, optical detect. in transmission band of ENDOR 2-116090
 CaF₂Tm³⁺, uniaxial stress effect on ENDOR, hyperfine parameters 2-72378
 CaF₂V³⁺(Ti³⁺), transferred hyperfine interaction 2-66506
 CaF₂HoF₃(ErF₃), cryst. growth from melt, laser props. 2-105063
 CaF₂LiF-NaF system, computer anal. of phase diagrams and thermodynamic props. 2-67308
 CaF₂PrF₃(NdF₃)(SmF₃), radiation induced F⁻ interstitials, TDPAC study 2-98163
 CaFe₂O₄ struct., relationship to rutile and hollandite type struct. 2-60934
 Ca₂Fe₂O₇-LaFeO₃ system, Mossbauer resonance study 2-61801
 Ca₂FeO₇, cryst. struct., X-ray diff. study (*French*) 2-91928
 CaFe₂O₆(FeO)_n, n=1,2,3, cryst. struct., bond lengths 2-103716
 Ca₂Ga₂GeO₇, cryst. struct. anal. 2-115203
 Ca_{1-x}Gd_xF_{2-x}, solid electrolyte, ionic cond. 2-92273

calcium compounds continued

- CaH, interaction energies calcs. 2-96727
 CaH, low lying electronic B² Σ state, radiative lifetimes, oscillator strengths meas. 2-65054
 CaH, potential energy curves, Franck-Condon factors 2-70164
 CaH⁺, interaction energies calcs. 2-96727
 CaH⁺, interaction energies calcs. 2-96727
 CaHPO₄2H₂O, crystallisation, representation of growth curves 2-76340
 CaHfO₄, thermodynamic stability investig. using EMF method with CaF₂-type electrolyte 2-81983
 Ca₂La(NH₄)₂Si₂P₂(V, As)₂O₂₆, solid phase synthesis, apatite struct. 2-111067
 CaLa_{1-x}Y_xCrO₃ solid solns., struct. and mag. study 2-76391
 Ca₂Mg_{1-x}Fe_xSi_{2-x}O₇, crystalline phase anal. 2-71416
 CaMgSi₂O₆-CaTiAl₂O₆, diopside, crystal struct., Ti⁴⁺ role 2-86655
 Ca₂Mn₂O₈, cryst. struct. determ. 2-91892
 CaMoO₄ scintillators, γ -ray absorpt. data 2-104983
 CaMo(WO₄)₂, scheelite struct., cation diffusional mobility, solid phase synthesis appl. 2-86923
 Ca(NH₄)₂NH₃ diffusion and H⁺ shift, PMR obs. 2-82735
 Ca(NO₃)₂, crystal growth from conc. aq. soln. 2-55869
 Ca(NO₃)₂-KNO₃ glasses, low temp. thermal props. rel. to glass transition temp., water doping effect 2-56271
 Ca(NO₃)₂-KNO₃ glasses, sp. ht. and glass transition temp. changes upon doping 2-81979
 Ca(NO₃)₂-K₂NO₃ mixture, hypersonic relax., Brillouin scatt. study, transverse mode obs. close to Rayleigh line 2-71591
 Ca(NO₃)₂4DMSO, cryst. growth rate from melt, cryst. morphology 2-111053
 Ca₂NaMg₂V₂O₁₂, ESR and optical absorpt. spectra of red V ions 2-110624
 Ca₂NaMg₂V₂O₁₂, tetrahedral sites and elec. field gradient distrib., ⁵¹V NMR study 2-110665
 CaO, deformation processes during creep 2-61058
 CaO, electron transfer between F-centres, luminescence, ODMR study 2-98999
 CaO F₂²⁺ defect, hole burning, optical spin-echo spectra 2-104298
 CaO FeO FeS-Cu₂S melts for electrothermal metallography elec. cond. mechanism, 1000-1210°C 2-104378
 CaO, ion irradi., F⁺ and F centre form. and annealing, UV spectra and volume study 2-76437
 CaO single crystals, dendritic growth from molten CaCl₂ 2-92430
 CaO, sub-Doppler spectrum, rot. anal. and deperturbation 2-64996
 CaO, surface area and morphologies of samples produced from decomp. of CaCO₃ crystals 2-76353
 CaO, triplet system orange arc bands, rot. anal. 2-70221
 CaO, with rare earth chromites, use as anodes in high-temp. O₂ conc. cell 2-77038
 CaO-Cr, APR study, Jahn-Teller effect 2-66899
 CaO-Cu electrochromism, anal. of traps 2-82925
 CaO:Eu³⁺(Er³⁺)(Pr³⁺), site selective spectroscopy, UV and fluoresc. study 2-110895
 CaO:Fe³⁺(Cr³⁺)(Gd³⁺), ESR dipolar linewidths 2-104688
 CaO:Mg, neutron or electron irradi., circular polarised luminesc. from F- and F₂-centres 2-110915
 CaO:Al₂O₃-CaF₂, melt struct., anion packing 2-71325
 CaO:Al₂O₃-SiO₂, calcined powders, appl. to U recovery from aqu. soln. 2-80144
 CaO:Al₂O₃-SiO₂, glass chem. interactions, molar vol. change 2-72985
 CaO:Al₂O₃-SiO₂, liquid-state interdiffusion using multiautomic ion models 2-86914
 CaO:Al₂O₃ system, phase diagram and thermodynamic props. 2-111147
 CaO-B₂O₃-V₂O₅-Fe₂O₃ glass, Mossbauer and ESR studies 2-66963
 CaO-CO₂-H₂O system, high press. differential anal. 2-93756
 CaO-Dy₂O₃, elec. cond., electrolytic region 2-86924
 CaO-Er₂O₃, elec. cond., electrolytic region 2-86924
 CaO-FeO-P₂O₅ glass, internal friction meas. 2-92105
 CaO-Ga₂O₃-GeO₂ system, phase form. 2-111150
 CaO-Gd₂O₃, elec. cond., electrolytic region 2-86924
 CaO-MgO-Ca₂SiO₅=Ca₂Al₂Fe₂O₁₀ magnesia-dolomite refractories, thermal equil. 2-62111
 CaO-MgO-SiO₂(TiO₂) diopside glasses, nucleation kinetics, small-angle X-ray scatt. study 2-115141
 CaO-MgO-V₂O₅, phase diagram 2-111157
 CaO-Nd₂O₃, elec. cond., electrolytic region 2-86924
 CaO-SiO₂, thermodynamic treatments 2-61167
 CaO-SiO₂ melt at 1600°C, tracer diffusivity 2-81999
 CaO-SiO₂-CaO melt, viscosity and elec. cond. (*Japanese*) 2-76720
 CaO-SiO₂-MnO melt, viscosity and IR spectra obs. 2-61184
 CaO-SiO₂-ZnO melt, viscosity and elec. cond. (*Japanese*) 2-76721
 CaO-SrO-Sc₂O₃ system, cryst. struct. and phase diagrams, X-ray diff. study 2-91921
 CaO-TiO₂-ZrO₂ system multiphase ceramics for bushing prod., mech. props. 2-67478
 CaO+As₂O₃, heat of form. of arsenates meas. 2-88374
 CaO+N₂O, collisional population transfer excited states, kinetic models 2-96686
 Ca(OH)₂, ferromag. ordering of proton spins 2-110585
 2CaO.K₂O.xFe₂O₃(5-x)P₂O₅ glass, elec. cond., temp. depend. anomaly 2-56580
 CaO2Al₂O₃, thermodynamic data 2-111161
 12CaO.7Al₂O₃, cryst., vibr. Raman spectra 2-116187
 Ca₃(PO₄)₂, ceramic, dense, mech. props., prosthetic appl. 2-57409
 Ca₁₀(PO₄)₆F₂, fission track radiation damage, diffusion to surface, defect absorpt. study 2-99162
 Ca₁₀(PO₄)₆(OH)₂, dissoln. kinetics, acidity constant for HPO₄²⁻ surface complex 2-60896
 Ca₂(PO₄)₂OH, hydroxapatite, crystallisation, representation of growth curves 2-76340
 Ca(Pt(CN)₄)₂.yH₂O, luminesc., mag. field effects 2-82899
 CaPuTi₂O₇, alpha decay self irradi. damage 2-80064
 CaS phosphors, initial decay mechanism 2-61965
 CaS, prep., crystal growth by CVT and luminescence 2-116349
 CaS:Ag phosphors, decay characts. and thermoluminesc. 2-99166
 CaS:Bi excitation mech. of Bi³⁺ luminesc. centres, luminesc., TSC and photocond. meas. 2-67103
 CaS:Ce.Fe(Co)(Ni)(Cd), phosphors, luminescence emission and decay, quenching 2-77584
 CaS:Dy, phosphors, electroluminescence study 2-61978
 CaS:Eu.Sm, phosphor, luminesc., nanosecond IR laser stimulation, dosimeter appl. 2-57140

calcium compounds continued

- Ca:Sm, phosphors, phosphorescence decay, trapping parameters 2-61941
 CaS(CaSe), optic phonon IR reflection spectra and cryst. growth, expt. study 2-99117
 CaSO₄, electron energy loss spectra, collective excitations 2-110997
 CaSO₄ phosphor, thermolum., and thermally stimulated exoelectron emission, SO₄²⁻ radicals role 2-77602
 CaSO₄ thermoluminescent films, X-ray imaging appl. 2-89878
 CaSO₄, X-irrad., ESR of thermoluminesc. centres 2-66916
 CaSO₄.Dy, sensitised phosphor, and phosphor embedded teflon TLD discs, response to X- and γ-rays 2-67128
 CaSO₄.Dy crystal TLD development 2-113753
 CaSO₄.Dy embedded in teflon, reliability for routine personnel monitoring 2-68149
 CaSO₄.Dy teflon discs, dose re-estimation by repeated read-outs, efficiency 2-59552
 CaSO₄.Dy teflon thermoluminesc. discs, light induced fading 2-64690
 CaSO₄.Dy³⁺, cathodoluminescence spectrum meas. 2-87875
 CaSO₄.Mn(Dy), gamma-irrad., laser heating in thermolum. dosimetry 2-104971
 CaSO₄.Tm, phosphor, thermolum., carrier capture during irrad. 2-104973
 CaSO₄(Dy/Tm) TL phosphors, self-dose and fading in environmental radiation monitoring 2-96315
 CaSO₄.2H₂O, gypsum, cryst. struct., neutron diff. refinement 2-65931
 CaSO₄.2H₂O, gypsum, X-ray irrad., EPR spectra 2-66915
 CaSO₄.2H₂O, gypsum, cryst. growth at low supersaturation, screw dislocation controlled 2-109717
 CaSe₂S₄, cryst. struct. refinement by powder neutron diff. 2-81732
 CaSeSi₃O₈(OH), cascandite, cryst. struct., X-ray diff. study 2-98009
 CaSe₂O₇, cryst. struct. determ. (*French*) 2-76379
 CaSiO₃, ceramic-forming glass, thermal expansion 2-71673
 CaSiO₃.Pb²⁺, phosphors, high press. phases, luminescence props., quenching 2-82903
 CaSiO₃.CaMgSi₂O₆.CaMgSi₂O₆ system, densities of melts 2-86771
 Ca₂SiO₄ and (Ca_{1-x}Mg_x)₂SiO₄, olivines, cryst. struct., interatomic pot. function method 2-97979
 Ca₂SiO₄, vibr. isotope shift, IR and Raman study 2-77507
 Ca₂(Si₂O₇)(CO₃).2H₂O, orientational disorder of dimeric or polyatomic ions 2-81723
 Ca₂Si₂O₇.H₂O, K-phase cryst. struct. determ. 2-86651
 Ca₂Si(OH)₂CO₃SO₄.12H₂O, carbonate group deviation from coplanarity 2-86650
 Ca_{1-x}Si_{0.3}Al_{0.3}Si_{0.4}Si_{0.24}.13H₂O, chabazite, cation-site location, cryst. struct. 2-55937
 CaTiO₃, acceptor doped, defect struct. at elev. temps. 2-92019
 CaTiO₃, defect struct., elec. cond. study 2-103750
 CaTiO₃, elec. cond., 800 to 1100°C, defect struct. 2-66554
 CaTiO₃, electronic spectra of TiO₆⁴⁻ clusters 2-93222
 CaTiO₃, kinetics of formation, hydrothermal conditions 2-111453
 CaTiO₃, powder prep. and densification for fabrication 2-93478
 CaTiO₃ with excess CaO, elec. cond. meas. and struct. model 2-104372
 CaTiO₃.La³⁺, self-compensation, gravimetric meas. 2-98127
 CaTiO₃.Ta, O nonstoichiometry, dopant conc. 2-86704
 CaV₂O₇.H, Fermi glass, ESR, elec. and mag. meas. 2-72352
 Ca₃(VO₄)₂, ferroelec., elastic props., Bragg scatt. laser radiation on HF sound 2-115364
 CaWO₄, IR spectra, vibr. exciton density of state functions 2-99106
 CaWO₄ scintillators, γ-ray absorpt. data 2-104983
 CaWO₄, solubility in metal chloride melts, crystallisation 2-86874
 CaWO₄.Eu²⁺ and CaWO₄.BaWO₄.Eu²⁺ phosphors, luminesc. props. 2-57150
 CaWO₄.Ho³⁺, NMR study of EM and sound energy absorpt. (*Russian*) 2-61778
 CaWO₄.Ho³⁺, scheelite, ESR line shape, elec. field effects 2-87586
 CaX₂ (X=Br, ClO₄), hydration, quadrupole moments of ionic nuclei NMR obs. 2-54882
 Ca₄XP₄, X=Si, Ge, struct. and characterisation (*German*) 2-60955
 Ca₃Y₂Ge₂O₁₂.Tb³⁺ garnet, luminescence studies 2-61952
 CaY₂Mg₂Ge₂O₁₂.Cr³⁺, broad-band emission 2-104914
 CaY₂Mg₂Ge₂O₁₂.Ni lasers, liq. N₂ cooled, pulse-pumped operation 2-102800
 Ca₂Zr₂O₇, existence and stability in ZrO₂-CaO system, phase diagram 2-81759
 Ca(Zn_{1/3}Nb_{2/3})O₃.PbTiO₃-PbZrO₃, elec. and optical props. 2-82795
 CaZrTi₂O₇, powder prep. and densification for fabrication 2-93478
 Ca₂Zr₂Ti₂O₁₆, calzitrile, fluorite-related superstruct., cryst. struct. determ. 2-55934
 CeO₂-CaO, O vacancy diffusion, ¹⁸¹Ta gamma-gamma angular correlation study 2-116096
 CuO-CaO-P₂O₅ glass, IR absorpt. spectra, CuI addition influence 2-116213
 dicalcium lead acrylate, ferroelastic phase transition, lattice const. and birefringence 2-92187
 (Eu,Tm,Y,Ca)₃(Fe,Ge)₅O₁₂ thin film system, domain boundaries (*Russian*) 2-77338
 Fe-garnet films, hard-stripe domains, investig. 2-104673
 Ga_{1-x}Ca_xMnO₃, electronic cond. (*German*) 2-110356
 GdF₃-CaF₂.Nd³⁺, trigonal crystals, disordered, spectroscopy and laser emission 2-82905
 HCl.BSiO₃, quadrupole lines dipolar struct., ¹¹B NMR study 2-110658
 HfO₂-CaO, phase equilib., 1600 to 2800°C 2-88069
 K₂Ca(CO₃)₂, synthetic fairchildite, struct., X-ray study 2-60961
 K₂Ca(PO₄)₂, R=rare earth, Nd³⁺, Eu³⁺ and Gd³⁺ local struct., probes, luminescence study 2-103715
 K₂O-CaO-B₂O₃ glass, microhardness 2-105335
 La_{1-x}Ca_xCoO₃, perovskite, prep., ferromagnetic props., rhombohedral distortion 2-61737
 (La_{1-x}Ca_x)₂(Mn_{1-x}³⁺Mn_x⁴⁺)O₇, indirect exchange interactions, and Jahn-Teller distortions, neutron diff. study 2-66800
 (La_{0.8}Ca_{0.2})MnO_{3-y}, elec. resist. and thermolec. power 2-66551
 MgF₂.CaF₂, recrystallisation pressing, struct. and strength 2-99524
 MgO-Cr₂O₃(Fe₂O₃)(Al₂O₃)-CaO.SiO₂, fused, retrograde stability of periclasite rel. to cracking 2-83103
 (Mn_{1-x}Ca_x)₃(PO₄)₂, cryst. struct. and homogeneity ranges, X-ray diff. study 2-115195
 Na₂Ca₄Al₁₀Si₁₀O₄₀, cryst. struct., X-ray diff. method 2-115188
 NaCaVO₄, cryst. struct. refinement by powder neutron diff. at 300K 2-76374

calcium compounds continued

- NaCl-CaCl₂-SrCl₂, molten, thermodynamic props. and phase diagram, calc. using computer (*Chinese*) 2-105129
 Na₁₁(Na₂Ca)₂Ca₂Ce_{0.67}[Si₄O₁₂][P O₄]₄, phosinaite, cryst. struct. determ. 2-86649
 Na₂O-Ca₂O-SiO₂ glass microstruct., laser scatt., small angle X-ray scatt. and TEM 2-91799
 Na₂O-CaO glass, ion substitution at low temp. by elec. field 2-67277
 Na₂O-CaO glass, thermally toughened and untoughened, crack initiations at microindentations 2-105285
 Na₂O-CaO-Ca₃(PO₄)₂-Na₃PO₄-Na₂SiO₃-CaSiO₃, subsolidus struct. 2-111151
 Na₂O-CaO-SiO₂, proof testing in heptane 2-111280
 Na₂O-CaO-SiO₂, scored glass, fracture toughness 2-83208
 Na₂O-CaO-SiO₂ glass, test pieces with controlled flaws, uniaxial and biaxial strength comparison 2-57414
 Na₂O-CaO-SiO₂ glass, irrad., failure, micromechanical model (*Russian*) 2-77947
 Na₂O-CaO-SiO₂ glass, chemically toughened, crack evolution in Vickers indentation 2-88169
 Na₂O-CaO-SiO₂ glass, bonding props., XPS study 2-93367
 Na₂O-CaO-SiO₂ glass, water content influence on viscosity, T_g, thermal expansion and hardness 2-93632
 Na₂O-CaO-SiO₂ glass, leaching characts., surface roughness and surface area effects 2-93650
 Na₂O-CaO-SiO₂ glass, electron bombardment, Na atom prod. absence XPS study 2-98160
 Na₂O-CaO-SiO₂ glass melts, oxidation state and O activity 2-92233
 Na₂O-CaO-SiO₂ glass rods, fatigue props., Vickers indentation flaws 2-99544
 Na₂O-CaO-SiO₂ glass:Cu,Cr,Er, energy transfer from Cu and Cr to Er 2-99176
 Na₂O-CaO-SiO₂ system glass, corrosion behaviour in water, ESCA obs. 2-93656
 Na₂O-CaO-SiO₂:UO₂²⁺ glass, energy levels, absorpt. and fluoresc. study 2-77565
 NaPO₃-AlF₃-CaF₂ glasses, Raman spectra, struct. models 2-87758
 NiFe₂O₄-CaFe₂O₄, magnetic props. (*Japanese*) 2-82578
 P₂O₅-SnO₂-CaO, Mossbauer and IR spectra quadrupole splitting 2-104767
 (Pb, Ca) ((Ca_{1/2}W_{1/2}), Ti)₂O₃ piezoelectric ceramics and their applications 2-87697
 RbCaF₃, lattice dynamics, Debye-Waller factor near 195K phase transition 2-76609
 RbCaF₃ lattice parameters and thermal expansion coeffs., precise determ. 2-92237
 Si-CaF₂-Si heteroepitaxial structs. formation by vacuum deposition, etching characts. 2-83026
 SiO₂-Al₂O₃-CaO MgO:Ce, U glass-forming melts, U chem., redox interactions 2-93771
 SiO₂-Al₂O₃-Fe₂O₃-CaO-MgO-Na₂O basalt glass, surface conc. profile, AES study 2-93333
 SiO₂-CaAl₂O₄ glasses, three-dimens. network struct. 2-115142
 SiO₂-CaO-Na₂O glass surfaces, interdiffusion of H⁺ and alkali ions, elec. resist. study 2-110034
 SiO₂-Na₂O-CaO-BaO(ZnO) glasses, microindentation hardness 2-93582
 SiO₂-Na₂O-CaO-MgO-R₂O₃ (R=rare earth) glass struct., diff. methods anal. 2-55859
 SmTmCaGe garnet (100) films, Neel walls and line transitions 2-110614
 (Sr,Ba,Ca)Nb₂O₆, diffuse ferroelec. phase transition, optical and dielec. props. study 2-61844
 Zr(Sn_{1/3}Nb_{2/3})O₃-PbTiO₃-PbZrO₃ elec. and optical props. 2-82795
 UCl₄-CaCl₂ melt, density and surface tension meas. 2-113676
 (Y,Eu,Tm,Ca)₃(Fe,Ge)₅O₁₂ system films, FMR study of mag. parameters (*Russian*) 2-77385
 (Y,Sm,Lu,Ca)₃(Fe,Ge)₅O₁₂ films, H⁺ implanted, laser annealing 2-76492
 (YBiCa)₃(FeSi)₅O₁₂, bubble film, growth induced anisotropy, FMR 2-72316
 (YSmCa)₃(FeGe)₅O₁₂ epitaxial film, cylindrical mag. domain behavior in ion implantation advancement channel 2-77347
 (YSmLuCa)₃(FeGe)₅O₁₂ films, ion implanted, cubic anisotropy meas. 2-77340
 (YSmLuCa)₃(GeFe)₅O₁₂-metal interface, mag. parameters, bubble memories 2-72318
 YSmLuCaGe(Ge:Ne(H), ion implanted bubble garnet film, mag. and cryst. props. 2-82644
 Zr(Ca, Mn)₂(Fe,Al)₂Ti₂O₁₆, cubic cryst. cpd. found in Radwaste ceramic, characteris. 2-103705
 Zr_{0.94}Ca_{0.06}O_{1.94}, partially stabilized, elec. cond. rel. to temp. and O₂ partial press. 2-115833
 ZrO₂-Al₂O₃-CaO, sub-solidus phase equil. 2-111161
 ZrO₂-CaO, sputter deposited, microstruct. control 2-115619
 ZrO₂-CaO ceramics, rare earth oxide stabilised, elec. conducting, for MHD generator electrodes 2-88043
 ZrO₂-CaO solid soln., O vacancy diffusion, ¹⁸¹Ta gamma-gamma angular correlation study 2-116096

calculating see calculation

calculating apparatus

No entries

calculating machines see calculation apparatus

calculation

see also graphs; nomograms

No entries

calculators see calculation apparatus

calculators (electronic) see electronic calculators

calculus

see also differentiation; integration; variational techniques

variational calculus, inverse problem, general soln. 2-113257

calibration

see also measurement standards; standardisation

absorption cell for 10 cm wavelength band design and calibration 2-53836

acoustic emitter calibration in bounded space 2-75820

acoustic measurement systems, in infrasound range 2-55385

actinides, gamma-ray spectra, anal., environmental contamination appl. 2-54712

active well coincidence calibration for ²³⁵U meas. 2-113840

ALARA exposures, dose calibrator activity evaluations 2-62774

calibration continued

analyses in liq. solns., calibration curve prep. using exponential dilution flask 2-93838
 angle transducer, microcomputer-based certifying device using reference transducer 2-63976
 Anglo-Australian Telescope prime focus spot sensitometer, photometric calibration technique 2-106550
 astronomical telescope, efficiency calibration for 5-50 MeV γ -rays 2-112325
 Bayard-Alpert broad range ionisation gauge tube, calibration 2-84650
 biomedical NMR imager, Aberdeen, calibration for proton spin-lattice relax. time meas. 2-100088
 biomedical US Doppler gain calibration, proposed standard target 2-100073
 biomedical US scanners, phantom for simple calibration and evaluation 2-100075
 brachytherapy sources, methods for routine calibration 2-94183
 broadband meters in presence of source fluctuations 2-112855
 capacitor microphone calibration, sensitivity variation with level obs. 2-55389
 cellulose nitrate track detectors, neutron dose distrib. meas. in water filled phantom 2-70014
 chromatographs and chromatomass spectrometers, using cryoscopic instrument for analysis of organic compounds 2-57659
 clinical linear accelerator, energy calibration with photonuclear reactions 2-88657
 cloud droplet size meas., calibration of light-scatt. counter 2-58162
 coercimeters 2-107291
 cosmic ray trigger cct. for large solenoidal particle detectors 2-68621
 density meas. of Si-Al electrical steel sheet (*German*) 2-53740
 detectors for high-energy neutrino interactions 2-70105
 dilatometers, device for gain determination 2-112866
 dosimeter, ^{60}Co gamma radiation detection using ionisation chamber, collimation conditions effect obs. 2-59560
 dosimeters and doserate meters, radiation sources standards 2-59550
 DVM calibration, Datron 4000 instrument 2-89741
 Earth's surface, time and frequency generation and maintenance at arbitrary points 2-94614
 eddy current testing of heat exchanger tubing, accuracy and repeatability 2-72932
 Einstein objective grating spectrometer, calibration and efficiency 2-89146
 elastic modulus calibration and resultant loads for long bone cross-sections 2-62853
 electrical measurements and standards, progress in instrumentation (*Rumanian*) 2-74382
 electrical measuring instruments, required intervals between checks 2-95309
 electron dosimetry with general cavities, theoretical anal. 2-70000
 electron spectrometer calibration, ang. distrib. parameters of Ar, Kr, Xe 2-85468
 electron spectroscopy, energy ref., binding energy of $\text{C}_{1\text{S}}$ electrons 2-92328
 EM magnitudes, metrological assurance developments (*Rumanian*) 2-74393
 EM pulsed field source, using biconical antenna 2-79624
 exposure dose rate meters, metrological characts. checking, using Si-Li detectors 2-85404
 fission track dating 2-106340
 fission track dating problems and solns. 2-73724
 flash chamber-proportional tube calorimeter, neutrino detector operation 2-70106
 flow measurement systems, using laser speckle photography 2-76043
 fluorescence quantum yield determ. using solvent spontaneous Raman scatt. as internal standard 2-96626
 force gauges, dynamic calibration 2-95366
 frequency activities overview at National Physical Laboratories, New Delhi, India 2-89658
 frequency and time, present status in Indonesia 2-89659
 frequency standards, reliability, serviceability and performance 2-89661
 galaxy luminosity classification for spirals, local vel. field effects 2-106885
 galaxy photometry on JF photometric system, secondary calibration sequences near clusters of galaxies 2-106819
 gamma-ray Compton telescope, balloon-borne, calibration meas. rel. to props. and performance 2-89147
 gas flow meter calibration system 2-65663
 gas ionization bulb breakdown voltage calibration device, MOS struct. appls. 2-64063
 geodetic instruments checking using cathetometer 2-94533
 geodetic levelling rod calibration procedures 2-78855
 geophysical apparatus with induction transducer, remote control and calibration of receive-amplifying channel (*Russian*) 2-100595
 goniophotometer for calibration of small luminous flux standard lamps 2-79644
 high-pressure high-temperature differential scanning calorimeter 2-95383
 hot-film static-pressure probe for flow meas. 2-97670
 hot-wire anemometers, in flows with widely varying temp. (*German*) 2-81422
 hot-wire probes including low velocity range 2-89653
 hydrophone, gradient, using shake table 2-97331
 hydrophone, press. gradient, calibration in a nondamped body of H_2O 2-81155
 IC temperature transducer, low power, high sensitivity and easy calibration 2-95341
 instrumentation, optimum organisation for calibration and repair 2-95312
 instrumentation control and maintenance (*Japanese*) 2-89699
 interference microscope, thickness conversion const. calibration using white light (*Chinese*) 2-58900
 International Radio Consultative Committee role in co-ordination of time and frequency activities 2-89665
 International Solar Polar Mission, accelerator calibration of COSPIN expt. Low Energy Telescope 2-63251
 intervals between checks of instrums., determ. on basis of stability 2-95311
 intervals between checks of instrums. optimisation 2-95310
 ionisation gauge, 10^{-7} to 10^{-12} mbar, mol. beam method 2-53779
 ionisation gauges for press. meas. in mag. fusion devices 2-84655
 IR collimated calibration source, 1.2-6.0 μm 2-55288
 IUE reseau grids and spectral formats, parameterisation of motion as function of time and temp. 2-68616

calibration continued

Kodak LR-115 track detector for α -particles detection in environment 2-67914
 laser monitoring of reactive atms. species, optogalvanic wavelength calibration 2-93966
 laser radiation pulse power meas., metrological provision 2-90962
 lasers absolute wavelength calibration equipment with automatic adjustment (*German*) 2-108922
 LASSO experiment and its operational organization 2-89670
 lead-glass segmented hodoscope for multiple photon final states detection 2-96378
 length standards and calibration 2-79528
 LF time signals for time and frequency dissemination system of moderate accuracy, sophistication and cost 2-89673
 low-energy housing experimentation, colloquium, Liege, Belgium (May 1981) 2-57763
 magnetic flux meas. instruments certification, in nW range 2-95411
 magnetic fusion devices, press. and gas flow meas. techniques 2-55789
 magnetic materials standard specimens certification and appl. 2-84671
 mammographic recording materials, X-ray sensimetry (*German*) 2-68120
 Maxwellian view optical system, calibration of retinal illuminance 2-62873
 Maxwellian-view optical system calibration 2-95433
 MBE, mol. beam source, collimating effusion cell 2-57298
 Mbq display for an isotope calibrator 2-73351
 medical dosimeter calibration in absorbed dose units using thermoluminescent dosimeters (*Russian*) 2-62769
 Meteosat IR sensors, calibration techniques 2-94522
 Meteosat-1 radiometer response adjustment by ground processing 2-68590
 Michelson interferometer spectrometer, spectral radiance and radiant intensity meas. 2-113009
 microwave attenuation standards, UK improvements 2-101382
 microwave power, working standard 2-95400
 mobile automatic installation for testing metering vessels 2-63977
 multipole magnetic standard for calibrating harmonic induction magnetic field probes 2-58770
 NE 213 scintillation detector, gamma-calibration 2-64749
 Netherlands calibration service NKO 2-112858
 neutron activation analysis of Ca in humans, total body anal., calibration and normalisation 2-73347
 neutron dosimeters, neutron source NBS/NRC development 2-70025
 neutron flux density unit reproduction by neutron-activation method 2-96406
 neutron personnel dosimeter and remmeter testing and calibration, analytic expressions 2-108160
 neutron spectrum calibration apparatus UKPN-1M with ^{252}Cf source 2-54707
 noise sources, using RF-switched radiometer with IF attenuation 2-112990
 oblique light particle detection instrums. detection capability 2-107481
 one-inch laboratory standard condenser microphone, coupler for calibration up to 20 kHz (*Japanese*) 2-102983
 optical fibre attenuator calibration, pyroelectric substitution method using PVF₂ detector 2-86108
 optical fibre near-field core diameter meas. system 2-107302
 optical instrumentation standardisation problems 2-112991
 optical radiation magnitudes, progress in measurements calibration and standards (*Rumanian*) 2-74480
 photodetector absolute calibration using two-photon field generated by parametric conversion 2-55266
 photon dosimetry with general cavities, theoretical anal. 2-70000
 physico-chemical magnitudes, metrological assurance (*Rumanian*) 2-74381
 piezoelectric pressure sensor calibration, for high pressures (*German*) 2-79556
 piezoelectric strain transducer for force meas. in presses, up to 500 tons (*German*) 2-64019
 piezoresistive gauges, calibration eqns. 2-69152
 pocket calibrator for volts and ohms, use with bench instruments 2-101423
 portable precision DC voltage-current transfer standard for electrometer calibration 2-107290
 positron emission tomography, procedure for calibration and correcting data 2-73342
 post yield strain gauge behaviour, calibration 2-89701
 power and energy meter calibration for far IR/near MM wave spectral region 2-95470
 practical reference temperatures using melting point techniques 2-107289
 precise T&F intercomparison between NPL, India and PTB, Federal Republic of Germany via Satellite Symphonie-1 2-89677
 precise time transfer techniques, satellite laser ranging, Indian contribution 2-89671
 precise time-keeping, time and frequency transfer using SABCTV 2-89675
 precision EM meas., conf., Boulder, CO, USA (June-July 1982) 2-101128
 precision time-keeping, modern methods, evolution of TAI and UTC 2-89668
 Preston tube calibrations and direct force floating element meas. in turbulent boundary layer 2-97519
 primary caesium clock development, review, satellite time comparison techniques and NRC 2-89672
 Pt thermometers, calibration at fixed points of IPTS-68 using standard resistances (*Polish*) 2-95378
 pulsed laser wavelength calibration, use of optogalvanic effect and U atlas 2-71270
 pulsed pressure meas. by piezoelectric transducer, calibration by ballistic manometer 2-95315
 PWR prototypic gamma thermometers, fabrication and elec. calibration 2-64564
 pyroelectric detectors, calibration method (*Spanish*) 2-84700
 pyrometers, luminance, using reference black-body radiator 2-53770
 radiation energy characts. comparator calibration, using conjugate-comparator method 2-95471
 radiation protection instruments calibration, comparison of collimated and free air radiation sources 2-64684
 radiometer standard sources certification, based on absolutely black body 2-95439

calibration continued

- rectilinearity and planarity deviations meas., instruments checking means in Soviet Union 2-89688
 rectilinearity and planarity deviations meas., metrological support in USSR 2-69134
 REM counter calibration and neutron flux density meas. for the FMRB 24.5 keV filtered beam 2-113841
 Rumanian national calibration system (*Rumanian*) 2-74380
 satellite remote sensing, vicarious satellite calibration in solar spectral range via calculated radiances 2-112297
 sea surface stress determ. by Seasat-SASS, study of retrieval algorithms calibration 2-83827
 Seasat radar scatterometer, calibration by obs. of Amazon rain forest 2-58148
 SEASAT radioaltimeter height calibration 2-89025
 self-calibrating meas. systems (*German*) 2-53726
 semiconductor detectors, calibration for efficiency calibration, γ -rays intensity meas. from $^{197}\text{Au}(n,\gamma)^{198}\text{Au}$ 2-75129
 sensor calibration for cloud liquid water content meas. 2-89044
 short rod chevron notch specimen for fracture toughness testing of brittle materials, compliance calibration 2-67679
 short-rod chevron notch specimen compliance calibration for fracture toughness testing of brittle materials 2-93718
 SIMS anal., matrix ion species indexed sensitivity factors for calibration 2-95531
 soda glass detector, fission fragment tracks, efficiency calibration and etchant temp. effect 2-96390
 solar magnetic field telescope (*Chinese*) 2-84198
 solid state nuclear track detector study 2-59636
 sound level meters using standard sound source, instrum. error meas. method (*Japanese*) 2-102988
 sound measuring instruments, calibration and standards 2-60334
 spatial analysers metrological certification using optical generator with normalised characs. 2-90963
 spectrochemical analysis, calibration and anal. functions, const. standard deviation theory (*German*) 2-88390
 spectrophotometer, calibration of photometric scale 2-112952
 spectropolarisation instrument, type DKHR-01, circular dichroism study and calibration 2-53819
 standard leaks, methods for calibration 2-74431
 standard time and frequency in Korea, and dissemination by AM/FM broadcasting network 2-89663
 steel, X-ray fluorescence analysis, calibration standards 2-73040
 strain gauges, by moiré interferometry 2-114743
 superconducting susceptometer for high-accuracy routine operation 2-101429
 synchrotron radiation for radiometric calibration 2-107378
 T/F comparisons, precise international, ground and satellite TV systems 2-89674
 temperature meas., British standards, National Physical Laboratory activities 2-58775
 temperature measurement, instrumentation and calibration standards (*Rumanian*) 2-74410
 temperature measurement, standards laboratory design and calibration 2-112857
 temperature sensors, calibration at boiling points of cryogenic liqs. 2-89708
 tensometric data acquisition systems, metrological support problems 2-95365
 thermal diffusion factor of isotopic gases, temp. depend., determ. using column calibration factor 2-86369
 thermocouple thermo-EMF instability, determ. by calc-empirical method 2-69167
 thermocouples checking in range 300-1200°C, metrological certification of test equipment 2-95370
 thermometer, Hg-glass, with 0.01°C scale divisions, zero mark testing instrument 2-64032
 thermophysical low-temp. meas. control, microcomputer-based system 2-53773
 three-port two-microphone cavity for acoustical calibrations 2-75818
 time and frequency, methods and techniques used in New Zealand 2-89660
 time and frequency in Japan 2-89664
 time and frequency meas., conf., New Delhi, India (Feb. 1981) 2-95306
 time and frequency meas., recent activities at Radio Research Laboratories 2-89657
 time and frequency services in Kenya, establishment, future radio broadcasting appl. 2-89662
 time dissemination capabilities via navigation satellites 2-89676
 time synchronisation via INSAT-1 direct reception system 2-89678
 time/frequency services of the US National Bureau of Standards and some alternatives for future improvement 2-89666
 timing receiver, satellite, NNSS 2-89679
 tissue equivalent spherical counter, for linear energy transfer 2-113844
 TLD calibration, γ -irrad. facility 2-102273
 traceability for ionising radiation measurements, conf., Gaithersburg, MD, USA (May 1980) 2-84384
 triple-split probe for reversing flow, characs. and calibration 2-89654
 turbulence measurements with inclined hot wires, calibration procedure 2-91399
 TV system, 3D, for kinematic anal., calibration and performance 2-105862
 US hydrophones, comparison of two calibration methods, medical diagnosis appl. 2-117037
 vacuum gauge, using spinning rotor gauge 2-79603
 vacuum standards, secondary standard ionisation gauge, calibration 2-84654
 vibration and shock meas., using accelerometers 2-53717
 vibration and shock measurement, transducer calibration, comparison and direct methods 2-58806
 VLF phase meas. for precise T&F intercomparison 2-89667
 VLF studies at NPL, New Delhi—experimental set-up and morphology of the data 2-89669
 voltage transfer standard cells, Josephson point-contact junction appl. 2-112930
 white dwarfs, effect of C_2 absorpt. bands on calibration of colour-absolute magnitude relation 2-63403
 X-ray diffractometer, flat specimens holder 2-113090
 X-ray emission lines used as calibration standards in soft X-ray region 2-105006

calibration continued

- α -emitting nuclides as absolute efficiency calibration source for Ge detector 2-59580
 $^{108}\text{Ag}^m$, E1 γ -ray transition energy (*French*) 2-79969
 Al mirror specular reflectance standards, prep. and calibration 2-114405
 Ar, determ. in sputtered films using wavelength-dispersive electron probe microanal. 2-73039
 Ar mini-arc, dispersed source for absolute calibration 2-86066
 B mapping in minerals and rocks using CR-39 polycarbonate plastic detector 2-68522
 Br solar neutrino detector calibration, implications of ^{81}Kr ground state mass 2-59227
 CO_2 , wave-number calibration tables, 500-900 cm^{-1} region 2-113971
 Cu-Fe low temp. thermocouples, props. and calibration (*Chinese*) 2-107323
 Fe content, meas. in human body, in-vivo, γ -rays nuclear reson. scatt. appl. 2-68111
 Fe, X-ray fluorescence analysis, calibration standards 2-73040
 Ge detector, efficiency calibration for 30-2800 keV γ -rays 2-59599
 Ge detector, efficiency calibration for 30-2800 keV γ -rays 2-108232
 Ge, intrinsic, X-ray fluorescence spectrometer, fundamental parameter-based calibration model 2-58976
 Ge spectroscopy, peak-fitting using 80 keV doublet of ^{133}Ba 2-113811
 Ge(Li) detector, energy and efficiency calibration using $^{166\text{m}}\text{Ho}$ sources 2-75121
 Ge(Li) detectors, ^{226}Ra standard source for efficiency calibration 2-113792
 H_2O , wave-number calibration tables, 500-900 cm^{-1} region 2-113971
 Mn-activation detector calibration for intense pulsed energetic neutron sources 2-102355
 N_2O absorpt. lines for calibration of tunable IR lasers 2-74170
 OCS, wave-number calibration tables, 500-900 cm^{-1} region 2-113971
 ^{180}O , energy of 6.13 MeV γ -transition related to ^{198}Au standard 2-95959
 Pt, resistance thermometer, for narrow temp. range 2-64033
 Rn concentration meas. in indoor air using LR-115 and CR-39 detectors 2-67900
 Rn monitors, continuous flow-through, simple procedure for calibration 2-62535
 ^{125}Sb , ^{152}Eu , NBS long-lived mixed-radionuclide standards, photon emission rates determ. 2-59579
 Si narrow-band radiation thermometer for temp. standard establishment (*Japanese*) 2-107292
 Si photodiode absolute spectral response self-calibration using filtered W source 2-89804
 Si(Li) detector and proportional counter calibration for microbeam PIXE anal. 2-59601
 ^{238}U neutron capture rate determ. using Ge(Li) detector 2-102029

californium

- see also nuclei with
 ^{249}Cf , α -emitting nuclides as absolute efficiency calibration source for Ge detector 2-59580
 ^{252}Cf irrad. effects, dysmorphic processes, pathogenetic role in rats (*Russian*) 2-57859
 ^{252}Cf neutron source, shielding expts. with acrylic resin for neutrons and γ -rays (*Japanese*) 2-54671

californium compounds

No entries

calorimeters

- see also calorimetry
 adiabatic, 5 to 300K, for automated energy meas. 2-53766
 adiabatic, for meas. thermal capacity of solid bodies 2-58826
 adiabatic calorimeter for heat capacity meas., 300-700K 2-53763
 assessment of colour-measuring instruments for textile acceptability judgment 2-58877
 block thermostat for a nonisothermic and nonadiabatic calorimeter (*Polish*) 2-95382
 developments in calorimetry, review 2-64823
 differential scanning design, based on heat leak principle 2-53767
 fine-grain marble calorimeter, response and resolution for hadronic and EM showers 2-108239
 flash chamber-proportional tube calorimeter, neutrino detector operation 2-70106
 forward calorimeters, small-angle particle detection in pp collisions 2-108240
 gas sampling EM calorimeter in saturated avalanche mode 2-108229
 heat capacity meas., 0.06 to 3K 2-112904
 HELICON, heavy liq. total absorpt. counter for electrons or photons 2-96372
 high-pressure high-temperature differential scanning calorimeter 2-95383
 ice calorimeter construction and high temp. enthalpies determ. (*Chinese*) 2-64040
 integrator, simple digital, and pulse counter 2-95384
 ionisation calorimeters, electron-proton discrimination capabilities study 2-113836
 laser calorimeter of high sensitivity, principles and construction (*Chinese*) 2-58825
 laser ice calorimeter for pulsed radiation meas. 2-114346
 lead-glass calorimeters and laser based monitoring system for European Hybrid Spectrometer 2-102327
 microcalorimeter, heat cond. batch, computer simulation for deconvolution by D-B finite element technique 2-117161
 microcalorimeter, optimised differential heat cond. soln., for thermal kinetic meas. 2-117160
 modifications for energy storage and recovery appl. 2-53765
 power and energy meter calibration for far IR/near MM wave spectral region 2-95470
 precision calorimeter for determining heats of solution and mixing (*German*) 2-79585
 proportional tube chambers for neutrino calorimeter, resistive charge division appl. 2-70040
 proportional tube EM calorimeter with conductive plastic tube 2-75114
 proportional wire calorimeter 2-102328
 rugged, 1-mil-thick gold foil, with fast rise time 2-95381
 Tian Calvet microcalorimeter, improved dynamic performance (*French*) 2-84629
 Cu-block, high-temperature enthalpy meas. 2-53768
 Fe-Ar liquid segmented calorimeter, performance Monte Carlo simulation 2-75097
 Fe-scintillator modular electron/hadron calorimeter, response to electrons 2-108231

calorimeters continued

- Fe-scintillator segmented hadron calorimeter performance 2-64759
- Li-Al/FeS high temp. battery calorimeter 2-58827
- Pb multi plate liq. Ar calorimeter for elementary particle energy meas., resolution 2-96388
- Pb-solid Ne sandwich detector, EM calorimeter development 2-90393
- U/scintillator, multicell hadron calorimeter in AFS expt. at CERN ISR, test results 2-70035
- U-scintillator hadron calorimeter in axial field spectrometer at CERN ISR 2-90348

calorimetry

see also *calorimeters; specific heat; thermal analysis*

- AC calorimetry, of solids at high hydrostatic pressures 2-66128
- aerosol particle light absorpt. meas., photometric and calorimetric techniques 2-53812
- alkyldiphenylethane, DSC of dissolved H_2O in dielec. fluids 2-89718
- 2-[4-n-alkylphenyl]-5-[4-n-alkyloxyphenyl]-pyrimidines, calorimetric investigation 2-56172
- automation of calorimetric system 2-84602
- benzene-alkane mixtures, excess heat capacities, microcalorimetric determ. 2-104010
- carbon tetrachloride-alkane mixtures, excess heat capacities, microcalorimetric determ. 2-104010
- computerised thermal analysis system, routine analysis and quality control appl. 2-74416
- cooled surfaces, absorbed laser power, calorimetric meas. 2-86027
- dimethyl 3,4-phosphacycmantrane, phase transition, calorimetric and LF Raman study (*French*) 2-110846
- dimethyl ether-trichloromethane vapour, enthalpy of mixing, assoc. model 2-86888
- dimethyl silicone liquid, DSC of dissolved H_2O in dielec. fluids 2-89718
- di-/lactide, thermodynamic props. and thermodynamics of polymerisation (*Russian*) 2-111510
- DTA, computerised extraction of calorimetric information (*Russian*) 2-79586
- fossil fuel related organic compounds thermodynamic props. meas., at Bartlesville Energy Technology Center 2-53764
- frequency response of thermal lens calorimetry 2-102886
- gas flow meter calibration system 2-65663
- isoperibol calorimetry at 10.6 μm using organic vol. absorbers, pulsed energy meas. appls. at Antares 2-107326
- laser calorimetric wattmeter, thermocouple sections selecting system 2-81007
- laser calorimetry, polarisation sensitive technique 2-65290
- laser calorimetry, repetitively pulsed, alkali halide intensity depend. absorpt. meas. 2-60193
- laser energy meas. using calorimeter with conical chamber, absorption coeff. determ. 2-85991
- mirrors, metallic, absorpt. coeff. meas. at 10.6 μm using calorimetric technique 2-70649
- optical absorption measurements of laser optical materials by interferometric calorimetry 2-97044
- polyester/chlorinated PVC blends, miscibility study by calorimetric glass transition temp. meas. 2-92219
- polylactide, thermodynamic props. (*Russian*) 2-111510
- polymer, glassy, approach to thermodynamic equil., improved calorimetric procedure 2-89717
- polymer, glassy, dye laser calorimetry, linear absorpt. coeff., 605-675 nm 2-93221
- PVC, stearate additive interaction, high temp., differential calorimetric obs. 2-81966
- radiation energy characts., comparator calibration, using conjugate-comparator method 2-95471
- respiratory exchanges meas. of different sized animals, automatic and continuous gas sampling, indirect calorimetry 2-62866
- steam turbine steam wetness measurement using calorimeter with two stage heating, application in corrosion protection (*Czech*) 2-107333
- sublimation calorimetric system using Calvet microcalorimeter, construction and testing 2-107327
- thermal relaxation calorimetry in high mag. fields in 2 to 15K range 2-89716
- thermodynamic properties meas. techniques, conf., Albany, OR, USA (Aug. 1979) 2-53425
- thin films, AC temp. calorimetry at low temp. 2-53762
- transparent solids, absorpt. coeffs., calorimetric meas. anal. 2-84630
- triarylpyrylium salts poly-N-epoxypropylcarbazole solns., thermodynamic analysis (*Russian*) 2-74551
- TTF/chloranil, neutral-ionic phase-transition, micro AC calorimetry study 2-86900
- Ag_2S , α to β phase transitions, entropy changes, calorimetric study 2-86847
- Ag_2Se , α to β phase transitions, entropy changes, calorimetric study 2-86847
- $Al_2SiO_5F_2$, fluor-topaz, thermodynamic props. 2-92226
- CaF_2 , surface-to-bulk optical absorpt., 1.3 μm laser rate calorimetry and photoacoustic meas. 2-58921
- CdTe modulator crystals, absorpt. coeff. meas. at 10.6 μm 2-116140
- Cs-CsF(CsCl)(CsI), liq., enthalpies and entropies of mixing, calorimetry study 2-86877
- CuMn spin glass, magnetisation, calorimetric determ. rel. to Maxwell relation 2-92926
- CuMn spin glass, magnetisation, calorimetric determ., rel. to Maxwell relation 2-92928
- Ge, absorpt. calorimetry and laser induced damage threshold meas. 2-60146
- Ge, optical surface and bulk absorption at 10.6 μm , adiabatic laser calorimetry meas. 2-70631
- H atoms, spin polarised, recombination calorimetry at liq. He temps. 2-92307
- $H_{1-x}MoO_3$, hydrogen bronze, enthalpy of formation, microcalorimetry study 2-93808
- H_2O -Ar vapour, enthalpy of mixing, assoc. model 2-86886
- H_2O -trichloromethane vapour, enthalpy of mixing, assoc. model 2-86887
- $H_{1-x}VO_x$, hydrogen bronze, enthalpy of formation, microcalorimetry study 2-93808
- $H_{1-x}WO_3$, hydrogen bronze, enthalpy of formation, microcalorimetry study 2-93808
- NiBe, NiBe₂, enthalpies of formation, soln. calorimetry 2-83402
- SiO_2 glass, low absorpt. loss, temp. depend., laser calorimetry study 2-114391

calorimetry continued

- Ti-Zr solid solns., phase diagram, $\alpha \leftrightarrow \beta$ transition 2-88077
- W (100), total hemispherical emissivity, adsorbate-induced change 2-61182
- ZnSe, absorpt. calorimetry and laser induced damage threshold meas. 2-60146

calorimeters see calorimeters**CAMAC**

- A/D convertor interface with data reduction facilities for nuclear physics expts. 2-64793
- C-CD leased read-out for charged particle identifier 2-64800
- charged particles meas. from fast neutron induced reactions in close geometry 2-108309
- controller for nuclear power plant radiation monitoring 2-64562
- Doublet III, data acquisition and control system for Thomson profile diagnostic 2-80226
- EBT, CAMAC based inter-computer communication system 2-85370
- electronic registration equipment in CAMAC standard, review 2-64813
- fusion reactor neutral beam water flow calorimetry module 2-80283
- gamma-ray scanning system, CAMAC-based, for nuclear safeguards 2-53906
- mass spectrometer, instrumentation, modular system, CAMAC RAM controllers, microprocessor and LSI appls. 2-85511
- MC68000 microprocessor CAMAC system for NMR meas. of polarisation 2-107353
- MFTF, power supply hardware protection, CAMAC based interlock system 2-74989
- microanalysis using charged particle accelerators, control and data handling system 2-95546
- modular HV system for phototube and MWPC appl. 2-75125
- multichannel analyser for fusion X-ray spectrometry 2-85500
- multienergy γ -ray scanner, CAMAC-based, attenuator transmission meas. 2-54729
- multiparameter multichannel anal. system for X-ray sources 2-84767
- neutron time of flight spectrometer, GNEIS, data acquisition system 2-64741
- nuclear instrumentation, computer control at Technical University of Dresden 2-85512
- Particle Beam Fusion Accelerator Performance Monitoring and Evaluation System 2-96409
- PDX neutral beam computer system, development and operation 2-74971
- programmable decision logic module for multidetector expts. (*French*) 2-90410
- pulse height readout system for proportional chambers 2-96397
- streamer chamber tracks digitisation using CCD image sensor and video digitiser 2-75103
- TMX, heavy ion beam probe control using high speed auxiliary crate controller 2-74965
- TMX-Upgrade, diagnostic timing system 2-80230

camera lenses see photographic lenses**camera tubes, television see television camera tubes****cameras**

see also *coronagraphs; television cameras*

- 16 mm cine cameras, image steadiness meas. instrument using moire fringes 2-107441
- 35 mm, tips for prospective buyers 2-58931
- airborne instruments enhancement, graphite/epoxy materials appl. 2-74478
- Anger-camera, linearity meas., results with and without a corrector 2-62751
- autofocus system for lens shutter cameras using NMOS technology 2-101478
- automatic cameras, exposure error meas. instrum. 2-53869
- C-CD array detectors for imaging in VUV 2-114471
- C-CD camera system, for remote meas. of ocean waves dynamics 2-58133
- Canon quick focus system for SLR cameras (*German*) 2-95499
- Canon AF 35 M, automatic focusing distance meas. system (*Italian*) 2-101474
- Canon zoom lens-reflex camera combination, self-adjusting, CCD grating with sensor array (*German*) 2-84723
- cine, quality control radioelectronic meas. apparatus development (*Russian*) 2-69282
- consumer camera market, electronic methods effects 2-95505
- digital CCD camera, appl. to high time resolution obs. of solar flare, (1980 December 17) 2-100868
- digital scintillation camera for single photon computerised tomography appl., concepts and design 2-73343
- eclipse camera for solar corona obs. 2-112405
- electron still-picture camera using CCD image sensor and mag. bubble memory 2-107431
- electronic cameras, Polaroid's 600 system 2-58928
- electronic still-picture camera using CCD solid-state imager and mag. disc 2-107432
- electronically collimated gamma camera, reconstruction algorithms comparison 2-73320
- electronics, appls. in photography (*German*) 2-58926
- electronics applications (*Swedish*) 2-95500
- energy dispersive EXAFS camera development for EXAFS spectra meas. 2-84769
- fast cameras for fast cycling bubble chambers 2-108278
- filmless camera (*Japanese*) 2-113023
- gait analysis, normal and pathological, camera speeds 2-83626
- gamma camera, gated computer-aided, evaluation using dynamic phantom 2-94193
- gamma camera, single rotating head, for emission computed tomographic images, performance characts. 2-100107
- gamma camera performance, quality control of nuclear medicine instrumentation 2-94194
- gamma cameras, Anger-type, routine quality control testing 2-94196
- gas scintillation proportional counter camera for X-ray astronomy appl. 2-78951
- Hasselblad 2000FC System, 2000FC/M modification 2-79695
- Hasselblad System, 2000 FC and 2000 FC/M, body, mirror and F lenses 2-64134
- Hasselblad System, 2000FC and 2000FC/M, body and shutter design 2-64133
- Hasselblad System, 2000FC and 2000FC/M, filters, alternative lenses, multi-prisms and meter prism finder 2-64137
- Hasselblad System, 2000FC and 2000FC/M, individual F lenses 2-64135

cameras continued

- Hasselblad System, 2000FC and 2000FC/M, VFC-6 metering prism and close-up accessories 2-64138
 Hasselblad System 2000FC and 2000FC/M, copying and accessories 2-84722
 high-resolution camera for rapid-cycling bubble chamber photography 2-108288
 high-speed photographic cameras using optico-mechanical commutation systems, defocusing and blurring analysis (*Russian*) 2-74558
 holographic, thermoplastic recording, real-time interferometry appls. (*Japanese*) 2-102745
 intensified video speckle interferometry system, Steward observatory 2-73857
 IR camera, high-sensitivity, for thermoelastic stress anal. 2-70884
 Kodak film disc system, Disc 4000, 6000, 8000 and 2000 camera models 2-64136
 lens-shutter automatic focusing camera rangefinder system simulations 2-91027
 lenses, initial optical schematics calc. using fund. aberration coeffs. 2-70650
 lighting, computer control (*German*) 2-58927
 liquid crystal camera for IR HCN laser mode examination 2-70595
 microelectronics appl. in still picture cameras (*German*) 2-113022
 military appl. of long range oblique photography camera system 2-74530
 Minolta X-700, program system and TTL flash control 2-53861
 motion picture equipment discrete electric drives structure and characts. (*Russian*) 2-89842
 motion picture film position in movie cameras, longitudinal non-stability measurement (*Russian*) 2-89843
 multi-pinhole camera for X-ray film spectroscopy 2-58977
 nuclear medicine, Ge rot. laminar emission system 2-78433
 Pentax LX system, review, data recording facilities, electronic flash unit performance 2-74526
 Pentax LX system, review, general construction, top plate layout, camera front/back, film transport 2-53857
 Pentax LX system, review, lens specifications, system ergonomics, comparison with other systems 2-74528
 Pentax LX system, review, shutter, battery power system, power winder, motor drive 2-74525
 Pentax LX system, review, SMC Pentax-M lens test reports 2-74527
 Pentax LX system, review, through the lens exposure metering system 2-69270
 Pentax LX system, review, viewing system, focusing screens, viewfinder display, dark chamber exposure modes 2-53859
 Pentax ME-F, TTL autofocus 2-53860
 photofluorographic camera coupled with image intensifier, MTF meas., performance for clinical appl. 2-73346
 picosecond high-power switching and applications 2-97069
 plastic window for ultrasoft X-ray studies 2-84096
 point focusing X-ray camera and the study of the total external reflection 2-53910
 positron camera, large-area stationary, using wire chambers 2-78430
 positron camera system for emission tomography of brain 2-73338
 reconnaissance prism panoramic cameras 2-74529
 reflective wide-angle pinhole camera 2-89835
 remote camera release, using CdS cell, bipolar transition, LED indicator 2-84725
 Rolleiflex SL 2000 F Motor camera, electronic controls (*Italian*) 2-101473
 SBG satellite-borne camera, variable star obs. appl. (*Russian*) 2-79113
 Schmidt 14 cm camera, photographic atlas construction (*French*) 2-84112
 scintillation camera characts. and test conditions, performance standards 2-94195
 scintillation cameras, quality control using a minicomputer 2-62752
 solid state camera for low cost image processing 2-84731
 solid state still camera and the future 2-53856
 Soviet cameras, information parameters evaluation 2-101486
 streak camera, picosecond, step-by-step calibration 2-95496
 streak camera operation and appls. 2-113024
 synchroscan streak camera with microchannel plate, combined operation with CW dye laser 2-101487
 TEM, camera constant determ. (*Czech*) 2-55815
 thermoplastic film camera for holographic recording 2-108838
 ultra-high-vacuum heating camera for in situ synchrotron radiation X-ray topographic studies 2-95576
 UOSAT satellite-borne Earth imaging system, educational applications 2-117498
 veiling glare in photographic systems 2-74544
 velocity modulating camera, appl. to obs. of planetary nebulae in centre of (M31) 2-74042
 X-ray camera for single cryst. studies at high temps. under controlled atmosphere 2-65803
 X-ray focusing camera for macromolecular crystallography with synchrotron radiation 2-81628
 X-ray Weissenberg goniometer, low temp., with closed-cycle cooling to 28K 2-65804
 Ge laminar emission camera 2-73324
 HgI₂ position sensitive detector, operating characts. 2-70059

candoluminescence see *luminescence*

canted spin arrangements

- see also *weak ferromagnetism*
 actinide mononitrides and monochalcogenides, Coqblin-Schneffer interaction and mag. orderings and excitations theory 2-72184
 antiferromagnets, magnetically ordered phases, field direction depend. (*Japanese*) 2-72164
 cerium mononitrides and monochalcogenides, Coqblin-Schneffer interaction and mag. orderings and excitations theory 2-72184
 Heisenberg magnet, quenched random site, with competitive exchange interactions, high temp. mag. states in simple cubic and BCC lattices 2-56816
 weak ferromagnets, one-dimens. and two-dimens., differential susceptibility meas. and mag. phase diagrams 2-56840
 Co¹⁹F, temp. depend. of local mag. fields 2-82760
 Cu_{1-x}Mn_xFe₂O₄, spin struct. and hyperfine fields, Mossbauer study 2-66959
 FeGe₂, canted antiferromag., magnetisation meas. (*Russian*) 2-98907
 Fe(Mn_{1-x}Pt_x)₂, antiferromag. structure, neutron diff. study (*Russian*) 2-87477
 HoIG, mag. umbrella struct., neutron diff. study 2-77267

canted spin arrangements continued

- Mn_{1-x}Zn_xFe₂O₄ ferrite, exchange interactions and canted-collinear struct. transition temp. calc. 2-110575
 PrAg, magnetisation and susceptibility meas. 2-116032

capacitance

- see also *photocapacitance*
 5 kV vacuum feedthrough connector with low capacitance and microphony 2-75122
 amorphous semiconductors, electronic gap state density, calc. from field effect and C-V data 2-76886
 DLTS system, constant capacitance, anal. and design considerations 2-76965
 ferroelectric semicond. p-n junction, capacitance, spontaneous polarisation and pyroelectric current 2-115881
 MOS ion-implanted structs., dopant density from maximum-minimum capacitance ratio 2-77195
 MOS structure, ion implanted, capacitance-voltage characts., temp. depend. 2-77191
 MOS structure, min. value of IF space-charge capacitance 2-66654
 MOS structure with buried layers, props. from nonequilib. C-V meas. 2-87396
 p-n junctions, asymmetric, capacitance calcs. 2-104476
 phospholipids, synthetic Langmuir films, elec. props. meas. 2-72092
 semiconductor, space-charge capacitance, quantum effects 2-77080
 semiconductors, thermal filling effects in capacitance expts. on deep levels 2-66481
 SOS structures, Hall mobility and capacitance meas., internal stresses and pot. fluctuations influence 2-82470
 surface space charge capacitance, determ. using light probe 2-77449
 Al/amorphous Se/Al struct., capacitance and photocapacitance, time depend. meas. 2-56724
 Al-Al₂O₃-Au struct., dielec. props. meas. at low freq. (*French*) 2-72075
 Al-Si₃N₄-SiO₂-Si MNOS struct., charge trapping, oxide thickness effects, capacitance and internal photoelec. effect study 2-98751
 Al₂O₃ film, electron beam evaporation prep., appl. to GaAs MOS diodes 2-62068
 Au-β-PbF₂ thin film interface, XPS and elec. meas. 2-87080
 CdS solar cells, deep trap levels obs. by capacitance meas. 2-88431
 GaAs, bulk, main electron trap, effect of elec. field and current injection 2-72009
 GaAs-Si₃N₄ interface quality improvement by surface treatment and annealing 2-110487
 GaAsP, deep level studies on traps showing nonexponential kinetics 2-115689
 GaP, deep level studies on traps showing nonexponential kinetics 2-115689
 Hg_{1-x}Cd_xTe-native oxide MIS struct., elec. props. meas. 2-87399
 InP-P₃N₅ MIS devices with CVD P₃N₅ gate simulating film, elec. props. 2-99346
 InSe-Au Schottky barrier diode, elec. and optical props. 2-77157
 MIS structure, minority carrier accumulation and capacitance under light illum. 2-115907
 Nd₂O₃ films, electron beam evaporated, dielec. props. meas. 2-72422
 Pd-SiO₂-Si struct., isothermal H₂ desorp. 2-110135
 Se-As alloy film, amorphous, capacitance changes during struct. relax. 2-91785
 Si, amorphous, Schottky barriers, theory of capacitance-voltage meas. 2-61554
 Si, amorphous film, gap state density, high freq. capacitance-voltage determ. 2-56429
 Si p-n junction, graded dislocation, capacitance-voltage meas. 2-104293
 Si:Au-SiO₂ MOS struct., Au related. interface states, quasi-static capacitance study 2-72069
 Si:Fe(V)(Ti)(Mn), deep levels under hydrostatic press., isothermal capacitance study 2-66477
 Si:H, amorphous Schottky diodes, capacitance-voltage characts. calc. 2-66667
 Si:H amorphous MIS struct., Langmuir-Blodgett film 2-87410
 Si:P, electron irradi., electron trap study by transient capacitance 2-110282
 Si:P, electron irradi. damage, capacitance and dielec. loss meas. 2-92037
 Si-SiO₂ interface, elec. props., negative bias-temp. test influence 2-77190
 Si-SiO₂ interface props. studied by constant capacitance DLTS method 2-61606
 TeO₂ thin films, dielectric studies 2-93114
 Yb₂O₃ thin films, dielec. loss factor and capacitance 2-110760
 ZnS:Mn,Cu,Cl, amorphous and cryst. electrolum. film, elec. cond. props. meas. 2-87429

capacitance measurement

- autoranging capacitance meter for range 100 pF to 1000 μF 2-74462
 charge and discharge time meas. methods, use of DVM (*German*) 2-74461
 circuit elements having low Q-factor inductance, capacitance and resistance meas., impedance meter (*Rumanian*) 2-89738
 digital capacitance meter, using 555 dual timer, LED indicators 2-84610
 digital LCR measurement instrumentation 2-89742
 dilatometer using bridge cct. for capacitance meas. 2-112889
 glass, cellular, strength limiting defect detection by dielectric meas. 2-105392
 isothermal capacitance transient spectroscopy, meas. method 2-84660
 metal/soln. interface, meas. using AC bridge 2-107346
 microcomputer-based apparatus for DLTS and C-V meas. 2-95332
 MOS structure, bulk generation lifetime and surface generation vel., rapid determ. by saturation capacitance meas. (*Chinese*) 2-92760
 planar capacitors in SHF range 2-58845
 PWM technique 2-101408
 semiautomatic system for measuring the nonequilibrium capacitance of semiconductor structures 2-112921
 semiconductor junctions, method for meas. of capacitance, series and shunt resistance 2-84668
 semiconductors, deep centres concentration, determ. by rapid capacitance relax. meas. of p-n junctions and Schottky barriers 2-69201
 p-Si/methanol interface photoelectrochemical cell characterisation using capacitance-voltage measurements and cyclic-voltammetric measurements 2-105578
 n-Si/methanol interface photoelectrochemical cells characterisation using capacitance-voltage and cyclic-voltammetric measurements 2-105577
 standard for 1 to 100 MHz range, Soviet All-Union Verification Scheme 2-58843

capacitance measurement continued

thin-film capacitance humidity sensor, fabrication using planar MOS technology 2-64054
 units realisation, progress at NPL (India) 2-101375
 very low frequency, measuring system (*Japanese*) 2-64069
 Si n-p solar cell, minority carrier lifetime and diffusion length determ. by self-biased capacitance meas. 2-116818
 Si:Al, mid-gap levels investigation by DLTS and transient capacitance meas. (*Chinese*) 2-66473

capacitance meters *see capacitance measurement***capacitor storage**

150 kV, 100 kA spark gap switch for Marx generator 2-97831
 200 kV capacitor band as current source for dense plasma focus 2-91635
 CANDU moderator pipe leak repair by exploding wire shock wave 2-90284
 capacitive accumulators as energy source for controlled thermonuclear fusion 2-64643
 high-power RF heating system for long theta-pinch 2-91661
 low-compression theta-pinch pulse power systems and diagnostics 2-91660
 Nova, high density energy storage capacitor 2-80309
 Nova capacitor banks, performance and cost analysis using Weibull statistics 2-96400
 pulse discharge energy storage, repetitively operated, database creation programme for design and fabrication for high reliability appls. 2-90416

capacitor stores *see capacitor storage***capacitors**

see also electrolytic capacitors; thin film capacitors; varactors
 200 kV capacitor band as current source for dense plasma focus 2-91635
 hydrostatic analogy for two-capacitor problem 2-94960
 Millikan capacitor modified for photoemission studies 2-57258
 MNOS capacitors, determ. of energy density distribution and capture cross-section of interface states 2-66652
 MNOS structures in region of punchthrough current, conductance and noise 2-104498
 MOS capacitor structure, elect. characts. of interface between laser-crystall. poly-Si and underlying insulator 2-92770
 MOS capacitors, X-ray irradiat. effects, deep traps 2-77194
 Nova capacitor banks, performance and cost analysis using Weibull statistics 2-96400
 planar capacitors in SHF range, capacity and dielectric loss angle meas. 2-58845
 polypropylene foil condenser, thermoelectret, TSC study 2-72406
 pulse discharge energy storage, repetitively operated, database creation programme for design and fabrication for high reliability appls. 2-90416
 water electric breakdown props. in 1 kHz repetitively pulsed burst conditions 2-99042
 GaN-GaAs MIS capacitors, interface states characts., G-V, C-V and transient capacitance anal. 2-92776
 Si-MOS structures, interface-state density investigation 2-66653

capacity, channel *see channel capacity***capillarity**

see also bubbles; contact angle; drops; foams; liquid films; surface tension
 adsorptive solid spheres, liq. capillary bridges, physical model 2-98437
 band broadening in turbulent-flow liq. and gas chromatography, retention effects 2-116733
 colloidal crystal with oscillatory flow, periodic structures 2-86337
 container-liquid system dynamics, capillarity effect 2-91228
 drop, spreading by capillary action 2-109409
 drop, thermocapillary and buoyant flow in space laboratory 2-76779
 droplet formation, light-induced, in capillary films of solns. 2-115503
 fast capillary jets nonaxisymmetric flow buckling regime 2-109384
 gravity waves, damping 2-75979
 hydraulic conductivity in porous media (*German*) 2-114897
 hysteresis, fluid boiling on surface of porous coating (*Russian*) 2-60363
 interface mean square fluctuation, capillary waves 2-86978
 liquid jets in parallel airstream, instability and breakup 2-81379
 liquids, evaporation from capillaries, corona discharge field effect 2-114626
 liquids, flow in capillary tube, rheological props. determ. from response functions of flow struct. 2-60650
 2,6-lutidine-water mixtures, wetting transition, capillary parameters meas. 2-71775
 newtonian, wetting film, equilib. profile of transition zone 2-66321
 Newton fluids, viscosity automatic measurement by capillary (*French*) 2-60677
 non-miscible fluid flow through hexagonal pattern (*French*) 2-86329
 percolation and capillary displacement in porous media 2-91533
 thermocapillary flows in two-dimensional slots 2-109408
 viscometers taking into account surface tension effects 2-91567
 Ar-N₂ mixtures, gaseous, viscosities, capillary flow meas. 2-110026
 CdS powder particle perfection, fused CdCl₂ and Na₂S_x solvent effects 2-105066
 o-D₂, capillary const. and surface tension, 20 to 36K (*Russian*) 2-82081
 p-H₂, capillary const. and surface tension, 20 to 32K (*Russian*) 2-82081
 Ni, high-porosity strips, capillary infiltration by Pb-Sn 2-115506
 Ti-B(C), combustion under ultrasonic vibrs., capillary flow effects 2-116700

capillary phenomena *see capillarity***capillary waves**

bounded capillary fluctuations, self-gravity constraint 2-114828
 deep water, weakly nonlinear steady gravity-capillary waves 2-91473
 nitroethane + 3-methylpentane mixt., thermally excited capillary waves, light scatt. spectroscopy 2-75982
 nonviscous liquid, surface sp. ht., vibr. contrib. 2-56325
 water waves, wind-driven gravity-capillary waves, steady state distrib. 2-70970

capture cross-sections, nuclear *see nuclear reactions and scattering***Carathéodory's principle** *see thermodynamics***carbon**

see also nuclei with
see also carbon fibres; charcoal; diamond; graphite
 abundance and chem. evolution in interstellar medium in solar neighbourhood 2-63579
 abundance in H II regions, IUE obs. of Magellanic Clouds 2-58444

carbon continued

abundance in RR Lyrae stars from visible photometry/spectra obs. 2-73978
 abundances in α Lyrae and α Caris Majoris from spectral obs. 2-68759
 activated, surface oxide structures, spectral obs. 2-78128
 adsorbed layer on Ru(0001), adsorbate band dispersions, photoelectron spectra study 2-66446
 adventitious, binding energy of C_{1s} electrons, energy ref. in electron spectroscopy 2-92328
 air impurities: radioactive carbon dating and computerization 2-57747
 air/C electrodes, charact. structure and hydrophobic properties effects 2-116703
 amorphous, short range atomic struct., comparison of diffraction analyses 2-71354
 amorphous, thin layers, 2D-, 3D hopping conduction (*French*) 2-92604
 amorphous thin film, struct., scanning electron diffraction study 2-86567
 antireflection coating for Si solar cells, SIMS anal. 2-83492
 asymptotic giant branch star, core C-burning model 2-58337
 asymptotic giant branch stars of small core mass, C brought to surface by semiconvection 2-106699
 atom, electron elastic scatt. at intermediate energies 45 to 750 eV, modified Born approx. 2-102622
 atom, high Rydberg states, populations assoc. with radio recomb. lines, interstellar appl. 2-74055
 atom, ionic charge state distribution in solar energetic storm particle enhancement 2-94570
 atom, self-consistent field equations based on the variation principle using the square of the Hamiltonian 2-75182
 atomic arrangement by X-ray diffraction, radial distrib. anal. 2-81673
 band structure, tight binding calc. 2-66443
 C:H(D), ion-implanted impurity retention, release and isotope exchange 2-69848
 catalytic graphitisation, process characts. and mechanism 2-78129
 chemical reaction and sputtering 2-111490
 coated ⁷⁶Se targets, prep. by evaporation 2-108181
 cohesion, polymorphic transition, elastic and dielec. props. 2-60919
 contamination of GaAs MBE substrate, thermal removal from surface 2-116572
 content and distrib. in high-purity Ge single crystals 2-70052
 detection by ¹²C(d,p)¹³C reaction in Pt film 2-62447
 determination in thin Si wafers by IR absorpt. spectrometry 2-93840
 diamond-like, quasi-amorphous hard film deposition and characteris., review 2-57307
 diffusion in austenitic steel, strongly radioactive, X-ray microanal. (*French*) 2-67786
 diffusion in Be, dislocation damping 2-56262
 diffusion in Fe-Ni alloy, transform-induced anomaly 2-71727
 disordered, micropore struct. obs. by high resolution electron microscopy 2-78024
 dust grains in interstellar medium, graphite grains and disordered C grains models 2-89345
 electrodes, high-surface area, in-situ Mossbauer spectroscopy of adsorbed species 2-93070
 electron momentum densities, Compton scattering in electron microscope study, EELS technique 2-67166
 emission to atmosphere from bushfires in intertropical savannah zones 2-112031
 energy loss of H₂⁺ traversing ultra-thin foils, cluster effects 2-81855
 fast ions reson. coherent excitation in Au crystals 2-76537
 film, electron irradiation obs. in vicinity of ice 2-92044
 film, exoelectron transfer through evaporated films (*Japanese*) 2-57275
 film, hopping conduction, graphical data interpretation 2-82497
 film, ion implanted, resist. changes, plasma energetic particle probe appl. 2-115041
 film, sputter deposition 2-62066
 film adsorbed on Ir, study by Auger electron spectroscopy and thermionic emission 2-66332
 film formation by laser evaporation and ion beam sputtering 2-116370
 film support, surface activation for biological electron microscopy 2-117172
 films, evaporated, electron transport, semicond. and hole metal behaviour 2-61461
 first wall material evaporation in ICF reactor utilising gas protection 2-74920
 fixation by lightning in primitive atmosphere 2-63098
 foil, energy loss of 300 keV He⁺ and N⁺ ions 2-81864
 foil, OH₂⁺ break-up, H₂⁺ component study 2-75371
 foils, H₂⁺ dissociation, interatomic separation and relative vel. distrib. calc. 2-75370
 foils + H⁺ (H₂⁺) (H₃⁺). Balmer emission yields meas. 2-114089
 fusion materials, nonmetals, radiation damage parameters, neutron and x-ray interactions 2-74898
 gas, transport props., atomic interaction pots. 2-97689
 glassy IR dynamic high temp. target irradi., spatial and temporal effects 2-81003
 granular film, nonscalar 1/f cond. fluctuations 2-82413
 He 2-131, very low excitation planetary nebula, C abundance determ. from UV spectrum 2-94817
 human total body C, meas. by counting neutron inelastic scatt. γ -rays 2-83650
 impurity, on Ti surface, oxidation 2-72882
 impurity, on ZrO₂-Y₂O₃ thermoionic cathode, Auger electron spectroscopy 2-11013
 impurity profiles in stainless steel sodium-cooled reactor fuel elements 2-54490
 interstellar C I, influence of low temp. dielectronic-like recomb. on radio recomb. lines 2-112314
 ion source, using duoplasmatron 2-85442
 ion-beam deposited diamond-like C, improved optical elements for high powered lasers 2-65323
 ions, electron affinity calc. using MCSCF wave function, CI calcs. 2-96759
 isotopes in Galaxy, evolution from galactic chem. evolution model 2-68888
 islands, stability on Rh-Pt (10 wt.%) (111) surfaces 2-87089
 L-shell vacancies and radiative electron capture prod. in Br ions bombarding thin C targets 2-75412
 longitudinal range distrib. for ¹²C ions 2-64821
 materials with Z₁=23-30, electronic stopping cross section for 30-300 keV protons 2-66086
 mesophase, in situ obs., 400-500°C (*French*) 2-76304

carbon continued

- metal-C films, graded index, solar absorbing, prod. by dual cathode sputtering 2-99335
 meteorite C, H and N isotopes: in carbonaceous chondrites 2-68684
 meteorites, H₂, C and N₂ concs. and isotopes in carbonaceous chondrites 2-68683
 molecular state of H₂⁺ traversing ultra-thin foils 2-81856
 molecule, A^{II}, state, vibr. levels radiative lifetimes, time resolved spectra obs. 2-63226
 molecule, energy differences using an accurate local density functional, spin-flip energies calc. using Alpha approx. 2-70122
 molecule, HF Slater wave functions calc. 2-96441
 molecule, MC SCF calculation of energy hypersurface, infinite order contrib. 2-80456
 needle emitter for B and Al 2-89854
 neutron irradiated material, restoration of struct. and props. during thermal annealing 2-86733
 neutron irradiated material, thermal and elec. cond. restoration during annealing (*Russian*) 2-66303
 NGC 6720 (Ring Nebula), C/O ratio, UV spectral obs. 2-63590
 NGC 6752, globular cluster, origin of C and N vars. 2-68839
 nuclear target development, conf., Gatlinburg, TN, USA (Oct. 1980) 2-106997
 oxidation, of monolayers on Ir, kinetics 2-66373
 oxidised, IR photoacoustic spectra, specular and diffuse refl. effects 2-110832
 particles, van der Waals forces, coagulation rate meas. 2-93822
 particulate, collected on Teflon filters, monitoring with photoacoustic and transmission techniques 2-53850
 photoelectric cross sections 2-96514
 plasma, CO₂ laser produced, acceleration of multi-species ions, props. 2-109550
 polarisation wave wavelength meas. 2-80776
 polyethylene coated C-black, secondary ion mass spectroscopy 2-93843
 polymer, C particle filled, elec. cond. as a function of C content 2-92617
 pyrocarbon coatings, deposition and charact., prod. by use of CO₂ dilution 2-113617
 pyrolyte, low temp., prep. from cis-1,2-dichloroethylene 2-78075
 radial electron density distribution meas. of PTFE reduction product 2-76308
 recrystallisation during diffusion-limited liquid-phase sintering 2-67234
 red giant stars, metal deficient, C and N abundances 2-84233
 world rivers, C,N, and P transport, review 2-106148
 RY Sagittarii, R. Coronae Borealis variable, amorphous C smoke rel. to circumstellar extinction 2-106747
 soft thermopower, 4.2 to 280 K, rel. to phonon drag, heat treatment temp. influence 2-77103
 stainless steel-C films prepared by reactive magnetron sputtering, optical constants and microstructure 2-99838
 steel, 316 plates, effects of C and N on corrosion resist. to liq. Li 2-105370
 stopping power for fast N and O diclusters 2-81854
 stripper films prep. and characterisation 2-108173
 stripper foil lifetimes, temp. influence 2-75090
 stripper foils, procedure for rapid evaluation 2-108175
 stripper foils, recent development work and meas., review 2-108176
 Sun, UV spectral redshift indicating downflow of material 2-73945
 surface, 32-2000 eV deuterium deflection 2-116316
 surface, Ni migration, TEM obs. 2-86983
 surface Ar⁺ ion irradi. damage 2-74929
 surface modification by H ion erosion 2-93655
 target, stopping power and effective charge of heavy ions 2-76543
 target for laser produced plasma, Al covered, ablation thickness estimation by ion expansion anal. 2-91636
 thin film, neutralisation of 50-230 keV H ions 2-111015
 thin films, plasma deposition, electron diff. anal. 2-104198
 thin target foils, electron impact, K-shell ionisation, bremsstrahlung and electron-electron bremsstrahlung 2-75404
 white dwarf, accreting, C-burning model 2-58337
 Al-C, interstitial solid solution, energy of mixing 2-92216
 Al₂Ga_{1-x}As₂C, acceptor states, photoluminesc. study 2-104931
 C coated and polished stainless steel, secondary electron yields 2-80214
 C foil + H₂⁺ (H₃⁺), convoy electrons dwell-time depend. 2-59922
 C foil + H⁺ (He⁺) (He²⁺), convoy electrons dwell-time depend. 2-59922
 C foil + H⁺ (He⁺) (Ti⁴⁺) (U⁴⁺) (H₂⁺) (H₃⁺) 2-75389
 C foil + H⁺ (H₂⁺), inner shell ionisation by ion bombardment 2-75391
 C foils behaviour under ion irradiation 2-66076
 C I abundance in bright rim cloud assoc. with H II region NGC 1977 2-84300
 C I in immediate solar vicinity, first interstellar detection in UV 2-117734
 C II and C III, spin-forbidden lines, oscillator strength calcs. 2-85590
 C III, wavelengths, fine struct. and decay times meas. using beam-foil technique 2-64898
 C IV (11-10) transition group in Wolf Rayet stars, origin of 3.3 μm emission line 2-63453
 C IV in sunspots, evidence for transition region oscils., UV obs. 2-63328
 C IV resonance lines profiles in hot stars spectra, observational test of temp. struct. in stellar atmospheres (*Russian*) 2-112435
 C V and VI, resonance line intensity in TFR Tokamak plasmas 2-55769
 C V and VI X-ray emission lines, interstellar studies 2-63549
 C VI line in dense plasma, Stark profile calcs. 2-103453
 C⁺ impurity ion sputtering yield for first wall materials in fusion reactors 2-74921
 C⁺, ion mobility in He, drift tube meas. 2-91585
¹³C chem. shifts, meas. in solids 2-79632
 C²⁺, electron impact excitation cross sections calc. 2-114112
 C²⁺, ground and metastable states, photoionisation cross section calcs. 2-102447
 C³⁺, Auger transition lineshape, CO⁺ Coulomb explosion influence 2-78068
 C³⁺, ground state, inner-shell photoionisation cross section calcs. 2-102447
 C⁴⁺, inelastic scatt., excitation, relativistic Born cross sections 2-114116
 C⁴⁺, energy and transition probabilities correl. wavefunctions calcs. 2-113874
 C⁵⁺, X-ray laser research, progress and trends 2-108855
 C:F, implanted and evaporated layers characterisation by RBS and PIXE anal. 2-99724
 C:H, amorphous, sidebands in luminesc. spectra 2-67111

carbon continued

- C:H, amorphous glow discharge film, photoluminescence and ESR spin density 2-93244
 C:H, H isotope exchange, depth resolved meas. 2-69847
 C:H amorphous thin films, hard, optical props. 2-99207
 C/Fe abundance ratio in halo dwarf stars 2-112446
 C-Cds-metal, switching struct., with potential barrier, elec. characts. 2-87407
 C-foil + Al⁺(Si⁺)(P⁺)(S⁺)(Cl⁺), absolute L-shell Auger electron yield meas. 2-75393
 C-foil + Ar⁺(Kr⁺), relative level populations expt. study 2-75397
 C-foil + Cl⁺(Fe⁺)(Cu⁺)(Br⁺), projectile K X-ray emission, target thickness depend. 2-75394
 C-foil + Ga⁺(Ti⁺), relative level excitation study 2-75398
 C-foil + He⁺, HeI 3d'D alignment, depend. on ion current density 2-75395
 C-foil + He⁺ beam interaction, quantum beat study 2-75396
 C-foil + O⁺(S⁺), fast ion excited Rydberg states 2-75392
 C-polymer composites, elec. cond. props. 2-61462
 C-SiC, structured composite limiters for ablation control in fusion devices 2-74902
 C+heavy ions, convoy electron prod. 2-77647
 C+Ni⁺, double-differential cross sections for delta-electrons 2-75401
 C⁺+Au, impact ionisation, L₃-subshell alignment 2-102605
 C⁺+H₂, pot. energy surfaces, CEPA calcs. 2-93766
 C⁺+H₂, radiative association reaction, rate coeff. reinvestigation 2-58235
 C⁺+H₂(N₂), atomic ground state, charge transfer cross sections 2-75417
 C⁺+O₂(NO), reaction rate coeffs., energy depend. 2-93787
 C⁶⁺+H, charge transfer, at. orbital expansion calcs., curved-line trajectory obs. 2-75376
 C⁶⁺+H(1s), electron capture cross section, Landau-Zener formula 2-114101
 C⁶⁺+H(1s)C⁵⁺(n,l)+H⁺, electron capture cross-section, perturbed stationary states calcs. 2-59930
 C⁶⁺+He, electron capture into selective state, energy spectra meas. 2-102608
 C⁴⁺+He, one-electron capture cross sections 2-96723
 C₂, ¹²_g state, Newton-Raphson eqns., MCSCF calcs. 2-108345
 C₂ absorption bands in C₂ white dwarfs, influence on UVB magnitudes 2-63403
 C₂ IR bands in solar photosphere spectra, oscillator strength determ. 2-79061
 C₂ in interstellar clouds, excitation, radiative lifetimes and rot. levels 2-101009
 C₂, interstellar, IR absorpt. lines obs. towards ϵ Ophiuchi 2-63558
 C₂ interstellar column density determ. 2-63226
 C₂ molecular ion structure study using charge-coupled imaging device 2-75458
 C₂+H₂(O₂)(methane) reactions, temp. depend. 2-93765
 C₃, neutral and ion molcs., struct. determ. by Coulomb explosion 2-93795
 C₃, mol. struct. studied by Coulomb explosion after acceleration to 4.67 MeV 2-54980
 C₃, mol. struct. studied by Coulomb explosion after acceleration to 4.67 MeV 2-54980
 C₄ radicals, excited, chemiluminesc. in diffusion flame 2-62400
 C₁, term energies and oscil. strengths, Thomas-Fermi Hartree Fock calcs. 2-80459
 C(II) plasma, UV Stark widths and shifts, photoelectric meas. 2-75212
 CIV, photoionisation from ν - γ decay, in galactic halos 2-74066
 α , A=12-14, K-series muonic X-ray energies determ. 2-74728
¹³C, effective activity for very short-lived radioisotopes (*Japanese*) 2-101851
¹³C projectiles at 250 MeV amu⁻¹, K vacancy prod., relativistic trajectory Monte Carlo method appl. 2-80806
¹³C/¹²C from formaldehyde obs. towards galactic centre, variation with distance 2-89334
¹³C/¹²C in galactic centre molecular clouds, SHF obs. 2-63591
¹³C autocorrel. NMR using double-quantum coherence 2-107374
¹³C isotope separation by laser excitation of CO vibr. mode 2-85830
¹³C/¹²C in tree rings, var. rel. to atm. CO₂ conc. 2-78811
¹³C/¹²C isotopic palaeo-oceanography of Caribbean and E Pacific, role of Late Neogene Panama uplift 2-111968
¹³C+H⁺, K-shell ionisation accompanying nuclear scatt. 2-65081
¹³C concentration measurement in multichannel scintillation system, data processing method 2-102325
¹³C content in terrestrial food chain 2-117096
¹⁴C film preparations for nuclear targets 2-85466
¹⁴C in atmos., conc. due to nucl. power programme 2-62526
¹⁴C in atmosphere, effect of climatic parameters, simulation 2-106174
¹⁴C, meas. in CO₂, tunable diode laser sensitivity spectroscopy 2-65103
¹⁴C meas. of C combustion sources contrib. to urban air particulate levels 2-62523
^{12,13}C⁺ beam foil interaction, atomic polarisation 2-69636
 C2p²(³S₀), excited state, collisional quenching, UV obs. 2-59736
 Cd electrodes, plastic-bonded with active C catalyst O₂ recombination rate 2-116795
 (Fe,Cr)₃O₄ (chromite)+C, in meteorites, noble gases sorption 2-100845
 α -Fe-C, electron irradi., vacancies and impurities, positron lifetime study 2-66065
 Fe-C, O, min. detectable atomic fractions, STEM study, EELS technique 2-67165
 Fe-C, positron trapping and detrapping 2-77616
 Fe-C, ferrite, C cluster formation, critical cluster size, computer calc. 2-67340
 Fe-C-Si melts, thermodynamic study 2-71668
 Fe₄B_{16-x}C_x, glassy, crystallisation, magnetisation 2-55862
 Fe₂O₃+C in meteorites, noble gases sorption 2-100844
 GaAs:C, site of substitutional C impurity, Fourier transform IR absorption study 2-91991
 GaAs:C layers, elec. props., and electron microscopy 2-61628
 GaAs:C VPE layers, impurity characterisation, photoluminesc. study 2-93264
 H⁺+C (methane), K shell ionisation, electron capture, cross section meas. 2-54940
 InP:C, ion implanted, annealing behaviour obs. 2-98135
 InP:C epitaxial layers, shallow acceptor excited states, luminesc. study 2-57156
 KCl:C, N, sequentially ion implanted, CN⁻ radical formation, ionolum. study 2-81802
 Ni vicinal surfaces, oxidation of C 2-78137

carbon continued

- Ni-C spectrally selective films produced by reactive sputtering, structural and electrical props. 2-98490
 Si-C, crystn. by zone melting, contamination with C 2-87972
 Si-C, effect of C on elec. props. of devices, impurity-defect interaction investig. 2-91994
 Si-C, electron irradi. defect accumulation kinetics and point defect annihilation 2-98153
 Si-C, ion implanted, defect states, DLTS study 2-56471
 Si-C, O, reactor neutron irradi. effect on C impurities 2-109839
 Si-C, polycrystn., C influence in resistivity and grain size 2-66547
 Si-C, O, Czochralski grown, donor form. by annealing at 700°C 2-110283
 a-Si-C and a-Si-C, B(P) films, cathodic deposition, charact. 2-88011
 Si-C⁺, MOS capacitors and Schottky diodes, ion implantation, elec. props. 2-86696
 Si-O, C, Czochralski grown, O related donors, 700 to 800°C, expt. study 2-56469
 Ti-C, combustion under ultrasonic vibrs., capillary flow effects 2-116700
 TiN:C film, reactivity sputtered, optical consts. and spectral selectivity, IR reflectivity study 2-72445
 TiN-C, prep. by gas absorption and reactive RF sputtering 2-74913
 Zr-C-C composites, strength 2-116544

carbon compounds

see also *organic compounds*

- boilers in industrial plants, CO₂ corrosion in water/steam cycle (*Hungarian*) 2-99589
 carbides, chemical reaction and sputtering 2-111490
 CO, monitoring in an air separation plant with the ULTRAMAT 3 gas analyzer 2-116764
 CO₂-N₂(N₂O₂) mixtures, ionisation and attachment obs. 2-103275
 CO, adsorbed on Mo, mol. dissociation, pulsed voltage and pulsed laser atom-probe study 2-76828
 CS radical, band intensity parameters and ground state dissociation energy 2-114045
 ferrocene/CBr₄ photosensitive layers, effect of non-interchangeability in charge transfer complexes (*Russian*) 2-74553
 flash carbonisation of coal to produce synthesis gas and low-sulphur char 2-99748
 hydrocarbons, liquid, elec. breakdown dynamics 2-87668
 metal carbides, material for limiter, shield and injector plates 2-113739
 pentacyclic mols., one-electron props., ab initio calcs. 2-64866
 triple discharge system, output characteristics CC CO₂ TEA laser oscillator, triple discharge system, output characteristics (*Korean*) 2-55196
 Al(100), electron spectroscopic study of CO adsorption 2-76819
 Ar-CO impurities, mol. dynamics calc. 2-115154
 Br-CO₂ He solar-pumped electronic-to-vibrational energy transfer lasers 2-80933
 C-Li, electronic struct., ab initio GVB, SCF and CI calcs. 2-108357
 C⁺-Ar(H₂), electron capture, cross section meas. 2-102619
 C+N₂, toxic cpd. form. in sintering furnaces 2-105097
 C³⁺+H, charge transfer, cross section calcs. 2-70412
 C₂, electronic excitation behind shock front 2-59918
 C₂, B²Σ_g⁺ state rot. level lifetimes meas. 2-114048
 CCN⁺, microwave spectroscopic consts., equilb. bond lengths and rot. consts., CI calcs. 2-102467
 CCl, A²Δ state predissoc. investig. 2-80747
 CCl radical, microwave spectra, rot. transitions, mag. and electric quadrupole hyperfine coupling consts. 2-108476
 CCl₄, conjugate wave phase instability at stimulated Brillouin scatt. 2-86058
 CF, rot., Zeeman hyperfine struct., laser mag. reson. obs. 2-90584
 CF₂ radicals in C₂F₄ and CF₄ discharge plasmas, laser induced fluorescence study 2-81575
 C₂F₂, discharges detection and characterisation, using trace gas analysis 2-103534
 C₂F₂O, discharges detection and characterisation, using trace gas analysis 2-103534
 CH electron density, pseudoatom expansion 2-60931
 CH molecule, vibrational smearing of deform. density, Hartree-Fock-Slater SCF calc. 2-80559
 C₆H₆, cryst. dynamics and binding, inelastic neutron scatt. obs. 2-109736
 C₆H₆, intercalation cpd., struct., dynamics, neutron diff. obs. 2-109763
 C₈KD_{3/3}, cryst. dynamics and binding, inelastic neutron scatt. obs. 2-109736
 C₈KD_{3/3}, intercalation cpd., struct., dynamics, neutron diff. obs. 2-109763
 C₈KD_{3/3}, intercalation cpd. formation kinetics, neutron diff. obs. 2-111484
 C₈KH_{2/3}, cryst. dynamics and binding, inelastic neutron scatt. obs. 2-109736
 C₈KH_{2/3}, intercalation cpd., struct., dynamics, neutron diff. obs. 2-109763
 C₈KH_{2/3}, intercalation cpd. formation kinetics, neutron diff. obs. 2-111484
 CN, A²Π and B²Σ⁺ states, radiative lifetime determ. from CI calcs. 2-85746
 CN abundance in HR 1614 moving group, DDO photometry 2-106827
 CN abundance in IRC 10216 shell and OMC-1, EHF obs. 2-89326
 CN adsorbed layer, picosecond surface Raman spectroscopy, surface damage effects obs. 2-93170
 CN distributions in globular clusters, obs. of NGC 3201, M55 and (M71) 2-63542
 CN, electronic excitation behind shock front 2-59918
 CN emission from mol. clouds assoc. with H II regions, (Sharpless 106 and NGC 7538) 2-101008
 CN in Comet Bowell (1980b), prod. rate in April 1982 from ground-based obs. 2-84165
 CN in open cluster IC 4651 giants, results of nonstandard stellar evolution 2-63543
 CN, photofragment fluoresc. spectrum of HCN C-state 2-85754
 CN radical in its ground state, vibr.-rot. transitions, IR laser spectrum, spin-rot. fine struct. 2-59800
 CN red system in solar spectrum, oscillator strengths, radiative lifetimes and electronic transition moment 2-106641
 CN⁺, J(¹N,¹³C) coupling, sign determ. 2-80674
 CN in aq. soln., vibr. energy relax. 2-85787
 CN⁺, NMR spin-spin coupling, ab initio calc. 2-102495
 CN⁺ radical formation by ion implantation in KCl 2-76470
 CN⁺ molecular ion structure study using charge-coupled imaging device 2-75458

carbon compounds continued

- CN⁺, second order perturbation energy, CASSCF calcs. 2-64887
 CN⁺, struct. studied using charge coupled device 2-54981
 C₂N₂, stretching vibrs., freq. and IR intensities, anharmonic pot. energy functions, geometry and rot. consts. 2-96554
 C₂N₂, VUV absorpt. spectra 2-96592
 CNC⁺, microwave spectroscopic consts., equilb. bond lengths and rot. consts., CI calcs. 2-102467
 CNS⁺, adiponitrile solns., ionisation energies, photoelectron study 2-80727
 CN(X²Σ⁺), vibr. and rot. distrib. from ICN photolysis 2-64951
 CN* radical, dissociation energy from pot. curves 2-108731
 (CO,CO₂)⁺, electron impact ionisation in supersonic mol. beam, appearance pots. 2-108728
 (CO)^m, SCF minimal basis set calcs., HF instabilities 2-80470
 CO 691 GHz line in Becklin Neugebauer/Kleinmann Low region 2-117724
 CO above Soviet cities, spectroscopic meas. (*Russian*) 2-99863
 CO adsorbed Cu, He beam-surface impact 2-98399
 CO, adsorbed on Ag, surface enhanced Raman scatt., role of direct surface interaction 2-77537
 CO, adsorbed on Pt, oxidation, photocatalytic effect 2-111519
 CO, adsorption on Pd islands 2-56361
 CO abundance in interstellar formyl-d, ion emission regions 2-68860
 CO adsorbed layer, disordered, on Ni(001), He scatt. study 2-98445
 CO, adsorbed layer Cu (100), electron scatt. from surface vibr. modes 2-98424
 CO, adsorbed layer on Pt, overtones and multiphonon processes in EELS, vibration spectra 2-99238
 CO, adsorbed on Ag film, mol. charge transfer excitation, EELS obs. 2-62027
 CO adsorbed on Cu, laser flash desorption, surface diffusion 2-87039
 CO adsorbed on Cu (100), IR spectra study 2-56359
 CO adsorbed on Cu (100) 2-83007
 CO adsorbed on Cu(Pd)(Ni)(Pt) (100), ordered structs., LEED, EELS, IR data 2-98456
 CO adsorbed on Ni (001), core level angle resolved XPS, single scatt. theory, mol. vibr. effects 2-111034
 CO, adsorbed on Ni (111), energy loss intensities, role of electrodynamic interactions 2-62029
 CO, adsorbed on Pt, photoemission reson. enhancement via autoionisation obs. 2-77700
 CO, adsorbed on Pt (111), scatt. cross sections for thermal He and H₂ beams 2-105027
 CO, adsorbed on Pt (111), vibrational spectroscopy, EELS and IR 2-110125
 CO adsorbed on Pt(Ir)(Cu), flat and rough surfaces, IR spectrosc. 2-66352
 CO adsorbed on Pt(110), surface phase studies 2-66353
 CO adsorbed on Pt(110), surface phase study 2-86985
 CO, adsorbed on transition metal surface, AES study 2-110136
 CO, adsorbed on W (110), neutral particle electron stimulated desorpt., reson. contribution meas. 2-56331
 CO adsorbed on W(110), core-level processes in electron stimulated desorption 2-110151
 CO, adsorbed on W[100], (√2×√2)R45° surface phase, LEED struct. anal. 2-110142
 CO adsorbed periodic overlayer on Ni(100), adatom vibr. mode freq. estimation 2-87006
 CO, adsorpt. and coadsorpt. with D₂ on Rh (100), LEED and thermal desorpt. study 2-56354
 CO, adsorpt. on Pt, polarisation modulated IR refl.-absorpt. spectrosc. obs. 2-115541
 CO, adsorption and dissociation on stepped Ni surface, SEM study 2-92358
 CO, adsorption on clean and Na covered Cu, surface state shifts, UPS study 2-98716
 CO, adsorption on Cu-Ni surfaces (110) 2-56362
 CO adsorption on Fe(110), thermal desorpt. spectroscopy, dissociation enhancement by surface defects 2-98464
 CO adsorption on kinked Pt(321) surface 2-61292
 CO adsorption on La_{1-x}Sr_xFeO₃, effect on elec. cond., appl. to gas sensors 2-71979
 CO adsorption on Mo(100), high resolution EELS study 2-71794
 CO, adsorption on Ni, decomposition and oxidation of surface carbide 2-62432
 CO, adsorption on Ni (100), photoemission study 2-56335
 CO, adsorption on Ni (110), electronic binding energies of valence levels, UPS study 2-82437
 CO, adsorption on Ni (110) at 20K, UPS and work function meas. 2-104159
 CO adsorption on Ni film, IR luminesc. under ultrahigh vacuum 2-93281
 CO, adsorption on nonreconstructed Pt (110) surface 2-115515
 CO adsorption on Pd(100), IR reflection absorpt. study 2-98466
 CO, adsorption on polycryst. Ag surfaces, SIMS investig. 2-105516
 CO, adsorption on Pt(111), EELS and thermal desorption study (*German*) 2-98469
 CO, adsorption on Ru (001), island form. and dissolution at low coverages 2-82126
 CO, adsorption on SiO₂ supported Pd catalyst, IR study 2-82129
 CO adsorption on small Al clusters 2-87057
 CO, adsorption on TiN(100), surface state, photoemission study 2-77705
 CO adsorption on V (100), surface struct., LEED and Auger study 2-71783
 α-CO, adsorption on W (110), singlet-triplet interplay in charge transfer relax. process 2-105045
 CO, adsorption/desorption on Pt-S surface, AES and temp. programmed desorption study 2-66369
 CO, air pollution level prediction (*Japanese*) 2-62542
 CO, and binary mixtures, diffusion coeffs., viscosity meas. 2-114960
 CO and H₂ coadsorption on Ni (100), electron spectroscopy study 2-76827
 CO Ar, laser-induced fluorescence, vibr. nonequilb. effects 2-59838
 CO, atmos. conc. in southern hemisphere 2-106209
 CO behaviour in central 2 kpc of galactic centre 2-63667
 CO, binding to protohaeme, ligand diffusion effects in solvents 2-78282
 CO branch-selected laser, opto-galvanic effect obs. 2-102774
 CO burning during core meltdown in PWR 2-96270
 CO, CI and coupled cluster approx. relationship 2-59710
 CO, catalytic oxidation on Pt (100), kinetic oscils. 2-93815

carbon compounds continued

- CO chemical laser produced by supersonically mixing CS-S-O₂, computer model 2-90881
- CO chemical laser utilising the branched-chain stage of CS₂ oxidation 2-96935
- CO chemisorbed on α -U and Th(111) surface, electron spectroscopic studies 2-56337
- CO chemisorbed on Cu (III), angle resolved photoelectron energy spectra 2-70331
- CO chemisorbed on highly dispersed Pt, double NMR study 2-104747
- CO chemisorbed on Ni (100), C(KVV) Auger line shape 2-108643
- CO chemisorbed on Ni surface, SCF-X α SW model cluster calcs. 2-61278
- CO chemisorbed on Ni(Cu)(Pt) (Pt₁Ni_{1-x}), photoemission study (French) 2-105052
- CO chemisorbed on Ni(110), vibr. spectra, EELS study 2-82133
- CO chemisorbed on Pd-Cu (110), Pt core level shifts, XPS study 2-77143
- CO chemisorbed on Pd(110), angle resolved surface Penning ionisation 2-87929
- CO chemisorbed on Pt(111), surface 4f core level binding energy shifts 2-87359
- CO chemisorbed on Pt(111), reson. photoemission obs. 2-105039
- CO chemisorbed on Ti(0001), correlated wave function calcs. 2-104148
- CO chemisorpt. on Pt(III) in presence of K, thermal desorpt. and electron energy loss spectra 2-83410
- CO chemisorption and absorpt. induced surface segregation on alloys 2-56345
- CO chemisorption on Cr (110), EELS and AES study 2-57225
- CO chemisorption on MgO (001), ab initio SCF calc. 2-104158
- CO chemisorption on Ni₂ cluster formation, SIMS study 2-71800
- CO chemisorption on Ni(100), vibr. freq. and ionisation pot., generalised valence bond methods 2-66370
- CO chemisorption on Pd, segregated P effect 2-115557
- CO chemisorption on Pt, 4f surface core level shifts, soft XPS study 2-67195
- CO chemisorption on Pt particulate films 2-76818
- CO chemisorption on Pt (110) and (111), mol. orientation, UPS study 2-87052
- CO chemisorption on Pt (100), mol. orientation, UPS study 2-98455
- CO chemisorption on Pt(111), mol. orbital study 2-98463
- CO chemisorption on Pt(110), surface phase transitions, LEED, UPS and thermal desorption study 2-98452
- CO closed-loop CW elec. discharge laser with cryogenically cooled active medium 2-114320
- CO cloud associated with Orion Nebula, mag. fields determ. UHF obs. 2-106869
- CO cloud complexes around galactic longitude $l=45^\circ$, CO maps 2-79179
- CO, coadsorbed with methane on W, interactions, ESD and flash desorpt. study 2-110163
- CO coadsorption, on Pt 2-92338
- CO, coadsorption with H₂ on Fe(100) 2-56363
- CO, coadsorption with H₂ on Ru(001), work function, XPS, UPS and thermal desorption study 2-71805
- CO, coadsorption with H₂ on ZnO, vibr., IR study 2-115540
- CO coadsorption with pyridine on Ag, effect on surface enhanced Raman spectra 2-87031
- CO content in Mars atmosphere 2-106591
- CO, corona effects on gaseous combustion 2-105486
- CO, Coulomb and exchange-correlation pots., local density models, expansion methods 2-54740
- CO, cryst., two-phonon transitions, vibr., IR study 2-57069
- CO diffusion near highways, numerical model 2-112007
- CO dimers, electron impact fragmentation, IR laser and mass spectrosc. anal. 2-59947
- CO, dipole oscillator strength distrib., sums and dispersion energy coeff. 2-70342
- CO, EELS with new position-sensitive multidetector spectrometer in 6 to 10.9 eV energy region 2-85824
- CO, elastic electron scatt., cross section data compilation 2-54964
- CO, elastic scatt. of intermediate and high energy electrons by two-pot. coherent approach 2-85807
- CO, elec. field effects, mol. geometry model 2-59723
- CO, elec. field gradients, semi-empirical SCF MO calcs. 2-108387
- CO, electron stimulated adsorption on Si(111)7 \times 7 (Russian) 2-115573
- CO emission from Lynds 1529 dark cloud, high vel. wings, EHF obs. 2-74054
- CO emission from Orion Molecular Cloud-1, model 2-106864
- CO emission in SAB galaxies NGC 157, 2903, 4321 and 5248, EHF obs. 2-74086
- CO emission in Sc galaxies, depend. on luminosity and star form. rate 2-106903
- CO emission line intensity modelling in Becklin-Neugebauer Kleinmann-Low region 2-106865
- CO exposed Al single crystal, EELS study 2-98457
- CO exposure on commuter routes in Los Angeles 2-111597
- CO, far-IR rotational emission 2-106495
- CO, force consts., pot. energy and derivative calcs. 2-108360
- CO formation dynamics from photodissoc. at 193 nm of isocyanic acid and ketone 2-62411
- CO fourth positive and Cameron bands identification in Comet Bradfield (1979 X) 2-84170
- CO, free and adsorbed mols., electron energy loss spectra, scatt. process 2-70414
- CO, free and chemisorbed, core-hole screening 2-102404
- CO gas, resonantly enhanced vacuum UV generation and multiphoton ionisation 2-65298
- CO gas distribution in IC 342 and NGC 6946 following light distrib. 2-101037
- CO gasdynamic laser gain kinetics 2-90877
- CO, geometry, force consts., test of new SCF method 2-108367
- CO, HF Slater wave functions calc. 2-96441
- CO, IR absorption bands monitoring in atmosphere, Indian (Trombay) experience 2-111525
- CO, importance of f basis functions in molecular electron correl. energy calcs., diagrammatic perturbation body 2-59713
- CO impulse ratios of gaps in compressed gases 2-97820
- CO in atmosphere, abundance determ. (Russian) 2-106220
- CO in diffuse interstellar clouds toward 14 stars, UV spectral obs. 2-101024

carbon compounds continued

- CO in evolved stars, J=2-1 line obs. rel. to stellar mass loss 2-58320
- CO in freshly fallen snow, implications for past atmos. 2-83885
- CO in galactic plane IR sources, obs. 2-68929
- CO in Herbig-Haro-like GGD objects mol. clouds, mass outflow anisotropy 2-117730
- CO in IRC+10216, radio emission rel. to circumstellar shell model and mass loss rate 2-68928
- CO in Mira variable χ Cygni, time series IR spectroscopy 2-58348
- CO in molecular clouds, line profiles determ., effect of complete freq. redistribution assumption relaxation 2-117723
- CO, in solid α -CO, vibr. transition line broadening by diagonal disorder 2-90631
- CO in solid N₂, high resolution laser spectroscopy, dipolar broadening effect on vibr. transitions 2-102535
- CO in T Tauri star spectra evidence for winds, obs. 2-100925
- CO industrial electrical-ionisation laser with turbocompressor cooling 2-80938
- CO, interstellar, 2.6 mm emission rel. to active star form. regions identification 2-112421
- CO, interstellar, determ. of ¹²CO/¹³CO abundance ratio towards ζ Ophiuchi 2-63557
- CO, interstellar, in clumpy irregular galaxies, unsuccessful search for 115 GHz line 2-106920
- CO, interstellar, obs. in far IR sources in galactic plane 2-58413
- CO, interstellar, obs. in molecular cloud complex in vicinity of (IC 5146) 2-74044
- CO, interstellar, obs. of high vel. CO near Herbig-Haro objects HH 24-27 and (HH 1-2) 2-112526
- CO, ionisation energy, X α SW method with universal potential 2-75183
- CO isotope selective photodestruction near mol. cloud boundary of H II region Sharpless 68 2-68858
- CO, isotopic mols. in solid α -CO, IR emission and absorpt. spectra 2-70238
- CO J=1-0 115 GHz obs. of molecular rings in Sb galaxies 2-117756
- CO J=17-16 transition detect. in Kleinmann-Low Nebula, IR obs. 2-84303
- CO J=2-1 line in molecular clouds near H II regions, EHF obs. 2-63584
- CO laser, all-glass vacuum-insulated, N₂-cooled 2-114247
- CO laser, fundamental and second harmonic freq. emission 2-102781
- CO, laser-assisted collisional energy transfer between Rydberg states 2-65078
- CO, line strengths, N₂ collisional broadening, IR obs. 2-75267
- CO, liquid, shock compression 2-78103
- CO liquid and plastic cryst. phase, LF Raman spectra 2-116164
- CO, MC SCF calculation of energy hypersurface, infinite order contrib. 2-80456
- CO mapping of Galaxy giant molecular clouds 2-63665
- CO mapping of Kleinmann-Low nebula, EHF OBS. 2-89340
- CO, matrix isolated, high-resolution coherent Raman spectrosc. 2-75297
- CO moderate-pressure electric-discharge laser 2-55204
- CO, mol., reson. scatt. of slow electron, vibr. excitation cross sections, quasiclassical calc. (Russian) 2-54973
- CO, mol. struct. calcs. using ab initio effective spin-orbit operators 2-75168
- CO, molecular overtone transitions, quantum dynamical study, vibr.-rot. transition probabilities 2-102541
- CO molecule, vibrational smearing of deform. density, Hartree-Fock-Slater SCF calc. 2-80559
- CO, monolayer sorption on Al₂O₃ supported Co, tunnelling spectra 2-66349
- CO, ocean chem. composition in coastal inlet 2-68388
- CO oxidation, oscillations, glow, ignition, in closed gas-phase system 2-78110
- CO, photon stimulated desorption from Ni (100), multi-electron excitations 2-104156
- CO, positron scatt., total cross section, retarding pot. time of flight method 2-108706
- CO, positron-gas cross-section measurements 2-75420
- CO, pressure broadening coeff. for rot.-vibr. lines of J states 2-108472
- CO, pulmonary diffusing capacity, independence from alveolar CO conc. 2-73276
- CO pure vibr. Raman struct. of mol. crystals in Ar matrix 2-113995
- CO, radiative decay lifetimes and optical excitation functions meas. using electron impact excitation 2-70187
- CO, rot. anal., Fourier transform IR obs. 2-75261
- CO, rot. Raman intensity-connection factors due to vibr. anharmonicity, effect on temp. meas. 2-108531
- CO, rot.-excited from formaldehyde photodissociation, fluoresc. obs. 2-108645
- CO, Rydberg series in 2-electron excited region 2-102491
- CO, slow electron reson. scatt., semiclassical calcs. (Russian) 2-54972
- CO standard samples preparation and assessment, 0 to 500 ppm 2-111530
- CO supersonically flowing gasdynamically cooled CW laser, microwave excitation 2-96994
- CO survey in Galaxy, tracing of giant mol. clouds 2-63595
- CO survey of southern galactic plane, EHF obs. 2-106876
- CO TEA laser operating at room temp., output characts. (Chinese) 2-60097
- CO, thermal desorpt. on Pt/TiO₂ 2-105502
- CO thermal desorption from CdSe thin film, resist. modification (French) 2-98773
- CO, tunable coherent VUV generation in 1150 Å range by sum freq. mixing 2-90980
- CO tunable sealed laser using selective, nonselective resonators, spectral and energy characts. 2-55131
- CO, valence Auger spectrum, MS X α calcs. 2-80739
- CO, vapourisation in Periodic Comet Schwassmann-Wachmann 1 rel. to outbursts 2-106624
- CO, vibr., radiative lifetimes determ., optical emission functions 2-90722
- CO vibrational mode laser excitation for ¹³C isotope separation 2-58530
- CO⁺, absorpt. spectra, charge exchange 2-54833
- CO⁺, Coulomb explosion influence on C³⁺ Auger lineshape 2-78068
- CO⁺, electronic states, spin-rot. coupling, RKR pot., deperturbation anal. 2-85624
- CO⁺, emission from Periodic Comet Schwassman Wachmann 1, obs. 2-68668
- CO⁺ excited vibr. state, millimetre wave spectrum 2-90527

carbon compounds continued

- CO⁺, hyperfine and spin-rot. parameters, isotope effects, microwave obs. 2-70226
 CO⁺, MODR spectra, fluoresc. 2-70309
 CO⁺, microwave spectra, struct. 2-54835
 CO⁺, mol. struct. calcs. using ab initio effective spin-orbit operators 2-75168
 CO⁺, spin-orbit coupling consts., ab initio calc. using universal even tempered basis set of exponential functions 2-96415
 CO⁺, zero-field splitting of ²II mol. states, ab initio multi-config. wave-function calcs. 2-96464
¹²C¹⁸O in solid N₂, IR transient antihole burning, spectral transfer 2-108978
 CO/Co (0001), angle-resolved photoemission studies 2-83000
 CO-air turbulent diffusion flame, laser absorpt. sampling probe 2-78145
 CO-He, pressure broadening coeff. for rot.-vibr. lines of J states 2-108472
 CO-N₂, diffusion coeffs., viscosity meas. 2-114960
 CO+Ar⁺, charge transfer, spin-orbit states, threshold electron-secondary ion coincidence study 2-96715
 CO+Ar⁺, energy depend., rate consts. meas. 2-88346
 CO+ArH⁺, proton transfer reactions, rate coeffs. 2-70409
 CO+atom, hyperthermal collisions, mol. anharmonicity, time correl. function 2-85783
 CO+Ca, collisional relax., rate consts. for quenching meas. by modulated laser induced fluoresc. technique 2-96680
 CO+Cd(5³P₁), quenching of Cd excited state, atomic fluoresc. obs. 2-80798
 CO+D₂, rot. excitation at 87.2 meV, differential cross sections, classical path calc. 2-108673
 CO+F⁺, electron detachment cross sections meas. 2-59927
 CO+H, dissociation in interstellar shock heated regions 2-68861
 CO+H₂, on transition metal surfaces, heterogeneous catalysis 2-105507
 CO+H₂, SCF pot. anal., dispersion energy 2-85571
 CO+H₂⁺, H⁺ and charge transfer, collision energy and ion vibr. excitation 2-102604
 CO+H₂(He), rot. energy transfer and anisotropic intermol. pots., ab initio calcs. and expt. 2-75387
 CO+H⁺, small angle vibr. excitation 2-85801
 CO+H⁺(hydride ion)(H₂), geometries and heat of reaction, MNDO calcs. 2-93778
 CO+HBr(HCl), vibr. relax., rate consts., fluoresc. intensity meas. 2-108689
 CO+HCl⁺, charge exchange reactions, rate coeffs., selected ion flow study 2-88341
 CO+He, integral and differential cross sections, use of nondiagonal matrix Green functions 2-70383
 CO+He, polarisation transitions, cross sections, close-coupling study 2-80781
 CO+He(Ne), vibr. relax. rate coeff., ab initio calcs. 2-59906
 CO+Hg(6³P), electronic to vibr. energy transfer, isotope effects 2-102593
 CO+Kr⁺, charge exchange, electronic state effects 2-90691
 CO+N₂, CO V-V transfer, theoretical probabilities 2-102586
 CO+N₂, vibr. transitions, quantum mechanical and semiclassical probabilities 2-54926
 CO+N₂ mixture, Raman scatt., rot. and vibr. relax. (*Russian*) 2-54856
 CO+NO, long transients in surface reactions at high pressures 2-78131
 CO+NO, rot. and spin-orbit transitions, IR-UV double reson. 2-75382
 CO+NO₂, laser-enhanced reaction mechanism 2-88371
 CO+Na, Na(3p²P) quenching at low temps. 2-102597
 CO+Na⁺, (3²P) state quenching, stereochem. effects, expt. and calcs. 2-108605
 CO+O, on Ni (100), XPS/LEED studies 2-83414
 CO⁺+CO, thermal energy charge transfer reactions, laser induced fluoresc. study 2-90683
 CO, 16 μm laser action study 2-96887
 CO, 16-μm gasdynamic laser in intracavity cascading mode 2-96888
 CO₂, adsorbed on O covered Ag (110), vibr., EELS study 2-87924
 CO₂, adsorption on Cr₂O₃, electroconductivity kinetics 2-77036
 CO₂, adsorption on polycryst. Ag surfaces, SIMS investig. 2-105516
 CO₂, adsorption on ZnO, effect on surface acidity, IR study 2-82131
 CO₂, advanced laser fusion systems, glancing incidence optics appls. 2-97029
 CO₂, advanced laser rangefinders 2-109012
 CO₂, air breathing elec. discharge laser, high-gain operation 2-114301
 CO₂, amplifier with saturating absorber, pulse shaping 2-114325
 CO₂, and CO, nonequilibrium mol. gas, vibr.-rot. bands, IR radiation transfer and emissivity 2-114927
 CO₂, Antares I laser system, large-aperture beam diagnostics 2-97061
 CO₂, Antares laser, alignment gimbal positioner 2-102814
 CO₂, Antares laser system, optical tooling and surveying techniques 2-102813
 CO₂, anthropogenic, distrib. in Atlantic and Southern Oceans 2-88910
 CO₂, atmospheric 4.3 μm clutter obs., radiative transfer calcs. 2-117441
 CO₂, atmospheric content effect on paleoairfall and temp. 2-100564
 CO₂, atmospheric content effect on world climate 2-117437
 CO₂, atmospheric O₃ perturbation due to CO₂ build-up 2-100503
 CO₂, atmospheric pressure laser, electron-beam-controlled, specific pump power influence on operating efficiency 2-114234
 CO₂, autoionisation reson. studied using triply differential photoelectron spectroscopy 2-96648
 CO₂, bands, rotational analysis near 4 μm 2-59793
 CO₂, binary (e, 2e) spectroscopy and momentum space chem. 2-102649
 CO₂, C²⁺ reson. ionis., photoelectron ang. distribs., partitioning anal. 2-59864
 CO₂, CK and OK emission spectra, core state vibr. excitations and symmetry breaking 2-70276
 CO₂, CW electron-beam-controlled lasers for technological appls., Ar use in working mixtures 2-55116
 CO₂, CW electron-beam-controlled technological laser, upper active level relax. rate determ. 2-90865
 CO₂, CW gasdynamic lasers operating at 16 and 14 μm, thermal excitation 2-96895
 CO₂, CW high power atm. laser radar power amplifier 2-96991
 CO₂, CW high-power laser, development (*Japanese*) 2-102762
 CO₂, CW laser, mode quality and tuning 2-75558
 CO₂, CW laser irradiation surface hardening, numerical anal. 2-116610
 CO₂, CW laser using high-speed current regulated power supply, optovolt-ohmic effect 2-114318
 CO₂, CW multibeam high-power laser excited by AC discharge 2-85995

carbon compounds continued

- CO₂, CW sealed high-pressure laser, high efficiency 2-55110
 CO₂, CW unstable resonator laser, output instability, mode-medium interactions 2-102764
 CO₂, chemisorbed on α-U and Th(111) surface, electron spectroscopic studies 2-56337
 CO₂, climate change model 2-117436
 CO₂, climatic problem, ocean-atmosphere interaction role 2-112109
 CO₂, cluster, collision induced dissoci., metastable ions, mass spectra 2-96749
 CO₂, clusters, +ve and -ve, prod. using supersonic mol. beam source with β-emitter 2-90758
 CO₂, clusters, multiply charged, critical sizes for stability 2-85856
 CO₂, coaxial low-pressure laser, thermal regime 2-80932
 CO₂, collision-broadened linewidths and band intensities near 2600 cm⁻¹ 2-59792
 CO₂, conc. increase, surface air temp. response 2-112106
 CO₂, concentration in manned spacecraft, using molten CO₂ electrochem. cell 2-83469
 CO₂, content of glacier ice air bubbles, meas. method 2-117481
 CO₂, density matrix treatment, atomisation energies, equilib. distances and ionisation pot. 2-80500
 CO₂, differential and total photoionisation cross sections calc. using frozen core HF final state wave functions 2-108644
 CO₂, dipole oscillator strength distrib., sums and dispersion energy coeff. 2-70342
 CO₂, dissociation process, ab initio study 2-88355
 CO₂, dual electron-beam controlled laser (*Chinese*) 2-90923
 CO₂, effect on climate, interdisciplinary research and integration 2-63077
 CO₂, effects on DC elec. breakdown of air in positive point plane gap 2-91698
 CO₂, eight-chord laser interferometer for plasma density meas. on ZT-40 2-103441
 CO₂, elastic electron scatt., cross section data compilation 2-54964
 CO₂, elastic electron scatt. at static exchange level 2-75437
 CO₂, electroionisation laser, physical processes numerical simulation 2-75554
 CO₂, electroionisation laser, resonator, wavefront inversion efficiency, theory 2-114381
 CO₂, electron (positron) impact, total cross-sections meas. 2-59937
 CO₂, electron beam ionised discharge laser, closed cycle operation, discharge product meas. 2-97065
 CO₂, electron scatt. cross-sections, near threshold behaviour 2-59938
 CO₂, electron-beam-controlled closed-cycle laser, gas mixture catalytic regeneration 2-70584
 CO₂, electron-beam-ionisation CW laser, plasma active medium, chem. reactions obs. 2-90866
 CO₂, evolution from soil, mineralisation process correl. with temp. variation 2-68339
 CO₂, exchange between atm. and surface, aircraft monitoring 2-100512
 CO₂, exchange through surface of the Black Sea 2-117360
 CO₂, fast-circulation laser with unstable cavity resonator, radiation dynamics 2-75600
 CO₂, fast-flow laser discharge chamber processes, diagnostic procedure 2-65200
 CO₂, five colour laser stabilisation and switching 2-108903
 CO₂, flow through porous plate into channel, natural convection study 2-65583
 CO₂, flyable laser beacon development 2-102820
 CO₂, free convection heat transfer at supercritical press. 2-75957
 CO₂, free jets, rot. energy distrib. FT IR emission spectrosc. obs. 2-108688
 CO₂, frequency-switchable laser with intracavity CdTe modulator, design and performance 2-60093
 CO₂, frequency-switching waveguide laser for atm. pollution monitoring 2-96893
 CO₂, from fossil fuel combustion, sinks in oceans and biosphere 2-112104
 CO₂, from synthetic fuels, climatic effects 2-112107
 CO₂, gas, vibr.-translational relax. time meas. using reson. laser spectrophones 2-58912
 CO₂, gas lasers utilising cascade transitions 2-70541
 CO₂, gas phase thermal diffusivities by a thermal lens technique 2-91576
 CO₂, gas transport laser, operating characts. 2-114232
 CO₂, gasdynamic laser, 16.8 to 17.2 μm output obs. 2-90868
 CO₂, gasdynamic laser, shock driven, vibr. temps. and gain coeff. meas. 2-102761
 CO₂, gasdynamic laser with optical feedback vibr. energy transfer 2-96889
 CO₂, high power laser, direct narrow line tuning 2-96980
 CO₂, high power waveguide TE laser, preionised 2-96992
 CO₂, high-power gas-discharge technological lasers, systems and methods for pumping 2-96986
 CO₂, high-power laser beam, temporal and spatial power distrib. meas. 2-97048
 CO₂, high-power laser systems, math. simulation 2-60060
 CO₂, high-power short-pulse laser systems for inertial-confinement fusion 2-75599
 CO₂, high-power TE laser using graphite anode and Mo wire cathode 2-60107
 CO₂, high-pressure electric-discharge laser with continuous freq. tuning and narrow emission line 2-96892
 CO₂, high-pressure laser, short light pulse generation, coherent effects role 2-70540
 CO₂, hot, saturation of short laser pulse transmission at 10.6 μm 2-97121
 CO₂, IR bands in Venus thermosphere, first order approx. model 2-112360
 CO₂, IR emission, self-trapping 2-75258
 CO₂, IR laser beam retroreflected through a turbulent atm., statistical props. 2-100561
 CO₂, impulse ratios of gaps in compressed gases 2-97820
 CO₂, in Atlantic tropical waters near Guinea coast (*Russian*) 2-88915
 CO₂, in atmos., partitioning in atmos.-ocean system 2-100527
 CO₂, in atmosphere, conc. effect on ¹³C/¹²C in tree rings 2-78811
 CO₂, in atmosphere, conc. sensitivity of climate models 2-100541
 CO₂, in atmosphere, concentrations meas. at Montsouris Observatory, Paris (1877 to 1910) 2-106204
 CO₂, in atmosphere, effect on monsoon rainwater pH in India 2-68438
 CO₂, in atmosphere, greenhouse effect 2-107081
 CO₂, in atmosphere, increase due to pollution, effect on climate and Suess effect 2-106304

carbon compounds continued

- CO₂ in atmosphere, regional climatic scenarios for CO₂-warmed Earth 2-73671
 CO₂ in atmosphere rel. to climate regulation, Gaia hypothesis of biological control 2-112085
 CO₂ in atmosphere. var. effect on biosphere life span, control mechanisms 2-73413
 CO₂ in atmospheric boundary layer above paddy field, Kolmogorov constant 2-111994
 CO₂ in atmospheric boundary layer, flux, eddy covariance meas., heat/water vapour transport effects 2-111999
 CO₂ in groundwater near San Andreas fault, causes of conc. changes 2-100300
 CO₂ in inert gas matrices, vacuum UV photolysis 2-108602
 CO₂ in primitive terrestrial atmosphere, effect on radiative-convective-photochemical models 2-112135
 CO₂ in seawater of N.Pacific, buildup due to fossil fuel combustion 2-78697
 CO₂, incoherent IR emission, amplification, coeff. determ. 2-65199
 CO₂ increase in atmosphere, effect on climate and summer dryness 2-63076
 CO₂ increase in atmosphere, transient climate response, role of ocean 2-73674
 CO₂ increase monitored at Barrow, Alaska 2-83932
 CO₂ interaction with Li surface, C KVV Auger electron spectrum 2-111511
 CO₂ ionisation energy, X α SW method with universal potential 2-75183
 CO₂ isotope laser status and appls. in tunable laser spectroscopy 2-108850
 CO₂ isotope laser technology status 2-96894
 CO₂ isotope lasers, sealed-off, 00⁰1-[10⁰0, 02⁰]₁ and ₁₁ vibr. band, transition small signal gain and saturation intensity 2-102766
 CO₂ jet, Rayleigh meas. 2-111521
 CO₂ large laser, design and construction of short pulse front end 2-102815
 CO₂ large laser amplifier, in situ optical breakdown 2-102832
 CO₂ large laser system, passive repulse protection through enhanced optical breakdown 2-102833
 CO₂ large vol. laser amplifier, internal parasitic oscill. suppression 2-90869
 CO₂ laser, ballast resist. helical transversely excited, with water vapour and low ionisation pot. additive 2-102768
 CO₂ laser, double electron beam controlled, freq. selection (*Chinese*) 2-65246
 CO₂ laser, electron beam preionised, discharge plasma characts. 2-80931
 CO₂ laser, etalon-coupled, cavity dumping and coupling modulation techniques 2-114334
 CO₂ laser, fast-flow, pumped by steady-state RF capacitive discharge 2-114235
 CO₂ laser, gain limitations, ν_1 mode vibr. temp. meas. 2-55112
 CO₂ laser, high power, output pulse shaping with externally sustained discharge 2-114339
 CO₂ laser, high power continuous wattage (*Japanese*) 2-70583
 CO₂ laser, high press., UV preionised, transversely excited, discharge parameters, meas. and theory 2-90929
 CO₂ laser, high-power, continuous freq. tunable 2-65254
 CO₂ laser, optical radar appl. 2-97067
 CO₂ laser, output stability, effect of Ge window's interference effect (*Chinese*) 2-70581
 CO₂ laser, photoacoustic spectroscopy of IR window materials 2-70633
 CO₂ laser, pulse propag. simulation using saturable absorbers, laser fusion appl. 2-80992
 CO₂ laser, Stark-effect modulation with NH₂D (*Chinese*) 2-60128
 CO₂ laser, transversely excited sequence laser, design criteria 2-80994
 CO₂ laser, wavelength selection and intracavity modulation using elec. controlled echellette grating 2-65268
 CO₂ laser active medium, preionisation electron density determ. 2-90864
 CO₂ laser amplifier, 1800 Torr electron-beam-controlled discharge, small signal gain spectrum 2-102763
 CO₂ laser beam reflected through atm. folded paths, scintillations 2-58124
 CO₂ laser excitation, high power, multiple electrode system 2-55182
 CO₂ laser fibre optics, medical appls. 2-100085
 CO₂ laser frequency stabilisation by optoacoustic tracking of SF₆ Lamb dip 2-70579
 CO₂ laser frequency stabilisation using OsO₄ narrow resonances 2-90965
 CO₂ laser fusion driver concepts, advanced 2-97070
 CO₂ laser fusion systems, phase aberrations and beam cleanup techniques 2-102816
 CO₂ laser fusion target optical diagnostics using backscatt. light 2-109589
 CO₂ laser high-power optics, absorption's dominant role 2-97043
 CO₂ laser interferometer for plasma electron density meas. 2-114231
 CO₂ laser irr. of SF₆-H₂, S₂F₁₀-H₂ mixtures, ignition of HF chem. laser 2-96936
 CO₂ laser optics design, weak refl. influence from anti-refl. coated surfaces 2-90933
 CO₂ laser opto-acoustic spectrometer 2-69267
 CO₂ laser phase-locking, C_s frequency standard realisation 2-102844
 CO₂ laser polarised performance determ. method (*Chinese*) 2-65272
 CO₂ laser polishing of fused SiO₂ surfaces for increased laser-damage resist. at 1064 nm 2-114342
 CO₂ laser radar using detector arrays, beam profile shaping 2-96964
 CO₂ laser resonator reflecting grating freq.-selective loss investigation 2-65342
 CO₂ laser tunable sideband spectrometer for 9-11 μ m region 2-101472
 CO₂ laser two-wavelength and power-balanced oscill., differential absorpt. meas. appl. 2-90964
 CO₂ laser with plasma mirror, electron-beam-controlled 2-70582
 CO₂ laser-active media nonlinear optical inhomogeneities 2-60061
 CO₂ laser-induced multiphoton dissociation, energy pooling, temp. effects 2-102555
 CO₂ lasers, freq. synchronisation and phase locking 2-114324
 CO₂ lasers used in Doppler lidars, freq. stabilisation (*Chinese*) 2-65273
 CO₂ liquid, shear viscosity meas. 2-104043
 CO₂ localised atomic orbitals for atoms in molecules 2-54760
 CO₂ low energy electron scatt., exchange interaction 2-65091
 CO₂ meas. system, computer-based, atmospheric and oceanic partial pressure determ. 2-58146
 CO₂ miniature sealed laser, service life, gas filling stabilisation 2-55202
 CO₂ mixing type gasdynamic laser characteristics 2-80930

carbon compounds continued

- CO₂, mol. solid at cryogenic temps., SIMS 2-99734
 CO₂ multichannel laser interferometer using PbSnTe detector array for plasma electron line density meas. 2-53828
 CO₂ nanosecond laser pulses, temporal shaping in multiphoton saturable absorbers 2-102828
 CO₂, nonlinearly-optical excitation of symm. vibr., Fermi resonance (*Russian*) 2-80842
 CO₂, $\nu_1/2\nu_2$ Fermi reson., motional narrowing, Raman spectrum 2-80635
 CO₂, ν_2 band, absorpt. coeffs., spectral line broadening 2-85657
 CO₂, ν_2 band line mixing 2-90630
 CO₂ ocean carbon cycle and dissolved CO₂ model (*Russian*) 2-88911
 CO₂ ocean-atmos. gas exchange rate 2-117361
 CO₂ on Mars, regolith-atmosphere exchange rel. to atmospheric history and climate change 2-112367
 CO₂ one-atmosphere laser amplifier pulse propag. 2-97059
 CO₂ optically pumped FIR laser for collision-induced absorption spectroscopy 2-55200
 CO₂ oxygen K hole photoionisation cross section 2-96647
 CO₂ permeability through cellulose acetate membranes (*Spanish*) 2-86307
 CO₂ plastic mol. cryst., diffuse X-ray scatt. due to orientational correl. 2-103668
 CO₂ polarisability vibr. matrix elements calc. from Raman intensity 2-113992
 CO₂ positron-gas cross-section measurements 2-75420
 CO₂ powerful pulsed laser installation 2-108900
 CO₂ pulse generation system, laser fusion appls. 2-97071
 CO₂ pulsed elec. discharge lasers, phase grating effects 2-102765
 CO₂ pulsed laser, low-voltage passive mode locking device 2-114297
 CO₂ pulsed TEA laser stabilised by double preliminary discharge, 1.1 kJ/litre input energy density 2-96890
 CO₂, π_3^+ $3p_{1/2} \rightarrow 2s_{1/2} \rightarrow 1s_{1/2}^+$ transition, rot.-resolved Rydberg absorpt. 2-114013
 CO₂ Q branch study, CW Raman amplification spectra 2-75295
 CO₂ quadrupole moment calc. 2-102432
 CO₂ RF-excited laser construction 2-114309
 CO₂ radial laser-induced sound wave propag. and vibr. relax. 2-81439
 CO₂ radiolysis, H₂ production potential 2-99844
 CO₂ reservoir in oceans 2-111965
 CO₂ single mode, mode locked TEA laser 2-55178
 CO₂ solid, in CH₄, cryogenic phase behaviour and saturated phase enthalpy relationship 2-74417
 CO₂ solid, second-order IR absorpt. spectrum 2-67028
 CO₂ sorption in glassy PMMA 2-65883
 CO₂ spectral lines, correl. function model, moment anal. 2-108633
 CO₂ stabilised laser parasitic amplitude modulation due to cavity periodic misalignment 2-55231
 CO₂ structural parameters determ. by gas electron diffraction, chemical binding effect 2-96730
 CO₂ supercritical, solubility of solid hydrocarbon mixtures 2-98285
 CO₂ synthesis by ion implantation in SiO₂ films and lunar dust, IR anal. 2-92009
 CO₂ TE hybrid unstable resonator laser, single longit. and transverse mode operation 2-65198
 CO₂ TEA large cross-section interferometer for plasma diagnostics 2-103440
 CO₂ TEA laser, doped with tripropylamine, extended lifetime operation 2-114304
 CO₂ TEA laser, injection mode locked, pulse broadening 2-60059
 CO₂ TEA laser, injection locked single mode operation with high energy extraction 2-96981
 CO₂ TEA laser, injection locking depend. on injected radiation intensity 2-108904
 CO₂ TEA laser, intense 11 μ m pulses production from 01¹-[11⁰0.03⁰] band 2-90867
 CO₂ TEA laser, multiple injection mode locking 2-86014
 CO₂ TEA laser, preionizing spark arrays, comparison of transverse and linear geometries 2-55111
 CO₂ TEA laser, semiconductor preioniser, expt. study 2-80993
 CO₂ TEA laser, single longit. mode operation by injection locking with tunable CO₂ waveguide laser 2-55189
 CO₂ TEA laser, stabilised, with double photopreionisation and low-ionisation-pot. additives 2-96891
 CO₂ TEA laser, UV preionised 2-60110
 CO₂ TEA laser, UV preionised 10.6 μ m operation 2-114250
 CO₂ TEA laser, variable short pulses 2-80996
 CO₂ TEA laser excited by preionised discharge through a dielectric 2-96993
 CO₂ TEA laser performance, dependence on circuit config. 2-90930
 CO₂ TEA laser performance with high levels of O₂ contamination 2-102767
 CO₂ TEA laser with unstable resonator, emission spectrum anal. using Fabry-Perot interferometer 2-70600
 CO₂ TEA lasers, electron-beam controlled discharge, electron beam intensity distribution 2-114233
 CO₂ TEA passively mode-locked laser, single variable-duration nanosec. pulse emission 2-55115
 CO₂ TEA sealed long-life lasers, medium pulse repetition 2-114314
 CO₂ TEA UV-preionised lasers, medium pulse repetition 2-114314
 CO₂ thermal expansion, X-ray diffraction study, 5 to 195K (*Russian*) 2-81991
 CO₂ thermally pumped gasdynamic laser, transitions between ν_1 , ν_2 mode levels, 16.4 to 17.2 μ m emission 2-55114
 CO₂ thin cryofilm, IR optical props. 2-87883
 CO₂ transversely excited waveguide laser (*Chinese*) 2-55185
 CO₂ triple point temp. det. 2-74419
 CO₂ tunable single-longit.-mode oscillator for efficient optical pumping 2-85992
 CO₂ UV preionised TEA laser using circularly profiled electrodes, high output power density 2-60106
 CO₂ UV-preionised TEA laser, discharge energy loading characts. 2-55113
 CO₂ ultrasonic relax. meas. method 2-98207
 CO₂ valence bands, solid and gas phase UPS study 2-67190
 CO₂ vapourisation in Periodic Comet Schwassmann-Wachmann 1 rel. to outbursts 2-106624
 CO₂ vibr. fine struct., natural lifetime, K X-ray emission obs. 2-54869
 CO₂ vibrational temperatures in CO₂ shock driven gasdynamic laser 2-102761
 CO₂ wave-number calibration tables, 500-900 cm⁻¹ region 2-113971

carbon compounds continued

- CO₂, waveguide laser, gain optimisation 2-108851
 CO₂, waveguide laser mode aberration by Brewster angle windows 2-60131
 CO₂, waveguide laser pump source for far-IR laser plasma diagnostic appls. (*Japanese*) 2-90925
 CO₂, wavenumber meas. standards, Fourier transform spectrometer spectral range extension 2-74522
 CO₂, weak absorpt. meas. using thermo-optical method in laser molecular spectroscopy 2-113985
 CO₂⁺ in Comet Bradfield (1979 X) and Comet Seargent (1979 XV), presence, UV obs. 2-84163
 CO₂⁺, ion-molecule reactions, SIFT obs. 2-83355
¹³C¹⁶O₂, absorpt. spectrum at 2.8 μm, line positions 2-108504
 CO₂/CO₂⁺, struct. changes, second order phase transition 2-75142
 CO₂-Ar pulsed 18.4 μm gasdynamic laser, shock-tube driven 2-96896
 CO₂-CH₄ reforming-methanation chemical cycle for solar energy conversion and transportation 2-111577
 CO₂-H₂, use of space fixed expansion for fitting ang. depend. of ab initio rigid rotor pot. 2-108658
 CO₂-HF, Ar matrix isolated, librational motion, IR obs. 2-64971
 CO₂-He(Ne)(Ar) gas, thermal cond. meas. 2-103250
 CO₂-methane, thermal diffusion meas., interaction parameters 2-102565
 CO₂-N₂, turbulent mixing of relaxing gases in a supersonic nozzle 2-60521
 CO₂-N₂, gas-dynamic laser, flowing mixture, gain saturation 2-65197
 CO₂-N₂ laser, plasma tube impedance, radiation fluctuations effects, theory 2-90863
 CO₂-N₂ mixture, vibr. relax., IR luminesc. kinetics obs. 2-75388
 CO₂-N₂-He gas mixt., press. shift in atmospheric press. 2-96641
 CO₂-N₂-He laser, vibr.-temp. model for determ. populations of N₂ and CO₂ levels 2-85936
 CO₂-N₂(air) mixture of electronegative and buffer gas, electron attachment coeff. meas. 2-97698
 CO₂-n-paraffins, Peng-Robinson equation of state, interaction parameters determ. 2-66160
 CO₂-TEA laser mode-locking by intracavity plasma switching 2-55224
 CO₂+Ar⁺, energy depend., rate consts. meas. 2-88346
 CO₂+ArH⁺, proton transfer reactions, rate coeffs. 2-70409
 CO₂+atom, hyperthermal collisions, mol. anharmonicity, time correl. function 2-85783
 CO₂+Ca, collisional relax., rate consts. for quenching meas. by modulated laser induced fluoresc. technique 2-96680
 CO₂+Cd(5³P₁), quenching of Cd excited state, atomic fluoresc. obs. 2-80798
 CO₂+F⁺, electron detachment cross sections meas. 2-59927
 CO₂+H₂O-H₂CO₃, hydration, theoretical models for activation by cationic binding sites 2-57600
 CO₂+HCl, vibr. relax. studied using IR chemiluminesc. method, quenching probabilities 2-72969
 CO₂+HCl⁺, charge exchange reactions, rate coeffs., selected ion flow study 2-88341
 CO₂+He, collision induced IR absorpt., frame distortion mechanism 2-80590
 CO₂+He(Ne), vibr.-rot. energy transfer, cross sections, rate consts. calcs. 2-96695
 CO₂+Li⁺, electron loss cross-sections 2-54943
 CO₂+Li⁺ collisions, high resolution ion energy-loss spectroscopy 2-114083
 CO₂+N₂, vibr. quenching, SIFT investig. 2-90676
 CO₂+N₂, vibr.-vibr. transitions between asymmetric stretch mode, rate const., semiclassical calcs. 2-90664
 CO₂+N₂(O₂)(Ar), collisional excitation cross section meas. 2-90670
 CO₂+NO, NO excited rot. levels, radiative lifetimes and electronic quenching rate const. 2-70343
 CO₂+O(³P), vibr. energy transfer, cross sections, infinite order sudden calcs. 2-85784
 CO₂+Xe, thermal energy collisions, change in m₁ 2-80782
 (CO₂)₂, vibr. freq., empirical pots., ab initio calcs. 2-85615
 (CO₂)₂⁺, electron impact ionisation in supersonic mol. beam, appearance pots. 2-108728
 CO₂, adsorbed on O covered Ag (110), vibr., EELS study 2-87924
 C₂ radical in C₂O₂+O flame identification by laser induced fluoresc. 2-96617
 C₂O₂⁺, isomers, bond lengths, ab initio SCF calcs. 2-113862
 C₂O₂, microwave spectrum, vibr.-rot. anal., rot. and centrifugal consts. 2-108480
 C₂O₂-O flame, photolysis, C₂O radical prod., laser induced fluoresc. 2-96617
 COS, angle resolved PES meas. as a function of photon energy from 21 to 70 eV 2-102532
 COS, cryst. struct. at 90K, neutron powder diff. study 2-65939
 COS from eruptions of Mount St. Helens, meas. 2-78623
 COS, mol. and dissoci. photolysis, dipole oscill. strengths 2-70355
 COS, mol. solid at cryogenic temps., SIMS 2-99734
 COS, photoabsorption cross sections, extreme-UV obs. 2-65001
 COS, Rydberg state assignments 2-70138
 COS+Ar⁺, energy depend., rate consts. meas. 2-88346
 COS+HCl⁺, charge exchange reactions, rate coeffs., selected ion flow study 2-88341
 C₂O₂, molecular spectroscopy using diode and combined diode-CO₂ lasers 2-63271
 CO₂...HCl, ab initio SCF MO study, H-bond energies 2-54766
 CO₂...HF, ab initio SCF MO study, H-bond energies 2-54766
 CO(a¹Π), metastable free radicals, radiative lifetimes quenching coeffs. 2-65050
 CP molecules, B-A system study 2-54834
 CS in Comet Bradfield (1979 X), IUE obs. rel. to CS and S prod. rates 2-73904
 CS in dark clouds TMC-1, Lynds 134N, B335, density determ. EHF obs. 2-68859
 CS⁺ identification in comets, origin 2-73905
 CS-S-O₂, supersonic mixing, CO chemical laser, computer model 2-90881
 CS₂, ¹B₁ state, fluoresc. spectrum 2-59843
 CS₂, angle resolved PES meas. as a function of photon energy from 21 to 70 eV 2-102532
 CS₂, backward stimulated Brillouin scatt. waves, phase conjugation char. acts. (*Chinese*) 2-90988
 CS₂, combustion, SOO existence and formation 2-83386

carbon compounds continued

- CS₂, controlled self-focusing, picosec. laser pulse shortening appls. (*French*) 2-65317
 CS₂, from eruptions of Mount St. Helens, meas. 2-78623
 CS₂, gasdynamic laser, mol. vibr. rot. anal. 2-70549
 CS₂, liq., induced Mandel'shtam-Brillouin scatt., restoration of amplitude and phase of laser signal liquid, Raman scattering 2-87807
 CS₂, liq., laser-induced breakdown, self-focusing and spot-size depend. 2-65320
 CS₂, liq., nonlinear refractive index, femtosecond interferometry study 2-81014
 CS₂, liq., Lennard-Jones pot., struct. and dynamics, computer simulation 2-97901
 CS₂, liquid, self-diffusion under press. 2-66267
 CS₂, liquid, shock compressed, time-resolved spectroscopy 2-69266
 CS₂, liquid, shock loaded, elec. resist. and UV reflectivity meas. 2-71963
 CS₂, liquid, US rel. and absorpt. meas. up to 1.5 GHz by high resolution Bragg reflection 2-75809
 CS₂, mixed with UV transmitting solvents, UV phase conjugation via degenerate four-wave mixing 2-90995
 CS₂, mixtures, UV phase conjugation, practical appls. 2-102878
 CS₂, mol. and dissoci. photolysis, dipole oscill. strengths 2-70355
 CS₂, mol. solid at cryogenic temps., SIMS 2-99734
 CS₂, multiphoton ionisation and fragmentation mechanisms 2-108649
 CS₂, n-alkane solns., ν₁ mode, Raman scatt. 2-64987
 CS₂, residence time from free troposphere and boundary layer obs. 2-63029
 CS₂, solid, intermol. modes, neutron and Raman scatt. studies 2-98211
 CS₂, struct., neutron powder profile refinement 2-55904
 CS₂, superbroadening spectrum, 5300 Å, using focused picosecond pulses (*Chinese*) 2-96584
 CS₂, UV photodissoc., S excited state study by flash photolysis 2-59719
 CS₂/nitromethane binary mixture, crit. anomaly induced by selectively adsorbing wall 2-61120
 CS₂-O₂ mixtures, self-ignition, conditions, spectrosc. investig. 2-62402
 CS₂+OH, OCS formation 2-83350
 CS₂, MnCl₂, antiferromag. ordering and mag. struct. below 0.6K, magnet-absorpt. and MCD study 2-77493
¹²C¹⁶O₂, spectroscopic constants of Fermi dyad [10⁰ν₃, 02⁰ν₃] and laser sequence band transition wavenumbers 2-102479
¹²C¹⁶O₂, collisional line broadening, IR obs. 2-75268
¹²CO₂, matrix isolated in Ne, EST study 2-102508
¹³C¹⁴N₂, red system, rot. anal., mol. consts. 2-64995
¹³C¹⁶O₂, high temperature, spectral meas. in 4.3 μm region 2-80584
¹³C¹⁶O₂, high temperature, spectral meas. in 4.3 μm region 2-80584
¹³CO abundance in bright rim cloud assoc. with H II region NGC 1977 2-84300
¹³CO⁺, matrix isolated in Ne, EST study 2-102508
¹⁴CO₂ monitoring, determ. in air 2-85398
¹³CO, obs. in second galactic quadrant (*French*) 2-89367
 CaO-CO₂-H₂O system, high press. differential anal. 2-93756
 Co, interstellar, in refl. nebula NGC 2071, broad wings and self-reversals obs. in line profiles 2-58425
 Co+Kr⁺, fine struct. state depend. reactivity 2-105471
 DF-CO₂, intracavity knife-edge diff. screen laser on D₂-F₂-CO₂-O₂-He gas mixture 2-85993
 DF-CO₂, pulse-periodic chemical laser, 16μ stimulated emission feasibility 2-55138
 HCN CW sub-MM laser output characts. based on temp. props. of electrons and gases 2-96922
 He-CO₂, dense gas, interdiffusion coeffs. meas., density depend. 2-103247
 He+CO total differential cross sections, space-fixed sudden approx. 2-80779
 N₂/CO₂ mixtures, double discharge TEA CO₂ laser uniform excitation 2-60058
 N₂+CO₂, intra and inter-mol. energy transfer, semiclassical calc. 2-70394
 Ne-CO₂ mixture filled proportional counter in avalanche multiplication zone for electrons 2-108251
 Ni-C spectra, selectively selective films produced by reactive sputtering, optical props. 2-97132
 O adsorption on Ru(001), Ni(111) and Ni(100), SIMS study 2-98448
 OCS, anharmonic force fields, ab initio calcs. 2-75174
 OCS formation in reaction of OH with CS₂ 2-83350
 OCS, IR spectra, absorpt., overtone and combination bands meas. 2-108500
 OCS, isotope effects, rot. transitions, microwave absorpt. lines 2-94923
 OCS, n-alkane solns., ν₁ mode, Raman scatt. 2-64987
 OCS, relax. times, K-entropy, intramolecular dynamics 2-108470
 OCS, vibr. band intensities in IR spectra, quantum and semiclassical theory 2-108454
 OCS, wave-number calibration tables, 500-900 cm⁻¹ region 2-113971
 OCS+Kr⁺, charge exchange, electronic state effects 2-90691
 OCS+Kr⁺, fine struct. state depend. reactivity 2-105471
 SF₆-CO₂ mixtures, impulse corona in negative rod-plane gaps 2-103523
 TiI+CO₂, CO₂ press. effect on Ti line following TiI photodissoc. 2-96503
 UO₂, kernelled HTR fuel particles, production of CO during burn-up 2-102045
 X-CO₂, filled position sensitive proportional counter for X-ray astronomy appl. 2-78952
 ZnO+CO=Zn(gas)+CO₂, reaction free energy 2-53708

carbon fibre reinforced composites

- epoxide matrix, kinking and compressive failure under superposed hydrostatic press. 2-67501
 epoxy matrix, fracture energy maps, hygrothermal ageing effects 2-57449
 epoxy matrix, model system for obs. of percolation effects (*French*) 2-77012
 epoxy matrix, unidirectional, strengths and thermal residual stresses 2-83215
 epoxy matrix, var. in acoustic emission 2-72916
 epoxy resins, linear and network, phys. ageing phenomena below glass transition 2-62161
 epoxy technology, appls. to RF components of satellite payloads (*German*) 2-88052
 filament wound cylinder under internal press., probabilistic burst strength 2-62170
 graphite fibre reinforced Al, elasticity, ultrasonic meas. 2-93552

carbon fibre reinforced composites continued

- graphite fibre reinforced composite laminates, fracture toughness, effect of notch length, specimen thickness 2-111271
- graphite fibre reinforced epoxy, centre-notched angle ply composites, tensile fracture 2-57450
- graphite fibre reinforced epoxy, fully and partially loaded, rate sensitive tensile impact props., test system 2-67684
- graphite fibre reinforced epoxy, thermal response under rapid heating 2-60361
- graphite fibre reinforced epoxy, thin struct., stress wave attenuation by US through transmission 2-62295
- graphite fibre reinforced epoxy, three-dimens. elastic moduli 2-88120
- graphite fibre reinforced epoxy laminate, fatigue damage detection using out-of-plane Moire interferometry 2-88178
- graphite fibre reinforced epoxy laminate, in situ transverse lamina strength, X-radiographic obs. 2-88135
- graphite fibre reinforced epoxy laminates, notched, compression fatigue 2-116532
- graphite fibre reinforced epoxy laminates, US and mech. charact. 2-78041
- graphite fibre reinforced epoxy ply of finite thickness, random lattice elec. cond. calc. 2-82358
- graphite reinforced polyimide resin, tensile testing at 316°C, gripping system appls. 2-105399
- graphite/glass fibre reinforced composites, hybrid effects in bending stiffness 2-88132
- graphite/glass fibres in plastic resin matrix, strong, stiff and thermally stable 2-62096
- nondestructive US testing technique using echo signals 2-67674
- phenol resin matrix, Young's modulus, repeated heat cycles effect 2-83154
- plastic matrix, fatigue resist. rel. to engineering factors 2-93618
- plastic matrix, non-linear stress-strain effects in flexural wrinkling 2-77870
- plastic matrix, unidirectional, thermal cond. meas. 2-71743
- plastic matrix, vibration technique for NDT (*German*) 2-78050
- plastic matrix disc, bursting and bulging 2-116520
- plastics, C-fibre reinforced, thermal expansion, technological implications 2-98315
- plastics, Young's modulus, heating temp. depend. 2-77866
- PMMA cement matrix, fatigue crack propag., comparison with PMMA bone cement 2-116528
- shear crack propag., acoustic emission monitoring 2-88317
- thermal conductivity, 2 to 80K 2-92296
- two-phase sintered materials, microstruct.-field prop. correl. (*French*) 2-77831
- Al matrix, alloying influence on solubility of fibres, energy calc. 2-66237
- Al matrix, chopped fibres, prod. by powder metallurgy, dry wear (*Japanese*) 2-105344
- Al-Si alloy matrix, short-and long-term strength, fatigue life in static and cyclic loading 2-99559
- Al-Si matrix, TiC barrier coating effect on reaction between components 2-99373
- C-C, prep. by CVD and characts. (*French*) 2-77764
- C-C, with hybrid C-SiC and C-TiC matrices, synthesis and characts. for high temp. applc. 2-77765
- Cu-Ti matrix, C fibre surface struct. effect, on strength 2-83067
- Sn-Ti matrix, C fibre surface struct. effect, on strength 2-83067

carbon fibres

see also carbon fibre reinforced composites

- catalytic graphitisation, process characts. and mechanism 2-78129
- coating with TiC and TiB₂ (*Russian*) 2-67583
- conducting fibres, elec. props. study 2-92559
- electrode based on C fibre, biological research appl. 2-78504
- felts, thermal cond. meas., for fusion blankets 2-69860
- field emission cathodes using commercial C fibres 2-99305
- microelectrodes for neuroscience research 2-68212
- microtexture and structure, TEM and electron diff. obs. (*French*) 2-78058
- plasma treatment, effect on C fibre material containing ZrO₂ 2-67585
- surface energy characterisation 2-56326
- surface structure effect on strength, in appl. of carbide coating in metal melt 2-83067
- surfaces, XPS and heat treatment effects 2-99296

carbon microphones see microphones**carbon steel**

- abrasive wear resist. improvement, cryogenic treatment 2-116556
- alpha-gamma transformation of steel 20, electron-autoradiographic investigation 2-67337
- cavitation damage under pressure conditions by a vibratory test (*Japanese*) 2-57491
- cavitation erosion test, comparison of results, venturi and vibratory facilities (*Chinese*) 2-62231
- cementite spheroidization 2-111212
- coated with organic films, Fourier transform IR spectroscopy, coating chem. interaction and mol. struct. and orientation 2-116603
- cold forgeability, effect of microstruct. 2-99456
- composite wire, C steel-stainless steel, corrosion under stress 2-88286
- corrosion rate in sea water, polarisation resist. technique 2-67613
- corrosion rates in aqu. soln. pH and S²⁻ conc. effect on type 1040 2-62254
- corrosion tubercles of Fe rust in aerated neutral boric-borate buffer solns. (*Japanese*) 2-62275
- critical crack opening measurement, fulcrum position determ. 2-116641
- cutting with gas transport CO₂ laser 2-116611
- deformation process development with temp., acoustic emission study in type A508 2-57423
- diffusion bonding to Zr alloys, reactor appl. 2-64545
- electron irradiation, high-energy, influence on struct. of type 65G (*Russian*) 2-10137
- erosive wear, by particle-laden high rel. liq. jet 2-67567
- eutectoid, austenite to pearlite and upper bainite isothermal transform. 2-99422
- eutectoid, thermomechanically treated, fatigue initiation study 2-77934
- eutectoid, U8, struct. superplasticity w.r.t. treatment conditions 2-57426
- fatigue crack growth in crude oil containing H₂S of type X65 2-77980
- fatigue crack propagation behaviour by cyclic overstressing and understressing 2-101322
- fatigue life estimation, under combined bending and torsional stresses (*Japanese*) 2-72816

carbon steel continued

- fatigue life under tension and compression (*German*) 2-77929
- fatigue limits, indirect eval. from static tensile strength 2-72900
- ferrite grain growth, effect of cementite particles (*Polish*) 2-67282
- ferritic, corrosion mechanism by high temp. water 2-57519
- ferritic, eqn. of state for methane in modelling H attack 2-57473
- flow properties, from Luders strain and hardness test, in SAE 1015 2-80117
- fracture surfaces, solute segregation distrib., Auger anal. of ASTM A533-B 2-80120
- fretting wear, from 20 to 650°C in air 2-88211
- grain boundary widmanstatten ferrite, angle with grain boundaries 2-81796
- ground and at layers, X-ray stress meas. (*Japanese*) 2-78012
- heat-treated, deform. and fracture processes by acoustic emission method 2-105420
- high C, carbonitriding 2-111374
- high C, friction and wear, strain and failure processes investigation by acoustic emission method 2-116633
- high C, spheroidised annealing effects on subsequent heat treatment 2-116470
- high strength, precipitation kinetics during discontinuous cooling (*French*) 2-99467
- high-C, segregation of Si on austenite grain boundaries and austenite/carbide interfaces 2-105161
- hot deform., struct. form. and stress-strain diagram during unstable stage (*Russian*) 2-77876
- hot rolled, fatigue crack propag. beyond general field 2-116554
- hydrogen embrittlement, in type 1020 2-57480
- hydrogen embrittlement detection by AE in type Ck 35 2-62192
- hypoeutectoid, spheroidising treatment from various initial conditions, struct. form. 2-99451
- hysteresis loop, anal. of loop shape 2-98186
- impact wear, of tool steel, surface topography 2-88225
- ion implanted with N, Fe, N and carbonitride phases, conversion electron Mossbauer study 2-98120
- liquid and solid metal embrittlement by In of type 4140 2-67477
- low C, austenitization kinetics in intercrit. temp. interval, effect on struct. and props. (*Russian*) 2-62148
- low C, brittleness transition temps. from different methods, comparison 2-116526
- low C, BS 4360 50D, as 3.5% NaCl, electrochem. polarisation studies 2-105357
- low C, C atom segregation, thermoelectric power and elec. cond. study (*Japanese*) 2-105155
- low C, cold rolling to foil 2-105188
- low C, cold-rolled sheet, texture form. at initial crystn. 2-99439
- low C, crack resist. determ. in brittle crack propag. from impact bend test results 2-72908
- low C, cyclic stress-strain curves and internal friction at US freqs. 2-111321
- low C, cylindrical shells, deform. and fracture under internal pulse load 2-83225
- low C, decarburisation of subcrit. temps., resolidification of ferrite 2-72689
- low C, ductile to brittle transition temp., microstruct. and US attenuation 2-88167
- low C, elongation, uniform, determ. from stress-strain curves 2-62313
- low C, fatigue crack growth under elastic, elastic-plastic and general yield conditions (*Japanese*) 2-105306
- low C, fatigue crack initiation and propag. in smooth specimens, microscopic study (*Japanese*) 2-93611
- low C, fatigue microcracks, early propag. stage (*Japanese*) 2-105305
- low C, ferrite-martensite dual phase struct., Snoek and Snoek-Koster-like relaxations 2-83159
- low C, hot rolling theories, statistical evaluation 2-105205
- low C, impact strength anisotropy, specimen width and notch tip radii influence 2-93592
- low C, internal friction, cyclic loading effect 2-77865
- low C, smooth specimens, surface crack propag. in plane bending fatigue 2-77898
- low C, strengthening and weakening of austenite during hot deformation 2-72734
- low C, structural, fracture toughness in grain coarsened region of weld heat-affected zones 2-62190
- low C, weld zone crack resistivity (*Korean*) 2-57461
- low C, weld zone, Mn and N effect on recrystallisation texture (*Japanese*) 2-105181
- low-C, ⁵⁹Fe self-diffusion, US treatment influence (*Russian*) 2-66281
- low-C, Al coating porosity determ. using electron probe microanalysis 2-99624
- low-C, boronising treatment 2-105354
- low-C, chem. capped, anomalous struct. layers form. 2-105185
- low-C, chem. scaled, anomalous interlayers 2-99416
- low-C, contact with liq. metal medium, deform. rate influence on ductility, adsorption induced embrittlement 2-99550
- low-C, decarburisation in intercrit. temp. range, recrystn. of ferrite, grain boundary migration 2-99452
- low-C, determ. of plastic surface energy 2-83178
- low-C, effect of sheet thickness on retardation behaviour of fatigue crack propag. (*Japanese*) 2-62200
- low-C, impact toughness, simultaneous influence of Ca and S 2-111311
- low-C, influence of non-metallic inclusions on cold upsetability 2-67421
- low-C, oxide film growth, vibr. technique obs. 2-83311
- low-C, plastic deform. features at elevated temps. 2-99503
- low-C sheet, strain rate effect as strain to fracture 2-105338
- lubricated wear transition 2-83239
- martensite plate size distribution, determ. by kernel estimation 2-88081
- martensite struct. after quenching and tempering (*Russian*) 2-99460
- medium C, behaviour in gaseous NH₃ under temp.-force loading 2-111380
- medium C, cavitation resist. of Cr diffusion coatings 2-72872
- medium C, corrosion fatigue testing 2-116651
- medium C, creep model for alternating loading 2-115343
- medium C, damage accumulation during initiation and short crack growth regimes 2-88163
- medium C, fatigue and inelastic deformation under nonuniform stressed state 2-116341
- medium C, fatigue crack growth regularities under torsion 2-116669
- medium C, high strain multiaxial fatigue 2-116553

carbon steel continued

- medium C, mech. props. in dynamic deform., struct. and ultrasonic vibrs. influence 2-72772
 medium C, N implanted, Mossbauer surface study 2-93086
 medium C, pearlitic-ferritic, alloying effect on fatigue failure and fracture toughness 2-111309
 medium C low tempered, dislocation density determ. in pack martensite 2-60981
 medium-C, railway wheels, rolling texture, X-ray determ. 2-99623
 medium-C, SNCM 431, effect of environments of fatigue crack propag. under 2-step varying load (*Japanese*) 2-62201
 medium-C, track traces on surface of fatigue cracks, nature 2-99548
 microhardness, temp. depend. in ASTM A533-B pressure vessels 2-80121
 mild, acoustoelastic effect of Rayleigh surface wave 2-98420
 mild, aged, plastic behaviour 2-93559
 mild, cold worked, caustic SCC 2-99596
 mild, corrosion and inhibition in NaF soln., study by small amplitude cyclic voltammetry 2-67605
 mild, corrosion fatigue in fresh water and corrosion inhibition using inhibitors (*Japanese*) 2-62276
 mild, corrosion in 0.01, 1 and 3 M HCl 2-62252
 mild, corrosion in water, Al-thiourea mixtures as inhibitors 2-111359
 mild, crack growth in notches under torsion, DC potential drop method of monitoring 2-88303
 mild, diffusion bonding, in situ obs. using photoemission electron microscope 2-110177
 mild, electrodisso., and passivation in alkaline sulphide solns. 2-116588
 mild, erosion by normal impingement of hard steel spheres 2-67553
 mild, fatigue, deform. behaviour and dislocation struct. (*Japanese*) 2-72811
 mild, Fe²⁺ reducing bacterium effect on passivity loss, anodic depolarisation mechanism 2-62257
 mild, hollow cylinders, strength of surface layer 2-57434
 mild, kinetics of H₂ form. in water, anaerobic conditions 2-88262
 mild, mech. behaviour invest. by combined-stress testing machine 2-105419
 mild, mech. stress meas. by means of mag. field strength rotation 2-62340
 mild, neck development meas., tensile testing using projection moire 2-105425
 mild, oxidation in CO₂ coded reactors 2-64483
 mild, plastic deform. behaviour along orthogonal trilinear strain trajectories 2-57435
 mild, plastic deform. in metal cutting 2-105267
 mild, precip. of Cu₃S₈, Digenite 1 2-105158
 mild, residual stress near fatigue fracture surface, meas. by X-ray method (*Japanese*) 2-77918
 mild, shaped charge jet penetration, compressibility related effects 2-86794
 mild, spherical wear debris form. in mode II fatigue cracks 2-93636
 mild, strain ageing, dynamic and static, strain depend. 2-67384
 mild, strain rate, deform. paths, plastic flow 2-57408
 mild, ultimate strength and hardness, mech. props. from extreme values, reliability based design 2-99511
 mild, wear expts. in SEM 2-67571
 mild and En8, laser surface hardening, acoustic emission monitoring 2-67602
 nuclear reactor constructional materials, liq. Na influence on strength, calc. method 2-96112
 OL-32, corrosion kinetics in acid media, radiochem. method investig. (*German*) 2-83290
 particles in Sn, effect on superconducting critical current, directional asymmetry 2-92841
 passivation using low energy Hg ion surface treatment 2-93677
 pearlitic, H cracking 2-105321
 pearlitic, impact fatigue props. 2-88164
 pearlitic eutectoid, phase interfaces and dislocations, positron trapping 2-99619
 plastic flow, elevated temps., effect of C content 2-67524
 plates rolled from continuously cast slabs and mold cast ingots, corrosion 2-77986
 retarded fracture, H influence 2-67540
 rolling-contact fatigue, effect of tangential traction and surface roughness 2-111256
 siliconising, pore-free 2-111375
 sized, Bausinger effect in alternating plastic deform., elec. contact method and hardness meas. 2-57427
 spheroidised tensile fracture, 710-735°C (*Japanese*) 2-72812
 steels, pre-stressing, environment cracking 2-99582
 stress corrosion cracking, diagnosis (*Japanese*) 2-78009
 stress corrosion cracking in nitrate soln., minor element effects (*Japanese*) 2-67634
 stress corrosion cracking in seawater, influence of pH and sulphide ions (*Italian*) 2-93686
 stress meas., combined use of longitudinal and transverse effects of magnetostriction in type St.3 2-62350
 structural, fatigue crack growth in air, crack surface oxide form., test freq. influence 2-105429
 structural, mech. test method for low strain rates 2-93709
 supercooled austenite, decomp. products morphology changes during continuous cooling, HTMT influence 2-105159
 thick welded cylinders under external press., collapse in type 1018 2-93584
 tool, hot-isostatic powder densification 2-57316
 type 08KP, structure and texture formation mechanism under hot plastic deformation (*Russian*) 2-67363
 uniaxial straining, thermal effects 2-99500
 US attenuation, rel. to thermal treatment 2-72896
 wear characts. under varying lead (*Japanese*) 2-62344
 X-ray elastic constants meas., Si45 steel 2-111225
 Cd plated, ductility, surface layers H content influence 2-67538
 Cr₂C₃ diffusion layer form. 2-83289
 Cu-C steel multilayer composite, dislocation density and diffusion processes study by thermo-EMF method 2-67381
 Fe-V-C ferritic steel, carbide precipitate size, EELS and energy dispersive anal. 2-67362
 H-trapping, phenomena 2-98288
 Nb addition effect on tempering of undeformed lath martensite (*Japanese*) 2-57381

carbon tetrachloride, CCl₄ *see organic compounds***carcinotrons**

No entries

cardiology*see also blood; electrocardiography; haemodynamics*

- angiographic picture processing, real-time classification of pictures (*Spanish*) 2-68133
 angiography, sequential ventricular borders, complex dynamic shape representation 2-100117
 aortic heart valve, stress anal. 2-116967
 apexcardiogram, left ventricular press. and wall stress: inter-relationships, dog expts. 2-83590
 arrhythmogenic mechanisms in a network of coupled excitable elements 2-88494
 arrival time analyser 2-78505
 artificial heart, elec. to mech. energy electrochemical convertor 2-78499
 artificial heart and auxiliary blood circulation systems, actuating devices 2-78497
 artificial heart electromechanical drive unit with rotary/translational motion kinematic convertor 2-78498
 artificial heart using electronically commutated brushless DC motor 2-94253
 artificial heart with pneumatic drive 2-78496
 atria, spontaneously beating, rat, effects of 2.45 GHz microwave irradiation 2-100051
 automatic left ventricular outlining 2-117055
 ballistocardiography, 3D responses to changes of posture 2-116943
 blood flow and metabolism, regional tissue, 3D quantitative meas. using ¹⁵O and positron emission tomograph 2-94201
 blood flow marker distrib., topographic display and quantitative anal. 2-117110
 blood flow profile in human heart, US measurement and imaging method 2-62661
 blood pool scintigrams, ^{99m}Tc gated, minimum cost contour detect. 2-88658
 blood pool studies, gated, time-domain anal. 2-78417
 blood-pool scintigraphy, equilib., detect. of 1 mm motion 2-83638
 cardiac time varying parameters, unconstrained, sensitivity to errors in meas. afterload and preload 2-73386
 cardio-pulmonary assessment using computerised rotating vane spirometer 2-117123
 cardiovascular system, pulsatile mech. and math. model 2-117169
 cardiovascular nuclear medicine, auxiliary moving image system, multi-phase dynamic colour display 2-94197
 cardiovascular physiology in space, current views and future programs 2-62783
 cardiovascular reflexes during rest and exercise modified by gravitational stresses 2-62643
 cardiovascular signals, detect. of trends in long term recordings 2-111808
 cardiovascular system, canine, response to ⁶⁰Co γ-irrad. 2-105795
 cell-to-cell communication in heart and other tissues, review 2-99928
 cells, single, dialysed, reversal of current through Ca channels 2-88524
 cineangiograms, coronary obstructions characterisation using single and multiple views 2-73354
 cineangiograms, left ventricular, acquisition, quality problems and solns. 2-88659
 circulatory system, modular, mock, programmable electronic control unit 2-100188
 computer applications, conf., Florence, Italy (Sep. 81) 2-79282
 computerised tomographic imaging, ECG triggered, with the Somatom 2-100096
 computerised tomography, single photon emission, comparison of 180° and 360° data collection in Tl²⁰¹ imaging 2-117059
 computerised tomography scans, quantitative computer graphic displays 2-117076
 conference on medical phys., Varenna, Italy (Jun.-Jul. 79) 2-89448
 contractile activity and energy circulation, modelling (*Russian*) 2-62546
 contrast echocardiography, 2D, videodensitometric data processing 2-117034
 contrast echocardiography, review 2-117033
 coronary artery disease, echocardiographic study of vel.-strain relationship 2-117025
 CT heart scanning, ECG gated, use of 4th generation scanners 2-111794
 deconvolution program for processing radiotracer dilution curves 2-117056
 defibrillation and cardiopulmonary resuscitation, conf., Lafayette, USA (Sep. 81) 2-53415
 defibrillation thresholds with transventricular simple-capacitor discharge, dog expts. 2-94017
 defibrillator analyser, microprocessor-based 2-57930
 diastole, deviation of observed from passive states 2-105732
 digital radiography, conf., Stanford, CA, USA (Sept. 1981) 2-94891
 disease diagnosis, precordial LF vibrs. meas. system, development of optical transducer (*Japanese*) 2-117047
 Doppler ultrasound and its use in clinical meas., book 2-89494
 Doppler US human foetal heart rate records, improvement by signal correl. 2-68087
 dynamic radiography: a new technique for epicardial imaging using microprocessor controlled system 2-111788
 ECG signal model with physically significant parameters 2-94020
 echo-interval shortening with increasing prematurity, computer model 2-88496
 echo-mechanocardiograms, methods and results 2-68204
 echocardiograms, 2D sector scans, computerised reconstruction of 3D images of pulsating left ventricle 2-83617
 echocardiograms, ECG synchronised 2D, on-line digital storage and image treatment 2-94141
 echocardiograms, M-mode, computer assisted anal. 2-100068
 echocardiograph, M-mode, microcomputerised, with VTR recording 2-100080
 echocardiographic 2D images sequence, approach to optimal threshold selection 2-100069
 echocardiographic computerised tissue characterisation system 2-94143
 echocardiographic images, computer processing for automated edge detect. of left ventricular boundaries 2-94142
 echocardiographic imaging, 3D resolution 2-100071
 echocardiographic sector scans, computerised enhancement techniques 2-83615
 echocardiography, computer supported meas. of 2D images 2-83616
 echocardiography, new techniques, review, book contrib. 2-111764

cardiology continued

- echocardiography, directly heated photothermographic paper appl. 2-68084
 electrical activation, normal and abnormal, phase analysis of equilib. cardiac imaging patterns 2-94198
 electrical bioimpedance of heart, tissue, brain, limb and lung, conf., Tokyo, Japan (Aug. 1981) 2-63741
 electrical periodic stimulation of embryonic chick cells 2-62591
 electrohydraulic energy converter for a left heart assist system 2-73396
 examination, non-invasive methods 2-83695
 extracorporeal and auxiliary circulation of blood, apparatus design 2-62833
 foetal heart rate during labour, variability computation using microcomputer 2-100133
 foetus, human, method for controlled sound stimulation, heart rate response determ. 2-117029
 functional imaging future in radionuclide studies 2-94190
 functional mapping of organ systems, computer methodology, symposium, New Orleans, LA, USA (1981) 2-63742
 haemodynamic values assessment from single-probe radioisotope dilution curves 2-100121
 Hall effect transducer for apexcardiography and sphygmography 2-117125
 heart perimeters measurement in animal research, strain gauge system isolated from elec. cts. using optocouplers (Spanish) 2-68214
 heart rate monitor for runners and joggers (German) 2-78475
 heart valves, fluid dynamics 2-100038
 HF jet ventilation, cardiac synchronised, haemodynamic effects in dogs 2-73294
 imaging by digitised intravenous angiocardiology, contrast enhancement 2-88661
 impedance pneumography, methods of filtering heart-beat artefact from breathing waveform of infants 2-68182
 impedance spectroscopy as an aid in cardiac surgery (German) 2-83697
 irradiation of beagle hearts with fractionated fast neutrons or photons, pathologic changes 2-68074
 ischaemic heart disease contraction risk rel. to blood plasma lipoprotein microviscosity 2-100019
 iterative reconstruction-reprojection, algorithm for limited data computerised tomography 2-78415
 laser fluorimeter for direct cardiac metabolism investigation 2-100177
 left ventricle delineation, edge detect. algorithms performance 2-100120
 left ventricle wall, biomechanical indicators of energy expenditure of heart muscle 2-100018
 left ventricular afterload parameters, automatic estimation procedure using a systemic vascular bed model 2-100149
 left ventricular assist device, cam-type elec. motor-driven 2-117139
 left ventricular boundary automated extraction from ^{99m}Tc gated blood pool scintigrams 2-68144
 left ventricular contraction assessment, fluid dynamic model 2-100039
 left ventricular diastolic press.-vol. relationship, effect of normal pericardium, dog expts. 2-68032
 left ventricular function, IR reflectance system for ambulatory characterisation 2-94151
 left ventricular function in right-heart-bypassed dogs, effect of positive end-expiratory press. 2-73274
 left ventricular function monitoring, evaluation of a miniature CdTe detector 2-105818
 left ventricular haemodynamics and chamber dimensions, computer-graphic anal. 2-100148
 left ventricular heat production, hybrid device for meas. 2-99905
 left ventricular press.-vol. relationships, assessment using a computerised nonimaging nuclear probe 2-83653
 left ventricular pressure and derivatives resynthesis from harmonics, cardiac relax. parameters 2-88579
 left ventricular wall motion abnormalities, assessment from contrast ventriculograms 2-94186
 left ventricular work and power: circumferential, radial and longitudinal components 2-105734
 left ventriculography, digital, determ. of benefit from post-acquisition processing 2-88660
 linear step motor drive for auxiliary blood circulation equipment and partially implantable artificial heart 2-78500
 M-mode echocardiographic system for cardiac parameters derivation 2-83614
 M-mode omnidirectional recordings obtained from 2D echocardiography 2-117019
 medical diagnostic data transmission via standard telephones 2-68191
 metabolism, non-invasive assessment by NMR 2-94152
 mitochondria of liver and heart, detect. of new paramag. centres by EPR 2-57792
 mitral valve insufficiency, expt. stimulated, myocardial mechs. 2-73295
 mitral-leaflet closing vel., rel. to 1st heart sound spectra 2-83613
 muscle, 4-electrode resistivity technique appl. 2-88704
 muscle, cardiac, contraction model 2-116867
 myocardial ^{201}Tl emission tomography with 180° and 360° data collection comparisons 2-117060
 myocardial cells, synchronisation model of beating phenomena 2-73211
 myocardial conduction vel., electrode system for in vitro determ., canine expts. 2-117162
 myocardial elastic props., 3D finite element reconstructions from 2D echocardiograms 2-94101
 myocardial fibre stresses, approx. formulas 2-105752
 myocardial flow and metabolism, imaging using multitracer autoradiographic technique 2-88711
 myocardial infarct size, quantification with multipinhole and rotating-slanthole tomography 2-62851
 myocardial perfusion abnormalities detect., performance of rot. slant-hole collimator 2-83637
 myocardial perfusion scintigraphy using ^{201}Tl , lesion detectability using math. model 2-73358
 myocardial scintigrams using ^{201}Tl , computer processing 2-73355
 myocardial scintigraphy, problems with ^{201}Tl 2-94199
 myocardium, regional flow estimation using CT, stochastic formulation 2-100104
 nuclear cardiology, ECG gated, image enhancements by Karhunen-Loeve transformation 2-68145
 nuclear medicine, acute myocardial infarction and other appls., review 2-57897
 nuclear medicine, factorial phase imaging, first-pass cardiac studies anal. 2-117070

cardiology continued

- nuclear medicine, multigated Fourier functional images, interpretation 2-117062
 oesophageal probe for heart and temp. monitoring during anaesthesia 2-68183
 orthostatic trial, passive, haemodynamic regulation (Russian) 2-62659
 output, automatic determ. using impedance plethysmography 2-57911
 output, technique for continuous meas. based on temp. variations 2-73388
 phonocardiography, digital filter design [phonocardiography application] (German) 2-111759
 piezoelectric polymers as peripheral pulse sensors 2-83689
 PMR of regionally ischemic canine heart, signal enhancement effect 2-105874
 positron tomograph, dynamic, for heart studies, medical criteria for desing 2-73329
 precordial pressure, dynamic instrumentation for meas. 2-117103
 prosthetic aortic valves, flow situations and patterns (German) 2-57923
 prosthetic heart valves, flow-induced shear stress distrib. meas. 2-62836
 prosthetic heart valves, in vitro evaluation, anomalies and limitations 2-100157
 Purkinje fibre action pot., simulation of repolarisation events 2-88528
 Purkinje fibres, fluctuations in membrane current driven by intracellular Ca^{2+} 2-94009
 pyroelectric sensor for the measurement of pressure and cardiac output (Spanish) 2-68179
 radiographic technique for cardiovascular disease diagnosis 2-57900
 radioisotope angiocardiology, digital computer methods for anal. 2-100118
 radioisotope angiocardiology, left ventricular ejection fraction determ., background counts correction 2-88655
 radioisotope cardioangiography by in vivo labelling of red blood cells, effective radiation protection (Japanese) 2-57899
 radioisotope ventriculography, regional wall motion disturbances quantification 2-100119
 radionuclide angiocardiology approaches to shunt assessment, simulation-based sensitivity study 2-73317
 rapid-freeze clamp, stimulator-regulated, for terminating cardiac metabolic processes 2-78508
 rate frequency modulation technique to increase LF content of cardiovascular signals 2-88703
 right ventricle in diastole, passive stress/strain relation 2-105723
 spherical conductor, 2 dipoles determ. from surface pot. meas., isolated heart appl. 2-73412
 stretch receptors of the heart, review (Japanese) 2-57833
 stroke volume meas., expt. evaluation of impedance and EM methods in dogs 2-117112
 stroke volume measurement by impedance cardiography 2-100136
 stroke volume rel. to pneumocardiogram, dog expts. 2-117121
 surgery, non-contacting temp. meas. technique (German) 2-111811
 thermomodulation technique for cardiac output meas. during artificial ventilation 2-73402
 thoracic impedance cardiograms, surface mapping 2-68180
 thoracic wall phonocardiogram recording and correlation 2-94129
 two-dimensional echocardiograph processing, noise insensitive thresholding method 2-94144
 US in medicine and biology, conf., Brighton, England (Jul. 82) 2-101123
 US transoesophageal phased array for imaging the heart 2-117023
 valve replacement, low profile bioprosthesis, hydraulic and haemodynamic studies 2-88696
 ventricular arrhythmias, computer simulation: ventricular bigeminy 2-88495
 ventricular contraction, models based on time-varying elastance, review 2-94093
 ventricular function, regional, assessment by segment work 2-73296
 ventricular function meas., data processing 2-100102
 ventricular myocardial action pot., simulation using math. model 2-88529
 ventricular vulnerability to fibrillation, estimation through T-wave time series anal. 2-88534
 volume estimation by 2D echocardiograms recorded from 1 extracorporeal point 2-94131
 Ca^{2+} channels in cardiac cultures, channel props., patch clamp obs. 2-88525
 K^+ and Cl^- channels in calf cardiac sarcolemma 2-105693
- carrier avalanches** see impact ionisation
- carrier density**
 see also current density; electron density; electron density (metals)
 bound exciton recombination, Auger processes effects 2-76931
 defects, two-dimensional, appl. of Van der Pauw's method 2-115787
 dielectric slab with taps, non-uniform illumination conditions, volt-amp characs. (Dutch) 2-61506
 epitaxial film, elec. cond. and Hall effect 2-115922
 film, electron concentration and density of states, modelless calc. 2-92780
 films, elec. characterisation by contactless microwave cavity technique (French) 2-101418
 graphites, exfoliated, thermopower, diffusion and phonon drag components 2-82389
 insulators, carrier density determ. using transient injection currents 2-82365
 MBE growth using Pb flux and elec. characterisation 2-87987
 mixed conductors, semicond.-metal transition, superionic transition, phenomenological model 2-61529
 multilayer heterojunctions, carrier conc. and mobility, calc. from Hall effect and hot electron data 2-56678
 p-n structure, small-signal double injection in mag. field 2-77172
 p-n asymmetrical diffused junctions, numerical method for space-charge region anal. 2-92740
 (perylene) $_2(\text{AsF}_6)_1 \times 0.7$ dichloroethene, one-dimensional conductor, spectral reflectance 2-57045
 (perylene) $_2(\text{PF}_6)_1 \times 0.8$ dichloroethene, one-dimensional conductor, spectral reflectance 2-57045
 phosphors, diffusion-assisted luminescent processes, nonequilib. thermodynamic study 2-82914
 piezoelectric semiconductor, acoustic wave visualisation using photoluminesc. modulation 2-66592
 piezoelectric semiconductor, photoelastic effect, electron contrib. 2-92703
 polar semiconductor, carrier mobility, effect of renormalised plasmon-phonon oscills. 2-77060
 polyacetylene films, dielectric props. 2-87646

carrier density continued

- polyacetylene MIS struct., field effect props. meas. 2-92772
 polystyrene films, soln. grown, DC electrical props., free and trapped carrier conc., density of states 2-56742
 quantum inversion layer, surface scatt. mechanism 2-77197
 semiconductor, carrier conc., deep levels effect in case of strong compensation 2-110368
 semiconductor, carrier density fluctuations due to trap distrib. 2-98660
 semiconductor, continuation method for calc. of potentials and currents 2-72008
 semiconductor, current flow, generalised stream function representation 2-115770
 semiconductor, surface barrier struct., photon-diffusion transport of nonequilib. carriers 2-115864
 semiconductor barrier structs., thermally activated carrier motion, charged impurity effect 2-115884
 semiconductor crystal properties, measuring apparatus (*Russian*) 2-98693
 semiconductor film, polycrystalline, Hall mobility interpretation 2-61630
 semiconductor superlattices, Einstein relation, effect of band non-parabolicity 2-82449
 semiconductor wafer, carrier concentration profile determination from light refl. spectrum in IR region 2-61484
 semiconductor-electrolyte contacts, impurity profile determ. in semiconductor, electrochem. C-V method (*Chinese*) 2-92745
 semiconductor-semiconductor interface, electron-hole systems work function and band struct. 2-87382
 semiconductors, ambipolar diffusion of high density electrons and holes 2-110367
 semiconductors, carrier conc. and mobility at low temps. 2-110351
 semiconductors, hot carrier noise 2-87352
 semiconductors, inhomogeneous anisotropic, current-voltage characs. 2-92629
 semiconductors, intrinsic, quantum-limit magnetoresist. 2-82382
 semiconductors, laser generated carriers by induced lattice temp. gradients 2-56630
 semiconductors, magnetodiode effect with monopolar injection, space charge limiting effects calc. (*Russian*) 2-77102
 semiconductors, polar, hot carrier energy loss, electron-hole plasma screening 2-110357
 semiconductors, reflectivity, spatially inhomogeneous carrier conc. dependence 2-67015
 semiconductors, S-shaped elec. cond. characteristics at low temp. 2-77074
 semiconductors, variable gap, photon transport of nonequilib. carriers, photoluminescence 2-116257
 SOS films, non-homogeneous elec. transport, galvanomag. expts., internal stress influence 2-115904
 SOS structures, Hall mobility and capacitance meas., internal stresses and pot. fluctuations influence 2-82470
 zero-gap semiconductor, carrier statistics 2-92623
 AgCl, non-stoichiometry and chem. diffusion coeff., electronic cond. meas. 2-56594
 AgI-Cu, electronic cond., carrier mobility, DC polarisation and charge transfer methods 2-115753
 (Al,Ga)As/GaAs heterostruc., electron mobility meas., AlAs mole fraction influence 2-56677
 AlGaAs, undoped, MOCVD growth and charact. 2-98497
 Al_{0.3}Ga_{0.65}As/Si MBE layer, donor activation energy determ. from elec. transport props. meas. 2-98769
 Al_{0.3}Ga_{0.65}As-GaAs heterostruc., modulation doped, photocond. effects 2-56679
 Al_{0.3}Ga_{0.65}As/Si(Sn), epitaxial films, doping effects on elec. props. 2-110502
 Al_{0.3}Ga_{0.65}As/GaAs heterostructures, single and multiple period modulation and doped, I-V characs., suitability for FETs 2-56682
 Al_{0.3}Ga_{0.65}As heterojunction, single period modulation doped, normal and inverted, electron mobility, substrate temp. influence 2-115876
 As₂Te₃ chalcogenide glass, photoabsorption and photoconductivity 2-82406
 BaPbO₃-BaBiO₃ system, Hall EMF, elec. cond., and supercond., 2.5 to 300K 2-61645
 Bi film, electron concentration and density of states, modelless calc. 2-92780
 Bi thin film, longit. magnetoresist. max. (*Russian*) 2-115788
 Bi-Sb thin film, longit. magnetoresist. max. (*Russian*) 2-115788
 Bi₂S₃ thin film, semicond. liq. junction solar cell and chalcogenide props. 2-78212
 Bi₂S₃ films, semimetal-semicond. transition, thickness depend., resist. and magnetoresist. meas. (*Russian*) 2-82411
 Bi₂Te₃Se, heat treatment influence on props. 2-72721
 CaGaCr, surface carrier conc., use of transverse electroreflectance 2-57058
 Cd_{0.8}Hg_{0.2}Se mixed cryst., Γ point band struct. parameter, elec. and thermomagnetic studies 2-76923
 Cd_{0.8}Hg_{0.2}Te, growth by pressurised cast-recrystallise-anneal technique 2-111068
 p-Cd_{0.8}Hg_{0.2}Te, hole conc. routine characterisation, Hall coeff. and bulk cond. meas. 2-82351
 n-Cd_{0.8}Hg_{0.2}Te layers, MBE growth, struct. and elec. props. 2-99340
 Cd_{0.8}Hg_{0.2}Te, MBE growth 2-93433
 CdS, hot wall epitaxial growth, elec. props. 2-93430
 CdS, impurity content evaluation by Hall effect analysis 2-115789
 CdS polycrystalline film, photoconductivity meas. 2-66674
 CdS single crystal, electroacoustic interaction, nondegenerate, at sum and difference freqs. mechanism 2-92706
 CdS thin films, elec. props. In doping and Ag contact effects 2-66672
 CdS in film, heavily doped, elec. transport props. 2-72090
 CdS:In(Sb) film, vacuum evaporated, elec. and optical props. 2-61631
 CdS:Te film, vacuum deposited, dark cond. and photocond. meas., doping effects 2-61623
 CdSe, optical absorpt. saturation near fundamental edge 2-114387
 CdSiP₃, intrinsic defect effect on elec. props. 2-61481
 CdTe, Ag diffused, degradation of elec. and optical props. 2-115751
 CdTe, DLTS study of deep electron traps 2-92516
 n-CdTe, electron mobilities at low temps., theory 2-87253
 CdTe, hot wall epitaxial growth, elec. props. 2-93430
 p-CdTe, imperfection anal. by photoHall effect and bipolar photocond. meas. 2-77114
 CdTe, MBE growth 2-93433
 CdTe, relaxation-case, photoconductivity 2-66589

carrier density continued

- CdTe, thermoelectric power, effects of bipolar photoconductors, photo-Hall effect meas. 2-87310
 CdTe:In, MBE growth, effects of doping on electron conc. and photolum. 2-76846
 CdTe-Cu(Ag) solid soln., supersaturated, carrier decay process kinetics 2-92649
 CdTe_{1-x}Te_x:Au, Hall coeff., thermo-EMF, cond. type, temp. depend., doping effects 2-56615
 Cd_{0.8}Zn_{0.2}As₂, Shubnikov de Haas oscils. 2-92673
 Cd_{0.8}Zn_{0.2}As₂ chemically sprayed thin films for solar cells, carrier density depend. on Zn conc. 2-115928
 CuFe₂O₄ ferrite, elec. cond. mechanism, phase transformation, heat treatment effects 2-71981
 CuInTe₂, electrical characs. 2-92648
 CuInTe₂, neutron irradiat., elec. props. and defect levels 2-71982
 CuInTe₂:Zn(Cd), elec. props., hole mobility and conc., annealing effects 2-87279
 Cu, S thin films prep. by Activated Reactive Evaporation, elec. and optical props. 2-99354
 Cu_{2-x}Se, electrophysical props., effects of uniaxial deform. at different temps. (*Russian*) 2-82353
 (GaAl)As-GaAs DH lasers, narrow oxide stripe, lateral current spreading and diffusion problem 2-80964
 Ga_{1-x}Al_xAs, epitaxial layers, Hall mobility-drift mobility ratio, press. depend. 2-87431
 Ga_{1-x}Al_xAs:Be-GaAs p-p-n solar cells, Be diffused doping and elec. props. meas. 2-105557
 Ga_{1-x}Al_xAs:Si, Ge, LPE growth and doping, elec. and photolum. props. 2-116393
 Ga_{1-x}Al_xAs:Zn, metalorganic CVD film, elec. cond. 2-56733
 GaAs, ambipolar diffusion of high density electrons and holes 2-110367
 GaAs, crystal growth-property relationships, Bridgman-type apparatus for study 2-86612
 GaAs, doped superlattices, quasi-two-dimensional photoexcited carriers 2-110433
 n-GaAs epitaxial layer on semi-insulating GaAs:Cr, current limitation due to IR radiation obs. 2-66626
 GaAs, heavily doped, electron pulsed annealed, elec. quality meas. 2-98161
 e-GaAs, hot carrier, picosecond absorpt. spectroscopy 2-92640
 GaAs, hot photoexcited electrons, theoretical study 2-82367
 GaAs, impurity band transport in large mag. fields 2-61487
 GaAs:Cr, Se, hot implanted, effects of damage-impurity interaction on elec. props. 2-71990
 GaAs:Cr, Si, ion implanted, AlN capped annealing, carrier profiles 2-66023
 GaAs:Cr, Si, ion implanted, Hall effect, depth profiles (*Slovak*) 2-98669
 GaAs:Cr,Si⁺, ion implanted semi-insulating substrate, carrier conc. uniformities meas. 2-98134
 p-GaAs:Ge LPE layer, electron diffusion length determ. by EBIC method 2-56736
 GaAs:Ge(Se), neutron transmutation doped, elec. props., metal-nonmetal transition 2-87284
 GaAs:In, crystals and films, elec. props., isovalent impurities effect 2-82286
 GaAs:O, deep electron traps, elec. and optical props. 2-98585
 GaAs:Se, ion implanted, elec. props., ion energy depend. 2-71999
 GaAs:Se, ion implanted, elec. carrier and atomic profiles correlation 2-72000
 GaAs:Se, ion implanted, elec. props. and impurity distrib. 2-98141
 GaAs:Sb, crystals and films, elec. props., isovalent impurities effect 2-82286
 GaAs:Se, ion implanted, carrier props. and photolum. meas. (*Korean*) 2-56585
 GaAs:Se⁺, ion implanted, transient annealing using graphite strip heater, elec. cond. study 2-82348
 GaAs:Se⁺, ion implanted, high temp. annealed, damage, defects and elec. props. 2-98097
 GaAs:Si, ion implantation, elec. props., for dual gate MESFET (*Chinese*) 2-109817
 GaAs:Si, study of encapsulation for annealing 2-77082
 GaAs:Si LPE layer, photolum. and carrier conc. (*Russian*) 2-99174
 GaAs:Sn, Te MBE layer, doping using SnTe source 2-92004
 GaAs:Sn LPE layer, deep level free-to-bound fluorescence line shapes 2-77564
 GaAs:Te, MBE grown, elec. cond. and photoluminesc. props. meas. 2-56734
 GaAs:Zn, Zn diffusional doping, open-tube method 2-104060
 GaAs:(AlGa)As heterojunction, modulation doped, intersubband scatt. 2-61573
 GaAs-oxide interface electronic struct. 2-87409
 GaAs,Sb_{1-x}As_x LPE growth on InAs substrates 2-88010
 Ga_{0.47}In_{0.53}As, MBE grown, Si doping and elec. props. meas. 2-92005
 GaN heteroepitaxial layer, growth and doping kinetics, cathode luminesc., elec. props. 2-104185
 GaP, heteroepitaxial MBE growth on Si (100), elec. props., heterojunction form. 2-57297
 GaP, proton irradiat., elec. cond. and electron conc. meas. 2-77053
 GaP:Mg, LPE growth, minority carrier lifetime, photoluminescence study 2-82488
 Ga_{1-x}Sn_xSe, solid solns., elec. cond., thermo-EMF and Hall coeff. meas. 2-87259
 Ge, ambipolar diffusion of high density electrons and holes 2-110367
 Ge, carrier conc. effect based devices, sensitivity increase 2-87430
 Ge, charge carrier drag study (*Russian*) 2-71983
 Ge, cleaved surface, charge carrier minimal motion (*Russian*) 2-72046
 n-Ge, electron and γ -ray bombarded, defect accumulation kinetics, intensity dependence meas. 2-115295
 n-Ge, electron pulsed bombardment, defect formation obs. 2-115294
 Ge epitaxial layers, LPE growth in γ -radiation field, struct. and electrophysical parameters 2-115599
 Ge, galvanomagneto-combinational elements, fluctuation processes 2-87351
 Ge, IR study of laser generated carriers 2-110859
 Ge, laser pulse interaction, 2.7 μ m 2-77627
 Ge:As, Sb, compensated and illum., low temp. Hall mobility of electrons 2-77096
 Ge:Cu, quenched, Cu related shallow acceptor, hole density temp. depend. study 2-92509
 Ge:Ni(Au), photoelectromotive force, carrier density 2-87339

carrier density continued

- Ge:P, ion implanted, elec. props. 2-77089
 n-Ge:Sb, Au, compensated, Sb ionization energy 2-76985
 GeTe, intervalley Jahn-Teller effect and polymorphic ferroelectric transitions 2-87208
 HfC_{1-x}N_x, spectral reflectance, interband absorption and carrier density 2-99152
 n-(Hg,Cd)Te, degenerate, two-band Auger recombination lifetime 2-93336
 HgCdTe epitaxial layers, Shubnikov-de Haas effect (*French*) 2-61486
 HgCdTe, transport props. rel. to acceptor levels 2-92633
 Hg_{0.7}Cd_{0.3}Te, photocond. props. 4.2 to 300K, recombination mechanisms (*French*) 2-61508
 n-Hg_{1-x}Cd_xTe, electron mobilities at low temps., theory 2-87253
 Hg_{1-x}Cd_xTe, isothermal epitaxial growth, elec. props. optimisation 2-93452
 n-Hg_{1-x}Cd_xTe, mag. freeze-out modification due to reson. levels 2-92670
 Hg_{1-x}Cd_xTe, n-channel, 2D-subband 2-92465
 p-Hg_{1-x}Cd_xTe, narrow gap low carrier conc., elec. props. 2-77047
 Hg_{1-x}Cd_xTe, photo-Hall meas. of high-density photoexcited electrons 2-92700
 Hg_{1-x}Cd_xTe, some props. of high-density electron-hole plasma 2-87296
 Hg_{1-x}Cd_xTe, zero-gap semiconductor, cond. study 2-104380
 Hg_{1-x}Cd_xTe-CdTe ion implanted epilayers, elec. and optical props. 2-115927
 Hg_{1-x}Cd_xTe-CdTe LPE layers, electron mobility near zero band-gap crossing 2-87426
 HgCr₂Se₄, mag. semicond., elec. optical and mag. studies 2-87288
 n-HgTe, zero-gap semiconductor, carrier statistics 2-92623
 InAs-AlAs solid soln., plasma edge reflectance, carrier density 2-82855
 InAs-GaSb superlattice, highly doped, effective mass, carrier density, helicon wave propag. determ. 2-56688
 InGaAs:Te, VPE growth for photodetectors 2-111086
 In_{0.53}Ga_{0.47}As:Be, Si, ion implanted, n⁺ layers, sheet resist., electron mobility and conc. 2-66022
 In_{0.53}Ga_{0.47}As:Si, n-layer formation by Si implantation 2-92001
 InGaAsP (InGaAs) LPE layers, room temp. electron diffusion lengths 2-56730
 InGaPAs_{0.01}:Zn(Te)(Se) LPE layer on GaAs, doping effect on physical, elec. and optical props. 2-110501
 In₂O₃:Sn films, annealed, elec. resist. and defect model 2-66671
 InP, agitated gas flow technique for high press. synthesis (*Chinese*) 2-99320
 InP, electron irradi., defect form. and annealing 2-98159
 InP:Be(C)(Si)(Ge)(Sn), ion implanted, annealing behaviour obs. 2-98135
 InP:Cd, VPE growth and photolum. characterisation 2-88002
 InP:Cr(Fe), impurity diffusion, carrier and impurity profiles 2-115467
 InP:Te, VPE growth for photodetectors 2-111086
 InSb, Auger recombination rate during intense laser pulse, carrier density depend., reflectivity study 2-67158
 InSb, carrier conc. effect based devices, sensitivity increase 2-87430
 InSb, Hall effect, press. effects 2-104398
 n-InSb, low electron conc., electron Hall mobility at high press. 2-92672
 InSb, n-channel, 2D-subband 2-92465
 InSb, neutron irradi., carrier density and mobility meas., disordered regions scatt. effects 2-61466
 p-InSb, radiation damage and recovery effects 2-66066
 InSb, residual impurities and inhomogeneities, galvanomagnetic meas. 2-110369
 InSb, thermal acceptors influence on electrophys. props. during annealing 2-56577
 InSb:Bi solid soln., Bi donor level form., X-ray struct. study 2-115702
 InSb:NiSb, low-freq. voltage instability (*Russian*) 2-56606
 InSe, intraband light absorption, high nonequib. carrier conc. induced by laser beam 2-87799
 IrSi_{1.75}, semiconductor thin film, optical and Hall effect meas. 2-77209
 LiAl, Hall mobility of positive carrier 2-110330
 Li₃NaPO₄, synthesis and props. 2-111102
 LiNbO₃:CdSe multilayer struct. with periodic-array contacts, freq. doubling 2-92705
 NiO, spin dependent charge carrier transport, 150 to 400°C 2-87269
 Pb_{1-x}Ge_xSe, optical and elec. props. (*Russian*) 2-57048
 (PbSe)_{1-x}(SnTe)_x:In, influence of In on props. 2-110238
 Pb_{1-x}Sn_xSe, thin layers, grown by 'hot wall' method 2-72627
 Pb_{1-x}Sn_xTe LPE inhomogeneous layer, IR plasma reflection spectrum, vapour transport process 2-93314
 Pb_{1-x}Sn_xTe:In epitaxial film, elec. and struct. props. 2-110506
 PbTe and PbTe-SnTe solid solns., Ga doping effect on electrophys. props., doping mechanism 2-56578
 PbTe crystal growth by travelling heater method 2-93404
 PbTe film, charge carrier conc. and mobility variations after deposition 2-66680
 PbTe films, electron mobility, temp. depend. meas. 2-110505
 PbTe, H⁺(Ag⁺)(Sn⁺) ion-implanted, elec. props. 2-104377
 p-PbTe:Ti epitaxial films, Hall mobility, doping effects 2-110509
 PbTe:Ti(Na), density of states in valence band, sp. ht. and Hall coeff. meas. 2-82515
 Sb-As, solid solutions, anisotropy of resistivity (*Russian*) 2-77090
 Sb_{1.5}Bi_{0.5}Te₂:Pb solid soln., doping, carrier density 2-71997
 Sb_{1.425}Bi_{0.575}Te₂:Se_{0.15} solid soln., thermoelectric props., effects of Ge and Cu impurities 2-82385
 Sb₂Te₃ single cryst. growth by hot wall epitaxy 2-93418
 Se_{1-x}As_xSe glassy semicond. based heterostructs., electron transport 2-92742
 Si, ambipolar diffusion of high density electrons and holes 2-110367
 Si, amorphous glow-discharge film, reflectivity, spatially inhomogeneous carrier conc. dependence 2-67015
 Si, carrier and lattice temps. induced by picosecond laser pulses 2-67155
 Si, gamma-ray irradi., metastable Frenkel pair form., elec. props. 2-115289
 Si, glow discharge microcryst., thermoelec. power, Hall effect and density of states meas. 2-98674
 Si, heavily implantation with BF₂⁺ (BCl₂⁺) and carrier density meas. 2-81803
 p-Si, hole-acoustic phonon transition rate angular depend. 2-110237
 Si, interband Auger recomb. rate, carrier density depend. 2-77088
 Si, ion implanted, isothermal annealing, IR refl., refr. index, regrowth rates, and carrier profiles 2-110836
 Si, laser annealing by nanosecond pulses, temp. rise and carrier conc., computer model 2-86723

carrier density continued

- Si MOS inversion layer, Anderson localization, neg. magnetoresist. 2-61597
 Si MOS inversion layers, Hall effect in strong mag. fields 2-61489
 Si p⁺-i-n⁺ solar cells, high injection phenomena, theoretical model 2-93911
 Si p⁺-p-n⁺ multilayer structure, multilayer carriers conc. meas. in base region 2-115886
 n-Si, proton-irradiated, radiation defect clusters, struct. and props. 2-81833
 Si, slip line free, large-area multiple scan annealing with line focussed electron beam, elec. study 2-71505
 Si solar cells, p-n⁺ junction, n-type heavily doped emitter region effective drift current densities 2-83500
 n-Si, transverse photovoltaic effect, intervalley relax. time 2-115819
 Si:As, doping during PD/Si form. at low temp. 2-86698
 Si:As, implanted, CO laser annealing 2-86727
 Si:As, ion-implanted, laser and thermal annealing comparison, ion backscatt. and elec. meas. 2-55991
 Si:As(P), CVD film, elec. characts., grain size, effects of impurity conc. and heat treatment 2-82487
 Si:B, diffusion doped, CW CO₂ laser irradi., sheet resistance depend. on power density and scanning vel. (*Chinese*) 2-109827
 Si:Be, atom and carrier depth distrib. 2-92018
 Si:Fe,B, Fe donor activity on heat treatment, elec., DLTS and EPR meas. 2-71911
 Si:H, amorphous, 1.4 eV luminescence lifetime distrib. 2-72540
 SiO₂, electron irradi., carrier removal and recombination by interstitial complexes 2-115781
 n-Si:P, B ion implanted, deep level profiles 2-98571
 Si:P, ion implanted, distrib. profiles, elec. props. 2-103797
 Si:P, ion implanted and annealed, IR reflectivity characterisation, physical model 2-77532
 Si:P, neutron transmutation doping, radiation defects, electrical activity, annealing 2-86738
 Si:P⁺(As⁺) layers, ion implanted, electron beam annealing, elec. props. 2-92039
 Si:Zn,CO, epitaxial layers, doping laws and electrophysical props. 2-66025
 Si-CdS(Zn,Cd_{1-x}S) heterojunction solar cell, elec. props. 2-115875
 Si₃N₄ film in MNOS struct., stoichiometry variation rel. to memory traps 2-82163
 SnO₂ ultrafine particle film, Hall effect meas. and elec. cond. model 2-87425
 SnO₂:F films, spray prep. and elec. and optical props. 2-105069
 SnO₂:Sb thick films, spray deposited, elec. cond., Hall mobility and optical gap meas. 2-82415
 SrTiO₃:La, quenched, highly reduced, electronic cond. 2-56583
 SrTiO_{3-x}, supercond. transition temp. of overlayers in films 2-66693
 Su(BP), heavily doped, defect formation under electron irradi. 2-103822
 Te, optical activity, current-induced, temp. depend. 2-77483
 TiSe, intercalated with hydrazine, transport props. 2-98626
 WO₃ films, reactively sputtered, electrical and optical props. 2-66673
 ZnGeP₂, intrinsic defect effect on elec. props. 2-61481
 ZnO RF sputtered films, carrier conc. of function of surface acceptor state density, gas sensor appl. 2-98772
 ZnO thin films, bias sputtered, electrical and optical props. 2-104395
 ZnS,Se_{1-x}, elec. and optical props., compositional disorder effects, photoluminescence and excitonic spectra 2-57171
 ZnS,Se_{1-x} thin film, high elec. cond. props. meas. and CVD prep. 2-98768
 ZnSe film on GaAs, elec. props. and impurity profile 2-61014
 ZnSe:Ga, MBE growth and elec. cond. and photoluminesc. props. meas., blue LED appl. 2-87986
 ZrC,N_{1-x}, band struct., elec. cond., Fermi energy, carrier density and mobility, two-band model 2-66438
 ZrTe₅, electronic struct., elec. props., absence of phase transition 2-87142

carrier diffusion length see carrier lifetime

carrier lifetime

- direct band-gap semiconductor films, minority carrier diffusion lengths, lateral variation meas. technique 2-98770
 disordered solids, hopping transport, diffusion temp. depend. 2-82355
 donor to acceptor energy transfer, arbitrary spatial distrib., high acceptor conc. (*Russian*) 2-82341
 hydrocarbons, saturated, liq. and solid, charge carrier form. by radiation (*Russian*) 2-61480
 LED, proton damage effects 2-71517
 long-base diodes, spin-dependent effects associated with passage of current 2-77173
 minority carriers, simultaneous determ. of bulk and surface layer lifetimes using MIS structures C(t) characts. (*Chinese*) 2-66643
 MOS devices, n-type and p-type Si, non-equib. generation lifetime meas. 2-110491
 MOS minority carrier lifetime improvement by F ion implantation in Si 2-66651
 MOS structure, bulk generation lifetime and surface generation vel., rapid determ. by saturation capacitance meas. (*Chinese*) 2-92760
 MOS structure, generation lifetime and surface generation velocity determ. (*Chinese*) 2-92762
 MOS structures, bulk generation lifetime distrib. and surface generation velocity determ. (*Chinese*) 2-66644
 MOS systems, reactive sputter etching of SiO₂ effect on elec. props. 2-115903
 narrow-gap semiconductors, in mag. field, plasmon-assisted recombination 2-87297
 p-n diode with single impurity level, injected carrier lifetimes and double injection currents calc. 2-104469
 p-n junction solar cells, doping and temp. dependences of minority-carrier diffusion length and lifetime 2-99804
 photoexcited carriers, time-resolved diffusion profiles, nonlinear luminesc. study 2-116221
 semiconductor, electron packet vel. and spreading fluctuations 2-115783
 semiconductor, III-V, band to band transitions, lifetime and probabilities, minority carrier lifetime 2-92353
 semiconductor, impurity photocond. under injection breakdown conditions, freq. depend. 2-77119
 semiconductor, minority carrier diffusion length meas. using microscopic electron probe 2-71996

carrier lifetime continued

- semiconductor, surface barrier struct., photon-diffusion transport of nonequilib. carriers 2-115864
 semiconductor, transition metal doped, photoanodes, steady state photoreponse in aq. soln. 2-115815
 semiconductor films, relaxation and lifetime behaviour, macroscopic aspects, theory 2-82492
 semiconductor materials, carrier diffusion length meas. 2-101409
 semiconductors, ambipolar diffusion of high density electrons and holes 2-110367
 semiconductors, Auger recombination, minority carrier lifetime, impurity and phonon scatt. effects 2-87299
 semiconductors, band-to-band Auger recombination, Green's function formalism 2-115778
 semiconductors, degenerate four-wave mixing, phase conjugation and transient carrier dynamics expts. 2-70615
 semiconductors, diffusion-mobility relation, statistical thermodynamics 2-71994
 semiconductors, generation and recombination lifetimes concept 2-110363
 semiconductors, lifetime meas. by electron beam technique 2-66570
 semiconductors, pulsed laser annealing rel. to excess charge carrier diffusion length 2-56011
 p-Si(Li) parameter meas. during drift compensation 2-74465
 solar cell, finite base, open-circuit voltage decay with drift field, theory 2-88454
 solar cell, short circuit current, nonlinear behaviour with light intensity depend. minority carrier lifetime 2-67857
 solar cell under illumination, minority carrier life-time determ. from steady-state and transient response 2-78208
 solar cells, back-surface field, minority carrier lifetime determ. in base by forward current-induced voltage decay and photovoltage decay methods 2-99807
 solar cells, P ion implanted from solid ion source, minority carrier lifetime meas. 2-84737
 two-dimensional metals, effects of mag. field on dielec. const. and cond. 2-56451
 X-ray photoconductor-thermochromic film struct. for X-ray visualisation 2-84776
 Al-SiO₂-p-Si MIS tunnel solar cells current mechanism, temp. depend. of dark I-V characts. 2-105555
 AlGaAs lasers, high injection region luminesc. decay and injected carrier lifetime 2-85962
 p-Al_{0.3}Ga_{0.7}As-p-GaAs-n-GaAs solar cell, minority carrier diffusion length modification 2-92644
 AlGa_{1-x}As epitaxial layer, graded band gap, dopant impurity effects on carrier lifetime, dislocation density and internal stresses (*Russian*) 2-77215
 AlGa_{1-x}As epitaxial solid soln., graded band-gap, photolum. (*Russian*) 2-104965
 n-AlGa_{1-x}As:Te solid soln. LPE layers, carrier diffusion length, conc. depend., 77-300K (*Russian*) 2-56741
 Cd,Hg_{1-x}Te, elec. behaviour of impurities, Hall effect and minority carrier lifetime meas. 2-77091
 CdS, hot wall epitaxial growth, elec. props. 2-93430
 n-CdSe, photoelectrochem. determ. of minority carrier diffusion length 2-115777
 n-CdSe_{0.64}Te_{0.35} photoelectrochemical solar cell, expt. study 2-105579
 CdTe, bulk grown and epitaxial samples, minority carrier diffusion length 2-115776
 CdTe epitaxial layers, charact. and annealing behaviour of deep levels 2-104288
 CdTe, hot wall epitaxial growth, elec. props. 2-93430
 CdTe, n- and p-type, photoelectrochem. determ. of minority carrier diffusion length 2-115777
 CdTe, relaxation-case, photoconductivity 2-66589
 CdTe-Cu(Ag) solid soln., supersaturated, carrier decay process kinetics 2-92649
 Ga_{0.9}Al_{0.1}As, heterostructures, radiative recombination, efficiency and lifetimes 2-87833
 Ga_{1-x}Al_xAs heterostructure diodes, laser irradi., electroluminescence emission 2-82926
 Ga_{1-x}Al_xAs:Si, LPE layers, photon recycling, photoluminescence study 2-82897
 GaAs, ambipolar diffusion of high density electrons and holes 2-110367
 GaAs film, elec. cond., relaxation and lifetime behaviour, macroscopic aspects, theory 2-82492
 GaAs, heterostructures, radiative recombination, efficiency and lifetimes 2-87833
 GaAs hot-electron diffusion const., Monte Carlo calc. 2-98656
 GaAs IMPATT diodes, γ -ray irradi. effects on elec. and recombination props. 2-76501
 GaAs, minority carrier lifetime meas. using SEM with intensity modulated electron beam 2-87301
 GaAs, minority carrier lifetime and diffusion length, EBIC method in SEM 2-98667
 GaAs p-n homojunction solar cell, minority carrier diffusion length modification 2-92644
 n-GaAs, photocurrent determ. of hole diffusion lengths 2-82396
 GaAs polycrystalline n-type film, hole diffusion lengths, lateral variation meas. technique 2-98770
 GaAs:Cr₂O₃, electron lifetime meas., photocond. and high field meas. 2-92655
 p-GaAs:Ge LPE layer, electron diffusion length determ. by EBIC method 2-56736
 GaAs:O, deep electron traps, elec. and optical props. 2-98585
 GaAs:Si(Be) artificial doping superlattices, MBE growth, elec. and optical props. 2-92735
 GaAs-Al_{0.36}Ga_{0.64}As DH laser, temp. depend. of lasing characts. 2-80965
 GaAs-AlAs p-n strucs., voltage relax. and electrolum. intensity 2-92741
 GaAs_{1-x}P_x epilayer, minority carrier lifetime and diffusion length, EBIC method in SEM 2-98667
 GaAs_{1-x}P_x, minority carrier lifetime meas. using SEM with intensity modulated electron beam 2-87301
 Ga_{0.1}In_{0.9}As_{0.64}P_{0.36}, heterostructures, radiative recombination, efficiency and lifetimes 2-87833
 GaP:Mg, LPE growth, minority carrier lifetime, photoluminescence study 2-82488
 GaP:N, Te VPE layer, minority carrier lifetime, dislocations influence 2-115920
 Ge, ambipolar diffusion of high density electrons and holes 2-110367
 Ge, carrier conc. effect based devices, sensitivity increase 2-87430

carrier lifetime continued

- Ge, electron bombardment, point defect generation, nonequilib. carrier lifetime study 2-56036
 Ge, electron heating time in HF field, effect on diffusion 2-87291
 Ge, galvanomagnetocombinational elements, fluctuation processes 2-87351
 Ge, hole capture by charged acceptors 2-115779
 Ge, p-n junction diode, minority carrier lifetime variation with injection level 2-66627
 (Hg, Cd)Te, carrier lifetime rel. to wafer processing parameters 2-72001
 HgCdTe, electronic props., MIS IR devices 2-87295
 HgCdTe photoconductors, effect of diffusion and drift on generation-recombination noise 2-87324
 HgCdTe, physics and chemistry, workshop, Minneapolis, MN, USA (Oct. 1981) 2-89437
 HgCdTe, transport props. rel. to acceptor levels 2-92633
 Hg_{0.7}Cd_{0.3}Te, carrier lifetime meas. by population modulation spectroscopy 2-92658
 Hg_{0.7}Cd_{0.3}Te, photocond. props. 4.2 to 300K, recombination mechanisms (*French*) 2-61508
 Hg_{1-x}Cd_xTe, deep level defect traps, DLTS study 2-87175
 Hg_{1-x}Cd_xTe, differentiation of low temp. recomb. processes, photocond. lifetimes meas. 2-115813
 p-Hg_{1-x}Cd_xTe, electron irradi., carrier lifetime, annealing effects 2-56610
 Hg_{1-x}Cd_xTe, some props. of high-density electron-hole plasma 2-87296
 InGaAsP (InGaAs) LPE layers, room temp. electron diffusion lengths 2-56730
 p-InGaAsP diode lasers, radiative and Auger recomb. rates meas. 2-102792
 InGaAsP-InP DH 1.3 μ m laser, temp. depend. of lasing characts. 2-80965
 p-In_{0.4}Ga_{0.6}As_{0.4}P_{0.6}Mn epitaxial layers, doping characts., elec. and luminesc. props. 2-76866
 InP, hot-electron diffusion const., Monte Carlo calc. 2-98656
 In_{2/3}PSe₃, radiative transitions, hole diffusion length, photoelectrochemical study 2-92647
 InSb, carrier conc. effect based devices, sensitivity increase 2-87430
 n-MoSe₂ photoelectrochem. cell, local spectral response meas. 2-93928
 Pb-Sn chalcogenide photodiodes, quantum efficiency and R₀A product, struct. effect 2-107403
 Pb-Sn-Te diode laser, recombination mechanisms and lasing threshold 2-90896
 PbSnTe diode laser, lifetime mechanisms, tunnelling currents and laser threshold 2-80956
 PbSnTe, lifetime calcs. for Auger recomb. rel. to laser and IR detector performance 2-77081
 Pb_{0.76}Sn_{0.24}Te: Cd, photoconductivity kinetics 2-104427
 Se, liquid, steady-state photocond., hole lifetime (*French*) 2-77115
 Si, ambipolar diffusion of high density electrons and holes 2-110367
 Si amorphous film, CC sputter and plasma deposited, photoconductive decay, carrier lifetime 2-82398
 Si, Czochralski-grown, effect of oxide precipitates as minority-carrier lifetime 2-66568
 Si, dislocations, interpretation of EBIC contrast 2-71453
 Si, electron and γ -irrad., defect prod. and lifetime control 2-109833
 Si, electron beam irradi., radiation efficiency, photocond. and carrier lifetime study 2-115293
 Si, electron heating time in HF field, effect on diffusion 2-87291
 Si epitaxial and recrystallised films, carrier lifetimes, MOS capacitance study 2-92787
 Si, excess minority carrier transient decay, surface recomb. effects, laser pulse sample heating 2-77086
 Si, hole capture by charged acceptors 2-115779
 Si, hot hole diffusion and mobility, thermal noise and cond. meas. 2-56604
 Si, LPE, minority carrier lifetime 2-72637
 Si, minority carrier diffusion length, electron beam induced current meas., cryst. imperfections effect 2-71998
 p-Si, minority carrier diffusion length meas., computer modelling of surface photovoltage method 2-72007
 Si n⁺-p solar cell, minority carrier lifetime and diffusion length determ. by self-biased capacitance meas. 2-116818
 Si, neutron transmutation doped detectors with improved carrier lifetime 2-59597
 Si, nondegenerate, physical model for depend. of carrier lifetime on doping density 2-92654
 Si p⁺-n-n⁺ high efficiency concentrator solar cells, fabrication and performance 2-93917
 Si, p-n junction diode, minority carrier lifetime variation with injection level 2-66627
 p-Si polycrystal, grain boundary photocurrent, diffusion length, recomb. speed 2-61482
 Si, polycrystalline, back surface field solar cells investig. using scanning spectral response technique 2-111551
 Si, polycrystalline, grain boundaries, chem., compositional and elec. props. 2-76458
 Si, polycrystalline, grain boundary recomb. vel. determ., laser spot technique for photoconductance meas. 2-77087
 Si, polycrystalline, grain boundary recombination rate determ. by scanned spot excitation methods 2-115774
 Si, polycrystalline for solar cell appl., photolum. charact. 2-87843
 Si solar cell, high efficiency, laser processing 2-57702
 Si solar cells, laser annealed, function and bulk region characts. 2-88441
 Si:Au, minority carrier capture cross section meas. 2-66569
 Si:Fe,B, Fe donor activity on heat treatment, elec., DLTS and EPR meas. 2-71911
 Si:H, amorphous, hole collection length, surface photovoltage study using liq. Schottky barrier 2-56631
 Si:H, amorphous, undoped, diffusion of holes 2-92651
 Si:H, amorphous solar cells, hot carrier effects on collection efficiency 2-67852
 Si:O, minority carrier lifetime, heating effects 2-104394
 Si:Pt, minority carrier capture cross section meas. 2-66569
 SiO₂, interface degradation and minority carrier lifetime effects of laser beam processing 2-61609
 α -Ta₂O₅, photocond. and photochromic props. meas. 2-92696
 n-WS₂, photoelectrochem. cell, local spectral response meas. 2-93928
 p-WS₂, recomb. sites and minority carrier diffusion length, charge collection microscopy 2-87294

carrier lifetime continued

- n-ZnSe, photoelectrochem. determ. of minority carrier diffusion length 2-115777
 p-ZnTe, photoelectrochem. determ. of minority carrier diffusion length 2-115777

carrier mean free path

- see also *electron mean free path (metals)*
 disordered materials, incoherent field, current balance, density of states test, and mobility 2-56540
 semiconductor superlattices, Einstein relation, effect of band non-parabolicity 2-82449
 GaAs field effect transistors, ballistic electron motion 2-98658
 In₂O₃ film, weak localization, anomalous transport props. 2-61627
 InSb, hypersonic wave propag. in appl. mag. fields, suppression of non-linear effects 2-115829
 Si, electron inelastic mean free path, 200 eV ≤ E ≤ 10 keV 2-92656
 Si:H amorphous p-n solar cell, photocurrent, voltage depend. 2-78211
 SiO₂, electron inelastic mean free path, 200 eV ≤ E ≤ 10 keV 2-92656

carrier mobility

- see also *carrier mean free path; carrier relaxation time; current density; electron-hole recombination; electron mobility (metals)*
 A_{2-x}B_x semiconducting cpds., nonstoichiometric, physicochem. props. 2-104005
 amorphous semiconductors, steady-state injection currents, activation energy, size and field dependence 2-82345
 anthracene, charge carrier escape from Coulombic pot. well, time-resolved meas. 2-82372
 Brownian motion, in quantising magnetic field, quasiclassical model 2-58710
 chlorophyll a layers, mobility of photogenerated holes 2-67948
 copper phthalocyanine thin layers, electron irradi., transient currents 2-110508
 defects, two-dimensional, appl. of Van der Pauw's method 2-115787
 diamond, synthetic, magnetoresistance 2-77097
 1,4-dibromonaphthalene, electron and hole mobility tensors meas. 2-71973
 dielectric slab with taps, non-uniform illumination conditions, volt-amp characs. (Dutch) 2-61506
 9,10-diphenylanthracene, hole mobility, trap controlled 2-71976
 disordered materials, incoherent field, current balance, density of states test, and mobility 2-56540
 disordered materials with traps, drift and diffusion, quasi-equilib. transport regime 2-61426
 drift and diffusion in materials with traps, non-equilib. transport regime 2-61427
 electron pulsed annealed, elec. quality meas. 2-98161
 epitaxial film, elec. cond. and Hall effect 2-115922
 films, elec. characterisation by contactless microwave cavity technique (French) 2-101418
 flicker noise, diffusion, mobility fluctuation, and island models 2-115838
 free carrier transport, criterion for multi-ion scatt. 2-66552
 GaAs-Al_xGa_{1-x}As heterojunctions, low temp. quantised Hall effect 2-87381
 granular metal film, dielectric regime, Hall effect 2-82381
 hopping Hall mobility: percolation theory 2-104333
 III-V semiconductors, microwave irradi., hot carrier mobility, phonon accumulation effects 2-66566
 insulating materials hopping conduction, Poole-Frenkel effect, carrier mobility 2-71991
 insulators, carrier mobility determ. using transient injection currents 2-82365
 inversion layers, noise near metal-insulator transition, power spectra meas. 2-66649
 isoform cryst., hole mobility, transient photocond. study 2-71972
 MBE growth using Pb flux and elec. characterisation 2-87987
 mesa structures, mobility-fluctuation 1/f noise 2-104443
 MOS structure, bulk generation lifetime and surface generation vel., rapid determ. by saturation capacitance meas. (Chinese) 2-92760
 MOS structure, generation lifetime and surface generation velocity determ. (Chinese) 2-92762
 multilayer heterojunctions, carrier conc. and mobility, calc. from Hall effect and hot electron data 2-56678
 neopentane, liq., positronium yield correl. with excess electron mobility 2-99210
 nonuniform nonlinear samples, mobility-fluctuation 1/f noise 2-104443
 one-dimensional conductor, randomly interrupted strand, carrier mobility 2-77029
 one-dimensional semiconductors, electron mobility, hot electron effects, and polarons 2-92611
 organic molecular crystals, mobilities 2-92622
 pentacene, polycrystalline layer, dispersive transport of charge carriers (Russian) 2-61626
 photoexcited carriers, time-resolved diffusion profiles, nonlinear luminesc. study 2-116221
 phthalocyanine thin films, metal-free, dispersive electron and hole transports 2-66677
 phthalocyanines, carrier mobility, band model 2-98640
 polar semiconductor, carrier mobility, effect of renormalised plasmon-phonon oscils. 2-77060
 poly(n-vinylcarbazole) film, photocarrier drift mobility meas., film struct. effects 2-72019
 polyacetylene films, dielectric props. 2-87646
 polyacetylene MIS struct., field effect props. meas. 2-92772
 polydiacetylene, cryst., space, charge limited currents, electron mobility 2-104390
 polydiacetylene toluene sulphonate, quasi-one-dimensional single cryst. polymer, charge carrier mobility 2-61514
 polyethylene, elec. cond. activation energy, elec. field and low press. effects 2-115754
 polyethylene, high density, carrier mobility meas. 2-71971
 polyethylene, photoconduction, vacuum UV region, temp. depend. 2-56635
 polyethylene film, numerical anal. of SCL cond. with consideration of diffusion and elec. field at electrode 2-110358
 polystyrene films, soln. grown, DC electrical props., free and trapped carrier conc., density of states 2-56742
 polyvinylcarbazole, photocurrent long relax time and carrier mobility meas. 2-72018
 PVC:1₂, photoconductivity, doping effect 2-61629
 rare earth tungstates, mixed cond. 2-72035

carrier mobility continued

- resistor, nonlinear, second and third harmonic generation in presence of a direct current 2-115741
 semiconductor, ambipolar mobility determ. by flying light spot expt., theory 2-89745
 semiconductor, carrier mobility in presence of edge dislocation well 2-87286
 semiconductor, charge packet drift vel.; transport eqn., space charge effects 2-87254
 semiconductor, disordered, transport props. theory 2-115742
 semiconductor, transition metal doped, photoanodes, steady state photore-sponse in aq. soln. 2-115815
 semiconductor barrier structs., thermally activated carrier motion, charged impurity effect 2-115884
 semiconductor device time-dependent models, stability problem 2-77068
 semiconductor film, polycrystalline, Hall mobility interpretation 2-61630
 semiconductor runaway electrons, heating and cooling, effect of inelastic scatt. on mobility (Russian) 2-82346
 semiconductor structures, triangular barrier, onset of diffusion-drift emission regime and current-voltage characs. 2-82444
 semiconductor superlattices, Einstein relation, effect of band non-parabolicity 2-82449
 semiconductor superlattices, phonon-limited near equilib. transport 2-56680
 semiconductors, ambipolar diffusion of high density electrons and holes 2-110367
 semiconductors, carrier conc. and mobility at low temps. 2-110351
 semiconductors, diffusion-mobility relation, statistical thermodynamics 2-71994
 semiconductors, electron mobility, Markovian soln. 2-110366
 semiconductors, free carriers kinetics in dislocation wall field (Russian) 2-82340
 semiconductors, inhomogeneous anisotropic, current-voltage characs. 2-92629
 semiconductors, variable gap, photon transport of nonequib. carriers, photoluminescence 2-116257
 semimetals, variational method 2-110337
 SOS, electrical transport props., thermoelectric power appl. (French) 2-61594
 SOS, laser annealed, electron Hall mobility and residual stresses, heat treatment effects, Raman study 2-98745
 SOS films, non-homogeneous elec. transport, galvanomag. expts., internal stress influence 2-115904
 SOS films, sapphire substrate orientation influence on crystn. quality and SOS/MOS mobility 2-91948
 SOS films, struct. props. rels. associated with haze 2-91907
 SOS structures, Hall mobility and capacitance meas., internal stresses and pot. fluctuations influence 2-82470
 surface superlattices, lateral, transport and scatt., Monte Carlo calc. 2-104454
 ternary semicond., carrier scatt. mechanisms, Boltzmann eqn. calc. 2-115744
 (TMTSF)₂PF₆, high elec. field transport at low temps. 2-56616
 (TMTSF)₂PF₆, magnetoresist. and Hall effect in semicond. phase 2-56620
 vinyl chloride-vinyl acetate copolymer, dielec. relax. and struct. morphology 2-82778
 Ag discontinuous film, carrier mobility 2-82479
 AgBr microcrystals, in gelatin layers, slow electron mobility, size effect 2-92661
 AgI:Cu, electronic cond., carrier mobility, DC polarisation and charge transfer methods 2-115753
 (Al_{0.3}Ga_{0.7})As/GaAs heterostruct., MBE grown, interface quality and electron mobility, substrate temp. effects 2-56385
 (Al_{0.3}Ga_{0.7})As/GaAs heterostruct., single and multiple period modulation doped, electron mobility meas. 2-56676
 (Al_{0.3}Ga_{0.7})As/GaAs heterostruct., electron mobility meas., AlAs mole fraction influence 2-56677
 Al discontinuous film, carrier mobility 2-82479
 Al_{0.35}Ga_{0.65}As:Si MBE layer, donor activation energy determ. from elec. transport props. 2-87869
 Al_{0.35}Ga_{0.65}As-GaAs heterostruct., modulation doped, photocond. effects 2-56679
 Al_{0.35}Ga_{0.65}As:Si(Sn), epitaxial films, doping effects on elec. props. 2-110502
 Al_{0.35}Ga_{0.65}As/GaAs heterostructures, single and multiple period modulation and doped, I-V characs., suitability for FETs 2-56682
 Al_{0.35}Ga_{0.65}As/GaAs modulation-doped structs., transport props., rel. to Monte Carlo calcs. 2-98731
 Al_{0.35}Ga_{0.65}As-GaAs heterostruct., modulation doped, MBE grown, carrier mobility, substrate temp. effect 2-61567
 Al_{0.35}Ga_{0.65}As-GaAs heterojunction, single period, mobility enhancement 2-77165
 Al_{0.35}Ga_{0.65}As-GaAs heterojunction, single period modulation doped, normal and inverted, electron mobility, substrate temp. influence 2-115876
 Ar, liquid and solid, electron dynamics meas. (Russian) 2-71993
 Ar, solid and liquid, hot electron thermalisation following subnanosec. pulse irradi. 2-72015
 AsSe chalcogenide glasses, hole drift mobility near photostructural transformations 2-87280
 As₂Se₃Cl(Br)(I)(Ge)(In)(Ti)(Na)(K)(Ag)(Cu), chalcogenide glasses, carrier mobility, transient photocurrent spectra study 2-72024
 Au discontinuous film, carrier mobility 2-82479
 Bi_{1-x}Ge_xO₂₀, drift mobility of photo-induced charge carriers, temp. depend. 2-110396
 Bi₂S₃ thin film, semicond. liq. junction solar cell and chalcogenide props. 2-78212
 Bi_{0.95}Sb_{0.05}, many-valley semicond., elec. cond. anisotropy under tension, HF magnetoplasma study 2-87287
 Cd_{0.9}Hg_{0.1}Se mixed cryst., Γ point band struct. parameter, elec. and thermomagnetic studies 2-76923
 n-Cd_{0.9}Hg_{0.1}Te layers, MBE growth, struct. and elec. props. 2-99340
 CdS, electro-acoustic current fluctuations 2-98702
 CdS films, chemical bath deposited, elec. resist. increase obs. by laser annealing 2-98766
 CdS, hot wall epitaxial growth, elec. props. 2-93430
 CdS polycrystalline film, photoconductivity meas. 2-66674
 CdS:In film, heavily doped, elec. transport props. 2-72090
 CdS:In(Sb) film, vacuum evaporated, elec. and optical props. 2-61631
 CdS:Te film, vacuum deposited, dark cond. and photocond. meas., doping effects 2-61623

carrier mobility continued

- CdSe polycrystalline thin film transistor, conductivity behaviour 2-56735
 CdSnAs₂, melt-grown crystals, surface polarity effect on electrical props. 2-115852
 CdSnP₃, melt-grown crystals, surface polarity effect on electrical props. 2-115852
 n-CdTe, electron mobilities at low temps., theory 2-87253
 CdTe, hot wall epitaxial growth, elec. props. 2-93430
 CdTe, relaxation-case, photoconductivity 2-66589
 CdTe, Te₂Au, Hall coeff., thermo-EMF, cond. type, temp. depend., doping effects 2-56615
 CoO, charge transport, lattice defects 2-104401
 Cu discontinuous film, carrier mobility 2-82479
 CuFe₂O₄, ferrite, elec. cond. mechanism, phase transformation, heat treatment effects 2-71981
 CuInTe₂, electrical characts. 2-92648
 CuInTe₂, neutron irradi., elec. props. and defect levels 2-71982
 CuInTe₂:Zn(Cd), elec. props., hole mobility and conc., annealing effects 2-87279
 Cu₂S thin films prep. by Activated Reactive Evaporation, elec. and optical props. 2-99354
 α-FeGa₂S₄ (1T), mag., elec. and Mossbauer props. (*French*) 2-72389
 GaAlAs:Zn, variable gap semicond., photon transport of carriers, photoluminescence study 2-116256
 Ga_{1-x}Al_xAs, electron drift mobility calcs. 2-77084
 Ga_{1-x}Al_xAs, epitaxial layers, Hall mobility-drift mobility ratio, press. depend. 2-87431
 Ga_{1-x}Al_xAs, Hall electron mobility, scatt. parameters 2-115790
 Ga_{1-x}Al_xAs:Si, Ge, LPE growth and doping, elec. and photolum. props. 2-116393
 Ga_{1-x}Al_xAs:Zn, metalorganic CVD film, elec. cond. 2-56733
 GaAs, ambipolar diffusion of high density electrons and holes 2-110367
 GaAs, carrier drift and recombination instabilities due to nonlinear interactions, expt. study (*Russian*) 2-115784
 GaAs, carrier mobility, electron-electron scatt. effect 2-77040
 GaAs, electron drift velocities, high field temp. depend. 2-56598
 GaAs, electron drift velocity meas. at high elec. fields 2-66567
 GaAs, electron drift velocity meas. using variable frequency microwave time-of-flight technique 2-98664
 GaAs, electron mobility, space charge and central-cell scatt. contribs. 2-104368
 GaAs, electron mobility, space charge and central cell scatt. contribs. 2-104369
 GaAs, epitaxial, electron mobility, temp. depend., impurity and phonon scatt. (*Russian*) 2-104513
 GaAs, high purity, grown by MBE, characterisation 2-56613
 n-GaAs, hot electrons, inertial props., Monte Carlo calc. 2-56628
 GaAs hot-electron diffusion const., Monte Carlo calc. 2-98656
 GaAs, ion implanted, pulsed ruby laser annealing, SIMS and elec. obs. 2-56023
 GaAs, low-field mobility temp. depend. with optic phonon scatt., Monte Carlo calc. 2-104383
 GaAs, semi-insulating, electron/hole mobility relations 2-110352
 GaAs, semi-insulating behaviour and thermal stability, stoichiometry effect 2-110348
 GaAs ultrafine semicond. wire, high electron mobility, theory 2-98655
 GaAs, velocity/field characteristic meas. using HF modulated solid-state laser diode 2-82350
 GaAs:C layers, elec. props., and electron microscopy 2-61628
 GaAs:Cr, charge transfer induced by press. 2-66484
 GaAs:Cr, horizontal Bridgman-grown for ion implantation, elec. characts. 2-115756
 GaAs:Cr, impurity levels, elec. cond., IR spectra and photocond. study 2-56485
 GaAs:Cr, Se, hot implanted, effects of damage-impurity interaction on elec. props. 2-71990
 GaAs:Cr, Si, ion implanted, Hall effect, depth profiles (*Slovak*) 2-98669
 GaAs:Ge(Sn)(Se)(Zn), doping by vapour phase epitaxy, carrier Hall mobility (*French*) 2-98129
 GaAs:In, elec. cond., Hall effect and deep levels 2-115760
 GaAs:Mg(Ca), MBE, doping behaviour, hole mobility study 2-92386
 GaAs:Se, ion implanted, carrier props. and photolum. meas. (*Korean*) 2-56585
 GaAs:Si, Ar, ⁴⁰Ar implant pretreatment, ²⁸Si implanted n layer, carrier mobility and activation efficiency 2-91995
 GaAs:Si, heavily doped, electron scatt. 2-92652
 GaAs:Si, ion implantation, elec. props., for dual gate MESFET (*Chinese*) 2-109817
 GaAs:Te, MBE grown, elec. cond. and photoluminesc. props. meas. 2-56734
 GaAs-(AlGa)As heterojunction, modulation doped, intersubband scatt. 2-61573
 GaAs-Al_{1-x}Ga_xAs modulation doped heterostruct., 2D electron gas transport props. meas. 2-98739
 GaAs-AlGaAs heterostruct., mobility calc. of two-dimensional electron gas at 4.2 K 2-66628
 GaAs-AlGaAs heterostructures grown by MBE and their application to devices (*Japanese*) 2-87380
 GaAs-Ga_{1-x}Al_xAs, superlattices, mobility tensor (*French*) 2-104475
 GaAs_{1-x}Sb_x LPE layer, carrier mobility and photolum., composition depend. 2-77214
 GaAs,Sb_{1-x}, LPE growth on InAs substrates 2-88010
 Ga_{0.47}In_{0.53}As high mobility thin epitaxial layers grown by MBE 2-115585
 Ga_{0.47}In_{0.53}As, MBE grown, Si doping and elec. props. meas. 2-92005
 Ga_{0.47}In_{0.53}As, VPE growth and charact. for microwave device appls. 2-83043
 Ga_{0.47}In_{0.53}As-Al_{0.49}In_{0.52}As modulation doped heterostruct., current transport meas. at moderate elec. fields 2-82446
 Ga₂In_{1-x}As_{1-x}P_{1-x}, effects of two longitudinal optical phonon modes on electron distrib. 2-82349
 Ga₂In_{1-x}As_{1-x}P_{1-x}, VPE growth and charact. for microwave device appls. 2-83043
 Ga₂In_{1-x}Sb_x, voltage-current curves, scatt. effects, Monte Carlo calc. 2-104382
 Ga₂-Mn₂Sb solid solns., carrier scatt. mechanisms 2-56571
 GaP, heteroepitaxial MBE growth on Si (100), elec. props., heterojunction form. 2-57297
 Ga_{1-x}Sn_xSe, solid solns., elec. cond., thermo-EMF and Hall coeff. meas. 2-87259
 Ge, ambipolar diffusion of high density electrons and holes 2-110367

carrier mobility continued

- Ge, cleaved surface, charge carrier minimal motion (*Russian*) 2-72046
 Ge, Corbino surface shape, magnetotransport. 2-115794
 Ge, electron mobility, Markovian soln. 2-110366
 Ge epitaxial film on Si(100), RF sputter deposition, struct. and elec. meas. 2-66386
 Ge epitaxial layers, LPE growth in γ-radiation field, struct. and electro-physical parameters 2-115599
 p-Ge, impurity band conduction, static and modulated uniaxial constraint effects 2-56575
 n-Ge, many-valley semicond., hot electrons in quantising mag. field 2-56622
 p-Ge, negative differential mobility of holes, Monte Carlo study 2-77078
 Ge-Si alloys, magnetoresistance and carrier mobility 2-56621
 GeSeTe, chalcogenide glasses, carrier mobility, transient photocurrent spectra study 2-72024
 Ge_{1-x}Si_x, carrier heating by elec. field, effect of electron irradi. 2-77076
 HgCdTe, electronic props., MIS IR devices 2-87295
 HgCdTe photoconductors, effect of diffusion and drift on generation-recombination noise 2-87324
 HgCdTe, transport props. rel. to acceptor levels 2-92633
 n-Hg_{0.8}Cd_{0.2}Te, magnetotransport meas. in extreme mag. quantum limit 2-92669
 Hg_{1-x}Cd_xTe, elec. cond., magnetoresist. and Hall effect, temp. depend. meas. 2-77049
 n-Hg_{1-x}Cd_xTe, electron mobilities at low temps., theory 2-87253
 Hg_{1-x}Cd_xTe, isothermal epitaxial growth, elec. props. optimisation 2-93452
 p-Hg_{1-x}Cd_xTe, narrow gap low carrier conc., elec. props. 2-77047
 Hg_{1-x}Cd_xTe, photo-Hall meas. on laser-generated electron-hole plasmas 2-87323
 Hg_{1-x}Cd_xTe, photo-Hall meas. of high-density photoexcited electrons 2-92700
 Hg_{1-x}Cd_xTe, zero-gap semicond. cond. study 2-104380
 Hg_{1-x}Cd_xTe:Mg, ion implanted, elec. and optical props. from IR refl. spectra 2-116218
 Hg_{1-x}Cd_xTe-CdTe LPE layers, electron mobility near zero band-gap crossing 2-87426
 HgCr₂Se₄, mag. semicond., elec. optical and mag. studies 2-87288
 Hg_{1-x}Mn_xTe (0<x<0.075), anomalous temp. depend. of resistivity and Hall coeff. at low temps. (*Russian*) 2-98637
 Hg_{1-x}Mn_xTe, elec., optical and mag. props. 2-87140
 HgTe, high acceptor conc., cond. processes, multiple scatt. 2-98636
 p-In_{0.53}Ga_{0.47}As epitaxial layers, minority carrier high field transport meas. 2-82493
 InAs, low-field mobility temp. depend. with optic phonon scatt., Monte Carlo calc. 2-104383
 InGaAs:Te, VPE growth for photodetectors 2-111086
 In_{0.53}Ga_{0.47}As, electron drift velocity meas. at high elec. fields 2-66567
 In_{0.53}Ga_{0.47}As:Be, Si, ion implanted, n⁺ layers, sheet resist., electron mobility and conc. 2-66022
 In_{0.53}Ga_{0.47}As:Si, n-layer formation by Si implantation 2-92001
 In_{0.7}Ga_{0.3}As, lattice-mismatched MBE growth on InP 2-57296
 In_{1-x}Ga_xAs system, alloy scatt., elec. cond. and Hall coeff. meas. 2-92627
 In_{1-x}Ga_xAsP_{1-y}, LPE system, alloy scattering mobility and energy gap evaluation by dielectric model 2-82485
 In_{1-x}Ga_xAsP_{1-y}, LPE layer, energy gap and alloy scatt. mobility, meas. and dielec. model 2-98542
 In_{1-x}Ga_xAsP_{1-y}, low field mobility and thermoelectric power, scatt. mechanisms 2-82362
 InGaP_{0.01}Zn(Te)(Se) LPE layer on GaAs, doping effect on physical, elec. and optical props. 2-110501
 In_{0.53}Gd_{0.47}As:Te degenerate LPE layers, electron mobility 2-61620
 In₂O₃:Sn films, annealed, elec. resist. and defect model 2-66671
 InP (100), electron cond. in surface subbands 2-115846
 InP, agitated gas flow technique for high press. synthesis (*Chinese*) 2-99320
 InP, conduction band deform. pot. const. estimation from temp. var. of drift mobility, comment 2-77058
 InP, conduction band deform. pot. const., estimation from temp. var. of drift mobility, reply to comment 2-77059
 InP, elec. props., positron annihilation radiation defects 2-115292
 InP, hot-electron diffusion const., Monte Carlo calc. 2-98656
 InP, transverse electric field effects on electron transport props. 2-98651
 InP:Te, VPE growth for photodetectors 2-111086
 InP/Al₂O₃ MOSFETs, CVD of Al₂O₃ dielec. layer 2-111090
 InP-SiO₂ MIS struct. and enhancement mode MISFET, expt. study 2-98760
 InSb, avalanche breakdown and elec. cond. 2-92638
 InSb, electron mobility, Monte Carlo calc. 2-92628
 n-InSb film, polycryst., intergrain barrier pot., temp. and field depend. 2-77208
 InSb, Hall effect, press. effects 2-104398
 n-InSb, low electron conc., electron Hall mobility at high press. 2-92672
 n-InSb, magnetotransport meas. in extreme mag. quantum limit 2-92669
 InSb, neutron irradi., carrier density and mobility meas., disordered regions scatt. effects 2-61466
 p-InSb, radiation damage and recovery effects 2-66066
 InSb, residual impurities and inhomogeneities, galvanomagnetic meas. 2-110369
 InSb, thermal acceptors influence on electrophys. props. during annealing 2-56577
 InSb:Ge(Sn)(Co), gamma-ray, electron and proton beam irradi., defect annealing, elec. props. (*Russian*) 2-103817
 Kr, solid and liquid, hot electron thermalisation following subnanosec. pulse irradi. 2-72015
 LiAl, Hall mobility of positive carrier 2-110330
 LiNbO₃:Fe, ferroelectric, anomalous current due to electron drag, photovoltaic effects 2-72027
 LiNbO₃-CdSe multilayer struct. with periodic-array contacts, freq. doubling 2-92705
 MnWO₄, elec. cond. and thermoelec. power, 300 to 1200K 2-87268
 n-MoSe₂, transverse photoconductivity, electronic mobility anisotropy 2-104419
 N₂, liquefied, hopping transport mech. of excess electrons, optical studies 2-104447
 PLZT transparent ceramic, elec. cond. model, dark current, photocond., optical absorpt. coeff. (*Russian*) 2-61504
 PbS, high field resistivity meas., phonon scatt. 2-104387
 Pb_{1-x}Sn_xSe, thin layers, grown by 'hot wall' method 2-72627

carrier mobility continued

- Pb_{0.8}Sn_{0.2}Te epitaxial films produced by vacuum evaporation, high mobility produced by annealing 2-82486
 Pb_{1-x}Sn_xTe:Cu(Bi), narrow band gap semicond., galvanomag. and optical props., Cd solubility and diffusion (*Russian*) 2-92666
 PbTe crystal growth by travelling heater method 2-93404
 n-PbTe epitaxial layers, ionised defect scatt. mobility 2-92671
 PbTe films, electron mobility, temp. depend. meas. 2-110505
 PbTe MIS struct., field effect studies, DC cond. and Hall effect 2-115895
 p-PbTe:Ti epitaxial films, Hall mobility, doping effects 2-110509
 p-PbTe/mica/Ag struct., field effect study, Hall coeff. and mobility 2-110490
 PtSb₂, narrow-gap semiconductor, elec. props. in DC and microwave fields 2-87313
 Se_{1-x}As_xSe glassy semicond. based heterostructs., electron transport 2-92742
 Si (100) inversion layers, subband splitting, uniaxial stress and substrate bias effects 2-56701
 Si, ambipolar diffusion of high density electrons and holes 2-110367
 Si, amorphous, density of localised states and carrier mobility, elec. cond. study 2-115640
 Si, CC amorphous p-i-n junction struct., photovoltaic effects, photo-carrier generation and recombination 2-82442
 Si, charged impurity conc., carrier mobility, electroreflection study 2-115273
 p-Si, cond. and Hall mobility calc. for dopant densities of 10¹⁴ to 10¹⁸ cm⁻³ 2-98678
 Si, electron mobility, Markovian soln. 2-110366
 Si, gamma-ray irradi., metastable Frenkel pair form., elec. props. 2-115289
 n-Si, hot electron 1/f noise 2-72040
 Si, hot hole diffusion and mobility, thermal noise and cond. meas. 2-56604
 Si, ion implanted, isothermal annealing, IR refl., refr. index, regrowth rates, and carrier profiles 2-110836
 Si, polycrystalline, conduction mechanism, diffusion theory and extended state mobility model 2-92608
 Si, polycrystalline, plasma sprayed, charge carrier mobility 2-72083
 n-Si, proton-irradiated, radiation defect clusters, struct. and props. 2-81833
 Si, slip line free, large-area multiple scan annealing with line focussed electron beam, elec. study 2-71505
 Si solar cells, p-n⁺ junction, n-type heavily doped emitter region effective drift current densities 2-83500
 Si, velocity/field characteristic meas. using HF modulated solid-state laser diode 2-82350
 Si, zone-melting-recrystallised films on SiO₂-coated Si substrate, subgrain boundaries effect on carrier transport 2-77207
 Si:As, implanted, CO laser annealing 2-86727
 Si:B thin film, polycrystalline, elec. props., use as sensor (*German*) 2-87427
 Si:H, amorphous, sputtered, time-of-flight and photoinduced mid-gap absorpt., dispersion 2-87432
 Si:H, amorphous, time resolved photoluminescence, quenching and carrier mobility 2-104949
 Si:H, amorphous film, optically induced pot. fluctuations, elec. cond. and thermopower study 2-77050
 Si:H, amorphous sputtered film, dispersive transport, carrier mobility, photoconductivity study 2-82357
 Si:H amorphous sputtered thin film, carrier propagation, trapping and mobility 2-87283
 Si:In, elec. resist. and mobility, hole scatt. by impurities 2-115750
 Si:O₂H₂F, amorphous, photoluminescence, localised states, temp. depend. 2-87854
 Si:P, ion implanted and annealed, IR reflectivity characterisation, physical model 2-77532
 Si:P polycryst. film, in situ doped, CW laser annealing, grain size and elec. cond. meas. 2-98771
 Si:P⁺(As⁺) layers, ion implanted, electron beam annealing, elec. props. 2-92039
 Si:ZnCo, epitaxial layers, doping laws and electrophysical props. 2-66025
 Si-B compounds, high elec. field effect 2-92639
 Si-CdS(Zn,Cd_{1-x}S) heterojunction solar cell, elec. props. 2-115875
 Si-Si_{1-x}Ge_x epitaxial multilayer films, electron mobility enhancement 2-115921
 SiO₂, electron mobility, hot electrons electronic breakdown, Monte Carlo study 2-61474
 Si(100) surface inversion layer, electron mobility, memory function and Boltzmann eqn. approaches 2-56699
 α-Sn, n-type, electron irradi., acceptor point defects, elec. resist., thermoelec. power and Hall effect study 2-61394
 SnO₂ ultrafine particle film, Hall effect meas. and elec. cond. model 2-87425
 SnO₂:F,Sb film, spray coated, dopant effects on elec. cond. and optical absorpt. props. 2-72088
 SnO₂:F films, spray prep. and elec. and optical props. 2-105069
 SnO₂:F(Sb,F) film, elec. resist. and optical absorpt. and reflection spectra meas. 2-66675
 SnO₂:Sb thick films, spray deposited, elec. cond., Hall mobility and optical gap meas. 2-82415
 p-SnTe, MIS structure, field effect studies 2-104491
 p-SnTe:In epitaxial thin film, elec. transport props., in effect 2-104514
 Sr(Sr_{1/3}Nb_{2/3})O₃, band gap, electron mobility, Schottky disorder, elec. cond. meas. 2-61530
 SrTeO₃, ferroelec., elec. cond., freq. and temp. depend. meas. (*Russian*) 2-77066
 SrTiO₃:La, quenched, highly reduced, electronic cond. 2-56583
 Te, optical activity, current-induced, temp. depend. 2-77483
 TiS₂, semicond., Hall coeff., elec. cond., electron-phonon scatt. 2-77041
 TiSe₂, semimetal, elec. cond., high pressure phase transformation, Hall coeff. 2-77041
 WO₃ films, reactively sputtered, electrical and optical props. 2-66673
 Xe, liquid and solid, electron dynamics meas. (*Russian*) 2-71993
 Xe, solid and liquid, hot electron thermalisation following subnanosec. pulse irradi. 2-72015
 ZnO film, electronic props., defects, morphology and adsorp. depend. 2-104515
 ZnO thin films, bias sputtered, electrical and optical props. 2-104395
 ZnS:Mn thin films, physical and elec. characts. 2-61622

carrier mobility continued

- ZnS,Se_{1-x}, elec. and optical props., compositional disorder effects, photoluminescence and excitonic spectra 2-57171
 ZnS,Se_{1-x}, thin film, high elec. cond. props. meas. and CVD prep. 2-98768
 ZnSe, carrier mobility, temp. depend., polaron effects, carrier scatt. mechanisms 2-66558
 ZrC,N_{1-x}, band struct., elec. cond., Fermi energy, carrier density and mobility, two-band model 2-66438
 ZrTe₂, electronic struct., elec. props., absence of phase transition 2-87142
- carrier relaxation time** *see also electron relaxation time (metals)*
 barrier layers, charge relax. 2-61582
 damping, number conserving relax. time approx. for second order quantum response 2-112841
 ferroelectrics, paraelectric phase in homogeneous, intense VHF field 2-99067
 liquid-metal-NH₃ solns., current-voltage drop charact., nonlinearity origin 2-115767
 polar semiconductors, high frequency electron scattering rate, Drude Zener theory 2-66581
 semiconductor films, relaxation and lifetime behaviour, macroscopic aspects, theory 2-82492
 semiconductor superlattice current-voltage characts., carrier relaxation, high freq. EM field effects 2-77169
 semiconductors, cubic, hot electron scatt. by neutral acceptors, energy and momentum relaxation time calc. 2-82370
 semiconductors, hot electrons, self scatt., Monte Carlo simulation 2-56603
 Ag chalcogenides, mixed conductors, electronic relax. time, phonon modes 2-115836
 Ar, liquid and solid, electron dynamics meas. (*Russian*) 2-71993
 As₂S₃, glassy, photocond. and absorpt. spectra, photoinduced changes (*Russian*) 2-115825
 GaAs film, elec. cond., relaxation and lifetime behaviour, macroscopic aspects, theory 2-82492
 p-GaAs, photoluminescence, time resolved, by population mixing 2-57138
 GaAs:Cr relaxation semiconductors with thin-film contacts, props. 2-66636
 GaAs:O relaxation semiconductors with thin-film contacts, props. 2-66636
 GaAs:Si, disordered, optical detection of multiple trapping relax. 2-72005
 p-Ge, energy relax. mechanisms under nonlinear absorpt. of light 2-114357
 Ge, galvanomagnetocombinational elements, fluctuation processes 2-87351
 Ge, hole capture by charged acceptors 2-115779
 Ge, laser pulse interaction, 2.7 μm 2-77627
 Hg_{1-x}Cd_xTe:Mg, ion implanted, elec. and optical props. from IR refl. spectra 2-116218
 p-In_{0.53}Ga_{0.47}As, hot-carrier relax. 2-57141
 In₂O₃ film, weak localization, anomalous transport props. 2-61627
 n-InSb, free-carrier-induced optical nonlinearities, difference-freq. variation 2-65291
 n-InSb, strong coupling between reson. state and cryst. lattice, Hall coeff. meas. 2-92531
 p-PbSnTe, free carrier freq. depend. relax. time, plasma refl. studies 2-110364
 p-Si, heavily doped 2-56609
 Si, hole capture by charged acceptors 2-115779
 Si inversion layers, cyclotron effective mass and electron relax. time 2-56454
 Si MOS inversion layer, Anderson localization, neg. magnetoresist. 2-61597
 n-Si, transverse photovoltaic effect, intervalley relax. time 2-115819
 Si:As(P), implanted and laser annealed, electronic states, IR optical props. 2-57112
 Xe, liquid and solid, electron dynamics meas. (*Russian*) 2-71993
 ZnTe, excited electronic states, picosecond time-resolved photoelectron spectra study 2-111025
- carrier scattering at surfaces** *see surface scattering*
carrier scattering by dislocations *see dislocation scattering*
carrier scattering by impurities *see impurity scattering*
carrier scattering by point defects *see point defect scattering*
carrier traps *see electron traps; hole traps*
carry circuits *see adders*
CARS *see coherent antiStokes Raman scattering*
- cartography**
 3-D display of remote sensing data (computer graphics) 2-94536
 Antarctica, ice thickness and geodetic meas., maps 2-111981
 computerised map. processing, grid cell size rel. to errors in maps and inventories 2-111837
 digital computer cubic spline interpolation method for map construction 2-78853
 digital image pattern recognition, mapping, charting and geodesy appl. 2-94518
 digitization of maps by raster scanning method 2-94499
 environmental science methods book 2-101150
 France, tectonic map (*French*) 2-100353
 GPS appl. to mapping, charting and geodesy 2-78881
 lunar cartography, selenodetic basis (*Russian*) 2-73866
 magnetic anomaly maps of northern high latitudes, Magsat data 2-100229
 map accuracy test reporting, user's view 2-111838
 map classification accuracy, user approach 2-112140
 multispectral mapper, appl. of imaging spectroscopy to Earth resources mapping 2-112158
 orthophoto technique in high mountains, appl. to glacier maps and topographic mapping (*German*) 2-106123
 photogrammetry, close range, orientation problem of stereo pairs rel. to construction of models 2-111840
 remote sensing satellite system appl., SPOT project 2-73561
 scalar magnetic anomaly map from Magsat data 2-100226
 seismic zones of Priamur'e and Primor'e regions of far Eastern USSR, map 2-58002
 soil surveys, digital overlay of cartographic information on Landsat MSS data 2-112141

cartography continued

vector magnetic anomaly map from Magsat data 2-100227
volcanic hazard maps, computer-assisted mapping of pyroclastic surges 2-117271

cascade control

JT-60, real-time plasma control, cascade struct., design concept 2-74969

cascade showers *see cosmic ray showers and bursts***Cassegrain antennas** *see reflector antennas***cast iron** *see iron alloys***casting**

alloys, solidification, primary dendrite arm spacing 2-105138
ceramic components from thermoplastic slip, continuous hot casting, temp. patterns calc. 2-60384
computer aided thermal design analysis of dies used in the pressure die casting process 2-65455
fluoride glass optical fibre, low loss, build-in casting prep. 2-60266
ingot, solidifying, variable comp. nonmetallic inclusions form. in two-phase zone 2-99414
metallic foils, high-speed casting by double-roller quenching technique 2-99370
solidification interface during continuous casting, Stefan problem 2-93497
steel, high-speed, struct. and props., Ce addition effect 2-111242
steel, liquid, EM stirrer for slab mould (*French*) 2-77766
steel, melt comp. effect on solidification cracking rel. to continuous casting 2-83107
steel ingot, hollow cylindrical continuously cast, solidifying, temp. distrib. analysis 2-67317
Al-Cu (10 wt.%), rheocast, microstruct. and mech. props. 2-99420
Al-Fe and Al-Mg, twin-rolling casting, centreline segregation 2-116435
Al-Fe-Si alloys, commercial purity, DC casting, form. of intermetallic cpds. 2-88060
Al-Si (20 wt.%), hypereutectic alloy, effect on cast struct. of P and Na additions (*Japanese*) 2-55890
Al₂O₃ Fibre FP reinforced pure Pb composite electrodes for Pb-acid battery 2-111544
Al₂O₃ suspension, high conc., rheology and binding props. 2-88042
Cd, Hg_{1-x}Te, growth by pressurised cast-recrystallise-anneal technique 2-111068
Fe, thermodynamic stimulus to graphitisation, alloying elements influence, chilling action 2-105139
Fe-Cr-Ti-Mo-TiO₂, dispersion strengthened, void swelling in HVEM, influence of fabrication procedure 2-111189
Fe-Si (5 wt.%) alloy, supercooled ingots, cryst. struct. features 2-67318
Ni alloy, heat-resisting cast, directed change of comp. and morphology of primary carbide phases 2-67320
Si₃N₄ slip cast reaction bonded, α/β ratio, effect of α -Si₃N₄ grog additions 2-93493
Zn-Al, casting, mech. props. 2-62113

castings

steel, alloys, fractographic features and fatigue failure mechanism, 20 GL and 20 GFL 2-72825
steel, directional solidification (*Rumanian*) 2-99368
steel, fatigue strength increase by residual stresses development 2-116551
steel, ingot prod., radioisotope inspection of technological process 2-62353
steel, low-C, chem. scaled, anomalous interlayers 2-99416
steel ingot, hollow cylindrical continuously cast, solidifying, temp. distrib. analysis 2-67317
temperature homogeneity moulds, Beuken thermoelectric model appl. (*French*) 2-70821
Al alloy castings, low-temp. characts. (*French*) 2-77895
Fe, grey, engine valve units, wear resist. of powder coatings produced by elec-pulse sintering and weld facing 2-67659
Fe, hot-worked high-strength, kinetics of isothermal breakdown of austenite 2-105140
Fe, hypoeutectic, Ce microdistrib. between struct. components, wide solidification range 2-99393
Fe products, friction and wear 2-88221
Fe, thermodynamic stimulus to graphitisation, alloying elements influence, chilling action 2-105139
Fe-Si (5 wt.%) alloy, supercooled ingots, cryst. struct. features 2-67318
Ni alloy, heat-resisting cast, directed change of comp. and morphology of primary carbide phases 2-67320
Ni-Al-Cr (W)(Ti), Ni₃Al based structural alloy, props. 2-72874
Ni-base superalloy IN 738, sequential effect of creep and fatigue 2-105330
Sm(Co, Cu, Fe)_{6-x/2} cast hard mag. alloys, fine struct. after heat treatment 2-99465

cataclysmic binary stars

see also novae

2A 0311-227, AM Herculis star, light curve fluctuations anal., VRI obs. 2-94775
2A 0311-227 (EF Eridani), AM Herculis star, accretion column model, visible/IR obs. 2-89311
2A 0526-328, X-ray cataclysmic variable, optical and X-ray study 2-112506
3A 0729+103, identification with cataclysmic variable and photometric and spectroscopic obs. 2-63521
accretion discs, vertical struct. 2-63368
RX Andromedae, eclipsing dwarf nova, orbit, spectral obs. 2-73995
Z Andromedae, UBVRJHKLMN photometry of symbiotic star 2-117686
R Aquarii, eclipsing symbiotic star, light curve, 1933 to 1981 and orbital period 2-100942
R Aquarii, symbiotic star, discovery and photometry of elongated extension of stellar image 2-117685
R Aquarii, symbiotic star, jet and assoc. radio source nature, obs. 2-94732
R Aquarii and jet, supercritical accretion and nova outburst 2-100956
V794 Aquilae, short-term light vars. detect. by high speed photometry 2-106732
TT Arietis, distance and outer disc temp. from light curve and spectral obs. 2-100951
TT Arietis, novalike variables, fading, visual magnitude estimates (March 4 to 24 1982) 2-58366
TT Arietis, UV continuum intensity comparison with optically thick accretion disc models 2-94730
KR Aurigae, orbital period from spectroscopic obs. 2-68791
Balmer decrement origin 2-84247

cataclysmic binary stars continued

AC Cancri, cataclysmic eclipsing binary, colour indices, magnitude, spectral obs. 2-63531
SY Cancri, Z Camelopardalis star, pulsations and flickering, spectra and colours 2-79099
OY Carinae, dwarf nova, near IR light curves 2-112464
V436 Centauri, SU Ursae Majoris star, radial rel. curve and orbital period, visible obs. 2-68777
Z Chamaeleontis, dwarf nova, evidence for eccentric disc during supermaximum 2-63418
CW 1103+254, AM Herculis star, visible and IR photometry and polarisation and spectroscopic obs. 2-94751
CW 1103+254, new AM Herculis star, photometry, spectrum and polarisation obs. 2-84250
CI Cygni, eclipsing symbiotic star; visual and photographic light curves, (1967 to 1981) 2-100949
V1016 Cygni, peculiar emission-line star, visible and near IR spectral vars. 2-84241
CI Cygni, symbiotic star, H vars. and near IR spectrum 2-68789
CI Cygni, symbiotic star, IR excess, UBVRJHKLMN obs. 2-106753
CH Cygni, symbiotic star, spectroscopic and photometric behaviour in (1981) (*Russian*) 2-112470
CI Cygni, symbiotic star, UV obs. of 1980 eclipse 2-63437
CH Cygni, UV spectrum during 1977-80 outburst 2-63436
HR Delphini (Nova 1967), UV spectral obs. 2-79110
disk radiation, chromosphere model 2-79102
AG Draconis, symbiotic star nature 2-106739
dwarf cataclysmic binary stars, effect of gravit. wave radiation on mass exchange and evolution (*Russian*) 2-106751
dwarf nova outbursts and convective accretion disks 2-117679
dwarf novae, influence of tidal effects on the structure of accretion discs 2-79126
dwarf novae, southern hemisphere and equatorial, atlas 2-100762
dwarf novae, viscous boundary layer and hard X-rays 2-79103
dwarf novae, white dwarf accretion disk, model 2-79127
dwarf novae polarisation obs. 2-63458
dwarf novae viscous accretion disc outbursts and mass flow, light curve anal. 2-63456
1 E 0643-1648, IUE UV obs. of cataclysmic variable 2-112456
1E 1405-451, AM Herculis star, two second variability 2-94777
E 1405-451, AM Herculis-type binary evidence from polarization 2-68822
E 1405-451, E 1013-477, identification with AM Herculis type cataclysmic variables 2-63788
E 1551+718, X-ray source, identification with uncatalogued dwarf nova 2-106965
early-type emission-line stars, book 2-94934
emission-line cataclysmic variable candidates from Palomar Green survey, spectra and finding charts 2-106748
evolution of compact binary star systems, implications for cataclysmic variables 2-68812
U Geminorum, dwarf nova, IR light curve anal., system nature, JHK obs. 2-100931
H2252-035, non-synchronous rotator, spectral/photometry obs. anal. 2-100955
H 0139-68 X-ray source identification with AM Herculis-type star 2-94788
HBV 475 (V1329 Cygni), peculiar emission-line star, line profiles rel. to expanding motions in ionised envelope 2-68781
AM Herculis, radio emission detect., origin in white dwarf magnetosphere, model and SHF obs. 2-74020
AM Herculis, visual magnitude estimates, (1982 June 23 to July 8) 2-106804
AM Herculis, VRI photometry and circular polarisation during low state, (1982 March 6 to April 19) 2-74025
AM Herculis (3U 1809+50), new optical decline, visual magnitude estimates (1982 March 29 and April 19) 2-68823
AM Herculis (3U 1809+50), visual magnitude estimate, (1982 April 16) 2-68824
AM Herculis stars, 2-second period, standoff accretion shock height instability, model predictions 2-94777
hot accreting white dwarfs, props. in in quasi-static approximation 2-106691
EX Hydrae, U Geminorum star, orbit from visible spectra/photometry obs. 2-100932
Lanning 10, eclipsing cataclysmic variable, photometric and spectroscopic obs. 2-58321
X Leonis, dwarf nova, visual magnitude obs., (1970 to 1979) 2-106737
MV Lyrae, IUE and optical obs. at intermediate and low states 2-106744
MV Lyrae, red+white dwarf model, UV spectra anal. 2-94726
mass loss effects on evolution 2-68833
minimum period, gravitational radiation and mass loss effects 2-106717
SY Muscae, symbiotic star, JHK magnitudes, (1982 February 4) 2-63450
SY Muscae, symbiotic star brightening interpretation, UV spectra/continuum obs. 2-89270
MWC 17, possible symbiotic star, spectrophotometric obs. in January 1982 2-84245
MWC 349, peculiar emission-line stars, near IR spectral vars. 2-84241
NS Ophiuchi, recurrent nova, near B-obs. 2-63445
RS Ophiuchi, recurrent nova, new brightening, visual magnitude obs., (1982 June 22 to July 21) 2-94754
RS Ophiuchi, recurrent nova, UV spectral obs. 2-79110
origin from star-planet systems 2-112454
CN Orionis, dwarf nova, periodic light vars. obs. 2-68787
CN Orionis, Z Cam star, light curve anal. 2-106738
AR Pavonis, symbiotic eclipsing binary, UV spectrum during eclipse egress, obs. 2-73996
AX Persei, symbiotic star, orbital period from light curve anal. 2-63461
PG 1550+191, AM Herculis star, discovery of M-type dwarf component from spectrophotometry at red wavelengths 2-112449
PG 1550+191, AM Herculis star, polarisation and period, visible obs. 2-84265
RR Pictoris, cataclysmic binary, light/colour curves interpretation, visible photometric/polarisation obs. 2-89271
progenitors and birthrate comparison with Type I supernovae 2-106741
VV Puppis, AM Herculis, time-resolved spectroscopy 2-112449
VV Puppis, AM Herculis star, cyclotron spectrum and polarisation props., model 2-58409

cataclysmic binary stars continued

- RX Puppis, symbiotic star, spectra anal. and circumstellar shell activity, UV obs. 2—89266
 radiation emissions and accretion 2—100959
 RZ Sagittae, new SU UMa-type dwarf nova, 1981 Oct. supermax. 2—117678
 HM Sagittae, peculiar emission-line star, visible and near IR spectral vars. 2—84241
 HM Sagittae, symbiotic star, IR and visual photometric obs. (*Russian*) 2—63465
 V3885 Sagittarii, nova like variable, accretion disc model and wind, UV obs. 2—94725
 TT Arietis, nova-like variable, new minimum, apparent visual magnitude obs., (1982 July 21), IUE UV obs. of cataclysmic variable 2—112456
 secondary low mass main sequence star secular evolution 2—117661
 RW Sextantis, accretion disc with hot wind, model and line anal. 2—94724
 spectrophotometric survey of 31 stars, visible obs. 2—73979
 steady accretion disks structure, depend. on mass of central star and accretion rate 2—100913
 symbiotic star nature 2—106739
 symbiotic stars, mag. flux emergence rel. to stellar winds and planetary nebulae form. 2—89335
 symbiotic stars, main sequence star accreting from red giant scenario 2—84077
 symbiotic stars, UV spectra model atm. anal., companion nature and spectrum origin 2—68773
 4 U 1849—31, IUE UV obs. of cataclysmic variable 2—112456
 AN Ursae Majoris, AM Herculis star, 1979 minimum, energy distrib., visible obs. 2—63423
 AN Ursae Majoris, AM Herculis star, two second variability 2—94777
 AN Ursae Majoris, polar, BV photometry during low state (1982 March 20 and April 20) 2—74025
 TW Virginis, dwarf nova during outburst, winds and mass transfer, UV obs. 2—116764
 H 0139—68, AM Herculis star, optical and near-IR polarisation obs. 2—106803
 He I line emission and He abundance 2—89269

catalysis

see also *catalysts; reaction kinetics*

- American Vacuum Soc., conf., Anaheim, USA (Nov. 1981) 2—79275
 coal hydrocracking, using molten salts as catalysts 2—73051
 convective-diffusive type catalytic burner using a Pt catalyst supported on inert porous materials for H_2 combustion 2—73163
 diacetylene, solid state polymerisation autocatalytic region, neutron diff. study 2—67751
 1,1-diphenylethylene adsorbed layer, reaction intermediates, resonance Raman spectra 2—73014
 enzymatic catalysis, electronic aspects, frontier orbital perturbation theory 2—116724
 ethylene, adsorption on zeolite surface, IR study 2—82132
 light-energy conversion efficiency in photogalvanic cells and H_2O cleavage systems 2—111569
 methanol- $d_0(d_1)(d_2)$, adsorption on zeolite surface, IR study 2—82132
 methylcyclopentane hydrogenolysis catalysed by Pt oriented ultrathin film on Al_2O_3 2—88381
 olefins, catalytic hydrogenation by Pd complex, MO calcs. 2—83378
 organometallic cpds. and synthesis, conf., Ft. Collins, CO, USA (Aug. 1981) 2—53418
 1-pentene, laser photocatalytic isomerisation and hydrogenation 2—116688
 photoacoustic Fourier transform IR spectroscopy, analytical apps. 2—116747
 phthalocyanines, micellar solns., photoelectrochem. hydrogen prod. 2—73128
 serine proteinases, catalytic rate enhancement, electrostatic effect 2—116864
 solar energy conversion technologies, solid-gas interface reactions, research needs 2—88378
 storage capacity of Mg, synthesis and study of reversible hydrides based on Mg rich alloys (*French*) 2—78261
 surface science, conference, Liverpool, England (April 1981) 2—58538
 transition metal complex photo-chem. for H_2 production from solar energy 2—62507
 Al_2O_3 , dry impregnation of $M(NO_3)_2$ ($M=Be, Mg, Ca, Sr, Ba$) and MoO_3 , cryst. struct. 2—109761
 C, fibrous and particulate, catalytic graphitisation, process characts. and mechanism 2—78129
 CO, adsorbed on Pt, oxidation, photocatalytic effect 2—111519
 CO, chemisorbed on Rh, dissociation mechanism 2—57638
 $CO+H_2$, on transition metal surfaces, heterogeneous catalysis 2—105507
 CO_2 electron-beam-controlled closed-cycle laser, gas mixture catalytic regeneration 2—70584
 $CO_2+H_2O-H_2CO_3$, hydration, theoretical models for activation by cationic binding sites 2—57600
 CuBr-CuI system, physicochem. props. 2—111512
 H_2 and fuel gas production by catalytic gasification of residual pitch and fluid coke from tar sands bitumen upgrading process (*Japanese*) 2—57737
 H_2 catalytic combustion, advantages and disadvantages of using catalytic heater 2—99850
 H_2 catalytic combustion, fundamental conditions for burner design 2—99749
 Mg, hydriding using Fe particles as dissoc. adsorption catalyst 2—67650
 n-MoSe₂ single crystals photocatalytic behaviour in contact with I^- , I_2 redox couple in solar photoelectrochemical cells 2—105575
 N+N, catalysed recomb. on Co and Ni surfaces, N_2 metastable states and vibr. relax. 2—108684
 NH_3 adsorbed on Ni surface, decomposition rate, magnetocatalytic effect absence 2—99709
 NH_3 , synthesis, on Fe surface, IR spectrosc. anal. 2—93813
 NH_3 , synthesis, on Fe surface, IR spectrosc. anal. 2—93814
 $2Na\rightleftharpoons Na_2$, surface catalysed equilib., laser diagnostics 2—57630
 Ni(100) surface, effects of Fe in reactivity 2—78135
 Pd, surface catalytic reactions, H_2 sensitive MOS-struct. and UPS, XPS study 2—88379
 Pt (100), catalytic activity, electronic struct., SCF-X α -SW MO calc. 2—61546
 Pt, adsorption of ethylene and acetylene, field emission study 2—82119
 Pt surface (100), catalytic oxidation of Co, kinetic oscils. 2—93815

catalysis continued

- Pt/TiO₂ particle, photochem. diode model and photocatalytic activity 2—78127
 Pt(PH₃)₄, catalytic activity, electronic struct., SCF-X α -SW MO calc. 2—61546
 RuO₂, colloidal redox catalysts, O₂ evolution in aq. systems 2—78141
 TiO₂, adsorption of H₂O, SIMS study 2—104168
 V oxides, oxidised surface state model, appl. to catalysis 2—82419
- catalysts**
 see also *catalysis*
 automatic apparatus for catalyst characterization by temperature-programmed reduction/desorption/oxidation 2—53911
 convective-diffusive type catalytic burner using a Pt catalyst supported on inert porous materials for H_2 combustion 2—73163
 coupled cells with mutual mass exchange and reactions, dissipative structs. 2—111513
 dibenzeneitanium, struct., spectra, chem. props. 2—67045
 electron microscopy, high-resolution, bright and dark field imaging 2—98299
 electron microscopy of surfaces and catalysts, image resolution 2—94973
 EM, high resolution applied to chem. problems, conf., New York, USA, (Aug. 1981) 2—94904
 EXAFS spectroscopy, conference, Boston, MA, USA (Nov. 1979) 2—74160
 graphite-to-diamond conversion, transition metal lamellar compounds of graphite as catalysts 2—67330
 heterogeneous catalyst system in reaction conditions, IR emission spectra 2—111522
 low overvoltage electrocatalysts for hydrogen evolving electrodes 2—73011
 model chemical system related to absolutely asymmetric synthesis, stereospecific and autocatalytic processes 2—62373
 NOx removal technique from coal fired boiler by dry system (*Japanese*) 2—57634
 photoacoustic Fourier transform IR spectroscopy, analytical apps. 2—116747
 polystyrene-Ru catalyst, EXAFS studies with synchrotron radiation 2—104998
 S/I thermochemical water splitting cycle studies 2—99845
 STEM, bright and dark field imaging methods 2—97884
 surfaces studied by photoacoustic spectroscopy 2—71587
 transition metal cluster chemistry and implications for hydrogen embrittlement, alloy behaviour and metal catalysts 2—91832
 water electrolysis, electrocatalysts and separators for use in KOH and LiOH solutions 2—62407
 zeolite catalyst, ZSM-5(Fe), magnetisation, Mossbauer and catalytic props. meas. 2—77433
 Au thin films, on n-TiO₂ wafer, photocatalysts, pot. meas. 2—110469
 C/air electrodes, charact. structure and hydrophobic properties effects 2—116703
 Cd electrodes, plastic-bonded with active C catalyst O₂ recombination rate 2—116795
 Cu chromite catalysts, XPS struct. elucidation and correl. with catalytic activity 2—105038
 CuO-ZnO-Al₂O₃ system, reduction process, rel. to catalysts for methanol synthesis 2—83373
 Fe catalysts, Fischer-Tropsch, Mossbauer study of surface effects 2—82750
 Fe particles, dissoc. adsorption catalyst for hydriding of Mg 2—67650
 γ -Fe₂O₃ submicron particles, morphology using high-resolution electron microscopy (*French*) 2—97872
 H_2 and fuel gas production by catalytic gasification of residual pitch and fluid coke from tar sands bitumen upgrading process (*Japanese*) 2—57737
 H_2 production using solid polymer electrolyte water electrolysis 2—73157
 MoO₃-Al₂O₃, struct. of uncrystallised Mo compounds 2—65862
 MoO₃-Al₂O₃ system, reaction and degree of cryst., effect of prep. conditions 2—67206
 NH₃ decomposition on Pt and Fe surfaces at high temp., NH radical prod. 2—72959
 Ni catalyst for methanation reaction, use of single crystals. 2—83412
 Ni, dispersed, low-temp. transfer of H from surface to bulk 2—56252
 P₂O₅ fuel cells aged electrodes in-situ regeneration of active surface area by electrochemical methods 2—78205
 Pd catalyst, SiO₂ supported, adsorption of ethylene, H_2 and CO, IR study 2—82129
 Pd, supported on vitreous materials, phenylacetylene half-hydrogenation 2—78138
 Pd/Si system, intrinsic and Si-stabilised oxides, Auger and UPS study 2—67160
 PdC, bonding, all electron ab initio calculations 2—75140
 Pt catalyst, SiO₂ supported, surface struct., EXAFS study 2—99219
 Pt film, ultrathin oriented, on Al₂O₃, catalysis of methylcyclopentane hydrogenolysis 2—88381
 Pt, on graphite, Pt alloys on SiO₂, characterisation by EM 2—98299
 Pt particulate films, CO chemisorption 2—76818
 Pt surface, highly dispersed, chemisorbed CO, double NMR study 2—104747
 Pt-IR clusters, catalysts, EXAFS study 2—67149
 Rh particles, Al₂O₃ supported, adsorption of NO, IETS study 2—56343
 Ru catalyst for methanation reaction, use of single crystals. 2—83412
 S tolerant catalysts, Toyo T-12 and T-12/T-48 combination, for processing no.2 fuel oil for use in fuel cells 2—62474
 α -Te₂MoO₇ and β -TeMoO₆, industrial oxidation catalysts, X-ray diff. and electron microscopy study 2—61157
 Th-catalysts, interference effects on Rh 3D photoelectron spectra 2—99297
 Ti complex, Ziegler-Natta catalysts, reaction path SCF-X α -SW MO study 2—108377
 TiO₂ powder, shock loaded, paramagnetic defects, ESR study 2—77370
 TiO₂ powder, shock loaded, catalytic activity 2—78125

cataphoresis see *electrophoresis*

catastrophe theory

- application in physical sciences 2—69003
 cuspid integral evaluation, Pearcey's integral appl. 2—63802
 diffraction, asymptotics and catastrophes 2—90798
 far-field caustics, law of reflection, catastrophe theory 2—65153
 fractal lattices, n^{th} order phase transitions, critical exponents from catastrophe theory 2—107256
 global bifurcation diagram in ecological interacting and diffusion systems 2—95284

catastrophé theory continued

- instability and catastrophe theory in science and engineering, book 2-53435
- mechanics, contrib. of catastrophe theory to elastic buckling 2-114698

cathode-ray oscilloscopes

- see also oscillographs*
- 10 MHz portable oscilloscope, opt. characts. 2-95340
- 60 MHz oscilloscope, using digital image storage, P²CCD appl. 2-95353
- Avon Corp. BS-810 4-channel (analog)+8-channel (digital) CRO 2-95346
- computer-oscilloscope interface for physiology laboratory 2-100172
- COS 6100 oscilloscope, characts. (Italian) 2-101390
- digital CROs, advantages over analogue instruments 2-101415
- digital CROs, improvements in precision and bandwidth 2-101416
- Hameg HM203 dual-trace oscilloscope 2-101421
- Hitachi Denshi V-1050F portable 100 MHz CRO 2-95345
- Iwatsu Electric's SS-5421 broad band oscilloscope, characts. 2-95344
- Iwatsu Electric TS-8121 wideband storage oscilloscopes 2-95343
- Kikusui Electronics COS6100 100 MHz CRO 2-95349
- Leader Electronic's LB0-517 100 MHz multipurpose oscilloscope, characts. 2-95350
- low-frequency CRO based on VCR517 radar tube and variations 2-107349
- Matsumita VP-5530B 300 MHz CRO, using switchable input impedance 2-95347
- operation and use of CRO 2-74397
- Philips PM3311 digital storage oscilloscope with P²CCD frequency converter 2-112883
- pocket calibrator for volts and ohms, use with bench instruments 2-101423
- storage oscilloscope, using digital memory 2-95339
- storage using video recording (German) 2-64012
- Trio-Kenwood CS-2100, CS-2070 4-channel, 8-trace CROs 2-95348
- vibrating string, reson. spectra, oscilloscope expts. 2-79332

cathode-ray tube displays

- see also cathode-ray oscilloscopes*
- computer-generated image visual systems for marine simulator training 2-79334
- contourgraphy for on-line signal monitoring, CRT display, ECG ambulatory monitoring 2-68188
- high energy physics, dual display system for multidimens. data anal. 2-54735
- medical use CRT display advances in diagnosis 2-57891
- vibration mode recording of rotating circular objects using CRT display 2-103120
- X-ray diffractometer, solid state detector, N-pattern display 2-65802

cathode-ray tube screens *see cathode-ray tubes; fluorescent screens***cathode-ray tubes**

- see also image converters; image intensifiers; image storage tubes; television camera tubes*
- cryopumping, theory, operations and appl. 2-53777
- laser-induced arcing in CRTs and arc suppression 2-76221

cathode rays

- No entries

cathodes

- see also electron emission; oxide coated cathodes; photocathodes; thermionic cathodes*
- coupled capillary-plasma wave excitation at liquid metal surface in plasma (Russian) 2-86435
- directionally solidified eutectics as field emission cathodes 2-57274
- DITE Tokamaks, arcing impurities, cathode erosion rate meas. of vacuum arcs 2-103475
- electron field emission from broad-area electrodes, review 2-77707
- electron microscopes, directly heated tungsten hair pin cathode development 2-101498
- erosion resistance in high-current vacuum arc regime 2-83233
- explosive emission source, cathode plasma-surface interaction 2-113801
- explosive-emission, in freq. mode with long pulse duration, electron source 2-62405
- field emission cathodes using commercial C fibres 2-99305
- hollow cathode arc for metastable inert gas atom beams 2-71282
- hot cathode arc discharges initiation by electron confinement in Penning and magnetron configurations 2-91701
- multipactor ion pump, high speed, using multipactor cathode 2-107336
- nonstationary low press. arc cathode anal., magnetoplasmadynamic instability of channel 2-103499
- semiconductor field emission cathodes, flicker noise 2-93385
- Tokamak vacuum arc behaviour rel. to cathode surface conditions 2-103496
- vacuum arcs, variety of cathode craters, influence of cathode temp. 2-115082
- He-Ne laser in hollow cathode discharge, output power 2-96899
- LaB₆ multi-cathodes, filament-free, long-pulse ion sources, high-density plasma prod. 2-59586
- Mo wire cathode with graphite anode for high-power TE CO₂ laser 2-60107

cathodes, electrochemical *see electrochemical electrodes***cathodochromism**

- No entries

cathodoluminescence

- diamond:N, ion implanted, cathodoluminescence of impurity-defect complexes 2-116276
- diamond:N, ion implanted, defect form., annealing and interactions, cathodoluminescence study 2-116277
- diamond, type Ia, cathodoluminescence from giant platelets and 2.526 eV vibronic system, plastic deform. effects 2-72561
- phosphor powders, anal. using SEM cathodoluminescence 2-67126
- SEM, simultaneous detection and computer-controlled data acquisition for spectrally and time-resolved cathodoluminescence 2-64173
- semiconductor, minority carrier diffusion length meas. using microscopic electron probe 2-71996
- STEM, simple cathodoluminescence detector 2-64175
- STEM appl. in solid state chemistry, cathodoluminescence, EELS, XES techniques 2-65821
- TEM, cathodoluminescence spectrometer design 2-64174
- transmission cathodoluminescence 2-87873
- ZnTe-CdS thin film photovoltaic cells, optical and elec. props. meas. 2-116824

cathodoluminescence continued

- AgGaS₂, cathodoluminescence, excitonic luminesc. and edge emission obs. 2-72559
- AlN epitaxial films, cathodoluminescence and optical absorption 2-99195
- CaS:Ce,Fe(Co)(Ni)(Cd), phosphors, luminescence emission and decay, quenching 2-77584
- CaSO₄:Dy³⁺, cathodoluminescence spectrum meas. 2-87875
- Ca₃Y₂Ge₂O₁₂:Tb³⁺ garnet, luminescence studies 2-61952
- CdCr₂Se₄, ferromag. semicond., cathodoluminesc. study 2-87876
- CdGa₂S₄, cathodolum. obs. in spontaneous and stimulated regimes 2-116209
- CdS-Cu₂S solar cell, photovoltaic props., cathodolum. spectrum 2-116823
- CdSe, ion implantation postrange defects, cathodoluminescence study 2-99196
- CdTe, defects evaluation using simple cathodolum. technique 2-77597
- CdTe, minority carrier diffusion length, cathodolum. intensity and decay time meas. 2-115776
- CdTe:P, doped by ion implantation, cathodoluminesc. 2-67124
- GaAs, electron irradi., luminescence of deep radiative centres obs. 2-57187
- GaAs, epitaxial film growth on amorphous substrate, CLEFT process, TEM and cathodoluminescence study 2-77749
- GaAs epitaxial layers, MBE and LPE, luminesc. props. 2-72564
- GaAs polycrystalline, scanning cathodolum. microscopy 2-71313
- GaAs_{1-x}P_xN, temp. depend. of luminescence intensity 2-82930
- GaInAs epitaxial layer device type structures, defects 2-71461
- GaInAsP epitaxial layer device type structures, defects 2-71461
- GaN epitaxial layer, optimized growth conditions 2-66391
- GaN heteroepitaxial layer, growth and doping kinetics, cathode luminesc., elec. props. 2-104185
- GaTe, electrical and optical props. (Russian) 2-57189
- In_{1-x}Ga_xP:Te(Sr)(Cd)(Zn)(Si)(O), epitaxial film, photo-, electro- and cathodoluminescence involving deep levels 2-116258
- InP/InGaAsP double heterogeneous epitaxial wafers, stress induced defect migration 2-92287
- InSb, electron stimulated IR luminesc., HF modulation interferometric obs. 2-116271
- LuOBr(Cl):Tb(Tm)(Ce)(Sm)(Dy) phosphor, photoluminesc. and cathodoluminesc. props. meas. 2-116231
- MgO, cathodoluminesc., electron beam effect meas. 2-110951
- MgO, cathodoluminesc. emission in SEM 2-110954
- MgO, cathodoluminescence at hardness indents, correlation with dislocation struct. 2-72563
- MgO crystal, cathodolum., from dislocations, purity influence 2-77599
- MgO, electron beam evaporated film, optical absorpt., RHEED and cathodoluminesc. study 2-93306
- MgO films, electron beam evaporated, RHEED, optical absorpt. and cathodoluminesc. 2-110209
- MgO, indented, cathodoluminesc. in SEM, effect of electron beam, expt. study 2-87874
- MgO, plastic deform., cathodoluminescence and photoluminesc. of slip bands, SEM study 2-67125
- MgO single cryst., cathodolum. from cutting damage 2-93286
- Ni, UV isochromat spectra, k-conservation effect 2-72562
- SiO₂ thin film, cathodoluminescence, luminescent centre distrib. (Russian) 2-104970
- SiO₂ thin films, luminesc. study, interf. effects 2-104968
- SnO₂-ZnS(A)-Cu₂S-ZnS(A)-Al, A=Ag,Mn,Sm, thin film struct., electrolum., cathodolum. and photolum. meas. 2-87871
- Th, in presence of O₂, CO, and gas mixtures 2-110953
- YAG:Fe cathodoluminesc. props., Fe ions absence effects 2-110957
- Y₂O₃:S phosphor, carrier migration, cathodoluminesc. study 2-116272
- Y₂O₃:Tb³⁺, X-ray phosphor prep., luminesc. props. 2-67096
- Zn_{1-x}Cd_xAs phosphor layer on SiO₂ and Zn₃SiO₄:Mn particles 2-110952
- Zn_{1-x}Cd_xS:Cu, Al cathodoluminescent phosphor, saturation obs. at high current density 2-116273
- ZnO, green cathodolum. and ESR spectra 2-116275
- ZnS, high resolution in scanning cathodolumin. of edge emission 2-116274
- ZnS phosphor layer on Zn₃SiO₄:Mn particles, prep. and cathodoluminescence 2-110952
- ZnS phosphors, cryst., radiative recomb. centres, cathodolum. meas. 2-110955
- ZnS:Mn film, sputter deposit, luminesc. and struct. props. variation with annealing 2-93287
- ZnS:Mn sputtered thin films, cathodoluminescence and struct. props. 2-110956
- ZnS(Se), Z. 2-116235
- ZnSe, blue emission of cathodoluminesc. 2-77598
- ZnSe grown by organometallic CVD on GaAs, blue cathodoluminesc. obs. at room temp. 2-104969

cathodophosphorescence *see cathodoluminescence***cathodothermoluminescence** *see cathodoluminescence***catholytes** *see electrolytes***causality** *see physics fundamentals***causticity** *see pH***cavitation**

- see also bubbles; vortices*
- acoustic cavitation in a highly superheated liquid 2-70742
- acoustic cavitation noise spectra 2-55625
- asymptotic solution of the equations for the dynamics of a cavitation bubble in a sound field and analysis of the solution 2-91123
- bubble, oscillating, interaction with neighbouring free surface, asymptotic study (French) 2-55649
- bubble collapse, study of light emission and shock waves produced 2-70740
- bubble dynamics, laser prod., acoustic emission study 2-55646
- bubble dynamics, vortex rings and jet formation 2-55642
- bubble interactions with each other and with obstacles, collapse 2-103195
- bubble ring cavitation on hemispherical headforms 2-86313
- bubbly water flow past supercavitating wedge, compressibility effects 2-71008
- carboxymethylcellulose, aq. soln., bubble dynamics, rheological model 2-60610
- cavitation bubble pressure in unsteady regimes 2-55627
- cavitation inception in spool valves 2-60592
- correlations of thermodynamic effects for developed cavitation 2-60589
- desinent cavitation, effect of short and laminar separation bubbles 2-65623

cavitation continued

- diving physiology implications on bubble nucleation in aq. media 2-55637
- dynamics of cavity clusters, two-phase model 2-114860
- electrical explosions, cavity form, closure props. 2-75990
- flow cavitation, real fluid effects 2-81378
- flow separation in shear-layer driven cavities 2-97484
- flow through very small orifices, role of cavitation nuclei 2-86312
- fluid structure interaction with cavitation, uncoupling approx. 2-91495
- gas cavitation nuclei, evolution, generation and regeneration 2-91129
- hydroxyethylcellulose, aq. soln., bubble dynamics, rheological model 2-60610
- ideal incompressible fluid, cavitation bubble collapse 2-55626
- impulse due to vapour bubble near boundary 2-97632
- jet flow, cavitation, photographic study 2-65622
- laminar flow, over hemispherical headforms, separation bubble, cavitation inception 2-60593
- laminar separation bubble, cavitation gaseous microbubble growth anal. 2-60631
- liquid, cavity clusters, energy consideration of collapse 2-60588
- liquid jet impingement with plain and cavitating jets, erosion study 2-114863
- liquids, boiling and cryogenic, acoustic cavitation and vapour bubble dynamics 2-55623
- liquids, gaseous cavitation prediction, two-phase flow analogy 2-60590
- liquids, US power and cavitation meas. methods, review 2-70791
- LMFBR, cavitation in submerged jets 2-102162
- microbubbles nucleation and stabilisation in liqs. 2-55639
- noise meas. system 2-86186
- noise spectral line breadth study 2-97606
- nuclei in cavitating flows 2-55624
- optical techniques for meas. cavitation nuclei 2-65621
- polyacrylamide, aq. soln., bubble dynamics, rheological model 2-60610
- polyethylene oxide, aq. soln., bubble dynamics, rheological model 2-60610
- secondary vorticity effect on cavitation inception 2-65598
- separating flow over backsteps and cavities 2-91494
- steel, austenitic stainless, 316, TEM observations of crack tip-cavity interactions 2-71521
- steel, stainless and C, cavitation damage under pressure conditions by a vibratory test (*Japanese*) 2-57491
- time effects, expt. studies, review 2-114859
- transient cavitation in fluid-structure interactions 2-60402
- two-phase noise diagnosis in nuclear power plants 2-69766
- viscous fluid in cylindrical elastic shell, normal modes, surface tension 2-65607
- vortex struts, 3-dimens., in cavities 2-60552
- water, cavitating lip, acoustic emission and sonoluminesc., dissolved gases effect 2-55622
- water, cavitation induced by shock wave refl. 2-70999
- Al, intercrystallite fracture obs. by high power US (*Russian*) 2-88160
- Al, irradiated with Al ions, pure and He doped 2-86747
- Al, microstructural evolution during 600 MeV proton irradi., He prod. rate effects 2-86746
- Cu and alloy, low ductility failure and cavitation during grain boundary migration (*Japanese*) 2-105301
- Cu, intercrystallite fracture obs. by high power US (*Russian*) 2-88160
- Fe, intercrystallite fracture obs. by high power US (*Russian*) 2-88160
- Fe-Al bronze, laser-surface-melted self-quenched, cavitation erosion 2-76491
- H bubble, nuclei effect on inception of bubble and sheet cavitation on axisymmetric bodies 2-60591
- Nb and alloys, ion irradiated by $^{58}\text{Ni}^{+}$ and $^3\text{He}^{+}$, swelling 2-85216
- Ni, cavities depth distrib. induced by 20 keV He ion irradi. 2-86748
- Ni, intercrystallite fracture obs. by high power US (*Russian*) 2-88160
- V, ion implanted, mech. props. study after neutron irradi. 2-71511
- V, neutron irradi., preimplantation of He effect on microstruct. 2-85215
- V-Cr-Ti (1.0 l wt.%), neutron irradi., preimplantation of He effect on microstruct. 2-85215
- V-Ti, ion implanted, mech. props. study after neutron irradi. 2-71511
- V-Ti (20 wt.%), He injected and neutron irradi., tensile props. and microstruct. 2-71509

cavities (solid) see voids (solid)**cavity resonators**

- see also acoustic resonators; laser cavity resonators*
- all-single-mode fiber resonator 2-91068
- axial symmetric cavities, nonsymmetric modes, PRUD code for calc. 2-113798
- bidirectional ring cavity use for optical bistable devices 2-55243
- bistable optical cavity, instability leading to periodic and chaotic self pulsations 2-55245
- cavity Q for ergodic eigenmodes 2-65702
- coupled optical cavities with common partial reflector, very high freq. intensity oscils. 2-108991
- dielectric parameter measurement of biological materials, using spiral resonators (*Russian*) 2-95402
- dielectric props. meas. apparatus, for solid and liquid dielectrics, microwave range 2-53787
- diffraction radiation generator near-MM sources, unstable resonator and output coupling 2-97010
- double-cavity electrooptic Fabry-Perot tunable filter 2-109016
- electron cyclotron maser oscillator, quasi-optical, open resonator cavity config. 2-80927
- Fabry-Perot resonator, active two-beam optical bistability 2-102863
- free electron masers with Bragg resonators (*Russian*) 2-80926
- gyrotron resonator, tapered analytic theory 2-96876
- higher-order mode loss, in stationary state 2-85422
- loop gap resonator, use in microwave lumped circuit ESR 2-84680
- microwave cavity for ^{15}N spectroscopic analysis 2-78161
- nonlinear Fabry-Perot resonators, self-oscillation and chaos 2-102851
- open resonators, interference effects between modes 2-55214
- optical bistability ring cavity model, relation between Bonifacio-Lugiato and Ikeda instabilities 2-86039
- optical cavity excitation for surface energy transfer enhancement, pole analysis 2-57042
- optical resonator eigenmodes, general, orthogonality props. 2-60215
- optical resonator with phase conjugate mirror 2-70623
- optical resonators with mirrors formed by sets of retroreflecting elements 2-70651
- optical standing-wave cavity, optical bistability for two-level atoms 2-97081

cavity resonators continued

- permittivity measurement, open resonator method 2-53790
- permittivity measurement, open resonator method 2-53791
- phase conjugate resonators, higher-order modes 2-90987
- ring cavity, multiphoton optical bistability, analytic description 2-102862
- spherical optical resonator, interf. function, diff. correction for length meas. by mirror displacement (*German*) 2-69246
- spherical resonator equivalence to arbitrary phase-conjugate resonators 2-75635
- unstable resonator with aspherical mirrors 2-108995
- untuned, for MM wave absorpt. meas. in low-loss dielectrics 2-99030
- wall-less microwave cavity for optical detection of magnetic resonance 2-79640
- waveguide resonators with distributed Bragg reflectors 2-86101
- H atoms, parity nonconservation expts. in RF cavities, theory 2-90725
- Nb superconducting resonators, characterisation using 10 GHz ultrastable oscillator 2-112923

c.c.d. circuits see charge-coupled device circuits**CCTV see closed circuit television****celestial mechanics**

- see also Earth orbit; N-body problems; stellar motion*
- 1976-87A (China 6), orbital decay rel. to atmos. density (*Chinese*) 2-63150
- analemmas from different planets 2-78942
- Apollo-Amor asteroids as extinct comets, Earth/Venus encounters and asteroid orbit problem 2-112370
- artificial resonant satellites of arbitrary eccentricity and inclination, long period motion 2-117563
- artificial satellite 1966-63 A, orbit anal. near 15th order reson. and geo-potential coeffs. 2-100701
- artificial satellite 1972-05 B, orbital inclination anal. used to find atm. rot. rate 2-100702
- artificial satellite in resonance with rotating planet, motion 2-89119
- artificial satellite orbit improvement from position determ. by photographic obs. 2-100700
- artificial satellite orbit perturbations due to atmospheric drag (*Chinese*) 2-112299
- artificial satellite orbits uncertainty due to gravity field uncertainty, effect on geomag. survey 2-73437
- artificial satellite position precise prediction, appl. of extended Kalman filter (*Chinese*) 2-112298
- artificial satellites, near stationary, orbit differential correction 2-89105
- artificial satellites, orbital motion and perturbing forces rel. to life times (*French*) 2-58222
- artificial satellites motion, linear perturbations (*Russian*) 2-84067
- artificial satellites orbit forecasting and determination accuracy, effect of atm. density fluctuations 2-106472
- artificial spherical balloon satellites orbits, effects of diffuse solar radiation 2-117562
- asteroid zone, kinematics and struct. rel. to motion of Jovian commensurability reson. 2-89170
- asteroids, three-dimensional motion at 2/1 resonance 2-106594
- asteroids 1 to 2297, orbits vel. to catalogue of minor planets identities 2-112347
- atomic model of planetary systems 2-117618
- axisymmetric satellite for triaxial planet, translational-rot. motion, steady state sols. 2-100717
- binary gravitating system, sudden loss of mass 2-107045
- binary star orbital perturbations on passage of gravit. waves 2-68813
- binary stars, eqns. of motion of systems with variable masses 2-68831
- canonical systems of differential, equations for multiple reson. conditionally periodic sols. determ. 2-100753
- capture into resonance, adiabatic invariant appl. 2-89124
- P/Comet Ashbrook-Jackson, orbit determ. from 1971-8 apparitions and ephemerides 2-112392
- Comet Austin (1982g), improved parabolic elements 2-117630
- Comet Bowell (1980b), orbit, physical appearance ephemeris and perturbation by Jupiter 2-79041
- Comet Bowell (1980b), orbit perturbation due to planets 2-106627
- P/Comet Brorsen-Metcalf, nongravitational effects on motion (*Russian*) 2-79035
- comet ephemerides calculations from orbital elements 2-100755
- comet families of outer planets, orbits and origin and evolution in pla net eruption theory 2-84171
- P/Comet Grigg-Skjellerup, orbit from 1947-1977 apparitions and 1982 ephemeris 2-106617
- P/Comet Halley, mechanical energy and planetary perturbations 2-68671
- Comet Howard-Koomen-Michels (1979 XI), orbital soln. effect of Sun collision 2-100830
- Comet Howard-Koomen-Michels (1979 XI), Sun collision and orbit, obs. 2-79040
- cometary nuclei, instability of dust cloud model (*Russian*) 2-73908
- comets, long period, orbits distrib. 2-112390
- comets, non-gravitational forces, Duryago rel. to Marsden method (*Russian*) 2-79034
- comets, numerical power series method applied to N-body problem (*Russian*) 2-84164
- comets, orbital elements, differential corrections for seven objects 2-79033
- comets, orbital patterns during close encounters with Jupiter 2-106622
- comets, periodic short period, disappearances due to perturbations 2-63315
- comets, review 2-73909
- conference on Moon/planets, celestial mechanics and ephemerides at Namur, Belgium (July 1980) 2-68951
- conservative dynamical systems with N degrees of freedom, intrinsic variational eqns. 2-100711
- Delaunay normalisations appl. to perturbed Keplerian systems, alternatives to expansion in eccentricity powers 2-73824
- diffusion of Keplerian motions by stochastic force, general formalism 2-89117
- Earth nutation and precession changes due to other planets 2-73415
- Earth orbit, comparison of solar observations in Washington, 1911 to 1970, with Newcomb's theory (*Russian*) 2-100709
- Earth-Moon system, motion around equilateral libration points, crit. stability case 2-117571
- eccentricity functions for eccentric orbits, evaluation by double summation truncation 2-117569

celestial mechanics continued

- elliptic motion of arbitrary eccentricity and semi-major axis, H_1 , H_2 , H_3 functions expansion 2-106482
 elliptic motion of arbitrary eccentricity and semimajor axis, expansion theory, regularisation approach 2-106483
 elliptic restricted three-body problem, stability of triangular points 2-89118
 equatorial satellite orbital parameters, time variation 2-106473
 Explorer 19, orbital perturbations due to solar radiation press. 2-117561
 Floquet reference solutions for the lunar theory and the Jovian moons 2-84068
 fluid bodies situated at liberation points, equilib. patterns 2-117568
 four-body problem, doubly restricted circular case, partial solns. 2-73826
 four-body problem, Newtonian, node elimination (*French*) 2-117570
 Galilean satellite system, appl. of general planetary theory extended to case of resonance (*French*) 2-78939
 Galilean satellite system evolution, implications of early eclipses 2-79011
 Galilean satellites, Sampson-Lieske theory, new constants 2-79008
 Galilean satellites of Jupiter, comparison of Sampson-Lieske theory with obs. 2-79010
 Galilean satellites of Jupiter (*French*) 2-79012
 gasdynamics of detonations and explosions, conf., Gottingen, FRG (Aug. 1979) 2-58549
 Geminid meteor stream, evolution of orbit 2-94661
 general planetary theory, extension to case of resonance and appl. to Galilean satellites of Jupiter (*French*) 2-78939
 general three-body problem, Hill stability and distance curves 2-78941
 geopotential 15th order harmonics from resonant orbit anal. 2-57953
 gravity-perturbed trajectories integration, numerical efficiency assessment 2-112308
 heavy rigid body motion round fixed point, Kovalevskaya's case, periodic soln. 2-106486
 Hyperion orbital motion anomalies (*Chinese*) 2-112380
 interplanetary spacecraft mission techniques and orbital mechanics 2-63209
 Kepler's equation solution using iterative methods, starting values comparison 2-94585
 Kepler potentials, time-depend., constants of motion, symm., orbit eqns. 2-63816
 Kepler problem, regularisation 2-68601
 Kepler problem for expositive binaries (*Polish*) 2-94792
 Keplerian motion numerical stabilisation 2-89122
 Lagoos orbit, semi-major axis secular decrease 2-89104
 Laplacian method modification for orbit computation (*Chinese*) 2-78937
 Lindstedt's eqn. with constant coeffs., second order soln. (*Chinese*) 2-63220
 long-period comets, stellar perturbations of orbital elements 2-106626
 lunar recession from Earth, history 2-84121
 magnetised natural satellite with 2:1 resonance, set of steady-state rots. 2-58232
 Mars, first-order theory, Hansen's method (*Chinese*) 2-84135
 Mars, obliquity vars. rel. to regolith-atmosphere exchange of H_2O and CO_2 and climate change 2-112367
 Mercury, perihelion motion, special relativity corrections, rel. to general relativity 2-58227
 meteor position and velocity in original orbit (*Japanese*) 2-68680
 meteor twin showers, theoretical radiant 2-79043
 meteorite orbits, effects in relative rates of falls on Earth's surface 2-89209
 meteoroid orbit evolution under influence of planets' secular perturbations 2-84174
 modified Zeipel's series convergence and resonant quasi-periodic solns. in celestial mechanics (*French*) 2-106487
 molecular cloud orbits and perturbations due to density wave spiral pot., star form. 2-63599
 Moon, orbital motion, direct perturbations of Venus and Mars, errors in ephemerides 2-73872
 Moon, orbital motion, progress in analytical theories 2-73868
 Moon, orbital perturbations due to Earth oblateness and planets, errors in ephemerides 2-73871
 Moon, orbital perturbations due to Earth oblateness and solar eccentricity/perigee, ELP soln. 2-73869
 Moon, perturbations due to Venus and Mars in ELP 2000, soln. 2-73870
 Moon orbit, oceans tidal dissipation, secular effects 2-111843
 Moon-Earth system, orbit evolution and tides 2-89172
 Moon-Earth System, orbital evolution 2-78986
 N-body problem, gravit. planetary case, motion asymptotic series 2-73825
 N-body problem in three-space for point masses of arbitrary magnitude 2-100713
 N-body problems equations of motion in Dirac cosmology 2-94878
 N-pointed body motion, approximated soln. eqns. (*Russian*) 2-84071
 N-type collision on N-body problem submitted to homogeneous pot. (*French*) 2-100712
 Nereid, orbital elements from visible obs. 2-112388
 nonsemisimple 1:1 resonance at an equilibrium 2-100710
 numerical integration, classical single step methods rel. to multi-step methods 2-100714
 numerical solns. of linearized differential eqns., error prop. 2-89128
 nutation, 1980 IAU theory, Working Group Final Report 2-88718
 obliquity, earliest known accurate obs. (135 BC) 2-101154
 Oort cloud, effect of star passages on comet orbits 2-106619
 optimal orbit construction with account for secular perturbations from oblateness (*Russian*) 2-84070
 orbit correction, appl. of symmetric difference quotient 2-89121
 orbit evolution of non-main belt asteroids in restricted circular N-planet problem 2-84138
 orbit similarities between comets, asteroids and meteoroids 2-94633
 orbital parameters, commensurability and quantisation 2-84117
 Pallas, secular motion, Lagrange planetary eqns. over 700000 years 2-63299
 Periodic Comet Halley, secular term to Newtonian eqns. rel. to apparitions, AD 1986 to 2647 BC 2-106625
 Periodic Comet Shajn-Schaldach (1949 VI), past 250 years orbital evolution 2-63316
 Periodic Comet Whipple (1948 VI), past 250 years orbital evolution 2-63316
 Perseid meteor stream, node stability and motion 2-79046
 perturbation theory in extended phase space and its application (*Chinese*) 2-78936

celestial mechanics continued

- perturbed oscillation problem and electrodynamic effects, soln. general approach 2-106489
 perturbed planetary motion, theory 2-89129
 Phoebe (Saturn IX), literal theory (*French*) 2-79021
 photographic positional obs. with long focus astrograph during (1975) (*Russian*) 2-94636
 planetary nebulae nuclei, corrections to ang. momentum loss for close binary nuclei 2-89259
 planetary ring systems, satellite-ring particles orbital resonances rel. to rings sharp edges 2-112383
 planetary satellites orbital parameters determination method 2-84107
 planetary secular perturbations, investigation using Gauss' method (*Chinese*) 2-84124
 planetary systems, resonance relative to instability 2-106802
 planetary theory, direct method of computing small divisors 2-78934
 planetary theory, integration constns. and mean elements for all planets (*French*) 2-78935
 Quadrantid stream, nodal regression study 2-79042
 quasi-periodic dynamic system, strongly perturbed, method for general theory of motion 2-73852
 relaxation time of one-dimensional self-gravitating system, computer anal. 2-106484
 resonant systems, comparison of Bohlin-von Zeipel and Bohlin-Lie series methods 2-89123
 retrograde closed orbits in a rotating triaxial potential 2-100708
 satellite motion, tesseral harmonics effect (*Polish*) 2-94821
 satellite orbiting Earth, inclination changes due to aerodynamic lift 2-73817
 satellite orbits with large eccentricities, numerical integration (*Russian*) 2-78930
 satellites, oscillations in elliptical orbit plane 2-100716
 Saturn's rings, electrodynamics of non-circular ringlets 2-89195
 Saturn ring system, collisions affecting ring struct. 2-89194
 Saturn satellites, orbits and formation, hydrodynamic theory appl. to Solar System 2-94637
 separation of two planets, theory 2-106490
 solar system bodies, anal. of anomalous motions due to violation of equivalence principle 2-68603
 spacecraft direct flight trajectories to periodic comets, optimisation 2-68588
 Stormer's problem, singularity (*French*) 2-89127
 Stormer's problem, variational eqns. (*French*) 2-75501
 subsatellite, three-dimensional motion under air drag and oblateness perturbations 2-78940
 Sun-Jupiter system interaction with particles, orbit integration, comet appl. 2-68669
 symmetric satellite trajectories about non-spherical planet (*Russian*) 2-84125
 systems of galaxies, corrections for redshift errors rel. to gravit. mechanics 2-101055
 three-body problem, circular restricted case, secular perturbations 2-73826
 three-body problem, elliptic three dimens. restricted case, motion integrals 2-89120
 three-body problem, elliptical restricted case, Jupiter-Saturn-Sun system, periodic orbits 2-89126
 three-body problem, elliptical restricted case, linear stability 2-89125
 three-body problem, elliptical spatial restricted case, periodic orbits construction methods (*French*) 2-106544
 three-body problem, equipotentials equivalent to numerical algorithm, graphical construction 2-100713
 three-body problem, general case, Hill stability (*Chinese*) 2-84066
 three-body problem, restricted case, Lagrangian solns. of transitory-rotary motion (*Russian*) 2-78938
 three-body problem, restricted case, singular invariant manifold 2-106485
 three-body problem, restricted circular case, periodic solns. of translational-rotational motion 2-117572
 three-body problem, restricted elliptical case, satellite perturbed motion at triangular libration point 2-117573
 three-body problem, third order general planetary theory 2-84069
 three-body problem, three dimens. restricted circular case, conditionally periodic solns., first approx. 2-106491
 three-body problem planar general case with equal masses, periodic orbits 2-112307
 three-body problems, circular restricted case, appl. to artificial satellite rot. at libration points 2-94584
 three-body problems, planar elliptic restricted case, 3/1 commensurability asteroid motion 2-78933
 three-dimensional restricted elliptical three-body problem, new class of steady and conditionally periodic solns. 2-68602
 Titus Bode law and wave formalism 2-112352
 translational-rotational motion in two axisymmetric bodies, semiregular motion 2-106492
 transitory-rotatory motion of two rigid bodies, necessary conditions for existence of plane motions (*Russian*) 2-100718
 triaxial body influenced by gravitational attraction of sphere, regular translation-rot. motion (*Russian*) 2-84072
 triaxial elliptical galaxy, stellar orbits 2-63650
 triple stars, study of stellar three-body problem 2-68816
 Trojan type orbits in two gravit. centres variable separation system, N-body problem 2-112372
 two rigid bodies, transitory-rotatory motion regular solns. 2-106488
 two-body problem, near-circular elliptical parameter determ. (*Russian*) 2-74199
 two-body problem, perturbed, orbital elements differential eqns., soln. error prop. 2-100715
 two-body problem, relativistic case, phys. distinction between normalised solns. 2-84492
 two-body problem, restricted case, triaxial planet, axisymmetric satellite translational rotational motion 2-68641
 Venus, motion in 1961-72 period, numerical integration method (*Russian*) 2-78991
 P/ Wolf-Harrington, orbital elements from 1952 to 1978 apparitions, non-gravitational effects 2-106616

cell model (liquids) see liquid theory

cell motility

- cytoplasm, primitive motile system, information-thermodynamical model 2-99927

cell motility continued

- Flexibacter FS-1, gliding bacterium, evidence for contractile flexing 2-105680
magnetotactic bacteria, review 2-116941
Paramecium caudatum, conjugating pair, elec. coupling and ciliary coordination 2-78313
spermatozoa, bull, circularly swimming, motility anal. by quasi-elastic light scatt. and cinematography 2-67980
spermatozoa, bull, half-width scaling of elec. field autocorrelation functions of scatt. light 2-67981
spermatozoa self propulsion in the cervical canal, microcontinuum anal. 2-94006
T-lymphocytes, mouse, elimination of radiation-induced migration defects (Russian) 2-105771

cells (electric)

- see also fuel cells; photoelectric cells; photoelectrochemical cells; primary cells; secondary cells
array representation of nonidentical electrical cells based on statistical considerations 2-111543
battery technology for electronic systems appls., uses and abuses 2-93881
bipolar cell for advanced alkaline water electrolysis 2-99849
ceramics, electrotechnical, present and future develop. (Czech) 2-111133
electrode kinetic investigations of fuel cell reactions, cell design 2-57696
fission electric cells—some elements of the operation theory 2-116851
gas bubble behaviour and ohmic potential drop during water electrolysis 2-72989
solid electrolytes for H₂O hydrolysis, characts. and prod. 2-71716
Al-air cells, characts. and electrochemistry (German) 2-88416
 β -Al₂O₃:Ag⁺ (Cu⁺), solid ceramic electrolyte, cells for thermodynamic studies 2-99378
MnO₂, struct.-activity relationships rel. to cell performance 2-109753
ZrO₂, Yt-stabilised, electrolytes, operation in ultra-high vac. cell 2-79595

cellular biophysics

- see also biomembrane transport; biomembranes; cellular effects of radiation; cellular transport and dynamics; lipid bilayers
adhesion physics, review 2-116894
animal cell adhesion to glass, study by disturbed total internal reflection 2-57935
Aplysia photosensitive neuron, simulation by physically-based model 2-83563
association amacrine cells, rel. to selectivity in pigeon retina 2-105699
automatic blood cell classifying system (Japanese) 2-105861
autoradiography of plant cells, scintillator effect on exposure time 2-57945
B-cell subpopulations, identification by 2-colour fluoresc. anal. 2-88519
bacteria, cell-free extracts, biolum. 2-105677
bacteria, luminous, electron microscopic investig. of mol. struct. of luciferase 2-105645
bacteria, magnetotactic, mag. moments, light scatt. study 2-83708
bacteria numbers estimation, turbidity multichannel instrument using scanning He-Ne laser system 2-117178
bacteria possessing Ni(III) octahedrally coord. EPR centre 2-105659
bacterial cultures, growth rate meas. using US interferometry 2-73399
bacterial growth detect. by impedance technique 2-117167
bladders, urinary, collapsed, mouse, screening by optical matched filtering 2-57933
blood, human red cells, cryopreservation 2-62850
blood cell electrophoresis meas. using microcomputer, cancer early detection appl. 2-117127
blood platelets, aggregation effects on suspension light transmittance 2-96836
blue sensitive cones signals, ganglion cells mediation, white-yellow borders detect. independent of brightness 2-68004
blue-sensitive cones, sensitivity cross the central retina 2-68015
cancer cell diagnosis, computerised picture processing appl. (Japanese) 2-105848
cardiac cells response to periodic electrical stimulation 2-62591
carp retina, nonlinear characts. of receptive field of horizontal fields 2-105703
cervical cells, differently stained, detectability and diagnostic output for quality assessment of classification 2-73313
Chlamydomonas and higher plant chloroplasts, photosystem I reaction centres 2-83553
CHO cells, differential cytotoxic effects of hyperthermia below and above 43°C, alone or combined with X-irrad. 2-67960
CHO DNA polymerases α and β , effect of hyperthermia 2-88521
chromosome image study, photographic equidensitometry 2-62867
Clare-Bishop neurons, responses to 3D movement of a light stimulus 2-68001
cochlear hair-cell innervation in cats 2-111708
colon tumour, human, responses to hyperthermia of oxic and hypoxic cells 2-105681
colour opponent goldfish ganglion cells, early visual adaptation 2-116910
cone cell model, hardware, operational characts. 2-83565
cone pigments in frog, fish, and monkey, single-cell microspectrophotometry obs. 2-99972
cone spectral sensitivity, estimation methods 2-99973
corneal endothelium, prep. method for accurate in vitro assessment by optical microscopy 2-88699
cryosection preparation for analytical electron microscopy 2-117176
ear, outer hair cell, hydrodynamic model 2-73267
electron microscopy and cell biology conference, Canberra, Australia (Feb. 1982) 2-107008
epilepsy, cellular mechanism of neuronal synchronisation 2-99940
erythrocyte deformability, procedure for determ. (German) 2-117141
erythrocyte membrane, viscoelastic behaviour 2-100020
erythrocyte membrane submitted to a bending stress, spin label study of mol. struct. 2-105667
erythrocytes, intact, determ. of fluoresc. polarisation of membrane probes, scatt. artifacts 2-111641
exactable biological membrane, chaos in self-sustained oscill. under sinusoidal stimulation 2-62570
fibroblast, critical-point-dried cultured, partial specific thickness meas. by energy anal. 2-73409
fluid trapping beneath deformable fluid cell membranes 2-111642
freezing, numerical stability of finite element solns. 2-67962
freezing damage, unilamellar liposomes as a model system 2-73210
freezing induced geometry changes, effect on dose from internal isotopes decay 2-67982
ganglion cell acuity in hooded rats 2-62610

cellular biophysics continued

- genetics, cryogenic preservation, effects on struct. 2-62573
glia and glioma cells, human, elemental characterisation by nuclear microprobe 2-68202
growth inhibition by PT electrodes at low current levels 2-94008
hair cell model, nonlinear resistance, intro. 2-94073
hair cell-primary auditory fibre complex model 2-73253
HeLa cells hyperthermal effects on nucleoids sedimentation in sucrose gradients 2-88522
human blood erythrocytes, imaginary refractive index spectrum reconstruction 2-75518
inner hair cell-tectorial membrane impact, relation to sensitization and masking of HF tone burst by LF tone 2-83574
insect central neurons, struct. and functional characterisation 2-111656
intact cells and tissues, ²³Na⁺ resons., NMR obs. using Dy(III) triply-phosphate paramag. shift reagent 2-94007
intracellular light responses in intact in vivo cat eyes 2-94035
kalikrein-like activity demonstration, microscopical method 2-73407
laser projection microscope system for fast stop-motion photography of biol. objects 2-105860
leucocytes, human, effects of HV pulses on in vitro viability 2-99915
leukemia cell proton NMR during differentiation 2-105682
leucocytes:mn²⁺ suspensions, H⁺ NMR relax. 2-116895
living tissue oxidation-reduction state meas. using laser fluorescence-absorption measuring device 2-111819
mammalian cells, 4 lines, responses to hyperthermia and/or radiation 2-73305
mammalian thalamic neurons, in vitro electrophysiology 2-83560
mammalian tissue, cryoprep. for X-ray microanal. in STEM 2-83714
marine algae, nature of after-glow 2-111638
marine invertebrate tissues, fixation procedure for ultrastruct. preservation 2-73406
mechanoreceptor neurons, single, impulse-coded and analogue signalling 2-83580
membrane fluidity rel. to heat killing of cells 2-94002
membrane impedance measurement by intracellular single-electrode bridge amplifiers, capacitance problems solns. 2-100176
mesenteric capillary contractility, low and high magnification simultaneous presentation of microscopic specimens 2-57946
mitochondria, rat liver, elimination with negative aero-ions of respiration changes during stress 2-111639
mitochondria of liver and heart, detect. of new paramag. centres by EPR 2-57792
mollusc brain single neuron, quasi-electrostatic influence, trace phenomena, rel. to intracellular excitation 2-57794
molluscan neurone, bifurcation of periodic activity, from periodic activity 2-83557
multiplexed time-lapse photomicrography of cultured cells 2-73404
muscle, smooth, freeze-substitution and isothermal freeze-fixation studies to elucidate ice formation pattern 2-83717
muscle cell volume, osmotic reactivity after fixation 2-73209
muscle tissue in soln., macromolecular movements, X-ray diffraction technique (French) 2-62575
myeloma cells, mouse, saline-treated, elec. determ. of viability 2-100165
myocardial cells, synchronisation model of beating phenomena 2-73211
nerve membrane, anal. of potential fluctuation at critical state 2-88532
neurochemically classified interneurons of goldfish retina, local patterns of spatial organisation 2-68002
neurogenic rat cell line, effect of hyperthermia in vivo 2-111626
neuron dendritic length estimation, limits of usefulness of electrophysiological methods 2-105871
neuron membrane models, brief review 2-105692
neurons, single, activity detect. in multiunits, real-time computer method (Japanese) 2-83711
nucleotides, cellular bioenergetic processes, ³¹P NMR chemical shift 2-90579
optical microscopy, cellular specimens (Japanese) 2-62715
orientational waves in cell membranes 2-105684
phagocytosis and cell spreading processes, role of adhesion forces 2-67979
red algae, low-temp. delayed fluoresc. of phycobilins 2-111640
red blood cells, HGMS 2-88518
regeneration of lost limbs by electrical stimulation 2-88687
retina, cat, receptive field props. of X and Y cells, contrast sensitivity meas. 2-111670
retina, dace, spectral props. of 2nd order neurons 2-99953
retina, fish, colour information coding of horizontal cell responses 2-99948
retina, rabbit, linear visual streak, dendritic struct. of A-type horizontal cells 2-99961
retina, ratfish, intracellular recordings and HRP injections 2-94034
retinal bipolar cells, carp, chromatic props. 2-99952
retinal cell loss following brain damage to cat 2-105701
retinal cells, Nissl staining, electron microscopy technique 2-62858
retinal ganglion cell responses, principal components anal. of variability sources 2-67995
retinal ganglion cells, turtle, spatial organisation, receptive fields to coloured lights 2-99951
retinal horizontal cells, information processing 2-68003
retinal L-type horizontal cells, role in opponent-colour process 2-99949
ribosomal crystalline arrays of large subunits from Escherichia coli 2-99890
rod and cone responses, summation at absolute threshold 2-94038
rod outer segment birefringence bands rel. to daily disc membrane synthesis 2-111668
sperm head of octopus, Eledone cirrhosa, differential scatt. of circularly polarised light 2-105756
stress required to induce deform. and separation of living cells, meas. method 2-88705
subcellular macromolecular arrays, model, periodic struct. anal. in STEM 2-78507
synthetic phospholipid bilayers, ordering effects due to N₂O 2-62571
thermotolerance induction and evidence for a well-defined, thermotropic process in Chinese hamster cells 2-88513
time-lapse phase contrast cinemicroscopy of cells in vitro, improved temporal and spatial resolution 2-73405
tissue sections at cellular resolution, elemental mapping using nucl. microprobe 2-99920
tumour, hyperthermia effect on hypoxic cell fraction 2-99903
Valonia ventricosa cells, excitation and hyperpolarisation. response 2-105673

cellular biophysics continued

- video/microscope densitometric system for cellular and nuclear props. study 2-111829
 viruses, enveloped, freeze fracture, freeze etching, critical point drying, review 2-57942
 visual cortex, cat, intracortical microstimulation of neurons 2-67997
 visual cortex, macaque, orientation and direction selectivity of cells 2-67999
 visual cortex, macaque, spatial freq. selectivity of cells 2-68000
 water crystallisation, grapevine tissue, possible mechanism of process, ¹H NMR obs. 2-111615
¹¹In labelled platelets, PAC obs., labelling mechanism 2-78416

cellular effects of radiation

see also biological effects of (type of radiation)

see also photosynthesis

- alpha-irradiated Chinese hamster V79 cells, G2 delay, cell recovery period 2-88627
 antibody enhancing helper T cells, X-irrad. effects 2-68058
 antibody forming cells precursors, X-irrad. effects meas. by in vitro limiting dilution assay 2-111749
 bacteria, killing with elec. pulses of high field strength 2-68044
 bacteria, photobiological aspects of ionising radiation damage (Russian) 2-57856
 bacterial growth rate, effects of LF mag. field 2-83599
 bacterial plasmids, mechanism of inactivating effect of laser UV radiation 2-111736
 bacterial spores, cell conc. effects on radiation sensitivity 2-83608
 bacteriophages, MS2 and T7, inactivating effect of laser and conventional UV light sources 2-57870
 birch, common and white, role of ploidy in seeds' radiosensitivity (Russian) 2-116998
 blood, segmentation of peripheral cells, quantitative determ. of colour differences (German) 2-57947
 bone marrow, rat, dynamics of CFUc content during long-term fractionated irradiation (Russian) 2-88598
 bone marrow, stromal elements in patients with Hodgkin's disease, radiosensitivity to γ -rays (Russian) 2-111741
 bone marrow and thymus, rat, injury caused by combined irradiation (Russian) 2-116992
 bone marrow cultures of Rf mice, lethal and physiologic effects of total body irradiation 2-117008
 bone marrow plasma cells of dogs with acute radiation sickness (Russian) 2-88607
 brain tumour, cyclic responses of cultured 9L cells to radiation 2-105806
 capsid protein synthesis in infected mouse cells, UV-enhanced reactivation and infectious centre formation 2-83604
 cell biology role in radiotherapy, particle radiation effects (Japanese) 2-62749
 Chara corallina, single excitable cells, effects of S-band microwaves on elec. activity 2-100050
 characean cells, vacuolar pot., effects of 20-300 MHz EM radiation 2-100049
 chloroplasts, mag. oriented, field conc. and temp. depend. of fluorescence polarisation 2-100040
 chloroplasts, thermoluminescence, in presence of photosystem II herbicides 2-111637
 CHO cells, differential cytotoxic effects of hyperthermia below and above 43°C, alone or combined with X-irrad. 2-67960
 CHO cells, effect of hyperthermia on repair of radiation-induced DNA strand breaks 2-94111
 CHO cells, in vitro US effects rel. to gas content, freq., radical scavengers and attachment 2-88586
 CHO cells, viable and nonviable, postirrad. growth kinetics 2-88619
 chromatin degradation in irradiated rat thymocytes, mechanism (Russian) 2-116988
 chromatophores of Rhodospirillum rubrum, microwave photolyses obs. 2-57848
 chromosomal aberrations in 2 mouse lymphoma sublines of different radiosensitivity 2-117007
 chromosome aberration analysis in radiological protection dosimetry 2-62772
 chromosome aberrations in myelocaryocytes of rats chronically exposed to ³HOH (Russian) 2-105776
 cilia, regeneration in heavily irradiated sea urchin embryos 2-68077
 conditions for modified irradiation, optimisation (Russian) 2-105768
 conference on radiation research, Salt Lake City, USA (Apr. 82) 2-112652
 coronary artery, mouse, late effects of heavy charged particles on fine structure 2-105805
 diploid fibroblasts, human, plateau-phase, characterisation of rapid recovery from γ -ray damage 2-88625
 diploid fibroblasts, synchronous human, X-ray inhibition of DNA synthesis during S phase 2-88633
 diploid Syrian hamster cells, discrimination of slow growth from non-survival after X-irrad. 2-117005
 diploid yeast, new type of postirrad. recovery (Russian) 2-88600
 DNA, γ -irrad. damage repair in rat cerebellar neurons and 9L brain tumour cells 2-105794
 DNA, photodynamic action, damage and repair (Japanese) 2-62684
 DNA bases, injured liver, slow elimination in α -irrad. old mice 2-78387
 DNA cross-linking with chromosomal proteins induced by X-rays, thermal enhancement 2-88621
 DNA double strand breaks in Ehrlich ascites tumour cells, centrifugation obs. 2-111753
 DNA double strand breaks in Ehrlich ascites tumour cells, rel. to cell death 2-117006
 DNA double-strand breaks generated by X-ray damage in Chinese hamster cells 2-94114
 DNA from old rat tissues, circular dichroism spectrum similarity to γ -irrad. DNA 2-105785
 DNA repair deficient cells, MWPC identification, digital autoradiography 2-100187
 DNA strand breakage, ionising radiation induced, sensitivity of active and inactive chromatin 2-68060
 DNA strand breaks rejoining after γ -irrad., in cultured fish cells 2-68062
 DNA synthesis, semiconservative, in ICR frog cells exposed to monochromatic UV and photoreactivating light 2-105797
 DNA-protein complexes in Ehrlich ascites carcinoma cells, radiation-induced dissociation 2-105788

cellular effects of radiation continued

- Drosophila melanogaster embryo developmental responses to localised X-irrad. 2-94124
 E. coli, Cherenkov-induced photoreactivatable damage 2-88623
 E. coli, O₂ effect rel. to suspension medium (Russian) 2-88596
 E. coli, UV-induced mutation hotspots rel. to DNA damage hotspots 2-94117
 E. coli cells, induction of reversions to prototrophy by neutrons and γ -rays (Russian) 2-116990
 E. coli K12 AB2480 DNA, broad spectrum near UV damage 2-78397
 Ehrlich ascites tumour cells, non-additivity of effects of neutron- and γ -irrad. (Russian) 2-105777
 electric pulse-induced fusion of mouse cells in monolayer culture 2-94103
 embryos, 2-cell, mouse, X-irrad. in vitro: cleavage, blastulation, cell kinetics, and foetal development 2-117012
 enzymic activity of epithelium macrocolonies, and erythroid endoclonies, ionising radiation effect (Russian) 2-57864
 epithelial tissue of rat oral cavity, early radiation injury diagnosis (Russian) 2-88606
 erythrocyte membrane, effect of hyperthermia and ionising radiation 2-105791
 erythrocyte membrane proteins, human, radiation-induced structural changes 2-88632
 erythrocyte membranes, use of circular dichroism spectroscopy in mol. phototoxicity study 2-116999
 erythrocytes, dog, K and Na ions content after radiation and heat exposure (Russian) 2-57843
 exonuclease, membrane-bound, γ -radiation-releasable, Arrhenius plot behaviour 2-62701
 feeder cells and cell survival in spheroids and monolayers, X-irrad. 2-68064
 femoral CFU-S repopulation after low-dose whole-body X-irrad. in mice 2-94125
 fibroblasts, Chinese hamster, prod. of chromosome aberrations by γ -rays and neutrons 2-94112
 fibroblasts, human, ornithine decarboxylase activity inhibition rel. to DNA repair synthesis 2-68080
 fish, cultured cell line, resistance to γ -irrad. 2-88629
 fish cells, cultured, UV-irrad., photoreactivation and excision repair of thymine dimers 2-105796
 follicular dendritic cells in lymph nodes after X-irrad., mouse expts. 2-111748
 gamma-irradiation, algorithm for determ. of proximity distrib. from dose-averaged lineal energies 2-105804
 genetic effects rel. to microwave irradiation of procaryotic and eucaryotic cells 2-68053
 granulocytic progenitor cells of blood and bone marrow, response to low X-irrad. doses, dog expts. 2-88616
 haemopoiesis, mouse, recovery at later times after long-term external (¹³⁷Cs) and internal (³H) irradiation (Russian) 2-105770
 haemopoietic cells, repair capacity after total body irradiation with different dose rates and fractionations 2-78392
 haemopoietic stem cells, in vitro repopulation after irradiation 2-73304
 Halobacterium halobium suspension, inhibiting effect of blue and UV light on photo-induced pH changes 2-57849
 hepatocytes, rat, repair of X-irrad.-induced DNA damage (Russian) 2-88593
 HeLa cell culture nucleic acids, low-intensity visible Cu laser radiation effects 2-100061
 hubble dynamics, biophysical implication, US irradiation 2-57845
 hyperthermia, localized, in cancer treatment 2-83629
 hyperthermia local therapy for cancer, physical principles, RF and US heating 2-73199
 immune competence, recovery following sublethal X-irrad. of young and old mice 2-88617
 immune system, effects of 60 Hz elec. fields on specific humoral and cellular components 2-111722
 irradiation facility for radiobiological expts. with protons from cyclotron 2-117145
 jejunal crypt cells, mouse, dose-survival characteristics, ⁶⁰Co γ -irrad. 2-68068
 jejunum, of two warm-blooded vertebrates, radiation induced changes in goblet cell kinetics 2-68070
 jejunum, postnatally developing, of Swiss albino mice, goblet cell kinetics after prenatal irradiation 2-68069
 kidney cells, mouse, repair of sublethal and pot. lethal damage after γ -irrad. 2-68063
 laser applications in biology, conf., Tbilisi, USSR (Nov. 1980) 2-94902
 laser biostimulation, hypothetical physical model 2-83600
 laser radiation effects on in vitro cultured Chinese hamster cells (Russian) 2-88588
 lens epithelium and radiation cataract, nuclear fragmentation of meridional row cells 2-105807
 leukocytes, human, X-ray induced cell cycle delay, differential response within the first post-stimulation G₁-phase 2-83611
 LF used mag. field effects on cells, system for in vitro effects investigation 2-117147
 liquid crystal thermometry of cells during hyperthermal microwave irradiation 2-100163
 liver mitochondria, rat, changes in electroneutral Ca²⁺-H⁺ metabolism after γ irradiation (Russian) 2-105766
 liver mitochondrial fractions, influence of whole-body γ -irrad. 2-62698
 LL cells, ionising radiation, nature and repair of potentially lethal damages (Russian) 2-57854
 lung, basal cell dose distrib. from inhaled natural radioisotopes and lung cancer risk 2-111799
 lung, mouse, irradiation from ¹⁷⁰Tm₂O₃ particles, short term effect 2-68079
 lung, radiation damage pathogenesis, kinetic model, rel. to essential cells killing 2-117003
 lymphocytes, human peripheral blood, in vitro radiosensitivity obs. 2-94123
 lymphocytes, human, irradiation and unirradiation, culture media rel. to proliferation, chromosome dosimetry appl. 2-62690
 lymphocytes, human, math. model resolving X-ray survival curves into 6 components 2-68059
 lymphocytes, human peripheral blood, ⁶⁰Co γ -ray exposure rel. to sister chromatid exchange freq. (Russian) 2-88605
 lymphocytes, rat, kinetics of long-term γ -irrad. (Russian) 2-57857
 lymphocytes of rat and human peripheral blood, nuclear DNA supercoiled structure changes after γ -irrad. 2-83610
 lymphoid cells, mol. mechanisms of interphase death, RNAs of irradiated thymocytes (Russian) 2-105772

cellular effects of radiation continued

- lymphoid organs, cell dynamics upon long-term administration of ^3HOH (Russian) 2-105774
- lymphoid organs cellularity and immune response of mice at later times following irradiation (Russian) 2-105773
- lymphoma cells, mouse, DNA repair and replication γ -irrad. expts. 2-88611
- lymphomas, cultured lines, rapid killing by X-rays and by bleomycin 2-105793
- lymphopoiesis, math. model for postirrad. dynamics study (Russian) 2-116993
- mammalian cell lysis induced by US, rel. to exposure vessel, systems comparison 2-100182
- mammalian cell lysis induced by US, rel. to exposure vessel, tube rot. explanation 2-100183
- mammalian cells, 4 lines, responses to hyperthermia and/or radiation 2-73305
- mammalian cells, microwave cytotoxicity, nonthermal effects at high power levels 2-88590
- mammalian cells, radiation-enhanced cytotoxicity of misonidazole 2-62697
- mammalian cells, X-ray-induced chromosome damage; improved meas. of its effect on colony-forming ability 2-83607
- mammalian chromatin DNA, radioimmune assay of induction and removal of UV lesions 2-88630
- mammalian spermatogenesis, use of whole testis prep. as biological dosimeter 2-83603
- mammalian cell survival following irradiation with 14.3 MeV neutrons, rat expts. 2-116983
- marrow colony-forming cells, temporal and spatial response after ^{226}Ra incorporation in mice 2-62692
- marrow stromal cells in culture, X-irrad. rel. to prostaglandin E release 2-94121
- melanoma, malignant, human, in vitro cellular radiosensitivity 2-117010
- melanoma, Nal human, transplanted into nude mice, radiosensitivity; repair, reoxygation and dose fractionation 2-111752
- melanoma cells, human, fraction size and repair of potentially lethal radiation damage 2-78396
- melanoma xenograft, human, broad-shouldered survival curves 2-83601
- melanoma xenografts, malignant, human, in vitro cellular response to X-irrad. 2-57869
- microdosimetry, role in radiobiology, review 2-105802
- microwave irradiated rats, acute in vivo exposure at 2450 MHz, biochem. and haematological effects 2-105764
- microwaves, effect on survival at elevated temps. 2-68052
- mitochondria, rat liver, MM wave irradiation effects on ATP synthesis and Ca^{2+} transport 2-88591
- mitotic delay, γ -irrad.-induced, cell division rel. to circadian rhythm 2-88618
- mutation of V79 cells, persistent hypersensitivity induction by X-rays 2-94128
- myelocytic leukemia, acute, effect of fractional vs. unfractionated total body irradiation, rat expts. 2-68066
- myelokaryocyte chromosome aberrations, freq. in rats during chronic ^3HOH and γ -ray exposure (Russian) 2-111743
- neurons, clonal line, ^3H -noradrenaline potentiation by low-intensity pulsed mag. fields 2-62675
- neutron irradiation, cell damage at reduced dose rates 2-94102
- neutrons, biological and microdosimetric intercomparison of 14 MeV d-T neutrons and 6 MeV cyclotron neutrons 2-111724
- neutrons, in vitro radiosensitivity to 50 MeV irradiation of human cells 2-105754
- neutrons from ^{252}Cf , effects at low dose rates 2-68042
- neutrons from a 4 MV Van de Graaff generator, radiobiological and phys. props. rel. to X-rays 2-88582
- NHIK 3025 cells, hematoporphyrin derivative treated, photodynamic membrane damage 2-62689
- nuclear volume and radiosensitivity, rel. to ploidy level in higher plants and a yeast 2-78388
- nucleus, ^{10}B dosage in neutron capture therapy, analytical calc. 2-105803
- oncogenic transformation by X-rays in C3H $10\text{T}^{1/2}$ cells, hyperthermic modulation 2-68075
- oocytes at meiotic stages in Chinese hamster, cytogenetic effects of X-irrad. 2-78395
- ovary, adult dog, short- and long-term radiation response to whole-body X-irrad. and leukocytes transfection 2-94113
- parotid radiosensitivity changes, rel. to glandular circadian rhythms, rat expts. 2-88614
- Peridinium depressum, photoregulation of US stimulated bioluminescence 2-111735
- phospholipid membranes, proton permeability and elec. breakdown after UV irradiation 2-99924
- plant growth, N_2 laser irradiation, effects 2-62680
- Poisson goodness-of-fit tests for radiation-induced chromosome aberrations 2-57769
- postirradiation cell recovery models and effective dose diminution principle (Russian) 2-105775
- progenitor cells in human blood and bone marrow, radiation sensitivity obs. 2-94115
- pulmonary alveolar macrophage colony-forming cells, radiosensitivity obs. 2-88626
- radiobiology conference, Amsterdam, Netherlands (Feb. 1982) 2-101118
- radiosensitivity of mice rel. to intestinal death and DNA repair in intestinal epithelium cells (Russian) 2-116991
- retinal tissue damage induced by 6-psc 530-nm laser light pulses 2-57847
- RNA turnover in WI-38 fibroblasts and HeLa cells, effects of growth state and ^3H labelling level 2-62696
- Salmonella typhimurium bacteria, mutagenic pot. of pulsed US 2-105757
- skin, rat, UV irradiation, effect on tissue respiration (Russian) 2-57861
- skin cancer in mice due to UV and suppressor T lymphocytes 2-105809
- spermatogenic colonies, growth in mouse testis after fission neutron irradiation 2-88581
- spermatogenic epithelium, mouse, effects of 2.45 GHz microwave radiation and heat 2-57851
- spinal cord, residual injury after treatment with X-rays or neutrons 2-105783
- spleen cell suspensions from heavily irradiated mice, toxicity 2-62695
- splenocytes, autoantigens excretion test for evaluation of functional changes (Russian) 2-88602
- cellular effects of radiation continued**
- spores of Bac. subtilis, low temp. rel. to survival after γ -irrad. (Russian) 2-88608
- stem cell number determination method using irradiation bone marrow (Russian) 2-105857
- structure damage, heavy charged particle stochastic track concept study (Russian) 2-57855
- survival-dose curves, statistical anal. and extrapolation number modification factor (Russian) 2-105769
- synaptosomes, irradiation by high energy electrons, Ca accumulation and retention 2-68076
- T lymphocytes, recovery from radiation damage in thymectomized mice (Russian) 2-116989
- T-lymphocytes, mouse, elimination of radiation-induced migration defects (Russian) 2-105771
- tail, mouse, epidermal kinetics and ultrastructure of tolerance to radionecrosis 2-94120
- thymocytes, mouse, damage and repair of superhelical DNA after γ -irrad. (Russian) 2-88595
- thymocytes, mouse, supercoiled DNA repair after ^{60}Co γ -irrad. in fractions differing in radiosensitivity 2-105790
- thymocytes, rat, chromatin structure change on γ -irrad. (Russian) 2-57853
- thymus cells, rat, γ -irrad. effects on DNA-dependent RNA polymerase activity 2-111750
- time factor considerations in radiobiology 2-68078
- tumour, in vitro multicellular system, US induced nuclear aberrations 2-88585
- tumour cells, HeLa, ultrashort UV laser pulse action 2-100064
- UHF-field, chronic exposure of mice, morphological effects on nervous system (Russian) 2-105758
- US irradiation, rectified diffusion and acoustic microstreaming by bubbles 2-57846
- US used in medicine, safety and biological effects, review, book contrib. 2-111729
- US-induced cell killing, temp. dependence, role of membrane fluidity 2-100046
- UV mutagenesis, specificity in lac promoter of M13lac hybrid phage DNA 2-88615
- V-79 cells with normal and BrdUrd-substituted DNA, UV-induced sister chromatid exchanges 2-105799
- viruses, mechanism of inactivating effect of laser UV radiation 2-111736
- visual cell photoreceptor membrane, structure change due to light damage, small-angle X-ray investigation 2-105759
- visual cell plasma membrane, fast photoinduced change in conductivity 2-78330
- whole-body γ -ray exposure, very low dose, acute non-stochastic effect, thymidine equiv. serum factor 2-83606
- yeast, photoprotection from lethal action of UV light 2-105786
- yeast, radiation-generated aqu. electron-type damage rel. to recombinational repairs pathway 2-94118
- yeast, wild type and repair deficient, comparison of radiosensitivity in various phases 2-83609
- yeast cells, evidence for DNA double-strand breaks as critical lesions on ionising particle irradiation 2-68072
- yeast cells, lethal effect of high-intensity 266 nm UV laser radiation 2-100065
- yeast cells, ploidy influence on RBE of densely ionising radiation (Russian) 2-88599
- yeast cells, specific damage by high-intensity UV radiation 2-78386
- DNA, single-strand-breaks in mice lymphocytes, repair γ - and UV-irrad. (Russian) 2-57860
- λ phage, lethal effect of transmutation on E. coli, importance of uvrA gene (French) 2-117004
- ^{226}Ra injected into mice, method to determine dose delivered to bone and marrow sites 2-105784
- ^{90}Sr - ^{90}Y toxicity, haematological studies, femoral CFUs kinetics and spleen cells mitogen response 2-111017
- cellular method**
- solid solution, binary substitutional solvent, nonrandom, thermodynamics of interstitial solute atoms 2-92236
- cellular transport and dynamics**
- see also cell motility
- archipelago, lateral diffusion, effects of impermeable patches on cell membrane diffusion 2-111644
- bilayer membranes, anion-selective ionic channels appearance during phase transitions 2-99926
- blood and other particulate suspensions, flow through narrow tubes, 3-layer semi-empirical model 2-105747
- blood flow velocity measurement using laser Doppler microscope 2-94261
- cardiac Purkinje fibres, fluctuations in membrane current driven by intracellular Ca^{2+} 2-94009
- CHO, Cd transport and distribution model 2-73214
- cytokinesis in animal cells, viscoelastic model 2-57793
- cytoskeleton dynamics, Frohlich wave self-focusing 2-88520
- eggs, mouse, effect of microvilli on lateral diffusion meas. using fluorescence photobleaching recovery 2-94010
- electro-osmotic stability in animal cells, unified model of morphologically active membrane coat 2-99925
- epithelial transport and metabolism, influence of cellular and paracellular conductance patterns 2-73212
- erythrocyte aggregometer for rapid quantification of aggregation using IR transillumination (German) 2-111770
- erythrocyte membrane, extensional flow from cell body to elastic tether, anal. 2-99917
- erythrocyte membrane, extensional flow from cell body to elastic tether, expt. 2-99918
- erythrocytes, aggregation kinetics in disease 2-105671
- erythrocytes, reduced filtrability due to plasma protein interactions 2-105672
- erythrocytes, sedimentation under gravity, comparison with suspension of rigid spheres 2-105670
- erythrocytes migration, Fareus-Lindquist effect mechanism (Russian) 2-83584
- flow microfluorocytometry and fluorescence polarisation (Japanese) 2-62728
- Halobacterium halobium, mutant selection method by control of transmembrane ion fluxes 2-111827
- heart, dialysed single cells, reversal of current through Ca channels 2-88524
- impedance of isolated cell, transient meas. technique 2-62880

cellular transport and dynamics continued

- intracellular mobility, Rayleigh spectroscopy of biological objects 2-100179
- ion-sensitive microelectrode, triple-barrelled for simultaneous meas. of two extracellular ion activities 2-117166
- kidney medullary layer, pig, channel-forming protein of an Na, K-ATPase prep. 2-111643
- leukocyte, PMN, migration towards casein in elec. field, chemotactic force, bowling alley technique 2-62576
- lymphoid organs, cell dynamics upon long-term administration of ^3HOH (Russian) 2-105774
- lymphopoiesis, math. model for postirrad. dynamics study (Russian) 2-116993
- mammalian central neuron, transient outward current, blocking by 4-aminopyridine 2-111654
- membrane potential of isolated smooth muscle cell, single microelectrode voltage clamping 2-62879
- metastable equilibrium with random local fluctuations, dynamic receptor pattern generation in fluid mosaic membrane 2-111645
- mitochondria, bovine heart, protein inducing channel K^+ cond. in bilayer lipid membranes 2-99923
- mitochondria, rat liver, MM wave irrad. effects on ATP synthesis and Ca^{2+} transport 2-88591
- muscle, frog, appl. of pulsed-gradient ^{31}P NMR to meas. of cellular diffusion rates of P compounds 2-73213
- muscle fibres, skeletal, intra- and extracellular action potentials, volume conductor model 2-67985
- neuroblastoma cell membrane patches, single Ca^{2+} -activated nonselective cation channels 2-62569
- neuron Cl^- conductance, activation by hyperpolarisation 2-116902
- neuron with NC-dendrites, theoretical input voltage-current charact. on uniform shift of clamped pot. of soma 2-67983
- neurons, clonal line, ^3H -noradrenaline potentiation by low-intensity pulsed mag. fields 2-62675
- neurons, mammalian sympathetic-ganglion, acetylcholine noise 2-105689
- neurons, perfused, inward ion current kinetics, effect of transmembrane osmotic press. gradient 2-105690
- neutrophils, human, rheology rel. to physicochemical factors 2-99919
- nonplanar membranes, mol. diffusion theory 2-93998
- Onchidium giant neuron, chaotic behaviour under sinusoidal stimulation 2-62590
- pancreatic acini basal surface, single-channel currents in isolated plasma membrane patches 2-105686
- phospholipid membranes, proton permeability and elec. breakdown after UV irrad. 2-99924
- plant stem, variable elec. signal form, depend. on const. elec. field 2-99930
- proteins, electrophoretic mobility, holographic interferometric obs. 2-78512
- protoplasm slow streams in living cells, computer controlled laser anemometer meas. (Russian) 2-117140
- purple membrane of Halobacterium halobium, IR spectrum rel. to proton conduction mechanism 2-94003
- red blood cell mechanics, viscoelastic membrane surface flow in viscous fluids 2-111635
- red blood cell motion in shear flow, theoretical model 2-100026
- red blood cells, transient effects on initial oxygenation rate 2-83554
- red cell Na^+ permeability, hypertension-associated, racial differences 2-88526
- renal microvillus membrane vesicles, modifier role of internal H^+ in activating Na^+ - H^+ exchanger 2-105687
- review of cell-to-cell communication in heart and other tissues 2-99928
- synaptosomes, LF AM microwave field irrad., effects on Ca^{2+} efflux rate 2-11731
- synthetic phospholipid bilayers, ordering effects due to N_2O 2-62571
- tracheal epithelium, posterior, canine, diffusion barriers to passive lipid uptake 2-116896
- tracking, modelling and minimisation approach 2-73208
- US irradiation, implications of bubble dynamics 2-57845
- vertebrate sympathetic neurons, intracellular Ca^{2+} activation of fast voltage-sensitive K^+ current 2-73222
- vesicles, inside-out, from human red cell membranes, Ca^{2+} -activated K^+ channel 2-73215
- vesicles, inside-out, of human red blood cells, all-or-none response of Ca^{2+} -dependent K^+ channel 2-73216
- yeast cells, direct high-resolution NMR studies of Na^+ transport 2-94257
- Ca^{2+} channels in cardiac cultures, channel props., patch clamp obs. 2-88525
- Ca^{2+} , similarity of unitary currents in 3 different species 2-105685
- Ca^{2+} -dependent current activation of cells, depression by residual Ca^{2+} ions 2-99929
- K^+ and Cl^- channels in calf cardiac sarcolemma 2-105693
- K^+ channels, Ca^{2+} -activated and light-dependent, selectivity for monovalent cations 2-94011
- O_2 uptake by red blood cell, factors defining rate 2-83555

cements (building materials)

- used only for those materials which bind together particulate matter so as to form a coherent mass of considerable strength. For cements that cause two or more separate masses to adhere see adhesion
- glass fibre reinforced cement, dimensional stability 2-67725
- glass fibre reinforced cement, strength assessment of aged fibres 2-99513
- glass fibre-reinforced cement composites, weather influence on creep 2-105228
- inorganic, cryogenic thermal expansion meas. method 2-65460
- Portland cement membranes, electroosmosis, higher order phenomenological coeffs. 2-73010
- pyroceramic cement, vitreocrystalline, struct. and mech. props. after heat treatment 2-72723
- reinforced with polyalkene films of varying elastic moduli 2-57411
- sand-cement mortar, acoustic emission and longevity under steady load 2-93619
- shale, simulated by cement mixture, for nucl. waste dumping, thermal diffusivity meas. by Angstrom's method 2-68333
- Cu wire/cement interface, statistical anal. of decohesion rel. to fibre reinforced composite 2-67475

centralised control

- Agano irrigation water system, centralised monitoring and control system (Japanese) 2-73601

centralised plant control see centralised control**centrifuges**

- Ra traces in aqs. soln. containing chlorides, sulphates and carbonates, isotope separation 2-78120

ceramals see cermetes**ceramics***see also refractories*

- acid resistances in HCl, 20 wt.% at 50°C 2-99578
- alkali metal niobates, prep. using glass-ceramic methods 2-67279
- ancient, electron probe microanalysis appls. in technological and provenance investigations 2-116737
- binding materials, heat resistant, prep., fundamental principles 2-111121
- bioglass ceramic coated metal implants, loaded total hip prosthesis model (German) 2-88692
- BPNN, transparent, photoacoustic spectroscopy exam. in 300 to 700 nm range 2-62442
- breeder materials, compatibility with struct. 2-69854
- breeders, ceramic, preparation, characts. and chemistry 2-69856
- breeding materials, interactions with structural alloys 2-69853
- brittle, inertia as a factor in dynamic strength 2-111277
- brittle, thermal shock testing, fluidised bed as quenching medium, charact. obs. 2-116655
- CC, AlN sintering, effect of CaCO_3 addition 2-105109
- ceramic, densification kinetics during press. sintering, porosity effect 2-116416
- ceramic/ceramic (metal) systems, surfaces and interfaces, 17th Univ. Conf. (7th LBL/MMRD Int. Materials Symp.), Aug. 1980 2-94909
- ceramics, low freq. dielectric props. (Chinese) 2-104788
- ceria-yttria high-density ceramics, preparation 2-88036
- concrete, silicate ceramic, porosity and mech. props. 2-57424
- containers for glass melting by direct induction heating 2-59472
- corundum, creep mechanism 2-93572
- crack front spreading, steady state fracture kinetics 2-109242
- creep fracture in polycrystals, containing small amount of liq. phase 2-83197
- crystalline phases, fission fragment damage 2-102058
- dielectrics, brightening using diff. grating 2-110806
- elastic/plastic indentation damage, median/radial crack system 2-111275
- electromechanical materials and their appl. review 2-77453
- electronic, in high temp. environment 2-77953
- electrotechnical, present and future develop. (Czech) 2-111133
- EM, high resolution applied to chem. problems, conf., New York, USA, (Aug. 1981) 2-94904
- failure prediction by strength and fracture mechanics, comparison 2-88165
- ferroelec., electro-optic and strain-optic effects 2-93159
- ferroelectric, acoustic microscopy, imaging of flows, grain struct. and elastic props. 2-105410
- ferroelectric, internal struct. defects influence on appls. in technology, two-dimens. heat receivers 2-66995
- ferroelectric ceramic, TBK-3, coupling and piezoelec. coeffs., hysteresis, neutron irrad. effects 2-82804
- ferroelectric ceramics, fracture mechanics evaluation of fracture strength 2-77906
- fibrous, low-density, fracture behaviour 2-77910
- fibrous, low-density, mech. props., micromech. model 2-77909
- fission reactor fuel, ceramic, fabrication by hot impact densification 2-102099
- float polishing for ultrafine finishing 2-60267
- fracture toughness testing, methods and results (German) 2-72918
- friction and wear, against metals 2-88210
- fusion insulating materials, review 2-80179
- glass-ceramic, 14 MeV neutron irradiation effects 2-85208
- glass-ceramic, fatigue anal. brittle materials using indentation flaws 2-83211
- glass-ceramics, matrix composite with dispersed crystalline or glass particles, indentation hardness (Japanese) 2-67509
- glass-ceramics, prep. from gels, conf., Padova, Italy (Oct. 1981) 2-74151
- glass-ceramics, ramp-wave generation 2-71566
- glass-ceramics, sol-gel process prep. 2-77792
- glaze, CuO-doped, Pb^{2+} release, effects of alkaline substitution and addition of trivalent ions 2-77955
- grain boundary films, TEM characterisation 2-71312
- heat resistance, rel. to strainability, strength and thermal expansion 2-115441
- high level radioactive waste immobilization, candidate ceramics 2-108017
- internal centrifugal zone growth, mathematical modelling 2-60897
- isostatic pressing without an isostat 2-57315
- kaolin, mech. strength rel. to specific surface 2-57403
- Li-containing, appl. as solid breeder material 2-69852
- MT-60 ceramic material, hot forming (Russian) 2-62092
- nitrides of group IIIA elements, thermodynamic props., at. no. depend., synthesis method selection 2-66259
- nuclear waste, alteration under hydrothermal conditions 2-107946
- optical, strength rel. to hardness 2-111269
- piezoceramics, fracture toughness determ. with kerf specimens 2-116670
- permittivity meas., USSR-Bulgarian development of standard specimens 2-84664
- phase diagrams, quasibinary and quasiternary, computer-based calc. 2-62101
- piezo-ceramic sensors review (German) 2-86197
- piezoceramic, explosively compacted, elec. domain struct. (Russian) 2-66990
- piezoceramic hydrophone with liq., cryst. light modulator for hybrid fibre optic sensors 2-102930
- piezoceramic materials, multicomponent, highly efficient, with various degrees of ferroelec. hardness 2-72425
- piezoceramic plates, calc. of flexural modes using energy method 2-70757
- piezoceramic rod discharge in shock loading 2-82787
- piezoceramics, phase coexistence, domain boundary interactions 2-87703
- piezoelectric, appl. in diagnostic ultrasound transducers 2-88639
- piezoelectric, polarisation using high-voltage pulses (Russian) 2-99043
- piezoelectric ceramic strips, energy trapping of width-shear vibrs. 2-87691
- piezoelectric ceramic thin cylindrical tubes, dielectric variables meas. method 2-74459
- piezoelectric ceramics, development and production 2-88031
- piezoelectric ceramics, mech. props. under large amplitude operation, transducer appl. (Japanese) 2-67510

ceramics continued

- piezoelectric ceramics for power transducers, automatic performance testing 2-86193
 piezoelectric ceramics in layer struct. oxide family, elec. props. 2-93115
 piezoelectric ceramics with ferroelectric characteristics (*German*) 2-82785
 piezoelectric pile of ceramic elements as displacing device 2-79552
 PLZT, piezoelectric, ceramic, mech. strength 2-79907
 PLZT, transparent, photoacoustic spectroscopy exam. in 300 to 700 nm range 2-62442
 PLZT ceramic, domain switching, space charge field effects 2-99074
 polymeric-ceramic low-shrinkage material, optimum form. conditions 2-67280
 powder compaction charact. 2-116415
 process design, prod. from recycled waste glass, green strength 2-11125
 process design, prod. from recycled waste glass, microstruct. and devitrification 2-11127
 process design, prod. from recycled waste glass, phys. props. 2-11126
 pyroceramic cement, vitreocrystalline, struct. and mech. props. after heat treatment 2-72723
 pyroelectric infrared detectors 2-112981
 pyroelectric materials, props. and appls. 2-82788
 quartz, piezoceramic, synthetic, elastic and elec. characts. at 4.2K, acoustic device applic. (*Ukrainian*) 2-82784
 quartz ceramic obtained from synthetic SiO_2 2-99377
 radwaste ceramics, sintered, solid-state reactions, Purex and Magnox wastes without additives 2-62372
 refractory mixed oxides, heat of formation 2-105495
 SEM and TEM, comparison (*German*) 2-113047
 shell of revolution, piezoelectric, ceramic, numerical anal. 2-60459
 β' -Sialon, density, microstruct. and strength, heating rate effects 2-116467
 α -Sialon, stability at high temps. 2-83145
 sintered materials, brittle fracture microstruct., comparative investig. by SEM and replica TEM 2-67695
 sintering parameters, calc. for viscous solids 2-83058
 Space Shuttle tiles coating, particle size analysis 2-77954
 β -spodumene ($\text{LiAlSi}_2\text{O}_6$), preliminary evaluation as fusion reactor structural material 2-69836
 steatite ceramics, extruded, texture effects, glass phase influence 2-111117
 structural reliability, processing-depend. phenomenon 2-77908
 surface coatings deposited by CVD and PVD (*German*) 2-83035
 surfaces and interfaces, 17th Univ. Conf. (7th LBL/MMRD Int. Materials Symp.), Aug. 1980 2-94909
 Synroc-B, powder prep. and densification for fabrication 2-93478
 synthetic materials for electronics, conf., Warsaw, Poland (Oct. 1979) 2-68964
 TEM, high-resolution, appl. to processing of ceramics 2-97881
 tensile strength, determ. by radial compression methods 2-67698
 thermal shock resistance, influence of size factor 2-62194
 thermal shock stability (*French*) 2-88155
 thermal stresses rel. to fracture 2-62218
 thermistor bolometer using positive temp. coeff. ceramic element 2-107405
 thermodynamic stability in liq. metal 2-80176
 thermoluminescence dating, grain size distrib. and beta dose-rate 2-100571
 thermoplastic slip, ceramic components continuous hot casting, temp. patterns calc. 2-60384
 thin electroconducting oxide layers on glass, electrochemical etching (*Polish*) 2-88248
 tubes, closed-end, test method for strength and fracture 2-93688
 two-phase sintered materials, microstruct.-field prop. correl. (*French*) 2-77831
 water reactor fuel, performance-related characts. 2-85133
 X-ray crystallography, at high pressures, 1933-1980: a bibliography 2-63771
 Al-Mg spinel, LiF doped, compaction and recrystn. kinetics 2-93482
 Al-Mg-O-N, phase equilib. 2-88072
 AlN polypolymer ceramic formation, mech. props. (*Japanese*) 2-88044
 AlN powders, explosive compaction 2-83069
 AlN-Al₂O₃, ALON powder prep. by carbothermal reduction of α -Al₂O₃ in N₂ 2-77784
 Al₂O₃, anelastic deform. effect on high temp. stress relaxation 2-67410
 Al₂O₃ ceramic, wear characteristics against ultrahigh mol. wt. polyethylene 2-88222
 Al₂O₃, delayed fracture, crack origins and microcracking 2-88175
 Al₂O₃, dense, steam-enhanced impurity segregation 2-11116
 Al₂O₃, effects of Cr₂O₃ additions on sintering and mech. props. 2-99375
 Al₂O₃ fibre, prep. and changes of microstruct. by heat treatment (*Japanese*) 2-116417
 Al₂O₃, grain size depend. of fracture energy 2-57457
 Al₂O₃, ion incidence angle effect on cleanliness, roughness and topography 2-92050
 Al₂O₃, MgO doped, grain boundary meas. technique 2-109812
 Al₂O₃, neutron irradiat. damage 2-115301
 Al₂O₃, notched bend specimens, memory effect of crack resist. during slow crack growth 2-105284
 Al₂O₃ powders, explosive compaction 2-83069
 Al₂O₃, reaction with saturated steam 2-111334
 Al₂O₃, shock loaded ceramic, glass transition 2-71647
 Al₂O₃, sintering and crystalline transform., effect of variations in polymerised oxides 2-111130
 Al₂O₃ suspension, high conc., rheology and binding props. 2-88042
 β -Al₂O₃:Ag⁺(Cu⁺), solid ceramic electrolyte, cells for thermodynamic studies 2-99378
 α -Al₂O₃:Y, isoelec. donor 2-98642
 Al₂O₃-Cr₂O₃ solid solutions, wetting by liq. metals, Cr₂O₃ content influence 2-61261
 β -Al₂O₃-K₂O, superionic conducting membrane, prod. by ion exchange 2-76733
 β -Al₂O₃-Na₂O, ceramic, solid electrolyte, chemical coloration, EPR study 2-66914
 β -Al₂O₃-Na₂O, hot-pressed polycryst., fracture energy at high temp. 2-93630
 β -Al₂O₃-Na₂O, ionic cond., 223 to 573K, effect of Na/S cell cycling 2-92265
 β -Al₂O₃-Na₂O, polycrystalline, X-ray obs. of surface layers 2-67587
 β -Al₂O₃-Na₂O, ultrafast ceramographic specimen prep. 2-111408
 β'' -Al₂O₃-Na₂O-Li₂O, ceramic, solid electrolyte, chemical coloration, EPR study 2-66914

ceramics continued

- β -Al₂O₃-Na₂O, densification kinetics 2-62095
 Al₂O₃-SiO₂, porous ceramic, sound insulating characts. 2-97252
 α -Al₂O₃-SiO₂ (fused) compacts, sintering 2-99374
 Al₂O₃-SiO₂ mixtures, impurity effect on mullite and kaolinite 2-116450
 Al₂O₃-ZrO₂-MgO, MgO and ZrO₂ effects on microstruct. and mech. props. 2-88038
 B ceramics powders, explosive compaction 2-83069
 B₂C, irradiated, crack propag. induced by swelling and thermal gradients 2-77912
 BN, electrical cond. meas., 700 to 1400°C 2-92618
 BN hexagonal film, low temp. deposition by CVD 2-71841
 BaAl₂Ti₆O₁₆, powder prep. and densification for fabrication 2-93478
 BaAl₂Ti₆O₁₆-CaTiO₃-CaZrTi₂O₇, ceramic, devel. and testing as high level nuclear waste form 2-107956
 Ba(Nb_{0.85}Sn_{0.15})₆O_{16-x}O₃, semicond. ceramics, space-charge-limited currents and dopant cond. influence, firing procedure effect (*Russian*) 2-56607
 Ba(Pb, Bi)O₃, ceramic supercond., transition temp., prep. conditions 2-82509
 BaPb_{1-x}Bi_xO₃ solid soln., microstruct. and supercond. 2-110518
 BaPb_{1-x}Bi_xO₃, supercond. ceramics, thermodynamic props. 2-92820
 BaPbO₃-BaBiO₃ system, Hall EMF, elec. cond., and supercond., 2.5 to 300K 2-61645
 Ba(Sr)(Ca)(Zn_{1/3}Nb_{2/3})O₃-PbTiO₃-PbZrO₃ elec. and optical props. 2-82795
 Ba(Sr)(M_{1/3}Nb_{2/3})O₃-PbZrO₃-PbTiO₃ (M=Pb, Ca, Sr) elec. and optical props. 2-82794
 Ba₂(Sr_{1-x}Nb_x)_{3-x/2}O₃-PbZrO₃-PbTiO₃ elec. and optical props. 2-82796
 BaTiO₃ dielectrics, flux sintered 2-88033
 BaTiO₃, ferroelec., domains and grain boundaries, SEM EBIC imaging technique 2-116132
 BaTiO₃ ferroelec. ceramic surface 2-109526
 BaTiO₃, hot-pressed ceramics, internal stresses, Curie temp. 2-88017
 BaTiO₃ piezoelectric, ceramic, mech. strength 2-77907
 BaTiO₃ semiconductive ceramics, positive temp. coeff. of resist. under reduced atm. 2-82720
 BaTiO₃:U, ceramic, room temp. elec. resist. and permittivity meas. 2-57003
 BaTiO₃-Bi₂TiO₅ low temp. sintered ceramics, microstruct. and elec. props. 2-88035
 BaTiO₃-SrTiO₃ ceramic mixture, reaction rates 2-77789
 Ba_{1-x}U_xTiO₃ ceramic, U doping and sintering atmos. effects on elec. and dielec. props. 2-116107
 Bi-based layer-structured ferroelectric ceramics, dielectric and piezoelectric props. 2-116122
 Bi₂TiNbO₉ piezoceramic, form. and props. 2-111122
 Bi₂TiO₁₂, layer struct., grain oriented ferroelec. ceramics, liq. phase sintering 2-77788
 Bi₂(Ti_{1-x}W_x)O₃₀, ceramic ferroelectricity, permittivity and losses 2-87701
 Bi₂WO₆ ceramics, grain oriented, fabrication 2-77790
 Bi₂WO₆ powders, obtained in presence of fused salts, morphology 2-97971
 Ca-Yb-O, bivalent Yb form. 2-111468
 CaO-Al₂O₃-SiO₂, calcined powders, appl. to U recovery from aqu. soln. 2-80144
 CaO-Al₂O₃-SiO₂, liquid-state interdiffusion using multiautomic ion models 2-86914
 CaO-Ga₂O₃-GeO₂ system, phase form. 2-111150
 CaO-MgO-V₂O₅, phase diagram 2-111157
 CaO-SiO₂, thermodynamic treatments 2-61167
 CaO-TiO₂-ZrO₂ system multiphase ceramics for bushing prod., mech. props. 2-67478
 Ca₃(PO₄)₂ ceramic, dense, mech. props., prosthetic appl. 2-57409
 CaSiO₃, ceramic-forming glass, thermal expansion 2-71673
 CaTiO₃, powder prep. and densification for fabrication 2-93478
 CaZrTi₂O₇, powder prep. and densification for fabrication 2-93478
 CeO₂, gels for protective coatings, TEM exam. technique 2-105400
 CoO, undoped and Cr doped, segregation and near surface diffusion 2-76682
 Co_{1-x}O, defect diffusion in single- and poly-crystals 2-110047
 Cs₃BiCl₆ ceramic, ferroelastic transitions, DTA, X-ray, dielec. and TSC meas. (*French*) 2-109889
 γ -Fe₂O₃, DC elec. cond., effect of adsorbed O₂ and water 2-115752
 HfO₂, fine monocrystalline powder prep. by hydrothermal oxidation 2-88039
 HfO₂-MgO system, eutectoid decomp. process influence on physico-chem. props. 2-99404
 HfO₂-MgO-Nb₂O₅(Ta₂O₅), ordered fluorite related phase 2-111159
 HfO₂-Pr₂O₃ system, eutectoid decomp. process influence on physico-chem. props. 2-99404
 KCl, large gas filled pore migration due to temp. gradient 2-56265
 KCl, small pore migration due to temp. gradient 2-56266
 K(Nb,Ta)O₃, solid solutions, temp., conc. and freq. depend. of dielectric constant 2-111124
 KNbO₃, hot pressed ceramics, internal stresses, Curie temp. 2-88017
 KNbO₃, polycryst., prep. using glass-ceramic methods 2-67279
 KNbO₃, sintering characts. and dielec. props. 2-105108
 K₂O-MgO-SiO₂, fluorine containing melt, prep. of microceramics by solidification (*Japanese*) 2-83074
 Li₂ZrO₃, breeding compounds for ³H, preparation 2-69857
 LaCrO₃:Sr(Ti) perovskite, IR spectra assignments and interpret. 2-93231
 La₂O₃-SiO₂, hot pressing, accretive recrystallisation 2-77785
 La₂S₃ ceramic, opt. props., IR transparency and spectra 2-57080
 La_{0.96}Sr_{0.04}CrO₃ ceramic, sintering and dielectric props. 2-62094
 β -Li₂-AlSi₄P₂O₁₀ ceramic solid soln., ionic cond. meas. 2-104052
 LiFeSnO₄ phase, cryst. struct. characts. 2-65942
 Li₂O-Al₂O₃-SiO₂ glass-ceramic, SiC fibre reinforced, thermal transport props. determ. by composite method 2-104088
 Li₂O-Al₂O₃-SiO₂ glass-ceramic, SiC yarn reinforced, high strength and toughness 2-105298
 Li₂O-Al₂O₃-SiO₂ glass ceramics, microstruct., electron microscopy and electron diff. 2-115140
 Li₂O-Al₂O₃-SiO₂-TiO₂ glass ceramics, cryst. props., grain growth, electron and X-ray study 2-66244
 Li₂O-Al₂O₃-SiO₂-TiO₂ glass ceramic, phase anal., Raman and X-ray obs. 2-110853
 Li₂O-SiO₂-B₂O₃ glass ceramics, piezoelec. reson. meas., crystal resonators appl. 2-82786
 Li₂O-ZrO₂, cpd. form., thermal and X-ray obs. 2-83102
 Li₂SiO₄, breeding compounds for ³H, preparation 2-69857
 Li₂SiO₄, fusion blankets, displacive transform. 2-69859

ceramics continued

- MgAl₂O₄, fission neutron irradiation, structural props. study 2-80187
 MgAl₂O₄, neutron irradiation, damage 2-115301
 MgO and Cr doped MgO, surface diffusion 2-76785
 MgO, anelastic deform. effect on high temp. stress relaxation 2-67410
 MgO, fission neutron irradiation, structural props. study 2-80187
 MgO, neutron irradiation, damage 2-115301
 MgO, Ni doped single crystal, thermal diffusivity/cond. 2-110056
 MgO, shock loaded ceramic, glass transition 2-71647
 MgO, thermoluminescent mechanisms involving transition metal ion impurities and V-type centres under UV irradiation 2-116279
 MgO:Fe³⁺, quenched crystals, kinetic reactions 2-57380
 MgO-Al₂O₃, transparent ceramic, coprecipitation followed by calcination 2-99379
 MgO-Cr₂O₃(Fe₂O₃)(Al₂O₃)-CaO-SiO₂, fused, retrograde stability of pericline rel. to cracking 2-83103
 MgO-TiO₂ mixtures, reaction sintering 2-99376
 MgO, single crystals, polishing with vibr. sliding in water, characts. 2-88250
 Mg-SiO₂ single crystal, chemical and thermal etching 2-67598
 MgTiO₃, ceramics, dielec. props. deviation 2-87647
 MnO-NiO, anal. phase diagram calculation from expt. activity data 2-99408
 MoSi₂, oxidation resist. improvement using GeO₂-SiO₂ glasses prep. from gels 2-77797
 (Na,Li)NbO₃, hot pressed ceramics, internal stresses, Curie temp. 2-88017
 NaNbO₃, solid solutions, phase transitions 2-87704
 Na₂O-B₂O₃-CeO₂-3Nb₂O₅(-Al₂O₃) porous glass ceramic 2-77811
 Na₂Sc₂(PO₄)₃, ferroelec., ionic cond. meas. 2-92263
 Na₂YSi₂O₇ ceramic superionic cond., sintering prep. and characterisation 2-83056
 NaZr₂(PO₄)₃, ceramic, sintering prep., appl. to radioactive waste disposal 2-90226
 (Nb,Pb)(Zr,Ti,Zn)O₃ piezoceramic, influence of static compression on props. 2-72426
 NiO, relative energies of {011} tilt boundaries 2-55982
 NiO-Y₂O₃, directionally solidified eutectic, crystallography 2-109762
 PLZT 7/65/35, ceramic, domain switching, one-dimens. polar responses 2-67010
 PLZT ceramic, holographic grating form by electro-optic effect 2-108826
 PLZT ceramic, reduced, dark cond. and optical absorpt. 2-104374
 PLZT ceramic, transparent ferroelectric, dielec., optical and semicond. props., reduction effect (*Russian*) 2-99668
 PLZT ceramics, photoferroelectric props., ion implantation effects, review 2-110393
 PLZT, chemically prepared powders, grain size of mixed oxides 2-72660
 PLZT electrooptic ceramic one-dimens. controlled transparency utilizing transverse effect, crosstalk 2-55323
 PLZT ferroelec. ceramic, laser beam amplification by dynamic holography 2-108835
 PLZT phase composer production for holographic memory (*Hungarian*) 2-55091
 PLZT slim loop and linear ceramics, devices based on longitudinal electrooptic effects 2-55302
 PLZT, solid solutions, regions of homogeneity 2-110003
 PLZT transparent ceramic, elec. cond. model, dark current, photocond., optical absorpt. coeff. (*Russian*) 2-61504
 PLZT, transparent ferroelec. ceramic, surface effects for information storage (*Russian*) 2-104846
 PLZT-Pb(Zn_{1/3}Nb_{2/3})O₃ piezoelec. ceramics, electromech. props. 2-87696
 (Pb,Ca)((Co_{1/2}W_{1/2}),Ti)O₃ piezoelectric ceramics and their applications 2-87697
 (Pb,Nd)(Ti,Mn,In)O₃ piezoelectric ceramics, appl. to high freq. SAW filters 2-81178
 (Pb,Nd)(Ti,Mn,In)O₃ piezoelectric ceramic SAW reflector, poled/unpoled domain array 2-91196
 Pb₂AlNbO₆, prep., polymorphic transition from pyrochlore to perovskite struct. 2-77787
 PbBi₂Nb₂O₉, layer struct., grain oriented ferroelec. ceramics, liq. phase sintering 2-77788
 Pb(Hf_{1-x}Zr_x)_{1-x}Ti_xO₃ ferroelectric-antiferroelectric transition (*French*) 2-99068
 Pb_{1-x}(La_{0.5}Li_{0.5})(Zr_{0.5}Ti_{0.5})O₃ transparent ceramic, SHG excited by Q-switched Nd³⁺ glass laser 2-81024
 Pb(Mg_{1/3}Nb_{2/3})O₃-Pb(Mg_{1/2}W_{1/2})O₃(PbTiO₃) ceramics, electrostriction rel. to phase transition diffusivity 2-87694
 Pb₂MnTaO₆, prep., polymorphic transition from pyrochlore to perovskite struct. 2-77787
 PbO(-ZrO₂) powder, shock-induced chem. and struct. modifications 2-76583
 Pb(Sn_{1-x}Zr_x)_{1-x}Ti_xO₃ ferroelectric-antiferroelectric transition (*French*) 2-99068
 (Pb_{0.8}Sn_{0.2})Bi₂Nb₂O₉ piezoelectric, ceramic, mech. strength 2-77907
 PbTiO₃ ceramics, grain-orientated, prep. by unidirectional solidification of melts 2-62118
 PbTiO₃ ceramics, piezoelectric, elastic and dielectric props. 2-87685
 PbTiO₃-Mn ceramics, Mn doping effect on dielec. and ferroelec. props. (*Chinese*) 2-72431
 PbTiO₃-PbZrO₃, solid solutions, phase transitions 2-87704
 PbTiO₃-PbZrO₃-PbNb_{2/3}Zn_{1/3}O₃-PbNb_{1/3}Mn_{1/3}O₃-PbSb_{2/3}Mn_{1/3}O₃, stability of electrophysical props. 2-99059
 PbTi(Zr)O₃, packing pressure and particle size effect on formation reaction kinetics 2-88040
 Pb(Zr,Ti)O₃ piezoelectric ceramic, P/S mode transducer, theory and fabrication 2-53746
 Pb(Zr,Ti)O₃ ceramic/Ni-Zn ferrite composite, dynamic magnetoelectric effect 2-116049
 Pb(Zr,Ti)O₃ composition piezoelectric ceramic preparation and props. 2-88030
 Pb(Zr,Ti)O₃, ferroelec. ceramic, domain switching, butterfly loops 2-67001
 Pb(Zr,Ti)O₃, impurity doping effects 2-86689
 Pb(Zr,Ti)O₃ piezoceramic, influence of ZnO on props. 2-72427
 Pb(Zr,Ti)O₃ piezoelectric effect 2-87686
 Pb(Zr,Ti)O₃ piezoelectric ceramics fabrication by explosion compression molding 2-99381
 Pb(Zr,Ti)O₃, poling method 2-87653

ceramics continued

- Pb(Zr,Ti)O₃, solid solns., piezoceramic fatigue strength, influence of polarisation on cyclic strength 2-72797
 Pb(Zr_{1/3}Nb_{2/3})O₃-Pb(Sn_{1/3}Nb_{2/3})O₃-PbTiO₃-PbZrO₃ hot pressed ceramics, piezoelec. props. 2-87695
 PbZrO₃ ceramic, dielec. props., X-ray irradiation, effect 2-110745
 PbZr_{1-x}Ti_xO₃, ferroelec. ceramic, mechanoelec. energy conversion under shock loading 2-72423
 PbZrTi_{1-x}O₃, solid soln., ferroelec.-paraelec. transition, tricritical point 2-93126
 PuO₂ fuel, ceramic, preparation for FBRs 2-102100
 SbSi₃ acicular crystals, prep. and elec. field alignment 2-98508
 SbSi₃ polycrystn., prep. by Czochralski method, piezoelec. props. 2-67267
 Si, C, neutron irradiation, and proof tested, flexural strength 2-115307
 Si, sinterable ceramic powder prod. from laser driven reactions, process description and modeling 2-111128
 Si, sinterable ceramic powder prod. from laser driven reactions, powder charact. and process variables 2-111129
 Si/SiC system, interfacial energy and Si+C reaction rel. to sintering 2-55981
 β-Si-Al-O-N ceramics, translucent, effect of impurities and hot pressing temp. 2-57495
 Si₃N₄N₂C₃, new compound with wurtzite struct. 2-57321
 SiAlON, oxidation resist. improvement using GeO₂-SiO₂ glasses prep. from gels 2-77797
 β-SiAlON solid soln. containing different amounts of amorphous grain boundary phase, TEM obs. 2-92223
 Si_{6-x}Al₂O_{8-x}N_{8-x}, hot-pressed β-sialon, oxidation effect on room temp. strength 2-93629
 Si_{6-x}Al₂O_{8-x}N_{8-x}, hot-pressed β-sialon, fracture strength and Weibull distrib. 2-93631
 SiC ceramic heat exchanger tubes, assessment of US method of NDT 2-93729
 SiC, fracture parameters evaluation, controlled flaw method (*French*) 2-88293
 SiC, oxidation resist. improvement using GeO₂-SiO₂ glasses prep. from gels 2-77797
 SiC, residual stresses and CNTD process scaling to larger specimen sizes 2-72657
 SiC, self-bonded, reactively sintered, mobility of intracrystallite boundaries, prep. conditions and additives influence 2-67270
 SiC, siliconised, strengthening and proof testing 2-88168
 SiC, single cryst., friction damage, surface and subsurface, SEM and TEM study 2-87566
 SiC, sinterable ceramic powder prod. from laser driven reactions, process description and modeling 2-111128
 SiC, sinterable ceramic powder prod. from laser driven reactions, powder charact. and process variables 2-111129
 SiC, sintered, α and β polymorph proportion estimation procedure using X-ray diffr. 2-65943
 SiC, sintered and reaction-bonded, radiation response, B isotope effects 2-80191
 SiC, slow crack growth parameter eval., fatigue theories 2-88166
 Si₃N₄ ceramic, prep., props. and appls., book contrib. 2-116420
 Si₃N₄, densification, C+N₂ interaction in sintering furnaces 2-105097
 Si₃N₄, fabrication by hot isostatic pressing 2-83070
 Si₃N₄, hot press, uniaxial tensile and flexural stress rupture strength 2-57453
 Si₃N₄, hot pressed, acoustic charact. of mech. props. (*Japanese*) 2-67511
 Si₃N₄, hot pressed, grooved by single-point grinding, residual stresses 2-57455
 Si₃N₄, hot-pressed, mech. and dielec. props. 2-67268
 Si₃N₄, hot-pressed at high press., temp. depend. of stress intensity factor 2-83212
 Si₃N₄, MgO-fluxed, soln.-precipitation creep 2-99492
 Si₃N₄, neutron irradiated, X-ray anal. of internal strain 2-93557
 Si₃N₄, oxidation resist. improvement using GeO₂-SiO₂ glasses prep. from gels 2-77797
 Si₃N₄ powders, explosive compaction 2-83069
 Si₃N₄ prep., nitridation of Si in N₂/H₂ atm. 2-105110
 Si₃N₄, preparation and props., book 2-112667
 Si₃N₄, prod. by nitridation of high purity single crystal Si 2-72661
 Si₃N₄, reaction bonded, hot pressed, comparison of US and radiographic methods of crack detection 2-67673
 Si₃N₄, reaction bonded, mech. props., creep and thermal shock behaviour, influence of microstruct. variables 2-116541
 Si₃N₄, SiC, hot pressed or reaction-bonded, effect of laser radiation 2-83174
 Si₃N₄, SiC, SiAlON, sintered microstruct. and property charact. 2-57323
 Si₃N₄, sinterable ceramic powder prod. from laser driven reactions, process description and modeling 2-111128
 Si₃N₄, sinterable ceramic powder prod. from laser driven reactions, powder charact. and process variables 2-111129
 Si₃N₄, sintered, hot isostatic pressing, effect on mech. props. (*Japanese*) 2-67266
 Si₃N₄, slip cast reaction bonded, α/β ratio, effect of α-Si₃N₄ grog additions 2-93493
 Si₃N₄-Y₂O₃, sintering behaviour and microstructural development 2-93480
 Si₃N₄-MgO (1 and 5 wt.%), hot pressed, passive and active oxidation 2-11340
 Si₃N₄-refractory compound cutting tool ceramics, mech. props. 2-72842
 Si₃N₄-SiO₂-La₂O₃ system, phase relationships 2-105134
 Si₃N₄-TiC composites, fracture toughness and strength 2-83202
 Si₃N₄-TiN composites, CVD, prep. and props. 2-87998
 Si₃N₄-Y₂O₃ (6 wt.%), density, microstruct. and strength, heating rate effects 2-116467
 Si₃N₄-Y₂O₃-SiO₂, strengthening by post-fabrication heat treatment 2-83131
 SiO₂, sintering and crystalline transform., effect of variations in polymerised oxides 2-111130
 SiO₂-Al₂O₃-MgO gel glasses, prep. and crystn. characts. 2-76319
 SiO₂-B₂O₃-Al₂O₃-BaO, pyroceramic, low temp. thermal cond. 2-110054
 SiO₂-based glass ceramics, neutron irradiation effects 2-85209
 SiO₂-MgO(Y₂O₃)(Ce₂O₃)-Si₃N₄ phase diagrams, computer-based calc. 2-62101
 Si₂ON₂ covalent ceramic, vibr. assignment, IR absorption bands 2-87770
 Si₂ON₂, neutron irradiated, X-ray anal. of internal strain 2-93557
 SnO₂-Nb₂O₅, reactions after annealing, X-ray anal. 2-88065
 Sr_{0.02}Pb_{0.98}(Li_{0.008}W_{0.012}Ti_{0.46}Zr_{0.52})O₃, impurity distrib., props. 2-86701

ceramics continued

- ThO₂ powder, initial sintering stage study by emanation thermal anal. 2-88032
- ThO₂ powders, from hydrothermal denitration, ceramic quality 2-111115
- ThO₂-UO₂, mixed oxide fuel, at. homogeneity evaluation 2-85136
- TiB₂, low temp. CVD of corrosion 2-87999
- TiB₂-Ni ceramics, crack form. and swelling in liquid Al 2-111273
- TiC and TiC_{0.9}N_{0.1}, abrasive power of powders, prod. technology role 2-67271
- TiC, synthesis by self-propagating high-temp. method, effect of O content of Ti powder 2-99382
- TiC-Al₂O₃, condensates, microhardness and microbrittleness 2-77904
- TiC-TiB₂ system, compressive creep of two-phase alloys, superplastic phenomena 2-99506
- TiN powder, shock treatment effect, microstrain increase 2-105112
- TiO₂, sintering and crystalline transform., effect of variations in polymerised oxides 2-11130
- TiO₂ varistors, prep. and props. 2-57320
- TiO₂/SnO₂ ceramic moisture sensor, elec. resistance stability, SEM, powder X-ray diff. exam. 2-74398
- TiO₂-Pt ceramics, heat treated, elec. rectification obs. due to PET₂ lamellar microstruct. 2-115748
- TiTaO₃, defect struct. at elev. temp. 2-87271
- UO₂ fuel, swollen, with nonuniform grain size, interconnected pores stability 2-93481
- UO₂, high pressure behaviour, X-ray powder diff. study 2-56178
- UO₂ LWR fuels prod. and characts. (*German*) 2-85158
- UO₂ powder manufacture, LWR fuel quality control, prod. parameters determ. (*German*) 2-96088
- UO₂-Gd₂O₃, LWR fuels prod. and characts. (*German*) 2-85158
- UO₂-PuO₂, mixed oxide fuel, at. homogeneity evaluation 2-85136
- UO₂-UC, spherical nuclear fuel, prod., appl. using thermochem. principles 2-108021
- WC, plasma-processed, condensation on graphite 2-105111
- YIG, microcrystalline, activation energy, synthesis by hot spray, spray dry and sol-gel methods 2-72659
- YIG phase containing glass ceramics, prep. and mag. characts. 2-67278
- Y₂O₃-S, hot pressing, accretive recrystallisation 2-77785
- ZnO varistor, influence of SiO₂ inclusions 2-66241
- ZnO varistor ceramics, thermal cond., intergranular phase and void effects 2-71744
- ZnO-CoO, enhancement of elec. cond. by doping 2-98643
- ZnO-Bi₂O₃-CoO-MnO-Sb₂O₃, influence of comp. on dielectric losses 2-87660
- ZnS ceramic phosphor, electroluminescence, temp. depend. meas. 2-116268
- ZnSe, optical ceramic, synthesis and props. 2-111123
- ZrC, diffusion of metal fission products 2-85153
- ZrC-ZrB₂ system, compressive creep of two-phase alloys, superplastic phenomena 2-99506
- Zr_{0.94}Ca_{0.06}O_{0.94}, partially stabilized, elec. cond. rel. to temp. and O₂ partial press. 2-115833
- ZrO exhaust-gas-sensor electrolytes, tubes, closed-end, test method for strength and fracture 2-93688
- ZrO₂, CaO stabilised, calc. of n, p-type conductivity surfaces 2-98717
- ZrO₂ ceramic, sputter deposition of Pb, interfacial reaction, Auger line shape and factor anal. 2-83429
- ZrO₂ ceramics, meas. of crystallographically transformed zone produced by fracture 2-99531
- ZrO₂, crystallisation and transform. under hydrothermal conditions 2-111170
- ZrO₂, sintered, struct. and fracture behaviour 2-88187
- ZrO₂, sintering and crystalline transform., effect of variations in polymerised oxides 2-11130
- ZrO₂, sputter deposited, microstruct. control 2-115619
- ZrO₂-Al₂O₃-CaO, sub-solidus phase equilib. 2-11161
- ZrO₂-CaO(Y₂O₃), sputter deposited, microstruct. control 2-115619
- ZrO₂-MgO-Nb₂O₅(Ta₂O₅), ordered fluorite related phase 2-111159
- ZrO₂-Y₂O₃, partially stabilised, anal. using STEM 2-77827
- ZrO₂-Y₂O₃ (8 wt.%), polycrystalline, annealing effect on elec. cond. 2-76734
- ZrO₂-Y₂O₃ ceramics, high-purity, effect of grain boundaries on cond. 2-71712
- ZrO₂-Y₂O₃ single crystal, room temp. strength and fracture 2-111274
- ZrO₂-Y₂O₃-Bi₂O₃, Bi₂O₃ effect on elec. and mech. props. 2-67265
- ZrO₂-Y₂O₃-Nd₂O₃, thermal aging rel. to struct. and electrophysical props. 2-111208
- ZrO₂-zircon ceramics, prep. from plasma dissociated zircon 2-83073
- ZrO₂-(PbO) powder, shock-induced chem. and struct. modifications 2-76583
- ZrO₂MgO (CaO)(Y₂O₃) ceramics, rare earth oxide stabilised, elec. conducting, for MHD generator electrodes 2-88043

Cerenkov counters see Cerenkov counters

Cerenkov radiation see Cerenkov radiation

cerium

see also nuclei with

- 4f level position in ground state 2-61385
- binding energies of 4f electrons in metallic rare-earth materials 2-56462
- intermediate valence materials, reson. photoemission and core-level spectroscopy 2-57264
- mixed-valent systems, perturbative theory 2-56499
- oxidised, resonant photon stimulated ion desorption 2-87048
- Γ-phase, lattice dynamics, dispersion curves 2-92127
- phase transition, α-γ, construction of electronic state for γ phase 2-56189
- relativistic 2p excitation energy calcs. 2-115686
- thermodynamic props. in transcrit. region, theoretical anal. (*Russian*) 2-86905
- vacuum UV absorpt. spectra 2-93217
- volume collapse in Kondo lattice 2-87476
- β-Al₂O₃-Na₂O-Ce, elec., mag., and phys. props. 2-82012
- Ba₂Sr_{1-x}Nb₂O₆Ce, photoluminescence, thermoluminescence and photocond. 2-110908
- CaS:Ce, Fe(Co)(Ni)(Cd), phosphors, luminescence emission and decay, quenching 2-77584
- γ-Ce, mixed valence, X-ray absorption spectra 2-76991
- CsMg_{1-x}Ce_x³⁺, thermoluminescence and energy storage 2-99198
- GeO₂-B₂O₃-SiO₂:Ce fibre composition and radiation hardness 2-114438
- GeO₂-P₂O₅-SiO₂:Ce fibre composition and radiation hardness 2-114438

cerium continued

- β-La₂S₃:Nd, Ce, efficient energy transfer from band excitation to Nd³⁺ 2-67102
- LiLaP₂O₇:Ce³⁺, luminescence of broad band emitters, concentration quenching 2-77575
- NaF:Ce³⁺, F-centres, luminescence and optical study 2-77601
- SiO₂-Al₂O₃-CaO MgO:Ce, U glass-forming melts, U chem., redox interactions 2-93771
- SrO-Li₂O-P₂O₅:Mn, Ce, luminesc. system, whitlockite phase struct. 2-98015
- Y₂O₃:Ce³⁺, energy levels, cryst. field anal., fluoresc. and IR study 2-72534
- ZnS:Ce, Li phosphors, luminesc. excitation and emission spectra 2-57155
- cerium alloys**
- antiferromagnetic, reduced moment, crit. behaviour 2-66815
- intermediate valence cpds., X-ray L_{III} absorption edge 2-57213
- intermediate valence materials, reson. photoemission and core-level spectroscopy 2-57264
- Laves phase, AB₂, evaluation of Ce metallic radius 2-56526
- Laves phase compounds, C15, Ce metallic radius 2-86625
- misch metal-Ni-Si alloys, H absorpt.-desorp. characts. 2-87024
- mixed-valent systems, perturbative theory 2-56499
- surface and bulk props. of Ce, XPS and X-ray absorption spectra 2-57268
- ternary alloys, behaviour of molar volumes 2-86893
- UPS, 4f level energy, width and volume coupling 2-57266
- valence fluctuation systems, systematics 2-56498
- ²⁴¹Am-Ce alloys investigation for target appl. 2-108183
- Ce-Al thin films, crystallographic phases following electron beam annealing 2-55888
- Ce-Fe, nuclear orientation and NMR in oriented nuclei 2-61776
- Ce-Si, ferromagnetic dense Kondo behaviour 2-104662
- Ce-Si, spin fluctuations, mag. susceptibility and sp. ht., paramagnon model 2-115970
- Ce-Si system, nonmagnetic-magnetic transition 2-61713
- Ce-Sn system, phase struct. and heat of form. 2-109745
- CeAg_{1-x}In_x, cryst. field excitations 2-61419
- Ce(Ag_{1-x}Pb_x)₇, mixed valency photoemission study 2-87199
- CeAl₂, electronic struct. and mag. props. 2-66752
- CeAl₂, quadrupole interaction at ¹¹³Cd probe 2-116100
- CeAl₂, reson. photoemission studies 2-57267
- CeAl₂, volume collapse in Kondo lattice 2-87476
- CeAl₂, volume mismatch substitution, γ-α transition 2-66197
- CeAl₃, electronic struct., XPS and bremsstrahlung isochromat spectroscopy 2-56434
- CeAl₃, low temperature sp. ht., thermal expansion and Gruneisen parameter 2-66246
- CeAl₃, thermal dilatation and sp. heat at very low temp. 2-56213
- CeAl₃ (x=2, 3, 1/3) mixed valence cpd., neutron diff., props. on basis of interacting Kondo-like ions 2-56831
- CeBe₁₃:Er, ESR thermal broadening 2-61762
- CeBi, p-f valence mixing, anomalous mag. and transport props. 2-56514
- CeCo₅, intermediate valence state of Ce, interconfiguration fluctuation model 2-76994
- Ce₂S₃O₂, amorphous, temp. depend. of mag., thermal and transport props. 2-115967
- CeCo₅(Ce₂Co₇)(CeCo₅Si₂), X-ray L_{III} absorpt. spectra of tetravalent Ce (*Russian*) 2-99218
- CeCo₅Si₂, valence state of Ce rel. to thermoelec. power, X-ray absorpt. spectra meas. 2-61448
- Ce₂Co_{17-x}Ti_x (T=Ti, V, Cr, Mn, Fe, Cu, Zr, Hf), mag. and crystallographic props. 2-72200
- Ce₂Co_{17-x}Zr_x, struct. and mag. props. 2-61741
- CeCu₅, intermediate valence state of Ce, interconfiguration fluctuation model 2-76994
- CeCu_{5-x}Ni_x, NMR and mag. susceptibility 2-66938
- CeCu₅Si₂, mixed valence, X-ray absorption spectra 2-76991
- CeCu₅Si₂, mixed valence state, elec. resist., mag. field and press. effects 2-110329
- CeCu₅Si₂, superconductivity 2-66691
- CeCu₅Si₂, valence state of Ce rel. to thermoelec. power, X-ray absorpt. spectra meas. 2-61448
- CeFe₂Si₂, valence state of Ce rel. to thermoelec. power, X-ray absorpt. spectra meas. 2-61448
- Ce_{1-x}Gd_xRu₂, self induced vortex state, Meissner effect, NMR study 2-87463
- CeIn₃ mixed valence cpd., neutron diff., props. on basis of interacting Kondo-like ions 2-56831
- CeIn₃, reson. photoemission studies 2-57267
- CeInAg, mag. struct., neutron diff. study 2-82565
- CeIn₃-Sn₃, valence fluctuation metals, Fermi liquidology and T/T_f scaling 2-56503
- Ce₄La_{1-x}Be₁₃, mixed valence and Kondo behaviour, lattice const. elec. resist. susceptibility 2-56515
- Ce₄La_{1-x}Be₁₃, thermal expansion temp. driven valence change 2-56226
- Ce_{1-x}La_xMn₂Si₂, mag. props. and struct. 2-87499
- Ce_{0.9-x}La_xTh_{0.1}, mixed valent ground-state, elec. resist., localisation transition 2-56551
- Ce_{1-x}M_xPd₃, M=Sc, Y, La, intermediate valence and Gd³⁺ ESR 2-56927
- CeMg₃, mag. struct., neutron diff. study 2-82565
- Ce(Mn,Ni)₁₁, cyclic intergrowth and crystal structures 2-65975
- CeNi₃, intermediate valence state of Ce, interconfiguration fluctuation model 2-76994
- Ce(Ni_{1-x}Cu_x)₅ and Ce(Co_{1-x}Cu_x)₅, mixed valence, Ce³⁺-Ce^{4f} electronic transition, X-ray K line shift study 2-56497
- CeNi₂Si₂, valence state of Ce rel. to thermoelec. power, X-ray absorpt. spectra meas. 2-61448
- CePd₃, core-level spectroscopy, 4f count determ., 4f hybridisation 2-83006
- CePd₃, electronic struct. from resonant photoemission and optical reflectivity spectra 2-66498
- CePd₃, f-states, optical refl. study 2-77550
- CePd₃, intermediate valence theory, lattice const. and paramag. susceptibility 2-76988
- CePd₃, mixed valence, X-ray absorption spectra 2-76991
- CePd₃ mixed valence cpd., optical absorpt. signature near 20 meV 2-57111
- CePd₃, mixed valency photoemission study 2-87199
- CePd₃, reson. photoemission studies 2-57267

cerium alloys continued

- CePd₃, screening effects in core-level spectra 2-110309
 CePd₃, volume mismatch substitution, γ - α transition 2-66197
 CePd₃(CeSn₃)(CeBe₁₃) mixed-valence cpd., paramag. neutron spectra meas. 2-104577
 Ce(Pd_{1-x}M_x)₃, M=Rh, Ag, intermediate valence and Gd³⁺ ESR 2-56927
 Ce(Pd_{1-x}Rh_x)₃, specific heat, susceptibility and resistivity across the entire mixed valence range 2-56212
 CePd₃Si₂, Ce valence state, Si addition effect, lattice const. and susceptibility meas. 2-97997
 CePtSi, cryst. struct. 2-65922
 CeRh₃, mixed valency photoemission study 2-87199
 Ce(Rh_{1-x}Pt_x)₃, intermediate valence effects in mag. susceptibility and lattice const. 2-87200
 CeRu₂(Co₂), superconductor with 4f electrons, photoemission study 2-104525
 CeSb, p-f valence mixing, anomalous mag. and transport props. 2-56514
 Ce_{1-x}Sc_xAl₃, electronic struct. of Ce 2-71933
 Ce_{1-x}Sc_xAl₃, volume collapse and spin fluctuation behaviour 2-55892
 CeSn₃, Fermi surface, linearised APW calc. 2-98525
 CeSn₃, mixed valence cpd., anomalous NMR shifts 2-56958
 CeSn₃, mixed valent cpd., Fermi surface props. 2-56427
 CeSn₃, mixed valent props. 2-56506
 CeSn₃, monocry., thermopower 2-71952
 CeSn₃, spin fluctuation quenching in heat capacity 2-82611
 α -CeO₃Th_{0.1}, ground state studied by resonant photoemission 2-56496
 Ce_{1-x}Y_xAl₃, demagnetization, mag. susceptibility and sp. ht. 2-56892
 Ce_{1-x}Y_xAl₃, electronic struct. of Ce 2-71933
 Ce_{1-x}Y_xPd₃, electronic struct. of Ce 2-71933
 Fe-Ce, inculant microdistrib. between struct., components of hypoeutectic cast Fe 2-99393
 Fe-Ce-C, ternary system, liquidus and isothermal section at 8000 and 950°C 2-88061
 Gd₂Ce_{1-x}Be_{3-x}, cond. electron lattice relax. due to Ce ion 2-72350
 Gd₂R_{1-x}Ce_xBe₃, (R=La,Y,Lu), cond. electron lattice relax. due to Ce ion 2-72350
 H₂ storage capacity of Mg, synthesis and study of reversible hydrides based on Mg rich alloys of Ce (*French*) 2-78261
 La_{1-x}Y_xCe₂Y₂ system, multiple supercond. transition temps. 2-98788
 Sc_{1-x}Ce_xAl₃Gd, EPR, intermediate valence 2-56926
 Sn-Ce, liquid, dil., 4f spin dynamics, TDPAD study 2-56992

cerium compounds

- see also cerium alloys
 12Kh18NiOT welded steel, effect of inoculation on corrosion resistance of chromium-nickel deposited metal 2-93661
 ceria-yttria high-density ceramics, preparation 2-88036
 intermediate valence cpds., X-ray L_{III} absorption edge 2-57213
 magnetic exchange interactions 2-92894
 mononitrides and monochalcogenides, Coghlin-Schneffer interaction and mag. orderings and excitations theory 2-72184
 UPS, 4-f level energy, width and volume coupling 2-57266
 BaCe₂(CO₃)₂F₂ and related fluorocarbonates, cryst. struct., disorder stacking and intergrowth, X-ray study (*Chinese*) 2-91905
 CaCe₂(CO₃)₂F₂ and related fluorocarbonates, cryst. struct., disorder stacking and intergrowth, X-ray study (*Chinese*) 2-91905
 (Ce, Tb)MgAl₃O₁₀ single crystal, prep. and X-ray charact. 2-87973
 Ce complex, (CN₃H₃)[Ce(CO₃)₃].4H₂O, cryst., vibr., IR study 2-77512
 Ce complex, Na₂[Ce(CO₃)₃].12H₂O, cryst., vibr., IR study 2-77512
 CeAs, mag. struct. and transitions, crit. neutron scatt. study 2-72144
 CeAsO₄, cryst. struct., IR and Raman vibr. spectra, X-ray diff. study 2-98957
 CeB₆, extreme UPS meas. 2-67187
 CeB₆, mag. ordering, neutron diff. study 2-72155
 CeB₆ mixed valence cpd., anomalous props. 2-56511
 Ce₂B₆Co, cryst. struct. 2-55939
 CeBi mag. phase transitions, anisotropic Ising model 2-116021
 CeBi, mag. struct. and transitions, crit. neutron scatt. study 2-72144
 CeBi, reson. photoemission studies 2-57267
 CeCO₃F, cryst. struct., disorder stacking and intergrowth, X-ray study (*Chinese*) 2-91905
 CeCl₃ gas phase, UVES 2-85739
 CeCu₂Si₂, high press. superconducting transition (*Russian*) 2-82511
 CeF₃Gd³⁺ single crystals., temp. variation anal. of EPR linewidths 2-98957
 CeH₃, valence band and 4f and 3d levels, XPS study 2-77704
 Ce_{0.75}La_{0.25}B₆, Kondo state, transport and mag. props. 2-56832
 Ce₂Mg(NO₃)₁₂.24H₂O, influence of environment on dynamic susceptibility in strong mag. field 2-56822
 CeMo₂S₈, mag. props. under press. 2-56911
 Ce_{1.2}Mo_{0.8}S₈, mag. susceptibility and elec. cond. under high press. 2-66789
 CeNH₄(PO₃)₄, X-ray structural investigation 2-76383
 CeO₂, additive in sintering of MgO, effect 2-57324
 CeO₂, first-order Raman spectrum linewidth, temp. depend. 2-110861
 CeO₂ gels for protective coatings, TEM exam. technique 2-105400
 CeO₂, Reststrahlen spectra, transmission and reflection study dielectric constant 2-67049
 CeO₂-CaO, O vacancy diffusion, ¹⁸¹Ta gamma-gamma angular correlation study 2-116096
 CeO₂-x 2-81215
 CeO₂-x, electromigration meas. 2-79613
 CeS₂, heat capacity and mag. ordering 2-104017
 Ce₂(SO₄)₃(H₂O), polarised Raman spectra, vibr. modes, temp. depend. (*French*) 2-72501
 Ce₂(SO₄)₃.5(H₂D)₂O, crystal synthesis and struct., X-ray, Raman spectra and thermal anal. 2-67205
 CeSb, mag. struct. and transitions, crit. neutron scatt. study 2-72144
 CeSb, metamagnet, mag. phase diagram, ANNNI model (*Russian*) 2-82600
 CeSb, phase diagram of ANNNI model in external mag. field 2-77309
 CeSb_{1-x}Te_x, elec. and mag. props. 2-66523
 CeSO₃, prep., cell const., mag. props. 2-71423
 CrCe₂S₇, thermal conductivity, phonon-paramag. ion scattering effects obs. 2-115480
 LiCe(MoO₄)₂, synthesis, structural characterisation 2-86633
 Na₁₁(Na,Ca)₂Ca₂Ce_{0.67}[Si₂O₇]₂[P O₄]₄, phosinaite, cryst. struct. determ. 2-86649
 Na₂O-B₂O₃-CeO₂.3Nb₂O₅-(Al₂O₃) porous glass ceramic 2-77811
 RbCe(SeO₄)₂, lattice parameters, X-ray powder diff. data 2-115193

cerium compounds continued

- SiO₂-Ce₂O₃-Si₃N₄, phase diagram, computer-based calc. 2-62101
 SmCe_{1-x}B₆ solid solution, valence and lattice const. 2-66500
 (Sr,Ba_{1-x})_{1-y}(Nb₂O₆)_y, cerium-doped, as holographic recording medium (*Russian*) 2-60035
 Sr_{0.9}Ce_{0.3}F_{2.3}, solid electrolyte, ionic cond. 2-92273
 (ZrO₂)_{1-x}(CeO₂)_x solid solns., elec. cond., O₂ press. depend. (*French*) 2-98704
- cermets**
 duplex coating, diffusion-inhibited oxidation resistant, for superalloys 2-116622
 optical props. from theory of electrostatic resonances 2-67013
 Pt-Al₂O₃ selective cermet coatings for high temperature photothermal conversion 2-105598
 test equipment for specimen examination at high temperatures 2-116646
 two-phase sintered materials, microstruct.-field prop. correl. (*French*) 2-77831
 Al-Al₂O₃ films, cluster size distrib. near metal-insulator transition 2-82169
 Al-SiO₂-Si metal-cermet-oxide-semicond. struct., enhanced electron injection into SiO₂ layers 2-104492
 Al₂O₃-Ni(Cr)(Ni-Cr) cermet prep. by plasma metallization of Al₂O₃ powder (*Russian*) 2-67272
 Au-Al₂O₃(MgO) granular films, optical props., topological considerations 2-62002
 Au-MgO cermet thin films, cosputtered, reflectivity meas., percolation threshold and grain size effects 2-82942
 Au-SiO₂ cermet film, Hall effect, electronic tunnelling near percolation limit 2-77202
 Bi-SiO₂ cermet films, elec. and optical props., H addition effects 2-82505
 Cm-Au cermets, remote micro-encapsulation of ²⁴⁴CmO₂ 2-108186
 Cu-C reactively sputtered selective surface for evacuated collectors 2-102890
 EuO-Fe cermet, fabrication for reactor control-arm plates 2-107947
 Mo-SiO₂-Si metal-cermet-oxide-semicond. struct., enhanced electron injection into SiO₂ layers 2-104492
 Nb-Al₂O₃ cermet film, elec. cond. calc. 2-82475
 Ni-C spectrally selective films produced by reactive sputtering, structural and electrical props. 2-98490
 Ni-SiO₂-Si metal-cermet-oxide-semicond. struct., enhanced electron injection into SiO₂ layers 2-104492
 Ni-WC cermet, electrodeposition and mech. props. 2-93462
 Pt/Al₂O₃ cermet, selective absorber coatings for solar radiation 2-83512
 W-Al₂O₃ cermet film, Hall effect, electronic tunnelling near percolation limit 2-77202
 WC-Co, deformed, defect struct. of WC 2-83166
 WC-Co (10%-hardmetal, sintering, prep. and props. (*German*) 2-105114
 WC-Co cermet, surface modification by H ion erosion 2-93655
 WC-Co hard alloy components, endurance eval. for cyclic loading conditions 2-99634
 WC-Co(Ni), cavitation erosion 2-88205
 YCrO₃-Cr, cermets, struct. and props. 2-60370
- CESR**
 alkaline earth hexamines, conduction EPR 2-61767
 metals, acoustic spin resonance of conduction electrons (*Russian*) 2-72351
 metals, CESR lineshape calc. under anomalous skin effect conditions 2-61768
 radical cation salts, CESR and spin-lattice relaxation time 2-93007
 (TMTSF)₂ClO₄, itinerant electron antiferromag. precursor to supercond. 2-116068
 C,K (x=8.24), stage and CESR line breadth, temp. depend. 2-87595
 C,Rb (x=8.24), stage and CESR line breadth, temp. depend. 2-87595
 CaV₂O₇H, Fermi glass, ESR, elec. and mag. meas. 2-72352
 p-GaSb, conduction electron spin relax., 4.2 to 77K 2-93008
 Gd,Ce_{1-x}Be_{3-x}, cond. electron lattice relax. due to Ce ion 2-72350
 Gd,R_{1-x}Ce_xBe₃, (R=La,Y,Lu), cond. electron lattice relax. due to Ce ion 2-72350
 (Hg,Cd)Te, optical phase conjugation, ESR mechanism 2-102879
 Li particles, Na impurity distrib., ESR study 2-76485
 Li-Al₂O₃-Cu layers, electron tunnelling, ESR study 2-82714
 Na particle, CESR g-shift, shape depend. 2-116063
- chalcogenide glasses**
 AC conduction, temp. depend. 2-98649
 AC conduction due to polarons (*Japanese*) 2-104384
 acousto-optic devices, selection criteria 2-87740
 atomic defects, dangling bonds, electronic structure, luminescence, review 2-65869
 book on glassy semiconductors 2-68974
 disordered semiconductors with Coulomb-type random field, interband absorpt., multiphonon transitions effects 2-104840
 electrical transport props. 2-72345
 EPR of Mn²⁺, additional HFS at g=4.3 2-110625
 film, photoinduced structural changes (*Russian*) 2-61301
 induced transitions, one-dimens. model, temp. softening (*Russian*) 2-61143
 laser materials, rare earth doped oxide, chalcogenide and fluoride glasses 2-90903
 nonisothermal crystallisation kinetics 2-103651
 optical properties 2-61851
 photoreceptors, residual voltage, electron traps effects, theory 2-115809
 refractive index, wavelength depend. for glasses with different linking 2-110801
 sulphide glasses, As and S centred paramag. species 2-61765
 tellurite glasses, Fe-containing, elec. cond. 2-110406
 transient currents, high speed, explanation by valence alternation pairs 2-56671
 vitrification capacity estimation from phase diagram 2-86570
 Al₂S₃-La₂S₃-Nd₂S₃, chalcogenide mini lasers, emission cross section and threshold power 2-96955
 As-Ge-Si glass, refr. index meas. in IR range using modified GS-5 goniometer (*Czech*) 2-58887
 As-S chalcogenide glass fibres, optical transmission loss spectra, IR region 2-57075
 As-S glasses, Raman inelastic light scatt. 2-104887
 As-S glassy chalcogenide semiconductor films, reversible optical bleaching 2-67138
 As-S-Ag system glass, phase separation and struct. changes on Ag addition to As₂S₃, fractured surface obs. 2-103649

chalcogenide glasses continued

- As-S-Te, temp. depend. of elec. cond. (*Russian*) 2-77039
 As-Se, amorphous struct. far IR reflection spectra study 2-67029
 As-Se-Ge glass, γ -irrad., hardness meas. Ge constant effects 2-56080
 As₂(S₂Se)₃ glass, EXAFS study 2-91786
 As_{1-x}S_x glass-forming liqs., viscosity and struct. transition 2-61187
 As₂S₃, amorphous, hot photoluminescence 2-93261
 As₂S₃, amorphous, photodarkening, configuration-coordinate model 2-57033
 As₂S₃, amorphous, photoluminescence decay 2-110906
 As₂S₃, amorphous, thermal relax., specific heat 2-76702
 As₂S₃, amorphous, time-depend. specific heat meas. 2-66250
 As₂S₃, amorphous, time-resolved phonon spectroscopy 2-56140
 As₂S₃ amorphous film, struct. changes due to laser irradiation and thermal treatment 2-86579
 As₂S₃ birefringence obs. using 1.44 μ m radiation 2-77484
 As₂S₃ film, refractive index changes, permittivity (*Russian*) 2-61864
 As₂S₃ film, vitreous, photodarkening value, press. effect 2-61026
 As₂S₃ glass, EXAFS study 2-91786
 As₂S₃, glassy, photocond. and absorpt. spectra, photoinduced changes (*Russian*) 2-115825
 a-As₂S₃, obs. of mobility gap in photolum. 2-57166
 As₂S₃ optical fibre investigation for devices used to match planar and cylindrical waveguides 2-97216
 As₂S₃, X-ray luminesc. and thermoluminesc. meas. 2-61993
 As₂S₃/Ag system, photodoping mechanisms, ESCA studies 2-115147
 As₂S₃-Ag and As₂S₃-Ag systems, transmission spectra of interacting products (*Russian*) 2-62423
 As₂S_{3-x} chalcogenide glasses, struct. models, bond lengths and angles 2-91805
 (As₂S₃)₁(Sb₂S₃)_{1-x}, chalcogenide glass, optical gap 2-110802
 As₂S₃-Se, birefringence obs. using 1.44 μ m radiation 2-77484
 As₂S₃-Se, birefringence obs. using 1.44 μ m radiation 2-77484
 (As₂S₃)_{1-x}(TiSe)_x, chalcogenide glass film, photoconductivity 2-110399
 As₂(Se₂Te)₂ glass, EXAFS study 2-91786
 As₂Se, high temp. thermal capacity, 300-600K 2-71665
 As₂Se, hole drift mobility near photostructural transformations 2-87280
 As₅₀Ge₅₀Se_{99.5}, amorphous, crystallisation, scanning calorimetry and X-ray diff. study 2-91780
 As₂Se-GeSe-SnSe, Sn valence states, Mossbauer, optical and electron spectroscopy study 2-71935
 As₂Se₃, amorphous, localised density of states meas. 2-82293
 As₂Se₃, amorphous, transient photoconductivity and photo-induced optical absorption 2-92684
 As₂Se₃ birefringence obs. using 1.44 μ m radiation 2-77484
 As₂Se₃, cryst. and amorphous, excitation and pair recomb., ODMR study 2-93067
 As₂Se₃, film, photostructural changes, influence of prep. method 2-99353
 As₂Se₃ glass, EXAFS study 2-91786
 As₂Se₃, glassy, pulse-induced microcosmic geminate excitons, thermal decay 2-61905
 As₂Se₃ thin film, vitreous effect of age, photocond. meas. 2-56645
 As₂Se₃-Ag, diffusion and photodoping, optical edge tracing study 2-71722
 As₂Se₃-Ag(Cu), amorphous, XPS study 2-57249
 As₂Se₃-Au(Pt), vitreous, impurities location and valency, XPS and Mossbauer study 2-76320
 As₂Se₃-Cl(Br)(I)(Ge)(In)(Ti)(Na)(K)(Ag)(Cu), chalcogenide glasses, carrier mobility, transient photocurrent spectra study 2-72024
 As₂Se₃-Ni glass films, photoluminesc. meas. 2-116259
 As₂Se₃-As₂S₃ glass IR fibre waveguides 2-114465
 As₂Se₃-As₂Te₃, As₂Se-As₂Te, As₂Se₃-S, glass point, activation energy of elec. cond. calc. 2-76312
 As₂Se₃-CdSe amorphous-crystalline heterojunction with built-in interface charge, steady-state transport props. 2-77170
 (As₂Se₃)_{100-x}Ge_x glass, elec. cond. and thermoelectric power, adiabatic pot. 2-92610
 As₂Se₂Te₂, glassy, piezoelec. effects, expt. study 2-57021
 As₂Se₂Te₂ birefringence obs. using 1.44 μ m radiation 2-77484
 As₂Te₃ chalcogenide glass, photoabsorption and photoconductivity 2-82406
 As₂Te₃ glass, EXAFS study 2-91786
 As₂Te_{3-x} glasses, intrinsically broken 8-N coord. rule, ¹²⁹I Mossbauer study 2-81686
 Au/Si₁₂Te₈As₃₀Ge₁₀/Al₂O₃/Al structure, current-voltage characts. 2-61589
 Cu-As-Se glassy films, photoconductivity and optical absorpt. (*Russian*) 2-104516
 Fe₂(As₁₅Te₃₇Si₂₅Sb₂₇)_{1-x} film, sputtered, phys. props. 2-92421
 Ga₂S₃, amorphous film, optical props. (*Russian*) 2-62007
 Ga₂S₃-La₂S₃-Nd₂S₃, chalcogenide mini lasers, emission cross section and threshold power 2-96955
 (Ge, Sn)-Se system, glass form. and vibr. props. 2-86578
 Ge-As-Se glass, ion beam deposited, use as optical coating 1 to 16 μ m laser damage 2-65324
 Ge-As-Se glass, optical fibres, plastic clad 2-65385
 Ge-chalcogenide films, optical const. and photo-optical changes, absorption edge 2-93301
 Ge-P-S glass:Mn²⁺, ESR study 2-104694
 Ge-S, amorphous, effective electron correlation energy, EPR study 2-110271
 Ge-S glasses, local order, ESR study 2-65865
 Ge-Se, amorphous, EXAFS spectrometer and detector system 2-116299
 Ge-Se, amorphous, valence and inner shells, XPS study 2-116332
 Ge-Se(S)-(As) amorphous films, obliquely deposited, Urbach tail, photoinduced changes 2-93309
 GeS₂ glass, phonon spectra 2-56138
 GeS₂, pressure-optical studies, network topology analysis 2-67021
 Ge_{1-x}S_x, chalcogenide glass, optical gap 2-110802
 GeS₂(Ge₂Se₃)₃, glassy, photoluminesc. obs. 2-61973
 Ge₄₀-Sb₅₀, chalcogenide glass, optical gap 2-110802
 GeSe amorphous thin layers electronic characts. modification by junction metal azomes incorporation (*German*) 2-92631
 GeSe, amorphous film, optical bistability obs. 2-102853
 GeSe, amorphous film, struct. changes due to laser irradiation and thermal treatment 2-86579
 GeSe, films, amorphous, laser induced optical anisotropy 2-93313
 GeSe, glass, reversible quasicryst., Raman scatt. study 2-81685
 GeSe, thermal quenching of photoluminesc. 2-87848
 GeSe₂-Ag, amorphous, XPS study 2-57249
 GeSe₂-As₂Se₃, glass point, activation energy of elec. cond. calc. 2-76312

chalcogenide glasses continued

- Ge₁₅Se₈₅:In(Cu)(Fe) glasses, photoluminesc. and excitation spectra 2-93263
 Ge₂₅Se₇₅, amorphous inorganic resist film, ion and electron beam induced struct. changes, TEM study 2-115588
 Ge₂Se_{1-x} glasses, photocond. and recomb. processes 2-77112
 Ge₂Se_{2-x}ln(Fe)(Cu), glassy, photoconductivity 2-56634
 GeSeTe, chalcogenide glasses, carrier mobility, transient photocurrent spectra study 2-72024
 GeSe₂Te_{2-x}, chalcogenide glasses, broken chemical order, X-ray and DTA study 2-103638
 Ge₂(Se₂Te₂)₄, glassy, piezoelec. effects, expt. study 2-57021
 (Ge₂₅Se₇₅)_{0.99}Se_{0.01}Se₂ glass, broken chem. order, Mossbauer study 2-81687
 GeS₂ glass, photoinduced EPR meas., dangling bonds role 2-56932
 GeS₂-As₂ amorphous film, diffusion of Au, nucl. backscatt. anal. (*French*) 2-104069
 Ge₂Te₈S₂Sb₂ glass, hopping cond. at low temp., Ge effects 2-61460
 Ge₂Te₈Sb₂S₂ glassy, piezoelec. effects, expt. study 2-57021
 PbS-GeS₂-GeS, chalcogenide glass, struct. and photoelectronic props., DTA and SEM study 2-92681
 Sb₂S₃, struct. rel. to As₂S₃ glass struct. 2-86573
 Sb₂S₃-PbS glass, prep. and props. 2-71367
 Se, amorphous thin film, photodependence of structural relax. 2-81678
 Se glass, dye laser Raman scatt. 2-99130
 Se glassy, piezoelec. effects, expt. study 2-57021
 Se-As alloy film, amorphous, capacitance changes during struct. relax. 2-91785
 Se-Ge, vitrification capacity estimation from phase diagram 2-86570
 Se-Ge-As chalcogenide glasses, microhardness 2-57446
 Se-Ge-As glass, microstruct., fracture surface study by SEM 2-91796
 Se-Ge-As glass melt, solubility of He 2-98292
 Se-Sn-As glass, microstruct., fracture surface study by SEM 2-91796
 Se-Sn-As system, glass transition temp., mech. and elastic props. 2-109687
 Se-Te chalcogenide amorphous semiconductors, nonisothermal crystallisation kinetics 2-103651
 Se_{1-x}As_x-Se glassy semicond. based heterostructs., electron transport 2-92742
 Se_{0.75}Ge_{0.25} films, obliquely deposited, ion-induced physical and optical densification 2-61042
 Te-Si-Pb, preheating effect on crystn. kinetics 2-97926
 Ti-Se-Te, vitrification, physicochemical props. 2-76313
- change of state** see phase transformations
- channel capacity**
 shallow-water acoustic communication channel capacity estimates 2-60287
- channel flow**
 see also pipe flow
 air convective flow, in parallelepipedic box of aspect ratio 14 (*French*) 2-55568
 axial gaps of turbines, gas flow optimisation 2-71035
 Benard convection, laminar and turbulent, direct numerical simulation 2-91431
 Bingham flow through conduits with sudden section change (*French*) 2-55669
 boundary layer flow predictions, low Reynolds number turbulence model 2-65644
 cavity flow, vortex-driven acoustic oscills., nonlinear resonant interactions 2-65645
 circular channel with laminar flow, heat transfer in initial segment 2-55573
 combined convection in wavy-walled channel, skin friction, heat transfer rate and press. drop 2-114799
 composite materials, nonisothermal channel flow laws 2-114748
 contaminant dispersion in turbulent shear channel flow, estuary modeling 2-81396
 corrugated duct heat transfer, press. drop, flow visualisation 2-114911
 curved channel pot. flows, gravity effects 2-60661
 cylinder, transitional and turbulence zones, heat exchange by streamline flow of air (*Russian*) 2-60540
 DC plasmatron, cold gas blowing through channel side walls, flow rate 2-81593
 detonation wave entry into expanding channel 2-81357
 diaphragm in 2-dimens. channel, flow separation 2-86334
 dissolution of rough wall in plane channel, mass transfer depend. on struct. of stream 2-60651
 duct flow, with separation at inlet, turbulent heat transfer 2-91441
 dusty gas, unsteady flow between parallel plates, one plate oscill. effects 2-114769
 dusty gas unsteady flow in elliptical and confocal channels with moving boundaries 2-109407
 flashing liquids, two-phase channel flow, flow crisis anal. 2-71009
 flow associated with intrusion of air cavity into long horizontal ducts 2-76025
 2D flow between parallel plates, mass transfer, turbulence promoters effect, flow separation obs. by visualisation 2-97513
 flow distribution in perforated channels with a permeable end face 2-114903
 fluid flow and heat transfer in vertically oriented cylindrical enclosure 2-114786
 forced convection boiling in oscillating accel. field, critical heat flux 2-113680
 free surface, turbulence struct. and transport mechanism study 2-65646
 gas, laminar convective channel flow, radiation effects 2-97667
 gas liquid two phase flow, liq. distrib., effect of swirl, film flowrate meas. 2-97625
 gas stream, two-dimens. nonstationary, interaction with free cylindrical body in channel 2-60646
 gas-liquid countercurrent flow through multiple short paths, flooding characteristics 2-109403
 Hall effect in free and forced convective flow in rot. channel 2-97664
 heat diffusion in duct flow, wall conductance effect 2-86339
 heat exchange in triangular channels under liq. laminar flow (*Ukrainian*) 2-60529
 heat transfer in MHD flow in a rotating channel 2-109312
 heat transfer under radiation equilibrium in a rectangular channel 2-60653
 horizontal enclosure, flow and heat transfer, effect of horizontal and vertical temp. differences 2-97657

channel flow continued

- hydraulic drag due to division of a stream of fluid into two parallel channels with an arbitrary ratio of flow rates 2-109411
 incompressible viscous fluid, flow through channel with permeable surface, MHD 2-86352
 inviscid shear flows, finite amplitude waves, Couette-Poiseuille channel flow 2-97575
 Jeffery-Hamel flow in convergent channel, linear stability 2-86338
 laminar boundary layer flow into a suction slot, separation region meas. 2-109273
 laminar cavity flow, high Rayleigh number convection investigation 2-91444
 laminar developed duct flow, surface integral numerical soln. 2-91552
 laminar duct flow, heat and mass transfer with mist form. 2-109269
 laminar film flow, mathematical model, heat and mass transfer in two-phase flow 2-97495
 laminar flow heat transfer on annular channel walls, phase transitions effects 2-71030
 laminar flow in porous walled channel with velocity slip 2-86254
 laminar flow in two-dimensional channel, sudden expansion at high Reynolds number 2-91386
 laminar forced convection in converging or diverging planar symmetric ducts 2-114761
 laminarisation, relaminarizing and retransitional flows, review 2-114773
 liquid metal, turbulent flow in flat induction pump channels 2-103156
 longitudinal diffusivity in rectangular channels, turbulence, aspect ratio 2-97530
 magnetic fluid flow through porous annulus 2-71023
 mass transport for Couette flow in a flat conduit 2-114912
 MHD channel flow, dynamic runaway effect associated with flux expulsion 2-109418
 MHD channel flow problems, finite element method 2-103219
 MHD flow between two concentric rot. cylinders under influence of uniform mag. field, porous lining effect 2-114915
 MHD oscillatory flow with heat transfer in a flat plate channel 2-76035
 microsize cylindrical channel, low press. gas flow, theoretical and expt. study 2-81395
 mixing turbulent coaxial flows swirled in opposite directions 2-103155
 modelling and aerodynamic characts. of two-phase media flow in diffuser channels 2-60629
 multichannel laser anemometer investig. of laminar-turbulent flow transition (Russian) 2-114939
 natural convection in space between concentric vertical cylinders of different height and diameter 2-97543
 natural convective flows in internally heated vertical channel with viscous dissipation and press. work 2-70937
 naturally permeable plane channel, unsteady flow of incompressible fluid 2-71034
 neutralizer gas cells, flow characts. and thermal accommodation, exptl. study 2-91546
 newtonian and non-Newtonian flow near a re-entrant corner 2-60657
 Newtonian fluid, high viscosity, in horizontal rectangular ducts, laminar heat transfer 2-109268
 Newtonian fluid, multiaxial elongational flow, growth of disturbances in sheets and annular cylinders 2-97654
 Newtonian fluids, flow between two flat plates interrupted by slit, pressure hole problem 2-60655
 non-Newtonian fluid channel flow, nonisothermal with viscous heating 2-91536
 non-Newtonian fluid unsteady flow through elliptical long ducts with press. gradient 2-109402
 noncircular passages, laminar and turbulent flow, heat transfer, calcs. 2-91553
 nonlinear viscoplastic media, rheodynamics 2-81304
 non-Newtonian fluids in channel, flow calc. using finite element method 2-109373
 nonparallel developing channel flow, stability 2-55664
 nonparallel developing flow in annulus, stability to asymmetric disturbances 2-103151
 nonstationary convective heat exchange in channels 2-91436
 nonuniform viscosity fluid, flow in converging and diverging channels 2-71033
 numerical modelling in diffusion convection, conference, Sunderland, England (May 1981) 2-89466
 one-dimension critical flow in nozzles, numerical soln. 2-60606
 open channel beds, prediction program in FORTRAN IV 2-114899
 open channel flow meas. using rotating EM field (German) 2-81417
 parallel plate channel, linear spatial stability of developing flow 2-97660
 particle motion in nonstationary layered flow of an incompressible fluid 2-86325
 permeable rectangular channel with injection from two sides, hydrodynamics 2-114906
 Poiseuille flow characteristics in 2D channel 2-76019
 polymer melts, nonisothermal flow in narrow rectangular cavity 2-97656
 power law fluid in 2-D channel, peristaltic motion 2-91550
 pressure fluctuations meas. on fixed and oscillating square section cylinders 2-91547
 profile-in-channel flow, oscillations, excitation features 2-114909
 pulsatile flow in heated porous channel, combined free and forced convection 2-71031
 pulsating flow bounded by wall, shear stresses determ. on surface 2-97659
 radio sources, fluid dynamics of relativistic beams flowing through channels rel. to double sources evolution 2-84337
 rectangular duct, S-curved, 3-D turbulence and press. meas., vortices 2-75969
 rotating curved channel flow, friction resist. study (German) 2-103172
 saturation zone for infiltration from shallow water channel 2-111977
 shear flow, laterally confined, non-uniform discharge of contaminants 2-97653
 shear stresses determ. on outlet and inlet sides of rot. channel using turbulence energy eqn. 2-114779
 shear turbulence, coherent struct., pattern recognition 2-70929
 shock wave interaction with wall cavity 2-114852
 shock wave motion in a channel in presence of steady flow regime 2-86302
 shock wave propag. in expanding symmetric channels 2-70992
 single-phase flow in bent channels, laminar and turbulent flow, forced convection visualisation study 2-75951
 slight non-Newtonian liquid, channel and pipe flows, random longit. vibr. influence 2-55671

channel flow continued

- spiral flow in circular channel, travelling mag. field, MHD 2-86351
 square dead-end channel with one porous wall, air flow (Russian) 2-60647
 stabilised flow of viscous liq. through rot. cylindrical channel, low Rossby numbers 2-114905
 stability of fluid flow in channel with porous walls 2-103146
 stable bed shear stress in curved channels, stochastic approach 2-60658
 steady 2-dimens. incompressible laminar viscoelectric channel flow with suction or injection 2-97650
 steady transonic duct flow, aerodynamics interaction of heat transfer 2-70930
 steam flow, nucleation and bubble growth in heated channel, void fraction 2-91515
 Stokes flow in rectangular well, free convection and boundary layer function 2-75963
 submerged obstacles effect on water waves in channel 2-60568
 subsonic inviscid flow in axisymmetric channel with division of flow 2-86336
 3-D supercavitating hydrofoils in oscillation, unsteady cavity flow model (Japanese) 2-76032
 supersonic air gap sensor, static characts. (Japanese) 2-91568
 supersonic flow over ducted body in detached shock wave regime 2-70983
 supersonic stream at exit section, profiling planar and axisymm. nozzles and channels 2-86320
 swirled-film cooling of cylindrical channels 2-91416
 thermal instability in a porous medium with random vibrations 2-97642
 thermally stratified flow under unstable conditions, turbulence, ordered motion 2-109389
 thin liquid films, surface waves, spectral anal. 2-70969
 three dimensional turbulent channel flow, mean vorticity and covariance soln. 2-109297
 transient MHD channel flow, with axial symmetry at subsonic speed 2-86295
 transient subcooled two-phase flows in channels 2-97623
 transient vapour-liquid flow in channels, two-fluid description 2-97636
 tube banks; closely-packed oval, twisted, hydraulic drag and heat transfer (Russian) 2-60659
 tube banks, velocity fluctuations influence on heat transfer (Russian) 2-60541
 Tuesdell viscoelastic fluid, free convection flow in heated channel 2-114855
 2-D turbulence in plane channel, simulation 2-81321
 turbulence non-local theory, heuristic approach 2-71036
 turbulent channel flow, jet model 2-76028
 turbulent channel flow, statistical props. and flow struct. 2-75938
 turbulent duct flows, motion of particles 2-70920
 turbulent open channel flow, discharge depth effect on containment dispersion 2-86332
 turbulent shear flows, conf., Toulouse, France (May 1981) 2-58545
 turbulent two-phase channel flow, phase distrib. mechanism 2-60519
 turbulent wall jets in rectangular diffuser, vel. profile, press. distrib. 2-71002
 turbulent-fluctuation energy spectra, suspended sediment effect in three dims. flow 2-60660
 two dimensional peristaltic flow, Navier-Stokes eqn.-soln., finite difference method 2-114901
 two phase flow about surface located in rectangular channel, heat exchange 2-60627
 two-dimensional transonic diffuses channel flow, hot-film probe and optical study of shock waves 2-109358
 two-phase flow in horizontal channels, anal. using SGAA III code user's guide 2-71021
 two-phase flow in vertical cylindrical passage, numerical anal. 2-114871
 unstable flow characts. over rectangular cavity and effect on mass exchange 2-91551
 unstably-stratified open-channel shear flow, turbulence struct., buoyancy effects 2-109305
 unsteady cavity flow model for two-dimensional super-cavitating hydrofoils in oscillation (Japanese) 2-76031
 unsteady slow flows over a cooled flat plate 2-86277
 vapour flow condensation charact. in channels 2-91544
 vapour generating tubes, heat transfer under transcritical conditions 2-91418
 viscoelastic fluids, flow between two flat plates interrupted by slit, hole press. calc. 2-60656
 viscoelastic liquid in converging channel, laminar flow development and heat transfer 2-109413
 viscoplastic fluids, mixing displacement from channel 2-60649
 viscous electrically conducting fluid, Couette flow in porous annulus 2-86252
 viscous fluid non-steady state flow computational method 2-60572
 viscous incompressible fluid, laminar flow in porous wavy channel 2-81314
 vortices generation in axisymm. shear flow 2-86283
 wall region excitation by sound in fully developed channel flow 2-91537
 water, channel turbulent flow struct., hot-film meas. 2-114900
 water, flat duct flow, turbulent friction 2-71029
 water, flow in inclined channel, turbulence, stability eqn. 2-86341
 water, flow in vertical channels, press. drop meas (Hungarian) 2-109436
 water, hydrodynamically stable-flow in annuli, burnout at varying heat inputs 2-91541
 wave-turbulent current interaction investig. 2-65665
 He two-phase channel flow, hydraulic charact. calcs. 2-103200
³He, superfluid B-phase, flow through narrow channels 2-66314
³He, superfluid B-phase, flow dissipation 2-104100
⁴He, superfluid, steady flow in presence of heat current 2-76762
 Hg-Ar two phase heat transfer in vertical annulus under transverse mag. field 2-114873

channeling radiation see channelling radiation

channelling

see also energy loss of particles

- atomic collisions in solids, conf., Lyon, France (July 1981) 2-68949
 atomic particle ionisation in crystals, mech. 2-115321
 atomic potential calc., simplified Thomas-Fermi-Dirac eqn. 2-80478
 axial, electron motion theory 2-76554
 axial channelling, stationary particle distrib. simulation 2-76551
 backscattered channelled MeV ions, surface peak intensity, theoretical anal. 2-57236

channelling continued

- backscattered electron channelling contrast, optimum detection 2-76556
backscattered electron channelling patterns, critical voltage effects 2-76557
bent single crystals, radiative polarisation of high energy electron-positron beams (*Russian*) 2-109875
CC, W, electron dechannelling lengths, and diffusion coeffs. (*Russian*) 2-56063
charged particle steering by bent single crystals, possible appl. 2-80359
Compton backscattering of laser photons by electrons channelled in a crystal 2-77615
continuum potentials, superposition criteria 2-76542
crystals, relativistic particle movement, Landau-Pomeranchuk effect (*Russian*) 2-92067
dechannelling mechanism due to thermal vibrs. of cryst. atoms 2-71527
dechannelling model based on the stochastic theory for the axial channelling particles 2-98173
diamond, channelled electrons, radiation from 2-dimens. mol. bound states 2-92065
diamond, channelling of He⁺ ions at high depth resolution, backscattering spectra 2-66095
diamond, natural, ion channelling critical angles 2-98175
diamond, ultrarelativistic positron radiation emission (*Russian*) 2-109876
EELS, crystallographic information, fine struct. channelling, diffraction patterns 2-67167
electron axial channelling, theory (*Russian*) 2-71533
electron channelling patterns, in SEM, computer estimation 2-115112
electron dechannelling in single crystals, theory 2-76540
electron planar channelling, transverse motion levels width, quantum theory 2-76549
electrons and positrons, above-barrier, quantum theory of radiation at axial channelling 2-92066
electrons and positrons, channelling in cryst., quantum theory of scatt. (*Russian*) 2-81868
electrons axially channelled in single cryst., multiple scatt. (*Russian*) 2-56063
emission, of channelling radiation by fast electrons 2-76555
energy loss and ion ranges in solids, book 2-74180
fast electron radiation in single crystals, effect of channelling 2-71526
group III arsenide MBE layers, composition, substrate temp. effect 2-87098
heterostructures, relativistic electron channelling (*Russian*) 2-92061
inelastic scatt. of channelled charged particles by phonon excitation 2-81837
ion channelling techniques for defect and surface studies, review 2-71535
ion channelling studies of defects 2-81840
ion implantation, stopping power, SIMS study 2-56053
ion inelastic scatt. at surface, collective modes and surface-channelled ions 2-57233
ion-solid interaction, electron capture process into wake pot. 2-76538
Kumakhov radiation rel. to bremsstrahlung, electron beam divergence 2-103872
laminated structs., neutron channelling, channelling angle (*Russian*) 2-92068
lattice defects study by channelling 2-71532
low-Z impurities lattice location study by ion channelling 2-81843
metals, FCC, dechannelling by defects and on lattice site location of H, review 2-66097
MoN film, As ion implantation, stopping power, SIMS study 2-56053
monocrystals, birefringence of channelled γ -quanta 2-93149
nonperfect crystals, curved X-ray trajectory determ., dynamical theory 2-103558
planar channelling temp. characts. 2-92063
planar dechannelling at dislocations, density effects 2-109869
quantum theory, transport coeffs. and equilb. distrib., quasiclassical case 2-66099
reconstructed surface, backscattered channelling MeV ions, surface peak intensity 2-116322
relativistic charged channelled particles, spontaneous and stimulated γ radiation 2-72521
relativistic positrons, refl. from solid surface, EM radiation emission 2-72575
relativistic protons dechannellisation in elastically deformed single crystal 2-61047
selected area electron channelling patterns, elastic strains effect 2-91733
SEM electron channelling patterns 2-115113
semiconductor superlattices, planar ion channelling, computer simulation 2-109873
Si:Sn, metastable alloy form., by electron beam annealing 2-56041
silicide epitaxial films Si substrates, characterisation by ion channelling and backscattering techniques 2-56403
SOS epitaxial films, defects and strain after CW laser annealing, Rutherford backscatt./channelling and TEM study 2-81799
spectrometer for proton channelling at 8.4 GeV in single crystals 2-64740
sputtering of single crystals, models, review 2-99270
steel, austenitic stainless, Sb⁺ ion implantation, martensitic transition, Rutherford backscatt. study 2-76658
steel, stainless, N implanted, Rutherford backscatt., channelling and nucl. reaction study 2-98119
target translation device for channelling expts. 2-81857
ultrarelativistic electrons, axial channelling (*Russian*) 2-103873
ultrarelativistic particles channelling having a mag. moment 2-81867
Z-oscillations in channelling stopping power 2-66084
Al-Ag (8.2 at.%), single crystals, dechannelling of fast ions by spherical GP zones 2-86762
Al-In (0.02 at.%), mid-channel He ion flux, depth and ang. depend. 2-66096
Al-Sn(Ni), metastable alloy form., by electron beam annealing 2-56041
Al-Zn (6.8 wt.%) single crystals, dechannelling of fast ions by spherical GP zones 2-86762
Al₂O₃, fracture, crack-tip plasticity, electron channelling study 2-88170
Au, convoy electron production by 1-8.5 MeV/u highly ionised ions traversing polycryst. solids and axial channels 2-57227
Au, electron channelling radiation and coherent bremsstrahlung 2-71531
Au epitaxial growth on Ag(111), ion scatt., Auger and LEED study 2-82160
Au, muon implanted, blocking expts. with positrons from muon decay 2-81839
Au, resonant coherent excitation of B, C, N, O, F ions 2-76537

channelling continued

- Co-Fe (20 at.%), grain boundary precip. TEM, STEM, SEM and electron channelling study 2-72708
CoP, ion implanted, elec. resistivity and channelling studies 2-104337
(Cr,Fe,Al,Mg)₂O₄ spinel, cation atom distrib., channelling effect in electron-induced X-ray emission 2-98018
Cu, double focusing in Ar ion refl. 2-81866
Cu¹¹¹In, defects obs. by channelling and perturbed $\gamma\gamma$ ang. correl. 2-81844
Cu-Mn (10 at.%), spin glass, lattice location of Mn 2-71489
Cu-Ni, high temp. sputtering, ion-enhanced diffusion, grain boundary erosion (*Japanese*) 2-116317
Cu(100)+Ar ion, semichannel focusing energy determ. 2-105030
D₂O ice crystal, light ion interaction 2-81842
GaAs:Al(P), ion implanted, radiation damage 2-115317
GaAs:Be(Mg)(Zn)(Cd), ion channelling, electronic stopping power, SIMS study 2-103867
GaAs:Cr, ion implanted, postannealed material state 2-103793
GaAs:Cr, Si, damage and Si lattice location studies 2-76479
GaAs:Se implanted, dose depend. of epitaxial regrowth 2-56378
GaAs:Se implanted layer, low temp. annealing, Rutherford backscatt. channelling study 2-71818
GaAs:Se⁺, ion implanted, high temp. annealing, damage, defects and elec. props. 2-98097
GaAs-InAs(100) heterojunction, MBE grown, lattice disorder, Rutherford backscatt. and channelling study 2-110202
GaP, depth oscill. asymmetry for (110) channelling 2-66094
Gd₃Ga₂O₇:Mg, Zn, channelling study 2-81841
Ge crystal, axially channelled 250 GeV/c positive particles ang. distrib. 2-66093
Ge epitaxial film on Si(100), RF sputter deposition, struct. and elec. meas. 2-66386
Ge, proton dechannelling, lattice thermal vibrs. effect 2-109872
Ge-Si alloys, electron pulse processing, solid soln. synthesis 2-66063
Ge+H⁺(π^-)(π^+), K-shell excitation and ionis. by relativistic projectiles, channelling obs. 2-59920
Ge₂ crystal, κ and p channelling, ang. distrib., 0-250 GeV/c 2-109871
Hg_{1-x}Cd_xTl, annealing and ion implantation damage, Rutherford backscatt. and channelling study 2-86763
InAs-GaSb superlattices, ion dechannelling mechanism 2-66082
InAs-GaSb superlattices, ion beam crystallography 2-116318
InP:Mg(Si), implanted, impurity redistrib. during annealing, SIMS study 2-98144
InSb:Mg, implanted, ion current density and dose effect on radiation defects 2-76533
InSb-InBi solid solns., grown by MBE, charact. 2-104190
LiF, channelling radiation from relativistic positrons 2-103870
MgAl₂O₄ natural spinel, charact. energy losses from channelled 100 keV electrons 2-81838
MgO smoke cryst. surfaces, energy losses of fast electrons 2-62028
Mo, ion irradi., final damage state, mass dependence, channelling and TEM study 2-76530
Ni, laser irradiated, epitaxial regrowth and defects, Rutherford backscatt., channelling and TEM obs. 2-61031
Ni surfaces, relaxation, reconstruction and oxidation, ion beam study 2-77662
Ni-D⁺, ion implanted, impurity defect trapping, ion beam anal. studies 2-81812
Ni:P, implanted, channelling study of amorphous phase formation 2-81804
Ni:P, ion implanted, elec. resistivity and channelling studies 2-104337
P₂O₅-In₂O₃ anodic layers grown on InP, composition 2-67600
PbS/PbSe bicryst., planar dechannelling at misfit dislocations 2-109870
Pd/Si (111)7 \times 7 system, transmission channelling studies 2-81858
Pd-Si(111) interface, ion beam crystallography study 2-115613
Pd₃Au₂:D, lattice location of implanted D 2-71488
Pd/Si epitaxial film, ion beam induced, growth mechanisms and thermal stability 2-115604
Si, electron backscattering, secondary channelling and double-focusing effect 2-87926
Si, electron dechannelling lengths, and diffusion coeffs. (*Russian*) 2-56063
Si, energy depend. of electron angular distrib. during channelling (*Russian*) 2-71530
Si, epitaxial growth, ion channelling studies, review 2-71537
Si epitaxial layers, defects anal., ion backscatt. and channelling techniques appls. (*Chinese*) 2-92376
Si film, polycryst., amorphized by Si ion implantation, solid phase epitaxial recrystn. 2-115581
Si, intense pulsed H⁺, B⁺, Ba⁺ beam irradiation effects 2-76513
Si, ion bombardment, surface layer amorphisation, ellipsometry and channelling investig. 2-103855
Si, ion implantation disorder, ion channelling studies, review 2-71537
Si, ion implanted, pulsed laser annealing, threshold energy density, backscatt. and channelling meas. 2-92029
Si ion implanted wafers, high dose rate, laser annealing effects, TEM, backscatt. and channelling obs. 2-56019
Si, ion-implanted, dechannelling by dislocations 2-76545
Si, proton damage by channelling, depth profiling (*Japanese*) 2-109864
Si, radiation damaged self-interstitial struct., double alignment channelling study 2-76433
Si surfaces, relaxation, reconstruction and oxidation, ion beam study 2-77662
Si, transverse oscills. of He and Li nuclei in planar channels 2-81863
Si:As, ion implanted, pulsed X-ray annealing 2-115286
Si:As, substitutional impurity clustering, ion channelling study, review 2-71536
Si:As(W), ion implanted, defect features 2-103796
Si:B, defect-impurity complexes, ion channelling study 2-71534
Si:B, laser beam annealing, recrystn. 2-103812
Si:Bi, ion implanted, impurity redistrib. after Nd laser pulse irradi. 2-115265
Si:Bi(As), scanning electron-beam annealing 2-103818
Si:Co, impurity lattice location, Mossbauer study 2-103785
Si:H, impurity lattice location, ion channelling studies, review 2-71537
Si(O/N), surface crystallinity and anomalous comp. profiles of buried SiO₂ and Si₃N₄ layers, Rutherford backscatt. and channelling 2-86688
Si:P, ion implanted, depth profiles, channelling and nuclear resonance studies 2-98142
Si:P(As), dechannelling by dislocations and stacking faults 2-81845

channelling continued

- Si/Si₃N₄ plasma enhanced thermally grown film, interface struct. and stoichiometry, backscattering-channelling study 2-56392
 Si-As surface alloy, supersaturated, formation by ion implantation and pulsed electron beam annealing 2-81801
 Si-CaF₂-Si heteroepitaxial struct., prep. by vac. deposition and charact. 2-115612
 Si-SiO₂ interface, atomic struct., ion backscatt. channelling study 2-104172
 Si₃N₄, low-pressure CVD layer anal. using Rutherford backscattering spectrometry 2-116314
 Si₃N₄ thin films, backscattering anal. and nuclear reaction meas. (Chinese) 2-66389
 SiO₂:Ar⁺, ion implanted electron irradi., antiannealing effect 2-66062
 Ta, pion implanted, blocking expts. with positive muons from pion decay 2-81839
 W, proton dechannelling, lattice thermal vibrs. effect 2-109872
 ZnCr₂Fe₂O₄ spinels, cation atom distrib., channelling effect in electron induced X-ray emission 2-81742
 ZnSi₃, iodine transport grown, channelling and ionoluminesc. spectra study 2-56058
 ZrO₂-Y₂O₃:Yb crystals, Yb implanted yttria stabilised, O vacancies, channelling study 2-109867

channelling radiation

- atomic collisions in solids, conf., Lyon, France (July 1981) 2-68949
 bent single crystals, radiative polarisation of high energy electron-positron beams (Russian) 2-109875
 diamond, electron channelling, sharp-line and broad-continuum radiation 2-81847
 diamond, electron channelling radiation, temp. and crystal defect effects 2-81849
 diamond, electron impact, small angles of incidence, radiation spectra (Russian) 2-92062
 diamond, electron irradi., coherent bremsstrahlung and channeling radiation meas. 2-77614
 diamond, ultrarelativistic positron radiation emission (Russian) 2-109876
 electrons, channeling radiation and coherent bremsstrahlung, theory 2-104984
 electrons, X-ray stimulated emission, theory 2-85979
 electrons and positrons channelled in crystals, radiation characts. 2-109868
 fast electron radiation in single crystals, effect of channelling 2-71526
 planar channelled electron radiation, model calc. at relativistically high energies 2-81853
 planar channelling radiation from GeV positrons, anharmonic pot. influence on calcs. 2-81860
 positrons and electrons, exptl. results and appl. possibilities 2-61046
 quasicchannelling, axial, electron and positron emission (Russian) 2-57205
 spontaneous radiation of relativistic electrons under planar channeling and band structure of transverse energy 2-56056
 stimulated emission possibility from relativistic channelled electrons, optical and x-radiation generation 2-116208
 visible radiation formed by channelled particles 2-104985
 Au, electron channelling radiation and coherent bremsstrahlung 2-71531
 CaF₂, planar channelled positron radiation characts. 2-81852
 Cu, effect of lattice periodicity on channelling radiation 2-71528
 KBr, planar channelled positron radiation characts. 2-81852
 KCl, planar channelled positron radiation characts. 2-81852
 KI, planar channelled positron radiation characts. 2-81852
 NaCl, planar channelled positron radiation characts. 2-81852
 Si, axial channelling radiation from MeV electrons 2-81846
 Si, channeling radiation from 5-55 GeV e⁺(e⁻) 2-56057
 Si, channelling radiation Monte Carlo calcs. and comparison with expt. 2-81848
 Si, channelling radiation of 10 GeV positrons 2-56055
 Si, electron channelling radiation, temp. and crystal defect effects 2-81849
 Si, radiation from 10 GeV positron channelling 2-81850
 Si, radiation from axially channelled electrons at low energies 2-81851

character recognition

- see also optical character recognition
 translation invariant transformations, fast, for pattern and character recognition (Slovak) 2-55080

characteristic temperature see Debye temperature**characteristics measurement**

- see also headings for specific characteristics, e.g. gain measurement; viscosity measurement
 semiconductor crystal properties, measuring apparatus (Russian) 2-98693
 US transducers, amplitude-frequency response meas. 2-109154

charcoal

- see also carbon
 No entries

charge (electric) see electric charge**charge compensation**

- see also crystallography
 polar surface of compound crystals, electronic struct. 2-110416
 semiconductor, carrier conc., deep levels effect in case of strong compensation 2-110368
 As₂Se₃:Ag(Cu), amorphous, XPS study 2-57249
 GaAs, bulk Bridgman crystals, O related gettering of Si during growth 2-61005
 n-GaAs:Te, degree of electronic compensation, laser IR microscopy 2-67043
 Ge:As, Sb, compensated and illum., low temp. Hall mobility of electrons 2-77096
 n-Ge:Sb, compensated by fast neutron irradi., activated elec. cond. 2-115762
 GeSe₂:Ag, amorphous, XPS study 2-57249
 KH₂PO₄:Ti³⁺, dynamical charge compensation, ESR, rel. to ferroelec. transition 2-56929
 d-LiO₂:Mn²⁺, superhyperfine and ⁷Li quadrupolar interactions, ENDOR and RF discrete saturation study 2-56535
 NaCl:Pb²⁺, luminescent centre symmetry, photoluminescence meas. 2-57168
 Si:H(O), interaction between dislocations and H or O, elec. and luminesc. props. (Russian) 2-56487
 Si:In, P, electron capture coeff. of neutral In and pair recomb., photoluminesc. spectra 2-77569
 SrTiO₃:La, elec. cond., 850 to 1050°C 2-87264

charge-coupled device arrays see charge-coupled device circuits**charge-coupled device circuits**

- 60 MHz oscilloscope, using digital image storage, P²CCD appl. 2-95353
 astronomical appls., conf. (Cambridge, MA, June 1981) 2-79270
 C-CD leased read-out for charged particle identifier 2-64800
 camera automatic focusing system using CCD grating with sensor array (German) 2-84723
 camera system, for remote meas. of ocean waves dynamics 2-58133
 cameras, electronics applications (Swedish) 2-95500
 CRO with digital storage and P²CCD frequency converter 2-112883
 digital CCD camera, appl. to high time resolution obs. of solar flare, (1980 December 17) 2-100688
 drift chamber positioning, dynamic compensation of small errors using optical CCD system 2-90390
 electron bombarded CCD detectors for VUV 2-114470
 electron microscopy charge-coupled device-based detector systems, dose effect 2-64189
 electronic still-picture camera using CCD solid-state imager and mag. disc 2-107432
 frame-transfer CCD electronic still-picture camera using magnetic bubble memory for digital recording 2-107431
 image detectors, CCD array, for VUV 2-114471
 image recording system, for TEM 2-113069
 image sensor and video digitiser for streamer chamber track digitisation 2-75103
 image sensors, eye movement measurement and meas. resolution 2-94156
 imaging arrays, appls. in astronomy 2-78963
 intensified CCD for spaceborne spectrographic image-plane detector 2-112148
 multidetector system for electron spectrometers 2-113812
 solid state still camera and the future 2-53856
 spectrum analyser/colorimeter, C-CD based, Rainbow system, design and appls. 2-64094
 time projection chamber, CCDs appl. 2-64799
 transversal filters, appl. to real-time spectral anal. of Doppler US arterial signals 2-68093
 UOSAT satellite-borne Earth imaging system, educational applications 2-117498
 InSb detector, 32X32 CCD array, IR astronomy appls. 2-74502
 Pd:Si Schottky-barrier IR-CCD for short wave IR appls. at intermediate temps. 2-74501

charge-coupled devices

- see also charge-coupled device circuits
 position-sensitive detector system for electrons using CCD 2-85477
 Al_{0.5}Ga_{0.5}As-GaAs heterojunction CCD, quantum efficiency, heterojunction spike effects 2-87376
 GaAs CCD 2-114416

charge density waves

- commensurate-incommensurate transition, one-dimensional, crit. behaviour 2-92145
 dynamic group model 2-61375
 dynamical group SO(6), coexistence with superconductivity 2-92814
 Fermi gas, quasi-one-dimensional phase transitions, renormalisation group study 2-56760
 fractional charges and freq. depend. currents in CDW systems 2-56557
 low dimensional conductors, irradiation effects and role of disorder, review 2-87233
 metal, surface Bernstein modes 2-82420
 metals, incommensurate charge density wave phase-amplitude instabilities 2-115683
 modulated crystal, excitations near commensurate-incommensurate transition 2-92179
 one dimensional CDW distorted solid, charge density fluctuations, dielec. function calc. 2-71893
 one dimensional many electron system, SDW and CDW regions, mean field theory 2-98564
 one-dimensional conductor, Peierls transition and electron localisation by random pot. 2-56554
 one-dimensional conductors, radiation effects on cond., review 2-71496
 one-dimensional electron-phonon system, CDW dielec. response in precrit. region 2-110251
 one-dimensional solitons, CDW, SDW, and ion displacement fields 2-115677
 one-dimensional system, CDW, domain struct. and 1/f² noise (French) 2-115675
 organic conductors, charge density waves, soliton collisions 2-92492
 Peierls system, 1-dimens., functional integral method, diagrammatical approach 2-115676
 Peierls system, interchain interaction and fractionally charged solitons 2-104274
 Peierls system, phonon dynamics calc. 2-104266
 Peierls transition and CDW in one-dimensional conductors (Japanese) 2-82257
 polyacetylene, collective fields, functional integral formalism 2-92588
 quasi-one-dimensional CDW system, life time of phase mode due to inter-chain coupling 2-61104
 quasi-one-dimensional spinand charge-density wave systems, solitons 2-56558
 radiation-induced depinning of CDW system 2-66465
 relativistic electron beam, in plasma waveguide, charge density wave scatt., ion acoustic waves (Russian) 2-103387
 sliding cond. 2-98630
 solitons in charge- and spin-density-wave systems 2-87162
 spin response study 2-115679
 superconductors, impurity and fluctuation effects 2-82526
 superionic crystals, surface capacitance, charge density waves (Russian) 2-92729
 TCNQ salt, TMTTF-TCNQ, charge transfer, Raman shift, XPS and elec. cond. meas. 2-87237
 threefold commensurate Peierls insulator, fractional soliton charges 2-92489
 (TMTSF)₂PF₆, cond. increase due to nonequilibrium conditions 2-110332
 (TMTSF)₂X, charge density waves, spin density waves 2-92491
 (TMTSF)₂X, X=ReO₄, PF₆, IR study of charge density waves 2-76951
 (TMTSF)₂X series, phase transitions 2-92589
 TMTSF-DMTCNQ, low temp. metallic state and superconductivity 2-72104
 transition metal dichalcogenides, layered, low dimensional conductors, phys. props., review (Japanese) 2-82335

charge density waves continued

- transition metal dichalcogenides, Raman scatt. from charge density wave phonons 2-104881
 transition metal intercalates, M_xTaS_2 ($M=Fe, Mn, Ni$), X-ray core level photoemission, charge transfer effects 2-11023
 transition metal monosulphides, metal-dielec. phase transition, two-band model 2-71871
 transition metal trichalcogenides supercond., CDW's and related phenomena, review (*Japanese*) 2-82256
 transition metals, HCP, lattice dynamics, dipole fluctuation model 2-81912
 TTF-TCNQ, low temp. IR studies, rel. to DC cond. 2-87783
 TTF-TCNQ, low temperature phases, CDW-CDW Coulomb interaction 2-92590
 TTF-TCNQ, temp. depend. of low energy IR modes 2-87784
 two-dimensional electron structs., Coulomb correlations and the quantum Hall effect 2-82379
 Ag_xTaS_2 , intercalation cpd., electron diffr. investig. of superlattices, struct. and CDW 2-103720
 Au-Cd (33 at %), hexagonal type antiphase domain struct., lattice modulation, X-ray diffr. study 2-65924
 $Cu_{1-x}S_x$, CDW and struct. transition, X-ray diffr. study 2-92189
 $Eu_xMo_2S_3$, superconductivity, thermoelectric power, Fermi surface 2-82510
 $FeNb_3Se_{10}$, metal-insulator and CDW transitions correlation, elec. cond. press. depend. study 2-77133
 $Fe_{1-x}Nb_xSe_{10}$, electronic struct., tight binding calc. 2-98517
 $GaAs-AlGaAs$ heterojunction, two-dimensional magnetotransport in the extreme quantum limit 2-82376
 $HfTe_2$, Ar, low-dimensional cond., Hall effect and transverse magnetoresist. 2-92663
 K, CDW state and residual resist. anisotropy 2-82316
 K, galvanomagnetic and thermomagnetic props. 2-87226
 K, induced torque temp. depend. 2-110617
 K, magnetoresistance, open-orbit spectra, effective medium theory 2-77023
 K, open orbits, rel. to high-field magnetoresistance 2-87227
 $\beta-Li_2V_2O_5$, quasi-one-dimens. cond., EPR 2-92997
 $\beta-Na_2V_2O_5$, quasi-one-dimens. cond., EPR 2-92997
 NbS_3 , nonlinear conductivity and charge density wave transitions 2-98631
 $NbSe_2$ -2H, charge density wave-periodic struct. distortion transition 2-103980
 $NbSe_3$, AC-induced DC cond. for CDW, tunneling theory 2-82329
 $NbSe_3$, CDW cond., field and freq. depend. 2-56559
 $NbSe_3$, CDW cond. onset, switching and hysteresis 2-110407
 $NbSe_3$, CDW motion, AC-DC coupling 2-56560
 $NbSe_3$, CDW motion, differential resist. study 2-66540
 $NbSe_3$, CDW motion, dynamic props., expt. study 2-66541
 $NbSe_3$, charge density wave dynamics and noise, damped kink model 2-104273
 $NbSe_3$, commensurate CDW system, fractional changes and freq. depend. currents 2-82328
 $NbSe_3$, current oscills. and stability of CDW motion 2-104356
 $NbSe_3$, dielectric function, low freq. noise meas. 2-92497
 $NbSe_3$, Fröhlich sliding mode mechanism 2-87231
 $NbSe_3$, microwave harmonic mixing 2-104411
 $NbSe_3$, nonlinear cond. and narrow band noise 2-104358
 $NbSe_3$, nonlinear response to pulsed elec. fields 2-104357
 $NbSe_3$, radiation-induced depinning of CDW 2-66465
 $NbSe_3$, transport props. rel. to CDW form. 2-115739
 $PbTe$, CDW, mag. field depend. 2-61376
 Si surface (111), electron-photon interaction and metal-insulator transition 2-87358
 TaS_2 (1T), CDW phase transform., positron annihilation Doppler broadening study 2-99215
 TaS_2 (1T), electron irradi., Mott to Anderson localisation, electronic transport 2-92594
 TaS_2 , X-ray core level photoemission, charge transfer effects 2-11023
 TaS_2 , CDW dynamics, freq. depend. cond. meas. 2-71956
 TaS_2 , elastic anomalies at CDW transition 2-76564
 TaS_2 , irradiation induced defect pinning of CDW, electron diffr. study 2-66064
 TaS_2 , monoclinic, press. depend. on CDW transitions 2-87241
 TaS_2 , thermoelectric power meas. 2-104400
 TaS_2 (1T), irradiation induced defect pinning of CDW, electron diffr. study 2-66064
 $TaSe_2$ (2H), discommensurations in commensurate CDW states 2-71426
 $TaSe_2$ (2H), microstruct. in incommensurate and commensurate CDW states, electron microscopy obs. 2-104009
 $TaSe_2$ (2H), Raman scatt. from CDW state, commensurate-incommensurate transition 2-66468
 $TaSe_2$ (2H) structure, CDW, interlayer interactions effects 2-76950
 $TaSe_2$ -2H, charge, density wave-periodic struct. distortion transition 2-103980
 $TaSe_2$ (2H), electronic susceptibility, CDW and lattice vibr., Raman scatt. study 2-77530
 $TaSe_2$ (2H), incommensurate CDW phases 2-103722
 $TiSe_2$, EXAFS spectra 2-72579
 α -U, atomic displacements incommensurate CDW 2-103691
 U, martensitic transform. effect on supercond. 2-110526
 $ZrTe_2$, negative evidences for CDW's and SDW's 2-56553
 $Zr_{1-x}Ti_xSe_2$, EXAFS spectra 2-72579

charge exchange

- for charge exchange in particle and nuclear physics see elementary particle interactions and nuclear reactions and scattering
 see also charge transfer states; ionisation
 acetylene+He (Ar^+), excitational disoc. optical emission from excited fragments 2-105470
 adenine-thymine base pair, double H-bonding, CNDO/S calcs., molecular orbital correls. and orbital energy shifts 2-96452
 adenine-thymine base pair, triplet excited electronic states, intermol. H-bonds, charge transfer, CNDO calcs. 2-102602
 adsorbed molecule on metal, spontaneous Raman processes, cross section growth (*Russian*) 2-59810
 alkenes, free radical addition, charge transfer and spin transfer during chemical bond form., MO anal. 2-99646
 aminoanthraquinone dyes, spectra, solvent effects 2-75302
 9-aminoanthraquinone, anomalous fluoresc., solvent effects 2-90603

charge exchange continued

- 4-(9-anthryl)-N,N-dimethylaniline, intramol. charge transfer, INDO/S CI and PCIO calcs. 2-90688
 aqueous solutions, free energies, electron transfer, photoelectron obs. 2-110009
 asymmetric ion atom collisions, coherent Coulomb ionisation of $1s\sigma$ mol. orbital 2-102606
 atom+ion collisions, charge transfer cross sections 2-108697
 atom-ion collisions, asymmetric electron capture theory 2-96714
 atom-molecule exchange reactions, cross section, impact parameter bands 2-111480
 benzaldehyde-phenols in carbon tetrachloride, association complexes, dipole moment studies 2-57605
 bond-orbital wavefunctions, bonding, charge transfer, UB anal. 2-64851
 n-butyl chloride, pulse irradi. liq. charge transfer from solvent radical to solutes 2-90682
 carbontetrachloride+tetracene charge transfer interaction 2-78092
 charged-particle scattering in the presence of an amplitude-modulated laser field 2-114100
 CIDNP formation in electron transfer reactions, electron exchange effect 2-70279
 close atomic collisions, compound atom model for charge exchange processes 2-54951
 N,N'-dimethyl-4,4'-bipyridylum chloride+electron donor, charge transfer spectra 2-57772
 p-(dimethylamino)benzonitrile in propanol soln., ps. dynamics of twisted internal CT phenomena 2-75347
 donor-acceptor charge transfer systems, in soln., charge transfer spectra, photoelectron emission 2-90622
 electron transfer reactions, approx. Franck-Condon exponential disordered wave scaling theory 2-99660
 electron transfer reactions, exact quantum no. scaling relationship for semiclassical time-depend. dynamics 2-99661
 electron transfer reactions, low temp. free energy rels. 2-111474
 electron transfer reactions, nucl. mag. relax. obs. 2-93772
 field evaporation, charge exchange mechanism, activation energy formulae 2-87054
 fluoroacetones gas-phase basicities, additivity of F substituent effects 2-78082
 fully ionised low-Z impurities in PDX Tokamak, spatially resolved meas. 2-109602
 H^+ transfer reactions, kinetic isotope effect 2-70410
 heavy ions exiting C-foils, equilb. charge-state distrib. 2-96707
 heavy ions in energy range up to 10 MeV/u, charge state distrib. and charge-changing cross sections 2-54952
 ion diffusion and generalised Einstein relations, reson. charge transfer effects 2-71064
 ion-ion collisions, doubly resonant charge exchange 2-75406
 ion-solid interaction, electron capture process into wake pot. 2-76538
 low energy charge transfer collisions, ion-impact ion sources 2-102301
 low energy ion scatt. from solid surfaces, neutralisation effects 2-77663
 molecular ions, molecular struct., and interaction with matter, conference, Haifa, Israel (Jan. 1981) 2-53410
 muonic H+Li, μ -mesomolecule form., charge exchange (*Russian*) 2-96779
 nonresonant radiative charge transfer 2-65084
 one electron two centre symmetric systems, differential cross sections 2-59928
 organic ion radical semicond., trimerised, electron-mol. vibr. coupling 2-96536
 paraquat dimer mols., electrochem. behaviour, bielectronic mediation appls. 2-85802
 peptide-ion model complexes, charge transfer, induced polarisation 2-73183
 photoelectrochemical devices, charge transfer via interface states 2-88463
 plasma positive ions, metastable states lines used to determine electron temp., charge transfer effects 2-94590
 polar media, transition probability, path. integral method 2-108695
 polyacetylene, geometry change on charge transfer, cryst. orbital calcs. 2-109689
 pyranthrone/dodecane (HMPA) interface, elec. field assisted photostimulated charge transfer 2-104420
 pyrene-dimethylaniline, donor to radical pair electron transfer, triplet form., delayed fluoresc. obs. 2-85720
 refined orthogonal variational treatment of continuum distorted waves 2-105442
 semiconductor surfaces and electrodes, macroscopic dynamic models of partial charge transfer processes (*German*) 2-61586
 solar wind ions, absorpt. in Venus dayside ionosheath due to charge exchange 2-73882
 cis-stilbene radical cation, electron transfer reaction, CIDNP formation, electron exchange effect 2-70279
 TCNQ salt, TMTTF-TCNQ, charge transfer, Raman shift, XPS and elec. cond. meas. 2-87237
 TCNQ-TTF complex, intermol. interactions, closed-shell MINDO/3 calcs. (*German*) 2-108389
 transient and equilibrium effects in the charge state distribution of ions 2-57226
 transition metal carbides and nitrides, Tc, charge transfer model 2-72095
 transition metal ions, bridging props. in electron transfer reactions 2-105449
 trichloroethylbenzene, ionis. pots. and intramol. charge transfer, photoelectron spectra, electronic struct. 2-90626
 triethylamine radical cation, electron transfer reaction, CIDNP formation, electron exchange effect 2-70279
 Ag surface (110), NH_3 adsorption, thermal desorption spectroscopy and EELS study 2-66372
 Al(III) complex, sulphonated phthalocyanine, excited singlet and triplet state electron transfer reactions 2-78089
 $Ar^+P_{3/2}$ ground state, thermal energy charge transfer 2-90692
 Ar^+ mobility in Ar, charge exchange cross section 2-55695
 $Ar+H_2^+(D_2^+)$, proton and charge transfer, coupling 2-102571
 Ar^+Ar , symmetric charge exchange cross section calcs. 2-90685
 Ar^+H_2 , low energy charge transfer reactions, time-of-flight study 2-80803
 $Ar^+H_2(N_2)(CO)(O_2)(CO_2)(N_2O)(COS)$, energy depend., rate consts. meas. 2-88346
 Ar^+ +insert gas atoms, electron loss cross section meas. 2-102600
 $Ar^+N_2(CO)$, charge transfer, spin-orbit states, threshold electron-secondary ion coincidence study 2-96715

charge exchange continued

- Bi₂GeO₂₀:Cr, light induced charge transfer processes, optical absorption and EPR 2-99159
 Bi₂SiO₂₀:Cr, light induced charge transfer processes, optical absorption and EPR 2-99159
 CO⁺, absorpt. spectra, charge exchange 2-54833
 CO+Ar⁺(CO⁺), thermal energy charge transfer reactions, laser induced fluoresc. study 2-90683
 Co complex, CO₂(CO)₆, where L=ethyne, propyne and butyne, electronic struct., CNDO/2 calcs. 2-96455
 Cu, surface (110), Ne⁺ and H₂O⁺ ion scatt., angular distrib., surface geometry 2-62035
 Cu, surface sp-d charge transfer 2-104458
 Cu, surface sp-d charge transfer 2-104459
 D⁺+H₂O, solvating collisions, trajectories calcs., mechanism 2-90654
 D⁺+alkaline earth vapour, D⁺ prod. by charge transfer, interaction energies 2-96727
 D⁺+H₂→HD+H⁺ reactions, drift tube investig. in relative energy range 0.04 to 0.3 eV 2-57606
 F⁺+CO(N₂)(O₂)(CO₂), electron detachment cross sections meas. 2-59927
 F⁺+He(Ne)(Ar), electron detachment cross sections meas. 2-59927
 Fe²⁺+Fe³⁺ electron exchange in H₂O, theory 2-54954
 Fe⁶⁺+H₂, one-electron capture, cross section meas. 2-102618
 GaAs:Cr, charge transfer induced by press. 2-66484
 H, electron impact, laser modification of exchange scatt. 2-102626
 H, positron impact, charge transfer cross-sections calcs. 2-59946
 H-like atoms, spin electron polarization in absence of external mag. field (*Russian*) 2-96485
 H⁺-Cs, plasma, charge exchange, population inversion, laser characts. 2-108861
 H+C³⁺, charge transfer, cross section calcs. 2-70412
 H+H₂, exchange reactions, cross section, impact parameter bands 2-111480
 H+H⁺, asymptotic behavior of charge exchange cross sections (*Russian*) 2-85804
 H+H⁺, electron excitation and charge transfer, 1-20 keV 2-96692
 H+H⁺ scattering appl. of soln. of time depend. Schrodinger eqn. with trajectory method 2-54944
 H+highly stripped ions, electron capture theories 2-54959
 H+Li²⁺(Be⁺), low impact energy, charge transfer 2-114099
 H+Li³⁺(Be²⁺), charge transfer cross sections, impact parameter approx. 2-59931
 H+O₂⁺(O⁺), charge transfer rate consts. 2-102613
 H⁺+D₂→HD+D⁺ reactions, drift tube investig. in relative energy range 0.04 to 0.3 eV 2-57606
 H⁺+H close coupling calcs., electron transfer cross sections 2-80805
 H⁺+H(D), charge transfer collisions within energy range 0.1-150 eV 2-90659
 H⁺+H(1s), charge exchange, three-centre atomic expansion method 2-85803
 H⁺+He, charge transfer collision, elec. dipole moment 2-54958
 H⁺+He⁺, excitation, charge transfer, ionisation, emission cross section meas. 2-114090
 H⁺+He⁺, one and half centred calcs. of ionisation and charge transfer 2-54955
 H₂+C²⁺(N⁺)(O⁺), atomic ground state, charge transfer cross sections 2-75417
 H₂+Ar⁺, near-reson. charge transfer, vibr. and electronic energy effects 2-75415
 H₂+N₂(CO)(O₂), H⁺ and charge transfer, collision energy and ion vibr. excitation 2-102604
 HCl⁺, ground state, charge exchange reactions, rate coeffs., selected ion flow study 2-88341
 HD⁺ absorpt. spectra, charge exchange, photodissoc. 2-54833
 H⁺+N⁴⁺(O⁴⁺)(Ar⁴⁺), charge exchange, impact ionisation, cross section, crossed-beam expt. 2-114102
 H⁺atomic-beam polarised ion sources, ionisation stage 2-75079
 He ions+He(N)(Ne)(Ar), charge exchange cross sections, oscillations, average equilb. charge 2-85800
 He⁺, backscattering from Pb, Sn, Al targets, equilb. charge state distrib. 2-54957
 He-N₂, afterglow, Penning ionisation, charge transfer, kinetic model 2-96716
 He⁺-Xe, charge transfer reaction, combined drift-tube and beam luminesc. study 2-99671
 He+C⁵⁺(O⁵⁺), electron capture into selective state, energy spectra meas. 2-102608
 He+H⁺(D⁺), electron detachment cross sections meas. 2-59927
 He⁺+H₂(D₂), collision spectrosc., triatomic mol. orbital promotion model 2-96691
 He⁺+H⁺, close coupling calcs., electron transfer cross sections 2-80805
 He⁺+He, scatt. cross sections meas., charge transfer cross section meas. 2-75410
 He⁺+He⁺, charge transfer cross sections 2-96682
 He⁺+N, charge transfer collisions, N₂⁺(B₂⁺) state vibr. populati on 2-70411
 He⁺+Ar, transfer ionisation in slow collisions 2-59926
 He⁺+H, one and half centred calcs. of ionisation and charge transfer 2-54955
 He⁺+H-like ions, charge transfer cross sections, Coulomb projected Born approx. 2-90687
 He⁺+He, charge exchange, time-dependent HF theory appl. 2-90658
 He⁺+He⁺, excitation, charge transfer, ionisation, emission cross section meas. 2-114090
 He⁺+Li, electron transfer, single and double, cross-sections 2-65086
 Kr⁺^{3/2} ground state, thermal energy charge transfer 2-90692
 Kr+Kr (Kr²⁺), symmetric reson. charge transfer, drift tube study 2-108696
 Kr⁺+inert gas atoms, charge transfer cross section meas. 2-102601
 Kr+O₂(CO)(N₂O)(OCS), fine struct. state depend. reactivity 2-105471
 Kr+O₂(CO)(NO)(OCS), charge exchange, electronic state effects 2-90691
 LaH₃, XPS core level and valence band spectra 2-76925
 Li³⁺+H, charge exchange calcs. 2-102610
 Li³⁺+H, electron transfer collisions at low and intermediate energies 2-80804
 M⁺+N, excited state charge-exchange cross sections, ODMR 2-102611
 Mg⁺+Ca collisions, total charge transfer cross section 2-114091

charge exchange continued

- N₂⁺ symmetric charge exchange reactions, laser-induced fluoresc. obs. 2-102617
 N₂+C²⁺(N⁺)(O⁺), atomic ground state, charge transfer cross sections 2-75417
 N₂+Pb(Xe), charge changing cross sections at velocities up to 4×10⁹ cm/sec 2-105479
 N₂⁺+Ar, charge transfer, threshold electron-secondary ion coincidence study 2-96717
 N₂⁺+Ar(N₂), charge transfer, vibr., laser induced fluoresc. study 2-80802
 N₂⁺+N₂, charge exchange, energy transfer dynamics 2-111475
 Na⁺+Na, Rydberg to Rydberg charge transfer 2-65083
 Ne⁺, mobility in N₂, charge exchange cross sections 2-55695
 Ne+K²⁺, inner-shell excitation, quasiresonant charge transfer, K-Auger emission 2-75416
 Ne⁺+O, close coupling calcs., electron transfer cross sections 2-80805
 Ni, surface sp-d charge transfer 2-104458
 Ni, surface sp-d charge transfer 2-104459
 O²⁺+H, charge exchange, rot. coupling matrix, ab initio CI calcs. 2-85799
 O₂+O₂, symmetric molecular charge exchange and vibr. excitations, quantum mechanical calcs. 2-96683
 O₂+Xe, near-reson. charge transfer, vibr. and electronic energy effects 2-75415
 PbMo₂S₈, charge transfer and 4d orbital splitting of Mo atom 2-76918
 Ru complex, tris(2,2'-dipyridine)ruthenium(II), photoinduced electron transfer with organic quenchers, temp. depend. 2-99648
 Ru complexes, soln.-polymer film interfaces, outer sphere electron transfer kinetics 2-62385
 Ru(II) complex, tris(2,2'-bipyridine)Ru(II), electron transfer quenching, radical yield 2-80794
 Si⁺+H⁺, charge transfer ionisation at thermal energies, reaction rates 2-59923
 TaS₂-2H, intercalation cpd. with NaOH, supercond. transition temp. and charge transfer 2-92804
 Xe⁺^{3/2} ground state, thermal energy charge transfer 2-90692
 Xe+Xe⁺(Xe²⁺), symmetric reson. charge transfer, drift tube study 2-108696
 ZnSe, vacancy defect energies 2-98574

charge measurement

see also electrometers

- balanced integration in precision coulometry with minitored potentials 2-95331
 battery charge monitor for balloon experiments 2-107343
 brush discharges, charge transfer meas. technique 2-115080
 charge to mass ratio of powders for powder coating plant optimisation 2-111069
 dielectric films, polarisation distrib., numerical evaluation from thermal-pulse data 2-93103
 electrophotography, magnetic blow-off method for toner charge measurement 2-53866
 meter for measurement of dielectric surface charge density 2-74466
 polyethyleneterephthalate thin films, charge distrib., electron beam meas. method 2-93113
 positive impulsive discharge streamer formations charge measurement (*Russian*) 2-97803
 powder charge meas. in electrostatic powder coating 2-58849
 spark discharges, charge transfer meas. technique 2-115080

charge-ordered states

- cooperative Jahn-Teller effect, charge and charge-orbital ordering, NQR spectral effects 2-93058
 granular superconductors, reentrant phase transition 2-56747
 quasi-one-dimensional systems, influence of electron-electron and electron-phonon interactions on electron charge orderings 2-56131
 Wigner crystallised ground state, stability anal. 2-92490

charge storage diodes

No entries

charge transfer see charge exchange

charge transfer states

- alkali chlorides: Cu, off-centre instability of Cu⁺ ions due to charge-transfer excitation 2-67085
 anthracene crystal, charge transfer energies, Fourier transform calc. 2-71934
 anthracene/tetracyanobenzene, charge transfer cryst., ODMR and EPR spectra calcs., triplet excitation coherent motion effects 2-56445
 anthraquinone derivatives, radiationless deactivation and picosec. fluoresc. lifetimes 2-114028
 anthra[9,10-cd:10,5-c'd']bis[1,2]dithiol (diselenol) and their polyiodides, prep. 2-93465
 N-aryl carbazoles, twisted intramol. charge transfer states, fluoresc. obs. 2-59924
 p-benzoquinone complexes, H bonding, thermal electron transfer investig. 2-77072
 4,4'-bisenolopyranilidene based charge transfer complexes and radical ion salts with TCNQ and DDQ 2-92577
 chlorobenzoquinone complexes, H bonding, thermal electron transfer investig. 2-77072
 conjugated molecules, electronic states, partial distance meas. 2-108409
 CT-complexes, electron transfer band profile calcs. (*German*) 2-80577
 4-cyano-2,6,N,N-tetramethylaniline, twisted internal charge transfer state fluoresc. 2-108615
 DBTTF-TCNQF4 charge transfer salt, struct. high temp. phase transition obs. 2-109778
 dimer in random pot., microscopic theory 2-104216
 dioxodiazacycloalkanes, singlet-triplet transition, CNDO/S-CI SCF MO calcs. 2-64879
 diphenylacetylene-TCNB charge transfer complexes, single crystals, excited triplet states, EPR investig. 2-92989
 donor-acceptor charge transfer systems, in soln., charge transfer spectra, photoelectron emission 2-90622
 hollow cathode discharges, excitation of charge states, spectroscopy study 2-96710
 hydrocarbon complex, I₂ saturated, contact charge transfer interaction, UV absorpt. spectra 2-108547
 H-VI semiconductors, optical props. of 3d transition metals 2-110286
 IR study, struct. (*French*) 2-90529
 low-dimensional organic metal, theory (*Russian*) 2-61452
 3-methyl-4-nitropyridine-1-oxide, mol. crystal, nonlinear-optical props. obs. 2-65304

charge transfer states continued

mixed-valence materials, charge fluctuations and absence of order 2-56501
 one dimensional many electron system, SDW and CDW regions, mean field theory 2-98564
 organic compounds, electron donors and acceptors (*Russian*) 2-59969
 (perylene)₂TCNQ, single cryst. Raman spectra, temp. depend., isotope effects 2-72470
 phenylacetylene, charge transfer states, two-photon obs., INDO/S calcs. 2-70366
 poly(p-phenylene), conjugated polymer, elec. cond. and optical absorpt., theory 2-71954
 poly(p-phenylene sulphide), conjugated polymer, elec. cond. and optical absorpt., theory 2-71954
 polyacetylene, semicond. and metallic, electronic props. 2-82327
 pre-equilibrium distribution of the charge states of fragments of molecular ions in gaseous targets 2-54953
 rubrene, photocond. obs., carrier generation determ. 2-72017
 semiconductor, bixcitons and intermediate-binding excitons 2-56448
 surface enhanced Raman scatt., chemisorpt. and charge transfer role 2-110872
 TCNQ charge transfer complexes, tetramethyl benzidine-TCNQ and tetramethyl p-phenylene diamine TCNQ, elec. cond. under high press. 2-71970
 TCNQ salt, 1-methyl-3'-ethyl-2,2'-quinoxalenylium-TCNQ₂, mag. susceptibility, spin dynamics, elec. cond. and EPR study 2-66759
 TCNQ salt, 2,2'-DIPSO₂-TCNQ-I₂, charge transfer complex 2-92576
 TCNQ salt, Cu-TCNQ semicond. films, AES, XPS, and IR refl. study 2-93302
 TCNQ salt, KTCNQ, single cryst. Raman spectra of phase transition 2-87785
 (TMTSF)_xX series, band struct. and props. 2-92438
 TMTSF complexes, XPS study 2-77703
 transition metal α -dime complexes 2-75291
 transition metal intercalates, M₂TaS₂ (M=Fe, Mn, Ni), X-ray core level photoemission, charge transfer effects 2-11023
 triethylamine-I₂, charge transfer complexes and ion pairs, stoichiometry, permittivity effects 2-114063
 tropylum cation, bridged, charge transfer transitions, MCD, UV obs., CNDO/S calcs. 2-85717
 TTF salts, highly conductive, temp. depend. of reflectance spectra 2-87786
 TTF-chloranil, neutral-ionic phase transition, IR and Raman studies 2-93188
 TTF-chloranil, neutral-ionic phase transition, review 2-92592
 TTF-p-chloranil, neutral-to-ionic transition, optical refl. spectra study 2-110889
 Ag film, adsorbed mol. charge transfer excitation, EELS obs. 2-62027
 BiCl₃-n(π) donor complexes, NQR study 2-108567
 (Cl₂)₂ config., charge transfer contrib. calcs. 2-108363
 CoAl, electronic struct. and charge transfer, APW band calc. 2-66430
 Cs₂NpO₂Cl₄, cryst., electronic struct., charge transfer transitions 2-82853
 CsNpO₂(NO₃)₂, cryst., electronic struct., charge transfer transitions 2-82853
 Cu I complexes, luminesc. spectra, decay times and intensities 2-80716
 Fe complex, Fe(bipyridyl)₃²⁺ electronic struct. of metal-to-ligand CT states 2-92535
 Fe complex, Fe(bipyridyl)₃²⁺ in host lattice, circular dichroism of CT bands 2-93162
 GaCl₃-n(π)-donor complexes, NQR study 2-108567
 Gd intermetallic cpds., charge transfer and isomer shift, ¹⁵⁵Gd Mossbauer spectra 2-104777
 KCl:H, I, relaxed excited state of atomic H centres, ODMR study 2-99000
 KI microcrysts., surface electronic transitions and adsorbate charge transfer 2-104453
 LiBr:M²⁺ (M=Mn, Fe, Co, Ni, Cu), charge transfer bands 2-87808
 LiCl:Mn²⁺ (M=Mn, Fe, Co, Ni, Cu), charge transfer bands 2-87808
 Mg₂Al₂Si₂O₁₀:TiO₂, changes in spectral props. at initial stages of crystn. 2-72529
 MnCl₂-graphite intercalation cpd., charge transfer and islands, X-ray diff. study 2-91932
 Ni complex, (tetraazeporphyrinato)Ni(II), doubly mixed valence mol. cond., struct., mag. and charge transport props. 2-71953
 O₂(phen)₂²⁺, nonradiative decay rate const. and emission energies, energy gap 2-114024
 Os complex, Os(bipyridyl)₃²⁺ electronic struct. of metal-to-ligand CT states 2-92535
 Os complex, Os(bipyridyl)₃²⁺ in host lattice, circular dichroism of CT bands 2-93162
 Os complexes, time-resolved reson. Raman spectrosc. and local charge-transfer state 2-59806
 PbI₂ intercalation compounds with org. donor mols., charge transfer and luminesc. (*Russian*) 2-61975
 RbCl:H, I, relaxed excited state of atomic H centres, ODMR study 2-99000
 Ru complex, Ru(bipyridyl)₃²⁺ electronic struct. of metal-to-ligand CT states 2-92535
 Ru complex, Ru(bipyridyl)₃²⁺ in host lattice, circular dichroism of CT bands 2-93162
 Ru complexes, time-resolved reson. Raman spectrosc. and local charge-transfer state 2-59806
 RuF₆ complex, charge-transfer electronic spectrum calc. using scatt.-wave method 2-108372
 SO₂ electroreduction in nonaqueous media, electrochem. and ESR obs. 2-114017
 SbBr₃ addition cpds, cryst. struct. and CT from NQR data 2-110718
 SbCl₃ addition cpds, cryst. struct. and CT from NQR data 2-110718
 Se/polystyrene-hexylmethacrylate copolymer interface, charge transfer 2-56722
 TaS₂, X-ray core level photoemission, charge transfer effects 2-111023
 VS₂(Se₂), intercalated with transition metals, X-ray absorpt. spectra and electronic struct. 2-67150
 WO₃, amorphous film, colour centres, optical absorpt. and EPR study 2-66492
 WO₃-P₂O₅ glass, colour centres, optical absorpt. and EPR study 2-66492
 ZnO, surface (1010), localized and delocalized charge transfer during adsorpt. 2-110425
 α -Zr(PO₄)₂M₂ (M=Li⁺, Na⁺, K⁺, Cs⁺) Mg K α ESCA spectra, shake up struct. enhancement by sputtering 2-57252

charge transfer transitions *see charge transfer states***charged dislocations** *see dislocation dipoles***charm particles**

see also D mesons; psi mesons
 baryons, hadronic decay from e^+e^- , P-odd effects (*Russian*) 2-64325
 baryons, weak EM decays, quark model 2-74685
 bound quark-antiquark states, inverse relativistic problems for charm 2-64268
 charmed meson decay via colour octet decays of c-quarks, D⁰, D⁺ 2-54069
 charmonium, EM decay, light plane theory appl. 2-59046
 charmonium, magnetic dipole transitions, relativistic corrections 2-95843
 charmonium, P-state decay, quark confining pot. 2-74682
 charmonium, relativistic corrections to dipole decay amplitudes 2-95842
 decay, following $\gamma p \rightarrow X$, 20 GeV 2-89969
 decay detection in freon bubble chamber equipped for holography 2-108282
 hadronic collisions, charm hadron prod. 2-107697
 hadronic collisions, charm prod. cross section meas. 2-107694
 hadronic production models 2-84845
 intrinsic charm model, 5-quark wave function calc. 2-101670
 lepton-induced reactions, charm hadron prod. 2-107697
 lifetime, experimental results review 2-101714
 lifetime measurement, high-resolution bubble chamber appl. 2-64788
 mesons weak hadronic decays in QCD 2-64318
 multi-quark charm hadrons, mass spectra, MIT bag model, with SU(4) flavour symm. 2-84884
 nucleon intrinsic charm 2-79842
 open charm, hadroproduction, rel. to perturbative QCD 2-101663
 open charm hadronic prod. in perturbative QCD approach 2-107626
 QCD charmonium sum rules, higher gluonic power correction calcs. 2-64279
 quarkonium decay, renormalisation group predictions 2-101710
 quarkonium potential model with a non-zero gluon effective mass for charmonium and T (*Chinese*) 2-95778
 Schwinger W(3) group, boson representations, mass formula 2-69360
 spectroscopy of hadrons containing one heavy quark, D and F weak decay 2-84882
 SU(2) \times SU(2) \times SU(2) \times SU(2) symmetry scheme for new particles 2-54106
 SVZ duality in two-dimensional QCD, charmonium and bottomium predictions 2-113214
 weak nonleptonic processes of strange and charmed mesons, unified SU(4) description 2-59085
 $\chi_1^{++}(3507)$, $\chi_2^{++}(3553)$ radiative decays to J/ ψ 2-95878
 D semileptonic and nonleptonic weak decays, branching ratios, quark mass effects 2-64320
 $e^+e^- \rightarrow hX$, charm baryon prod. and decay, P-odd effects (*Russian*) 2-64325
 $\eta_c \rightarrow 2\gamma$, three point functions contributions, relativistic corrections 2-79886
 $\eta_c \rightarrow 2\gamma$ gluon condensate effects 2-95765
 $F \rightarrow K\pi(KK)$, exclusive decay study 2-101706
 $F \rightarrow K^*K^*$, lifetime meas. in LEBE-EHS expt. 2-79916
 F^+ , nonleptonic decays by $c\bar{q}$ annihilation, two-gluon radiation 2-59143
 F^+ meson lifetime meas., review 2-79865
 γN , charmed hadron inclusive photoproduction in VDM (*Russian*) 2-74694
 $\gamma N \rightarrow c\bar{c}X$, charmed particles photoproduction cross section, valence gluons contrib. calc. (*Russian*) 2-74696
 $\gamma p \rightarrow X$, 20 GeV/c charm particle lifetimes 2-79888
 $\Lambda_c \rightarrow lX$, obs. in e^+e^- events 2-79872
 Λ_c semileptonic decays, lepton spectrum calc. in pp collisions 2-95886
 Λ_c^+ decays, hard and soft gluonic effects, Weinberg-Salam weak Hamiltonian 2-84893
 Λ_c^+ lifetime meas., review 2-79865
 μ^+N , 250 GeV, nucleon intrinsic charm component, expt. limit 2-54171
 $\mu^+p \rightarrow \mu c\bar{c}X$, spin-spin asymmetries, structure function depend. 2-59161
 $nN \rightarrow \Lambda_c^+ X$, 40 GeV, charmed baryon prod. cross section (*Russian*) 2-89986
 $\nu N \rightarrow X$, charmed baryon weakly inelastic prod., dual model (*Russian*) 2-95816
 pN , 400 GeV/c, charm prod., Λ_c^+ decay and prod. cross section 2-101779
 pN , 400 GeV/c, in Cu beam-dump, prompt neutrino prod., charmed hadrons 2-84929
 pp , 360 GeV, charm prod. in LEBE-EHS expt. 2-79916
 $pp \rightarrow$ charm, rel. to backward scatt. sum rules 2-101754
 $pp \rightarrow \pi^0 +$ charmonium, diff. cross section, pp resonance formation, soft pion emission 2-64338
 $\pi p \rightarrow$ charm, rel. to backward scatt. sum rules 2-101754
 πp , 360 GeV, charm prod. in LEBE-EHS expt. 2-79916
 $\pi^0 \gamma$, hyperfine splitting, potential model calcs., charmonium mass spectrum 2-107650
 Si detector telescope as active target for charm particles lifetime meas. 2-90337

charring *see combustion***Chebyshev approximation**

alternative techniques to least squares approximations 2-112336

Bickley functions, rational Chebyshev approx. 2-54470

general Chebyshev complex function approximation procedure and an application to beamforming 2-97303

chelates *see coordination complexes***chemical analysis**

see also chemical analysis by nuclear reactions and scattering; chromatography; electrochemical analysis; electron probe analysis; ion microanalysis; mass spectroscopic chemical analysis; polarimetry; pollution detection and control; radioactive chemical analysis; spectrochemical analysis; thermal analysis; X-ray chemical analysis
 acetone cations, dissociation dynamics, surprisal anal. 2-105457
 analytes in liq. solns., calibration curve prep. using exponential dilution flask 2-93838
 CO₂ monitoring in an air separation plant with the ULTRAMAT 3 gas analyzer 2-116764
 concentration of chemicals in equilibrium, numerical method 2-62377
 convolute integers, 2-dimens., for anal. instrumentation 2-116731
 cryoscopic instrument for gas analysis 2-57660
 cyclopropenium, gas phase ion struct. anal. by chemical methods 2-54736
 EELS, chemical analysis in high voltage TEM 2-71298
 EELS, microanalysis in STEM (*French*) 2-71299

chemical analysis continued

- electron microscopy, high resolution, appl. to microanalysis 2-101497
 electron microscopy, quantitative, of metals and minerals 2-97882
 EM, analytical, high-resolution, local composition of specimen area 2-95563
 EM, high resolution applied to chem. problems, conf., New York, USA, (Aug. 1981) 2-94904
 fuel oils characterisation by thermogravimetry 2-73034
 gas anal., compensation for nonoptimal transducer selection (*Russian*) 2-67790
 gas analyzers, sorption, surface acoustic waves appl. 2-73025
 gas discharges detection and characterisation, using trace gas analysis 2-103534
 instrumental techniques for thermochemical analysis 2-73030
 IR study, struct. (*French*) 2-90529
 isotope (^{18}O , T, D) measurement techniques for hydrological purpose 2-73718
 liquid scintillation counting on filter paper 2-57657
 methylene cyclopropenium, gas phase ion struct. anal. by chemical methods 2-54736
 minerals, binary mixtures, anal. by gamma-gamma method, two-beam probe optimisation 2-73026
 muonic atoms in physics, chemistry and archeometry (*German*) 2-54990
 muonium, detect. in water by pulsed muons 2-59973
 oil transformers gas anal., similarity of results (*German*) 2-99732
 organobimetallic compounds, (SCN)₂Ni(NCSHgR)₂, synthesis, elemental anal., IR and electronic spectra, mag. susceptibility 2-96571
 organotin benzilates, synthesis, elemental anal., struct., IR obs. 2-110868
 phenyl cation, gas phase ion struct. anal. by chemical methods 2-54736
 polymers, characterisation, conf, Durham, UK, 13-17 July 1981 2-68957
 prompt gamma activation of environmental and terrestrial samples 2-57669
 propargyl cation, gas phase ion struct. anal. by chemical methods 2-54736
 pulsed optoacoustic signals, freq. anal. and appl. to chem. anal. 2-89819
 rare earth metal complex, elemental anal., NMR, IR, UV-visible study 2-110672
 seawater anal. by nucl. physics methods 2-100600
 solar energy conversion technologies, interface microstruct. and micro-chem., research needs 2-87078
 solar energy conversion technologies, ion etching limitations for interface analysis, review 2-88413
 solar materials, interfacial phenomena and features, review 2-88458
 spectroscan 177 rapid scanning spectrophotometer and its application for investigation of rapid processes 2-107383
 steel, Cr-Mo-V (1.5, 1, 0.25 wt.%), carbide phases determ. by quantitative stereological anal. and electrolytic isolation (*Czech*) 2-67788
 TEM, high-resolution, appl. to processing of ceramics 2-97881
 tholins production in planetary atm. on elec. discharge, mol. anal. 2-57603
 toxicity of U, Th, As, on Scots pine 2-64539
 transuranic activity measurements in environmental samples with a Si(Li)-NaI(Tl) photon spectrometer 2-57670
 ultrahigh vacuum apparatus for combined low-energy electron diffraction, Auger spectroscopy, MeV ion scattering, and nuclear microanalysis 2-89733
 volcanic ash form Mount St. Helens 2-58028
 C₂H₄ + C₂H₄ reaction in propyne and allene, long lived collision complex form., exothermicity effect 2-111473
 CO standard samples preparation and assessment, 0 to 500 ppm 2-111530
 Ca amphibole schist, Fe²⁺ and Fe³⁺ conc. determ. by Mossbauer spectroscopy 2-99738
 Ca₂Mg_{1-x}Fe_{2x}Si_{2-x}O₇, crystalline phase anal. 2-71416
 Fe-C, O, min. detectable atomic fractions, STEM study, EELS technique 2-67165
 Fe_{0.95}Mn_{0.05}Ti, surface anal. by magnetisation meas. 2-73012
 FeTi, surface anal. by magnetisation meas. 2-73012
 GeO₂ in fibre light-guide bundles, photometric radial distrib. control 2-91053
⁸¹Kr, conc. meas. rel. to groundwater dating 2-105525
 Ni-Zn ferrite fillers for elastic magnetic materials 2-72658
 Ni(II)Cd(II) and Ni(II)Hg(II) mixed complexes, chem. anal., spectra, EPR study 2-110630
 Pu measurement for nuclear safeguards, automated analytical instrumentation appl. 2-74804
 Sm and Nd isotope ratio determination method using laboratory standard solutions 2-63253
 Sm/Nd ratio determination method using laboratory standard solutions 2-63253
 Sm₂Ce_{1-x}B₆ solid solution, valence and lattice consts. 2-66500
 Sm₂La_{1-x}B₆ solid solution, valence and lattice consts. 2-66500
 U measurement for nuclear safeguards, automated analytical instrumentation appl. 2-74804
 V-Zr-O, phase equilibria, penetration of Li at 670K 2-72681

chemical analysis by mass spectrometry *see mass spectroscopic chemical analysis*

chemical analysis by nuclear reactions and scattering

- see also chemical effects of nuclear reactions and scattering; neutron activation analysis; radioactive chemical analysis*
 Amsterdam proton microbeam and its appl. 2-95549
 automated gamma densitometry of fuel pellets, rods, and control rods, 2-80073
 cation insertion reactions 2-105526
 charged particle and gamma ray activation anal., life sciences appl. 2-57647
 depth profiling of conc. using charged particle induced nuclear reactions 2-99722
 depth profiling with narrow reson. of nuclear reactions, theory and expt. 2-99719
 elemental mapping with Karlsruhe nucl. microprobe 2-99725
 FeCrAlloy surface, oxide layers nuclear reaction anal. 2-99723
 fissile assay measurement of ²³⁵U in a lead slowing down time spectrometer 2-80134
 fissile waste or scrap assay system with 1-mg sensitivity 2-80132
 glass surface region, H, Na, Al conc. profile meas. by reson. nucl. reactions 2-99720
 hydrogenated species at surface of solid material, chemical effects induced by MeV ion beams 2-93852
 light element distrib. meas. using Harwell nucl. microprobe 2-99728

chemical analysis by nuclear reactions and scattering continued

- light isotopes in metals, ion beam anal. using solid state track detectors 2-67789
 low enriched U scrap and waste, elephant gun assay, age correction 2-80131
 low-Z impurities lattice location study by ion channelling 2-81843
 microanalysis using charged particle accelerators, conf., Namur, Belgium (Sept. 1981) 2-94883
 neutron assay meas. techniques on crate size radioactive waste packages 2-80130
 neutron assay of bulk nuclear materials 2-80071
 neutron interrogation method for fissile content measurement of fresh BWR and PWR fuel assemblies 2-80074
 nondestructive assay of plutonium fuel for FFTF and supporting operations 2-80075
 nondestructive assay technique for 55 gal. radioactive drums 2-80133
 passive neutron measurement applications for irradiated fuel assemblies 2-80136
 photon interrogation for bulk measurement of transuranic materials 2-80072
 prompt gamma-ray spectroscopy and its use in elemental analysis 2-57648
 proton and nuclear microprobe developments 2-95550
 proton nuclear activation, trace elements anal. in biological samples appl. 2-83707
 PWR fuel assembly, neutron assay 2-80076
 radioisotope researches and appls., 30 years progress, review 2-58554
 seawater anal. by nucl. physics methods 2-100600
 semiconductor counter appls. 2-80394
 steel, stainless, N implanted, Rutherford backscatt., channelling and nucl. reaction study 2-98119
 steel, stainless, oxidation investig. using automated scanning proton microbeam 2-111351
 Tokamak wall material transport meas. using nuclear activation techniques 2-103407
 two-dimensional anal. of solid materials using nucl. microprobe, techniques development and comparison 2-95547
 Zircaloy-2, corrosion in high temp. water, ion beam induced nucl. reaction study 2-57517
 C, H isotope exchange, depth resolved meas. 2-69847
 F concentration profile, nuclear microprobe meas., appl. in archaeology and geology 2-100572
 Fe content, meas. in human body, in-vivo, γ -rays nuclear reson. scatt. appl. 2-68111
 Fe/F, concentration depth profiling using nuclear reson. reactions 2-98139
 Fe₃₂Ni₃₆Cr₁₄P₁₂B₆, metallic glass ribbons, P conc. meas. using neutron generator (*Russian*) 2-99742
 Fe₄₀Ni₄₀P₁₄B₆, metallic glass ribbons, P conc. meas. using neutron generator (*Russian*) 2-99742
 GaAs:O, determ. of O by ³He activation anal. 2-98147
 H, three-dimensional conc. profiles in solids, quantitative meas. 2-115266
 InSb layer oxidation study after ion implantation by backscattering and nuclear reaction 2-99567
 (Mg,Fe):SiO₂, atomic C depth profiling meas. 2-99721
 MgO, atomic C depth profiling meas. 2-99721
¹⁵N tracers, quantitative anal. by proton reaction 2-99718
 Ni:D⁺, ion implanted, impurity defect trapping, ion beam anal. studies 2-81812
 Ni:He⁺, D⁺, ion implanted, D trapping, ion beam anal. studies 2-81813
 Pt film, DC reactively sputtered, C detection by ¹³C(d,p)¹³C reaction 2-62447
 S concentration profile determ. using reson. nucl. reactions 2-116740
 S, nuclear microanal. using ³²S(d,p)³²S reaction (*French*) 2-105527
 Si:BF₃⁺ single cryst., pulsed laser irradiated, ion implanted, F conc. profile 2-115263
 Si:H, three-dimensional H conc. profiles 2-115266
 Si:H amorphous film, DC sputtered, characterization by optical and nuclear methods 2-93308
 Si:H amorphous reactively sputtered film, H anal. by IR spectroscopy, nuclear reaction and SIMS 2-76857
 Si:N, ion implanted, oxidation inhibition 2-115271
 Si:P, ion implanted, depth profiles, channelling and nuclear resonance studies 2-98142
 Si-F amorphous film, grown from SiF₂ disproportionation, F conc. determ. 2-92021
 Si₃N₄ thin films, backscattering anal. and nuclear reaction meas. (*Chinese*) 2-66389
 SiO₂ thin films, nonequilib. water permeation, nucl. reson. profiling meas. 2-92250
 WO₃.H₂O film, cation insertion reactions 2-105526
- chemical association** *see association*
chemical batteries *see cells (electric)*
chemical bonding *see bonds (chemical)*
chemical bonds *see bonds (chemical)*
chemical composition *see chemical analysis*
chemical diffusion *see diffusion*
chemical effects of nuclear reactions and scattering
see also chemical analysis by nuclear reactions and scattering; radiation chemistry
 No entries
chemical effects of radiation *see radiation chemistry*
chemical elements *see elements (chemical)*
chemical energy conversion
 coal, gasification, Texaco process, waste anal., environmental acceptability 2-67806
 coal conversion, liquid and solid waste, pollution control technology 2-67804
 combined cycle power station, coal gasification 2-67870
 hydrogen, large-scale production plants, future development (*German*) 2-62506
 nuclear power appls. 2-105546
 supply output power characteristic extremal points existence conditions determ. (*Russian*) 2-57719
 transition metal complex photo-chemistry for hydrogen production 2-62507
 CO₂-CH₄ reforming-methanation chemical cycle for solar energy conversion and transportation 2-111577

chemical engineering *see chemical technology***chemical engineering computing**

- see also computerised control; computerised instrumentation*
 evaporating droplet, vaporization and trajectory characteristic simulation 2-97619
 fossil fuels, gas sorption systems for S compounds, NH_3 , computer simulation 2-73057
 noncatalytic reactions model solution 2-99702
 PHOENICS, computer code system, appl. to fluid flow, heat transfer and chemical reactions 2-91571
 restricted chemical equilibrium computation 2-99698
 thermal column coefficients evaluation 2-97692

chemical equilibrium

- see also chemical reactions; reaction kinetics*
 Belousov-Zhabotinskii closed reaction system, excitability 2-99652
 compartmentalised systems, partition consts. evaluation from fluoresce. quenching 2-111505
 complexes, thermomechanical props. of clustering reactions in gas phase 2-78081
 concentration of chemicals in equilibrium, numerical method 2-62377
 1,4-cyclohexanedione, oscill. oxidation by BrO_3^- in H_2SO_4 or HNO_3 soln. 2-83349
 dissociating gases, transport phenomena calcs. 2-86308
 fission product chemical behaviour in fuel rods under accident conditions 2-80087
 fission reactor spent fuel extraction, chem. equil., diluent props. effect 2-64547
 fluoroacetones gas-phase basicities, additivity of F substituent effects 2-78082
 ion-molecule equilibria, entropy effects, Langevin model 2-57631
 molecular complexes, det. of equilibrium const. using US meas. 2-93806
 molecular complexes, equil. const., molar extinction coeff., evaluation from spectrophotometric data 2-57633
 multicomponent chemical reaction, 1-dimens. dynamics 2-99669
 Onsager's reciprocity relations nonlinear generalisations of linear dependent chem. elementary reactions (German) 2-83341
 reaction diffusion systems, multivariate master eqn. stochastic derivation 2-93752
 reaction rate constants, time dependent and equilibrium, stochastic approach appl. 2-111452
 reaction systems, chem. potential, algebraic quantum theory (German) 2-78121
 reactivity, quantum scatt. and mol. orbital theories, Hammond's postulate 2-83344
 relaxation theorem and its appl. to gas equil. 2-103236
 restricted chemical equilibrium computation 2-99698
 solutions, associated, equil. const., enthalpy and entropy of association 2-67760
 steel, equilibrium between trapped and diffusible H at room temp., obs. using gas-surface reaction 2-88092
 thermal perturbations, nonlinear theory of fluctuations 2-93754
 $\alpha\text{-Ag}_2\text{S}$, nonstoichiometry investig. 2-86932
 Ar-H₂ mixtures, H⁺ transfer and isotopic exchange reactions 2-93785
 Ca+Br, surface reaction, chemical equil., desorpt. and reaction kinetics (German) 2-78123
 Ca+Cl, surface reaction, chemical equil., desorpt. and reaction kinetics (German) 2-78123
 D isotope effects on outer-sphere electron-transfer reactions 2-78083
 H plasma, eqn. of state, atom-atom interactions effect 2-76072
 $\text{H}_2\text{CN}^+\text{-N}_2$ production from α -irrad. N_2+CH_4 mixture, Titan atm. appl. 2-100826
 $\text{HCO}_2^+ + \text{H}_2\text{O}$, O isotope exchange, rate and equil. factor 2-88350
 $\text{H}_2\text{O} + \text{D}_2\text{O} \rightarrow 2\text{HDO}$ equil. const., by direct summation over rot. vibr. states 2-99663
 Mn^{2+} -citric acid- $\text{H}_2\text{SO}_4\text{-KBrO}_3$, chemical system bifurcation diagrams 2-72957
 Mn^{2+} -malic acid- $\text{H}_2\text{SO}_4\text{-KBrO}_3$, chemical system bifurcation diagrams 2-72957
 $2\text{NO}_2 \rightleftharpoons 2\text{NO} + \text{O}_2$, friction law, averaged vel. profile in turbulent reactive tube flow (Russian) 2-55548
 $2\text{Na} \rightleftharpoons \text{Na}_2$, surface catalysed equil., laser diagnostics 2-57630
 $\text{O}_2\text{-Ar}$ mixture, flow in nozzles, chem. and vibr. disequil. effects 2-81381
 Pd/ $\text{H}_2\text{-H}_2\text{O}$ system, H isotope distrib. equil., Pd use in isotope separation 2-111509
 TeO_2 coaction in Porex process 2-64551
 UF, UF_3 , UF_4 and UF_6 , gaseous equilibria, reaction enthalpies and entropies, bond dissociation energies 2-60709
 $2\text{UF}_4 + \text{H}_2 = 2\text{UF}_3 + 2\text{HF}$, equil. consts., vapour press., entropy and heat of vaporisation 2-93773
 $\text{ZnO} + \text{CO} = \text{Zn(gas)} + \text{CO}_2$, reaction free energy 2-53708

chemical exchanges

- see also ion exchange; isotope exchanges*
 acetaldehyde + $\text{O}(\text{P})$, prod. distrib., mol. beam-laser induced fluoresce. study 2-116689
 N-acetyloxypyridinium salts, fragmentary exchange, reaction rates and mechanism, IR and NMR obs. 2-83372
 atom-molecule reactions, reaction probability, kinematic effects, trajectory calcs. 2-83363
 ethyl radical, (1,2) H migrations, ab initio POL-CI calcs. 2-59708
 fatty acids, spin labelled, covalently attached to boundary of intrinsic membrane protein, EPR, chemical exchange 2-105655
 fluorene:acridine, photochemical H abstraction from fluorene, kinetic 2-57627
 intermolecular H⁺ transfer between equivalent mols., diffusion induced tunnelling 2-88339
 ion+molecule reaction, enthalpy changes involving H-D exchange, zero-point energy considerations 2-78077
 isotope exchange reactions 2-78076
 lithium methoxide, methanolic soln., nonexponential ^{13}C spin-lattice relax. (French) 2-77402
 methyl carbene triplet radical, (1,2) H migrations, ab initio POL-CI calcs. 2-59708
 molecular system, with spatial point symm., unrestricted HF solns., instability, interconnection classification 2-80467
 4-nitrobenzoic acid-phenolate, H-bonded complex, ^1H transfer, PMR and IR obs. 2-80602
 nitroxyl radicals, hyperfine splitting consts., g-factors pH effect on EPR spectra 2-108585

chemical exchanges continued

- pancreatic trypsin inhibitor, 2-dimens. NOE and chem. exchange spectrosc. 2-69220
 porphines, free base, H⁺ migration dynamics, tautomerisation 2-88351
 sodium methoxide, methanolic soln., nonexponential ^{13}C spin-lattice relax. (French) 2-77402
 tetrakis(N,N-dimethylacetamide)beryllium(II), ligand exchange, rate consts., PMR study 2-85691
 tetrakis(N,N-dimethylformamide)beryllium(II), ligand exchange, rate consts., PMR study 2-85691
 tetrakis(N-methylacetamide)beryllium(II), ligand exchange, rate consts., PMR study 2-85691
 three-body exchange reactions, classical var. rate calcs. 2-105461
 triorganyl borane + BH_3 , exchange reactions, ^{11}B NMR obs. 2-108577
 vinyl radical, (1,2) H migrations, ab initio POL-CI calcs. 2-59708
 $\text{AlCl}_3\text{-n-butylpyridinium chloride melt}$, ^{27}Al NMR 2-66923
 Al(III) complex , sulphonated phthalocyanine, excited singlet and triplet state electron transfer reactions 2-78089
 Ar-H₂ mixtures, H⁺ transfer and isotopic exchange reactions 2-93785
 Ar₂ collisions, trimer form., atom exchange and dissociation 2-105463
 ArH_3^+ , ion-molecule reactions, rate consts., mass spectrometric study 2-72962
 Be complex, tetrakis(dimethylmethylphosphonate)Be(II), ligand exchange, PMR obs. 2-70278
 Be complex, tetrakis(methylmethylphenylphosphinate)Be(II), ligand exchange, PMR obs. 2-70278
 Ca-Yb-O, bivalent Yb form. 2-111468
 $\text{CaO-Al}_2\text{O}_3\text{-SiO}_2$ glass chem. interactions, molar vol. change 2-72985
 $\text{Co(NH}_3)_6^{2+}\text{-Co(NH}_3)_6^{3+}$ electron transfer reactions, quantum effects 2-75411
 D isotope effects on outer-sphere electron-transfer reactions 2-78083
 D+HCl, reaction kinetics, infinite-order-sudden method 2-88348
 D+HCl reaction, abstraction vs. exchange study 2-83357
 D_2+T_2 , liq. and solid, chem. exchange reactions, IR spectra study 2-96301
 $\text{F}+\text{H}_2$, kinetic field pot., Morse function, pot. energy surface 2-85770
 $\text{F}_2+\text{Mu(H)(D)(T)}$, collinear reactions, semi- and quasi-classical probability calcs. 2-105473
 H⁺ transfer reactions, gas-phase, energy barriers and wells 2-62386
 H+formaldehyde, rate const., pot. energy surface, transition state theory, ab initio CI calcs. 2-72980
 $\text{H}+\text{H}_2\text{O}$, reaction rate enhancement, quasiclassical trajectory study 2-88338
 $\text{H}+\text{H}_2(\text{I}_2)$, exchange reactions, classical var. rate calcs. 2-105461
 $\text{H}+\text{H}_2(\text{MuH})$, collinear reactive scatt., reson. widths, quasiclassical model 2-93767
 $\text{H}_2+\text{O}(\text{D})$, vibr., rot. distrib., pot. energy surface, quasiclassical trajectory calcs. 2-83361
 H_3^+ , ion-molecule reactions, rate consts., mass spectrometric study 2-72962
 $\text{HCO}_2^+ + \text{H}_2\text{O}$, O isotope exchange, rate and equil. factor 2-88350
 $\text{H}_2\text{O}^+ + \text{D}_2\text{O}$ isotope exchange reactions 2-78076
 Li+FH, endothermic reaction, vibr. threshold, pot. energy surface 2-99658
 Li+FH(FD)(FT), collinear exchange reactions, quantum mech. calcs. 2-62381
 $\text{LiCl}+\text{He} \rightarrow \text{LiHe}^+ + \text{Cl} + \text{e}$, chemical exchanges, mechanism, cross-section determ. 2-57604
 $\text{NH}_3^+ + \text{ND}_3$ isotope exchange reactions 2-78076
 N_2H^+ , ion-molecule reactions, rate consts., mass spectrometric study 2-72962
 $\text{Na}_2\text{P}_2\text{O}_7\text{-SnCl}_2$ aq. solns., complex form., ^{31}P NMR obs. 2-70288
 $\text{O}^+ + \text{H}_2$, pot. energy surface, diatomics in mols. calcs. 2-105469
 $\text{O}^+ + \text{N}_2$, vibr. excitation, pot. energy surface, quasiclassical trajectory reaction theory 2-99662
 $2\text{UF}_4 + \text{H}_2 = 2\text{UF}_3 + 2\text{HF}$, equil. consts., vapour press., entropy and heat of vaporisation 2-93773

chemical industry

- acetylene producing using solar furnace 2-99760

chemical kinetics *see reaction kinetics***chemical lasers**

- , physical principles, chem.-reaction systems and modelling 2-75564
 aero-optical phenomena rel. to laser beam quality, overview 2-97036
 atomic resonance line laser status, appl. to quantitative analysis 2-80942
 based on CdI_2 photodissoc. 2-55136
 C HF CW subsonic laser, 120 W power output, design and performance characts. 2-96985
 CW chemical laser outcoupled beam diagnostic system 2-108921
 fluoromethanol, chemical laser system, dynamic behaviour of intrinsic reaction coordinate, HF laser emissions 2-93798
 HF chemical lasers ignited by CO_2 -laser irradiation of $\text{SF}_6\text{-H}_2$, $\text{S}_2\text{F}_{10}\text{-H}_2$ mixtures 2-96936
 high-energy lasers, introduction 2-75553
 high-power tunable lasers, appls. to photochemistry and isotope separation 2-75451
 high-powered chemical lasers, development, weapon appls. (French) 2-60071
 population inversion processes 2-75562
 pulsed chain reaction chemical laser, initiator duration effect 2-96933
 S excited state laser prod. from CS_2 UV photodissoc. 2-59719
 theory and appls. 2-108867
 transverse acoustic waves in pulsed lasers 2-96961
 CO chemical laser produced by supersonically mixing CS-S-O_2 , computer model 2-90881
 CO laser utilising the branched-chain stage of CS_2 oxidation 2-96935
 Cd atomic laser action at 508.6, 643.8 nm based on CdI_2 photodissoc. 2-55136
 CdI molecular laser action at 475, 656 nm based on CdI_2 photodissoc. 2-55136
 DF- CO_2 intracavity knife-edge diff. screen laser on $\text{D}_2\text{-F}_2\text{-CO}_2\text{-O}_2\text{-He}$ gas mixture 2-85993
 DF- CO_2 pulse-periodic chemical laser, 16μ stimulated emission feasibility 2-55138
 F atomic laser, gain and saturation meas. 2-90880
 H_2/F_2 photoinitiated laser, performance characts. with O_2 inhibitor 2-108866
 HF CW chemical lasers, medium induced phase aberrations 2-102784
 HF chemical laser, high initiated, surface-spark UV flash initiation 2-65252

chemical lasers continued

- HF, continuous wave chemical laser with chain excitation mechanism, ring model 2-55137
 HF laser initiated by 308 nm radiation from an XeCl excimer laser 2-114261
 HF pulse chemical laser initiated by Blumlein discharge (*Chinese*) 2-65209
 HF rot. lasers, V—R multiquantum energy transfer by CO (CO₂) 2-102785
 HF simple pulsed laser for optical expts. 2-55181
 HF/DF high energy laser system, CaF₂ or ZnSe as window materials 2-81040
 HF/DF recirculating laser, high-repetition-rate 2-65255
 HF-DF chemical laser, rotational nonequilibrium analysis 2-80941
 Hg blue-green laser emitting at 435.8, 546.1 nm, using HgI₂ photodissociation 2-96937
 Hg produced by HgBr₂ photodissociation by ArF laser, superfluores. laser action at 404.7 nm 2-96934
 HgBr injection-locked laser oscillator spectrum, injected intensity effect 2-55123
 HgBr₂ photodissociation laser, spectral props. 2-70554
 I, 2 TW, irr. of spherical microtargets, exploding pusher regime case (*Russian*) 2-55768
 I CW photodissociation laser with cyclic circulation of gaseous trifluoromethyl iodide 2-96987
 I high power Asterix III laser, status and prospects 2-97063
 I high-power laser, fundamentals, pulse propag. and Asterix III description 2-75563
 I laser amplifier chain performance, pulse compression, extraction efficiencies 2-80940
 I laser optical inhomogeneities, dynamic correction 2-70555
 I laser pumped by open high-current discharge by radiation, active mixture regeneration anal. 2-114260
 I photodissociation laser, cavity length and absorpt. depend. longit. beat 2-60124
 I photodissociation laser, ultrasound intensity excited in stimulated light scatt., optically-controlled chem. reactions 2-60165
 I photodissociation laser, possible gain control of stimulated enthalpy scatt. of light 2-90986
 I photodissociation lasers, stimulated light scatt. by thermal waves excited in thermodynamically nonequilib. media 2-60164
 I photodissociation lasers, new active substances 2-114259
 I subnanosecond photodissociation laser 2-60116
 Mo(CO)₆ photolysis gain line obs., photodissoc. laser appls. 2-62422
 O-I chemical laser, efficient small scale operation 2-90919
 OH pure rotational laser, pumping mechanism anal. 2-96932
 SF₆-H₂ laser pumped by axially injected electron beam, characts. 2-114258
 Ti photodissociation laser efficiency, radiation trapping and collisional de-excitation effects 2-96938
 XeF C—A laser, photolytically pumped, multijoule performance 2-60070

chemical reactions

- see also association; atom-atom collisions; atom-ion collisions; atom-molecule reactions; atomic inelastic collisions; catalysis; charge exchange; chemical exchanges; chemically reactive flow; chemiluminescence; chemisorption; CIDEP; CIDNP; corrosion; dissociation; electrolysis; free radical reactions; heat of reaction; ion-molecule reactions; isomerisation; molecule-molecule reactions; oxidation; photochemistry; polymerisation; pyrolysis; radiolysis; reaction kinetics; reduction (chemical); solvation
 acetophenones, p-substituted, ionisation pot., PES, correl. with reactivity (*French*) 2-96629
 acrylamide, chemical reactivity under shock loading 2-78102
 adamantane, chemical reactivity under shock loading 2-78102
 4-(trans-4'-n-alkylcyclohexyl) benzoic acids, synthesis and liq. cryst. props. 2-103600
 analytical derivatisations reactions, fluoresc. polarisation change appls. 2-93755
 7-azaindole, electronic excitation, mol. struct. and reactivity changes 2-108620
 Belousov-Zhabotinskii closed stirred system, excitability 2-99652
 benzo(a)phenazine, electronic excitation, mol. struct. and reactivity changes 2-108620
 benzophenone, in PMMA soln., photochemical reaction, holography study 2-83399
 benzoxazoles, excited, intramol. proton transfer, tautomeric fluoresc., isotope effect 2-105447
 1,1'-bicobaltocene salt of tetrabromoquinone, and tetrabromodiphenoquinone, synthesis 2-93774
 biomass conversion, importance of glucose decomposition at high temperature, mild acid, and short residence times 2-57730
 bis(3,3,3-triphenylpropanoyl)peroxide, crystal., neophyl rearrangements, EPR obs. 2-67741
 bridge processes, kinetic theory 2-116681
 butanoic acid, ionised, single and double H-rearrangements involving β -bond cleavage studied using field ionisation 2-105456
 cation hydrolysis thermodynamics, review 2-68304
 chemically active plasma with molecular nonequilibrium vibration excitation 2-76071
 chemically reacting systems, sound propag. in presence of thermodynamic couplings 2-67745
 cholesterol and nitrobenzene reaction, EPR obs. 2-111464
 coherent states representation, semiclassical approx. 2-72944
 combination in reactive systems, book 2-63766
 corn stover acid hydrolysis, kinetic parameters determ. 2-57731
 coupled cells with mutual mass exchange and reactions, dissipative structs. 2-111513
 cyanodiacyetylene, discharge chemistry and mm spectrum up to 210 GHz 2-85637
 cyclobutene, single collision gas-surface vibr. energy transfer, initial energy distrib. variation 2-62378
 1,4-cyclohexanedione, oscill. oxidation by BrO₃⁻ in H₂SO₄ or HNO₃ soln. 2-83349
 2-cyclohexene-1-one, 3 substituted, ionisation pot., PES, correl. with reactivity (*French*) 2-96629
 cyclohexyl isonitrile + bis(trifluoromethyl)ketene, crystal and mol. struct., X-ray anal. 2-78087
 cyclopropane-1₁, 2,2₂, competitive collisional activation in vibr. energy transfer 2-70395
 diatomic ion beam-surface reaction, quantum mechanical model 2-99705

chemical reactions continued

- diffusion controlled chemical reactions, steric factor 2-99655
 diffusion controlled reactions among static traps, conc. depend. 2-62391
 diffusion theory 2-111483
 dioxirane, symmetric ring opening, nonadiabatic interactions, ab initio CI calcs. 2-67736
 1,6-diphenyl-2,4-hexadiyne, chemical reactivity under shock loading 2-78102
 duroquinone in alcohol soln., electron transfer reaction, time-resolved flash photolysis, EPR 2-85703
 electron transfer reactions, approx. Franck-Condon exponential disordered wave scaling theory 2-99660
 electron transfer reactions, exact quantum no. scaling relationship for semiclassical time-depend. dynamics 2-99661
 electron transfer reactions, low temp. free energy rels. 2-111474
 electron transfer reactions, nucl. mag. relax. obs. 2-93772
 explosive, polymer bonded, impact on steel plate, radiographic study 2-78107
 first order reversible reaction, kinetic eqns., time-depend. behaviour 2-116686
 fission product chemical behaviour in fuel rods under accident conditions 2-80087
 fission reactor spent fuel extraction, chem. equilib., diluent props. effect 2-64547
 flow, heat transfer and chemical reactions, simulation using computer code system 2-91571
 fluctuations, space-time correlation, crit. behaviour of non-linear systems (*Chinese*) 2-111460
 fluctuations, space-time correlation (*Chinese*) 2-111459
 fluoromethanol, chemical laser system, dynamic behaviour of intrinsic reaction coordinate, HF laser emissions 2-93798
 force fields for chemically reacting systems 2-83354
 forster-type processes in cascading systems 2-83351
 gas-surface, collision interaction, vibr. energy transfer in reactive systems, variation of initial energy distrib. 2-62378
 gas-surface reactions, diffusion controlled, state depend. reactivity 2-99707
 generalised transition state theory, quantum effects 2-111457
 graphite intercalation cpd. with FeCl₃, reduction and Fischer-Tropsch reactions, Mossbauer study 2-116692
 hexamethylenetetramine, chemical reactivity under shock loading 2-78102
 hexanoic acid, ionised, single and double H-rearrangements involving β -bond cleavage studied using field ionisation 2-105456
 inorganic chemistry, shock induced 2-78098
 inorganic substances, shock compressed, chem. effects 2-78097
 inorganic synthesis under shock-wave compression 2-78099
 interstellar chemical evolution, laboratory simulation 2-106831
 interstellar dense cloud chemistry, grain-surface reactions, direct and indirect effects 2-63585
 intrinsic reaction coordinate, variational principles 2-88334
 kinetic energy, dynamical theory 2-88333
 liquid state chem. reactions dynamics, R-dependent correl. functions modelling 2-99642
 low temperature, models 2-83356
 low-temperature chemical reactions, enhancement in phase transitions 2-67735
 mass transport for Couette flow in a flat conduit 2-114912
 model chemical system related to absolutely asymmetric synthesis, stereospecific and autocatalytic processes 2-62373
 molecular dynamics with stochastic boundary conditions 2-101298
 molecular ions, molecular struct., and interaction with matter, conference, Haifa, Israel (Jan. 1981) 2-53410
 molecular spectroscopy, conf., Albena, Bulgaria, (Oct. 1980) 2-107020
 multicomponent chemical reaction, 1-dimens. dynamics 2-99669
 naphthalene, chemical reactivity under shock loading 2-78102
 nitrobenzene and cholesterol reaction, EPR obs. 2-111464
 nonautocatalytic polymer solution reaction model, stable limit cycles 2-111492
 nondiffusive fluid, chemically reacting mixtures, acoustic wave kinetic props. meas. 2-99643
 nonlinear reaction-diffusion, generalised Lagrangian equations 2-67728
 Onsager's reciprocity relations nonlinear generalisations of linear dependent chem. elementary reactions (*German*) 2-83341
 organic compounds, shock-induced chemistry 2-78101
 organic cpds., ground state reactions, HF MO theory 2-116687
 organic solids, melting point rel. to reactivity 2-103951
 organic substances, shock wave chem. 2-78100
 organometallic cpds. and synthesis, conf., Ft. Collins, CO, USA (Aug. 1981) 2-53418
 pentanoic acid, ionised, single and double H-rearrangements involving β -bond cleavage studied using field ionisation 2-105456
 phenol-formaldehyde, 2nd order condensation, signal averaging, Varytemp NMR investig. 2-85698
 polyacetylene film, IR study of cis trans isomerisation 2-62398
 polyatomic scatt., system-bath decomposition of reaction path Hamiltonian, quantum perturbative treatment 2-111454
 polybutanamide solns., solubility, viscosity and stability (*Russian*) 2-76725
 polyethylenimine backbone polynucleotide models, synthesis and ¹H and ¹³C NMR characterisation 2-116865
 polymethylene chains, ring closure dynamics, reaction rates, Brownian motion 2-59982
 polypyromellitimide, Hugoniot cusp, low press. 2-76581
 polysulphone, Hugoniot cusp, low press. 2-76581
 potential, algebraic quantum theory (*German*) 2-78121
 powders, mass transfer routes in reactions 2-72963
 proton transfer reactions, kinetic isotope effect, interaction pot. influence 2-111467
 protonation constants computation using new algorithm 2-67733
 PWR circuits, chemical decontamination LOMI reagents development by CEBB, in Britain 2-90305
 reacting systems, pot. energy surfaces, transition state struct. studied by distinguished coordinate method 2-116682
 reaction kinetics, deterministic and stochastic models and applications (*Hungarian*) 2-105439
 reaction rate constants, time dependent and equilibrium, stochastic approach appl. 2-111452
 reaction-diffusion eqns., Debye limit soln. helical and toroidal waves 2-72947
 reaction-diffusion system, rotating spiral waves, symm. props. 2-75984

chemical reactions continued

- reaction-diffusion systems, rotating spiral waves, Schrodinger eqn. approach 2-83346
 reactions in Ar matrix, IR spectra of prods., vibr. 2-96564
 reactive scattering, infinite order sudden approx. within classical mechanics 2-72945
 reactive transition probability, appl. to arrangement channel approach 2-11451
 reactivity, quantum scatt. and mol. orbital theories, Hammond's postulate 2-83344
 scavenger problem in diffusion controlled recombination 2-62390
 Schlögl's second model, phase transitions 2-116683
 silicates, sol-gel transition, gel-to-glass conversion 2-76315
 silicon alkoxides, hydrolysis kinetics rel. to glass form. 2-76316
 silicon tetrachloride, sol-gel transition in hydrolysis rel. to form of glass fibre and films 2-77793
 solids, reaction kinetics, jump diffusion rates effect 2-72979
 solution reactions, dynamical polar solvents effect, simple continuum model 2-72970
 solutions, critical slowing down of chemical reactions (*Russian*) 2-88336
 sorbate and nitrite reaction, in presence of spin trap, ESR obs. 2-108583
 SOS films, and interfaces, chem. aspects 2-91847
 spectrometer 177 rapid scanning spectrophotometer and its application for investigation of rapid processes 2-107383
 stabilisation energies of chemical species calc. (*French*) 2-99641
 stabilisation in chemical system 2-105441
 sulphophthalene macronetwork polyelectrolytes, synthesis and props. (*Russian*) 2-78093
 TCNQ salt, 1,1'-biscobaltocene[Co(III)Co(III)]TCNQ, synthesis and struct. 2-93774
 tetragonal-pyramidal complexes, rearrangement, symmetry props. of chemical graphs 2-67739
 tetrakis (deuteriomethyl) tetraselenafulvalene, preparation 2-93464
 tetraselenafulvalenes, substituted, synthesis from dimethylphosphene iminium chloride 2-93463
 2,4,6,9-tetrathiaadamantane and its methyl derivatives, synthesis, mass and ¹H-NMR spectra 2-114016
 theoretical chemistry, conf., Colorado, USA (June 1981) 2-107002
 thermal runaway, modelling and criticality, in systems with diminishing rates, Semenov approx. 2-57609
 thermal unimolecular reactions, fall-off behaviour models 2-99665
 thermotropic liquid crystalline polymers, synthesis by poly(acryloyl chloride)+mesogenic cpds. interactions 2-115136
 thiophenes, electrophilic bromination, charge density-activation energy correlation, Huckel LCAO calc. 2-54771
 Titan atmosphere, chemistry and evolution 2-112386
 transition metal, refractory, surface carbidisation by elec.-spark alloying 2-67658
 transition metal complex photo-chem. for H₂ production from solar energy 2-62507
 transition metal ions, bridging props. in electron transfer reactions 2-105449
 transition state theory, effect of reaction path curvature and dimensionality 2-72946
 trimethylammonium aluminium trichloride, electron density distrib., electrostatic mol. pot. anal., CNDO/2 calcs. 2-85544
 trimethylammonium aluminium trihydride, electron density distrib., electrostatic mol. pot. anal., CNDO/2 calcs. 2-85544
 trypsin, conformational fluctuations of protein mol. 2-73185
 unimolecular reactions with intense radiation 2-83396
 V-VI-VII compounds, chem. transport during crystn. from vapour 2-81698
 viscous fluid mixture, equations of motion, thermal and intermol. diffusion, chemical reactions, radiation press. 2-76722
 Ag⁺ bis(2,2'-bipyridine)-bis-cyanoruthenium(II) complex form., redox and photochem. behaviour 2-83392
 Al/W/NiSi structure, use of thin W barrier to inhibit Al+NiSi reaction 2-98472
 Al-Si, reaction retardation by Ti intermediate layer 2-71737
 Ar(³P_{0,2}), metastable atoms, chemi-ionisation reactions 2-72974
 B fibre reinforced Al, dynamic elastic modulus with solid-state chem. interaction 2-83158
 B fibre reinforced Al, fracture and strength characts., chemical action effect (*Russian*) 2-72795
 B fibre reinforced Al and Al-Cu-Mg-Mn, hot pressing, reaction between fibres and matrix 2-83068
 B filament reinforced Ti, fibre-matrix chem. interactions at high temp. composite strength 2-77783
 Bi₂O₃+MoO₃, solid-state reaction kinetics and mechanism 2-83374
 Br, short-lived fission products, gas-phase chem. separation 2-75450
 C and carbides, chemical reaction and sputtering 2-111490
 C fibre reinforced Al-Si, TiC barrier coating effect on reaction between components 2-99373
 C+H reactivity electron beam enhancement, in pyrolytic graphite 2-74938
 C+N₂ toxic cpd. form. in sintering furnaces 2-105097
 C₂KD₂/3, intercalation cpd. formation kinetics, neutron diff. obs. 2-111484
 C₂KH₂/3, intercalation cpd. formation kinetics, neutron diff. obs. 2-111484
 CaO-CO₂-H₂O system, high press. differential anal. 2-93756
 CdBr₂·4H₂O, solid, elec. and electrochemical props., dehydration effects 2-71708
 Cl recombination, preelasing investigations 2-114973
 Co-Ge-Te, physicochemical reaction, equilibria and cross-sections 2-72680
 Cu plate, accelerated by reacting and detonating explosives, free surface vel. meas. 2-76591
 FeTa₂O₆, free energy of form. at 1470-1750K 2-111507
 Gd(OH₂)₈³⁺, aq., chemical behaviour of Gd_{aq}³⁺, changes in inner coordination phase 2-116684
 HCl⁺+Xe, charge exchange reactions, rate coeffs., selected ion flow study 2-88341
 HSiF, form., struct. and matrix isolated IR spectrum 2-108493
 HSiOH, form., matrix isolation IR spectra, isotope effects 2-108492
 He⁺-Xe, charge transfer reaction, combined drift-tube and beam luminesc. study 2-99671
 He+He, low energy scatt., ⁴He, bound state 2-88349
 Hg+Br, collisional de-excitation, ion-pair form. in entrance channel, quenching rate coeff. 2-72973
 I+I, recombination in liqs., vibr. relax. study 2-105465

chemical reactions continued

- KCNO, electric gun induced reactions, EPR study 2-116697
 Kr⁺+F⁻, ion-ion recombination, reaction rates 2-99672
 Mn²⁺-citric acid-H₂SO₄-KBrO₃, chemical system bifurcation diagrams 2-72957
 Mn²⁺-malic acid-H₂SO₄-KBrO₃, chemical system bifurcation diagrams 2-72957
 MnO-MnS, reactions and sintering, struct. props. variation 2-88015
 2Na₂=Na₂, surface catalysed equilib., laser diagnostics 2-57630
 Na₂PO₄F, prep. from mixture of Na₂CO₃, H₃PO₄ and NH₄HF₂ 2-72615
 Ni(100) surface, effects of Fe in reactivity 2-78135
 Pb surfaces, halogenation, UV photoelectron spectra 2-73013
 Pb+Pb metastable levels 6p²¹P₁ and 6p²³P₂, collisional quenching, rate const. meas. 2-59888
 PbO-(ZrO₂) powder, shock-induced chem. and struct. modifications 2-76583
 SF₆⁻, reaction rates and mechanisms, flowing afterglow study 2-99677
 Se, short-lived fission products, isolation and obs. by organometallic reactions 2-75449
 Si, nitridation in N₂/H₂ atm., Si₃N₄ prep. 2-105110
 Si-metal interface, low temp. intermixing reactions 2-115579
 SiC filament reinforced Ti, fibre-matrix chem. interactions at high temp. composite strength 2-77783
 SiF₄+F₂ chemiluminescent reaction 2-88361
 TiB₂+H reactivity electron beam enhancement 2-74938
 TiC+H reactivity electron beam enhancement 2-74938
 TiO₂-SiO₂ gel prep. to obtain high homogeneity glasses by low temp. synthesis 2-77796
 Xe⁺+Cl⁻, ion-ion recombination, reaction rates 2-99672
 Zn+Se(Si), mechanochem. reaction, positron annihilation study 2-105446
 ZrO₂-(PbO) powder, shock-induced chem. and struct. modifications 2-76583

chemical reactivity see chemical reactions

chemical relaxation

No entries

chemical shift

see also isomer shift

- acenes, linear ¹H NMR chemical shifts, ring current effects 2-70281
 acetamide, solvent effect on amidic bond, PMR study 2-70291
 N-acetylxypridinium salts, fragmentary exchange, reaction rates and mechanism, IR and NMR obs. 2-83372
 alkali silicate glass, corrosion behaviour in water, ESCA obs. 2-93656
 alkyl chain ligands coordinated to Ln(DPM)₃, ¹³C pseudocontact shift and relax., conformational anal. 2-70283
 alkynyl mercury (II), chemical shifts, coupling consts., NMR 2-54880
 anisole, NMR study, proton-proton coupling consts. (*French*) 2-96594
 anisotropies in solids, determ. using magic angle sample spinning technique 2-80658
 aqueous acid solns. dissoc. consts., anion effects by PMR spectroscopy 2-65017
 aqueous shift reagents for high-resolution cationic nuclear magnetic resonance 2-70290
 aromatic cpds., NMR using binuclear shift reagents 2-114014
 aromatic heterocyclic compounds, S-containing, proton, ¹³C and ¹⁵N chemical shifts, MO LCAO SCF method 2-75321
 aromatic molecules, PMR chem. shifts due to proton mag. shielding, symm. anal. 2-75461
 2-aryl-1,2-dihydro (4H) thieno[2,3-c]benzo[e]pyrane-4-ones, IR and NMR spectroscopic props. (*French*) 2-110863
 2-arylamino-1,2-diarylethanephosphoric acid esters, stereochemistry, PMR study 2-114019
 azobenzenes, stereospecificity of ¹⁵N,¹³C coupling consts. and chem. shifts in ¹³C NMR spectra 2-96600
 benzene, cryst., intermolecular contrib. to chemical shielding anisotropy 2-93029
 benzene, diamagnetic shielding const. interaction with surface, NMR study 2-102501
 benzene, PMR chem. shifts due to proton mag. shielding, symm. anal. 2-75461
 benzocyclobutenes, isopropyl substituted, UV spectra, steric interaction, ¹H NMR chemical shift 2-70274
 benz[a]anthracenes, methyl substituted, ¹H and ¹³C NMR chem. shifts 2-65020
 binuclear shift reagents for NMR spectroscopy 2-114014
 compounds with intramol H-bonds with large proton polarisability, ¹H NMR spectra, solvent effect 2-102503
 1,3-cyclohexadiene, ¹³C NMR 2-110671
 cytidine 2'-phosphate, chem. shift and ¹H-¹H decoupling detect., effect of RNase 2-59825
 p,p'-di-n-heptyloxybenzene, diamag. susceptibility, ¹H NMR, chem. shift 2-98979
 dibenzo-18-crown-6, solvent effects on PMR spectra 2-108578
 beta-dicarbonyls, H bonding and proton migration, ¹H and ¹³C NMR chem. shift. obs. 2-80680
 dipeptide, magic angle NMR, dipolar and scaled chem. shift interactions 2-108554
 diphenyl disulphide, NMR study, proton-proton coupling consts. (*French*) 2-96594
 diphenyl ether, NMR study, proton-proton coupling consts. (*French*) 2-96594
 N,N-diphenylthiourea, NMR and IR studies of solvent effect 2-75325
 DNA, backbone motions, spin-lattice relax., NOE, chemical shift, ³¹P and ¹³C NMR 2-83543
 electron transfer reactions, nucl. mag. relax. obs. 2-93772
 ethyl phenylpropiolates, p-substituent effect, IR and ¹³C chem. shift study 2-75283
 ethyl trans-cinnamates, p-substituent effect, IR and ¹³C chem. shift study 2-75283
 α,β-ethylenic ketones, conformations, substituent effects, NMR, IR study (*French*) 2-90582
 ferredoxin, heteronuclear 2-dimens. chem. shift correl. NMR spectrosc. 2-108552
 fluorobenzenes, monohalosubstituted, orientation in lyotropic mesophase, NMR 2-54881
 gentiobiose octaacetate, conformation, NMR obs. and hard-sphere calcs. 2-96602
 glass coated by Sn and organic long chain moles., chemical bond nature, Mossbauer spectra 2-99009
 glycerol, glassy, NMR hole burning slow mol. rot. study 2-104722

chemical shift continued

hexadecyltrimethylammonium fluoride-H₂O, phase equilibria studied by ¹H, ¹⁴N and ¹⁹F NMR 2-81958
 hexapentoxy-triphenylene, discotic columnar mesophase, mol. ordering, ¹³C NMR study 2-71336
 inorganic systems, ²⁹Si, ²⁷Al, ¹¹B magic angle spinning NMR technique 2-82728
 lactams, trimethylsilyl derivatives, ¹⁵N NMR 2-65013
 lanthanide shift reagents, nonlabile coordinated chelate proton spin relax. 2-59823
 magic angle NMR, dipolar and scaled chem. shift interactions 2-108554
 magnetic susceptibility meas. using solenoidal magnet NMR spectrometer 2-107366
 measurement precision 2-59824
 methyl-10-phenothiazine, phosphonation isomers, ¹³C and ³¹P NMR 2-75317
 N-methylacetamide, solvent effect on amidic bond, PMR study 2-70291
 methylbenzenes, sterically crowded, methyl proton signals, NMR chem. shift calcs. 2-80656
 N-methylthiourea, NMR and IR studies of solvent effect 2-75325
 micelles, inverted, chemical shift, phosphate buffer effect, relax. time, NMR 2-57644
 mononucleotide solutions, ³¹P NMR, chem. shift (French) 2-75315
 monosaccharides, ¹⁷O NMR, chemical shifts 2-102505
 monosaccharide (-dn) and ¹³C enriched compounds, ¹H and ¹³C two dimens. spectroscopy (French) 2-80679
 4-nitrobenzoic acid-phenolate, H-bonded complex, ¹H transfer, PMR and IR obs. 2-80602
 nitrosobenzenes, stereospecificity of ¹⁵N-¹³C coupling consts. and chem. shifts in ¹³C NMR spectra 2-96600
 nucleotides, cellular bioenergetic processes, ³¹P NMR chemical shift 2-90579
 nucleotides in aq. solns., conformation study by NMR lanthanide shift 2-67931
 organic compounds, chemical shifts ¹³C, EHT and GIAO calcs. 2-85557
 organoselenium cpds. with C=Se double bonds, ⁷⁷Se NMR 2-65006
 phased and absolute value FT NMR spectra, shift distortions and resolution 2-101430
 phenolic H⁺ chemical shift, high dilution meas., correl. with electronic charge calc. by CNDO/2 method 2-75326
 phenylthioacetic acids, substituted, ¹H NMR spectra, substituent effects 2-65009
 phosphates, inorganic and organic, natural abundance ¹⁷O NMR spectra 2-75319
 phospholipid multilayers, oriented, ³¹P NMR obs. 2-94000
 plastics, engineering, ¹³C chem. shift meas. 2-79632
 polarization transfer via J coupling by semiselective excitation applied to the high gyromagnetic ratio nucleus 2-84677
 polyacetylene, AsF₅ and HF doping, ¹³C NMR study 2-76473
 polycyclic aromatic cpds., NMR using binuclear shift reagents 2-114014
 polymers, aromatic, benzoid and heterocyclic, characterisation by cross-polarisation, magic-angle ¹³C NMR 2-110670
 polyprenol homologues struct. charact., ¹³C NMR spectroscopy 2-90752
 PTFE, deformed, ¹⁹F NMR chemical shift 2-72365
 pulse sequence for 2-dimens. chem. shift correl. spectroscopy 2-58869
 purines + phenylalanine, collision complexes, ¹H NMR spectra 2-57591
 pyridine-N-oxide, thermotropic nematic phase, NMR spectrum, chemical shift 2-87608
 quadrupolar nuclei, NMR using rapid simple spinning 2-116076
 β -quinol-methanol clathrate static and dynamic struct., ¹³C NMR and H⁺ T₁ meas. 2-104730
 rare earth metal complex, elemental anal., NMR, IR, UV-visible study 2-110672
 relayed coherence transfer spectroscopy, structural determ. 2-90580
 rotating solids, line shape anal., chemical shift dipolar NMR study 2-66936
 selenenyl sulphides, ⁷⁷Se NMR chem. shift meas. 2-65011
 selenolesters, ⁷⁷Se chemical shifts (French) 2-70293
 selenolo[3,2-b]selenophenes, ¹H, ¹³C and ⁷⁷Se NMR, substituent-induced shifts 2-75312
 selenophenes, condensed phase CNDO/2 calcs., ⁷⁷Se NMR chemical shifts 2-82736
 selenophthalic anhydride, chemical shift, NMR, IR, Raman UV, visible and PES study 2-54896
 simple molecules, mag. susceptibility, chemical shift, HFC 2-54984
 sulphanilamide, NQR and NMR study 2-108568
 tellurophthalic anhydride, chemical shift, NMR, IR, Raman UV, visible and PES study 2-54896
 tetrafluoro-1,4-benzoquinone in liq. cryst. solns., struct., chem. shift anisotropy and J couplings, NMR study 2-72363
 tetrakis(N,N-dimethylacetamide)beryllium(II), ligand exchange, rate consts., PMR study 2-85691
 tetrakis(N,N-dimethylformamide)beryllium(II), ligand exchange, rate consts., PMR study 2-85691
 tetrakis(N-methylacetamide)beryllium(II), ligand exchange, rate consts., PMR study 2-85691
 tetramethylsilane, mag. susceptibility, ¹H and ¹³C chem. shifts, temp. depend. 2-80672
 tetraphenylphosphonium complexes, ESCA chem. shift and low binding energy satellites 2-75352
 transition metal oxides, 3d, L_{2,3} edge, EELS 2-108636
 trifluoromethyl halides, ¹⁹F shielding tensors, chemical shift and spin-rot. tensors 2-108556
 triorganyl borane + BH₃, exchange reactions, ¹¹B NMR obs. 2-108577
 tripeptide, polarization transfer via J coupling by semiselective excitation applied to the high gyromagnetic ratio nucleus 2-84677
 uniform chemical shift scaling in rotating solids 2-69225
 variable freq. H⁺ off-reson. decoupled ¹³C NMR, appl. to micellar and microemulsion systems 2-80653
 X-ray absorption edges, chemical shifts, use in density determinations, theory 2-77622
 X-ray transmission, chemical effects 2-67147
 Al (111), overlayer of O, position, electronic and binding props. 2-82135
 As₂Se₃:Ag(Cu), amorphous, XPS study 2-57249

chemical shift continued

¹⁹⁷Au, Au and Au-Cu Mossbauer isomer shift calc. from electron capture lifetime meas. 2-93076
 Ba and Ba compounds, photoelectron, Auger, and ionisation loss spectra 2-83003
 BaB₆, ¹¹B chem. shifts and quadrupole coupling consts. 2-87607
 Ba(NH₃)₆, NH₃ diffusion and H⁺ shift, PMR obs. 2-82735
¹³C, Z 2-79632
 CaB₆, ¹¹B chem. shifts and quadrupole coupling consts. 2-87607
 Ca(NH₃)₆, NH₃ diffusion and H⁺ shift, PMR obs. 2-82735
 CsH₃(SeO₃)₃, ⁷⁷Se high resolution NMR 2-61779
 Cs₂Sb, solid compound semiconductor, chemical bonding, ¹³³Cs-NMR spectra 2-56957
 Cu₂Mg_{1-x}Fe_xO₄, spinel ferrites, ionic-covalent bonding, X-ray diffr. and absorption chemical shift study 2-65919
 Cu₂Zn_{1-x}Fe_xO₄, spinel ferrites, ionic-covalent bonding, X-ray diffr. and absorption chemical shift study 2-65919
⁶⁴Cu, nuclear electron density in CuSCN and Cu(SCN)₂, electron capture decay study 2-92545
 Dy and Dy cpds., EXAFS and chem. shifts meas. 2-99224
 Eu reagents with coordination at pyridine N-atom, NMR, chemical shift, pseudocontact model 2-75322
 Ga surface, oxidation, photoemission spectra study 2-93376
 GaAs, epitaxial layers, donors contaminants study far-IR photoconductivity method 2-56732
 Ge-Se, amorphous, valence and inner shells, XPS study 2-116332
 GeSe₂:Ag, amorphous, XPS study 2-57249
 Ge-_{1-x}Se_x:Ag amorphous films, Ag photodoping, XPS study 2-57245
²H containing mol., mol. structure effect on chemical shift 2-79983
 Ho and Ho cpds., EXAFS and chem. shifts meas. 2-99224
 Mn compounds, X-ray K absorption spectrum, chemical effects on main peak 2-57211
 NH₄HSeO₄, polycrystalline, ¹H NMR chem. shift 2-104725
 Ni d¹⁰ complexes, ⁶¹Ni NMR obs. 2-65012
 Pb ultra thin overlayers on Ag surface, oxidation, UPS and XPS study 2-83267
 PdH_{0.6}, XPS/UPS study of electronic struct. 2-72600
 Pr complex, L-carnosine-Pr³⁺, in aq. solns., bound shifts 2-70286
 Pt-Ni, surface composition, oxidation, surface segregation, AES and photoemission study 2-66330
 Pt(II) complex, cis-(¹⁵ND₃)₂Pt(OD)₂Pt(¹⁵ND₃)₂²⁺, ¹⁹⁵Pt chem. shift and Pt-N coupling consts. 2-90575
 RAl₃, X-ray L₁ absorpt. edge study 2-62018
 RGA₃, X-ray absorpt. spectrum study 2-77621
 RbHSeO₄, polycrystalline, ¹H NMR chem. shift 2-104725
 Re compounds, chemical shifts of X-ray L_{III} absorption discontinuity 2-99221
 RhF, Rh-F coupling const. and Rh shielding in Rh square planar complex 2-75320
 RuO₂ film, reactively sputtered, ESCA spectra meas. 2-57255
⁹⁹Ru, NMR in soln. 2-70289
¹⁰¹Ru, NMR in soln. 2-70289
 Si, Auger line chemical shifts, KL₂₃L₂₃ transition 2-90491
 Si-H, amorphous thin film, pure and hydrogenated, adsorbed O₂ layer, electronic struct., XPS and UPS study 2-57254
 Si-Al-O system compounds, chem. state plots, line energies ESCA study 2-83425
 Si-d metal interface, interface, O₂ interaction, photoemission investig. 2-110474
 SiO₂-Al₂O₃ amorphous thin films, coordination and bond character of cations 2-99228
 SiO₂ amorphous films, reactively sputtered, struct. and props., IR spectra study 2-66397
 SiO₂, LO-TO mode splittings and dynamic effective charges of O₂ 2-99204
 Sn chalcogenides, Mossbauer spectra, secondary periodicity 2-77430
 SnS-BaS(Tl₂S) systems, ¹¹⁹Sn Mossbauer spectra, chemical isomer shifts (French) 2-61799
 SrB₆, ¹¹B chem. shifts and quadrupole coupling consts. 2-87607
 Sr(NH₃)₆, NH₃ diffusion and H⁺ shift, PMR obs. 2-82735
 Tb and Tb compounds, EXAFS and chem. shifts meas. 2-99224
¹²⁵Te, internal conversion of 35 keV M1 + E2 transition, nucl. struct. and chem. effects 2-101843
 transition metals, 3d, L_{2,3} edge, EELS 2-108636
 UF₆, liq., ²³⁵U enrichment effect, ¹⁹F NMR 2-116084
 USb₂Te_{1-x}, core level binding energies and heat of formation, UPS study 2-67193
 VO₂-CrNbO₄ (FeNbO₄), solid solns., phase transitions, ⁵¹V 2-110669
 VS₂(Se₂), intercalated with transition metals, X-ray absorpt. spectra and electronic struct. 2-67150
 W (111) and (100), chemisorbed O₂(H₂), 4f core electron binding energy shifts, XPS study 2-105041
 WSi₃ compounds, chem. bonding, XPES and X-ray emission study 2-91862

chemical structure

see also bonds (chemical); crystal atomic structure; crystal chemistry; molecular configurations
 organic and organometallic mol., geminal interaction of atoms in Y-C-M groups 2-108562
 porphyrins, energy states, spectroscopy study, mol. biology 2-62560
 Si₃N₄ film in MNOS struct., stoichiometry variation rel. to memory traps 2-82163

chemical technology

see also chemical industry; chemical variables control; chemical variables measurement
 bubble and packed bubble columns, with downcomers, hydrodynamic and mass transfer charact. 2-109394
 coal liquefaction processes, research and development by EPRI, progress report 2-93859
 electrochemical cell for measuring the activity of oxygen in sodium 2-102060
 hydrogen, large-scale production plants, future development (German) 2-62506
 KILnGAS coal gasification process for combined cycle power generation, evaluation 2-62452
 multistage fluidisation, press. drop, solids conc. and mean holding time 2-109401
 nuclear wastes, structural influences on the lanthanide-actinide selectivity of some aminocarboxylates 2-113619

chemical technology continued

- phenolic wastewater, purification by parametric pumping, nonequilib. dead volume model 2-83526
 thermal regenerators, waste steam recirculation, matrix temp. control 2-65667
 transport processes and unit operations (book) 2-63767
 D, rectification, feeder current phase composition influence 2-54660
 H isotope separation, temp. swing process using VH 2-80830
 TeO_4 coextraction in Porex process 2-64551
 U, recovery from seawater, ion exchange method 2-64555
 UO_2 - PuO_2 mixed powder, prod. by denitrification using microwave heat 2-102101
 UO_2 - UC_2 spherical nuclear fuel, prod., appl. using thermochem. principles 2-108021
 U_3O_8 , recovery from phosphate rock 2-102091
 $\text{UO}_2(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$, conversion to UF_6 , in reprocessing plant 2-102090

chemical vapour deposited coatings *see CVD coatings***chemical vapour deposition**

- see also vapour phase epitaxial growth*
 bibliography (1960-1980) 2-58578
 capillary layer deposition, mol. decomp. probability determ. method 2-111088
 decomposition prob. for deposition in capillary layers, expt. determ. 2-105087
 deposit thickness measurement technique using forward scatt. light field (Chinese) 2-63970
 diamond particles, vapour deposition from methane- H_2 mixture 2-77744
 fibre optics manufacturing technology, used for optical communication systems 2-55364
 fine glass particles and high-rate production of fibre preforms in VAD process, deposition mechanism 2-116373
 fission reactor fuel claddings, anti-deposition coating, CVD method 2-64485
 graded index low-loss high-numerical-aperture fibres fabrication by pressurised modified CVD method 2-102939
 inertial confinement fusion targets, thin-wall, free standing, fabrication by CVD 2-80196
 insulating film deposition technology, secondary passivation 2-62075
 LPCVD A-Si post-hydrogenation and ion-implantation doping 2-71960
 MCVD, multimode optical fibres manufacture (French) 2-70687
 metal film photodeposition by UV laser light 2-77751
 MOS capacitor structure, elect. characts. of interface between laser-recrystall. poly-Si and underlying insulator 2-92770
 optical fibre design and material choices, modified CVD process and performance, overview 2-65421
 optical fibre graded-index preforms fabricated by high-rate vapour-phase axial deposition 2-75729
 optical fibres, graded-index high numerical aperture, fabrication by MCVD method 2-91073
 optical fibres, long high-strength with low loss, modified CVD fabrication 2-91096
 optical fibres, single-mode, wholly synthesised by vapour-phase axial deposition 2-75728
 optical fibres, VAD, refractive-index profile formation mechanism 2-91074
 optical fibres manufacture by MCVD technique (French) 2-70692
 optical single-mode fibres, fabrication by modified CVD process 2-114449
 phosphates, polymeric vitreous, gas phase synthesis laws 2-111084
 phosphosilicate glass films, low press. CVD growth 2-105082
 plasma enhanced 2-111082
 plasma enhanced CVD, microwave and RF N_2 activation methods 2-93442
 plasma enhanced CVD of thin films 2-72631
 polymer film, plasma polymerisation deposition in low press. reactive plasma, review 2-57287
 semiconductor thin films, microwave plasma CVD fabrication 2-111093
 substrate-tube lithography for optical fibres 2-114477
 surface coatings deposited by CVD and PVD (German) 2-83035
 targets prep. for superheavy element synthesis 2-108185
 AlGaAs, undoped, MOCVD growth and charact. 2-98497
 $\text{Al}_x\text{Ga}_{1-x}\text{As}$ proton-isolated narrow stripe visible laser grown by MOCVD 2-80984
 AlN, metal organic CVD on Si substrate, substrate temp. effects, surface texture 2-67223
 $\alpha\text{-Al}_2\text{O}_3$, CVD from AlCl_3 - H_2 - CO_2 gas phase mixtures, thermodynamic and expt. anal. 2-98479
 Al_2O_3 , deposited on cemented carbides, increase in wear characts. (Korean) 2-62073
 Al_2O_3 dielec. layer on InP MOSFET, elec. and chem. props. 2-111090
 Al_2O_3 film growth, on Al acetylacetonate by thermal decomposition 2-87994
 Al_2O_3 -doped silica-based optical fibres, VAD fabrication 2-114476
 B fibre encapsulation, in situ investig. in CVD reactor 2-77782
 BN film, low temp. double plasma MOCVD technique 2-99349
 BN hexagonal film, low temp. deposition by CVD 2-71841
 C fibres, coating with TiC and TiB₂ (Russian) 2-67583
 C-C composite, prep. by CVD and characts. (French) 2-77764
 C-C composite with hybrid C-SiC and C-TiC matrices, synthesis and characts. for high temp. applic. 2-77765
 CdCr₂Se₄In. Ag defect single cryst. growth, elec. and mag. characts., dopant influence 2-91842
 CdS epitaxial layer preparation in $\text{Cd}(\text{CH}_3)_2$ - $(\text{CH}_3)_2\text{S}$ - H_2 system 2-87996
 CdS film, oriented, grown on glass and InP substrates by thermal decomposition of organometallic cpds. 2-67224
 Co conducting film deposition on glass fibre substrate, growth rate rel. to substrate temp. 2-111085
 Cu_2S polycrystalline thin film prep. from Cu film in H_2S - H_2 mixture 2-77748
 $\text{Cu}_2\text{S}/\text{CdS}$ sprayed solar cells photovoltaic performance 2-78221
 $\alpha\text{-Fe}_2\text{O}_3$:Zr single crystals, growth and photoelectrochemical study 2-62052
 GaAs and related cpds., conf. Oiso, Japan (Sept. 1981) 2-94906
 GaAs, CVD from trimethyl gallium-AsH₃ flowing vapour 2-116381
 GaAs, thermodynamic anal. of $\text{Ga}/\text{AsCl}_3/\text{H}_2$ /inert gas system (Chinese) 2-111079
 GaAs/GaAlAs lasers nonplanar structures fabrication, by metalorganic chemical vapour deposition 2-85958

chemical vapour deposition continued

- GaAs-GaAlAs-GaAs rectifying structures fabricated by metalorganic CVD composition grading 2-115871
 GaAs-P₁-GaP strain-layer superlattice, MOCVD growth and photoluminesc. props. 2-98729
 GaAs-P₁-GaP strained-layer superlattice, MOCVD growth and photoluminesc. props. 2-110919
 Ga₂In₂-As films, vapour growth from In/Ga alloy source, characterisation 2-99351
 GaInAsP low press. MOCVD growth, for microwave device and optoelectric device appl. 2-98496
 GaN CVD growth on sapphire, growth kinetics and surface morphology meas. 2-111081
 GaN, gas phase deposition by pyrolysis of Ga tri-iodide ammine, vel. front 2-72630
 Gd targets prep. for superheavy element synthesis 2-108185
 Ge chemical transport, water desorption and absorption on quartz glass ampoules (German) 2-93440
 Ge, chemical transport with H₂O, transport rate depend. on solid phase comp. (German) 2-111039
 Ge, thin film growth by laser induced CVD 2-77752
 Ge transport by GeI₄, GeI₃, CVD numerical model 2-97956
 HfC whiskers, growth by CVD (Japanese) 2-105057
 In₂O₃:Sn film, transparent conductive, prep. by pyrolysis method 2-111091
 InP low press. MOCVD growth, for microwave device and optoelectric device appl. 2-98496
 P₃N₅ gate insulating film, CVD prep., dielec. props. and InP-P₃N₅ MIS device props. 2-99346
 PbSiO₂ hydrophobic films, CVD prep. and microelectronic apps. 2-62070
 Pb_{1-x}Sn_xTe, horizontal vapour transport in closed tube (Chinese) 2-111078
 Se thin film, prep. by photodissociation of organometallic gases 2-83036
 Si amorphous CVD film, prep. solar photovoltaic apps. 2-105081
 Si amorphous thin film, microwave plasma CVD fabrication 2-111093
 Si, Ar⁺ laser induced CVD from SiH₄ 2-83030
 Si, CVD growth, decomposition prob., expt. determ. 2-105087
 Si, CVD growth rate from SiH₄ atm., temp. depend. meas. 2-99345
 Si epitaxial layer on SOC, contaminant reduction during CVD growth, SIMS study 2-77750
 Si film, CVD in capillary layers, mol. decomp. probability determ. method 2-111088
 Si film production by laser dissociation of SiH₄ (Chinese) 2-62074
 Si, impurity doping processes, book 2-68985
 Si, polycryst. and amorphous, deposition from silane in low-pressure hot-wall system 2-77746
 Si production by SiH₄ heterogeneous decomposition in fixed bed reactor 2-116376
 Si, thin film growth by laser induced CVD 2-77752
 Si-B, codeposition from Si and B, influence of traces of water vapour 2-111080
 Si-B thin film, polycrystalline, elec. props., use as sensor (German) 2-87427
 Si-C, polycrystn., C influence in resistivity and grain size 2-66547
 Si-H amorphous film, growth by silane laser photodissociation, X-ray and IR spectra study 2-116375
 a-Si:H films, growth and characterisation 2-83031
 Si-O, incorporation of O impurities in CVD 2-86700
 Si-O, polycrystalline films, prep. and props. 2-72629
 Si:P, polycrystalline, low press. CVD with in situ P doping 2-93438
 Si/WSi₂(MoSi₂)-based composite electrodes for MOS-type capacitor structs., elec. props. 2-98752
 Si-B, chemical vapour codeposition, thermodynamic model 2-87990
 Si-enriched layers on Ni, obtained by CVD, characterisation 2-105084
 SiC 2H crystals, growth by hydrogen reduction of methyltrichlorosilane 2-111038
 SiC, chemical vapour deposited, mirror material evaluation for synchrotron radiation 2-86071
 β -SiC layers formation on heated Si wafers exposed to sublimed C 2-93443
 SiN_x, plasma CVD, ellipsometric automatic in-line evaluation of thin films (Japanese) 2-112957
 Si₃N₄ films, CVD deposition, thermodynamic evaluation 2-77753
 Si₃N₄ amorphous film, prep. by ammonolysis of SiCl₄ 2-87995
 Si₃N₄ CVD film prep., reaction mechanism under kinetically controlled conditions 2-111458
 Si₃N₄ ceramic, prep., props. and apps., book contrib. 2-116420
 Si₃N₄ film, CVD from SiH₂Cl₂-NH₃ in diffusion-controlled regime, mechanism model 2-111089
 Si₃N₄ layers grown by plasma enhanced thermal nitridation 2-62076
 Si₃N₄, plasma enhanced CVD, microwave and RF N_2 activation methods 2-93442
 Si₃N₄-TiN composites, CVD, prep. and props. 2-87998
 SiO₂ laser-induced CVD 2-67221
 SiO₂ particle deposition in a burner 2-116374
 SiO₂:Nd glass, plasma torch CVD and fluorescence props. meas. 2-93436
 SiO₂:P(Bi)(Pb), oxidative pyrolysis of SiH₄, thermal oxidation of Si 2-77960
 SnO₂ film deposited by oxidation of SnCl₂, transparency and resistivity 2-111092
 SnO₂ film on Si, solar cell appl., CVD low-temp. process 2-57713
 SnO₂:Sb films, deposition by oxidation of tetramethyltin and trimethylantimony, elec. and optical props. 2-87997
 SnO₂/n-Si polycrystalline solar cells, spray-deposited, performance parameters 2-83497
 SnS₂, structural polytypism rel. to environments of formation 2-76338
 TaB and TaB₂, low temp. CVD, hardness and corrosion resistance 2-83033
 Ti-rich deposit, corrosion resist., prep. by CVD from tris-(2,2'-bipyridine) titanium 2-77745
 Ti-Si enriched layer for carburization protection of Hastelloy X 2-116619
 TiB₂, low temp. CVD of corrosion 2-87999
 TiC, CVD on cemented WC, growth rate and failure mode 2-116380
 TiC₂N₂, CVD on cemented WC, growth rate and failure mode 2-116380
 TiN, CVD on cemented WC, growth rate and failure mode 2-116380
 TiN, TiC layers, CVD, nucleation and kinetics 2-83034
 TiN, amorphous film, CVD on TiB₂ interlayer, Vickers microhardness 2-76854

chemical vapour deposition continued

- Ti, O_{2-x} ($x=2$ to 9), single cryst. growth by CVD 2-105056
 W film, plasma-enhanced CVD, elec. resist. and film stress 2-93434
 W, low temp. CVD from $W(CO)_6$ 2-87102
 Y_2O_3 phosphor, Eu activated, chem. transport method cryst. growth, red luminesc. 2-111040
 Zn, thin film, prep. by photodissociation of organometallic gases 2-83036
 ZnO thin films, c-axis oriented growth on Si, CVD method 2-62072
 ZnS:Fe, CVD polycrystalline films, incorporation of Fe impurities 2-116379
 ZnSe, thin film, prep. by photodissociation of organometallic gases 2-83036
 ZnTe, CVD epitaxial growth, closed tube method, transport rates, expt. and thermodynamic anal. 2-57306

chemical variables control

- see also moisture control; pollution detection and control
 electrochemical cell for measuring the activity of oxygen in sodium 2-102060

chemical variables measurement

- see also chemical analysis; moisture measurement; pollution detection and control
 automatic apparatus for catalyst characterization by temperature-programmed reduction/desorption/oxidation 2-53911
 convolute integers, 2-dimens., for anal. instrumentation 2-116731
 dilute gases, reactive species diffusion coeff. meas. method 2-60708
 electrochemical oxygen sensors, membrane type, metrological properties (Polish) 2-93850
 micro-climatic measurements in power stations for optimizing protection against corrosion. (German) 2-93665
 optical-acoustic gas analysers, single-beam differential, static characts. (Russian) 2-99735
 physico-chemical magnitudes, metrological assurance (Rumanian) 2-74381
 standard specimens metrological characts. evaluation, from interlaboratory expt. data 2-79530
 H₂S detection by SnO₂ solid state gas detection humidity effects 2-64010
 NO monitoring system using tunable laser and microcomputer aided signal processing system 2-93971
 O₂ concentration measurement using Clark cells (Dutch) 2-83427
 Pd-MOS structures, hydrogen sensitivity and long term behaviour 2-64008

chemically reactive flow

- atmospheric diffusion eqn., numerical soln. 2-55674
 combination in reactive systems, book 2-63766
 combustion tunnel, numerical modelling of turbulent flow 2-91556
 combustor flow modelling 2-75959
 compressible nonisothermal flow, boundary layer with surface reaction, appl. to wall jet (French) 2-55628
 concentration fluctuations for chemical reaction in isotropic turbulence (French) 2-97666
 condensation of a chemically reactive gas on a horizontal tube, heat and mass transfer in boundary layer 2-60672
 confined compressible reactive gas, thermal behaviour 2-89539
 dissociating gas, unsteady flow 2-86356
 exothermic reaction zone in porous media, filtration combustion wave stability 2-114889
 flame propagation in laminar flow, strain influence 2-114758
 flaming regime in glass-plastic pipe, coolant mixed convection effects 2-60670
 gas-solid reacting systems, heat and mass transfer, thermodynamic approach 2-56335
 grid generated turbulence, role played by chemical reactions (French) 2-70917
 grid generated turbulence in isothermal second order chemical reaction (French) 2-86355
 hydrodynamic equations for complex systems 2-81403
 laminar liquid films, chemical reactions, gas absorpt., mass transfer 2-65656
 methane flowing into cold plasma, chemical behaviour, H-production (French) 2-91555
 plates, reacting, orderly system distributed along a stream, conc. field 2-81402
 polyatomic gases, multitemp. flow caused by exothermic reactions 2-60673
 shear gas flow, diffusion to a particle in arbitrary surface reaction kinetics 2-114926
 structural transformations in flowing systems 2-114928
 thermoacoustic self-oscillations in a gas volume with internal heat supply sources 2-81404
 tubular flow, computations of chemical reactions using iterative methods 2-81405
 turbulent boundary layer, reactive material injection, combustion 2-114778
 turbulent diffusion flame in 2-D shear layer, probability density function 2-109306
 viscous inert and reactive fluids, flow in long tube, temp. discontinuity effects 2-60644
 N_2O_4 generalised eqn. of transfer for unsteady-state processes (Russian) 2-54554
 N_2O_4 in circular pipes, dissoc., heat transfer in turbulent flow 2-70918
 $2NO_2 \rightleftharpoons 2NO + O_2$, friction law, averaged vel. profile in turbulent reactive tube flow (Russian) 2-55548

chemiluminescence

- alkali atom + tetrahaloethylene, reaction, anomalous chemiluminesc. 2-62400
 digital instrument for circular polarisation meas. of luminescence 2-107422
 electrochemiluminescence, DC thin film cell characteristics meas. 2-93284
 electrochemiluminescence recomb. yield in double step driven system, theoretical anal. 2-116284
 electrolyte-free solution, used in electrochemiluminescence cell for liquid crystal displays 2-99199
 globular proteins, comparative investigation of radiation oxidation and X-ray chemiluminesc. 2-111745
 metal surface, non-adiabatic processes 2-87939
 vinyl fluoride, chemically energised, decomposition, energy partitioning meas. using IR chemiluminescence technique 2-88343
 Ar + H₂O, dissociative excitation, crossed mol. beam and luminesc. study 2-57602

chemiluminescence continued

- B + epoxide, chemiluminesc. obs., vibr. distrib. 2-57619
 Ba + N₂O(O_3), chemiluminescence of BaO*, vibr. transitions 2-93797
 Ba + N₂O(O_3) in solid Ar, visible chemiluminescence, thermoluminescence 2-99682
 Ba + NO₂(N₂O), nascent metastable products, chemiluminescence study 2-93796
 Ba + NO₂(NO₂)_n, beam chemiluminesc., excitation functions 2-67734
 CF₃ triplet state, initial vibr. distrib. and relax. following prod. from reaction 2-70393
 CO oxidation, oscillations, glow, ignition, in closed gas-phase system 2-78110
 Ca(P₄) + HCl(Cl₂) (carbon tetrachloride), reactivity, atomic reagent approach geometry effect, chemiluminescence 2-111476
 Cl, nonequilib. recomb. in supersonic nozzles, chemiluminesc. investig. 2-59737
 F₂ + Ga(In), product form. rate, excited states, chemiluminescence obs. 2-83359
 H₂/O₂ exhaust plumes spectrochemical analysis from Space Shuttle main engine Mach disks 2-111527
 HCl + CO₂(N₂O), vibr. relax. studied using IR chemiluminesc. method, quenching probabilities 2-72969
 Li + Mg, optically pumped LiMg* excimer chemiluminesc. intensities, form. and decay kinetics 2-83353
 Mg + N₂O, quenching, cross sections, kinetics, chemiluminescence 2-111496
 Na₂ + Cl(Br)(I), metal cluster oxidation, chemiluminescence study 2-99681
 NaMg, laser induced chemiluminesc. 2-57618
 No + O₃, transition states, mechanisms, angular distrib. chemiluminescence 2-105466
 O formation in Cl + O₃ secondary reaction, chemiluminesc. detection 2-78074
 SO + O₂(O₃)(NO₂), rate coeffs., chemiluminescence study 2-99651
 SOCl₂ + Mg*(Ca*), chemiluminesc. and chemionising reactions absolute cross sections 2-83381
 Si etching by F and F₂, chemiluminescent reaction 2-88361
 Si + OCS chemiluminesc. reaction, SiS(a Σ^+) formation, dynamic constraints 2-105487
 SiF₄ + F(F₂) chemiluminescent reaction 2-88361
 TeO, bO* \rightarrow X₁O*, X₂ IR emissions, chemiluminesc. studies 2-83388
 TeS, bO* \rightarrow X₁O*, X₂ IR emissions, chemiluminesc. studies 2-83388

chemioception

- cola drink, taste anal. using differential light scatt. props. 2-105708
 discrimination mechanisms of mammal olfaction, electronic nose expts. 2-116939
 gustatory tissue response during photon and neutron radiotherapy, quantitative dose-response relationships 2-117014
 nasal flow in unrestrained domestic rabbits, meas. instrument, olfactory research appl. 2-111817
 olfactory bulb neurons, self excitation, turtle expts. 2-73270
 olfactory centre, computerized model (Hungarian) 2-94016
 taste and salivary function, long-term effects of radio therapy 2-111751
 taste perception threshold, digital electro-gustometer for meas. (Polish) 2-111807
 tongue, dog, active ion transport, possible role in taste 2-62642

chemisorption

- acetylene chemisorpt. on Ni, Rh and Pt (111) surfaces, extended-Huckel calcs. 2-66358
 alloys, surface segregation due to chemisorption and absorpt. 2-56345
 American Vacuum Soc., conf., Anaheim, USA (Nov. 1981) 2-79275
 atoms on metal surfaces, friction coeff., electron correlation 2-92345
 benzenethiol, adsorbed on Cu(III) at 300K, angular resolved UPS and XPS spectra 2-78134
 bond making and breaking 2-98431
 core level photoelectron spectroscopy for surface crystallography 2-77694
 diamond, of H₂, surface electronic struct., ab initio atom cluster model 2-115641
 diamond (111), adsorbed H, photoemission and photon-stimulated ion desorpt. study 2-110144
 diffusion in surface layers, review 2-104140
 diffusive kinetic model for chemisorption monolayer of atoms at surface (Russian) 2-110164
 ferromagnets, theory of H chemisorption 2-78136
 image prot. contrib. to chemisorption energy 2-104163
 jellium surface, universal binding energy relationship 2-61285
 localized spin-orbital theory 2-56339
 magnetic thin films, chemisorpt., mag. anisotropy, ferromag. reson. study 2-56946
 metal film on semiconductor, interface chem. reaction and diffusion 2-86954
 metal surface, appl. of vibr. spectroscopy methods 2-79692
 metal surfaces, monocrystalline, and chemisorbed species, photoemission study (French) 2-105052
 metals, chemisorbed atoms, surface bond energy estimation 2-82117
 metals surface dipole moments, variations due to anisotropy and chemisorption 2-82439
 molecule on metal surface, vibr. state, electron-hole pair excitation 2-115526
 neutron scattering from adsorbed systems, review 2-110150
 order in two dimensions, theory 2-110131
 photoemission splendata, satellite structs. 2-105048
 semiconductor surface, chemisorpt. equilib. and isotherms with partial charge transfer, statistical thermodynamic anal. 2-56358
 single crystal surface, chem. reactivity, surface irregularities and point defects role 2-57637
 species, Auger lineshapes, effect of hole-hole correlations 2-87919
 surface core-level shifts, for surfaces with chemisorbed atoms, semiempirical theory 2-56662
 surface enhanced Raman scatt., chemisorpt. and charge transfer role 2-110872
 surface science, conference, Liverpool, England (April 1981) 2-58538
 surface struct. determ. by surface EXAFS 2-105003
 surfaces, atomically clean, prep., struct. and props. 2-82103
 transition adatoms on transition metals, and of simple chemisorption theory 2-92346
 transition metals, chemisorption energy polarisation effect, quasimolecule projection method 2-82141
 transition metals, ferromag. of H, self-consistent model 2-115554

chemisorption continued

- Ag (110), SO₂ chemisorption, atomic O effects, UPS, LEED and thermal desorpt. study 2-76824
 Ag (110) of NH₃, thermal desorption spectroscopy and EELS study 2-66372
 Ag, adsorbed pyridine, surface enhanced Raman scatt., chemisorpt. and charge transfer role 2-110872
 Ag films, clean and adsorbate-covered, optical spectra 2-87890
 Ag surface (110), O precovered, chemisorbed ethylene, EELS cross-section, energy depend. 2-56364
 Al (001), of Na, effects on surface dipole moment 2-82439
 Al (111), of Li, O, and Na, cluster model 2-66363
 Al (111) surfaces, CO exposed, Auger electron spectroscopy, electron beam stimulated chemisorption 2-82088
 Al film, evaporated, oxidation studied by AES, EELS and electron stimulated desorpt. 2-76855
 Al oxide, absorpt. of 1,3-dihydroxy- and 1-amino-3-hydroxypropane, chemisorpt. and oxide surface sites, tunnelling spectra 2-78140
 Al surface (111), O chemisorption, quantum chem. cluster model 2-110127
 Al surface (111), O chemisorpt. 2-110132
 Al-GaAs(110) interface, possibility of adatom cluster formation 2-61555
 Be, of atomic H, on (0001) surface, mixed basis set calcs. 2-110138
 C, activated, surface oxide structures, spectral obs. 2-78128
 CO, chemisorbed on Rh, dissociation mechanism 2-57638
 CO matrices, photoelectron spectra of Cu and Ni atoms and clusters 2-83416
 CO on Ni(100), vibr. freq. and ionisation pot., generalised valence bond methods 2-66370
 cc Ge, surface oxidation, modification by Al adatoms, UPS study 2-67576
 CdS films, of O₂, XPS study 2-99292
 Co, of NO and NH₃, UPS, XPS and work function meas. 2-62430
 Cr (100), of Cl, surface chloride form., struct. and kinetic study 2-66366
 Cr (110), of CO, EELS and AES study 2-57225
 Cr, BCC, surface (001), O chemisorpt., X α cluster model calcs. 2-98461
 Cr epitaxial film on W (110) face, adsorbed O and Cs effect on work function, two-stage oxidation phenomenon (*Russian*) 2-61298
 Cr films, clean and adsorbate-covered, optical spectra 2-87890
 Cr, surface (110), chemisorpt. of O and initial oxidation 2-115567
 Cu (III), of CO, angle resolved photoelectron energy spectra 2-70331
 Cu (100) and (110) of O₂, UPS, EELS, LEED and work function study 2-87071
 Cu (100) of CO, XPS satellite struct. 2-83007
 Cu (111), of O₂, UPS, EELS, LEED, AES and work function meas. 2-87072
 Cu and Ag electrodes, of thiourea complexes, surface enhanced Raman spectroscopy 2-93811
 Cu, caesiated surfaces and negative ion emission 2-99277
 Cu clusters isolated in O₂ matrices, UV photoemission studies 2-108757
 Cu, of H, small cluster model and embedding theory based on orbital localization 2-61291
 Cu, of H₂, on (100) surface, many-electron embedding theory 2-110139
 Cu surface, adsorpt. of ethylene (H₂O), chemisorbed O effects, XPS obs. 2-67188
 Cu surface (100), adsorbed CO, IR spectra study 2-56359
 Cu surface (111), O₂ chemisorpt. 2-110155
 Cu-Pd alloys, effects of alloying and chemisorpt. on Auger line shape 2-77142
 Cu(100), angle resolved photoemission studies of oxide formation 2-93366
 Fe, BCC, surface (001), O chemisorpt., X α cluster model calcs. 2-98461
 Fe, of H₂, EELS vibrational spectrum 2-61286
 Fe₂O₃, chemisorption of O₂, N₂, NO and H₂, IR study 2-82130
 Fe(110) and Fe(100) surfaces, of propyne, chemisorpt. and decomposition, UPS 2-62427
 GaAs (110), adsorbed Al, surface structure, first-principles pseudopot. determ. 2-110143
 GaAs (110), Al chemisorpt., extended Huckel mol. orbital calc. 2-66345
 GaAs (110), chemisorbed H, pseudopot. calc. 2-110423
 GaAs (110), chemisorption of Al (*Chinese*) 2-104139
 GaAs (110), chemisorption of Ge, UPS and work function studies 2-110412
 GaAs (110), of Ge, surface defect states 2-56659
 GaAs with chemisorbed H, surface optical phonon obs. 2-115550
 GaP with chemisorbed H, surface optical phonon obs. 2-115550
 GaP(110), chemisorbed H, pseudopot. calc. 2-110423
 Ge (111), Cl chemisorpt., charge density self-consistent-extended Huckel calc. 2-66344
 InP with chemisorbed H, surface optical phonon obs. 2-115550
 Ir, chemisorption of N₂ and H₂ on densely packed cryst. planes 2-115559
 LaNi₅, hydriding, kinetic model and rate eqns. 2-57608
 Li, chemisorption of H, localized spin-orbital theory 2-56339
 LiF (001) surface, H₂ adsorption atop an anion vacancy 2-61279
 MgO (001), of H₂ and CO, ab initio SCF calc. 2-104158
 Mo (100), of O, surface EXAFS study 2-105003
 Mo (100), sputtering of chemisorbed N, mass effect 2-82981
 Mo, chemisorption of N₂ and H₂ on densely packed cryst. planes 2-115559
 Mo monocrystal, (110) surface, chemisorbed gas, desorption by low-energy ions 2-74923
 Mo, of Li, image pot. contrib. to sorption energy 2-104163
 Mo(100), change in surface polarisability with oxidation, XPS of physisorbed Xe 2-77451
 N₂, chemisorbed on Ni (110) and physisorbed on Pd (111), angle resolved UPS and EELS study 2-92359
 2Na \rightarrow Na₂, surface catalysed equil., laser diagnostics 2-57630
 Ni (100), of N₂ and CO, photoemission study 2-56335
 Ni (100), of S, surface EXAFS study 2-105003
 Ni (100) and (111), of H, binding props., effective medium theory calc. 2-82137
 Ni (110), of Cl 2-56346
 Ni (110), of N₂, O₂, and CO at 20K, UPS and work function meas. 2-104159
 Ni, chemisorbed O at step sites, elastic interaction between atoms 2-98451
 Ni, initial oxidation kinetics anisotropy, AES study 2-57541
 Ni, monocryst., chemisorpt. of benzene, hydrogenation and exchange (*French*) 2-67766
 Ni, of CO, cluster formation, SIMS study 2-71800

chemisorption continued

- Ni, of CO, on (100) surface, C(KVV) Auger line shape 2-108643
 Ni of H, surface vibr. spectroscopy 2-87033
 Ni, of O₂ under equil. conditions, 850°C, AES study 2-61289
 Ni, polycrystalline, chemisorbed gas, desorption by low-energy ions 2-74923
 Ni, Raney, of H₂ and D₂, incoherent neutron inelastic scatt. 2-104142
 Ni surface, (111) and (211), initial oxidation kinetics, RHEED and X-ray emission study 2-57542
 Ni surface, chemisorbed CO(N₂), SCF-X α SW model cluster calcs. 2-61278
 Ni-Fe, surface (100), oxidation 2-116612
 NiO growth, and dissoln. on Ni (100), temp. effects 2-83404
 Ni(100), of p(2 \times 2) and c(2 \times 2)O, surface EXAFS study 2-93326
 Ni(100), of CO, vibr. spectra, EELS study 2-82133
 Pb(110), of HCl, ionic adlayer form. 2-105501
 Pd (110), of Cl 2-56346
 Pd (111), of Br, dibromide form. 2-66364
 Pd, chemisorption of CO, segregated P effect 2-115557
 Pd, of methanol, on (100) surface, spectrosc. obs. 2-93812
 Pd surface (100), initial oxidation, LEED, EELS and AES studies 2-56314
 Pd/Si system, intrinsic and Si-stabilised oxides, Auger and UPS study 2-67160
 Pd-Cu (110), chemisorbed CO, Pt core level shifts, XPS study 2-77143
 Pd-Nb system, band occupancies, correlation to chemisorption 2-82424
 Pd(110) of CO, angle resolved surface Penning ionisation 2-87929
 Pd(111), of acetylene, surface vibr., LEED and EELS study 2-71787
 Pt (100), of CO, mol. orientation, UPS study 2-98455
 Pt (110), of CO, surface phase transitions, LEED, UPS and thermal desorption study 2-98452
 Pt (110), of Cl 2-56346
 Pt, (110) and (111), of CO, mol. orientation, UPS study 2-87052
 Pt (111), chemisorption from polar solvents, superlattice form., LEED, AES and mass spectra study 2-92354
 Pt (111), chemisorption of H₂, surface motion effect, quasi-classical trajectory study 2-66346
 Pt, of CO, 4f surface core level shifts, soft XPS study 2-67195
 Pt particulate films, CO chemisorption 2-76818
 Pt surface (111), CO chemisorpt. and oxidation, mol. orbital study 2-98463
 Pt surface (111), chemisorbed CO, surface 4f core level binding energy shifts 2-87359
 Pt, surface (997), double step form. and destruction dynamics, O₂ induced, He beam scatt. study 2-115513
 Pt(III), of CO, chemisorpt. in presence of K, thermal absorpt. and electron energy loss spectra 2-83410
 Pt₁₀Ni₉₀, chemisorpt. of benzene, hydrogenation and exchange (*French*) 2-67766
 Re, chemisorption of N₂ and H₂ on densely packed cryst. planes 2-115559
 Si (100) and (111), dissociative chemisorption of water, EELS study 2-87051
 Si (111), Cl chemisorpt., charge density self-consistent-extended Huckel calc. 2-66344
 Si (111), of NH₃ and NO, UPS study 2-87949
 Si (111) 7 \times 7 surface, of Cl and H, electronic struct., DV-XX cluster calc. 2-66613
 Si (111) chemisorbed H, Cl, Ag, vacancy and chemisorptive bond elec. struct. 2-82417
 Si, of H₂, field evaporation in presence of H₂, field ion microscope study 2-71799
 Si, of O, electronic struct. study 2-87053
 Si, with chemisorbed Br, X-ray standing wave anal. 2-82128
 Si(111), chemisorption of Al (*Chinese*) 2-104139
 SrMO₄-Eu₂(MO₄)₃ (M=Mo, W), defect formation, electrochemical props. 2-109783
 Ta (111), chemisorbed O₂(H₂), 4f core electron binding energy shifts, XPS study 2-105041
 Th(111), of O₂, CO and CO₂, electron spectroscopic studies 2-56337
 Ti₂O₃, surface electron struct., defect, chemisorption effects 2-82421
 Ti(0001), chemisorbed CO, correlated wave function calcs. 2-104148
 α -U of O₂, CO and CO₂, electron spectroscopic studies 2-56337
 V, BCC, surface (001), O chemisorpt., X α cluster model calcs. 2-98461
 W (001), of Cs, work function lowering by multiple dipole form., full pot. linearised APW calc. 2-72050
 W (100), chemisorption and physisorption of acetylene at 80K 2-56344
 W (100), of S, Auger, TDS, LEED and work function study 2-82147
 W (100), sputtering of chemisorbed N, mass effect 2-82981
 W (110), H chemisorption effect on LEED fine struct. (*French*) 2-104122
 W (110), LEED fine struct., effect of H chemisorption 2-81635
 W (110), of H, photoemission and electron stimulated desorption study 2-87049
 W (111) and (100), chemisorbed O₂(H₂), 4f core electron binding energy shifts, XPS study 2-105041
 W, chemisorption of N₂ and H₂ on densely packed cryst. planes 2-115559
 W heated surface, SF₅⁻ form. SF₅%u%-form. 2-99233
 W hot surface, laser-activated chemisorption of SF₆ mols. 2-56366
 W, of Li, image pot. contrib. to sorption energy 2-104163
 ZnO film, of O₂, heat treatment effects on elec. and optical props. 2-72087
 ZnO, surface (1010), localized and delocalized charge transfer during adsorpt. 2-110425

chemistry

see also atmospheric chemistry

No entries

chemistry, physical see physical chemistry**chemistry computing**

see also computerised instrumentation; spectroscopy computing

- Aerosols, chemically modified, N₂ adsorpt., energy distrib. functions eval. using numerical methods 2-67772
 automated qualitative wavelength-dispersive X-ray fluorescence analysis 2-88398
 biomolecular aggregates, non-bonded interaction energy calculation 2-62848
 chromatographic analysis of propionic acid, using microcomputer-based integrator 2-78160
 chromatography automation 2-78147

chemistry computing continued

- circular dichroism spectropolarimeter, microcomputer automated 2-89790
- crystallography computing 2-55866
- CTEM/STEM, conventional, chemical anal. data online processing 2-113062
- DTA, computerised extraction of calorimetric information (*Russian*) 2-79586
- electron densities, atomic orbitals, molecular orbitals representation, plotting program, in FORTRAN 2-64862
- fluorescence decay curves, numerical deconvolution, regularisation operators use with Lagrange multipliers, in FORTRAN 2-65034
- gas chromatography with Fourier transform IR spectroscopy detection, algorithms and techniques 2-116750
- gas chromatography with Fourier transform IR spectroscopy detection, systems design requirements 2-116752
- inorganic ring systems, anticancer, dynamical conformational anal. using microcomputer system 2-73188
- laboratory automation developments 2-79545
- matrix-diagonalization with a programmable calculator, using HP-41C/CV 2-64855
- molecular weight averages determ. by gel permeation chromatography, data analysis effect on accuracy and precision 2-116763
- polymerisation, in solid state, radiation induced, Monte Carlo simulation 2-105483
- protein crystallography, RESTRAIN, restrained least squares refinement program 2-68207
- protonation constants computation using new algorithm 2-67733
- reaction kinetics computer modelling with numerical methods 2-62375
- theoretical chemistry, conf., Colorado, USA (June 1981) 2-107002
- thermogravimetric analysis; Reich-Stivala anal. algorithm, for TI-59 calculator 2-67730
- unimolecular rate constant fall-off using quantum RRK equation, interactive calculation in BASIC E 2-67729
- X-ray powder patterns, simulation using microcomputer 2-65793

Cherenkov counters

- antinucleus detection in cosmic rays 2-100749
- cosmic ray isotope expt. using Cherenkov range detector technique 2-68625
- detector of γ quanta and electrons, for 90-channel mass spectrometer 2-64771
- detectors and appls. of photomultipliers in expts. at CERN (*French*) 2-113829
- DUMAND, technological advances 2-59611
- gaseous detectors, recent trends in evolution 2-90351
- HELICON, heavy liq. total absorpt. counter for electrons or photons 2-96372
- high pressure photomultiplier tube development for deep underwater study 2-102337
- lead glass shower detector at SLAC hybrid facility 2-90394
- lead-glass calorimeters and laser based monitoring system for European Hybrid Spectrometer 2-102327
- lead-glass gamma-ray detector for relativistic heavy-ion collisions 2-108230
- lead-glass segmented hodoscope for multiple photon final states detection 2-96378
- microscopic meas. of μ SR time spectrum in pulsed muon beam 2-90419
- multineedle counters with cathodic focusing for UV Cherenkov imaging device 2-64762
- nuclear radiation detectors, Int. Symp., Tokyo, Japan (March 1981) 2-89434
- photoelectron drift detector, use for Cherenkov ring imaging 2-108241
- pressurised UV photoionization threshold Cherenkov counter operation 2-64763
- pulsed Cherenkov gamma-detector, use of hollow lightguide, influence on time resolution 2-64772
- resolution of meas. with square root metric. for detectors with photomultipliers 2-108316
- ring-imaging Cherenkov detector for 200 GeV/c particles identification 2-64761
- silica aerogel prep. for Cherenkov counters 2-75101
- spectrometers for labelling bremsstrahlung photons 2-108322
- stimulated Cherenkov interaction study, experimental system 2-90402
- storage rings, electron beam polarisation meas. using synchrotron radiation 2-80360
- total absorption type lead glass Cherenkov counter (*Chinese*) 2-59602
- Triton-X-100 wavelength shifter in Cherenkov counting system, scintillant behaviour 2-85482

Cherenkov detectors *see Cherenkov counters***Cherenkov radiation**

- see also Cherenkov counters; electron radiation*
- air shower core obs. using channeltron system 2-94613
- charged particle bunching in self-radiation fields, theory (*Russian*) 2-114174
- cosmic ray electron-photon cascades, longitudinal development, Cherenkov radiation pulses 2-117546
- cosmic ray electron-photon cascades in air, ang. and energy distrib. 2-117542
- cosmic ray showers, longitudinal cascade development from atmospheric Cherenkov radiation 2-117549
- current maintenance in plasma by HF fields (*Russian*) 2-76082
- distant cosmic ray air shower, optical images, photons, emission from electron component 2-117545
- E. Coli, Cherenkov-induced photoreactivatable damage 2-88623
- EAS Cherenkov light detection using solar arrays, nighttime astronomical appl. 2-73843
- electron momentum modulation by stimulated Cherenkov interaction, theory 2-102708
- flat disc charge Cherenkov radiation 2-101190
- free electron Cherenkov laser as possible near MM wave source, multiphoton analysis 2-80979
- inhomogeneous electron fluxes, Landau damping 2-81603
- longitudinal-transverse coupling, temp. effect 2-114171
- maser oscillator, high power operation 2-114225
- quasars, Cherenkov line radiation and emission line spectra calc. 2-68927
- relativistic charged particle passing through crysts., radiation intensity 2-57203
- stimulated Cherenkov interaction study, experimental system 2-90402
- stimulated Cherenkov interaction and appls., electron beam momentum modulation by laser field 2-55052

Cherenkov radiation continued

- transition and Cherenkov radiation generation when charged particle moves with const. velocity along straight line 2-90790
- tunable Cherenkov lasers 2-102758
- Be, neutrons moving through matter, phonon analogue of Cherenkov radiation (*Russian*) 2-115322
- ^{90}Sr , low activities assay by early counting of Cherenkov radiation induced by ^{90}Y 2-67782

chilling *see cooling***chiral symmetries**

- see also SU_c theory*
- A=12 system, isovector $0^+ \rightleftharpoons 1^+$ transition, chiral symmetry and axial charge density 2-95961
- axion mass, in CP-conserving method with extra U(1) chiral symm. 2-54012
- baryon number violating nucleon decay, chiral lagrangian 2-59144
- baryonic current sum rules and chiral symmetry breaking 2-59066
- chiral dynamics for colour and technicolour QCD like theories at large N 2-54090
- chiral models, implications for gauge theories and large N 2-53992
- classical models, chiral field analogue, Cauchy problem soln. 2-95215
- cloudy bag model, chiral symm. constraints 2-59117
- composite models of quarks and leptons 2-79848
- composite quarks and Cabibbo mixing 2-59128
- composite quarks and leptons in supersymmetric grand unification 2-101686
- confined magnetic charge, chiral anomaly, magnetostatics, integrability 2-101534
- cylindrically symmetric solutions, inverse scattering analysis 2-107504
- deconfining phase transitions, critical behaviour onset 2-54110
- discrete chiral-field hierarchy 2-59002
- dual chiral models, SU(2) invariant, in low coupling limit 2-101604
- duality in chiral field theories, Abelian and non-Abelian gauge potentials 2-113172
- dylons, chiral limit charge, spin, statistics, anomalous charges 2-69373
- effective action divergences in chiral superfield in external supergauge field (*Russian*) 2-113176
- excluded pions and confined quarks, many-body theory, chiral bag perturbative study 2-95781
- fermion determinant calcs. in chiral and supersymmetric theories (*Russian*) 2-69378
- field hierarchy, Lax operator construction 2-59055
- gauge theories, non-Abelian axial anomalies, nonperturbative proof 2-84808
- generalised Villain models, Migdal recursion relations 2-107543
- gravitino and spin zero boson masses in theories with spontaneously broken supersymmetry 2-112781
- Gross-Neveu model, chiral-invariant, Bethe ansatz eqns. anal. 2-101515
- Gross-Neveu model, dynamical mass generation, S-matrix extraction 2-113146
- Gross-Neveu model, scale-dependent phase structure analysis 2-112748
- homology theory of lattice fermion doubling 2-113099
- instanton type soln. in chiral models 2-95693
- integrable 2-dimens. quantum models, relativistically invariant quasiclassical limits 2-53987
- large N model, reduced and quenched 2-101592
- lattice fermions, equivalence of degeneracy regularisations 2-95616
- lattice QCD, large-N, mean field approx., chiral symm. breaking 2-89903
- lattice QCD with fermions, high temp. behaviour 2-95750
- lattice Schwinger model and anomalies 2-101562
- lattice theories of fermions, criterion for chiral symmetry 2-84806
- massive fermion field, chirally symmetric Dirac eqn. 2-113175
- massless composite fermion models 2-113169
- N=2 Fayet-Sohnius superfield, reduction to chiral superfields (*Russian*) 2-59063
- neutron DD β -decay, Goldberger-Treiman relation, chiral symmetry breaking corrections 2-69611
- Nielsen-Nomima theorem for lattice models of non-selfinteracting chiral fermions 2-107492
- nonlinear systems with exponential interactions, Pohlmeyer transformation 2-59024
- nucleon-nucleon forces from bags, quarks and boson exchange 2-95794
- pion in nuclear physics and QCD 2-54065
- pionic decays, current-algebra sum rules saturation in quark shell model nonrelativistic expansion 2-69430
- pseudoscalar meson decay constant-pomeron residue relation 2-95821
- QCD, chiral flavour symm., spontaneous breaking 2-79752
- QCD, chiral symm. breaking, quark pair condensation 2-89938
- QCD, chiral symm. breaking 2-69409
- QCD, chiral symmetry breaking pattern 2-101678
- QCD, dynamical chiral symm. breaking, pseudoscalar meson spectra (*Russian*) 2-95771
- QCD, Dyson eqns., confinement, chirality 2-74647
- QCD, generalised bag eqn. derivation 2-107620
- QCD, massless 4-D and lattice, long range chiral structure, Monte Carlo study 2-101647
- QCD, quark model pion and Goldstone pion 2-54096
- QCD vacuum quark condensate and MIT bag lagrangian with broken chiral symmetry 2-69413
- quark self-energy in the chiral bag 2-54108
- quark-gluon confinement in chiral bag model 2-95793
- quarks and the light hadrons, review 2-95759
- rishon model, particles, hypercolour, intermediate bosons 2-113249
- scalar qq meson in QCD, spontaneous breakdown of chiral symmetry 2-101650
- SO(10)² effective technicolour model, CP violation and axions 2-84824
- SO(N) gauged Poincare supergravity theories, vanishing β -functions 2-84509
- spontaneous breaking, anisotropic chromodynamics model 2-113252
- spontaneous chiral symmetry breaking before confinement, quenched fermions, nonrelativistic quarks, η , glueballs 2-113238
- strong CP problem, supersymmetric GUT soln. 2-79778
- SU_c×SU_N chiral broken symm., quark mixing in SU_c×SU_N exact limit 2-95669
- SU(4) gauge theory, symmetry breakdown and condensates 2-79767
- SU(N) chiral (QCD), massless baryons and anomalies, chiral limit 2-69414
- SU(n)/Z_n×SU(n)/Z_n spin system, phase struct. in two dimens. 2-101518

chiral symmetries continued

- super chiral fields, hidden symm., Noether currents and algebraic struct. 2-53972
- supersymmetric theories, effective pot. 2-84794
- supersymmetric Yang-Mills theories, quartic mass matrix and renormalisation constants 2-107540
- supersymmetric Yang-Mills theory with $SU(N_c)$ gauge group, effective lagrangian 2-84801
- topological vector gluons, quark chirality 2-79831
- $U(\infty)$ chiral, 2-dimens. spin system, roughening phenomenon 2-59059
- $U(N)$ one-dimensional chiral models, $N \rightarrow \infty$ limit study 2-84805
- vacuum periodicity in instanton angle, chiral perturbation theory and fractional topological charge 2-101645
- vector-like gauge theories with massless fermions, phase structure 2-53946
- $\Delta\Delta$ strong coupling constant and $[g_A(0)]_{\Delta\Delta}$ weak axial vector coupling constant 2-113318
- p and n charge rms radius from chiral quark model 2-59126
- pp , pseudoscalar meson flux, axions, ghosts, standard model chiral predictions test 2-89984
- $\pi\Delta$ system, props. in chiral bag model 2-59118
- ρ -meson coupling in chiral bag model 2-64298

chlorine

see also nuclei with

- adsorbed on Si and Ge(111), surface EXAFS study 2-110977
- atom, nonequib. recomb. in supersonic nozzles, chemiluminesc. investig. 2-59737
- atoms, point detect. using CARS 2-93845
- atoms, two-photon absorpt., laser induced fluoresc. 2-54797
- chemisorbed on Si (111), vacancy and chemisorptive bond elec. struct. 2-82417
- chemisorption and surface chloride form. on (100) surface, struct. and kinetic study 2-66366
- chemisorption on Ni, Pd, and Pt 2-56346
- chemisorption on Si (111) 7×7 surface, electronic struct., DV-XX cluster calc. 2-66613
- chemisorption on Si (111) and Ge (111), charge density self-consistent-extended Huckel calc. 2-66344
- diatomic molecules thermal dissociation with bound electron excited states 2-93764
- halogenation of Pb surfaces, UV photoelectron spectra 2-73013
- hexachlorophene derivatives, cryst., ^{35}Cl NQR spectra, struct., bonding, mol. conformation 2-93053
- ion-atom collisions, information theoretical description of charge-state distributions 2-102576
- liquid, interaction-induced IR absorpt., molecular dynamics investigation 2-102470
- liquid, struct., neutron diffr. investig. 2-81650
- molecular fluid, liq.-vapour interphase, perturbation-variational theory 2-115502
- molecule, $B^2\Pi(0_u^+)$ state, spontaneous predissoc. mechanism and rate consts. 2-114057
- molecule, dissociative electron attachment reaction, Cl_2^- resonant states, symmetry 2-114120
- molecule, electron impact excitation, valence states, pot. energy curves, spectra 2-54974
- molecule, ground state dissociative electron attachment rate meas. 2-65097
- molecule, UV emission, excitation achieved by two-photon absorpt. 2-96588
- thermal desorption from W (100), Auger spectra study 2-87067
- As_2Se_3 :Cl, chalcogenide glasses, carrier mobility, transient photocurrent spectra study 2-72024
- CdS:Cu, Cl, sintered layers, absorpt. and photoluminescence spectra 2-110928
- CdS:Cu, Cl, point defect luminescence anal. (Russian) 2-87869
- CdTe:Cl, electroabsorption spectra, effective masses 2-77491
- Cl I 2D -P transitions, vac. UV, oscill. strengths 2-59733
- Cl II, III, IV, UV and visible laser oscillations obs. 2-85942
- Cl V, oscillator strengths, potential model calc. 2-80538
- Cl-, adiponitrile solns., ionisation energies, photoelectron study 2-80727
- Cl-, adsorbed on Ag(100), fractional coverage, dipole sum calcs., appl. to enhanced Raman spectra 2-87004
- Cl-, hydrated, mixed electrostatic quantum chem. approach MO calcs. 2-85530
- Cl $^+$, 3d- p transitions in ionic spectra, isotope shifts, laser spectroscopic meas. 2-70193
- Cl $^+$ conductance in compressed water at 25°C 2-81998
- Cl $^{16+}$, Lamb Shift studies by laser reson. spectroscopy 2-64928
- Cl $^{17+}$, resonant dielectronic recombination cross sections 2-102578
- Cl-like ions, electric dipole transition energies, wavelengths and oscillator strength for E1 transitions 2-79291
- Cl+Ca, desorpt. kinetics, dissociation and recombination rate consts., temp. depend. (German) 2-78124
- Cl+Ca, surface reaction, chemical equilib., desorpt. and reaction kinetics (German) 2-78123
- Cl+H $_2$, semiempirical method of modelling pot. energy surfaces for generalised TST and appl. to kinetic isotope effects 2-62376
- Cl+HO $_2$, rate const. and branching ratio, temp. depend. 2-105459
- Cl+methyl chloroform, reaction kinetics, time resolved reson. fluoresc. 2-105448
- Cl+N $_a$, metal cluster oxidation, chemiluminescence study 2-99681
- Cl+O $_3$, O formation in secondary reaction, chemiluminesc. detection 2-78074
- Cl+Sr, desorpt. kinetics, dissociation and recombination rate consts., temp. depend. (German) 2-78124
- Cl $^+$ +Cl $_2$ reactions, flowing afterglow study 2-62387
- Cl $^+$ +H $_2$, associative detachment reaction 2-114075
- Cl $^+$ +H $_2$ (D $_2$)(HD), reactive scatt. 2-88345
- Cl $^+$ +inert gas atom, electrons detachment energy distrib. 2-90684
- Cl $^+$ +Xe $^+$, ion-ion recombination, reaction rates 2-99672
- Cl $^+$ +C-foil, absolute L-shell Auger electron yield meas. 2-75393
- Cl $^+$ +C-foil, projectile K X-ray emission, target thickness depend. 2-75394
- Cl $_2$ +Ca, reactivity, atomic reagent approach geometry effect, chemiluminescence 2-11476
- Cl $_2$ +F $^+$ (Cl $^+$) reactions, flowing afterglow study 2-62387
- Cl $_2$ +H $_2$ O, singlet O $_2$ generation reaction, evaluation of amines as bases 2-78080
- Cl $_2$ +Li, chemi-ionisation reactions 2-72968

chlorine continued

- Cl $_2$ +Mu(H)(D), kinetic isotope effect, pot. energy surface 2-57598
- (Cl $_2$) $_2$ config., charge transfer contrib. calcs. 2-108363
- Cl $_3$, struct., props., CNDO/2 and INDO calcs. 2-102388
- Cl $_3$ -nH $_2$ O ion mobilities and collision cross-sections in Ar, Kr and Xe 2-91581
- Ge:Cl, amorphous, ion implanted, gap-states, elec. cond. study 2-76987
- in Ni, grain boundary segregation of S and Cl, high resolution scanning AES and SIMS 2-93518
- Se:Cl, amorphous, elec. cond. and EPR studies, dopant effect 2-77083
- ZnS:Mn, Cu, Cl, Cd electrolum. films, field enhanced changes in comp. and struct. 2-116263
- ZnS:Mn,Cu,Cl, amorphous and cryst. electrolum. film, elec. cond. props. meas. 2-87429
- ZnSe:Cu,Cl phosphor, activated, recombination centres, photoluminesc. study 2-87850
- ZnTe:Cl, EPR study of deep Cl-associated centre 2-110642

chlorine compounds

- ^{35}Cl -containing mols., spin-spin relax., reson. freqs., temp. depend. meas. 2-108557
- CIBO, mol. consts., vibr.=rot., IR diode laser and microwave spectra 2-90541
- ClCN gas, elect. reson. obs. 2-70313
- ClF, cryogenic solns., vibr., IR and Raman obs. 2-70240
- ClF $_2$, struct., props., CNDO/2 and INDO calcs. 2-102388
- ClF $_3$, electronic struct. and bonding, reaction energy, extensive RHF ab initio calcs. 2-96433
- ClFCl(ClClF), electronic struct., CNDO/2 and INDO calcs. 2-102389
- CINO, VUV photodissoc., fluoresc., rot. level distrib. 2-96623
- CIO, fundamental band, isotope effects, IR obs. 2-75263
- ClO $_4$ -, aq. soln., free energies, electron transfer, photoelectron obs. 2-110009
- H+XY and X+HY where X and Y are halogen atoms, semiempirical pot. energy surfaces 2-99644

cholesteric liquid crystals

- N-(alkoxycarbonyl-n-pentyl)-3 β -cholesteryl urethanes, synthesis, polymorphic and mesomorphic props. 2-81957
- binary compensate cholesteric mixture with added pleochroic dye, dynamic scattering 2-86544
- blue phase, cubic, lack of second order phase transition in Landau theory 2-103989
- blue phases, in mixtures and in an elec. field 2-76285
- blue phases, symmetry anal. 2-66186
- blue phases I and II, crystallography 2-86559
- chiral-racemic mixture, cholesteric pitch and blue phases 2-71643
- cholesteric-nematic mixture, compressional deform. response 2-79121
- cholesteryl arylbenzoates, mesomorphic props., effect of ang. linkage 2-103604
- cholesteryl benzoate, refr. indices, densities, polarisabilities, and mol. order 2-60876
- cholesteryl chloride, ^{35}Cl NQR spectrum 2-77414
- cholesteryl chloride-cholesteryl myristate mixture, negative-positive monopole transitions (Russian) 2-81961
- cholesteryl chloride-laureate compensated mixture, guest-host interaction 2-86543
- cholesteryl hexanoate, phase transitions, high press. study 2-71642
- cholesteryl hydrogen phthalate, mol. relax. glassy 2-81667
- cholesteryl laurate, refr. indices, densities, polarisabilities, and mol. order 2-60876
- cholesteryl linoleate, dielec. props. in smectic, cholesteric and isotropic phases 2-99031
- cholesteryl myristate/ethyl p-aminobenzoate liquid crystalline mixtures, US vel., density and compressibility study 2-71581
- cholesteryl n-alkanoates, cholesteric helix pitch behaviour at cholesteric-smectic A phase transition 2-103988
- cholesteryl nonanoate-cholesteryl chloride, blue phase stability, pitch depend. 2-92194
- cholesteryl nonanoate-propionate (butyrate) binary mixtures, cholesteric pitch divergence near smectic-A transition 2-98280
- cholesteryl oxycarboxylate derivatives, liq. cryst. props. 2-103603
- cholesteryl pentanoate, phase transitions, high press. study 2-71642
- COC, optical anisotropy in smectic and cholesteric phases 2-77472
- COC, optical rot., Kerr effect, and dynamic light scatt. in isotropic and homeotropic states 2-61135
- COC optically determ. transitions at high pressure 2-76669
- conducting, oscillatory convection 2-65589
- dipole-dipole interaction, to orientational ordering 2-55845
- dye activated cholesteric liq. crystal, as tunable laser with DFB 2-114262
- elastic constant measurement on cholesteric materials 2-103874
- elastoplastic behaviour of continuous compressional deform. 2-71348
- film, elec. field induced texture and phase transformation, light absorpt. study 2-55833
- flow alignment, microscopic theory 2-86547
- hard-rod fluids, lyotropic cholesteric phase, statistical theory 2-81661
- heat transfer coeff. mapping contours, mapping using cholesteric liquid crystals 2-79576
- helical alignment, of field depend. structs. 2-76291
- helical flow between hot cylinders 2-60584
- helical twist in cholesteric mesophases 2-76306
- localized instabilities and the order-disorder transition in cholesteric liquid crystals 2-86867
- memory light valve using smectic-cholesteric liq. cryst. mixture 2-72468
- mesophase induced by chiral probe, ESR obs. 2-76279
- monodomain, total light reflection obs. and numerical calc. 2-87727
- optical bistability with distributed feedback (Russian) 2-60150
- optical harmonic generation, theory (Russian) 2-70610
- order parameters of cholesteric and blue phases 2-86560
- orientational instability of liquid crystals in acoustic fields 2-109674
- planar texture, field-induced instability calcs. 2-55835
- polyesters, thermotropic liq. cryst., orientation in high mag. fields 2-103607
- polypeptide, microscopic model 2-55838
- polypeptide solutions, lyotropic cholesteric phase, statistical theory 2-81661
- reentrant cholesteric phase of optically active derivative of p-cyanobiphenyl 2-60878
- review of liq. cryst. phases and phase transitions 2-76297
- second-harmonic lasing in orientationally ordered solutions of noncentrosymmetrical molecules 2-108950
- self-diffusion, spatial modulation, mag. field distortion 2-103618

cholesteric liquid crystals continued

- thermomechanical coupling expt. 2-60883
- topological defects of cholesteric liquid crystals for volumes with spherical shape 2-60884
- viscosity, anomalous bulk, of cholesteric systems exhibiting blue phases 2-104045

chondrites see meteorites**chopping see cutting****chromatic aberration see aberrations****chromatography**

- adsorption of hydrocarbon on SiO_2 -supported water surfaces, meas. using gas chromatographic technique 2-57636
- analyser for toxic chemicals detection 2-83537
- analytical chemistry and applied spectroscopy, conf., Atlantic city, USA (March 1981) 2-112636
- automated data reduction in gel permeation chromatography 2-78147
- automated gas chromatograph mass spectrometer for isotopic anal. 2-74563
- automated HPLC, with samples rapid separation 2-83428
- automated UV detector for liquid chromatography 2-83422
- band broadening in turbulent-flow liq. and gas chromatography, retention effects 2-116733
- beta-induced fluorescence HPLC detector 2-84777
- capillary gas chromatography with Fourier transform IR spectroscopy detection, status report 2-116751
- cryoscopic instrument for analysis of organic compounds 2-57659
- Digilab FTS-15B, improved changeover between regular and gas chromatography-infrared spectroscopy 2-53855
- dipeptides, polycryst., γ -irrad. ESR and chromatographic separation of radicals 2-110643
- free radical-aromatic ligand π complexes, spin density transfer mechanism, struct. effect 2-111491
- gas chromatograph/IR spectrometer, light pipe appl. 2-57651
- gas chromatographic integrator, microcomputer-based 2-73021
- gas chromatography in nuclear fuel rod fabrication 2-85141
- gas chromatography with Fourier transform IR spectroscopy detection, algorithms and techniques 2-116750
- gas chromatography with Fourier transform IR spectroscopy detection, systems design requirements 2-116752
- gas chromatography with Fourier transform IR spectroscopy detection, interferometer stability, error sources 2-116753
- gas chromatography with matrix isolation Fourier transform IR spectroscopy detection, complex sample analysis 2-116754
- gas chromatography with microprocessor control 2-73036
- gas chromatography/mass spectroscopy/Fourier transform IR spectroscopy, instrument design and optimisation 2-116755
- gas chromatography/mass spectroscopy/Fourier transform IR spectroscopy, small FTIR spectrometer system use 2-116756
- gaseous detectors, recent trends in evolution 2-90351
- Hewlett Packard product range review (Italian) 2-73024
- hexadecane, oxidation reaction, gas chromatography-IR study 2-78085
- high-voltage spark atomic emission detector for gas chromatography 2-99714
- HPLC, column packing system 2-62444
- HPLC, compact injector system 2-62445
- HPLC system control through detector monitoring 2-73022
- HPLC-Fourier transform IR technique using nondispersive detector 2-69268
- ion chromatography anal. of power station water and effluent (German) 2-93844
- laser anemometer appl. to hydrodynamics investig. in chromatographic columns (Russian) 2-114941
- liquid, high-pressure, Fourier transform IR spectroscopy interface with solvents elimination 2-116744
- liquid, high-pressure, IR spectra recording using Fourier transform technique 2-116743
- liquid, microprocessor-based permittivity detector appl. 2-116769
- liquid chromatograph, high performance, microcomputer controlled (Japanese) 2-67791
- liquid chromatographic phosphoresc. detect. with micellar chromatography and postcolumn reaction modes 2-116734
- liquid chromatography coupled with electrochemistry, biomedical appl. 2-73398
- microcomputer-based integrator for gas chromatographic analysis of propionic acid 2-78160
- molecular weight averages determ. by gel permeation chromatography, data analysis effect on accuracy and precision 2-116763
- organometallic radicals, spin trapping by quinones, optically active complex form. 2-110645
- pharmaceuticals, trace anal. by combined liq. chromatography/desort. mass spectrometry 2-99731
- photoacoustic Fourier transform IR spectroscopy, analytical appls. 2-116747
- PMMA, stereoregular, unperturbed dimens. meas. by gel permeation chromatography 2-71330
- poly(ethylene oxide), solubility parameter determ. at 25°C by gas-liq. chromatography 2-109661
- polyethylene, ultrahigh-modulus, nitric acid etching and gel permeation chromatography, struct. obs. and influences 2-109693
- polymers, characterisation, conf. Durham, UK, 13-17 July 1981 2-68957
- quantitative flow FT ^1H NMR, repetitive pulse conditions 2-107367
- radio-gas chromatography for ^3H and ^{14}C labelled compounds (Chinese) 2-62438
- radiochromatographic anal. of mixtures labelled with soft β -emitting isotopes 2-67783
- techniques and terminology of spectrophotometry and chromatography in industry (Spanish) 2-53813
- thin-layer chromatograms development, mobile phase sensor design 2-73035
- vitamin D-metabolites from human plasma and mass spectrometric analysis by fast heavy ion induced desorption 2-100171
- water pollution analysis using extraction/gas chromatography technique 2-93973
- $\text{Ba}_2\text{P}_{10}\text{H}_9\text{O}_2$, preparation and props. 2-72643
- CO standard samples preparation and assessment, 0 to 500 ppm 2-111530
- $[\text{Ga}(\text{OH})_2]_2\text{P}_{10}\text{H}_9\text{O}_2$, preparation and props. 2-72643
- H isotope separation by gas chromatography 2-85381
- laser pumped by open discharge radiation, active mixture regeneration, chromatographic mass-spectroscopic anal. 2-114260

chromatography continued

- NiO, occluded gases within microscopic cavities, Raman spectra and gas-phase chromatography 2-61013
- Se-Ge-As glass melt, solubility of He 2-98292

chromium*see also nuclei with*

- 3d, L_{23} edge, EELS 2-108636
- antiferromagnetic, spin-flip transition, latent heat 2-92906
- antiferromagnetic spin waves, SDW model (Russian) 2-77281
- atom and ions, valence state structs., electron correl. effects 2-108399
- atomic energy level and Grottrian diagrams, VI to Cr XXIV, book 2-63757
- BCC, surface (001), O chemisorpt., $X\alpha$ cluster model calcs. 2-98461
- black, selective solar absorber, optical response, high temp. substrate oxidation 2-99840
- black Cr plating, present status and appls. 2-62286
- chemisorption of Cl and surface chloride form. on (100) surface, struct. and kinetic study 2-66366
- chemisorption of CO on (110) surface, EELS and AES study 2-57225
- corundum, Cr impurity rel. to dislocation struct. 2-98095
- determination, using coherent forward scatt. spectrometry 2-88391
- determination in air (Tehran) by neutron activation anal. 2-78162
- diffusion coatings on cast Fe and medium C steel, cavitation resist. 2-72872
- diffusion in Re, SIMS study 2-110041
- dissolution in liq. Al, kinetic parameters and diffusion coeffs. 700-900°C 2-99395
- electrical resistivity due to antiferromag. spin waves 2-61457
- electron beam evap. thin film, struct. and props. (Korean) 2-57301
- electron energy absorption spectrometry (German) 2-113084
- electron energy loss spectra for clean and oxidized surfaces 2-56663
- electron irradi., internal friction 2-56085
- electronic heat capacity, electron band theory description 2-81977
- electroplating on Al using electrolytic brushing combined with cathodic activation 2-99599
- energy band calcs. of magnetism 2-66749
- epitaxial film on W (110) face, adsorbed Cs and O effect on work function, two-stage oxidation phenomenon (Russian) 2-61298
- ethylene glycol:Cr $^{3+}$, dynamic proton polarisation 2-116065
- film, evaporated, scanning ion microscope study, ion probe forming and secondary electron images (Japanese) 2-113051
- film, nonscalar 1/f cond. fluctuations 2-82413
- film, pyrolytic, comp. and nature of impurities 2-82157
- film, sputtered, internal stresses, optical reflectance, 2-82181
- film interaction with Si, bilayer silicide form. 2-86949
- film on (001) Cu substrate, misfit twin crystals (Japanese) 2-104194
- film-substrate structure exposed to pulsed laser heating, thermal stresses 2-82113
- films, clean and adsorbate-covered, optical spectra 2-87890
- films, laser machined holes, TEM, SEM and numerical study 2-86725
- films, vacuum deposited, interaction with various gases, internal stress and resist. study 2-82186
- GaAs:Cr wafers, EPR charact., etch-pit-density and X-ray double diffraction meas. (Japanese) 2-66907
- incommensurate spin density wave, phase and amplitude fluctuations, RPA calc. 2-98565
- ion implantation of $\text{H}^+(D^+)$, atomic displacements, residual resist. study 2-98121
- lattice location of Si impurities by ion channelling technique 2-81843
- longitudinal acoustic phonon vel. in spin density wave state, temp. depend. 2-98219
- magnetic susceptibility and local moments, temp. depend. in paramag. state 2-104576
- materials with $Z_2=23-30$, electronic stopping cross section for 30-300 keV protons 2-66086
- muffin-tin pot., non self consistent, model of self-consistency simulation 2-98522
- oxides, thin film, differential reflectometry 2-101445
- pH-potential diagrams, elevated temps. 2-105361
- powder, thermal vibr. anharmonicity, temp. depend. 2-103933
- 1,2-propylene glycol:Cr $^{3+}$, dynamic proton polarisation 2-116065
- reflective coating, failure by cracking 2-61319
- residual stresses, local, determ. from X-ray meas. (German) 2-93747
- ruby:Cr $^{3+}$, generation, detect. and reson. trapping of very high freq. acoustic phonons 2-93277
- ruby:Cr $^{3+}$ effect of ^{27}Al nuclei on hypersound intensification (Russian) 2-77422
- SIMS, very small clusters study 2-77683
- spin density wave states, tight-binding approx. 2-66751
- surface, (100), nonreconstructed, O induced magnetism 2-56833
- surface, rough, reflectance spectral selectivity meas. 2-67027
- surface (110), chemisorpt. of O and initial oxidation 2-115567
- surface magnetism, polarised electrons 2-66890
- transition from nonmagnetic to antiferromagnetic state (Russian) 2-77293
- transport through Cr_2O_3 scales, lattice diffusion 2-86926
- transport through Cr_2O_3 scales, scale morphology change during high vacuum treatment 2-86927
- X-ray K series emission spectra 2-57216
- Ag $_2$ Se-Se-Cr thin film sandwich, polarised memory switching obs. 2-104468
- Al, optical films, mechanical props. 2-82191
- Al-Cr dilute alloy, irradi., self interstitial trap and clustering at impurities 2-76689
- Al-Cr-Al layer system anal. by Rutherford backscatt. spectrometry 2-105177
- AlN:Cr, sintered, dielec. losses, lattice defect types (French) 2-77448
- Al_2O_3 :Cr $^{3+}$, heavily doped, fluoresc. spectra and decay times 2-110925
- Al_2O_3 :Cr $^{3+}$, multiple reson. spin-phonon Raman scatt. by acoustic phonons in mag. field 2-116198
- Al_2O_3 :Cr $^{3+}$, second order microwave elec. field effects 2-66904
- Al_2O_3 :Cr $^{3+}$, single-ion-pair fluoresc. ratios and Anderson localisation 2-57176
- Au/Cr/Au epitaxial metal film sandwiches, supercond. transition temp. 2-87440
- BeAl $_2$ O $_4$:Cr $^{3+}$, alexandrite, excited-state absorpt. in lasing wavelength region 2-85973
- Bi $_2$ GeO $_{10}$:Cr, light induced charge transfer processes, optical absorption and EPR 2-99159

chromium continued

- Bi₂SiO₅:Cr, light induced charge transfer processes, optical absorption and EPR 2-99159
 Ca₃Al₂Ge₂O₁₂:Cr³⁺, broad-band emission 2-104914
 CaGa:Cr, surface carrier conc., use of transverse electroreflectance 2-57058
 CaO:Cr, APR study, Jahn-Teller effect 2-66899
 CaO:Cr³⁺, ESR dipolar linewidths 2-104688
 CaY₂Mg₂Ge₂O₁₂:Cr³⁺, broad-band emission 2-104914
 CdS:Cr, excited state lifetimes, 4 to 300K, luminesc. study 2-57162
 CdSe:Cr thin film transistor, SIMS depth profiling, high spatial resolution 2-104207
 Co-Cr perpendicular magnetic recording films, meas. of M-H curve 2-116039
 Cr³⁺, Nd³⁺, GdSeGa-garnet laser at 1.06 μm 2-96953
 Cr, electronic structure model using mag. state and electron occupancies correl. 2-104237
 Cr I, oscillator strengths for Fraunhofer lines (*Russian*) 2-75216
 Cr IV, energy levels and ionisation energy 2-80468
 Cr IV, parametric fits in the atomic d shell 2-85515
 Cr, metallic target, isotope discrimination, secondary ion mass spectrometry 2-57652
 Cr, reoxidation with densified Cr₂O₃ scales 2-67648
 Cr XIII spectra, intercombination lines obtained from Tokamak plasma 2-71262
 Cr XIX-XXIII, high resolution spectra in wavelength interval 2.18 to 2.24 Å from inner-shell transitions 2-64906
 Cr XV to XVIII in solar corona active regions, plasma diagnostics use 2-63332
 Cr²⁺ in aq. soln., thermal electron transfer correl., photoelectron emission 2-70408
 Cr²⁺ in laboratory plasma, X-ray spectra (*Russian*) 2-108415
 Cr²⁺ in phosphate fluorophosphate and fluoride glasses, ESR study (*Chinese*) 2-110621
 Cr³⁺ pairs, interacting mag. ions, D_{3h} symmetry 2-98874
 Cr³⁺:Al_{1-x}Cr_x(PO₃)₃ tunable IR solid-state laser material, spectroscopic and laser props. 2-108884
 Cr³⁺:BeAl₂O₄, alexandrite, ground state absorpt. determ. over tunable lasing region, 830 to 690 nm 2-60088
 Cr³⁺:BeAl₂O₄ (alexandrite) lasers, physics and performance 2-80974
 Cr³⁺:BeAl₂O₄ tunable laser action, theory and expt. results 2-96960
 Cr³⁺:BeAl₂O₄; alexandrite, laser freq. tuning 700 to 800 nm, spectroscopic characts. 2-114288
 Cr³⁺:Ge garnets, broad-band emission 2-104914
 Cr³⁺:K₂NaCr₂-Cr₂F₆ tunable IR solid-state laser material, spectroscopic and laser props. 2-108884
 Cr-Al₂O₃ electrodeposited composite coatings 2-116579
 Cr-CdS-C, switching struct., with potential barrier, elec. charcts. 2-87407
 Cr-Cr₂O₃, black, selective solar film, DC resist. and optical const. meas., percolation obs. 2-116845
 Cr-Cr₂O₃, black chrome solar selective films, surface comp., SIMS study 2-57724
 Cr-Cr₂O₃, black chrome selective surfaces, deposit growth mechanisms and optical props. 2-72639
 Cr-Cr₂O₃, solar black chrome film, microstruct., comp., plating process variables, thermal ageing effects, performance 2-93943
 Cr-MgO condensates, second phase particles distrib. (*Russian*) 2-67314
 Cr-Si interface, chem. bonding and density of states, UPS and LCAO calc. 2-110476
 Cr+H⁺, K-shell X-ray prod. cross section meas. in energy range 300-2400 keV 2-90492
 Cr+O₂(N₂O) and other reaction, translational energy depend. of cross sections 2-62389
⁵¹Cr β⁺-decay rate, electron capture, chemical valency effect 2-96713
 Cu-Cr multilayer composites, yield point, struct. influence (*Russian*) 2-67446
 Cu-Ni-Cr protective coatings, corrosion resistance evaluation by electrochemical porosity test (*German*) 2-105365
 GaAs:Cr, APR spectra, illum. effect 2-66898
 GaAs:Cr, charge transfer induced by press. 2-66484
 GaAs:Cr, deep level optical spectroscopy 2-71902
 GaAs:Cr, deep level photoluminescence, vacancies and annealing 2-99190
 p-GaAs:Cr, EPR identification of Cr⁴⁺3d² using appl. uniaxial stress 2-110629
 GaAs:Cr, epitaxial layers, impurity redistrib., SIMS study 2-98344
 GaAs:Cr, exciton and subband-gap absorption, quenching and enhancement, acoustoelectric volt. spectroscopy 2-82235
 GaAs:Cr, Fe liquid encapsulated Czochralski cryst., SIMS 2-115270
 GaAs:Cr, generation of paramagnetic defects, EPR study 2-66906
 GaAs:Cr, horizontal Bridgman-grown for ion implantation, elec. characts. 2-115756
 GaAs:Cr, impurity levels, elec. cond., IR spectra and photocond. study 2-56485
 GaAs:Cr, ion implanted, annealing, Cr redistrib., SIMS study 2-76484
 GaAs:Cr, ion implanted, postannealed material state 2-103793
 GaAs:Cr, O, ion implanted, Cr redistribution and Cr-defect-O interactions, SIMS and TEM study 2-98149
 GaAs:Cr, optical absorpt. spectroscopy on Cr-related defects 2-57129
 GaAs:Cr, phonon scatt., tunnelling parameter, thermal cond. study 2-61086
 GaAs:Cr, photoconductivity, instability, mixed cond. anal. 2-72026
 GaAs:Cr, photoluminescence, Cr diffusion 2-99184
 GaAs:Cr, precipitation processes, TEM 2-92203
 GaAs:Cr, Se, not implanted, effects of damage-impurity interaction on elec. props. 2-71990
 GaAs:Cr, semi-insulating, EPR of extended defects 2-87590
 GaAs:Cr, semi-insulating, photoelectrochem. etching and defect characterisation 2-98072
 GaAs:Cr, semi-insulating, Bridgman growth method, props. 2-98675
 GaAs:Cr, semi-insulating, inhomogeneities, scanning leakage current meas. 2-109800
 GaAs:Cr, semi-insulating, impurity modes, far-IR Fourier transform spectroscopy obs. 2-116214
 GaAs:Cr, Si, damage and Si lattice location studies 2-76479
 GaAs:Cr, Si, ion implanted, AlN capped annealing, carrier profiles 2-66023
 GaAs:Cr, Si, ion implanted, Hall effect, depth profiles (*Slovak*) 2-98669
 GaAs:Cr, Si implanted, thermally annealed, semi-insulating, deep levels 2-76966

chromium continued

- GaAs:Cr, Sn, Cr and Sn migration obs. during open tube diffusion 2-98343
 GaAs:Cr, spin dependent carrier capture, ODMR study 2-98998
 GaAs:Cr, with grain boundaries, elec. props. (*Russian*) 2-71989
 GaAs:Cr, O, electron lifetime meas., photocond. and high field meas. 2-92655
 GaAs:Cr:Si⁺, ion implanted semi-insulating substrate, carrier conc. uniformities meas. 2-98134
 GaAs:Cr:Si⁺, Se⁺, Mn, ion implanted, Mn redistribution after annealing, SIMS study 2-86699
 GaAs:Cr relaxation semiconductors with thin-film contacts, props. 2-66636
 GaAs:Cr structures, semi-insulating, mag. field influence of the small signal impedance (*Slovak*) 2-61485
 GaAs:Cr surface states, two-beam transverse acoustoelec. spectroscopy study 2-82463
 GaAs:Cr²⁺, APR study 2-66897
 GaAs:Cr²⁺, deep levels, EPR spectra study 2-77365
 GaAs:Cr²⁺, EPR resonance parameter calcs. 2-104691
 GaAs:Cr²⁺, substitutional impurities, dynamic Jahn-Teller theory 2-76995
 GaAs:Cr²⁺, zero-phonon optical absorpt. lines, dynamic Jahn-Teller model 2-57130
 GaAs:Cr-n-GaAs epitaxial layer junction, current limitation due to IR radiation obs. 2-66626
 GaAs:Cr, semi-insulating, bulk growth by LEC 2-57283
 GaAs:Cr(Si), semi-insulating, incorporation of anomalously large amounts of Si 2-98133
 GaAs:Fe, Cr, LEC grown, impurity densities and Fe(Cr) redistrib. 2-98146
 GaP:Cr, optical absorpt. spectroscopy on Cr-related defects 2-57129
 n⁺GaP-i-Al_{0.5}Ga_{0.5}As:Cr(Fe)-M struts., I-V characts. 2-104477
 GaS:Cr, impurity redistribution after implantation with Ga,As,O, SIMS and TEM study 2-115276
 GaSe:Cr, luminescence spectra, absorption edge, struct. defects (*Russian*) 2-93273
 GdAlO₃:Cr³⁺, fluoresc. spectrum, splitting and line shape 2-93262
 GdAlO₃:Cr³⁺, optical props. meas. in paramag., antiferromag. phases 2-93275
 Ge, Cr, Te solid solutions, thermoelectric props. 2-98680
 InP:Be, Zn, Cr, Se, doping profiles, SIMS anal. 2-103806
 InP:Cr, impurity diffusion, carrier and impurity profiles 2-115467
 InP:Cr, photocurrent instability, temp. depend. meas., temp. meas. systems appl. 2-58824
 InP:Cr, semi-insulating, photoinduced current transient spectroscopy 2-92646
 InP:Cr, VPE layers, deep impurity levels DLTS and DLOS study 2-98590
 InSb:Cr, deep levels in band gap, photocond. study 2-115706
 InSb:Cr, hot electron thermoelectr-EMF 2-104402
 KAl(SO₄)₂·12H₂O:Cr³⁺, SO₄²⁻ dynamics, ESR at high press. 2-77363
 KCl:CrO₂, Ca²⁺, X-irrad., EPR and thermoluminesc. glow curves 2-56919
 KCr(SO₄)₂·12H₂O:Cr³⁺, SO₄²⁻ dynamics, ESR at high press. 2-77363
 KSe(MoO₄)₂:Cr monocrystals, ferroelastic phase transitions, Cr³⁺ EPR 2-115400
 LiGaO₃:Cr³⁺, tetrahedral coordination, energy levels, absorpt. spectra 2-67088
 LiGaO₃:Cr³⁺, luminescence and absorpt. spectra 2-82908
 LiKSO₄:Cr³⁺, optical absorpt. and EPR spectra 2-116212
 LiNaSO₄:Cr³⁺, optical absorpt. and EPR spectra 2-116212
 Li_{0.5}Y_{0.5}CrO₅S₂:Cr³⁺, NMR ionic motion studies 2-110676
 MgO:Cr, surface diffusion 2-76785
 MgO:Cr³⁺, nonradiative transitions and energy levels 2-72548
 MgY₂Ge₂O₁₂:Cr³⁺, broad-band emission 2-104914
 NaAl(SO₄)₂·12H₂O:Cr³⁺, EPR linewidth anomaly, struct. fluctuations 2-98952
 Na₂O-CaO-SiO₂ glass:Cu,Cr,Er, energy transfer from Cu and Cr to Er 2-99176
 Nb:Cr, electromigration and self diffusion, effective valence, radioactive tracer method (*French*) 2-76156
 Nb₂O₅:Cr, CC acceptor doped, defect struct., elec. cond. study 2-92613
 Ni:Cr³⁺(Ni²⁺) oxidation, effect of implantation 2-88254
 Ni:Cr thin-film structures, sputter depth profiles obtained from emission of Auger electrons and X-rays 2-77682
 Ni-Cr/Ni-Al thermocouple response linearization using FET cct. 2-53757
 RbH₂(SeO₄)₂:Cr³⁺, ferroelec.-ferroelastic, domain struct., EPR study 2-116136
 RbH₂(SeO₄)₂:Cr, ESR study of Cr³⁺ 2-66903
 n-Si:Cr, donor levels, photocapacitance and photocond. spectra 2-115707
 Si₃N₄:Cr, Zn, donor-acceptor complexes, DLTS and TSC meas. (*German*) 2-98579
 SrO:Cr³⁺, ESR dipolar linewidths 2-104688
 SrTiO₃:Cr³⁺, photoelectronic and optical props. 2-82402
 Ta₂O₅:Cr, acceptor doped, elec. cond., majority defect model 2-92615
 TiO₂:Cr, rutile pigments, EPR study 2-104695
 YAG:Cr³⁺, Czochralski grown, colour centres, optical absorption spectra study 2-91959
 YCrO₃:Cr, cermets, struct. and props. 2-60370
 ZnO:Al₂O₃, gahnite, behaviour of Cr³⁺ and Fe³⁺ ions 2-98296
 ZnS:Cr, excited state lifetimes, 4 to 300K, luminesc. study 2-57162
 ZnS:Cr³⁺, cubic, ESR spectrum, press. influence 2-66909

chromium alloys

see also chromium compounds

- binary alloys, liq. and solid., enthalpies of formation 2-61175
 ferrous surface, oxide layers nuclear reaction anal. 2-99723
 film, 2000 Å thick crack-free, sputter deposition onto ABS plastics 2-87984
 Hastelloy alloy G, roles of ordering and impurity segregation as H-assisted crack prop. 2-57481
 Hastelloy C-276, heterogeneous precipitates, electron microscopic anal. 2-99432
 Hastelloy C-276 and G, Ni-base stainless alloys, H transport rel. to H embrittlement 2-99539
 Hastelloy X, carburization protection with Ti-Si enriched layers 2-116619
 IN 738 LC and IN 939, Ni-base cast superalloys, high cycle fatigue 2-105318

chromium alloys continued

Inconel, TFR Tokamak limiter, thermal load during additional heating pulses and major plasma disruptions 2-65771
 Inconel 600, 625, ion eroded, erosion yields, topographical changes and depth profile anal. 2-77661
 Inconel 600, Cr depletion at grain boundaries, detection 2-60996
 Inconel 600, mechanically polished and sand-and bead-blasted, thermal outgassing props. 2-110161
 Inconel 600, Ni-base superalloy, corrosion behaviour in high temp. steam, effect of grain size 2-67615
 Inconel 600, SCC in NaOH, composition and heat treatment effects 2-77983
 Inconel 600, SCC using const. strain rate test 2-57520
 Inconel 600, stress corrosion cracking in high-temp. water 2-83297
 Inconel 600, structural material for fusion reactor appl., Ta protective coatings 2-74911
 Inconel 600 alloy, stress corrosion cracking 2-83298
 Inconel 600 surfaces, H₂ and CO adsorp. behaviour under laser-induced thermal desorp. 2-66357
 Inconel 625, high-temp. air oxidation 2-80115
 Inconel 625, sequentially He⁺ implanted, surface exfoliation suppression 2-76522
 Inconel 700, creep strength, microstruct. depend. 2-77932
 Inconel 718, Ni-base superalloy, low cycle fatigue, stress-strain behaviour 2-116516
 Inconel alloy 600, stress corrosion cracking in PWR boilers 2-80124
 Inconel X750, age hardenable, stress corrosion cracking in hot water, rel. to prior heat treatment 2-83299
 Inconel X750, stress corrosion cracking, yield strength, rel. to heat treatment, Zr levels 2-83300
 Inconel X-750, fatigue and creep crack growth at elevated temps., effect of environment 2-99536
 Inconel X-750, limiters in Doublet III, changes in near-surface microstructure 2-74901
 metallic glasses, (A₂B_{1-x})₇₀P₁₀B₁₀Al₁₀, A and B=Fe, Co, Ni, Mn or Cr, mag. phase diagrams 2-92933
 Ni-Cr thin film resistors 2-87976
 Nimonic alloy PE 16, ion eroded, erosion yields, topographical changes and depth profile anal. 2-77661
 Rene 95, Ni-base superalloy, fatigue crack propag. thresholds for long and short cracks 2-105314
 spin density wave state, Landau theory 2-66757
 steel, austenitic, Cr-Ni, surface (100), water vapour adsorp., AES studies 2-66343
 Stellite, Co-base, cavitation erosion 2-88205
 Stellite-6, in fission reactors, ⁶⁰Co release rates 2-80114
 Al-Cr system, Cr dissolution in liq. Al, kinetic parameters and diffusion coeffs., 700-900°C 2-99395
 Al-Cr-Zr, powder metallurgical, heat resistant, props. 2-72875
 Al-Cu, ion implanted nonsubstitutional alloy, laser treatment, expt. study 2-86724
 Al-Cu-Mg-Zn-Cr powder, effect of compression by high omnidirectional pressure on struct. and props. 2-72654
 Al-Mg-Mn-Zr-Ca-Ti, chem. comp. optimisation rel. to fracture toughness, Mn, Zr, Cr and Ti additions effect 2-77945
 Al-Mg-Si-Cu-Cr, quench sensitivity, effects of Cu and Cr 2-105174
 Al-Zn-Mg-Cu-Cr, 7XXX series alloys, influence of microstruct. and strength on fracture 2-111293
 Co-Cr, computer calc. of phase diagram (*Japanese*) 2-105120
 Co-Cr, liq. and solid., conc. and dil., temp.-conc. relationships of susceptibility 2-66766
 Co-Cr, mag. behaviour above crit. conc. for ferromag. 2-72204
 Co-Cr (25 wt.%), Cr₂O₃ forming alloys, corrosion in H₂-H₂S-H₂O atmosphere 2-77982
 Co-Cr alloys, hot corrosion in modified Dean's rig 2-99583
 Co-Cr dil. alloy, kinetics and mechanism of high temp. oxidation 2-88277
 Co-Cr film, RF sputtered, HCP phase and perpendicular mag. anisotropy, N₂ induced 2-56394
 Co-Cr film, RF sputtered, perpendicular mag. anisotropy, magneto-optical Kerr effect and reflectivity meas. 2-61878
 Co-Cr-Al alloys, hot-corrosion in modified Dean's rig 2-99584
 Co-Cr-Al-Y (22, 11, 0.5 wt.%) coating, oxide form. at 700°C 2-116621
 Co-Cr-Al-Y vacuum plasma sprayed coatings 2-62274
 Co-Cr-Mo alloys, hot corrosion in modified Dean's rig 2-99585
 Co-Cr-Mo-C alloys, strengthening mechanisms, room temp. 2-67371
 Co-Cr-Mo-C alloys, wrought, phase transform. 2-99423
 Co-Cr-Ta alloys, hot corrosion in modified Dean's rig 2-99583
 Co-Cr-Ti alloys, hot corrosion in modified Dean's rig 2-99583
 Co-Cr-W, processed by liq. phase sintering, microstruct. invest. 2-67310
 Co-Cr-Zr, amorphous alloys, Curie temp. and mag. thermal expansion, press.-depend. meas. 2-72323
 Cr-La-Ta-O-C-N dil. alloy, fracture and plasticity, structural effects (*Russian*) 2-99481
 Cr-Al-Y-M (M=Co, Ti, Si, Ni, Mn, Pt, Fe), alloying additions effect 2-116451
 Cr-Au film, vacuum deposited, partial press. and temp. effect on props. 2-76871
 Cr-Co-V alloys, mag. susceptibility and thermal expansion 2-98855
 Cr-Cu, polycrystalline films, elec. resist. study 2-61614
 Cr-Cu film, mech. props., thickness depend 2-115628
 Cr-Cu films, elec. cond., annealing characts. and lattice distortion energy spectra 2-92783
 Cr-Fe, antiferromagnetic, high press. phase diagram, neutron scatt. study 2-116000
 Cr-Fe, mag. first-order transition, susceptibility and latent heat study 2-98880
 Cr-Fe-C alloy with precip. (Cr,Fe)₂₃C₆ phases, nonrandom site occupation, parameters 2-72705
 Cr-Fe-V alloys, mag. susceptibility and thermal expansion 2-98855
 Cr-Ga, effect of press. on Neel temp. 2-72202
 Cr-La (0.3 wt.%), films, dislocations, struct. and composition 2-115600
 Cr-MgO, sintered, struct. and mech. props. 2-67544
 Cr-MgO-B, struct. and mech. props. 2-72783
 Cr-Mn single crystals, first order incommensurate-commensurate transform. 2-92175
 Cr-Mo ferritic steel for LMFBR primary and secondary systems 2-64536
 Cr-Mo solid soln. systems, high-temp. X-ray investigs., lattice and thermal props. (*Russian*) 2-66156
 Cr-Ni (45 wt.%) film, amorphous sputtered, crystn. 2-110211

chromium alloys continued

Cr-Ni steel, Kh16Ni15M3B, reactor irradi. in N₂O₄ medium, effect on strength and plasticity 2-116613
 Cr-Ni-Fe, free energy Kohler method rel. to subregular model 2-62103
 Cr-Rh-Zr dil. alloy, grain boundary relax., internal friction study (*Russian*) 2-93546
 Cr-Si, mag. first-order transition, susceptibility and latent heat study 2-98880
 Cr-Si alloy films, RF sputter deposition 2-99334
 Cr-Si alloys, Cr-rich, thermal cond. meas., 3-300K, rel. to antiferromag. transition 2-92567
 Cr-Si-Fe (2, 0.5 wt.%), mag. behaviours in commensurate spin density wave state 2-92882
 Cr-V, dilute alloys, elastic consts., mag. transition 2-86774
 Cr-V single crystals, growth by floating-zone technique 2-77726
 Cr-V solid soln. systems, high-temp. X-ray investigs., lattice and thermal props. (*Russian*) 2-66156
 Cr-V(Mn), spin density wave states, tight-binding approx. 2-66751
 Cr-Zr-N alloy system, phase equilibria (*Ukrainian*) 2-67288
 Cr₂Al₃, SIMS, very small clusters study 2-77683
 CrCoFe permanent magnet, powder metallurgy processing 2-72652
 CrFe₂, itinerant electron systems with local mag. moments, paramag. state, static props. 2-98837
 Cr(Mo)(W)-Gd-B, phase comp. and cryst. struct. 2-116426
 CrSi, dil. alloys, first order phase transition from paramag. to commensurate SDW state 2-116003
 CrSi, Raman scatt., phonon linewidth and mag. susceptibility 2-57090
 CrSi-type struct., at. dias. in voids rel. to unit-cell dimensions 2-109747
 Cu/Cr epitaxial film, ion mixing during RF sputtering deposition 2-82161
 Cu-Cr, dil., mag. impurity effects studied by tunnelling in supercond. proximity layers 2-61660
 Cu-Cr, failure anal., impurity segregation, Auger spectra study 2-83205
 Cu-Cr, Kondo system, nucl. spin relax. of host metal, field depend. 2-116083
 Cu-Cr, SIMS, very small clusters study 2-77683
 Cu-Cr, thermodynamic study and phase diagram by mass spectrometry 2-56219
 Cu-Cr sputtered thin film, precipitate morphologies, annealing effects, electron microscope and EDX study 2-67353
 Cu-Cr-(Fe), (-Mn), dilute alloys, ionic model, energy level splitting, NMR study 2-66932
 Cu-Ni-Cr, spinodally decomposed, high cycle fatigue 2-67472
 Cu-Su-Cr, struct. and mech. props., Cr effect 2-112244
 Fe-B-Cr(Co)(Ni), metallic glasses, crystn. behaviour 2-71368
 Fe-Co-Cr system, phase diagram, thermodynamic evaluation 2-72667
 Fe-Cr, diffusion of S, activation energy, comp. depend. 2-86939
 Fe-Cr, elastic modulus and internal friction, mag. field effect 2-116050
 Fe-Cr, electron irradi., rad. induced segregation at internal sinks 2-86731
 Fe-Cr, high purity, corrosion resistance and acid and chloride media (*Japanese*) 2-105373
 Fe-Cr, oxide film, Auger sputtering profiles, quantitative interpretation 2-82962
 Fe-Cr, oxide scale form. in air at elev. temp., Raman obs. 2-62264
 Fe-Cr, packet martensite, struct. changes during annealing, electron microscopy study (*Russian*) 2-99425
 Fe-Cr, passive film, ESCA, AES and SIMS study 2-111366
 Fe-Cr, varying corrosion rate system, monitoring in H₃PO₄ 2-67608
 Fe-Cr, wetting of TiC 2-67597
 Fe-Cr (0-15 wt.%), mech. props. changes by fast neutron irradiation 2-67504
 Fe-Cr (2.5 wt.%), Cr₂O₃ forming alloys, corrosion in H₂-H₂S-H₂O atmosphere 2-77982
 Fe-Cr (32 at.%) supersaturated solid solns., spinodal decomp. at 470°C, precip. morphology 2-105162
 Fe-Cr (45.5 at.%), α phase form., Mossbauer effect study 2-104776
 Fe-Cr alloy, decomposition in unstable state, neutron small angle scatt. study 2-61145
 Fe-Cr alloys, existence of spin glass region 2-66830
 Fe-Cr alloys oxide film growth, vibr. technique obs. 2-83311
 Fe-Cr based alloys, damping capacity, mag. field, heat treatment and cold working effects 2-57393
 Fe-Cr solid solns., vol. effects in thermodynamics at high temps. 2-61172
 Fe-Cr system, lattice dynamical parameters, X-ray diff. study (*Russian*) 2-61101
 Fe-Cr-Al, corrosion in H₂/H₂O/H₂S mixtures at 1200°C 2-105380
 Fe-Cr-Al, corrosion resist. meas. in coal gasification atm., Cr conc. effects 2-93669
 Fe-Cr-Al (20, 4.5 wt.%), oxide dispersion strengthened, long-term high velocity oxidation and hot corrosion testing 2-88274
 Fe-Cr-Al (22.4 wt.%), void form. mechanism at substrate oxide interface 2-67610
 Fe-Cr-Al alloy, wrought, prep. and characts. 2-67249
 Fe-Cr-Al alloys, rapidly quenched, microstructs., mech. props., elec. cond. 2-111332
 Fe-Cr-Al-Hf, corrosion scales, elevated-temp., erosion rate 2-67570
 Fe-Cr-Al-P-C alloys, amorphous corrosion resist. 2-78016
 Fe-Cr-Al(22, 5.5wt.%), sulfidation, far-from-equilibrium phenomenon 2-62279
 Fe-Cr-B amorphous Invar alloy, Curie temp. and high field susceptibility, press. effects 2-72322
 Fe-Cr-C (3.15 wt.%) martensite cryst., midribs (*Russian*) 2-115249
 Fe-Cr-Co permanent magnets, mag. props. and Mossbauer effect 2-72282
 Fe-Cr-Co permanent magnet alloys, coercivity mechanism obs. 2-92971
 Fe-Cr-Co-Mo-Ti (24, 15, 2, 0.5 wt.%), magneto alloy, machinable, microstruct. and props. (*Chinese*) 2-72261
 Fe-Cr-Co-Nb-Al, high-coercivity, microstruct. rel. to mag. props. 2-111333
 Fe-Cr-Co-W, mag. props. and cryst. struct. (*Russian*) 2-92970
 Fe-Cr-Ni, austenite-ferrite struct., tensile props. and fracture (*Japanese*) 2-105239
 Fe-Cr-Ni, neutron irradi., swelling under electron irradi., reactor conditioning effect 2-109837
 Fe-Cr-Ni, ternary phase diagrams, computer calc. (*Korean*) 2-67289
 Fe-Cr-Ni alloys, electron-irrad., swelling and Ni segregation 2-111182
 Fe-Cr-Ni alloys, neutron irradiated, defect recovery 2-66074
 Fe-Cr-Ni-Al, NiAl precipitation during ageing 2-105156
 Fe-Cr-Ni-Al coatings, for resisting fretting wear in temp. range 20-700 °C 2-88291
 Fe-Cr-Ni-Mn-Si-Al-REM alloys, heat resist., expt. design appl. 2-116604

chromium alloys continued

- Fe-Cr-Ni-based alloys, commercial, electron irradi., void swelling 2-103820
 Fe-Cr-Si (18.2 wt.%), corrosion resist. meas. in coal gasification atm., Si additions' effect 2-93668
 Fe-Cr-Ti-Mo-TiO₂, dispersion strengthened, void swelling in HVEM, influence of fabrication procedure 2-111189
 Fe-Cr-Ti(Si), ion irradiation, void swelling and solute segregation 2-85212
 Fe-Cr(Al), oxidation, high temp., wet and dry atmos. (Japanese) 2-83283
 Fe-Cr(Mo), Neel temp. and elec. resist., mag. moment-spin density wave coupling 2-82573
 Fe-Cr(Mo), reaction with Cl₂ gas, kinetics and mechanism 2-67639
 Fe-Cr(Al), mech. props., effect of fast neutron irradi. 2-103844
 Fe-Mn-Cr-Mo-C-P, metallography rel. to sintering 2-116665
 Fe-Mn-Cr-Ni systems, alloy comp. effects on lattice parameters regarding γ , ϵ and α phases (German) 2-88058
 Fe-Mo-Cr, α phase, range of stability 2-62100
 Fe-Ni-Cr, A286 superalloy, electron beam welded, fatigue crack growth 2-111300
 Fe-Ni-Cr, Alloy 800, mechanical behaviour at 838K 2-77888
 Fe-Ni-Cr, mass transfer and corrosion in Li, Ni conc. effect 2-72866
 Fe-Ni-Cr, sp. ht. and magnetis. near Curie pt., anomalous behaviour (Russian) 2-66836
 γ -Fe-Ni-Cr, spin glass state charact. near crit. conc. (Russian) 2-98886
 Fe-Ni-Cr alloys, grain coarsening, influence of second phase particles 2-93511
 Fe-Ni-Cr-Al-Y alloys, high-temp. oxidation, adherence of Al₂O₃ scale 2-105367
 Fe-Ni-Cr(Al), corrosion in H₂/H₂O/H₂S mixtures at 1200°C 2-105380
 Fe-Ti(Cr)(Mn)(Ni)(Rh)(W), in contact with SiC single cryst., adhesion, friction and wear 2-88199
 Fe-X-C (X=Ti, V, Nb, W, Cr, Mo), C activity, influence of alloying additions (German) 2-93491
 Fe(Cr), triple beam ion irradi., microstruct. 2-109856
 Fe₅Co_{0.4}Cr_{0.1} films, polycryst., subjected to X-irrad., magnetisation (Russian) 2-66876
 Fe_{0.16}Cr_{0.84}, spin glass, mag. relax. meas. 2-110589
 Fe₇₃Cr₂₇B₂₀ metallic glass ribbon, elec. resist. free volume depend. 2-110322
 Fe₈₀-Cr₂₀B₂₀, amorphous, crystn., Mossbauer study 2-103633
 Fe₇₀Cr₁₀P₁₃Cr₇, amorphous, spin waves 2-92884
 Fe₇₂Cr₁₈P₁₀Cr₇, amorphous powder, spark erosion prep., corrosion study 2-105384
 Fe₇₄Cr₁₀P₁₀Cr₃Si₃, amorphous, appearance pot. spectroscopy, electronic struct. effects 2-105005
 Fe₆₅Ni₃₅Cr₁₀, spin glass, magnetic viscosity obs. (Russian) 2-72230
 γ -Fe₈₂-Ni₁₈Cr₁₈, transport and galvanomag. props. near crit. comp., 4.2 to 300K (Russian) 2-61444
 Fe₇₂Ni₁₈Cr₁₀P₁₂B₈, Metglas, heat treatment effect on internal friction 2-62151
 Fe₇₂Ni₁₈Cr₁₀P₁₂B₈, thin passive films, comparison of AES and XPS anal. 2-78004
 Fe₇₂Ni₁₈Cr₁₀P₁₂B₈, metallic glass, mag. hyperfine field distrib., Mossbauer study 2-87640
 Fe₇₂Ni₁₈Cr₁₀P₁₂B₈, metallic glass, crystn., hardness and tensile deformation meas. 2-91784
 Fe₇₂Ni₁₈Cr₁₀P₁₂B₈, metallic glass ribbons, P conc. meas. using neutron generator (Russian) 2-99742
 Fe₇₂Ni₁₈Cr₁₀P₁₂B₈, amorphous and polycryst., He ion bombardment 2-103856
 Fe₇₂Ni₁₈Cr₁₀P₁₂B₈, metallic glass, hydrogen embrittlement 2-116599
 Fe₇₂Ni₁₈Cr₁₀P₁₂B₈, amorphous, Mossbauer study under press. 2-72385
 (Fe_{1-x}Ni)₇₈₋₈₀-Cr₇Si₂₀B₂, glass, magnetisation, crystn. and microstruct. 2-77322
 Ga-Cr melts, contact reactions with quartz and graphite, X-ray diffr. study 2-82085
 In-Cr dilute superconducting alloy, tunnelling, localised excited states 2-72122
 Mn_{1-x}Cr_xB, Invar like props. 2-72174
 Mn_{1-x}Cr_xSb, mag. phase diagram and struct. 2-104612
 Mo fibre reinforced Ni-Cr, TiN coating on fibres influence on props. 2-67455
 Mo-Cr powder mixtures, alloy form. during sintering 2-83065
 Ni-Al/Ni-Cr, thermocouples, deterioration of, EMF in reducing atm. at high temps. 2-67641
 Ni-Al-Cr, Ni-Al based structural alloy, props. 2-72874
 Ni-Al-Cr dendritic monocrystals, solidification, coarsening and microsegregation 2-99413
 Ni-Al-Cr Li₂ cpds., melt quenching, improved mech. props. 2-116472
 Ni-base Alloy 600, stress corrosion cracking in oxygenated water at high temp., environmental effects (Japanese) 2-83282
 Ni-base superalloy, 718, sintered and heat treated, phase anal. 2-67290
 Ni-base superalloy, Inconel 600, ultra-pure, H embrittlement, effect of C, P, Sn and Sb additions 2-67525
 Ni-base superalloy, space group of μ -phase, electron diffr. study (Chinese) 2-60924
 Ni-Co-Cr superalloy, wrought, struct., microchem. and mech. props., effect of Co 2-99438
 (Ni)-Co-Cr-Al-Y coatings, on IN-100 and Udimet 520 superalloys, microstruct. stability 2-99462
 Ni-Co-V(Cr), α phase, range of stability 2-62100
 Ni-Cr, aluminide coatings, form. kinetics and microstruct. 2-116620
 Ni-Cr, brazed ring, geom. parameters selection, tolerable stresses 2-99640
 Ni-Cr, lattice parameter studies of struct. changes near Ni₃Cr 2-105124
 Ni-Cr, oxidation and reduction, scanning Auger and XPS study 2-83278
 Ni-Cr, Portevin-Le Chatelier effect rel. to solid solubility (Japanese) 2-105235
 Ni-Cr, quenched, short range order form. and vacancy annihilation on annealing, elec. cond. study 2-115723
 Ni-Cr (25 wt.%), Cr₂O₃ forming alloys, corrosion in H₂-H₂S-H₂O atmosphere 2-77982
 Ni-Cr (5 at.%), ferromagnetic, optical props., temp. depend. (Russian) 2-61923
 Ni-Cr alloys, short-range order, discontinuous creep 2-99496
 Ni-Cr alloys MA 6000E, scaled-up thermomech. processing 2-77856
 Ni-Cr austenite steel, stable oxide film formation in N₂O₄ coolant 2-113627

chromium alloys continued

- Ni-Cr based refractory eutectic alloy, electron microscopy study (Russian) 2-98298
 Ni-Cr film, amorphous, struct. and crystn. 2-55863
 Ni-Cr-Al (16, 4 wt.%), oxide dispersion strengthened, long-term high velocity oxidation and hot corrosion testing 2-88274
 Ni-Cr-Al-Ti, ageing and γ' phase precipitation after strong deform., recrystn. processes (Russian) 2-99443
 Ni-Cr-Al-Y₂O₃, dispersion and precip. hardened superalloy, recrystn., influence of hot working 2-111196
 Ni-Cr-Al-Y₂O₃, oxide dispersion and precip. strengthened, creep and rupture 2-112299
 Ni-Cr-BN plasma spray deposited composite coatings, props. 2-83231
 Ni-Cr-C, phase diagram, 1000-1200°C, thermodynamic study (Czech) 2-116425
 Ni-Cr-Co, age-hardened, delayed discontinuous plastic flow, mechanism 2-93553
 Ni-Cr-Co, Mar M002, cast superalloy, creep and fracture, effect of hot isostatic pressing 2-88184
 Ni-Cr-Co, Mar M002, superalloy, fracture processes during creep in conventionally cast and directionally solidified material 2-88185
 Ni-Cr-Co, nimonic 90, He⁺ ion irradi., microhardness, microstruct., and blistering 2-98168
 Ni-Cr-Co-Al-Ta superalloy, air embrittlement, role of S 2-99541
 Ni-Cr-Co-W-Al-Ti-Nb-Hf system, refractory as-cast alloy, phase comp., struct. transforms. during high-temp. heating 2-99434
 Ni-Cr-Cr₂O₃ films, RF sputter-deposited struct. and comp. 2-87983
 Ni-Cr-Fe(Mo), long-life fatigue test results 2-62226
 Ni-Cr-La-Y-Al, La, Y and Al addition effects on high temp. oxidation 2-93685
 Ni-Cr-Mo-Co-Fe(Al), aluminide coated, compatibility in simulated HTGR 2-113664
 Ni-Cr-Mo-W, heat-resist., struct. and strength charact. estimation on temp. and time basis 2-112520
 Ni-Cr-Nb-Mo-Al-Ti, heat-resistant, homogenisation effect on struct. and plasticity 2-62181
 Ni-Cr-Si-B coatings formed in air, props. of glass-metal coatings (Russian) 2-77966
 Ni-Cr-TiO₂, oxidation, high temp. influence of TiO₂ content 2-111384
 Ni-Fe-Cr, 'Nichrome', phonon-induced desorption of He, crit. cone 2-92349
 Ni-Fe-Cr alloy tubes, prestrained, creep rupture bending test 2-62184
 Ni-Nb-Cr-Mn weld metals, struct. stability (Slovak) 2-116446
 Ni-W-Co-Cr-Al-Nb-C eutectic CoTaC-741 alloy autoradiographic investigation, of Pm distrib. 2-105176
 Ni-Zr-Co-Cr-Al-Ti powders, rapidly solidified, shock wave consolidation 2-62089
 NiCr thin film resistance layers, factors affecting props. (Hungarian) 2-77754
 NiCr thin films, sequential heat treatment effect on resist. and TCR 2-110496
 Ni₃Cr, laser damages, comparison with tensile deform. and neutron irradiation effects 2-66047
 NiCrAl-Zr alloys, oxidation features, AES study 2-88273
 Pd-Cr, Pd based solid soln., diffusivity of H meas. 2-104058
 Pd-Fe-Cr solid soln., elec. props. (Russian) 2-92562
 PdAuCr alloys, spin fluctuation effects, elec. resist. meas. 2-71958
 Rh-Cr dil. alloys, low temp. nucl. orientation meas. 2-92546
 Ru-Cr, X-ray fluorescence, K-emission band struct. (Russian) 2-116300
 Ru-Cr-Al-Mo-V, mech. props., statistical anal. 2-72763
 Ti-V-Cr-Mo, VT3-1, α' phase form. and decomp. (Russian) 2-99385
 Ti-Cr, TiN-Cr and TiB₂-Cr, sintering and props. 2-111109
 TiCr_{1.8}H_{0.8}(D₂), H position and diffusion, NMR studies 2-93025
 V-Cr binary alloys, fabricability and tensile strength 2-67496
 V-Cr alloys, elastic const. C₄₄, temp. variation 2-92079
 V-Cr-Ti (1.01 wt.%), neutron irradi., preimplantation of He effect on microstruct. 2-85215
 V-Cr-Ti (15.5 wt.%) unirradiated high temp. fatigue in vacuum, comparison with 316 stainless steel 2-72805
 V-Nb-Cr, ternary alloys, fabricability and tensile strength 2-67497
 V-Ta-Cr, ternary alloys, fabricability and tensile strength 2-67497
 W-Cr sintered alloys, prod. and oxidation 2-72655
 W-Cr-Pd sintered alloys, Pd addition effects on oxidation 2-72885
 Y(Co,Cr)₃, metastable character, decomposition behaviour, precipitation 2-67345
 Y(Co_{1-x}Cr_x)₃, struct. and mag. props. 2-91874
 Zn-Cr, dilute, cryst. field effect on magnetisation 2-82660
 Zr-Cu-Cr-Fe, phase diagram, isothermal section of Zr corner 2-83093

chromium compounds

see also chromium alloys

- black chrome selective surfaces degradation at elevated temps. 2-97131
 hydride system for electric power storage (German) 2-62508
 phosphate, polymeric, ESR and spin dynamics 2-82710
 Ag_{0.3}Cr_{0.7}S₂, non-stoichiometric layer cpd., cryst. struct. determ. 2-103700
 (Al,Cr)₃BeO₅, laser-quality alexandrite, Cr³⁺ EPR spectrum and anti-phase boundaries obs. 2-87583
 Al_{1-x}Cr_x(PO₃)₃-Cr³⁺ tunable IR solid-state laser material, spectroscopic and laser props. 2-108884
 Al₂O₃, effects of Cr₂O₃ additions on sintering and mech. props. 2-99375
 Al₂O₃-Cr₂O₃ solid solutions, wetting by liq. metals, Cr₂O₃ content influence 2-61261
 Al₂O₃-ZrO₂-Cr₂O₃-SiO₂, ER 216 refractory material, fusion cast, zonality of ruby (Czech) 2-86896
 CC Cr-C, X-ray emission and photoelectron spectra meas. 2-87906
 Cd_{1-x}Ag_xCr₂Se₄, photomagnitisation obs. (Russian) 2-56912
 CdCr₂In₂-S₈, dil. insulating system, mag. phase diagram 2-110591
 CdCr₂Se₄, effect of light on mag. after effects 2-87553
 CdCr₂Se₄, ferromag. semicond., cathodoluminesc. study 2-87876
 CdCr₂Se₄, hot carrier influence on Raman spectra (Russian) 2-72498
 CdCr₂Se₄, photomagnitisation of, Landau-Lifshitz domain struct. (Russian) 2-87750
 CdCr₂Se₄, s-conduction band splitting, photoluminesc. study 2-87849
 CdCr₂Se₄, single crystal growth, chemical transport reaction 2-99328
 CdCr₂Se₄(S₈), occupied d-band position, photoemission determ. 2-83005
 (Cr,Fe,Al,Mg)₂O, spinel, cation atom distrib., channelling effect in electron-induced X-ray emission 2-98018
 Cr complexes, Cr₂(O₂CCH₃)₄, photoelectron spectra, interpretation using ab initio MO calcs. and correl. effect 2-96635
 Cr-C hard facing, wear transitions, effect of high gas press. 2-88202

chromium compounds continued

- Cr-Cr₂O₃, black, selective solar film, DC resist. and optical const. meas., percolation obs. 2-116845
 Cr-Cr₂O₃, black chrome selective surfaces, deposit growth mechanisms and optical props. 2-72639
 Cr-Cr₂O₃ solar black chrome film, microstruct., comp., plating process variables, thermal ageing effects, performance 2-93943
 Cr-Mo-O system, stability and morphology 2-67305
 CrAl₂S₄, thiospinel, thermodynamic props. 2-86906
 CrAl₂S₄+γ, spinel, homogeneity region 2-76695
 CrB-MnB system, phase diagram, 600 to 2400°C 2-62106
 CrB₃ based thick composite films, elec. cond. mechanism 2-72041
 CrBr₃, 3p spectra splitting of transition metal ions in XPS 2-57247
 Cr(CO)₆, adsorbed on MgO, decarbonylation, spectrosc. obs. 2-64958
 Cr(CO)₆, dissociative electron attachment reactions, influence on thermalisation of electrons by CO₂ 2-72967
 Cr(CO)₆, high press. phase transitions, Raman study 2-76650
 Cr(CO)₆, IR reflectance and Raman spectra, lattice modes 2-110851
 Cr(CO)₆/Mn(CO)₅NO, gamma-irrad., anisotropic EPR spectrum 2-82177
 CrCeS₇, thermal conductivity, phonon-paramag. ion scattering effects obs. 2-115480
 CrCl₂, Kβ' satellite plasma oscills. theory 2-67152
 CrCl₃, 3p spectra splitting of transition metal ions in XPS 2-57247
 CrCl₃, mag. ordering at phase transition, Faraday rot. and susceptibility meas. 2-98882
 CrCl₃, purification, by distillation and sublimation in vacuum 2-77720
 Cr₂Cl₆²⁺, binuclear complexes, sudden polarization ab initio SCF calcs. 2-102662
 CrCl₃·6H₂O, cryst. field splitting, K X-ray absorpt. spectra, MO theory 2-62017
 CrF₆³⁻, octahedral cluster, quintet-triplet electronic transitions, nephelauxetic effects 2-75175
 CrH, effective core pot. calcs., pseudopotential method 2-64861
 CrLaS₇, thermal conductivity, phonon-paramag. ion scattering effects obs. 2-115480
 Cr_{1/3}NbS₂, helical spin struct. due to antisymmetric exchange interaction 2-72162
 Cr₂Nb₅Se₁₀, low dimensional conductors, cryst. struct., X-ray diffr. study 2-115197
 CrO, effective core pot. calcs., pseudopotential method 2-64861
 CrO₂/Fe particles, noncollinear mag. struct., Mossbauer study 2-77329
 CrO₃, L₂MM Auger transitions under ion bombard. 2-105028
 (Cr₂O)₄²⁺, dimeric units, correl. struct., antiferromag. and ferromag. props. 2-109752
 Cr₂O₃, 3d, L₂ edge, EELS 2-108636
 Cr₂O₃, adsorption of CO₂, electroconductivity kinetics 2-77036
 Cr₂O₃, electron energy loss study of K near-edge fine struct. of O 2-104248
 Cr₂O₃, in solar absorbers, optical const. 2-93142
 Cr₂O₃, ionic implantation for SIMS quantification, corrosion study 2-99744
 Cr₂O₃, Kβ' satellite plasma oscills. theory 2-67152
 Cr₂O₃, L₂MM Auger transitions under ion bombard. 2-105028
 Cr₂O₃ layers on Cr, reflectance spectroscopy 2-67136
 α-Cr₂O₃, microcrystals, surface modes, IR study 2-93206
 Cr₂O₃ plasma sprayed layer on rolls, roll coatings formed during Al hot rolling 2-111385
 Cr₂O₃ scale, Cr transport, scale morphology change during high vacuum treatment 2-86927
 Cr₂O₃ scales, Cr lattice diffusion 2-86926
 xCr₂O₃-(1-x)3B₂O₃-PbO glasses, EPR and mag. susceptibility studies 2-98946
 Cr₂O₃-CoO solid soln., segregation and near surface diffusion 2-76682
 Cr₂O₃-Cr, black chrome solar selective films, surface comp., SIMS study 2-57724
 (CrOCl₂)₂, electronic struct., SCF-MS-Xalpha calc., EPR spectra, EHT calcs. 2-70144
 CrOCl₂-H₂(x), mode selective nonradiative process, vibr. predissoc., fluoresc. 2-80709
 Cr(OH)₃·H₂O, AC proton conduction 2-115451
 CrP₂Se₆, synthesis and cryst. struct., X-ray and electron diffr. study 2-109770
 Cr₂(SO₄)₃, Kβ' satellite plasma oscills. theory 2-67152
 CrSe-1T, lattice instability and electron-lattice interaction, Jahn-Teller mechanism 2-98210
 Cr₂Se₆, micromagnetism, mag. susceptibility and magnetisation studies 2-72219
 CrSi₃, formation, diffusion mechanism, ³¹Si radioactive marker study 2-61209
 CrSi₃, formation, radioactive ³¹Si marker study 2-115472
 Cr₂Si, lattice dynamics neutron scatt. study 2-92126
 Cr₂Te-ZnCd_{1-x}S heterojunction photoelectronic converters with improved parameters 2-116807
 (Cr_{1-x}V_x)_{0.14}Te, mag. phase diagram, thermomagnetic props., mag. moments 2-87494
 Cr₂WO₆, elec. transport props., Seebeck coeff. 2-71978
 Cs₂CrCl₆, exchange interactions, neutron scatt. study 2-66803
 Cu₂Cr₂M₂S₄ (M=Sn, Ti), mag., EPR, and Mossbauer meas. 2-98840
 Cu₂·Cr₂O₃, prst. struct. and mag. props. 2-60946
 CuCr₂S₄, spinel, spin polarised electronic band struct. 2-71861
 CuCr₂Se₄(Te₂), spin-polarised electronic band struct. 2-104245
 (Fe,Cr)₂O₄ (chromite)+C, in meteorites, noble gases sorption 2-100845
 Fe_{1-x}Cr_xBO₃, ferrimagnet, Mossbauer study 2-72381
 Fe_{2-x}Cr_xCa₂O₃ sintering, mag. transitions, solid soln. composition depend. 2-98875
 Fe_{2-x}Cr_xO₃ films, optical props. and chem. resist. 2-93300
 Fe_{3-x}Cr_xO₄, heat capacity, 200 to 850K, λ=type anomaly due to ferriparallel magnet. transition 2-61161
 (Fe²⁺Fe_{1-x}³⁺Cr_x³⁺)O₄²⁻ ferrites, thermopower-composition depend. 2-61499
 GaAs:Cr₂O₃ precipitation processes, TEM 2-92203
 Gd₂CrSe₆, single crystal growth, crystal struct. 2-87959
 HgCr₂Se₄, FMR characts., 1.8 to 130K 2-82725
 HgCr₂Se₄, Hall effect during ferromagnetic transition 2-110372
 HgCr₂Se₄, hot carrier influence on Raman spectra (Russian) 2-72498
 KCr(SO₄)₂·12H₂O, behaviour in high vac. of XPS spectrometer 2-99739
 Li₂CrO₄, cathodes in Li/organic electrolyte batteries, props. 2-93889
 Mg(NH₄)₂(SO₄)₆·6H₂O·CrO₄²⁻, irradiated, EPR studies 2-61753
 MgO-Al₂O₃-Cr₂O₃, kinetics of soln. in oxide melts 2-88063

chromium compounds continued

- MgO-Cr₂O₃-CaO·SiO₂, fused, retrograde stability of periclae rel. to cracking 2-83103
 MgO-Cr₂O₃(Fe₂O₃)(Al₂O₃)-CaO·SiO₂, fused, retrograde stability of periclae rel. to cracking 2-83103
 Mn₂Cr₂Ge₂O₁₂ garnets, mag. phase diagram (Russian) 2-56861
 Ni-Cr₂C₂ electroless composite coatings for wear resistant applcs., prep. and characts. 2-67666
 Ni-Cr-Cr₂O₃ films, RF sputter-deposited struct. and comp. 2-87983
 (Pd_{1-x}Cr_x)H, mag. and supercond. ordering 2-98845
 Rb₂Cr_{1-x}Cd_xCl₄, mag. props. study 2-87505
 Rb₂Cr₂Cl₄, linear birefringence and spin correlations 2-93148
 Rb₂Cr_{1-x}Mn_xCl₄, mag. props. study 2-87505
 Rb₂Mn_{1-x}Cr_xCl₄ spin glass, thermomagnetic magnetisation 2-110607
 (Rh_{1-x}Cr_x)₂Te₄, paramag. susceptibility, elec. resist. and lattice const. meas. 2-72136
 Se₂Cr₂Si₂, cryst. struct., Laue rotating and precession study 2-65960
 Sn_{1-x}Cr_xTe degenerate mag. semiconductor, struct. transform-induced mag. ordering 2-56852
 Ti-Cr₂Cr₂ composite, struct. form. mechanism 2-67260
 UO₂·Cr₂O₃, elec. cond., effects of doping 2-87262
 (V_{0.99}Cr_{0.01})O₃, metal-insulator transition, domain effects 2-76928
 VO₂·CrNbO₄, solid solns., phase transitions, ⁵¹V 2-110669
 ZnCr₂Al_{2-x}Se₂, dil. insulating system, mag. phase diagram 2-110591
 ZnCr₂Fe_{1-x}O₄ spinels, cation atom distrib., channelling effect in electron induced X-ray emission 2-81742
 ZnCr₂S₄, thiospinel, thermodynamic props. 2-86906
 ZnCr₂Se₄ spinel, reflectance spectra, band struct. 2-87811
 ZrCr₂D₄, phase transition, X-ray and neutron diffr. studies 2-103686

chromosphere

- acoustic-gravity waves, parametric generation in isothermal atmosphere 2-68718
 Active Region 2717, 1980 October 9, chromosphere and transition region mass motions 2-100853
 active regions, lower transition region, UV lines Doppler shift, obs. 2-68692
 Alfvén surface waves in solar chromosphere, conditions for existence 2-100732
 canopy type magnetic fields, response of magnetographs 2-117649
 Compton effect in chromosphere, evidence from spectral line wavelengths 2-106644
 downflow of material indicated by C IV and Si IV spectral redshift 2-73945
 EUV line emission diagnosis 2-89225
 faculae, non-thermal vel. field above faculae from OSO-8 obs. 2-94691
 flare activity rel. to near Earth space UHF emission 2-73756
 flare distribution rel. to interplanetary mag. field sector boundaries extrapolated to Sun 2-84203
 flare of 1980 April 8, transition zone plasma characts. 2-58312
 flares, interacting mag. loop model for hard X-ray bursts 2-68693
 flares, interaction of collisionless conduction front with chromosphere rel. to hard X-ray bursts 2-58308
 flocculi in sunspot groups, brightness variations assoc. with mag. fields 2-84201
 heating by photospheric nonacoustic 5 minute period vertical traveling waves 2-84194
 heating perturbations, chromospheric response rel. to hydrodynamic stability of closed coronal structs. 2-58307
 limb brightening at extreme solar limb, determ. from photoelectric eclipse obs. 2-94686
 line spectra above sunspot umbra 2-100883
 magnetic fields, random force-free fields, turbulence effect 2-106509
 magnetic flux tube solitons 2-58318
 MHD waves evolution in homogeneous isothermal medium 2-58245
 O I spectrum, form. of resonance triplet and intercombination doublet 2-112398
 oscillations, nonlinear models 2-94668
 photosphere-chromosphere transition layer below flares, ionisation and radiative cooling 2-68720
 plasma condensational instability 2-63230
 plasma coupling with corona, coronal loop thermal stability 2-79060
 response to variation in heating rate 2-79057
 spicule brightness distribution measured during partial solar eclipse 2-117652
 spicule formation, role of photosphere shock wave propag. 2-89211
 spicules, reason for absence over plages and great length under coronal holes 2-100876
 spicules role in heating solar atm. 2-79053
 structure from Ca II K₂/K₁ asymmetry 2-93889
 sunspot, intensity ratios of Ca II K to H spectral line cores 2-100877
 sunspot propagating oscillations from photospheric and chromospheric lines obs. 2-58314
 sunspot transition region oscillations, C IV line obs. 2-63328
 supergranular and mesogranular scale vertical flows, spectral obs. 2-94673
 surge formation mechanism 2-117646
 surges and relation to radio bursts 2-73940
 switch on shocks form., role in coronal heating 2-68688
 temperature minimum, fine struct. and wave patterns, obs. 2-100852
 transition region, character and parameters of wave motion from radio obs. (Russian) 2-100864
 transition region, Lyman continuum absorpt. anal. 2-63336
 transition region, plasma flow along coronal mag. flux tube 2-94677
 transition region, profiles of emission lines produced in wake of shock wave 2-89221
 transition region, S IV emission line ratios 2-89210
 transition region O IV spectrum, calcs. including photoexcitation by Fe IX 171.07 Å 2-73923
 transition zone, electron press. determ. from EUV obs. of O IV and N IV 2-106639
 transition zone, response to variation in heating rate 2-79057
 white light flare, 1981 February 26, chromospheric penetration rel. to pink colour 2-100869
 Ca II, velocity oscills. phase differences between two lines 2-58313
 Ca II in canopy type models, scaling-law equilibria 2-117651
 Hnα lines for 5≤n≤20, model strengths 2-112403

chronographs see chronometers

chronometers

- automatic measurement of chronometer time differences 2-58800

CIDEP

- duroquinone in alcohol soln., electron transfer reaction, time-resolved flash photolysis, *EPR* 2-85703
 liquids, time resolved electron spin resonance spectroscopy 2-116064
 organometallic radicals, spin trapping by quinones, optically active complex form. 2-110645
 transient paramagnetic intermediates detection by time-resolved mag. reson. and related techniques 2-93849
 triplet mechanism of chemically induced electron spin polarisation, density matrix equations of motion 2-102510
 H-like atoms, spin electron polarization in absence of external mag. field (*Russian*) 2-96485
 N heterocyclic radicals, CIDEP, polarisation theory test 2-75328

CIDNP

- amino acids, photo-CIDNP spectra, cross-relax. effects 2-108573
 electron transfer reactions, CIDNP formation, electron exchange effect 2-70279
 hydrocarbons, radical ion pair reactions, nucl. spin polaris. effects 2-65007
 liquids, time resolved electron spin resonance spectroscopy 2-116064
 proteins, photo-CIDNP spectra, cross-relax. effects 2-108573
 pyrene-dimethylaniline, donor to radical pair electron transfer, triplet form., delayed fluoresce. obs. 2-85720
 cis-stilbene radical cation, electron transfer reaction, CIDNP formation, electron exchange effect 2-70279
 triethylamine radical cation, electron transfer reaction, CIDNP formation, electron exchange effect 2-70279

cinelifilm *see cinematography***cinematography**

- see also cameras; telefilming*
 3-D films, summary of basic principles 2-69273
 16 mm cine cameras, image steadiness meas. instrument using moiré fringes 2-107441
 16 mm raw film stock, frictional props. meas. 2-69274
 16 mm test film for evaluation of telecine performance 2-79701
 123rd SMPTE conf., Los Angeles, USA, 1981, Oct. 2-53419
 afocal close-up lenses, for optical projector systems in professional cinematography (*Czech*) 2-55291
 biomechanics cinematography, kinematic anal. procedures 2-117149
 biomechanics research, integrative role of cinematography 2-117150
 bleaching process by $K_3Fe(CN)_6$, $K_2Cr_2O_7$, $(NH_4)_2Cr_2O_7$, $CuCl_2$ (*Russian*) 2-64151
 broadcast telecine equipment Rank Xerox Mk III, advertising agency appl. 2-74537
 camera lens colour characteristics, computer calc. (*Russian*) 2-69285
 cameras, quality control radioelectronic meas. apparatus development (*Russian*) 2-69282
 close-range cinephotogrammetry: from theory to practice 2-113019
 cloud photogrammetry, aircraft side camera movies during winter MONEX 2-83916
 colour motion picture films, two new products from EASTMAN 2-113016
 colour separations in inverse colour process 2-95497
 copying machines for optical printing (*Russian*) 2-64149
 deaf speakers, anal. of laryngeal biomechs. using high-speed cinematography 2-117151
 dynamic multivision, new methods 2-107427
 dynamics of cinelifilm feed with claw mechanisms (*Russian*) 2-64152
 economic efficiency of studio workshops (*Russian*) 2-69290
 electronic pictures compared with cinelifilm, TV broadcasting appl. (*German*) 2-89839
 equipment quality control during development (*Russian*) 2-69289
 feature cine film dubbing console 2-109133
 feature length printing system with microcomputer control 2-69278
 FeRRIT, 35 mm/17.5/16 mm audio recorder/reproducer, audio post production appl. 2-101480
 film industry in Quebec, Canada, historical perspective 2-79700
 film soundtrack recording, reduction of electrostatic power dissipation in galvanometer 2-58951
 film/video sound dubbing system, HTV, Welsh/English languages 2-101479
 front projection techniques for motion picture photography 2-107425
 holocinematography, high speed, with multiply cavity-dumped Ar ion laser 2-96860
 holocinematography, high-speed with acoustooptic light deflection 2-70523
 holographic, panoramogram photography of outdoor scenes (*Russian*) 2-69286
 intermodulation distortion in sound channels in music recording (*Russian*) 2-64155
 lighting systems (*Russian*) 2-69292
 loudspeaker system characteristics (*Russian*) 2-60343
 microelectronics appls., general discussion 2-69271
 mixing consoles 90K45 (*Russian*) 2-64153
 motion picture equipment discrete electronic drives structure and characts. (*Russian*) 2-89842
 motion picture film position in movie cameras, longitudinal non-stability measurement (*Russian*) 2-89843
 motion picture printing and duplication routes 2-107428
 motion picture/TV visuals production, filters for special effects 2-107426
 motion pictures, supporting role of sound 2-109132
 movement analysis appl., 3D technique 2-88707
 National Film Board of Canada, Technical and Production Services Branch, aims and objectives 2-79699
 photographic sound recording, early glass discs 2-69279
 photographic sound reproduction principles, system components and implementation 2-109135
 photomicrography device with TV finder system, educational films in biology appl. (*Russian*) 2-58948
 post-production dubbing by computer-assisted digital sound mixer 2-109134
 projection room acoustic noise level standardisation (*Russian*) 2-69284
 projector quality control (*Russian*) 2-58950
 projectors, results of questionnaire for operators (*Russian*) 2-58947
 release prints quality, service life improvement (*Russian*) 2-69287
 Rhythm 320 2-channel primary synchronous audio tape recorder, cinematography appl. (*Russian*) 2-70803
 Scene-Sync system, slave pan, tilt head with chroma-key, TV special effects appl. 2-53862

cinematography continued

- shapes travelling at 6.85 Mach number, large amplitude oscillatory motions, schlieren photography 2-114951
 SMPTE 1981 progress report 2-79703
 SMPTE role in motion picture and TV standards 2-79702
 technical progress, problems in magnetic tapes and motion picture films, application in cinematography and television (*Russian*) 2-89845
 techniques, comparison with TV techniques (*Russian*) 2-64154
 telecine film transmission, EBU colour mixing curves (*German*) 2-58929
 tone reproduction, effect of image sharpness on optical gradient (*Russian*) 2-58949
 TsP-11 colour positive motion picture film, structure and properties (*Russian*) 2-69288
 TV optical view-finder Soyuz appl. (*Russian*) 2-69291
 USSR, development in 11th 5 year period (*Russian*) 2-58943
 USSR, development targets for 11th 5-year period (*Russian*) 2-64148
 videotape editing system for film post-production 2-95512
 vocal cord vibration, automated anal. from ultra high-speed films using angular bend function (*Japanese*) 2-117046
- circuit analysis** *see network analysis*
circuit analysis computing
 toroidal reversed-field pinch, circuit anal., computer simulation 2-86471
- circuit breakers**
see also circuit breaking arcs; gas blast circuit breakers
 ASDEX fusion experiments, circuit breaker investigation 2-64635
 HV, arc behaviour anal. using Cassie, Mayr and Rizk's models (*French*) 2-86491
 HV-DC circuit breaker for 20 kA, 12 kV and its protection system, stelarator expt. appl. (*German*) 2-76168
 large scale thyristor DC circuit breaker for fusion application 2-69938
 shock free nozzle for dielectric recovery 2-103480
- circuit-breaking arcs**
see also circuit breakers; sparks
 fireball generation, threshold current, quantum mechanical theory 2-91693
 free burning arc in air after fast short circuiting (*German*) 2-81597
 gas blast circuit breaker DC arc in constant diameter nozzle flow 2-97808
 high current arcs, lower temp. limit determ. with double wire probes 2-103470
 incident EHF microwave in transient narrow gap arc, electron density meas. 2-103472
 switchgear, Cc SF₆ insulated, random prebreakdown discharges as diagnostic criterion of particle contamination 2-97809
 Ar-SF₆, recombining arc discharge, decay and re-ignition, appl. to circuit breakers 2-60818
 SF₆ insulated substations enclosure burn through probability estimation 2-97807
- circuit design** *see network synthesis*
circuit oscillations
see also circuit resonance
 No entries
- circuit resonance**
see also circuit oscillations
 No entries
- circuit synthesis** *see network synthesis*
circuit theory
see also distributed parameter networks; filters; lumped parameter networks; network analysis; network synthesis
 electrical properties of statistical mixtures, derivation using circuit theoretical approach 2-92553
 equivalent circuits in Fourier space for the study of electromagnetic fields 2-102694
- circuits** *see networks (circuits)*
circular polarisation *see polarisation*
circular waveguides
 asymptotic vector modes of inhomogeneous circular waveguides 2-65349
 coaxial, impedance working standards 2-53742
 electron beam filling cylindrical waveguide, energy per unit length and power flow 2-76140
 periodically varying waveguide, transverse wake force 2-85451
 step-index circularly symmetric optical waveguide, strong anisotropy, wave propag. 2-75675
- circumstellar shells**
see also stellar atmospheres; stellar winds
 2200 Å hump nature, fine struct. and possible emission from circumstellar shells 2-106853
 2A 1822-371, compact X-ray binary, accretion disc struct. from phase resolved optical spectroscopy 2-112502
 2A 1822-371, degenerate star shell emission, component masses and orbital period, visible obs. 2-79145
 2A 1822-371, optical, UV and X-ray modulation due to accretion disk bulge 2-79146
 accretion disc winds driven by super-Eddington luminosities, thermal and spectral props. 2-84076
 accretion disc winds driven by super-Eddington velocities, dynamical theory 2-84075
 accretion discs, vertical struct. 2-63368
 accretion rings and discs in close binaries, nodding motions freq. and amplitude determ. 2-117676
 Algol-like binary stars, discs and hot spots rel. to transient photometric disturbances 2-112483
 Algol-type binaries, short period, spectroscopic survey for gaseous discs during primary eclipse 2-106813
 o Andromedae, Be star, shell episode, model 2-73994
 o Andromedae, recurrent shell star, linear polarisation obs. in April 1982 rel. to new shell episode 2-94737
 V1343 Aquilae (SS 433), accretion disc models involving black hole or neutron star 2-63474
 R Aquarii, binary long period variable, model involving companion photosphere under circumstellar shell 2-58350
 R Aquarii, symbiotic star, accretion disc. form. and outburst mechanism 2-94732
 R Aquarii, symbiotic star, discovery and photometry of elongated extension of stellar image 2-117685
 R Aquarii, variability, nebulae and blue continuum 2-106754
 R Aquarii and jet, supercritical accretion and nova outburst 2-100956
 N603 Aquilae, accretion disc surrounding white dwarf, UV spectral obs. 2-68797

circumstellar shells continued

- V603 Aquilae (Nova Aquilae 1918) circumstellar shell and accretion disc nature, UV/visible obs. 2-116777
 V1343 Aquilae (SS 433), accretion disc spectrum similarities 2-63466
 V1343 Aquilae (SS 433), disc motions/binary orbital period from theoretical anal. 2-116766
 V1343 Aquilae (SS 433), early type star+black hole/neutron star accretion disc 2-63471
 V1343 Aquilae (SS 433), polarisation due to electron scatt. in jets or disc 2-63468
 V1343 Aquilae (SS 433) accretion disc luminosity and false expanding photosphere 2-63469
 V1343 Aquilae (SS 433) neutron star with accretion disc+B-type star, model 2-63473
 TT Arietis, UV continuum intensity comparison with optically thick accretion disc models 2-94730
 astrophysical masers, collisional pumping rate, rot. state depend. 2-117583
 Be stars, long-term radial vel. vars. rel. to recurrent shell activity 2-84239
 binary stars accretion discs, high energy gamma-ray spectrum from relativistic plasma 2-73832
 bipolar nebulae, model of stellar wind flow in disc-shaped interstellar cloud 2-74074
 black hole, orbiting vorticity free rings, metric 2-68807
 black hole, thick disc, model with equatorial accretion 2-63495
 black hole accretion disc, radiation emission freq. shift 2-79139
 black hole accretion discs in galactic nuclei, struct. and evolution 2-94833
 black holes, geometrically thin accretion discs, inner edge struct. 2-94593
 black holes supercritically accretion discs, physical props. 2-84262
 BN-like IR point sources, model of 9.8 μ m silicate absorption band 2-101020
 AG Carinae, galactic S Doradus star, spectral characts. and shell nature, visible obs. 2-106727
 η Carinae, H α line profile obs. rel. to massive circumstellar shells 2-106724
 η Carinae, remarkable spectrum of ejected material 2-63438
 SX Cassiopeiae, eclipsing Be+giant stars, model involving accretion disc erosion 2-84263
 cataclysmic variable candidates from Palomar Green survey, thick accretion disc phases 2-106748
 SV Centauri, interacting early-type contact binary, circumbinary shell nature 2-100979
 VV Cephei, H α line profiles rel. to struct. of H α emission envelope around early-type component 2-68827
 Z Chamaeleontis, dwarf nova, evidence for eccentric disc during supermaximum 2-63418
 chemical evolution of circumstellar shells, laboratory simulation 2-106831
 cluster photometry, photometry of 2200 Å hump 2-79174
 cool high polarisation stars, circumstellar dust extinction and luminosity 2-94858
 S Coronae Austrinae, YY Orionis type star, peculiarities of activity and envelope 2-68770
 cyanodecapentayne, detection in IRC+10°216 cool C star at 24 GHz 2-58369
 59=V832 Cygni, Be star, shell absorpt. lines vars. during shell episode (1974-1975) 2-100940
 V380 Cygni, eclipsing binary, spectroscopic evidence for circumstellar gas 2-100977
 V1057 Cygni, FU Orionis star, circumstellar and photospheric IR emission rel. to IR photometry 2-89262
 χ Cygni, Mira variable, photospheric pulsations and circumstellar shell from IR spectra 2-58348
 V645 Cygni, possible biconical nebula, assoc. OH maser, UHF obs. 2-106855
 CI Cygni, symbiotic star, accretion disc struct. rel. to UV obs. during 1980 eclipse 2-63437
 CH Cygni, symbiotic star, Ti II shell spectrum obs. during (1981) (*Russian*) 2-112470
 V1357 Cygni (Cygnus X-1), light curve anal., accretion disc transient streams effect, UVB obs. 2-106816
 Cygnus X-1, Compton-cooled feedback mechanism in black hole accretion disc 2-63529
 S Doradus, envelope emission and mass loss 2-94729
 dwarf novae, influence of tidal effects on the structure of accretion discs 2-79126
 dwarf novae, white dwarf accretion disk, model 2-79127
 dwarf novae viscous accretion disc outbursts and mass flow, light curve anal. 2-63456
 early type stars, modelling of UV reson. line form. in expanding envelopes 2-63386
 Eddington flux from dust shell, second spherical exponential integral 2-100901
 expanding circumstellar envelopes, ionisation and vel. struct. 2-63370
 extreme C stars, circumstellar dust shells morphology from optical spectropolarimetry 2-112447
 flat rotating Keplerian gaseous disc, theoretical line profiles 2-106677
 flux distrib., reflected and external radiation effects 2-89233
 gas interaction with supernova remnants from Type I supernovae interaction with circumstellar gas 2-106863
 giant stars, obs. of new circumstellar cyanacetylene sources 2-68736
 grain-grain collisions in cool circumstellar envelopes and interstellar grain size spectrum 2-58428
 GX 339-4, optical counterpart, fast optical activity, accretion disc origin, visible obs. 2-84276
 HBV 475 (V1329 Cygni), peculiar emission-line star, expanding motions in ionised envelope 2-68781
 HD 193793, WN7 star, wind vel. and circumstellar dust shell, UV obs. 2-84236
 HD 50896, WN5 star, kinematics of assoc. ring nebula (Sharpless 308) 2-68852
 HD 86161, WR star, envelope variability from visible obs. 2-73983
 HDE 269006, S Doradus star, temps. for central star and envelope from VBLUW obs. 2-106726
 HDE 283809, B-type star in direction of Taurus dark cloud, circumstellar shell model for IR excess (*Russian*) 2-112444
 HZ Herculis, UV light curve, effect of accretion disc, UV obs. 2-63530
 HZ Herculis, X-ray binary precessing tilted accretion disc periodic mass transfer models 2-84264

circumstellar shells continued

- HH100, patchy circumstellar dust shell rel. to nearby IR source vars. 2-94816
 hybrid atmosphere stars, red giants with double circumstellar lines 2-79092
 IR stars, OH and H₂O maser sources evolution 2-112541
 IRC+10216, C star, acetylene in shell, abundance from IR spectra 2-112458
 IRC+10216 (CW Leonis), circumstellar molecular emission and mass loss rate 2-68928
 IRC+10°216, circumstellar shell NH₃ inversion lines, SHF obs. 2-63428
 IRC 10216, shell CN abundance from EHF obs. 2-89326
 IRC 10216 (=CW Leonis), shell 30 micron feature obs. 2-100937
 AR Lacertae, RS CVn-type binary star, shell model for light vars. 2-106810
 EW Lacertae (HD 217050), Be star, mag. field and shell disturbances, visible obs. 2-79115
 Lanning 10, eclipsing cataclysmic variable, accretion disc radius from photometry and spectrum 2-58321
 late-type stars, search for FeO 2-74045
 CW Leonis (IRC+10216), molecular line obs. 2-63435
 CW Leonis (IRC+10216), rot. temps. of cyanodiacetylene 2-63559
 CW Leonis (IRC 10216), molecule abundance 2-63706
 light polarization by scattering in single stars 2-89246
 LMC X-4, X-ray binary, possible disc, UV spectral obs. and light var. 2-63507
 long-period variable stars, dust condensation in circumstellar shells rel. to mass loss rates 2-94748
 RY Lupi, T Tauri star, variable circumstellar extinction as cause of optical and IR variability 2-79098
 M16, H II, H I, mol. complex., IR sources near neutral inclusions, JHKL obs. 2-63589
 M17, H II region, protostellar dust shells evidence from early type stars, JHKL photometry 2-94805
 M-type giants and supergiants, radiative transfer in dust shells 2-89247
 maser brightness temperature and kinematic compression of Doppler width in regions under collapse 2-58437
 mass loss from evolved stars, obs. of 17 stars in CO (2-1) line 2-58320
 Mira variables, shell expansion vel. rel. to period and 1 μ m intensity var. 2-106729
 molecular spectroscopy using diode and combined diode-CO₂ lasers 2-63271
 R Monocerotis, circumstellar torus and stellar wind model for NGC 2261 and (HH-39) 2-106841
 R Monocerotis, shell dust grains aligned by mag. field, contrib. to NGC 2261 polarisation 2-63581
 BT Monocerotis (Nova 1939), eclipsing nova, accretion disc radius and luminosity 2-68776
 MXB 1728-34, periodic emission from black hole accretion disc 2-89297
 neutron star, magnetosphere accretion disk interface, Kelvin-Helmholtz instabilities 2-112480
 NGC 6302, planetary nebulae with circumstellar H I ring 2-117736
 Nova Aquilae 1982, 10 μ m silicate emission feature obs. and photographic magnitudes 2-112461
 Nova Aquilae 1982, discovery of 10 μ m feature due to circumstellar SiC grains emission 2-94750
 novae, speed class and IR development 2-89283
 novae envelopes, supercritical accretion disc winds theory 2-84077
 O-type and related stars, radio and IR emission from stellar winds and circumstellar shells 2-63415
 O-type stars, circumstellar envelope density rel. to He emission in near IR spectra 2-63416
 Of-like stars with circumstellar shells, spectral classifications for LMC objects 2-84235
 OH 104.9+2.4 and 127.8-0.0, MERLIN obs. of OH/IR star shells 2-106740
 RZ Ophiuchi (BD+7°3832), supergiant eclipsing binary, VBLUW photometry rel. to eclipse of accretion disc 2-106788
 optically thick accretion discs, meridional circulation 2-106680
 Orion SiO maser, protostar expanding envelope model for rel. shifts of SiO maser emission 2-68875
 FU Orionis, far-IR obs. 2-100916
 YY Orionis stars, spectral line form. in infalling envelopes using multi-level H I atom 2-89260
 RR Pictoris, cataclysmic binary, accretion disc contrib. to light curve and polarisation 2-89271
 RZ Piscium, RW Aurigae star, model to explain antilaes involving absorbing matter layer 2-63401
 postruptive phase, shell 2200 Å graphite feature, var. in different models 2-63425
 pre-main sequence stars, ionised envelopes props. and mass flow rates from radio obs. 2-73966
 protoplanetary discs surrounding F and G-type stars, models (*Russian*) 2-106687
 protostars, IR spectra and dust shell comp. 2-63395
 RX Puppis, symbiotic star, spectra anal. and circumstellar shell activity, UV obs. 2-89266
 VV Puppis, time-resolved spectroscopy rel. to accretion column struct. 2-112449
 ζ Puppis (04 If), free-free radio emission at 2 cm from ionised gas shell 2-63476
 radiative flux from nonspherical envelopes 2-68735
 radiofrequency lines linear polarisation 2-68604
 relativistic Keplerian ring line profiles (*Chinese*) 2-112430
 ring nebulae assoc. with Wolf-Rayet stars, kinematics of stellar wind blown bubbles 2-68853
 rotating fluid discs around massive objects, struct. and stability, Newtonian formalism 2-100906
 2 S 0921-630, optical counterpart eclipsing binary, accretion disc emission 2-106789
 HM Sagittae, symbiotic star, parameters of dust shell and late-type star from IR obs. (*Russian*) 2-63465
 V3885 Sagittarii, nova like variable, accretion disc model and wind, UV obs. 2-94725
 RY Sagittarii, R Coronae Borealis variable, circumstellar extinction meas. from UV spectrophotometry 2-106747
 α^1 Scorpii, mass loss rate from IUE obs. of α^1 Scorpii 2-58334
 RW Sextantis, cataclysmic binary, accretion disc with hot wind, model and line anal. 2-94724

circumstellar shells continued

- SMC X-1, X-ray binary, possible disc from light var. and UV spectral obs. 2-63507
 SN 1979c, progenitor star as red supergiant giant with extensive shell and wind 2-100964
 steady accretion disks structure, depend. on mass of central star and accretion rate 2-100913
 supernova in NGC 1332, circumstellar dust shell form. and K-band magnitude 2-117690
 supernovae, Type II, circumstellar shells rel. to radio and X-ray emission 2-106756
 symbiotic stars, UV spectra possible origin from accretion disc 2-68773
 RW Tauri, accretion disc, visible spectral obs. 2-94769
 119 Tauri, M-type supergiant, atm./shell occultation obs. in H α and continuum light 2-68760
 BU Tauri (Pleione), effect of Balmer continuum absorpt. by HI shell on VBLUW meas. 2-94741
 T Tauri stars, Balmer decrement, contrib. of envelope 2-58341
 T Tauri stars, evidence for charact. max. temp. in circumstellar dust 2-73964
 T Tauri stars, extinction props. 2-73976
 thick accretion discs, self similar supercritical models 2-63360
 4U 1735-44, X-ray burster, accretion disc struct., UV spectral obs. 2-58391
 4U 1915-05, X-ray burster, accretion disc struct. rel. to 50-minute periodic absorpt. events 2-63509
 4U 2129+47, neutron star accretion disc model scatt. radiation, obs. 2-94771
 4U 2129+47, X-ray binary, spectral line component origin from accretion disc 2-68930
 Ursa Major Stream stars, IR search for assoc. fragmentation debris 2-106572
 variable IR emission of cosmic dust sources 2-63379
 Vela X-1, X-ray binary, neutron star component interaction with accretion disc 2-63712
 γ Velorum (WC8+09 I), free-free radio emission at 2 cm from ionised gas shell 2-63476
 Wolf-Rayet stars, obs. of ring nebulae produced by stellar winds 2-68854
 X-ray binary, accretion disc structure, role of X-ray heating 2-74030
 X-ray binary stars, accretion disc coronae around eclipsing systems, spectra 2-89298
 young stars, energetic outflows 2-94822
 young stars, obs. of radio emission from ionised circumstellar envelopes 2-73965
 C star shells, inverse greenhouse effect of dust/molecules 2-89280
 C stars, 3 μ m absorpt. anal. circumstellar emission IR spectra/photometry obs. 2-73974
 C stars, circumstellar shells development rel. to optical obscuration and IR emission 2-94735
 C stars, IR excess and shell dust 2-112471
 C stars, models of grain forming atm. and mass outflow 2-89267
 He-rich stars, H α emission 2-79096
 OH/IR sources, VLBI maps of maser spots, model 2-106837
 SiO, masing and non-masing emission from evolved stars, EHF obs. 2-89228

civil engineering

- see also architecture; building; dams*
 geothermal reservoir, penny-shaped, in Earth's crust, stability 2-116777
 hingeless circular arches, critical centrally-directed pressure values 2-74216
 seismic safety assessment, statistical characterisation of strong ground motions using power spectral density function 2-88757
 two-hinged circular arch under external gas pressure, initial postbuckling analysis 2-74217

civil engineering computing

- see also architectural CAD; town and country planning*
 cylindrical shells, internally loaded, stress anal. 2-60403
 framework dynamic response by FFT 2-109215
 membranes, cable reinforced, initial equilb. soln. methods, implementation 2-91231
 rectangular Mindlin plates, buckling 2-114694
 substructuring techniques in material nonlinear analysis 2-60417

cladding techniques

- fluoride glass preforms prepared by a rotational casting process 2-97240

claddings

- fission reactor fuel claddings, anti-deposition coating, CVD method 2-64485
 fuel pin failure, by melt through 2-102049
 fusion breeding materials, Li compound, irradiation study 2-69858
 laminar, methods of props. determ. review 2-93700
 LWR barrier claddings, I SCC susceptibility 2-80091
 LWR reactor pins, thermochem. eval. 2-102043
 mixed oxide fuel pins, fuel-cladding mech. and chem. interaction 2-54498
 PWR fuel rods, high-temp., post-irrad. performance 2-54496
 steel, austenitic stainless, fast reactor fuel cladding, failure due to fuel adjacency 2-80089
 steel, austenitic stainless, fuel pin cladding, neutron irradiated, energy dispersive X-ray spectrometry, STEM anal. 2-69709
 steel, austenitic stainless type 316, liq.-metal embrittlement in LMFBRs 2-80088
 steel, ferritic and austenitic, LMFBR materials, neutron irradiated effects 2-107950
 Zircalloy cladding, irradiation, stress corrosion cracking under constant load 2-80090
 Zircalloy fuel cladding tube, biaxial stress effect on I₂ SCC 2-83275
 Zircalloy fuel rod embrittlement, assessment in water accident situations 2-96119
 Zircalloy-2, oxygen embrittlement on long-term exposure to fission product oxides 2-69707
 Zircalloy-4, reaction in steam-H₂ mixture at high temp. 2-83274
 Zircalloy-4 fuel cladding, anisotropic creep behaviour 2-90243
 Zircalloy-clad UO₂ fuel, Indian experience on prod. and quality control 2-85163
 Al, erosion-corrosion in high temp. high velocity water, water chemistry 2-57515
 Cu barriered Zircalloy cladding tube for BWR fuel 2-80092
 (GaAl)As DH visible lasers on p-GaAs substrate, reliable and model-stabilised 2-55207

claddings continued

- GeO₂-ZnO-K₂O glass cladding for 940 cm⁻¹ CO₂ laser transmitting hollow-core fibre waveguide 2-102946
 SiO₂ plastic clad fibre termination 2-86123

classical algebra *see algebra***classical field theory**

- see also classical mechanics; electromagnetic field theory; gravitation; special relativity*
 ball, scalar localised solns., stability 2-79383
 boundary conditions anal. in variational formulation 2-95586
 elastically deformable body, direct continuum model and field equations 2-74208
 electromagnetism, book 2-79299
 Lagrangian choice criterion, physical consequences 2-95643
 manifestly covariant eqns. of motion for particle in external field 2-112758
 point-source idealisation in chemical field theories, mech. energy losses from EM radiation reactions 2-84489
 point-source idealisation in classical field theories, EM radiation damping 2-84488
 Polyakov quantisation, dual string spectrum 2-89948
 solitary-wave solns. of scalar field eqns., stability theory 2-107113
 symmetries of Hodge operator and conserved quantities 2-79386
 symmetry algebra of Heisenberg model and nonlinear Schrödinger eqn. 2-113168
 virial constraints and stable solitons 2-53543

classical mechanics

- see also classical mechanics of continuous media; classical mechanics of discrete systems; classical theories of fluid structure*
 regular and chaotic motions, unified description 2-58702
 stochastic space-time, generation of potential 2-112743
 teaching, proof of classical mechanics theorem 2-63781

classical mechanics of continuous media

- see also elasticity; fluid mechanics; mechanical contact; plasticity*
 acceleration waves in isotropic elastic membranes, propag. 2-53519
 antenna structure, large, homologous optimisation design (Chinese) 2-103020
 Applied Mathematics and Mechanics Society Meeting, Würzburg, Germany (April 1981) 2-84377
 axisymmetrical problems, limit analysis, numerical determ. of complete statistical solns. 2-89535
 balance equations for materials with affine structure 2-109179
 beam, imperfect, directionally depend., practical unstable load interval 2-55420
 beams, rigid-plastic, stepped, simply supported, under dynamic press. loading, optimal design 2-60395
 cables and cable network structs., explicit anal. 2-70843
 cantilever beam problem, mech. props. from extreme values, reliability based design 2-99511
 catastrophe theory in mechanics, elastic buckling fundamental mechanics 2-114698
 composite material, elastic, effective constitutive coeffs., effect of slip between components (French) 2-55422
 composite material, partially cohesive, homogenised constitutive law 2-60396
 composite materials, homogenisation problems, math. anal. 2-95007
 composite materials with different moduli in tension and compression, pre- and post-degradation anal. 2-91229
 composite shell of revolution, linear axisymmetric response 2-60454
 continuum constitutive modelling, shock waves 2-69015
 continuum mechanics, rel. to solid state physics, review (German) 2-91232
 continuum models of discrete systems, conf., Stockholm, Sweden (Jun.-Jul., 1981) 2-84380
 Cosserat continua, with local curvature, director theory (German) 2-55427
 Cosserat continuum theory development (Chinese) 2-101169
 cylinder, one class of nonquasilinear eqns. (Russian) 2-79369
 cylinder, short circular, stress state, homogeneous soln. method convergence 2-55432
 cylinders, multilayer, with noncanonical interfaces, three-dimens. elasticity theory problems 2-65478
 deformable body nonlinear boundary value problems, quasilinearisation method 2-65479
 difference grid construction method in problems of continuous medium mech. 2-112702
 dissipative bodies, weak solns., stability and uniqueness 2-74210
 Echinodome analysis, improved numerical approach 2-55425
 elastic, dielectric continuum theory, basic eqns. and general constitutive relations (German) 2-96796
 elastic composite layer, pressing rigid circular stamp problem, dual integral eqn. soln. 2-60390
 elastic dielectric half space, Boussinesq problem, similarity soln. 2-74214
 elastic fibre pull-out problem, asymptotic and numerical results 2-97372
 elastic half-space perforated by twin circular holes and under gravit. loading, stress anal. 2-65476
 elastic materials, reduced equilb. eqns. 2-91236
 elastic media, quasimomentum, quasi ang. momentum, spin 2-58615
 elastic medium with couple-wise periodic forces, homogenisation techniques (French) 2-55421
 elastic parallelepiped, equilb. problems, efficient numerical method of soln. 2-53523
 elastica-similarity solutions, folding processes 2-97381
 elastically deformable body, direct continuum model and field equations 2-74208
 elastically embedded rigid inhomogeneity interaction with lateral force 2-97384
 elasticity theory, two-dimens. boundary value problems (Polish) 2-79365
 elastostatic systems with one degree of freedom, practical instability 2-55420
 equal-strength hole in a plate in an inhomogeneous stress state 2-60399
 equivalence classes of configurations and deformations 2-53511
 films, wrinkling, equilb. anal. 2-91234
 Fourier series, biorthogonal, theoretical framework 2-74211
 fracture mechanics, material momentum tensor and path-independ. integrals 2-58612
 framework dynamic response by FFT 2-109215
 gel, soft, with fixed rectangular boundaries, shear waves 2-103895
 geometrically nonlinear solids, effective consts. 2-65480

classical mechanics of continuous media continued

- global one parameter Lie subgroups of continuum deformations group 2-53512
- Goldstone theorem in statistical mechanics 2-74355
- heterogeneous material, universal conditions for assimilation to effective continuum 2-114638
- homogeneously deformable body mechanics, high symmetry dynamical models 2-95013
- honeycomb sandwich struct., linear eqns. soln. for behaviour 2-55423
- impact oscillator resonance, chaos after period-doubling bifurcations 2-101329
- incompressible continuous media, penalty finite element anal., round-off error 2-79358
- inelastic structures subjected to dynamic loads, optimal design 2-97368
- Korteweg-deVries-Burgers generalised eqns., group analysis 2-53510
- Lagrangian nonlinear theory for thin shells 2-75852
- laminar plane, elastic, weakened by doubly periodic system of slits, deform. 2-55441
- liquid-like response of the size-effect body 2-55414
- load carrying capacity of slabs on plastic subgrade 2-55415
- manifold ratio structure for a material system (*French*) 2-79359
- membrane, axisymmetric, Mooney, rubber, large deform., finite element computation 2-79361
- membrane locking and reduced integration for curved elements 2-103030
- membranes, cable reinforced, initial equil. soln. methods, formulations 2-91230
- membranes, cable reinforced, initial equil. soln. methods, implementation 2-91231
- mixture theory application, phys. const. determ. 2-114641
- momentum, generalised, thermodynamic restrictions on constitutive eqns. 2-58595
- Navier's equation solution in rotational curvilinear coordinates 2-53515
- nonlinear dispersing inhomogeneous media, nonlinear problem sol. near caustic, high-freq. asymptotics 2-79374
- nonlinear mechanical system identification 2-97370
- nonlinear systems in critical case of two zero roots, stability in the large 2-112706
- nonlinear viscoelastic bodies under harmonic excitation, approx. theory of behaviour 2-60428
- nonlocal EM fluids theory 2-74220
- objective strain acceleration measures in nonlinear analysis of structures 2-55428
- one-dimensional classical fluid with nearest-neighbor interaction in arbitrary external field 2-97891
- orthotropic body, elastic symm. plane optimal positioning 2-79360
- periodic system response to moving load, free-wave propag. eqns. 2-55491
- piecewise smooth surfaces, elastic potentials 2-89536
- plane, elastic, anisotropic, infinite, single force and edge dislocation influence functions (*German*) 2-55418
- plane intersections of 3D boundary element mesh, stress contour plotting, PP3D-COUPE program 2-101168
- plasticity, general mathematical theory, processes with const. stress intensity 2-53514
- plate, anisotropic, with elliptical hole, elasticity theory, second boundary-value problem 2-97369
- plate, elastic, free, round, deform. anal. (*Russian*) 2-81222
- plate, elastic, thick, stability under thrust 2-91235
- plate, plastic, circular, under press., strain distrib. determ. for biaxial stress tests 2-91282
- plate, rectangular, simply supported, subjected to follower forces, instability mode 2-55424
- plate, transtropic, three-dimens. Kirsch problem 2-65475
- plate, variable thickness, stress state eqns. 2-65474
- plate element, bilinear, Mindlin, stabilisation matrix 2-55416
- plate theory, variational iteration method substantiation 2-58619
- plate-bending triangular element, stiffness matrix formulation 2-103061
- plates, composite, laminated, edge effects 2-103028
- plates, elastic, distributed control 2-97367
- plates, elastic, partially loaded, general anal. 2-91233
- plates, rectangular, completely supported with uncoupling boundary conditions subjected to follower forces, stability 2-75850
- plates, sandwich, with unequal thickness surface layers, fundamental theory (*Chinese*) 2-103021
- plates, shear-deformable, small finite deform., two-dimens. strain displacement relation derivation 2-103031
- plates, thick, elastodynamics, three-dimens. axisymmetric problem soln. (*Ukrainian*) 2-60391
- plates, thin, energy method in nonlinear theory 2-109180
- plates and shells, optimum design with allowance for temp. effect 2-114640
- polygon-circle paradox resolution 2-97371
- porous body, plasticity theory variant 2-81253
- porous materials plastic strain 2-91281
- Prager-structures, archgrids and cable networks of optimal layout 2-103022
- reinforced shells of revolution, carrying capacity 2-81254
- relativistic continua, material frame-indifference, response function restrictions 2-60400
- rheologically complex media, modelling technique for mechanical behaviour (*Russian*) 2-55426
- rigid body displacement anal. from initial and final position data, linear algebra approach 2-101172
- rigid-plastic solids obeying non-assoc. flow laws, variational principles, adjoint operator, prescribed jumps 2-69019
- rigid-plastic solids obeying non-assoc. flow laws, variational principles, unprescribed jumps 2-69020
- Rikitake two-disc dynamo system and Lorentz model, continuous symm. 2-94990
- ring, rotating, nonlinear harmonic oscills. of gyroscopic structural systems 2-55492
- rod pull out problem, theory and expt. 2-97467
- rods, thin, skew-curved, large elastic deformations 2-55419
- shafts of revolution, grooved, torsion, max. principles and bounds on stress conc. factors 2-109177
- shell, cylindrical, nonlinear problems, choice of main soln. (*Ukrainian*) 2-81221
- shell, elastic, cylindrical, subjected to lateral dynamic press. anal. using Vlasov eqns. 2-114636
- shell, spherical, fluid-filled, under a point load, large deflection 2-103027

classical mechanics of continuous media continued

- shell, spherical, under a conc. load at the apex, min. weight design 2-103024
- shell, spherical, with circumferential partial penetration defect, limit anal., spherical press. vessel appls. 2-114637
- shell, thin, nonlinear theory based on attached vectors concept (*Ukrainian*) 2-55417
- shell, thin, penalty function element for analysis 2-86207
- shell analysis, deep, conforming finite element family 2-60397
- shell approximation via finite quadrilateral elements 2-103026
- shell elements, axisymmetric, geometrically nonlinear formulation 2-70845
- shells, circular cylindrical, reinforced, static anal. using geodesic beam finite elements 2-60398
- shells, cylindrical, locally-loaded, stresses, displacements (*Russian*) 2-60392
- shells, cylindrical, under nonaxisymm. press., nonlinear deform. and stability, finite-element anal. 2-65481
- shells, doubly curved, nonlinear intrinsic dynamics 2-91237
- shells, orthotropic, cross displacements, pressing (*Russian*) 2-79368
- shells, parabolic, existence and uniqueness criteria of membrane state 2-114635
- shells, ribbed, dynamics studies 2-114719
- shells, shallow, arbitrarily shaped, static anal. 2-103023
- shells, shallow, hyperbolic paraboloidal, dynamic anal. by finite Fourier transform method 2-103025
- shells, spherical, three-layer, structurally asymmetric, crit. press., loss of stability (*Russian*) 2-60393
- shells of revolution, linear node and transitional shell finite element 2-86208
- shells of rotation, composite, large displacements (*Russian*) 2-60394
- shells with holes, composite, design method anal. 2-60401
- short rods, longitudinal deflection 2-114639
- solid mechanics problems, point least squares method with B-splines appl. 2-86209
- space of stress invariants 2-53516
- stress analysis of continua in 2D and 3D using UNCLE finite element scheme 2-97388
- string mechanics based on 2-forms 2-53513
- strip, elastic, equil. problem, generalised formulation 2-58613
- systems of processes, stability and instability with respect to two multivalent measures 2-53525
- three-dimensional Cartesian tensor averages 2-95006
- three-dimensional Cartesian tensors, explicit expression for rotation 2-95005
- three-dimensional Cartesian tensors, irreducible tensors props. 2-95004
- topological rubber elasticity theory 2-95008
- topological rubber elasticity theory in simple cubic lattice networks 2-95009
- transient cavitation in fluid-structure interactions 2-60402
- transient large displacement calcs., error growth 2-101167
- turbulent Reynolds stress closure in modern continuum mechanics 2-69022
- unbounded homogeneous continua, finite element formulation 2-103029
- unified theory of defects and stresses 2-109178
- viscoelastic-media, dynamic models, deform. processes 2-101170
- Al plates, collapse behaviour 2-65477

classical mechanics of discrete systems

see also *N-body problems*

- bow dynamics, simulation 2-112690
- brachistochrone, expt. study 2-89503
- cable net, pretensional saddle-shaped, modal stiffnesses 2-114631
- canonical transformation theory, generalisation 2-74200
- chaotic behaviour, unstable periodic orbits 2-69088
- classical integrability 2-89564
- coagulation-fragmentation equation, geometric interpretation 2-63812
- completely integrable Hamiltonian systems, operators factorisation 2-53496
- conservative mechanical systems, var. solutions, freq. condition 2-94999
- constrained Hamiltonian systems, rel. to singular Lagrangian, generalised canonical formalism 2-69010
- constrained system, valleys and fall lines on Riemannian manifold 2-74202
- continuum models of discrete systems, conf., Stockholm, Sweden (Jun.-Jul., 1981) 2-84380
- critical mappings, universal scaling laws 2-74329
- cylinder, freely floating, transient heaving motion 2-86206
- cylinder oscillating in still water, freq. components of fluid-lift forces 2-103016
- Dirac theory of constraints for singular dynamical systems 2-101158
- discrete, deterministic computer modelling 2-94989
- discs, membrane-like, anisotropic, spinning, non-linear wave propag. and stability 2-75847
- discs, orthotropic, stress distrib., axisymm. computation 2-63808
- disordered harmonic chain, classical anal. 2-101160
- dissipative systems, vector fields generating invariants 2-112692
- dynamic stability and pot. energy 2-79310
- dynamic systems, finite resolution approx. to asymptotic distrib. 2-69011
- dynamical Noether symmetry 2-101159
- dynamical system, mech. model with constraints 2-74590
- dynamical systems, Green's functions 2-58601
- elastic elements of systems with many degrees of freedom, vibr. damping 2-75849
- elastic systems with amplitude-dependent hysteresis friction, multifreq. resonance vibrs. 2-114633
- equivalent Lagrangians, calculus of variations, inverse problem, review (*Spanish*) 2-63818
- Euler-Poisson equations, auxiliary first integral 2-53502
- extended charged particle, classical eqn. of motion 2-79349
- fast and slow motions, technical stability 2-112698
- feasible motion domain in certain mechanical systems 2-112686
- floating elastic plate, optimisation of wave-damping props. (*Ukrainian*) 2-103015
- forced Lorenz system, chaos, limit cycles, topology 2-79478
- gyropendulum theory 2-63805
- gyroscope, dynamically adjustable, under conditions of spatial motion of base 2-55409
- gyroscope rotor, conducting, nutation active damping 2-94997
- gyrostat, heavy, steady rot. stability about its principal axis 2-63806

classical mechanics of discrete systems continued

- gyrostat with elastic plates, steady-state motion stability in Newtonian central force field 2-55410
 Hamiltonian system, perturbation theory in noncanonical coordinates 2-74203
 Hamiltonian systems and Riccati eqn. 2-53495
 Hamiltonian systems with symmetry, review 2-53501
 heavy rigid body, asymptotic motions 2-112697
 heavy rigid body with elastically connected point mass, motion, bifurcational set (*Russian*) 2-79352
 heavy symmetrical top motion into motions of two free triaxial tops, Jacobi's decomposition 2-112691
 Henon attractor, entropy computation 2-74371
 Henon-Heiles Hamiltonian, analytic struct. in integrable and nonintegrable regimes 2-63813
 Henon-Heiles system, Painleve criterion and integrals of motion 2-74204
 Henon-Heiles system, analytic struct. 2-112558
 hinged-beam systems, structural and parametric optimisation problems 2-60389
 Hopf bifurcation with fluctuating control parameter, Fokker-Planck eqn. soln. 2-84541
 inertial reference frames, gravitational forces, appl. to university courses 2-69006
 integrable Hamiltonian systems, perturbations, Arnold diffusion, Melnikov integrals 2-63817
 integrable Hamiltonian systems and the Painleve property 2-58731
 integrable Hamiltonians construction in two degrees of freedom 2-94991
 isotropic solid, cascade processes, thermal and shift peaks effects (*Russian*) 2-71525
 Kac's ring model, many-particle system irreversibility, micro-computer expt. (*Japanese*) 2-58581
 Kepler potentials, time-depend., constants of motion, symm., orbit eqns. 2-63816
 Kovalevskaia top, two classes of motion 2-114628
 lagrange functions of a class of dynamical systems with limit-cycle and chaotic behavior 2-90046
 Lagrangian dynamics, inverse problem, Helmholtz conditions approach 2-69008
 laminar massif interaction with discrete system of supports, elastic equilb. (*Ukrainian*) 2-75845
 lattices, mechanical behaviour, continuum representation 2-55408
 Lie theory of extended groups, appls. 2-53498
 light vertical rot. column with end mass, stability 2-94986
 liquid dynamics in vessel executing a prescribed motion, nonlinear problem soln., approx. method 2-55411
 liquid layer, pattern equilibria 2-89527
 logarithmic singularities and chaotic behavior in Hamiltonian systems 2-107087
 Mach's principle and structure of dynamical theories 2-95164
 macroscopic system, Bell's inequality violation 2-84471
 mathematical methods in hydrodynamical systems, conf., La Jolla, California, USA (Dec. 1981) 2-112637
 multidegree-of-freedom system with variable coeffs., response to random excitation 2-107088
 multidimensional linear systems with variable parameters, stability theorems 2-97365
 multidimensional system with several equilb. nonlinear vibrs. 2-55412
 multilevel systems, reduced descriptions of incoherent and coherent dynamics 2-84437
 multimass array of solid bodies lowering the order of system of differential eqns. of motion 2-81220
 N-body system, relativistic classical mechanics and canonical formalism 2-79347
 Newton's Principia, Kepler's laws, universal gravitation 2-94970
 Newton's Principia and inverse-square orbits 2-94969
 nonbijective canonical transformation theory in mechanics, appl. to Coulomb problem 2-94992
 noncanonical Hamiltonian mechanics 2-112688
 nondiagonal systems under small perturbations 2-94998
 nonholonomic variable mass system, extended Kane's eqn. 2-103019
 nonlinear oscillators self-synchronisation in presence of fluctuations 2-74330
 nonlinear systems with slowly varying parameters, forced unsteady oscills., projection method 2-79344
 nonmonotonic hill, profile determination 2-58592
 nonpotential interactions, Lie-admissible treatment, conf., Orleans, France (Jan. 1982) 2-74149
 nonpotential interactions, Lie-admissible treatment 2-74666
 nonpotential systems, bifurcations, instabilities and catastrophes 2-94988
 nonrigid controlled objects in central force field, programmed motion generation 2-53500
 nonspherical bodies, binary collisions in two dimens., classical mech. 2-63814
 nonspherical bodies, Boltzmann eqn. of H-theorem, two-dimens. 2-63815
 open systems, work-energy theorem 2-94947
 oscillatory systems, root parties and phase behaviour in slow-fluctuation technique 2-112693
 particle motion under repulsive forces, asymptotic behaviour 2-94987
 pendulum, inverted, optimal parametric stabilisation 2-81218
 pendulum, simple, forced subharmonic oscills. 2-81217
 pendulum large-angle motion, meas. and anal. 2-79316
 pendulum made up of mass, pivoted weightless rod and spring, rotational vibr. 2-97366
 perturbed system, transient moments, Fokker-Planck spectrum 2-74333
 phase locking fine structure 2-84539
 quadratically damped forced oscillator, Lorentz linearisation 2-74205
 rigid body, heavy, fast rot. about fixed point 2-63807
 rigid body, heavy, motion about a fixed point in the Kovalevskaia case, periodic solns. 2-114629
 rigid body, rapidly twisted, small oscills. in mag. field 2-53499
 rigid body dynamics in incompressible viscous fluid 2-81219
 rigid double pendulum, Newtonian formulation 2-94946
 rigid rod system, movable knots, shakiness, projective invariance 2-103013
 Rikitake two-disc dynamo system and Lorentz model, continuous symm. 2-94990
 ring fixed to elastic mountings, spatial stability (*Russian*) 2-60388
 self-excited oscillators, response to multifrequency excitations 2-58599
 single-degree-of-freedom system with an infinite number of equilibrium positions 2-107053

classical mechanics of discrete systems continued

- single-degree-of-freedom system with quadratic-velocity damping, optimal isolation 2-55413
 singular Lagrangian systems, rel. to constrained Hamiltonians, generalised canonical formalism 2-69010
 solid plane and similar motions about a fixed point 2-112687
 spectral controllability and observability for linear retarded systems 2-53493
 spin-nonzero particles, relativistic Newtonian mech. 2-74207
 spinning particles, relativistic Newtonian mech., two-particle forces 2-101164
 springs, large displacements and dynamic stability, helical finite elements 2-114630
 stability of Hill's equation with three independent parameters 2-58600
 stochastic optimal control and quantum mechanics 2-95239
 string, vibrating, in presence of fixed straight obstacle, almost-periodic motion (*French*) 2-75848
 structures, vibr. anal., use of screw translational symm. 2-58596
 structures amplitude-frequency characteristics, determ. using explosive loading 2-114634
 symmetry transformation, first integrals 2-112689
 third-order systems, general dynamic props. 2-94993
 Toda chain, nonlinear normal modes 2-63811
 top, relativistic, EM interaction, classical theory 2-79350
 topological models for connection endowed mechanical systems (*Rumanian*) 2-94996
 transient state stability, phase-plane anal. 2-112696
 two-rotor gyrocompass, natural oscillations damping, Newtonometer appl. (*Ukrainian*) 2-75846
 two-state model, stochastic resonances 2-79348
 uniform rope sliding over the edge of a smooth table 2-84415
 variational calculus, inverse problem, Lagrangian formalism 2-74198
- classical theories of fluid structure**
see also kinetic theory; liquid theory
 classical fluids, struct. factor and its derivatives, long-wavelength behaviour 2-60853
 cluster expansion for real fluid 2-103582
 coordination numbers for rigid spheres of different size, number of nearest neighbour interactions in mixture estimation 2-98238
 density fluctuations dynamics in BGGY hierarchy 2-97885
 hard discs system, equation of state obtained from pressure consistent integral eqn. 2-103575
 hard-sphere liquid, spectral density calc. using correlation function 2-91735
 hard-sphere model approach to struct. and compressibility of liq. metals 2-65845
 kinetic theory 2-71314
 kinetic theory 2-71315
 Lennard-Jones fluid, crit. point, iterative perturbative theory 2-76647
 liquid state of matter: fluids, simple and complex, book 2-94930
 liquid-gas interface, generalised van der Waals theory 2-104118
 one-dimensional classical fluid, correl. functions, Monte Carlo and Percus-Yevick results 2-71319
 one-dimensional classical fluid with nearest-neighbor interaction in arbitrary external field 2-97891
 one-dimensional Percus-Yevick eqn., phase transition 2-115389
 square-well liq., spectral density calc. using correlation function 2-91735
 Ag-In melt, X-ray investigation, hard sphere model (*Russian*) 2-86541
- classification**
see also indexing
 asteroid orbits, classification from exploration of three-dimensional motion at 2/1 resonance 2-106594
 cellulose felt, metal-filled, high-porosity material prep., heat treatment and strength props. 2-99383
 climatic data classification, twentieth century changes in winter climatic regions 2-73672
 climatic division of China, new approach (*Chinese*) 2-88942
 Earth crustal faults in Lake Baikal-Nyukzha River area, classification and tectonics 2-58042
 geological features discrimination, construction of self-correcting system for geophysical data integrated interpretation 2-73689
 interstellar clouds, classification of solns. for simple polytropes 2-68871
 map classification accuracy, user approach 2-112140
 steel stainless, dense powder metallurgical, prod. methods and mech. props. 2-99371
 stellar spectral classification methods, appl. to study of galactic struct. (*Russian*) 2-94705
 stellar UV spectral classification, workshop, Vilsa, Spain (1981 October 26 to 28) 2-84390
 supernovae, physically grounded classification (*Russian*) 2-106761
- classification, pattern** *see pattern recognition*
clathrates *see molecules; organic compounds*
clay
 beidellite, in ocean, deep advective transport of lithogenic particles in Panama Basin 2-94396
 kaolinite, freq. and temp. variation of dielec. props. 2-68337
 kaolinitic, dielec. props., firing temp. effect 2-99020
 marine sediments, Jurassic-Quaternary sedimentation environments 2-62949
 sediments of continental slope and rise off NE Newfoundland, significance of shear strength meas. 2-78639
- cleaning** *see surface treatment*
cleanliness *see hygiene*
cleavage fracture *see brittle fracture*
Clebsch-Gordan coefficients
see also elementary particle theory
 double trigonal group, Clebsch-Gordan coeff., Racah algebra 2-101194
 generalised Clebsch-Gordan coeffs., permutational props. 2-95073
 invariant eqns. under finite representations of de Sitter group (*French*) 2-79257
 Lie group sl(2,R), Clebsch-Gordan coeffs. in parabolic basis 2-69367
 permutation group representation theory 2-95074
 point groups, double groups and projective representations 2-64240
 quantum field theory and math. phys. conf., Bechyně, Czechoslovakia, June 1981 2-68950
 vector coupling coefficients at large angular momentum values 2-74242
- climatology**
see also atmospheric humidity; atmospheric precipitation; sunlight; wind
 tropical north Africa, climate change occurring 7000 years ago 2-112114

climatology continued

- annual average temperature, relation to H isotope ratios in tree cellulose and climatic significance 2-89000
- Antarctic Ocean, circulation and climate during last 120 years 2-117325
- Antarctica and Southern Ocean, conf., Dec. 1979, Canberra, Australia 2-112648
- Arabian Sea, tropical cyclone occurrence freq. 2-94439
- Arctic regions air temperature variations in AD 1980 to 1980 period 2-106185
- Arctic tundra, surface energy balance 2-106298
- arctic tundra energy balance study 2-88998
- North Atlantic, sea surface temp. rise, 1970 to 1980 AD (*German*) 2-63078
- N Atlantic, zonal index and circulation change (19873-1972) 2-106178
- middle Atlantic Bight, surface temp. from isotopic and shell growth records 2-73581
- atmosphere precipitation along Pacific coast of North America, variability (1851 to 1980) 2-73616
- atmospheric content of CO₂, effect on world climate 2-117437
- Australian region tropical cyclone development 2-88940
- Bay of Bengal, tropical cyclone occurrence freq. 2-94439
- Belgium, climatic variability, effect of general atm. circulation (*French*) 2-73670
- Bering Sea cyclone climatology rel. to sea ice extent 2-106180
- biosphere life span, effect of climate as controlled by solar radiation 2-73413
- Bombay, SW monsoon precipitation patterns from 70 yrs pentad rainfall data 2-68391
- Boolean logic application to climate dynamics 2-100540
- NE Brazil rainfall climate rel. to Atlantic trade winds 2-88996
- British Isles, daily weather types, annual freqs. (1861-1980) 2-106177
- building solar heating systems optimised design and operation using climatic data stochastic model 2-116847
- Burton Bay-Tarr Inlet, Baffin Island, 1100 yr palaeoclimate 2-89007
- N Canada, reconstructed Holocene July temp. departures, eigenvector anal. 2-78846
- N Cascade Range, Washington, evidence for climatic cooling from early Holocene moraine 2-94406
- change due to solar, volcanic and CO₂ forcing 2-100537
- changes in precipitation data, determ. method 2-83963
- China, climatic change effect on earthquakes 2-88804
- China, new approach to climatic division (*Chinese*) 2-88942
- China, temp. variation in present century (*Chinese*) 2-112111
- Churchill River estuary on Hudson bay, freezing record (1680-1977) from tree ring anal. 2-106302
- cloud characteristics sensitivity of general circulation models 2-73679
- cloud optical feedback and climate stability in a radiative-convective model 2-94485
- cloudiness at low-latitude and climate feedback 2-83934
- conference on climatic variation and variability at Erice, Italy (March 1980) 2-84387
- mid-Cretaceous general circulation and climate 2-106076
- critical events (*French*) 2-63083
- cyclone climatology, appl. of test for principal components selection 2-106332
- data series analysis, significance tests (*German*) 2-106343
- deglaciation, assessment of global meltwater spike 2-94395
- delayed action of ocean-atmosphere system 2-100542
- dendroclimatology, book 2-84397
- diffusive climatological models, numerical soln., radiation effects 2-78826
- droughts, climatic aspects 2-106149
- dynamics, ageostrophic effects 2-106234
- dynamics, free boundary value problem, heat and mass transfer 2-58115
- Earth rotation variations rel. to weather and climate (*Chinese*) 2-112005
- energy balance model of climate involving extremal principle 2-106300
- Ethiopia, implications of 1.2 Myr record of ¹⁸O and ¹³C changes in late Pliocene Rift Lake 2-68338
- Europe, increased atmosphere CO₂ content, effect on climate and Sues effect 2-106304
- Central Europe, temp. changes, 1761 to 1980 AD period (*German*) 2-63079
- central European area, statistical struct. of climatic fluctuations 2-68475
- feedback system involving sea-ice, ocean temp. and CO₂ 2-83939
- flood recurrence estimation method using river sediment records 2-78714
- fossil fuel CO₂, sinks in oceans and biosphere 2-112104
- Gaia hypothesis for atmospheric CO₂ and climate regulation, biological control model 2-112085
- general circulation model climate, effect of cloud-radiation feedback 2-78828
- general circulation model of large-scale features 2-68449
- geomagnetic secular variation as precursor of climate change 2-83936
- global climate, effects of polar ice caps in two-dimensional energy balance model (*Chinese*) 2-88999
- global climate model involving max. entropy production 2-100539
- global mean sea level as indicator of climatic change, causes 2-78693
- global ocean circulation and heat balance model 2-94384
- Gulf Stream circulation rel. to climate, implications of isotopic palaeo-oceanography of Caribbean and E Pacific Ocean 2-111968
- Hawaii, solar radiation and thin cloud climatology 2-94461
- hemispheric temperature fluctuations of long period from satellite data, energy balance climate model (*Russian*) 2-73628
- Hokkaido, Japan, Ice Age snow ablation due to climate change (*Japanese*) 2-94404
- Holocene climate from Lake sediments in Venezuela 2-63084
- hydrologic variations due to increase of atm. CO₂ 2-63076
- ice age climate model involving ice latent heat 2-100538
- ice age glacial cycles, simple ice sheet model 2-63081
- ice age initiation by East Antarctic ice sheet creep instability and surging 2-63080
- ice age model with cryogenic forcing and Earth rot. dynamics 2-63008
- ice caps in 2-D energy balance model (*Chinese*) 2-112110
- Illinois, temp. and precipitation normals (1901-79) 2-83912
- India, flooding since 1891 AD, rel. to sunspot cycle 2-58116
- NW India, low rainfall and drought conditions, climatological anal. 2-68392
- E India coast, tropical cyclone occurrence freq. 2-94439
- Indian summer monsoon, coarse-mesh GCM studies 2-106176
- Indian summer monsoon regime, drought foreshadowed by solar activity 2-68477
- interannual variability of climate (large-scale) 2-106264
- Japan, winter temp. since AD 1444 from lake freezing data 2-117438

climatology continued

- Kashmir, India, Pleistocene climate variation from isotope evidence 2-106303
- Kylen Lake, Minnesota, Late Wisconsin climatic history from glacial and vegetational data 2-78845
- Lake Lahontan, palaeo-lake level fluctuations, corresponding climatic conditions 2-78847
- Lake Superior, implications for regional deglaciation of seismic refl. study of recessional moraines 2-94405
- Lake Turkana, Kenya, palaeoclimate determination from gastropod shell ¹⁸O/¹⁶O ratios 2-83967
- land-surface evapotranspiration effect 2-83938
- Late Palaeozoic gondwana glaciation in Oman 2-112134
- E Mediterranean, climate from sediment cores anal. of planktonic foraminiferal populations 2-106299
- E Mediterranean, termination II, assoc. palaeo-oceanography 2-83947
- Minneapolis-St. Paul urban heat island, temp. adjustment effect on local climate 2-78829
- model interpretation workshop, San Diego (March 1981) 2-106993
- modelling, equiv. meridional circulation 2-94484
- models, one and two dimens., comparison solar radiation effects 2-78827
- models with suspended particles 2-112103
- monsoon climate/general circulation model, with Earth orbit changes 2-117435
- Northern Hemisphere, linear trends in tropospheric geopotential height and temp. patterns 2-100469
- Northern Hemisphere surface air temp. in AD 1881 to 1980 period 2-106184
- ocean-atmosphere coupling in climate model 2-73673
- oceanic variability on climatic time scales, conf., Nov. 1979, Miami, USA 2-79278
- Oligocene palaeoclimate of Canada, from pollen deposits 2-83937
- orbital perturbation in climate model with ice-sheets 2-83935
- western N Pacific, short-term climatic variability 2-68476
- palaeoclimate, temp. and rainfall, effect of CO₂ var. 2-100564
- palaeoclimates of NE France since 140000 yr BP, ¹⁴C-pollen study 2-73675
- palaeoclimatology, appl. of marine-astronomical correls. to dating of Brunhes-Matuyama mag. reversal 2-94277
- palaeoclimatology, consequences of warm saline bottom water in ancient ocean 2-68374
- Palaeogene climates of NW Siberia 2-78831
- Palaeogene ocean circulation and climate, review 2-62993
- past climate determin. from borehole temp. gradients 2-88834
- past climates and impacts on human society, book 2-68987
- Peace River district, Canada, Holocene vegetation and climatic change 2-89008
- precipitation in N Hemisphere, monthly sums var. (1891-1979) 2-106282
- predictability, sea ice role, coupled atmosphere-sea ice model 2-112113
- primitive Earth, climatic calcs. from radiative-convective-photochemical models of primitive terrestrial atmosphere 2-112135
- radiation climate of Malta, data anal. using linear regression 2-73659
- radiation effects of model feedbacks 2-112105
- E Sahara Desert, geochronology of desertification in Great Sand Sea and Selima Sand Sheet 2-117269
- satellite remote sensing appl. to climatology, 1980-2000 development trends 2-73821
- sea surface temp. response to stochastic forcing 2-73678
- seasonal climatology of large scale atmospheric features 2-106301
- seasonal variability of atmos.-ice-ocean system, model 2-100543
- sedimentary record of rainfall variations in a sub-humid lake 2-73602
- sensitivity of boundary layer energy fluxes in simple model 2-100544
- solar influence on terrestrial weather and climate, review 2-94474
- solar-terrestrial relationship 2-106305
- South Africa, intra-annual rainfall variation since 1921 AD 2-88997
- South Pole, microparticle deposition from 1450 to 1850 as natural background aerosol record 2-78814
- statistical approach to historical records of flood and drought, results 2-100485
- statistical evaluation of climate expts. with general circulation models, parametric time series modelling 2-112112
- statistical-dynamical climate model with a simple hydrology cycle 2-94483
- stochastic predictions of cataclysmic events 2-111989
- stochastic resonance in model with orbital forcing 2-73677
- stratosphere 2-88979
- subtropical desert margins, rainfall trends, comparison of northern hemisphere regions 2-78713
- surface air temp. response to CO₂ conc. increase 2-112106
- surface temp. rel. to solar constant 2-112108
- Tahoe-Tioga deglaciation dating from basalt flow K-Ar ages 2-78830
- Tasmania, palaeoclimate from swamp and marl pollen record 2-112115
- temperature change model involving volcanic dust and CO₂ 2-117434
- theory, fundamental theorems 2-58117
- transient response to CO₂ increase, role of ocean 2-73674
- transitions of climate due to weak external periodic forcing 2-73676
- tree rings, book 2-84397
- Tunguska meteor fall, 1908 June 30, physical, chemical and climatic effects 2-106629
- United States, atmos. temp. correl. with Pacific sea surface temp. 2-63050
- United States, climate variability due to 18.6 year lunar atmos. tide effect 2-73619
- United States, forecasting of winter temp. climate 2-78720
- United States, twentieth century changes in winter climatic regions 2-73672
- volcanic eruptions effects 2-106278
- volcanoes, climatic effects of volcanic eruption plumes 2-63082
- warmer Earth, climatic consequences of precipitation trends 2-111983
- winter strength in upper Danube region, Markov chain model 2-106205
- zonal climate models which are general circulation zonal models (*Russian*) 2-73626
- CO₂ conc. sensitivity of climate models 2-100541
- CO₂ effect on climate, interdisciplinary research and integration 2-63077
- CO₂ from synthetic fuels, climatic effects 2-112107
- CO₂ increase and effect on Antarctic ice and sea-level 2-88917
- CO₂ increase model, study of convection parameterisations 2-117436
- CO₂ increase-atmospheric warming models, differences 2-112102
- CO₂ problem, ocean-atmosphere interaction role 2-112109
- CO₂ reservoir in oceans 2-111965

climatology continued

- CO₂-warmed Earth, regional climatic scenarios 2-73671
- ¹⁴C in atmosphere, effect of climatic parameters, simulation 2-106174
- climb, dislocation** *see* **dislocation climb**
- clock paradox** *see* **special relativity**
- clocks**
 - see also* **atomic clocks; chronometers; time measurement**
 - digital clock cct. (Italian) 2-84609
 - digital watch with computerised radiation dosimeter 2-70005
 - electronic watches, use of solar batteries, as power supplies (Czech) 2-73119
 - high stability microwave, space appl. 2-79535
 - modeling of frequency random walk instability and effects on spectral spreading 2-95314
 - precision solar and sidereal clock, CMOS 2-79536
 - reliability, seismological research in India 2-83964
 - standard time/frequency dissemination, India, radio broadcasting appl. 2-79539
 - sun clocks design (German) 2-69143
 - warship's master clock system for time/frequency reference 2-95305
 - Cs primary clocks performance, Canadian (NRC) research 2-107310
- closed circuit television**
 - astronomical telescope attachment appl. for amateur obs. 2-73853
 - Czachralski crystal growth, monitoring diameter variation using CCTV on meniscus 2-111058
- closed loop control systems** *see* **closed loop systems**
- closed loop systems**
 - see also* **feedback**
 - biomechanical closed loop problems, classification system 2-105719
 - biomechanical closed loop problems, optimisation approach 2-105720
 - helically magnetic unstable elec. arc, instability growth rates and closed-loop mag. field control 2-103500
 - Transrapid 06 maglev system propulsion by iron-cored long-stator synchronous motor (German) 2-70477
- cloud chambers**
 - tissue-equivalent cloud chamber gas mixture, ionisation distrib. calc. 2-88584
 - tissue-equivalent gas, W value meas., advances in cloud-chamber techniques 2-62870
- cloud physics** *see* **clouds**
- clouds**
 - see also* **atmospheric precipitation; sky**
 - aerosol size distrib. in marine convective boundary layer 2-58107
 - Aitken nuclei counters, intercomparison of different instruments 2-63104
 - albedo of Earth due to fractional cloud cover 2-117439
 - area-perimeter relation for rain and cloud areas, appl. of fractals theory 2-88987
 - North Atlantic humidity distribution obs. (German) 2-94427
 - atmosphere, lidar multispectral method for aerosol and cloud obs. 2-94501
 - Bay of Bengal, cloud cover rel. to surface long wave radiation, from temp. anal. 2-88903
 - blue-green pulse temporal and ang. spreading in clouds 2-94486
 - boundary layer diurnal evolution in presence of cloud 2-100522
 - brightness var. with height, airborne meas. 2-106286
 - cirrus, holographic obs. of ice particles 2-83951
 - cirrus temp. determ. by far IR spectral emission method 2-94529
 - classification of high-level cloud by METEOSAT imagery method 2-94531
 - cloudbow in cirrostratus 2-68492
 - cold front evolution, numerical model 2-94445
 - COMSTAR satellite propagation experiments, 19 and 28 GHz 2-94471
 - condensation nuclei, workshop, Reno, Nevada (Oct. 1980) 2-89439
 - contrast transmittance models for cloud atmospheres 2-117450
 - convective clouds, symmetrical CISK in baroclinic flow 2-106244
 - convective evolution in FACE experimental area 2-112051
 - Cooperative Convective Precipitation Experiment 2-100566
 - cuboidal clouds, IR radiation transport modelling 2-78777
 - cumulonimbus, temp. of tropical clouds tops 2-112024
 - cumulonimbus contributing H₂O to tropical stratosphere 2-112028
 - cumulonimbus effect on stratosphere water balance 2-112025
 - tropical cumulonimbus injecting aerosol into stratosphere 2-112027
 - cumulonimbus rainfall, mountain-generated, on northern Great Plains, USA, seasonal vars. and areal extent 2-100483
 - cumulus, fair-weather convection, model 2-68416
 - cumulus, optical albedo and extinction coeff. 2-73685
 - cumulus (precipitating), holographic obs. of droplets 2-83951
 - cumulus and cumulonimbus vertical transport, energy budgets 2-100436
 - cumulus cloud ensemble, theory 2-83905
 - cumulus cloud ensemble interaction with large-scale atmos. 2-83906
 - cumulus clouds, numerical model and appl. to hail forecasting (Chinese) 2-88945
 - cumulus congestus, Schlesinger's 3-D model 2-83907
 - cumulus convective activity of GATE modulated by large scale flow 2-117411
 - cumulus dimensions, effect on longwave irradiance and heating rate calcs. 2-106230
 - cumulus ensemble in three dimensions, numerical simulation 2-106243
 - cumulus mixing processes 2-63069
 - Dar es Salaam point cloudiness sampling and estimation 2-58114
 - deep cloud convection, thermodynamic eqn. 2-100422
 - droplet collision efficiency, wind tunnel expts. 2-73611
 - droplet collision efficiency on uncharged droplets in elec. fields 2-73643
 - droplet condensation growth by entity type mixing 2-106273
 - droplet size distrib. model 2-112058
 - Earth-atmosphere radiation budget, quasi-global sensitivity to clouds 2-78834
 - Eddington-type solar flux calcs. 2-78832
 - electricified clouds, atm. vorticity prod. 2-78787
 - ensembles of clouds in cloud clusters, GATE study 2-78747
 - far infrared emissivity in 8-14 μ m range 2-83909
 - freezing of porous medium with water supply, model and existence theorems (French) 2-114627
 - severe frontal rainband over Central Valley, California 2-94443
 - general circulation model climate, effect of cloud-radiation feedback 2-78828
 - giant aerosol particles as warm rain initiators 2-94453
 - global cloud cover, methods for archiving data 2-63100
 - hail nuclei origin in clouds (Russian) 2-78760

clouds continued

- hailstone growth in storms, isotope and layer struct. study 2-117417
- hailstorm, cloud origin and movement prediction, appl. to Fort Collins storm 2-78723
- Hawaii, solar radiation and thin cloud climatology 2-94461
- height over oceans from scanning multichannel microwave radiometric meas. 2-73558
- height ranging, methane eyesafe Raman laser appl. 2-97058
- High Plains of central USA, convective cloud variability 2-58104
- holographic airborne technique for obs. of cloud droplets 2-83951
- ice nucleation depend. on particle size 2-112050
- icing in supercooled water droplet/ice crystal clouds 2-106258
- India, cloud mass types and western disturbances from satellite obs. 2-112083
- Indian Ocean, cloud motion rel. to ship wind obs. 2-111998
- Indian summer monsoon, intensity var. from satellite cloud data 2-100517
- infrared longwave irradiance model 2-112055
- infrared radiative transfer in cloudy atm., parameterisation 2-78835
- intertropical convergence zone, conditions for rain and cloud development 2-100523
- IR attenuation by cirrus clouds 2-117387
- IR imaging, background spatial radiance variations obs. 2-117476
- IR radiative transfer through cuboidal cloud array 2-94494
- Iran, sunshine correl. with cloudiness 2-88966
- lidar (infrared) obs. of cloud and aerosol from space, optical calcs. 2-94500
- liquid water content, sensor calibration 2-89044
- liquid water evaporation, rel. to cloud-top entrainment instability observed during AMTEX 2-100475
- M17 SW, J=4-3 HCN transition, IR obs. 2-63588
- Madras region, India, convective clouds spatial distrib. from radar obs. 2-112084
- marine stratocumulus clouds effect on ocean surface heat budget 2-106231
- marine stratocumulus layers, mean conditions 2-106226
- marine stratocumulus layers, turbulence budgets and general conditions 2-106227
- measurement method for liq. water content by microwave radiometry (Chinese) 2-112182
- measurement of droplet size distrib., calibration of light-scatt. counter 2-58162
- Meteosat data integrated processing, cloud-top height maps 2-78750
- modification of cumulus clouds for rain enhancement, evaluation techniques 2-73708
- narrow cold frontal rainband substructure 2-94444
- Nepal, cloud obs. during mountain trek in February (1981) 2-100528
- noctilucent clouds, assoc. positive ion comp. meas. at mesopause 2-63151
- noctilucent clouds over W. Europe during 1981 2-94469
- normal direct radiation correlation with global radiation dependence on cloudiness 2-73656
- one dimensional time dependent models for ions and precipitation charging 2-78773
- optical feedback in radiative-convective model 2-94485
- tropical Pacific, sea surface temp. rel. to cloudiness (Chinese) 2-88909
- Pacific Ocean, tropical, cloudiness rel. to IR emission 2-106249
- Pacific Ocean cloudiness fluctuations from satellite observed outgoing IR radiation 2-106183
- particle capture by evaporating cloud drops 2-106247
- particles shapes and dimensions determ. method 2-100589
- photogrammetry, aircraft side camera movies during winter MONEX 2-83916
- planetary albedo estimates from meteosat data 2-94492
- planetary boundary layer, ensemble cloud relations testing against numerical data 2-78770
- polar stratoprecipitic cloud occurrence, 1978 and 1979 AD obs. 2-117419
- Puerto Rico trade wind cumulus boundary layer, high order one dimens. model 2-78771
- radiative characteristics, effect of cloud shape 2-63088
- radiative interaction in 3-dimens. cloud fields 2-100549
- radiative transfer eqns. for horizontal inhomogeneous media (Russian) 2-94493
- rain droplet coalescence and breakup model 2-117415
- remote sensing of cloud tops by airborne lidar 2-94502
- remote sensing of global cloud cover by IR radiometry 2-83960
- riming, ice cryst. growth process 2-63070
- satellite images in presence of thin clouds, atm. corrections 2-68486
- satellite remote sensing method for cumuli and cloud shadows 2-94513
- scavenging for evaporating cloud drop, thermophoresis, diffusiphoresis and Brownian diffusion 2-106246
- Second Israeli Randomised Cloud Seeding Experiment, results 2-78806
- seeding of clouds, statistical anal. of Climax obs. 2-112063
- seeding of stratiform and cumuliform clouds with AgI and metaldehyde (Chinese) 2-78742
- seeding of stratiform cloud with AgI or CO₂, microphys. study 2-112068
- seeding over last 35 years 2-106202
- seeding with PbI₂ and AgI, laboratory expts. 2-58105
- shortwave fractional absorptance of non-homogeneous clouds 2-83945
- Sierra Nevada Mts, USA, seeding of towering cumuli 2-63053
- solar radiation at Earth surface from cloud images obs. from satellites 2-100489
- solar radiation beneath cloud, meas. by dial radiometer technique 2-94528
- Soufriere volcanic column skirt clouds 2-106057
- South China Sea 10-12 December 1978 cloud organisation and mesoscale features 2-112044
- tropical squall line, mesoscale air motions 2-106188
- stationary front clouds model, including temperature and humidity effects 2-100516
- stratiform clouds, raindrops spectra variations (French) 2-100487
- stratiform water clouds, shortwave radiative props. 2-88984
- stratocumulus, solar and emitted thermal radiation 2-63020
- stratocumulus at nighttime, microphysics and IR radiative props. 2-68455
- stratocumulus at nighttime, struct. rel. to synoptic conditions 2-68453
- stratocumulus at nighttime, turbulence struct. and entrainment 2-68454
- marine stratus, droplet size distrib. obs. 2-106273
- subcloud layer energetics of precipitating convection 2-106187
- subpixel-sized cloud, effect on ground target discrimination from satellite data 2-106307

clouds continued

- successive cell development along cold outflow boundary, three dimens. numerical storm model 2-112036
 supercooled cloud, evaporation and riming during glaciation 2-100486
 supercooled cloud drops collection by planar ice crystals, efficiency, effect of elec. charges 2-78774
 supercooled liquid water drops, evidence from Skylab near-IR obs. 2-100476
 Tanzania, areal cloudiness at near-equatorial stations 2-68469
 thermodynamics of cloudy atmosphere, moist convective overturning and saturation point anal. 2-112037
 thundercloud downdraft development and effect of electrified raindrops 2-83891
 thundercloud electrical model 2-100518
 thunderstorm updraft cyclonic rotation, model 2-106189
 tornadic thunderstorms, satellite observed cloud top height/temp. changes 2-78808
 total water mixing ratio, measuring instrument calibration and performance 2-106358
 tropical convection during GATE, review 2-58112
 tropical cyclones cloud spirals and wind field 2-88969
 tropical cyclones over Arabian Sea and Bay of Bengal, cloud band organisation 2-88972
 tropical easterly waves, four dimensional anal. of condensation during GATE period 2-100466
 troposphere upper cold low in western North Pacific, cloud cluster obs. by GMS satellite 2-100461
 UV radiation propagation, influence of effective cloud amount on global UV radiation at ground level 2-100462
 vertical attenuation of 4.1 mm wave radiation in Earth's atmosphere, meas. 2-63072
 visibility of atmos. rel. to cloud base height 2-100559
 warm clouds precipitation modification, review 2-94428
 water content, remote sensing using atmosphere microwave thermal radiation (*Russian*) 2-94472
 winter orographic clouds, precipitation augmentation potential 2-88962
 NH₃ aerosol, pH control of clouds and precip., atmos. comp. meas. and modelling 2-68402
 SO₂ conversion to SO₄, in-cloud conversion model 2-100419
 SO₂ removal from atmos. by rain 2-83866

Clusius-Dickel columns *see* isotope separationcluster analysis *see* pattern recognition

cluster approximation

- alkali chlorides:Cu, off-centre instability of Cu⁺ ions due to charge-transfer excitation 2-67085
 alkali halides, hydrogen centres, interatomic pot., vibr. modes, and diffusion, pseudopot. cluster calc. 2-65992
 alkaline earth fluorides, electronic struct., cluster calc. by multiple scatt. X α method 2-61350
 alloys, BCC, disordered, electronic density of states, self-consistent cluster CPA calc. 2-115639
 alloys, binary, ordering and segregation, density of states, electronic theory 2-76888
 alloys, disordered, electronic struct., self-consistent cluster CPA incorporating off-diagonal disorder and short range order 2-61336
 binary alloys, alloy broadening of impurity electronic spectra 2-82278
 binary alloys, Ising model phase diagram calcs. 2-76634
 classical liquids, cluster expansions, ordering principle 2-65834
 composition modulated alloys, electronic struct., CPA calc. 2-104224
 configurational entropy, group theory appl. 2-104026
 dense gas, cluster expansions, ordering principle 2-65834
 diamond surface, electronic struct. and H₂ chemisorption, ab initio atom cluster model 2-115641
 disordered s-scatterers, cluster approach, density of tail states determ. 2-110304
 disordered system, transport, localisation in coherent site approx. 2-110317
 FCC lattice, approx. methods of studying antiferromagnetism 2-104559
 graphite, intercalated, CKVV Auger lineshape, screening effects, cluster model 2-77635
 graphite surface, electronic struct., ab initio atom cluster model 2-115641
 Heisenberg magnet, anisotropic, cluster variational calc. 2-92954
 Ising magnetic systems, cluster approx. for q-depend. corrls. 2-82800
 Ising model site diluted, FCC and frustrated square lattice, spin glass and super-antiferromagnetism 2-77313
 liquid, real, generalised cluster expansion 2-103582
 liquid alloy melts, crystal quasiparticle anal. using cluster-variation method 2-103586
 metals, finite cluster description of electromigration 2-86956
 multicomponent alloys, cluster effects 2-92436
 plane quadratic lattice gas, multiphase behaviour 2-101342
 polar surface of compound crystals, electronic struct. 2-110416
 powders, clustered ionic spheres, IR absorpt. spectrum, size effects, dipolar approx. 2-61901
 quantum fluid, perturbation theory at high temp. 2-104091
 quantum fluids cluster expansions, ordering principle 2-65834
 α -quartz, electronic struct., cyclic cluster calc. 2-61393
 quasi-one-dimensional systems, cluster CPA approach 2-82195
 semiconductors, deep levels, book 2-89491
 spatial Bose condensation, cluster size distrib. 2-101312
 spherical atomic clusters, geometric struct., computer algorithm 2-80859
 spin glasses, $\pm J$ model, minimum free energy principle appl. 2-110592
 spin glasses, magnetisation process, hysteresis loops, two spin cluster model anal. 2-56884
 transition metals, surface mag. moments and electronic struct., Hubbard model 2-115980
 Al (111), chemisorption of Li, O, and Na, cluster model 2-66363
 Al (111) and (111)p(1 \times 1)O, cluster and DVM approach to LEED pot. generation 2-98439
 Al-Fe, Fe impurity mag. moment, cluster approx. calc. with k-dependent boundary conditions (*Russian*) 2-115972
 Al-GaAs(110) interface, possibility of adatom cluster formation 2-61555
 Al₁₁ clusters, cubo-octahedral, electronic struct. calc. 2-82269
 Al₁₂V clusters, cubo-octahedral, electronic struct. calc. 2-82269
 Be, X-ray spectrum near Raman band, electronic struct. calc. 2-72577
 CO, free and chemisorbed, core-hole screening 2-102404
 Co:H, impurity electronic struct. and hyperfine fields 2-110292
 Co,Zr_{1-x}, metallic glass, electronic struct. calc. 2-98529

cluster approximation continued

- Cr, BCC, surface (001), O chemisorpt., X α cluster model calcs. 2-98461
 Cu (100) chemisorbed CO, XPS satellite struct. 2-83007
 Cu Zr metallic glasses, electronic density of states, cluster calc. 2-71848
 Cu-Fe, Fe impurity mag. moment, cluster approx. calc. with k-dependent boundary conditions (*Russian*) 2-115972
 Cu₆₀Zr₄₀ glass, electronic struct. 2-104236
 Cu,Zr_{1-x}, metallic glass, electronic struct. calc. 2-98529
 Fe, BCC, surface (001), O chemisorpt., X α cluster model calcs. 2-98461
 Fe:H, impurity electronic struct. and hyperfine fields 2-110292
 Fe,Zr_{1-x}, metallic glass, electronic struct. calc. 2-98529
 GaAs (110), chemisorption of Al (*Chinese*) 2-104139
 GaAs, electronic density of states, cluster-Bethe-lattice approach 2-66413
 GaAs:Cr²⁺, EPR resonance parameter calcs. 2-104691
 Ga₂Se₃, ordered and disordered phases, struct., electron diffr. and micro-scopy obs. 2-60957
 KCl, electron struct. and X-ray absorpt. spectra, core hole effect in cluster approx. 2-98536
 KD₂PO₄-type ferroelectrics, cluster approx. for q-depend. corrls. 2-82800
 La, liquid, electronic struct. 2-87133
 Li, surfaces (100) and (110), BCC, H atom-cluster interactions, ab initio CI calc. 2-116325
 NaCl:Cu⁺, Cu⁺ electronic struct., multiple scatt. X α method appl. to CuCl₂ cluster 2-87192
 Nb₂(Ga)(Al)(Ir)(Pt)(Au), A15 struct. cpds., quadrupole interactions, cluster model interpretation 2-66510
 Ni, adsorption of N₂, HF cluster model calc. 2-56334
 Ni surface, chemisorbed CO(N₂), SCF-X α SW model cluster calcs. 2-61278
 Ni:H, impurity electronic struct. and hyperfine fields 2-110292
 NiO, anion-anion interionic pot., covalency influence 2-54782
 Ni,Zr_{1-x}, metallic glass, electronic struct. calc. 2-98529
 PbMoS₆, charge transfer and 4d orbital splitting of Mo atom 2-76918
 Pd,Zr_{1-x}, metallic glass, electronic struct. calc. 2-98529
 Se, amorphous, electronic density of states, cluster model, CPA calc. (*Russian*) 2-104220
 Si (111) chemisorbed H, Cl, Ag, vacancy and chemisorptive bond elec. struct. 2-82417
 Si, surface (111), Mott insulator model 2-115839
 Si, transition metal interstitials, impurity states, many electron effects, SCF X α cluster calc. 2-82283
 Si, transition metal interstitials, impurity levels, many electron effects, SCF X α cluster calc. 2-82284
 Si, vacancy and chemisorptive bond elec. struct. 2-82417
 Si:Fe, local electronic struct., molecular cluster method based on HF approx. 2-92533
 Si:H, amorphous, electronic states and total energies 2-66429
 Si:P, heavily doped, as amorphous antiferromagnet 2-77283
 SiO₂, E' centres, Huckel calc. of ¹⁷O, ²⁹Si and ¹H hyperfine splitting 2-76975
 Si(100), electronic correlation and buckling props. calc. 2-110421
 Si(111), (2 \times 1) struct., Mott insulator model 2-110419
 Si(111), chemisorption of Al (*Chinese*) 2-104139
 V, BCC, surface (001), O chemisorpt., X α cluster model calcs. 2-98461
 V₂O₅, single cryst., anisotropy of X-ray emission spectra and electronic struct. 2-62019
 V₂Sn(Ga)(Al)(Ir)(Pt)(Au), A15 struct. cpds., quadrupole interactions, cluster model interpretation 2-66510
 ZnO, surface (1010), localized and delocalized charge transfer during adsorpt. 2-110425
 ZnO:Cu, deep Cu centre, lattice distortion effects, SCF-LCAO cluster calc. 2-104297

cluster model (nuclear) *see* nuclear cluster modelclustering, impurity *see* segregationclustering, solute *see* segregationclusters, atomic *see* atomic clustersclusters, globular (stellar) *see* globular star clustersclusters, metal *see* metal clustersclusters, molecular *see* molecular clustersclusters, stellar *see* stellar clusters and associations

clusters of galaxies

see also galaxies; intergalactic matter

- 0430.6-6133, 0626.7-3426, X-ray clusters of galaxies, optical investigations 2-89389
 A 1367, spiral-rich cluster of galaxies photometry 2-106937
 Abel 1763, X-ray galaxy cluster, X-ray meas. and cluster mass to radius of 1.4 Mpc 2-68909
 Abel 1560, 2356 and 2384, X-ray emission anal. and evolution 2-101077
 Abel 2069, X-ray cluster of galaxies with multiple subcondensations, X-ray and optical obs. 2-68910
 Abel 2218, X-ray obs. implications for Sunyaev-Zel'dovich effect 2-89387
 Abel 2241E and W, radio and X-ray obs. 2-94846
 Abel 370, galaxies colour indices and nature, CCD photometry obs. 2-68908
 Abel 484 and 2534, X-ray selected active galactic nuclei 2-106882
 Abel 496, cooling intracluster gas, X-ray anal. 2-84336
 Abel 566, radio and X-ray galaxies obs. 2-106934
 Abel 779 and 1314, detect. of 110 radio sources, positrons, UHF obs. 2-63693
 Abel 98, two-component cluster, internal dynamics, redshift obs. 2-89385
 Abel clusters, radio halo emission search at 430 MHz 2-101081
 Abel clusters, red shift table 2-79224
 Abel clusters of galaxies, 1400 MHz survey of 1478 clusters 2-106932
 Abel clusters of galaxies, shape and orientation determ. 2-74110
 Bootes void, surrounding large scale superclusters 2-94848
 catalogue of clusters with measured redshifts 2-117614
 Cetus 1 group, NGC 1068 member rotation curve 2-112555
 C1 2244-02 galaxies colour indices and nature, CCD photometry obs. 2-68908
 clustering and missing mass 2-117782
 clustering length rel. to mass distrib. prior to galaxy form. 2-101097
 coma, spatial vel. dispersion profile determ. 2-58471
 Coma cluster, evidence for supercorona from radial vels. of faint galaxies behind Virgo cluster (*Russian*) 2-63656
 Coma cluster, structure and dynamics 2-101078

clusters of galaxies continued

- Coma Supercluster, clt. struct. from galaxies optical spectra and redshift 2-101069
- compact groups, galaxy magnitudes, morphology and group ang. size 2-79221
- companion galaxies, spectroscopic characts. and differential redshifts 2-74078
- cosmological redshift-magnitude relation perturbation by galaxy clusters, redshift eqns. in inhomogeneous relativistic model 2-89418
- Cygnus A group, spectroscopy and photographic photometry 2-89381
- distances, results from supernovae distance determ. methods 2-63496
- double galaxies, in close groups/clusters orientation, ang. momentum and peculiar motions 2-117753
- dynamical evolution, form. of single massive object by galaxy mergers 2-63685
- dynamical evolution, mass segregation, relaxation and Coulomb logarithm in N-body systems 2-58475
- dynamical evolution, theory for non-point body clusters (Russian) 2-63688
- dynamics, effects of stochastic background of gravit. radiation 2-79249
- dynamics, use in determ. of neutrino mass lower limit 2-73833
- force field tidal braking, effect on internal dynamics of member galaxies 2-63610
- formation, max. density in clouds of heavy neutrinos (Russian) 2-95891
- formation, nonlinear effects on evolution of adiabatic cosmological perturbations 2-58510
- formation, nonlinear effects rel. to isothermal perturbations prod. by primordial sound spectrum 2-58511
- formation, nonlinear growth of density perturbations in expanding collisionless medium 2-101045
- formation, triggering by quasar explosions 2-68902
- formation and evolution of galaxies and clusters of galaxies, review 2-101070
- Fornax cluster galaxies, colour magnitude relation at UBV wavelengths 2-79222
- gas, interaction with cosmic rays, gamma ray prod. 2-58211
- gas flow round galaxies, dynamics 2-94824
- gravitational mechanics of systems of galaxies, corrections for errors in redshifts 2-101055
- hot gas flow past galaxy, viscosity, turbulence and thermal cond. effects 2-58477
- Hydra I, galaxies membership from red shifts 2-101082
- inhomogeneous clusters embedded in homogeneous background, cosmological model 2-112614
- intergalactic H I and tidal debris within groups of galaxies 2-63682
- intracluster gas, scatt. and polarisation of central radiogalaxy radio emission (Russian) 2-106923
- JF photographic photometry, secondary standard sequences near 14 rich clusters of galaxies 2-106819
- kinetic energy, vel. dispersion mass depend. effect 2-117778
- linear filamentary structure in galaxies large-scale space distrib., statistical tests (Russian) 2-112567
- Local Group, catalogue of diffuse nebulae and emission-line stars in (NGC 6822) 2-106559
- Local Group, infall velocity to Virgo cluster 2-106983
- Local Group, interacting galaxies rel. to Magellanic Stream dynamics 2-68904
- Local Group, obs. of infalling clouds with very high vels. rel. to Magellanic Stream interaction with Galaxy 2-74083
- Local Group, photometry of resolved stars in Pegasus dwarf irregular galaxy 2-63617
- Local Group barycentre motion and mass 2-63687
- Local Group peculiar motion from Scl galaxies B-V vs HM relation 2-89390
- Local Supercluster, components features 2-89386
- Local Supercluster, galaxy clustering and missing mass 2-117782
- Local Supercluster, global props. of Sa-type galaxies from H I obs. 2-89366
- Local Supercluster, Monte Carlo simulation 2-58262
- Local Supercluster, structure and origin 2-94849
- Local Supercluster, vel. field 2-101076
- M81/M82 group, Sculptor type galaxies discovery and survey 2-112598
- Magellanic Plane Group surrounding Milky Way, struct. and reson. theory 2-117767
- magnetic field distribution from X-ray and radio map anal. 2-58505
- mass determination, potential-estimation method 2-106929
- mass distrib. in open cosmological model, microwave background anisotropy 2-106967
- masses, Universal significance 2-117817
- massive neutrinos in galactic systems 2-106522
- master list of nonstellar optical astronomical objects 2-58563
- Monte Carlo simulations for galaxies in rich clusters 2-84319
- nearby clusters, expansion meas. 2-84334
- nearby clusters, galaxy distance correl. with red shift 2-84334
- nearby groups, density enhancements location in redshift space, determ. methods 2-89157
- neutrino-dominated Universe, galaxy and cluster form. 2-101107
- NGC 3607 group of galaxies, hot intergalactic matter X-ray emission obs. 2-84335
- origin, effect of neutrino mass 2-117839
- Pegasus I cluster, 21 cm and optical survey of gas-rich spiral galaxies 2-79205
- Pegasus I cluster, 21-cm VLA obs. of giant cluster spiral (UGC 12423) 2-106890
- Pegasus I cluster, galaxy counts and H I UHF obs. 2-89388
- Perseus cluster, hard X-ray flux rel. to multifreq. VLBI obs. of nucleus of (NGC 1275) 2-74080
- perturbations of the Hubble flow 2-63722
- phase space distribution function of galaxies and secondary peak 2-101080
- poor clusters 4C radiogalaxies, red shifts, clustering props. and radio parameters 2-79225
- quasars clustering, results from objective prism survey 2-79242
- radio emission probability from brightest galaxy and subsequent members 2-58459
- relic neutrino clustering in early Universe 2-117816
- Sculptor group, resolution of old red giant stars 2-58332
- Sersic 129-1 cluster galaxies, colour magnitude relation at UBV wavelengths 2-79222
- Sersic 159-03, rich galaxy cluster, Einstein obs. of X-ray sources in confused 2A 2315-428 region 2-94866
- clusters of galaxies continued
- Seyfert galaxy members, number distrib. in clusters (Russian) 2-68911
- Shane-Wirtanen catalogue, clustering information 2-106931
- Southern Hemisphere clusters, photometry and spectra obs. 2-106936
- spiral galaxies in nine clusters, UBV photometry and 21 cm survey rel. to H I contents and colour props. 2-79223
- spiral galaxies in various cluster sizes, spiral galaxy ang. momentum var. 2-63626
- substructure within clusters of galaxies, results from surface number density contour maps 2-106938
- supercluster, expanding, assoc. with QSO Q2204-408, implications for He ionisation balance in intergalactic medium 2-94837
- supercluster dynamics rel. to cosmological density parameter 2-117780
- supercluster filaments, Monte-Carlo simulations of static properties of galaxies 2-84321
- superclustering and galaxy formation 2-117844
- superclusters, large scale space distrib. of galaxies from redshifts survey 2-58448
- superclusters and voids distribution, implications for Universe struct. 2-74112
- two point autocorrelation function and two dims. angular equivalent 2-117783
- Ursa Major I (X) group, NGC 3310 member rotation curve 2-112555
- velocity distributions, selection effect 2-117779
- velocity dispersion profile and stream vel. field determ. 2-58471
- velocity evolution of galaxy clustering, theory 2-58473
- Virgo, radial vels. of dwarf emission galaxies (Russian) 2-74111
- Virgo cluster, depend. of Tully-Fisher relation on galaxies Hubble types 2-63615
- Virgo cluster, galaxy density field from redshifts survey 2-68881
- Virgo cluster, Seyfert galaxy NGC 4388, nature and visible obs. 2-89374
- Virgo cluster, UBV photometry of 46 E-S0 galaxies 2-106935
- Virgo cluster direction, evidence for Hubble modulus anisotropy from study of quasars 2-79240
- Virgo cluster direction, evidence for Hubble modulus anisotropy from study of quasars 2-79241
- Virgo cluster galaxies, colour magnitude relation at UBV wavelengths 2-79222
- Virgo cluster Sunyaev-Zel'dovich effect 2-117801
- Virgo cluster UV radiation setting neutrino lifetimes limit 2-117810
- Virgo E, distance estimates (French) 2-101058
- Virgo S cloud of galaxies, distance moduli and vel. struct. 2-58476
- Virgo supercluster, nearby galaxy decelerations and cosmological density 2-117818
- virtual parameters correlations 2-112597
- virtual parameters of small groups, effects of different weighting procedures 2-79220
- virtual properties dependence on sample selection 2-94847
- virtualized clusters in complete redshift catalogue, masses 2-106930
- Webb Society deep sky observers handbook (book) 2-101144
- X-ray background with power-law sources in 3-50 keV range 2-63713
- X-ray clusters and microwave emission, Sunyaev-Zeldovich effect 2-106933
- X-ray clusters of galaxies, obs. at 102.5 MHz 2-112599
- X-ray emission, log N-log S relation and luminosity functions from complete sample 2-58270
- X-ray emission, log N-log S relation from medium-sensitivity survey by Einstein Observatory 2-58271
- X-ray emission from clusters containing classical double radio sources, obs. 2-58474
- X-ray luminosity rel. to vel. dispersion in clusters 2-101079
- X-ray sources, SHF obs. 2-79244
- X-ray studies with Einstein Observatory 2-117781
- clutter
- see also radar clutter
- echo-to-reverberation (clutter) ratio for strongly bistatic systems 2-70776
- spatial filtering for clutter rejection in (moving) point-target detection 2-108800
- c.m.o.s. integrated circuits see field effect integrated circuits
- c.m.o.s.i.c. see field effect integrated circuits
- CNDO calculations
- acenes, photoelectron spectra, CNDO/S assignment calcs. 2-80479
- acetaldehyde- $d_0(d_1)(d_2)(d_4)$, force field determ., vibr., CNDO calcs. 2-64875
- acetamide- $d_0(d_1)(d_2)(d_3)(d_4)(d_5)$, isotope effects, force consts., CNDO calcs. 2-96457
- acetone- $d_0(d_1)(d_2)(d_3)(d_4)(d_5)$, force field determ., vibr., CNDO calcs. 2-64875
- adenine-thymine base pair, double H-bonding, CNDO/S calcs., molecular orbital cores, and orbital energy shifts 2-96452
- adenine-thymine base pair, triplet excited electronic states, intermol. H-bonds, charge transfer, CNDO calcs. 2-102602
- adenosine, vertical ionisation pot., UV PES 2-75354
- alanine ($-d_4$), CH stretching vibr. circular dichroism, localised MO calcs. 2-108448
- alkanes, electronic excitation calcs. using semi-empirical method RCNDO/S 2-102390
- amino acids, H^+ transfer energies and electrostatic lattice energies, CNDO/2 and ab initio SCF calcs. 2-78079
- cis-3-aminocyclohexane, OH stretching and H bonds, CNDO/2 calcs. 2-70147
- aromatic cpds., induced moments, polarisabilities and second hyperpolarisabilities, CNDO calcs. 2-108403
- aromatic sulphinylamines electronic struct., PES and CNDO/S LCAO MO calcs. 2-85742
- atom-in-molecule polarisabilities, modified CNDO/2 calcs. 2-96458
- aziridinyl cyclophosphazenes and rel. compounds, electronic struct., CNDO/2 calcs. 2-96454
- bi(4,4-dimethyl-2,5-cyclohexadiene-1-ylidene), conformational anal., CNDO/2, MNDO and PPP calcs. 2-96459
- biphenyl molecules, constant relating total mol. energy to sum of valence eigenvalues, CNDO and INDO methods 2-75188
- carbodiimide, isomerism, force consts. vibr. spectra, CNDO calcs. (French) 2-108383
- o-carboranyl-substituted allyl anion, CNDO/2 calc. 2-90457
- conjugated compounds, CNDO and INDO method failure in conformational anal. 2-80481
- corundum, electronic energy levels by CNDO method, small cluster calc. 2-110243
- CSF iterations, convergence methods, appl. to CNDO, INDO and STO-3G calcs. 2-64852

CNDO calculations continued

- cyanamide, isomerism, force consts. vibr. spectra, CNDO calcs. (*French*) 2-108383
 cis-cyclohexane-1, 3-diol, OH stretching and H bonds, CNDO/2 calcs. 2-70147
 cyclopentadienylindium, electronic struct., CNDO calcs., dipole moment and orbital energies 2-90453
 cyclopropane, Raman intensities, CNDO calcs. 2-85549
 cytidine, vertical ionisation pot., UV PES 2-75354
 diacridines, antitumour activity, CNDO/2 calcs. 2-80484
 diamond, (111) surface relax. and reconstruction, CNDO/2 calcs. 2-82097
 diazaphosphorines, cyclic, intramol. transmission effects, ^{35}Cl NQR 2-108566
 1,6-dicarba-closo-hexaborane electronic struct., CNDO approx. 2-90456
 dimethyl diselenide, torsional barrier heights, MO calcs. 2-102375
 dioxidiazacycloalkanes, singlet-triplet transition, CNDO/S-CI SCF MO calcs. 2-64879
 diphenylamine and its ortho- and para-nitro derivatives, conformation calc. by atom-atom pot. method 2-75144
 ethane, internal rot., barrier height CNDOC (*German*) 2-85554
 ethyl acetate, cation radical, equilib. struct., SCF MO LCAO CNDO calcs. 2-96456
 formaldehyde- $d_0(d_1)(d_2)$, force field determ., vibr., CNDO calcs. 2-64875
 formamide- $d_0(d_1)(d_2)(d_3)$, isotope effects, force consts., CNDO calcs. 2-96457
 α -(N)-formyl isoquinoline thiosemicarbazones antitumour activity, electronic struct., CNDOC 2-108379
 Freon-113-tri-*t*-butyl phenoxy radical system, ^{19}F DNP investig. 2-108591
 glycine, zwitterionic, charge separation, UPS 2-93364
 Group IIIA metal β -diketonates, intramol. tunnelling in coord. units 2-80504
 hydroxy-ellipticine (olivacines) (methyl-z-ellipticine), oxidation pathways, CNDO calcs. (*French*) 2-96453
 lactate dehydrogenase, active centre, CNDO/2, INDO and EHT calcs. 2-80854
 linear molecules, elec. field gradients, semi-empirical SCF MO calcs. 2-108387
 methane ($-d_4$), IR and Raman spectra, vibr. freq. and intensities, CNDO calc. 2-80632
 mixed first and second row composition, struct. and relative stability 2-64876
 molecules, localised bond model to fourth order perturbation theory 2-113847
 naphthalene, in-plane vibr., CNDO force field calcs. 2-108381
 naphthalene, two-photon spectrum of b_{2u} modes, vibronic activity 2-80750
 1,4,5,8-naphthalenetetracarboxylic 1,8:4,5-dianhydride, CNDO/S CI MO calcs., MCD and UV obs. 2-54887
 naphthalic anhydride, CNDO/S CI MO calcs., MCD and UV obs. 2-54887
 nucleosides related to cytidine and uridine, opt. activity and electronic absorpt. spectra, CNDO calcs. 2-78288
 oxalic acid, constant relating total mol. energy to sum of valence eigenvalues, CNDO and INDO methods 2-75188
 peptides, H^+ transfer energies and electrostatic lattice energies, CNDO/2 and ab initio SCF calcs. 2-78079
 perturbation theory, constant denominator, for mol. energy calcs. 2-113854
 phenolic H^+ chemical shift, high dilution meas., correl. with electronic charge calc. by CNDO/2 method 2-75326
 phenyl-S bonds, substituent effects transmission CNDO/C calcs. 2-90459
 polarisabilities, CNDO/2-FPP, for model molecules 2-85564
 polyacetylene, electronic struct. and photoemission spectra, CNDO/S3 calc. 2-75483
 polyacetylenes, electronic struct., mol. architecture depend. 2-55000
 polyenes, induced moments, polarisabilities and second hyperpolarisabilities calcs. 2-108402
 polymers, electronic struct. and photoemission spectra, CNDO/S3 calc. 2-75483
 polyphenylenes, electronic struct., mol. architecture depend. 2-55000
 polythienylene, electronic struct., mol. architecture depend. 2-55000
 pteridines, substituted, enzyme inhibitory potency, CNDO/2 calcs. 2-108378
 α -quartz, electronic struct., cyclic cluster calc. 2-61393
 quinoxalines, substituted, CNDO calcs., enzyme inhibition potencies 2-85545
 quixotic molecules, $\text{AB}_2(\text{AH}_3)(\text{HAB}_2)$ classes, geom. and electronic struct., INDO and CNDO calc. 2-102386
 quixotic molecules, hypothetical HAB, geom., electronic struct. and common props. 2-85551
 selenophenes, condensed phase CNDO/2 calcs., ^{77}Se NMR chemical shifts 2-82736
 sodium malononitrile, its derivatives and isotopomers, IR spectra, vibr. coupling 2-64968
 tetrahalomethanes and decomposition products, CNDO/2 calcs. (*German*) 2-64877
 thymidine, vertical ionisation pot., UV PES 2-75354
 transition metal ion- $\text{H}_2\text{O}(\text{amine})$ complexes, semiempirical CNDO calc., σ -donor ability of H_2O 2-80482
 triazines, substituted, enzyme inhibitory potency, CNDO/2 calcs. 2-108378
 trichloroethylbenzene, ionis. pots. and intramol. charge transfer, photoelectron spectra, electronic struct. 2-90626
 trifluoromethyl(bromo)germanes, photoelectron spectra, CNDO/2 calcs., band shapes 2-70334
 trifluoromethyl(chloro)germanes, photoelectron spectra, CNDO/2 calcs., band shapes 2-70334
 trifluoromethylgermanes, UV and X-ray photoelectron spectra, binding energies, CNDO/2 and EESOP charge calcs. 2-70335
 trimethylammonium aluminium trihydride, electron density distrib., electrostatic mol. pot. anal., CNDO/2 calcs. 2-85544
 trimethylammonium aluminium trihydride, electron density distrib., electrostatic mol. pot. anal., CNDO/2 calcs. 2-85544
 tropylum cation, bridged, charge transfer transitions, MCD, UV obs., CNDO/S3 calcs. 2-85717
 urea- $d_0(d_4)$, isotope effects, force consts., CNDO calcs. 2-96457
 uridine, methylated, vertical ionisation pot., UV PES 2-75354
 zeolite crystals, cluster models, CNDO/2 calcs. including their electrostatic field and its effect on interacting mols. 2-11571

CNDO calculations continued

- Cl_2 , struct., props., CNDO/2 and INDO calcs. 2-102388
 ClF_3 , struct., props., CNDO/2 and INDO calcs. 2-102388
 $\text{ClFCI}(\text{ClCIF})$, electronic struct., CNDO/2 and INDO calcs. 2-102389
 Co complex, $\text{CO}_2(\text{CO})_6$ where L=ethyne, propyne and butyne, electronic struct., CNDO/2 calcs. 2-96455
 F_3 , electronic struct., CNDO/2 and INDO calcs. 2-102389
 F_2Cl , electronic struct., CNDO/2 and INDO calcs. 2-102389
 Ge, surface, (100), atomic struct., CNDO calc. 2-61270
 Ge_2H_6 , internal rot., barrier height CNDOC (*German*) 2-85554
 $(\text{H}_2\text{O})_2$, environmental effects, self-consistent reaction field, CNDO/INDO calcs. 2-108384
 K zeolites, quantum chemical study of physico-chemical props. 2-65917
 Li, atomic cluster, CNDO/BW study of different crystallographic structs. 2-59988
 Li BCC cluster, CNDO/BW method calc. 2-55003
 Li zeolites, quantum chemical study of physico-chemical props. 2-65917
 LiF (001) surface, H_2 adsorption atop an anion vacancy 2-61279
 NH-O bonds, neighbouring monovalent metal cation effects 2-80450
 Na zeolites, quantum chemical study of physico-chemical props. 2-65917
 S-N ring systems, 3, 4, 5 and 6 membered, localised MO calcs. 2-59707
 Si, (111) surface relax. and reconstruction, CNDO/2 calcs. 2-82097
 Si_2H_6 , internal rot., barrier height CNDOC (*German*) 2-85554
 ZnFOH cryst., ^{19}F nuclei mag. shielding 2-92549
 $\text{ZnF}_2 \cdot 4\text{H}_2\text{O}$ cryst., ^{19}F nuclei mag. shielding 2-92549

coagulation

- aerosols, coagulation at high Knudsen no. 2-57643
 blood conductivity at time of coagulation, recording with a biactive clamp, temp. effects (*French*) 2-116900
 laser photocoagulation treatment using fibre bundle scanner 2-81106
 polystyrene, monodisperse lattices, particle size determ., stopped-flow spectroscopy 2-84593
 $\text{Mg}(\text{OH})_2$, periodic crystallisation in agar-agar gel 2-116350

coal

- see also mining
 analysis ^{13}C NMR with cross polarisation and magic angle spinning, spin dynamics 2-116736
 ash content determ., γ -ray backscatt. spectral method 2-58136
 ash content of coal seam, determination by elec. and gamma-ray logging 2-63116
 brown coal combustion, developments and problems in fields of application (*German*) 2-99676
 Casson model slurries laminar-turbulent transitions in pipeflow 2-81320
 coalification process and estimation of geothermal history 2-88839
 combined cycle power station, coal gasification 2-78780
 combined heat and power, energy savings in FDR (*German*) 2-73050
 concentration of Th, U and K, gamma-ray spectra meas. 2-67781
 conversion, liquid and solid waste, pollution control technology 2-67804
 Critical Solvent Deashing ash concentrate, agglomeration, briquette tests 2-67803
 dielectric properties, frequency-dependence application in industrial heating 2-104808
 EDS coal liquefaction, status of development 2-111534
 electricity generation, coal-using technologies, effects on future markets 2-57674
 energy planning, stochastic simulation model 2-83449
 flash carbonisation of coal to produce synthesis gas and low-sulphur char 2-99748
 flue gas desulphurisation, sprayer-dryers 2-73055
 frozen coal thawing using Thawtron microwave device 2-73058
 future availability and economics prospects review (*French*) 2-57673
 gasification, kinetic equation parameters determ. (*Polish*) 2-105485
 gasification, Texaco process, waste anal., environmental acceptability 2-67806
 gasification technology in electric power generation 2-83447
 hydrocracking, using molten salts as catalysts 2-73051
 KILNGAS coal gasification process for combined cycle power generation, evaluation 2-62452
 liquefaction processes, research and development by EPRI, progress report 2-93859
 liquid and aromatic mixture anal. using computer program AMCLA 2-57650
 liquid fuels, coal-derived, potential health problems 2-67805
 liquid fuels from gas and coal, assessment of comparative economics 2-99747
 low-Btu gasification of northern plains lignite in a commercial-sized unit 2-116771
 MHD converters, coal channel slag, form, behaviour and effects 2-57718
 MHD generator, coal-fired, electrical effects of slag 2-111576
 NOx removal technique from coal fired boiler by dry system (*Japanese*) 2-57634
 particle motion in oil droplet, eqns. of motion 2-112848
 pelletisation, process engineering 2-73056
 pulverised, complex refractive index, light scatt. meas. technique 2-95443
 solvent refining, pilot plant 2-67802
 solvent-refined coal solids produced by liquefaction processes, combustion charact. evaluation 2-99755
 synfuels and coal, technical and economic aspects 2-73059
 synthetic liquid and gas fuels, future trends 2-99750
 types and classification (*Dutch*) 2-67799
 Underground Coal Gasification linked vertical well test in thin seam bituminous coal, field results 2-83448
 utilisation methods, research and development plans in Hungary (*Hungarian*) 2-111533
 world coal trade and the fuel supply to power stations in Europe (*German*) 2-78178
 Wyoming subbituminous coals, liquefaction yields and product structure, analysis by Fourier transform infrared spectrometry 2-62448
 H_2 production from coal, storage facilities and techniques (*French*) 2-105605

coating processes see coating techniques

coating techniques

- see also anodisation; cladding techniques; coatings; electrodeposition; electrophoretic coating techniques; encapsulation; epitaxial growth; metallisation; spray coating techniques; vapour deposition
 arc metallisation, electrode heating efficiency and coeff. of material use (*Russian*) 2-67582
 dimension deviation for film coating process (*German*) 2-67214
 dimension deviation for film coating process (*German*) 2-83018
 dip coatings, prep. technique 2-105096

coating techniques continued

- fibres, carbide coating produced by liquid metal transfer agent method 2-88245
 film coating theory, drag-out problem 2-111338
 glass, flat, coated, optical props. 2-61850
 glass microballoons, coating technique using acoustic levitation 2-85244
 metallurgical coatings and process technology, conf., San Diego, CA, USA (April 1982) 2-112654
 Newtonian fluid, flow between rollers, coating process models 2-70962
 optical fibre, high speed coating with thermally curable silicone resin using pressurised die 2-97241
 optical fibre coating speed prediction from flow props. of coating materials 2-102941
 optical oxide coating deposition from polymerised solns., props. 2-111096
 solar energy conversion technologies, film and coating deposition and characteris., research needs 2-87974
 subbing, of glass substrates, factors affecting film formation (*Russian*) 2-67586
 Ag mirror production, comparison of SnCl_2 , SnCl_4 sensitizing agents in electroless deposition 2-72641
 C fibres, coating with TiC and TiB₂ (*Russian*) 2-67583
 Ni-Cr₂C₃ electroless composite coatings for wear resistant applics., prep. and characts. 2-67666

coatings

- see also anodised layers; antireflection coatings; claddings; decorative coatings; electrodeposits; electrophoretic coatings; epitaxial layers; insulating coatings; protective coatings; spray coatings; sputtered coatings; vapour deposited coatings; varnish*
 albedo dynamic thickness control by high energy electrons 2-111438
 astronomical modern optical coating problems 2-73838
 brass coatings, diffusion formed, AES study 2-87105
 current-conducting pastes based on polymer binders and fine Ag and graphite powders, prep. and electrophys. props. 2-99384
 fibre reinforced polymers coatings, internal stresses, reduction by physico-chem. means 2-83187
 fibres utilising Ni coatings, acoustic desensitisation 2-109064
 glass, flat, coated, optical props. 2-61850
 heat resisting coatings, optimising thermal fatigue testing 2-99614
 injection lasers, coating effect obs. using intracavity spectroscopy 2-108880
 inorganic coating, Fourier transform IR spectra 2-77606
 interdiffusion with substrate, thickness effects analysis using normalised distance and time 2-93653
 IR laser reflector, dielectric-enhanced, wavefront error, interferometric meas. in visible light 2-95455
 laser fusion targets, coating thickness variations meas., automated computer anal. of X-ray radiographs 2-79533
 light-diffusing AK-5192 varnishes for translucent silicate-glass screens 2-77969
 low Z coatings for first wall and limiter, erosion resistance 2-85266
 low-reflection coatings, synthesis, laser refl.-index optimisation method 2-65335
 metal, coating thickness meas., eddy current and magnetic methods 2-107296
 metallurgical coatings and process technology, conf., San Diego, CA, USA (April 1982) 2-112654
 morphology, effect of processing variables 2-87103
 optical coating deposition condition optimisation 2-77742
 optical materials for high-power lasers, advances 2-81006
 organic molecule coating on glass, chemical bond nature, Mossbauer spectra 2-99009
 paint, pigment photodecomposition, diffuse refl. FT IR spectrosc. obs. 2-89830
 paint coatings, portable gloss tester 2-58873
 polymer coating adhesion applied as hot melt, test temp. effect 2-67637
 polymer films, spin coated, associated with semicond. industry, thickness variation 2-62081
 polystyrene, PVC or polybutadiene coated, ellipsometric meas. of thickness of interfacial layer (*Japanese*) 2-84596
 reflectors, coated, laser damage testing at excimer laser wavelengths 2-97028
 stainless steel limiters in ISX-B Tokamak, operational history 2-74900
 thickness monitoring, densitometric albedo method with single energy electrons 2-58788
 Al highly reflective coatings for the UV 2-97148
 B limiters in ISX-B Tokamak, operational history 2-74900
 C coated and polished stainless steel, secondary electron yields 2-80214
 C coatings to modify PLT lower hybrid waveguide surfaces 2-80213
 CdSnO₄ films, dip coatings, prep. technique 2-105096
 Co-Cr-Al-Y (22, 11, 0.5 wt.%) coating, oxide form. at 700°C 2-116621
 Fe-B layers, effects of annealing (*Korean*) 2-62150
 HfN electric spark alloyed coatings on Mo and W 2-67657
 Ni coated polycrystalline Fe wire, plastic deform. during diffusion homogenisation (*Russian*) 2-67445
 Ni films and coatings, porosity and internal stresses, annealing and thermal cycling effects (*Russian*) 2-76870
 Ni-Cr, aluminide coatings, form. kinetics and microstruct. 2-116620
 Ni-Cr-Si-B coatings formed in air, props. of glass-metal coatings (*Russian*) 2-77966
 Ni₃Al₂ coatings, aluminisation of Ni, form. of intermetallic phases 2-99593
 SF₆, effect of coatings on impulse breakdown for electrodes with different surface roughness 2-103530
 SiC coated B fibres, tensile strength as function of coating thickness 2-77950
 Sn coating on glass, chemical bond nature, Mossbauer spectra 2-99009
 TaC, coating for graphite furnaces in electrothermal at. absorpt. spectrometry (*Japanese*) 2-112995
 TiB₂ limiters in ISX-B Tokamak, operational history 2-74900
 TiC barrier coating in C reinforced Al-Si composite, effect on reaction between components 2-99373
 TiC coated graphite, performance in electron beam tests 2-69843
 TiC coated limiter testing in Tokamaks 2-69842
 TiC, coating materials for Tokamak limiters and walls, thermal testing 2-102264
 TiC, first wall coating, preferential sputtering partial yields 2-80212
 TiC limiters in ISX-B Tokamak, operational history 2-74900
 TiN, coating materials for Tokamak limiters and walls, thermal testing 2-102264
 TiN electric spark alloyed coatings on Mo and W 2-67657

coatings continued

- Tib, first wall coating, preferential sputtering partial yields 2-80212
 ZrN electric spark alloyed coatings on Mo and W 2-67657
- coatings, protective** *see protective coatings*
- coaxial cables**
 heat and radiation resistant cable for LMFB appl. 2-69763
 impedance working standards 2-53742
 sensor for tissue permittivity in vivo meas. using network analyser 2-105879
 waveguide terminations, 16/4.58 mm, characteristic impedance meas., high-precision verification system 2-53743
 MgO insulated nuclear instrument cable, gamma radiation and temp. effects 2-69765
 SiO₂ insulated nuclear instrument cable, gamma radiation and temp. effects 2-69765
- coaxial lines** *see coaxial cables*
- cobalt**
see also nuclei with
 AC conduction, and DC conduction 2-66527
 adsorption and decomp. of water, LEED, UPS, surface pot., and thermal desorption study 2-104160
 atoms, energy levels, Co I to Co XXVII 2-74171
 atoms, transition probabilities, decay branching ratios (*French*) 2-54789
 Auger MVV and L_{2,3}VV spectra meas. 2-77633
 chemisorption of NO and NH₃ on Co, UPS, XPS and work function meas. 2-62430
 coatings, black selective surfaces growth by spray pyrolysis for optimum photothermal conversion 2-57727
 coherent scatt. length, neutron interferometric meas. 2-115106
 corrosion in physiological media 2-93675
 creep, viscous, activation energy eval. through temp. change tests, β -phase specimens 2-72926
 electric quadrupole splittings, elec. field gradient 2-66948
 electrocrystallisation during deposition of mag. thin films (*Russian*) 2-77761
 electrodeposition on WC particles 2-83261
 electrolytic polishing, with appl. of alternating to DC current (*Russian*) 2-62268
 FCC, cryst. dynamics 2-86813
 Fermi surface, relative changes due to uniaxial tension 2-92441
 ferromagnetic jellium model, surface characteristics, var. technique 2-72134
 fluorophosphate glass:Co²⁺, absorption spectra of Co²⁺ meas. at solid-liquid transformation 2-104924
 kinetics and reaction mechanism with P vapour (*Japanese*) 2-78006
 lattice dynamics, neutron diff. study and dipole fluctuation model 2-81912
 liquid, thermodynamic activity of S 2-105126
 magnesium acetate tetrahydrate:Co²⁺, EPR spectra 2-61757
 magnetic surface states, angle resolved photoemission studies 2-66604
 magnetisation direction, temp. depend., 1 MV Lorentz electron microscopy study 2-77286
 materials with Z₂=23-30, electronic stopping cross section for 30-300 keV protons 2-66086
 minority spin bands, inverse photoemission study 2-116293
 MnCl₂:Co²⁺, IR absorpt. spectra 2-110897
 monolayer on Cu, mag. exchange splitting, photoemission, LEED and Auger study 2-98870
 oxidation, at 600-800°C kinetics and mechanisms 2-67646
 oxidation rates near ϵ - γ and α - γ phase transitions, oxide thickness and temp. effects 2-67649
 NE Pacific Ocean, Co origin and distrib. 2-78700
 polycrystalline film, saturation magnetostriiction meas. 2-77337
 powder, sintering diagrams, activation energy and mechanisms 2-93473
 powder, sintering in mag. field 2-116411
 protons in Be, Al, Ti, V, Fe, Co, Ni, Cu, Zn, Mo, Rh, Ag, Sn, Ta, Pt, Au, stopping power meas. 2-64820
 range profiles of ³He and ⁶Li ions 2-66089
 residual stresses, local, determ. from X-ray meas. (*German*) 2-93747
 resistivity damage rate under neutron irradi. at 4.6K, 2-103827
 sputtered film, high coercivity and hysteretic loop squareness, mag. props. 2-82666
 strontium tartrate tetrahydrate, Co²⁺ centres, optical absorpt. studies 2-115220
 Sun, Co abundance determ. from Co I lines absolute oscillator strengths 2-112315
 surface, competitive accumulation of S and graphite 2-82121
 surface (0001), LEED struct. anal. 2-56316
 surface (001), chemisorbed S, surface superstruct., LEED study 2-98404
 surface mag. moment and electronic struct., Hubbard model 2-115980
 surface magnetism, polarised electrons 2-66890
 textured films, NMR and mag. meas. (*Russian*) 2-98994
 thermal expansion, up to 600K above melting 2-66260
 thin films, transverse susceptibility and struct. const. 2-61744
 Al₂O₃ supported, sorption of CO monolayers, tunnelling spectra 2-66349
 Au/Co/Si thin film condensate, electrophys. props., heat treatment influence 2-104505
 Au/Co/SiO₂ thin film condensate, electrophys. props., heat treatment influence 2-104505
 CO/Co (0001), angle-resolved photoemission studies 2-83000
 CaS:Ce,Co, phosphors, luminescence emission and decay, quenching 2-77584
 CdI₂:Co²⁺, phonon side bands in absorpt. spectra 2-99161
 CdS:Co, excited state lifetimes, 4 to 300K, luminesc. study 2-57162
 Co, black, electroplated, selective absorber coatings for solar radiation 2-83512
 Co I, absolute oscillator strengths for lines between 2276 Å and 9357 Å rel. to solar Co abundance 2-112315
 β -Co, viscous creep 2-67439
 Co²⁺ in aq. soln., thermal electron transfer correl., photoelectron emission 2-70408
 Co²⁺ in fluoride, phosphate and fluorophosphate glasses, ESR study (*Chinese*) 2-110622
 Co¹⁹F, temp. depend. of local mag. fields 2-82760
 Co:H, impurity electronic struct. and hyperfine fields 2-110292
 Co:MgF₂, lasers, liq. N₂ cooled, pulse-pumped operation 2-102800
 Co/Si thin film condensate, electrophys. props., heat treatment influence 2-104505
 Co/SiO₂ thin film condensate, electrophys. props., heat treatment influence 2-104505

cobalt continued

- Co-Al₂O₃ mag. emulsion, electron diff. study (*German*) 2-82667
 Co-Cr perpendicular magnetic recording films, meas. of M-H curve 2-116039
 Co-polybutadiene interface chemistry, ⁵⁷Co emission Mossbauer spectroscopy 2-87638
 Co-Si contact, barrier height 2-92752
 Co²⁺+O₂(N₂O) and other reaction, translational energy depend. of cross sections 2-62389
⁵⁷Co, diffusion along grain boundaries in NiO 2-76747
⁵⁷Co marker system for central venous press. line localisation 2-62761
⁶⁰Co and stable Co, concs. in migratory marine organisms (*Japanese*) 2-78459
⁶⁰Co and stable Co, concs. in coastal marine organisms (*Japanese*) 2-78460
⁶⁰Co deposition on pipe walls in high-temp. water 2-80113
⁶⁰Co, origin in LWR cooling system 2-80353
⁶⁰Co, release from Stellite-6, deposition on steel, in reactor cooling loop 2-80114
 Fe (ClO₄)₂·6H₂O: ⁵⁷Co, Mossbauer emission and absorpt. spectra, study of phase transitions 2-61805
 α-Fe:⁵⁷Co, Mossbauer study of magnetism 2-66956
 Fe(BF₄)₂·6H₂O:⁵⁷Co, Mossbauer emission and absorpt. spectra, study of phase transitions 2-61805
 Ge:Co, Mossbauer study of implanted ⁵⁷Co below full amorphisation limit 2-77441
 InP:Co, deep levels, elec. and optical meas. 2-76971
 InSb:Co, gamma-ray, electron and proton beam irradi., defect annealing, elec. props. (*Russian*) 2-103817
 MgCl₂:Co²⁺, optical absorpt. spectra 2-93234
 MgCl₂:Fe²⁺, Co²⁺, optical absorpt. spectra 2-93234
 Nb:Co, electromigration and self diffusion, effective valence, radioactive tracer method (*French*) 2-76756
 Si:Co, impurity lattice location, Mossbauer study 2-103785
 Si:Co, Mossbauer study of implanted ⁵⁷Co below full amorphisation limit 2-77441
 Si:Zn:Co, epitaxial layers, doping laws and electrophysical props. 2-66025
 Si-Co thin film reactions, Co₂Si and CoSi growth kinetics and thermal stability obs. 2-92290
 Sn, diffusion mobility of Fe(Co), radioactive tracer study (*Russian*) 2-92277
 α-Y, fast diffusion and electrotransport of Co, Fe and Ni 2-86933
 ZnCl₂:Co²⁺, glass, absorption spectra of Co²⁺ meas. at solid-liquid transformation 2-104924
 ZnO:Co nonstoichiometric single cryst., growth and elec. props. 2-77051
 ZnS:Co, excited state lifetimes, 4 to 300K, luminesc. study 2-57162
 ZnS(Se):Co, amphoteric exciton trapping by 3d impurities 2-76937

cobalt alloys

see also cobalt compounds

- Alnico magnets, anisotropic, model for field computation 2-82638
 amorphous alloys, Curie temp. and mag. thermal expansion, press.-depend. meas. 2-72323
 amorphous alloys and intermetallic compounds, mag. props., prep. method effects 2-115982
 amorphous CoP alloys, apparatus for columnar growth control 2-69311
 C DyCo₂, Fe, Hy, lattice parameters and mag. characs. 2-56891
 C UCoAl, absorption of H₂, thermodynamic and struct. study 2-56196
 corrosion in atmos. containing C and O₂ 2-88276
 demagnetisation curves determ., in closed magnetic loop 2-58860
 FCC, diffusion of H₂D, and T, mag. aftereffect meas. 2-82027
 Fe-Ni-V, maraging kinetics, specific elec. resist. obs. 2-105204
 foil thickness meas. from convergent-beam diff. patterns, error assessment 2-95557
 Hastelloy X, carburization protection with Ti-Si enriched layers 2-116619
 IN 738 LC and IN 939, Ni-base cast superalloys, high cycle fatigue 2-105318
 Inconel 700, creep strength, microstruct. depend. 2-77932
 metallic glasses, (A₁B_{1-x})₂P₁₀B₈Al₃, A and B=Fe, Co, Ni, Mn or Cr, mag. phase diagrams 2-92931
 rare earth alloy, R₂(Co_{1-x}Fe_x)₂, magnetic anisotropy 2-72191
 rare earth alloys, R₂GaCo₂ (R=Sm, Gd, Tb, Dy, Ho, Er, Tm, Lu, Y), cryst. struct. study 2-115180
 rare earth alloys, RCo₂, C15 type, ⁵⁹Co NMR study, hyperfine field anisotropy 2-66934
 rare earth alloys, RCoSn, cryst. struct. and mag. susceptibility, 78 to 800°C (*Russian*) 2-55891
 rare earth alloys R₂(Co_{1-x}Fe_x), magnetic anisotropy phase diagram 2-98883
 rare earth-Co alloys, RCo₂ (R=Pr, Nd, Sm, Gd, Tb, Dy, Ho, Er and Tm), anomalous hyperfine field and orbital moment 2-56973
 rare earth-Co magnets, demagnetization curves, 300 to 1000K 2-72293
 rare earth-Co matrix magnets heated in dry air, thermal stability and temp. coeffs. 2-72292
 rare earth-Co permanent magnet, sintered, particle alignment factor, mag. determ. 2-72287
 rare earth-Co powders, prep. process 2-111108
 rare earth-cobalt intermetallic, R₂Co type, elec. resist. accompanying metamag. phase transitions (*Russian*) 2-66820
 Rene 95, Ni-base superalloy, fatigue crack propag. thresholds for long and short cracks 2-105314
 stacking fault energy role, on galling and wear behaviour 2-88218
 Stellite, Co-base, cavitation erosion 2-88205
 Stellite-6, in fission reactors, ⁶⁰Co release rates 2-80114
 superalloys thermodynamics, activity coeffs. of Al, Ti, Cr, Fe, Co, Ni, Mo and W 2-99390
 thin film recording materials, corrosion 2-72864
 WC-Co, sintered, surface struct. and strength after various forms of working 2-67458
 WC-Co alloys microscopic behaviour in deformation, anal. using finite elements (*Japanese*) 2-77882
 Ag-Co, dil., mag. behaviour of Co impurities 2-115971
 Al-Co dil. alloys, damage rate and recovery meas. 2-76488
 Al-Co-Fe, electron irradi., ⁵⁷Fe diffusion, Mossbauer study 2-92254
 Al-Co-Fe system, phase equilibria 2-111138
 Al-Ni-Co-Cu-Ti, Alnico 8 alloy, α-γ transformation, α, phase precipitation, coercive force study 2-91858
 Au-Co, dil., mag. behaviour of Co impurities 2-115971
 Au-Co, dil. alloy, impurity optical absorpt. meas. 2-99160

cobalt alloys continued

- Au-Fe-Co system, permanent magnet material for ornamental applic. 2-56890
 CeCo₂, superconductor with 4f electrons, photoemission study 2-104525
 CeCo₂, intermediate valence state of Ce, interconfiguration fluctuation model 2-76994
 Ce₂S₂Co₂₄S₄₅, amorphous, temp. depend. of mag., thermal and transport props. 2-115967
 CeCo₂(Ce₂Co₇)(CeCo₂Si₂), X-ray L_{III} absorpt. spectra of tetravalent Ce (*Russian*) 2-99218
 Ce(Co_{1-x}Cu_x)₂, mixed valence, Ce³⁺-Ce^{4f} electronic transition, X-ray K line shift study 2-56497
 CeCo₂Si₂, valence state of Ce rel. to thermoelec. power, X-ray absorpt. spectra meas. 2-61448
 Ce₂Co_{17-x}T_x (T=Ti, V, Cr, Mn, Fe, Cu, Zr, Hf), mag. and crystallographic props. 2-72200
 Ce₂Co_{17-x}Zr_x, struct. and mag. props. 2-61741
 (Cn_{1-x}Co_x)₂MnSn Heusler alloy, mag. transition 2-72203
 Co₂Mn, NMR ON study 2-98971
 Co⁹⁰Nb, NMR ON study 2-98971
 Co-Al eutectic, lamellar, shock-induced incipient fracture 2-72788
 Co-Al-O, liq. solubility of oxides, prediction 2-86889
 Co-B, phase comp. and cryst. struct. meas. 2-88055
 Co-base wear-resistant alloys, carbide transform. during ageing 2-77851
 Co-CoAl alloys, equiaxed two-phase fracture in alloys with isolated elastic particles 2-77936
 Co-CoAl alloys, equiaxed two-phase, fracture in alloys with isolated plastic particles 2-77937
 Co-Cr, 2-93501
 Co-Cr, liq. and solid., conc. and dil., temp.-conc. relationships of susceptibility 2-66766
 Co-Cr, mag. behaviour above crit. conc. for ferromag. 2-72204
 Co-Cr (25 wt.%), Cr₂O₃ forming alloys, corrosion in H₂-H₂S-H₂O atmosphere 2-77982
 Co-Cr alloys, hot corrosion in modified Dean's rig 2-99583
 Co-Cr dil. alloy, kinetics and mechanism of high temp. oxidation 2-88277
 Co-Cr film, RF sputtered, HCP phase and perpendicular mag. anisotropy, N₂ induced 2-56394
 Co-Cr film, RF sputtered, perpendicular mag. anisotropy, magneto-optical Kerr effect and reflectivity meas. 2-61878
 Co-Cr-Al alloys, hot-corrosion in modified Dean's rig 2-99584
 Co-Cr-Al-Y (22, 11, 0.5 wt.%) coating, oxide form. at 700°C 2-116621
 Co-Cr-Al-Y vacuum plasma sprayed coatings 2-62274
 Co-Cr-Mo alloys, hot corrosion in modified Dean's rig 2-99585
 Co-Cr-Mo-C alloys, strengthening mechanisms, room temp. 2-67371
 Co-Cr-Mo-C alloys, wrought, phase transform. 2-99423
 Co-Cr-Ta alloys, hot corrosion in modified Dean's rig 2-99583
 Co-Cr-Ti alloys, hot corrosion in modified Dean's rig 2-99583
 Co-Cr-W, processed by liq. phase sintering, microstruct. invest. 2-67310
 Co-Cr(Mn), computer calc. of phase diagram (*Japanese*) 2-105120
 Co-Cu, sintering, liq. phase, grain coarsening kinetics 2-111111
 Co-Cu (8.03 wt.%), high temp. oxidation, reaction kinetics 2-62258
 Co-Cu alloys, molten, activities and thermodynamic props. 2-99401
 Co-Cu-Mn(Ni), computer calc. of phase diagrams (*Japanese*) 2-105121
 Co-Fe, dilute alloy, elec. resist. meas., 4 to 300K 2-87223
 Co-Fe, induced mag. anisotropy, role of stacking faults, expt. study (*Russian*) 2-92897
 Co-Fe, mag. props., review 2-82652
 Co-Fe, magnetostriction meas. at high stress levels 2-82692
 Co-Fe, ternary oxide scale form., diffusional growth, computer simulation 2-62271
 Co-Fe (20 at.%), grain boundary precip., TEM, STEM, SEM and electron channelling study 2-72708
 Co-Fe-Cu-Hf-Sm, permanent magnet, microstruct., SEM study 2-92224
 Co-Fe-Cu-Zr-Sm(Ti), permanent magnet, microstruct., SEM study 2-92224
 Co-Fe-Nb alloy, magnetisation reversal and Barkhausen effect 2-72277
 Co-Fe-Nb semihard mag. alloy, cold working effects on precipitate morphologies rel. to mag. hysteresis 2-92962
 Co-Fe-Si-B amorphous ribbons, with induced mag. anisotropy, influence of applied tensile stress on power loss 2-82686
 Co-Ga, mag. and struct. props., Mossbauer study 2-116097
 Co-Ga alloys, B2 struct., defect struct. and lattice parameters (*German*) 2-81784
 Co-Gd amorphous films, struct. and mag. props., Mossbauer study (*Russian*) 2-77429
 Co-Ge liq. alloys, liq. struct. and elec. cond. (*Russian*) 2-91761
 Co-Ge liquid alloys, thermodynamic excess props. determ. by mass spectrometry 2-98306
 Co-H(D), based alloy, mag. relax., isotope effects and diffusion 2-77382
 Co-Hf sputtered amorphous film, struct., soft mag. props. and magnetostriction meas. 2-87534
 Co-Mn, mag. moment distrib. study 2-82566
 Co-Mn (0-35 wt.%) alloys, oxidation at high temps. 2-72884
 Co-Mn system, phase equilibrium for activity determ. 2-83096
 Co-Nb (0.96 at.%), solute segregation to stacking faults, atom probe FIM obs. 2-105163
 Co-Ni, sputtered film, high coercivity and hysteresis loop squareness, mag. props. 2-82666
 Co-Ni, ternary oxide scale form., diffusional growth, computer simulation 2-62271
 Co-Ni (0.45 wt.%), O₂ press. effect on elev. temp. oxidation (*Japanese*) 2-105375
 Co-Ni (33wt.%), fatigue crack tip, plane strain distrib. 2-111261
 Co-Ni-Al-Ti-Cu, porous, laser pulse treatment (*Russian*) 2-67355
 Co-O-Zr(Ti), liq. solubility of oxides 2-98295
 Co-P, amorphous ferromagnet, ferromagnetic saturation (*Russian*) 2-87491
 Co-P alloys, amorphous, elec. resist. 2-77014
 Co-P amorphous alloys, annealing effect on anisotropy 2-88229
 Co-P amorphous alloys, contraction during struct. relax., heat treatment effects 2-71674
 Co-Pt (50 at.%), shear modulus, magnetomech. effects 2-56908
 Co-S system melts, thermodynamic activity of S 2-105126
 Co-S film, laser melted, lamellar eutectic solidification 2-116431
 Co-Si-B with and without group IV-VIII transition metals, amorphous wire prod. by melt spinning into rotating water, mech. props. 2-105104
 Co-Sn, metallic glass, struct., forming ability and elec. cond. 2-103653
 Co-Sn eutectic alloy solidification, low-frequency vibration influence obs. 2-116432

cobalt alloys continued

- Co-Sn-M (M=rare earth, Y, Sc, Ca, Sr, Th), supercond. and mag. transition temp. 2-115934
 Co-V, mag. moment distrib., neutron scatt. study 2-72172
 Co-V FCC alloy, quenched from 1200°C, elec. resist. 2-104345
 Co-W-C, n-carbides, struct. stability (*German*) 2-83097
 Co-Zr, intermediate phases, heat of formation, direct reaction calorimetry study 2-99699
 Co-Zr amorphous film, coevaporated, magnetisation and ferromag. reson. studies 2-72264
 Co-Zr metallic glass, struct. investig. by X-ray diffr. 2-55857
 Co-Zr sputtered amorphous film, struct., soft mag. props. and magnetostriiction meas. 2-87534
 CoAl, electronic struct. and charge transfer, APW band calc. 2-66430
 β -CoAl, optical absorpt. spectra meas. 2-82866
 CoB amorphous alloys, hyperfine field, mag. anisotropy, domain walls, NMR study 2-104714
 Co_{1-x}B_x metallic glass, struct., neutron diffr., Mossbauer and EXAFS study 2-103640
 Co_{100-x}B_x metallic glasses, structural investigation 2-86571
 Co₂Fe₃Si₂B₁₀ and Co₂Fe₂Ni₂(SiB)₂₀, amorphous, crystn. in RF mag. field, Mossbauer study 2-103634
 Co₃₀Fe₇₀Si₁₀B₁₀, amorphous, crystn., Mossbauer and X-ray diffr. study 2-103636
 (Co₉₀Fe₁₀)₂Al₃ alloy, ordered, microstruct. 2-72719
 Co₂MnSn, Heusler alloys, band struct., SAPW calc. 2-82215
 Co₂Mn_{1-x}Ti_xSn Heusler system, mag. and chem. ordering 2-93073
 Co₄₈Ni₁₀Fe₃Si₁B₁₆, amorphous, annealing effects and short range ordering 2-82588
 Co₄₈Ni₁₀Fe₃Si₁B₁₆, surface conditions influence in mag. props. 2-82593
 Co₄₈Ni₁₀Fe₃Si₁B₁₆, amorphous ferromag. alloys, anal. of coercivity 2-87538
 Co₄₈Ni₁₀Fe₃Si₁B₁₆ ribbons, domain pattern annealing effect 2-92978
 Co₂Ni_{1-x}MnGe, cryst. and mag. struct. 2-104581
 Co₂Ni_{1-x}MnGe, hexagonal, mag. props. 2-56835
 Co_{2-x}Ni_{2x}Zr_x, supercond., anisotropy of normal state props. 2-110324
 CoP amorphous alloy, hyperfine field, mag. anisotropy, domain walls, NMR study 2-104714
 CoP, ion implanted, elec. resistivity and channelling studies 2-104337
 CoPt ferromagnetic alloy, atomic ordering in mag. field, magnetoelastic energy role (*Russian*) 2-92983
 CoSi (100) and CoSi₂ (110), interaction with O₂, LEED, AES, and UPS STUDY 2-104162
 CoSi₃, chimney-ladder structs., formed by high-temp. and pressure treatment 2-88022
 CoSi_{3-x}, amorphous sputtered films, anomalous Hall effect 2-71950
 Co₂TiAl, Heusler alloys, band struct., SAPW calc. 2-82215
 Co₂TiSn, Heusler alloys, band struct., SAPW calc. 2-82215
 Co₉₀Zr₁₀ and Co₉₀Zr₁₀, amorphous, sp. ht., susceptibility, resist. 2-72224
 Co₂Zr_{1-x}, metallic glass, electronic struct. calc. 2-98529
 Cr-Co-V alloys, mag. susceptibility and thermal expansion 2-98855
 CrCoFe permanent magnet, powder metallurgy processing 2-72652
 Cu-Al-Si-Co (2.8, 1.8, 0.4 wt.%), fine grained, creep 2-105219
 Cu-Be-Co (13.1, 0.2 at.%), rapid solidification effect on ageing (*Japanese*) 2-105137
 Cu-Co, mag. behaviour of Co impurities 2-115971
 Cu-Co, spin glass state form. investig. (*Russian*) 2-56875
 Cu-Co (2 at.%), precip. hardened, fatigue softening, precip. state depend. 2-72837
 Cu-Co alloys, precipitated particles, coarsening process (*Japanese*) 2-83125
 Cu-Co dilute alloy powders, mag. charact. scatter 2-72289
 Cu-Co single cryst., magneto specific heat capacity, superparamagnetic clusters 2-92944
 DyCo₃, H₂ multiplateau absorption isotherms, chem. pot. 2-92348
 DyCo₂, vol. depend. of first order mag. transition temp. 2-98881
 DyCo₂, elec. resist. accompanying metamag. phase transitions (*Russian*) 2-66820
 Dy₂(Fe_{1-x}Co_x)₂, spontaneous magnetostriiction 2-77356
 ErCo₂, Co Knight shift anisotropy, spin echo study 2-110668
 ErCo₂, vol. depend. of first order mag. transition temp. 2-98881
 ErCo₃, H₂ multiplateau absorption isotherms, chem. pot. 2-92348
 ErCo₂-Fe₃, Laves phase cpds. and their hydrides, mag. behaviour 2-56855
 Fe-B-Cr(Co)(Ni), metallic glasses, crystn. behaviour 2-71368
 Fe-B-Si-Co, Metglas 2605, magnetostriiction and mag. anisotropy, meas. using magnetisation loops under stress 2-77352
 Fe-B-Si-Co, Metglas 2605, Mossbauer and magnetoelastic coupling 2-77432
 Fe-Co, BCC, mag. moments and lattice const., band theory 2-72133
 Fe-Co, order-disorder transition, band theory 2-98268
 Fe-Co films, IR absorpt. props. meas., order-disorder phase transition effect (*Russian*) 2-93297
 Fe-Co monocryst. alloy, surface comp., ion bombardment and annealing effects, Auger study 2-71782
 Fe-Co powder, form., struct., and mag. props., electrolysis conditions effect 2-83063
 Fe-Co-Bi, amorphous film, magnetisation, Mossbauer study 2-72263
 Fe-Co-Cr system, phase diagram, thermodynamic evaluation 2-72667
 Fe-Co-Mn-V cryogenic magnetostriiction transducer 2-81200
 Fe-Co-Ni activity measurement, implications for solar nebula condensation processes 2-84115
 Fe-Co-Ni system, mag. moment, CPA calc. (*Russian*) 2-115981
 Fe-Co-V, Vicalloy-2, phase and struct. transitions, mag. props. (*Russian*) 2-61714
 Fe-Co-W semihard mag. alloys for remanent reed switch appl. 2-82626
 Fe-Cr-Co permanent magnets, mag. props. and Mossbauer effect 2-72282
 Fe-Cr-Co permanent magnet alloys, coercivity mechanism obs. 2-92971
 Fe-Cr-Co-Mo-Ti (24, 15, 2, 0.5 wt.%), magneto alloy, machinable, microstruct. and props. (*Chinese*) 2-72261
 Fe-Cr-Co-Nb-Al, high-coercivity, microstruct. rel. to mag. props. 2-111333
 Fe-Cr-Co-W, mag. props. and cryst. struct. (*Russian*) 2-92970
 Fe-Ni-Al-Co-Cu-Ti, thermomag. treatment, struct. form. and mag. props. 2-62152
 Fe-Ni-Co, phase transitions occurring during heating (*Russian*) 2-62119
 Fe-Ni-Co (34, 28.5, 17.5 wt.%), struct. transforms. of FCC phases on heating 2-62121
 Fe-Ni-Co powders obtained by decomp. of carbonyls, Co content influence on phase comp. 2-67294

cobalt alloys continued

- Fe-Ni-Co-Bi-Al, amorphous, initial permeability and long-time stability, freq. depend. 2-72258
 Fe-Ni-Co-Ti, martensite and austenite, disperse γ' particles elastic deform. and γ - α transitions (*Russian*) 2-88078
 Fe-Ni-Co-Ti (23, 10, 10, wt.%), martensitic transformation 2-83118
 Fe-Ni(Ti)(Ga)(Al)(Co)(Pt), flow stress at low temp., influence substitutional elements 2-105213
 Fe-Sb-Co, dil., impurity pair interactions, resist. and NMR meas. 2-82317
 FeCo and Fe₉₃Co₇Cr₇ films, polycryst., subjected to X-irrad., magnetisation (*Russian*) 2-66876
 FeCo, energy band struct. and optical props. due to order-disorder transition 2-82220
 FeCo, heat capacity in range 5-300K, anal. of entropy contribs. 2-56211
 FeCo, ordered single cryst., slip systems, compression test obs. 2-93573
 Fe₉₀-Co₁₀B₂₀, amorphous, crystn., Mossbauer study 2-103633
 (Fe₉₀Co₁₀)₂B₂₂ and (Fe₉₀Co₁₀)₂Si₂B₂₆ glasses, ⁵⁷Fe substitution effects, Mossbauer study 2-110738
 Fe₉₃Co₇B₁₂Si₁, metallic glass, atomic site environments, spin echo NMR study 2-72376
 Fe₉₃Co₇B₁₂Si₁, Metglas 2605CO, transverse field annealed, transverse susceptibility and magnetisation 2-72268
 (Fe₉₀Co₁₀)₂Si₂B₂₂, amorphous, zero-magnetostriiction induced mag. anisotropy, formation kinetics meas. 2-72189
 Fe₇₃Co₂₇Si₁₅B₁₀, amorphous struct., X-ray diffr. study 2-65866
 Fe₇₃Co₂₇Si₁₅B₁₀, amorphous zero magnetostriiction alloy, mag. aftereffect 2-72290
 Fe₇₀Co₃₀Si₁₅B₁₀, glassy, free vol., positron annihilation study 2-104987
 (Fe_{1-x}Co_x)₂Zr₁₀ amorphous alloys, mag. induced anisotropy meas. 2-92896
 FeNiCo films, secondary nucl. spin echo signals in NMR and FMR overlap region 2-104741
 Gd-Co amorphous films, torque curves meas. (*Russian*) 2-98926
 Gd-Co, amorphous alloy films, changes in struct., mag. anisotropy and mag. domains (*Chinese*) 2-62238
 Gd-Co, charge transfer and isomer shift, ¹⁵⁵Gd Mossbauer spectra 2-104777
 Gd-Co, RF-sputtered amorphous film, magneto-optical spectra (*Japanese*) 2-116158
 Gd-Co amorphous films, perpendicular mag. anisotropy, effect of O₂ and N₂ addition 2-72299
 Gd-Co uniaxial amorphous ferrimagnet, mag. states 2-110608
 GdCo amorphous bubble film, FMR spectra, angular depend. 2-72354
 GdCo amorphous film, compensation temp., substrate effects, Hall effect study 2-92974
 GdCo amorphous RF sputtered films, substrate bias effect on film composition and mag. props. 2-56900
 GdCo film, bias-sputtered, perpendicular anisotropy rel. to microstruct. 2-72297
 GdCo, magnetisation reversal, domain wall vel., temp. depend. 2-82643
 Gd_{1-x}Co_x amorphous films, oxidation, FMR study 2-82724
 Gd_{1-x}Co_x sputtered film, amorphous, radioactive tracer diffusion 2-92429
 Gd₂Co₃, elec. resist. accompanying metamag. phase transitions (*Russian*) 2-66820
 GdCoB amorphous thin films, mag. props. 2-72298
 GdCo₂H₃, NMR spin echo study 2-56972
 Gd₂(Co_{1-x}Mn_x)₁₇, ⁵⁹Co NMR, influence of easy direction of magnetisation 2-104740
 Gd₂(Co_{1-x}Mn_x)₁₇, NMR spin echo study 2-93060
 Hf-Co-Al, Laves phase, mag. susceptibility (*Russian*) 2-72142
 Ho-Co uniaxial amorphous ferrimagnet, mag. states 2-110608
 HoCo₂, vol. depend. of first order mag. transition temp. 2-98881
 HoCo₂, magnetisation reorientation, neutron diffr. and Mossbauer study 2-72148
 HoCo₂, magnetic anisotropy 2-72190
 HoCo₂, magnetic excitations study 2-110573
 HoCo₂-Fe₃, Laves phase cpds. and their hydrides, mag. behaviour 2-56855
 Ho(Co_{1-x}Ni_x)₂, mol. moments rapid changes, magnetisation and spin-echo NMR study 2-72167
 Ho₂Ga₂Co₂, cryst. struct. study 2-115180
 Ho_{2-x}Y_xCo₂, Curie temp., magnetisation and NMR, Co local environment effect 2-116071
 La-Co-Ni phase diagram, X-ray and metallographic study (*Chinese*) 2-93489
 La-Mn-Co(Ni), phase diagrams, isothermal sections at 400 and 600°C 2-83092
 LaB₃-Co system, wetting and contact reactions 2-77780
 LaCo₂, mag. props., PAC study 2-66954
 LaCo₂Si₂, cryst. struct., stability criteria (*German*) 2-65925
 Mn-Co layered mag. thin films, magnetisation and struct. 2-72302
 Nb-Co, residual influence of individual particles, powders and massive specimens 2-72288
 NdCo₃, thermal expansion and resist., anomalies obs. at spin-reorientation transition 2-76715
 NdSm_{1-x}Co_x, magnetisation curve anomalies meas., 4.2 to 100K (*Russian*) 2-92960
 Nd₂Y_{1-x}Co_x, magnetocrystalline anisotropy meas. (*Russian*) 2-98872
 Ni-Al-Co Li₂ cpds., melt quenching, improved mech. props. 2-116472
 Ni-Co, relation between damping capacity and magnetomech. props. 2-57393
 Ni-Co galvanic coatings, struct., corrosion resist. and mech. props. 2-57540
 Ni-Co-Cr, superalloy, wrought, struct., microchem. and mech. props., effect of Co 2-9438
 (Ni)₂Co-Cr-Al-V coatings, on IN-100 and Udimet 520 superalloys, microstruct. stability 2-99462
 Ni-Co-Cu, electrodeposition from citrate bath 2-116396
 Ni-Co-S melt, associated solution model extension, thermodynamic props. 2-71669
 Ni-Co-V(Cr), σ -phase, range of stability 2-62100
 Ni-Cr-Co, age-hardened, delayed discontinuous plastic flow, mechanism 2-93553
 Ni-Cr-Co, Mar M002, cast superalloy, creep and fracture, effect of hot isostatic pressing 2-88184
 Ni-Cr-Co, Mar M002, superalloy, fracture processes during creep in conventionally cast and directionally solidified material 2-88185
 Ni-Cr-Co, nimonic 90, He⁺ ion irrad., microhardness, microstruct., and blistering 2-98168
 Ni-Cr-Co-Al-Ta superalloy, air embrittlement, role of S 2-99541

cobalt alloys continued

- Ni-Cr-Co-W-Al-Ti-Nb-Hf system, refractory as-cast alloy, phase comp., struct. transformations, during high-temp. heating 2-99434
- Ni-Cr-Mo-Co-Fe(Al), aluminide coated, compatibility in simulated HTGR 2-113664
- Ni-Fe-Co magnetic alloys with stepwise hysteresis loop 2-61738
- Ni-W-Co-Cr-Al-Nb-C eutectic CoTaC-741 alloy autoradiographic investigation of Pm distrib. 2-105176
- Ni-Zr-Co-Cr-Al-Ti powders, rapidly solidified, shock wave consolidation 2-62089
- Pd-Co, anomalous Hall effect, cond. tensor (*Russian*) 2-77021
- Pd-Co, Pd based solid soln., diffusivity of H meas. 2-104058
- Pd-Co films, epitaxial, polycryst. and amorphous, transverse anisotropy meas. (*Russian*) 2-92975
- PrCo₂, ⁵⁹Co Knight shift anisotropy, spin echo study 2-110668
- PrCo₂, X-ray L_{II} absorpt. spectra of tetrahedral Pr (*Russian*) 2-99218
- Pr_{1-x}Y_xCo₂, Curie temp. magnetisation and NMR, Co local environment effect 2-116071
- Pt-Co, weakly ferromag. alloys, elastic diffuse neutron scatt. 2-98849
- Pu-Al-Co system, phase diagram and corrosion resist. props. of various phases 2-99397
- SiFeCo_{1-x}, ferromag., thermal expansion, mag. contribution meas. 2-86910
- SiFeCo_{1-x}, mag. props. and magnetovolume effects, thermal expansion 2-86909
- Sm-Co film, RF sputtered, phase stability and mag. props. 2-72301
- Sm-Co-Cu-Fe-Zr, permanent mag., struct., sintering and annealing effects (*Russian*) 2-88226
- Sm(Co, Cu, Fe, Zr)_{7.4} permanent magnet, precip. hardened, microstruct. 2-71657
- Sm(Co, Cu, Fe)_{6.8-7.2} cast hard mag. alloys, fine struct. after heat treatment 2-99465
- Sm₂(Co, Fe, Cu, Zr)₁₇ sintered permanent magnets, coercive force and struct., Sm content effect 2-72278
- Sm₂(Co, Fe, Cu, Zr)₁₇ permanent magnet, coercivity 2-72284
- Sm₂(Co, Mn)₁₇, domain struct. parameters 2-72252
- SmCo₅, abrupt magnetisation switching anisotropy (*Russian*) 2-104658
- SmCo₅ permanent magnet, coercivity 2-72284
- SmCo₅ permanent magnet, sintered, particle alignment factor, mag. determ. 2-72287
- SmCo₅ sintered permanent magnets, fine struct. and mag. props. (*Russian*) 2-104664
- SmCo₅-Sn(Fe), alloying addition effect on X-ray diffraction relative intensity (*Chinese*) 2-97993
- Sm₂Co₁₇, abrupt magnetisation switching anisotropy (*Russian*) 2-104658
- Sm₂Co₁₇, mag. props., effect of heat treatment and addition of Fe, Mn, V and Sn (*German*) 2-67575
- Sm₂Co₁₇, NMR study of hyperfine interactions 2-56974
- Sm₂Co_{17-x}, struct. and mag. props. 2-61741
- Sm₂Co₁₉, intergrowth and stacking faults, electron microscope obs. 2-115255
- Sm(Co_{0.65}Cu_{0.35})_x (x=4.5, 5.6, 6), coercive force, precipitation effects (*Russian*) 2-92961
- Sm(Co_{0.86}Cu_{0.14})₇, struct. and coercivity, heat treatment effects (*Russian*) 2-88227
- Sm₂(Co_{1-x}Fe_x)₁₇, magnetisation reversal and coercive force, comp. depend. 2-72279
- Sm(Co_{0.66}Fe_{0.2}Cu_{0.10}Zr_{0.06})_{7.4}, struct. transformations and coercive force meas. (*Russian*) 2-98913
- Sm(Co_{0.69}Fe_{0.2}Cu_{0.07}Zr_{0.02})_{7.221}, magnetic hardening 2-72283
- Sm₂(Co_{1-x}M_x)₁₇, M=Mn, Zr, struct. and mag. props. 2-72280
- Sm₂(Co_{1-x}T_x)₁₇ (T=V, Ti, Zr, Hf), mag. props. 2-72171
- Sm₂(Er,Gd)_{1-x}Co_x, mag. props. and mag. induction temp. depend. meas. (*Russian*) 2-98914
- Sn-Co, electron struct., X-ray and X-ray electron spectra obs. (*Russian*) 2-67153
- SnCo₅, mag. anisotropy due to strong J-mixing 2-56847
- TbCo_{2-x}Fe_xHe_y, lattice parameters and mag. characts. 2-56891
- Tb₂Co₇, mag. anisotropy, cryst. symmetry effects 2-92901
- Tb₂Co₇, elec. resist. accompanying metamag. phase transitions (*Russian*) 2-66820
- Tb₂Co₇ amorphous alloy, transition to spin glass state, magnetisation, mag. susceptibility meas. 2-61720
- Tb_{1-x}Dy_xCo₂, spin orientation, ⁵⁹Co NMR study 2-66950
- Tb₂(FeCo_{1-x})₇, pseudobinary intermetallic compound, mag. struct., neutron diffraction study (*Russian*) 2-98846
- Tb₂Y_{1-x}Co_x, magnetocrystalline anisotropy meas. (*Russian*) 2-98872
- Th-Fe(Co)(Ni), fast diffusing solutes, thermal friction studies 2-98326
- Ti-Co, amorphous, thermal stability study 2-104029
- TiFe_{0.5}Co_{0.5}, thermal expansion, mag. contrib., spontaneous magnetisation 2-115440
- TiFeCo_{1-x}, mag. props. and magnetovolume effects, thermal expansion 2-86909
- TmCo₂, ⁵⁹Co Knight shift anisotropy, spin echo study 2-110668
- U(Co_{1-x}Fe_x)₂ and Hf(Co_{1-x}Fe_x)₂, mag. ordering 2-98845
- WC-(TiC)-Co, appl. of carbide coatings 2-72883
- WC-Co, as-milled Co distrib. 2-111118
- WC-Co, deformed, defect struct. of WC 2-83166
- WC-Co, elastic deform. during compression, math. modelling 2-77863
- WC-Co, phase comp. determ. and regulation by two-freq. mag. method 2-67241
- WC-Co (10%) hardmetal, sintering, prep. and props. (*German*) 2-105114
- WC-Co (25 wt.%), martensitic transform., transverse rupture strength 2-105289
- WC-Co (6 wt.%), substoichiometric, η-phase particles 2-105290
- WC-Co cemented carbide, bend deform. up to 1273K 2-57432
- WC-Co cermet, surface modification by H ion erosion 2-93655
- WC-Co hard alloy components, endurance eval. for cyclic loading conditions 2-99634
- WC-Co sintered carbides, quality inspection instrument 2-83337
- WC-Co sphere impingement at oblique incidence for Al erosion 2-111324
- WC-Co VK6 hard metal, optimum conditions for hot pressing, characts. 2-67247
- WC-Co(Ni), cavitation erosion 2-88205
- WC-TiC-TaC-NbC-Co cemented carbide, C content effects 2-77939
- Y-Co, amorphous, mag. props. due to 3d magnetism 2-72269
- Y-Co alloy, Y₂Co₉ phase identification by thermomag. anal. 2-77292
- Y-Co amorphous powders, mech. grinding prep., struct. and mag. props. (*Russian*) 2-61742

cobalt alloys continued

- Y(Co,M)₅, (M=Ni, Cu, Al, Ti, V, Cr, Mn, Fe), metastable character, decomposition behaviour, precipitation 2-67342
- YCo₅, ⁵⁹Co Knight shift anisotropy, spin echo study 2-110668
- YCo₅, density of states and mag. moments, appl. of CPA and continued fraction method 2-66411
- Y₂Co₉, elec. resist., mag. susceptibility, and magnetisation, press. depend. 2-104590
- Y₂Co₉, mag. supercond., hybrid state, resist., magnetoresistance and AC susceptibility study 2-82571
- YCo₅H₂, NMR spin echo study 2-56972
- Y(Co_{1-x}M_x)₅, M=Ni, Cu, Al, Ti, V, Cr, Mn, Fe, struct. and mag. props. 2-91874
- Y₂(Co_{1-x}Mn_x)₁₇, ⁵⁹Co NMR, influence of easy direction of magnetisation 2-104740
- Y₂(Co_{1-x}Mn_x)₁₇, NMR spin echo study 2-93060
- Y₂(Co_{1-x}Mn_x)₁₇, Y transferred hyperfine fields, NMR study 2-66951
- Y(Fe_{1-x}Co_x)₂ crystal struct. deform., elastic props. (*Russian*) 2-92074
- YMn_{1-x}Co_x, mag. order occurrence, comp. depend. 2-82646
- Y₂-PrCo₅, magnetisation and magnetocrystalline anisotropy meas. 2-61706
- Y₂-SmCo₅, magnetisation and magnetocrystalline anisotropy meas. 2-61706
- Zr-Co, amorphous, thermal stability study 2-104029
- Zr-Co, melt spun alloys, struct. and supercond. props., X-ray diffraction study 2-87437
- Zr_{1-x}Co_x, crystallisation and struct. transition, X-ray and thermal anal. 2-109677
- Zr(Fe_{0.3}Co_{0.68})₇, acoustic study of elastic behaviour, temp. and mag. field effects 2-56065

cobalt compounds

see also cobalt alloys

- borides, RCo₂B₆, new, with rhombohedral SrNi₂B₆ type struct. (*Ukrainian*) 2-65946
- DC permanent magnet motors, new high energy permanent magnets props. related to DC motor parameters 2-77319
- naphthenate, thermo-electret form., surface charge 2-61819
- oxides with anodic coloration, electrochromic materials and displays review 2-77487
- salicylato complex, mag. susceptibility, cond., thermal and chemical anal. 2-86639
- trans-[(NH₃)₄(CN)₂]⁺⁺, vibr. fine struct. of polarised absorpt. band 2-72471
- Al₂O₃-ZrO₂-CoO₂ refractories, thermal shock resist., CoO₂ effect 2-93623
- Ba₂CoFeF₉, cryst. struct., cationic ordering, X-ray diffraction study (*French*) 2-86646
- Co₂Si₂O₆, cryst. struct., net atomic charges and electron density distrib., X-ray diffraction study 2-91935
- CoO-SiO₂-CoO melt, viscosity and elec. cond. (*Japanese*) 2-76720
- Co complex, 2-fluoro- and 4-fluoro-2-nitroaniline cobalt(II), mag. moments, IR and visible study 2-93203
- Co complex, Co₂(CO)₈, where L=ethyne, propyne and butyne, electronic struct., CNDO-2 calcs. 2-96455
- Co complex, Co(acac)₃, cryst. field splitting, UV absorpt. study 2-67072
- Co complex, di(p-nitrobenzoate)tetraquocobalt(II) dihydrate, cryst. and mol. struct. 2-98032
- Co complex, N,N'-ethylenebis (acetylacetonatimato) CoII, ENDOR and double ENDOR expt., hyperfine tensors 2-104744
- Co complex, thiourea and diphenylthiourea based, K absorption edge shifts 2-62016
- Co complex, tris(thiosemicarbazide)cobalt(III)chlorides, geometric isomer cryst. struct. 2-98067
- Co complexes, Co(III)/Co(II) complexes with o-phenanthroline and related ligands, redox couples for electrochem. energy storage 2-57620
- Co complexes, Co(II)-8-quinolines, dihydrates and adducts, IR absorpt. spectra 2-110866
- Co complexes, low spin Co (III) porphyrins, bond lengths, EXAFS obs. 2-85689
- Co complexes [Co(C₅H₅NO)₆][CoCl₄] and [Co(C₅H₅NO)₆][ZnCl₄], bimetallic, two mag. subsystems, sp. ht. and susceptibility meas. 2-66825
- Co II complex, Co(4-cyanopyridine N-oxide)₂ (NCS)₂, struct., vibr., mag. moments, IR study 2-77518
- Co II halide, 2TMPO complexes, IR spectra, band assignments 2-113988
- Co-Ge-Te, phase equilibrium cross-sections 2-72679
- Co-Ge-Te, physicochemical reaction, equilibria and cross-sections 2-72680
- CoAl₂O₄, IR and Raman spectra and lattice vibrs. 2-57074
- CoAs₂, far IR reflection spectra meas. and dielec. function and lattice dynamics calc. 2-110855
- CoBr₂, cryst. field splitting, UV absorpt. study 2-67072
- CoBr₂, lattice and mag. vibr. study 2-86803
- CoBr₂, trigonal cpd., mag. excitations 2-87485
- CoBr₂·6H₂O, thermal cond., mag. field depend., 1.5 to 30K 2-82043
- CoCO₃, antiferromag., cryst. growth and mag. props. 2-66792
- CoCo₂Mn²⁺, interactions between magnons and impurity excitations 2-98858
- Co₂(CO)₈, thermal decomposition, prep. of conducting Co film on glass substrate 2-111085
- Co₂(CO)₈(μ₂-CH), CH fragment orientation calc., implications for metal surfaces 2-108373
- CoCl₃, anhydrous single crystals, in-situ purification and Bridgman growth 2-111060
- CoCl₃, cryst. field splitting, UV absorpt. study 2-67072
- CoCl₃, trigonal cpd., mag. excitations 2-87485
- CoCl₂-graphite intercalation compounds, mag. phases 2-56863
- CoCl₄, energy levels, INDO MO calcs. 2-85550
- CoCl₂·6H₂O and H₃BO₃, electrolyte for Co coating WC particles 2-83261
- CoCo₂¹⁰O₄, IR and Raman spectra and lattice vibrs. 2-57074
- CoCr₂S₂Fe²⁺, impurity Jahn-Teller effect, phase transition, mol. field theory 2-61418
- Co_{0.7}Cu_{0.3}Cr₂S₄-Se₂, ferrimag. semicond., elec. cond. and thermoelec. coeff. meas. 2-115763
- CoF₂, cryst. field splitting, UV absorpt. study 2-67072
- CoF₂, far-IR reflectivity of optical magnons 2-98864
- CoF₂, noncollinear state, magneto-optical study (*Russian*) 2-61883
- CoF₂Mn²⁺, interactions between magnons and impurity excitations 2-98858

cobalt compounds continued

- CoFe₂O₄, In₂O₃, In³⁺ cation distrib., mag. props. 2-98868
 CoFe₂O₄, bonding, EXAFS study 2-99226
 CoFe₂O₄, ferrite, valence states, NMR study 2-110667
 CoFe₂O₄, single cryst., ellipsometric and magneto-optical study 2-61880
 CoFe₂O₄-P₂O₅, amorphous cpd., prep. and mag. props. 2-61735
 CoFe₂O₄-O₂, ⁵⁷Fe Mossbauer study 2-77428
 CoFe₂O₄-S, electrical resistance, time depend., α -phase transition (German) 2-92626
 Co_{1-x}Fe_xSi, elec. props. and thermal cond. 2-82366
 Co_{1-x}Fe_xTiO₃, competing mag. orderings, Mossbauer and neutron diff. study 2-66777
 Co₂Ge-GeTe eutectic, microstructure and mech. props. meas., thermocouples appl. 2-86890
 Co(II) complex, N,N'-ethylenebis(acetylacetonatiminato)Co(II) EPR/ENDOR and semiempirical calcs. study 2-116089
 CoK₂(SO₄)₂·6H₂O·Mn, phase transition effects in EPR 2-56915
 Co₂Mn₂F₂, mag. excitation spectrum rearrangement (Russian) 2-61772
 Co₂Mn_{1-x-y}Fe_xO₄, hyperfine interactions, Mossbauer study 2-72393
 Co₂Mn_{1-x-y}Fe_xO₄, solid solns., Zeeman spectra, Mossbauer study 2-61792
 CoMn₂O₄, cation distribution, X-ray diff. study 2-60958
 Co₂MoS₈, superconductive props. 2-66689
 Co(NH₃)₆³⁺-Co(NH₃)₆²⁺, electron transfer reactions, quantum effects 2-75411
 Co(NH₃)₆(SO₄)₂·6H₂O, cryst. growth from aq. soln., mag. field effect 2-109712
 Co_{0.7}Na_{0.3}PtO₃, non-stoichiometric, anal. of internal struct. distortions, neutron diff. study 2-103697
 Co₂Ni_{1-x}MnGe_x, mag. phase diagram, antiferromag.-ferromagnetic transition, neutron diff. study 2-72206
 Co₂Ni_{1-x}S_x, phase diagram in Ni-rich region, Hubbard model 2-66816
 Co₂Ni₂Si₂, elec. props. and thermal cond. 2-82366
 Co₂Ni_{0.6}-Zn_{0.4}Fe₂O₄, magnetostriiction meas. 2-87568
 CoO, ⁶⁰Co tracer diffusivity 2-82018
 CoO, charge transport, lattice defects 2-104401
 CoO, creep and point defects, O diffusion 2-109893
 CoO, lattice dynamics, three-body force shell and deform. dipole model effects 2-56114
 CoO, undoped and Cr doped, segregation and near surface diffusion 2-76682
 CoO-Al₂O₃-SiO₂ glass, high temp. susceptibility and paramag. Curie temp. study 2-72168
 Co_{1-x}O, defect diffusion in single- and poly-crystals 2-110047
 Co₃O₄, elec. cond., crit. behavior near antiferromag. phase transition 2-98648
 Co₃O₄ electrodes for high temp. cells, electrochemical behaviour 2-67849
 Co₃O₄, heat capacity and thermodynamic props., 5 to 307K, mag. transition 2-81978
 Co₃O₄ powder, adsorbed Ar layer, study by surface differential diff. meas. 2-82124
 Co₃O₄-CoO, spray pyrolysed Co black, high temp. selective absorber 2-67891
 CoP₃, far IR reflection spectra meas. and dielec. function and lattice dynamics calc. 2-110855
 CoS₂, pyrite-type ferromag., obs. of strong IR magneto-optical effect 2-116157
 CoS₂ single cryst., ferromagnetic and paramagnetic resonance 2-116066
 CoS₂·7H₂O and H₃BO₃, electrolyte for Co coating WC particles 2-83261
 Co(S,Se_{1-x})₂, metamagnetic transition, mag. props. 2-92904
 CoSb₃, far IR reflection spectra meas. and dielec. function and lattice dynamics calc. 2-110855
 CoSe₂, thermal expansion, mag. susceptibility, spin density fluctuations 2-66262
 CoSi, elec. props. and thermal cond. 2-82366
 CoSi, extreme UV valence band photoemission 2-111022
 CoSi-based material, figure of merit determ. 2-98679
 CoSi₂ epitaxial films, Ar-ion implanted, elec. and struct. props. 2-87413
 CoSi₂ epitaxial films Si substrates, characterisation by ion channelling and backscattering techniques 2-56403
 CoSi₂-Si interface, lattice imaging 2-115609
 CoSi₂-Si system, epitaxy, effects of nucleation and growth 2-115610
 CoSi₂-Si(111), MBE growth, Rutherford backscattering, TEM and LEED studies 2-66385
 CoSiF₆·6H₂O, anomalous dielec. props. near transition temp. 2-99018
 CoSiF₆·6H₂O, uniaxial press. effect on struct. phase transition, mag. anisotropy study 2-66196
 Co₃U₂O₈, cryst. struct. and struct. modification, X-ray diff. study (French) 2-115200
 CoUS₃, mag. props. and struct. (French) 2-72143
 Co₂Zn_{1-x}Fe_xO₄, Mossbauer spectra, isomer shifts, quadrupole coupling consts. and effective mag. fields calc. 2-82755
⁵⁷CoCl₂, frozen aq. soln., electron capture, Auger cascades, Mossbauer study 2-87644
⁵⁷CoCl₂, frozen aq. soln., electron capture after-effects, Mossbauer study 2-104768
 Co(III) complex, vibronic lifetimes, red shift, Raman spectra 2-75294
 CsMg_{1-x}Co_xCl₃, disordered 1D antiferromag., Raman scatt. from Co²⁺ excitations 2-67039
 DyFe₂-Co₂O₃, magnetoelasticity near mag. transitions (Russian) 2-98925
 (Fe,Co)Cl₂, anhydrous single crystals, in-situ purification and Bridgman growth 2-111060
 (Fe,Co)Si_{1-x} solid solns., Mossbauer effect study of mag. behaviour 2-61797
 Fe_{1-x}Co_xCl₂, Raman study of excitations 2-72483
 (Fe_{1-x}Co_x)₂O₄, ferrites, thermopower-composition depend. 2-61499
 Fe_{1-x}Co_xGe₂, 0 ≤ x ≤ 0.05, selective etching on dislocations 2-86669
 Fe_{1-x}Co_xO, mag. props. 2-104592
 (Fe_{1-x}Co_x)₂Se₈, mag. easy-axis transition, magnetisation and mag. torque study 2-66810
 Fe₂O₃-MgO-MnO-CoO (41, 3, 1 mol.%) ferrite film, thermal and thermomag. treatment 2-72294
 GdCoSi, synthesis, mag. props. and struct., X-ray and mag. torsion balance anal. 2-72176
 Ge_{1-x}Co_xTe solid solutions, thermoelectric props. 2-98680
 LaNi_{1-x}Co_xO₃, magnetic props., review (Japanese) 2-66870
 La_{1-x}Sr_xCoO₃, X=0.2 to 1.0, elec. cond., influence of prep. and comp. 2-87257

cobalt compounds continued

- MgFe₂O₄-CoFe₂O₄ mixed ferrite, initial susceptibility, coercive force, mag. domain behaviour 2-116030
 (Mn_{1-x}Co_x)₂(PO₄)₂, cryst. struct. and homogeneity ranges, X-ray diff. study 2-115195
 Na₂O-SiO₂-CoO melt, viscosity and elec. cond. (Japanese) 2-76720
 NdCo₂H₁₁, ferromag., magnetisation, H₂ press. and comp. depend. meas. 2-82642
 PuCoCl₂, ternary compound struct., X-ray diff. anal. 2-102040
 RbCl:CoCl₂, heavily doped crystals, Co precip., elec. cond. studies 2-56201
 Rb₂CoF₆, magnon Raman scatt., AFMR 2-72356
 Rb₂CoF₆, two-dimensional Ising system, dynamic crit. neutron scatt. study 2-104643
 SeCo₂H₃, Laves phase, thermal stability, H sorption effects of U and Ti doping 2-87014
 SiO₂-Na₂O-CoO-V₂O₅ glass, Co²⁺ spin-lattice relax. by V⁴⁺ EPR study 2-72335
 Sm-Co permanent magnets, prep. by liq. phase sintering (Chinese) 2-62088
 So₂Si, ferromagnetic, radioactive ³¹Si marker study 2-115472
 Yb₂O₃-Fe₂O₃-CoO, phase diagrams, quenching method X-ray study 2-76639
 Zn_{0.85}Co_{0.15}Fe₂O₄, mag. struct., neutron diff. and Mossbauer study 2-66775
 ZnO:CoO, enhancement of elec. cond. by doping 2-98643
 ZnO-Bi₂O₃-CoO-MnO-Sb₂O₃, ceramic, influence of comp. on dielectric losses 2-87660
 ZrCo₂Si₂, magnetic susceptibility and electrophys. props. (Russian) 2-104575

cochlea see ear**Cockcroft Walton rectifiers see voltage multipliers****code converters**

- see also codes; information theory
 multidimensional sensor number-code converter with data selection and compression 2-85469

codes

- see also encoding
 predictive coding, appln. in quality improvement of synthesized speech 2-75788
 reconnaissance by photographic imagery, using code block 2-74532

coding see encoding**coding errors**

- see also error correction
 digital high frequency radiocommunications, applications of microprocessors 2-73781
 reconnaissance by photographic imagery, using code block 2-74532

coefficient of thermal expansion see thermal expansion**coercive force****see also magnetic hysteresis**

- Barkhausen coercivity, domain wall proving numerical model 2-92964
 blocking temps., field depend., coercive force data 2-58039
 domain wall pinning, coercive force theory 2-72281
 domain wall pinning, theory 2-66864
 ferromagnet, Barkhausen coercivity, domain wall motion 2-82639
 garnets, LPE growth and defects, review 2-82168
 magnetic bubble films, AC susceptibility technique for characterisation 2-72314
 Mumetal film, RF sputtered, mag. props. and effect of deposition conditions 2-56899
 Permalloy film, RF sputtered, mag. props. and effect of deposition conditions 2-56899
 Permalloy-type materials, soft mag. props., appls. in electronic ultravacuum equipment 2-69299
 rare earth alloys, R_{0.4}Fe_{0.6} (R=Pr, Sm, Gd, Tb, Er), melt-spun coercivity, quench rate depend. 2-72285
 rare earth-Co magnets, demagnetization curves, 300 to 1000K 2-72293
 soft magnetic materials, compact, mag. props. and appls. in instruments and devices 2-82653
 steel, alloy, roll, heat treatment influence on struct. and props. 2-67393
 steel, high Si, ribbons, roller quenched, mag. props., pot. core material of elec. machines and power transformers 2-87522
 steel, inspection of products with little variation in coercive force 2-93737
 steel, low Si electrical, mag. ageing characts., coercive force enhancement 2-116034
 steel, Si-Al bearing electrical, internal oxidation and mag. props., annealing conditions influence 2-72724
 steel transformer plates, mag. props., rapid cooling effects (Russian) 2-104666
 TGS, ferroelectric coercive force, temp. depend. near transition point 2-82791
 titanomagnetite grains in deep-sea basalts, low temp. mag. hysteresis rel. to domain state and coercivity 2-78642
 Al-Ni-Co-Cu-Ti, Alnico 8 alloy, α - γ transformation, α , phase precipitation, coercive force study 2-91858
 Co sputtered film, high coercivity and hysteresis loop squareness, mag. props. 2-82666
 Co-Fe-Cu-Hf-Sm, permanent magnet, microstruct., SEM study 2-92224
 Co-Fe-Cu-Zr-Sm-(Ti), permanent magnet, microstruct., SEM study 2-92224
 Co-Ni, sputtered film, high coercivity and hysteresis loop squareness, mag. props. 2-82666
 Co₈₈Ni₁₀Fe₂Si₁₁B₁₆, amorphous, annealing effects and short range ordering 2-82588
 Co₈₈Ni₁₀Fe₂Si₁₁B₁₆, surface conditions influence in mag. props. 2-82593
 Co₈₈Ni₁₀Fe₂Si₁₁B₁₆, amorphous ferromag. alloys, anal. of coercivity 2-87538
 Cu-Co dilute alloy powders, mag. characts. scatter 2-72289
 Cu-Mn-Al, exchange anisotropy, hysteresis loops and coercive force study 2-66866
 Dy(Fe_{1-x}Ga_x)₂, mag. props. and Mossbauer spectra, 4.2 to 293K (Russian) 2-104657
 Fe acicular particles, mag. props. and morphology, heat treatment effects 2-73728
 Fe, high purity mag. and magnetomechanical props., influence of grain size 2-87565
 Fe, magnetic domain wall motion, wall-defect interactions, mag. meas. 2-116028

coercive force continued

- Fe-B metallic glasses, rare earth additives, mag. props. study 2-87498
 Fe-Bi-Si metallic glass, form. and mag. props. 2-103648
 Fe-Co powder, form., struct., and mag. props., electrolysis conditions effect 2-83063
 Fe-Co-V, Vic alloy-2, phase and struct. transitions, mag. props. (Russian) 2-61714
 Fe-Co-W semihard mag. alloys for remanent reed switch appl. 2-82626
 Fe-Cr-Co permanent magnet alloys, coercivity mechanism obs. 2-92971
 Fe-Cr-Co-Mo-Ti (24, 15, 2, 0.5 wt.%), magneto alloy, machinable, microstruct. and props. (Chinese) 2-72261
 Fe-Cr-Co-Nb-Al alloy, high-coercivity, microstruct. rel. to mag. props. 2-111333
 Fe-Cr-Co-W, mag. props. and cryst. struct. (Russian) 2-92970
 Fe-garnet films, hard-stripe domains, investig. 2-104673
 Fe-Ni-Al-Co-Cu-Ti, thermomag. treatment, struct. form. and mag. props. 2-62152
 Fe-Ni-B based amorphous ferromags., aging effects on mag. props. 2-98909
 Fe-Ni-NbC, phase equilb., struct., mag. props. and hardness (Russian) 2-67291
 Fe-Si, grain orientated laminations, coercivity meas. 2-82647
 Fe-Si, oxide layer composition, influence on mag. props. 2-56893
 Fe-Si orientated alloys with residual S, tensile stress effect on mag. props. 2-72325
 Fe-Si-Al Sendust ribbon, rapidly quenched, annealing effect on coercive force 2-72273
 Fe-Zr amorphous alloy, ferromag-spin glass transition, magnetisation study 2-72220
 Fe₈₀B₂₀, amorphous, aging effects on mag. props. 2-98909
 Fe₈₀B₂₀, Metglasses, thermomagnetic treatments 2-88110
 FeCo and Fe_{0.5}Co_{0.5}Cr_{0.5} films, polycryst., subjected to X-irrad., magnetisation (Russian) 2-66876
 Fe_{0.988-1}Mn_{0.012}Si_{0.012} system, Mossbauer and mag. studies 2-82761
 Fe₇₈Mo₂₂B₁₀, Metglasses, thermomagnetic treatments 2-88110
 Fe₄₀Ni₄₀B₂₀, surface conditions influence in mag. props. 2-82593
 Fe₆₀Ni₄₀B₁₀ amorphous alloys, influence of heating on mag. props. 2-87533
 (Fe_{1-x}Ni_x)₇₈₋₇₉Cr₂Si₂₀B₁₂, glass, magnetisation, crystn. and microstruct. 2-77322
 Fe₄₀Ni₄₀P₁₄B₆, amorphous ferromag. alloys, anal. of coercivity 2-87538
 Fe₄₀Ni₄₀P₁₄B₆, Metglasses, thermomagnetic treatments 2-88110
 FeO_x, bertholide type, reactive sputtering prep., struct. and props. 2-82158
 γ-Fe₂O₃, sputtered thin film disks, high density recording characts. 2-77335
 Fe₃O₄ and γ-Fe₂O₃ acicular particles, prep. and mag. props. 2-72286
 Fe₃O₄, magnetite, multidomain powders magnetostrictive control of coercive force 2-100374
 FeSi sheets, effect of stacking on coercivity 2-56887
 MgFe₂O₄-CoFe₂O₄ mixed ferrite, initial susceptibility, coercive force, mag. domain behaviour 2-116030
 Mn_{0.4}Al_{0.6}C, magnetic viscosity 2-72291
 MnBi thin films, polycryst., with perpendicular anisotropy, domain wall coercivity 2-72310
 Nd-Fe alloys, melt-spun, mag. hardening and crystn. props. 2-88228
 NdH₂, ferromagnetism, susceptibility and magnetisation meas. 2-72159
 Ni, cold rolled, recovery and recrystallisation in magnetic fields 2-62142
 Pr-Fe alloys, melt-spun, mag. hardening and crystn. props. 2-88228
 (PrRd₈₀Ga₂₀)_{100-x}Fe_x metallic glasses, mag., Mossbauer, and struct. studies 2-72270
 R₂(Co-M)₁₇ (R=rare earth), residual induction, mag. props., permanent magnets appl. 2-82662
 Sm-Co film, RF sputtered, phase stability and mag. props. 2-72301
 Sm-Co permanent magnets, prep. by liq. phase sintering (Chinese) 2-62088
 Sm₂(Co,Cu,Zr,Fe)₁₇, coercive force due to domain wall pinning, theory 2-66864
 Sm₂(Co,Fe,Cu,Zr)₁₇ sintered permanent magnets, coercive force and struct., Sm content effect 2-72278
 Sm₂(Co, Fe, Cu, Zr)₁₇ permanent magnet, coercivity 2-72284
 SmCo₅ permanent magnet, coercivity 2-72284
 SmCo₅ sintered permanent magnets, fine struct. and mag. props. (Russian) 2-104664
 Sm₂Co₁₇, mag. props., effect of heat treatment and addition of Fe, Mn, V and Sn (German) 2-67575
 Sm(Co_{0.85}Cu_{0.15})₁₇ (x=4.5, 5.6, 6), coercive force, precipitation effects (Russian) 2-92961
 Sm(Co_{0.86}Cu_{0.14})₁₇, struct. and coercivity, heat treatment effects (Russian) 2-88227
 Sm₂(Co_{1-x}Fe_x)₁₇, magnetisation reversal and coercive force, comp. depend. 2-72279
 Sm(Co_{0.88}Fe_{0.21}Cu_{0.10}Zr_{0.06})_{7.4}, struct. transformations and coercive force meas. (Russian) 2-98913
 Sm(Co_{0.89}Fe_{0.22}Cu_{0.07}Zr_{0.02})_{7.22}, magnetic hardening 2-72283
 Sm₂(Co_{1-x}M_x)₁₇, M=Mn, Zr, struct. and mag. props. 2-72280
 Tb-Fe amorphous films, mag. props., sputtering induced recrystn. effect 2-72300
 Tb,Co₃ amorphous alloy, transition to spin glass state, magnetisation, mag. susceptibility meas. 2-61720
 WC-TiC-TaC-NbC-O cemented carbide, C content effects 2-77939
 Y(Co_{1-x}M_x)₅, M=Ni, Cu, Al, Ti, V, Cr, Mn, Fe, struct. and mag. props. 2-91874
 Y_{2.6}Sm_{0.4}Ga₁Fe_{3.9}O₁₂ epitaxial bubble garnet film, mag. props. 2-87561

coercivity see coercive force

coexistent superconductors see magnetic superconductors

coherence

- see also light coherence
 coherent properties and focusing of wave beams reflected in a turbulent medium 2-90783
 diamond, electron irrad., coherent bremsstrahlung and channeling radiation meas. 2-77614
 electron microdiffraction, coherent convergent beam technique 2-65812
 NQR coherent relaxometer, transceiver 2-89764
 underwater coherent sound source, radiation field anal. 2-60278
 US coherent shear waves, laser excitation and stimulated Brillouin scatt., theory 2-114365
 X-ray incoherent dynamic diffr. from randomly disordered crystals, mutual coherence formalism 2-76237

coherence continued

- X-ray source coherence properties, synchrotron radiation spatial coherence 2-60002
 X-ray sources coherent properties, partially coherent X-radiation in crystals, dynamic scatt. 2-58988
coherence distance see coherence length
coherence length
 A15 superconductors, atomic disorder rel. to superconductivity 2-56769
 normal metal in proximity system, coherence length 2-98823
 superconducting alloys, Ginzburg-Landau functional calc. 2-92815
 superconducting ring struct., higher order crit. fields, nonlinear Ginzburg-Landau eqns. 2-77242
 (TMTSF)₂ClO₄, supercond. transition in mag. fields 2-56758
 He-A, rotating, vortex lines, analytic and singular, order parameters and energies 2-56289
 He superfluid interferometer, Sagnac-Josephson interference, inertia 2-71750
 Nb₃Ge films, critical mag. field temp. depend. (Russian) 2-61673
 TiN_{0.5}O_{0.5}, small particles and granular samples, superconductivity 2-82516

coherent accelerators see collective accelerators

coherent antiStokes Raman scattering

- acetylene, pulsed mol. beam, rot. temp., CARS 2-96582
 biomolecules investig. by CARS 2-78292
 combustion media diagnostics, thermometry and conc. meas., CARS appl. 2-88359
 combustion systems, temp. and species distrib., CARS obs. 2-107413
 condensed phase, scanning algorithm 2-95476
 correlation functions, band profiles, Laplace transforms 2-69259
 droplets in Mie size range, CARS 2-75629
 dynamic Stark effect occurrence in reson. CARS spectroscopy of homogeneous medium 2-90975
 ethylene, pulsed mol. beam, rot. temp., CARS 2-96582
 ethylene-Ar clusters, in supersonic mol. beam, CARS 2-80861
 experimental profiles, interpretation model 2-95478
 folding BOXCARs, scanning algorithm 2-95476
 gas phase, apps. 2-107413
 IRS- and CARS-spectroscopic Raman detect. limit comparison, excitation near mol. one-photon reson. 2-74513
 lasers in chemistry, conf., New York, USA, (August 1982) 2-107005
 methane, pulsed and CW mol. beam CARS spectroscopy 2-59812
 methane diffusion flame, comparison between CARS and corrected thermocouple temp. meas. 2-107322
 methane in underexpanded supersonic jet, high-resolution CW CARS 2-108530
 microscope, CARS based, using picosecond dye lasers, biological appl. 2-112971
 molecular gases, coherent anti-Stokes Raman spectroscopy, saturation and secondary Stokes effects 2-60153
 naphthalene, cryst., vibr. dephasing, temp. depend., picosec. CARS obs. 2-110827
 nonlinear spectroscopy, steady-state, third-order, in inhomogeneous media 2-60167
 photoatomic molecules, reson. Raman and CARS effect of inhomogeneous broadening on absorption spectra and excitation profiles 2-85672
 polarisation sensitive CARS and Raman-induced Kerr effect as probe of Raman optical activity 2-58907
 pulsed molecular beam, CARS, saturation broadening 2-96575
 pump fluctuation effect on lineshapes 2-86048
 rotational Raman intensity-correction factors due to vibr. anharmonicity, effect on temp. meas. 2-108531
 saturation effect in CARS 2-65306
 scanning CARS microscope construction 2-97111
 n-trimethylene oxide, ring puckering vibr., high-resolution CARS 2-64986
 unifying degenerate four-wave mixing and coherent anti-Stokes Raman scattering in rare media 2-65297
 CaCO₃, calcite, high order CARS and coherent Stokes Raman spectra (Chinese) 2-108948
 CaCO₃, high order CARS and CSRS spectroscopy 2-60169
 Cl₂, atomic, point detect. using CARS 2-93845
 F₂, improved rotational constants using coherent anti-Stokes Raman spectroscopy of vibr. Q branch 2-85671
 H₂O vapour, CARS spectrum, temp. depend. meas. 2-85676
 N₂, microwave-excited, CARS meas. of vibr. temp. at low press. 2-102481
 N₂, molecular vibration levels population, plasma neutrals temp. meas. in microwave discharge, CARS 2-114006
 SF₆, resonance excited vibr. spectrum, CARS method study (Russian) 2-70249
 TiO₂, rutile, third-order nonlinear susceptibility tensor component and dispersion determ. by coherent Raman ellipsometry 2-104876

coherent optical transients see optical coherent transients

coherent potential approximation see CPA calculations

cohesive energy see binding energy

coils

- see also cores; inductors; solenoids; windings
 12 T yu-yang magnets design 2-75038
 Argonne Pulsed Cable Test Facility for the development of superconducting ohmic heating coils 2-85360
 cryostable low loss cable for 3.8 MJ pulsed supercond. coil 2-75036
 EBT-P development coils, design and construction 2-69974
 FED, PF coil replacement considerations 2-80300
 FED, poloidal field coil system 2-69967
 FED magnets, structural design procedures 2-69973
 FED superconducting coils protection system 2-80318
 ferrite-core, inductance meas. using direct-reading instrument 2-89744
 fusion reactor external hybrid poloidal coil system anal. 2-64676
 high frequency Rogowski coil response characteristics 2-71265
 induced current time depend. in spatial coil moving periodically in air gap (German) 2-96795
 INTOR, superconducting poloidal field coils 2-80261
 large-current conductor development for superconducting poloidal coils 2-85365
 LCT, pool boiling superconducting coils 2-69975
 LCT protective dump switch tests 2-69954
 PF coil current sheets for circular section tori to produce specified internal fields 2-64675
 plane noninductive coil construction device 2-79615

coils continued

- RF coil designs for NMR zeugmatographic imaging 2-117053
- Ripple Reduction Poloidal Field Coils for Tokamak fusion reactors 2-64666
- S-1 Spheromak coil systems, engineering design and construction 2-69972
- stellarator, modular coils, optimisation techniques 2-109563
- superconducting 20 MJ induction coil for Tokamak poloidal field system 2-80234
- superconducting poloidal field coils for Tokamak reactors 2-80233
- TFTF poloidal field coils epoxy impregnation molding system 2-69927
- TFTR, epoxy impregnation system for Large Coil Program 2-69928
- TFTR, Rogowski coil and diamag. loop, design, fabrication and testing 2-80295
- TFTR coils, electrical insulation qualification tests 2-59533
- thermal design consideration of shields for levitated coils 2-69932
- Tokamak, coupled circuit transient current response 2-64674
- Tokamak superconducting coils, normal shield use to reduce transient field induced losses 2-64670
- Tokamak toroidal field coil casing, eddy current losses calc. 2-64677
- underwater coil receiver system for studying EM propagation 2-68511
- Cu stabiliser in supercond. magnet, radiation damage, review 2-80183
- Nb₃Sn conductor, coil performance test for advanced cluster test facility 2-69923
- NbTi compacted monolithic conductor, fabrication and performance 2-69925

coincidence circuits

- see also counters*
- high count rate gamma-ray spectroscopy, coincidence losses correction method 2-64745
- neutron counting, shift register coincidence unit 2-102351
- nonlocality propagation, four-coincidence expt. test 2-74252
- Positologica, positron computerised tomography dedicated to head studies, electronic system 2-100091
- positron emission tomography, coincidence time window, ring sampling, attenuation 2-57892
- ¹⁴⁴Ce, specific activity determ. by $4\pi\beta\text{-}\gamma$ coincidence method (Chinese) 2-59654
- Nal(Tl) coincidence method for ^{57,60}Co stock standardisation 2-59646
- Pb, L₁, L₂ and L₃ subshells, X-ray fluoresc. yields and Coster-Kronig transition probabilities 2-70114

cold-cathode tubes

- see also counting tubes; photomultipliers; phototubes*
- No entries

cold rolling

- alloy, ferromag., cold rolling induced mag. anisotropy use for cryst. defect analysis (Russian) 2-67574
- metallic glass, positron annihilation, electron irradi. and heat treatment effects 2-104992
- metals, thin sheets, cold rolling to foil 2-105188
- polypropylene, rolled, mech. props. rel. to structure 2-67377
- rheological properties of material effect on stress and strain states in rolling 2-99450
- steel, alloy, cold rolled, type 08, isothermal austenitization 2-105201
- steel, austenitic 304, diffusivity and solubility of H₂, electrochemical determ. (Japanese) 2-104064
- steel, austenitic ferritic, with low interstitial level, mech. and corrosion props. (Italian) 2-99563
- steel, C, Nb addition effect on tempering of undeformed lath martensite (Japanese) 2-57381
- steel, electric grade, isotropic with planar cubic texture, prod. by two-stage treatment, mag. charact. 2-67379
- steel, low C, C atom segregation, thermoelectric power and elec. cond. study (Japanese) 2-105155
- steel, low C, cold-rolled sheet, texture form. at initial crystn. 2-99439
- steel, low C, ferrite-martensite dual phase struct., Snoek and Snoek-Koster-like relaxations 2-83159
- steel, low C sheets, Mn and N effect on recrystallisation texture (Japanese) 2-105181
- steel, low-C, chem. capped, anomalous struct. layers form. 2-105185
- steel, martensite-ageing NVS-2, deform. and texture form. during cold rolling (Russian) 2-62139
- steel, mild, cold forming suitability 2-72718
- steel, Mn-Mo-Nb, pipeline, yielding behaviour 2-105256
- steel, stainless, ferrite struct., rolling, plastic deform., metallography study 2-57422
- steel lath martensite, deformed and undeformed, tempering process, effect of Nb additions 2-99454
- strip, cold rolled, optical surface inspection system with on-line signal processing (German) 2-72939
- temperature control, heat transfer dimensional analysis model applic. 2-99449
- Zircaloy-2, cold rolled, stress corrosion failure in methanol-HCl media, texture dependence 2-99579
- Al, deformation analysis using viscoplasticity 2-116461
- Al, rolled, penetration of shear texture 2-77841
- Al-Al₂O₃, dispersion strengthened, fatigue strength, effect of heat treatment temp. (Japanese) 2-93610
- Al-Mg, recrystn. after cold rolling, optical and electron microscopy study 2-88098
- Al-Mn, unhomogenized, recrystn. 2-83138
- Cu, recrystn. mechanisms, origin of cube texture 2-116456
- Cu, rolled, penetration of shear texture 2-77841
- Cu, rolled single crystals, shear band form., TEM study 2-99455
- Cu, single crystals, strain hardening at high strains and dynamic recovery 2-116457
- Cu, strain rate effect on mech. prop. changes at high strains 2-105184
- Cu-Be (2 wt.%), quenched and aged, struct. and props. after deform. to large strains 2-93569
- Cu-Be (2 wt.%) alloy strips, residual stress profiles along rolling direction, X-ray diffr. obs. 2-67367
- Cu-C steel multilayer composite, dislocation density and diffusion processes study by thermo-EMF method 2-67381
- Cu-Ni-Fe, superplasticity and form. of microduplex struct. (Japanese) 2-72769
- Cu-Ti, strength and ductility, 4 to 70K (Japanese) 2-105234
- Fe, fatigue crack growth, mechanism and kinetics 2-88191
- Fe-Ni (32 wt.%), plate martensite, deformation on cold rolling 2-57373
- Fe-Ni-C (24, 0.5 wt.%), plate martensite, deformation on cold rolling 2-57373

cold rolling continued

- Fe-Si, rolling rel. between strain in deform. zone and texture 2-72716
- Fe-Si (3 wt.%), primary recrystn. grain size, influence on secondary crystn. and texture (Russian) 2-116458
- Fe-Si (3 wt.%) alloy, cold rolling induced mag. anisotropy use for cryst. defect analysis (Russian) 2-67574
- Fe-V-C, cold rolled, containing carbides, recrystallisation 2-83137
- Mo, cold rolled, strain texture formation, dependence on orientations distrib. function (Russian) 2-99441
- Mo, cold rolled and annealed, dislocation struct., electron microscopy study 2-76450
- Mo wire, rolling and flattening to ribbon, electrostimulated deform. role 2-116465
- Ni, cold deformed, local cryst.-amorphous state phase change obs. 2-57374
- Ni, cold rolled, recovery and recrystallisation in magnetic fields 2-62142
- Ni-Ti (45 wt.%) plate, shape-memory effect, thermomechanical treatment influence (Russian) 2-72761
- Ti-Al-Mo-Zr-Sn-Si, metastable α' phase, struct. transformation on cold rolling, X-ray study (Russian) 2-99440
- Ti-Al-V alloy sheet, acoustic emission during deform., microstruct. influence, twin form. 2-88324
- Ti-Al-Zr-V-Mo-B sheet, elastic props. anisotropy and texture hardening (Russian) 2-116502
- Zr, radiation induced dimens. changes 2-103809

cold shortness *see* brittleness**cold working**

- see also bending; cold rolling; plastic deformation; slip; work hardening*
- Bordoni relaxation, internal friction due and microdeform. due to intrinsic props. of dislocation 2-77862
- cold pressure spot welding, topography of surfaces being joined 2-93525
- Inconel 600, SCC in NaOH, composition and heat treatment effects 2-77983
- MANGALLOY, elinvar type alloys, nonferromag., characts. (Japanese) 2-77881
- metal forming, rigid-plastic anal. using finite element method, formulation for finite deform. 2-105180
- metallic glass, cold drawing and intrinsic ductility 2-111201
- nylon 6 and 6,6, NH₃ plasticisation effect on cryst. state deform., NH₃ absorpt. extent and morphology 2-116506
- particle size and strain determ. from Fourier X-ray line shape anal. of single reflection 2-97846
- polyethylene terephthalate, deformation process instabilities in cold drawing 2-67372
- polymers, deformation process instabilities in cold drawing 2-67372
- residual stresses effect, cold-formed member behaviour under normal stresses (French) 2-111193
- solid with cold worked surface layer, Rayleigh wave propag. 2-62299
- steel, 3% Si, role of cold work on secondary recrystn. (Korean) 2-83134
- steel, austenitic, Ni-Mo, strength increase by $\gamma\text{-}\alpha'$ transition cycles during slow heating (Russian) 2-105225
- steel, austenitic stainless, 316, cold worked, 20%, tensile props. correl. 2-72714
- steel, austenitic stainless, 316, cold worked, Ti modified, tensile props., irradi. in high flux isotope reactor 2-72764
- steel, austenitic stainless, corrosion rate in boiling HNO₃, effect of cooling rate and plastic deform. 2-88264
- steel, austenitic stainless, depend. on thermomech. pretreatments 2-93607
- steel, austenitic stainless, irradiated in EBR-II and HFIR, swelling and microstruct./microchem. evolution 2-108110
- steel, austenitic stainless, neutron irradi., type 316, increased He content effect on void form. and solute segregation 2-109846
- steel, austenitic stainless, rapidly solidified, path A prime candidate alloy, neutron irradi., microstruct. 2-108112
- steel, austenitic stainless, structure, effect of cold working and annealing 2-67370
- steel, austenitic stainless 316, containing irradi. induced He, high temp. fatigue life 2-72801
- steel, austenitic stainless 316, fatigue crack propag. in vacuum and air 2-72803
- steel, austenitic stainless 316, rapidly solidified, high Ti stabilised, mech. props. and struct., irradi. effects 2-72765
- steel, C, cementite spheroidization 2-111212
- steel, cold forgeability, effect of microstruct. 2-99456
- steel, cold formability (French) 2-67383
- steel, high hardness, grain size effect on fracture toughness (Japanese) 2-77921
- steel, high-speed, hydroextruded, austenitic grain size 2-111197
- steel, low C, austenitization kinetics in intercrit. temp. interval, effect on struct. and props. (Russian) 2-62148
- steel, low C, cold forming, bendability, tensile props. and particle struct. 2-88128
- steel, low-C, influence of non-metallic inclusions on cold upsetability 2-67421
- steel, spheroidized type 1090, permeation, trapping and damage by hydrogen 2-116602
- steel, stainless, austenitic, cold worked and/or H charged, internal friction peaks 2-56086
- steel, stainless, neutron irradi. at 55°C, effect on mech. props. 2-69866
- steel, stainless, SUS 304 (Japanese) 2-67635
- steel wire rod, unalloyed, 0.8% C, behaviour in cold drawing (German) 2-72717
- Torbar steel reinforced concrete, cold worked ribbed reinforcing bar, fatigue, fracture mechanics approach 2-67494
- upsetting of circular cylinder, assessment of free surface strains and stresses 2-93733
- Ag-Pd alloy, equiatomic, metallurgical instabilities, SRO and elec. resist. anomalies 2-93490
- Ag₃Mg, ordered and disordered, cold-worked, internal friction and shear modulus meas. 2-116484
- Al, plastically deformed, lattice defect trapped at In impurities, PAC study 2-92022
- Al, pure, wire drawing 2-67364
- Al, recrystallised, grain vol. distrib. and grain growth, effect of prior cold work 2-99446
- Al-Cu (0.5 wt.%, 0.21 wt.%), cold-worked, low temp. internal friction peaks meas. 2-88125
- Al-Zn-Mg-Cu, recrystallised grain size, effect of heating rate 2-57371
- Co-Fe-Ni semihard mag. alloy, cold working effects on precipitate morphologies rel. to mag. hysteresis 2-92962

cold working continued

- Cu, cold worked, local struct. EXAFS study 2-60921
 Cu, creep under biaxial stress states, influence of prior cold work 2-67420
 Cu, wrought, engng. fatigue props. review 2-88161
 α -Cu-Al, DSC eval., energetics 2-83111
 Cu-Al (9.8-11 wt.%), dual-phase, struct.-prop. relationship, individual phases 2-77833
 Cu-Al (9.8-11 wt.%), dual-phase struct.-prop. relationship, alloy behaviour 2-77834
 Cu-Ni-Sn (9, 6 wt.%), combined recrystn. and precip. 2-77840
 Cu-Ni-Sn spinodal alloy, tensile props. improvements by two-phase heat treatment 2-116478
 α -Cu-Su-Al, anneal hardening (*Korean*) 2-116464
 Fe-Cr based alloys, damping capacity, mag. field, heat treatment and cold working effects 2-57393
 Fe-Cu wire reinforced Cu-Fe alloy, age hardening (*German*) 2-11192
 Fe-Mn-Al-C, nonequilib. ordered austenite wire fabrication by in-rotating-water spinning method, mech. props. 2-93532
 Fe-P-C amorphous wires, prod. by in-rotating-water spinning, mech. props. 2-57317
 Mo, cold-worked, deform. and slip behaviour, cryst. orientation effect 2-99502
 Mo, ion bombarded by 10 MeV $^4\text{He}^+$ ions, depth depend. of radiation hardening 2-88095
 Mo, neutron irradi., anneal hardening, influence of purity, cold work and alloying elements 2-103843
 Nb, Snoek effect, rel. to O impurity content, cold work and ageing (*French*) 2-67414
 Ni corrosion resistance, effect of plastic deformation (*German*) 2-88290
 Ni superalloy, creep life, effect of room temp. restrain and subsequent heat treatment 2-72833
 Ni-alloys, cast, grain boundary voids formation after cold-working and annealing 2-57375
 Ni-Cr-Fe-(Mo), long-life fatigue test results 2-62226
 ($\text{Ni}_{0.6}\text{Fe}_{0.4}$)_{0.89}V_{0.11}, substruct. develop. during cold working, neutron diffr. and microscopical obs. 2-83133
 Sn-Pb eutectic, superplastic behaviour in as-worked state 2-67442
 Ta, deformed, low temp. internal friction 2-72751
 Ta, Snoek effect, rel. to O impurity content, cold work and ageing (*French*) 2-67414
 V-Nb(Al), dil. alloys, radiation-induced defects, interaction with O 2-103840
 Zn-Al (22 wt.%), eutectoid, thermomech. treatment effect on superplasticity 2-105195
 Zr-Nb (2.5% wt.%), pressure tubes for CANDU-PHW, cold working, manufacture 2-90231

collections of physical data

- A=107, nuclear data sheets 2-101142
 A=113, nuclear data sheets, levels, transitions, J π 2-58559
 A=134, nuclear data sheets 2-101139
 A=185, nuclear data sheets 2-89477
 A=188, nuclear data sheets, levels, transitions, J π^* 2-58558
 A=189, nuclear data sheets 2-101140
 A=197, nuclear data sheets 2-89479
 A=210, nuclear data sheets 2-101143
 A=243, nuclear data sheets, levels, transitions, J π 2-58560
 A=244, nuclear data sheets 2-101141
 A=245, nuclear data sheets, levels, transitions, J π 2-58561
 A=247, nuclear data sheets, levels, transitions, J π 2-58562
 A=249-263 (A odd), nuclear data sheets 2-89478
 A=68, nuclear data sheets 2-89476
 A=78, nuclear data sheets, levels, transitions, J π 2-58557
 atomic energy level and Grotrian diagrams, VI to Cr XXIV, book 2-63757
 character table of D $_8$, C $_8$, and D $_{4d}$ single and double groups, Tisza isomorphism 2-63756
 cloud cover on global scale, methods for archiving data 2-63100
 compressible turbulent boundary layers, data compilation 2-81330
 cubic crystal structures, homogeneous frameworks, data collection 2-91854
 doubly even nuclei, transition strength B(E2) in yrast bands 2-69601
 earthquake damage catalogue (2000 BC to 1979 AD) 2-100270
 elastic electron scatt. of atoms and mols., cross section data compilation 2-54964
 elementary particle properties review 2-89481
 global volcanism, chronology and directory, book 2-84394
 hydrocarbons, critical temp., density and pressure parameters 2-103967
 ideal gas thermodynamic props. of some organic cpds. 2-94922
 inner-shell excitation and ionisation studies 2-58556
 1 X-ray satellite energies 2-79290
 light atoms and ions, cross section and rates for electron impact ionisation 2-101146
 marine science related activities, lists of annotated acronyms and abbreviations (book) 2-74178
 material property requirements for laser windows 2-60196
 medical physics data, book 2-112665
 metals, optical props., data collection 2-93138
 neutron dose depth distrib. and depth dose equivalent 2-108138
 northern PZT stars catalogue, compilation from meridian circle catalogues of 1950's (NPZT $_{11}$) 2-100758
 northern PZT stars catalogue (NPZT $_{7d}$), meridian circle obs. 2-100759
 NP 0532, Crab pulsar, pulse arrival times and periods, availability 2-84257
 NQR spectra database 2-107025
 nuclear data sheet, 1981 references 2-89480
 nuclear data sheets, May to Aug. 1981 references 2-89475
 nuclear data sheets, references Jan.-April, 1982 2-107728
 organic molecular crystals, mobilities 2-92622
 physics data handbook 2-58565
 polyolefins, diffusion of organic cpds., collection of kinetic data 2-107026
 polyoxides, heat capacity and other thermodynamic props. 2-74168
 polypropylene, heat capacity and other thermodynamic props. 2-74169
 proton energy range tables. 1 keV to 10 GeV 2-112663
 psychrometric tables, draft proposal for novel system 2-73714
 quantum chemical literature data-base, (book) 2-89482
 roothaan-Hartree-Fock atomic wave functions Slater basis-set expansions for Z=55-92 2-68976
 Sa-type galaxies, global props. from H I obs. 2-89366

collections of physical data continued

- screenless photolithographic images, plate flash and density range 2-58939
 stellar radiation, numerical tables of broadband linear polarisation from magnetised stellar atmospheres 2-112431
 stratospheric IR absorption spectra, atlas 2-73680
 unsteady turbulent boundary-layer data compilation 2-55555
 UV intrinsic colours of normal stars (06.5V-K3III) 2-101138
 vibrational contrib. to mol. dipole polarisabilities, data tables 2-94924
 volcanic explosive eruptions 2-62931
 X-ray interaction coeff., photoabsorpt., scatt. and reflection 2-107024
 (n,n), bound scattering lengths 2-79293
 NN scattering, phenomenological anal., data tables 2-101136
 CO $_2$, wave-number calibration tables, 500-900 cm $^{-1}$ region 2-113971
 Cl-like ions, electric dipole transition energies, wavelengths and oscillator strength for E1 transitions 2-79291
 Co, energy levels, Co I to Co XXVII 2-74171
 D $_2$ O, thermodynamic properties in SI units 2-74179
 D $_2$ O, thermodynamic props., eqns. of state, data tables 2-94920
 Fe I to XXVI, energy levels, data compilation 2-94925
 Fe-N, thermodynamics, kinetics and props., data collection 2-89474
 H bound in moderators, thermal neutron scatt. cross sections, data tables 2-101137
 H $_2$ +ion collisions, electron-capture and -loss cross section data compilation 2-79294
 H $_2$ O, wave-number calibration tables, 500-900 cm $^{-1}$ region 2-113971
 He-like ions, Z=6-20, Lyman- α and dielectronic satellite spectra 2-70167
 NaCl, aq. soln., volumetric props., data tables 2-94921
 O, mol., soln., lowest excited singlet state decay and reactions 2-74167
 QCS, wave-number calibration tables, 500-900 cm $^{-1}$ region 2-113971
 Y IV, spectrum and energy levels, 300-5000 Å 2-75210
- collective accelerators**
 cold cathode Hall plasma accelerator 2-59570
 EAGLE, 2 TW pulsed power generator 2-90322
 heavy ion collective accelerator thermal-electrical problems (*German*) 2-113766
 ion, collective acceleration by relativistic electron beams (*Russian*) 2-54693
 ion acceleration mech. by nonmagnetised high current electron beam 2-85463
 magnetically confined plasma ring type, appls. 2-54694
 Pulselac, high intensity accelerators for ion beam fusion 2-90324
 review of collective field accelerators 2-113765
 SEPAC Spacelab-1 expts. with particle accelerators, plasma accelerator and charger (*Japanese*) 2-84062
 two-stage axial ion accelerator, with anode layer, working conditions optimisation 2-59569
 Ba ions, collective acceleration in preformed anode plasma 2-90320
- collective states, nuclear** see *nuclear collective states and giant resonances*
- collimators (optical)** see *optical collimators*
- collision processes**
 see also *atom-surface impact*; *atomic inelastic collisions*; *charge exchange*; *chemical reactions*; *elastic scattering of atoms and molecules*; *elastic scattering of electrons by atoms and molecules*; *electron attachment*; *electron impact*; *elementary particle interactions*; *intermolecular mechanics*; *ion-surface impact*; *molecular inelastic collisions*; *molecule-surface impact*; *negative ions*; *Penning ionisation*; *plasma collision processes*; *potential energy surfaces for collision processes*; *quantum field theory*; *quasimolecules*; *radiation quenching*
 cascades, vacancy spatial struct. 2-76434
 charge-dipole interaction, dynamic symm. in scatt. and relax. (*Russian*) 2-70369
 cometary impacts on Earth, geophysical and biological effects 2-101149
 galaxies, gravitational interactions rel. to origin of angular momenta 2-89384
 galaxies inelasticity of collisions rel. to galaxy clusters dynamics 2-63685
 galaxy mergers, implications of specific globular cluster freq. in elliptical and spiral galaxies 2-106921
 Galaxy-LMC-SMC, gravitational interaction rel. to Magellanic Stream dynamics 2-68904
 IC 5174/75, very large interacting galaxy pair, recent encounter 2-63633
 interstellar clouds, ang. momentum changes during collisions 2-63567
 ion-atom collision expts., use of retarding field electron spectrometers 2-69300
 Magellanic Stream collision with Milky Way, obs. of infalling clouds with very high vels. 2-74083
 monoenergetic electron stream in ionosphere, electron-neutral collisions rel. to relaxation 2-112195
 multiple expansions method, exponent range overflow, counteraction 2-64853
 NGC 2685, 'prolate' galaxy, dwarf galaxy collision model for gas disc 2-106912
 quantum virial expansions in bound state kinetics (*Russian*) 2-58659
 star cluster, compact, in galactic nuclei, stellar collisions as mechanism for nuclei recurrent activity (*Russian*) 2-101072
 stars-interstellar gas clouds encounters, rel. to transitions between epicyclic stellar orbits 2-68837
 theoretical chemistry, conf., Colorado, USA (June 1981) 2-107002
 H I regions, colliding H I shells assoc. with high vel. H I stream (Weaver jet) in galactic anticentre 2-106856
- collision sequences, focused** see *sputtering*
- colloid chemistry** see *colloids*
- colloids**
 see also *Brownian motion*; *coagulation*; *electrophoresis*; *electroviscous effect*; *emulsions*; *gels*; *magnetic fluids*; *thixotropy*
 aerocolloids, distribution of finite-amplitude disturbances 2-91134
 aggregates of large colloidal particles, light scatt. and transmittance 2-96836
 alkyl chain conformations in a micellar system from the nuclear spin relaxation enhanced by paramagnetic ions 2-75311
 anthracene, in CTAB and CTAC micelles, fluoresc. study 2-85718
 cetylpyridinium salicylate solns. with rodlike micelles, small angle neutron scatt. 2-71320
 charged colloids, motion in electric fields, mean field approx. 2-88382
 colloidal crystal with oscillatory flow, periodic structures 2-86337
 dibenzylketone in micelles, photochem. processes under high mag. fields, laser photolysis study 2-72992
 dilute charged colloidal dispersions, rescaled MSA struct. factor 2-93821

colloids continued

- 9,10-dimethylanthracene, in CTAB and CTAC micelles, fluoresc. study 2-85718
 dynamics of colloidal crystals and colloidal liquids 2-109945
 fluoresc., in CTAB and CTAC micelles, fluoresc. study 2-85718
 heavy impurity dynamics, Brownian motion 2-79476
 interacting sphere suspensions, shear viscosity conc. depend., cluster theory 2-93817
 interacting sphere suspensions, shear viscosity conc. depend., Huggins coeff. calcs. 2-93818
 ionic detergent solns. with rodlike micelles, small angle neutron scatt. 2-71320
 Liesegang rings, nucleation and growth in concentration gradients 2-105518
 liquid chromatographic phosphoresc. detect. with micellar chromatography and postcolumn reaction modes 2-116734
 magnetofluid, ferromagnetic particle microrotations, surface instability 2-86264
 metals particles isolated in Ar matrices, surface plasmon absorpt. bands. 2-85684
 micellar aggregates, cluster partition functions, Monte Carlo method 2-99710
 micellar solutions, nonuniversal crit. behaviour, laser light scatt. study 2-83420
 micellar system, variable freq. H^+ off-reson. decoupled ^{13}C NMR 2-80653
 micelles, fluoresc. quenching, polydispersity effects 2-62436
 micelles, inverted, chemical shift, phosphate buffer effect, relax. time, NMR 2-57644
 particle aggregation in colloids in high magnetic fields 2-104681
 pattern formation, instability theory, rel. to Liesegang rings 2-105519
 phospholipids in inverted micelles, small mol. interactions, NMR spectra 2-99913
 phthalocyanins, micellar solns., photoelectrochem. hydrogen prod. 2-73128
 polystyrene, charged spheres in colloidal suspension, spatial correl. calcs. 2-105520
 polystyrene, charged spheres in colloidal suspensions, dynamic correl. calcs. 2-105522
 polystyrene, monodisperse colloids, Wigner cryst. and glasses, shear modulus meas. 2-78142
 radionuclide behaviour in aqueous soln., sorption on hydrated oxides 2-57628
 scattered light streaming birefringence in colloidal solutions 2-55687
 silicate glass, prep. from colloidal gels by sintering 2-72663
 spiropyran, aliphatic solns., quasi-cryst. struct. characterisation by optical frequency doubling 2-62435
 styrene-butadiene block copolymer solns. in selective solvents, rheological and morphological behaviour 2-75914
 zinc porphyrin, in micellar soln., fluoresc. intensity oscils. 2-65038
 Ag colloid, form. on float glass surface by heat treatment, optical props. 2-92398
 Ag colloids, chem. neutron dosimetry appl. 2-80352
 CdS, colloidal, surface photochem., rel. to adsorbed methylviologen 2-83394
 CsBr(Cl)(I), additively coloured, illumination effect, 200-300 nm 2-57645
 CsCl(Br), X-ray irradi., colloid form., optical props. 2-56030
 β -FeOOH, rodlike crystals, dil. aqueous dispersions, light scatt. obs. of laminar, vortical and turbulent flow 2-76015
 HgI₂SCN powder, ^{201}Hg , ^{199}S or ^{211}I labelled, thermal effect on photolysis 2-78118
 PbI₂, cryst. and thin films, electronic absorption spectra meas., Pb colloids obs. 2-67071
 SiO₂ particle deposition in a burner 2-116374

colorimeters

- see also colorimetry*
 C-CD based hybrid spectrum analyser/colorimeter 2-64094
 electronic colour generator for visual tests 2-68187
 La Jolla analytic colorimeter, human chromatic discrimination meas. appls. 2-78511

colorimetry

- see also colorimeters; spectrochemical analysis; spectrophotometry*
 chromatic adaptation effect on colour rendering 2-58881
 colour measurement and relative tolerances, II. (Italian) 2-58882
 daylight simulator visual evaluation for colorimetry of luminescent materials 2-58880
 light mixture description through linear algebra 2-53814
 matching of RGB colour recordings, mathematical approach 2-64093
 optical radiation magnitudes, progress in measurements calibration and standards (Rumanian) 2-74480
 processing colour information of images obtained with drum processor 2-65173
 pseudo-object colours, simplified method for formulation 2-95430
 spectroradiometry, benefits, hardware and appls. 2-79646
 tristimulus value calculation from spectral data with regard to meas. uncertainties 2-95440
 tristimulus values, recommendations for calc. of weights 2-58879
 tristimulus values calc. method using integration and interpolation 2-58878
 vision, colorimetric standard observer for colour vision studies, Stiles and Burch 2° colour-matching functions 2-99942
 CuMn spin glass, magnetisation, calorimetric determ., rel. to Maxwell relation 2-92927
 NO₂, thermal lensing colorimetry determ. using single laser system 2-89785

colour

- see also colour vision*
 container glass, optical props. 2-61858
 HID lamps nonequilibrium vaporization effects during warmup 2-95436
 high-contrast colour set choice for additive colour mixers 2-112947
 liquid crystal, electrochemically induced coloration 2-71334
 oil colour fluorescence, laser induced, oil painting pigment identification 2-99165
 pseudo-object colours, simplified method for formulation 2-95430
 Sn/Na halide lamps in ceramic envelopes, characts. features 2-95437
 star colours, naked-eye determ. of colour indices and spectral types 2-68738
 TTF-chloranil, neutral-ionic phase transition, review 2-92592
 Al₂O₃-Na₂O, β and δ phases, chem. coloration 2-67767

colour continued

- La₂O₃-BaO-B₂O₃ and La₂O₃-BaO-PbO-B₂O₃ system glasses, very pure, absorpt. curve and colour 2-93227
 NaCrS₂, a new mineral from a meteorite (caswellsilverite) 2-68681
 Na₂O-Fe₂O₃-Al₂O₃-SiO₂ glass with decorative cryst. surface film, synthesis 2-67275
 TiN films, reactive DC magnetron sputtering, color, corrosion, Auger study 2-83249

colour blindness *see colour vision***colour centres**

- see also F-centres; OH⁻-centres; paramagnetic resonance of colour centres; U-centres; V-centres*
 alkali halide, activated, photostimulated luminesc. decay kinetics, radiation defects spatial distrib. (Russian) 2-82902
 alkali halide colour centre lasers, electrical pumping 2-102801
 alkali halides, colour centres, thermoluminesc., expt. and computer anal. 2-57193
 alkali halides, hydrogen centres, interatomic pot., vibr. modes, and diffusion, pseudopot. cluster calc. 2-65992
 alkali metal halides 2-82297
 covalent semiconductors, nonequilibrium carriers cascade capture effects on Faraday rotation 2-99093
 diamond:N, vacancy-related colour centres, spectroscopic study 2-98082
 fluorite, colouring by neutron and gamma radiation 2-103816
 glass, photochromic, deviation from law of mutual substitution 2-104827
 higher-order ion-size effects in pseudopotential theory 2-71904
 insulating crystals, defects, conf., Riga, USSR (May 1981) 2-68967
 insulator surfaces, electronic struct. of point defects, review 2-61539
 intracavity photoacoustic spectroscopy with F-center lasers 2-84715
 ionic crystals, luminescence and stimulated emission from colour centres 2-82893
 optical materials, radiation colouring under electron bombard. 2-56038
 photochromic glass, flash photolysis, colour centre formation 2-103664
 quartz, natural or irradi. colour, anomalous photovolt. effect 2-104433
 quartz, shock-metamorphosed, defects study 2-115227
 quartz glass, absorption characteristics for γ -ray dosimetry 2-96322
 ruby, UV absorption induced by ionising radiation 2-67077
 AgCl, photochromic glass, flash photolysis, colour centre formation 2-103664
 B₂O₃-K₂O-Ti₂O (14, 1 mol.%) glass, Ti³⁺ centre interaction with laser radiation (Russian) 2-105009
 BaF₂, rare earth doped and hydrolyzed, mol. centres, Raman spectra study 2-104873
 CaF₂, rare earth doped and hydrolyzed mol. centres, Raman spectra study 2-104873
 CsBr(Cl)(I), additively coloured, illumination effect, 200-300 nm 2-57645
 KBr, microcrystalline powder, colouration, isothermal decay, temp. effects meas. 2-98083
 KBr:Sn²⁺, colour centres, optical absorpt. line shapes, calc. 2-67089
 KCl crystals, γ irradi. influence on absorpt. coeff. at CO₂ laser radiation wavelength 2-87828
 KCl, microcrystalline powder, colouration, isothermal decay, temp. effects meas. 2-98083
 KCl Ti³⁺(I) colour centre laser, mode locking by synchronous pumping using gain medium with microsec. decay times 2-108889
 KCl-KBr mixed cryst., colour centres, Mollwo-Ivey relationship 2-61933
 KI:Ti³⁺ crystal, optical absorption induced by intense laser radiation 2-87829
 LiF:Mg,OH, radiation point defect condensation at dislocations (Russian) 2-71494
 MgF₂-like crystals, colouring by neutron and gamma radiation 2-103816
 NaCl crystals, γ irradi. influence on absorpt. coeff. at CO₂ laser radiation wavelength 2-87828
 NaCl-KCl powder, thermoluminescence study of colour centre isothermal stability 2-72567
 Nd:glass fibre laser, lasing kinetics in periodic giant pulse regime 2-114289
 Nd:glass fibre lasers, generation kinetics 2-96959
 PbO-SiO₂ glasses, nonlinear colouring and destruction under multiphoton absorpt. conditions 2-108933
 RbCl:Li colour centre laser pumped with a DCM dye laser 2-102803
 Si, diffusion of P, nonequilibrium vacancies influence 2-92252
 Si, proton and γ -irrad., defect clusters, Hall effect study 2-115225
 SiO₂, E' centres, Huckel calc. of ^{17}O , ^{29}Si and 1H hyperfine splitting 2-76975
 SiO₂:Al, vitreous, radiation colour centres, multiple nature, ESR and optical absorpt. study 2-72348
 SrF₂, rare earth doped and hydrolyzed mol. centres, Raman spectra study 2-104873
 WO₃, amorphous film, colour centres, optical-absorpt. and EPR study 2-66492
 WO₃ amorphous thin films, coloration mech. study 2-99206
 WO₃ films, electron beam excited, exoelectron emission obs. 2-77715
 WO₃:P₂O₅ glass, colour centres, optical absorpt. and EPR study 2-66492
 YAG:Cr³⁺, Czochralski grown, O⁻ centre, optical absorpt. spectra study 2-91959
 YAG:Nd crystals, radiation colour centres rel. to growth defects, absorpt. and luminesc. obs. 2-71445
 ZnSe, self activated centre, excited states, polarisation spectroscopy study 2-110291
 α -Zr(PO₄)₂M₂ (M=Li⁺, Na⁺, K⁺, Cs⁺) Mg K α ESCA spectra, shake up struct. enhancement by sputtering 2-75252

colour display tubes, television *see colour television picture tubes***colour filters** *see optical filters***colour model**

- 1° glueball and OZI-violating couplings in J/ ψ prod., vector dominance model 2-74673
 additive quark model, QCD derivation from 2 and 3 gluon exchanges, pomeron couplings 2-113212
 anisotropic chromodynamics, particle matrix elements for electroweak currents 2-107619
 anomalous dimension functions in QCD, constraints 2-89941
 anomalous mass dimension to two loops in quantum chromodynamics 2-89934
 anomaly eqns. solns. based on SU(N)×SU(N) hypercolour and superalgebras 2-84846
 asymptotic freedom requirements, asymptotic convergence, convergent resummation in QCD 2-59107

colour model continued

axial gauge gluon propagator, IR limit at high temp., screened colour mag. fields 2-69411
 axion prod. in parton model 2-101674
 B-L and nucleon decays in the subquark model 2-64301
 bag fusion in SU(2) Yang-Mills matter and colour deconfinement 2-84847
 bag model gluonia, hyperfine splittings 2-89936
 baryon asymmetry and nucleon decay in supersymmetric SU(5) GUT 2-101617
 baryon mass splitting in quark model with broken symmetry 2-69439
 baryon masses in relativistic quark-diquark model 2-84883
 baryon prod. in quark jets, recombination mechanism 2-101745
 baryon propagator, mesonic amplitudes and Greens function 2-113230
 baryon-vector-meson couplings in quark model with chromodynamics 2-54095
 baryonium internal color transitions in the $L=0$ state 2-101649
 baryons, loop average in large N limit 2-69420
 baryons, mag. moments, QCD enhancement and quenching effect 2-54157
 baryons and dibaryons, colour elec. instabilities 2-101816
 baryons in multicolor chromodynamics 2-107629
 boson resonance, decay into two pseudoscalar mesons, quark-gluon model (Russian) 2-95824
 broken SU(3) symmetry from quark interchange, one boson exchange model 2-101651
 Callan-Symanzik γ function in $1/N_f$ expansion 2-79829
 CERN-JINR School of Physics, Hanko, Finland (June 1981) 2-112634
 charmed meson decay via colour octet decays of c -quarks, D^0 , D^+ 2-54069
 chiral dynamics for colour and technicolour QCD like theories at large N 2-54090
 chiral symmetry breaking pattern 2-101678
 classical Yang-Mills theory, fields of an infinite plane of color 2-53978
 Coleman-Glashow relation and the chromodynamic spin-spin interaction 2-113215
 colour exclusion principle, phenomenological quark potential anal. 2-95762
 composite quarks and Cabibbo mixing 2-59128
 confinement, infrared behaviour of gluon propagator, Wilson loop 2-113227
 continuum QCD, dynamical mass generation 2-113216
 cosmological baryon prod. vs. intermediate mass scales 2-89426
 CP violation in broken supersymmetric theories 2-101593
 cut vertex formalism, rel. to operator product expansion 2-79880
 cylindrical graph, topological glueball contribs., vacuum trajectories 2-74646
 deep Compton effect, contributions 2-101728
 deep inelastic electroproduction, twist-4 contrib., QCD anal. 2-54168
 deep inelastic polarised electroproduction model 2-54170
 deep inelastic scatt., e^+e^- annihilation and high- p particle prod., higher twist contrib. 2-64292
 deep inelastic scatt., higher twist contribs., corrections to QCD, scaling violations, struct. functions 2-95757
 deep inelastic scatt., longit. structure function, fourth order calc. 2-54169
 deep inelastic scatt., power corrections in QCD, Q^{-2} effects 2-101643
 deep inelastic scatt., two-loop QCD corrections to longit. structure function 2-113274
 deep inelastic scatt. in QCD, power corrections theory 2-101730
 deep inelastic scatt. structure functions, nonperturbative QCD effects 2-84894
 deep-inelastic scatt., large- x and higher order corrections 2-54167
 deep-inelastic scatt. structure functions, renormalisation-convention in dependence beyond leading order 2-69466
 deformation theory in particle physics, fundamental concepts, physical theories 2-69318
 dense-gluon plasma and condensation 2-64282
 deuteron quark model 2-107632
 diffraction in accelerators, colliders and QCD 2-107627
 diffractive photoproduction cross section, QCD planar ladder diagram anal. 2-69426
 dimensional regularisation techniques, rel. to QCD and QED two-point functions 2-89910
 diquark fragmentation 2-95787
 doublet composite schemes of leptons and quarks (Russian) 2-74665
 Dreil-Yan cross section, QCD corrections 2-54215
 Dreil-Yan pairs, transverse momentum distrib., QCD calcs., soft emission, nonabelian effects 2-84921
 Dreil-Yan process, perturbative QCD correction, spectator interactions 2-113231
 dynamical mass generation, Gross-Neveu model, extraction of S-matrix 2-113146
 E(1440), meson-decay modes of glueballs 2-79867
 early Universe, quark-hadron transition, QCD and effective interaction calcs. 2-84362
 effective weak Hamiltonian for $\Delta c=1$ decays, non-leading mass effects 2-101659
 electroproduction, twist-4 effects, canonical operators, coeff. functions, proton constituents 2-95847
 elementary particle physics, conf., Jodlowy Dwor, Poland (May 1980) 2-63739
 evolution probabilities, review 2-54056
 excited glueball states in four-dimensional SU(3) lattice gauge theory 2-107633
 exclusive processes in QCD 2-54091
 exotic meson reson. with $J^{PC}=1^{-+}$ from QCD sum rules (Russian) 2-74655
 exotic mesons with $J^{PC}=1^{-+}$ from QCD sum rules 2-79824
 experimental tests, review 2-53436
 extra (qq) admixture in hadrons, bagged QCD perturbation theory 2-59105
 fermionic flavours and generations, unification before flavours and colours 2-95700
 FF gauge-invariant scalar operator in pure QCD, renormalisation 2-59008
 field theory caustics, quark confinement model 2-64286
 flux confinement in leading logarithmic model 2-95751
 four-dimensional QCD, West's proof of confinement 2-84852
 four-quark scalar mesons, with charm, implications, SU(6)_{cs} theory 2-101589
 fractional charges binding to nuclei 2-54075

colour model continued

fragmentation functions, higher order QCD corrections for scaling violation 2-64290
 frozen and broken colour, Lipkin's mechanism, matrix Schrodinger eqn., semiclassical limit 2-89933
 gauge-invariance QCD, relationship with string theory 2-107614
 generalized bag models as mean-field approximations to QCD 2-69412
 glueball G(1440) and radially excited pseudoscalar states 2-84858
 glueballs masses in MIT bag model 2-59101
 glueballs theoretical models, review 2-79833
 gluino mass in supersymmetric theories 2-107552
 gluon attributes, overview 2-54094
 gluon bremsstrahlung effects in large p_T hadron-hadron scatt. 2-107703
 gluon condensate correlation function, effect on quarkonium spectra 2-113229
 gluon condensation and QCD 2-64283
 gluon confinement in QCD (Russian) 2-107621
 gluon density, next-to-leading approx., QCD generalised parton model 2-101675
 gluon propagator IR behaviour at finite temp. 2-69418
 gluonic currents propagators, two-loop calcs. 2-89937
 grand potential of hot QCD, lattice calculations 2-113228
 grand unification schemes involving QCD, Z_3 graded Lie algebra $su(l/m/n)$ (Chinese) 2-95674
 grand unified model with composite fermions based on $SO(3) \times SU(8)$ group 2-69394
 Gross-Llewellyn Smith sum rule from neutrino/antineutrino expts. 2-64313
 hadron structure, pairing scheme in Yang-Mills gauge theory 2-84862
 hadron-hadron collisions, lepton pair prod. process, kinematic anal. 2-95887
 hadronic collisions, charm hadron prod. 2-107697
 hadronic collisions, charm prod. cross section meas. 2-107694
 hadronic collisions, forward-backward jets, QCD predictions, invariant mass spectra 2-95879
 hadronic high P_T prod., QCD subprocesses contrib. 2-64288
 hadronic multijet prod., hadron structure functions, S-matrix approach 2-95880
 hadronic reactions, large perturbative corrections in soft-gluon limit 2-69423
 hadronisation by colour bremsstrahlung 2-54097
 hadrons containing heavy quark, masses from QCD sum rules 2-79820
 Hamiltonian lattice gauge theories, gauge-invariant variational methods 2-95627
 hard hadronic collisions, large p_T jets at small angles 2-64287
 hard processes, inclusive spectra, scaling violation anal. in QCD 2-59192
 hard processes, polarisation asymmetries predicted by QCD and parton model, review 2-69501
 Hartree approximation as high density limit 2-74134
 heavy mesons exclusive decay study 2-101706
 heavy parton quarkonia decay, GGG and qqG jets anal. in perturbative QCD 2-54146
 heavy quark decoupling in QCD minimal subtraction scheme 2-59106
 heavy quark potential to two-loop order (Chinese) 2-107622
 heavy quark system decay, gluon condensate effects, QCD sum rules appl. 2-95765
 heavy quark systems, leading nonperturbative effects, vacuum fluctuations in QCD 2-113213
 heavy quarkonia, S levels, hyperfine splitting in QCD (Russian) 2-64309
 heavy quarkonium energy levels, pre-Coulomb asymptotics, in QCD (Russian) 2-95775
 heavy quarks and perturbative QCD calcs. 2-54072
 Higgs mesons, grand unified theory 2-107579
 Higgs physics, technicolour predictions 2-79787
 high energy neutrino interactions, expt. advances 2-64312
 high energy perturbation QCD status 2-54061
 high energy physics and nuclear structure, conf., Versailles, France (July 1981) 2-53416
 higher-order QCD calcs., prescription depend. 2-54057
 highly excited nuclear matter, theoretical description 2-59275
 hot QCD, θ vacua in one loop order 2-54084
 hot quark-gluon plasma, collective excitations, dispersion laws (Russian) 2-54080
 inelastic $1/\psi$ photoproduction with linearly polarised photons, QCD based models predictions 2-54176
 infrared properties of a quark gas 2-64284
 infrared sensitive quantities and the structure of final states in QCD 2-54102
 instantons and the interaction of heavy quarks in QCD vacuum 2-79821
 intermediate vector bosons, mass and width corrections 2-107630
 jets and QCD tests in e^+e^- expts. 2-59112
 large- N lattice QCD with fundamental and adjoint action terms 2-79759
 large- N lattice QCD with mixed fundamental adjoint action, phase struct. 2-64276
 lattice fermions, IR regularisation, rel. to θ -vacua in QCD 2-69354
 lattice gauge theory, Monte Carlo calcs., review 2-53916
 lattice QCD, axial current matrix element evaluation, quenched approx. 2-101360
 lattice QCD, large- N , mean field approx., chiral symm. breaking 2-89903
 lattice QCD, quark-antiquark state in strong-coupling limit 2-84851
 lattice QCD thermodynamics, Yang Mills system 2-107511
 lattice QCD with fermions, high temp. behaviour 2-95750
 leptons, subquark fermion-boson two body model, Cabibbo model 2-89949
 Lie algebras in particle physics, book 2-79298
 light quarks and leptons, consistency conditions for simple subconstituent model 2-54117
 local QCD sum rules and quarkonia 2-69422
 local quantum field theory, analyticity, renormalisation group (Russian) 2-95655
 long range quark-antiquark pot. from asymptotic QCD dynamics 2-69419
 loop diagrams in boxes, appl. to QED and QCD vacuum 2-95634
 lowest lying scalar glueball 2-95766
 many body content of gauge theories, spontaneous supersymmetry breaking, colour confinement 2-59020
 massless QCD₂, Lax representation 2-101646
 massless QCD, constraints from conformal covariance on the mixing of operators of lowest twist 2-79819

colour model continued

- massless scalar electrodynamics; pair condensation, implications for QCD 2-84836
 meson and glueball masses from one-parameter pot. and relativistic wave eqn. 2-84849
 meson degrees of freedom in nuclei, review 2-59253
 meson resonances, spectrum and leptonic decay widths in QCD (*Russian*) 2-74653
 meson resonances mass spectrum and leptonic decay widths in QCD 2-79836
 MIT bag, gluonia states, QCD perturbation effects, $\theta(1640)$ and $i(1440)$ 2-54071
 MIT bag model with centre-of-mass correction 2-84864
 modified Eguchi-Kawai model 2-107535
 modified jet calculus of Bassetto, Ciafaloni and Marchesini 2-95768
 multiplicities in deep inelastic scattering and Drell-Yan process 2-107667
 multi-quark $9q$ and $12q$ systems, excited configurations, multiparticle forces, chromo-mag. NN interaction (*Russian*) 2-95934
 multi-quark hadrons in nonrelativistic quark-potential models 2-54067
 multi-quark spectra, calc. using algebraic program in SCHOONSCHIP 2-107628
 multi-quark states, colour content 2-101642
 neutrino deep inelastic scatt., gluon distrib., nucleon struct. functions, QCD anal. 2-59140
 neutron DD β -decay, Goldberger-Treiman relation, chiral symmetry breaking corrections 2-69611
 non-Abelian fields, charges and strings 2-107529
 non-Abelian gauge field to string transformation 2-54066
 non-Abelian gauge theories, local observables 2-59009
 non-Abelian gauge theories, colour confinement, local gauge symm. restoration 2-101540
 noninteracting Bose and Fermi fields, Euclidean lattice thermodynamics, finite size effects 2-89902
 nonleptonic weak decays, two-loop calcs. in QCD and $\Delta I=1/2$ rule 2-113226
 nonrelativistic coloured constituent quark models, explicit gluonic components in multi-quark wave functions 2-95752
 nuclear structure function at large x and A_{exp} 2-107634
 nucleon D waves, colour magnetism test 2-74651
 nucleon magnetic moment, spin orbit term in gluon exchange QCD pot. 2-79835
 nucleon structure functions from nN inclusive scatt., QCD anal. 2-54163
 nucleon valence structure functions, QCD and DTU parton model 2-84898
 nucleon-meson coupling in QCD perturbation theory for confined quarks (*Chinese*) 2-79828
 nucleon-nucleon elastic scatt. at large transverse momentum 2-54212
 nucleon-nucleon forces from bags, quarks and boson exchange 2-95794
 $O(10)$, grand unified theories subgroup structure with appl. to fermion mass matrix 2-54020
 one-loop QCD corrections for deep inelastic scattering and Drell-Yan process 2-101668
 open charm, hadroproduction, rel. to perturbative QCD 2-101663
 open charm hadronic prod. in perturbative QCD approach 2-107626
 operator product expansion of ϕ^3 theory 2-107505
 particle and nucl. scatt. at large p_T in perturbative QCD 2-113234
 particles and fields, conf., Santa Cruz, CA, USA (Sept. 1981) 2-79265
 parton model, correspondence, derivation of nucleon gluon and sea quark structure functions 2-101720
 partons in QCD, review 2-59109
 Pauli principle and QCD for quarks and nucleons in hadrons and nuclei, book contrib. 2-113220
 perturbative QCD, conf., Tallahassee, FL, USA (March 81) 2-53409
 perturbative QCD, diagrammatic mass factorisation 2-84850
 perturbative QCD, hard processes 2-54086
 perturbative QCD, IR divergences 2-54055
 perturbative QCD, jet evolution beyond leading logarithms 2-64291
 perturbative QCD, multiparton distrib. and fragmentation functions 2-95749
 perturbative QCD, optimum renormalisation scheme 2-101538
 perturbative QCD, quark-quark and quark-antiquark pot. 2-95756
 perturbative QCD, renormalisation scheme depend. problem 2-113105
 perturbative QCD correspondence with parton model, large N behaviour 2-113218
 perturbative QCD parton jets, coherent effects 2-113224
 perturbative QCD structure 2-54054
 phase structure and masterfields 2-113210
 phenomenological QCD, high twist contribution problems 2-54089
 photon, massless particle confinement 2-54041
 pion EM form factor using extended VDM 2-95838
 pion form factor, corrections using perturbative QCD and dimensional regularisation 2-54155
 pion form factor and sum rules in QCD 2-113273
 pion in nuclear physics and QCD 2-54065
 pion-nucleon σ commutator, spin-orbit interaction, QCD calc. (*Russian*) 2-95770
 planar field theories, planar QED, planar Ward identities 2-113207
 plasma physics techniques for QED and QCD systems 2-64266
 polarised deep-inelastic scatt., total gluon helicity 2-54160
 Polyakov string theory, pomeron singularities, saddle point anal. 2-101694
 potential bag dynamics and tunnelling 2-101680
 pp-hyperon X , large p_T , gluon helicity distrib. 2-59203
 preon models within 10 constraints 2-101682
 primordial colour fluctuations, survival and fractionally charged states production 2-101662
 proton supersymmetric decay, enhancement factors 2-95829
 pseudo-Goldstone boson pair production at very high energies, hypercolour 2-101652
 pseudo-Goldstone technicolour bosons (*Russian*) 2-107623
 pseudoscalar glueball two-proton decay 2-54227
 pseudoscalar mass spectrum as evidence for gluons, anomalies and topological charge 2-59136
 pseudoscalar meson decay, $P \rightarrow l^+ l^- + \gamma$, bound state quark model calculations 2-101667
 pseudoscalar meson decay constants in a quark confinement model 2-84889
 QCD $_{3+1}$, finite N , master fields and variational method for gluon condensation 2-95747
 QCD $_3$, perturbative results at finite temp. 2-101640

colour model continued

- QCD, 3-dimens., at finite temp., Monte Carlo study, confinement and critical point 2-54064
 QCD, chiral flavour symm., spontaneous breaking 2-79752
 QCD, chiral symm. breaking, quark pair condensation 2-89938
 QCD, chiral symm. breaking 2-69409
 QCD, colour monopoles from fractional charges 2-59103
 QCD, confinement and hadron problem 2-69406
 QCD, current status 2-101657
 QCD, dual string field theory (*Russian*) 2-54078
 QCD, dynamic theory of quark and meson fields 2-95789
 QCD, Dyson eqns., confinement, chirality 2-74647
 QCD, effective charges and expansion parameters 2-54058
 QCD, EM transition form factor of 1^{++} meson, large momentum behaviour (*Chinese*) 2-79827
 QCD, evolution eqns. approx. soln. (*Russian*) 2-54100
 QCD, experimental evidence, review, book contrib. 2-54082
 QCD, fragmentation functions, scaling, timelike cut vertices 2-79751
 QCD, generalised gap eqn. derivation 2-107620
 QCD, glueball mass spectrum, lattice Monte Carlo calc., SU(2) gauge theory 2-59108
 QCD, gluon condensation, vacuum props., axial gauge formalism 2-79823
 QCD, gluon condensation, vacuum props. 2-79822
 QCD, gluon propagator, effective Lagrangian 2-95758
 QCD, gluon propagator, IR asymptotic form 2-95745
 QCD, hadron classification, meson mass scales (*Russian*) 2-74649
 QCD, hadron masses, instantons role 2-107615
 QCD, hadronic structure 2-79832
 QCD, higher order corrections, review 2-54059
 QCD, in review of theoretical physics (*Russian*) 2-89927
 QCD, $L=1$ light quark mesons 2-59115
 QCD, local and nonlocal light cone expansion, anomalous dimensions 2-95743
 QCD, local gauge invariance theories and spontaneous symmetry breaking (*French*) 2-89911
 QCD, massless 4-D and lattice, long range chiral structure, Monte Carlo study 2-101647
 QCD, master field Poincaré invariance, SU(N_c) gauge field construction 2-69405
 QCD, Maxwell eqns., semiclassical approach 2-69407
 QCD, minimal subtraction and heavy quark decoupling 2-54062
 QCD, naturality problems 2-79817
 QCD, nonlinear effects, self-consistent treatment 2-107618
 QCD, nonperturbative power corrections calc. (*Russian*) 2-54079
 QCD, one-instanton contribution, IR behaviour 2-79825
 QCD, operator-product expansion and vacuum instability 2-95640
 QCD, perturbative, box graph calc., with light-like particles 2-69358
 QCD, perturbative, odd C gluonic Regge singularities 2-59111
 QCD, perturbative, qq degenerate state role 2-69425
 QCD, perturbative at finite temp. and density, technical review 2-54083
 QCD, phase structure, 'superconducting' extended object appls. 2-69343
 QCD, pion form factor at intermediate momentum transfer 2-107661
 QCD, polarisation density matrix, pion asymm. (*Russian*) 2-95774
 QCD, principle of minimal sensitivity appl. to higher-order processes 2-95767
 QCD, qq scatt., IR divergences, KLN theorem 2-95744
 QCD, quark model pion and Goldstone pion 2-54096
 QCD, quark-antiquark pair effective interaction, static pot. 2-84848
 QCD, quark-gluon plasma, instantons role 2-107616
 QCD, rare processes in model of composite quarks and leptons 2-95804
 QCD, renormalisation and CP violation 2-95754
 QCD, renormalization group functions, prescription depend. 2-53971
 QCD, soft gluon emission, hadron transverse momenta 2-54081
 QCD, structure function tests 2-89942
 QCD, summation of nonleading logarithms 2-74645
 QCD, supersymmetric Yang-Mills theory, effective lagrangian 2-84801
 QCD, three-ladder vertex in Reggeon graph technique (*Russian*) 2-74654
 QCD, transversal gluon propagator, IR instability at finite temps. 2-89940
 QCD, two critical field strengths in the Copenhagen vacuum 2-59104
 QCD, two-point functions, quark vacuum condensate contribs., gluonic corrections 2-59110
 QCD and dual topological unitarisation, gluons in hadronic S-matrix 2-101666
 QCD and neutron stars 2-64281
 QCD and quark models in nuclear physics 2-79840
 QCD and the search for glueballs 2-107625
 QCD at nucl. dimensions, book contrib. 2-113221
 QCD beyond leading order 2-64289
 QCD charmonium sum rules, higher gluonic power correction calcs. 2-64279
 QCD coupling constant, effect of quark mass 2-101656
 QCD coupling constant, evolution through flavour thresholds, momentum subtraction scheme 2-79818
 QCD gluon, compositeness 2-54076
 QCD hard jets, average multiplicity, multiplicity fluctuations (*Russian*) 2-95772
 QCD in matrix formalism of first-order eqns. 2-64280
 QCD influence on nucl. physics, book contrib. 2-113222
 QCD jets, leading log approx. 2-54088
 QCD jets in leading log approx. and beyond, review 2-54092
 QCD local colour symmetry, anomalous props. 2-113209
 QCD perturbation theory, hadron energy shift and mass difference (*Chinese*) 2-54077
 QCD perturbation theory, singularities for $x \sim 1$ 2-54073
 QCD perturbative expansion, general props., review 2-79816
 QCD phase transition, mechanical analogue 2-95639
 QCD phenomenology, mass depend. renormalisation group parameters implications 2-54063
 QCD physical vacuum, instanton liquid role 2-107506
 QCD renormalisation using momentum-space subtraction scheme 2-84854
 QCD scale parameter Λ , analytical continuation effects influence from $\psi, \bar{\psi}$ decay 2-113211
 QCD vacuum quark condensate and MIT bag lagrangian with broken chiral symmetry 2-69413
 quantum field theory and math. phys. conf., Bechyně, Czechoslovakia, June 1981 2-68950
 quark interactions and colour chemistry 2-95740
 quark mass matrix eigenvalues, review 2-113243

colour model continued

quark plasma critical behaviour, photon spectra 2-113232
 quark plasma in superdense matter, instanton effects 2-54085
 quark-antiquark pot. and QCD 2-54060
 quark-colour switching, smooth topological representation 2-79830
 quark-gluon coupling strength estimation from baryon masses 2-69424
 quark-gluon dynamics, Monte Carlo studies 2-79733
 quark-gluon elastic scatt., gluon polarisation in perturbative QCD 2-54098
 quark-gluon jets, evolutions eqns. including quark and gluon confinement (Russian) 2-54114
 quark-gluon plasma, strangeness prod. in QCD, chemical equilibration time 2-69408
 quarkonia, fine and hyperfine structure in Coulomb plus linear pot. model 2-79826
 quarkonium decay, radiative corrections, scheme depend. in perturbative QCD 2-101710
 quarkonium potential model with a non-zero gluon effective mass for charmonium and Υ (Chinese) 2-95778
 quarkonium spectroscopy in heavy QQ bags approach 2-79846
 quarkonium systems, interquark pot. using gluon condensate and quark screening 2-64277
 quarks, subquark fermion-boson two body model, Cabibbo model 2-89949
 quarks and nucl. forces, book 2-113219
 quarks and the light hadrons, review 2-95759
 recent progress, conf. Bad Honnef, Germany (Sept. 1980) 2-53432
 relativistic heavy-ion collisions, charact. time for strange quarks chem. equilibration in QCD 2-85075
 renormalisable model with Peccei-Quinn global symmetry, axion elimination by 't Hooft mechanism 2-95755
 renormalisation group solutions, heavy quark production in QCD 2-113217
 renormalisation scheme depend. problem and soln. 2-53914
 repulsive core, quark model 2-79953
 scalar chromodynamics, generalised BRST quantisation of gauge field theory 2-79763
 scalar qq nonet in QCD, spontaneous breakdown of chiral symmetry 2-101650
 scaling violations beyond the leading order 2-54087
 Schwinger model and two dims. $SU(n)$ QCD, equivalence demonstration 2-101641
 semi-inclusive hard processes in QCD, eikonal corrections 2-101661
 semileptonic processes mediated by W, $O(\alpha)$ corrections, large m_w , m , behaviour 2-59114
 single particle inclusive lepton production in QCD 2-101658
 $SO(10)_V \times SO(10)_H$ grand unified extended technicolour models 2-95727
 $SO(10)_V \times SO(10)_H$ GUT, hypercolour, extended hypercolour, generation problem 2-113190
 $SO(10)^3$ effective technicolour model, CP violation and axions 2-84824
 $SO(10)$ grand unified theory, intermediate mass scale through subgroup $SU(3) \times SU(2) \times U(1) \times U(1)$ 2-84823
 $SO(3)$ lattice gauge theory, defect melting 2-95617
 soft gluon emission and the QCD Λ mass parameter 2-95748
 soft QCD partons in jets, spectrum props. (Russian) 2-79845
 soliton bag model study 2-69417
 spectroscopy of hadrons containing one heavy quark, D and F weak decay 2-84882
 spontaneously broken QCD, short-distance behaviour 2-54068
 statistical mechanics of quarks and hadrons, conf., Rielefeld, Germany (Aug. 1980) 2-53423
 storage, charmed and heavier mesons weak hadronic decays in QCD 2-64318
 strangeness-changing nonlepton decay 2-74648
 strong coupling constant, renormalisation scheme depend. in QCD 2-101654
 strong CP problem, supersymmetric GUT soln. 2-79778
 strongly coupled lattice QCD, baryons in effective lagrangian, $SU(3)$ pot. 2-101644
 structure functions, deep inelastic, Regge behavior, in perturbative QCD 2-95769
 structure functions, QCD evolution, heavy quark effects, Monte Carlo calc. program 2-64327
 structure functions, soft gluon corrections, Bloch-Nordsieck moments 2-101718
 $SU(2)$ lattice gauge theories, interquark pot., Monte Carlo evaluation 2-95753
 $SU(3)_C \times SU(2)_L \times U(1)$ supersymmetric grand unified theories predictions 2-95718
 $SU(3)_C \otimes U(1)$ unification, integer charge quarks and spontaneously broken color symmetry 2-54033
 $SU(3)_{HC} \times SU(6)_F \times SU(6)_R$ theory, four families of composite quarks and leptons 2-84873
 $SU(3)$ gauge theory at finite temp., first-order phase transition 2-107545
 $SU(3)$ glueball mass numerical estimation 2-84857
 $SU(3)$ lattice gauge theory predictions for low- Q^2 phenomenology 2-54074
 $SU(3)$ lattice QCD, hopping parameter expansion, meson and quark masses 2-69410
 $SU(3)$ lattice QCD, meson spectrum, quark masses, analytic calc. 2-89939
 $SU(3)$ Yang-Mills system, gluon matter, thermodynamic props., Monte Carlo simulation 2-101648
 $SU(4)$ gauge theory, symmetry breakdown and condensates 2-79767
 $SU(8)$ hyperunification, composite quarks and leptons derivable from $SO(8)$ extended supergravity 2-95712
 $SU(N)$ chiral (QCD) $_2$, massless baryons and anomalies, chiral limit 2-69414
 subconstituent models and composite symmetries 2-79852
 subquark models of leptons and quarks, observable effects 2-79850
 SVZ duality in two-dimensional QCD, charmonium and bottomium predictions 2-113214
 technicolour, weak interaction confining models, strong $SU(2)_L$ effects 2-113208
 technicolour and effective technicolour equivalence, Higgs mesons 2-107578
 technicolour pseudos prod., nucleon intrinsic charm 2-79842
 technicolour theories, flavour changing neutral processes suppression 2-113223
 thermodynamics of chromomagnetism 2-64285
 three-heavy-quark system spectroscopy 2-64297

colour model continued

topological vector gluons, quark chirality 2-79831
 two-quark process at twist four level, current product expansion 2-59064
 $U(1) \otimes SU(2) \otimes SU(2)'$ gauge theory, unification and family structure as consequences of universality 2-54023
 $U(1)$ pseudoscalar field in QCD, effective Lagrangian 2-84856
 uniform colour electric field, particle creation and Yang-Mills vacuum decay 2-95746
 vacuum periodicity in instanton angle, chiral perturbation theory and fractional topological charge 2-101645
 van der Waals forces between leptons made of coloured constituents 2-54118
 vector-like gauge theories with massless fermions, phase structure 2-53946
 weak current algebra, composite W bosons and weak interactions universality 2-101683
 Weinberg sum rules, Laplace transform analysis, pseudoscalar meson properties 2-113178
 Yang-Mills theories, Abelian dominance and quark confinement 2-84853
 Yang-Mills-Dirac equations, rel. to Cauchy-Riemann eqns. in twistor space (Russian) 2-95656
 $A_2(A_3)$ tensor mesons in QCD sum rules 2-79837
 B_c decays, penguin effects in five flavour $SU(2) \times U(1)$ model, QCD corrections 2-95826
 $D \rightarrow K\pi$, quark dynamics 2-107658
 $D \rightarrow K\pi$, weak decays using QCD corrected hamiltonian and $1/N_c$ expansion 2-101709
 D mesons nonleptonic decays, coupled channel unitarity appl. 2-95823
 D^0 , nonleptonic decays by $c\bar{q}$ annihilation, two-gluon radiation 2-59143
 e^+e^- , 22, 34 GeV, hadronic annihilations, energy weighted ang. correl. anal. 2-101751
 e^+e^- , charged Higgs boson search methods using jet identification 2-101739
 e^+e^- , heavy particles detection and study through jet identification 2-54185
 $e^+e^- \rightarrow 4$ jets, 33 GeV, acoplanarity and tripodity distrib., QCD effects 2-107674
 $e^+e^- \rightarrow ABX$, $A, B =$ hadrons, back-to-back jets in QCD, comparison with expt. 2-54186
 $e^+e^- \rightarrow a+b+X$, cross section, QCD soft gluon emission resummation 2-79899
 e^+e^- annihilation, charged and neutral energy flow anal., QCD coupling constant determ. 2-95853
 e^+e^- annihilation, dominant EM correction to energy-energy correl. 2-69471
 e^+e^- annihilation, exclusive heavy meson prod. in QCD perturbation theory 2-64334
 e^+e^- annihilation, expt. evidence of quarks and gluons, book contrib. 2-113233
 e^+e^- annihilation, gluino pair prod. 2-113284
 e^+e^- annihilation, heavy quarks electroweak prod. 2-69477
 e^+e^- annihilation, inclusive two-particle prod., nonleading Sudakov effects in QCD 2-54180
 e^+e^- annihilation, jet distrib., QCD effective coupling constant 2-54188
 e^+e^- annihilation, multijet events perturbative calc. 2-54183
 e^+e^- annihilation, partons and hadrons prod., quark and gluon jet models 2-54184
 e^+e^- annihilation, QCD expt. tests from gluon bremsstrahlung and Υ (9.46) decay 2-54093
 e^+e^- annihilation, testing QCD with moment sum rules 2-69421
 e^+e^- annihilation, three-jet cross section, higher order corrections 2-54182
 e^+e^- annihilation producing hadrons, hydrodynamic model 2-101752
 $e^+e^- \rightarrow ggg$, differential and total cross section 2-54190
 $e^+e^- \rightarrow \gamma\gamma$, direct photons, QCD predictions, W_1^2 , W_2^2 structure functions 2-95855
 $e^+e^- \rightarrow \gamma Z$, neutral gauge boson self-couplings tests 2-59138
 $e^+e^- \rightarrow hX$, cut vertex formalism and higher-order QCD predictions 2-54181
 $e^+e^- \rightarrow hX$, higher order QCD corrections 2-54197
 $e^+e^- \rightarrow hX$, P violation, QCD calc., cut vertex method 2-79898
 $e^+e^- \rightarrow$ hadrons, 12-36.7 GeV CM, total cross section meas. 2-95854
 $e^+e^- \rightarrow$ hadrons, 22, 34 GeV, annihilation event topology, coupling constant, QCD anal. 2-69475
 $e^+e^- \rightarrow$ hadrons, energy correl. meas. 2-101743
 $e^+e^- \rightarrow$ hadrons, evidence for QCD gluon emission 2-79894
 $e^+e^- \rightarrow$ hadrons, four-jet events, QCD prediction for tripodity D_3 2-101750
 $e^+e^- \rightarrow \mu^+\mu^- X$, QCD effects 2-107673
 $e^+e^- \rightarrow \mu X$ search for charged Higgs, scalar τ , technicolor test 2-107675
 e^+e^- physics at PETRA, review 2-79856
 $e^+e^- \rightarrow \pi X$, higher twist contrib. from direct pion coupling, QCD interpretation 2-95859
 $e^+e^- \rightarrow q\bar{q}$, broken colour gauge symm. test 2-79900
 $e^+e^- \rightarrow q\bar{q}$, three-jet events Υ distrib. for heavy quarks (Russian) 2-54194
 $e^+e^- \rightarrow q\bar{q}(gg\gamma)$, differential and total cross section 2-54190
 $e^+e^- \rightarrow q\bar{q}g(q\bar{q}g)$, four-jet prod. cross section 2-101746
 e^+e^- single arm expts., QCD predictions for energy moments 2-113225
 $e^+e^- \rightarrow VX$, vector mesons structure functions in QCD framework using relativistic quark model (Russian) 2-74699
 $e^+e^- \rightarrow X$, virtual photon structure to non-leading order in QCD 2-89966
 e^+e^- annihilation, hadron multiplicity in jets (Russian) 2-54191
 eN scattering, polarised electron, gluon corrections (Russian) 2-59158
 ep, elastic photon-gluon scatt. obs. possibility 2-79890
 ep, scaling violations and gluon distrib. of nucleon 2-79882
 $\eta \rightarrow \gamma\gamma(\pi^+\pi^-\gamma)(\pi^+\gamma\gamma)(3\pi)$, coloured quark field theory, PCAC approx. 2-89967
 η , mass, perturbative QCD estimate, $U_A(1)$ current 2-64278
 $f(1270)$ -glueball mixture phenomenology 2-69416
 f tensor mesons in QCD sum rules 2-79837
 F^+ , nonleptonic decays by $c\bar{q}$ annihilation, two-gluon radiation 2-59143
 gg states, account in QCD exclusive processes (Russian) 2-64293
 γe^+ , phenomenology, QED tests, intermediate boson prod. 2-113262
 $\gamma\gamma$, virtual annihilation to hadrons, perturbative QCD 2-89991
 $\gamma N \rightarrow (J/\psi)X$, momentum distrib. for inelastic J/ψ photoproduction in QCD 2-54177
 $\gamma N \rightarrow e^+e^- X(\mu^+\mu^-X)$, deep-inelastic photoproduction, broken colour symmetry effects 2-107668
 $\gamma N \rightarrow J/\psi X$, inelastic neutrino production of J/ψ in QCD-based model 2-101736

colour model continued

- γp , large p_T photoproduction in hard scatt. expansion 2-101734
 γp , QED Compton effect, gluon distrib. function effect (*Chinese*) 2-107666
 γp , total cross-section enhancement, photon shadowing, perturbative QCD calc. 2-79887
 $\gamma p \rightarrow \pi X$, higher twist contrib. from direct pion coupling, QCD interpretation 2-95859
 $\gamma q \rightarrow M q$ subprocess, higher twist contrib. in QCD 2-74692
 H meson and deviations from ideal mixing 2-95805
 $h h$, high energy scatt., massive lepton pair prod. in perturbative QCD 2-54220
 $h h$, multi-quark resonant states 2-54198
 $h h \rightarrow jet + X$, hadron calorimeter reactions, nonleading QCD correction 2-64343
 $h h \rightarrow l^+ l^-$, Drell-Yan pairs, p_T effects in QCD 2-89944
 $h h \rightarrow X$, mechanisms, review 2-74659
 $i(1440)$ pseudoscalar state interpretation as glueball 2-79838
 $J/\psi \rightarrow \gamma f(1270)$, decay branching ratio and polarisation meas. 2-95822
 $K \rightarrow 2\pi$, quark dynamics 2-107658
 $K \rightarrow \pi\pi$, weak decays using QCD corrected hamiltonian and $1/N_c$ expansion 2-101709
 IN , deep inelastic scatt., baryon prod. and diquark fragmentation 2-95852
 Λ_c^+ decays, hard and soft gluonic effects, Weinberg-Salam weak Hamiltonian 2-84893
 μN , deep inelastic scatt., single hadron prod., Q^2 , x and W^2 depend. meas. 2-107669
 μN , deep inelastic scatt. data, perturbative QCD anal. 2-95777
 μN , inelastic muonproduction of J/ψ , ψ' , T in QCD based model 2-101736
 μN , nucleon structure function meas. 2-64329
 μN deep inelastic scatt., QCD related expt. results 2-54173
 μN deep inelastic scatt., QCD strong coupling constant examination 2-79889
 $\mu N \rightarrow X$, struct. functions, QCD quark-parton model test 2-74652
 $\mu N \rightarrow \mu \psi X$, QCD parton model test, photon-gluon fusion model (*Russian*) 2-95851
 $\mu p \rightarrow X$, struct. functions, QCD quark-parton model test 2-74652
 $\mu p \rightarrow \mu J/\psi X$, deep inelastic heavy reson. prod., azimuthal depend. 2-101737
 NN , 2^+ glueball effect in QCD 2-64336
 $\nu(\bar{\nu})N \rightarrow \mu(\mu^+)h^+X$, 200 GeV narrow band beam, fragmentation functions anal. 2-89958
 $\nu(\bar{\nu})N \rightarrow \mu^+ \mu^- X$, same-sign dimuons phenomenological study 2-69445
 νN , deep inelastic scatt., structure function F_2 , QCD anal. 2-101731
 νN , deep inelastic scatt. data, perturbative QCD anal. 2-95777
 νN , deep inelastic structure functions, direct diquark contrib. 2-101701
 νN , nucleon structure functions, comparison with QCD predictions 2-113272
 νN , struct. functions, strong non-asymptotically-free theories, QCD test, scaling violation 2-84897
 νN , structure functions, higher twist phenomena 2-79857
 νN deep inelastic scatt., nucleon gluon distrib., QCD, struct. function scaling violation 2-84887
 $\nu N \rightarrow X$, struct. functions, QCD quark-parton model test 2-74652
 $\Omega \rightarrow \Lambda K(\bar{\Sigma}\pi)$, nonleptonic decays in relativistic composite model with QCD effects 2-54149
 $\Omega \rightarrow \Xi \gamma$, parity violating mode, penguin contribs. to QCD hamiltonian, Wilson coeffs. 2-79869
 $p \rightarrow \pi^+ X$, recombination model to measure sea polarisation 2-95776
 pN , high energy, massive $\mu\mu$ prod., transverse momentum distrib. (*Chinese*) 2-79913
 pp , diffractive heavy flavour prod. consequences 2-95886
 pp , multiple prod., hadron distrib. calc. and comparison with e^+e^- annihilation 2-95874
 pp , toponium prod. and decay characts. study 2-107698
 pp , W^+W^- , $W^\pm\gamma$ prod. in quark-antiquark annihilation 2-107702
 pp , W 's, W pairs and Higgs boson prod. cross-section for CERN UA1 expt. 2-107701
 pp , Z and W bosons prod. 2-107700
 pp collider physics 2-113313
 $pp \rightarrow \gamma\gamma X$, large p_T , QCD test 2-74703
 $pp \rightarrow \gamma\gamma$, large- p_T photon prod., QCD $O(\alpha_s^2)$ corrections 2-54217
 $pp \rightarrow \mu^+ \mu^- X$, dimuon prod. at large transverse momentum, EM effects 2-101776
 $pp(pp)$, CMS energies up to 1000 GeV, charged hadron multiplicity 2-79920
 $pp(pp)$, hadronic toponium prod. 2-79921
 $pp(pp)$, heavy quark jets as technicolour signatures 2-54218
 $pp(pp)$, heavy quark prod., Monte Carlo simulation 2-107699
 $pp(pp) \rightarrow Z^0 X \rightarrow l^+ l^- X$, scaling, nonleading QCD corrections 2-113305
 $pp \rightarrow W^+ X \rightarrow l^+ X$, W bosons decay-lepton distrib. study 2-54221
 $pp \rightarrow X$, low p_T interaction, QCD test 2-79834
 $pp \rightarrow Z^0(\gamma)(W^\pm) \rightarrow l^+ X$, $\sqrt{s}=540$ GeV, QCD and direct lepton prod. 2-54216
 π , EM form factors and struct. functions, dressed quark model 2-59149
 π , wave function and EM form factor, large momentum behaviour, QCD and renormalisation theory 2-59148
 $\pi \rightarrow e\nu_e \gamma$, radiative decay, axial form factor, QCD nonperturbative contrib. 2-84895
 π formfactor and QCD sum rules (*Russian*) 2-79881
 $\pi N \rightarrow \gamma X$, high-twist production of prompt single photons at large transverse momentum 2-95881
 $\pi N \rightarrow \mu^+ \mu^- X$, 190 GeV/c, different flavour and colour hadronic systems fragmentation meas. 2-84924
 $\pi p \rightarrow \mu^+ \mu^- X$, dimuon prod. at large transverse momentum, EM effects 2-101776
 $\pi p \rightarrow \mu^+ \mu^- X$, Drell-Yan process, higher twist contrib. from direct pion coupling, QCD interpretation 2-95859
 $\pi p \rightarrow \phi\pi$, OZI rule, colour confinement and glueballs 2-59102
 ψ decays, configuration mixing effects, QCD calc., rel. to confining pot. 2-54140
 $\psi \rightarrow \eta(\eta')\gamma$, pseudoscalar mesons mixing in $SU(3)_c$ quark-gluon model 2-54145
 $\psi \rightarrow \gamma + \text{glueball}$, vertex const. in QCD 2-79863
 $\psi \rightarrow \gamma\eta(\eta')$, decay rates and anomalous Ward identities 2-113266
 $\psi \rightarrow \psi\pi(\eta)$, decay rates and anomalous Ward identities 2-113266
 QQ , production in e^+e^- annihilation 2-101753
 $QQ \rightarrow l^+ l^- + \text{Higgs boson or pseudo Goldstone boson}$, discrimination between technicolour and Higgs breaking 2-54139

colour model continued

- $qq(q\bar{q})$ systems, chromostatics 2-69415
 QQ systems, spectroscopy 2-95760
 $\rho^+ \rightarrow \pi^+ \pi^0$ in SLAC lattice QCD theory 2-69455
 $T \rightarrow \text{gluons}$, QCD corrections to gluonic width 2-54142
 $T \rightarrow \gamma\pi\pi$, exclusive decay, perturbative QCD calcs. 2-59154
 $T \rightarrow \text{hadrons}$, evidence for QCD gluon emission 2-79894
 $T \rightarrow K^+ K^0(D^+ D^0)$, decay rates calcs. using perturbative QCD 2-54144
 T spectroscopy, QCD effects 2-54099
 $\Xi \rightarrow \Xi' \gamma$, parity violating mode, penguin contribs. to QCD hamiltonian, Wilson coeffs. 2-79869
 Z^0 , transverse momentum distrib., higher order QCD test 2-74650
 Z^0 decay, exclusive heavy meson prod. in QCD perturbation theory, Z^0 width 2-64334
 $H-H$ oscillations, double proton decay and grand unified theories 2-89924
 μN , structure functions, higher twist phenomena 2-79857
- colour perception** *see colour vision*
- colour photography**
 air pollution plumes, colour-IR photography 2-111603
 conference, Washington, DC, USA (Nov. 1981) 2-58540
 N,N' -dialkylcarboanines, influence of protected colour components on characts. (*Russian*) 2-58959
 electronic cameras, Polaroid's 600 system 2-58928
 electrophotographic camera-processor for colour slide prep. (*Japanese*) 2-101477
 image deblurring using white-light processing technique 2-108808
 Kodak film disc system 2-64136
 prints, colour light induced fading 2-53858
 recording by speckle interferometry in white light 2-89841
 shadow photography, image resolution 2-53868
 Ag halide photographic process based on dye form. at one-equiv. steps, colour development (*German*) 2-83401
- colour picture tubes, television** *see colour television picture tubes*
- colour receivers, television** *see colour television receivers*
- colour television**
 colour separations in inverse colour process 2-95497
 telecine film transmission, EBU colour mixing curves (*German*) 2-58929
- colour television picture tubes**
 visual test device, electronic colour generator 2-68187
- colour television receivers**
 hue-rotation patterns, visual temporal freq. response 2-116923
 vario-objective optical system for colour television (*German*) 2-60209
- colour tv** *see colour television*
- colour tv receivers** *see colour television receivers*
- colour vision**
see also eye
 achromatic locus, effect of chromatic adaptation, role of contrast, luminance and background colour 2-99977
 adaptation in the long-wavelength pathways 2-99981
 adaptation of more than one class of cone, $Pi-4$ colour mechanism 2-57818
 adaptation to coloured filters, electrophysiological evidence 2-99945
 appearance grids and chromatic adaptation transforms, anal. 2-99986
 appearance modes: aperture colour rel. to object colour 2-99990
 appearance of colours prod. by min. energy stimulus and 2 pairs of fundamental colours 2-99989
 Bezold-Brucke phenomenon of the far peripheral retina 2-94044
 binocular gain in 100-Hue test score, rel. to fixation 2-57817
 binocular rivalry mechanism, tritanopic considerations 2-68019
 blue sensitive cones signals, ganglion cells mediation, white-yellow borders detect. independent of brightness 2-68004
 blue-sensitive cones, sensitivity cross the central retina 2-68015
 cardinal directions of colour space 2-111676
 chromatic adaptation effect on color rendering 2-58881
 chromostereopsis, interperipular distance meas. 2-88546
 colorimetric matching of RGB colour recordings, mathematical approach 2-64093
 colorimetric standard observer for colour vision studies, Stiles and Burch 2° colour-matching functions 2-99942
 colour TV hue-rotation patterns, visual temporal freq. response 2-116923
 colour-word (Stroop) test and localisation of interference by brain pots. 2-57823
 cone distribution and three primary colour freq. characts. 2-116906
 cone pigments in frog, fish, and monkey, single-cell microspectrophotometry obs. 2-99972
 cone sensitivity spectral dependence model for a Gaussian beam illuminated retina (*German*) 2-11677
 cone spectral sensitivity, estimation methods 2-99973
 cone to channel sensitivities transform. 2-99955
 daylight simulator visual evaluation for colorimetry of luminescent materials 2-58880
 defects, historical review of 1st 4 decades of 20th century (*Italian*) 2-53477
 defects, rel. to occupational hazards, review 2-83566
 detection/discrimination in the long-wavelength pathways 2-99980
 dichoptic colour fusion, wavelength discrimination studies 2-99993
 dichoptic colour perception and the X-Chrom lens 2-73236
 dichromatic colour blindness, evidence for more than 2 kinds of cones 2-78339
 disappearance of stabilised chromatic gratings 2-62621
 discrimination, temporal aspects 2-78338
 discrimination at threshold, increment threshold sensitivity 2-94040
 discrimination processes, observation conditions influence (*Spanish*) 2-88545
 discrimination study using La Jolla analytic colorimeter 2-78511
 dyschromatopsia, clinical use of human retinal late-receptor pot. 2-99950
 electronic colour generator for visual tests 2-68187
 evoked cortical pot., human, rel. to chromatic modulation of sinusoidal grating 2-94033
 evoked potentials, multivariate anal. 2-73232
 evoked potentials in monkey brain, opponent colour responses (*Japanese*) 2-116912
 exchange thresholds for long-wavelength incremental flashes 2-78332
 fish, colour vision rel. to eye evolution 2-78340
 flicker-photometric and flicker-threshold spectral sensitivity comparison for eye adapted to coloured backgrounds 2-78336
 foveal pi mechanism early-stage abnormality in protanopic patient with retinitis pigmentosa 2-116918

colour vision continued

- ganglion cells, colour opponent, goldfish, early visual adaptation 2-116910
- green tests, exchange thresholds 2-99978
- Haidinger's brushes and macular pigment dichroism 2-88544
- high-contrast colour set choice for additive colour mixers 2-112947
- hue shifts following differential postreceptor achromatic adaptation 2-57820
- lantern for colour perception testing 2-100084
- long-wave fundamental, threshold detect. of flicker obs. 2-68013
- masking effects in the discrimination of color texture fields 2-99982
- Maxwellian-view optical system calibration 2-95433
- model for colour appearance 2-99985
- model making, merits of, review 2-99971
- neurobiological and psychophys. aspects, conf., Katata, Japan (Nov. 1980) 2-94886
- object colour perception under high pressure Na illuminants 2-99975
- opponent-colour channels, nonlinear nature 2-99954
- opponent-colour theory, additivity failure of chromatic valence 2-99988
- parafoveal retina short-wavelength-sensitive mechanism field sensitivity in protanopic patient with retinitis pigmentosa 2-116919
- periapical bone lesions, dental radiographs, colour conversion for improved diagnosis 2-68142
- peripheral retina, colour vision under photopic conditions 2-94043
- peripheral retina, spectral sensitivity to large and small stimuli 2-116920
- phoria measurements using chromatic targets 2-99970
- primate colour vision, neural organisation 2-99956
- processing colour information of images obtained with drum processor 2-65173
- R-G cone difference signal, primates, chromatic adaptation and flicker-freq. effects 2-116916
- R-G cone difference signal identification in corneal electroretinogram of primates 2-116917
- Rayleigh discrimination in young human infants 2-68012
- red mechanism, field sensitivity derived from primate local ERG 2-99976
- red-green colour defects, review of new obs. 2-99974
- red-green colour deficiencies, congenital, large-field colour match homogeneity 2-78337
- research, silent substitution method 2-68227
- retina, dace, spectral props. of 2nd order neurons 2-99953
- retina, fish, colour information coding of horizontal cell responses 2-99948
- retinal bipolar cells, carp, chromatic props. 2-99952
- retinal ganglion cells, turtle, spatial organisation, receptive fields to coloured lights 2-99951
- retinal L-type horizontal cells, role in opponent-colour process 2-99949
- saturation, rel. to test field size and surround luminance 2-99984
- scotopic spectral sensitivity development, absorpt. spectrum of human ocular media 2-57819
- spectral dimorphism of crayfish visual pigment in soln. 2-94041
- systems analogue mime for colour vision and vision disorders in humans 2-94260
- thresholds for discrimination and detect., spatial props. of chromatic and achromatic mechanisms 2-99979
- tilt aftereffect, colour-contingent, spatial freq. specificity 2-94057
- transient luminance and quasi-sustained colour mechanisms 2-62611
- trichromacy, cause, theoretical anal. using comb-filtered spectra 2-68014
- visual-error criterion for color-image processing 2-116922
- wavelength-discrimination behaviour in the grasshopper, *Phlaeoba* 2-94042
- yellow perception, differences of unique loci between individuals 2-99987

columbium *see niobium***coma** *see aberrations***combination scattering spectra** *see Raman spectra***combinatorial mathematics** *see combinatorial mathematics***combinatorial mathematics**

- see also graph theory; sorting; trees (mathematics)*
- isolated word recognition, dynamic time warping, adaptive ordered graph search technique 2-97307
- quantum theory, N-body problem, related combinatoric result 2-53569
- symmetric groups, representation theory, book 2-79341

combustion

- see also explosions; flames; heat of combustion; reaction kinetics*
- acetylene-O₂ flame, two-photon excitation of O 2-96526
- acetylene-O₂ mixture, transition from burning to detonation 2-83387
- are metallisation, electrode heating efficiency and coeff. of material use (Russian) 2-67582
- automobile engine using hydrogen storage technology, mixture formation and combustion 2-83443
- brown coal combustion, developments and problems in fields of application (German) 2-99676
- CARS study of temp. and species distrib. 2-107413
- coal water slurries, combustion characts., test programme 2-99753
- combination in reactive systems, book 2-63766
- combustion tunnel, numerical modelling of turbulent flow 2-91556
- combustor flow modelling 2-75959
- decane, cool-flame combustion, mechanism 2-99679
- diagnostics, photothermal deflection technique appl. 2-105522
- diamond, micropowder, thermal ovaling, theoretical model 2-88018
- diffusion combustion, rates and crit. conditions 2-62401
- ethyl alcohol, laminar boundary layer, heat and mass exchange with vaporisation and combustion 2-60503
- exothermic reaction zone in porous media, filtration combustion wave stability 2-114889
- fast reactions in energetic systems, conf., Preveza, Greece (July 1980) 2-58544
- flame minority species concentration measurements by photoacoustic technique 2-93793
- flames, point-absorption measurements using spatially resolved optical Stark-modulation spectroscopy 2-78109
- fluidised beds of coarse solids, fine particle behaviour 2-71027
- freon 113, impinging jets, forced convection boiling, burnout heat flux 2-70935
- n-hexane, laminar boundary layer, heat and mass exchange with vaporisation and combustion 2-60503
- jets, submerged diffusion flame in immiscible fluid, combustion 2-60594
- laboratory flat flame non-uniform Na atom distrib. meas. using tunable laser absorpt. spectroscopy 2-101465
- laser absorption sampling probe for temporally and spatially resolved combustion measurements 2-78145

combustion continued

- methane/air flame, in plane OH combustion species visualisation, quantitative 2-116696
- nitrocellulose-nitroglycerin solid fuel based gasdynamic laser 2-96963
- noise, influence of droplet size of liquid fuel 2-102975
- oil-spray flames, burning processes studies, gas turbine low NO_x combustor design appls. 2-62403
- plane wedge ignition by a glowing surface 2-116698
- premixed flame in uniform straining flow 2-109350
- propellant, solid, shock-induced instability due to crack-like defects 2-78106
- quasihomogeneous turbulent diffusion investig. using the probability density distrib. function of conc. 2-88357
- Raman scattering exper. in combustions media, using 5 J 1.8 μ sec pulse 10 pps dye laser 2-75587
- Raman spectroscopy of combustion processes, using 1-pps 2- μ sec pulse freq.-doubled Nd:YAG/glass laser 2-75586
- self-excited waves, propag. mode 2-111495
- shock wave propag., vaporisation heat and mass transfer 2-114849
- solvent-refined coal solids produced by liquefaction processes, combustion charact. evaluation 2-99755
- turbulent boundary layer, reactive material injection, combustion 2-114778
- turbulent combustion media diagnostics, thermometry and conc. meas., CARS appl. 2-88359
- turbulent flow in internal combustion engine during compression, computation 2-65572
- water, hydrodynamically stable-flow in annuli, burnout at varying heat inputs 2-91541
- wave stability, heat loss effects 2-60671
- CO, corona effects on gaseous combustion 2-105486
- CO oxidation, oscillations, glow, ignition, in closed gas-phase system 2-78110
- CS₂ combustion, SOO existence and formation 2-83386
- H-air flames, reson. multiphoton optogalvanic detect. of H 2-108435
- H₂ catalytic combustion, advantages and disadvantages of using catalytic heater 2-99850
- H₂ catalytic combustion, fundamental conditions for burner design 2-99749
- H₂ ignition when injected into high temperature oxidiser experimental study 2-99847
- H₂O, impinging jets, forced convection boiling, burnout heat flux 2-70935
- H₂O vapour, CARS spectrum, temp. depend. meas. 2-85676
- Li fire modelling, in fusion reactors 2-54644
- NO₂ produced in methane-air flame combustion low conc. detect. by photothermal deflection technique 2-105522
- Ti particle dispersion regularity, in high temp. Ar jet, with combustion (Russian) 2-60599
- Ti-B(C), combustion under ultrasonic vibrs., capillary flow effects 2-116700
- Ti+H₂ self-propag. high-temp reaction, hydride synthesis 2-111112
- TiC, synthesis by self-propagating high-temp. method, effect of O content of Ti powder 2-99382

comets

- 1981 Agassiz Station obs. of magnitudes 2-94650
- Apollo-Amor asteroids as extinct comets, Earth/Venus encounters and asteroid orbit problem 2-112370
- Arend Roland, ion tail Kelvin-Helmholtz instability 2-63320
- P/ Ashbrook-Jackson, orbit determ. from 1971-8 apparitions and ephemeris 2-112392
- atmosphere particles, brightness and polarisation depend. on phase angle 2-73910
- atmosphere-solar wind interactions 2-100695
- Austin (1982g), discovery, precise positions, parabolic orbital elements and ephemeris 2-89199
- Austin (1982g), discovery posns., magnitude and appearance 2-84167
- Austin (1982g), ephemeris, (1982 August 9 to September 2) 2-94652
- Austin (1982g), ephemeris (1982 September 8 to October 28) 2-112395
- Austin (1982g), improved parabolic elements 2-117630
- Austin (1982g), parabolic orbital elements, ephemeris and visual magnitude estimate 2-100836
- Austin (1982g), precise positions, improved parabolic orbital elements and corrections to ephemeris 2-94657
- Austin (1982g), precise positions, parabolic orbital elements and ephemeris 2-89201
- Austin (1982g), precise positions, total visual magnitude, parabolic orbital elements and ephemeris 2-89202
- Austin (1982g), spectrum obs. and total visual magnitude, coma dia. and tail length estimates 2-112394
- Austin (1982g), total visual mag. estimates and coma diameters (July 1982) 2-100833
- Austin (1982g), total visual magnitude, coma diameter and tail length estimates (1982 September 4 to 20) 2-117631
- Austin (1982g), total visual magnitude estimates and coma diameter (1982 July 2 and 3) 2-94655
- Austin (1982g), UVRI photometry, spectrum and total visual magnitude estimates 2-112393
- Austin (1982g), visual obs., elements and ephemeris (1982 Aug.-Dec.) 2-106621
- bioposis in cometary nuclei 2-63319
- P/Borrelly (1980i), 1981 obs. summary 2-68675
- Bowell (1980b), coma diameter and total visual magnitude (Feb. 26 to March 4 1982) 2-58305
- Bowell (1980b), JHK photometry and total visual magnitude-estimates, (1982 May 25 to July 10) 2-94654
- Bowell (1980b), OH and CN prod. rates from IUE and ground-based obs., (April 1982) 2-84165
- Bowell (1980b), orbit, physical appearance ephemeris and perturbation by Jupiter 2-79041
- Bowell (1980b), orbit perturbation due to planets 2-106627
- Bowell (1980b), total visual magnitude estimate (1982 April 23) 2-73912
- Bradfield (1979 VII), topocentric posns., Wrocław photographic obs. (1979 Aug.) 2-79001
- Bradfield (1979 X), CO₂⁺ ion presence and prod. mechanism, UV obs. 2-84163
- Bradfield (1979 X), CS and S production rates from IUE obs. 2-73904
- Bradfield (1979 X), identification of CO fourth positive and Cameron bands 2-84170

comets continued

- Bradfield (1980 XV), head during post-perihelion phase, emission features, visible obs. 2-84169
P/Brorsen-Metcalf, nongravitational effects on motion (*Russian*) 2-79035
P/Churyumov-Gerasimenko (1982f), recovery and precise positions (1982 May 31 and June 1) 2-79036
coma aeronomic processes 2-63321
coma model including nucleus with interstellar molecules 2-79028
P/Comet Halley, design of high resolution imaging system for spin-stabilised Probe spacecraft 2-112301
P/Comet Halley, orbital elements, AD 1986 to 2647 BC 2-106625
P/Comet Schwassmann-Wachmann 1, CO and CO₂ vaporisation rel. to outbursts 2-106624
cosmic serpent, book 2-101149
Cretaceous-Tertiary boundary event, and extinction of marine plankton 2-94368
P/d'Arrest (1982e), recovery, precise positions, 1982 April 23 to May 16, and orbital elements 2-73911
discovery probability rel. to origin 2-117632
discovery rates, statistics 2-73915
P/du Toit-Hartley (1982b, 1982c), magnitudes from red-sensitive exposure and ephemeris 2-68677
dust grains formation by condensation, contrib. to comet integral brightness (*Russian*) 2-94647
dust origin for interplanetary dust 2-63314
dust tails, striae and dust streamers, particle-fragmentation model 2-68672
P/Encke, radar obs. of nucleus 2-94658
P/Encke (1980) X10, topocentric posns., Wrocław photographic obs. (1980) 2-79001
ephemerides calculations from orbital elements 2-100755
families of outer planets, orbits and origin and evolution in planet eruption theory 2-84171
formation due to radiation pressure from protosun 2-112351
frost, condensed gas, ion induced erosion 2-100781
P/Grigg-Skjellerup, orbit from 1947-1977 apparitions and 1982 ephemeris 2-106617
P/Grigg-Skjellerup (1982a), ephemeris (1982 May 16 to June 30) 2-73913
P/Grigg-Skjellerup (1982a), mag. estimates and ephemeris continuation (1982 June-Aug.) 2-84168
P/Grigg-Skjellerup (1982a), total visual magnitude estimates, (1982 April 20 to May 12) 2-89200
P/Grigg-Skjellerup (1982a), total visual magnitude estimates (1982 May 14 to 27) 2-79038
groups and pairs, significance 2-106623
P/Gunn, total magnitude estimates (1982 May 22 and 23) 2-79037
Gusev comet crater (S.Russia) and Cretaceous-Tertiary extinctions 2-62959
P/Halley, dust and gas environment, conf. at Heidelberg, Germany (Aug. 1981) 2-63749
P/Halley, ephemeris calc. technique 2-100757
P/Halley, fast flyby Giotto mission, spacecraft and expts. 2-68589
P/Halley, Giotto mission payload and objectives 2-63215
P/Halley, Giotto spacecraft gas and plasma environment, workshops (Noordwijk, 1980-1) 2-84386
P/Halley, infrared sounding from flyby Venera Halley probes 2-63216
P/Halley, mechanical energy and planetary perturbations 2-68671
P/Halley, nucleus brightness and props. 2-100837
P/Halley, PLANET-A project (*Japanese*) 2-89109
P/Halley, unsuccessful search, (1981 December 18) 2-63318
P/Halley, visibility of nucleus rel. to dust obscuration problem 2-78977
P/Halley (1910 II), Bobrovnikoff's photometric power-law solns. 2-68673
P/Halley (1910 II), brightness fluctuations at 1910 apparition rel. to predicted brightness in (1986) 2-68670
P/Halley (1910 II), light curve anal. and predictions for next return 2-112391
Hartley (1982h), discovery and approximate positions, (1982 July 11 and 13) 2-94653
Hartley (1982h), precise positions, elliptical orbital elements and ephemeris 2-94656
Howard-Koomen-Michels (1979 XI), orbital soln. and effect of Sun collision 2-100830
Howard-Koomen-Michels (1979 XI), Sun collision and orbit, obs. 2-79040
Ikeya-Seki (1965 VIII), ion tail helical structures 2-89203
impact mechanics of the Cretaceous-Tertiary extinction bolide 2-94497
impacts on planetary surfaces, rel. to origin and evolution of planetary atmospheres 2-112357
inner coma plasma production, role of critical ionisation vel. phenomena 2-100838
interstellar comets, prod. in galactic spiral arms and relation to terrestrial catastrophism 2-79039
ion tail Kelvin-Helmholtz instability 2-63320
ionosphere, solar wind magnetic field penetration 2-112295
Kamensk comet crater (S.Russia) and Cretaceous-Tertiary extinctions 2-62959
Kohler (1977 XIV), topocentric posns., Wrocław photographic obs. (1977 Oct.) 2-79001
Kohoutek, ion tail Kelvin-Helmholtz instability 2-63320
long period comets, orbits distrib. 2-112390
long-period comets, stellar perturbations of orbital elements 2-106626
magnitude, coma and tail obs. (1980-1) 2-68674
magnitude sources for visual photometry 2-94649
magnitudes, coma dia. and tail details for eight objects (1980-2) 2-106620
Meier (1978 XXI), topocentric posns., Wrocław photographic obs. (1978) 2-79001
Morehouse, ion tail Kelvin-Helmholtz instability 2-63320
motion, non-gravitational forces, Dubyago rel. to Marsden method (*Russian*) 2-79034
Na I D₂-line resonant scatt. in cometary atmosphere, intensity and linear polarisation (*Russian*) 2-73907
nature (book) 2-79292
P/Neujmin 3, improved elements and ephemeris (1982 May-Aug.) 2-84166
nuclei, alternative model (*Russian*) 2-73908
nuclei, IR line emission from constituent molecules, evaluation 2-89198
nucleus, two-layer model (*Russian*) 2-79030
numerical power series method applied to N-body problem (*Russian*) 2-84164

comets continued

- Oort cloud, capture of interstellar comets on Solar System passage through cloud 2-68669
Oort cloud, effect of star passages on comet orbits 2-106619
orbit similarities with asteroids and meteoroids 2-94633
orbital elements, differential corrections for seven objects 2-79033
orbital patterns during close encounters with Jupiter 2-106622
P/Oterma before 1934 approach to Jupiter, orbital patterns 2-106622
P/Comet Peters (1846 VI), possibly identical with Comet Hartley (1982h) 2-94656
P/Tempel 2 (1982d), ephemeris (1982 May 31 to July 30) 2-73914
periodic active comets, possible mechanism of form. 2-100831
periodic short period comets, lifetimes and disappearances 2-63315
P/Peters-Hartley (1846 VI=1982h), precise positions, orbital elements and ephemeris 2-100832
photochemical heating of cometary atmosphere, theory for H₂O dominated coma 2-112389
photometry, gas component/visual brightness at large heliocentric distances (*Russian*) 2-79031
physical structure of nucleus, coma and tail, review 2-73909
plasma tail disconnection events used to study interplanetary sector boundaries 3-dimens. props. 2-68666
plasma tails, interaction with turbulent solar wind 2-106615
position meas. from photograph 2-84106
precise posns. on Minor Planet Circulars 6345-6424 for eight objects 2-63302
precise posns. on Minor Planet Circulars 6481-6572 for 16 objects 2-63301
precise posns. on Minor Planet Circulars 6573-6652 for 18 objects 2-58294
precise posns. on Minor Planet Circulars 6643-6770 for 13 objects 2-58295
precise posns. on Minor Planet Circulars 6751-6838 for 11 objects 2-73889
precise posns. on Minor Planet Circulars 6839-6898 for 14 objects 2-84141
precise posns. on Minor Planet Circulars 6899-6988 for 23 objects 2-84142
precise posns. on Minor Planet Circulars 6989-7054 for six objects 2-94635
precise posns. on Minor Planet Circulars 7055-7166 for 16 objects 2-100806
precise posns. on Minor Planet Circulars 7167-7278 for 14 objects 2-117626
radar obs., improvement of orbital elements and rotation estimates 2-94648
research in understanding solar system origin (*German*) 2-68678
P/Schwassmann-Wachmann 1, colour and CO⁺ emission, visible obs. 2-68668
P/Schwassmann-Wachmann 1, new outburst, visual magnitude estimates, (1982 April 13 to 15) 2-63317
P/Schwassmann-Wachmann 1, total visual magnitudes and coma diameters (1982 April 16 to 20) 2-68676
Seargent (1978 XV), CO₂⁺ ion presence and prod. mechanism, UV obs. 2-84163
P/Shajn-Schaldach (1949 VI), past 250 years orbital evolution 2-63316
solar wind interaction with comet tail, EM plasma instability (*Russian*) 2-58304
solar wind interactions, review 2-117556
spacecraft direct flight trajectories to periodic comets, optimisation 2-68588
sungazer, discovery of third object on SOLWIND data (1981 July) 2-100835
sungazer, second object from SOLWIND data (1981 Jan.) 2-100834
surface nonradial gas flow 2-112396
tail, inclination angle with radius vector, determ. method 2-78974
terrestrial upper atmosphere, aerosol chem. enrichment, role of cometary material 2-100615
topocentric posns., Wrocław photographic obs. (1977-80) 2-79001
Tunguska meteor fall, 1908 June 30, anal. of physical, chemical, optical and historical impacts 2-106629
Tunguska precatastrophic chem. comp. estimation 2-84172
P/Tuttle (1980 XIII), positions (1980 December 26 to 1981 January 9) 2-106618
visibility of comet nuclei, dust obscuration effects 2-78977
visual obs. (1948-82) of mag., tails and comae 2-94651
West (1976 VI), dust tail striae, particle-fragmentation model 2-68672
West (1976 VI), spectrum energy distrib. and flux, visible obs. (*Russian*) 2-79029
West (1976 VI), tail structure rel. to solar wind vel. (*Russian*) 2-79032
P/Whipple (1948 VI), past 250 years orbital evolution 2-63316
P/Wolf-Harrington, orbital elements from 1952 to 1978 apparitions, non-gravitational effects 2-106616
CS⁺ tentative identification, origin 2-73905
H I atmospheres, solar La radiation scatt. (*Russian*) 2-73906
NH UV and submillimetre line emission intensities 2-68667
OH fluorescence, UV bands 2-94646
- commensurate-incommensurate transformations**
acoustic anomalies in commensurate phases 2-66162
adsorbed monolayers, commensurate-incommensurate transitions, chem. pot. and press. induced 2-115405
antiferromagnet, triangular, incommensurate mag. struct., role of dipole-dipole interaction 2-66778
asymmetry four-state clock model, perturbation expansion, commensurate-incommensurate transition 2-56878
bis-tetramethylammonium ion tetrachloride, phase transition X-ray study in modulation wavenumber 2-81945
carbon tetrachloride, adsorbed on graphite (0001), appl. of Landau theory to 2D struct. phase transition 2-76802
chiral Potts and asymmetric clock model, phase diagram, Monte Carlo study 2-92908
continuous media with dislocations, commensurate-incommensurate transitions (*Russian*) 2-56154
dislocations in domain wall struct., two-dimens. model 2-92153
domain wall wandering and dimensionality depend. 2-63953
domain walls, fluctuations and the incommensurate-commensurate transition in two and three dimensions 2-66164
frozen impurities, random, effect on commensurate-incommensurate transition 2-103939
Goldstone symmetry violation in incommensurate systems 2-69122

commensurate-incommensurate transformations continued

- graphite, physisorbed monolayer of Kr, commensurate melting and commensurate-incommensurate transition, X-ray study 2-115548
 graphite intercalated with alkali metals, commensuration struct. of mass density waves, thermodynamic theory 2-98017
 graphite-Br₂ intercalation cpd., struct. phase transitions, Raman scatt. study 2-86863
 Heisenberg spin-Peierls system in mag. field, commensurate and incommensurate states 2-92952
 incommensurate cryst. phases, microscopic model 2-81925
 incommensurate multisoliton lattice, NMR lineshape anal. 2-66928
 Ising model, axial nearest neighbour, perturbation expansion, commensurate-incommensurate transition 2-56878
 light scatt. characts. in presence of devil's ladder 2-87806
 magnetic field induction of incommensurable mag. structure (*Russian*) 2-56865
 modulated crystal, excitations near commensurate-incommensurate transition 2-92179
 one-dimensional, crit. behaviour 2-92145
 one-dimensional conductors, neutron scatt., struct., lattice dynamical, and mag. props. 2-91726
 order parameter spatial distrib. in weak anisotropy approx. 2-103947
 polyacetylene, doped, modulated crystal, excitations near commensurate-incommensurate transition 2-92179
 pTS, monomer diacetylene, incommensurate-commensurate phase transition, Raman study 2-71631
 rare gas physisorbed monolayer on graphite, orientational epitaxy of wall near commensurate-incommensurate phase transition 2-66355
 review 2-92188
 splitting of phase transitions into commensurate and incommensurate under effect of external agencies 2-76668
 surface, H₂ adsorption, commensurate-incommensurate transition, LEED study 2-87064
 symmetry aspects, unit cell multiplication 2-110784
 symmetry jumps in presence of devil's ladder 2-86833
 tetragonal tungsten bronze struct., incommensurate phases, Landau free energy anal. 2-66213
 di-[tetramethyl ammonium] copper tetrachloride, modulated structs., lattice excitations, Brillouin spectroscopy 2-92121
 tetramethylammonium cobalt chloride, phase transitions, ESR study 2-98267
 tetramethylammonium tetrabromocuprate, cryst. struct. and incommensurate-commensurate phase transition 2-65977
 tetramethylanion copper bromide, ferroelec., phase transitions, high press. effects, permittivity study 2-99069
 thiourea, modulated struct., phase diagrams, commensurate-incommensurate transition, neutron diffr. study 2-66180
 thiourea-d₄, elec. field induced commensurate phase, elastic neutron scatt. study 2-104820
 thiourea-d₄, ferroelec. incommensurate-commensurate phase transition in DC bias elec. field 2-67005
 three-dimensional uniaxial cpds., domain wall dynamics near commensurate-incommensurate transition 2-76636
 tricritical point, Landau-type theory 2-66167
 TTF-TCNQ, neutron scatt. study of commensurability effects under high press. 2-86858
 TTF-TCNQ, nonlinear model for hysteresis obs. in neutron scatt. 2-56182
 two-dimensional sine-Gordon system, commensurate-incommensurate transition, renormalisation-group approach 2-112853
 two-dimensional transitions, review (*Japanese*) 2-81934
 Cr-Fe, antiferromagnetic, high press. phase diagram, neutron scatt. study 2-116000
 Cr-Mn single crystals, first order incommensurate-commensurate transform. 2-92175
 Cu (110), adsorbed Kr and Xe, surface structs. and uniaxial phase transitions 2-66367
 Cu complex, α -bis(N-methylsalicylaldiminato)Cu(II), incommensurate phase, X-ray study 2-97975
 Cu₂-S, CDW and struct. transition, X-ray diffr. study 2-92189
 Cu(110) with adsorbed Xe, commensurate-incommensurate transition, PES study 2-104154
 K₂SeO₄, ferroelec. incommensurate transition, Brillouin scatt. study 2-66997
 K₂SeO₄, incommensurate superlattice, X-ray diffr. study 2-55943
 K₂SeO₄, incommensurate phase transition, uniaxial stress depend., Raman scatt. study 2-71638
 K₂SeO₄-type crystals, sp. ht. in incommensurate phase 2-66247
 Kr adsorbed on graphite, 2D commensurate solid, stabilization by Xe 2-61287
 Kr overlayer on graphite, commensurate-incommensurate phase diagram, helical Potts model 2-82136
 β -Li₂V₂O₈, quasi-one-dimens. cond., EPR 2-92997
 (NH₄)₂BeF₄, dielec. props. near nonpolar-incommensurate-polar phase transitions 2-104824
 (NH₄)₂BeF₄, commensurate-incommensurate polar transition, dielectric hysteresis (*Russian*) 2-82799
 (NH₄)₂BeF₄, ferroelec., incommensurate phase, quadrupole moment, homogeneous mech. stress effects 2-57023
 (NH₄)₂BeF₄, incommensurate superlattice, X-ray diffr. study 2-55943
 (NH₄)₂ZnCl₄, proton mag. relax., commensurate-incommensurate transition 2-77400
 NaNO₂, incommensurate phase transition near Lifshitz point, thermodynamic theory 2-87712
 β -Na₂V₂O₈, quasi-one-dimens. cond., EPR 2-92997
 Pd surface (100), CO adsorpt., IR reflection absorpt. study 2-98466
 RbH₂(SeO₃)₂, ferroelec. and incommensurate transitions, US study 2-66137
 (Rb_{1-x}K_x)₂ZnCl₄, thermal hysteresis of modulation wavevector, X-ray study 2-109975
 Rb₂ZnCl₄, elastic behaviour, temp. depend., commensurate-incommensurate transition, Brillouin spectra study 2-61053
 Rb₂ZnCl₄, incommensurate-commensurate phase transition, dielec. meas. 2-71637
 Rb₂ZnCl₄, incommensurate state, elastic stiffness const. temp. depend., Brillouin scatt. 2-115360
 Rb₂ZnCl₄, optical props. changes at successive phase transitions 2-77476
 Rb₂ZnCl₄, paraelectric-incommensurate transition, fluctuations, NMR study 2-87710
 Rb₂ZnCl₄, phase transitions, Raman scatt., dielec. const. and spontaneous polarisation study 2-72510

commensurate-incommensurate transformations continued

- Rb₂ZnCl₄:Mn²⁺, slow soliton motion inferred from EPR meas. at T=T_c+e 2-72337
 TaS₃ (1T), CDW phase transform., positron annihilation Doppler broadening study 2-99215
 TaSe₂ (2H), microstruct. in incommensurate and commensurate CDW states, electron microscopy obs. 2-104009
 TaSe₂ (2H), Raman scatt. from CDW state, commensurate-incommensurate transition 2-66468
 TaSe₂ (2H) structure, CDW, interlayer interactions effects 2-76950
 TbH_{2+x}, antiferromagnetic ordering 2-72158
 Te, adsorbed layer on W(110), multiple commensurate-incommensurate transitions, LEED study 2-115560
 Ti-V, β -w transform under press., stacking soliton model for diffuse omega phase 2-71639
 U, martensitic transform. effect on supercond. 2-110526
 V-H and V-D systems, modified phase diagrams, TEM obs. of transforms. 2-72671
 W surface (001), transition to incommensurate reconstruction induced by H adsorpt. 2-56313
- commerce**
 consumer camera market, electronic methods effects 2-95505
 interferometric and multimode optical fibres, market prospects (*Norwegian*) 2-70678
 selective absorber coatings for flat-plate solar collectors, market opportunities 2-57722
 world coal trade and the fuel supply to power stations in Europe (*German*) 2-78178
- commissioning**
see also installation
 440 MW unit commissioning at Paks Nuclear Power Plant (*Hungarian*) 2-94215
 fuel charge and physical starting organization at Loviisa II. Nuclear power plant (*Hungarian*) 2-90221
 TEXTOR toroidal field power supply system commissioning tests 2-69942
- communication channels**
see also channel capacity
 multichannel radio microphone operation, improvements by use of advanced receiver techniques 2-86195
 ocean surface-scatter communication channel, Kirchhoff approach 2-91163
 underwater acoustic medium as generalised communication channel 2-60284
- communication networks**
see also computer networks; radio networks
 satellite telecommunication, link availability subject to correlated rain attenuation at ground terminals 2-106293
- communication theory** *see information theory*
- communications applications of computing** *see communications computing*
- communications computing**
 digital high frequency radiocommunications, applications of microprocessors 2-73781
 geosynchronous satellite location program in TRS-80 BASIC 2-117564
 HF sky-wave field strengths and max. usable freqs., calc. using programmable pocket calculator (*German*) 2-78912
- community planning** *see town and country planning*
- commutators**
 multichannel commutator, electrical contact with conscious freely moving rats 2-62860
- compacting** *see densification*
- compandor transmission** *see compandors*
- compandors**
see also interference suppression; pulse code modulation
 wire-less microphone transmitters appl. (*German*) 2-91195
- comparators (circuits)**
see also phase comparators
 corrosion protection, automatic control of pickling process (*Russian*) 2-72857
 physiological monitoring, comparator circuit for alarm using single op-amp 2-78461
 thermocouple convertor inertia meas., electric variables meas. appl. 2-58818
- compasses**
see also navigation
 acoustic transponding fish tag compass, trials 2-111815
 electronic solid state, fluxgate sensor realization 2-112940
- compensation**
see also error compensation
 electric measurement techniques appl., general survey (*German*) 2-79610
 single mode fibre interferometer, passive compensation scheme 2-84688
 strain-gauge balance, dynamic interference compensation 2-58808
 temperature compensation linear displacement transducer (*German*) 2-53751
 thermocouple response linearization using FET cct. 2-53757
 vibration elastoviscosimeter based on a micro-controller (*Russian*) 2-114955
 LiNbO₃ optical waveguides, temp. compensated prism coupler 2-109035
- compensation, charge** *see charge compensation*
- complementarity**
 fermionic composite models from complementarity 2-101684
- complementary metal-oxide-semiconductor integrated circuits** *see field effect integrated circuits*
- complete computer programs**
see also subroutines
 alloys, heat of formation for binary systems, program in BASIC 2-111506
 BASIC program for simple field calcs. for monomode optical waveguides 2-97170
 bed load grain size grain size distribution model in FORTRAN IV 2-117366
 chemistry appls., matrix-diagonalization with a programmable calculator, using HP-41C/CV 2-64855
 electron densities, atomic orbitals, molecular orbitals representation, plotting program, in FORTRAN 2-64862
 fluorescence decay curves, numerical deconvolution, regularisation operators use with Lagrange multipliers, in FORTRAN 2-65034
 Fresnel lens approximation, simple computer program in BASIC 2-75654

complete computer programs continued

- geosynchronous satellite location program in TRS-80 BASIC 2-117564
hydrodynamic parameters of biological macromolecules, evaluation, FORTRAN IV program 2-99881
isotropic ESR spectra simulation, transportable BASIC program 2-108582
laser pumping cavities radiation transfer efficiency, TI-59 program 2-97008
MSONRM, FORTRAN program for mesonorm calc. in whole-rock analyses 2-117303
open channel beds, prediction program in FORTRAN IV 2-114899
PSOD, interactive FORTRAN program for membrane radiation response simulation 2-100667
seismograms interpretation, FORTRAN program 2-100306
solar system with two suns and one planet model, BASIC program 2-58275
thermogravimetric analysis, Reich-Stivala anal. algorithm, for TI-59 calculator 2-67730
tomography reconstruction from sparse data, JETCAT Fortran program 2-97797
unimolecular rate constant fall-off using quantum RRK equation, interactive calculation in BASIC E 2-67729
WAVES: a FORTRAN IV program on the stochastic simulation of waves in the coastal environment 2-117310

complex angular momentum plane

- see also *angular momentum theory; Pomeranchuk poles and trajectories; Regge poles and trajectories*
quark scattering amplitudes with flavour exchange, double logarithmic asymptotics 2-113241

compliance constants see *elastic constants***composite insulating materials**

- glass fibre reinforced epoxy, magnet coil insulating materials, irradiation studies 2-80181
glass fibre reinforced plastic, liq. medium influence on strength and deform. props. 2-99576
glass-ceramic, 14 MeV neutron irradiation effects 2-85208
heat resistant rubbers development for power cables and conductors 2-67273
turbogenerator superconducting windings bonding material requirements and development 2-62097
SiO₂-based glass ceramics, neutron irradiation effects 2-85209

composite materials

- see also *cermets; composite insulating materials; composite superconductors; concrete; eutectic alloys; fibre reinforced composites; fibres; filled polymers; laminates*

- aggregate materials, notch sensitivity in fracture testing 2-99611
bar, reinforced, cylindrical, non-stationary wave propag. (Russian) 2-75887
bending displacement, computer aided design (Japanese) 2-72770
bimodulus composite material cylindrical shells, vibration analysis 2-97265
brittle fracture, plate with crack in transverse compression 2-109248
building panels, transmitted acoustic intensity measurement 2-60305
carbide-graphite composite materials, high temp. oxidation, heat treatment effect 2-77222
cement based matrix reinforced with polyalkene films of varying elastic moduli 2-57411
cement-based composites with powdered fillers, current-conducting sensor for recording failure of structures 2-99636
ceramic-plastic composites, electromechanical materials and their appls. review 2-77453
combined deformation by creep and fracture, driving process 2-115342
constitutive law, homogenised, for partially cohesive composite material 2-60396
continuous fibrillated polyolefin film reinforced cement, toughness 2-116521
cylindrical shells, deform. under combined dynamic loading 2-91286
diamond composite, textile yarn guide appl. feasibility 2-72893
directed solidification of in situ composites, forced convection influence on microstruct. (French) 2-77818
elastic, layered, orthotropic, harmonic waves with arbitrary propag. direction 2-70863
elastic composite layer, pressing rigid circular stamp problem, dual integral eqn. soln. 2-60390
elastic composite material, effective constitutive coeffs., effect of slip between components (French) 2-55422
elastic media, boundary-value problems in two dims., interior, exterior solns. 2-103042
elastic modules difference phenomena 2-62157
elastoplastic strain, calc. under complex load 2-114677
fabric reinforced woven hybrid composites, elastic props. 2-83152
fatigue, differential damage accumulation model 2-93624
fracture study method for use under biaxial loading 2-67696
glass, matrix composite with dispersed crystalline or glass particles, indentation hardness (Japanese) 2-67509
glass sphere reinforced TRACAST-3012 epoxy, ultrasonic wave propag. at long and short wavelengths 2-61073
glass-ceramics, matrix composite with dispersed crystalline or glass particles, indentation hardness (Japanese) 2-67509
granular, effective characs. optimisation 2-81235
granular materials, resistivity at zero temp. coeff. 2-66600
graphite/epoxy materials appl. to airborne instruments, performance enhancement 2-74478
heat conduction, air void distrib. (Russian) 2-82041
homogenisation problems, math. anal. 2-95007
inhomogeneous media, random, plane wave dispersion and attenuation, variational estimates, general theory 2-97413
internal centrifugal zone growth, mathematical modelling 2-60897
isotropic composites, plane wave dispersion and attenuation, variational estimates 2-97414
laboratory mock-up US inspection system 2-93727
laminated composites, nonlinear stress-strain response at elevated temps. (Japanese) 2-93567
macroscopic props. of disordered media, conf., New York, USA (June '81) 2-94915
metal-C films, graded index, solar absorbing, prod. by dual cathode sputtering 2-99335
metal-insulator composite films, electrical conductivity, theory 2-82474
metal-matrix composite wire appl. of torsional wave vel. meas. technique 2-92113

composite materials continued

- metallic glass-matrix composite, fabrication feasibility using vac. hot pressing 2-99372
mica reinforced cellular soda-lime glass composite, fabrication, mica dehydration effect 2-93485
microstructural features, computational models 2-76694
mixture theory application, phys. consts. determ. 2-114641
mixtures, binary elastic, theory of coupled thermoelasticity 2-91249
multi-layer composite materials with different moduli in tension and compression, pre- and post-degradation anal. 2-91229
multilayer shell, inclined, isoparametric triangular finite element 2-91273
multilayer shells of revolution, geometrically nonlinear anisotropic, statics, numerical soln. 2-91246
N-phase composites, effective thermal cond., bounds 2-58754
nonisothermal channel flow laws 2-114748
oligomer-polymer composites, phase struct. and props. during curing (Russian) 2-111135
particulate composite, random, wave propag., particle reson. influence 2-97420
particulate composite material, overall elastic constants 2-86215
percolation effects in model systems (French) 2-77012
perfect plasticity theory, vol. compressibility 2-81245
plate, cracked repaired by bonded reinforcements 2-65530
plate, elastic anisotropic, reinforced by stiffener, contact problem 2-60491
plate with multilayered insert, crack inhibition and stoppage (Ukrainian) 2-103091
plates, composite, laminated, edge effects 2-103028
porous glass, microcrack fusion dynamics obs. by acoustic emission 2-62337
Pyralin, polyolsed, elec. conduction 2-61470
quality control, of non-metallic materials and structs., capacitance technique 2-62331
sand-cement mortar, acoustic emission and longevity under steady load 2-93619
sheet moulding compound composite, NDT of localised weak areas 2-111404
shell, cylindrical, glued with stiffeners, optimum design w.r.t. dynamic restrictions 2-60453
shell, cylindrical three-layered anisotropic, elastic stability problem (Ukrainian) 2-81260
shell, three-layer, stress/strain state of boundary-layer type 2-60427
shell structure, rational parameter values calc. and selection 2-60409
shells, cylindrical, polymeric, stability under axial compression 2-114702
shells under impulsive loads, elastic-plastic deform. 2-65493
shells with holes, composite, design method anal. 2-60401
steel, C-stainless composite wire, corrosion under stress 2-88286
steel-TiC composite with 10R6M5 high-speed steel, high-density material, processing parameters, struct. and mech. characs. 2-67262
stochastically reinforced composites with initial strains, corrected consts. 2-97377
superconducting cables critical current, effect of technological defects (Russian) 2-98829
thin film, granular, metal-insulator transition 2-66452
three-layer panels, flat and spherical, trapezoidal, with honeycomb filler, natural vibrs. 2-81279
transport props. meas., extraction of struct. information 2-107271
triple-layer cylindrical shells, stability under combined axial compression and lateral pressure 2-114701
two-component, effective dielec. function, bounds on allowed values at finite freqs. 2-82260
two-component, upper bounds to average field enhancement factors 2-82854
two-component infinite plate with heat sources, thermoelasticity 2-114663
two-component materials, elastic moduli, bounds 2-61054
unidirectional material, nonlinear viscoelastic anal. 2-91280
viscoelastic-elastic, sandwich seal 2-109203
viscoelastic-elastic composite, general theory 2-109202
Al-Al₂O₃-graphite composite system, threshold switching characs. correl. with fracture path 2-105331
Al-BN plasma spray deposited composite coatings, props. 2-83231
Al-glass composite, prep. and mech. props. 2-57319
Al-Mg/Al/Al-Mg composite, dislocation struct. and element diffusion resist. 2-82037
Al-steel-Pb admixed alloys, wear-resistant, prod. by dynamic compaction 2-88025
Al-Zn composite material, prep. and treatment optimum conditions (Russian) 2-67257
Al₂O₃ 2-57406
Al₂O₃ particles/epoxy matrix composite, pressure-shear loading, dynamical response meas. 2-57405
Al₂O₃-Mo composite powder, room- and high-temp. thermal cond. 2-66308
B-Al composite, heat deposition meas. in ZING-P' pulsed spallation neutron source 2-102028
B-Al composite periodically laminated medium, harmonic wave propag. 2-60447
C-polymer composites, elec. cond. props. 2-61462
C-SiC structured composite limiters for ablation control in fusion devices 2-74902
Cr-Al₂O₃ electrodeposited composite coatings 2-116579
Cr-B₂ based thick composite films, elec. cond. mechanism 2-72041
Cu coated shell char particle reinforced Al-Si composites, prep. and props. 2-67258
Cu, porous and filled, internal friction and effective elastic moduli 2-99476
Cu-C steel multilayer composite, dislocation density and diffusion processes study by thermo-EMF method 2-67381
Cu-Cr multilayer composites, yield point, struct. influence (Russian) 2-67446
Fe carbonyl powder based sintered magnetic material, polyorganosilazane resin bonded 2-67261
Mo, porous and filled, internal friction and effective elastic moduli 2-99476
Mo-ZrN composite powder, room- and high-temp. thermal cond. 2-66308
Ni, porous and filled, internal friction and effective elastic moduli 2-99476
Ni-BN plasma spray deposited composite coatings, props. 2-83231

composite materials continued

- Ni-Cr₂C₃ electroless composite coatings for wear resistant applcs., prep. and characts. 2-67666
 Ni-Cr-BN plasma spray deposited composite coatings, props. 2-83231
 Ni-Cr-Si-B coatings formed in air, props. of glass-metal coatings (*Russian*) 2-77966
 PbO-B₂O₃ phase separated glass, matrix composite with dispersed crystalline of glass particles, indentation hardness (*Japanese*) 2-67509
 PbS-CdS composite films, solution-grown, spectral selectivity meas., solar absorber appl. 2-105596
 Pb(Zr,Ti)O₃, transverse honeycomb composition transducers, dielectric const., piezoelectric props. 2-66991
 Pb(Zr,Ti)O₃-polymer composites, preparation and props. 2-88045
 Pb(Zr,Ti)O₃-polymer composite, preparation and transducer applications 2-88046
 PbZr_{1-x}Ti_xO₃-polyvinylidene fluoride composite, piezoelec. and dielec. const. and Young's modulus meas. 2-93119
 SbSI-polymer composite, preparation and props. 2-88047
 Si particle reinforced Al, SASI-50 composite, internal stresses and dimens. instability under cyclic thermal load 2-62210
 Si₃N₄-refractory compound cutting tool ceramics, mech. props. 2-72842
 Si₃N₄-TiC composites, fracture toughness and strength 2-83202
 Si₃N₄-TiN composites, CVD, prep. and props. 2-87998
 Ti-Cr₂Cr₂ composite, struct. form. mechanism 2-67260
 TiB₂ based thick composite films, elec. cond. mechanism 2-72041
 TiC-TiB₂ system, compressive creep of two-phase alloys, superplastic phenomena 2-99506
 TiN-Al₂O₃ composites, hot pressed, props. rel. to TiN conc. 2-72753
 V₃Ga superconductors, with Ga and Mg additions, composite-processed, fabrication (*Japanese*) 2-77772
 ZrC-C composites, strength 2-116544
 ZrC-ZrB₂ system, compressive creep of two-phase alloys, superplastic phenomena 2-99506
 ZrN-Al₂O₃ composite powder, room- and high-temp. thermal cond. 2-66308

composite models of elementary particles

- see also composite models of hadrons
 anomaly eqns. solns. based on SU(N)×SU(N) hypercolour and superalgebras 2-84846
 B-L and nucleon decays in the subquark model 2-64301
 Casalbuoni-Gatto subquark model study 2-79851
 colour van der Waals forces between leptons made of coloured constituents 2-54118
 common substructure of quarks and leptons using basisons 2-59130
 composite particles with highly relativistic components, potential models 2-64303
 composite quark-lepton model, generation, confinement and S⁰ scalar mesons 2-79849
 composite SU(3) gauge bosons in nonAbelian theory 2-59129
 decoupling relations from anomaly constraints and n-independence 2-59131
 doublet composite schemes of leptons and quarks (*Russian*) 2-74665
 effective electroweak Lagrangian for composite models 2-74635
 eletron dynamics, Lie-admissible formulation, gauge degrees of freedom 2-113251
 eletronic model for hadrons, decay, unified theory 2-113250
 exact rotating dyon solution with Tomimatsu-Sato metric 2-64302
 extended supersymm., with central charges, nonlinear realisations, preon appl. 2-69365
 fermion masses, from large mass scale, rel. to GUTs, composite quark/lepton 2-95704
 fermionic composite models from complementarity 2-101684
 fermionic composite models from confining SU(2)_L 2-89951
 generalized gauge theories and the constituents of massless particles 2-101575
 geometric rishon model, quark and lepton generations 2-69436
 global isospin invariance, effective gauge theory, rel. to composite quarks and leptons 2-79750
 grand unified model with composite fermions based on SO(3)×SU(8) group 2-69394
 heavy leptons, gravitational decay in unified theories (*Russian*) 2-54228
 internal structure of quarks and leptons and asymptotic freedom in SU(8)_L×SU(8)_R model (*Russian*) 2-74639
 lepton, composite models, mass scale, rel. to flavour gauge symm. 2-95801
 lepton spectrum inducing pot., elementary construction 2-84870
 lepton topological representation 2-113254
 leptons, composite Harari-Shupe model, revision, new algebraic formulation 2-101681
 leptons, composite models, generation problem soln. 2-84871
 leptons, composite models, group theoretical search 2-89950
 leptons, constituent models 2-101685
 leptons, subquark fermion-boson two body model, Cabibbo model 2-89949
 light composite fermion spectrum from gauge theory of quark and lepton constituents 2-64304
 light quarks and leptons, consistency conditions for simple subconstituent model 2-54117
 massless composite fermion models, discrete chiral symmetries 2-113169
 massless composite quarks, leptons and technifermions, three generations 2-95802
 massless composite states, existence limitations in gauge theory 2-54050
 massless composites with massive constituents, model field theories 2-84872
 monopole + charged particle composites, mag. flux, ang. momenta, statistics 2-69051
 nonpotential interactions and origin of masses of elementary particles 2-95799
 Polyakov quantised string, saddle point approx., dual models 2-59121
 preon models with dynamical symmetry breaking 2-101689
 preon models within 10 constraints 2-101682
 preons with strong and electroweak quantum numbers, composite quarks and leptons 2-101687
 QCD gluon, compositeness 2-54076
 quark-lepton composites, effective symm. 2-74664
 quarks, composite Harari-Shupe model, revision, new algebraic formulation 2-101681
 quarks, composite models, generation problem soln. 2-84871
 quarks, composite models, group theoretical search 2-89950

composite models of elementary particles continued

- quarks, composite models, mass scale, rel. to flavour gauge symm. 2-95801
 quarks, constituent models 2-101685
 quarks, gravitational decay in unified theories (*Russian*) 2-54228
 quarks, subquark fermion-boson two body model, Cabibbo model 2-89949
 quarks and Cabibbo mixing 2-59128
 quarks and leptons composite models 2-79848
 rare processes in model of composite quarks and leptons 2-95804
 rest-inertia, rel. to number of generations 2-101561
 rishon model, low-energy electroweak phenomenology, diagrammatic rules 2-74663
 rishon model, particles, hypercolour, intermediate bosons 2-113249
 second-quantization representation and diagrammatic technique for systems of composite particles 2-107130
 string, relativistic, quantisation methods 2-95803
 string mechanics based on 2-forms 2-53513
 strings, effective Hamiltonian, spatial symm. 2-64295
 SU(3)_{HC}×SU(6)_L×SU(6)_R theory, four families of composite quarks and leptons 2-84873
 SU(8) hyperunification, composite quarks and leptons derivable from SO(8) extended supergravity 2-95712
 subconstituent models and composite symmetries 2-79852
 subquark models of leptons and quarks, observable effects 2-79850
 unified gauge theory, walls bounded by strings 2-95722
 Universes baryon asymmetry using models with composite quarks and leptons 2-68944
 weak current algebra, composite W bosons and weak interactions universality 2-101683
 Z_{2K} cyclic group, fermion generation labeling in composite models, t mass 2-101688
 γ-W⁰ mixing in composite weak boson models, confinement in quantum hadrodynamics 2-64267
 K_L⁰→μ⁺e⁻, charged boson mass bounds in Fritzsch-Mandelbaum composite model 2-113253
 μ→γγ(eγ), radiative decays and lower bounds on mass scale in composite lepton model 2-64326
- composite models of hadrons**
 see also parton model; quark models
 anisotropic chromodynamics, spontaneous chiral symmetry breaking 2-113252
 erons, particle sextet, spinless, with B=2/3 2-95738
 SU(2)×SU(2)×SU(2)×SU(2) symmetry scheme for new particles 2-54106
 two-component structure for hadron, diffraction on nucleon and nuclei 2-74672
- composite particles**
 see also alpha-particles; deuterons; nuclei with mass number 1 to 5; tritons
 tri-neutron system, dominant resonance pole of S-matrix 2-59303
- composite superconductors**
 A15 continuous filamentary superconductors, metallurgy 2-67263
 A15 multifilamentary superconductors, alternative fabrication technologies 2-67264
 AC, temp. characteristics and thermal stability 2-66705
 acoustic emission triangulation, of disturbances and quenches in superconductor and superconducting magnet 2-56807
 critical state stability, and training phenomenon in non-uniform composites 2-66711
 layered model systems and in situ materials, supercond. proximity effect 2-66725
 limiting currents 2-104556
 monofilamentary nonideal type II supercond. wires, linear array, abnormal transverse field effect 2-56775
 multifilamentary, direct meas. of transverse resistivity 2-74460
 normal-zone propagation, influence of temperature 2-98798
 penetration depth near transition 2-71869
 stability with respect to thermal disturbances, dimensional anal. 2-92848
 superconducting cables critical current, effect of technological defects (*Russian*) 2-98829
 superconducting materials, multifilamentary, for large scale appl. 2-92817
 Hg filaments in chrysotile-asbestos matrix, heat capacity near supercond. transition 2-66254
 In filaments in chrysotile-asbestos matrix, heat capacity near supercond. transition 2-66254
 Nb-Ti (50 wt.%) filaments in Cu matrix, low-temp. heat capacity 2-76697
 Nb-Ti composite superconductor, limiting currents 2-104556
 Nb₃Sn forced flow conductor production for Large Coil Program 2-75039
 Nb₃Sn, infiltration process prep., supercond. props., effect of Cu and Ga additions 2-61676
 Nb₃Sn monofilamentary wire, bronze processed, supercond. props., strain-induced phase transition effects 2-98783
 Nb₃Sn, multifilamentary supercond., prod. by external diffusion method 2-75035
 Nb₃Sn multifilamentary supercond. composites, fabrication and supercond. props. (*Chinese*) 2-110555
 Nb₃Sn, production and manufacture to obtain strong magnetic fields, props. (*Dutch*) 2-98780
 Nb₃Sn wires, fabrication by solid-liquid diffusion method 2-67237
 Nb₃Sn-Cu composites for fusion magnets, in-situ development 2-75033
 Nb₃Sn-Ti, composite processed, Ti addition effect on supercond. props. 2-104555
 NbTi filamentary Cu superconductor, direct meas. of transverse resistivity 2-74460
 NbTi, production and manufacture to obtain strong magnetic fields, props. (*Dutch*) 2-98780
 NbTi supercond. composite, unpainted, exptl. study of quenching dynamic processes (*Chinese*) 2-110531
 NbTi/Cu composite supercond., dynamic quench in superfluid ⁴He, rel. to magnet cooling 2-112906
 NbTi-Cu, losses under adiabatic conditions 2-66730
 NbTi-Cu, multifilamentary, supercond. current stability, max. transport current meas. 2-66731
 Ni-Ti/Cu multifilamentary supercond., proximity effect, diamag. transitions obs. 2-61664

composite superconductors continued

- Sn-Xe frozen mixtures, normal state cond. and supercond. props. 2-92798
 Th-Nb composite, sp. ht. meas. rel. to supercond. energy gap enhancement 2-98800
 V₂(Hf,Zr) Laves phase composite superconductors, effect of strain on crit. parameters 2-82552

composition measurement *see* **chemical analysis****compressibility**

- see also* compressibility of gases; compressibility of liquids; compressive strength
 alkali halide crystal compressibility 2-98178
 alkali halides crystals, repulsive hardness param. and ionic props. correl. 2-109732
 alkali metals, lattice dynamics, compression effect 2-92120
 alkaline earth chalcogenides, crystals, repulsive hardness param. and ionic props. correl. 2-109732
 anomalous fluctuations during structural phase transitions (Russian) 2-71636
 bar, variable section, torsion, theory of small elastico, plastic deform. (Russian) 2-91268
 borosilicate glass, shock wave compression up to 170 kbar 2-71559
 boson binary mixture, ground-state props., Jastrow wave functions in hypernetted chain approx. 2-98382
 bubbly water flow past supercavitating wedge, compressibility effects 2-71008
 chlorides (NaCl, CsCl, AgCl), compressibility and Moelwyn-Hughes parameters at high-pressure. 2-58040
 composite material cylindrical shells, polymeric, stability under axial compression 2-114702
 composite materials perfect plasticity theory, vol. compressibility 2-81245
 entropy jump during compression, minimisation 2-60424
 fluorite type AB₂ crystals, cohesion and thermodynamical props., Debye temp., Gruneisen and force const. 2-61169
 hard-dumbbell mixtures, eqns. of state 2-79511
 inert gas atoms, crystals, repulsive hardness param. and ionic props. correl. 2-109732
 laminated cylindrical shell, thin-walled, functioning for stability optimisation 2-91287
 melting, solid, melting as a critical transition 2-81937
 methane, solid, isotope effect in phase diagram, proton NMR expt. 2-56964
 phospholipid bilayers, lateral compressibility obs. 2-62566
 plexiglas, shaped charge jet penetration, compressibility related effects 2-86794
 porous solids, compressible plastic, determining eqns. 2-65492
 powder rolling, coeff. of external friction calc. 2-116402
 powders, densification in initial stages of pressing 2-77767
 rare gas physisorbed monolayer on graphite, orientational epitaxy of wall near commensurate-incommensurate phase transition 2-66355
 shell, cylindrical, dynamic stability, axial compression (Russian) 2-91285
 shell, cylindrical, with circular hole, compression, torsion and bending, stress anal. 2-55438
 shells, truncated conical, with variable modulus of elasticity under periodic compressive forces, dynamic instability 2-60435
 silicate glasses, destruction by laser beam and compressive stress (Russian) 2-99562
 slab, massive, subjected to initial finite compression, thermoelastic stability 2-81264
 solid bodies, fracture by compressibility along cracks 2-81886
 solid cylinders, surface contours in axi-symm. upsetting 2-67431
 Solithane 113 elastomer, shear wave propagation and compression 2-71565
 steel, mild, shaped charge jet penetration, compressibility related effects 2-86794
 steel plates loaded by uniaxial in-plane compression, evaluation of elastic-plastic analyses 2-91265
 steel type medium, energy dissipation and yield limit determ., strain/temp. coupling effect (Polish) 2-83180
 TCNQ salt, 2,2'-DIPS₄-TCNQ-I₂, charge transfer complex 2-92576
 (TMTSF)₂PF₆, compressibilities, X-ray diff. study 2-115338
 tubular samples, fracture during compression 2-83214
 Al, isothermal compression to 10 GPa at 673K 2-66107
 Al, thermal viscous model for yielding due to shock waves 2-71561
 AlN, phase transition and shock compression 2-71627
 β-As₂S₃, thermal expansion, compressibility, X-ray diff. study 2-115438
 BP, phase transition and shock compression 2-71627
 Be, shock compressed, strain rate effects 2-71541
 Be, shock compression study 2-71562
 Bi bicrystal dislocation struct., compressibility anisotropy influence 2-103768
 CO₂, thermal expansion, X-ray diff. study, 5 to 195K (Russian) 2-81991
 CdGeAs₂, chalcopyrite, elastic behaviour, US wave vel. study 2-61052
 CdTe_{1-x}Se_x, sp. ht. and thermodynamic props. 2-81973
 Cd_{1-x}Zn_x, elastic consts., temp. depend., compressibility, Debye temp., US meas. 2-99468
 CsIO₃, NQR frequencies, temp. and press. depend., compressibility, thermal expansion calc. 2-93050
 EuB₆, compressibility, valency and intermediate valence effects 2-56072
 Fe, grey cast type medium, energy dissipation and yield limit determ., strain/temp. coupling effect (Polish) 2-83180
 Fe powders, atomised, pressing behaviour, compressibility and compactibility rel. to sponginess and agglomeration 2-77779
 GaS, layered compound, elastic consts. and compressibility 2-86773
 GaSe, layered compound, elastic consts. and compressibility 2-86773
 GdBr₃, compressibility, valency and intermediate valence effects 2-56072
 GeSb, uniaxially compressed, biexciton-impurity complexes (Russian) 2-82242
 HfO₂, cryst., phase transition under press., NQR investig. 2-110694
 InSe, layered compound, elastic consts. and compressibility 2-86773
 Ir, eqn. of state and volume compression under high press., α-ε transition 2-115385
 KClO₃, NQR frequencies, temp. and press. depend., compressibility, thermal expansion calc. 2-93050
 KIO₃, cryst., phase transition under press., NQR investig. 2-110694
 LaB₆, compressibility, valency and intermediate valence effects 2-56072
 LiIO₃, NQR frequencies, temp. and press. depend., compressibility, thermal expansion calc. 2-93050

compressibility continued

- MX₂O₄ cpds., SnPb₂O₄, NiSb₂O₄, ZnSb₂O₄ and Pb₂O₄, struct. evolution, dilatation, vibr., rigidity (French) 2-91911
 N₂O, thermal expansion, X-ray diff. study, 100 to 182K (Russian) 2-81991
 NaNO₃, elastic consts., compressibility, ultrasonic pulse echo superposition technique 2-61055
 Ni-Ti (45 wt.%) plate, shape-memory effect, thermomechanical treatment influence (Russian) 2-72761
 α-NiSiO₃·6H₂O, elastic consts., temp. depend., ultrasonic meas. 2-98179
 Pb, linear potential calcs. of phonon props. 2-66146
 Sb bicrystal dislocation struct., compressibility anisotropy influence 2-103768
 SiN film, plasma enhanced CVD coating, phys. and elec. props. 2-115629
 SmB₆, compressibility, valency and intermediate valence effects 2-56072
 Tm₂Se, intermediate valent, phonon and elastic anomalies, Raman effect 2-56110
 TmSe_{1-x}Te_x, intermediate valent, phonon and elastic anomalies, Raman effect 2-56110
 Zn bicrystal dislocation struct., compressibility anisotropy influence 2-103768
- compressibility of gases**
see also high pressure phenomena and effects
 cold gas, nonadiabatic compression, P-V relation 2-94949
 state variation in a gas, cylinder confined, compression and expansion (German) 2-65683
 Ar, adsorbed on Ag (111), two-dimens. gas phases 2-61293
 Ar-trifluorobromomethane, compressibility factors calc. from refractive index meas. 2-76058
 Kr, adsorbed on Ag (111), two-dimens. gas phases 2-61293
 S, fluid, critical point, equation of state determ. 2-92142
 Xe, adsorbed on Ag (111), two-dimens. gas phases 2-61293
- compressibility of liquids**
 1-alkanols-n-octane binary mixt., isentropic compressibilities at 303.15K 2-109878
 aniline, o-, m- and p-halogen derivatives, thermodynamic studies of melting 2-103948
 aniline-cyclohexane critical mixture, acoustic anomaly at low and ultrasonic freq. 2-86798
 aqueous non-electrolytes, at infinite dilution estimation of solute-solvent interaction from ultrasonic studies 2-76593
 carbon tetrachloride-phenol (cresol), mol. interactions, US study 2-61067
 cholesteric-nematic mixture, compressional deformation response 2-97912
 cholesterol-1-hexadecanol smectic liquid crystal mixtures, adiabatic compressibility 2-61066
 cholesteryl myristate/ethyl p-aminobenzoate liquid crystalline mixtures, US vel., density and compressibility study 2-71581
 classical fluid, crit. point, iterative perturbative theory 2-76647
 cyclohexylamine-benzene (toluene) (chlorobenzene), (bromobenzene), (nitrobenzene), compressibilities, US study 2-61049
 o-dichlorobenzene-cyclohexane(carbon tetrachloride), molar and available vol., free length, isentropic compressibility meas. 2-86770
 1,2-dichloroethane-alkanol mixtures, isentropic compressibilities and sound vel. meas. 2-81893
 electron fluid, 2-D, compressibility and bulk modulus 2-66466
 p-(p-ethoxyphenyl) azo phenyl undecylenate, liq. cryst. phase transitions, specific vol. and US vel. study 2-92199
 gelatin, aqueous soln., study of US vel. and associated parameters 2-71577
 glycerol, shaped charge jet penetration, compressibility related effects 2-86794
 Gruneisen parameter and characteristic param. estimation 2-109877
 hard sphere system in limited volume, density and isothermal compressibility coeff. changes (Ukrainian) 2-56064
 metal, hard-sphere model approach 2-65845
 metals, liq., struct. in improved RPA 2-76276
 methanol, shaped charge jet penetration, compressibility related effects 2-86794
 organic solvents, chlorinated, compressibility, ultrasound propag. study 2-115356
 polybutadienes, linear and star-shaped, in soln., US attenuation and vel. meas. 2-76599
 polymer melts, biaxial extension flow, transient stress and flow birefringence meas. 2-55610
 pyridine-chloroform-methanol (n-butanol) mixtures, degree of mol. interaction and other thermodynamic props. 2-71574
 square-well fluid, 2-dimens., compressibility factor 2-97887
 starch, aqueous soln., study of US vel. and associated parameters 2-71577
 water, isentropic compression, one-dimens. finite difference calc. 2-69194
 water, isentropic compression, one-dimens. impact expt., finite difference simulation 2-69195
 water, shock-compressed, temp. meas. using pyrometer 2-89719
 water, supercooled, sound velocity anal., Brillouin light scatt. study 2-76597
 water properties, Fortran library of subroutines 2-96098
 water properties, STP computer code 2-96099
 water-ethanol, supercooled, sound velocity anal., Brillouin light scatt. study 2-76597
 Ar, scaling corrections to X-ray scatt. near liquid-vapour critical point 2-98256
 Ar-acetylene-methane liq. mixtures, excess vol. and compressibility, dielec. const. meas. 2-92071
 D₂O, supercooled, sound velocity anal., Brillouin light scatt. study 2-76597
³He, liquid, thermodynamic functions 1.5 to 14K (Russian) 2-86966
³He, thermal conductivity near liquid-vapour critical point 2-56288
⁴He, liquid, thermodynamic functions 1.5 to 14K (Russian) 2-86966
 Hg thermodynamic props., density and elec. cond. in metal-nonmetal transition range 2-61170
 Mg₂Pb, molten semiconductors, US velocity, temp. depend. 2-76600
 Mg₂Sn, molten semiconductors, US velocity, temp. depend. 2-76600
 Na-Cs liq. alloy, partial struct. factors calc. 2-60869
 NaCl, aq. soln., volumetric props., data tables 2-94921
 Pb, phonon-like collective oscillation modes and related props. calc. (Russian) 2-65843
 Rb, phonon-like collective oscillation modes and related props. calc. (Russian) 2-65843
 S, fluid, critical point, equation of state determ. 2-92142

compressibility of liquids continued

Se-Te, liquid, thermodynamic and elec. props., inhomogeneous struct. model 2-98314

Xe, liq., shock compression to 130 GPa 2-66130

compressible flow

see also compressibility

alternating direction implicit finite element method for flow problems 2-91374

axisymmetric flows, modelling of strain histories for memory integral fluids 2-60496

compressible flat plate boundary layers, 3D spatial stability, heat transfer effect 2-109364

compressible nonisothermal flow, boundary layer with surface reaction, appl. to wall jet (*French*) 2-55628

conference, Aachen, Germany (March 1980) 2-68969

confined compressible reactive gas, thermal behaviour 2-89539

density gradient meas., moire deflectometry 2-109424

dilatation wave and soliton dynamics in variable density flows 2-91480

elliptical cone, compressible laminar boundary layer, heat transfer coeff. 2-75927

explosive, polymer bonded, high explosive detonation products in varying O_2 atmospheres 2-78105

flow separation in shear-layer driven cavities 2-97484

gas bubbles in compressible flows, oscils., boundary stability 2-76012

gas flows with vibr. relax., behaviour of discontinuities 2-60564

gases, shear viscosity coeff., Green's function calc. method 2-86367

general relativistic gas dynamics, steady axisymm. flows 2-89589

immersed shell struct., natural vibr. modes (*French*) 2-65511

inviscid flow, 3-D, in annular diffusers 2-91485

K-consistence prop., first-order difference schemes 2-75985

K-consistence prop., second-order difference schemes 2-75986

laminar vortex-sink flow of compressible fluid (*German*) 2-97580

linear stability equations for compressible laminar boundary flows 2-97582

linearised Navier-Stokes equations for compressible flows 2-70976

liquid metal fast breeder reactors, appl. of boundary elements method to potential fluid flow problems 2-80148

microsize cylindrical channel, low press. gas flow, theoretical and expt. study 2-81395

molecular gases, almost-isentropic flows, nonequilib. distrib. function 2-109353

Navier-Stokes equations soln. using integral method 2-91373

Newtonian fluid with transverse viscosity gradient, compressive flow between parallel disks 2-60570

oscillating airfoils, subsonic flow, viscous-inviscid interaction 2-70978

particle-laden gas flows, thermodynamics, in convergent-divergent nozzle 2-109385

potential flow, transonic eqn. soln. by optimal control and finite element methods 2-103187

potential gas flow along a wavy wall and the transonic controversy 2-109360

pressure pulsations in subsonic or supersonic flow over recess 2-60654

pressure transients in an idealised horizontal two fluid reservoir 2-97644

quadrupole in pot. flow, model problems 2-65609

rotating nonisothermal compressible stratified atmosphere, Alfvén wave propag. WKB approx. 2-109346

stratified shear flow, Brunt-Vaisala freq. induced instability 2-109392

subsonic compressible gas flow, flow visualisation at junctions 2-75991

subsonic flow, vel. component meas. by static pipe 2-109352

supersonic ramp, near-field analysis 2-97587

swirling stagnation point boundary layer for rotating sphere 2-65563

thin cavities, shapes, asymptotic laws of degeneracy 2-81354

three-dimensional boundary layers, Le Foll integral extension 2-103185

time dependent flow, symmetric toroidal dynamo field decay 2-109351

time-dependent, numerical calcs., starting error 2-75988

TNT, high explosive detonation products in varying O_2 atmospheres 2-78105

turbulent boundary layers, data compilation 2-81330

turbulent compressible 2D impinging jet flowfields, Navier-Stokes computations 2-109288

turbulent flow, free shear layer reattachment, Navier-Stokes eqns. 2-65576

turbulent flow, free shear layer reattachment 2-65575

turbulent flow in internal combustion engine during compression, computation 2-65572

turbulent gas flow downstream of micronozzle cascade 2-55547

vibrationally relaxing gas, accel. wave breakdown 2-114822

viscous flow at high Reynolds numbers, Navier Stokes eqn. soln. 2-70977

viscous fluid containing solid bodies, dynamics, Navier-Stokes eqn. 2-65610

viscous fluid non-steady state flow computational method 2-60572

vortical flow, Hamiltonian formulations in computer simulations 2-114835

N_2 underexpanded jet, compressible flow density meas. by LIF 2-97581

compression, bandwidth see bandwidth compression**compressive strength**

see also compressibility

bone strength, effects of hypokinesia in primates, space flight appl. 2-62644

composite shell, cylindrical, supporting power under axial compression, prep. influence 2-60476

concrete, for large vac.-system construction, compressive strength and out-gassing characts. 2-83175

concrete, silicate ceramic, porosity and mech. props. 2-57424

diamine cured epoxy resins, microballoon filled, acoustic. mech. and phys. props. 2-60322

glass fibre reinforced plastics, mech. props. at low temps. 2-77864

glass fibre reinforced plastics, strength anisotropy 2-67357

glass fibre unidirectionally reinforced terephthalate-polyester filled resin, laminate, filament wound tubes, resin flexibility effects on props. 2-116497

glass shell, cylindrical, carrying capacity prediction from NDT under external press. 2-57573

glass shell, spherical, breaking external hydrostatic press. prediction 2-97457

graphite fibre reinforced epoxy laminates, notched, compression fatigue 2-116532

ice, columnar-grained, compressive strength, const. strain- and stress-rate 2-66106

lumbar spine, effect of posture on strength 2-94094

compressive strength continued

polyimide, glass-fabric-filled, mech. strength as function of γ -ray irradiation 2-80180

polymeric foam, compressive deform. 2-116510

polymers, coke filled, strength and deform. props. 2-83188

shell, cylindrical, dynamic stability, axial compression (*Russian*) 2-91285

shell, cylindrical, longit. divided, stability and load-carrying capacity under compression 2-97409

solid cylinder, couple-stress effect on diametral compression 2-65514

thin walled structures, expt. determ. of uniaxial compression charact. 2-91283

Al, texture induced acoustic anisotropy due to compressive deformations, strain rate and temp. effect (*Japanese*) 2-77839

Al_2O_3 - ZrO_2 - SiO_2 refractories, props. with different ZrO_2 and SiO_2 concs. 2-88188

B_2C , hot pressed, mech. props., effect of porosity and grain size 2-116543

Bi, Sb, \dots, Si , uniaxial deform., influence on elec. cond. and dielectric const. 2-109886

C fibre reinforced epoxide, kinking and compressive failure under superposed hydrostatic press. 2-67501

C-C composite with hybrid C-SiC and C-TiC matrices, synthesis and characts. for high temp. applic. 2-77765

$Ca_3(PO_4)_2$ ceramic, dense, mech. props., prosthetic appl. 2-57409

Cu, texture induced acoustic anisotropy due to compressive deformations, strain rate and temp. effect (*Japanese*) 2-77839

$LiAlO_2$ /molten carbonate structs., compressive strength anal. 2-61050

$MgAl_2O_4$, fission neutron irradiation, structural props. study 2-80187

MgO , fission neutron irradiation, structural props. study 2-80187

MgO , high-purity fusions, sintering, effect of CeO_2 , ZrO_2 and Y_2O_3 additives 2-57324

MgO, Al_2O_3 , high-purity fusions, sintering, effect of Y_2O_3 additive 2-57324

Si, heat-treated, Czochralski grown, compression tests, dislocation study, TEM and etch pit obs. 2-60985

TiC, RF floating zone grown single crystal, high temp. deform. mech. 2-105242

W wire, splitting, knife-edge compression test 2-116536

compressor-expanders see companders**compressors**

energy storage, A-5 hybrid compressed air design 2-57733

magnetoplasma compressor, high-current plasmadynamic discharge, particle acceleration and VUV and X-ray emission 2-114982

Compton effect

V1343 Aquilae (SS 433), inverse Compton emission rel. to simultaneous radio and X-ray activity 2-112453

atomic inner shell ionisation, Al appl. 2-59768

atomic number dependence of elastic scatt. cross-sections of 0.145 MeV γ -rays 2-54352

atoms, Compton defects and asymmetries, electron impact spectra, Hartree-Slater calc. 2-90425

atoms, photoeffect, high energy tip bremsstrahlung, radiative corrections 2-90484

axial spectrometer for reverse Compton scattering 2-95573

channelling electrons in cryst., Compton backscatt. of laser photons 2-77615

charged spin- $1/2$ fermion, high intensity Compton scatt., low-freq. approx. 2-101726

collimated photon scatt., nondestructive examination appl. 2-57549

combination with high-resolution electron microscopy, application to chem. problems 2-97878

Compton heating and cooling and astrophysical jets 2-112318

corpuscular interpretation 2-58657

cosmic microwave background spectrum, effects of double Compton process 2-68936

α Cygni (Deneb), generalized Compton effect in spectra 2-106696

Cygnus X-1, Compton-cooled feedback mechanism for high and low spectral states 2-63529

Cygnus X-1, inverse Compton effect in hot plasma cloud rel. to hard X-ray spectrum 2-74015

Cygnus X-3, inverse Compton effect on binary star model with pulsar component 2-106781

electron Compton scattering expts., impulse approx. corrections 2-77637

energy exchange between free electrons+EM radiation, appl. to X-ray sources 2-63228

free electron laser in magneto-Compton regime, gain 2-70575

free electron lasers, multiphoton transitions and saturation 2-114293

gamma ray point sources, optical thickness against stimulated inverse Compton scatt. 2-74127

gamma-ray bursts, comptonised X-ray source model for burst spectra 2-89410

graphite, electron momentum densities, Compton scattering in electron microscope study, EELS technique 2-67166

induced Compton scattering in radiative transfer, appl. to astronomical sources 2-112319

jugal venous reflux, simulation by Compton scatt. image 2-83639

lung density, clinical system for in vivo meas. using Compton scatt. 2-94173

mass absorption coeffs., $RhK\alpha$ Compton scatt. study 2-99217

β Orionis, evidence for Compton red shift in stellar chromosphere 2-106644

photofraction correction for voluminous sources and mean photon path 2-113827

photon-fluence scaling theorem for Compton-scatt. radiation 2-68158

profile, directional, meas. by use of annular γ -ray source 2-77612

profile analysis using plane wave approx., non-impulse effects 2-108655

proton Compton scatt., model-independent dispersion approach 2-69472

pulmonary oedema, lung density imaging, chest X-rays vs. Compton scatt. tomography 2-83654

radio sources, compact, inverse Compton radiation spectra from relativistic flows 2-74114

radio sources with hard injection, nonlinear spectra 2-94853

random energy of scattered photon as result of Compton effect 2-53706

relativistic charges driven by elliptically polarised plane vacuum wave, synchro-Compton radiation 2-63225

solar spectrum, evidence for Compton red shift in chromosphere 2-106644

statistical analysis of positron annihilation and Compton profile experiments using normal probability plots 2-67146

Compton effect continued

- storage ring, electron self-polarisation effect, Compton scatt. test (*Russian*) 2-90343
- triatomic system, bending process, applicability of momentum density approach 2-85519
- two-phase flow meas., γ -ray Compton profile appl. 2-108072
- X-ray diffraction phenomena, Thomson theory inconsistency 2-115087
- X-ray diffraction phenomena, Thomson theory inconsistency 2-115088
- X-ray sources, time-dependent X-ray spectra of Compton-cooled plasmas 2-78948
- $\gamma\pi^0$, phenomenology, QED tests, intermediate boson prod. 2-113262
- Γ_p - γ X, contributions to deep Compton effect 2-101728
- $\gamma\pi^-$, Compton effect obs. (*Russian*) 2-69473
- Ag alloys, Roman, analysis by scatt. and X-ray fluoresc. of monoenergetic gamma-rays 2-116738
- Ag, K shell electron incoherent scatt. functions for 145 keV gamma rays 2-70209
- Al, inelastically scatt. radiation in EDXRF spectrometer, expt. and theoretical distrib. 2-99216
- Au, 279 keV γ -rays Compton scatt. by L shell electrons 2-67140
- Au, K shell electron incoherent scatt. functions for 145 keV gamma rays 2-70209
- Be, electron momentum distrib., Compton profiles, Hartree-Fock calc. 2-92447
- Be, electronic and struct. props., HF ab initio calc. 2-82218
- Be, metallic, core expansion calcs. 2-81709
- C, electron momentum densities, Compton scattering in electron microscope study, EELS technique 2-67166
- Cu, profile anisotropy, Fermi surface, momentum density, Seitz approx. 2-93317
- Fe, Compton profiles, effect of BCC-FCC phase transition 2-82949
- H-like atoms, laser-modified angular distribution of Compton electrons 2-96739
- He, Compton defects and asymmetries, electron impact spectra, Hartree-Slater calc. 2-90425
- He, electron Compton scatt., ejected electron cross-section, impulse profile calcs. 2-65095
- KCl, Br₂, crystals, Compton profile anal. 2-86730
- LiF(Cl)(Br)(I), Compton profile anisotropy calcs. 2-72574
- Nb-Mo alloys, Compton profile 2-116292
- Ne, Compton profile, electron scatt. study and impulse approx. 2-114110
- Ne to Si and Ar, exact hydrogenic Compton profiles 2-59687
- Ni-B alloy glasses, positron annihilation, comparison with Compton scatt. 2-104991
- Se, trigonal, monoclinic and amorphous, Compton profiles and autocorrelation functions, HF and OPW calc. 2-87892
- Y, K shell electron incoherent scatt. functions for 145 keV gamma rays 2-70209

Compton profile *see* Compton effect

Compton scattering *see* Compton effect

computation *see* calculation

computational complexity

- lexicographic sorting of k-tuples in Cartesian product of k totally ordered sets 2-84433

computer-aided analysis

- see also analogue simulation; CAD; circuit analysis computing; digital simulation; electric machine analysis computing; hybrid simulation*
- albedo TLDs, computer assisted evaluation technique 2-113754
- ambulatory blood pressure recordings, microcomputer anal. 2-83691
- biological material image analysis (*Italian*) 2-105858
- building solar heating systems optimised design and operation using climatic data stochastic model 2-116847
- cardiac left ventricular haemodynamics and chamber dimensions, computer-graphic anal. 2-100148
- CIELAS, Cambridge interactive electron lens anal. system, appls, computer-aided analysis electron lenses electron optics electron microscopes CAD 2-65149
- cinéangiograms, coronary obstructions characterisation using single and multiple views 2-73354
- coherent optical adaptive technique system computer modelling algorithm 2-81050
- compressed gases, spatial and temporal resolved predischARGE development, CAA 2-103278
- conforming axisymmetric shell element 2-109216
- contact problems for the elastic beam 2-114671
- echocardiograms, M-mode 2-100068
- eddy currents in parallel conducting bars with a.c. 2-85861
- EPR spectrometer, microprocessor based data collection and anal. system 2-84676
- fault tree analysis package for design engineers 2-85192
- fibre lightguide with different shaped end faces, light distrib. anal., computer method 2-65386
- flat solar water heater numerical model 2-99829
- flat-plate collector energy output determ., computational methods validation 2-67863
- framed underground structures, dynamic response 2-109190
- fringe-pattern analysis using Fourier-transform method, computer-based topography and interferometry appls. 2-58890
- holographic systems, vector ray tracing computer anal., comment and reply 2-60036
- III-V polycrystalline semiconductor systems modelled by computing technique, phase diagrams (*Czech*) 2-83013
- laryngeal surgery, perturbation anal. use for objective assessment 2-57879
- laser fusion targets, coating thickness variations meas., automated computer anal. of X-ray radiographs 2-79533
- Long-Term Energy Analysis Program assessment 2-83440
- loudspeaker cone vibration modes, computerized analysis and observation 2-55393
- materials testing, data acquisition and eval., microcomputer appl. (*German*) 2-116658
- nerve fibre velocity spectrum estimation by computer 2-57949
- nonisothermal classical plasticity, computational aspects 2-109192
- once-through steam generator in Integrated Type Marine Reactor, two-phase flow stability anal. (*Japanese*) 2-71007
- orthotropic shallow spherical shells, dynamic buckling 2-109211
- passive solar homes with off-peak power use, thermal performance assessment 2-62498
- River Coa hydroelectric power potential and development (*Portuguese*) 2-67814

computer-aided analysis continued

- single crystal struct. anal., secondary extinction correction (*Chinese*) 2-97945
- small-molecule cryst. structs., interactive computer display and anal. 2-97946
- solar heating systems performance prediction using Lunde's methods 2-111590
- solar space heating options impact on electric power systems demand and supply capabilities 2-99767
- solar water heaters thermal performance in UK 2-73147
- solar water heating system multivariate optimisation using Simplex method 2-111586
- spurious reflection of elastic waves in nonuniform meshes of constant and linear strain finite elements 2-114704
- static structural analysis, algorithms 2-114691
- SWAN (seismic wave analysis system) general outline and usefulness (*Japanese*) 2-78875
- thick plate buckling FEM 2-114690
- three dimensional solid shell transition elements 2-109181
- three dimensional thermoelastic problems, boundary conditions effect 2-114647
- two-pass solar air heaters thermal performance anal. 2-78249
- two-phase flow in vertical cylindrical passage, numerical anal. 2-114871
- viscous fluid non-steady state flow computational method 2-60572
- X-ray powder diffraction data, search-match system 2-86498
- X-ray spectrometer, PV9500 system software 2-79728
- Cu₂S/CdS unit photocells behaviour simulation using Spice II program 2-78224

computer-aided circuit analysis *see* circuit analysis computing

computer-aided design *see* CAD

computer-aided instruction

see also education

- electronics course, CAI methods 2-107037
- image visual systems for marine simulator training 2-79334
- medical emergency simulation by microcomputer and video disc 2-83696
- Prof-i-5 single printed wiring board instructional microcomputer features, facilities and operating program (*German*) 2-74186
- Schrodinger eqn. study program 2-107072
- teaching processes in the light of developments in communication and information techniques (*Italian*) 2-58583
- United States Air Force physics course in mastery mode 2-94941

computer evaluation *see* computer selection and evaluation

computer facilities

- energy efficiency in computer centre, heat recovery scheme 2-83506

computer-generated holography

- aspheric surface testing using computer-generated holograms (*Chinese*) 2-91017
- aspherical surface, optical testing by computer-generated holography (*Chinese*) 2-70712
- filters, signal-to-noise ratio improvement (*Chinese*) 2-97158
- Fourier and Fresnel digital holograms, hexagonal sampling techniques 2-96858
- holographic efficient aberration-free lenses, design in presence of construction-reconstruction wavelength shift 2-60039
- hybrid high-efficiency computer-generated holograms 2-114212
- hybrid optical-digital rainbow and stereo hologram synthesis 2-85919
- image reconstruction, homomorphic system of logarithmic Fourier transform type, computer methods 2-60048
- least-squares linear mapping technique for image classification, optical implementation 2-85902
- nondetour phase computer-generated holograms, projection type, improved variation 2-90836
- on-axis complex computer generated hologram prod. method evaluation 2-75540
- on-axis complex computer generated hologram production method evaluation 2-90839
- optical elements, computer-originated, aspheric wavefront recorded 2-60044
- OTF synthesis low pass and band pass filter realisation by pupil function replication 2-96848
- particle physics, optical processor appl., computer generated hologram optimal filter construction 2-108815
- partitioned holographic optical elements, cylindrical lens prod. 2-75542
- polarisation kinoforms, theory 2-65193
- radiofrequency microcomputer-controlled holographic system, dependency of imaging characs. on references phase 2-114222

computer graphic equipment

see also interactive terminals

- ECG spectral resonances, computer graphic display 2-94243
- MIRO colour display system for ultrasonic pictures (*Italian*) 2-70793

computer graphics

see also curve fitting; interactive systems

- animation, reactor safety film production 2-54574
- atmospheric temperature determ. using satellite data and interactive computer graphics 2-63106
- cardiac computerised tomography scans, quantitative computer graphic displays 2-117076
- cartographic 3-D display of remote sensing data (computer graphics) 2-94536
- charged particle radiotherapy, three dimensional graphics appl. 2-100122
- colour display appls. 2-83974
- continental drift film-show made using computer graphic technique 2-68331
- continents movements simulation 2-73717
- cubic single cryst., integral photoelasticity, computer graphics study (*Russian*) 2-97380
- design and evaluation of nuclear reactor control room display 2-96241
- digitization of maps by raster scanning method 2-94499
- geology appl. for illustrating propagating rift theory 2-62941
- gravimetric data management at Bureau Gravimetric International (BGI), interactive graphics terminal 2-106321
- half-tone representation of molecular surfaces 2-90746
- IMAGES2, MODEL, graphics and three dimensional modelling, appl. to nuclear power plant design 2-54575
- membranes, cable reinforced, initial equilb. soln. methods, implementation 2-91231
- MFTF, display management system 2-74984
- molecular structure, with probability ellipsoids of atomic thermal vibrs., graphical representation, ELLIDS program 2-55811

- computer graphics** continued
plate tectonic evolution of NE.Pacific, computer graphic pseudomovie 2-68327
Schrodinger eqn. study program 2-107072
small-molecule cryst. structs., interactive computer display and anal. 2-97946
texture of FCC metals, graphic kinematics using computer (*French*) 2-78055
X-ray crystal struct., interactive dynamic molecular display 2-97947
- computer industry** see *DP industry*
- computer installation**
see also *distributed processing*
particle accelerator control computer, online replacement 2-54695
- computer interfaces**
see also *CAMAC; data communication equipment; program processors*
audio signals, microcomputer based data acquisition 2-75800
digital multichannel analyser-computer interface for use in physics laboratory 2-94964
experimental data acquisition and handling, system based on HP-1000 minicomputer and IEEE-488 standard 2-84598
Fermilab collider detector facility data acquisition system 2-59673
interface between several cameras and two computers, using differential analog transmission 2-117065
medical tomography systems, interface requirements, networking strategies 2-100098
MFTF, local controls and instrumentation 2-74980
oscilloscope interface for physiology laboratory 2-100172
STEM-computer interfacing 2-107468
- computer metatheory**
see also *automata theory; formal logic*
Universe, rel. to computer theory 2-95060
- computer networks**
see also *distributed processing*
ALOHA, in NBS conf., Gaithersburg, MD, May 1979 2-86463
dedicated EPROM-based computer for distributed instrumentation control 2-59671
fusion experiments, data acquisition and communications computer network 2-80227
medical tomography systems, interface requirements, networking strategies 2-100098
Novanet, a local computer network, and nova target data acquisition system 2-75024
- computer operator training** see *training*
- computer printers** see *printers*
- computer programs, complete** see *complete computer programs*
- computer programs (listings)** see *complete computer programs*
- computer science education**
Profi-5 single printed wiring board instructional microcomputer features, facilities and operating program (*German*) 2-74186
- computer selection** see *computer selection and evaluation*
- computer selection and evaluation**
FACOM 230-75 APV vector processing efficiency testing, using plasma MHD codes 2-97721
microcomputers, applications in experimental physics 2-94966
- computer software**
not used for applications software for which see *specific applications*
nuclear power system simulation, general purpose software, role 2-102023
- computer storage devices** see *digital storage*
- computer subroutines** see *subroutines*
- computerised control**
see also *chemical engineering computing; electrical engineering computing; mechanical engineering computing; nuclear engineering computing; power system computer control*
air quality control system 2-62544
air to water heat pumps, power consumption minimisation by microprocessor based control system 2-62492
Amsterdam proton microbeam appl. 2-95549
artificial heart using electronically commutated brushless DC motor 2-94253
astronomical observatory automation, appl. of microcomputers 2-106524
Auger scanning electron microscope, computer-controlled, program suite 2-64192
automated laser Doppler anemometer, aerodynamic expts. (*Russian*) 2-114937
camera automatic focusing system using CCD grating with sensor array (*German*) 2-84723
circular dichroism spectropolarimeter, microcomputer automated 2-89790
circulatory system, modular, mock, programmable electronic control unit 2-100188
data measuring control complexes for Angara-5 fusion reactor 2-54658
dedicated EPROM-based computer for distributed instrumentation control 2-59671
digital reactor protection system with no stored programs 2-96203
Doublet III, data acquisition and control system for Thomson profile diagnostic 2-80226
Doublet III neutral beam mode control 2-85372
Doublet III operator generated command language for computer control 2-80225
EELS, in multi spectrum acquisition system, computer control and instrumentation 2-64191
electron micrograph analysis computer system 2-107462
electron micrograph image processing minicomputer system 2-107463
electron microscope-computer interactions 2-107460
electron microscopy, computer applications 2-107473
electron microscopy, microscope-computer interactions and atomic resolution and spectroscopy, conf., Atlanta, GA, USA (Aug. 1981) 2-107013
electron microscopy, online image capture and anal., microprocessor system appl. 2-113055
electron microscopy, real-time digital image processing 2-64185
electron microscopy digital morphometry system 2-107461
ELMO Bumpy Torus, plasma heating system instrumentation and control design 2-64662
Fermilab particle accelerator processing power, port selection system 2-96337
FFTF MIDAS computerized operational work control system 2-69793
fusion experiments, generalised control system 2-74962
fusion reactor instrumentation and control, development strategy 2-85373
- computerised control** continued
geologic materials, laboratory meas. of ultralow permeability 2-106364
heat pump automatic control system guided by computerised integrated heating control system for space heating (*German*) 2-93938
Hot Fuel Examination facility, subassembly profilometer 2-107966
HT-1, feedback control system for plasma position 2-74972
JT-60, real-time plasma control, cascade struct., design concept 2-74969
JT-60, ZENKEI central control system design 2-74964
MFTF, display management system 2-74984
MFTF, local controls and instrumentation 2-74980
MFTF, shot synchronisation 2-74988
MFTF control systems, tools and implementation methods 2-85367
MFTF database notification facility 2-85369
MFTF device configuration management system 2-74966
MFTF distributed database management system 2-85368
MFTF neutral beams supervisory control software 2-85371
MFTF Supervisory and Control and Diagnostic system, debugging process 2-74967
microprocessor-based heat pump regulator, capabilities and installation (*German*) 2-67873
microprocessor-based random-access slide projection 2-69226
molecular fluorescence, time domain meas. system with /real-time monitor, pulsed dye laser control 2-74505
National Synchrotron light source, data acquisition and control system 2-59672
neutron beam instruments, control and data acquisition 2-59674
Nova, control system, data acquisition, architecture and system design 2-75023
Novanet, a local computer network, and nova target data acquisition system 2-75024
optical source, emission spectra analysis, microprocessor controlled (*Italian*) 2-101436
optical surface computer-controlled grinding 2-55363
particle accelerator control computer, online replacement 2-54695
PDX diagnostic control system 2-74977
PDX neutral beam computer system, development and operation 2-74971
PDX operating controls 2-74975
S-1 Spheromak, control and data acquisition systems 2-74974
scanning PIXE meas. with Eindhoven cyclotron, data handling 2-95548
Space Telescope high resolution UV spectrograph, on-board computer software 2-117593
spent nuclear fuel reprocessing facility, control laboratory automation 2-64556
SRS01 Siemens X-ray spectrometer appl. 2-88398
STEM, digital image processing 2-107464
STEM, digital image recording, image display and characterisation 2-107471
STEM, energy filtered images, simultaneous collection and processing 2-107470
STEM, microcomputer control 2-107467
STEM data acquisition and display system 2-107469
STEM system, computer control, EELS acquisition 2-107466
STEM-computer interfacing 2-107468
TEM and STEM, computer control for X-ray and energy loss line profiles and images 2-107472
TEM image recording and processing, on-line 2-107465
TEXT, Central Control System computer software requirements 2-74981
TEXTOR, control and data acquisition system 2-74963
TFTR, torus gas injection control system, design and development 2-74973
TFTR diagnostic vacuum controller 2-74976
TMX, ECRH diagnostic system control and data systems 2-80232
TMX, heavy ion beam probe control using high speed auxiliary crate controller 2-74965
tokamak plasma-position control systems 2-64648
tokamak-type installations computerised central system structure and equipment selection 2-65774
very high level neutral beam control system for fusion reactor 2-74978
- computerised instrumentation**
see also *astronomy computing; astrophysics computing; automatic test equipment; biology computing; chemical engineering computing; chemistry computing; computerised monitoring; computerised spectroscopy; computerised tomography; electrical engineering computing; electronic engineering computing; geophysics computing; nuclear engineering computing; physics computing*
A/D converter interface with data reduction facilities for nuclear physics expts. 2-64793
air impurities: radioactive carbon dating and computerization 2-57747
air pollution detection, airborne data acquisition system 2-99869
Amsterdam proton microbeam and its appl. 2-95549
angle transducer calibration, microcomputer-based certifying device using reference transducer 2-63976
apnea monitor, neonatal, multi-microcomputer based 2-62820
area detector data acquisition system for macromolecules X-ray studies and other diff. expts. 2-85478
arrhythmia monitor, high performance microprocessor based 2-94240
atmospheric and oceanic partial pressure of CO₂ meas., computerised systems 2-58146
audio signals, microcomputer based data acquisition 2-75800
audiometer, computerised automatic apparatus 2-62708
Auger scanning electron microscope, computer-controlled, program suite 2-64192
automated analytical instrumentation for U and Pu meas. for nuclear safeguards 2-74804
automated high accuracy phase measurement system 2-107311
automated laser Doppler anemometer, aerodynamic expts. (*Russian*) 2-114937
automated X-ray orientation system for meas. of angles of cut of doubly rotated quartz crystals 2-97859
automatic apparatus for catalyst characterization by temperature-programmed reduction/desorption/oxidation 2-53911
automatic X-Y scanning controller for laser annealing of ion-implanted semiconductors 2-86035
BESSY experimental facility, status report 2-85415
bicycling, pedal loading meas., instrumentation system 2-88706
blood cell electrophoresis meas. using microcomputer, cancer early detection appl. 2-117127
blood pressure and flow meas. instrumentation development 2-78479
body surface maps, signal anal. and display with a microcomputer mapping system 2-100145

computerised instrumentation continued

C-CD leased read-out for charged particle identifier 2-64800
 calorimeter automation, adiabatic, 5 to 300K 2-53766
 calorimetric system, automation 2-84602
 cardio-pulmonary assessment using computerised rotating vane spirometer 2-117123
 cardiachometer, data processing and storing, field-portable, microprocessor-controlled 2-11816
 charged particles meas. from fast neutron induced reactions in close geometry 2-108309
 chemical laboratory automation developments 2-79545
 chromatographic analysis of propionic acid, using microcomputer-based integrator 2-78160
 chronometer time differences meas. 2-58800
 circular dichroism spectropolarimeter, microcomputer automated 2-89790
 conf., Boulder, CO, USA (June-July 1982) 2-101128
 cosmic-ray LET spectra meas. using microprocessor supported microscope 2-68623
 cryogenic temperature meas. and data processing system (*Russian*) 2-112909
 CTEM/STEM, conventional; chemical anal. data online processing 2-113062
 cyclotron beam, neutral beam profiles and computer-controlled emittance measuring device 2-102312
 Czochralski crystal puller automated by the weighing method 2-67208
 Czochralski growth apparatus, automatic, phantom controlled 2-67209
 data acquisition, modular memory subsystems, geophys. instrumentation package 2-100574
 data-logging system, efficient use with a special-purpose control language interpreter 2-84599
 dedicated EPROM-based computer for distributed instrumentation control 2-59671
 defibrillator analyser, microprocessor-based 2-57930
 detectors for high-energy neutrino interactions 2-70105
 digital pulse counting cct., computer-interfaced 2-108306
 digital voltmeter coupling to KSR-4100 minicomputer 2-84611
 disk based observing system for a radio telescope 2-117589
 Doublet III Doppler ion diagnostic software system using Northern 1710-31 and LSI-11/2 2-74998
 Doublet III neutral beam mode control 2-85372
 dynamic hysteresis loop meas. using computer-controlled digital voltmeters 2-69208
 ECG microprocessor-based data acquisition, reduction and anal. system, design, implementation 2-94242
 ECG monitor, microprocessor-based portable anaesthesiology ST-segment analyzer 2-62823
 ECG simulator, programmable, for instrument testing and evaluation 2-62812
 ECG ST-segment analyser, compact, microprocessor-based, for the operating room 2-100138
 echocardiograph, M-mode, microcomputerised, with VTR recording 2-100080
 echocardiographic computerised tissue characterisation system 2-94143
 electrochemical instrumentation, microprocessor-based 2-116768
 electron micrograph analysis computer system 2-107462
 electron micrograph image processing minicomputer system 2-107463
 electron microscope-computer interactions 2-107460
 electron microscopes, interactive image processing with an off-line minicomputer: organization, performance and applications 2-113058
 electron microscopy, computer applications 2-107473
 electron microscopy, microscope-computer interactions and atomic resolution and spectroscopy, conf., Atlanta, GA, USA (Aug. 1981) 2-107013
 electron microscopy, on-line digital computer techniques 2-64184
 electron microscopy, online digital computer techniques 2-113052
 electron microscopy digital morphology system 2-107461
 electronic registration equipment in CAMAC standard, review 2-64813
 electrostimulation of pain under analgesia, computer based test setup (*German*) 2-62845
 ELMO Bumpy Torus, plasma heating system instrumentation and control design 2-64662
 environmental analyser for toxic chemicals detection, photoionisation detector-gas chromatograph combination 2-83537
 environmental sound level analyser, microprocessor-controlled 2-60329
 epicardial mapping by online display (*Japanese*) 2-57914
 experimental data acquisition and handling, system based on HP-1000 minicomputer and IEEE-488 standard 2-84598
 far-infrared Michelson interferometer with a step drive operating on line with a computer 2-95457
 FAST facility delayed neutron interrogator control system for U assay 2-74855
 fast microprogrammable trigger processor, ESOP, operating experience 2-85509
 fast polarization modulated ellipsometer using a microprocessor system for digital Fourier analysis 2-95442
 ferromagnetic thin films, magneto-optical const. meas. using automated system 2-64099
 fibre optic attenuation meas. with aid of microprocessor 2-114483
 flame photometer, microprocessor-controlled Flapho 40 four-channel emission 2-69230
 flowmeter, variable area, microcomputer appl. (*German*) 2-86364
 fluoroangiographic pictures, computerised elaboration (*Italian*) 2-73315
 fly wingbeat frequency meas., microprocessor-based instrument 2-117179
 frequency response of sound level meters meas. (*Japanese*) 2-102985
 functional diagnostic instruments, state of the art and future trends 2-62824
 fusion reactor instrumentation and control, development strategy 2-85373
 gamma camera, gated computer-aided, evaluation using dynamic phantom 2-94193
 gas chromatographic integrator, microcomputer-based 2-73021
 gas chromatography with microprocessor control 2-73036
 graphite, irradiation-induced creep testing, computer-supervised data logger 2-69762
 high-power radio frequency irradiation system with automatic tuning for NQR apps. 2-95416
 hologram, synthetic, recording using a numerically controlled optical recorder (*Czech*) 2-96861
 holographic electrooptical automated processing method for surface displacement determ. 2-85910
 Hot Fuel Examination Facility, data acquisition and process control system 2-107968

computerised instrumentation continued

Hot Fuel Examination facility, element laser profilometer system 2-107967
 Hot Fuel Examination facility, subassembly profilometer 2-107966
 HTR fuel irr. facility, programmable logic controller appl. 2-69761
 humidity measurement, multichannel ventilated psychrometer-type hygrometric system using a microcomputer 2-58837
 humidity measurement using an integrated circuit, Aquamax II (*German*) 2-53776
 image analysis system, for holographic droplet spectra (*Chinese*) 2-70517
 information presentation in modern electric measuring instruments, visual and computerisation (*Bulgarian*) 2-95396
 intelligent digital multimeter, 5 1/2-digit, standard meas., logging facilities, computer interfaces 2-53782
 kinesiology EMG system for computer-controlled recording and processing of muscle action pots. of walking subjects 2-78471
 laboratory, microcomputer-controlled, for meas. of visual discrimination learning in rodents 2-62877
 laser Doppler anemometer, computer-controlled real-time meas. of intracellular protoplasm flow (*Russian*) 2-117140
 laser Doppler anemometer, two-colour, for nozzle flow meas. 2-65673
 laser Doppler anemometry using microprocessor-based data logging and processing 2-79547
 laser Doppler meter, investig. of transition to turbulence in hydrodynamic flows (*Russian*) 2-114929
 laser frequency stability, Allan variance real-time processing system 2-63983
 laser tuning using microprocessor-controlled laser grating system 2-97047
 lasers absolute wavelength calibration equipment with automatic adjustment (*German*) 2-108922
 layered semiconductors, Brillouin scattering meas. using microprocessor-controlled Fabry-Perot interferometer 2-79655
 liquid chromatograph, high performance, microcomputer controlled (*Japanese*) 2-67791
 M-mode echocardiographic system for cardiac parameters derivation 2-83614
 MC68000 microprocessor CAMAC system for NMR meas. of polarisation 2-107353
 measuring instrument systematic error, correction via data compression (*Russian*) 2-79523
 measuring stage, for track chamber picture meas., microprocessor control 2-85502
 medical instruments using microprocessors, review 2-83686
 Melbourne scanning proton microprobe developments 2-95543
 meteorological shipboard automated instrument system and computing subroutines (*Russian*) 2-63129
 metrology, evolution from pre-history to present day (*French*) 2-74191
 MFTF control systems, tools and implementation methods 2-85367
 MFTF neutral beams supervisory control software 2-85371
 MFTF-B plasma diagnostics system instrumentation and data acquisition system 2-80288
 microanalysis using charged particle accelerators, control and data handling system 2-95546
 microcomputer-based flow sensing systems (*French*) 2-60681
 microcomputer-controlled system for recording rapid changes of US wave vel. and attenuation 2-84600
 microelectrode lowering, single unit discrimination, computer automation 2-62865
 micromanipulators with high frequency vibratory drive (*Russian*) 2-53744
 micromechanical props. meas., automatic system 2-107320
 microprocessor controlled instrument for lens quality assessment 2-114400
 microprocessor controlled multichannel analyser 2-90409
 microprocessor-controlled continuous-flow cryostat for single-crystal X-ray diffraction in the range 10-300K 2-97849
 microprocessor-controlled multichannel photon counter with a time resolution of 2.5 ns 2-107407
 microprocessor-controlled phase analysis for a 2-mm microwave interferometer on the TCA Tokamak 2-81588
 microprocessor-controlled saturated-core magnetometer (*German*) 2-84672
 microscope employing laser interferometry for cosmic ray track meas. in plastic detector 2-64841
 microwave system, computer-controlled for local tumour hyperthermia 2-111768
 modular HV system for phototube and MWPC appl. 2-75125
 multichannel analyser for fusion X-ray spectrometry 2-85500
 multichannel analyses based on SDK 85 2-59650
 multichannel polarimeter, TV guider and minicomputer system (*Japanese*) 2-117601
 multichannel recorder/display system based on an Apple II microcomputer 2-84618
 multidimensional expts. on nucl. interactions, measuring and computing complex 2-108326
 multiparameter multichannel anal. system for X-ray sources 2-84767
 microprocessor, FAMP, for high-energy physics appl. 2-85510
 multiprocessor system hardware based on MC68000 microprocessor 2-64805
 National Synchrotron light source, data acquisition and control system 2-59672
 neuro-ophthalmology system based on a PET computer for evoked response, EOG and ERG tests 2-117121
 neutron beam instruments, control and data acquisition 2-59674
 Nova, control system, data acquisition, architecture and system design 2-75023
 Novanet, a local computer network, and nova target data acquisition system 2-75024
 nuclear instrumentation, computer control at Technical University of Dresden 2-85512
 nuclear reactor vessel level monitoring system for assessing inadequate core cooling 2-64561
 nuclear tracks in plastic foils, automatic meas. 2-64775
 oceanography, one-bit microprocessor controlled data acquisition system [for wave recorders] 2-83978
 online optical particle and sizing for crystalliser operation control 2-64209
 optical fibre length meas. by reflectometry (*German*) 2-74484
 optical source, emission spectra analysis, microprocessor controlled (*Italian*) 2-101436
 particle size analyser with built-in microcomputer (*Japanese*) 2-63978

computerised instrumentation continued

- period timing device for laser Doppler signals 2-65670
 permittivity detector for liquid chromatography, microprocessor-based system 2-116769
 phonopneumography, microcomputer-based analysis of recorded breath sounds 2-62826
 phosphate glass dosimeter reader, computerised, for estimating dose, radiation quality and direction of radiation 2-59547
 photoelectric precision pyrometer, IPTS-68 scale above 1064.43°C realisation 2-69179
 physics applications, conf., Stara Lesna, Czechoslovakia (May 1981) 2-84364
 physiology laboratory, use of computer-oscilloscope combination 2-100172
 pocket neutron REM meter 2-64692
 portable bench-top instruments for combination in single ATE system 2-101417
 precordial LF vibr. meas. system, development of optical transducer, heart disease diagnosis appl. (*Japanese*) 2-117047
 pressure-volume-flow relations meas. in isolated rabbit hearts, sensors and actuators development 2-100189
 programmable decision logic module for multidetector expts. (*French*) 2-90410
 pulse height readout system for proportional chambers 2-96397
 pulsed eddy current test system with computer added registration and eval. of meas. signal (*German*) 2-116659
 pulsed optical source fluctuation microprocessor controlled meas. system 2-64083
 radiation detector, moving, with electronic control for whole body counting (*Hungarian*) 2-111779
 radiation dosimeter development 2-70005
 radiation therapy, computer appl., conf., Kawasaki and Tokyo, Japan (Sept. 1980) 2-100123
 radiotherapy beam compensator design and patient contour plotting, microcomputer-based system 2-68131
 Salter Abbey electronic force gauge, hand-held 2-101395
 scanned film radiography system with computer assisted exposure 2-111787
 scanning Auger electron microscopy, high spatial or high energy resolution 2-101504
 scanning Auger microscopy, software 2-113061
 scanning PIXE meas. with Eindhoven cyclotron, data handling 2-95548
 SEM, topographical analysis, automatic focusing technique use 2-113060
 semiautomatic system for measuring the nonequilibrium capacitance of semiconductor structures 2-112921
 semiconductors, low resistance, automated equipment for meas. galvanomagnetic characts. in high electric fields 2-95397
 simulator of cardiac arrhythmias, microprocessor based 2-62813
 skin potential monitor and display system 2-68185
 Solar Maximum Mission vidicon camera and data acquisition control 2-112328
 solar pilot test facility, in Belgium, design, construction and first operational experience 2-116850
 SPECORD M 40, recording type UV-VIS spectrophotometer 2-69229
 spectrophotometric titrator with photodiode array 2-78149
 spectroscopic splitting factors, g-values, meas. in EPR spectroscopy, microprocessor-based unit 2-101433
 speech research, steerable X-ray microbeam appl. 2-57938
 spent nuclear fuel reprocessing, remote control using computerised X-ray fluorescence 2-64557
 spent nuclear fuel reprocessing facility, control laboratory automation 2-64556
 spirometry system, microcomputer based, remote pulmonary function anal. 2-73385
 STEM, digital image processing 2-107464
 STEM, digital image recording, image display and characterisation 2-107471
 STEM, energy filtered images, simultaneous collection and processing 2-107470
 STEM, microcomputer control 2-107467
 STEM data acquisition and display system 2-107469
 STEM system, computer control, EELS acquisition 2-107466
 STEM-computer interfacing 2-107468
 stereological analysis system, automated, for trabecular bone 2-73314
 streamer chamber tracks digitisation using CCD image sensor and video digitiser 2-75103
 telephotometer, field testing and data analysis for prototype automated field instrument 2-112186
 television measuring system for crystal growth parameter determ. (*German*) 2-69151
 TEM and STEM, computer control for X-ray and energy loss line profiles and images 2-107472
 TEM image recording and processing, on-line 2-107465
 thermal analysis system appl. to routine analysis and quality control 2-74416
 thickness measurement of biological structures, computer aided 2-100173
 time projection chamber, CCDs appl. 2-64799
 time projection chamber, data acquisition system 2-64758
 TLD personnel monitoring systems, automated, present situation 2-64683
 TOKIWA large-aperture spectrometer magnet, computer-controlled field measuring system 2-96362
 turbidity multichannel instrument using scanning He-Ne laser system, bacteria numbers estimation appl. 2-117178
 two-dimensional anal. of solid materials using nucl. microprobe, techniques development and comparison 2-95547
 UNICON, a universal nuclear imaging construct 2-111781
 UV detector for liquid chromatography, with time-programmable variable wavelength 2-83422
 UV-visible spectrophotometers, holographic gratings and microprocessors appl. (*French*) 2-64125
 vibration elastoviscosimeter based on a micro-controller (*Russian*) 2-114955
 vibration mode anal. using electronic speckle pattern interferometry, instrument 2-83324
 video/microscope densitometric system for cellular and nuclear props. study 2-111829
 X-ray diffractometer, wide-angle, microprocessor appl. 2-84773
 X-ray image recognition, automatic systems, comparative analysis 2-78410
³H on-line monitor development with γ -ray rejection and energy discrimination 2-75057

computerised instrumentation continued

- Pt resistance thermometer, A/D convertor for microprocessor (*French*) 2-107325
 Rn isodose curve drawing using microdensitometer-computer ensemble 2-64838
- computerised monitoring**
 aircraft wake vortices detection and analysis, measuring system (*Dutch*) 2-114957
 ambulatory monitoring, algorithm to analyse ST segment changes 2-88677
 ambulatory patients, microprocessor based portable equipment for ECG on line recording and analysis 2-88675
 blood pressure monitors, automatic, noninvasive: analogue/manual adaptation of Dinamap (TM) 2-83672
 CAMAC-based controller for nuclear power plant radiation monitoring 2-64562
 cardiac arrhythmia monitoring using Hewlett-Packard 78520A computer (*German*) 2-88670
 drift chamber positioning, dynamic compensation of small errors using optical CCD system 2-90390
 ECG, computer-assisted diagnostic interpretation and arrhythmia monitoring 2-68189
 energy-conserving house simulation, monitoring and data analysis 2-57764
 epilepsy seizure, microcomputer based detection and quantification 2-100134
 industrial atmospheres automatic surveillance by computerised centralised IR spectrometer (*French*) 2-62528
 LOCA tests, touch-sensitive colour graphic monitoring system 2-64560
 magnetron system, microprocessor-controlled, for reactive sputtering of optical films 2-57289
 microcomputer controlled data acquisition system for lightning strike current recording 2-68538
 microprocessor based reactor vessel level/containment monitor 2-85175
 nuclear reactor digital protection system 2-102195
 oceanography, one-bit microprocessor controlled data acquisition system [for wave recorders] 2-83978
 Oldbury nuclear power station, computerised monitoring and control system 2-108053
 particle accelerators, computerised data acquisition and monitoring system 2-108327
 Particle Beam Fusion Accelerator Performance Monitoring and Evaluation System 2-96409
 pulmonary artery pressure monitoring using spectral analysis and Strand's algorithm 2-88678
 PWR feedwater control valves, computerised acoustic monitoring 2-74892
 skin potential monitor and display system 2-68185
 Swedish nuclear power station on-line isotopic stack monitoring system 2-70004
 telephone ECG monitoring in real time by means of a microcomputer based terminal 2-83690
 thermoelectric plant, supervisory scheme, design criteria (*Italian*) 2-62484
 TLD personnel monitoring systems, automated, present situation 2-64683
 visual perception, saccadic eye movement as function of task visibility level 2-73234
 NO monitoring system using tunable laser and microcomputer aided signal processing system 2-93971
- computerised navigation**
 image visual systems for marine simulator training 2-79334
- computerised numerical control**
 lathing system for contact lens production, computer controlled 2-109082
- computerised pattern recognition**
 2-D pattern recognition using generalised matched filters 2-80902
 ambulatory ECG processing by general-purpose minicomputer 2-117101
 blood cell image classifying system (*Japanese*) 2-105861
 brain computerised tomography images, automated pattern extraction and 3D construction (*Japanese*) 2-57896
 carotid arterial disease, pattern recognition using pulsed Doppler US 2-94138
 chemical bonds, computerised pattern recognition, model and computation method 2-54753
 digital techniques for industrial appl., review (*Japanese*) 2-102729
 ECG, computer-assisted diagnostic interpretation and arrhythmia monitoring 2-68189
 ECG, P-wave recognition with adaptive correlating filter, effects of data compression (*Japanese*) 2-117111
 FILE-1B aircraft flight test program [Earth observation] 2-73730
 holographic recognition system modelling 2-70527
 image processing equipment, techniques development, SPIDER image enhanced software (*Japanese*) 2-102730
 moire and speckle pattern fringe smoothing by computer processing 2-114183
 moire patterns in scanned halftone pictures 2-108805
 respiratory sounds, automatic recognition (*Japanese*) 2-62707
 spiogram analysis for quiet breathing 2-100023
- computerised picture processing**
 see also computer-generated holography
 adaptive filtering for image enhancement 2-60032
 adrenal gland uptakes, computer program for determination 2-117057
 airborne reconnaissance, conf., San Diego, CA, USA (Aug. 1981) 2-74146
 angiographic images, atherosclerosis, computer assessment 2-83636
 angiographic picture processing, real-time classification of pictures (*Spanish*) 2-68133
 angiography, sequential ventricular borders, complex dynamic shape representation 2-100117
 arteriography, improvement by hybrid subtraction 2-62762
 automatic image classification for astronomy 2-89159
 automatic left ventricular outlining 2-117055
 biological material image analysis (*Italian*) 2-105858
 biomedical image analysis, algorithms for morphological features extraction 2-68186
 bone mass determ. by automated processing of CT images, radius appl. 2-73359
 cancer cell diagnostic equipment (*Japanese*) 2-105848
 cardiac blood flow marker distrib., topographic display and quantitative anal. 2-117110

computerised blood processing continued

- cardiac blood pool scintigrams, ^{99m}Tc gated, minimum cost contour detect. 2-88658
- cardiac imaging by digitised intravenous angiocardigraphy, contrast enhancement 2-88661
- cardiac left ventricle delineation, edge detect. algorithms performance 2-100120
- cartography, grid cell size rel. to errors in maps produced by computerised map processing 2-111837
- charged particle radiotherapy, three dimensional graphics appl. 2-100122
- chest radiographs, posterior/anterior, automatic anal. 2-100116
- Cluster Compression Algorithm for Landsat image data 2-78273
- coded X-ray pictures, short term tomosynthesis (*German*) 2-68115
- colour make-up printing, CCD scanners (*Japanese*) 2-101481
- composite materials, ultrasonic evaluation using digital imaging and image processing 2-67719
- conference on medical phys., Varenna, Italy (Jun.-Jul. 79) 2-89448
- contrast echocardiography, 2D, videodensitometric data processing 2-117034
- coronary angiograms, semiautomatic computer technique for processing 2-88662
- coronary obstructions, objective meas. by digital image processing 2-111786
- cryogenic STEM, integrated approach to data acquisition 2-113057
- dental radiographs, digitised image processing for improved diagnosis 2-68143
- detection quantum efficiency of electronic image recording systems 2-113053
- digital CCD camera, appl. to high time resolution obs. of solar flare, (1980 December 17) 2-100868
- digital image processing of remotely sensed phenomena, DIBIAS system use 2-117511
- digital image quality and interpretability by military photointerpreters, database and hardcopy studies 2-55085
- digital imagery and display fundamentals, resolution and MTF problems 2-114209
- digital interactive image processing system, design and implementation of DIBIAS system 2-117510
- digital radiography, conf., Stanford, CA, USA (Sept. 1981) 2-94891
- digital subtraction angiography 2-83633
- digital subtraction videangiography, technique for scatt. and glare correction in videodensitometric studies 2-78421
- digital techniques for industrial appl., review (*Japanese*) 2-102729
- digital US C-scan image construction using electronic ordered dither microprocessor-based techniques 2-62303
- double contrast radiography, stomach region extraction 2-57902
- Doublet III, data acquisition and control system for Thomson profile diagnostic 2-80226
- echocardiograms, 2D sector scans, computerised reconstruction of 3D images of pulsating left ventricle 2-83617
- echocardiograms, ECG synchronised 2D, on-line digital storage and image treatment 2-94141
- echocardiographic images, computer processing for automated edge detect. of left ventricular boundaries 2-94142
- echocardiographic sector scans, computerised enhancement techniques 2-83615
- echocardiography, computer supported meas. of 2D images 2-83616
- edge tracing for determination of left ventricular projection (*Japanese*) 2-68140
- electron diffractograms, computer-aided reconstruction of image contrast 2-55816
- electron diffractograms, digital processing of lattice images 2-115107
- electron image processing: 1978-1980 2-53895
- electron micrograph analysis computer system 2-107462
- electron micrograph Fourier transform data, interpolation in tilted-view 3-D reconstruction 2-71302
- electron micrograph image processing minicomputer system 2-107463
- electron micrographs, image reconstruction, EM computer program system 2-113076
- electron microscope image processing, recursive methods with a transfer function 2-76259
- electron microscope-computer interactions 2-107460
- electron microscopes, interactive image processing with an off-line minicomputer: organization, performance and applications 2-113058
- electron microscopy, computer applications 2-107473
- electron microscopy, high-resoln., on-line image anal. and processing 2-64186
- electron microscopy, image processing, array processor appl. 2-113059
- electron microscopy, microscope-computer interactions and atomic resolution and spectroscopy, conf., Atlanta, GA, USA (Aug. 1981) 2-107013
- electron microscopy, on-line digital computer techniques 2-64184
- electron microscopy, online image capture and anal., microprocessor system appl. 2-113055
- electron microscopy, real-time digital image processing 2-64185
- electron microscopy digital morphometry system 2-107461
- fast-neutron hodoscope data, image processing and resolution restoration 2-96216
- FILE-1B aircraft flight test program [Earth observation] 2-73730
- Fourier phase recovery restricted to one-dimens. images 2-102731
- gamma-ray camera nonidealities, computer correction 2-96405
- high-resoln. electron microscope, Cambridge University, image pickup and display systems 2-64187
- holographic droplet spectra, image anal. system (*Chinese*) 2-70517
- holographic interferometry, aerodynamic flow meas. appl. (*French*) 2-60042
- image processing equipment, techniques development, SPIDER image enhanced software (*Japanese*) 2-102730
- image processing techniques, conf., Athens, Paris and The Hague (June 1982) 2-112660
- image understanding system, identification of artery branches in cineangiograms 2-100115
- images, incoherent, bandlimited, digital restoration 2-90820
- IMAGIC, interactive image anal. software system for electron micrographs 2-71301
- interferometric automatic fringe analysis using digital image processing techniques 2-89797
- IUE SWP camera linearity, correction algorithm 2-112340
- left ventricular boundary automated extraction from ^{99m}Tc gated blood pool scintigrams 2-68144
- left ventriculography, digital, determ. of benefit from post-acquisition processing 2-88660

computerised picture processing continued

- materials testing, ultrasonic evaluation using digital imaging and image processing 2-67719
- medical electronics, trends in Japan 1979 and 1980 (*Japanese*) 2-94245
- medical US echo data, developments in computer processing 2-88634
- meteorological satellites, on-line processing of high resoln. imagery 2-117467
- Meteosat data integrated processing, cloud-top height maps 2-78750
- moire topography, automatic fringe anal. 2-95452
- multiple bandpass filters applied to computed tomographic images 2-68146
- myocardial scintigrams using ^{201}Tl 2-73355
- nuclear cardiology, ECG gated, image enhancements by Karhunen-Loeve transformation 2-68145
- nuclear medicine, computer applications, meeting, Paris, France (Sept. 1982) 2-94895
- nuclear medicine, digital filtering 2-83640
- nuclear medicine, dynamic sequence handling 2-100100
- nuclear medicine, picture processing, computer appls. 2-100099
- phase retrieval from intensity data, algorithms comparison 2-102725
- photoelectronic-digital diagnostic radiology department 2-105822
- photoelectronic-digital vs. film-based system for radiology, cost anal. 2-105823
- photographic negative of Holy Shroud of Turin 2-95495
- placental US images, in vivo, characterisation using digital techniques 2-68092
- plastic detectors, automatic track meas., microprocessor based picture anal. 2-64840
- police photographic image enhancement and deblurring system 2-113026
- pulmonary scintigrams, ventilation and perfusion, automatic anal. (*French*) 2-68121
- radio astronomy, algorithm for azimuth aperture synthesis RATAN-600 radio telescope 2-94620
- radiographs, tumour detection by computer 2-111790
- radioisotope imaging, edge detection algorithm, performance evaluation 2-100110
- radioisotope imaging, review of new developments in information processing techniques 2-78442
- reconstruction using discrete coincidence 2-90827
- satellite-based images, computerised processing, parallel computer appls. 2-100752
- solid state camera for low cost image processing 2-84731
- SPIDER image data enhancement software (*Japanese*) 2-102730
- STEM, digital image processing 2-107464
- STEM, digital image recording, image display and characterisation 2-107471
- STEM, energy filtered images, simultaneous collection and processing 2-107470
- STEM, microcomputer control 2-107467
- STEM, multiple signals description 2-113056
- STEM data acquisition and display system 2-107469
- STEM images, stand alone image processing system 2-113075
- STEM system, computer control, EELS acquisition 2-107466
- STEM-computer interfacing 2-107468
- stereological analysis system, automated, for trabecular bone 2-73314
- strip, cold rolled, optical surface inspection system with on-line signal processing (*German*) 2-72939
- suspended sediment concentration in coastal waters, digital Landsat MSS data use for patterns determ. 2-73695
- TEM, conventional, nonlinear high resolution computer image processing 2-113073
- TEM, conventional nonlinear high resolution computer image processing 2-113074
- TEM and STEM, computer control for X-ray and energy loss line profiles and images 2-107472
- TEM image recording and processing, on-line 2-107465
- tomography, image reconstruction package 2-62763
- tomography equipment development, image reconstruction technique, HEADTOME system (*Japanese*) 2-105849
- tomosynthesis image improvement using digital computer (*French*) 2-62740
- TV rate electron microscope images, noise reduction by digital filtering 2-113054
- two-dimensional digital filter design for electron microscopy 2-58971
- underground cultural properties, computer assisted imaging based on acoustic pulse-echo techniques (*Japanese*) 2-81190
- vocal cord vibration, automated anal. from ultra high-speed films using angular bend function (*Japanese*) 2-117046
- computerised power station control** see power station computer control
- computerised power system control** see power system computer control
- computerised process control** see process computer control
- computerised signal processing**
see also biology computing; computerised pattern recognition; computerised picture processing; medical diagnostic computing
- abdominal tissues, US characterisation via digital anal. of backscatt. waveforms 2-62710
- acoustic imaging, medical and underwater surveillance systems, microprocessor controlled 2-81192
- AN/UYS-1 advanced acoustic signal processor, architectural review 2-75786
- arterial stenosis, on-line classification of severity by Doppler US signals anal. 2-117022
- bio-signals, basis of digital processing (*Japanese*) 2-83712
- biological signal processing, digital low-pass differentiation 2-117109
- body surface maps, signal anal. and display with a microcomputer mapping system 2-100145
- breaths, algorithms for detect. from respiratory waveform recordings of infants 2-68181
- cardiovascular signals, detect. of trends in long term recordings 2-111808
- deconvolution program for processing radiotracer dilution curves 2-117056
- digital audio signal processing by microcomputer 2-81165
- ECG, computer assisted evaluation, results and perspective 2-83681
- ECG, computer system for electrophysiologic studies of cardiac rhythm in humans 2-88680
- ECG, high freq., notching during anaesthesia 2-62818
- ECG, Holter recordings computer anal. system, performance evaluation 2-100150
- ECG, multiple-lead, exercise, real-time processing 2-94246
- ECG, PR interval variations determ., on-line method 2-88679

computerised signal processing continued

- ECG, QRS delineation algorithm with low sensitivity to noise and morphology changes 2-94232
 ECG ambulatory tape analysis, Concordia high speed system, design for noise immunity 2-94231
 ECG analysis, signal representation and learning 2-94234
 ECG annotated database, R-R interval predictors evaluation 2-94235
 ECG computerised analysis, digital filtering and regression algorithm for pre-processing 2-94238
 ECG large database evaluation by coupled computer system, unique QRS axis definition 2-94236
 ECG recording analysis from implanted pacemaker patients, computer technique 2-94254
 ECG signal data compression using high-speed computer processor 2-57913
 ECG signal portable late potential averager device using microprocessor 2-94239
 ECG ST-segment analyser, compact, microprocessor-based, for the operating room 2-100138
 ECG waveforms, frequency-domain-based QRS classification algorithm 2-94233
 EEG analysis in patients with migraine 2-94221
 electro-oculographic records, automatic anal., audio-vestibular diagnosis appl. 2-73390
 electrocardiographic rhythm analysis using Lorenz plot and microcomputer (*Japanese*) 2-73383
 electronic music, digital techniques for sound synthesis (*French*) 2-70785
 EMG, quantitative evaluation of various signal processing techniques 2-62814
 EMG, single-site microcomputer identification of temporal pattern differences, prosthesis and orthosis appl. 2-83701
 EMG of small intestine, computerised anal. of spike burst activity 2-78503
 FFT, hydroelastic gate model force and displacement signals (*German*) 2-76053
 His bundle activity with cross-correlative waveform alignment 2-94217
 impedance pneumography, methods of filtering heart-beat artefact from breathing waveform of infants 2-68182
 laser Doppler system with transient recorder for study of particles in flowing fluid 2-74582
 micro, mini and maxi processor applications 2-60312
 neurons, single, activity detect. in multiunits, real-time computer method (*Japanese*) 2-83711
 NMR spectrometer, microprocessor-based data acquisition and anal. system 2-89780
 post-production dubbing by computer-assisted digital sound mixer 2-109134
 remote sensing, design considerations for programmable signal processor for imaging interferometer sounder 2-112160
 sonar combination of SAW analogue and digital processing 2-60288
 sonar systems, microprocessor appls. in signal processing and picture generation 2-81194
 thoracic wall phonocardiogram recording and correlation 2-94129
 underwater signal processing, high-speed programmable digital systems 2-63143
 US scanner digital signal processing (*German*) 2-68082
 weather station as example for microcomputer sensorics (*German*) 2-100440
 X-ray image recognition, automatic systems, comparative analysis 2-78410

computerised spectroscopy

- see also spectroscopy computing*
 AES, microcomputerised data collection 2-84741
 AES of solid surface, microcomputer based data acquisition and control system 2-116304
 atomic absorption spectrophotometers, recent developments in hardware and software 2-64088
 automated hydride analysis, low concentration of toxic elements determ. 2-78148
 automated qualitative wavelength-dispersive X-ray fluorescence analysis 2-88398
 automated transportable mass spectrometer for isotopic anal. 2-74563
 automatic sampler for ICP atomic emission spectrometer 2-64116
 automation of Bausch and Lomb Spectronic 20 using Apple computer, use as teaching aid 2-74187
 cathodoluminescence in SEM, computer controlled data acquisition 2-64173
 colour centre laser spectroscopy 2-58923
 deep level transient spectroscopy using CAMAC components 2-101469
 DLTS measurement assembly with general-purpose correlation facility (*German*) 2-84714
 double NQR-NMR spectrometer, program device 2-89765
 EELS, in multi spectrum acquisition system, computer control and instrumentation 2-64191
 far IR Fourier spectrometer, microcomputer control and data analysis 2-95492
 ferromagnetic resonance spectrometer, digital recording system 2-69215
 gamma-ray spectrometry 2-58979
 HP 8450A spectrophotometer with multicomponent analysis capability 2-75653
 ion probes A-DIDA, advances 2-95568
 IR analyser, automated acousto-optic tunable filter 2-109018
 IR computerised dispersive spectroscopy procedures (*Spanish*) 2-84721
 IR spectroscopy, automated quality control 2-79693
 laser-induced fluorescence signals, interface for registration 2-107411
 magnetoabsorption, far-IR, multichannel time-resolved meas. 2-74519
 mass spectrometer, quadrupole, microprocessor controlled 2-89852
 microbeam analysis, conf., Vail, CO, USA (July 1981) 2-68961
 microcomputer controlled sample changer system for γ -ray spectroscopy 2-96365
 microcomputer-corrected spectrosc., appls. 2-58910
 microprocessor controlled Mossbauer spectroscopy, software package 2-107476
 microprocessor-based Mossbauer fitting program 2-84772
 molecular fluorescence, time domain meas. system with real-time monitor, pulsed dye laser control 2-74505
 neutron time of flight spectrometer, GNEIS, data acquisition system 2-64741
 NMR spectrometer, microprocessor-based data acquisition and anal. system 2-89780

computerised spectroscopy continued

- PET-microcomputer-based Fourier transform and data acquisition system using a Michelson interferometer for far-infra-red spectroscopy 2-95491
 pulse height analysers, modular system, CAMAC RAM controllers, microprocessor and LSI appls. 2-85511
 pulsed NQR spectrometer control and signal processing system 2-107363
 radio astronomy, software struct. of acousto-optical spectrograph 2-94606
 spectrographic plates, measurement and data processing system 2-64120
 spectrometers, microprocessor-controlled, wavelength reading using gray code techniques (*Japanese*) 2-112994
 spectrophotometers, single-beam, Beckman DU-8 and DU-5 models 2-74482
 splitting factors, g-values, meas. in EPR spectroscopy, microprocessor-based unit 2-101433
 UV, high-temperature 2-74516
 UV spectrometer and polarimeter on Solar Maximum Mission satellite 2-94578
 UV-visible spectrophotometer, with high-speed computing facilities 2-79642

computerised test equipment *see automatic test equipment***computerised tomography**

- algorithms for limited-angle CT 2-117075
 Anger tomographic scanner, computerised, development for positron imaging 2-78445
 arteriography, improvement by hybrid subtraction 2-62762
 attenuation in human muscle and fat tissue in vivo and in vitro 2-94157
 axial tomographic images, correl. with simulation and port films using a computed radiograph 2-68118
 bone mass determ. by automated processing of CT images, radius appl. 2-73359
 brain images, automated pattern extraction and 3D construction (*Japanese*) 2-57896
 breast cancer ultrasonic imaging 2-68089
 cardiac scans, quantitative computer graphic displays 2-117076
 cardio-CT imaging, ECG triggered, with the Somatom 2-100096
 cerebral blood flow, local, in vivo mapping by Xe-enhanced CT 2-83651
 cerebral blood flow, regional, errors in determ. by Xe enhanced CT 2-62759
 cerebral blood flow determ. using positron emission meas. of fluoromethane kinetics 2-62753
 charged particle radiotherapy, three dimensional graphics appl. 2-100122
 charged-particle radiography and computerised tomography using nuclear track detectors 2-68134
 coded X-ray pictures, short term tomosynthesis (*German*) 2-68115
 conference, optical instrumentation appl. in medicine, San Francisco, CA, USA (March 1981) 2-94888
 conference on medical phys., Varenna, Italy (Jun.-Jul. 79) 2-89448
 conference on phys. and engng. in medical imaging, Pacific Grove, USA (Mar. 82) 2-107017
 contrast media in CT, workshop, Berlin, Germany (Jan. 1981) 2-63747
 CRT display, advances in medical diagnosis 2-57891
 design constraints, theoretical review 2-94176
 developments in medical imaging techniques 2-100094
 digital scintillation camera for single photon computerised tomography appl., concepts and design 2-73343
 direct Fourier transform NMR tomography with modified Kumar-Welti-Ernst method 2-73310
 direct sagittal scanning using the Philips Tomoscan 300, value 2-68113
 dose descriptor, equiv. rectangular width 2-68166
 double-exposure technique for CT imaging on X-ray film 2-105833
 dynamic CT pictures, problems in data evaluation (*German*) 2-117071
 ECG gated heart scanning, use of 4th generation CT scanners 2-111794
 electronically collimated gamma camera, reconstruction algorithms comparison 2-73320
 electronics in Soviet Union, review 2-78473
 emission, interface requirements, networking strategies 2-100098
 emission computed tomographic images using single rotating head gamma camera, performance characs. 2-100107
 emission CT, quantitative multi-detector, using iterative attenuation compensation 2-117061
 emission CT, single photon, reconstruction algorithms 2-100101
 emission CT images, 3D display (*Japanese*) 2-117066
 emission CT with an Anger camera, field-of-view requirements 2-78419
 emission tomographic instruments, single photon: figures of merit obs. 2-78440
 emission tomography, longitudinal and transverse digital image reconstruction 2-78444
 emission tomography, max. entropy reconstructions 2-78443
 emission tomography, pot. and limits of quantitative studies 2-78439
 emission tomography, reconstruction algorithm (*French*) 2-94170
 emission tomography reconstruction techniques, deterministic versus statistical methods 2-100112
 energy selectivity in projection radiography and CT 2-111784
 explosive, polymer bonded, impact on steel plate, radiographic study 2-78107
 fan beam, optimisation of short scan convolution reconstruction 2-117079
 fan beam CT, optimal short scan convolution reconstruction 2-68129
 fatty liver and cirrhosis diagnosed by US texture discriminant analysis 2-57878
 gallbladder, automatic volumetry system using US tomography (*Japanese*) 2-78403
 gamma emission CT, attenuation correction 2-94162
 gamma-ray tomographic scanner, for industrial appls. 2-57548
 GAMMATOM-I, single photon tomographic system performance 2-73328
 gated digital tomography with focal plane scanner 2-73341
 guided stereotaxis, localisation error sensitivity 2-94166
 head examination, 3D computer reconstruction from surface contours 2-94160
 head fixation device for reproducible position alignment in transmission CT and positron emission tomography 2-94164
 HEADTOME, hybrid emission tomograph for brain 2-78435
 HEADTOME hybrid emission computerised tomography system (*Japanese*) 2-105849
 HEADTOME II, hybrid emission computerised tomography for brain 2-73334
 heavy ion beam CT, imaging with a multiplane multiwire proportional chamber 2-117083
 high-speed multi-slice X-ray CT, CVCT scanner development review 2-111793

computerised tomography continued

- image reconstruction developments, parallel beam and fan beam integral convolution methods, HEADTOME system (*Japanese*) 2-105849
 image reconstruction from limited data 2-117077
 image reconstruction from X-ray projection using accelerative gradient method 2-94185
 image reconstruction package 2-62763
 image reconstruction with limited view angle projections 2-117074
 impedance tomography using nonlinear reconstruction 2-73391
 internal three dimensional struct. of objects, reconstruction based on real time projections 2-62356
 iterative reconstruction-reprojection, algorithm for limited data cardiac CT 2-78415
 limited angle multifrequency diffraction tomography 2-81175
 limited angle reconstruction problems in X-ray and NMR tomography 2-117051
 limited angle tomography, image sharpening by including orthogonal projection set 2-57893
 limited-angle positron tomography, contrib. of time-of-flight information 2-73333
 mathematical anal., regularisation technique 2-57901
 mathematical principles of X-ray computerised tomography technique (*Spanish*) 2-68631
 medical X-ray apparatus, computer technology 2-62741
 Medisor CT 0100/0150 and general principles of CT 2-62757
 multilayer positron emission computed tomographs, slice shift collimators evaluation 2-73344
 multiplane positron tomographs designed for brain imaging, performance evaluation 2-73325
 multiple bandpass filters applied to CT images 2-68146
 multispectral imaging, use in limited-angle reconstruction 2-73332
 myocardial ^{201}Tl emission tomography with 180° and 360° data collection comparisons 2-117060
 myocardium, regional flow estimation using CT, stochastic formulation 2-100104
 neutron-transmission CT scanning system 2-94161
 NMR rheotomography, feasibility and clinical pot. for blood flow anal. 2-68103
 nonuniqueness problems 2-100114
 nuclear imaging, new perspectives 2-78427
 nuclear spin tomography for medical diagnosis (*German*) 2-68190
 optical-scanning tomography of turbulent wakes and exhaust plumes 2-76050
 organ system functional mapping, computer methodology, symposium, New Orleans, LA, USA (1981) 2-63742
 organ volume visualisation using emission-computerised tomography 2-94187
 PETT VI, positron computed tomograph with CsF detectors, performance study 2-73336
 PETT VI multislice positron emission tomograph, engineering aspects 2-73326
 phantoms for meas. of low contrast resolution and comparison of several CT scanners 2-117080
 photomultipliers for positron CT in nuclear medicine 2-90374
 plasma diagnostic technique 2-86475
 Positologica, positron computerised tomography dedicated to head studies, electronic system 2-100091
 positron camera, large-area stationary, using wire chambers 2-78430
 positron computed tomograph, continuously rotating, design considerations 2-73337
 positron computed tomographs, rotational 2-78436
 positron computed tomography: present and future design alternatives 2-78438
 positron CT, dual rectangular photomultiplier tube 2-117081
 positron emission computed tomography, time-of-flight meas. incorporation 2-100106
 positron emission CT, quantitation, effect of accidental coincidences 2-88651
 positron emission tomograph with BGO crystal, performance study 2-73340
 positron emission tomography: instrumentation perspectives 2-111780
 positron emission tomography, coincidence time window, ring sampling, attenuation 2-57892
 positron emission tomography, procedure for calibration and correcting data 2-73342
 positron emission tomography, props. of statistical noise 2-117073
 positron emission tomography and NMR, new medical imaging modalities 2-88656
 positron emission tomography having time-of-flight meas., noise performance 2-88654
 positron emission tomography of brain, four ring camera system 2-73338
 positron tomograph, dynamic, for heart studies, medical criteria for desing 2-73329
 positron tomographic ring detector, one-dimensional scintillation camera appl. 2-73323
 positron tomography, technique for providing pseudo-continuous detector ring 2-73321
 positron tomography and NMR imaging, review 2-78425
 pulmonary oedema, lung density imaging, chest X-rays vs. Compton scatt. tomography 2-83654
 pulsed X ray detection in medical tomography, use of CdTe 2-83652
 radiation therapy, computer appl., conf., Kawasaki and Tokyo, Japan (Sept. 1980) 2-100123
 radiotherapy planning, accuracy of topometric information input from CT scans (*Russian*) 2-111774
 radiotherapy planning, role of CT, computer dose calcs. 2-105836
 radiotherapy treatment planning, inexpensive simulator based CT scanner 2-117082
 radiotherapy treatment simulator, appl. to tomographic imaging 2-62764
 reconstruction from sparse data, JETCAT Fortran program 2-97797
 resolution improvement by nonuniform detector aperture 2-88652
 respiration monitor for use with CT body scanning and other imaging techniques 2-105816
 review of medical imaging technology (*Japanese*) 2-105825
 review of X-ray CT: engng. synthesis of multiscientific principles 2-94167
 rotate-translate scanner for radiotherapy planning dosimetry 2-68130
 scanner, 4-MV, for radiation therapy, prototype system 2-94180
 scatter effects, nonlinear errors induction 2-94172
 scattered radiation in fan beam imaging systems 2-68128
 scintillation counter apps. to CT 2-80395
- computerised tomography continued**
 semiconductor detector suitability for imaging appl. 2-59598
 single photon emission, comparison of 180° and 360° data collection in Ti^{40} imaging 2-117059
 single photon emission computed tomography, image noise, resolution and lesion detectability 2-73330
 single photon emission computed tomography anal. using Monte Carlo simulation 2-73331
 single photon emission CT system, camera-based 2-94171
 single-photon emission tomography with a 12-pin-hole collimator 2-105820
 soft tissue, acoustic vel. and attenuation const. meas. 2-78513
 soft tissue US attenuation tomography corrected by simulation of refraction 2-57877
 spatial filtering, appl. to CT imagery 2-117078
 SPECT, anal. using Monte Carlo simulation 2-111783
 stereology, quantitative, and radiological image anal.: CT and US 2-83642
 stereotactic neurosurgery, 3-D digital signal processing 2-62744
 streaks due to insufficient angular sampling, reduction using phantom views 2-111777
 Super-PETT, positron emission transaxial tomograph, data acquisition aspects 2-73339
 terminology used in CT 2-62756
 theoretical foundations and practical realisation in Soviet Union 2-78426
 time-of-flight positron emission tomography, real-time image reconstruction 2-73335
 time-of-flight positron emission tomography, sensitivity improvement utilising interslice coincidence 2-73327
 tissue US attenuation anisotropy effects 2-57876
 tomographic ocean surveillance 2-63146
 tomographic streak camera for ultrahigh-speed movies for transient event recording 2-74534
 truncated projections, evaluation of a preprocessing algorithm 2-94163
 tube life increase method 2-94165
 two-phase flow visualisation, CT appl. 2-108070
 US computer-aided tomography, correction method for refraction effect 2-94134
 US computerised tomography, reconstruction algorithm for body sections with opaque obstructions 2-62706
 US CT, effects of diffr. and refr. 2-117039
 visual cortex activation recorded by dynamic emission CT of inhaled ^{133}Xe 2-62746
 $\text{Bi}_2\text{Ge}_2\text{O}_{12}$ scintillation detector for positron emission tomography 2-75110
 Xe gas recovery apparatus used in computerised tomography studies 2-79590
- computing applications to aerospace engineering** *see aerospace computing*
computing applications to architectural design *see architectural CAD*
computing applications to art *see art*
computing applications to astronomy *see astronomy computing*
computing applications to astrophysics *see astrophysics computing*
computing applications to biology *see biology computing*
computing applications to biomedical engineering *see medical computing*
computing applications to business *see administrative data processing*
computing applications to chemical engineering *see chemical engineering computing*
computing applications to chemistry *see chemistry computing*
computing applications to circuit analysis *see circuit analysis computing*
computing applications to civil engineering *see civil engineering computing*
computing applications to communications engineering *see communications computing*
computing applications to electric machine analysis *see electric machine analysis computing*
computing applications to electrical engineering *see electrical engineering computing*
computing applications to electronic engineering *see electronic engineering computing*
computing applications to engineering *see engineering computing*
computing applications to geophysics *see geophysics computing*
computing applications to history *see history*
computing applications to information science *see information science*
computing applications to linguistics *see linguistics*
computing applications to literature *see literature*
computing applications to manufacturing *see manufacturing data processing*
computing applications to mathematics *see numerical analysis*
computing applications to mechanical engineering *see mechanical engineering computing*
computing applications to medical administration *see medical administrative data processing*
computing applications to medical diagnostics *see medical diagnostic computing*
computing applications to medicine *see medical computing*
computing applications to music *see music*
computing applications to natural sciences *see natural sciences computing*
computing applications to nuclear engineering *see nuclear engineering computing*
computing applications to physics *see physics computing*
computing applications to police *see police data processing*
computing applications to power system design *see power system CAD*
computing applications to psychology *see psychology*
computing applications to town and country planning *see town and country planning*
computing military applications *see military computing*
concrete
 acoustic emission analysis of concrete for damage characterization (*French*) 2-72892
 chamotte, in high- Al_2O_3 cement, rheological props. 2-57425
 containment wall elements, reinforced, strain development, failure anal. 2-96109
 containment walls, reinforced, cyclic shear, numerical modelling 2-96110
 fission reactor containment structures, simultaneous pressure and shear, design considerations 2-96108
 fracture toughness parameters theoretical and experimental anal. (*Italian*) 2-67482

concrete continued

- heated concrete, moisture and heat transfer, finite element program 2-69711
 in-situ, diagnosis using ultrasonic pulse velocity technique 2-57551
 linear failure criterion under multiaxial stress states 2-93594
 nuclear reactor containment structures, research needs 2-96103
 plastic-fracture model 2-55503
 pressure vessel steel and concrete, temp. effects 2-64482
 reactor accident, transient structure code for thermal loading 2-74881
 reinforced concrete, containment elements, shear tests, research status and needs 2-96104
 reinforced containments, design and construction, permissible shear stress 2-96105
 research reactor, concrete biological shielding, demolition and removal 2-108155
 shields, lightweight and heavyweight, secondary γ -dose distrib. 2-96319
 silicate ceramic, porosity and mech. props. 2-57424
 steel reinforced concrete, AE appl. to corrosion damage charact. 2-78026
 steel reinforced concrete bond specimens, mech. props., finite element anal. (*Chinese*) 2-83167
 structures, penetration depth for nondeformable missiles 2-113622
 tensile test method, indirect applicability with frame specimens (*Japanese*) 2-62320
 Torbar steel reinforced concrete, cold worked ribbed reinforcing bar, fatigue, fracture mechanics approach 2-67494
 tube, thick-walled, optimal design of dynamically loaded rigid-plastic structures 2-75861
 vacuum system construction concrete, compressive strength and outgassing characts. 2-83175
 vinyl monomer additives, effect on radiative styrene polymerisation (*Russian*) 2-54523
 wall elements, reinforced, biaxially tensioned, peripheral shear strength 2-96111

concurrency (computers) see *multiprocessing systems***condensation**

- see also *clouds; drops; fog*
 A15 compounds, prep. by electron beam evaporation, superconductivity and phys. props. (*Russian*) 2-66688
 acetylene condensation reactions in a microwave induced plasma 2-57613
 annular turbulent flow, vapour condensation 2-55546
 bubble condensation in immiscible liquid, noncondensable gases effects 2-114804
 chemically reactive gas condensation on horizontal tube, heat and mass transfer in boundary layer 2-60672
 cloud condensation nuclei, workshop, Reno, Nevada (Oct. 1980) 2-89439
 concrete slab, surface heated, heat and mass transfer, evaporation-recondensation mechanism 2-114621
 condensing ejectors operating on Hg 2-75833
 diffusion convection equation, solns. 2-91457
 dust grains condensation in comets, contrib. to comet integral brightness (*Russian*) 2-94647
 ethanol, condensation, homogeneous nucleation rate meas. 2-103966
 film condensation, steady and unsteady process on flat plate, vertical coin, horizontal pipe and a sphere (*German*) 2-115574
 film condensation of pure nonmetal vapours, semiempirical theory 2-70833
 foam concrete, moisture condensation and re-evaporation 2-70831
 gas, Temperley's model in the (T,P,N) ensemble 2-109964
 heat transfer in condensation on a grooved surface 2-60383
 interstellar dust grains, high temp. condensation rel. to comp. and interstellar element depletion 2-106849
 laminar film condensation in tube with upward vapour flow 2-109270
 laminar jet of liq. with initial segment, heat transfer during vapour condensation 2-60533
 laminar wavy film flow, condensation and evaporation, Nusselt theory 2-114832
 Lennard-Jones vapour, nucleation, critical cluster size, Monte Carlo calc. 2-109951
 liquid droplet growth rate on flat surface in dropwise condensation of vap. from vap. gas mix. 2-91517
 liquid droplets condensation and nucleation from vapour, thermodynamic theory 2-98255
 moving condensation front, heat transfer in thermal oil processes 2-55557
 porous half space, heated, transient heat and mass transfer, self-similar temp., press. and moisture distrib. 2-114603
 steam, heat transfer in condensation on finely-finned horizontal tubes 2-91423
 steam, saturated vapour condensation on melting vertical wall 2-91439
 steam condensation in a vertical tube, heat transfer coeff. 2-91422
 steel, alloy, coatings based on component nitrides obtained by plasma flow condensation in vacuum (*Russian*) 2-67219
 stratified two-phase flow condensation in horizontal or sloped tubes 2-91542
 stratified two-phase flows condensation eqn. in horizontal or sloped tubes 2-91543
 surface, liq. and solid, nonequilibrium condensation, shock tube study 2-60379
 vapour condensation rate inside horizontal tubes in co-current and counter-current flow 2-109406
 vapour flow condensation charact. in channels 2-91544
 vapour-gas mixture, condensation process, computational method 2-60505
 wet steam condensation on horizontal tube with additional droplet deposition 2-97363
 wetting characteristics of contact line change of phase heat transfer, adsorpt. and capillary condensation 2-71772
 Ar, adsorbed monolayer on lamellar halides, two-dimens. condensation, critical temp. 2-66350
 Cr-MgO condensates, second phase particles distrib. (*Russian*) 2-67314
 Cu complex, Cu-olefin co-condensation complex chemistry, optical spectra in Ar matrix 2-80641
 Kr, adsorbed monolayer on lamellar halides, two-dimens. condensation, critical temp. 2-66350
 Mo-ZrO₂ condensates, second phase particles distrib. (*Russian*) 2-67314
 NH₃ adsorption and decomposition on W(100), XPS study, core level binding energy interpretation using equiv. core approx. 2-115558
 Na forced convection, wall heat transfer coeff. for condensation and boiling 2-97635
 Pd, of methanol, on (100) surface, spectrosc. obs. 2-93812
 Se amorphous vacuum condensates, cryst. 2-104181

condensation continued

- SiO condensation and vapour phase nucleation 2-109947
 Xe, adsorbed monolayer on lamellar halides, two-dimens. condensation, critical temp. 2-66350
condensers (electric) see *capacitors*
condensing see *condensation*
conductance, electric see *electric admittance*
conductance, electric, measurement see *electric admittance measurement*
conductance measurement, electric see *electrical conductivity measurement*
conducting materials
 see also *bimetallics; electrolytes; metals; semiconductor materials; superconducting materials*
 No entries
conduction, heat see *heat conduction*
conduction bands
 see also *Fermi level; semiconductor materials*
 bound exciton and hole, three-body model in any number of dimensions 2-110260
 effective-mass theory for electrons in heterostructures 2-110231
 ferromagnetic semiconductor, critical shift of cond. bound bottom 2-77255
 graphite, electronic and struct. props., EELS and secondary electron emission study 2-110999
 graphite, K-shell near-threshold photoemission cross section, elastic peak and plasmon sideband, energy depend. 2-87950
 many valley semicond., band structure parameters 2-115661
 mean internal potential, rel. to density, calc. of phys. characteristics 2-110311
 mixed conductors, semicond.-metal transition, superionic transition, phenomenological model 2-61529
 mixed valence system with two mag. configurations, mag. props. 2-56810
 polyacetylene:AsF₆(I₂), pure and doped, electronic struct. as meas. by EELS 2-67161
 polystyrene films, soln. grown, DC electrical props., free and trapped carrier conc., density of states 2-56742
 semiconductor, interband electron Raman scatt. of light, Coulomb interaction effects 2-87798
 semiconductor, nonequilibrium current carrier spectrum, relationship to carrier temp. after pulse photoexcitation 2-66590
 semiconductor-semiconductor interface, electron-hole systems work function and band struct. 2-87382
 semiconductors, elec. resist. 2-56574
 SOS structures, Hall mobility and capacitance meas., internal stresses and pot. fluctuations influence 2-82470
 superlattice alloy, impurity sheet doped, band struct. 2-110242
 Ag island films, optical plasma reson. absorpt. half-width, size effect 2-67132
 Al_{1-x}Ga_xAs, Γ -X-junction position, effect of alternating exial press. meas. 2-66449
 AlInSb, localised impurity states, cond. band minima role 2-98576
 AlSb(As)(P), surface (110), bound and resonant surface states 2-110429
 BiSe(Br), band struct., pseudopotential calcs. 2-71860
 CdCr₂Se₄, s-conduction band splitting, photoluminesc. study 2-87849
 CdF₂/Eu, localised impurity excited states degenerate with cond. band, absorpt., cond., thermoluminesc., and ESR study 2-56473
 α -CeO₃Th_{0.1}, ground state studied by resonant photoemission 2-56496
 CuCr₂S₄, spinel, spin polarised electronic band struct. 2-71861
 CuCr₂Se₄(Te₄), spin-polarised electronic band struct. 2-104245
 CuGaSnSe₄, energy gap values, temp. var., optical refl. study 2-56438
 p-CuO:Li, conduction and valence band edge positions, photoelectrochem. determ. 2-56440
 Eu chalcogenides, undoped ferromag., real spin 7/2, density of states and band edge shift 2-76885
 EuO(S), conduction band states, effect of electron-magnon interaction 2-66439
 Ga_{1-x}Al_xSb, LPE layers, photolum. study, cond. band minimum determ. 2-98540
 n-GaAs, epitaxial, far IR photocond. saturation 2-87319
 GaAs n⁺-n⁻ and n⁺-p⁻ structs., near ballistic transport, intervalley scatt. and nonparabolic conduction band effects 2-92733
 GaAs, probability of cond. band-acceptor optical transitions 2-116254
 GaAs:Sn LPE layer, deep level free-to-bound fluorescence line shapes 2-77564
 GaAs:Zn, Cd, hot photoluminescence spectrum and polarisation 2-82894
 GaP:Fe crystal, electron irradiated, IR absorpt. 2-61908
 GaP-AlP(100) superlattice band struct. 2-110460
 GaSb:Te, Hall coeff. and L minima under hydrostatic press. 2-115793
 (Hg,Cd)Te, optical phase conjugation, cond. band nonparabolicity mechanism 2-102879
 HgCdTe epitaxial layers, Shubnikov-de Haas effect (*French*) 2-61486
 HgTe:Mg, conduction band struct., Hall effect and magnetoresist. study 2-115662
 InAs-GaAs, heterojunction band discontinuities, MBE growth, XPS study 2-77166
 InGaAsP-InP laser, asymmetric longitudinal mode competition, mechanism 2-60076
 InP, localised impurity states, cond. band minima role 2-98576
 InSb, band struct. calcs., hydrostatic press. effects 2-92457
 InSb, localised impurity states, cond. band minima role 2-98576
 LaH₃, XPS core level and valence band spectra 2-76925
 β -LiAl, positive carrier conc. rel. to Li vacancies, Hall effect and lattice parameters study 2-56552
 Na-Cs, Cs 5p absorpt. edge 2-110979
 Na₂WO₃, conduction band photoelectron spectroscopy, core holes and Fermi surface 2-105040
 Na₂WO₃, electronic struct., photoemission study 2-115656
 Ne, crystalline, cond. bands, OPW calc. (*Russian*) 2-115654
 PbCl₂, XPS, satellites on core and valence bands 2-67194
 PbF₂, XPS, satellites on core and valence bands 2-67194
 Pb_{1-x}Ge_xTe_{1-x}, phase, band struct. 2-92467
 Pb_{1-x}Sn_x, XPS, satellites on core and valence bands 2-67194
 p-Mn₂Te, influence of In and Ga on kinetic props. 2-87261
 n-Pb_{1-x}Sn_xTe, Fermi surface and cond. band, Shubnikov-de Haas study 2-115644
 PbTe epitaxial layer, optical four-wave mixing 2-93315
 Si:As(P), implanted and laser annealed, electronic states, IR optical props. 2-57112
 Si:H, amorphous, electronic struct. by soft X-ray spectroscopy 2-104301
 Si:H, amorphous, gap-state absorpt. meas. 2-87827

conduction bands continued

- Si:H, amorphous, Schottky diode spectral response, gap states effect 2-87753
 a-Si:H, electronic props., CPA calc. 2-56430
 $\text{Sm}_{1-x}\text{La}_x(\text{Yb},\text{Ba})$, valence instabilities and elec. props. 2-56595
 SmS_1 , O, local electronic struct. 2-56488
 $\text{SnS-BaS}(\text{Ti}_2\text{S})$ systems, ^{119}Sn Mossbauer spectra, chemical isomer shifts (French) 2-61799
 $\text{SnS}_2(\text{Se}_2)$, angle-integrated photoemission, band struct. 2-67189
 SrTiO_3 :La, quenched, highly reduced, electronic cond. 2-56583
 TaS_2 (2H), intercalation cpds., mag. susceptibility and band struct. 2-104251
 TiS_2 , structural and electronic characteristics 2-115749
 TiTaO_4 , struct. and mag. props. 2-86634
 TmSe single cryst., inelastic neutron scatt. studies 2-55956
 UO_2 and UPd_3 , f and d electrons, resonant photoemission study 2-116336
 UTE and $\text{U,Th}_{1-x}\text{Sb}_x$, f and d electrons, resonant photoemission study 2-116336
 ZnGeP_2 , press. depend. of pseudodirect gaps 2-87141
 ZnIn_2S_4 , electron trap distrib., elec. cond. meas. 2-92520
 ZnO , surface (1010), localized and delocalized charge transfer during adsorp. 2-110425
 ZnS:Mn electrolum. films grown by at. layer epitaxy, ageing process 2-116264
 $\text{ZrS}_2(\text{Se}_2)$, conduction band struct. 2-71864

conduction electron spin resonance *see CESR***conduction in solids, ionic** *see ionic conduction in solids***conductivity, electrical** *see electrical conductivity***conductivity, thermal** *see thermal conductivity***conductors (electric)**

- see also bimetals; wires (electric)*
 conducting rods electromagnetic fields calc. using variation method (Hungarian) 2-55024
 current displacement in rectangular conductors surrounded by ferromag. material, integral eqns. method (Polish) 2-75491
 edge slopes measurement 2-58779
 electromagnetic field distribution in solid metallic structures near current-carrying finite-length bar conductors, three-dimensional analysis 2-80875
 induction motor CC Cu winding conductors, mechanical props. (Czech) 2-111230
 insulated conductor near interface of two media, field analysis (Russian) 2-96799
 temperature rise and distribution under variable load (German) 2-103002

confinement, plasma *see plasma confinement***connecting** *see joining processes***connectors (electric)** *see electric connectors***conservation laws**

- see also C invariance; CP invariance; CPT invariance; elementary particle symmetry; P invariance; T invariance*
 B-L and nucleon decays in the subquark model 2-64301
 baryon number and lepton number conservation laws, book contrib., review 2-54017
 baryon number conservation, spontaneous symm. breaking of supersymm. 2-101585
 constant of motion, derivation from conservation law 2-89638
 cosmological baryon asymmetry in grand unified gauge models 2-101614
 doubly charged Higgs bosons and lepton number violating processes 2-69388
 drift waves, nonlinear, energy conservation in coherent renormalization (Chinese) 2-74225
 electrodynamics, rel. to action at a distance, 4-dimensionality and conservation of energy 2-107046
 exotic bosons, contrib. to B- and L-violation, proton decay, neutron oscils., μ mass 2-107582
 grand unified monopole catalysation of baryon number violation 2-113187
 grand unified theories 2-113195
 Hartree approximation as high density limit 2-74134
 instanton-induced baryon and lepton number violating processes in $\text{SU}(2)\times\text{U}(1)$ electroweak theory 2-54027
 internally structured particles, classical motions, conservation laws, geometry 2-107488
 Korteweg-de Vries eqn. with space dependence, Lie-Backlund transformation and Painleve transcendent calc. 2-101177
 Korteweg-de Vries eqn., conservation laws and symmetries, explicit formulae 2-58628
 lepton and baryon number, review 2-53436
 lepton number, in electroweak gauge models 2-95705
 local conservation laws for two-dimens. field theories 2-69328
 Majorana neutrino masses, rel. to lepton number violation and supernovae 2-68800
 maximal grand unification model based on $\text{SU}(16)$, gauge hierarchies and baryon nonconservation 2-95713
 Nambu-Goto string model, conserved currents 2-113258
 neutrino mass, rel. to lepton number nonconservation 2-101590
 neutron-antineutron transition amplitude in MIT bag model 2-101673
 non-local field theories, canonical constants of motion 2-95581
 nonconservative theories, stress-energy conservation 2-79450
 nuclei and particles, book 2-53444
 oscillations, rel. to true neutral micro-objects (Russian) 2-95725
 proton decay, B-L nonconservation in $\text{SO}(10)$, $\text{E}(6)$ and $\text{SU}(5)$ GUTs 2-101715
 proton decay operator anal. in $\text{SU}(7)$ grand unified theory 2-84821
 quark-hadron transition in systems with net baryon number 2-90036
 rotation invariance and polarisation expts. 2-95686
 Rubik's cube, conservation rules and symmetry, teaching appls. 2-89512
 self-dual $\text{SU}(2)$ Yang-Mills system, 't Hooft's ansatz, local conservation laws 2-113109
 $\text{SU}_c\times\text{U}(1)$ theory, Zee model of neutrino mixing 2-113186
 $\text{SU}(3)\times\text{SU}(2)\times\text{U}(1)$ supersymm. GUTs, baryon and lepton conservation 2-107584
 $\text{SU}(3)\times\text{SU}(2)\times\text{U}(1)$ supersymmetric model, masses, p decay, conservation laws, spontaneous breakdown 2-101599
 topological particle structure probing by period integrals 2-95689
 two-point mass system, conservation laws in general relativity (French) 2-84484

conservation laws continued

- unified conservation law for general relativity, gauge theories, elementary particle physics 2-107210
 weak boson mass spectra in extended gauge models $\text{SU}(2)_L\times\text{U}(1)\times\text{G}$ 2-107573
 $J/\psi\rightarrow\text{BB}$, B=baryon, isospin-violating EM contrib. 2-69456
 n- \bar{n} oscillation time evaluation 2-101619
 τ , neutrinoless decay modes, expt. upper decays on branching fractions 2-95833
 ^{125}Te , A=128, 130, double β -decay, lepton number conservation 2-74749
constant current modulation *see amplitude modulation*
constant current sources
 power supply, constant, 500 μW -275 mW, 30-120 mA (Spanish) 2-69162
 pump generator for a double nuclear-quadrupole resonance spectrometer to irradiate quadrupolar nuclei 2-79630
constant voltage diodes *see avalanche diodes; Zener diodes*

constants

- see also elastic constants; gravitational constant; lattice constants; optical constants*
 Avogadro, EMF units reproduction accuracy increase 2-89652
 low-temperature physics near 0K, review 2-107330
 two-dimensional electron gas, Hall resist. meas., fine struct. const. determ. 2-58777

constitution diagrams *see phase diagrams***construction** *see building***constructional engineering** *see civil engineering***contact (mechanical)** *see mechanical contact***contact angle**

- see also capillarity; surface tension; wetting*
 adhesive, dielec. monitoring of bonding process, correl. of dielec. props. with curing thermoset resin props. 2-111449
 dynamic contact angle, expt. study 2-76781
 fluid-solid interfaces, wetting transitions 2-115501
 gas-liquid-solid contact region, struct. and stress 2-115500
 nematic homeotropically aligned cell in DC elec. field, alignment deterioration and surface props. meas. 2-115133
 non-contact meas. using VELOMET interphako interference microscope 2-71774
 optical comparator meas., optometry appl. 2-105810
 surface diffusion and heterogeneous nucleation on solid substrates 2-76813
 Ag-Pb, system, solid-liq. region of phase diagram, interfacial tensions and adsorption 2-88057
 Si, powder wetting and dispersion without deflocculants 2-115491

contact e.m.f. *see contact potential***contact lenses**

- aphakia-correcting soft contact lenses, validity of labelled parameters 2-117131
 computer controlled lathe system for contact lens production 2-109082
 conference on bioengineering and microtechniques, Besancon, France (Apr. 82) 2-112638
 deformation, effects on tear film pressures induced during blinking 2-88535
 hard, back surface meas. with interferometer 2-62714
 historical review of theory, prescription and fitting 2-100160
 hydrophilic polymer based permanent contact lens, conception and development (French) 2-117132
 movement meas. using motion picture camera 2-111766
 Polycron and PMMA, flexure and residual astigmatism with toric corneas 2-105852
 prosthetic correction of disfigured eyes with contact lenses and shells 2-94248
 soft, base curve meas. 2-62832
 squeeze pressures, effects of base curvature 2-94247

contact potential

- see also contact resistance*
 C Cu, work function, electrolytic hydrogenation effect (Russian) 2-66623
 p-n junction, contact pot. determ. 2-115885
 steel, work function, electrolytic hydrogenation effect (Russian) 2-66623
 InGa-Sn-Si, interface contact potential difference (Chinese) 2-92748
 Nb surface (110), coadsorp. of O and Cs, work function and thermal stability (Russian) 2-104166
 Ni, work function, electrolytic hydrogenation effect (Russian) 2-66623

contact resistance

- see also contact potential*
 Cu oxidised crossed bars, contact resistance in terms of Schottky effect (Hungarian) 2-98762
 ferromagnetics parameters meas. at HF, primary transducers stability improvement 2-58861
 geometrical contribs., finite element modelling and explt. results 2-110446
 ohmic contacts, specific contact resistance determ. from transmission line model meas. 2-92750
 thermoelectric cooling batteries, contact resistance effects on elements height 2-99819
 Ag-Zn internally oxidised, containing various alloying additions, elec. contact charact. 2-83248
 Al point contact spectra, electron-phonon interaction anisotropy (Russian) 2-56673
 Al-Al interface contact resistance meas. 2-115867
 Al-Si/Si ohmic contacts to shallow junctions 2-98741
 AuGeNi ohmic contacts to MBE grown GaAs epitaxial layers, charact. 2-66637
 CdS thin films, elec. props., In doping and Ag contact effects 2-66672
 CdTe-Au(Cd,P), ohmic contact form. by pulsed laser heating 2-104483
 GaAs, metallised, volatile component loss and contact resistance during annealing 2-92753
 GaP, metallised, volatile component loss and contact resistance during annealing 2-92753
 p-GaP-Au, ion beam contacting by Be implantation 2-115889
 p-InP, low resistance ohmic contacts using Au-Zn-Cr-Au metallisation 2-104482
 Pd-Si-Si:Ar interface, contact resist. stabilization due to ion implantation 2-66635
 Si, contact resistance to Pt-Al films 2-87388
 n-Si:H, amorphous film, interaction with metal electrodes 2-87389
 n-Si:H, amorphous film, interaction with metal electrodes 2-87390

- contacts, electrical** *see electrical contacts*
- continuous creation hypothesis** *see cosmology*
- continuum hypothesis** *see set theory*
- continuum mechanics** *see classical mechanics of continuous media*
- contours, surface** *see surface contours*
- contrast transfer function** *see optical transfer function*
- control system synthesis**
see also correlation methods; frequency response; linearisation techniques; perturbation techniques; phase space methods; piecewise-linear techniques; poles and zeros; root loci; sensitivity analysis; stability; transfer functions
 nuclear power plant primary coolant temperature controller 2-102102
 solar powered central receiver, quadratic optimal control 2-57687
- control systems**
see also adaptive systems; closed loop systems; distributed parameter systems; multivariable control systems; optimal control; physical instrumentation control
 CANDU PHW nuclear power plants, 600 MWe, control and instrumentation systems 2-108078
- controllers**
see also cryostats; instruments; servomechanisms; thermostats
 CAMAC-based controller for nuclear power plant radiation monitoring 2-64562
 circulatory system, modular, mock, programmable electronic control unit 2-100188
 dedicated EPROM-based computer for distributed instrumentation control 2-59671
 microprocessor-based heat pump regulator, capabilities and installation (German) 2-67873
 monochromators, programmable output intensity controller 2-91032
 optimal integral controller for large Tokamak 2-115033
 pH controller, microprocessor based (Italian) 2-62408
 programmable controllers for MFTF personnel safety interlocks 2-74968
 proportional temperature regulator with phase control for an inductive load 2-112891
 Simatic S31, programmable logic controller appl. 2-69761
 solar battery simulators design with improved characts. (Russian) 2-116835
 sublimation pumps in ultrahigh vacuum 2-84646
 Al block temperature controller for fatigue testing 2-78057
⁶⁰Co irradiation chamber, programmable electronic controller (Chinese) 2-59584
- convection**
see also convection in liquids
 absorption solar cooling system, open-cycle, possibilities of storage of cold 2-99842
 advection equation, stability and convergence of polynomial spectral methods (French) 2-75964
 air beneath heated horizontal circular plate, convective heat transfer, holographic interferometry meas. 2-97536
 air convective flow, in parallelepipedic box of aspect ratio 14 (French) 2-55568
 annulus flow, natural convection, flow pattern, temp. distrib. 2-91446
 atmosphere, convective stability rel. to dispersion relation for Charney baroclinic instability problem 2-100467
 atmosphere, effects of convective stability on Great Lakes evaporation 2-88919
 atmosphere, mean path of rising buoyant plumes with allowance for ambient turbulence (Chinese) 2-88946
 atmosphere, moist convection rel. to expt. in numerical forecasting of synoptic system (Chinese) 2-88947
 atmosphere, scheme for retaining Hadley circulation during nonlinear normal mode initialisation 2-112009
 atmosphere, similarity of characts. of turbulence in unstable boundary layer 2-100430
 atmosphere, stabilisation and destabilisation rel. to Northern Hemisphere geopotential height and temp. patterns 2-100469
 atmosphere, thermodynamic eqn. for deep cloud convection 2-100422
 atmosphere convective stability, extraction from satellite sounding radiometer data 2-63101
 atmosphere mesoscale lifting, effects on cumulus cloud model and hail forecasting (Chinese) 2-88945
 atmosphere surface layer, effect of convective stability on streamwise heat flux budget 2-100427
 Benard convection, 2D hydrodynamic and MHD, energy conserving Galerkin approxs. 2-65588
 Benard convection, flow visualisation using holographic interferometry 2-114948
 Benard convection, two-component, discontinuous transitions, critical and multicritical phenomena 2-70915
 Bernard convection, mean field approx. accuracy and Prandtl number effect 2-109322
 Bernard convection in the presence of dielectrophoretic forces 2-91453
 binary alloy, solutal convection on morphological stability 2-91850
 binary melt, crystallisation, nonequib. two-phase zone model, convection effects 2-109719
 binary mixtures, free convection in square cylinder, thermal diffusion effects 2-109166
 blunt body in vicinity of stagnation point, unsteady convective heat transfer (Russian) 2-55585
 blunt-nosed body in nonuniform hypersonic gas stream, convective heating 2-86298
 Boussinesq fluid, vertical circular cylinder buoyancy-drives convection 2-114793
 buoyant plume heat transfer to unconfined ceiling 2-114802
 CaCl₂·6H₂O heat storage system for off-peak energy supply and solar heating 2-83519
 cavity flow effects of geometrical imperfection convection onset 2-55560
 cellular convection in a viscoelastic fluid 2-60539
 cellular structure, wavelength selection, thermoconvection in porous materials 2-70954
 channel, uniformly heated, force of convection boiling, limited exited quality study 2-91216
 combined convection in wavy-walled channel, skin friction, heat transfer rate and press. drop 2-114799
 combined convection on a vertical permeable surface for different Prandtl numbers 2-60642
 combined convection stagnation heat transfer from an isothermal cylinder with internal sources or sinks 2-114800
- convection continued**
 combined free and forced laminar convection in entrance of horizontal pipe 2-91450
 conductive samples heat transfer in NMR with RF decoupling 2-55403
 convection diffusion problems, finite element method, error anal. 2-103003
 convection dominated, finite element method for solving flow problems, upwinding technique 2-91456
 convection-diffusion eqn., stability of Petrov-Galerkin method for periodic problems (Chinese) 2-109164
 cyclonic convection, theory of flux ejection dynamo effect 2-100722
 diffusion convection equation, solns. 2-91457
 diffusion convection problems, computer modelling 2-91454
 diffusion equation, asymptotic solutions, fluid flow, mass transfer and heat transfer 2-91455
 diffusion-convection eqns., operator compact implicit method of exponential type 2-97539
 Earth mantle, evolution with phase transitions 2-83772
 Earth mantle convection, convection, effect of solar activity rel. to Earth diurnal rot. vars. 2-111834
 Earth mantle convection currents, models 2-112729
 expansive convection, in vapour transport across horizontal rectangular enclosures 2-60898
 fission reactor, 2X6 rod bundle, controlled flow and power transients, natural convection 2-108076
 flaming regime in glass-plastic pipe, coolant mixed convection effects 2-60670
 flow past infinite porous plate in rotating fluid, effects of mass transfer and free-convection currents 2-106498
 fluid filling the cavity of a moving solid, convection 2-65582
 fluid layer, convective, heat flux 2-70953
 fluid saturated porous layer with nonuniform temp. gradient, convection 2-97535
 fluid saturated porous media, transitions in time dependent thermal convection 2-109318
 forced convection boiling heat transfer data correl. 2-70814
 forced convection boiling in electrically heated coil with heat flux tilt toward outside of coils 2-109313
 forced convection in a circular tube, Graetz problem, Dirichlet boundary conditions 2-81333
 forced convection on vertical plane surface under radiation flux, natural convection effect 2-91215
 forced MHD convection, with aligned mag. field, surface curvature effect 2-60664
 forced-convection heat transfer to boiling liquids 2-75840
 free convection and mass transfer MHD flow through porous medium 2-114798
 free convection at small Rayleigh number in porous cavities of rectangular, elliptical, triangular and other cross-sections 2-114787
 free convection between vertical parallel plates with symmetric heating 2-114806
 free convection effects on laminar forced convective heat transfer in a horizontal isothermal tube 2-91402
 free convection effects on oscillatory flow in Stokes problem 2-106510
 free convection flow with constant heat sources in a porous channel 2-86279
 free convection flows under non-uniform gravity, integral method 2-91389
 free convection from an infinite horizontal cylinder in a second-order fluid with time dependent temperature distribution 2-60543
 free convection from inclined cylinder 2-55584
 free convection heat transfer from upward-facing horizontal isothermal surfaces, investig. 2-114805
 free convection laminar flow, with transverse mag. field, time-depend. suction appl. 2-60663
 free convective flow with uniform lateral mass flux in porous medium, local non-similar solns. 2-91433
 free convective mass transport, electro-chemical flow visualisation 2-103161
 free convective MHD flow and mass transfer past an accelerated vertical porous plate 2-114923
 Freon-22, free convection heat transfer at supercritical press. 2-75957
 frequency response of heat fluxmeters, influence of convection, conduction and radiation 2-53756
 frost form. on vertical cylinder in free convective flow 2-91437
 gas, laminar convective channel flow, radiation effects 2-97667
 gas blast circuit breaker, DC arc in constant diameter nozzle flow 2-97808
 gas flow patterns in horizontal epitaxial reactor cells observed by interference holography 2-70907
 gas flow through a tube, finite element soln. 2-97694
 gas mixture concentration and temp. meas. using heterodyne holographic interferometry 2-80910
 gas mixtures, nonstationary mixed convection problem 2-97690
 geothermal reservoir, during hot-water reinjection 2-83451
 giant planets interiors, thermally driven convection rel. to core masses and planetary form. 2-112358
 giant stars, rot. of convective layers rel. to ang. momentum history of Hyades K-type giants 2-63397
 granular bed showing laminar free gas convection, thermal cond. determ. 2-60369
 granular material in chute flow, forced convection 2-70940
 graphite fibre reinforced epoxy, thermal response under rapid heating 2-60361
 Hall plasma, thermosolutal instability 2-86399
 heat convection and laminar flow in annular crevices 2-114801
 heat generating fluid, heat transfer along a porous cylinder, convection 2-70945
 heat sources, temp. field distrib. 2-60357
 heat transfer coeff. mapping contours, mapping using cholesteric liquid crystals 2-79576
 heat transfer from a rotating cylinder under forced convection 2-103162
 heat transfer from saturated and superheated atm. for containment anal. 2-113711
 heated flat plate, mixed, forced and free convection study 2-91449
 heated magnetisable fluid, convective motion in porous media 2-103169
 heterogeneous porous media, onset of thermohaline convection, groundwater 2-70943
 horizontal plate, free convection fluctuating boundary layer 2-114812
 horizontal porous layer, fluid saturated, natural convection 2-55582

convection continued

- HR 5999 (V856 Scorpii), Herbig Ae star, sub-photospheric convection rel. to chromospheric and transition region emission lines 2-63404
 hydromagnetic free convection flow from conducting vertical plane 2-109415
 hydromagnetic free convection flow past porous plate in rot. fluid 2-75949
 hydromagnetics, thermal convection instability of two component fluid layer 2-106501
 inclined rectangular cell, thermal wall props. effect on natural convection 2-91445
 incompressible convection in radiating stellar atm. 2-79085
 inner-flow regions with closed streamlines at high Peclet numbers, mass and heat transfer 2-114607
 instability in a HF vibr. fluid under weightlessness conditions 2-86280
 instability Lorenz model, correl. decay, statistical decay 2-86202
 inviscid stability of plane Couette flow, convection of initially conc. vorticity, calcs. 2-114763
 Kaplan's optimal co-ordinates 2-55539
 laminar boundary layer with blowing or suction along vertical wall, combined natural and forced convection 2-109276
 laminar cavity flow, high Rayleigh number convection investigation 2-91444
 laminar forced convection in converging or diverging planar symmetric ducts 2-114761
 laminar free 2-91388
 laminar free convection from a vertical plate with nonuniform surface conditions 2-97544
 laminar free convection with suction or blowing along a vertical surface 2-91387
 laminar incompressible flow, boundary layers, unsteady mixed convection 2-91448
 laminar incompressible flow, over solid plate with heat source, heat transfer in boundary layer 2-91442
 laminar natural convection on vertical cylinder, perturbation calcs. 2-97548
 laminar unsteady boundary layer accelerated flow past vertical porous limiting surface 2-55536
 laminar vortex flow, mass transfer, forced convection (*French*) 2-55561
 laser with saturable absorber and two-component Benard convection, model problem 2-55105
 latent heat solar walls performance anal. using variable parameter test-cell 2-111587
 laterally misaligned vertical plates, natural convection anal. 2-70815
 layered convection and crystal layers in multicomponent systems, appl. to magma chambers 2-106116
 leading edge of semi-infinite vertical plate, free convection heat transfer, $Pr=0.72$ 2-70931
 liquid hydrocarbons stored in underground reservoirs, convective heat transfer investig. 2-60356
 LMFBR debris tray free convection flow, finite element solns. 2-90263
 LMFBR shutdown heat removal test facility, natural convection, scaling requirements 2-54538
 Lorentz system, liquid layer heated trimodal roll convection, MHD 2-86345
 low Reynolds number flow due to impulsively started circular cylinder 2-60550
 low-gravity fluid flows 2-97493
 LV indoor switchgear installations thermal problems (*Hungarian*) 2-91222
 LWR, degraded core cooling hydrodynamics 2-113681
 magnetogasdynamics flow near flat plate, boundary layer flow due to free convection 2-75950
 magnetosphere, EM disturbances, convection study (*Russian*) 2-63171
 magnetosphere plasma convection rel. to geomag. vars. inside auroral oval, effect of northward interplanetary mag. field 2-112293
 mass transfer in porous media, boundary and inertia effects 2-97645
 melted layer between vertical plates, convection onset 2-92159
 MHD, unsteady boundary layer free convection flow past vertical porous plate 2-65653
 MHD convection, basic props. of flux ejection dynamo with small diffusivity 2-106502
 MHD convection, flux ejection dynamo with small diffusivity 2-106503
 MHD convective flow of viscous fluid past infinite vertical surface 2-106506
 minimum mass convective annular fin 2-55399
 mixed convection in a wall plume 2-81336
 natural circulation in multiloop PWRs, simulator programming 2-102018
 natural convection across vertical air layers 2-70816
 natural convection across vertical and inclined air layers 2-91443
 natural convection adjacent to vertical isothermal hot plate with high surface to ambient temp diff. 2-91425
 natural convection between horizontal concentric cylinders with density inversion of water for low Rayleigh numbers 2-114788
 natural convection from short horizontal cylinder array 2-91447
 natural convection in partitioned enclosures, interferometric obs. 2-114810
 natural convection in space between concentric vertical cylinders of different height and diameter 2-97543
 natural convection in vertical and inclined air layers, thermal boundary conditions effects 2-114808
 natural convection loop, heat transfer and fluid flow, 2 dimens. calcs. 2-114807
 natural convection past inclined porous layers 2-97545
 natural convective boundary layer, high Prandtl fluid, saturated porous media 2-55583
 natural convective flows in internally heated vertical channel with viscous dissipation and press. work 2-70937
 natural convective heat transfer in shallow rectangular cavity 2-70817
 natural hydromagnetic convection between heated plates, linear theory study 2-65448
 Navier Stokes eqns. with heat conduction, initial value problem 2-114757
 nematic liquid cryst., hydrodynamic instability, convective struct., defects 2-71349
 neutron stars atmospheres, convection in hot dense plane-parallel neutrino atmosphere 2-106755
 non-Newtonian electrically conducting fluid, natural convection 2-103168
 non-steady convective regimes using Poincare sections 2-75962
 nonisothermal chemical reaction at the particle surface in a laminar flow 2-91429

convection continued

- nonisothermal objects, laminar free convection boundary layer heat transfer 2-55540
 nonlinear phenomena at phase transitions and instabilities, conf., Geilo, Norway (Mar.-Apr. 1981) 2-94882
 nonreactive binary mixture in vertical cylinder heated from below, Benard convection 2-109314
 nonstationary convective heat exchange in channels 2-91436
 nonstationary MHD flow between two vertical plates, free and forced convection 2-114921
 nuclear waste repositories ventilation cooling, rectangular ducts, forced convection 2-74817
 numerical modelling in diffusion convection, conference, Sunderland, England (May 1981) 2-89466
 oceanography, convection model for warm saline bottom water in ancient ocean 2-68374
 particle assemblages hydrodynamics at intermediate Reynolds number, cylindrical cell model 2-91393
 porous container with fault-like geometry convection, initial and boundary conditions effect 2-71024
 porous half space, heated, transient heat and mass transfer, self-similar temp., press. and moisture distrib. 2-114603
 porous layer, two-dimens. natural convection stability 2-109323
 porous layer saturated by ideal gas, onset of convection 2-114790
 porous media, thermally driven cavity flows, boundary layer structure near corners 2-55659
 porous media, thermally-driven cavity flow, horizontal boundary layer struct. 2-91534
 porous medium, diffusing component and permeability influence on convection onset 2-65449
 porous medium bounded by porous plate, free convection and mass transfer 2-114898
 porous medium convection with nonlinear density effects 2-75826
 postcritical heat flux region, forced convective heat transfer and quenching 2-91217
 pulsatile flow in heated porous channel, combined free and forced convection 2-71031
 Rayleigh-Benard cells, convective rolls, envelope function, boundary conditions 2-91435
 Rayleigh-Benard convection, phase diffusion 2-70950
 Rayleigh-Benard convection, side wall effect on pattern formation 2-114795
 Rayleigh-Benard convection, transverse phase diffusion 2-70946
 Rayleigh-Benard structures, diffusive modes 2-97538
 Rayleigh-Bernard convection, truncated series approximations in theory 2-60542
 Rayleigh-Bernard convection, wave number selection, numerical study 2-97352
 rectangular enclosed region, solidification with natural convection 2-65450
 rectangular enclosure, convective modes 2-70952
 refrigerant 12, forced convection boiling in uniformly heated vertical tubes, critical heat flux 2-70837
 rotating disk, combined free and forced convection, internal heat effects 2-60562
 rotating layer, instability, mean flow generation 2-109324
 rotating thermally driven flows, high vorticity regions 2-81346
 semi-infinite strip, Stefan problem with convective boundary condition 2-109167
 semiconvection, occurrence and effects in low-mass main sequence stars 2-79084
 shallow sloping container, Benard convection onset 2-70949
 simple gas flows with large density gradient layers 2-76011
 single-phase flow in bent channels, laminar and turbulent flow, forced convection visualisation study 2-75951
 slightly buoyant flow induced by submerged point head source motion, asymptotic soln. 2-109317
 solar convection zone, mixing length from freqs. of low-l five-minute oscillations 2-89220
 solar energy concentrators, V-trough, linear, natural convection heat transfer coefficients experimental determ. 2-57684
 solar heating systems, liquid-based, effects of thermal stratification on performance 2-111593
 spent fuel transport casks, natural convection heat dissipation 2-64523
 stable convection disappearance between free-slip boundaries 2-114796
 steam generator tubes, forced convection, density-wave oscillations 2-55565
 stellar, interior, penetrative convection model, numerical expts. 2-94708
 stellar atmospheres, modified mixing-length theory for convective model atmospheres 2-112427
 stellar interiors, development of convection theory 2-100911
 stellar pulsation problem, effect of turbulent viscosity on local theories of time-dependent convection 2-89240
 still brine regenerator, solar-powered, design and performance 2-105588
 Stokes flow in rectangular well, free convection and boundary layer function 2-75963
 stratified flow, ADI on staggered mesh anal. 2-109316
 stratified fluid, freely convective mass transport 2-60607
 Sun, basic eqns. and methods for numerical simulations of granulation 2-68695
 Sun, effect of perturbations of convective energy transport on solar luminosity and radius 2-112402
 superposed porous and fluid layers, convection onset prediction 2-91451
 surface tension-driven Marangoni instability, linear perturbation anal. 2-61257
 synergetics, chaos and order in nature, conf., Schloss Elman, Bavaria, FRG (April-May 1981) 2-58543
 Taylor dispersion phenomena, general theory 2-74327
 thermal boundary layer on rot. cylinder, optical study 2-114608
 thermal convection in multilayered porous media, anisotropic modelling 2-75961
 thermal convection in slowly rotating, weakly magnetic fluid shells 2-103170
 thermal convection problems in 2D horizontal square box, mixed finite difference Galerkin method appl. 2-97349
 thermal instability in a porous medium with random vibrations 2-97642
 thermal plumes, axisym., turbulent struct. 2-114794
 thermoelectric MHD heat convection 2-97351
 thermomicroplar fluid, free convection flow past plate, laminar boundary layer 2-103142
 thin spherical layer, nonsteady state convective diffusion 2-109320

convection continued

- transient mixed convection, adjacent to a vertical flat surface 2-70941
 transient natural convection in shallow enclosures 2-114811
 transient thermal anal., stability of mixed time integration schemes 2-97347
 transport-diffusion algorithm and its applications to the Navier-Stokes equations 2-69114
 Tuedsell viscoelastic fluid, free convection flow in heated channel 2-114855
 turbulence, convective, discrete Lorenz model, phase space and bifurcation struct. 2-112840
 turbulent convection, generation of large scale circulation 2-81338
 turbulent pipe flow, eddy diffusivity, electric charging theory 2-97529
 two component fluid in horizontal porous layer, convection, linear and nonlinear stability 2-70938
 two-pass solar air heaters thermal performance anal. 2-78249
 unsteady hydromagnetic free convective flow through a porous medium 2-65641
 vertical cylinder with saturated porous material, thermal convection 2-91452
 viscous fluid, free and forced convection flow through parallel porous walls, MHD 2-103160
 water, nonBoussinesq convective behaviour near maximum density 2-70951
 water heated surface, free convection inception 2-81209
 water near 4°C, convective response to constant cooling rate applied on its boundaries 2-75960
 water oscillatory flow at 4°C past an infinite porous plate, hydromag. free convection effects 2-81401
 CO₂, flow through porous plate into channel, natural convection study 2-65583
 CO₂, free convection heat transfer at supercritical press. 2-75957
 Ge transport by GeL₄, GeL₂, CVD numerical model 2-97956
 H-He shock layer, radiating, convective heat flux, opaque admixture blowing effects 2-81358
 Hg, flow in vertical annuli, free convection heat transfer 2-55563
 Na forced convection, wall heat transfer coeff. for condensation and boiling 2-97635
 water, flow in vertical annuli, free convection heat transfer 2-55563

convection in liquids

- adsorbed species at liq.-liq. interface, surface diffusion and convection, theory 2-98387
 axisymmetric thermal convection in rot. fluid annulus 2-75956
 Benard convection, slow spatial variation effects 2-70948
 Benard-Marangoni convection anal. using thermovision 2-89805
 binary liquid metal, convective instability in horizontal layer, mag. field effect 2-98318
 binary mixture, stability of plane-parallel convective flow 2-55556
 cellular convection, symmetry and pattern transitions anal. 2-65590
 charged liquid dielectrics, fluid flow effects on electric field distribution 2-96803
 cholesteric liquid crystals, conducting, oscillatory convection 2-65589
 composite solidification, directed, forced convection influence on microstruct. (French) 2-77818
 Czochralski and CACRT crystal growth numerical simulation of convective flow in melt 2-105064
 Czochralski classical growth method and CACRT, free and forced convection simulation 2-76339
 double-diffusive convection in an inclined fluid layer 2-65585
 elastic liquid flow through U-shaped vessel, computer modelling 2-60587
 fluid-saturated porous medium, nonlinear cellular convection, heat transport 2-81332
 freon 113, impinging jets, forced convection boiling, burnout heat flux 2-70935
 fusion reactor blanket, convection in conducting liquid 2-85256
 glycerine-water, immersion of plane plate, natural convection 2-55566
 Hall effect in free and forced convective flow in rot. channel 2-97664
 heat-generating boiling pools, heat transfer from vertical at inclined boundaries 2-114803
 horizontal layer, free-convection flow struct., boundary condition 2-70933
 hydrocarbons, liquid, elec. cond. meas. in low elec. field 2-92243
 indicator dilution theory for convective dispersion in laminar flow through straight tubes 2-73288
 liquid flow in circular cylinders, nonlinear Marangoni convection 2-97540
 liquid flow in rectangular cylinders, nonlinear Marangoni convection 2-97541
 magnetic fluids, thermal convection in horizontal layer 2-114792
 nonlinear Marangoni convection, large cells, form, and stabilisation 2-55571
 nonlinear pattern near onset of Rayleigh-Benard convection 2-109311
 pair correlation function near a convective instability 2-55570
 phase change material, melting within a spherical enclosure 2-91438
 plates, reacting, orderly system distributed along a stream, conc. field 2-81402
 porous media, conductive fluid hydromagnetic free convection 2-97647
 Rayleigh-Benard, flow field meas., speckle velocimetry appl. 2-76051
 rectangular boxes, external mag. field effect, linearised theory 2-114791
 saturated liq. film, forced convection boiling heat transfer from cylinder 2-75952
 solidification, two dimens., natural convection, vorticity, anal. 2-70947
 spent nuclear fuel storage under water, natural convection 2-74818
 stability of convection rolls in vertical mag. field 2-91434
 tear film, human, Marangoni convection 2-78358
 thermal diffusion columns, forgotten effect 2-66266
 thermospheres, review 2-65587
 two-component fluid immiscible convection, theory 2-100358
 variable viscosity fluid, convection onset 2-97542
 viscous fluid, convective flow, stability studied by method of local pot. 2-60507
 warm flowing liquid, planar solidification, boundary conditions effects 2-97551
 water, freezing rate, heat transfer, finite element anal. 2-55407
 water, natural convection across tilted rectangular enclosures, aspect ratio effects 2-114809
 water, Rayleigh-Benard convection, max. density region effects (German) 2-97546
 water, thermally stratified buoyant flows, mixing and heat transfer study 2-70942
 water 2-55562

convection in liquids continued

- water-saturated porous media, viscosity variation effect on convection 2-70944
 Cu, liq., Czochralski classical growth method and CACRT, free and forced convection simulation 2-76339
 H₂O, impinging jets, forced convection boiling, burnout heat flux 2-70935
³He-⁴He mixture, superfluid, dil., onset of convection in unbounded slab 2-104102
³He-⁴He mixture, superfluid, dil., onset of convection in closed cylindrical container 2-104103
⁴He, convection and turbulence, Rayleigh-Benard expt. 2-110060
⁴He, liquid, linear irreversible thermodynamics, two-fluid model 2-92301
⁴He, supercritical, free convecting heat transfer from vertical surface, numerical anal. 2-60532
 Hg Rayleigh-Benard expt., period doubling cascade, quantitative meas. 2-60510
 InSb melt, suppression of thermal convection by transverse mag. field 2-86600
 Si, Czochralski and CACRT crystal growth numerical simulation of convective flow in melt 2-105064

convergence

see also convergence of numerical methods

- ab initio SCF calcs., convergence props. 2-80441
 geodesy, convergence of Molodensky's series rel. to soln. of continuous and discrete boundary value problems (Russian) 2-100194

convergence of numerical methods

- advection equation, stability and convergence of polynomial spectral methods (French) 2-75964
 convection-diffusion eqn., stability of Petrov-Galerkin method for periodic problems (Chinese) 2-109164
 core neutronics, iterative calc. acceleration, dominant error vector eigenvalue 2-54477
 diamond difference method, spatial convergence props. 2-74791
 dielectrics, nonhomogeneous, theory, iteration method 2-72403
 elasticity, convergence of approximate solns. for nonlinear incompressible problems (French) 2-89534
 elasticity, difference methods for elliptic partial differential equations with nonunique solutions 2-95012
 elastoplastic bodies obeying Hencky's constituent law, finite element analysis 2-84443
 electronic density of states, expansion technique calc. 2-56420
 elliptic variational inequalities, mixed formulation and approximation 2-84436
 geoelectrical sounding, convergence of fast automatic solution of inverse resistivity problem 2-111863
 heat eqn. with nonclassical boundary conditions, stability in C of difference schemes 2-112842
 incompressible finite elasticity, appl. of existence and approx. results for nonlinear mixed problems 2-69021
 incompressible flows, two- and three-dimensional vortex methods 2-103179
 incompressible viscous flow, conforming mixed finite element methods 2-75919
 magnetic fields, two dimens. problems, NMLAP finite element program 2-55018
 mathematical physics transcendental eqns. iterative solns. with programmable pocket calculator 2-84412
 neutron transport equation, stability, convergence and error estimation for DSN method (Chinese) 2-107922
 neutron transport theory, monokinetic, A_n method, convergence and appl. 2-74793
 nonlinear heat conduction eqn. with moving boundary condition, convergence of difference schemes (Chinese) 2-109158
 oscillatory infinite integrals, numerical evaluation by extrapolation 2-79364
 Schwartz iteration for calc. of lowest eigenvalue of stellar stability problem, oscillating convergence 2-106671
 semiconductor transport equations, linearization methods, decoupled and coupled approaches 2-77035
 stationary problem with strongly varying coefficients, numerical soln. 2-114605
 stationary Stokes problem, finite element subspaces with optimal rates of convergence 2-75924
 transonic stream function eqns., modified artificial density soln. 2-53526
 transport processes, finite-difference approximations and superconvergence for the discrete-ordinate equations in slab geometry 2-95286
 transport-diffusion algorithm and its applications to the Navier-Stokes equations 2-69114
 two species diffusion in sphere 2-99428
 vortex methods for numerical simulation of three-dimensional incompressible fluid flow 2-103178

conversion electron spectra

- conversion electron Mossbauer spectrometer equipped with ceramic electron multiplier detector 2-102323
 electrostatic electron spectrometer for Mossbauer conversion electron spectroscopy 2-96367
 internal conversion electron meas. using dE/dn plus E-counter system 2-96370
 (n,γ), high-precision spectroscopy, nuclear struct. research 2-107803
 nuclear lifetime meas. using electron spectrometer 2-108314
 steel, C, ion implanted with n, Fe, N and carbonitride phases, conversion electron Mossbauer study 2-98120
²¹²At, low-seniority shell-model structure 2-54233
¹⁰⁷Cd, penetration effects in internal conversion process 2-95974
¹²¹Cd^m, decay study by γ-ray and conversion electron spectroscopy 2-54306
¹⁵³Er, high spin states study 2-69514
 Fe₈₀B₂₀, amorphous alloy, ion irradiat. effects, conversion electron Mossbauer spectra study 2-61043
 Fe₇₀B₃₀, amorphous, struct. and crystn. study by Mossbauer spectroscopy (Russian) 2-93075
⁷⁶Ge, 5/2⁺ level at 192.5 keV, 52.5 keV transition 2-84956
¹⁸⁵Hg^m-¹⁸⁵Hg^g decays, ICE spectrum 2-113414
⁴¹La, A = 123, 125, conversion electron spectra, from ^{131,125}Xe β⁺ decay 2-84997
¹²¹In, decay study by γ-ray and conversion electron spectroscopy 2-54306
¹³⁵La levels study by X-ray and conversion-electron spectroscopy (Russian) 2-64370

conversion electron spectra continued

- ¹³⁷La, N=80 nucleus, medium-spin levels and 360 ns $I^{\pi}=19/2^{-}$ isomer 2-54232
- ¹⁷¹Lu, γ -ray spectra, internal conversion, $\epsilon\gamma$ coincidence, decay scheme 2-90051
- ⁹⁰Nb^m decay rate obs. via E3 conversion electrons 2-54315
- ²³⁸Np levels, bandheads, γ -transitions, conversion electrons from ²³⁷Np(n, γ), ²⁴²Am^m decay 2-113348
- ¹⁸⁰Os, side bands props. study using in-beam spectroscopy method 2-54246
- ¹⁸⁸Os E0 transition strengths, 0^{+} states, IBA test from ¹⁸⁷Os(n, γ) 2-113397
- ²⁰⁴Po, 15^{-} isomer mag. moment and Po internal mag. field in Ni 2-69534
- ¹⁹⁶Pt E0 transition strengths, 0^{+} states, IBA test from ¹⁹⁵Pt(n, γ) 2-113397
- ¹¹⁹Sb levels from ^{119m}Tc decay, 153 and 270 keV transition characts. 2-107793
- Si(Li) plus mag. lens electron spectrometer, centroid-shift time meas. 2-108216
- ¹³⁹Sm^m, ¹³⁹Pm, decay props. study from γ -ray, β^{+} and internal conversion electron spectroscopy 2-54324
- ¹⁴⁷Sm nuclear states characts. and diluting transitions props. (Russian) 2-64369
- ¹⁵⁵Sm, rotational-vibrational band structure 2-54231
- ¹¹⁸Sn, excited 0^{+} states and elec. monopole transitions 2-69605
- ⁹⁹Tc^m, E3 transition conversion electron spectrum in NH₄TcO₄ and metallic Tc, chem. environment effect (Russian) 2-54316
- ¹⁶²Tm, γ -ray spectra, conversion electrons, $\gamma\gamma$ and $\epsilon\gamma$ coincidences, from ¹⁶²Yb decay 2-95955
- ¹⁴¹U, A=236,238, conversion electrons, lowest β -vibrational phonon 2-69604
- ²³⁵U^m, internal conversion, lifetime and spectra, laser irradiation effect 2-74746
- ²³⁶U lowest octupole bandhead, spin, conversion electron spectra from ²¹⁰U(n, γ) 2-113346
- ⁹⁸Zr, excited 0^{+} levels study 2-59288

convertors

- see also analogue-digital conversion; code convertors; digital-analogue conversion; direct energy conversion; frequency convertors; image convertors; magnetohydrodynamic convertors; power convertors; solar absorber-convertors
- amplitude-time convertor, for digital NQR signal store 2-89767
- analogue drift chamber readout cct. for colliding beam facility at Fermilab 2-64803
- artificial heart, elec. to mech. energy electrochemical convertor 2-78499
- time digitiser with 10 MHz conversion rate for X-ray detector positional read-out 2-64807
- vibromotor annular motion convertors, holographic interferometry of wave processes 2-58812
- NbSe₃ whiskers, quasi-one-dimensional, microwave and MM EM signal detection and conversion 2-116302

cooling

- see also Joule-Thomson effect; low-temperature production; magnetic cooling; quenching (thermal); refrigeration; supercooling
- absorption solar cooling system, open-cycle, possibilities of storage of cold 2-99842
- accelerated electrons, intense beam, device for cooling thin samples irradiated by beam 2-112880
- atoms and molecules, internal degree of freedom cooling using reson. radiation 2-54808
- buildings, solar heating and cooling, expt. projects 2-78255
- chondritic meteorites; olivine-porphyrific fluid droplet chondrules, cooling history 2-79049
- coherent spectroscopy on single atomic system at rest in free space 2-65111
- cryogenic pipeline flow, cooling temp. profile 2-103166
- cylinders and spheres, energy conditions for brittle failure, cooling (Russian) 2-55506
- electric machine air-cooling flow-visualization technique (Japanese) 2-55684
- electronic equipment rectangular modules arrays, heat transfer and press. drop charact. 2-91219
- emulsion cooling for amateur astrophotography 2-63261
- flow rate history for cooling and energy storage processes 2-97362
- flow simulation of cooling oil in transformers 2-91226
- Ga_{1-x}Al_xP, solid soln., variation of comp. gradient during LPE 2-83047
- gas atoms, laser cooling by optical freq. shifts 2-59754
- gas blast circuit breaker DC arc in constant diameter nozzle flow 2-78708
- glass formation, continuous cooling approx. 2-55855
- gray cast Fe, cooling rate influence on eutectic cell struct. and mech. strength (Japanese) 2-62115
- halfspace radiative equilib., surface cooling effect 2-81213
- heat balance in a wall incorporating a thermoelectric cooling device 2-99820
- heat pumps, electric air source, in single family homes, hourly power demand, Monte Carlo model 2-62493
- hybrid double-absorption cooling systems for solar power utilisation, anal. and design 2-78242
- interstellar shocks and masers, cooling by OH IR line emission 2-106874
- laser cooled stored ion expts. at NBS, appls. to freq. standards 2-63996
- laser cooled-stored ions, dilute population, model for computing temp. 2-65112
- liquid desiccant system optimisation for low grade solar/geothermal dehumidification and cooling 2-88406
- low-heat-resistance sheet, moving through fluid, cooling 2-97550
- metal cooling in moulds, numerical solutions of one dimensional problem 2-97364
- miniature cryogenic refrigerator for satellite borne IR detector coding 2-89729
- molten metal crystallisation via cooling sheath, variational methods (French) 2-71383
- nonlinear two component media with vol. sources, nonstationary dissipative struts. 2-55396
- nonmechanical adiabatic wave expansion in gas stream, cooling effects 2-91505
- nucleate boiling, surface conditions effect 2-60382
- open inclined surface solar regenerators, anal. for absorption coding applications by numerical and analytical models comparison 2-67889

cooling continued

- optical frequency standards, appl. of laser cooling of atoms 2-63998
- organic materials, cryoprotection, electron microscopy with cold stages 2-113080
- peritectic alloy, thermal analysis, cooling curves interpret. 2-105118
- photovoltaic systems with concentrators, optimum cost computation 2-99806
- plane slab of absorbing gray medium with simultaneous conduction and radiation heat transfer, cooling 2-109160
- plasma, magnetized, high energy electron component cooling 2-76084
- plate, semitransparent, radiation-conduction heat exchange 2-102998
- protein crystallography, crystal cooling device for use with synchrotron radiation 2-68209
- radiative cooling to low temperatures with selectively IR-emitting surfaces 2-92241
- rare earth alloys, magnetic, amorphous, obtained by high speed cooling 2-105100
- semiconductor thermoelectric battery cooling unit, coeff. of performance 2-105583
- semiconductor thermoelectric modules for heating and cooling appls. in instruments (German) 2-107318
- small split Stirling coolers for IR detectors 2-89730
- solar atmosphere, radiative cooling of photosphere-chromosphere transition layer below flares 2-68720
- solar heating and cooling in USA, ten years' experience and future prospects for reducing utility costs and consumer bills 2-78244
- solar powered building heating, cooling and hot water supply system 2-67887
- steel, constructional, critical hardening rates and hardness calcs. 2-67390
- steel, high-speed, type R6M5, powders, primary crystn. features at high cooling rates (Russian) 2-62112
- steel, stainless, maraging, susceptibility to warm embrittlement 2-67531
- steel, tool, high speed, S 6-5-2 and S 10-4-3-10, cooling during hardening process, effects on toughness (German) 2-57367
- superconductive windings cooling by helium in various phase states, calculation fundamentals (Slovak) 2-69180
- swirled-film cooling of cylindrical channels 2-91416
- thermal energy storage, conf., Washington, DC, USA (Sept. 1981) 2-58552
- thermoelastic waves in circular cylinder, dispersion and energy dissipation 2-102974
- thermoelectric cooling batteries, contact resistance effects on elements height 2-99819
- thermoelectric cooling in medicine, Peltier effect based devices 2-78474
- (TMTSF)₂ClO₄, organic supercond., obs. of mag. state, cooling rate influence 2-104614
- vacuum brazing machine power and coolant switching unit 2-74396
- water, flow through heated porous layer, evaporative cooling, temp. distrib. 2-65639
- water, river, real equilib. temp. and instantaneous cooling velocity 2-75844
- water near 4°C, convective response to constant cooling rate applied on its boundaries 2-75960
- X-ray Weissenberg goniometer, low temp., with closed-cycle cooling to 28K 2-65804
- Al, porous, deposition techniques and heat transfer props. 2-87979
- Al-Pb, hypermonotectic alloys, solidified by rapid cooling, struct. (Japanese) 2-105136
- Al₂Ga_{1-x}As heteroepitaxial struct., graded-index, current controlled thickness composition profile 2-88013
- Al₂O₃ sphere in KCl single cryst., crowding mass transfer mechanism in localized stress relaxation (Russian) 2-66121
- CO₂ CW high-power laser, development (Japanese) 2-102762
- CaSiO₃, ceramic-forming glass, thermal expansion 2-71673
- Fe, ferromag. metals, mag. transition on cooling course 2-116002
- GaAlAs solar batteries with radiative cooling concentrating systems optimal parameters determ. 2-99785
- ⁴He crystal, charge capture by defects appearing during coding below half melting temp. (Russian) 2-82068
- ⁴He, superfluid, turbulence and cooling effect in adiabatic flow 2-115484
- InP, LPE growth on In_{0.52}Ga_{0.48}As (111)A without dissolution 2-77757
- α -LiO₃ single crystal, thermal study, 195-265K 2-104014
- Mn-Zn ferrite synthesis from Na₂O-B₂O₃ flux under CO-CO₂ ambients 2-72612
- MnZn ferrite, temp. and time stability 2-82694
- NH₃ gas, selectively IR emitting, radiative cooling props., spectrophotometric study 2-103248
- NH₃-H₂O absorption refrigeration cycles, solar operated, simulation, design and economics for building cooling 2-99835
- NbTi/Cu composite supercond., dynamic quench in superfluid ⁴He, rel. to magnet cooling 2-112906
- Ni, ferromag. metals, mag. transition on cooling course 2-116002
- Pb thin films, on substrate, low-temp. strain behaviour 2-110218
- SF₆ cooled in free jet expansion from pulsed supersonic nozzle, multiphoton absorpt. characts. 2-96555
- SF₆ $\nu_3 + \nu_4$ combination band multiple photon excitation in bulk and pulsed free jet 2-96670
- Si solar batteries with radiative cooling concentrating systems optimal parameters determ. 2-99785
- Sn-Pb (15 wt.%), acceleration forces influence on dendritic growth and grain struct. 2-67316
- TaC single-crystal powders, morphology, hardness, and grinding ability 2-83230
- Ti-Al-Zr-Mo(W), cooling rate effect on struct. 2-67315
- TiC single-crystal powders, morphology, hardness, and grinding ability 2-83230
- TiSbSe₃ layer cryst., electrophys. parameters, growth conditions depend. 2-104375
- cooling, splat see splat cooling
- cooling towers
- see also water supply
- natural draught dry cooling towers finned tube arrangement effect on dimensions (German) 2-91218
- Cooper Hewitt lamps see mercury vapour lamps
- Cooper pairing see Cooper pairs
- Cooper pairs
- see also BCS theory; Josephson effect
- delocalisation theory, effective Hamiltonian, appl. to BCS theory 2-87169
- granular superconductors, resistivity minima origin 2-56772

Cooper pairs continued

- Green function equations for correlated Cooper pairs 2-92816
 Green functions, appl. to B-phase of superfluid ⁴He (*Russian*) 2-56287
 magnetic flux quantum, elementary derivation 2-84410
 non-equilibrium superconductors, fluctuation induced cond. near supercond. transition 2-66714
 normal metal in contact with supercond., proximity effect, Ginzburg-Landau calcs. 2-115953
 superconductivity, coexistence with mag. long range order, Cooper pairs role 2-61647
 system kinetics in strong alternating fields, semiconductor electron gas, electron Cooper pairs 2-56773
 (TMTSF)_x family of organic superconductors, survey of low dimensional phenomena 2-56751
 TMTSF salts, supercond. props., review 2-110522
 tunnel junctions, inhomogeneous resist. state 2-77236

coordination complexes

- inorganic complexes are indexed under the appropriate metal compound headings*
 crystals, contact conformers 2-92069
 Forster cycle, generalised, appl. to coordination cpds. 2-57623
 AlCl₃, chelation with C-methylated flavonoids, UV spectrosc. obs. 2-75303

copolymerisation *see* polymerisation**copper**

see also nuclei with

- 3d, L₂₃ edge, EELS 2-108636
 (100)+Ar ion, semichannel focusing energy determ. 2-105030
 (100) chemisorbed CO, XPS satellite struct. 2-83007
 (100) surface core-electron binding energy shifts 2-104460
 (110) surface, corrugation profile determ. by the scatt. 2-104455
 (110) surface adsorbed Xe, commensurate-incommensurate transition, PES study 2-104154
 (110)surface, physisorbed Xe, temp. depend. photoemission line slopes 2-71796
 absolute determ. in ancient coins using 14 MeV neutrino 2-116741
 abundance in waters of Baffin Bay and Canadian Arctic Archipelago 2-83850
 AC conduction, and DC conduction 2-66527
 adsorbed CO, laser flash desorption, surface diffusion 2-87039
 adsorbed Kr and Xe on (110), surface structs. and uniaxial phase transitions 2-66367
 adsorbed Ni, surface and interface mag. props. 2-66772
 adsorption and coadsorption of Cs and O₂ on (100) surface, LEED, AES, and work function meas. 2-82140
 adsorption of CO, on flat and rough surfaces, IR spectrosc. 2-66352
 adsorption of NO on (100) and (110) surfaces, EELS, LEED and TSD studies 2-110128
 air pollution in Nepal Himalayas, due to domestic fires 2-62527
 alkali chlorides: Cu, off-centre instability of Cu⁺ ions due to charge-transfer excitation 2-67085
 alkali halide:Cu, ligand relax., isotropic superhyperfine const. anal. 2-109816
 alpha particle stopping cross section at energies below 3 MeV 2-66085
 ammonium oxalate: Cu²⁺, EPR study 2-110627
 annealed FCC, twin boundaries, orientation and struct. (*Russian*) 2-103779
 annealing phenomena, in critically work-hardened specimens (*French*) 2-99463
 anodic dissolution in nitrate electrolyte 2-88270
 Arctic Ocean, Zn, Cd, Cu, Al vertical profile obs. 2-62997
 atom, in inert gas matrix, fluoresc. spectrosc. and photoprocesses 2-85577
 atom, resonant satellite photoemission, super-Coster-Kronig decay 2-102443
 atoms, inner-shell ionisation by ultra relativistic electron impact, density effect search 2-70426
 atoms, polarisation intermodulated excitation (POLINEX) spectroscopy 2-59729
 Auger electrons, and photoelectrons, accurate determ. of energies 2-82964
 band structure, angle resolved photoemission spectra, triangulation analysis 2-61342
 benzenethiol, adsorbed on Cu(III) at 300K, angular resolved UPS and XPS spectra 2-78134
 benzimidazole passivated, Auger anal. 2-88265
 binary collision simulations of high energy displacement cascades 2-103868
 cadmium acetate dihydrate:Cu²⁺, single cryst., EPR study of low symm. site 2-56918
 caesiated surfaces and negative ion emission 2-99277
 chemisorption, of H₂ on (100) surface, many-electron embedding theory 2-110139
 chemisorption of H, small cluster model and embedding theory based on orbital localization 2-61291
 chemisorption of thiourea complexes on Cu electrodes, surface enhanced Raman spectroscopy 2-93811
 clusters, electronic struct., SCF calcs. 2-85855
 clusters, symmetry breaking and ions. from 3d and 4s shells 2-59985
 clusters isolated in O₂ matrices, UV photoemission studies 2-108757
 coated shell char particle reinforced Al-Si composites, prep. and props. 2-67258
 coated W spheres, liq. phase sintering, rearrangement of large particles 2-88028
 coincidence site lattice twist boundary energy, long-ranged pot. 2-81795
 cold rolling, strain rate effect on mech. prop. changes at high strains 2-105184
 cold rolling to foil 2-105188
 cold worked, local struct. EXAFS study 2-60921
 composite, porous and filled, internal friction and effective elastic moduli 2-99476
 Compton profile anisotropy, Fermi surface, momentum density, Seitz approx. 2-93317
 containing P, anodic dissolution in bright Cu plating electrolytes, kinetics and mechanisms 2-67664
 corrosion, interfacial, effect of boundary struct. 2-93657
 corrosion in SO₂+O₂ mixtures (*French*) 2-88251
 corrosion inhibition by benzotriazole, surface enhanced Raman scatt. study 2-111367
 creep, static and cyclic of pure specimens, quenching effect 2-72779
 creep, steady and transient, based on constitutive eqns. 2-103886
 creep deform. and rupture under non-proportional loading 2-57445
 creep under biaxial stress states, influence of prior cold work 2-67420
 cylinder, impact deformation meas. at high temp. 2-83172
 cylindrical magnetron co-sputter etching of Cu tubes with appl. for solar selective absorbing surfaces 2-93678
 Debye-Waller factor calcs. 2-103932
 deformed, cyclically and monotonically, stress-substruct. relationships in wavy slip mode metals 2-99498
 deformed, isothermal elec. resist. changes rel. to stage III recovery 2-67366
 deformed, small-angle cold neutron scatt. study 2-71548
 deformed single crystals, near surface and bulk dislocations, X-ray line broadening study 2-116490
 density of unoccupied electronic states, soft X-ray appearance, pot. spectrosc. obs. 2-111028
 determination in waste water by radionuclide X-ray fluoresc. anal. 2-78164
 deuterium trapping, by impurities 2-82007
 diffuse necking in sheet tensile specimens 2-116496
 diffusion and solubility of H₂, electrochem. determ. (*Japanese*) 2-76743
 diffusion bonding of balls, to Ag substrate 2-72940
 diffusion of Ni, partial diffusion coeff. after ion irradi., fusion neutron effects simulation 2-86757
 diffusion of Pt, 1149 to 1352K 2-61204
 discontinuous film, carrier mobility 2-82479
 dislocation cell boundary widths and dislocation cell sizes in deformed samples 2-81789
 dislocation etch pits on (111) surface, morphology change (*Japanese*) 2-55977
 dislocation structures recovery, in elastically deformed single crystals. 2-71451
 dispersion strengthened, prep. from internal oxidation of sputtered powders, struct. and props. (*Russian*) 2-67238
 double focusing in Ar ion refl. 2-81866
 effect of lattice periodicity on channelling radiation 2-71528
 electric field domains at low temp. (*Russian*) 2-110321
 electrode, adsorpt. of Ru(CN)₆⁴⁻, surface enhanced Raman spectrosc. obs. 2-61889
 electrodeposited films, inclusions, direct obs. by TEM 2-92389
 electrodeposition and dissolution on sinusoidal mandrels 2-76852
 electrodes, packed-bed, in galvanic cells 2-62467
 electroless plating kinetics meas., ligand adsorpt. inhibition effects 2-93451
 electron emission under molecular H ion bombardment 2-72592
 electron irradi., vacancy cluster form. and radiation-induced refining, HVEM obs. 2-81829
 electron irradiated, effect of vacuum environment on void nucleation 2-76506
 electron-phonon effects, elec. and thermal resistivities, Hall effect 2-115728
 electron-phonon effects, electron scatt. rate, mass enhancement 2-115376
 electronic energy bands, KKRZ calc. 2-76910
 electronic props., one parameter model pot. 2-61331
 electronic struct., non-muffin-tin and relativistic interaction effects 2-61341
 electroplated Fe, passivity and its breakdown 2-77972
 epitaxial layers, inner potential meas. 2-92725
 epitaxy on muscovite mica, RHEED study 2-115617
 equation of state calc. 2-71603
 eroded single crystals, subsurface defect struct. 2-62237
 erosion at 30° incidence of glass spheres, Cu single crystals 2-111329
 erosion by spherical particles, modelling 2-86790
 erosion wear mechanism, solid particle, 90° impact 2-88209
 erosive wear, by particle-laden high rel. liq. jet 2-67567
 etch beaks, on (111) cryst. surface 2-71456
 exoelectron emission, chem. nature of centres on surfaces 2-83012
 fast secondary electron emission by X-ray irradi. 2-57262
 fatigue, low temp. in polycrystalline samples, grain size effect (*Japanese*) 2-77920
 fatigue crack growth, near-threshold, load ratio influence 2-105332
 fatigue crack growth rate, comparison between in-plane bending and cyclic torsion (*Japanese*) 2-62198
 fatigue in single crystals, obs. of crack nucleation 2-93588
 fatigue in single crystals 2-93589
 fatigue surface damage modifications, by ion implantation 2-55996
 fatigue-induced grain boundary cavities, small angle neutron scatt. study 2-93581
 FCC metals, high energy recoils, computer simulation, cascade shapes and sizes 2-86712
 Fermi surface changes due to alloying with Al and Ni 2-82209
 Fermi surface meas., positron annihilation study, expt., apparatus (*German*) 2-104232
 Fermi surface radius, Fourier expansion method 2-104230
 fibre materials, sintered, high-porosity, physicochem. study 2-83192
 film, coupled fine particles, electron localization and transport props. 2-61618
 film, electron transmission and backscattering, Boltzmann eqn. model (*French*) 2-77643
 film, evaporated polycryst., hypersound attenuation and phase vel., 1-24 GHz 2-109907
 film, inelastic lifetime and spin-orbit coupling of cond. electrons., magneto-conductance study 2-110494
 film, reduced electron density, elec. cond. study 2-82477
 film, vacuum evaporated, defect density and elec. props. from annealing study of elec. resistance 2-110495
 film deposition, planar magnetron characts. at high power input 2-57291
 film deposits, on Al(100) substrate, electronic struct. evolution 2-82443
 film on Ni (100), electronic and mag. struct., interface magnetisation 2-82695
 films, elec. cond. localisation effects and negative magnetoresist. obs. 2-82476
 flow stress, strain and grain size depend. 2-57399
 flow stress in polycryst., grain size depend., texture hardening concept 2-72780
 foil, electrodeposited, AES and ESCA, effects of surface roughness 2-78155
 fracture and deformation props. meas. at elevated temperatures (*Russian*) 2-88158
 fusion-neutron irradi. damage rates 2-103828

copper continued

glide systems during in situ straining in TEM, Schmid's law deviations 2-98103
 grain boundary multiple special contacts (*Russian*) 2-115251
 He ion energy straggling, 0.25 to 0.75 MeV/a.m.u., backscatt. study 2-76550
 heavy ion-irrad., vacancy loop form. 2-103863
 hollow cathode laser design with alternative excitation, 781 nm transition 2-96998
 induction motor CC Cu winding conductors, mechanical props. (*Czech*) 2-111230
 interaction cross section with low energy neutrons 2-59446
 interatomic pot. functions from phonon dispersion relations, stacking fault energy 2-109737
 intercrystalline fracture obs. by high power US (*Russian*) 2-88160
 interelectron interaction parameters, possibility of determ. 2-92443
 interionic pot. and stacking fault energy 2-66016
 internal pot. determ. by interf. electron microscopy (*Russian*) 2-60845
 internally oxidised, elec. and mag. props. 2-98620
 intraband optical cond. relax. time, phonon contrib. 2-93143
 ion beam textured surfaces, quasi-liquid states 2-82984
 ion bombarded, secondary electron emission coeff. meas. 2-72591
 ion bombarded, temp. depend. of sizes of defects 2-56047
 ion implanted with Xe^+ , Xe-defect configuration spatial anisotropy, ^{133}Xe TDPAC study 2-61044
 ion-electron emission depend. on projectile incidence angle 2-62031
 irradiated, atomic displacement, temp. depend. of threshold energy 2-66042
 isoelectronic series ionisation potentials, core polarisation, relax., and relativistic effects 2-113896
 $K\alpha$, X-ray emission lineshape, core hole effects 2-87909
 laser, pulse generator for energizing 2-85989
 lattice rotations, necking and localised deform. in FCC single crystals. 2-71546
 lattice vibr. of split self-interstitials, local density of states, recursion method 2-81910
 line profiling, of Kossel X-ray diffraction lines in SEM using energy-dispersive X-ray detector 2-64177
 liquid, Czochralski classical growth method and CACRT, free and forced convection simulation 2-76339
 liquid, mag. susceptibility calcs. 2-98843
 localised defect electronic struct. calc. method 2-115698
 low dose fission neutron irrad. damage 2-103829
 low ductility failure and cavitation during grain boundary migration (*Japanese*) 2-105301
 maculose films, nature and distrib. function of cluster dimensions 2-56400
 Magela Creek, N.Territory, Australia, natural trace metal concs. 2-88930
 mass absorption coeff. and range of beta particles 2-75135
 materials with $Z_{\beta}=23-30$, electronic stopping cross section for 30-300 keV protons 2-66086
 microcrystals, conical, ion irrad., surface stress and plastic deformation 2-86777
 mirror, cooled, absorbed laser power, calorimetric meas. 2-86027
 mirror, diamond-turned, laser-induced damage, spot size dependence meas. 2-114343
 mirror, laser damage threshold depend. on wavelength, material, pulse length and prep. method. 2-60143
 mirrors used in CO_2 -ICF laser systems, optical damage limitations 2-60145
 molecule, $a^1\Sigma_u^+$ state, Ne matrix isolation, absorpt. and fluoresc. obs. 2-114027
 molecule, nature of bonding, SCF calcs. 2-96413
 molten, interaction with Mo 2-72873
 monolayer, thickness meas., X-ray fluorescence anal. 2-69140
 multilayer relaxation, LEED data 2-76362
 naphthalene-Cu interface, viscosity and thickness of quasi-liquid layer during melting (*Russian*) 2-115796
 neck development meas., tensile testing using projection moire 2-105425
 negative ion emission by mol. sputtering 2-57229
 neutron and electron irradiations, initial damage rates study of internal friction 2-92046
 neutron irradiated, 0.1-24 MeV, free interstitial prod. cross sections 2-103834
 neutron irradiated, 14 MeV, damage development and hardening 2-109841
 neutron irradiated, 14 MeV, strengthening and microstruct. alterations, determ. by microhardness 2-103848
 neutron irradiated, yielding, surface effect 2-103842
 neutron irradiation, long-time, elevated temps., damage-rate meas. 2-103832
 North Sea, trace metal concs. 2-78699
 nuclear magnetism at nK temps., mag. susceptibility and NMR study 2-104595
 optical scales and grids of Ni, Cu, and Cd, physical development on iron oxalate emulsions 2-107440
 organic compd. corrosion inhibition efficiency quantum chemical paramet-ers 2-77987
 oxidation by plasma formed due to low-threshold breakdown of air 2-99604
 oxides, thin film, differential reflectometry 2-101445
 oxidised crossed bars, contact resistance in terms of Schottky effect (*Hungarian*) 2-98762
 passivation, role of anions in film form. and breakdown 2-62251
 penetration of H, sorption parameters estimation (*Russian*) 2-87075
 persistent slip bands, macro- and micro-, slip offsets development during one fatigue cycle 2-98112
 phase transformation wave excitation by action of square surface heat pulse 2-62120
 phonon dispersion, three-body interactions effects, theory 2-98217
 photo-induced diffusion in solid Zr (*Russian*) 2-98340
 photoemission, band struct. depend. damping 2-99295
 photoemission, polarisation depend., from (110) and (111) surfaces, dipole selection rules 2-72601
 photoemission spectra from (110) surface, relativistic dipole selection rules 2-72602
 photon multiple scatt., saturation depth 2-115320
 plastically deformed, dislocation anelasticity in kHz range (*German*) 2-83162
 plastically deformed sample, near-surface dislocation sources 2-98088

copper continued

plastically deformed single crystals, dislocation anelasticity in kHz range (*German*) 2-86680
 plate, accelerated by reacting and detonating explosives, free surface vel. meas. 2-76591
 point contact spectroscopy, temp. depend., nonequilib. phonon temp. (*Russian*) 2-61565
 point contacts, low freq. elec. fluctuations 2-110449
 point defect props. calcs. based on three-body interactions 2-91962
 pollution of Denmark coastal waters by heavy metals 2-78698
 polycrystalline, containing Al_2O_3 particles, yield point and strain hardening (*Russian*) 2-105226
 polycrystalline, fatigue failure in air and vac., plastic strain inhomogeneity (*Russian*) 2-75258
 polycrystalline, X-ray attenuation coeffs., 5 to 50 keV 2-86624
 polymer coating adhesion applied as hot melt, test temp. effect 2-67637
 positive muon depolarisation, 5 to 365K 2-82766
 potassium hydrogen maleate: Cu^{2+} EPR and optical absorpt. spectra, spin Hamiltonian parameters 2-98948
 powder, atomised, prod. and characts. 2-67243
 powder compacted specimens, ductile fracture, influence of porosity 2-77948
 powder electrodeposition at gas-evolving electrodes, mass transfer role 2-62090
 powder nuclear demagnetisation for cooling of liq. ^3He and dil. ^3He - ^4He solns., simulation 2-95386
 powder pressing, external friction coeff. rel. to applied press. 2-67244
 powder sintering kinetics 2-11114
 prestrained, bending test for tension and compression stress-strain curves 2-105401
 protons in Be, Al, Ti, V, Fe, Co, Ni, Cu, Zn, Mo, Rh, Ag, Sn, Ta, Pt, Au, stopping power meas. 2-64820
 pure, deform., effect of low-temp. irrad. 2-93564
 pure, instability and failure of internally pressurized ductile metal cylinders 2-99526
 quasi-elastic high press. waves 2-71557
 radial distrib. functions, refl. EELS study 2-105020
 radiation damage initiation and energy spectra formation of primary knocked atoms, nucl. reaction effect 2-76526
 radiation hardness, influence of neutron irrad. on yields stress 2-103846
 range profiles of ^3He and ^6Li ions 2-66089
 reactor-irradiated, defects and transmutations 2-102265
 recrystallisation, tensile deform. of single crystals. (*Chinese*) 2-62135
 recrystallisation, twin and grain boundary dislocation movement obs. 2-71474
 recrystallisation mechanism, origin of cube texture 2-116456
 reflectance at visible, IR wavelengths, wavelength and temp. depend. 2-67083
 reflective coating, failure by cracking 2-61319
 resonant photo- and Auger emission at 3p threshold 2-108434
 rolled, penetration of shear texture 2-77841
 rolled single crystals, shear band form., TEM study 2-99455
 secondary electron emission enhancement by adsorbed Pb and Sn monolayers 2-62025
 self-ion sputtering yields 2-77660
 semiconducting oxide films, photoelectrochem. invest. 2-105363
 semiconductor-metal interfacial reaction at room temp. 2-56267
 shear stress and spall strength under shock loads, preview 2-83213
 shear stress and stored energy, high purity samples, influence of strain rate (*German*) 2-77893
 shock wave attenuation induced by contact detonation 2-71567
 SIMS, very small clusters study 2-77683
 single crystal, ion bombardment induced surface topography, incidence angle effect 2-76471
 single crystals, strain hardening at high strains and dynamic recovery 2-116457
 single vacancies and clustered interstitials, spontaneous recomb., elec. resist. meas. 2-76435
 solid particle erosion of single crystal accuracy of melting 2-67562
 spallation by ductile void growth 2-72786
 spherical shells, stability loss under external press. 2-116542
 spontaneous nkl. ordering at nK temps.? 2-115983
 sputtering, atomic excitations, optical spectrometry study 2-77689
 stabiliser for supercond. magnets, low temp. irradiation effect 2-80182
 stabiliser in supercond. magnet, radiation damage, review 2-80183
 stabilisers for composite supercond. magnet, radiation resist. in magnet location 2-108118
 stacking fault tetrahedra induced by electron irrad., dynamic study 2-76462
 strain bursts under various forms of static and cyclic loading at ambient temp. 2-62206
 strain hardening, monotonic and cyclic deform. 2-62136
 strength controlling processes, temp. and strain rate effects 2-77891
 structural material for fusion reactor appl., Ta protective coatings 2-74911
 substrate, low temp. CVD of TiB₂ corrosion protective coating 2-87999
 substrate, misfit twin crystals in deposited Cr films (*Japanese*) 2-104194
 substrate, TaB and TaB₂ low temp. CVD, corrosion protection 2-83033
 substrate for H₂ condensed layers, photoemission study 2-93374
 substrate for high-hardness Mo coatings, vac.-arc discharge plasma deposited 2-72871
 substrate for Ni thin film, presence and absence of magnetism 2-104667
 superconducting magnet stabiliser, fusion neutron damage 2-80184
 surface, (100), CO adsorption, ordered structs., LEED, EELS and IR data correlation 2-98456
 surface, (100) and (111), NO adsorption, EELS study 2-77640
 surface, (110), H⁺ ion reflection, ionic charge states, expt. study 2-57234
 surface, (110), oscil. relax. investig. 2-104137
 surface, (111), chemisorbed CO, photoemission study (*French*) 2-105052
 surface, (410), relax., ion scatt. spectroscopy study 2-82096
 surface, adsorpt. of ethylene (H_2O), chemisorbed O effects, XPS obs. 2-67188
 surface, adsorpt. of NO₂, reaction, UHV ESR obs. 2-67765
 surface, atom ejection processes influence of lattice atom. pot. function mol. dynamics simulation, study 2-93343
 surface, Auger neutralisation mechanism in secondary ion emission 2-67179
 surface, clean and Na covered, CO adsorption, surface state shifts, UPS study 2-98716

copper continued

- surface, clean and O_2 covered, dielec. functions, ellipsometry study 2-87737
- surface, cylindrical cryst., initial $O_2(S_2)$ adsorpt. kinetics, AES study 2-56355
- surface, damage thresholds for short pulse IR lasers 2-108923
- surface, He beam impact, order, disorder, nucleation and energy changes 2-98399
- surface, low index planes, LEED fine struct., surface barrier resonances obs. 2-56309
- surface, N_2^+ beam reaction in low kinetic energy region, Auger effect 2-99706
- surface, rough, elec. field enhancement, surface enhanced Raman scatt. 2-87790
- surface, stepped, interaction with H, pairwise-additive model 2-56349
- surface, thermionic emission, theory, band struct., electron electron interactions 2-67183
- surface (100), adsorbed CO, IR spectra study 2-56359
- surface (100), adsorbed Pb, LEED studies 2-98450
- surface (100), angle resolved photoemission studies of oxide formation 2-93366
- surface (100), epitaxial growth of Ti, LEED, AES, UPS and EELS studies 2-56398
- surface (100), Mn overlayer, LEED, AES and UPS study 2-87111
- surface (100), N_2^+ ion reflection, directional effects 2-116319
- surface (100), soft surface phonons and reconstruction, dispersion relations 2-92128
- surface (100) and (110), O_2 chemisorption, UPS, EELS, LEED and work function study 2-87071
- surface (110), O covered, surface reconstruction, Ne^+ and H_2O^+ ion scatt. 2-61268
- surface (110), LEED surface crystallographic anal. 2-87000
- surface (110), Ne^+ and H_2O^+ ion scatt., angular distrib., surface geometry 2-62035
- surface (110), O_2 adsorption, Debye Waller factor, surface struct., He scatt. study 2-87070
- surface (110), S adsorbed monolayer struct. (French) 2-71788
- surface (111), O_2 chemisorpt., Cu_2O form., high resolution EELS study 2-110155
- surface (111), O_2 chemisorption, UPS, EELS, LEED, AES and work function meas. 2-87072
- surface (111), photoemission, comparison between matrix elements of 1-step and 3-step calcs. 2-87946
- surface (111), UV photoemission, temp. depend. 2-116328
- surface adsorbed CO, CH_3O and S layers, electron scatt. from surface vibr. modes 2-98424
- surface analysis, Auger electron spectroscopy, relative intensity meas. 2-62441
- surface profiles, autocovariance functions, electron microscope and microdensitometer study 2-76792
- surface scattering of non-homonuclear hydrated ArH^+ ions (Russian) 2-111014
- surface sp-d charge transfer 2-104458
- surface sp-d charge transfer 2-104459
- surface struct. ion scatt. spectroscopy study, time of flight energy anal. 2-76790
- surface structural characterization by secondary electron emission 2-87923
- surfaces, clean and adsorbate-covered, metastable He atom refl. 2-82979
- surfaces (100) and (111), desorpt. of H_2 and D_2 , fast vel. distrib. 2-98446
- target, stopping power and effective charge of heavy ions 2-76543
- TCNQ salt, Cu TCNQ, Raman study of electrical switching 2-87791
- texture induced acoustic anisotropy due to compressive deformations, strain rate and temp. effect (Japanese) 2-77839
- texturing with an RF-ion source using Xe working gas 2-105390
- TGS- Cu^+ crystals, ^{14}N quadrupole interactions, ENDOR obs. 2-110730
- thermal cond., plastic deformation effects, dislocation scatt. 2-104349
- thermal expansion, up to 600K above melting 2-66260
- thermoelectric behaviour of metal powders depending on press. (German) 2-77024
- thin film, inelastic mean free paths of Auger electrons 2-93335
- thin film, low loss surface imaging STEM studies 2-110181
- thin film, resistivity and temp. coeff. of resist., transient hot strip method 2-110500
- thin film, size depend. cond., electron density and, mean free path 2-110498
- thin plates, cleavage strength 2-83228
- thin target foils, electron impact, K-shell ionisation, bremsstrahlung and electron-electron bremsstrahlung 2-75404
- TMMC:Cu, heavily doped, ESR study 2-72334
- TMMC:Cu, high temp. dynamics, effect of impurities, EPR study 2-98944
- TMMC, one-dimens., spin dynamics, ESR study 2-72338
- Tokamak discharges, transitions in $n=2$ ground state configurations 2-86479
- torionally deformed, reverse mech. aftereffect, temp. depend. (Russian) 2-99470
- transparent cond. film, planar magnetron sputtering 2-105074
- tris(sarcosine) calcium bromide: Cu^{2+} hyperfine spectra, ESR, study 2-61754
- twin boundary struct., high resolution electron microscopy study 2-71471
- ultrafine particles, positron annihilation 2-93319
- ultrasonic irradi., effect of neutron irradi. on mechanical props. (Russian) 2-76512
- US attenuation, impurity and dislocation effects 2-56096
- vacancy, electronic struct., self-consistent calcs. of soln. of embedding problem 2-76982
- vacancy clusters, athermal formation in cascades of atomic collision 2-56061
- vapor laser, sealed, assembly 2-90934
- vapour laser, active medium, wavefront reversal 2-60068
- vapour laser, Cu transitions in $CuBr_2$, parametric study 2-86000
- vapour laser, decay of $^3D_{3/2,5/2}$ levels (Russian) 2-90878
- vapour laser, development and appls., reviews 2-96916
- vapour laser, externally heated, parametric study appls. 2-80991
- vapour laser development, computer modelling 2-85999
- vapour lasers, contaminants, decontamination procedures 2-86032
- vapour lasers, pulse width var. 2-85950
- vapour transverse-discharge laser, Cu vapour conc., degree of gas heating 2-60067

copper continued

- VPE growth on Cu, Auger line shape anal. 2-110186
- wear mechanism, obtained by repetitive impacts 2-88207
- whiskers, atomic scatt. factors using Pendellosung intensity beat meas. 2-81713
- whiskers, growth by chemical reduction, elec. field effect 2-87121
- wire/cement interface, statistical anal. of decohesion rel. to fibre reinforced composite 2-67475
- wires, ultrathin, low temp. resist. rise, interaction effects 2-92566
- work function, electrolytic hydrogenation effect (Russian) 2-66623
- wrought, engng. fatigue props. review 2-88161
- X-ray K edge, absorption and anomalous dispersion meas. 2-116298
- X-ray mirror reflectivities from 3.8 to 50 keV 2-84756
- Young's modulus of single cryst., low temp. peak, deform. and annealing effect 2-88127
- Ag-Cu electrode, adsorbed pyridine mols., surface enhanced Raman scatt. 2-99131
- AgI:Cu, electronic cond., carrier mobility, DC polarisation and charge transfer methods 2-115753
- Al/Cu bolted joints electrical performance 2-99590
- Al- Al_2O_3 -Cu tunnel junctions, electron energy loss function image in light emission 2-116267
- Al- Al_2O_3 -Cu tunnel structures, photon emission, expt. study 2-82471
- Al_2O_3 :Cu porous anodic film, elec. props. meas. 2-82501
- β - Al_2O_3 : Cu^{+} , solid ceramic electrolyte, cells for thermodynamic studies 2-99378
- As- Se_2 :Cu, amorphous, XPS study 2-57249
- As- Se_2 :Cu, chalcogenide glasses, carrier mobility, transient photocurrent spectra study 2-72024
- Au/Cu, thin films, diffusion-induced grain boundary migration 2-71735
- BaS:Cu,Er, phosphors, electroluminesc., spectral characteristics 2-67122
- BaS:Cu phosphors, thermally stimulated conductivity 2-72006
- CaO:Cu electroluminesc., anal. of traps 2-82925
- $CdBr_2$: Cu^{+} , impurity level and photoionisation processes, photocond. meas. 2-56638
- $CdCl_2$: Cu^{+} , impurity level and photoionisation processes, photocond. meas. 2-56638
- CdS:Cu, Cl, sintered layers, absorpt. and photoluminescence spectra 2-110928
- CdS:Cu, electron irradi. prod. defects interaction with impurities, elec. and optical props. study 2-56035
- CdS:Cu, excited state lifetimes, 4 to 300K, luminesc. study 2-57162
- CdS:Cu, photochemically active IR centres, luminesc. and excitation spectra, polarisation characs. 2-61970
- CdS:Cu,Cl, point defect luminescence anal. (Russian) 2-87869
- CdS:Cu photoelectrochemical cells, energy conversion and storage 2-116841
- CdS-Cu, interface form., Schottky barriers, interdiffusion and chem. processes, XPS study 2-77182
- $CdSnP_3$:Cu photopleochroism spectrum, imbedded n-p junction depth effect 2-61523
- CdTe:Cu, acceptor levels, elec. and photoluminescence study 2-110296
- CdTe-Cu solid soln., supersaturated, carrier decay process kinetics 2-92649
- Cu (III), CO chemisorption, angle resolved photoelectron energy spectra 2-70331
- Cu (100):K, surfaces, metastable de-excitation spectra 2-82197
- Cu (111)(1×1)-Ni, LEED study using reliability (R) factors 2-110116
- Cu barriered Zircaloy cladding tube for BWR fuel 2-80092
- Cu II, radiative lifetimes and transition probabilities 2-75217
- Cu matrix with NbTi filaments, direct meas. of transverse resistivity 2-74460
- Cu, metallic target, isotope discrimination, secondary ion mass spectrometry 2-57652
- Cu^+ , energy distrib. meas. in energy range from 0 to about 500 eV (German) 2-93847
- Cu^+ dispersion mode adsorbed on SiO_2 and Al_2O_3 surfaces, ESR study 2-116057
- $Cu^{191}In$ (^{119}Sb), Mossbauer study of impurity-vacancy interactions 2-86705
- Cu:B, cavitation-erosion resist., effect of B implantation 2-88197
- Cu:H, spherical solid model 2-104294
- Cu:Kr, ion implanted, cryst. defects, positron annihilation and TEM study 2-81781
- ^{63}Cu :Sn, ^{119}Sn impurity force const. changes, Mossbauer study 2-61098
- Cu/Au double layers, thickness meas., X-ray fluorescence anal. 2-69140
- Cu/Be electron multipliers, rejuvenation 2-69294
- Cu/LaB₆ system, wetting and the contact reaction 2-71777
- Cu/Ni bilayer system, interfacial diffusion coeffs. meas. during diffusion induced grain boundary migration 2-71739
- Cu/Ni thin films, interdiffusion, Auger study 2-82035
- Cu/Ni ultradisperse layer system, cold homogenisation by mutual diffusion (Russian) 2-104076
- Cu/Si system, diffusion of Cu 2-61210
- Cu/Sn, bimetallic thin films, interfacial reaction kinetics 2-66298
- Cu/Sn bimetallic thin film, interdiffusion and intermetallic phase form. 2-115473
- Cu-Au, ion beam mixing study by 300 keV Kr^{4+} bombardment 2-76514
- Cu-C steel multilayer composite, dislocation density and diffusion processes study by thermo-EMF method 2-67381
- Cu-CdS-C, switching struct., with potential barrier, elec. characs. 2-87407
- Cu-Cr multilayer composites, yield point, struct. influence (Russian) 2-67446
- Cu-CuO photovoltaic cells, prep. by high temp. reduction and props. meas. 2-88459
- Cu-Fe, low temp. thermocouples, props. and calibration (Chinese) 2-107323
- Cu-graphite tiles brazed protective surface for FED pump limiter 2-74904
- Cu-He interaction pot. determ. by atomic beam scatt. 2-99266
- Cu-Ni multilayer films, interdiffusion, Auger electron depth profiling 2-82038
- Cu-Ni system, diffusion erosion phenomenon (Russian) 2-77988
- Cu- SiO_2 granular films, elec. props., electron localisation in metallic regime 2-72081
- Cu-W, ion beam mixing study by 300 keV Kr^{4+} bombardment 2-76514
- Cu-W(-Mo), ion beam microtextured surface, optical absorption coeff. 2-83277
- Cu-ZnS luminophore, decay time determ. from photocount statistics 2-102755

copper continued

- Cu-ZnS(Se) Schottky barrier contacts, exptl. study 2-72057
 Cu+Cu³⁺, K-shell vacancy prod. study 2-108694
 Cu+Fe, K-shell vacancy prod., direct excitation effects 2-75405
 Cu+H⁺, K-shell X-ray prod. cross section meas. in energy range 300-2400 keV 2-90492
 Cu²⁺+C-foil, projectile K X-ray emission, target thickness depend. 2-75394
 Cu⁴⁺+Cu(Ge)(Ag), K-shell vacancy prod. study 2-108694
 Cu₂ cooled metal clusters, laser spectroscopy 2-108762
 Cu₂ in inert gas matrix, fluoresc. spectrosc. and photoprocesses 2-85577
 Cu₂ supersonic cluster beam, laser photoionisation 2-108761
 Cu₂ mol. stability, ab initio SCF mol. orbital calc. 2-102380
 Cu₂O/Cu thin film photovoltaic cells, possible appl. as solar cells 2-93896
 Cu₂O-Cu solar cells, grown by anodic oxidation, photovoltaic effects 2-88460
 Cu₂S-Zn,Cd_{1-x}S film struct., Cd and Zn cross diffusion, AES, ESCA and atomic absorpt. spectroscopy study 2-66299
⁶⁴Cu, low energy neutron interaction, total and inelastic cross sections 2-92048
 Cu(110) surface, adsorption of sulphur heterocycles, photoelectron spectra 2-62428
 Fe-P-M (M:Ni, Mo), powder premixes, effect of Cu addition on sintering 2-72650
 GaAs:Cu, electron irradi., photoluminescence 2-61967
 p-GaAs:Cu, electron irradi., photoluminescence 2-87851
 GaAs:Cu, F- and C-centres, vibr. props., Green's function calc. 2-86811
 GaAs:Cu, luminescence, deep centres in bound exciton form. 2-104960
 GaAs:Cu, recombination radiation band, piezospectroscopic study 2-77588
 GaAs:Te, Cu contamination during heat treatment, photolum. study 2-91993
 GaP:Cu, Cu related 2.177 eV bond-exciton, photoluminesc. study 2-110917
 GaP:Cu, ion damaged, depth profiling of gettered Cu, SIMS study 2-98150
 GaP:Cu, photoluminescence and impurity states 2-104947
 GaP:Cu, photoluminescence, excitons 2-116249
 Ge:Cu, γ-ray irradi., Cu atom activation and concentration 2-115704
 Ge:Cu, in-diffusion and annealing 2-98337
 Ge:Cu, quenched, Cu related shallow acceptor, hole density temp. depend. study 2-92509
 Ge:Cu p-n junction, reversed biased, Cu²⁺ centres mobility, DLTS study 2-98336
 Ge_{0.95}Se_{0.05}:Cu glass, photoluminesc. and excitation spectra 2-93263
 Ge, Se_{1-x}, Cu glassy, photoconductivity 2-56634
 (GeTe)_{0.95}Bi_{0.05}Cu_{0.01}, ionic transport of Cu and thermo EMF 2-104068
 He-Cu ion lasers with transverse RF discharge excitation 2-86002
 Hg_{1-x}Cd_xTe:Cu, deep level defect traps, DLTS study 2-87175
 KCl:Cu²⁺, Schottky defects, energy of form., ion mobility and cond. study 2-71441
 KCl:Cu²⁺, Kerr const. dispersion 2-72453
 K₂SO₄:ZnSO₄:Cu²⁺, glass, dopant site symmetry, ESR study 2-98947
 Li-Al-O₂-Cu layers, electron tunnelling, ESR study 2-82714
 Li₂B₂O₇:Cu, thermoluminesc. phosphor, radiation dosimetry characts. expts. 2-113755
 Li₂B₂O₇:Cu thermoluminescent phosphor, dosimetry characts. 2-59556
 Li₂B₂O₇:Mn, Cu, suitability of different props. for medical dosimetry 2-100129
 LiCl:Cu²⁺, luminesc. props. and impurity electronic struct. 2-57161
 LiF:Cu, phosphor, thermolum., carrier capture during irradi. 2-104973
 LiH, (SeO₂)₂:Cu²⁺, EPR spectra, g and A matrices, Q tensor 2-82709
 Mo fibre reinforced composites, porous, stress-strain state during compression 2-116414
 N₂-Cu arc discharge near anode, transport coeffs at atmospheric press. 2-103502
 NH₄LiCu²⁺ single crysts., EPR investig. 2-82700
 NaCl:Cu, activator electroluminesc., recomb. and intracentre processes, strong electric field effect 2-72557
 NaCl:Cu, Schottky defects, energy of form., ion mobility and cond. study 2-71441
 NaCl:Cu⁺, Cu²⁺ electronic struct., multiple scatt. X_α method appl. to CuCl₂ cluster 2-87192
 NaCl:Cu²⁺, luminesc. props. and impurity electronic struct. 2-57161
 NaF:Cu²⁺, single cryst., UV absorpt. and fluoresc. study 2-67084
 Na₂O-CaO-SiO₂ glass:Cu,Cr,Er, energy transfer from Cu and Cr to Er 2-99176
 Nb-Cu layered system, conductivity transition 2-110253
 Nb-Cu superlattice, supercond. transition temp., proximity theory, density of states 2-66701
 NbTi/Cu composite supercond., dynamic quench in superfluid ⁴He, rel. to magnet cooling 2-112906
 NbTi-Cu, multifilamentary, supercond. current stability, max. transport current meas. 2-66731
 NbTi-Cu composite multifilamentary supercond., losses under adiabatic conditions 2-66730
 Ni-Cr-Cu protective coatings, corrosion resistance evaluation by electrochemical porosity test (German) 2-105365
 Ni-Cu misfit boundaries, growth-in dislocation generation during 3D nucleation and growth 2-103772
 Ni-Ti/Cu multifilamentary supercond., proximity effect, diamag. transitions obs. 2-61664
 S monolayer on Cu(110) surface LEED diagram interpretation (French) 2-86524
 Sb_{1.43}Bi_{0.57}Te₂K₂Se_{0.15}:Cu, solid soln., effects on thermoelectric props. 2-82385
 Si:Cu, deep centre long lifetime photoluminescence 2-110938
 Si:Cu, gettering by Al at low temp., Rutherford backscatt. study 2-115264
 Si:Cu, luminescence, excitons and impurity states 2-104946
 Si-Al interface, O₂ interaction, photoemission investig. 2-110474
 SrS:Cu,Er, phosphors, electroluminesc., spectral characteristics 2-67122
 SrSe:Cu,Er, phosphors, electroluminesc., spectral characteristics 2-67122
 TiB₂-Cu, coating for fusion reactor first wall, characterisation by lattice constant meas. 2-74912
 W fibre reinforced Cu, helical fibres tensile props. (Japanese) 2-77913
 W fibre reinforced Cu composites, tensile yield behavior, effect of thermal history (Japanese) 2-105238
 W helical fibre reinforced Cu, fibre deform. under tensile load (Japanese) 2-105233

copper continued

- Zn_{1-x}Cd_xS:Cu, Al cathodoluminescent phosphor, saturation obs. at high current density 2-116273
 ZnO:Cu, deep Cu centre, lattice distortion effects, SCF-LCAO cluster calc. 2-104297
 ZnO:Cu,Yb(Tm), phosphors, photo- and electro-luminesc. studies 2-110909
 ZnS:Cu, Al, phonon-assisted tunnelling in the electroluminescence exciting process 2-110950
 ZnS:Cu, Br phosphor, electroluminesc. and lattice const. meas. 2-93283
 ZnS:Cu, donor-acceptor recombination, ODMR study 2-99185
 ZnS:Cu, Eu, Cl, electron multiplication process, luminesc. kinetics study 2-67121
 ZnS:Cu, excited state lifetimes, 4 to 300K, luminesc. study 2-57162
 ZnS:Cu, Gudden-Pohl effect flash spectra depend. on elec. field 2-87817
 ZnS:Cu, ODMR study of IR photolum. 2-93066
 ZnS:Cu, Sm(Eu)(Tm), electrolum. and photolum., quantum yield meas. 2-110943
 ZnS:Mn, Cu, Cl DC electrolum. films, field enhanced changes in comp. and struct. 2-116263
 ZnS:Mn,Cu,Cl, amorphous and cryst. electrolum. film, elec. cond. props. meas. 2-87429
 ZnS,O_{1-x}:Cu,Sn, phosphor, electrolum. 2-57182
 ZnSe:Cu, photoluminesc. bands, ODMR study 2-56979
 ZnSe:Cu,Cl phosphor, activated, recombination centres, photoluminesc. study 2-87850

copper alloys

see also brass; copper compounds

- Al-Cu alloys, polycrystalline, second-order elastic moduli, US vel. study 2-72748
 bronze, Al, recovery and recrystn. during hot deform. 2-105202
 bronze-graphite antifriction material, sintered, struct. and mech. props. 2-67556
 constantan film, evaporated polycryst., hypersound attenuation and phase vel., 1-24 GHz 2-109907
 dilute, elec. field gradient, valence and size effect contribs. 2-104325
 dilute, free enthalpy of impurity-vacancy binding 2-81814
 dilute, impurity d-bands and core level binding energy shifts 2-56482
 dilute, pseudo Green's function theory for dil. alloys 2-71901
 dilute, US attenuation, impurity and dislocation effects 2-56096
 dilute alloys, electric field gradient 2-115718
 dilute alloys, electric field gradients, point defects, PAC meas. 2-93085
 dilute alloys, single vacancies and clustered interstitials, spontaneous recomb., elec. resist. meas. 2-76435
 fusion reactor first wall candidate 2-69833
 Hume-Rothery systems, cpd. form and s-d reson. role, terminal solubilities 2-116423
 low ductility failure and cavitation during grain boundary migration (Japanese) 2-105301
 MANGALLOY, elinvar type alloys, nonferromag., characts. (Japanese) 2-77881
 Monel 400, liq. metal and H embrittlement, influence of grain boundary P conc. 2-77930
 Mumetal film, RF sputtered, mag. props. and effect of deposition conditions 2-56899
 Nb₃Sn_{1-x}Cu_x, infiltration process prep., supercond. props. 2-61676
 neutron source target, large diameter target fabrication for RTNS-II using electroforming 2-85446
 oxide particle precipitation, thermodynamic calcs. 2-81969
 rare earth alloys, RbCu, lattice parameters and struct. characts., X-ray diff. study 2-91876
 rare earth-copper-gallium system, RCu₂-RGa₃ sections, phase form. and crystallographic characts. (Ukrainian) 2-83080
 shape memory alloys, aging 2-88144
 undercooled alloys, grain refinement obs. solute effects 2-62146
 Ag-Cu, ion sputtered, surface topography 2-105025
 Ag-Cu eutectic alloys, elec. contact performance, effects of microstruct. (Korean) 2-62239
 Ag-Cu films, plasmon excitation by fast electrons 2-92785
 Ag-Cu system, T₀ curve between liquid and α-phases, calc. and relevance to rapid solidification 2-105128
 Ag-Cu-Ti(Al)(Mg)(Ni), dendritic segregation, effect of alloying additions (Polish) 2-67338
 Al-Al₃Cu submicron eutectic thin-film struct. 2-104186
 Al-Cu, aged, imaging by FIM 2-55885
 Al-Cu, ageing, microcalorimetric studies 2-99457
 Al-Cu, fatigue crack opening stress meas., electron microscope technique 2-93719
 Al-Cu, Mn, Ti, Cd and Zr impurities effect on ageing, electron microscopy study (Russian) 2-93539
 Al-Cu, Portevin-Le Chatelier effect, rel. to solid solubility (Japanese) 2-105235
 Al-Cu, two-phase, inhomogeneity of plastic deform. and fracture modes 2-105245
 Al-Cu, θ' precipitates, coherency loss, dislocations, plastic deformation effects, internal friction study 2-71464
 Al-Cu, vacancy migration energy, quenching rate 2-86942
 Al-Cu (0.5 wt.%, 0.21 wt.%), cold-worked, low temp. internal friction peaks meas. 2-88125
 Al-Cu (1 at %), dislocation dynamics, NMR and TEM study 2-105215
 Al-Cu (1-6 wt.%), ingots, unidirectionally solidified from bottom, struct. 2-99417
 Al-Cu (10 wt.%), rheocast, microstruct. and mech. props. 2-99420
 Al-Cu (2.4 or 6 wt.%), primary dendrite arm spacing, solidification conditions effects (Japanese) 2-57342
 Al-Cu (2-6 wt.%), ingot, unidirectionally solidified from bottom; seeded by single crystals, struct. 2-99418
 Al-Cu (2.8 wt.%), lattice rotations, necking and localised deform. in FCC single crystals. 2-71546
 Al-Cu (3 wt.%), pre-precipitates, microstruct. obs. using lattice imaging technique 2-111186
 Al-Cu (4 wt.%), evolution toward equil. shape of θ' precip. by interface diffusion 2-72702
 Al-Cu (4 wt.%), Guinier-Preston zones, high resolution image calc. 2-71434
 Al-Cu (4 wt.%), laser surface hardening, acoustic emission monitoring 2-67602
 Al-Cu (4 wt.%), resistivity maximum during Guinier-Preston zone formation 2-82319

copper alloys continued

- Al-Cu (4 wt.%), stacking fault energy change during ageing (*Russian*) 2-115256
 Al-Cu (4 wt.%), θ' precipitates, lattice image obs. 2-76363
 Al-Cu (4 wt.%) single crystals, containing θ'' precipitates, cyclic stress/strain response 2-99495
 Al-Cu (6 wt.%), fatigue crack growth, near-threshold, load ratio influence 2-105332
 Al-Cu alloy, 2024-T851, growth of corner cracks at hole 2-105339
 Al-Cu alloy 1201, superplasticity conditions 2-62179
 Al-Cu alloy ingots, columnar equiaxed transition 2-105135
 Al-Cu alloys, AC anodising processes, expt. study 2-105366
 Al-Cu alloys, precip. hardening, sound wave vel. and US attenuation 2-88318
 Al-Cu alloys, study with quadrupole mass spectrometer (*French*) 2-111012
 Al-Cu alloys solidified under high press., Cu segregation (*Japanese*) 2-116449
 Al-Cu eutectic, superplastic, fracture strain and strain rate sensitivity (*Japanese*) 2-57459
 Al-Cu eutectic, superplastic, fracture behaviour (*Japanese*) 2-57460
 Al-Cu eutectic alloy, substrate temp. effect on rapid solidification 2-93498
 Al-Cu films, amorphous, crystallisation 2-71837
 Al-Cu films, X-ray microanalysis using STEM (*German*) 2-97876
 Al-Cu layer, evaporated, interface elec. resist. and Auger profiling 2-77160
 Al-Cu thin film with polyimide passivation, electromigration 2-98503
 Al-Cu thin films, large grain growth during recrystn. annealing, elec. resist. and TEM study 2-111203
 Al-Cu unidirectionally solidified ingots, inverse segregation (*Japanese*) 2-77816
 Al-Cu-Mg, 2024 alloy, ageing effects and plane strain constraint on ductility 2-67441
 Al-Cu-Mg, ageing, elec. cond. study using eddy current meas. 2-88230
 Al-Cu-Mg, high tensile strength, environmental fatigue strength and fracture (*Japanese*) 2-93612
 Al-Cu-Mg, prestrained by pulling, corrosion fatigue crack length distrib. (*Japanese*) 2-93613
 Al-Cu-Mg, transient creep 2-76574
 Al-Cu-Mg (1.3, 1.3 at.%), high temp. ageing, coherence loss, electron microscopy study (*Russian*) 2-93540
 Al-Cu-Mg (1.3, 1.3 at.%), high temp. ageing, coherent precipitation obs. (*Russian*) 2-99429
 Al-Cu-Mg (4.5, 1.5 wt.%), alloy 2124, H embrittlement 2-57468
 Al-Cu-Mg eutectic alloys, unidirectionally solidified, structure, and mech. props. (*Korean*) 2-67312
 Al-Cu-Mg-Mn-Si-Fe sheet, fracture toughness and crit. crack length, inhibiting layer effect 2-72826
 Al-Cu-Mg-Zn, acoustic emission during static deform. 2-72777
 Al-Cu-Mg-Zn-Cr powder, effect of compression by high omnidirectional pressure on struct. and props. 2-72654
 Al-Li-Cu-Zr-Cd system alloys, microstruct.-prop. rels. 2-111210
 Al-Li-Mn(Zr)(Mg)(Cu), corrosion behaviour, correl. with microstruct. 2-88253
 Al-Mg-Si-Cu-Cr, quench sensitivity, effects of Cu and Cr 2-105174
 Al-Mg-Zn-Cu, 7075-T7351, localised corrosion, environmental factors 2-67640
 Al-Mg(-Cu), water corrosion study by gas chromatography 2-88255
 Al-Ni-Co-Cu-Ti, Alnico 8 alloy, α - γ transformation, α phase precipitation, coercive force study 2-91858
 Al-Si-Ni-Mg-Cu, Ni, Mg, and Cu additions effect on tensile strength, hardness, abrasion and thermal expansion (*Korean*) 2-57418
 Al-Si(Cu) ingots, equiaxed cryst. formation by electromag. stirring (*Japanese*) 2-83105
 Al-Zn-Cu, electron diff. determ. of soft directions in cryst. lattice at premartensite stage 2-60925
 Al-Zn-Mg-Cu, high-strength, powder metallurgical, props. and heat treatment 2-72740
 Al-Zn-Mg-Cu, near threshold fatigue crack growth rates, effect of purity and dispersoid type 2-72840
 Al-Zn-Mg-Cu, precip., DSC study 2-99430
 Al-Zn-Mg-Cu, recrystallised grain size, effect of heating rate 2-57371
 Al-Zn-Mg-Cu, superplastic alloy, cavitation, influence of hydrostatic press. and multiaxial straining 2-116494
 Al-Zn-Mg-Cu (6.2, 2.5, 1.7 wt.%), fatigue crack growth, micromechanisms 2-105273
 Al-Zn-Mg-Cu alloy V95, fatigue crack kinetics, influence of water and its inhibiting 2-88282
 Al-Zn-Mg-Cu alloys, fractography of long-transverse SCC 2-77977
 Al-Zn-Mg-Cu-Cr, 7XXX series alloys, influence of microstruct. and strength on fracture 2-111293
 (Al-4Cu)-Al₂O₃ composite, SAP type, precipitation hardening 2-77836
 Au-Ag-Pd-Cu-Zn, dental white gold alloy, age hardening, X-ray, SEM and TEM study 2-67359
 Au-Cu, strain ageing, dynamic and static, strain depend. 2-67384
 Au-Cu, surface comp. ion scattering spectra study by Ar⁺ and He⁺ ion bombardment 2-71781
 Au-Cu alloy particles produced by Au and Cu smoke particles coalescence, electron microscopy study 2-93476
 Au-Cu long period ordered alloys, incommensurate statistical struct., high resolution electron microscopy 2-71397
 Au-Cu sputtered surface, AES, quantitative anal., backscattering correction factors 2-57221
 (Au_{1-x}Cu_x) Mn spin glass alloys, low-field magnetoresist. 2-82323
 B fibre reinforced Al-Cu-Mg-Mn, hot pressing, reaction between fibres and matrix 2-83068
 BaCuSn₂, cryst. struct., stability criteria (*German*) 2-65925
 Be-Cu-Fe, phase relations in Be rich section 2-111146
 C fibre reinforced Cu-Ti, C fibre surface struct. effect on strength 2-83067
 Cu₂Mg-type struct., at dias. in voids rel. to unit-cell dimensions 2-109747
 Ca-Cu, with trigonal-prismatic coordination, struct. study 2-103692
 CeCu₂, intermediate valence state of Ce, interconfiguration fluctuation model 2-76994
 CeCu₂-Ni₂, NMR and mag. susceptibility 2-66938
 CeCu₂Si₂, mixed valence, X-ray absorption spectra 2-76991
 CeCu₂Si₂, mixed valence state, elec. resist., mag. field and press. effects 2-110329
 CeCu₂Si₂, superconductivity 2-66691

copper alloys continued

- CeCu₂Si₂, valence state of Ce rel. to thermoclec. power, X-ray absorpt. spectra meas. 2-61448
 Ce(Ni_{1-x}Cu_x)₂ and Ce(Co_{1-x}Cu_x)₂, mixed valence, Ce³⁺-Ce^{4f} electronic transition, X-ray K line shift study 2-56497
 (Cn_{1-x}Co_x)₂MnSn Heusler alloy, mag. transition 2-72203
 Co-Cr, 2-93501
 Co-Cu, sintering, liq. phase, grain coarsening kinetics 2-111111
 Co-Cu (8.03 wt.%), high temp. oxidation, reaction kinetics 2-62258
 Co-Cu alloys, molten, activities and thermodynamic props. 2-99401
 Co-Cu-Mn(Ni), computer calc. of phase diagrams (*Japanese*) 2-105121
 Co-Fe-Cu-Hf-Sm, permanent magnet, microstruct., SEM study 2-92224
 Co-Fe-Cu-Zr-Sm(Ti), permanent magnet, microstruct., SEM study 2-92224
 Co-Ni-Al-Ti-Cu, porous, laser pulse treatment (*Russian*) 2-67355
 Cr-Cu, polycrystalline films, elec. resist. study 2-61614
 Cr-Cu film, mech. props., thickness depend 2-115628
 Cr-Cu films, elec. cond., annealing characts. and lattice distortion energy spectra 2-92783
 Cu (110)-Ni surface alloy, adsorption of O₂ and reaction with H₂ and CO 2-104161
 Cu Al and Cu-Al-Ni(Zn)(Si), β -type alloys, internal friction amplitude dependence meas. (*Russian*) 2-99469
 Cu, Cu-Mn(Al)(Ni), neutron irradi., 14 MeV, damage development and hardening 2-109841
 Cu Zr metallic glasses, electronic density of states, cluster calc. 2-71848
 Cu/Cr epitaxial film, ion mixing during RF sputtering deposition 2-82161
 Cu/Ni compositionally modulated films, magnetisation and Curie temp. meas. 2-87533
 Cu¹¹¹, defects obs. by channelling and perturbed $\gamma\gamma$ ang. correl. 2-81844
 Cu-3d transition metal dil. alloys, residual resist. calc. using exact soln. of linearised Boltzmann eqn. 2-98618
 Cu-Ag, amorphous films with high stability 2-104196
 Cu-Al, amplitude dependent internal friction and microplasticity (*Japanese*) 2-77859
 α -Cu-Al, DSC eval., energetics 2-83111
 Cu-Al, deform., effect of low-temp. irradi. 2-93564
 Cu-Al, dispersion hardened, struct. stability and resist. to deform. (*Russian*) 2-77872
 Cu-Al, elec. resist., 4.2 to 300K, over entire phase diagram 2-82321
 α -Cu-Al, electronic struct., piezoref. study 2-57052
 Cu-Al, impedance-match experiments using high intensity lasers 2-76588
 Cu-Al, modelling of low rel. erosion by spherical particles 2-86790
 Cu-Al, short-range order and coherent precipitation in α -phase (*French*) 2-57358
 Cu-Al, single-phase, electropolishing in H₃PO₄ 2-116617
 Cu-Al, surface electronic states, Tamm state, photoemission, LEED and Auger study 2-98712
 Cu-Al (10 at.%), single crystals, slightly deformed, dislocation multipoles struct., TEM 2-55975
 Cu-Al (10.1 wt.%), bronze, cast, characterisation using X-ray diff. and microscopy (*French*) 2-88104
 Cu-Al (3 at.%), dislocation struct. effect on flow stress, X-diff. and electron microscope study 2-91982
 Cu-Al (7.5 wt.%), fatigue crack growth rel. to plastic zone depth in air and vac. 2-77943
 Cu-Al (9.8-11 wt.%), dual-phase, struct.-prop. relationship, individual phases 2-77833
 Cu-Al (9.8-11 wt.%), dual-phase struct.-prop. relationship, alloy behaviour 2-77834
 Cu-Al lamellar eutectoid alloys, spheroidization by thermomech. treatment 2-93535
 Cu-Al single cryst., X-ray diffuse scatt. effects 2-81714
 Cu-Al-Fe, surface oxidation, suppression during laser surface treatment 2-83294
 Cu-Al-Mn alloys, influence of Mn on phase shifts (*French*) 2-99543
 Cu-Al-Ni, shape memory alloys, ageing effects 2-77852
 Cu-Al-Ni (14, 3.4 wt.%), shape memory alloy, shape strains assoc. with thermally-induced and stress-induced martensite 2-57350
 Cu-Al-Ni β -phase shape memory alloys, intergranular fracture origin 2-72838
 Cu-Al-Ni; loaded; internal friction meas. (*Russian*) 2-88116
 Cu-Al-O, liq. solubility of oxides, prediction 2-86889
 Cu-Al-Si-Co (2.8, 1.8, 0.4 wt.%), fine grained, creep 2-105219
 Cu-Al-Zu, damping capacity, quenching and Zn addition effects 2-116441
 Cu-Al(-Ti)(-Hf) powder, sputtered, internal oxidation to produce dispersion strengthened Cu (*Russian*) 2-67238
 Cu-Al(Ni), Cu Fermi surface changes due to alloying 2-82209
 Cu-Al(Ni), electronic struct. atomic approx. 2-104244
 Cu-Al(Si)(Sn)(Ga) solid soln., H₂ solubility, thermodynamic props. (*Russian*) 2-92207
 Cu-Au, threshold sputtering effects, ion scatt. spectroscopy study 2-82982
 Cu-Au, X-ray diffuse scatt. and ordering energy (*Russian*) 2-77618
 Cu-Au system, LI, struct., covalent contrib. to bond energy, order-disorder transitions 2-76359
 Cu-Au(Al)(Ni), dilute, Matthiessen's rule deviation at high temp. 2-115729
 Cu-Au(Be)(Pd)(Sb) dil. alloys, electron irradiated, solutes as nuclei for self-interstitial complexes 2-66061
 Cu-Au(Ni), deviation from Matthiessen's rule 2-110327
 Cu-based solid solns. with group I to VB solutes, at. size and lattice parameters 2-109748
 Cu-Be, AE generated during tensile deform (*Japanese*) 2-105232
 Cu-Be, multistage twinning of tetragonal two-phase blocks formed during ageing, γ' particle distrib. (*Russian*) 2-67348
 Cu-Be, TEM obs. of microstruct. evol. in simulated ion irradi. alloys 2-86745
 Cu-Be (1.4 wt.%), discontinuous precip., secondary reaction 2-105149
 Cu-Be (2 wt.%), quenched and aged, struct. and props. after deform. to large strains 2-93569
 Cu-Be (2 wt.%) alloy strips, residual stress profiles along rolling direction, X-ray diff. obs. 2-67367
 Cu-Be system, local vibr. levels, effect of long range stress fields, neutron scatt. study 2-71599
 Cu-Be-Co (13.1, 0.2 at.%), rapid solidification effect on ageing (*Japanese*) 2-105137
 Cu-Be-Ni (2 wt.%, 0.30 wt.%), ageing characts. (*Chinese*) 2-62147

copper alloys continued

- Cu-Bi (0.1 at.%), grain boundary embrittlement as function of boundary struct. 2-115246
 Cu-Bi(Ag), tilt grain boundaries with substitutional impurities, atomistic study 2-115247
 Cu-Cd, electrocrystn. on (111) plane of Cu single cryst. 2-62085
 Cu-Cd, struct. of alloy obtained on Fe single crystals by electrolysis (*Polish*) 2-67283
 Cu-Cd film on Cu (111), struct., electrolyte effect 2-61312
 Cu-Co, dil., mag. behaviour of Co impurities 2-115971
 Cu-Co, spin glass state form. investig. (*Russian*) 2-56875
 Cu-Co (2 at.%), precip. hardened, fatigue softening, precip. state depend. 2-72837
 Cu-Co alloys, precipitated particles, coarsening process (*Japanese*) 2-83125
 Cu-Co dilute alloy powders, mag. characts. scatter 2-72289
 Cu-Co single cryst., magneto specific heat capacity, superparamagnetic clusters 2-92944
 Cu-Cr, dil., mag. impurity effects studied by tunnelling in supercond. proximity layers 2-61660
 Cu-Cr, failure anal., impurity segregation, Auger spectra study 2-83205
 Cu-Cr, Kondo system, nucl. spin relax. of host metal, field depend. 2-116083
 Cu-Cr, thermodynamic study and phase diagram by mass spectrometry 2-56219
 Cu-Cr sputtered thin film, precipitate morphologies, annealing effects, electron microscope and EDX study 2-67353
 Cu-Cr(Fe), (-Mn), dilute alloys, ionic model, energy level splitting, NMR study 2-66932
 Cu-Cr(Al) alloys, SIMS, very small clusters study 2-77683
 Cu-Cu₂Mg system, metastable cubic phase form. by quenching from liq. state 2-99396
 Cu-Er(Zr)(Ti), dil., D permeation meas., trapping impurities effect 2-56254
 Cu-Fe, containing α -Fe particles, back stress hardening and static and dynamic hardening 2-67358
 Cu-Fe, Fe impurity mag. moment, cluster approx. calc. with k-dependent boundary conditions (*Russian*) 2-115972
 Cu-Fe, spin glass state form. investig. (*Russian*) 2-56875
 Cu-Fe alloys, solid soln. to precip. hardening transition, mech. props. 2-105172
 Cu-Fe dil. alloys, internally oxidised, elec. and mag. props. 2-98620
 Cu-Fe electron irradi., rad. induced segregation at internal sinks 2-86731
 Cu-Fe spin glass, elec. resist., Hall effect, mag. susceptibility, and EPR meas. (*Russian*) 2-82602
 α -Cu-Ga, electronic struct., piezoref. study 2-57052
 Cu-Ga (23.7 wt.%), migration kinetics of β - β_m transformation interface 2-72691
 Cu-Ga alloys, EXAFS associated with K-absorption discontinuity 2-99220
 Cu-Ga(Ge)(Ni), Fermi surface, density of electron states, positron annihilation study (*German*) 2-104231
 α -Cu-Ge, electronic struct., piezoref. study 2-57052
 Cu-Ge, Fermi surface of Hume-Rothery phases, positron annihilation study 2-61335
 Cu-Ge, heavy ion-irrad., vacancy loop form. 2-103863
 Cu-Ge, low dose fission neutron irradi. damage 2-103829
 Cu-Ge (8.7 at.%), shock-loaded, deform. twinning, time depend. and assoc. strengthening 2-88138
 Cu-Ge alloys, EXAFS associated with K-absorption discontinuity 2-99220
 Cu-Ge liq. alloy, activities of oxygen 2-66258
 Cu-In, dil., electron irradi., self-interstitial-impurity complexes, internal friction study 2-56007
 Cu-In, low energy ion bombard. enhanced diffusion, segregation, and phase transforms. 2-82991
 Cu-In, NMR study 2-104724
 Cu-M, polycrystalline, thermoelectric power meas. (*Russian*) 2-87230
 Cu-Mg alloy, disintegration kinetics upon natural ageing, X-ray diffuse scatt. study 2-77850
 Cu-Mn, dil., mag. impurity system, spin-resolved scatt., de Haas-van Alphen study 2-82563
 Cu-Mn, manganese, elec. resist. meas. to 100 kbar, press. gauge appl. 2-89735
 Cu-Mn, solid soln. hardened, crit. resolved shear stress, low temp. anomaly 2-93523
 Cu-Mn, spin glass, AC susceptibility, Mossbauer and anomalous Hall effect, mag. hysteresis, review 2-56866
 Cu-Mn, spin glass alloy, vol. and shape magnetostriiction 2-104674
 Cu-Mn, spin glass state form. investig. (*Russian*) 2-56875
 Cu-Mn (10 at.%), spin glass, lattice location of Mn 2-71489
 Cu-Mn spin glass, elec. resist., Hall effect, mag. susceptibility, and EPR meas. (*Russian*) 2-82602
 Cu-Mn spin glass, LF ESR, lineshape and temp. depend. 2-104692
 Cu-Mn spin glass, magnetisation saturation in high mag. fields, effect of RKKY interaction 2-82645
 Cu-Mn spin glass, magnetocaloric study of (H, T) phase diagram 2-56869
 Cu-Mn spin glass, remanent magnetisation reversal, mag. domain walls obs. 2-98893
 Cu-Mn spin glass alloys, origin of anisotropy 2-72211
 Cu-Mn spin glasses, cooperative phenomena at low temps. 2-92956
 Cu-Mn spin glasses, dynamics, muon spin relax. study 2-116106
 Cu-Mn spin glasses, spin struct., neutron polarisation anal. 2-110593
 Cu-Mn-Al, exchange anisotropy, hysteresis loops and coercive force study 2-66866
 Cu-Mn-Al alloy, influence of static tension on vibration damping behaviour (*Japanese*) 2-97416
 Cu-Mn(Au) spin glass, anisotropy energy at $T < T_g$ transverse susceptibility study 2-66829
 Cu-Ni, failure anal., impurity segregation, Auger spectra study 2-83205
 Cu-Ni, high temp. sputtering, ion-enhanced diffusion, grain boundary erosion (*Japanese*) 2-116317
 Cu-Ni, sputter-enhanced diffusion at high temps. 2-92279
 Cu-Ni surface (110), CO adsorption 2-56362
 Cu-Ni (Fe)(Ag), electron irradi., rad. induced segregation at internal sinks 2-86731
 Cu-Ni (40 at.%) alloy, ion bombardment induced subsurface composition modifications at elevated temps. 2-77692
 Cu-Ni (40 at.%) Ar^+ irradi., subsurface composition modification 2-74932

copper alloys continued

- Cu-Ni (40 wt.%), physisorbed 3He desorpt. kinetics, prefactors and compensation effect 2-98458
 Cu-Ni alloy, in seawater, AES study of corrosion mechanism 2-93662
 Cu-Ni alloy film deposition by RF sputtering, rate and chem. composition (*Japanese*) 2-87982
 Cu-Ni alloy particles, Ni impurity distrib., mag. props. study 2-76485
 Cu-Ni alloys, elec. and mag. props. at 4K 2-77018
 Cu-Ni alloys, friction and wear 2-88217
 Cu-Ni composition modulated foils, thermoelec. props. meas. 2-98629
 Cu-Ni compositionally modulated film, Arrott plots, computer anal. 2-72304
 Cu-Ni compositionally modulated thin film, mag. behaviour, struct. 2-98920
 Cu-Ni substitutional alloy, XVV Auger effect, theory 2-77630
 Cu-Ni thin film, static and dynamic mag. studies 2-72303
 Cu-Ni Zn system, ternary diffusion paths prediction 2-104082
 Cu-Ni/LaB₆ system, wetting and the contact reaction 2-71777
 Cu-Ni-Al-Fe, bronze, as-cast, morphology, crystallography and chemistry 2-111140
 Cu-Ni-Cr, spinodally decomposed, high cycle fatigue 2-67472
 Cu-Ni-Fe, superplasticity and form. of microduplex struct. (*Japanese*) 2-72769
 Cu-Ni-Fe disperse ferromag. particles, mag. state transition with charge in interparticle distance (*Russian*) 2-104665
 Cu-Ni-Mn, grain boundary reaction after ageing (*Japanese*) 2-77848
 Cu-Ni-Mn-Fe (45.19, 0.95, 1.40 wt.%) constant wire, elec. resist., press. effect (*Japanese*) 2-98623
 Cu-Ni-Sn (10, 6 wt.%), spinodal, high cycle fatigue behaviour 2-99532
 Cu-Ni-Sn (10.8 wt.%), grain boundary reaction after ageing (*Japanese*) 2-77849
 Cu-Ni-Sn (9, 6 wt.%), combined recrystn. and precip. 2-77840
 Cu-Ni-Sn spinodal alloy, tensile props. improvements by two-phase heat treatment 2-116478
 Cu-Ni(Cu-Ni-Fe), micromagnetic aged alloy, mag. susceptibility and elec. resist. meas. (*Russian*) 2-98885
 Cu-Ni(Pd) alloy, composition-modulated films, for studying stability and crit. phenomena in solid solns. 2-56402
 Cu-P solid solution, density and other props. meas. (*Russian*) 2-92206
 Cu-Pb, microstruct., mech., elec., and mag. props., depend on synthesis conditions 2-56748
 Cu-Pd, dilute, impurity system -electron struct., pseudopot. study 2-98575
 Cu-Pd, ordering process during continuous process (*Japanese*) 2-77820
 Cu-Pd alloys, effects of alloying and chemisorpt. on Auger line shape 2-77142
 Cu-Pd long period ordered alloys, incommensurate statistical struct., high resolution electron microscopy 2-71397
 Cu-Sb alloys, solid, thermodynamic props. (*German*) 2-88059
 Cu-Sb liq. alloy, activities of oxygen 2-66258
 Cu-Si, FCC alloy, partial grain boundary dislocations, periodic arrays 2-91968
 Cu-Si, rolled, microstruct. and texture 2-111204
 Cu-Si liq. alloy, cpd. forming, configurational entropy and regular associated model 2-97890
 Cu-Si thin films, simultaneous X-ray EDS meas. of thickness and composition (*Chinese*) 2-109630
 Cu-Sn, martensitic transform., influence of β -phase holding (*Russian*) 2-67333
 Cu-Sn, peritectic reactions and transforms, mechanisms 2-83087
 Cu-Sn, porous, laser pulse treatment (*Russian*) 2-67355
 Cu-Sn, sample prep. for TEM 2-69150
 Cu-Sn (10 wt.%), sintered, Cu oxide film influence on dimens. change (*Korean*) 2-116407
 Cu-Sn alloys, elec. and mag. props. at 4K 2-77018
 Cu-Sn whiskers, stress-excitation behavior, size and conc. depend. 2-61320
 Cu-Sn(Al)(Zn), Portevin-Le Chatelier effect rel. to solid solubility (*Japanese*) 2-105235
 Cu-Sn(100) surface struct., LEED obs. (*Japanese*) 2-115511
 α -Cu-Su-Al, anneal hardening (*Korean*) 2-116464
 Cu-Su-Cr, struct. and mech. props., Cr effect 2-112244
 Cu-Ti, amorphous, thermoelec. powers and resistivities 2-98611
 Cu-Ti, spinodally decomposed, high cycle fatigue 2-67472
 Cu-Ti, strength and ductility, 4 to 70K (*Japanese*) 2-105234
 Cu-Ti alloy, thin foil, microstruct. changes 2-71826
 Cu-Ti single crystals, model for anomaly in age-hardening 2-57368
 Cu-V-Si superconducting filament produced by glass-coated melt spinning 2-83066
 Cu-Zn, dil. alloy, electrical resist. anisotropy meas. 2-98617
 α -Cu-Zn, electronic struct., piezoref. study 2-57052
 Cu-Zn, grain boundary migration, diffusion-induced morphology 2-109811
 Cu-Zn, interdiffusion, ultrasound influence (*Russian*) 2-66302
 α -Cu-Zn, oxidation, low temp., XPs ESCA study 2-111352
 β -Cu-Zn, quenched, elec. resist. and hardness recovery on annealing 2-92568
 Cu-Zn (0.9-8 at.%), intrinsic diffusion coeffs. and vacancy flow factor 2-98350
 Cu-Zn Al, martensitic, rapid solidification effects 2-111175
 Cu-Zn alloys, grain boundary migration, diffusion-induced 2-81794
 Cu-Zn-Al, diffusivity of Zn, effects of Al 2-61193
 Cu-Zn-Al, martensite structures for various quenching conditions 2-93510
 β -Cu-Zn-Al, ordered, martensitic phases, premartensitic states and struct. (*Russian*) 2-62123
 Cu-Zn-Al, shape memory alloys, ageing effects 2-77852
 Cu-Zn-Al, shape memory alloys, review 2-88143
 Cu-Zn-Al, thermoelastic martensitic transform., nucleation, localised soft mode model 2-99427
 Cu-Zn-Al (32.23, 1.84 wt.%), martensitic transform. and shape memory effect (*Chinese*) 2-62122
 Cu-Zn-Al quenched alloys, martensitic structs., electron diffr. study 2-62124
 Cu-Zn-Al shape memory alloy, rapid solidification and assoc. effects 2-67322
 β -Cu-Zn-Sn (33.8, 3.1 wt.%), pseudoelastic polycryst., fatigue 2-67517
 Cu-Zr, amorphous, press. depend. of elec. resist. meas. 2-77016
 Cu-Zr, amorphous, thermoelec. powers and resistivities 2-98611
 Cu-Zr metallic glass, sputtering prep. and props. 2-82948

copper alloys continued

- Cu₄₀Zr₆₀ metallic glass, elec. resist. as function of press. and temp. 2-56547
- CuAl, electronic energy bands, Fermi surface 2-92448
- Cu_{0.9}Al_{0.1}, bulk and surface electronic struct. 2-104238
- Cu₂₈AlMn₇₂, solid soln. containing disperse ferromag. Cu₂MnAl inclusions, martensitic transition obs. (*Russian*) 2-98915
- β -CuAlNi, pseudoelastic, thermal effect in β_1 - β_2 transform. 2-111177
- CuAu, fast neutron irradiated, defect production, resist. meas. (*French*) 2-76510
- CuAu II, modulated struct., antiphase domains, Fourier synthesis 2-81715
- CuAu, ordered alloy, mechanical props. meas. (*Russian*) 2-88091
- CuAu type ferromagnetic alloy, atomic ordering in mag. field, magnetoelectric energy role (*Russian*) 2-92983
- CuAu vacuum deposited films, mech. twinning 2-98492
- CuAu-(111), vacuum deposited ordered thin films, mech. twinning obs. 2-82173
- Cu₃Au (111), surface state near Fermi level, photoelectron spectra 2-92712
- Cu₃Au, antiphase domain boundaries, electron diff. study 2-115245
- Cu₃Au, Cu⁺ ion irradi., displacement cascade dimensions, TEM and computer simulation study 2-86759
- Cu₃Au, displacement cascade damage, produced by fusion-neutron irradi. 2-85224
- Cu₃Au, elec. cond. and long range order (*Chinese*) 2-104342
- Cu₃Au, electron irradi., dislocation loops, electron microscope study 2-76449
- Cu₃Au, fast neutron irradiated, defect production, resist. meas. (*French*) 2-76510
- Cu₃Au, Fermi surface, de Haas-van Alphen meas. 2-104229
- Cu₃Au, fusion neutron disordering 2-85219
- Cu₃Au, ordered, displacement cascade damage, TEM obs. 2-103861
- Cu₃Au, ordered alloys, fundamentals mechanisms of neutron damage 2-103830
- Cu₃Au, ordered and disordered, containing SiO₂ particles, critical shear stress, Orowan stress 2-86778
- CuAu, electron irradi., dislocation loops, electron microscope study 2-76449
- Cu₃Cr₇₀, cryst. struct. (*German*) 2-76367
- CuFe dilute mag. alloys, g-factor, mag. field splitting of microcontact spectrum (*Russian*) 2-98527
- CuMn dilute mag. alloys, g-factor, mag. field splitting of microcontact spectrum (*Russian*) 2-98527
- CuMn spin glass, magnetisation, calorimetric determ. rel. to Maxwell relation 2-92926
- CuMn spin glass, magnetisation, calorimetric determ., rel. to Maxwell relation 2-92927
- CuMn spin glass, magnetisation, calorimetric determ., rel. to Maxwell relation 2-92928
- Cu₂MnAl, Heusler alloy, decomp. of β -phase 2-88086
- Cu₂MnAl, Heusler alloy, elec. and mag. props. 2-110326
- Cu₂MnAl(Sn), Stoner and spin wave excitation spectra, OPW calcs. 2-115990
- Cu₂MnIn(Al)(Sn) films, struct., mag. and transport props. 2-60889
- CuMnSb, elec. cond. meas. 2-104348
- Cu, Ni_{1-x}, surface segregation, electronic theory, local density of states 2-61152
- Cu₂NiSn, Heusler alloy, elec. and mag. props. 2-110326
- Cu₂NiZn, ordering alloy, mech. props. 2-105216
- CuPbM, (Ml=Ag, Ni, Sn, Sb), solid-liquid two-phase system, equilib. microstruct. and interface tensions (*French*) 2-61156
- CuPt(48.1 wt.%), press. induced variation of order-disorder transition (*Russian*) 2-56187
- Cu₂Sb, recrystn. and brittleness threshold temp. 2-99546
- Cu₂Si and Cu₃Si, recrystn. and brittleness threshold temp. 2-99546
- CuZnAl, martensitic, high resolution electron microscopy of boundaries 2-71473
- CuZr₂, electronic density of states for cryst. and amorphous phases 2-76909
- Cu₃₃Zr₆₇, metallic glass struct., tunnel states, computer model 2-81688
- Cu₅₀Zr₅₀, glass, partially crystallised, shear bands interactions with crystals, TEM study 2-71372
- Cu₅₇Zr₄₃, amorphous alloy, EXAFS spectra meas. and calc. 2-99222
- Cu₆₀Zr₄₀, amorphous, initial quench effect on thermal behaviour 2-91813
- Cu₆₀Zr₄₀ glass, electronic struct. 2-104236
- Cu₆₀Zr₄₀ metallic glass, bend testing, heat treatment effect on mech. props. 2-88322
- Cu₆₀Zr₄₀ metallic glass, as-quenched, low-temp. relax. under tensile stress, dilatometric obs. 2-91812
- Cu₆₈Zr₃₂, amorphous, elastic moduli, hardness and density 2-99472
- Cu₂Zr_{1-x} (25 \leq x \leq 70) metallic glasses, crystn. characs. 2-97928
- Cu₂Zr_{1-x}, metallic glass, electronic struct. calc. 2-98529
- Cu₅₀Zr₄₀Fe₁₀, alloy, thermoelec. powers and resistivities 2-98611
- Cu₆₀Zr₄₀O₂, alloy, polyphased microcryst.-amorphous, high resolution imaging 2-71356
- Cu₆₀Zr₄₀, amorphous, EXAFS study, struct. characs. 2-110978
- Dy-Cu amorphous films, crystallisation, TEM and electron diff. study 2-92415
- Dy_{0.5}Cu_{0.5}d₄₈, amorphous, random anisotropy props., magnetisation meas. 2-72271
- Er(Mn_{1-x}Cu_x), quasibinary system, HCP struct., stability, Cu effects investig. 2-115179
- EuCu₂Si₂, valence fluctuation and Cu NQR temp. depend. 2-56512
- Fe-Cu, precipitation during annealing, after low temp. electron irradi. (*Russian*) 2-116445
- Fe-Cu, sintered, mech. props., effect of steam treatment and age-hardening 2-88097
- Fe-Cu, sintering, liq. phase, grain coarsening kinetics 2-111111
- Fe-Cu, thermal expansion of inclusions 2-61180
- Fe-Cu binary alloy, selective oxidation, optical, X-ray and SEM obs. 2-99605
- Fe-Cu wire reinforced Cu-Fe alloy, age hardening (*German*) 2-111192
- Fe-Cu-Ni (2.2 at.%), ϵ -Cu precip. on interphase boundaries, orientation relationships, electron microscopy study 2-72707
- Fe-Ni-Al-Co-Cu-Ti, thermomag. treatment, struct. form. and mag. props. 2-62152
- Gd-Cu, charge transfer and isomer shift, ¹⁵⁴Gd Mossbauer spectra 2-104777
- GdCu₂, mag. and crystallographic props., Mossbauer effect, H absorption effects 2-82758

copper alloys continued

- GdCu_{1-x}Ga_x, mag. order 2-98845
- Hf-Cu-Al, Laves phase, mag. susceptibility (*Russian*) 2-72142
- HoCu₂, magnetisation, elec. cond., thermopower, paramagnetic-antiferromag. transition 2-77327
- In-Cu, liq. binary system, O diffusivity and thermodynamic props. 2-86907
- In-Sn-Cu system, dispersion-hardening pastes, phase comp. 2-111143
- KbCu₂Si₂, mixed valence cpd., optical absorpt. signature near 20 meV 2-57111
- La₇₀Cu₃₀, amorphous, penetration depth, metallurgical phase separation 2-87446
- LaCu_{0.56}Sn₂, cryst. struct., stability criteria (*German*) 2-65925
- Mg-Mg₂Cu-AgMg system, partial phase diagram, eutectic and peritectic reactions 2-57334
- Mn-Cu, FCC to FCT transform., crystallographic and morphological obs. 2-57347
- r-Mn-Cu, single-domain antiferromagnet, mag. struct. study 2-87478
- MnCu, spin glass, nonlinear susceptibility 2-72215
- γ -Mn₈₂Cu₁₈, thermal-excitation phonon spectra near FCC \rightleftharpoons FCT transform. 2-56126
- (Mn_{1-x}Fe_x)_{0.95}Cu_{0.05}, γ -phase, damping capacity and Young's modulus 2-57394
- γ -Mn₈₇Fe₁₀Cu₃, thermal-excitation phonon spectra near FCC \rightleftharpoons FCT transform. 2-56126
- Nb-Cu, superlattice, sputtered, struct., elec. cond. and supercond. props. 2-61311
- Nb₂Sn-Cu composites for fusion magnets, in-situ development 2-75033
- Ni-Al bronze cast, detection of selective phase corrosion by AE 2-67631
- Ni-Co-Cu, electrodeposition from citrate bath 2-116396
- Ni-Cu, diffusion coeff., conc. dependence, X-ray study (*Russian*) 2-98329
- Ni-Cu, L₁₀, L₁₀₁ X-ray absorpt. spectra and density of states, KKR CPA calc. 2-99223
- Ni-Cu, ordered alloys, magnetisation and electronic struct. calc. 2-82576
- Ni-Cu liq. alloys, thermodynamic props. and solubility limits of O₂ 2-56199
- Ni-Cu-Al, FMR and mag. props. 2-77384
- Ni-Cu-H solid soln., phase equilibria and magnetisation meas. (*Russian*) 2-98906
- Ni₆₅Cu₃₅, electron irradi., Frenkel defects, elec. cond. (*German*) 2-98080
- Pd-Cu (110), chemisorbed CO, Pt core level shifts, XPS study 2-77143
- Pd_{77.5}Cu_{22.5}Si_{16.5}H, H in amorphous alloys 2-81963
- Pd_{77.5}Cu_{22.5}Si_{16.5}, metallic glass, diffusion rates of Au 2-104057
- Pd_{77.5-x}Cu_{22.5}Si_{16.5}Fe_x, amorphous, elec. and mag. props. 2-72169
- Pd_{0.77}Si_{0.165}Cu_{0.06}, amorphous, acoustic wave attenuation and vel. change, 0.05 to 90K 2-66610
- Pd₈₀Si_{14.8}Cu_{5.2} eutectic, laser beam interaction 2-99435
- PrAg_{1-x}Cu_x, quadrupole interactions and struct. instabilities, neutron diff. and magnetisation study 2-71943
- Pt-Cu(Au), thermal and fast neutron irradi., Stage II recovery 2-103831
- Pt_{0.99}Cu_{0.02}, surface segregation and surface electronic interactions, UPS and AES study 2-88226
- Rh_{0.95}Cu_{0.05}, surface segregation, AES study 2-110108
- Sm-Co-Cu-Fe-Zr, permanent mag., struct., sintering and annealing effects (*Russian*) 2-88226
- Sm(Co, Cu, Fe, Zr)_{7.4}, permanent magnet, precip. hardened, microstruct. 2-71657
- Sm(Co, Cu, Fe)_{6.8-7.2}, cast hard mag. alloys, fine struct. after heat treatment 2-99465
- Sm₂(Co, Fe, Cu, Zr)₁₇, sintered permanent magnets, coercive force and struct., Sm content effect 2-72278
- Sm₂(Co, Fe, Cu, Zr)₁₇, permanent magnet, coercivity 2-72284
- Sm(Co_{0.65}Cu_{0.35})₁₃, (x=4.5, 5.6, 6), coercive force, precipitation effects (*Russian*) 2-92961
- Sm(Co_{0.86}Cu_{0.14})₇, struct. and coercivity, heat treatment effects (*Russian*) 2-88227
- Sm(Co_{0.66}Fe_{0.21}Cu_{0.10}Zr_{0.03})_{7.4}, struct. transformations and coercive force meas. (*Russian*) 2-98913
- Sm(Co_{0.69}Fe_{0.22}Cu_{0.07}Zr_{0.02})_{7.22}, magnetic hardening 2-72283
- Ti-Ni-Cu, phase diagram in Ti-rich region (*Japanese*) 2-105119
- TiB_{2-x}Cu_x, magnetisation meas. in low and high fields 2-56839
- Ti₅₀Ni₄₀Cu₁₀, first-order martensitic transforms., and contrib. to shape memory effect (*Russian*) 2-67336
- Ti₅₀Ni_{50-x}Cu_x, martensitic transform., TEM obs., compositional depend. of one-third reflections from matrix 2-111173
- Ti₅₀Ni_{50-x}Cu_x, martensitic transform., TEM obs., morphology and crystal struct. 2-111174
- UNi_{1-x}Cu_x, band struct., photoemission study 2-104240
- UNi_{1-x}Cu_x, intermediate valence theory, lattice const. and paramag. susceptibility 2-76988
- V-Sn-Cu system, phase comp., stoichiometry and homogeneity, microstruct., X-ray and microhardness study 2-66172
- W-Cu, liq. phase sintering, W particles rearrangement mechanism (*Korean*) 2-116406
- W-Cu(Ag), powder metallurgy factors affecting elec. contact props. 2-116408
- Y-Cu-Ga system, phase form. and crystallographic characs. (*Ukrainian*) 2-83080
- Y(Co,Cu)₅, metastable character, decomposition behaviour, precipitation 2-67342
- Y(Co_{1-x}Cu_x)₅, struct. and mag. props. 2-91874
- YbCuAl, mixed valence cpd., anomalous NMR shifts 2-56958
- YbCu₂Si₂, mixed-valence cpd., paramag. neutron spectra meas. 2-104577
- YbCu₂Si₂, valence fluctuation and Cu NQR temp. depend. 2-56512
- YbNi_{1-x}Cu_x, mixed valence states, cryst. struct. and transformations, X-ray study 2-104319
- Zn-Cu, peritectic cooling curves interpret. 2-105118
- Zr-Cu, crystalline and amorphous, enthalpy effects 2-61174
- Zr-Cu metallic glass, density of states and comp. short range order, NMR and mag. study 2-104726
- Zr-Cu-Cr-Fe, phase diagram, isothermal section of Zr corner 2-83093
- Zr₁Cu_{1-x}, amorphous, supercond., thermal props. 2-98803

copper compounds

- see also copper alloys
- acetate, Cu negative ion emission by mol. sputtering 2-57229
- annihilation radiation triple coincidence meas. 2-77437
- bis-methylammonium copper bromochloride, moment direction, NMR study 2-115974
- chalcogenides, mechanochemical synthesis, explosions (*German*) 2-62053

copper compounds continued

- chromite catalysts, XPS struct. elucidation and correl. with catalytic activity 2-105038
 complex, bis-(adiponitrile)copper(I) nitrate, orientational disorder of diatomic or polyatomic ions 2-81723
 copper (II) complex, with N,N-dimethylpyruvamide 4-phenylthiosemicarbazone, cryst. and mol. struct. 2-81776
 copper calcium acetate hexahydrate, linear chain complex, EPR spectra, temp. depend. 2-61756
 copper phthalocyanine, chlorinated, molecular crystal, quantitative characterisation, radia. tion damage imposed limits 2-66071
 copper phthalocyanine, powder pattern, g and A tensors, EPR obs. 2-80684
 copper phthalocyanine crystals, lattice imaging 2-65819
 halide ligand hyperfine interactions, MO calcs. 2-70139
 halides, cryst. growth techniques and defect chemistry, review 2-83015
 halides, optical deform. pot., absolute Raman scatt. efficiency 2-104835
 halides, spin-orbit splitting, volume, depend. 2-104322
 lysozyme-Cu²⁺ complex, hen egg-white, ENDOR study 2-62561
 phthalocyanine thin layers, electron irradi., transient currents 2-110508
 rare earth compounds, R₂Cu₂O₃ (R=Lu, Yb, Tm, Ho, Er, Dy, Tb, Y), cryst. struct. data 2-81757
 TCNQ salts of Cu chelates, highly conducting 2-92581
 Tutton salts, nuclear and electron spin-lattice relax. times meas. 2-82741 (urea), CuO₃H₂O, cryst. struct. and IR spectrum 2-81773
 Ag_{1-x}Cu_xI, polymorphic transition, enthalpy change, differential scanning calorimetry and X-ray diff. obs. 2-60914
 AgI-CuI solid soln., influence of Cs⁺ ion on co-ionic cond. 2-71713
 CaO FeO FeS-Cu₂S melts for electrothermal metallography elec. cond. mechanism, 1000-1210°C 2-104378
 CdCl₂-CuCl photochromic glass, colloidal darkening mechanism 2-97135
 Cd₂Cu₂(Fe₂O₄)₂, mag. props., hyperfine interaction, Mossbauer study 2-116103
 CdIn₂S₄ spinel, lattice thermal expansion, 28 to 685°C 2-104033
 CdS/Cu₂S solar cells, reactive sputtering, apparatus surface conditioning effects 2-83020
 CdS-Cu₂S solar cell, physics of operation and performance 2-111553
 CdS-Cu₂S solar cells, anal. of dispersion in the measured capacitance 2-99808
 CdS-Cu₂S solar cells preparation and anal. 2-78220
 CdS-Cu₂S thin film solar cells, electron affinity difference 2-67858
 CdS-CuInSe₂ solar cells, annealing and interface effects, EELS, AES, SIMS and XPS study 2-83491
 CeCu₂Si₂, high press. superconducting transition (Russian) 2-82511
 Co_{0.9}Cu_{0.1}Cr₂S₄, Se₂, ferrimag. semicond., elec. cond. and thermoelec. coeff. meas. 2-115763
 CrBr₃, domain wall magnetisation temp. depend. (Russian) 2-87545
 CsCu₂Cl₃, solid electrolyte, cond. and struct. props. 2-82016
 CsCu₂M₂O₇ (M=Nb, Ta), intergrowth of hexagonal and perovskite-like struct. 2-65962
 Cs₂Cu₂Se₄, fragment framework struct. (German) 2-65958
 Cu (II) complex, 5-benzylthio-1,2,4-triazole, IR obs. 2-113991
 Cu (II) complex, bis(N-benzylpyridoxalaminato) copper (II), struct., ESR and X-ray obs. 2-54883
 Cu (II) ions intercalated in alpha- and gamma-Zr(HPO₄)₂ compounds, X-ray induced photoreduction rates 2-93761
 Cu clusters, inadequacy of symmetry restricted HF theory in determ. s- and d-like ionisation pots. 2-102668
 Cu complex, 2-fluoro- and 4-fluoro-2-nitroaniline copper(II), mag. moments, IR and visible study 2-93203
 Cu complex, (L-proline-L-alanine)Cu(II).2.5 H₂O, crystal struct., X-ray determ. 2-116878
 Cu complex, [Cu(bipyridyl)(OH)](SO₄·4H₂O), triplet state, zero-field splitting, EPR obs. 2-80687
 Cu complex, alkanediammonium copper tetrachloride, EPR obs. 2-82704
 Cu complex, α-bis(N-methylsalicylaldiminato)Cu(II), incommensurate phase, X-ray study 2-97975
 Cu complex, bis(2,4-pentanedionato)Cu(II) single cryst., ⁶³Cu and ⁶⁵Cu ENDOR 2-77420
 Cu complex, bis(anilinium) copper tetrachloride, two-dimens. spin diffusion, EPR and ferromag. reson. study 2-77364
 Cu complex, bis(cresatinium)tetrachlorocuprate(II), single cryst., X-ray absorpt. study 2-87899
 Cu complex, C(II) α-thiopicolinanilidate, X-ray diff., crystal struct. 2-76396
 Cu complex, copper chloride dimethyl sulphoxide, pseudo one-dimens. system, antiferromag. reson. study 2-77381
 Cu complex, Cu-olefin co-condensation complex chemistry, optical spectra in Ar matrix 2-80641
 Cu complex, CuCl₂·DMSO, one-dimens. Heisenberg ferromag., spin waves, neutron scatt. study 2-92892
 Cu complex, CuCl₂·TMSO, Heisenberg 1-D ferromag., single cryst. mag. studies 2-66802
 Cu complex, Cu(II)-1-(2-pyridylazo)-2-naphthol far-IR studies by metal isotope technique 2-110864
 Cu complex, Cu(2,5-diphenylloxazole)₂(ClO₄)₂·4H₂O ground state wavefunction and EPR 2-82702
 Cu complex, ethylenebisguanidine copper(II) chloride monohydrate, tetradentate ligand coordinated, EPR study 2-110623
 Cu complex, imidazolate-bridged Cu(II), mag. exchange 2-87488
 Cu complex, N,N'-bis-silycloyl-hydrazine, steric struct. determ. using supercond. electron microscope 2-115214
 Cu complex, triphenylphosphine Cu(I) complexes, ³¹P NMR, quadrupole effects 2-72360
 Cu complexes, ESR and optical absorpt. 2-98943
 Cu I complexes, luminesc. spectra, decay times and intensities 2-80716
 Cu II mixed ligand chelate complex, single cryst., ⁶³Cu and ³¹P ENDOR study 2-69592
 Cu, Rb₂Cu₁₄Cl₁₉/Rb₂Cu₁₁Cl₁₃/Cu_{1.75}Se solid electrolyte cell electrochemical behaviour 2-78198
 Cu²⁺ compounds Cl NMR, elec. quadrupole interactions (Japanese) 2-70294
 Cu/Ni complex, bis-(diethylthiocarbamate) copper/nickel, ¹³C and ¹⁴N ENDOR study 2-98996
 Cu-As-Se glassy films, photoconductivity and optical absorpt. (Russian) 2-104516
 Cu-C reactively sputtered selective surface for evacuated collectors 2-102890
 Cu-Fe-Se system, phase equilibria and stability field, X-ray, electron microprobe and DTA study 2-116429
 Cu-Sb, chemiepitaxial layer formation, during reactive diffusion 2-76849

copper compounds continued

- Cu-TCNQ films, reversible field induced phase transition 2-66597
 Cu_{2-x}-CdS photoconverters, electron microprobe analysis and degradation 2-73113
 CuAgH₃(AsO₄)₂, cryst. struct. study (French) 2-71401
 CuAlGeSe₄, energy gap, visible-UV absorpt. 2-104904
 CuAlO₂, delafossite-type cpd., cryst. struct. parameters 2-60942
 CuAlSnSe₄, energy gap, visible-UV absorpt. 2-104904
 Cu₃As₂, elastic and mag. props., temp. depend., phase transform. 2-116009
 Cu_{2-x}B_{1-x} preparation by solid-phase mass transport, elec. props. 2-111066
 Cu₃B₂O₃ CC, improper ferroelectric transition 2-72434
 Cu₂BiS₆, cubic, modulated struct. 2-91900
 CuBr, excitonic mol. luminesc. at 4.2K, time depend. 2-67101
 CuBr, isotopically invariant Dunham coeff. 2-85643
 CuBr, optical constants and exciton spectrum (Russian) 2-67131
 CuBr, Raman study of exciton-polariton dispersion relation 2-93180
 CuBr, short-pulse high-repetition-rate laser, for bathymetry 2-90917
 CuBr TE laser, parametric study 2-86000
 CuBr-Ag system light-sensitivity spectra, correl. with Cu halide absorpt. spectra 2-67079
 CuBr-CuI system, physicochem. props. 2-111512
 CuBr₂ aq. solns., local struct., EXAFS study 2-71331
 CuCl aqueous soln., Cu²⁺ coordination, neutron diff. study 2-60862
 CuCl, biexciton reson. linewidth, collision broadening or not? 2-87155
 CuCl, deep impurity level theory 2-66486
 CuCl, diffusion coeffs. of exciton and excitonic mol., picosec. transient grating spectroscopy 2-61926
 CuCl double-pulsed laser, temp. effects 2-102773
 CuCl, electron-hole plasma form. after subpicosec. photoexcitation 2-99175
 CuCl, excitonic mol. broadening under giant two-photon excitation, circular dichroism and light depolarisation study 2-66454
 CuCl, excitons, wave-number dependent oscillator strength and longitudinal-transverse splitting calc. 2-98549
 CuCl films on mica, MBE 2-115622
 CuCl high-power pulsed lasers with flowthrough design 2-60112
 CuCl in glassy matrix, growth kinetics of microcrystals obs. 2-103661
 CuCl, isotopically invariant Dunham coeff. 2-85643
 CuCl laser, operating characts., Na and K addition effects 2-108862
 CuCl, molten, partial struct. factors, neutron diff. determ. 2-97902
 CuCl, self-induced polarisation rotation effect of elliptically polarised beam 2-108936
 CuCl, solid-state phase transitions under hydrostatic press. up to 12.8 GPa 2-109969
 CuCl, thermal cond. and sp. ht., temp. and press. depend. 2-115478
 CuCl thin film, probe biexcitons, momentum space condensation, luminesc. study 2-61363
 CuCl, two-photon absorpt. study of Γ_1 valence band 2-104909
 CuCl-Ag system light-sensitivity spectra, correl. with Cu halide absorpt. spectra 2-67079
 CuCl, aq. solns., vibr. dynamics, Raman scatt. study 2-57085
 CuCl₂, bleaching action in cinefilm processing (Russian) 2-64151
 CuCl₂, valence band photoemission spectra, electron correl. effects 2-72605
 CuCl₂³⁻, electronic struct., multiple scatt. Xalpha calc., harmonic force const. 2-108376
 CuCl₂·2H₂O, antiferromagnetic resonance, characteristic fields and spin flop transition 2-104711
 CuCl₂·2H₂(D₂O), antiferromag. resonance freq., mag. susceptibility (Russian) 2-98966
 Cu₂Co₂-O₈, props. of spinel prep. at low temps. and normal press. 2-55945
 Cu₂Cr₂M₂S₄ (M=Sn, Ti), mag., EPR, and Mossbauer meas. 2-98840
 Cu₂Cr₂PS₄, cryst. struct. and mag. props. 2-60946
 Cu₂Cr₂S₄ spinel, spin polarised electronic band struct. 2-71861
 xCu₂Cr₂S₄(1-x)Ga_{0.67}Cr₂S₄ (0≤x≤0.4) semiconducting spinel, spin-glass state 2-68840
 Cu₂Cr₂Se₄InSe₃(In₂Se₃)(CuInSe₂) solid soln. form., DTA and X-ray phase anal. 2-109993
 Cu₂Cr₂Se₄-Br₂ spinel, elec. cond., NMR study 2-56954
 Cu₂Cr₂Se₄(Te₂), spin polarised electronic band struct. 2-104245
 CuFeO₂, Sternheimer quadrupole factors 2-98603
 CuFe₂O₄, bonding, EXAFS study 2-99226
 CuFe₂O₄, cation distrib. and hyperfine parameters, Mossbauer study 2-99010
 CuFe₂O₄ ferrite, elec. cond. mechanism, phase transformation, heat treatment effects 2-71981
 Cu₂Fe_{1-x}O₄ cubic spinel system, Mossbauer spectrum, electronic props. 2-104775
 CuFeS₂, electronic struct., X-ray emission and XPS study and Xα calc. 2-92455
 CuGaGeSe₄, energy gap, visible-UV absorpt. 2-104904
 CuGaIn_{1-x}S₂ solid solns., growth and props. 2-83017
 CuGa₂In_{0.2}Se₂, thermal expansion meas. 2-92239
 CuGaIn₂Se₄, solid solns., phase diag., cryst. growth and dislocation struct. 2-86836
 CuGaS₂, band gap temp. depend., exciton reflection spectra 2-104252
 CuGaS₂, luminesc. and refl. spectra of free excitons 2-104963
 CuGaS₂, nonlinear cryst. refractive index, temp. depend. 2-61856
 CuGaSe₂(Te₂), specific heat, Debye temp., entropy 2-92231
 CuGaSnSe₄, energy gap values, temp. var., optical refl. study 2-56438
 CuGaSnSe₄, energy gap, visible-UV absorpt. 2-104904
 CuGaTe₂, LPE growth on Bi soln. and heterostruct. elec. props. 2-62084
 Cu₂GeSe₄, thermal cond., thermal diffusivity and elec. cond. 2-104090
 CuH, RKR turning points of A(Σ⁺), B(Π(0⁺)) and X(Σ⁺) states, pot. energy curves 2-70165
 Cu(H₂PO₃)₂, elec. cond., temp. depend., effect of decomp. and NaHSO₄ additive 2-71967
 Cu₆Hg₂As₂S₁₂, aktoshite, cryst. struct., isotypy with Cu₆Zn₂As₂S₁₂ 2-103727
 Cu₂HgI₄, ionic cond., Raman spectra and phase diagram, press. depend. 2-115450
 Cu₂HgI₄, solid electrolyte, attempt. freq. for ion hopping, Raman spectra 2-116176
 CuI, cryst. struct. determ. 2-76375
 CuI, epitaxy on Cu(111), growth by chemical reaction with I₂ vapour 2-76844
 Cu(I) phosphite complexes, tetrahedral, NQR obs. 2-80661

copper compounds continued

- CuI, single cryst., luminesc. study 2-67104
 CuI single crystals, exciton luminesc. 2-61964
 CuI, theory of superionic transition 2-66200
 CuI-Ag system light-sensitivity spectra, correl. with Cu halide absorpt. spectra 2-67079
 Cu(II) complexes with amino alcohols, NQR study 2-116086
 Cu(II) diethyldithiocarbamate chelate, struct., XPS obs. 2-75355
 CuI/ZnII bis-(diethyl-dithiocarbamate), ^{13}C ENDOR study 2-77418
 CuIn/Se₂, semicond., absorption coeff., impurity effects, IR spectra study 2-77475
 CuInGeSe₄, energy gap, visible-UV absorpt. 2-104904
 CuInS₂, electron-beam induced effects, Auger spectroscopy study 2-103824
 CuInS₂ film, ion beam sputter deposition, substrate heating effects, TEM and Rutherford backscatt. study 2-111073
 CuInS₂, force consts. and phonon freq., spectral moment calc. from sp. ht. data 2-98224
 CuInS₂, liquidus curve meas. and zone melting cryst. growth 2-105065
 p-CuInS₂, photocond. spectrum obs. 2-56643
 CuInS₂, photoluminescence, broad band emission, defect electron states 2-93249
 CuInS₂, photoluminescence, exciton and near edge emission, energy gap 2-93250
 CuIn₂S₈ spinel, thermal expansion coeff., 28 to 685°C 2-104032
 CuIn₂S₈, two-temp. synthesis, props. 2-77725
 CuInS₂(Se₂)(Te₂), mag. susceptibility, 4.2 to 300K 2-66761
 CuInSe₂, amorphous and crystalline, optical props. 2-87889
 CuInSe₂ grown onto CdS by molecular beam epitaxy, resistivity control using ion gauge beam flux monitor 2-99344
 CuInSe₂, impurity states, after annealing, elec. cond. study 2-66475
 CuInSe₂, LPE heteroepitaxial growth on ZnSe from In soln. 2-57310
 CuInSe₂ single cryst., fundamental absorpt. band edge 2-77538
 CuInSe₂, spray pyrolysis and heat treatment, for photovoltaic appl. 2-71843
 CuInSe₂, thin film, prep. by RF sputtering, optical props. 2-110962
 CuInSe₂-Fe, EPR study, thermal treatment effects 2-98945
 n-CuInSe₂/polysulfide, photoelectrochem. solar cells 2-67854
 CuInSe₂-CdS solar cells with CdS window layer, high efficiency operation, review 2-105570
 CuInSe₂-CdS solar cell, interface formation, comp. and stability, XPS, EELS and AES study 2-111554
 CuInSe₂-Mo interface, capacitance-voltage and EBK study 2-87385
 CuIn₂Se₃, cryst. struct. determ. 2-86648
 CuIn₂Se₃, optical props. near fundamental absorpt. edge 2-99151
 CuInSnSe₄, energy gap, visible-UV absorpt. 2-104904
 CuInTe₂, electrical characts. 2-92648
 CuInTe₂, neutron irradi., elec. props. and defect levels 2-71982
 CuInTe, single cryst., photocond. and electronic struct., impurity levels 2-115814
 CuInTe₂, specific heat, Debye temp., entropy 2-92231
 CuInTe₂, two-phonon absorption spectra meas. 2-93197
 CuInTe₂-Zn(Cd), elec. props., hole mobility and conc., annealing effects 2-87279
 CuIn₂Te₃, cryst. struct. and microstruct., electron microscopy study 2-115198
 CuK₂(SO₄)₂·6H₂O/⁴He, phonon bottleneck, thermal resist. meas. 2-76760
 CuMoO₄ (M=Fe, Cr, Ga), characterisation and chem. bonding, X-ray absorption study (French) 2-82955
 CuM₂O₄ (M=Fe, Cr, Ga), characterisation and chem. bonding, X-ray absorption study (French) 2-82955
 Cu₂Mg_{1-x}Fe_xO₄, spinel ferrites, ionic-covalent bonding, X-ray diffr. and absorption chemical shift study 2-65919
 Cu_{1-x}Mn_xFe₂O₄, spin struct. and hyperfine fields, Mossbauer study 2-66959
 CuMn₂O₄, cation distribution, X-ray diffr. study 2-60958
 Cu_{1-x}Mo_xS₄, sp. ht. in high mag. field, 2 to 15K, thermal relax. calorimetry study 2-89716
 Cu₂MoS₈, sputtered film, surface topography, SEM study 2-92321
 Cu₂MoS₈, superconductive props. 2-66689
 Cu_{1-x}Mo_xS_{8-y}Se_y, Chevrel phase cpd., elec. resist. and supercond. 2-92799
 Cu_{1-x}Mo_xSe₈(Se₈), supercond crit. props., depend on hexagonal cell vol. 2-61643
 Cu_{1-x}Mo_xS_{8-y}Te_y, Chevrel phase cpd., elec. resist. and supercond. 2-92799
 β-CuNCS, 2H polytype, prep. and cryst. struct. refinement 2-71412
 Cu(NH₄)₂(SO₄)₂·6H₂O, crystal growth from aq. soln., mag. field effect 2-109711
 Cu(NO₃)₂·5H₂O, cryst. struct. PMR and DMR study 2-81717
 Cu_{1-x}Ni_xFe₂O₄, spin struct. and hyperfine fields, Mossbauer study 2-66959
 CuO, ^2I ground state, centrifugal distortion in spin-orbit coupling 2-64956
 CuO, 3d, L₂₃ edge, EELS 2-108636
 CuO and Cu₂O, semiconducting oxide films, photoelectrochem. invest. 2-105363
 CuO doped ceramic glaze, alkaline substitution and trivalent ion additions effect on Pb²⁺ release 2-77955
 CuO doped NiO-Mn₂O₃ NTC thermistor material, effect of CuO on elec. props. 2-66545
 CuO, electron energy loss study of K near-edge fine struct. of O 2-104248
 CuO, IR Y²⁺X²⁺ transition, laser induced fluoresc., interpretation of X²⁺ ground state 2-64977
 CuO, in solar absorbers, optical consts. 2-93142
 CuO, resonant photo- and Auger emission at 3p threshold 2-108434
 p-CuO:Li, conduction and valence band edge positions, photoelectrochem. determ. 2-56440
 CuO-B₂O₃-K₂O glass, ¹¹B NMR and mag. susceptibility 2-104587
 CuO-CaO-P₂O₅, glass, IR absorpt. spectra, CuI addition influence 2-116213
 CuO-NiO-MgO system, X-ray powder diffr. study at 1000°C 2-86636
 CuO-ZnO-Al₂O₃ system, reduction process, rel. to catalysts for methanol synthesis 2-83373
 Cu₂O, Ar matrix isolated, laser induced fluoresc. obs. 2-65039
 Cu₂O, sputtered thin films, struct. and elec. props., O₂ pressure effects, X-ray study 2-72093
 Cu₂O, 1S exciton two-photon magnetoabsorpt. spectra, polarisation depend. meas. 2-77498

copper compounds continued

- Cu₂O 1S yellow exciton luminescence intensity temp. depend. 2-87858
 Cu₂O, chemically oxidised solar plate absorbers, optical props. and long-term stability 2-105597
 Cu₂O, cryst., struct. factors, Coulomb and Slater pots., cryst. field theory 2-86630
 Cu₂O crystal, dark current-voltage characts. rel. to struct. defects 2-77052
 Cu₂O formation on Cu (111), high resolution EELS study 2-110155
 Cu₂O, heating dynamics, O₂ partial pressure effect 2-65459
 Cu₂O, high-pressure, induced phase transition 2-92180
 Cu₂O, in solar absorbers, optical consts. 2-93142
 Cu₂O, interband electron Raman scatt. of light, Coulomb interaction effects 2-87798
 Cu₂O, relaxed excitons, optical and cyclotron reson. study 2-76938
 Cu₂O, resonant photo- and Auger emission at 3p threshold 2-108434
 Cu₂O, third order optical nonlinearity near exciton lines (Chinese) 2-99083
 Cu₂O/Cu thin film photovoltaic cells, possible appl. as solar cells 2-93896
 Cu₂O/I⁻ photoelectrochemical cell, photocorrosion mechanism 2-62415
 Cu₂O-Cu photovoltaic cells, prep. by high temp. reduction and props. meas. 2-88459
 Cu₂O/Cu solar cells, grown by anodic oxidation, photovoltaic effects 2-88460
 (CuO)₂(2B₂O₃.PbO)_{1-x} glasses, EPR study of mag. behaviour 2-110631
 Cu₂PS₂Br(I) argyrodite-type ionic conductors, bulk photovoltaic and photocond. effects 2-104424
 CuS/CdS thin film solar cells, fabrication trends and problems, review 2-78223
 Cu_{1-x}S-CdTe, p-n heterojunction phototransducers 2-104478
 Cu₂S, chalcocite, Cu vacancy ordering and transition to djurite, TEM study 2-115222
 Cu₂S, crystallisation from KSCN melts, solubilities 2-111043
 Cu₂S enthalpy meas., using Cu-block calorimeter 2-53768
 Cu₂S film, SIMS, matrix effects, ion yield enhancement 2-76856
 Cu₂S polycrystalline thin film prep. from Cu film in H₂S-H₂ mixture 2-77748
 Cu₂S, semicond., form. at polythiazyl-metal junction, elec. study 2-110470
 Cu₂S Zn_{1-x}Cd_xS single crystal photovoltaic cell, optimum performance 2-116822
 Cu₂S/(Cd,Zn)S solar cells, fabrication and characterisation, SEM study 2-73122
 Cu₂S/CdS sprayed solar cells photovoltaic performance 2-78221
 Cu₂S/CdS thin film solar cell, freq. depend. capacitance studies 2-88430
 Cu₂S/CdS thin film solar cells, trapped holes depth depend., photocapacitance study 2-93905
 Cu₂S-CdS heterojunction solar cell, Cu diffusion effects, theoretica anal. 2-73115
 Cu₂S-CdS heterojunction solar cells, Cd anodic sulfurization and RF sputtering, MIS struct. for interface state determ. 2-78229
 Cu₂S-CdS heterojunction solar cell, lateral photovoltaic effect 2-83470
 Cu₂S-CdS heterojunctions, elec. and optical props. 2-99354
 Cu₂S-CdS solar cell, photovoltaic props., cathodolum. spectrum 2-116823
 Cu₂S-CdS thin film heterojunction solar cell, fabrication 2-116833
 Cu₂S-CdS thin film solar cells, sputter deposited, fabrication and characts. 2-67850
 Cu₂S-CdS thin film solar cells, review 2-105568
 Cu_{2-x}S, CDW and struct. transition, X-ray diffr. study 2-92189
 Cu_{2-x}S thin films, oxidation-reduction effects on optical absorption, application in solar cells 2-82941
 Cu₂S film, topotactically grown, chalcocite-djurite transform., TEM study 2-104195
 Cu₂S thin films prep. by Activated Reactive Evaporation, elec. and optical props. 2-99354
 Cu₂S/Cd_{1-x}Zn_xS/CdS evaporated back-wall bifilm solar cells, growth and conversion efficiency meas. 2-105563
 Cu₂S/CdS solar cells, deep trap levels obs. by capacitance meas. 2-88431
 Cu₂S-Cd_{1-x}Zn_xS thin film solar cell with improved ternary cpd. layer 2-116821
 Cu₂S-CdS heterojunction, electron and hole traps, deep level transient spectroscopy 2-115873
 Cu₂S-ZnS coherent system, secondary phase form. 2-115240
 Cu₂S-ZnS:Mn p-n heterojunction DC electroluminesc. structs., degradation theory based on donor diffusion 2-57186
 CuSCN and Cu(SCN)₂, ⁶³Cu nuclear electron density, electron capture decay study 2-92545
 CuSCN photographic layers, processing in hydrazine developer to give silverless photographic images (Russian) 2-53884
 CuSO₄, acidified, for Cu powder electrodeposition 2-62090
 CuSO₄, aq. solns., permittivity, transmission dielectric time domain spectra 2-110742
 CuSO₄·5H₂O, behaviour in high vac. of XPS spectrometer 2-99739
 CuSO₄·5H₂O, proton relax. rate angular depend., deviations from point-dipolar model 2-61783
 Cu₂SbS₄-Cu₂SbS₄, partial enthalpy of S, calorimetric determ. 2-78122
 CuSe, superlattice struct., polymorphism and elec. props. (French) 2-66556
 Cu₂Se, mixed cond., influence of cation disordering on elec. cond. 2-104439
 Cu₂Se thin-film solar cells, status as emerging materials PV technologies 2-57712
 Cu_{2-x}Se, electrophysical props., effects of uniaxial deform. at different temps. (Russian) 2-82353
 CuSiF₆·6H₂O, single cryst., EPR 2-92996
 Cu₂Si₂S₇, cryst. struct., X-ray diffr. study (French) 2-98002
 CuSn₃S₈, cryst. struct. determ. (French) 2-55909
 Cu₈Ta₂O₈, Cu(I) and Cu(II) distrib. in LiNbO₃F struct. 2-71414
 Cu₂Ta_{1-x}O_{10-x} hexagonal, cryst. struct., X-ray diffr. study 2-60951
 Cu₂TaSe₄, ¹⁸¹Ta 6.2 keV nuclear transition isomer shift 2-110737
 Cu₂Te hexagonal, lattice vibr. symmetry 2-115374
 Cu₂Te, phase transitions during heating and isothermal annealing 2-81944
 Cu₂Te_{0.68}Se_{0.32}, phase transitions during heating and isothermal annealing 2-81944
 CuTiSe₂, ternary semicond., liq. and solid, dielec. relax., defect electron states 2-61829
 Cu₂V_{1-x}O₂, struct. and physical props., EPR, DTA, mag. and X-ray diffr. study (French) 2-81761

copper compounds continued

- Cu₃(VO₄)₂, cryst. struct., R value, X-ray diffr. study (*French*) 2-81731
 CuWO₄ anodes, for photoelectrolysis of water, bandgaps 2-61348
 Cu₃WO₄ anodes, for photoelectrolysis of water, bandgaps 2-61348
 Cu₂Zn₃As₂S₁₂, nowackite, cryst. struct., isotypy with Cu₆Hg₃As₄S₁₂ 2-103727
 Cu₂Zn_{1-x}Fe₂O₄, spinel ferrites, ionic-covalent bonding, X-ray diffr. and absorption chemical shift study 2-65919
 Cu₂Zn_{1-x}Fe₂O₄ system, Curie temp., cation distrib., magnetisation 2-56851
 Cu₂Zn_{1-x}Fe₂O₄ system, elec. resistivity and Curie transition 2-87256
 Cu(en)₂²⁺ exchanged Y zeolite, X-ray absorpt., obs. 2-93324
 EuCu₂Si₂, energy balance of mixed-valent Eu ions 2-93324
 EuCu₂Si₂, valence fluctuation study by 3d core level XPS 2-57269
 Fe₂Cu_{1-x}Rh₂Se₄, magnetic and crystallographic props. 2-92860
 K₂CuF₄, spin wave instability, subthreshold parallel pumping 2-110574
 K₂CuF₄, two-dimensional planar ferromag. Kosterlitz-Thouless transition 2-66826
 KCu₂M₂O₂₁ (M=Nb, Ta), intergrowth of hexagonal and perovskite-like structs. 2-65962
 K₂PbCu(NO₃)₆, Jahn-Teller effect, uniaxial stress effects, ESR study 2-87580
 Li₂Cu₂(MoO₄)₃, electrical cond., ionic and electronic 2-72034
 (Li_{0.5}Fe_{0.5}O₄)_{x1}(Cu_{0.5}Fe_{0.5}O₄)_{x2}(CuFe₂O₄)_{1-x1-x2}, ferrite solid soln., thermodynamic props. 2-66256
 (Mn_{1-x}Cu_x)₃(PO₄)₂, cryst. struct. and homogeneity ranges, X-ray diffr. study 2-115195
 MoGa₂(CuS₂)_{0.0556}, cryst. struct., X-ray diffr. study 2-65953
 Ni₂Cu_{1-x}Fe₂O₄, spinel ferrite, influence of Ni²⁺ ions on distrib. of Mg²⁺ ions, magnetisation meas. 2-60938
 Ni_{1-x}Cu_xS₂, phase diagram in Ni-rich region, Hubbard model 2-66816
 RbCuBr₄·2H₂O, spin dynamics study 2-66860
 Rb₂Cu_{1-x}Cl_{1+x} thin film preparation and electrical conductivity 2-77216
 RbCu₂M₂O₂₁ (M=Nb, Ta), intergrowth of hexagonal and perovskite-like structs. 2-65962
 SnMn₃C-CuMn₃N, perovskite, local effects and short range magnetic interactions (*French*) 2-72137
 SnO₂-ZnS(A)-Cu₂S-ZnS(A)-Al, A=Ag, Mn, Sm, thin film struct., electrolum., cathodolum. and photolum. meas. 2-87871
 TiCu₃Ta₂O₂₁, intergrowth of hexagonal and perovskite-like structs. 2-65962
 Yb₂O₃-Fe₂O₃-CuO, phase diagrams, quenching method X-ray study 2-76639
 Zn₂Cd_{1-x}S/Cu₂S single crystal photovoltaic solar cell preparation and performance characs. 2-78222
 Zn₂Cu_{1-x}Fe₂O₄, ferrite, mag. ordering 2-66819
 ZnO-CuInSe₂, thin film solar cell, spray pyrolysis prep. 2-105566
 ZnS:Cu₂S single crystal, microbrittleness, impurity effects 2-83210

copper zinc alloys see brass**copying** see reproduction (copying)**copyright** see industrial property**Corbino effect**

- see also Hall effect
 semiconductors, Corbino disc geometry, acoustic waves amplification and generation 2-77129
 Ge, Corbino surface shape, magnetocond. 2-115794
 InSb Corbino discs, S-type I-V characs. in mag. field 2-61494

core stores (magnetic) see magnetic core stores**cores**

- see also magnetic cores; saturable core reactors
 Fe-concrete cores for bending magnets at CERN (*French*) 2-113785

Coriolis force

- see also rotation
 formic acid, ν_3 vibr.-rot. band, Stark spectroscopy and laser microwave ODR, vibr.-rot. band 2-102516
 formic acid, IR transitions, offset-locked CO₂ waveguide laser study 2-85652
 homogeneous turbulent field within a rotating frame 2-114775
 ion+asymmetric top rigid rotor, perturbed rot. state method, adiabatic pot. curves and nonadiabatic couplings 2-85798
 methane+Ar, vibr. transitions, vibr.-rot. energy exchange mechanism 2-114086
 methyl cyanide, laser Stark and microwave spectra, vibr.-rot. bands 2-85714
 methyl fluoride, ¹²CH₃F, ν_2 and ν_3 fundamental vibr.-rot. bands, Coriolis interaction 2-96559
¹⁴NH₂, ¹⁴NO₃ and ¹⁵NO₃, submillimeter wave, diode laser, Fourier transform and grating spectra, vibr.-rot. anal. 2-108485
 normal coordinates calcs. from centrifugal distortion plots and Coriolis coupling consts. 2-108444
 octahedral hexahalide anions, vibr. anal., GVFF method 2-90498
 sonar system performance, effects of oceanographic fluctuation power spectra 2-60285
 steady MHD Couette flow, effect of Coriolis force and Hall effect 2-86286
 stimulated demonstration of Coriolis force 2-63786
 tetrahedral XY₄ ions, mol. consts., normal coordinate anal. and ionic props. 2-102664
 trifluoriodomethane, quadrupole hyperfine struct. investigated by Lamb-Dip spectroscopy in 10 μ m region 2-108502
 XY₆ type anions, mol. consts. and cation effects 2-96533
 XY₆ type molecules, vibr. anal. 2-108445
 Ge halides, pseudo exact force const. calc. 2-54985
 GeO, low lying electronic states, vibrational numbering determ. from isotope shifts 2-64850
 HCO A state, predissoc., laser optogalvanic study, rot. quantum number, Coriolis interaction 2-80743
 HDO, ion collisions, Coriolis transition and impact parameter Born theory, perturbative treatment 2-65071
 HNCO, Coriolis-induced rot. struct. in IR spectrum 2-80593
 MoO₃, vibr. anal. and characteristic consts. 2-96531
 NSF₃, vibr. anal., Urey-Bradley and valence force fields, mol. consts. 2-113963
 NaH, photodissociation, fine struct., ang. distrib., quantum mech. calcs. 2-108646
 PSF₃, vibr. anal., Urey-Bradley and valence force fields, mol. consts. 2-113963

cornea see eye**corona**

- see also electric breakdown; flashover; solar corona
 atmospheric dust movement in point-grid corona discharge, laser anemometry study (*French*) 2-94454
 DC corona breakdown, narrow-jet model 2-103507
 DC corona discharge in air, mass spectra of ionic species obs. 2-103513
 DC corona discharges in air or O₂, gaseous products obs. 2-103514
 discharges, interferometric meas. of gas temp. 2-65785
 earthed points in DC field 2-106296
 effects on gaseous combustion 2-105486
 electric field meas. using Pockels device 2-115071
 electrodes in floating potential, corona inception 2-103554
 embedding effect on electrode in dielectric med. 2-103553
 gas discharges and appls., conf., London, England (August/September 1982) 2-101134
 Geiger counter region of positive corona, initial electrons detection 2-103516
 inception in air at high pressure 2-103506
 inception mechanism comparison between positive and negative impulse corona 2-103505
 interaction between adjacent positive glow corona 2-103515
 interaction with surfaces, review of physics 2-81599
 ion drift vel. meas. in gases, new apparatus 2-113049
 laser corona, Langmuir collapse (*Russian*) 2-60809
 laser-driven hydrodynamics, model expts. 2-59514
 laser-irradiated foil, mag. field induced surface transport 2-81552
 leader velocity characteristics in spark discharges 2-103548
 needle corona counter with preamplification gap for β -rays 2-96382
 negative, effects on morphological changes of surfaces 2-104131
 plasma corona, underdense, laser produced, instability obs. by optical probing 2-55733
 point-to-plane gaps with positive pulseless corona, calc. of electric field 2-109615
 point-to-plane steady discharge 2-76222
 polyethylene, low and high density films, corona charging, vibr. excited diatomic mols. as charge injectors 2-115775
 polypropylene films, corona charging, vibr. excited diatomic mols. as charge injectors 2-115775
 polytetrafluoroethylene films, corona charging, vibr. excited diatomic mols. as charge injectors 2-115775
 positive corona sheath, in air, thickness and luminosity distrib. 2-65783
 positive corona space charge, impulse withstand voltages, humidity effects 2-103509
 positive glow corona effects on stainless steel points, in room air 2-103511
 positive glow corona point-plane gap, dual-patch regime stabilisation 2-103510
 positive impulsive discharge streamer formations charge measurement (*Russian*) 2-97803
 positive point to plane gaps, corona discharge calc. 2-103504
 pulse intervals distribution, physical mechanisms 2-103517
 pulsed, in cylindrical and wire-plate geometries, theory and electrostatic precipitator appl. 2-115079
 pulsed glow discharges in laser excitation and breakdown 2-81601
 RF excited fully ionised low press. plasma, production 2-115023
 rod-plane gap, accurate field soln. using optimised charge simulation 2-109449
 space charge dominated, Warburg law and saturation current, approx. theory 2-55802
 spark discharges, corona cloud motion 2-103547
 surface topography and flaw detection using elec. discharge imaging as NDT 2-72933
 switchgear, Cc SF₆ insulated, random prebreakdown discharges as diagnostic criterion of particle contamination 2-97809
 transition regime from quasiniform to nonuniform field breakdown obs. 2-103508
 Trichel pulses in O₂, theory 2-103503
 unipolar corona discharge in conductor-plane arrangement, electric field and volt/ampere characs. determ. using θ -method 2-60822
 He, corona discharge, microscopic theory 2-60823
 SF₆, compressed, optimisation of pressure and surface roughness parameters 2-103526
 SF₆ corona, effects of H₂O 2-103525
 SF₆ corona stabilisation and critical pressure 2-103260
 SF₆ DC and 60 Hz AC corona, inception mechanisms 2-81600
 SF₆ insulation, impulse corona effects on subsequent breakdown 2-65790
 SF₆ mixtures with enhanced corona stabilisation 2-103520
 SF₆, positive and negative mean ion mobilities in corona discharges 2-103524
 SF₆, threshold field for DC positive corona discharge 2-103522
 SF₆-air mixtures, impulse corona in negative rod-plane gaps 2-103523
 SF₆-CO₂ mixtures, impulse corona in negative rod-plane gaps 2-103523
 SF₆-N₂ gas mixtures, meas. of impulse positive point predischARGE growth 2-103519
 SF₆-N₂ mixtures, impulse corona in negative rod-plane gaps 2-103523
 SF₆-N₂ mixtures, optimisation of pressure and surface roughness parameters 2-103526
 SF₆-N₂ mixtures, positive and negative mean ion mobilities in corona discharges 2-103524

coronagraphs

- see also solar corona
 emission-line coronagraph, design and performance 2-106528
 photometers operating at 530.3 nm, comparison of different instruments 2-73837
 Solar Maximum Mission instrumentation and obs. 2-112328

corporeal streams see cosmic rays; solar wind**correlation methods**

- see also correlators
 adaptive filter performance with nonlinearities in the correlation multiplier 2-97311
 complex sampled coded signals used in incoherent scattering ionospheric meas. method, spectral/correl. processing (*Russian*) 2-63137
 double correlation technique for pattern recognition and counting 2-108816
 fluctuations in physical systems, correl. functions of fluctuation forces, Langevin eqn. appls. 2-53675
 His bundle activity with cross-correlative waveform alignment 2-94217
 ionosphere radio wave reflection, space correl. of polarisation characs. of partly scattered vector field 2-112200

correlation methods continued

- laser Doppler anemometer, velocity pulsations correlation function determ. (*Russian*) 2-114947
- laser radiation fluctuations in model turbulent medium, longitudinal correlation 2-102720
- multiphoton ionization autocorrelation, appln. to UV laser pulse width meas. 2-60137
- nonlinear correlation method using multiphoton ionisation for UV ultra-short pulse meas. 2-81015
- nuclear reaction, coherence energy extraction from fluctuating excitation function 2-54346
- one-dimensional signal optical processing 2-90829
- quasi-interferometry with coded correlation filtering 2-107392
- random field, binary correl. function, intermediate order influence (*Russian*) 2-53677
- surface roughness meas. using acoustic interferometry and speckle correlation 2-75812
- thoracic wall phonocardiogram recording and correlation 2-94129
- transit time flowmeters, errors in cross-correlation peak location 2-97678
- underwater acoustic signals, surface reflected 2-86162

correlation theory

- see also correlators; information theory
- sonar system performance, effects of oceanographic fluctuation power spectra 2-60285
- statistical characteristics of test signals for measurement information systems 2-63959

correlators

- see also correlation methods; correlation theory; information theory
- acoustooptic correlator with an offset recording plane of the holographic filter 2-114408
- acoustooptic matched filter correlator performance 2-91028
- digital photoelectric correlator 2-53837
- femtosecond laser pulse duration meas. system 2-95428
- holographic matched-filter correlator, real-time, screen-aided, multiple-image storage appls. 2-114215
- interference correlator with determination of the foreshortening of the image 2-89801
- optical correlator, two-sample imaging optics appl. (*Czech*) 2-95424
- optical correlator comparison, joint-transform and freq.-plane types, from coherence theory viewpoint 2-108812
- optical correlator with feedback, for geometric shape detect. (*Czech*) 2-60030
- pattern recognition, correlation function, effect of transparency characts. 2-108821
- real time correlation system for US NDT appls. 2-111395
- statistical pattern recognition correlators, principal-component imagery 2-55087
- time-integrating correlator using guided-wave anisotropic acoustooptic Bragg diffraction and hybrid integration 2-60263

correspondence principle

- finite bodies, viscoelastic responses, quadrature form of correspondence principle 2-97402

corrosion

- see also corrosion protection; corrosion testing; electrochemistry; stress corrosion cracking; surface chemistry
- alkali silicate glass, corrosion behaviour in water, ESCA obs. 2-93656
- aluminosilicate glass surface interdiffusion and phase boundary reaction in aqueous CsCl soln. 2-57503
- atmospheric corrosion, initiation by SO₂ and particulate matter, corrosivity of individual pollutants 2-111356
- borosilicate glass, antireflective surfaces for high-energy laser optics formed by neutral soln. processing 2-70641
- BS4360 50D, in 3.5% NaCl, electrochem. polarisation studies 2-105357
- cathode spot, erosion mechanism 2-81608
- CC(n)/MoS₂(Se₂), photocorrosion, anisotropic, cleavage steps, line and screw dislocations role 2-99575
- ceramics, acid resistances in HCl, 20 wt.% at 50°C 2-99578
- coal liquefaction vessel components, surface anal. of corrosion 2-83279
- current and Tafel slope determ. 2-62242
- de-alloying, at elevated temps. and 298 K 2-105355
- discontinuous steady state polarisation systems, corrosion rates determ. by electrochem. AC and DC methods 2-105488
- dynamic compliance meas., crack nucleation and propagation study 2-91352
- Electrochemical Society, Incorporated, Spring Meeting, conf., Montreal, Canada (May 1982) 2-101133
- erosion-corrosion behaviour, appl. of thin layer surface activation technique 2-88299
- Fessenheim PWR power station, test of morpholine treatment of water-steam circuit 2-85172
- fission reactor metallic surfaces, initial state after assembly 2-54506
- fission reactor reprocessing plant, materials corrosion 2-64554
- fusion reactor materials, conf. Seattle, WA, USA (Aug. 1981) 2-68954
- gas turbine in marine environment operation, state-of-the art review of factor contributing to hot corrosion 2-72869
- glass fibre reinforced plastic, elec. insulation, liq. medium influence on strength and deform. props. 2-99576
- glass fibre reinforced polyester resins, water and H₂SO₄ influence, determ. by radioactive tracer technique (*German*) 2-67593
- glass matrix for radioactive waste disposal, surface effects on leaching 2-93649
- graphite, corrosion in gas-cooled reactors, by H₂O, O₂, CO₂, H₂, temp. depend. (*German*) 2-102025
- graphite, corrosion in HTR, calc. using REACT/THERMIX code (*German*) 2-102012
- graphite moderator bricks, radiolytic corrosion in commercial AGR, model 2-64484
- Incoloy, corrosion by simulated high level radioactive waste (*Japanese*) 2-59465
- Inconel, corrosion by simulated high level radioactive waste (*Japanese*) 2-59465
- Inconel 600, Ni-base superalloy, corrosion behaviour in high temp. steam, effect of grain size 2-67615
- interfacial, effect of boundary struct. 2-93657
- laboratory equipment corrosion resistance, review 2-62278
- large structure under corrosive environment, AE monitoring 2-111388
- linear polarisation resistance, theoretical errors and method for reducing them 2-77956
- liquid metals, fusion reactor appls., corrosion and compatibility 2-69864

corrosion continued

- metal, solution composition and electrode potential in pits, crevices and cracks, review 2-99606
- metal superpolished mirrors, deterioration by blue haze 2-102902
- metallic glasses, review of applications (*Hungarian*) 2-104558
- metals, corrosion scales, elevated-temp., erosion rate 2-67570
- metals, pitting dissolution in aqueous soln., stability 2-77992
- metals and oxides, ionic implantation for SIMS quantification, corrosion study 2-99744
- Metglas 2826, Ni-Fe-base metallic glass, dynamically compacted, mech. props. 2-99527
- nuclear reactor constructional materials, liq. Na influence on strength, calc. method 2-96112
- pitting, modelling of initiation (*German*) 2-83301
- polarisation resistance data anal. by computer program, POLCURR 2-62241
- polyester resins, isophthalic acid type, water and H₂SO₄ influence, determ. by radioactive tracer technique (*German*) 2-67593
- polymers, surgical, biodegradation, review 2-88243
- potential distribution measurement, rapid method, appl. to corrosion studies (*Japanese*) 2-74392
- PWR stations, damp steam circuits, summary of erosion-corrosion observation 2-85170
- PWR stations, steam generator feed pumps, investigations on resistance to erosion corrosion 2-85171
- PWRs, secondary cooling system, corrosion product transport 2-54527
- reactor materials, cyclic loading influence on Li corrosion behaviour steel Cr-Mo 2-80172
- Shirasu volcanic glass-CaO-MgO system, glass form. composition range, props. (*Japanese*) 2-88049
- silica, crack blunting in water and silicic acid soln. 2-111276
- solar energy conversion technologies, solid-liq. interface research needs 2-88464
- stainless steel points under positive glow corona, in room air 2-103511
- steam turbine steam wetness measurement using calorimeter with two stage heating, application in corrosion protection (*Czech*) 2-107333
- steel, 304 stainless, sputter deposited, oxide and sulphide scales, AES and SEM studies 2-88272
- steel, 316 plates, effects of C and N on corrosion resist. to liq. Li 2-105370
- steel, austenitic ferritic, with low interstitial level, mech. and corrosion props. (*Italian*) 2-99563
- steel, austenitic stainless, abrasive wear, electrochem. polarisation influence 2-88198
- steel, austenitic stainless, compatibility with Li₂Pb₃ eutectic 2-111372
- steel, austenitic stainless, corrosion in Li test loop, for type 304 2-72867
- steel, austenitic stainless, corrosion inhibition expts. in liq. Li 2-80171
- steel, austenitic stainless, corrosion rate in boiling HNO₃, effect of cooling rate and plastic deform. 2-88264
- steel, austenitic stainless, corrosion resistance, effect of high temp. low cycle fatigue 2-78018
- steel, austenitic stainless, Cr-Mn, low-Ni, intergranular Li penetration 2-111371
- steel, austenitic stainless, cyclic loading influence on Li corrosion behaviour 2-80172
- steel, austenitic stainless, evaluation of ASTM A276 type XM19 for marine applications 2-105382
- steel, austenitic stainless, fatigue props., effects of Li environment 2-80170
- steel, austenitic stainless, fatigue threshold, effects of environment, stress ratio and defect size (*Japanese*) 2-111287
- steel, austenitic stainless, impregnation of H during friction in H₂SO₄, influence on wear 2-67555
- steel, austenitic stainless, intergranular corrosion, struct. influence 2-72876
- steel, austenitic stainless, multiple heat treatment effect on sensitization (*Japanese*) 2-105194
- steel, austenitic stainless, partially martensitic, deformation mode effect on sensitization 2-67423
- steel, austenitic stainless, refinement, for corrosion resist. improvement 2-72870
- steel, austenitic stainless, sensitization, controlled purity alloys 2-116600
- steel, austenitic stainless, type 304, haematite, suspended, deposition rate in boiling water system under BWR conditions 2-77979
- steel, austenitic stainless, type 316, corrosion in molten LiF-LiCl-LiBr 2-80174
- steel, austenitic stainless, types 304-SS and 316-SS, exposed to liq. Li, microstructural changes 2-80169
- steel, austenitic stainless 303, current oscillations induced by presence of chloride ions 2-77974
- steel, austenitic stainless 303, 304 and 316, pitting in the atmos., airborne contaminants effect 2-77973
- steel, C, plates rolled from continuously cast slabs and mold cast ingots, corrosion 2-77986
- steel, C, type 1040, corrosion rates in aqu. soln. pH and S²⁻ conc. effect 2-62254
- steel, CC H embrittlement and permeability in H₂S media, quaternary ammonium salts influence 2-67541
- steel, corrosion and H₂ embrittlement, role of H₂S 2-77996
- steel, corrosion scale action on H and ³H permeation (*German*) 2-90242
- steel, Cr, cast, fatigue threshold, effects of environment, stress ratio and defect size (*Japanese*) 2-111287
- steel, Cr-Mn, high-N, precip. and intercryst. corrosion after isothermal annealing 2-72729
- steel, Cr-Mo, low alloy, heat resistance at 500°C in Na, NaOH admixture effect 2-67459
- steel, CrNi(MoTiAl), austenitic, potentiodynamic curves 2-83286
- steel, ferritic, anodic disoln. in H₂SO₄ influence of Cr on mass transfer limitation 2-67612
- steel, ferritic, corrosion inhibition expts. in liq. Li 2-80171
- steel, ferritic, fatigue props., effects of Li environment 2-80170
- steel, low alloy and C, ferritic, corrosion mechanism by high temp. water 2-57519
- steel, low alloy and plain C, corrosion rate in sea water, polarisation resist. technique 2-67613
- steel, low-alloy, corrosion props. in saline media 2-57507
- steel, medium C, behaviour in gaseous NH₃ under temp.-force loading 2-111380
- steel, medium C, cavitation resist. of Cr diffusion coatings 2-72872
- steel, mild, anodic behaviour in deaerated carboxylic acid solns. containing NO₂⁻, Cl⁻ and NO₃⁻ ions 2-67607

corrosion continued

steel, mild, corrosion and inhibition in NaF soln., study by small amplitude cyclic voltammetry 2-67605
 steel, mild, corrosion in 0.01, 1 and 3 M HCl 2-62252
 steel, mild, Fe^{2+} reducing bacterium effect on passivity loss, anodic depolarisation mechanism 2-62257
 steel, mild, kinetics of H_2 form. in water, anaerobic conditions 2-88262
 steel, Mn-Cr-Mo-Nb, austenitic, heat resisting, props. and microstruct. (Korean) 2-57534
 steel, permeation of H, surface oxides and tempering treatments influence 2-93680
 steel, spheroidized type 1090, permeation, trapping and damage by hydrogen 2-116602
 steel, stainless, corrosion by simulated high level radioactive waste (Japanese) 2-59465
 steel, stainless, corrosion props. in saline media 2-57507
 steel, stainless, Cr-Ni (18, 8.5 wt.%), hot corrosion in Na_2SO_4 and NaCl 2-57536
 steel, stainless, crevice corrosion initiation in ferric chloride exposure tests 2-57521
 steel, stainless, deposition of radioactive corrosion products on reactor components 2-59463
 steel, stainless, microcrystalline, corrosion resistance meas. 2-116605
 steel, stainless, pitting under controlled potential, creep behaviour (Japanese) 2-78013
 steel, stainless 2-88257
 steel, stainless 304, pitting corrosion, hydrodynamic effects in NaCl soln. or type 304 2-62261
 steel, stainless and structural, nitriding, saturation with H 2-62283
 steel, structural, corrosion and corrosion fatigue in sea and under laboratory conditions 2-88283
 steel, unprotected, corrosion in inert-gas atmos. containing water vapour, O_2 , SO_2 , N_2 and CO_2 2-67616
 steel, vibration-hardening treatment, influence of polymer-containing oil media, mech. characts. 2-99603
 steel Cr-Mo (2.25, 1wt.%), in Pb-Li liq., Pb conc. effect on corrosion susceptibility 2-80173
 steel needles, austenitic stainless, corrosion on ringer soln. (Japanese) 2-78007
 steel stainless, dense powder metallurgical, prod. methods and mech. props. 2-99371
 steel structs. in Europe, study of atmos. conditions 2-72886
 steels, AISI 302, 304, 316, 347, C-precipitation influence on low temp. impact strength, corrosion, austenite stability 2-57508
 steels, C, corrosion tubercles of Fe rust in aerated neutral boric-borate buffer solns. (Japanese) 2-62275
 steels, corrosion behaviour in saline water, cooperation report 2-57506
 steels, ferritic, corrosion by flowing liq. Pb (French) 2-105369
 steels, high-Mo, Cr-Ni, corrosion behaviour 2-57509
 steels, stainless, electrochem. testing of intergranular corrosion 2-83287
 steels, stainless, in Cl-containing water, electrochem. prediction of corrosion behaviour 2-105358
 Stellite-6, in fission reactors, ^{60}Co release rates 2-80114
 surface treatment for performance and property improvement conf., NY, USA (July 1979) 2-94914
 thermocouples, Chromel-Alumel, deterioration of EMF in reducing atm. at high temps. 2-67641
 thin film recording materials, corrosion 2-72864
 turbulent pipe flow, relation between mass transfer and corrosion 2-76024
 two-layer metal-dielectric film growth model 2-61303
 water pipe corrosion, on-line monitoring 2-72887
 Zircaloy, corrosion and hydriding during irradi. in high temp. water 2-113665
 Zircaloy-2, corrosion in 340°C water, LiOH effects, comparison with Zr-Nb (2.5 wt.%) 2-77981
 Zircaloy-2, corrosion in high temp. water, ion beam induced nucl. reaction study 2-57517
 Ag alloys, corrosion, anodic dissoln. and O reduction in aq. media 2-111354
 Al alloys, corrosion in HCl, influence of anion 2-67630
 Al alloys, high strength, exfoliation corrosion, math. modelling 2-105362
 Al corrosion, energy transfer during Al dissolution, theory 2-77995
 Al, corrosion, initial dissolution step 2-57525
 Al, corrosion products, $\text{Al}_2\text{O}_3\cdot\text{xH}_2\text{O}$, visual detection by staining with fluorescing and nonfluorescing dyes 2-116608
 Al, crevice corrosion, expt. study 2-77998
 Al, crevice corrosion in dil. NaCl soln., mathematical model 2-77999
 Al, erosion-corrosion in high temp. high velocity water, water chemistry 2-57515
 Al, pH potential diagram for seawater, expt. 2-62262
 Al, PWR, containment sprays, H_2 evolution 2-74882
 Al, pitting corrosion, current signature during early events 2-77994
 Al, pitting corrosion, pit growth rate determ. 2-62259
 Al surface, preconditioned, flaw obs. by anodisation/TEM technique 2-116607
 Al- Al_2O_3 , powder metallurgical, heat resistant, props. 2-72875
 Al-alloys, corrosion behaviour in saline water, cooperation report 2-57506
 Al-alloys, corrosion props. in saline media 2-57507
 Al-Cr-Zr, powder metallurgical, heat resistant, props. 2-72875
 Al-Li-Mn(Zr)(Mg)(Cu), corrosion behaviour, correl. with microstruct. 2-88253
 Al-Mg (3 wt.%) alloy, corrosion and corrosion inhibition in seawater 2-57512
 Al-Mg based alloys, surface corrosion during heat treatment 2-99598
 Al-Mg-Si (6000) series alloys, exfoliation corrosion obs. in water 2-93671
 Al-Mg-V, candidate material for NET/INTOR first wall, development and evaluation 2-69834
 Al-Mg-Zn-Cu, 7075-T7351, localised corrosion, environmental factors 2-67640
 Al-Mg-(Cu), water corrosion study by gas chromatography 2-88255
 Al-Mn, Mn effect on corrosion behaviour, metallographic study 2-62256
 Al-Mn (1.2 at.%), electrochemical behaviour, effect of laser-surface melting 2-57523
 Al_2O_3 ceramics, reaction with saturated steam 2-111334
 $\text{Al}_2\text{O}_3\cdot\text{ZrO}_2\cdot\text{SiO}_2$, AZS, refractories, corrosion by vapours of NaOH and Na_2CO_3 2-116560
 Au, anodic corrosion obs. in conc. chloride solns. 2-93673
 Au-Ag, oxide formation during corrosion in HNO_3 , electron microscopy study 2-72890

corrosion continued

$\text{B}_2\text{O}_3\text{-Li}_2\text{O-(LiCl)}$ glasses, chem. durability 2-93647
 C steel, OL-32, corrosion kinetics in acid media, radiochem. method investigation (German) 2-83290
 n-CdS, photoanodic dissolution, rot. ring-disc electrode study 2-57500
 CdS(Se)/polysulphide photoelectrochem. cells, stability against photocorrosion, effect of added salts 2-57715
 CdSe-p⁻-n-Si tunnel junction solar cell photoanode props. meas. 2-88427
 Co base alloys, corrosion in atmos. containing C and O_2 2-88276
 Co, kinetics and reaction mechanism with P vapour (Japanese) 2-78006
 Co, pure, corrosion in physiological media 2-93675
 Co-Cr (25 wt.%), Cr_2O_3 forming alloys, corrosion in $\text{H}_2\text{-H}_2\text{S-H}_2\text{O}$ atmosphere 2-77982
 Co-Cr alloys, hot corrosion in modified Dean's rig 2-99583
 Co-Cr-Al alloys, hot-corrosion in modified Dean's rig 2-99584
 Co-Cr-Mo alloys, hot corrosion in modified Dean's rig 2-99585
 Co-Cr-Ta alloys, hot corrosion in modified Dean's rig 2-99583
 Co-Cr-Ti alloys, hot corrosion in modified Dean's rig 2-99583
 ^{60}Co , origin in LWR cooling system 2-80353
 Cr (100), chemisorption of Cl and surface chloride form., struct. and kinetic study 2-66366
 Cr- H_2O system, pH-potential diagrams, elevated temps. 2-105361
 Cr-Ni steel, Kh16Ni5M3B, reactor irradi. in N_2O_4 medium, effect on strength and plasticity 2-116613
 Cu, corrosion in SO_2+O_2 mixtures (French) 2-88251
 Cu, organic compd., corrosion inhibition efficiency quantum chemical parameters 2-77987
 Cu-Ni alloy, in seawater, AES study of corrosion mechanism 2-93662
 $\text{Cu}_2\text{O/I}$ photoelectrochemical cell, photocorrosion mechanism 2-62415
 Fe, Armo, behaviour in gaseous NH_3 under temp.-force loading 2-111380
 Fe, Armo, electrochem. props. in friction, H absorpt. influence 2-67651
 Fe, Armo, surface films grown in saturated Ca(OH)_2 soln., electrochem. and ellipsometric invest. 2-67611
 Fe base alloys, corrosion in atmos. containing C and O_2 2-88276
 Fe, cast, cavitation resist. of Cr diffusion coatings 2-72872
 Fe cast, corrosion products in NH_4NO_3 solns., Mossbauer study 2-111378
 Fe, corrosion, in HCl gas and HCl-O_2 gas mixtures 2-67614
 $\alpha\text{-Fe}$, corrosion and passivation, in H_2O soln., Mossbauer invest. 2-116589
 Fe, corrosion in water at room temp., electron microscope obs. 2-67622
 Fe, corrosion reaction in NH_4NO_3 aq. soln. 2-67606
 Fe, crevice corrosion, expt. study 2-77998
 Fe, high purity (Japanese) 2-57532
 Fe, in natural waters, corrosion kinetics 2-99586
 Fe, passive, pit form. in cathodic polarisation, anion effects 2-57516
 Fe, passive, pit form. in cathodic polarisation, stimulation by chelating agents 2-116592
 Fe, passive film formation in polyphosphate solns., XPS study 2-93672
 Fe, pitting and pitting inhibition, in Na_2SO_4 solns. 2-105360
 Fe, pitting corrosion, hydrodynamic effects in NaCl soln. 2-62261
 Fe, Pourbaix diagram, EMF-pH, presence of solid Fe(OH)_2 2-116597
 Fe-Cr, high purity, corrosion resistance and acid and chloride media (Japanese) 2-105373
 Fe-Cr, varying corrosion rate system, monitoring in H_3PO_4 2-67608
 Fe-Cr (2.5 wt.%), Cr_2O_3 forming alloys, corrosion in $\text{H}_2\text{-H}_2\text{S-H}_2\text{O}$ atmosphere 2-77982
 Fe-Cr-Al, corrosion in $\text{H}_2/\text{H}_2\text{O}/\text{H}_2\text{S}$ mixtures at 1200°C 2-105380
 Fe-Cr-Al (20, 4.5 wt.%), oxide dispersion strengthened, long-term high velocity oxidation and hot corrosion testing 2-88274
 Fe-Cr-Al-P-C alloys, amorphous corrosion resist. 2-78016
 Fe-Cr-Al(22, 5.5wt.%), sulfidation, far-from-equilibrium phenomenon 2-62279
 Fe-Cr-(Mo), reaction with Cl_2 gas, kinetics and mechanism 2-67639
 Fe-Ni-Cr, mass transfer and corrosion in Li, Ni conc. effect 2-72866
 Fe-Ni-Cr-(Al), corrosion in $\text{H}_2/\text{H}_2\text{O}/\text{H}_2\text{S}$ mixtures at 1200°C 2-105380
 $\text{Fe}_{100-x}\text{B}_x$, metallic glass, electrochem. corrosion and Mossbauer spectra, composition and processing parameters effects 2-93640
 $\text{Fe}_{2-x}\text{Cr}_x\text{O}_3$ films, optical props. and chem. resist. 2-93300
 $\text{Fe}_{72}\text{Cr}_{13}\text{C}_3$, amorphous powder, spark erosion prep., corrosion study 2-105384
 $\text{Fe}_{80}\text{M}_{17}$, M=transition metal, metallic glass, Mossbauer and corrosion studies 2-104769
 GaP:N LED degradation, surface corrosion 2-116559
 MgO, neutron and γ -ray effects on dissolution and corrosion 2-76688
 Mo-Zr, gaseous impurity effects on mech. props., interstitials role 2-57538
 $\text{Na}_2\text{O-CaO-SiO}_2$ glass, leaching characts., surface roughness and surface area effects 2-93650
 $\text{Na}_2\text{O-FeO-SiO}_2$ simulated waste glass, chem. durability, press. effects and surface layer form. 2-93651
 $\text{Na}_2\text{O-ZnO-B}_2\text{O}_3\text{-SiO}_2$ glasses, chem. durability, effect of Zn^{2+} adsorption 2-93648
 $\text{Na}_2\text{O}_3\text{SiO}_2$ glass, water content effect on chemical durability 2-77962
 Nb bicrystals, grain boundary corrosion, correlation with grain boundary energy 2-88278
 Nb-Zr, gaseous impurity effects on mech. props., interstitials role 2-57538
 Ni base alloys, corrosion in atmos. containing C and O_2 2-88276
 Ni corrosion resistance, effect of plastic deformation (German) 2-88290
 Ni, electrodeless deposits, heat treatment effects on physical props. 2-57384
 Ni, high-temp. corrosion in SO_2 at 500-800°C 2-99588
 Ni, passive oxide films, electrochem. and surface analytical techniques 2-88260
 Ni, positive electrode components for Li-Al/FeS cell, corrosion resist. meas. 2-78201
 Ni superalloys, B-1900 and NASA-TRW VIA, hot corrosion chem. reactions, expt. study 2-78000
 Ni-Al bronze cast, detection of selective phase corrosion by AE 2-67631
 Ni-base superalloy, Incoloy-800, fatigue crack growth, elevated temps., sulphidising environments 2-67526
 Ni-Cr (25 wt.%), Cr_2O_3 forming alloys, corrosion in $\text{H}_2\text{-H}_2\text{S-H}_2\text{O}$ atmosphere 2-77982
 Ni-Cr alloys MA 6000E, scaled-up thermomech. processing 2-77856
 Ni-Cr stainless steels corrosion resistance in thermochemical cycle of hydrogen production using concentrated sulphuric acid 2-72863
 Ni-Cr-Al (16, 4 wt.%), oxide dispersion strengthened, long-term high velocity oxidation and hot corrosion testing 2-88274
 Ni-superalloy, IN-100, Cr-Ni-Al and Al-N coated, hot-corrosion and oxidation 2-67591

corrosion continued

- O₂ induced corrosion, design guide for secondary systems for reduction in fission reactors 2-64586
 P₂O₅-SiO₂ glass passivation layers, cracks and Al corrosion 2-88234
 Pb, corrosion in sea water 2-111360
 Pb-Sn, corrosion in acid soln. 2-67662
 Ru-Al-Co system, phase diagram and corrosion resist. props. of various phases 2-99397
 Si strain gauges for mechanical variables meas. in biomedicine, stability problems (*Czech*) 2-62803
 SiC coated HTGR fuel pellet, corrosion by Pd fission product 2-90229
 Si₃N₄ ceramic, prep., props. and appls., book contrib. 2-116420
 SiO₂ refractories, corrosion by vapours of NaOH and Na₂CO₃ 2-116560
 SiO₂-B₂O₃-K₂O-Na₂O glass, leaching characts., surface roughness and surface area effects 2-93650
 Sn-Sb, corrosion in deaerated citric acid, Sb effects 2-111364
 Ti, anodic soln. in nitrates and nitrate-chloride solns., NO₃-ions reduction (*Russian*) 2-62269
 Ti gettering efficiency in respect to C and N in Li 2-80177
 Ti, pickled, anodised and thermally oxidised, oxide film effect on corrosion resistance 2-57518
 U, electrochemically marked, residual contamination and corrosion, SEM and ion microprobe anal. 2-83269
 W fibre reinforced depleted U-Ti matrix, corrosion rates and electrochem. behaviour obs. 2-116566
 WC-Ni cemented carbides, prep. and props. 2-111119
 n-WSe₂, photocorrosion, anisotropy, cleavage steps, line and screw dislocations role 2-99575
 Zr alloys, stresses induced by oxide layers in fission reactor 2-85155
 Zr gettering efficiency in respect to C and N in Li 2-80177
 Zr-Nb (2.5 wt%), corrosion in 340°C water, LiOH effects, comparison with Zircalloy-2 2-77981
 ZrSiO₄, refractories, corrosion by vapours of NaOH and Na₂CO₃ 2-116560

corrosion control see *corrosion protection*

corrosion fatigue see *stress corrosion cracking*

corrosion fatigue testing see *corrosion testing*

corrosion prevention see *corrosion protection*

corrosion protection

- see also *anodisation; corrosion; corrosion protective coatings; packaging; pH control*
 aero gas turbines, corrosion prevention by organometallic cpd. additives 2-116623
 boilers in industrial plants, CO₂ corrosion in water/steam cycle (*Hungarian*) 2-99589
 geothermal plant structures development, materials assessment 2-116776
 H₂ production by alkaline electrolysis of water, research progress from 1976-1980 (*French*) 2-105604
 HV semiconducting glazed insulators properties and behaviour (*Italian*) 2-77957
 LWRs, high temp., corrosion producing salts, chemistry 2-99688
 micro-climatic measurements in power stations for optimizing protection against corrosion. (*German*) 2-93665
 organic cmpds., corrosion inhibition efficiency quantum chemical parameters 2-77987
 pickling, automatic control (*Russian*) 2-72857
 power station equipment corrosion protective measures and economics (*German*) 2-93664
 steel, C, passivation using low energy Hg ion surface treatment 2-93677
 steel, Cr-Mo cast, corrosion fatigue in fresh water and corrosion inhibition using inhibitors (*Japanese*) 2-62276
 steel, ferritic stainless, stress corrosion cracking, inhibition in Na₂SO₄ soln. 2-88263
 steel, high-strength, inhibitor protection from corrosion cracking in crack propag. stage 2-67654
 steel, mild, corrosion fatigue in fresh water and corrosion inhibition using inhibitors (*Japanese*) 2-62276
 steel, mild, corrosion in water, Al-thiourea mixtures as inhibitors 2-111359
 steel, testing methods, comparative eval. (*German*) 2-62343
 stress corrosion cracking prevention (*Japanese*) 2-78010
 superalloy, duplex coating, diffusion-inhibited oxidation resistant 2-116622
 surface coatings deposited by CVD and PVD (*German*) 2-83035
 surge towers/corrosion control of Mingechaurs hydroelectric power plant (*Russian*) 2-88268
 Al alloys, anodised and unanodised, ten year open air weathering tests, results (*German*) 2-105364
 Al-Mg (3 wt.%) alloy, corrosion and corrosion inhibition in seawater 2-57512
 Fe-Cr-Al, corrosion resist. meas. in coal gasification atm., Cr conc. effects 2-93669
 Fe-Cr-Si (18.2 wt.%), corrosion resist. meas. in coal gasification atm., Si additions' effect 2-93668
 Ni-base superalloy, IN-100, an eval. study of Al-N and Cr-Al-N coatings 2-67591
 Te corrosion-resistant film deposition for ablative optical recording media 2-62243
 Zn, corrosion in acidic media, inhibiting action of benzene thiols 2-57514
 Zn, corrosion inhibition in CoCl₂, Mossbauer study 2-111365

corrosion protective coatings

- 12Kh18N10T welded steel, effect of inoculation on corrosion resistance of chromium-nickel deposited metal 2-93661
 abrasion testing device 2-116637
 duplex coating, diffusion-inhibited oxidation resistant, for superalloys 2-116622
 electroplating alternatives for Au in electronics and decorative industries 2-67665
 electroplating with Au and Ag, future trends, substitute materials and cost reduction 2-67667
 epoxy based coatings, hygrothermal ageing 2-111368
 fission reactor fuel claddings, anti-deposition coating, CVD method 2-64485
 fission reactor fuel claddings, anti-deposition coating, sol-gel method 2-64485
 glass, antireflection polished, strengthened by ion exchange 2-97134
 hexamethyldisiloxane coatings, plasma polymerised, on Si electrodes, for photoelectrochemical device appl. 2-83502
 high temperature coatings, Si role 2-116586

corrosion protective coatings continued

- HV semiconducting glazed insulators properties and behaviour (*Italian*) 2-77957
 ion plating methods (*Hungarian*) 2-93445
 ion vapour deposited aluminium, process and coating performance 2-83272
 paint coatings on metals, protective properties, inhibitors influence 2-67655
 paint film deterioration testing by meas. dielectric loss 2-116678
 steam turbine components, corrosion protective coatings, review 2-62288
 steel, coated, corrosion eval. by AC impedance meas. 2-116601
 steel, galvanised sheet, chromate passivated, ESCA obs. 2-111382
 steel, low-C, boronising treatment 2-105354
 steel, mild, Fe²⁺ reducing bacterium effect on passivity loss, anodic depolarisation mechanism 2-62257
 steel, stainless, austenitic and ferritic 2-105385
 steel, stainless, Cr-Ni (18, 8.5 wt.%), hot corrosion in Na₂SO₄ and NaCl 2-57536
 steel, stainless, Nb stabilised, oxidation in CO₂, CVD SiO₂ coating effects 2-67620
 varnish coatings on metals, protective properties, inhibitors influence 2-67655
 vitreous, on glass, dip coatings, prep. technique 2-105096
 Zircaloy, surface oxidation, protective coating form. 2-99607
 Al alloy conversion coatings, corrosion protection, adhesive bond durability, cracking 2-83270
 Al alloys, coated, corrosion eval. by AC impedance meas. 2-116601
 Al alloys, corrosion-preventing coatings, surface studies 2-83266
 Al, on steel, porosity determ. using electron probe microanalysis 2-99624
 Al, oxide coatings, corrosion protection Auger and XPS study 2-83268
 Al/Cu bolted joints electrical performance 2-99590
 Al-Mg, SCC in saline water, protection by anodic coating 2-111358
 Al-Zn (45 wt.%), SIMS study 2-93683
 CeO₂ gels for protective coatings, TEM exam. technique 2-105400
 Cu, corrosion inhibition by benzotriazole, surface enhanced Raman scatt. study 2-111367
 Cu-Ni-Cr protective coatings, corrosion resistance evaluation by electrochemical porosity test (*German*) 2-105365
 GeO₂-SiO₂ glasses from gels to increase oxidation resist. of porous Si-containing ceramics 2-77797
 Ni-Co galvanic coatings, struct., corrosion resist. and mech. props. 2-57540
 NiO, sulphurisation by H₂S, elec. cond. and TEM study 2-110200
 Se-Te bilayers, struct. changes by laser writing, TEM study 2-91009
 Si-SiO₂ photoelectrochemical solar cell performance, surface film effect 2-111568
 Si₃N₄, reactive sputter-coated reaction-bonded 2-99336
 TaB and TaB₂, low temp. CVD, hardness and corrosion resistance 2-83033
 Ti, self-colour anodisation, colours rel. to electrochem. parameters 2-111381
 Ti-Si enriched layer for carburization protection of Hastelloy X 2-116619
 TiB₂, low temp. CVD of corrosion 2-87999

corrosion testing

- atmospheric corrosion, initiation by SO₂ and particulate matter, test-cell apparatus 2-111355
 electrochemical corrosion monitoring non-perturbative 2-78025
 electrochemical potentiokinetic reactivation method, anal. of different treatments of expt. data 2-116625
 geothermal plant structures development, materials assessment 2-116776
 impedance measurements, microprocessor data from corrosion cells, Laplace transform. 2-116626
 metals, oxide film growth, vibr. technique obs. 2-83311
 paint film deterioration testing by meas. dielectric loss, using MOS-FET meter 2-116678
 PWR stations, damp steam circuits, summary of erosion-corrosion observation 2-85170
 steel, corrosion fatigue test method 2-116651
 steel, corrosion prevention testing methods, comparative eval. (*German*) 2-62343
 steel, embrittlement susceptibility by H₂S eval. using delayed fracture test, procedures comparison (*French*) 2-78053
 steel, porous fibre materials, corrosion resist. determ. 2-67694
 steel reinforced concrete, AE appl. to corrosion damage charact. 2-78026
 steel structs. in Europe, study of atmos. conditions 2-72886
 thermal wave imaging techniques status and appl. 2-112895
 thin layer activation technique using high energy ion beams 2-95324
 Al alloy 7075, T6-RR temper treatment eval. w.r.t. SCC resistance 2-72879
 Al alloys, anodised and unanodised, ten year open air weathering tests, results (*German*) 2-105364
 Al-(alloys), corrosion testing in flowing hot sea-water 2-57547
 Cu-Ni-Cr protective coatings, corrosion resistance evaluation by electrochemical porosity test (*German*) 2-105365
 Fe, using Raman spectroscopy 2-93689
 Mo sheet, SIMS analysis of oxygen on brittle fracture surface 2-99581

corundum

- see also *ruby; sapphire*
 additional absorpt. spectra irradi. with fast electrons and γ-rays (*Russian*) 2-82880
 carbothermal reduction in N₂, ALON powder prep. 2-77784
 ceramic, creep mechanism 2-93572
 charge density and elec. field gradients 2-115183
 crystal, hydrothermally grown, cryst. habit 2-65941
 CVD from AlCl₃-H₂-CO₂ gas phase mixtures, thermodynamic and expt. anal. 2-98479
 defect energetics, Mott-Littleton computational method 2-65987
 dislocation struct. rel. to Cr impurity 2-98095
 electronic energy levels by CNDO method, small cluster calc. 2-110243
 growth of crystals from cryolite flux, surface microtopographs, spiral growth mechanism 2-76343
 microcrystals, surface modes, IR study 2-93206
 neutron irradiation damage, review 2-115300
 sintering, voids, and boundary migration, electron microscope study 2-113046
 twin packing defects in lattice, effect on X-ray scatt. 2-91916
 α-Al₂O₃:H, H donors, mixed conductivity study 2-82274
 α-Al₂O₃:Ni²⁺, US self-focusing 2-66134
 α-Al₂O₃:V, zero field splitting, g-factors (*Chinese*) 2-110310

corundum continued

- Al₂O₃-ZrO₂-Bi₂O₃(CoO₂)(SuO₂) refractories, thermal shock resist., Bi₂O₃(CoO₂)(SuO₂) effect 2-93623
 Al₂O₃-ZrO₂-Cr₂O₃-SiO₂, ER 216 refractory material, fusion cast, zonality of ruby (Czech) 2-86896
 Al₂O₃-ZrO₂-SiO₂ refractories, props. with different ZrO₂ and SiO₂ concs. 2-88188
 α -Al₂O₃, native disorder, determ. of parameters 2-76432

cosmic background radiation

see also radiofrequency cosmic radiation

- γ -ray background similarity to Seyfert galaxies emission 2-58506
 anisotropy in cosmological models with spatial curvature, theory for free-streaming radiation 2-63715
 antiprotons from evaporation of primordial black holes 2-84351
 diffuse galactic light, scattering by interstellar grains 2-106832
 diffuse UV background, contrib. of warm intercloud medium emission 2-89412
 diffuse X-ray (2-60 keV) background, galactic subdwarfs and halo gas contributions 2-117800
 diffuse X-ray background, contrib. of X-ray transition radiation 2-117533
 early Universe, primordial gas heating by background radiation in presence of heavy elements 2-101046
 extragalactic γ -rays, derived from using galaxy counts as galactic matter tracer 2-89413
 far UV background rel. to line of sight H I column density 2-63573
 Galaxy diffuse gamma-ray emission, review (German) 2-94868
 gamma ray background, diffuse, contribution of extragalactic objects non-thermal radiation 2-117537
 gamma-ray background from active galactic nuclei in various earlier evolutionary stages 2-117739
 gamma-ray background nature 2-117799
 gamma-ray diffuse background and pulsar magnetic window 2-100967
 gravitational radiation, contrib. of stochastic background to timing noise of pulsars 2-79249
 IR background, spectrum and ang. distrib. meas. via Cosmic Background Explorer (COBE) 2-106478
 IR flux upper limits from M87 X-ray and γ -ray obs. 2-63714
 multipole anisotropy in density wave models 2-89414
 neutrino pairing 2-63728
 soft X-ray background, origin in interstellar extended adiabatic blast wave 2-58424
 underground cosmic radiation study using large-volume anticoincidence detector 2-58260
 UV background, 1700 Å feature due to massive neutrinos decay 2-89130
 UV background, implications of energy distrib. of spiral and irregular galaxies obtained from OAO photometry 2-74077
 UV background, procedure for separation of sky brightness 2-84104
 UV radiation from neutrino decays, scatt. from interstellar dust grains 2-117810
 X- and gamma-ray backgrounds 2-117803
 X-ray background, contrib. of radio loud and radio quiet, X-ray quasars 2-63716
 X-ray background, contrib. of X-ray emission from extragalactic star form. bursts 2-106911
 X-ray background, implications of discovery of new BL Lacertae object (IE 1402.3+0416) by Einstein Observatory 2-94838
 X-ray background, isotropy and origin 2-117811
 X-ray background, use in distinguishing Universe models 2-58515
 X-ray background from active galactic nuclei in various earlier evolutionary stages 2-117739
 X-ray background origin, Einstein results and quasar contrib. 2-117812
 X-ray background with power-law sources in 3-50 keV range 2-63713
 X-ray diffuse 1 keV background origin 2-101095

cosmic dust

see also meteoroids

- bacterial interstellar grains, implications of IR spectroscopy over 2.9 to 3.9 μ m waveband in biochemistry and astronomy 2-84347
 Bok globules, dust distrib. 2-74060
 3C 445, Paschen α flux and dust extinction, IR obs. 2-84338
 Cassiopeia A, supernova remnant, fast moving knots, search for hot dust 2-79184
 circumplanetary dust particle dynamics with radiation pressure 2-100828
 circumstellar dust shell, Eddington flux, second spherical exponential integral 2-100901
 clouds around pre and post main sequence stars, energy distrib. from IR photometry 2-94820
 comet dust tails, striae and dust streamers, particle-fragmentation model 2-68672
 comet formation from dust grains coagulation due to protosun radiation press. 2-112351
 P/Comet Halley, Giotto experiments including cometary dust mass spectrometry 2-68589
 cometary nuclei, instability of dust cloud model (Russian) 2-73908
 comets, contrib. of dust grains formed by condensation to integral brightness (Russian) 2-94647
 Corona Austrina, gas and dust survey, UHF obs. 2-106877
 V1057 Cygni, FU Orionis star, circumstellar dust grains form. rel. to IR photometric obs. 2-89262
 Cygnus Loop, dust form. rel. to UV spectra and heavy elements depletion 2-106848
 dark clouds, dust grain segregation by gravit. settling 2-106843
 dark clouds in NGC 253, dust content and distance 2-101049
 dark lanes in spiral galaxies, large-scale magnetic fields 2-101030
 density in central parsec of Galaxy, Sgr A far IR obs. 2-101034
 in early Universe, dust-gas coupling rel. to isothermal perturbations prod. by primordial sound spectrum 2-58511
 elliptical galaxy model, dusty King spheres 2-101048
 extreme C stars, circumstellar dust shells morphology from optical spectropolarimetry 2-112447
 galactic dust and extinction in Galaxy 2-63598
 galactic dust layer, struct. from extinction of open clusters in Galaxy 2-89318
 normal galaxies, models for far-IR emission from interstellar dust 2-63619
 Galaxy centre, IR obs. 2-63668
 galaxy nuclei, Galaxy comparison with others 2-63671
 gas-dust systems with nonlocal radiative coupling, spectral line radiation press. 2-63232
 grain alignment in the galactic magnetic field 2-58439

cosmic dust continued

- HD 193793, WN7 star, wind vel. and circumstellar dust shell, UV obs. 2-84236
 HH100, patchy circumstellar dust shell rel. to nearby IR source vars. 2-94816
 IC 4329A, Seyfert galaxy, optical polarisation due to disc dust grains, visible obs. 2-68890
 influx to Earth from meteor obs. 2-100841
 intergalactic dust, extinction of quasars rel. to isotropy of Hubble modulus (H₀) 2-79240
 intergalactic dust, extinction of quasars rel. to isotropy of Hubble modulus (H₀) 2-79241
 intergalactic suprathermal grains producing EAS 2-84053
 interplanetary dust distribution, search for short term vars. in zodiac light 2-89197
 interplanetary dust dynamics, evaporative effects 2-106614
 interplanetary dust dynamics and origin 2-63314
 interplanetary dust influx to Mars atmosphere, effect on ¹⁵N/¹⁴N ratio 2-106590
 interplanetary grains, solar wind pressure 2-63202
 interplanetary material as origin for radio and photographic meteors 2-100840
 interstellar, starlight scatt. correl. with far UV background 2-63573
 interstellar, X-ray transition radiation generation contrib. to cosmic X-rays 2-117533
 interstellar absorption band at 220 nm, equivalent width catalogue 2-100760
 local interstellar dust, rel. to total gas density and COS-B gamma-ray meas. 2-74051
 interstellar dust emissivity, mm spectral depend. 2-58421
 interstellar dust grains, contrib. to photoelectric heating of H II regions 2-63566
 interstellar dust grains Fe abundance, implications of search for interstellar FeO 2-74045
 interstellar dust in active star form. regions in galactic plane, temps. from far IR obs. 2-112421
 interstellar dust in spiral and irregular galaxies, effects on UV spectral energy distrib. 2-74077
 interstellar elongated grains causing starlight thermalisation, origin for microwave background 2-79248
 interstellar grains, relation between 4430 Å band strength and interstellar Fe, Ti and H₂ abundances 2-106847
 interstellar grains, scattering of diffuse galactic light 2-106832
 interstellar grains, sputtering, by shock waves rel. to interstellar element depletions 2-106849
 interstellar grains explosions, rel. to molecule cycling between gas and dust 2-89331
 interstellar grains formation, condensation temps. rel. to element depletions in interstellar gas 2-106871
 interstellar matter, nature and composition 2-79198
 in interstellar medium, dust grains formation and props. 2-89345
 IR emission from globular clusters 2-74039
 BL Lacertae objects, JHK photometry, power law continuum implications for dust and gas 2-89376
 light scatt. theory for rough surfaced grains 2-89142
 in LMC, far UV extinction and 4430 Å band central depths for reddened stars 2-106898
 in LMC, gas/dust ratio and near-IR extinction law 2-79208
 long-period variable stars, dust condensation in circumstellar shells rel. to mass loss rates 2-94748
 M101 (NGC 5457) Sc I galaxy, dust and metallicity 2-74090
 M16, evolved H II region, obs. of far-IR emission from heated dust 2-63561
 M17, aligned foreground dust grains rel. to optical polarisation of H II region 2-112536
 M17, H II region, protostellar dust shells evidence from early type stars, JHK photometry 2-94805
 M31 main dust lane complex, extinction and mass, B-surface photometry 2-63624
 Mars atmosphere, effects of solar tides on general circulation during global dust storms 2-100800
 meteoric dust modulated by Moon acting as ice forming nucleus, effect on rainfall 2-88971
 meteoric material influx rate to Earth 2-100842
 molecular cloud processes 2-79194
 R Monocerotis, shell dust grains aligned by mag. field, contrib. to NGC 2261 polarisation 2-63581
 NGC 1947, elliptical galaxy, dust lane rot., spectral obs. 2-68895
 NGC 5253, E-SO galaxy, dust thermal IR emission assoc. with high-excitation H II region in nucleus 2-79217
 Nova Aquilae 1982, 10 μ m silicate emission feature obs. and photographic magnitudes 2-112461
 Nova Aquilae 1982, discovery of 10 μ m feature due to circumstellar SiC grains emission 2-94750
 Orion Molecular Cloud, shock-induced grain alignment rel. to polarimetry of H₂ IR emission 2-106872
 Orion Nebula, colour gradients and flux and morphology, dust distrib., UV obs. 2-68855
 Orion Nebula, polarisation obs. rel. to light scatt. by dust grains 2-68873
 postexpulsive phase, shell 2200 Å graphite feature, var. in different models 2-63425
 radionuclide production due to cosmic ray protons 2-89100
 retrieval from Pacific Ocean sediment 2-89206
 HM Sagittae, symbiotic star, parameters of dust shell and late-type star from IR obs. (Russian) 2-63465
 RY Sagittarii, R Coronae Borealis variable, C rich dust rel. to circumstellar extinction 2-106747
 samples stored at Lunar Sample Building 2-78985
 Selected Areas 128 and 156, interstellar dust distrib. from uvby β obs. 2-101021
 Seyfert galaxies, effects of interstellar reddening on H line emission 2-74079
 Sharpless 106, bipolar nebula, central star polarisation due to dust lane aligned grains 2-68856
 Sharpless 106 (AFGL 2584), star formation region, IR images rel. to nebular dust heating 2-68724
 solar nebula, dust sedimentation and planetary growth in gaseous nebula 2-100775
 solar nebula, surface densities of dust and gas rel. to growth and decay of mag. fields 2-100776

cosmic dust continued

- star clusters, circumstellar matter, ANS photometry of 2200 Å hump 2-79174
- supernova in NGC 1332, circumstellar dust shell form, and K-band magnitude 2-117690
- T Tauri stars, evidence for charact. max. temp. in circumstellar dust 2-73964
- Tolmans collapsing dust problem, WKB approx. 2-58441
- Ursa Major Stream stars, IR search for assoc. fragmentation debris 2-106572
- variable IR emission of cosmic dust sources 2-63379
- W51 IRS 1, 20 µm emission origin from heated dust 2-79227
- C star shells, inverse greenhouse effect of dust/molecules 2-89280
- C stars, circumstellar shells development rel. to optical obscuration and IR emission 2-94735
- C stars, IR excess and shell dust 2-112471

cosmic radiation *see cosmic background radiation***cosmic radiations, radiofrequency** *see radiofrequency cosmic radiation***cosmic radio waves** *see radiofrequency cosmic radiation***cosmic ray absorption** *see cosmic ray propagation***cosmic ray alpha-particles and helium nuclei**

- heliospheric intensity gradients of anomalous ⁴He and galactic cosmic rays over solar cycle 2-84049
- high energy α-particles in Earth's magnetosphere 2-73794
- solar ³He-rich events, He and heavy ion spectra rel. to stochastic Fermi accel. model calcs. 2-106442
- solar particles penetration of polar magnetosphere 2-84016

cosmic ray apparatus*see also particle detectors*

- antineutrino detection in cosmic rays 2-100749
- cellulose triacetate track detectors for solar cosmic ray heavy ion abundances meas. 2-112335
- channeltron system for air shower core obs. 2-94613
- cloud chamber measurement of EAS density spectra 2-58215
- COALA Project, Tasmania, EAS observing system rel. to anisotropies in 10¹³ to 10¹⁴ eV primaries (*Japanese*) 2-106454
- Compton polarimeter for cosmic X-rays/γ-rays linear polarisation above 50 keV 2-106542
- CR-39 track detector characts. for cosmic ray particle detection 2-63255
- CR-39 track detector for cosmic ray appl. 2-63256
- galactic antimatter cosmic rays detect. technique 2-117609
- gamma ray spectrometer, balloon-borne equipment 2-64743
- HEAO-3 Cosmic Ray Isotope Spectrometer 2-106541
- high pressure photomultiplier tube development for deep underwater study 2-102337
- International Solar Polar Mission, accelerator calibration of COSPIN expt. Low Energy Telescope 2-63251
- ion chambers, digital recording system 2-117606
- isotope expt. using Cherenkov range detector technique 2-68625
- LET spectra meas. using microprocessor supported microscope 2-68623
- Lexan polycarbonate and CR-39 track detectors, track response depend. on registration temp. 2-59665
- Lexan polycarbonate track detector for Zn/Ni meas. 2-68580
- liquid scintillation cosmic ray veto detector with BBQ shifter, design optimisation 2-68622
- microscope employing laser interferometry for cosmic ray track meas. in plastic detector 2-64841
- Nagoya cosmic ray muon spectrometer, characts. of events selected by various trigger conditions (*Japanese*) 2-106463
- neutrino detector using coherent scattering, appl. to low energy cosmic neutrinos 2-78964
- plastic scintillator response to relativistic Ne, Ar, Fe ions and cosmic ray muons 2-80385
- plastic track detectors for isotopic abundance meas. 2-68626
- plastic-electronic balloon-borne expt. package 2-68624
- sample-hold cct. with analogue multiplexer for multidetector systems 2-108304
- solid state nuclear track detectors, conf., Ahmedabad, India (Feb. 1981) 2-89441
- solid state track recorders, annealing effects 2-59661
- solid-state nuclear track detectors, conf., Bristol, England, Sept. 1981 2-58532
- SSNTD stack, cosmic ray charge spectrum efficiency correction 2-68581
- transition effect for ionisation calorimeters calc. 2-102326
- trigger circuit for large solenoidal particle detectors 2-68621
- ultrasoft X-ray radiation spatial distribution, polarization and spectrum measurement using multisectional gas counter 2-64774
- underground cosmic radiation study using large-volume anticoincidence detector 2-58260
- X-ray transition radiation meas. from plastic fibres 2-64816
- Br solar neutrino detector calibration, implications of ⁸¹Kr ground state mass 2-59227
- Ge intrinsic planar crystal, balloon-borne solid state cosmic X-ray detector 2-100748

cosmic ray composition

- see also cosmic ray alpha-particles and helium nuclei; cosmic ray deuterons; cosmic ray electrons; cosmic ray mesons; cosmic ray muons; cosmic ray neutrinos; cosmic ray nuclei; cosmic ray photons*
- abundance calculation on assumption of origin near Ap stars 2-100673
- antiproton fluxes, rel. to cosmic rays confinement in interstellar mol. clouds 2-112271
- CR-39 track detector for cosmic ray appl. 2-63256
- EAS, hadron component, charged to neutral ratio 2-106450
- elemental and isotopic abundance anomalies interpretation in terms of Solar System origin 2-89169
- extensive air showers, hadron and muon numbers determ., use of multi-group method 2-106330
- fractionally charged particles search in cosmic rays at large zenith angles 2-100684
- galactic antimatter cosmic rays detect. technique 2-117609
- galactic cosmic ray nuclei, charge abundance at source in 600-1000 MeV/nucleon range 2-68575
- galactic cosmic rays source abundances and propagation of Z<30 relativistic cosmic rays 2-89086
- hadron interactions with nuclei at 2500 m above sea level 2-106457
- hadron-nucleus reactions in ionisation calorimeters, albedo particles flux 2-106458
- highly penetrating hadrons made of heavy flavour quarks 2-59125
- isotopic abundances meas. using plastic track detectors 2-68626
- massive cosmic monopole search, upper limit 2-84052

cosmic ray composition continued

- measurement with HEAO-3 Cosmic Ray Isotope Spectrometer 2-106541
- nuclear interactions and primary cosmic-ray components around 10¹⁵ eV, γ-ray families cluster anal. 2-100687
- nuclear track record of events in early solar system 2-68583
- particle phenomenology at ultrahigh energies, review 2-117550
- particles with small charge, sea-level search (*Chinese*) 2-112279
- primary 10¹⁵ eV cosmic rays composition from EAS muons+electrons 2-106448
- primary composition of cosmic rays near 10¹⁷ eV 2-84050
- primary cosmic rays, heavy nuclei content meas. 2-89093
- primary mass composition from longitudinal cascade development of cosmic ray showers 2-117549
- secondary cosmic rays in ionosphere, comp. and energy spectrum from Kosmos-721 data 2-112276
- solar ³He-rich events, He and heavy ion spectra rel. to stochastic Fermi accel. model calcs. 2-106442
- solar cosmic ray heavy ion abundances/energy spectra, use of cellulose triacetate track detectors 2-112335
- solar events with abundant heavy nuclei (1971-78) 2-106445
- solar flare particles anomalous abundances and preacceleration in collapsing mag. neutral sheets 2-63346
- ultraheavy (Z>30) cosmic rays, elemental composition (from HEAO-3) 2-89095
- ultrahigh energy cross section from air shower longit. development study 2-112284
- ultrahigh-energy cross section from study of longitudinal development of air showers at 10¹⁸ eV 2-106453
- ²²Ne abundance in low energy cosmic ray sources 2-89094
- ²²Ne excess in cosmic rays, origin and comp. and propag. from WC stars 2-94568

cosmic ray deuterons

No entries

cosmic ray effects and interactions*see also high-energy cosmic ray interactions*

- Earth atmosphere, relative contrib. of electrons produced at different heights to albedo flux 2-112277
 - flare particles interacting with atmosphere, radioisotope production and decay, γ-ray line emission 2-106654
 - galactic cosmic rays-interstellar matter interactions, gamma ray prod. 2-63568
 - HZE particles, role in space flight, results from space and ground-based expts. 2-62793
 - interplanetary shock wave causing fluctuations in cosmic ray neutrons 2-73803
 - local interstellar medium, electron spectrum from COS-B gamma-ray meas. 2-74051
 - lunar Kr production by nuclear spallation 2-113473
 - meteorite radionuclide production due to solar protons 2-89100
 - meteorites, Ne isotope depth profile due to cosmic ray irradiation 2-63200
 - particle phenomenology at ultrahigh energies, review 2-117550
 - protons and other substances, aq. solns., macroscopic fluctuations rel. to cosmo-geophys. factors 2-111746
 - solar proton hazard to Space Shuttle 2-100866
 - underground cosmic radiation study using large-volume anticoincidence detector 2-58260
 - ⁴He(³He,X), ⁷Li prod. in galactic cosmic ray interaction with interstellar medium 2-54416
- cosmic ray electrons**
- distant air shower, optical images, photons, emission from electron component 2-117545
 - EAS, cascade max. depth, from muon meas. 2-100681
 - EAS muons+electrons used to determine 10¹⁵ eV primary cosmic ray comp. 2-106448
 - electron-photon cascades, longitudinal development, Cherenkov radiation pulses 2-117546
 - electron-photon cascades in air, ang. and energy distribts. 2-117542
 - energies in SC 4.81 head-tail radio galaxy 2-79236
 - extensive air showers muon and electron components meas. 2-106452
 - free electron distribution in inner Galaxy from pulsar dispersion measures 2-89358
 - galactic cosmic rays, electron spectrum rel. to COS-B gamma-ray meas. 2-74051
 - gamma ray point sources, optical thickness against nonthermal electron bremsstrahlung 2-74127
 - interplanetary low-energy relativistic electrons, origins 2-89089
 - M31, cosmic ray electron dominated galactic wind, accounting for central extended radiosource 2-84325
 - modulation by solar wind high vel. stream 2-106441
 - NGC 6946, Scd galaxy, electron number density and diffusion due to mag. field 2-68897
 - primary cosmic rays, electrons with $e \geq 10^{12}$ eV, detect. 2-106449
 - radio galaxies, particle reacceleration by MHD turbulence rel. to apparent radio source struct. 2-68885
 - radiogalaxies, cosmic ray electrons diffusion, role in morphology and spectral index distrib. 2-106899
 - relativistic electron adiabatic deceleration in galactic wind, steady-state case 2-63638
 - relativistic galactic cosmic rays, propag. and nonthermal radiation emission 2-117537
 - secondary electrons, relative contrib. of electrons produced at different heights to albedo flux 2-112277
 - shower lateral distribution age parameter depend. on shower size 2-68579
 - solar electron streams diffuse component as MF and HF source 2-94675
 - solar electrons, accel. in loop coronal transients and radiation signatures 2-94670
 - solar flare electrons, accel. and energy spectrum 2-63329
 - solar flare particles, injection onset times of 2 GeV protons, 1 MeV electrons and 100 keV electrons 2-112273
 - supernova remnants surface brightness-diameter distrib. from cosmic ray electrons reacceleration 2-117729
- cosmic ray energy spectra**
- calculation on assumption of origin near Ap stars 2-100673
 - Cosmos-396 biological satellite, LET spectra obs. 2-62796
 - delayed hadrons in EAS, Fe group nuclei in primary cosmic ray flux 10¹⁰⁻¹⁵ eV 2-117547
 - diurnal anisotropy of cosmic ray intensity, spectral exponent vars. on mag. quiet days 2-68578

cosmic ray energy spectra continued

- diurnal anisotropy of cosmic rays, spectral exponent (β) on geomag. disturbed days 2-68577
 EAS meas. via atm. fluoresc. 2-112280
 electron energies in 5C 4.81 head-tail radio galaxy 2-79236
 electron-photon cascades in air, ang. and energy distrib. 2-117542
 galactic cosmic ray nuclei, charge abundance at source in 600-1000 MeV/nucleon range 2-68575
 galactic cosmic rays, electron spectrum rel. to COS-B gamma-ray meas. 2-74051
 galactic cosmic rays, sources location and anisotropy 2-117536
 galactic cosmic rays variations and energy spectra 2-106436
 gamma ray bursts, power law spectral index from search for assoc. high-energy gamma rays 2-84349
 ground level energy spectrum, 0 to 4 MeV 2-63197
 hadrons energy spectrum at sea level 2-84051
 measurement with HEAO-3 Cosmic Ray Isotope Spectrometer 2-106541
 muon energy spectrum measurement, appl. of time of flight method (Japanese) 2-106464
 muon flux energies and intensities at various zenith angles 2-106460
 muon horizontal flux in atmosphere, spark calorimeter and mag. spectrometer meas. 2-106459
 muons, ang. distrib. and density spectrum from obs. by Nagoya cosmic ray muon spectrometer (Japanese) 2-106463
 neutron multiplicity frequencies, differential energy spectrum for 10-4000 MeV, 4-1000 GeV 2-117543
 nuclear interactions and primary cosmic-ray components around 10^{15} eV, γ -ray families cluster anal. 2-100687
 nuclear track record of events in early solar system 2-68583
 proton energies in 5C 4.81 head-tail radio galaxy 2-79236
 sea level muon spectra, zenith angles, derivation from cosmic ray spectrum 2-68582
 secondary protons in ionosphere, latit. depend. and differential energy spectrum from (Kosmos-721) 2-112276
 showers, longitudinal development from Cherenkov radiation meas., 10^{15} to 10^{18} eV primaries 2-100685
 solar ^3He -rich events, He and heavy ion spectra rel. to stochastic Fermi accel. model calcs. 2-106442
 solar cosmic ray heavy ion abundances/energy spectra, use of cellulose triacetate track detectors 2-112335
 solar flare cosmic ray protons, energy spectra anal. 2-100676
 solar flare electrons, accel. and energy spectrum 2-63329
 solar flare neutrino production and spectra for various accel. proton spectra 2-106444
 solar flare particles penetration of polar magnetosphere, spectra and intensity var. 2-84016
 solar protons, assoc. type IV radio bursts (Chinese) 2-84196
 solar protons in high-latit. magnetosphere, spectral characts. at initial anisotropic stage of propag. 2-112225

cosmic ray geophysical effects *see* *geophysical aspects of cosmic rays*

cosmic ray jets *see* *cosmic ray showers and bursts*

cosmic ray mesons

- electron-photon cascade showers and μ mesons, transport problem soln. techniques (Japanese) 2-117544
 hadrons energy spectrum at sea level 2-84051
 Fe(π ,X), in cosmic rays, partial inelasticity coeff. (Russian) 2-117552
 (H1, k), 100 TeV, rel. to cosmic ray air shower interpretation 2-74718

cosmic ray muons

- EAS, cascade max. depth, from muon meas. 2-100681
 EAS muons, origin heights 2-106455
 EAS muons+electrons used to determine 10^{15} eV primary cosmic ray comp. 2-106448
 energy spectrum measurement, appl. of time of flight method (Japanese) 2-106464
 extensive air showers, hadron and muon numbers determ., use of multi-group method 2-106330
 extensive air showers muon and electron components meas. 2-106452
 flux energies and intensities of various zenith angles 2-106460
 horizontal flux in atmosphere, energy spectra measured with spark calorimeter and mag. spectrometer 2-106459
 pair time distrib. at 40 m water equivalent 2-112289
 sea level muon spectra, zenith angles, derivation from cosmic ray spectrum 2-68582
 shower, characts. of events selected by trigger conditions in Nagoya cosmic ray muon spectrometer (Japanese) 2-106463
 shower anisotropy used to determine primary local anisotropy at 10^{11} eV and above 2-106461
 stopping-muon rate in Mont Blanc spark chamber telescopes 2-59658
 underground cosmic radiation study using large-volume anticoincidence detector 2-58260

cosmic ray neutrinos

- bursts from collapsing stars, Homestake burst search results 2-89099
 capture rate and standard solar models 2-100865
 early universe, neutrino-dominated, galaxy and cluster form. 2-101107
 EAS meas. via atm. fluoresc. 2-112280
 low energy cosmic neutrinos, detect. via coherent scatt. 2-78964
 massive, effect on big bang cosmology 2-101627
 massive neutrinos, cosmological implications 2-74680
 massive neutrinos in bulk matter; vanishing of order-Ce mech. effects 2-106462
 massless, stellar stopping power via V-A and Weinberg interactions 2-73836
 pairing in background 2-63728
 point source detection prospects (Polish) 2-94615
 radiative decay, detectability of decay photons 2-89130
 resonant absorption by relic neutrino background 2-94879
 solar flare neutrino production and spectra for various accel. proton spectra 2-106444
 solar neutrino flux calc., use of low-energy $^3\text{He}(\alpha,\gamma)^3\text{He}$ cross section 2-85065
 solar neutrino production of ^9Tc and ^9Zr 2-89227
 solar neutrinos capture rates calc., effects of changes in $^7\text{Li}(\text{d},\text{p})^8\text{Li}$ cross section 2-85063
 solar problem, ^{81}Kr ground state mass 2-59227
 Sun, neutrino flux from solar activity (Russian) 2-73808
 ν - γ , photoionisation source in galactic haloes 2-74066
 νN - μX , tests for heavy weak bosons and cosmic antimatter 2-100688

cosmic ray neutrinos continued

- νN - μe , ^3Cl detector, solar neutrino time variations, rel. to oscillations 2-74679
 $^3\text{He}(\alpha,\gamma)^3\text{He}$, $E_{\text{cm}}=107$ -1266 keV, capture reaction and solar neutrino problem 2-59380
- cosmic ray neutrons**
 fluctuations during passage of interplanetary shock wave 2-73803
 multiplicity frequencies, differential energy spectrum for 10-4000 MeV, 4-1000 GeV 2-117543
- cosmic ray nuclei**
see also *cosmic ray alpha-particles and helium nuclei; cosmic ray neutrons; cosmic ray protons*
 composition measurement with HEAO-3 Cosmic Ray Isotope Spectrometer 2-106541
 delayed hadrons in EAS, Fe group nuclei in primary cosmic ray flux 10^{10} - 10^{15} eV 2-117547
 energetic nuclear fragments from cosmic-ray nuclei, anomalous behaviour 2-64426
 extragalactic cosmic rays limits from γ -ray fluxes 2-58211
 galactic cosmic ray nuclei, charge abundance at source in 600-1000 MeV/nucleon range 2-68575
 galactic cosmic rays radial intensity gradient and heliosphere large scale modulation 2-58210
 galactic cosmic rays-interstellar matter interactions, gamma ray prod. 2-63568
 isotope expt. using Cherenkov range detector technique 2-68625
 isotope meas. from Ca to Fe by plastic-electronic expt. 2-68624
 relative abundance obtained with track detectors, correction factor calc. 2-68581
 solar events with abundant heavy nuclei (1971-78) 2-106445
 (H1, k), 100 TeV, rel. to cosmic ray air shower interpretation 2-74718
 P/Ni ratio meas. in cosmic radiation using Lexan polycarbonate track detector 2-68580
- cosmic ray-nucleus reactions**
for inelastic cosmic ray-nucleus scattering, see "cosmic ray-nucleus scattering"
 Fe(p,X), in cosmic rays, partial inelasticity coeff. (Russian) 2-117552
 Fe(π ,X), in cosmic rays, partial inelasticity coeff. (Russian) 2-117552
- cosmic ray-nucleus scattering**
 No entries
- cosmic ray origin**
see also *cosmology; element origin*
 10^{13} to 10^{14} eV primaries, anisotropies determ. from cooperative obs. of EAS in Tasmania (Japanese) 2-106454
 acceleration in cosmic ray modified shock 2-63193
 active galaxy nuclei cosmic ray production 2-106907
 antiprotons from evaporation of primordial black holes 2-84351
 Ap stars, low energy cosmic ray production and accel. in interstellar space 2-100673
 compact stars, charged particles relativistic ejection by strong magnetic field 2-106694
 EAS muons, origin heights 2-106455
 extragalactic cosmic rays limits from γ -ray fluxes 2-58211
 galactic cosmic ray nuclei, charge abundance at source in 600-1000 MeV/nucleon range 2-68575
 galactic cosmic ray positrons, spectrum and origin for different propagation models 2-63192
 galactic cosmic rays origin and acceleration in galactic centre during periods of activity 2-106438
 galactic distrib. from γ -ray obs. 2-101062
 galactic haloes, neutrino EM decay as photoionisation source 2-74066
 gamma ray bursts, search for assoc. high-energy ($\geq 10^{15}$ eV) gamma ray photons 2-84349
 gamma rays, origin of 0.511 MeV annihilation line from galactic centre (Russian) 2-101074
 gamma-rays, review 2-89085
 high energy particles acceleration and origin assoc. with X-ray sources 2-89087
 interplanetary low-energy relativistic electrons 2-89089
 neutrino bursts from collapsing stars, Homestake burst search results 2-89099
 \bar{p} origin, obs. and models anal. 2-117535
 proton collisions in cosmic ray sources 2-84054
 pulsar particles ejection, role of plasma flute instability 2-114991
 relativistic electron sources origin 2-117537
 shock wave acceleration, struct. of cosmic ray shocks 2-106431
 solar flare electrons, accel. and energy spectrum 2-63329
 solar flare neutrino production and spectra for various accel. proton spectra 2-106444
 sources location 2-117536
 supernova remnants, relativistic particles content-diameter relation rel. to Bell's eqn. mechanism 2-106432
 supernovae nucleosynthesis and remnant form. 2-89288
 X-ray transition radiation generated on interstellar dust, contrib. to cosmic X-rays 2-117533
 ^{22}Ne excess in cosmic rays, origin from WC stars 2-94568

cosmic ray photons

- see also* *cosmic ray X-rays; solar cosmic ray photons*
 distant air shower, optical images, photons, emission from electron component 2-117545
 electron-photon cascades, longitudinal development, Cherenkov radiation pulses 2-117546
 electron-photon cascades in air, ang. and energy distrib. 2-117542
 Galaxy diffuse gamma-ray emission, review (German) 2-94868
 gamma ray bursts, search for assoc. high-energy ($\geq 10^{15}$ eV) gamma ray photons 2-84349
 gamma ray emission, galactic, COS-B meas. rel. to cosmic rays and local interstellar medium 2-74051
 gamma ray linear polarisation determination, use of Compton polarimeter 2-106542
 gamma ray obs. in 0.3-5 GeV range from balloon 2-64743
 gamma rays, ΣE_{e} , ≥ 1000 TeV and hadronic interactions 2-63198
 gamma rays, origin of 0.511 MeV annihilation line from galactic centre (Russian) 2-101074
 gamma-ray bursts, log N-log S curve meas. by SIGNE expts. 2-89407
 gamma-ray bursts, review 2-58217
 gamma-ray production and cosmic-ray acceleration in OB star winds 2-63396
 gamma-ray triggering of pulsar spark discharges 2-100967
 gamma-rays, review 2-89085

cosmic ray photons continued

- gamma-rays with $E > 40$ MeV, quasi-periodic vars. in upper atmosphere 2-89092
- multiple prod. process study in balloon borne cosmic ray expt. 2-112285
- solar flare particles accel. by propagating interplanetary shock wave 2-94570

cosmic ray propagation

- acceleration at shock front including preshock scatt., appl. to supernova remnants 2-73801
- acceleration by plasma motions with randomly distributed shock waves 2-100672
- acceleration by shock waves, struct. of cosmic ray shocks 2-106431
- acceleration by shock waves 2-117534
- acceleration by shock waves in lossy media and γ -ray prod. 2-106433
- acceleration in cosmic ray modified shock 2-63193
- acceleration in interstellar shocks after prod. near Ap stars 2-100673
- acceleration in supernova outbursts 2-73802
- acceleration in supernova remnant shock fronts 2-73801
- acceleration mechanisms (*French*) 2-58209
- acceleration by shock waves 2-63194
- atmosphere propagation in light of scaling deviations 2-106447
- compact stars, charged particles relativistic ejection by strong magnetic field 2-106694
- confinement of cosmic rays in molecular clouds, rel. to COS-B γ -ray sources 2-112271
- electron-photon cascade showers and μ mesons, transport problem soln. techniques (*Japanese*) 2-117544
- electrons modulation by solar wind high vel. stream 2-106441
- galactic cosmic ray modulation and propagation in interplanetary space rel. to cosmic ray var. 2-106436
- galactic cosmic ray modulation by interplanetary mag. piston, kinetic theory 2-112275
- galactic cosmic ray modulation by solar wind and diffusion coeff. energy depend. 2-106437
- galactic cosmic ray positrons, spectrum and origin for different propagation models 2-63192
- galactic cosmic rays, interplanetary diffusion, effect of solar wind mag. inhomogeneities 2-73804
- galactic cosmic rays acceleration in interstellar medium by shock waves 2-89088
- galactic cosmic rays diffusion coefficient, effect of galactic fountain MHD instability 2-63587
- galactic cosmic rays origin and acceleration in galactic centre during periods of activity 2-106438
- galactic cosmic rays source abundances and propagation of $Z < 30$ relativistic cosmic rays 2-89086
- hadron cascade propagation, diagram method for kinetic eqns. soln. 2-106329
- halo round Galaxy from γ -ray evidence 2-63676
- high energy particles acceleration and origin assoc. with X-ray sources 2-89087
- interactions with solar wind magnetic field 2-106435
- interplanetary acceleration of energetic particles at 1 and 5 AU, theory 2-106443
- interplanetary cosmic rays, steady state transport equation separation 2-58213
- interplanetary mag. reversal and influence on cosmic rays 2-73805
- interplanetary propagation, solns. of spherically symmetric cosmic ray transport eqn. 2-106439
- interplanetary propagation of solar flare events X-rays and ions 2-112274
- interplanetary relativistic particles in corotating interaction regions 2-94569
- interplanetary shock wave mag. disturbance, oscillatory struct. and cosmic ray trapping 2-73803
- NGC 6946, Scd galaxy, electron number density and diffusion due to mag. field 2-68897
- protons in interplanetary space, sunward propagation effects 2-112272
- pulsar particles ejection, role of plasma flute instability 2-114991
- radiogalaxies, cosmic ray electrons diffusion, role in morphology and spectral index distrib. 2-106899
- relativistic galactic cosmic rays, propag. and nonthermal radiation emission 2-117537
- sea level measurements for showers of 2×10^5 to 10^7 particles 2-73810
- semi-diurnal anisotropy direction at Deep River rel. to interplanetary mag. field 2-117540
- shock acceleration, diffusion theory, effect of ambient mag. field and MHD shock 2-78925
- shock wave acceleration in interplanetary space 2-63196
- shock wave modulation of cosmic rays in interplanetary space 2-117539
- solar cosmic rays, diaphragming of particle stream entering magnetospheric clefts 2-112228
- solar cosmic rays propag. and modulation in solar wind mag. field 2-73806
- solar electrons accel. in loop coronal transients 2-94670
- solar flare cosmic ray protons, energy loss in interplanetary space 2-100676
- solar flare electrons, accel. and energy spectrum 2-63329
- solar flare protons, propag. and diffusion coeff. in interplanetary medium 2-100675
- solar modulation near heliospheric current sheet 2-112278
- solar proton propagation in interplanetary space 2-100674
- solar protons in high-latit. magnetosphere, spectral characts. at initial anisotropic stage of propag. 2-112225
- solar wind magnetic field structure inside Mars orbit from cosmic ray var. 2-106466
- supernova remnants in cloudy interstellar medium, shock front particle accel. and radioemission 2-117729
- supernova remnants surface brightness-diameter distrib. from cosmic ray electrons reacceleration 2-117729
- transport including pitch angle scatt., finite difference solns. 2-63195
- ultrahigh-energy cross section from study of longitudinal development of air showers at 10^{16} eV 2-106453
- ^{56}Fe , fragmentation cross section on H 2-113522
- ^{23}Ne excess in cosmic rays, origin and comp. and propag. from WC stars 2-94568

cosmic ray protons

- antiproton fluxes, rel. to cosmic rays confinement in interstellar mol. clouds 2-112271
- antiprotons at sub-GeV energies, secondary production 2-58212
- antiprotons from evaporation of primordial black holes 2-84351

cosmic ray protons continued

- delayed hadrons in EAS, Fe group nuclei in primary cosmic ray flux 10^{13} - 10^{15} eV 2-117547
- energies in 5C 4.81 head-tail radio galaxy 2-79236
- extragalactic cosmic rays limits from γ -ray fluxes 2-58211
- interplanetary effects on sunward propagating electrons 2-112272
- meteorite radionuclide production due to solar protons 2-89100
- β origin, obs. and models anal. 2-117535
- secondary protons in ionosphere, latit. depend. and differential energy spectrum from (Kosmos-721) 2-112276
- solar cosmic ray obs. in high-latitude magnetosphere 2-117541
- solar energy spectra, assoc. type IV radio bursts (*Chinese*) 2-84196
- solar flare cosmic ray protons, energy spectra anal. 2-100676
- solar flare particles, injection onset times of 2 GeV protons, 1 MeV electrons and 100 keV electrons 2-112273
- solar flare protons, propag. and diffusion coeff. in interplanetary medium 2-100675
- solar particles penetration of polar magnetosphere 2-84016
- solar proton event, 1975 September 1, evidence for energetic particle release before optical flare 2-106465
- delayed hadrons in EAS, Fe group nuclei in primary cosmic ray flux 10^{13} - 10^{15} eV 2-117547
- density spectrum of EAS at sea level, calc. (*Russian*) 2-100686
- distant air shower, optical images, photons, emission from electron component 2-117545
- EAS, cascade max. depth, from muon meas. 2-100681
- EAS, double-cored, large p_T subshower, fine anal. 2-112282
- EAS, hadron component, charged to neutral ratio 2-106450
- EAS, hadron component meas. at energies above 10^{13} eV 2-89097
- EAS, integral size spectrum, age parameters and absorption length 2-100680
- EAS $> 10^{12}$ eV due to γ -ray component of Cygnus X-3 X-ray binary 2-84283
- EAS age parameter and show, size at sea level, dissertation 2-117548
- EAS Cherenkov light detection using solar arrays, nighttime astronomical appl. 2-73843
- EAS density spectra re-evaluation 2-58215
- EAS density spectra reconstruction 2-58216
- EAS high energy hadrons, charged to neutral ratio meas. 2-112286
- EAS in Tasmania, search for anisotropies in 10^{13} to 10^{14} eV primaries (COALA Project) (*Japanese*) 2-106454
- EAS meas. via atm. fluoresc. 2-112280
- EAS muons, origin heights 2-106455
- EAS muons+electrons used to determine 10^{15} eV primary cosmic ray comp. 2-106448
- EAS produced by intergalactic suprathermal dust grains 2-84053
- electron lateral distribution age parameter depend. on shower size 2-68579
- electron-photon cascade showers and μ mesons, transport problem soln. techniques (*Japanese*) 2-117544
- electron-photon cascades, longitudinal development, Cherenkov radiation pulses 2-117546
- electron-photon cascades in air, ang. and energy distrib. 2-117542
- elongation rate theorem for cosmic-ray showers 2-89096
- extensive air showers, delayed energetic events 2-100683
- extensive air showers, hadron and muon numbers determ., use of multi-group method 2-106330
- extensive air showers multicomponent events 2-106451
- extensive air showers muon and electron components meas. 2-106452
- fractionally charged particles search in cosmic rays at large zenith angles 2-100684
- gamma ray bursts, search for assoc. high-energy ($\geq 10^{15}$ eV) gamma ray photons 2-84349
- gamma-ray bursts, review 2-58217
- hadron cascade propagation, diagram method for kinetic eqns. soln. 2-106329
- hadron showers in Pb, 100 TeV, instabilities of particles responsible for anomalies in absorption 2-85507
- hadronic interactions and gigantic γ -ray family events with $\Sigma E_{\gamma} \geq 1000$ TeV 2-63198
- heavy nuclei content meas. 2-89093
- high energy cosmic ray interaction props. and comparison with accelerator expt. results 2-112288
- horizontal air showers, 1-100 TeV, size spectrum, zenith angle distrib. 2-94571
- jet interaction at 800 TeV, obs. aboard Concorde 2-95888
- longitudinal cascade development for atmospheric Cherenkov radiation 2-117549
- longitudinal development from Cherenkov radiation meas., 10^{15} to 10^{18} eV primaries 2-100685
- maximum depth fluctuations, for showers prod. by 1.5×10^{17} eV particles 2-100682
- muon anisotropy used to determ. primary local anisotropy at 10^{11} eV and above 2-106461
- muons, characts. of events selected by trigger conditions in Nagoya cosmic ray muon spectrometer (*Japanese*) 2-106463
- neutrino bursts from collapsing stars, Homestake burst search results 2-89099
- non-pion multiple prod. of hadrons in Chacaltaya emulsion chamber expts. 2-112283
- primary composition of cosmic rays near 10^{17} eV 2-84050
- radial electron distrib. of EAS 2-112281
- sea level measurements for showers of 2×10^5 to 10^7 particles 2-73810
- solar proton ground level event, study of interplanetary propagation effects 2-100674
- subcore TeV interactions high- p_T scaling test 2-84055
- ultrahigh energy cross section from air shower longit. development study 2-112284
- ultrahigh-energy cross section from study of longitudinal development of air showers at 10^{18} eV 2-106453
- ultrahigh-energy EM cascades development in water and Pb including LPM effect 2-73809
- X-ray photons in EAS 2-89098

cosmic ray showers and bursts

- see also cosmic ray electrons; cosmic ray X-rays
- core obs. using channeltron system 2-94613
- Cygnus X-3, γ -ray obs. via air showers anal. 2-74026
- delayed hadrons in EAS, Fe group nuclei in primary cosmic ray flux 10^{13} - 10^{15} eV 2-117547
- density spectrum of EAS at sea level, calc. (*Russian*) 2-100686
- distant air shower, optical images, photons, emission from electron component 2-117545
- EAS, cascade max. depth, from muon meas. 2-100681
- EAS, double-cored, large p_T subshower, fine anal. 2-112282
- EAS, hadron component, charged to neutral ratio 2-106450
- EAS, hadron component meas. at energies above 10^{13} eV 2-89097
- EAS, integral size spectrum, age parameters and absorption length 2-100680
- EAS $> 10^{12}$ eV due to γ -ray component of Cygnus X-3 X-ray binary 2-84283
- EAS age parameter and show, size at sea level, dissertation 2-117548
- EAS Cherenkov light detection using solar arrays, nighttime astronomical appl. 2-73843
- EAS density spectra re-evaluation 2-58215
- EAS density spectra reconstruction 2-58216
- EAS high energy hadrons, charged to neutral ratio meas. 2-112286
- EAS in Tasmania, search for anisotropies in 10^{13} to 10^{14} eV primaries (COALA Project) (*Japanese*) 2-106454
- EAS meas. via atm. fluoresc. 2-112280
- EAS muons, origin heights 2-106455
- EAS muons+electrons used to determine 10^{15} eV primary cosmic ray comp. 2-106448
- EAS produced by intergalactic suprathermal dust grains 2-84053
- electron lateral distribution age parameter depend. on shower size 2-68579
- electron-photon cascade showers and μ mesons, transport problem soln. techniques (*Japanese*) 2-117544
- electron-photon cascades, longitudinal development, Cherenkov radiation pulses 2-117546
- electron-photon cascades in air, ang. and energy distrib. 2-117542
- elongation rate theorem for cosmic-ray showers 2-89096
- extensive air showers, delayed energetic events 2-100683
- extensive air showers, hadron and muon numbers determ., use of multi-group method 2-106330
- extensive air showers multicomponent events 2-106451
- extensive air showers muon and electron components meas. 2-106452
- fractionally charged particles search in cosmic rays at large zenith angles 2-100684
- gamma ray bursts, search for assoc. high-energy ($\geq 10^{15}$ eV) gamma ray photons 2-84349
- gamma-ray bursts, review 2-58217
- hadron cascade propagation, diagram method for kinetic eqns. soln. 2-106329
- hadron showers in Pb, 100 TeV, instabilities of particles responsible for anomalies in absorption 2-85507
- hadronic interactions and gigantic γ -ray family events with $\Sigma E_{\gamma} \geq 1000$ TeV 2-63198
- heavy nuclei content meas. 2-89093
- high energy cosmic ray interaction props. and comparison with accelerator expt. results 2-112288
- horizontal air showers, 1-100 TeV, size spectrum, zenith angle distrib. 2-94571
- jet interaction at 800 TeV, obs. aboard Concorde 2-95888
- longitudinal cascade development for atmospheric Cherenkov radiation 2-117549
- longitudinal development from Cherenkov radiation meas., 10^{15} to 10^{18} eV primaries 2-100685
- maximum depth fluctuations, for showers prod. by 1.5×10^{17} eV particles 2-100682
- muon anisotropy used to determ. primary local anisotropy at 10^{11} eV and above 2-106461
- muons, characts. of events selected by trigger conditions in Nagoya cosmic ray muon spectrometer (*Japanese*) 2-106463
- neutrino bursts from collapsing stars, Homestake burst search results 2-89099
- non-pion multiple prod. of hadrons in Chacaltaya emulsion chamber expts. 2-112283
- primary composition of cosmic rays near 10^{17} eV 2-84050
- radial electron distrib. of EAS 2-112281
- sea level measurements for showers of 2×10^5 to 10^7 particles 2-73810
- solar proton ground level event, study of interplanetary propagation effects 2-100674
- subcore TeV interactions high- p_T scaling test 2-84055
- ultrahigh energy cross section from air shower longit. development study 2-112284
- ultrahigh-energy cross section from study of longitudinal development of air showers at 10^{18} eV 2-106453
- ultrahigh-energy EM cascades development in water and Pb including LPM effect 2-73809
- X-ray photons in EAS 2-89098

cosmic ray showers and bursts continued

pN (NN), inclusive γ -ray and charged-meson prod. study at \geq greater than 10 TeV 2-73811
(HI, k), 100 TeV, rel. to cosmic ray air shower interpretation 2-74718

cosmic ray solar modulation

electrons modulation by solar wind high vel. stream 2-106441
galactic cosmic ray modulation and propagation in interplanetary space rel. to cosmic ray var. 2-106436
galactic cosmic ray modulation by interplanetary mag. piston, kinetic theory 2-112275
galactic cosmic ray modulation by solar wind and diffusion coeff. energy depend. 2-106437
galactic cosmic rays diffusion, effect of solar wind mag. inhomogeneities 2-73804
galactic cosmic rays interactions with solar wind magnetic field 2-106435
galactic cosmic rays radial intensity gradient and heliosphere large scale modulation 2-58210
heliospheric current sheet region, 3-D model of modulation 2-112278
heliospheric intensity gradients of anomalous ^4He and galactic cosmic rays over solar cycle 2-84049
interplanetary mag. reversal and influence on cosmic rays 2-73805
interplanetary propagation, solns. of spherically symmetric cosmic ray transport eqn. 2-106439
relativistic particles in corotating interaction region 2-94569
solar wind, effect on cosmic ray accel., modulation and drift 2-73806
solar wind influence 2-89091
solar wind magnetic field effect on cosmic ray drift 2-106440
tridiurnal wave, seasonal variation over 1961-1971 solar cycle 2-68576

cosmic ray variations

see also geomagnetism
1976 March-April, related solar geomag. and interplanetary disturbances 2-58214
anisotropy and drift in solar wind mag. field 2-106440
diurnal anisotropy of cosmic ray intensity, spectral exponent vars. on mag. quiet days 2-68578
diurnal anisotropy of cosmic rays, spectral exponent (β) on geomag. disturbed days 2-68577
galactic cosmic ray modulation and propagation in interplanetary space rel. to cosmic ray var. 2-106436
galactic cosmic ray modulation by interplanetary mag. piston, kinetic theory 2-112275
heliospheric intensity gradients of anomalous ^4He and galactic cosmic rays over solar cycle 2-84049
interplanetary mag. reversal and influence of cosmic rays 2-73805
neutron component fluctuations during passage of interplanetary shock wave 2-73803
semi-diurnal anisotropy direction at Deep River rel. to interplanetary mag. field 2-117540
solar flare particles penetration of polar magnetosphere, spectra and intensity var. 2-84016
solar flare protons, interplanetary propag. and diffusion coeff. rel. to time vars. at Earth orbit 2-100675
solar wind magnetic field structure inside Mars orbit from cosmic ray var. 2-106466
tridiurnal wave, seasonal variation over 1961-1971 solar cycle 2-68576

cosmic ray X-rays

diffuse X-ray background, contrib. of X-ray emission from extragalactic star form. bursts 2-106911
EAS X-ray photons 2-89098
flare event of Nov. 22 1977 2-112274
gas scintillation proportional counters for Japanese astron. satellite 2-94609
linear polarisation determination, use of Compton polarimeter 2-106542
transition radiation generated on interstellar dust, contrib. to cosmic X-rays 2-117533
Ge intrinsic planar crystal, balloon-borne solid state cosmic X-ray detector 2-100748

cosmic rays

see also cosmic ray apparatus; cosmic ray composition; cosmic ray effects and interactions; cosmic ray energy spectra; cosmic ray origin; cosmic ray propagation; cosmic ray showers and bursts; cosmic ray solar modulation; cosmic ray variations; galactic cosmic rays; geophysical aspects of cosmic rays; high-energy cosmic ray interactions; primary cosmic rays; solar cosmic ray particles

17th International Conference at Paris, France (July 1981) 2-84385
Seventh European Symposium on cosmic rays, Leningrad, USSR (1980 September 15 to 19) 2-84367

cosmic X-rays *see cosmic ray X-rays***cosmogony** *see cosmology***cosmology**

see also black holes; element origin; general relativity; red shift
250 absorption systems, red shift distrib., cosmological implications 2-89403
active galactic nuclei spectral evolution 2-117739
adiabatic perturbations evolution, nonlinear effects 2-58510
adiabatic perturbations growth rate, closed form. expressions 2-112613
anti-de Sitter background and gauged extended supergravity 2-107224
axion models, Z(N) breaking, domain walls role 2-74133
axion models with no domain wall problem 2-101621
background radiation, IR and microwave obs. via Cosmic Background Explorer (COBE) 2-106478
background radiation anisotropy measurements and cosmological implications 2-117805
baryon asymmetry and spontaneous CP breaking in SU(5) model 2-64258
baryon asymmetry in grand unified gauge models 2-101614
baryon asymmetry of Universe, supersymmetry breaking scale 2-113193
baryon density constraints 2-117829
baryon number, contrib. of primordial black holes 2-79255
baryon prod. and neutrino masses in SU(2) $_L$ × SU(2) $_R$ × U(1) $_{B-L}$ gauge theory 2-84825
baryon prod. vs. intermediate mass scales 2-89426
Bianchi type EM cosmology, Type I Hamiltonian 2-68937
Bianchi type III model, with cosmological const., general soln. 2-68940
Bianchi type VI $_0$ cosmological models with matter and EM field, exact solns. 2-106972
Bianchi type-I, primordial nucleosynthesis 2-84361
bianchi type-II cosmological models in Brans-Dicke theory 2-63725
Bianchi Universes, quantum stationary states 2-117822
big bang, massive neutrinos effect 2-101627

cosmology continued

Big Bang and element creation, conf. (London, March 1982) 2-112651
big bang model, evidence from Li abundance at Galaxy form. 2-89382
Big Bang nucleosynthesis, open and closed model anisotropies 2-117826
big bang relic neutrinos, detection through energy splittings 2-117835
big bang singularity and cosmological uniformity 2-117842
big-bang theory, implications of constraints imposed by $\Delta Y/\Delta Z$ ratio on galaxies chemical evolution 2-74107
Bootes void, surrounding large scale superclusters 2-94848
Bootes void emission line galaxies, velocities and distances from spectra 2-94828
Brans-Dicke cosmology, modified, anisotropic homogeneous models 2-94871
Brans-Dicke cosmology, stellar evolution in theoretical isochrones with variable G 2-106683
Brans-Dicke modified cosmology, Bianchi type-I solns. 2-117823
3C radiogalaxies, JHK photometry and IR Hubble diagram 2-89398
Casner metric, interacting scalar and EM fields, model isotropisation, classical case 2-74139
Casner metric, interacting scalar and EM fields, model isotropisation, quantum case 2-74140
Cauchy horizons in cosmological spacetimes with one Killing field 2-94870
chaos, nonlinear dynamics, in general relativity 2-112765
chemical evolution of two-component galaxies, generalised model allowing for gas inflow 2-106897
closed cosmological model, correspondence between Brans-Dicke theory and general relativity 2-74132
clusters of galaxies evolution from subclusters 2-101077
conference at Christ Church, Oxford, England (September 1981) 2-112661
conformally flat space-time with perfect fluid and heat flux, Einstein eqns. solns. 2-84491
continuous creation theory, Brans-Dicke model adaptation 2-112616
cooling Universe, gauge symmetry breaking, unified interactions 2-117840
cosmic magnetic fields origin, role of parity nonconservation 2-63227
cosmic ray neutrinos, resonant absorption by relic neutrino background 2-94879
cosmic string self-intersection, galaxy formation 2-117833
cosmic strings and domain walls in models with Goldstone and pseudo-Goldstone bosons 2-89425
creation of nuclear energy at big bang 2-74131
deceleration parameter determination from radio quasars luminosities (Chinese) 2-79254
deceleration parameter determination methods review 2-112631
degenerate supersymmetric vacua and gravitation 2-84508
density parameter, anal. of induced gravity field from galaxy redshifts survey 2-68881
density parameter from double radiosource props., use of Spearman partial rank correlation coeff. 2-84341
density perturbations in early Universe, spontaneous generation 2-101104
density perturbations in expanding collisionless medium, nonlinear growth theory 2-101045
density wave models, background radiation multipole anisotropy 2-89414
detonation, relativistic waves, rel. to bubble growth in false vacuum decay 2-69073
Dicke-Brans-Jordan cosmology, cosmological red shift time var. 2-117813
Dirac's Large Numbers Hypothesis and isotopic abundances 2-101096
Dirac cosmology, N-body problem eqns. of motion 2-94878
Dirac large numbers hypothesis, cosmological implications 2-106977
distance scale, Hubble constant, two approaches 2-117761
distance scale, methods for determining distance to supernovae 2-63496
distance scale in extragalactic astronomy 2-106990
distance scales, for distances to extragalactic objects 2-117768
distance scales, Galaxy as standard (French) 2-101058
distant galaxies, radiosource identifications reliability and radio/stellar population props. var. with cosmic epoch 2-117776
dynamical symmetry breaking induced by nonconformal coupling in $R^1 \times S^3$ 2-53939
early Universe, baryon excess contrib. from grav. interaction after Planck time 2-68946
early Universe, CPT noninvariance and massive scalar particle decay 2-117814
early Universe, curvature effects 2-79258
early Universe, de Sitter-Friedmann phase transition and finite temp. $\lambda\phi^4$ model 2-117821
early Universe, free quark-baryon ratio, time development 2-68941
early Universe, generalised theory of gravitation 2-89419
early Universe, isothermal perturbations generation 2-79251
early Universe, matter-radiation thermal interaction 2-112615
early Universe, quark-hadron transition, QCD and effective interaction calcs. 2-84362
early Universe, scalar field, coherent-state representation 2-74136
early Universe, vacuum phase transitions, primordial irregularities 2-101106
early Universe, viscous dissipation and unification 2-79256
Earth expansion due to decreasing gravit. const. 2-88830
Einstein Universe, dynamical symmetry breaking by EM corrections 2-79262
Einstein-Cartan-Maxwell-Bianchi type-V cosmological models 2-112618
Einstein-de Sitter universe of radiating massive photinos 2-94880
Einstein-de Sitter Universe with perfect fluid + relativistic collisionless gas, cosmological perturbations evolution 2-89417
elemental abundances 2-117827
elementary particle physics correlation 2-117839
entropy generation and phase transitions in the early Universe 2-58513
entropy in expanding Universe, cosmological and biological implications 2-117836
ether formulations of relativity 2-107190
Euclidean models, magnetic fields and rotation 2-58508
evolution of perturbations in an inflationary Universe 2-106968
expanding cosmologies, colliding gravit. waves 2-58519
expanding Newtonian cosmology, correlation dynamics, exact eqn. derivation 2-112612
expanding Universe, inhomogeneous density distrib. 2-63730
expanding Universe, particle creation, suppression of supercooling 2-84358
expanding Universe, statistical effect of interactions on particle creation 2-106984

cosmology continued

- expanding Universe, void enlargement, Einstein-de Sitter model, galaxies 2-11770
- expansion controlled by symmetry transition at grand unification 2-106979
- extragalactic astronomy (book) 2-68986
- extragalactic distance indicator, central vel. dispersion in galaxies 2-84307
- extragalactic distance scale, depend. of Tully-Fisher relation on Hubble type rel. to use of 21 cm line width 2-63615
- extragalactic radiosources cosmological evolution, effect of gravit. lensing 2-89397
- fine structure constant, time variability 2-74293
- finite temperature QED, mass generation 2-113198
- Friedmann hot Universe, absence of particle creation (*Russian*) 2-84363
- Friedmann Universe large scale struct., general props., one and two dims. models 2-89423
- Friedmann-Robertson-Walker space-times, explicit solns. of $\square u=0$ 2-68938
- galaxies, adiabatic formation scenario, clustering of massive neutrinos 2-68906
- galaxies formation, two-parameter scheme for evolution of symmetrical galaxies 2-106896
- galaxies formation inside large scale struct. 2-89386
- galaxies gravitational interactions in early Universe, rel. to origin of angular momenta 2-89384
- galaxies large scale space distribution, from redshifts survey 2-58448
- galaxies space distribution, search for large-scale linear filament struct. in apparent distrib. (*Russian*) 2-112567
- galaxies velocity distributions, selection effect 2-117779
- galaxy angular size test, mild evolutionary correction due to galactic mass loss 2-68882
- galaxy clustering, velocity evolution 2-58473
- galaxy clustering and missing mass 2-117782
- galaxy clusters embedded in homogeneous background, cosmological model 2-112614
- galaxy clusters formation, implication of clusters shapes and orientations 2-74110
- galaxy clusters formation time, implications of anal. of cluster dynamics 2-63685
- galaxy correlation function, rel. to multipole moments in Rubin-Ford data 2-106892
- galaxy distance and expanding Universe (book) 2-74192
- galaxy formation, density fluctuations rel. to phase space struct. of $r^{1/4}$ galaxies 2-112563
- galaxy formation, effects of hidden mass and Population III objects 2-117844
- galaxy formation, triggering by quasar explosions 2-68902
- galaxy formation and phonons 2-101066
- galaxy formation from collision of two clouds, subsequent evolution 2-117774
- galaxy formation in gravitino dominated Universe 2-112627
- galaxy formation theory, string in SO(10) grand unified theory 2-84822
- gauge-covariant gravitation theory and cosmological constant 2-63727
- general-relativity-with-higher-derivatives, horizon free cosmologies 2-95182
- generalised Einstein eqns., cosmology without singularity and nonlinear gravitational Lagrangians 2-101099
- globally hyperbolic space-times, black hole theory, cosmological implications 2-89295
- Godel Universe, scalar and neutrino fields 2-112623
- grand unification and possible matter-antimatter domain structure in the Universe 2-117579
- grand unification phase transition, cosmological kinetic term 2-59074
- grand unified theories, baryon generation and symmetry behaviour, cosmological consequences 2-59072
- grand unified theories, monopoles and early Universe, review 2-79790
- grand unified theories, supersymm., cosmological consequences 2-101620
- grand unified theories 2-113195
- grand unified theories in cosmology 2-117830
- grand unified theories with radiatively induced symmetry breaking 2-84359
- gravitating Julia-Zee Dyon and the cosmological term 2-84816
- gravitational and cosmological constants in broken symmetry theories of gravity, temp. depend. 2-84505
- gravitational constant variability and primordial nucleosynthesis 2-58507
- gravitational radiation, contrib. of stochastic background to timing noise of pulsars 2-79249
- gravitino-dominated Universe, galaxy formation 2-84333
- gravothermal aspects of evolution of stars and Universe, theory 2-100726
- Guth cosmology, phase transitions, gravitational effects 2-106986
- H-space with cosmological constant 2-53617
- Hartree approximation as high density limit 2-74134
- heavy leptons, fractionally charged, abundance, cosmological implications 2-84360
- homogeneous cosmological model, Einstein's eqns. self-similar solns. 2-95161
- homogeneous models, evolution near singularity, EM fields effect 2-89422
- homogeneous universe with viscous fluid 2-94874
- horizon problem, Planck era discussion 2-94875
- hot plasma in closed Universe, cosmological constraints 2-84308
- Hubble constant, determ. from radio galaxy emission scatt. by intergalactic gas (*Russian*) 2-106923
- Hubble constant, determ. from Virgo cluster 2-106983
- Hubble constant, global value from Type I SN max. absolute mags. 2-84306
- Hubble constant, value from surface photometry of edge-on spiral galaxies 2-89364
- Hubble constant determination from Local Group infall towards Virgo cluster 2-89390
- Hubble diagram for Type I supernovae 2-100963
- Hubble modulus isotropy, upper limit to dipole component from study of quasars 2-79240
- Hubble modulus isotropy, upper limit to dipole component from study of quasars 2-79241
- hydromagnetic model stability 2-89131
- inflationary universe scenario, Coleman-Weinberg GUT, monopoles 2-106985
- inhomogeneous cosmology: gravitational radiation in Bianchi backgrounds 2-63719

cosmology continued

- intergalactic medium, photoionisation anal. of He ionisation balance 2-94837
- intergalactic void in Bootes, implications of redshift distrib. of Markarian galaxies 2-68898
- invariant eqns. under finite representations of de Sitter group (*French*) 2-79257
- isothermal perturbations prod. by primordial sound spectrum, nonlinear effects 2-58511
- isotropic focusing of light rays 2-101100
- isotropy of Universe from motion of Local Group galaxies 2-79219
- Kantowski-Sachs cosmological solution with torsion 2-112624
- kinetic theory 2-89132
- large number hypothesis, rel. to spin, circulation and ang. momenta 2-106976
- large number hypothesis and the matter-dominated Universe 2-112621
- large numbers hypothesis, classical formalism 2-112620
- linearly expanding universe, quantised scalar field behaviour at low energy 2-112617
- lore of large numbers, historical and background to Anthropic Principle 2-63793
- Lyttleton-Bondi Universe, static conformally flat cosmological soln. 2-112619
- magnetic monopole-antimonopole annihilation, two- and three-body contributions 2-117585
- magnetic monopoles, massive, number density and flux in Universe 2-74634
- mass bodies gravitational instability, effects of extended Maxwell-like gravitational field eqns. 2-106496
- mass distrib. in open model, microwave background anisotropy 2-106967
- massive neutrinos, cosmological implications 2-74680
- massive neutrinos role in galactic halo and globular cluster form. 2-58512
- massive oscillators as cosmic energy sources 2-58241
- massive photinos, rel. to intergalactic UV radiation 2-79796
- matter fields, cosmology, topology and field theory 2-101101
- Maxwell equations in homogeneous cosmologies 2-84354
- microwave background, gravit. scintillation, density inhomogeneity cause 2-112611
- microwave background, large-scale anisotropy meas. 2-117804
- microwave background radiation, ang. fluctuations of temp. in Universe with massive neutrinos (*Russian*) 2-63718
- microwave background spectral distortions and angular anisotropy 2-117802
- microwave background spectrum, effects of double Compton process 2-68936
- minimally extended SU(5) model, cosmological baryon generation 2-68943
- model Universe, heavy quarks and perturbative QCD calcs. 2-54072
- models, temporal finiteness and infinity in relativity 2-106989
- monopoles connected by strings, cosmological evolution 2-58516
- naturality problems, cosmological constant smallness 2-79817
- neutrino background, pairing 2-63728
- neutrino decay and lepton number spontaneous violation in SU(2) \times U(1) gauge theory 2-54154
- neutrino dominated Universe, density perturbation evolution (*Russian*) 2-89427
- neutrino galaxies, model 2-74076
- neutrino rest mass and clustering in early Universe 2-101098
- neutrino rest mass implications 2-117815
- neutrino Universe, struct. dev. 2-106988
- neutrino-Compton effect, Hubble's law 2-89420
- neutrino-dominated Universe, galaxy and cluster form. 2-101107
- neutrino-dominated Universe structure, max. density in clouds of heavy neutrinos (*Russian*) 2-95891
- neutrinos, Dira and Majorana masses limits 2-59077
- nonsingular cosmological models in Brans-Dicke theory 2-112776
- Nordstrom's first theory of gravitation, cosmology 2-53456
- numerical relativity, appl. to cosmology 2-100727
- O₂ gravity hydrodynamics, stars, cosmological evolution 2-74294
- parity violation, cosmological evolution effects 2-73835
- partially self-similar spacetimes and fluid motions, appl. to Bianchi-type cosmologies 2-100730
- particle creation, single vacuum propagators 2-84357
- particle creation and smoothing regularisation in current spacetime 2-63729
- particle creation in asymptotically flat space-time containing shell-focusing singularities 2-106521
- particle physics aspects 2-117841
- particle physics in very early Universe 2-117578
- perfect fluid models, anisotropic, nonstatic homogeneous 2-68939
- personal retrospect and prospect 2-101108
- perturbations of the Hubble flow 2-63722
- phase transitions in the embryo Universe 2-117831
- Planck mass problem soln. in Kaluza-Klein theories 2-95188
- Population III objects effect on galaxy form. 2-117844
- Population III stars, microwave background contrib. and early galactic heavy element form. 2-117711
- Population III stars, possible locations 2-94793
- Population III stars generation and microwave background distortion (*Polish*) 2-94795
- pregalactic Population III stars, prod. of primordial He and heavy elements and microwave background 2-106818
- primeval adiabatic perturbations, massive neutrino effects 2-101097
- primordial black holes and the era of superheavy-particle dominance in the early Universe 2-74138
- primordial colour fluctuations, survival and fractionally charged states production 2-101662
- primordial gas heating by background radiation in presence of heavy elements, effects on microwave background spectrum 2-101046
- primordial light-isotope abundance, anisotropy and dissipation effects 2-84361
- primordial nucleosynthesis, implications for cosmology and neutrino physics, review 2-84356
- primordial nucleosynthesis, neutrino mass effect 2-79261
- primordial turbulence and star formation in early Universe 2-84212
- primordial Universe, phase transitions and baryon number creation 2-63720
- QSO, redshift distrib. of Lyman limit absorpt., cosmological model 2-101102

cosmology continued

- quantised scalar field, initial behaviour rel. to pair creation in isotropic closed and open universes 2-10109
 quantum gravity in 1+1 dimensions with zero cosmological constant, exact soln. 2-79457
 quantum theory of gravitation 2-95200
 quasar alignments, assessment of statistical significance 2-112606
 quasar space density decrease in $z \geq 3.5$ range 2-63700
 quasars as probes of the distant and early Universe 2-79263
 quasars associations with companion galaxies to bright spirals, implications of Poisson statistics 2-106954
 quasars clustering, results from objective prism survey 2-79242
 radiation hydrodynamics of H plasma below 10^4 K 2-106974
 distant radio galaxies with strong emission lines, luminosity evolution rel. to radio source counts 2-106917
 radiogalaxies, angular diameter-red shift relations 2-117784
 redshift evolution, deceleration parameter determ. 2-106893
 redshift-magnitude relation perturbation in inhomogeneous relativistic model, redshift eqns. 2-89418
 relativistic cosmology, geodesic instability, internal time 2-58518
 relativistic neutral superfluid, exact soln., of Einstein eqns. 2-76775
 relic neutrino clustering in early Universe 2-117816
 repulsive gravitational forces, appl. to primordial big-bang 2-106980
 review of theoretical physics and cosmology (*Russian*) 2-89927
 right handed neutrino abundance, neutrino mass, closure of the Universe 2-58514
 Robertson-Walker Universes, gravit. radiation, gauge-invariant definition 2-69065
 Robertson Walker Universe, dust filled, perturbation by point particles representing galaxies 2-117824
 Robertson-Walker universe, gravitational effects on phase transitions 2-112769
 Robertson-Walker Universe, spatially flat, dynamical symmetry breaking by EM corrections 2-79262
 rotating space-time homogeneous cosmologies, null geodesics behaviour 2-63724
 rotation of Universe indicated by radiogalaxies obs. 2-101103
 scalar particle topological mass generation in Clifford-Klein-Robertson-Walker spacetimes 2-112760
 scale covariant gravitation and primordial nucleosynthesis 2-89416
 Schwarzschild metric, tangential metric coefficient problems 2-58236
 self-similar cosmologies, self-similarity effect on whimper singularities occurrence and nature 2-117820
 semiclassical expanding discrete space-times 2-112754
 single bubble inflationary universe, irregularity development 2-112629
 singularity-free models 2-63723
 small cosmological constant, model using twisted symm. breaking on projective hypersphere 2-53641
 spatial curvature of cosmological models, effect on anisotropy of free-streaming radiation 2-63715
 spatial homogeneity and redshift-distance laws 2-106982
 spherically symmetric zero pressure model, galaxy space distrib. hole devel. 2-89415
 spinor sources in cosmology 2-95156
 stars electronic stopping power for massive neutrinos, cosmological significance 2-64817
 static Einstein Universe, non-Minkowskian space-times, vacuum stability and symmetry breaking 2-84803
 structure from galaxy counts 2-84331
 structure produced by phase transition near nuclear density 2-58509
 SU(5), early Universe supercooling, gauge coupling const. temperature depend. 2-58520
 SU(5) GUT, Higgs particle 45-plot role, cosmological baryon to entropy ratio 2-113191
 SU(5) hierarchical supersymmetric model, cosmological consequences 2-79798
 super-cosmology, supersymmetric theories, baryon asymmetry, proton decay 2-68945
 supercluster dynamics rel. to cosmological density parameter 2-117780
 superclusters origin in Universe 2-94849
 supergravity, R invariance and spontaneous supersymmetry breaking 2-84510
 superheavy confined monopole annihilation, energy loss mechanisms 2-64247
 superheavy mag. monopoles, thermal production in early Universe 2-106987
 superluminal expansion in extragalactic sources, effects of induced Compton scatt. 2-112319
 supersymmetric gauge theories, symmetry breaking mechanism 2-79760
 supersymmetric grand unified theories and the early universe 2-107577
 supersymmetric unification, cosmological implications, phase transitions, baryon no. 2-59081
 supersymmetry breaking scale, cosmological constraints 2-69374
 Swiss Cheese model to calculate microwave background temp. fluctuation 2-58515
 Taub-NUT like cosmologies 2-117832
 Taub-NUT-type singularities, quantum vacuum energy 2-117834
 tensor spherical and pseudo-spherical harmonics in four-dimensional spaces, Friedmann universe models 2-117808
 terms used, compilation (book) 2-89484
 tilted EM Bianchi type III cosmology, exact soln. 2-106970
 tilted EM Bianchi type VI₀ cosmological model, Einstein-Maxwell eqns. integration 2-106971
 time-dependent, Bianchi II, rotating Universe 2-63726
 time-variant G, effects in scale-covariant theory for large numbers hypothesis 2-112622
 torsion balance for gravitation and cosmology studies 2-53655
 unitary field theory with gravo-electric induction (*German*) 2-79250
 Universal density from nearby galaxy decelerations 2-117818
 universal expansion, text using extended images of distant quasars 2-106951
 Universal mass 2-117817
 universal structure, formation on large scale (*Russian*) 2-74137
 universal structure from massive neutrino model 2-79252
 Universe, age and density, general relativistic fluid models 2-79260
 Universe, age estimation from $O(n,\gamma)$ cross section and nucleosynthesis model 2-54389
 Universe, dynamical importance of vorticity and shear 2-117825
 Universe, inflationary, graviton creation and grand unification scale 2-112628
 Universe, inflationary, reheating 2-89424

cosmology continued

- Universe, isotropically expanding, stability 2-112630
 Universe, rel. to computer theory 2-95060
 Universe, stochastic density fluctuations in radiation era 2-106969
 Universe age problem 2-117845
 Universe and supersymmetry in SU(5) ground unified theory 2-101616
 Universe baryon asymmetry in axion GUT model, invisible axions, Higgs field 2-68942
 Universe closure, effect of neutrino mass and right-handed neutrino abundance 2-117819
 Universe deceleration parameter from quasar data anal. 2-106975
 Universe density perturbations and deceleration parameter from quasar redshift anal. 2-63721
 Universe evolution, Mach's principle and structure of dynamical theories 2-95164
 Universe evolution in baryon symm. cosmology based on grand unified theories 2-117838
 Universe expansion and creation of elementary particles 2-106973
 Universe expansion and free neutron charge 2-95685
 Universe expansion from analytic eqn. of state from state. bootstrap model 2-94876
 Universe in highly anisotropic planar configuration 2-101105
 Universe large scale anisotropy from quasar distrib. and galaxy kinematics distrib. 2-79253
 Universe large scale structure, use of microwave background radiation as probe 2-117843
 Universe large scale structure from X-ray background 2-117811
 Universe large scale structure origin, plasma problems 2-63731
 Universe mean density, estimate from deep optical samples of galaxies 2-84355
 universe model, macro-micro relationships 2-113180
 Universe origin, as quantum tunnelling event 2-74135
 Universe structure and evolution, effects of elementary particles and microprocesses (*Polish*) 2-79259
 Universe structure and nature (book) 2-112673
 Universe structure from galaxy clustering and voids 2-74112
 Universe with non-zero baryon number, asymmetric lepton prod. due to stellar evolution processes 2-74129
 Universes baryon asymmetry using models with composite quarks and leptons 2-68944
 unlimited renewable universe, energy, matter and gravitation 2-94873
 vacuum Bianchi type III model with cosmological const., soln. 2-112625
 vacuum state determination from Universe hot dense phase dynamical evolution 2-106978
 vacuum viscosity description of quantum processes in the early Universe 2-106981
 variable G and the strong equivalence principle 2-107227
 very early Universe, supercooled phase transitions 2-58517
 viscous Robertson Walker Universe, dynamics 2-74130
 viscous Universe solns., density depend. 2-84353
 voids due to galaxies gravit. clustering 2-94872
 voids in space, formation and gas props. (*Russian*) 2-68947
 Weyl geometry, length integrability, field eqns., cosmology 2-58673
 Witten-type supersymmetric models, light singlet particles and cosmological consequences 2-107591
 X-ray background, contrib. of X-ray emission from extragalactic star form. bursts 2-106911
 X-ray background, use in distinguishing Universe models 2-58515
 $\nu\bar{\nu}$, detection prospects for primordial neutrinos 2-117837
 $\nu\bar{\nu}$ - $\gamma\gamma$ with massive neutrinos, cosmological implications 2-64315
 $p\bar{p}$, $\nu\bar{\nu}$ pair prod. in Drell-Yan model, fermion generation and big-bang 2-59193
 He abundance in pregalactic era from obs. of Sc galaxy M101 2-68889
 He primordial abundance, dwarf galaxy optical emission spectra 2-117828
 ^6Li primordial synthesis, reaction rate for $^4\text{He}(d,\gamma)^6\text{Li}$ 2-112626
- cosmotrons**
 No entries
- Costa Ribeiro effect** see *dielectric phenomena; phase transformations*
Cotton-Mouton effect see *birefringence; magneto-optical effects*
- Cottrell atmospheres**
 steel, mild, aged, plastic behaviour 2-93559
 Ag, Lomer-Cottrell locks by mech. straining, X-ray topography 2-109805
 Al-Zn (9.5 at.%) high temp. creep mechanism and dissolution process, expt. study 2-88146
 Si, dendritic web. grown, dislocation struct., TEM and SEM study 2-91975
 SiO crystal, Czochralski grown, deformed, dislocation configurations 2-76448
- Cottrell locking** see *Cottrell atmospheres*
- Couette flow**
 see also *jets*
 anisotropic Ericksen fluid, flow of fibre suspension between coaxial cylinders, Couette flow stability 2-65566
 autooscillations derived from loss of stability of nonisothermal Couette flow 2-81316
 coherent structure in turbulent shear flow, research prospects 2-81326
 cohesionless granular materials, rapid Couette-flow between rotating cylinders 2-103173
 existence in incompressible simple fluids 2-55598
 finite element analysis of Couette flow with mixed interpolation 2-86257
 heat transfer, surface roughness effects 2-60545
 inviscid plane Couette flow, stability 2-114765
 inviscid shear flows, finite amplitude waves, Couette-Poiseuille channel flow 2-97575
 inviscid stability of plane Couette flow, convection of initially conc. vorticity, calcs. 2-114763
 liquid metals, Couette flow, linear induction motor induced MHD flow 2-81398
 macromolecules, dil. solns., Couette flow, embryo cells and overstability 2-91466
 mass transport for Couette flow in a flat conduit 2-114912
 MHD Couette-type flow, heat transfer 2-60669
 microthermopolar liquids, Couette flow between parallel plates 2-97494
 nematic liquid crystals, Couette flow, Pieranski-Guyon instability 2-97505
 non-Newtonian fluid, nonisothermal Couette flow under press. gradient action 2-76002
 nonlinear phenomena at phase transitions and instabilities, conf., Geilo, Norway (Mar.-Apr. 1981) 2-94882

Couette flow continued

- plane flow in strong centrifugal field 2-109338
- polymers, nonlinear viscoelastic fluid, inhomogeneous shear flow 2-103193
- rotating flow, stability of a hollow vortex 2-75977
- rotational flow, Taylor- and wavy-vortex waves, spatial and temporal char. 2-70959
- steady Couette flow, Hall effect 2-65655
- steady MHD Couette flow, effect of Coriolis force and Hall effect 2-86286
- stratified shear flow, Couette and Garcia flows, unstable modes, evolution eqn. 2-71006
- Taylor vortices, form. between heated rot. cylinders 2-114819
- Taylor-Couette flow, geometric factors, struct. parameters (French) 2-86259
- Taylor-Couette flow, hysteresis effect 2-97499
- Taylor-Couette flow stability, nonlinear anal. 2-75932
- transition to Taylor vortex flow, boundary and fluctuation effects 2-70908
- travelling waves superposition in circular Couette system 2-70973
- turbulent, phenomenological theory 2-55545
- unsteady hydromagnetic Couette flow in a rotating system 2-91554
- viscoelastic fluids subject to plane Couette and oscillatory flow, local order theory 2-55533
- viscometric flow stability (German) 2-70914
- viscous electrically conducting fluid, Couette flow in porous annulus 2-86252
- Ar, Lennard-Jones fluid, Couette flow, shear rate depend. viscosity function (French) 2-97497
- β -FeOOH, rodlike crystals, dil. aqueous dispersions, light scatt. obs. of laminar, vortical and turbulent flow 2-76015

counter accessories

see also *counting circuits*

- Mark-J detector counter monitor system (Chinese) 2-80403

counters

- see also *Cherenkov counters; counting tubes; fission counters; Geiger counters; proportional counters; scintillation counters; semiconductor counters; spark counters*
- az esztetszamlalo detektormozgatsat vezelo elektronikanak tovabfejlesztése (A whole body counting moving detector with electronic control) (Hungarian) 2-111779

counters (circuits) see counting circuits**counting circuits**

- see also *coincidence circuits; pulse height analysers; scaling circuits*
- digital pulse counting cct., computer-interfaced 2-108306
- integrator, simple digital, and pulse counter 2-95384
- liquid scintillation counting, automatic quenching compensation sample channels ratio method abnormalities (Chinese) 2-59648
- Mossbauer spectrometer, with constant velocities, recording unit 2-107478
- optical discriminator-counter for atm. O_2/N_2 mol. ratio meas. using photomultipliers 2-68510
- pulse processing system in Ge(Li) γ -ray polarimeter 2-64797

counting tubes

see also *dekatrons*

No entries

country planning see town and country planning**country planning see town and country planning****coupled circuits**

- Tokamak, coupled circuit transient current response 2-64674

coupled networks see coupled circuits**coupled superconductor devices see superconducting junction devices****couplers (electric connectors) see electric connectors****coupling (process) see joining processes****coupling circuits see coupled circuits****CP invariance**

- abelian lattice gauge theories, duality and θ parameter, CP violation 2-79742
- atomic and nuclear physics exptl. results on weak interactions, review 2-79775
- axion mass, in CP-conserving method with extra U(1) chiral symm. 2-54012
- broken supersymmetric theories 2-101593
- charge conjugation parity asymmetry, discovery (Czech) 2-59049
- cosmological baryon number creation and CP violation 2-63720
- CP symmetry violation, discovery (Czech) 2-59050
- E(6) unified theory to solve strong CP problem 2-64260
- Green functions on CP^2 2-101587
- mass matrix in Higgs-boson model of CP violation 2-69387
- neutral mesons with heavy quarks and mixing angles in six-quark model 2-54105
- non-invariance in gauge theory models 2-107503
- O(14) unification, simultaneous soln. of strong CP and generation problems 2-64251
- QCD, renormalisation and CP violation 2-95754
- Rarita-Schwinger field in non-abelian Klein-Kaluza theories 2-101524
- renormalisable model with Peccei-Quinn global symmetry, axion elimination by 't Hooft mechanism 2-95755
- SO(10)³ effective technicolour model, CP violation and axions 2-84824
- SO(10) unified gauge theory, CP violation, axions 2-74636
- spectra of operators on CP^2 2-101588
- strong CP problem, supersymmetric GUT soln. 2-79778
- strong interaction CP problem (Russian) 2-69379
- SU(2) \times U(1) gauge models, permutation symmetries and fermion mass matrix 2-69392
- SU(3)_C \times SU(2)_L \times U(1) model, CP-violation from horizontal interactions 2-107593
- SU(5) model, spontaneous CP breaking, natural flavour conservation and baryon asymmetry 2-64258
- SU(7) grand unified theory, CP violation (Chinese) 2-54032
- superweak CP violation and right-handed horizontal interactions in Weinberg-Salam theory 2-59073
- time dependence of CP violation 2-95687
- violation, review 2-101591
- weak interaction theory, comparison with expts., review 2-79811
- e^+e^- annihilation, neutral conjugate heavy mesons, dilepton charge asymmetry, CP violation 2-95856
- $K^0-\bar{K}^0$ system fundamental parameters determ. in energy range 30-110 GeV 2-69463

CP invariance continued

- A \rightarrow ny, CP violation induced by penguin diagrams, n electric dipole moment 2-54158
- μ decay, Majorana neutrinos role, CP violation 2-74687
- n-f oscillations, CP violation, rel. to p decay law exponentiality 2-79873

CPA calculations

- alloys, BCC, disordered, electronic density of states, self-consistent cluster CPA calc. 2-115639
- alloys, disordered, alternative derivation of CPA, tight binding model (Chinese) 2-110221
- alloys, disordered, electronic struct., self-consistent cluster CPA incorporating off-diagonal disorder and short range order 2-61336
- alloys, random muffin-tin, itinerant electron magnetism, multiple scatt. theory 2-104570
- amorphous solids, electrical conductivity, CPA study (Chinese) 2-110315
- antiferromagnet, randomly diluted anisotropic, spin waves, spin-flop transition, AFMR 2-104597
- binary alloys, short-range order, cluster model, coherent pot. approx. calcs. 2-115378
- composition modulated alloys, electronic struct., CPA calc. 2-104224
- density of states, total and component, CPA and average t-matrix approx. 2-61326
- dilute systems, bond and site CPAS comparison 2-92434
- disordered alloys, coherent and incoherent neutron scatt. theory 2-65811
- disordered semiconductor alloys, CPA theory 2-87129
- exciton-phonon system, optical response, formulation of emission spectrum 2-67098
- Falicov-Kimball model, spinless, with hybridisation, alloy analog approx. 2-104218
- ferromagnetic disordered alloy with s-f exchange, conduction electron lifetime, composition depend. (Russian) 2-92572
- half-infinite chains, cluster CPA calcs., appl. to coupled polymer chains 2-80852
- heat removal rate and effective dielec. const. calcs., CPA appl. 2-65456
- infinite chains, cluster CPA calcs., appl. to coupled polymer chains 2-80852
- Ising model, quenched dilute random-bond, crit. curve 2-56877
- itinerant ferromagnets, random, percolation limit, mean field scaling relations 2-66756
- liquid metal, conductivity, vertex corrections in effective medium approx. 2-77015
- metals, liq., electrical conductivity, CPA study (Chinese) 2-110315
- mixed crystal modes, vibr. conc. depend. 2-86820
- mixed distance crystals, lattice dynamics within CPA for disordered shell models 2-92124
- mixed valence cpds., electrical resistivity, periodic Anderson model with off-site hybridisation 2-56545
- mixed valence systems, classification of states at Fermi energy 2-56422
- quasi-one-dimensional systems, cluster CPA approach 2-82195
- random alloys, electronic states, SCF-KKR-CPA method 2-76904
- random systems, wave propag. and transport problems, hopping cond. 2-66520
- randomly disordered systems, elec. cond., CPA study for various percolation models 2-56539
- semiconductor, impurity doped, electron correlations effect 2-115682
- superconducting alloys, Ginzburg-Landau functional calc. 2-92815
- tight-binding bonds, electronic struct., cryst. struct. depend. 2-56417
- trans-polyacetylene, density of states, elec. cond., optical absorpt. and EELS calc. 2-77026
- type-III superconductor, flux-time lattice, pinned, elastic Green's function 2-61674
- Wigner crystal, two dimensional, with random array of pinning centres 2-61377
- Al_{1-x-y}Ga_xIn_yAs, pseudopot. band struct., CPA calc. 2-115657
- Cu_{2-x}Al_x, bulk and surface electronic struct. 2-104238
- Fe-Al, electronic struct., KKR-CPA calc. with muffin-tin pot. model 2-66431
- Fe-Co, order-disorder transition, band theory 2-98268
- Fe-Co-Ni system, mag. moment, CPA calc. (Russian) 2-115981
- Fe-Cr alloys, existence of spin glass region 2-66830
- Fe-Mn, electron struct. and mag. state, CPA calc. (Russian) 2-87135
- Hg_{1-x}Cd_xTe, disordered, band struct., CPA calc. 2-87138
- Hg_{1-x}Cd_xTe, disordered complex bound struct., CPA calc. 2-87129
- Hg_{1-x}Cd_xTe, surface electronic struct. and cation bonds, tight-binding calc. using CPA and virtual cryst. approx. 2-110428
- Nb-Mo, random alloy, Fermi surface, KKR-CPA calc. 2-61334
- Ni-Cu, L₁₁₁, L₁₁₁ X-ray absorpt. spectra and density of states, KKR CPA calc. 2-99223
- Ni-Pd alloys, electronic struct. calc. by self-consistent KKR-CPA method 2-56432
- Pd-Al, electronic struct., KKR-CPA calc. with muffin-tin pot. model 2-66431
- Se, amorphous, electronic density of states, cluster model, CPA calc. (Russian) 2-104220
- Si, amorphous, tetrahedrally bonded, simple model of hydrogenation 2-56418
- a-Si:H, electronic props., CPA calc. 2-56430
- Si-Ge, amorphous, defect vibrs., Green function-CPA calc. 2-98233
- SiO₂, amorphous, electronic states, theoretical model of disorder 2-71857
- SrB₆, mixed-valent, dynamic mag. response 2-72132
- YCo₅, density of states and mag. moments, appl. of CPA and continued fraction method 2-66411
- Zr-Nb, soft X-ray absorpt. spectra and density of states calcs. 2-104999

CPT invariance

- antiparticles from special relativity with ortho-chronous and antichronous Lorentz transformations 2-89529
- breakdown of CPT and Lorentz invariance 2-69380
- early Universe, CPT noninvariance and massive scalar particle decay 2-117814
- hadron classification, U(6,6) ladder symm. scheme, asymptotic eqns. 2-101695
- Lorentz invariance by rewriting as MPT 2-107563
- magnetic groups corepresentation, character table 2-76357
- manifestly covariant presentation of motion reversal and particle-antiparticle exchange 2-107558
- quantum fields, manifold-based, CPT and gravit. induced thermal states 2-107483

crack detection

- see also cracks
- acoustic emission, signal distortion by change of gain in sensing device 2-57565
- acoustic signal in solid body, reconstruction procedure for original form 2-93740
- adhesive bonded multilayer joint detection and location of non-bonds, acoustic impedance method 2-83323
- ALOK method transit-time locus curves for US tandem testing and defect position reconstruction (*German*) 2-78046
- ball bearing inspection for surface defects using optical scanner 2-62342
- butt-welding seam, topography of field due to surface defect 2-62351
- carbon and glass fibre reinforced plastics, shear crack propag., acoustic emission monitoring 2-88317
- composite, porous glass, microcrack fusion dynamics obs. by acoustic emission 2-62337
- composite materials, laboratory mock-up US inspection system 2-93727
- composite materials, NDT, review 2-62338
- current-conducting sensor for recording failure of structures 2-99636
- DC electrical potential drop technique 2-93748
- defect identification and sizing by the ultrasonic satellite-pulse technique 2-62294
- dielectric NDT inspection, theoretical-game optimization 2-93738
- digital correlation flow detection system 2-62301
- direct current method appl. (*German*) 2-78049
- dry magnetic powder method transverse surface crack detection in semifinished castings (*German*) 2-78047
- eddy current flow detection, for W and Mo wire fracture recording 2-116667
- eddy current probe response to open and closed surface flaws 2-62296
- eddy current technique, accuracy considerations, computational aspects 2-67723
- eddy current technique, exptl. practicalities 2-67721
- edge cracks, diffraction of long wavelength horizontally polarised shear waves, NDT 2-83304
- edge image correction in radiation inspection, physical and information aspects 2-116673
- electrical discharge imaging for nondestructive inspection of surface topography and flow detection 2-72933
- electro-chemical techniques, for yielding and crack detection 2-83303
- electron accelerator applicability in defectoscopy (*Czech*) 2-62318
- fatigue cracks, friction prod. between edges, AE charact. 2-83328
- ferroelectric ceramic, acoustic microscopy, imaging of flows, grain struct. and elastic props. 2-105410
- fibre reinforced composite, acoustic backscattering of subcritical flows 2-111405
- fibre reinforced composites, acousto-US charact. 2-83315
- fillet welded joint, fatigue crack meas. 2-67680
- flat specimens, fatigue cracks obs. expt. and data processing automation 2-72899
- flow detection in mine hoist transportation systems 2-78064
- flow location for automated US testing, comparison of 3 methods 2-83322
- flow type, position and dimension charact. by transit time locus curves of US inspection (*German*) 2-62335
- gas turbine servicing system 2-111418
- GDP-1 gamma flow detector for panoramic radioscropy of annular welded joints of hollow cylindrical articles 2-111436
- glass, cellular, strength limiting defect detection by dielectric meas. 2-105392
- graphite fibre reinforced epoxy laminate, fatigue damage detection using out-of-plane Moire interferometry 2-88178
- growth in notches under torsion, DC potential drop method of monitoring 2-88303
- high-frequency pulse flow detector type DIV-1 2-111440
- holographic reconstruction algorithms, potentials and limits 2-105391
- ionographic transducers in flow detection 2-57580
- large ferromagnetic body, heat source recognition rel. to defect detection 2-111439
- magnetic field depend. on frequency of magnetising field 2-67713
- magnetic rubber inspection of inaccessible places of structures 2-111442
- magnetographic inspection of soundness, optimization 2-67714
- metal, surface crack meas. using AC elec. fields 2-83325
- metal, surface layer cracks, high frequency monitoring 2-57576
- microgauge based on AC field meas. 2-78052
- multichannel scanning defectometric systems, complex information processing using computers 2-93741
- multilayer system with losses, scope for detecting exfoliation 2-62357
- nonmetallic materials, active thermal inspection 2-83338
- phonon neutron attenuation function meas. from electron accelerator-defectoscope 2-67709
- plastics, nondestructive testing using thermography (*French*) 2-93725
- principal components method in NDT, multiparameter flaw detection 2-116675
- pulse shape analyzer and 14 MeV neutron use 2-105395
- PWR pressure vessels, construction, inspection and safety 2-80067
- radiography, shadow image distortion analytic eval. 2-57583
- random measuring errors for nominal flow dimensions, using US probe 2-67717
- real time correlation system for US NDT appls. 2-111395
- rough defects in solids, US eval. of geometrical and surface parameters 2-62293
- scattering of shear wave pulses by surface breaking cracks—time and frequency domain analysis 2-57560
- semiconductor, high resistivity layers, expt. determ. of defects and charge relaxation 2-62352
- shadow flow detection, US with recording of second transmitted pulse 2-67715
- shear horizontal waves, nondestructive evaluation of planar defects in plates, theory and expt. 2-93721
- shear wave scattering from cracks in plates, extended variational soln. 2-93722
- sheet moulding compound composite, NDT of localised weak areas 2-111404
- sital, luminescence defectoscopy of strength rel. to phase composition 2-99485
- sital, thermal stability determ. by luminesc. defectoscopy 2-116671
- static stress/strain anal. of NDT samples, holographic methods 2-116676
- steel, AE monitoring system for crack growth (*French*) 2-62371
- steel, austenitic stainless, 316 and 347 weldments, US inspection of fatigue cracks 2-67671

crack detection continued

- steel, austenitic stainless, volumetric inspection of moderately thick specimens by multifrequency eddy currents 2-62297
- steel, austenitic stainless, weldment, US testing by transmitter-receiver type longitudinal-wave angle-beam probe 2-78040
- steel, austenitic weld and overlay testing using longitudinal waves 2-83331
- steel, heavy-section, controlled flaw prep. for fracture mech. testing 2-72929
- steel, high-strength, cylinder, crack depth determ. using mag. perturbation 2-62329
- steel, welded joints, crack detection and location using AMUR-6 acoustic emission apparatus 2-83330
- steel slabs at red heat, automatic inspection techniques, picture processing appl. (*Japanese*) 2-105409
- straight through eddy current transducer signals from cracks, cross-section shape effects 2-62362
- stress problems, NDT related, displacement discontinuity method appl. 2-103121
- strip, cold rolled, optical surface inspection system with on-line signal processing (*German*) 2-72939
- structural materials, prediction of tearing instability, acoustic emission rating parameter 2-111393
- surface cleanliness effect of thin defects on US refl. 2-105435
- surface cracks, scanning acoustic microscope obs. 2-57552
- thermost plastic connector blocks, rapid proof testing system using AE 2-83317
- thin plates, eddy current flow around cracks, boundary integral method 2-55037
- transducers for low frequency acoustic flow detectors based on transverse piezoelectric effect 2-111435
- US diameter meas. of cylindrical and spherical defects 2-67710
- US flaw-detector, compact and portable, model FD-410P, Mitsubishi Electric product 2-67689
- US immersion testing system for flow detection 2-111417
- US probability of detection, of subsurface flaws 2-62330
- US signals, broadband, transducer-couplant effects, computer simulation 2-72934
- weld, optimal parameter determ. for US inspection rel. to state of welding technology 2-62346
- Al 1100, deformed, fatigue cracks, gel electrode imaging 2-111414
- Al alloys, fatigue cracks, gel electrode imaging 2-111413
- C fibre reinforced plastic struct., vibration technique for NDT (*German*) 2-78050
- Si, microcrack and work damage detect. using ultrasonic sonoprobe 2-57589
- SiC ceramic heat exchanger tubes, assessment of US method of NDT 2-93729
- Si₃N₄, defect charact. in short wavelength regime 2-62292
- Si₃N₄, reaction bonded, hot pressed, comparison of US and radiographic methods of crack detection 2-67673
- Zr alloys, hydrogen charged, subcrit. crack nucleation and propag., acoustic emission obs. 2-72936

crack-edge stress field analysis

see also penny-shaped cracks

- angle-ply laminates, stress intensity factors for through cracks 2-97436
- annular crack, static finite element stress intensity factors 2-103088
- biaxial stress field, fatigue crack propag., stress-ratio effect 2-93590
- bimaterial interface, two collinear cracks, harmonic stress intensity 2-103106
- bimaterial structures, elastodynamic fracture anal. using finite element method 2-55499
- biphase model, slowly propagating cracks, evaluation of elastic strain-energy density 2-109228
- blunt crack tip, stress field and fracture criterion 2-65520
- brittle body with rectangular crack limiting equilib. 2-86232
- brittle solids, decrease in durability in cyclic tests, phenomenological model 2-60478
- brittle two-phase solid, curved thermal crack growth 2-97452
- centrally cracked plate, stress intensity factors, influence of geomagnetic non-linearity 2-86227
- chevron notch three point bend fracture toughness specimen 2-91351
- complex structures, surface crack stress intensity factors, EPAS-J1 appl. 2-69804
- constant K_I crack-propagation test specimens 2-91350
- contact problem, elastic space with spherical crack (*Ukrainian*) 2-114723
- corner cracked holes, stress intensity factors under general loading conditions 2-60483
- crack extension criterion and energy change 2-103098
- crack extension criterion development 2-103097
- crack opened by semi-infinite wedge, stress distrib. 2-65527
- crack opening displacement rel. to crack tip strain, model 2-66116
- crack-tips, stress wave diffr., photoelastic study 2-55505
- cracked beam under influence of dynamic electromagnetic force in Tokamak reactors 2-96302
- CT specimen, with straight and curved crack, 3D elastic anal. 2-97451
- cylinder with finite size, approx. analytical soln. for surface and embedded cracks 2-65523
- cylindrical shell with arbitrarily oriented crack, analytical-numerical procedure 2-109241
- disc-shaped crack in elastic body with initial stresses, three-dimens. problem 2-114728
- discontinuous deformation gradients away from crack tip in anti-plane shear 2-60470
- ductile fracture, three dimens. constitutive relations, symposium, Dourdan, France (June 1980) 2-53427
- dynamic crack propag. simulation in SEN specimen by SMF2D code 2-91320
- dynamic energy release rate, theoretical study (*Japanese*) 2-109246
- dynamic fracture mechanics, infinite body effect, practical appl. 2-65517
- dynamic problems of propagating cracks, min. elastic energy density criterion 2-114733
- dynamic problems of running cracks, optical method of caustics 2-103123
- dynamic stress intensity factors, method of determ. from crack opening displacement at notch mouth 2-86239
- edge crack problem boundary element soln. 2-70870
- elastic and inelastic solids, path-independent integrals, body forces, inertia and arbitrary crack-face conditions 2-86223
- elastic bodies with initial stresses, crack theory 2-60480

crack-edge stress field analysis continued

elastic bodies with initial stresses, theory of cracks 2-91332
 elastic body, plane anisotropic, near-tip behaviour of crack 2-86225
 elastic ferromagnetic strip containing two coplanar Griffith cracks, linear magnetoelastic problem 2-103045
 elastic isotropic body, flat toroidal crack, stress intensity factors 2-75904
 elastic layer, vibr. of circular crack under three-dimens. loading 2-55494
 elastic plane, interaction of linear rigid inclusions and cracks 2-86233
 elastic plate-strip, crack at joint 2-55496
 elastic solids 2 bonded dissimilar, finite crack at interface transient horizontal shear wave diff. 2-109238
 elastostatics with multiply connected region, rel. to mode III fracture mechanics 2-114645
 electrically conducting body with semi-infinite cut, magnetothermoelastic field 2-55022
 elliptical crack embedded in infinite solid, general soln. for arbitrary crack-face tractions 2-91334
 energy release rate, Irwin's and Achenbach's expressions 2-70872
 energy release rate for crack starting from apex of wedge 2-97459
 fast running crack band, dynamic finite element anal. 2-91328
 fatigue crack growth, cumulative model 2-92092
 fatigue crack propagation, crack-tip-strain loop appl. 2-55501
 fatigue crack propagation, damage accumulation model 2-56081
 fibre reinforced composite with rigid curvilinear crack and interface crack, antiplane deform. 2-97456
 finite length interface crack with contact zone 2-91325
 finite thickness rectangular plate containing through thickness central crack, elasto-plastic anal. 2-65528
 finite-part integrals, crack problems of three dimens. elasticity 2-109231
 fracture, dislocation-free zone model, comparison with expts. 2-103889
 fracture criteria, Mises elastic-plastic boundary as core region 2-86228
 fracture mechanics, error anal. of photoelasticity study 2-55502
 fracture mechanics parameter, elastic-plastic, preloaded specimens (*Japanese*) 2-91331
 front spreading, steady state fracture kinetics 2-109242
 glass fibre reinforced epoxy, fracture behaviour 2-72809
 Griffith and external cracks, stress distrib. 2-97434
 Griffith crack, in infinitely long strip, elastic wave interaction 2-55513
 Griffith crack loaded asymmetrically at surfaces 2-65522
 half plane stiffened by elastic cover plates, crack problem 2-60467
 incompressible elastic material under finite plane strain, crack tip equilib. field 2-91329
 infinite elastic medium under impact load, dynamic stress intensity factors around for rectangular cracks 2-75902
 infinite isotropic homogeneous elastic strip containing three coplanar Griffith cracks, stress intensity factor determ. 2-91330
 infinite transversely isotropic medium, elastic wave interaction by Griffith crack 2-91321
 interface, circular, between dissimilar media, arc crack plane problem 2-109247
 interface crack, with contact zone 2-70869
 internal unconventional cracks, straight crack symmetric vars. 2-103101
 isochromatic crack tip fringe loop area, physical significance 2-97383
 isotropic elastic solid containing penny-shaped crack, stress distrib. 2-75898
 kinked or bifurcated crack in antiplane strain, dynamic propagation 2-97461
 linear rigid inclusion, stress intensity factors for crack propag. (*Ukrainian*) 2-55495
 mode-III crack kinking under stress-wave loading 2-86234
 NDT related stress problems, displacement discontinuity method appl. 2-103121
 no-slip interface crack in a shear field 2-97443
 non-coplanar crack extension, relationship between energy release rate and stress intensity factors 2-65526
 notch stress anal. and crack fracture mechanics relationships 2-109251
 notch-tough materials, extremal elastic and ideally plastic solns. for flow assessment 2-97437
 numerical analysis of dynamic crack propagation, generation and prediction studies 2-86222
 orthotropic nonhomogeneous materials, crack propag. anal. 2-75900
 penny-shaped cracks in a finitely deformed elastic solid 2-97440
 pin-load joints, opening mode stress intensity factors for cracks 2-65529
 plane elasticity crack problems, Bueckner singular integral eqn., numerical soln. methods 2-109229
 plane strain crack growth, equivalence of final stretch and crack tip opening angle 2-60482
 plastic enclave, crack-tip, stress intensity factor, crack propag. model 2-81290
 plastic zone instability theory 2-86230
 plastic zones, and crazes at crack tips, dislocation stress anal. 2-103096
 plate, anisotropic, with a crack, fundamental solns. 2-65536
 plate, viscoelastic, cracked, dynamic anal. by finite element method, J-integral 2-103102
 plates, bent, with cracks, complex stress intensity factor meas. using method of caustics 2-103134
 plates, with oblique equal and unequal parallel edge cracks in tension, stress intensity factors 2-97446
 PMMA plates, brittle fracture in tension, static field radiated by abrupt crack-arrest 2-56077
 quarter-point crack tip elements, optimum size 2-103094
 rectangular crack in half space under impact load, dynamic stress intensity factors 2-109250
 rectangular plate and infinite strip, crack problems 2-91326
 rod, short, 3-D finite element anal. 2-70871
 semi-elliptical cracks, crack tip stress intensity factors, crit. review 2-91317
 semi-infinite rectangular cutout, singular problem of elasticity theory 2-55431
 semi-theoretical and experimental stress intensity factors 2-86229
 semielliptical surface cracks, front surface correction factor 2-65532
 semiinfinite crack subjected to dynamic antiplane loading, crack bifurcation and propag. 2-97460
 sheets, finitely deformed, reinforced with inextensible fibres, crack extension and energy release rates 2-97441
 shell, cylindrical, containing an axial part-through crack, line-spring model appl. 2-103104
 slab, orthotropic elastic, containing plane flaw, thermal stresses 2-81231
 slip band development, from crack tip under anti-plane shear deform. (*Japanese*) 2-103880
 slit, narrow, shear and normal impact loadings, stress modes 2-75886
 small cracks at notches, stress intensity factor 2-97438

crack-edge stress field analysis continued

sphere, elastic with annular, edge, or penny shaped crack, singular stresses 2-109249
 steel, SA533B-1, plane strain large-scale yielding, crack tip intense strain region 2-116527
 stress corrosion crack growth rates, prediction at high stress levels 2-105379
 stress distribution due to crack determ. using dislocation layers 2-55497
 stress induced microcracking at second phase inclusions 2-86231
 stress intensity factor, empirical eqn. for surface crack 2-65515
 stress intensity factor and displacement field around crack tip, determ. by white light speckle method 2-55519
 stress intensity factor estimation with singular components of the total finite element soln. 2-103093
 stress intensity factor evaluation, using singular finite elements 2-97435
 stress intensity factor near crack tip, finite element anal. 2-81286
 stress intensity factors, mixed mode, photoelastic determ., far field effects 2-109254
 stress intensity factors determination by photoelastic method 2-70882
 stress intensity factors for cracks at a row of holes 2-65533
 stress wave interaction with running cracks, photoelastic study 2-55500
 strip, infinite, containing a periodic row of line cracks, elastostatic problem soln. 2-91319
 surface flaws, semi-elliptical, interaction under tension and bending 2-86224
 thermally-loaded structures, cracks, elastic-plastic anal. 2-86226
 thermoviscoelastic solids, invariant integrals, crack tip fields 2-75853
 thick cylinders, multiply-cracked, pressurised, stress intensity and fatigue crack growth 2-91318
 thick walled cylinder subject to internal press., stress intensity factors for embedded crack 2-65531
 three-dimensional cracked body problems, optical methods use in stress analysis 2-103130
 tip, inelastic deform. due to microcracking 2-109243
 tip, superposition of the finite element method on the singularity terms in determining the stress intensity factor 2-65525
 tip region, mixed-type stress field anal. 2-65521
 tip stress intensity factor, two upper bound values estimated by expt. optical method 2-91349
 tip stresses in time-dependent inelastic fracture mechanics, numerical soln. 2-70873
 torsionally-loaded samples, crack growth monitoring, DC elec. pot. method 2-97475
 transversely isotropic medium, stress conc. near hyperboloid notch 2-114730
 transversely isotropic medium containing annular crack under torsion, stress distrib. 2-70874
 tube, partially autofretted, residual stress redistrib. caused by notches and cracks 2-62219
 two dimensional crack parallel to free surface, stress field 2-91322
 two-dimensional static problems, singular integral eqns. method 2-97455
 vibration method for determination of stress intensity factors 2-86240
 Al foil, deformation twinning, TEM study 2-66013
 GaP, Kossel line broadening near scratch 2-103566
 ZrO_2 , sintered, struct. and fracture behaviour 2-88187

crack inspection see *crack detection*
crack-tip stress field analysis see *crack-edge stress field analysis*
cracking see *cracks; fracture*
cracking, stress corrosion see *stress corrosion cracking*
cracking, thermal stress see *thermal stress cracking*
cracks
 see also *crack detection; crack-edge stress field analysis; crazing; fatigue cracks; penny-shaped cracks; stress corrosion cracking; thermal stress cracking*
 amine cured epoxies, tensile deform. and failure processes 2-67449
 angled crack problem, strain energy density theory appl. 2-97462
 antiplane, rectangular subregions 2-109235
 arbitrary shaped crack released energy formula, rigorous proof (*Chinese*) 2-103089
 bars, torsional, with angle sections, SIF K_{III} calcs. for cracks, torsional rigidity (*Chinese*) 2-103090
 bimaterial plate, crack along interface, photoelastic study 2-75911
 Brazilian disk test, combined mode fracture 2-70883
 brittle crack advance by double kink nucleation 2-57451
 brittle crack propagation, debonding of two linear chains of atoms 2-86787
 brittle fracture, environmentally induced crack nucleation 2-105277
 brittle material, damage theory 2-91335
 brittle materials, fracture and defects (*French*) 2-86780
 brittle materials, microstrength meas. 2-93743
 carbon and glass fibre reinforced plastics, shear crack propag., acoustic emission monitoring 2-88317
 cavitation propagation 2-103087
 cement based matrix reinforced with polyalkene films of varying elastic moduli 2-57411
 ceramics, brittle, inertia as a factor in dynamic strength 2-111277
 cold cracks in welded joints, high strength, investigation using acoustic emission method 2-67668
 collective effects in an ensemble of microcracks and transition to macrofracture (*Russian*) 2-88156
 composites, aligned short-fibre reinforced, stiffness fibre-end crack effects 2-97442
 concrete, transient structure code for thermal loading in reactor accident 2-74881
 continuum mechanics, rel. to solid state physics, review (*German*) 2-91232
 coplanar, interacting, upper bound for stress intensity factors along boundaries in three-dimensional elasticity 2-109239
 3-D crack configurations, energy release rate and J-integral 2-97444
 crack edge mapping by US methods 2-111397
 crack tip, dislocation-free zone 2-56079
 cratering experiment calcs. with bedded crack model, computer simulation 2-72790
 creep crack growth initiation, crack tip blunting 2-115347
 creep-fatigue interactions, mechanisms 2-99540
 creeping plate, stresses and line integrals in presence of cracks 2-114722
 crystalline particles, active sintering by spontaneous dislocation healing of incomplete crack 2-105099
 cylinder, explosion-loaded, radial rupture crack propag. 2-114726
 cylinder, quasi-static elastic crack propag., energy release rate 2-60479

cracks continued

damage accumulation during initiation and short crack growth regimes 2-88163
 damage processes, acoustic emission 2-62290
 delayed fracture theory, incubation stage and macroscopic crack development 2-60477
 double torsion test, crack front shape effects 2-116653
 ductile material containing spherical voids, localisation 2-72799
 dynamic compliance meas., crack nucleation and propagation study 2-91352
 dynamic fracture process, quantitative characterisation by acoustic emission source wave anal. (Japanese) 2-83306
 elastic bodies with initial stresses, static cleavage problems 2-65538
 elastic continuous medium, Poisson set of cracks 2-60462
 elastic half-space, surface, loaded, subsurface and surface cracking due to Hertzian contact 2-114732
 elastic medium, scatt. of SH waves by cavities and cracks 2-91316
 elastic solid, flat annular crack, normal compression wave scatt. 2-55508
 elastic strain energy density distrib. at tip for fracture modes I and II 2-67490
 elastic strips, dynamic crack propag. simulation and dynamic stress intensity 2-70867
 elastic-plastic strain hardening material, ductile tearing instability anal., piecewise power law hardening 2-60468
 elastic/plastic indentation damage, median/radial crack system 2-111275
 elastostatic problems, 2-dimens., boundary-element investig. 2-115330
 epoxy resin-glass adhesion, fracture energy, rel. to crack velocity 2-78066
 epoxy resins, round notched, subjected to plane strain bending, internal fracture and surface morphologies 2-67534
 external crack problems in 2-dimens. elastostatics 2-70868
 fabric reinforced laminates, flexural deform., transverse cracks, ply-delamination (Japanese) 2-57464
 fibre reinforced composite, brittle matrix, with continuously aligned fibres, average crack spacing 2-103888
 fibre reinforced composite, fracture energy, stability of transverse cracks 2-105283
 fibre reinforced composite, slowly propagating crack 2-83216
 fibre reinforced composites, coated, raindrop impact, indirect damage 2-62229
 fibre reinforced plastic, filament-wound disc, rot. strength, tensile stress, cracking and buckling failures (Japanese) 2-57465
 fibrous composite with undamaged fibres, macrocrack problem 2-114729
 finite element analysis of slow crack growth 2-75901
 fracture instability, semibrittle, inclined yield strip, continuum dislocation model 2-86786
 fracture mechanics, crack energy density concept 2-75899
 glass, crack initiation, acid-enhanced 2-77911
 glass, tempered, crack branching, multiple ruby laser system for high speed photography 2-103131
 glass, vacuum durability, isotherm 2-72843
 glass fibre reinforced epoxy, laminates, ballistically impacted, delamination-crack propag. 2-83207
 glass fibre unidirectionally reinforced terephthalate-polyester filled resin, laminate, filament wound tubes, resin flexibility effects on props. 2-116497
 glass surfaces, water vapour sorption 2-110147
 glass surfaces used in precision optics, roughness and crack layers (French) 2-108985
 global J scalar, appls. to 3D cracks (Japanese) 2-60472
 grain boundary embrittlement, decohesion theory 2-98194
 granite, mechanical failure precursors 2-106113
 graphite fibre reinforced epoxy laminate, in situ transverse lamina strength, X-radiographic obs. 2-88135
 Green's function for two cracks of equal length, from circular hole in infinite sheet 2-81287
 highly filled polymeric rubber composites, struct. changes under stretching, acoustic obs. (Russian) 2-109703
 holographic interferometry applied to stress wave and crack propag. problems 2-86242
 ice, mech. props. 2-115349
 ice, polycryst., tensile strength as function of grain size 2-105272
 indentation hardness, current development review 2-55522
 infinite plane with curved notch, contact problem of elasticity theory 2-65539
 interaction with dislocation pile-up (Russian) 2-92023
 intercrystalline crack development by diffusion mass transfer, kinetics 2-81289
 interface crack, with contact zone 2-70869
 interface crack with no tangential slip 2-103107
 isochromatic crack tip fringe loop area, physical significance 2-97383
 J integral for various geometries 2-67488
 J-estimating procedure for a solid subjected to bending loads 2-114734
 J-integrals, three-dimens., evaluation by elastic analysis (Japanese) 2-109245
 laminated composite plates, cracked, sudden stretching 2-65518
 lenticular bubble growth, rel. to blistering and flaking 2-74926
 Macgregor-Westergaard complex potential numerical evaluation using natural quadrature formula 2-109230
 mechanics of cracks screened by dislocations 2-92090
 metal subsurface crack and plastic deform. detect. using the photoacoustic effect (Chinese) 2-97473
 metallic limiters in Doublet III, changes in near-surface microstructure 2-74901
 metals, abrasion, SEM obs. of worn surfaces 2-67568
 microstructural features, computational models 2-76694
 photoacoustic phase signatures of closed cracks 2-55504
 piezoelectric ceramics, mech. props. under large amplitude operation, transducer appl. (Japanese) 2-67510
 pipe, circumferentially cracked, fracture instability 2-62220
 pipes, circumferentially cracked, bending failure by flattening 2-65534
 plane elasticity, path-independent integral concept 2-109244
 plane strain cumulative fracture 2-97445
 plane strain in infinite body of power law material 2-91338
 plastic deformation, localisation by heat dissipation, crack form. and propag. 2-70854
 plate, conducting, with finite length cut, EM and thermoelectric field conc. 2-114152
 plate, cracked repaired by bonded reinforcements 2-65530
 plate, extended, unlimited, elastic equilb. stability loss in vicinity of sloping crack (Ukrainian) 2-60464
 plate, local and integral strain behaviour, elastic plastic anal. 2-65535

cracks continued

plate with multilayered insert, crack inhibition and stoppage (Ukrainian) 2-103091
 plates, viscoelastic, ageing, with linear cracks, durability (Ukrainian) 2-103092
 PMMA, collinear cracks dynamic interaction 2-98192
 PMMA, rigidity modulus near a running crack tip, US method 2-77928
 PMMA cracks, stress intensity factor meas. using method of caustics (Japanese) 2-88180
 PMMA double torsion specimens, geometrical obs. on crack front profiles 2-116529
 poly(styrene-co-acrylonitrile), gamma-irrad., crack healing, fracture toughness 2-111305
 polyethylene films in active environments, local yielding 2-76576
 polymer glasses, in surface active medium, strength, time depend. (Russian) 2-109891
 polymer with submicrocracks, deform. props. and macroscopic breakdown kinetics, dislocation model 2-62209
 polymers, inner potential of cracked material, electron microscopy meas. technique 2-93746
 polymers, mech. props., influence of mol. wt. and mol. wt. distrib. 2-111306
 polymethylmethacrylate, elec. field induced damage, space charge, light scatt. study 2-87672
 polystyrene, elec. field induced damage, space charge, light scatt. study 2-87672
 polystyrene, inner potential of cracked material, electron microscopy meas. technique 2-93746
 prestressed highly elastic materials, crack theory 2-55512
 preyielded hole, crack growth 2-103100
 propag. under combined stresses in three-dimensional medium 2-65519
 propagating, dynamic effects during 2-75897
 propagation, modified strain-energy density criterion 2-103103
 propagation in visco-elastic medium, stress and strain response anal. (French) 2-84444
 propellant, solid, shock-induced instability due to crack-like defects 2-78106
 PWR fuel rods, high-temp., post-irrad. performance 2-54496
 radiation-induced cracks, micro-mechanical destruction model (Russian) 2-92101
 reactor fuel behaviour, fracture mech. props. influence 2-85145
 rectangular lattice, crack propagation in HF lattice vibr. 2-103893
 rigid inclusion tip vicinity crack propag. (Ukrainian) 2-60463
 rock, crack effects on elastic moduli, thermal shock role, correl. with earthquake magnitude 2-73548
 rock, ultrasonic vibration leading to fissured traces, method for Rn emanation (Chinese) 2-62954
 rocks, US radiation from crack in strained rock specimen 2-117295
 rupture crack propagation, radial, in explosion-loaded cylinder 2-114726
 sand-cement mortar, acoustic emission and longevity under steady load 2-93619
 shells, cylindrical, under tension, circumferential through-cracks 2-103105
 shells, shallow saddle-shaped supported by shear diaphragms under uniform load, nonlinear anal. (German) 2-75871
 silica, crack blunting in water and silicic acid soln. 2-111276
 silicate, commercial, glass, relation of K_{Ic} to median crack indentation load in Vickers indentation (Japanese) 2-67508
 single phase polycrystals, microcrack zone formation 2-103887
 Sneddon formulae, domain of application 2-81291
 solid bodies, fracture by compressibility along cracks 2-81886
 specimen thickness, effect on crack propag. and branching in delayed failure 2-86782
 steel, 37KhN3(MF), fracture and mech. props. (Russian) 2-105288
 steel, 4140, mechanism of crack initiation and propag. in In-induced embrittlement 2-111295
 steel, alloy, crack initiation, effect of H source 2-57474
 steel, alloy 2-77933
 steel, austenitic stainless, 316, TEM observations of crack tip-cavity interactions 2-71521
 steel, austenitic stainless, annealed, subcrit. crack growth and instability, mechanism of initiation 2-57438
 steel, austenitic stainless, fatigue props., effects of Li environment 2-80170
 steel, austenitic stainless, microcrack growth in grain boundaries, at the surface of smooth specimens in high temp. creep (Japanese) 2-111289
 steel, austenitic stainless, simultaneous ion bombardment, neutron irradiation and stress/temp. cycling 2-108113
 steel, austenitic stainless, subcrit. crack growth, effect of severity of notch-root radius 2-83206
 steel, case hardened, fracture behaviour evaluation by means of fracture mechanics values (German) 2-83204
 steel, Cr-Mo, H stress cracking, enhanced resist., role of Mo 2-99537
 steel, crack initiation, stable crack growth resist., rel. to inclusion distrib. 2-57436
 steel, detection by dry magnetic powder method transverse surface crack detection in semiconducting castings (German) 2-78047
 steel, ductile plate, plastic strain conc. at crack, optical meas. 2-105268
 steel, ferritic, fatigue props., effects of Li environment 2-80170
 steel, low alloy, high strength, fracture, effect of thin film form. 2-67470
 steel, low alloy, surface crack propag. laws, exp. study 2-67486
 steel, low C, cold forming, bendability, tensile props. and particle struct. 2-88128
 Steel, Low C, weld zone crack resistivity (Korean) 2-57461
 steel, medium C, damage accumulation during initiation and short crack growth regimes 2-88163
 steel, medium strength, compatibility between J-integral and CUD 2-67485
 steel, Ni-Cr, low alloy, nucleation threshold stresses for dynamic fracture 2-72787
 steel, pressure vessel, crack vel. and dynamic fracture toughness during brittle crack propag. (Japanese) 2-111283
 steel, quenched and tempered, crack nucleation and propag., electron microscope obs. (German, English) 2-57477
 steel, vacuum-melted, strengthening using combined cyclic elec. heat treatment and thermomech. heat treatment 2-72711
 steel fibre reinforced methyl methacrylate, crack growth, micromech. studies 2-111263
 steel mild, crack growth in notches under torsion, DC potential drop method of monitoring 2-88303

cracks continued

- steel reinforced concrete bond specimens, mech. props., finite element anal. (*Chinese*) 2-83167
- steel thin-walled tube, crack initiation and fatigue, statistical anal. using Weibull law (*French*) 2-111259
- stress wave interaction with a periodic system of curvilinear longitudinal shear cracks 2-60469
- thermoplastics, relationship between Charpy and dart drop impact (*Japanese*) 2-88181
- thin plates, cracks, eddy current flows, nondestructive testing 2-105434
- three-dimensional crack problems, local path independ. integral definition 2-55507
- tip acceleration and deceleration, Rayleigh surface wave obs. 2-109255
- transparent solids, destruction by pulsed tensile loading, submicroscopic crack development 2-66118
- transverse crack going through longitudinal crack or hole, crack arrest modes 2-60484
- transversely isotropic medium containing annular crack under torsion, stress distrib. 2-70874
- travelling crack, stress curves, dynamic theory problems 2-55509
- tube, partially autofretted, residual stress redistrib. caused by notches and cracks 2-62219
- unconventional internal cracks, method of generating sharp cusps 2-97463
- viscoelastic body, cracked, standard linear, steady state solns. 2-75906
- yield strength, general, interf. effect of double symmetrical cracks 2-91266
- Al alloy, 2024-T851, growth of corner cracks at hole 2-105339
- Al alloy, single specimen method for calculating J_{IC} 2-111268
- Al alloy conversion coatings, corrosion protection, adhesive bond durability, cracking 2-83270
- Al alloys, stable fracture mechanism, fractographic study (*Japanese*) 2-111281
- Al, anodic barrier-type films, flaw generation 2-67629
- Al, intercrystallite fracture obs. by high power US (*Russian*) 2-88160
- Al plates, crack growth under equibiaxial tension 2-111258
- Al sheet, crack propagh, refl. holography applied to deform. meas. problems 2-103118
- Al-Cu, two-phase, inhomogeneity of plastic deform. and fracture modes 2-105245
- Al-Cu (10 wt.%), rheocast, microstruct. and mech. props. 2-99420
- Al-Cu-Mg-Mn-Si-Fe sheet, fracture toughness and crit. crack length, inhibiting layer effect 2-72826
- Al-Si, as-cast and age-hardening, wear, friction and surface topography in dry sliding 2-83237
- Al₂O₃, delayed fracture, crack origins and microcracking 2-88175
- Al₂O₃, sintered and fusion cast, and ruby and sapphire, fracture induced photon emission, appl. to fracture mechanics 2-93293
- β -Al₂O₃-Na₂O electrolyte, model I degradation initiation 2-56245
- Au, ruptured, final separation, role of glide and twinning 2-83200
- B fibre reinforced Al, acoustic emission and longevity under steady load 2-93619
- B₂C, irradiated, crack propagh. induced by swelling and thermal gradients 2-77912
- BN, hardness load depend., structural state, fracture, cracks 2-83229
- C fibre reinforced plastic disc, bursting and bulging 2-116520
- C, neutron irradiated material, thermal and elec. cond. restoration during annealing (*Russian*) 2-66303
- C-SiC, structured composite limiters for ablation control in fusion devices 2-74902
- CaPuTi₂O₇, alpha decay self irradi. damage 2-80064
- Cr alloy crack-free 2000 Å films, sputter deposition onto ABS plastics 2-87984
- Cu, intercrystallite fracture obs. by high power US (*Russian*) 2-88160
- Cu single crystals, erosion at 30° incidence of glass spheres 2-111329
- Cu-Cr, failure anal., impurity segregation, Auger spectra study 2-83205
- Cu-Ni, failure anal., impurity segregation, Auger spectra study 2-83205
- Fe, intercrystallite fracture obs. by high power US (*Russian*) 2-88160
- Fe-Si (3.25 wt.%) plate, fast crack development mechanism in parallel twin system 2-57482
- KCl, EM emission stimulated by acoustic wave 2-116301
- LiF, EM emission stimulated by acoustic wave 2-116301
- LiTaO₃, large cryst., Czochralski grown, low angle tilt boundaries, edge dislocations and cracking 2-91843
- MgF₂ films, vacuum deposited, Young's modulus, internal stress and internal friction meas. 2-82185
- MgO-Cr₂O₃(Fe₂O₃)(Al₂O₃)-CaO-SiO₂, fused, retrograde stability of pericase rel. to cracking 2-83103
- Mo, microcrack behaviour in neutron irradi. single crystals 2-54508
- Mo single crystals, microcrack healing in heating under uniaxial compression 2-116550
- Mo, sintered sheet, electron beam welded, bend props. 2-116509
- NaCl, EM emission stimulated by acoustic wave 2-116301
- Na₂O-CaO-SiO₂ glass, test pieces with controlled flaws, uniaxial and biaxial strength comparison 2-57414
- Na₂O-CaO-SiO₂ glass, chemically toughened, crack evolution in Vickers indentation 2-88169
- Nb(C,N), fracture props., Young's modulus, Hertzian indentation testing 2-62216
- NbC, fracture props., Young's modulus, Hertzian indentation testing 2-62216
- NbN, fracture props., Young's modulus, Hertzian indentation testing 2-62216
- Ni, intercrystallite fracture obs. by high power US (*Russian*) 2-88160
- Ni-base superalloys, fatigue growth of surface cracks 2-93599
- P₂O₅-SiO₂ glass passivation layers, cracks and Al corrosion 2-88234
- PbO-ZnO-B₂O₃, critical load for median crack initiation in Vickers indentation 2-111279
- PbO-ZnO-B₂O₃ glass, relation of K_{IC} to median crack indentation load in Vickers indentation (*Japanese*) 2-67508
- Pd crystallites, wetting phenomena, alternating heating in O₂ and H₂ 2-86974
- SbSi single cryst., photocond., surface perfection influence 2-104423
- Si, back-surface damage regions, gettering of mobile O, defect stability, O diffusion 2-56256
- Si, fracture and crack propagation, dislocation generation, X-ray study 2-115346
- Si:H, FZ cryst., anomalous defect form. by H doping 2-71476
- Si:H amorphous films, H₂ evolution 2-93950
- Si₃N₄, effects of oxidation and oxidation under load on strength distrib. 2-99491

cracks continued

- Si₃N₄, hot pressed, acoustic charact. of mech. props. (*Japanese*) 2-67511
- Si₃N₄, hot pressed, grooved by single-point grinding, residual stresses 2-57455
- Si₃N₄, oxidised, hot pressed, microstruct. and subcritical crack growth 2-116530
- SiO film, step coverage growth, computer calc. 2-82176
- SiO₂, commercial glass, critical load for median crack initiation in Vickers indentation 2-111279
- Ti-Al-V-Sn, temp. depend. of sustained-load subcritical crack growth 2-111297
- Ti-Al-V-Sn (6.6,2 wt.%), internal H-induced crack growth effect of stress state 2-99535
- TiB₂, low temp. CVD of corrosion 2-87999
- TiB₂-Ni ceramics, crack form. and swelling in liquid Al 2-111273
- β -U₂N₃, elec. and mag. props. mag. transition temp. 2-87281
- UO₂, Al clad fuel cores, compacted and extruded, failure mechanisms 2-85164
- UO₂-PuO₂ pellets, structure development during reduction sintering from granulated powders 2-85161
- UO₂-PuO₂ pellets fabrication using granular technique, process parameter influence 2-85162

cranking model, nuclear see nuclear cranking model

crazing

- see also stress corrosion cracking
- dislocation stress analysis 2-103096
- fibre reinforced plastic, elastic and fracture props., design and testing 2-88195
- glassy polymer thin films, competition between shear deform. and crazing 2-99528
- graphite/glass fibre reinforced epoxy var. in acoustic emission 2-72916
- PMMA, thermal phonon softening and crazing under tensile stress, Brillouin scatt. study 2-110877
- PMMA, Young's modulus of craze, crit. temp. for craze growth, interferometric obs. 2-105206
- polycarbonate, crazing and fracture, SEM obs. 2-116517
- polycarbonate, notched, fracture difference between atmospheric and hydrostatic press. 2-57448
- polymer, finite-element analysis of craze deformation, surface displacements and stresses 2-67590
- polymer, glassy, craze micromech., entanglement network role 2-111346
- polymers, elastic and fracture props., design and testing 2-88195
- polymers, glassy, craze-shear band interaction, TEM study 2-97939
- polymers, inner potential of cracked material, electron microscopy meas. technique 2-93746
- polymers, mech. props., influence of mol. wt. and mol. wt. distrib. 2-111306
- polymers, stress cracking and crazing, environmental irreversible thermodynamics 2-103891
- polypropylene, EPDM modified, struct.-property relations under tensile and impact tensile stress (*German*) 2-67533
- polystyrene, craze layer, crack nucleation and propagh. 2-67500
- polystyrene, craze microstructure, strain history effect 2-77967
- polystyrene, high impact microcomposite thermoplastic, stress crazing, temp. effect 2-77926
- polystyrene, high impact microcomposite thermoplastic, stress crazing relax. behaviour 2-77927
- polystyrene, high-impact, rubber-toughened, internal struct. of rubber particles and craze breakdown 2-105297
- polystyrene, high-press. CO₂ effects on T_g and mech. props., plasticisation effect 2-115413
- polystyrene, inner potential of cracked material, electron microscopy meas. technique 2-93746
- polystyrene, tensile stress-strain behaviour in inert and gaseous environments 2-88130
- polystyrene, toughened, crazed, strain rate depend. of yield stress, model and eqn. development in terms of craze growth 2-67424
- polystyrene, toughened, stress-strain behaviour model 2-67428
- polystyrene, toughened, stress-strain behaviour model 2-67429
- polystyrene film, atactic, glassy, craze healing kinetics 2-62247
- polystyrene-low density polyethylene blends, const. stress behaviour 2-105229
- polystyrene-low density polyethylene blends, crazing, effect of varying polyethylene and co-polymer contents 2-116571
- polystyrene-polyphenylene oxide blends, crack microstruct. and mol. entanglements 2-77968

creation hypothesis, continuous see cosmology

creation of electron pairs see electron pair production

creep

- see also creep fracture; creep testing; diffusion creep; elastic aftereffect; irradiation induced creep; recovery-creep; stress relaxation
- aero gas turbines, corrosion prevention by organometallic cpd. additives 2-116623
- alloy, thermomechanically treated, creep yield stress 2-99479
- alloys, creep behaviour, friction stress concept appl. 2-62167
- anisotropic materials, creep mechanics, constitutive eqns. (*German*) 2-71549
- Astrolay, wrought, grain boundary void nucleation during high temp. creep 2-93575
- BCC metals, impurity interstitials strain ordering and associated anelasticity, theory 2-98242
- biaxial stress experiments, constitutive eqn. study 2-105264
- biaxial tension stability under creep conditions 2-60429
- bicrystal, tilt type, symmetrical deform., model and exptl. confirmation 2-71469
- bone, human compact, creep under various specimen storage and test conditions 2-94099
- bone, human compact, factors affecting creep props., 2-116965
- boundary element methods, for plasticity and creep, including visco-plastic approach 2-81239
- brass, creep rheological study in single and two phase alloys near stoichiometric composition 2-62174
- butadiene-styrene block copolymers, strain-strength props. under uniaxial stretching (*Russian*) 2-67466
- CANSWEL-2 code for creep predictions in Zircaloy fuel can following LOCA 2-113616
- celluloid, softened, deform. under complex loading, mirror transform. (*Japanese*) 2-93566
- cellulose nitrate, creep behaviour in unloading process under superimposed tensile and hydrostatic loading 2-67430

creep continued

- class II behaviour, modified constitutive eqn. 2-71550
 composite plate, multipurpose optimisation 2-60426
 composites, combined deformation by creep and fracture, driving process 2-115342
 concrete, chamotte, in high-Al₂O₃ cement, rheological props. 2-57425
 corundum ceramics, creep mechanism 2-93572
 crack tip blunting rel. to creep crack growth initiation 2-115347
 creep-fatigue, mechanistic approach to creep-dominated failure 2-88183
 creep-fatigue interactions, mechanisms 2-99540
 cumulative damage conditions for fatigue and creep, phenomenological approach 2-11623
 deformation, separation of cavitation-strain and creep-strain 2-76567
 dislocation network theory, climb glide, multiplication and pipe diffusion 2-76572
 dislocation pinning by impurity atmospheres, nucleation mechanism, theory (*Russian*) 2-86666
 dislocations, mobile fraction, phenomenological dislocation transformation model 2-98087
 Earth crust, anomalous land uplift and aseismic creep prior to 1976 Tangshan earthquake 2-94307
 Earth interior, O₂ partial press. effect on olivine dislocation recovery as creep constraint 2-106117
 Earth mantle (*Chinese*) 2-106008
 elastic and inelastic solids, path-independent integrals, body forces, inertia and arbitrary crack-face conditions 2-86223
 energy balance approach to fracture of creeping materials 2-91324
 FACSIMILE code for void swelling and creep calc. with vacancy loops 2-67468
 fatigue, low cycle, wedge-type creep damage 2-98195
 fatigue-creep interactions, failure mode 2-99522
 glass fibre reinforced plastic, elec. insulation, liq. medium influence on strength and deform. props. 2-99576
 glass fibre-reinforced cement composites, weather influence on creep 2-105228
 grain boundary sliding during creep, stress redistrib. 2-83185
 Harper-Dorn creep, flow process 2-71540
 high-temperature, pore growth and closure at inter-grain boundary (*Russian*) 2-66111
 high-, columnar-grained, compressive strength, const. strain-and stress-rate 2-66106
 ice, mech. props. 2-115349
 J integral for various geometries of cracks and notches 2-67488
 layer superstructure, domain-boundary hardening theory (*Russian*) 2-93529
 martensitic transformation, creep and strain hardening model 2-83115
 mechanical props. for use at high temps. 2-105343
 metal, FCC, saturation of flow stress 2-93574
 metal, time-depend. behaviour, self-consistent determ. 2-92089
 metal, void nucleation, stress and temp. driven 2-76429
 metal beam under bending and tension, rheological effects, steady state creep law (*Polish*) 2-81247
 metals, deform. kinetic theory 2-115341
 metals, long-term strength estimation with stepwise stress changes 2-109890
 model for alternating loading 2-115343
 Nabarro-Herring creep, irreversible thermodynamic analysis 2-98191
 non-linear, approx. anal. method 2-67432
 nuclear components, structural anal., practical anal. of ratchetting 2-113585
 nuclear reactor constructional materials, liq. Na influence on strength, calc. method 2-96112
 orientation dependence of the creep stress for combined dislocation slip and climb 2-66105
 plastics, long static loading behaviour, computer aided data acqu. and eval. (*German*) 2-62334
 plate, stresses and line integrals in presence of cracks 2-114722
 PMMA, creep kinetics, influence of stressed state 2-105262
 polyacrylonitrile, I swelling, creep yield and conformational transition 2-76275
 polycarbonate, deformability prediction in complex stressed state 2-83189
 polycrystalline material, creep constitutive eqn. based on creep-hardening surface concept 2-81879
 polyethylene, chlorinated, as impact modifier for PVC, mech. and dielec. relax. obs. 2-81692
 polyethylene, creep kinetics, influence of stressed state 2-105262
 polyethylene, highly oriented sheets, lateral compliances and Poisson ratio 2-83149
 polymer, glassy, deform. props. prediction using dislocation analogy 2-62183
 polymer, solid and melts, equations of state, bulk creep problems 2-93571
 polymer with microcracks, deform. props. and macroscopic breakdown kinetics, dislocation model 2-62209
 polymers, combined deformation by creep and fracture, driving process 2-115342
 polymers, deformability prediction in complex stressed state 2-83189
 polymers, mech. props., influence of mol. wt. and mol. wt. distrib. 2-111306
 polypropylene, activation enthalpy for vol. relax., thermal stimulation 2-92108
 polypropylene, rubber toughened, creep kinetics, effect of rubber particles 2-67360
 polystyrene, high-press. CO₂ effects on T_g and mech. props., plasticisation effect 2-115413
 polystyrene-low density polyethylene blends, const. stress behaviour 2-105229
 power law creep, struct. depend. 2-57430
 PVC, creep kinetics, influence of stressed state 2-105262
 random creep process, statistical props. 2-60421
 rate dependent materials, elastic/viscoplastic problems using boundary elements 2-114673
 shell, thin axially-symmetric, creep stability, plastic flow theory (*Polish*) 2-81248
 solid of revolution, finite, axisymmetrically loaded, creep anisotropy 2-97398
 spherical powders, densification, influence of increasing particle coordination 2-116398
 stainless steel, type 304, creep and creep recovery at low stresses, plastic strains, ageing effect 2-93579
 steady and transient, based on constitutive eqns. 2-103886

creep continued

- steel, 37KhN3(MF), fracture and mech. props. (*Russian*) 2-105288
 steel, alloy, heat resistant, creep under different temp. and force conditions 2-67460
 steel, austenitic, stainless, type 316, fusion reactor first walls, creep fatigue, design limits 2-80218
 steel, austenitic stainless, creep and plastic strains at 593°C, under step stress changes, ageing effects 2-99509
 steel, austenitic stainless, creep constitutive eqns., evaluation under repeated multiaxial loading 2-116515
 steel, austenitic stainless, creep fracture, effect of vacuum environment, 600°C (*Japanese*) 2-72815
 steel, austenitic stainless, creep-fatigue behaviour, Type 316 2-57440
 steel, austenitic stainless, high temp. creep, mech. props., influence of C and N 2-105246
 steel, austenitic stainless, microcrack growth in grain boundaries, at the surface of smooth specimens in high temp. creep (*Japanese*) 2-111289
 steel, austenitic stainless, steady-state creep, effect of prior creep 2-105248
 steel, austenitic stainless, strain limit at elevated temps., creep tests 2-105255
 steel, austenitic stainless, thin-walled tubes, state variable anal. of elastic deform. 2-57398
 steel, Cr type, plasma spraying of, Mo influence on creep, preliminary applic. of low-melting layer 2-99601
 steel, Cr-Mo, const. and var. stress creep tests 2-62166
 steel, Cr-Mo, creep, effect of P 2-105217
 steel, Cr-Mo, high strength, thermomech. strengthening 2-77855
 steel, Cr-Mo, low alloy, heat resistance at 500°C in Na, NaOH admixture effect 2-67459
 steel, Cr-Mo-V, 12Kh1MF, dispersion hardening, creep rate (*Russian*) 2-77871
 steel, Cr-Mo-V, creep-fatigue failure mechanism map at 565°C 2-105312
 steel, Cr-Mo-V, ferritic, fatigue, high temp., low cycle, strain wave shape and freq. effects 2-105313
 steel, Cr-Mo-V, high temp. ductility, compositional effects 2-111238
 steel, Cr-Mo-V, life anal. for fatigue-creep 2-93583
 steel, Cr-Ni-Ti(Al), austenitic, rel. between struct., internal stress, and creep rate 2-83177
 steel, Cr-Ni-W, transient creep 2-76574
 steel, creep in type 09Kh16N15M3B at 623-823K in reactor 2-59468
 steel, dispersion hardened, 12Kh1MF, grain boundary fracture under creep (*Russian*) 2-105287
 steel, ferritic, Cr-Mo-V, constitutive eqn. for creep at 823 to 838K 2-105241
 steel, medium C, behaviour in gaseous NH₃ under temp.-force loading 2-111380
 steel, medium C, creep model for alternating loading 2-115343
 steel, Ni-Cr (30.30 wt.%), high temp. carburisation correl. with creep-rupture props. 2-62265
 steel, Ni-Cr-Ti-Al, precip. and dislocation struct. in creep, 1023-1173K (*Czech*) 2-116507
 steel, stainless, creep microstrains nonuniformity 2-111254
 steel, stainless, Nb stabilised 20/25, creep, primary and recoverable 2-116492
 steel, stainless, pitting under controlled potential, creep behaviour (*Japanese*) 2-78013
 steel, stainless, type 304, dislocation substruct. rel. to power law breakdown 2-67454
 steel, stainless, type 304, Te implantation effect on creep rate and oxidation resist 2-93576
 steel, stainless, type 316, cast, creep, effect of thermal ageing and grain size 2-105196
 steel, stainless 321 and 310, creep and fracture at elev. temp. 2-93558
 steels, 20 Cr-25 Ni heat resisting, alloying elements, effect on creep and creep rupture (*Japanese*) 2-62203
 stochastic model of internal stresses, rel. to dislocation struct. 2-92088
 tertiary, creep rates and life prediction, eqns. development 2-109894
 threshold stress process effect on ductility 2-88133
 transient, two-parameter struct.-phenomenological model, expt. verification 2-76574
 turbine blades life extension, mechanical and metallurgical aspects 2-99369
 upper limit to creep life of solids under tensile force 2-103884
 Zircaloy-4, recovery and deform. substruct. in high temp. plasticity, stationary and non stationary stress 2-83173
 Zircaloy-4 fuel cladding, anisotropic creep behaviour 2-90243
 Ag-Mg, equitatomic, rheological behaviour of β' phase 2-57421
 Al alloy, 2618-T61, simultaneous stress relax. in tension and creep in torsion 2-105269
 Al alloy, combined tension and torsion and stress reversal, nonlinear model predictions 2-93577
 Al alloy, creep deform. and rupture under non-proportional loading 2-57445
 Al alloy, extruded, creep damage 2-111227
 Al alloy, time-depend. behaviour, self-consistent determ. 2-92089
 Al, creep, dislocation networks 2-57400
 Al, creep deform. characts., effective stress 2-62171
 Al, dislocation substruct. rel. to power law breakdown 2-67454
 Al, Harper-Dorn creep, nature and origin 2-116491
 Al, high-temp. creep, dislocation density and internal stresses (*Russian*) 2-67447
 Al, in-situ study of subboundary props. during creep, HVEM 2-71462
 Al, pure, static and cyclic creep behaviour, quenching effect 2-72779
 Al, stress dependence of subgrain size 2-103765
 Al-Al₂O₃, oxide dispersion strengthened, high temp. deform. 2-93554
 Al-Be alloys, Be dispersion strengthened, high-temp. creep (*Japanese*) 2-77879
 Al-Be alloys, Be dispersion strengthened, work hardening and recovery in high temp. creep (*Japanese*) 2-77880
 Al-Cu-Mg, transient creep 2-76574
 Al-Mg, dilute, dislocation pinning by impurity atmospheres, nucleation mechanism, theory (*Russian*) 2-86666
 Al-Mg (3 at.%), solid soln., correl. between creep and dislocation substruct. 2-105249
 Al-Mg (5 wt.%), steady state creep, pre-strain effects, dislocation slip 2-77867
 Al-Mg (5 wt.%), solid soln., Harper-Dorn creep, mech. and microstruct. characts. 2-72755
 Al-Mg-MgO, oxide dispersion strengthened, high temp. deform. 2-93554

creep continued

- Al-Mg-V, candidate material for NET/INTOR first wall, development and evaluation 2-69834
 Al-Mg(3 wt.%), high temp. creep, stress sensitivity parameter 2-77869
 Al-Zn (11 wt.%), long range internal back stresses, new evaluation technique 2-105220
 Al-Zn (9.5 at.%), high temp. creep mechanism and dissolution process, expt. study 2-88146
 Al₂O₃, anelastic deform. effect on high temp. stress relaxation 2-67410
 Au, creep rate meas., cathodic polarisation effects 2-93563
 CaO, deformation processes during creep 2-61058
 β -Co, viscous creep 2-67439
 CoO, creep and point defects, O diffusion 2-109893
 Cu, creep deform. and rupture under non-proportional loading 2-57445
 Cu, creep under biaxial stress states, influence of prior cold work 2-67420
 Cu, pure, static and cyclic creep behaviour, quenching effect 2-72779
 Cu, pure, strain bursts under various forms of static and cyclic loading at ambient temp 2-62206
 Cu-Al-Si-Co (2.8, 1.8, 0.4 wt.%), fine grained, creep 2-105219
 (Fe,Ni)₃V, long-range ordered alloys, fusion reactor appl., mech. props. 2-85218
 Fe, Armcro, behaviour in gaseous NH₃ under temp.-force loading 2-111380
 Fe polycrystalline wire, Ni coated, plastic deform. during diffusion homogenisation (*Russian*) 2-67445
 Fe-Ni-Cr, Alloy 800, mechanical behaviour at 838K 2-77888
 Fe-Si (1-4 wt.%), simultaneous creep and oxidation, 973-1073K 2-105214
 Fe-Si (6 at.%) single crystals, strain rate vs. stress depend. 2-105240
 FeBSiC metallic glass, creep and homogeneous plastic flow 2-105257
 Fe₄₀Ni₄₀P₁₄B₆, Metglas 2826, crystn. kinetics, effect of tensile stress 2-103652
 Gd₃Ga₅O₁₂, garnet single crystals, slip systems 2-66007
 Gc bicrystal, tilt type, symmetrical deform., exptl. confirm. of model 2-71469
 H₂, solid, creep at unsteady stage, 1.8 to 12K (*Russian*) 2-56296
 He, solid, lattice defects (*Chinese*) 2-61249
 LiF, forging processes development for large scale deform. without optical props. degradation 2-60194
 LiF, mechanical props. and dislocation struct. under creep conditions 2-81880
 Mg, polycrystalline, grain boundary during high temp. deform. (*Japanese*) 2-55983
 Mg-Al, solid soln., creep behaviour at elev. temp. 2-83164
 MgO, anelastic deform. effect on high temp. stress relaxation 2-67410
 MgSiO₃, forsterite, deformed at high temp., dislocation study (*French*) 2-60995
 Mo, creep, polycryst., substruct.-induced stability 2-93555
 Mo, polycrystalline, creep props. and microstruct. precreeping effects, TEM obs. 2-105243
 Mo-Ti-Zr (0.5, 0.08 wt.%), dispersion-strengthened, activation energy meas. for creep 2-67426
 Mo-W (5 wt.%), effect of substructure 2-105227
 NaCl, mechanical props. and dislocation struct. under creep conditions 2-81880
 Nb alloy NV7, solid solution reinforced, creep 2-116514
 Nb-Hf-Ti (10, 1 wt.%), hot isostatically pressed powder compact, creep 2-116504
 Nb-Mo-Ti-Zr MN-1 alloy, nitriding effect on heat-resisting props. 2-111247
 Nb-W-Mo-Zr-Re, deform. and fracture, alloying and heat treatment influence 2-111252
 Nb-W(Mo)(TA)-Ti(Zr), creep kinetics under ultrahigh vac. 2-67462
 Nb-Zr-V-C alloy, high-temp. creep in vac., long ageing and V additions influence 2-99504
 Ni alloy, heat-resisting, directional solidification, B influence on fine struct., diffusion and creep 2-67321
 Ni alloys, heat resistant, high-temp. cyclic creep, effect of cyclic and static stresses 2-67461
 Ni, preliminary electron irradi. influence on low-temp. creep, pt. defect control of activated dislocation glide (*Russian*) 2-67448
 Ni superalloy, particle strengthened, resisting stress model of creep, stacking fault energy role 2-88149
 Ni superalloy IN 738, applicability of strain range partitioning to high temp. low cycle fatigue life prediction 2-88162
 Ni-base alloys, anisotropic, creep transients in deform. 2-83163
 Ni-base superalloy, cast IN 738, sequential effect of creep and fatigue 2-105330
 Ni-base superalloy, Inconel X-750, fatigue and creep crack growth at elevated temps., effect of environment 2-99536
 Ni-based oxide dispersion strengthened alloys, crystallographic texture 2-99444
 Ni-Co-Cr superalloy, wrought, struct., microchem. and mech. props., effect of Co 2-99438
 Ni-Cr alloys, short-range order, discontinuous creep 2-99496
 Ni-Cr based refractory eutectic alloy, electron microscopy study (*Russian*) 2-98298
 Ni-Cr-Al-Y₂O₃, oxide dispersion and precip. strengthened, creep and rupture 2-111299
 Ni-Cr-Co, Mar M002, cast superalloy, creep and fracture, effect of hot isostatic pressing 2-88184
 Ni-Cr-Co, Mar M002, superalloy, fracture processes during creep in conventionally cast and directionally solidified material 2-88185
 SiC whisker reinforced Al-Li alloys, mech. props. and microstruct., effect of Li 2-111240
 SiC yarn reinforced lithium aluminosilicate glass-ceramic, high strength and toughness 2-105298
 Si₃N₄, MgO-fluxed, soln.-precipitation creep 2-99492
 Si₃N₄, reaction bonded, mech. props., creep and thermal shock behaviour, influence of microstruct. variables 2-116541
 Ti-Al-Nb-Ta alloy, rate and time depend. behaviour under quasistatic monotonic and cyclic loading 2-93578
 Ti-Al-Sn, H-charged, room temp. creep 2-111241
 Ti₃Al, deformed 'C' component dislocations 2-60938
 Ti₃Al-Nb, as-annealed and creep deformed, superdislocation networks, APB energy role 2-98091
 TiC-TiB₂ system, compressive creep of two-phase alloys, superplastic phenomena 2-99506
 UO₂, polycryst., creep behaviour 2-86779
 UO₂-Gd₂O₃, thermal cond. and plasticity meas. (*German*) 2-85147

creep continued

- Zn, creep rate, pulse current freq. and external mech. stresses effects (*Russian*) 2-77875
 Zn, impression creep and dislocation controlled plastic flow, high temp. study 2-88147
 Zn, twin boundary mobility, basal forest dislocation density effect, theory (*Russian*) 2-61000
 Zn:Al, single cryst., steady-state creep rates, Al doping effect 2-88150
 Zn-Al, steady state creep near eutectoid transformation, microstructural anal. 2-77868
 Zn-Al alloys, thermal cycling effect across eutectoid transformation temp. on superplasticity 2-67440
 Zn-Cd, creep rate, pulse current freq. and external mech. stresses effects (*Russian*) 2-77875
 Zr, jump-like creep at 4.2K (*Russian*) 2-83169
 ZrC-ZrB₂ system, compressive creep of two-phase alloys, superplastic phenomena 2-99506
- creep fracture**
 carbide γ/γ' directional eutectic, fracture under creep conditions (*Russian*) 2-99517
 ceramics, creep fracture in polycryst. containing small amount of liq. phase 2-83197
 crack growth tests, J* eval. methods 2-91327
 deformation mechanism maps, in high temp. creep range 2-83218
 embrittlement, creep induced, fracture mechanics study 2-67491
 intergranular fracture, aggressive environments 2-83201
 Kevlar-29 fibre, tensile fatigue and creep behaviour 2-105299
 Larson-Miller parameter and modified version 2-111426
 metallic materials, statistical props. of mech. strength (*Japanese*) 2-99493
 metals, creep and stress-rupture testing 2-99639
 metals, critical crack opening, method for determ. in creep 2-116640
 metals, time under arbitrary stress and temp. new extrapolation method (*Japanese*) 2-77924
 moving singularity growth anal. with $(\Delta T)_c$ and C* integrals 2-109236
 nonsteady creep, fracture anal., ΔT_c and C* integrals 2-109896
 prediction of creep strength, statistical approach (*Japanese*) 2-93614
 steel, 12% Cr-heat resisting, hardness of creep-ruptured specimens, residual life prediction (*Japanese*) 2-62204
 steel, 316 type, construction of deform. and fracture maps 2-83218
 steel, austenitic stainless, creep fracture, effect of vacuum environment, 600°C (*Japanese*) 2-72815
 steel, austenitic stainless, creep fracture model after neutron irradi. and He injection 2-88173
 steel, austenitic stainless, depend. on thermomech. pretreatments 2-93607
 steel, austenitic stainless, DIN 1.4970, He embrittlement, high temp. in-beam simulation 2-71519
 steel, austenitic stainless, fatigue and creep fracture combined at 650°C (*Japanese*) 2-77923
 steel, austenitic stainless, He bubble form., influence of temp., stress and time 2-108114
 steel, austenitic stainless, strain limit at elevated temps., creep tests 2-105255
 steel, austenitic stainless, type 316, long-temp. creep rupture properties, 550 to 700°C 2-99564
 steel, austenitic stainless, unstabilised, creep crack growth in air and Na 2-111264
 steel, austenitic stainless 304, creep crack, moving singularity growth anal. with $(\Delta T)_c$ and C* integrals 2-109236
 steel, Cr-Mn, creep induced embrittlement, fracture mechanics study 2-67491
 steel, hot-work X40CrMoV51, short-time creep behaviour 2-83203
 steel, Mn-Cr-Mo-Nb, austenitic, heat resisting, props. and microstruct. (*Korean*) 2-57534
 steel, Ni-Cr (30.30 wt.%), high temp. carburisation correl. with creep-rupture props. 2-62265
 steel, stainless, 1.4970, He embrittlement reduction by finely dispersed TiC precipitates 2-71520
 steel, stainless, creep rupture, correl. with environmentally controlled microstruct. 2-83222
 steel, stainless, pitting under controlled potential, creep behaviour (*Japanese*) 2-78013
 steels, 20 Cr-25 Ni heat resisting, alloying elements, effect on creep and creep rupture (*Japanese*) 2-62203
 time under arbitrary stress and temp. new extrapolation method (*Japanese*) 2-77924
 void growth 2-77940
 weld samples, creep rupture, effect of specimen size, simplified approach 2-103894
 Al alloy, creep deform. and rupture under non-proportional loading 2-57445
 Cu, creep deform. and rupture under non-proportional loading 2-57445
 Ni base superalloy IN 100, hybrid experimental-numerical procedure for determining creep crack growth rates 2-77899
 Ni superalloy, creep life, effect of room temp. restrain and subsequent heat treatment 2-72833
 Ni-Co-Cr, Inconel 700, creep strength, microstruct. depend. 2-77932
 Ni-Cr-Al-Y₂O₃, oxide dispersion and precip. strengthened, creep and rupture 2-111299
 Ni-Cr-Co, Mar M002, superalloy, fracture processes during creep in conventionally cast and directionally solidified material 2-88185
 Ni-Fe-Cr alloy tubes, prestrained, creep rupture bending test 2-62184
 Ni-Mo-Al, γ/γ' eutectic, directionally solidified, struct. and creep rupture 2-105326
 Si, growth kinetics of plastically deformed regions at crack tips, X-ray synchrotron topography 2-86788
 Si₃N₄, hot press, uniaxial tensile and flexural stress rupture strength 2-57453
 Sn-Pb (38 wt.%) eutectic alloy, fracture in superplastic flow Region III 2-105300
- creep-recovery** see *recovery-creep*
- creep testing**
 compressive creep machine 2-105417
 constant stress, cam design 2-88331
 constant stress creep machine, parametric eqns. for cam lever 2-57553
 constant stress tensile creep machine, for very low stresses 2-105416
 fusion material, irradi., time-depend. flow props. from indentation tests 2-88315
 high temperature extensometer for creep and fatigue testing 2-72894
 Larson-Miller parameter and modified version 2-111426

creep testing continued

- lever device for testing under tension-compression 2-93715
- metals, creep and stress-rupture testing 2-99639
- metals, creep strength estimation from quasistationary creep rate data 2-93701
- polymer films, creep and life testing apparatus 2-62317
- servo-hydraulic test rig for controlled cyclic strain and temp. testing 2-57559
- steel, Cr-Mo-V, creep strength estimation from quasistationary creep rate data 2-93701
- steel, stainless, Cr-Mo-Ni, irradiat., time-temp. depend. of long-term strength 2-99633
- temperature meas. standards in high temp. mech. testing 2-105437
- torsionmeter, use in thermorheological charact. of struct. adhesive 2-93693
- β -Co, viscous creep, activation energy eval. through temp. change tests 2-72926
- Ni alloy, heat-resistant, creep resist. determ. by prolonged ball indentation into crater 2-99632
- Pb alloy model beams, rig for creep and thermal ratchet testing, strain and temp. meas. 2-57558
- Pb, irradiat., time-depend. flow props. from indentation tests 2-88315
- α -Ti, viscous creep, activation energy eval. through temp. change tests 2-72926
- Zn-Al (22 wt.%), comparison of constant strain rate and creep testing procedures 2-99617
- α -Zr, viscous creep, activation energy eval. through temp. change tests 2-72926

crestatrons see travelling-wave-tubes**crimping**

- No entries

critical constants, thermal see critical points**critical current density (superconductivity)**

- A15 superconductors, atomic disorder rel. to superconductivity 2-56769
- bridge junctions, critical current, increase in microwave field (Russian) 2-82547
- Josephson junction, two-dimens., phase distrib., boundary conditions effect 2-110541
- materials for supercond. magnets, mechanical props. and strain effects, review 2-67469
- measurement, elec. field and resistivity criteria, temp. and strain effects 2-92847
- percolation correl. length 2-66453
- rotating superconductors, relativistic mass correction 2-98794
- superconducting point contacts, low resist., static and HF props., microwave and Josephson radiation 2-104548
- type II superconductors, total pinning force calc. without threshold criterion 2-61675
- Al, impurity scatt. time, critical current density 2-82548
- Al supercond., order parameter relax. under microwave irradiat. 2-72115
- Al superconducting strip, influence of microwaves on order parameter relax. time 2-72114
- LiTi₂O₄ supercond. film, prep. and props. 2-115940
- Nb-Nb₂O₃-Pb Josephson junction, phase distrib., boundary conditions effect 2-110541
- Nb-NbO₂-Pb Josephson junctions, high current density, fabrication and props. 2-82532
- Nb-Pb Josephson junction, submicron, electron beam lithographic fabrication and crit. current density meas. 2-56796
- Nb-Ti superconducting materials, review 2-67255
- Nb₃Al, supercond., ultimate crit. current density (Chinese) 2-110556
- Nb₃(AlGe), supercond., ultimate crit. current density (Chinese) 2-110556
- Nb₃(Al_{1-x}Ge_x), A15 superconductor, prep. from transformation from liq. quenched BCC phase 2-98777
- Nb₃Sn CVD superconducting tapes, dynamic stability 2-104554
- Nb₃Sn, infiltration process prep., supercond. props., effect of Cu and Ga additions 2-61676
- Nb₃Sn multifilamentary supercond. composites, fabrication and supercond. props. (Chinese) 2-110555
- Nb₃Sn, supercond., low bulk pinning, min. in AC losses 2-92842
- Nb₃Sn-Ti, composite processed, Ti addition effect on supercond. props. 2-104555
- NbTi-Cu, multifilamentary, supercond. current stability, max. transport current meas. 2-66731
- NbTi-Cu composite multifilamentary supercond., losses under adiabatic conditions 2-66730
- Pb ternary alloys, supercond. props., influence of US treatment 2-82514
- Pb/Bi/In oxide-Pb/Bi tunnel junction, quasiparticle mixer and appls. 2-98812
- Pb-Zn-Pb superconductor-normal-superconductor junction, self-field effects 2-110540
- PbMo₆S₈, Chevrel phase thin films, crit. currents meas. 2-115960
- PbMo₆S₈ coatings, second crit. field and crit. current density (Russian) 2-98826
- PbMo₆S₈, scaling law parameters, upper critical field, critical current meas. 2-56803
- PbMo₆S₈, superconducting props. 2-66697
- Pb₃Mo₆S₈, superconducting critical parameters (Russian) 2-61646
- SnMo₆S₈ coatings, second crit. field and crit. current density (Russian) 2-98826
- Ti-Nb-Si-Ge foil, struct. and supercond. props. (Russian) 2-92818
- V₄(HfZr), supercond., ultimate crit. current density (Chinese) 2-110556
- V₃Si, for fusion reactor magnets, neutron irradiat. defects influence on supercond. props. 2-110550
- Zr-Si, non-equilib. superconductor, rapidly quenched from melt 2-110520

critical currents

- see also critical current density (superconductivity); flux creep; flux flow; flux pinning
- C NbTi superconductor for magnets, fusion neutron damage 2-80184
- clean SNiNS junction, double critical current stimulation (Russian) 2-110546
- composite superconductors, limiting currents 2-104556
- corrugated film in transverse mag. field, vortex struct., upper crit. field increase, crit. currents (Russian) 2-56805
- films, inhomogeneous, local transition temps. and crit. currents, optical probing technique 2-61635
- inductively shunted Josephson tunnel junctions, relax. oscills. 2-92836
- Josephson junction, pair current, periodic modulation 2-92840
- Josephson junctions, phase locking 2-92839
- Josephson S-N-S junctions, critical current oscills. (Russian) 2-56797

critical currents continued

- Josephson short tunnel junctions, low-freq. cavity mode excitation 2-56798
 - Josephson tunnel junctions, variation of crit. current with external DC mag. field (Chinese) 2-110537
 - Josephson weak links, influence of effective electron interaction on critical current (Russian) 2-104557
 - superconducting cables critical current, effect of technological defects (Russian) 2-98829
 - superconducting microbridge, crit. current hysteresis, theory 2-72119
 - superconductor, supercritical current pulses response 2-56771
 - superconductor-normal-superconductor junctions, crit. current (Russian) 2-56788
 - superconductor-semiconductor-superconductor junction, current-voltage characts. 2-104547
 - superconductors for magnets, low temp. irradiation effect 2-80182
 - (TMTSF)₂ClO₄, nonlinear resistivity above supercond. crit. current obs. 2-66732
 - type II superconducting cylinder with longitudinal current, flux-line instability in absence of vol. pinning 2-82551
 - Al, microwave enhancement of crit. current and order parameter 2-110548
 - In one-dimensional strips, crit. current, temp. depend. 2-104550
 - Nb, peak effect near H(c₁), crit. current meas. 2-72245
 - Nb, point contact, crit. current-normal state resist. product meas. 2-56791
 - Nb₃Ge microbridges, fabrication and I-V characteristics meas. 2-61663
 - Nb₃Sn, neutron damage, changes in critical props. and damage-energy anal. 2-80186
 - PbMo₆S₈, thin film, sputtered supercond., crit. currents and scaling laws 2-61677
 - PbMo₆S₈, superconducting props. 2-66697
 - Sn, superconducting critical current, directional asymmetry, ferromag. particles effect 2-92841
 - Sn-Xe frozen mixtures, normal state cond. and supercond. props. 2-92798
 - V₃(Hf,Zr) Laves phase composite superconductors, effect of strain on crit. parameters 2-82552
 - V₃Si, prep., supercond. props. and normal state susceptibility 2-115931
- critical field, superconducting see superconducting critical field**
- critical fluctuations**
see also fluctuations in superconductors
- anomalous fluctuations during structural phase transitions (Russian) 2-71636
 - benzil, structural phase transition, proton mag. relax. study 2-116079
 - binary mixtures, solid and fluid, periodic spinoidal decomp. 2-61149
 - graphite, pyrolytic, second order phase transition, magnetoacoustic study 2-115828
 - interface fluctuations and the Ising model in a random field 2-74362
 - interface mean square fluctuation, capillary waves 2-86978
 - Ising ferromagnet, dipolar, phase transitions with spontaneous modulation 2-104646
 - Ising model, finite, crit. dynamics, queueing theory 2-104638
 - limit cycle state, fluctuations, rel. to phase chaos 2-86830
 - liquid crystals, hexatic order and herring-bone packing 2-81670
 - liquid mixture, closed-loop phase diagrams, orientational degrees of freedom effects, lattice gas model 2-98259
 - magnetic system, dilute, crit. temp., conc. fluctuations effects, theory 2-104624
 - nonconserved order parameter system, periodic spinodal composition, non-linear sound waves effect 2-81930
 - perovskites, crit. US attenuation, scaling function 2-71589
 - phase transformations in open pseudobimolecular system, microscopic-macroscopic correlation 2-112851
 - polydimethylsiloxane-diethyl carbonate, conc. fluctuation dynamics 2-103972
 - polydimethylsiloxane-diethyl carbonate crit. mixt., phase separation 2-81967
 - quasi-one dimensional systems, fluctuation-driven phase transitions, spatial anisotropy effect on order 2-103944
 - random functions and fluctuation phenomena 2-84545
 - solid solutions, substitutional, order-disorder transitions, review 2-98245
 - stimulated Raman scattering, transient, energy fluctuations 2-90984
 - TCNQ salt, HMTTF-TCNQF₄, separate donor and acceptor phase transitions, mag. susceptibility meas. 2-110565
 - TDGL model, phase transition under periodic temp., critical point, sound wave effects 2-81931
 - three-component cubic model, fluctuation induced first-order transitions and symm. breaking fields 2-89645
 - two-dimensional solid, relax. and fluctuation effects near melting transition, mol. dynamics simulation 2-103957
 - water-oil microemulsion, dynamic scaling near critical phase transition point 2-115400
 - Bi, second order phase transition, magnetoacoustic study 2-115828
 - He, liquid, specific heat, nonlocal critical, in broken symmetry state, fluctuation/order-parameter hybridisation 2-71755
 - ⁴He, liq. surface, fluctuations and shear modulus 2-92302
 - Hg, gaseous, electron stabilisation of high-density fluctuations 2-86379
 - KD₂PO₄, ferroelectric fluctuation, diffuse X-ray and neutron scatt. anal. 2-61837
 - KD₂PO₄-type ferroelectrics, cluster approx. for q-depend. correls. 2-82800
 - KH₂PO₄-type cryst., isotopically disordered, central peak, continued-fraction calc. 2-77460
 - K₂O-B₂O₃-SiO₂ glasses and melts, microstruct., X-ray scatt. study 2-91794
 - NaNbO₃, antiferrodistortive transition, order parameter crit. behaviour, NMR study 2-92183
 - Sb, second order phase transition, magnetoacoustic study 2-115828

critical mixtures

- aniline-cyclohexane critical mixture, acoustic anomaly at low and ultrasonic freq. 2-86798
- binary mixtures, double light scatt. contrib. to Rayleigh line wing intensity in critical region 2-116201
- binary mixtures, obs. of anomalous adsorption 2-56332
- binary mixtures, solid and fluid, periodic spinoidal decomp. 2-61149
- cyclohexane-aniline near crit. binary liq. mixture, short-ranged roughness on the near-critical liquid interface 2-56171
- liquid binary mixtures, isomorphism eqn. of state near liq.-gas crit. point, theoretical anal. (Russian) 2-71601

critical mixtures continued

liquid mixture, closed-loop phase diagrams, orientational degrees of freedom effects, lattice gas model 2-98259
methane-ethane crit. mixt., liq.-gas crit. line prediction and interaction param. evaluation 2-71623
methanol-n-heptane crit. mixture, low freq. dielec. const. meas. 2-82767
microemulsion, anomalous shear viscosity obs. near crit. point 2-97631
nitrobenzene-isooctane mixtures, dielectric const. anomaly near consolute point 2-87649
o-nitrotoluene-n-paraffin mixtures, critical conc. and points 2-81943
polydimethylsiloxane-diethyl carbonate, conc. fluctuation dynamics 2-103972
polydimethylsiloxane-diethyl carbonate, liq. mixture, phase separation, light scatt. study 2-98260
polydimethylsiloxane-diethyl carbonate crit. mixt., phase separation 2-81967
styrene-butadiene diblock copolymer solns. in selective solvents, rheological and morphological behaviour 2-75914
CS₂/nitromethane binary mixture, crit. anomaly induced by selectively adsorbing wall 2-61120
(NH₄)₂SO₄-H₂O-ethanol-benzene tricrit. mixt., thermodynamic model 2-56158

critical opalescence

inhomogeneous medium near critical point, multiple light scatt. (*Russian*) 2-55077

critical phenomena

see also critical fluctuations; critical mixtures; magnetic transitions; phase equilibrium; phase transformations; renormalisation
1/n expansion for weakly random system with impurity correlation 2-53671
anisotropic bond percolation by position-space renormalization group 2-69104
anisotropic triangular lattice, bond-site percolation, real space renormalisation group study 2-95255
anisotropic triangular lattice, bond-site percolation, series anal. 2-95254
Ashkin-Teller model, Ising crit. exponents 2-107259
asymptotic power regimes, crit. exponent calcs. using self-consistent eqns. (*Russian*) 2-53713
BCC Ising model, subdominant crit. singularities 2-87518
benzil, annealed and unannealed, critical behaviour, simultaneous Brillouin correl. light scatt. 2-110878
bis-propylammonium tetrachloro-zincate, second order ferro-paraelastic phase transition, birefringence 2-61124
combinatorial lattice models, critical behaviours 2-69108
commensurate-incommensurate transition, one-dimensional, crit. behaviour 2-92145
dangerous irrelevant operators, effects on critical phenomena, renormalisation group treatment 2-95289
diode-resistor network, directed percolation, wetting velocity, crit. conc. 2-74342
diode-resistor network, percolation, crit. probability 2-74341
directed animals, correl. lengths, crit. exponents 2-79484
directed percolation clusters, random walks, crit. exponents 2-63915
disordered systems and localisation, conf., Rome, Italy (May 1981) 2-63750
double-Gaussian model, crit. and crossover behaviour 2-112836
ferromagnetic system, O(n) symmetry, generalisation of Migdal recursion relation 2-92911
flow birefringence in critical fluids 2-82820
fluids, sound propagation, viscosity and sp. ht. theories 2-103252
fractal lattices, n^{th} order phase transitions, critical exponents from catastrophe theory 2-107256
gas of topological excitations, real-space renormalisation group 2-79518
Gaussian model, inhomogeneous, semiinfinite, nonuniversal and anomalous surface crit. behaviour 2-79486
hard hexagon model, interface tension and correl. length 2-53688
harmonic rotator model, 2-D, generalisation of Migdal recursion relation 2-92910
Ising model, diluted and pure quantum transverse crit. behaviour 2-79490
Ising model, kinetic, real-space renormalisation group approach 2-104642
Ising model, random field d-dimens. hypercubic model, Monte Carlo renormalisation group study 2-72238
Ising model, regular and random, on Cayley tree, higher order susceptibilities 2-77248
Ising model, two-dimens., thermodynamic props. at phase transform., analytic continuation method 2-69120
Ising model, two-dimensional, with impurity lattice bonds, two-point correl. function 2-89631
Ising model, with infinite-range coupling, critical props. 2-79485
Ising systems, compressible, crit. behaviour, Monte Carlo study 2-107260
isotropic gases with generalised interacting charges, phase transitions 2-101369
KAM surface, critical behaviour, empirical results 2-84577
Landau-Ginzburg-Wilson model, tricritical scaling near four dims. 2-63951
lattice models, series analysis, direct estimates of η 2-84556
liquids, critical superheating 2-92152
magnets, dil., with long range percolation, width of crit. region 2-92913
microemulsions, multiphase systems 2-57642
Migdal-Kadanoff renormalisation group approach to spin- $1/2$ anisotropic Heisenberg model 2-77317
mode coupling problems, new integral eqn. 2-63943
Monte Carlo renormalisation group studies of crit. phenomena 2-69119
n-vector model, crit. exponents, Borel resummations behaviour 2-74376
n-vector model with defect plane, critical behaviour at $n \rightarrow \infty$ 2-63929
nonconserved order parameter system, periodic spinodal composition, nonlinear sound waves effect 2-81930
nonequilibrium spatio-temporal self organization due to delayed negative feedback 2-89643
nonlinear field effects, magnetostriction, statistical mechanics theory 2-104678
nonlinear mappings, universal scaling laws 2-74329
one-dimensional percolation problem, transfer-matrix approach 2-101338
operator expansions for critical dynamics 2-101365
ordered spin system, critical dynamics of longit. component 2-56882
percolation, critical phenomena and fractals 2-63937
planar model, crit. exponent, one-dimens. quantum field theory calc. 2-79493
point defect-containing crystal, crit. behaviour, scaling appl. 2-115390

critical phenomena continued

polymer solutions, partition function, mol. wt. depend., criticality 2-63920
polymers, gelation, critical props., kinetic approach 2-105482
polymers, self-avoiding walks, critical phenomena approach 2-80857
Potts model, quantum in D dims., with multi-spin interactions, self-duality, phase transforms. 2-69093
Potts model, three-state, dynamic crit. exponent, Monte Carlo renormalisation group method 2-74363
renormalized $(1/\sigma)$ expansion for lattice animals and localization 2-101347
self-avoiding random walks, persistency 2-84537
site percolation, high-density, on real lattices 2-95262
sol-gel transition, critical behaviour percolation, kinetic model 2-105481
spin systems, random, critical phenomena, second order ϵ -expansion, renormalisation model 2-116012
stochastic processes, critical slowing down 2-107285
supersymmetric Liouville action renormalisation and 3D Ising model critical exponent 2-79762
thermal ignition with variable thermal conductivity 2-84572
thermal instability of phase transition front on decay of frozen metas table states (*Russian*) 2-56156
three-dimensional lattice, two-dimens. defect, local critical exponent 2-74358
two-dimensional percolation and lattice animals, phenomenological renormalisation appl. 2-63912
two-dimensional system, finite size scaling and phenomenological renormalization 2-63935
Yvon-Born-Green function critical behaviour, dimensionality effects 2-53711
⁴He, liquid, permittivity, molar volume and crit. phenomena near λ -point (*Russian*) 2-98371
Ne liquid, critical superheating 2-92152

critical points

see also boiling point; melting point
adsorbed layers, HCP, statistical model of form. 2-98440
alkali metal vapour, ionized, eqn. of state 2-76056
aniline-cyclohexane critical mixture, acoustic anomaly at low and ultrasonic freq. 2-86798
anisotropic ferromagnet in both random and uniform field, multicritical point 2-56867
Ashkin-Teller five-state model, group theory 2-95250
binary liq. mixtures, with upper crit. point, dielec. relax. meas. 2-72413
binary liquid films, Rayleigh linewidth meas. near crit. point 2-57116
binary mixture crit. soln. point, coexistence curve, noncritical fluctuations and Fisher renormalisation 2-103937
chlorotrifluoromethane gas/liq. crit. points, holographic interferometry 2-98251
classical fluid, crit. point, iterative perturbative theory 2-76647
directed lattice animals, configurational props. 2-63914
disordered magnetic lattice gas, ferromag. and spin glass fluids 2-104629
disordered systems, crit. behaviour at mobility edge of Anderson model 2-71873
external noise, influence on marginal or critical equilibrium point 2-53710
ferroelectric crystals, phase transitions under press., NQR-NMR obs. 2-110692
first order, phase transitions, crit. exponents and tricritical points, Landau-de Gennes model, Gaussian approx. 2-66163
graphite, solid-liquid-gas triple point, sublimation and boiling curve 2-61116
incommensurate-commensurate phase transition, tricritical point, Landau-type theory 2-66167
ionic system, thermodynamic props. and crit. points, charged hard sphere model (*Russian*) 2-61107
Ising model, anisotropic, crit. temps. double chain approximation 2-74359
Ising model, decoupling point and marginal crossover 2-89632
Ising model of hypercubic lattices, crit. temp., linear formula 2-112837
Ising transverse model with random local fields, tricritical line 2-84557
isobutyric acid-H₂O-D₂O, phase behaviour near critical point, phase diagram, scatt., ang. depend. 2-61119
liquid crystals, hexatic order and herring-bone packing 2-81670
liquids, critical point props. and Born-Green theory 2-60858
mesophase, possible universal existence 2-66214
methane-d₆(-d₄) single crystals, elastic and photoelastic const., Brillouin scatt. obs. 2-66103
micellar solutions, nonuniversal crit. behaviour, laser light scatt. study 2-83420
monomer-dimer model relation with Yang-Lee model 2-95261
Monte Carlo renormalisation group studies of crit. phenomena 2-69119
nitrobenzene-isooctane mixtures, dielectric const. anomaly near consolute point 2-87649
nitroethane+3-methylpentane mixt., thermally excited capillary waves, light scatt. spectroscopy 2-75982
order and universality, bifurcation ratio, period doubling 2-84583
order-disorder displacive crossover in a structural phase transition model 2-66166
order-parameter profile in semi-infinite systems at criticality 2-69121
ordered phase critical point singularities 2-63954
polymer chain solns., Lagrangian tricritical theory near θ -point 2-92151
polymer gels, solvent effects, statistical mechanical model 2-91754
polymer mixtures and solns., crit. double points 2-109658
polymer solution, two-dimensional, collapse transition, tricritical behaviour, Monte Carlo study 2-114142
Potts model, ferromag. and antiferromag. in (1+1) and (2+1) dimensions 2-72231
quasi-one dimensional systems, fluctuation-driven phase transitions, spatial anisotropy effect on order 2-103944
quaternary mixtures, liquid-liquid equil., singlet-triplet Ising model 2-61106
solid solutions, substitutional, order-disorder transitions, review 2-98245
spin glass, randomly layered Ising model on square lattice, criticality condition 2-104645
superconductors, impure, crit. behaviour in 4-e dimensions 2-92823
TDGL model, phase transition under periodic temp., critical point, sound wave effects 2-81931
ternary mixtures, liquid-liquid equil., singlet-triplet Ising model 2-61105

critical points continued

- three-component cubic model, fluctuation induced first-order transitions and symm. breaking fields 2-89645
two-dimensional sine-Gordon system, commensurate-incommensurate transition, renormalisation-group approach 2-112853
two-dimensional system, dislocations and melting, crit. point behaviour 2-92167
two-mode lasers, multicritical points 2-96882
two-phase equilibria and nucleation barriers near a critical point 2-103943
As₂Sb_{1-x}Si ferroelec., tricrit. points, dielec. meas. 2-93127
Bi₂Sb_{1-x}Si ferroelec., tricrit. points, dielec. meas. 2-93127
CO₂, triple point temp. det. 2-74419
CS₂/nitromethane binary mixture, crit. anomaly induced by selectively adsorbing wall 2-61120
CdGa₂Te₄, amorphous film, structural ordering, effect of group I metal impurities 2-87114
H₂O, flowing, heat transfer in a horizontal tube at supercrit. press. (Japanese) 2-55577
H₂O, supercritical pressure, heat transfer deterioration, flow direction and grooved surface effect (Japanese) 2-55576
He, critical dynamics at superfluid phase transition (German) 2-71746
He, liquid, critical dynamics near lambda transition, nonlinear renormalisation group anal. 2-110069
He, liquid, superfluid transition, crit. phenomena 2-110066
KMnF₃, uniaxially stressed, phase diagrams, sp. ht. meas. 2-56177
NH₄Cl, single cryst., tricritical point, Raman study 2-82845
(NH₄)₂SO₄-H₂O-ethanol-benzene tricrit. mixt., thermodynamic model 2-56158
N₂O₄, specific heat at const. volume and dissociation effect (Russian) 2-55694
NaNO₂, incommensurate phase transition near Lifshitz point, thermodynamic theory 2-87712
Pd_{1-x}Ag_xHy, α - α' phase transition of H, X-ray scatt. study 2-103977
S, fluid, critical point, equation of state determ. 2-92142
SF₆, liq. and gas, thermal conductivity determ. in critical region 2-71058
SbSe₂S_{1-x} and SbsBr_{1-x}, ferroelec., tricrit. points, dielec. meas. 2-93127
Sn₂P₂(Se₂S_{1-x})₂, ferroelec. solid soln., phase transition splitting 2-104823
SrTiO₃, crossover exponent and struct. phase diagram, sp. ht. meas. 2-76665
Xe, liq., nucleation near crit. point 2-71624

critical temperature, superconducting *see superconducting transition temperature*

CRO *see cathode-ray oscilloscopes*

crocidolite *see asbestos*

crops *see farming*

cross-sections (nuclear) *see nuclear reactions and scattering*

crosstalk

- Bragg diffraction switches, electrooptic, in low cross-talk integrated-optics switching matrix 2-91093
electrooptic 4X4 matrix switch for multimode fibre-optic systems, low crosstalk levels 2-70698
spectral demultiplexer with a plate waveguide 2-114472
CaCO₃, calcite 2X2 optical bypass switch controlled by liq.-cryst. cells 2-60257
LiNbO₃/Ti intersecting waveguides, crosstalk charact., TE/TM mode splitter appl. 2-70668
PLZT electrooptic ceramic one-dimens. controlled transparency utilizing transverse effect, crosstalk 2-55323
Si IR detector arrays, line spread function, crosstalk, and modulation transfer function 2-89809

crowdions

- Al₂O₃-Ag, phase in KCl single cryst., crowdion mass transfer mechanism in localized stress relaxation (Russian) 2-66121

CRT *see cathode-ray tubes*

crushing strength *see compressive strength*

cryoelectric stores

see also cryotrons; superconducting devices

- Josephson interferometers, dense array, stray mag. coupling between neighbouring supercond. memory cells 2-115951
NbN-Nb double-layered base-electrode Josephson junctions, single flux quantum memory cells fabric 2-82531

cryogenic pumps *see cryopumping*

cryogenics

see also cryoelectric stores; cryopumping; cryoscopy; cryostats; cryotrons; Joule-Thomson effect; low-temperature production; low-temperature techniques; magnetic cooling; refrigeration

- 5 kV vacuum feedthrough connector with low capacitance and microphony 2-75122
biological cryosection preparation for analytical electron microscopy 2-117176
bolometer noise, nonequilibrium theory 2-64046
breakdown strength obs. and statistical evaluation 2-99037
calorimeter for heat capacity meas., 0.06 to 3K 2-112904
capabilities related to test sections, cryogenics, and computer-wind tunnels integration 2-95387
cold H atom beam source using microwave discharge 2-107449
concentric capacitive sensor for cryogen level 2-74401
cooling, thermal props. and heat transfer coeffs. 2-89723
cryo-liquids, portable auto-transfer equipment (Chinese) 2-107328
cryocoolers, miniature, research in the USA 2-66734
cryoelectron microscopy, review 2-113079
cryomicroscopy and radiation damage, conf., Schloss Ringberg am Tegernsee, Germany (Nov. 1981) 2-112655
dewar, superinsulated, for liq. He, vapour-cooled shields 2-64052
Dewar design for optically pumped semiconductor lasers 2-65240
discharge of cryogenic fluids from nozzles, flow rate determ. using isentropic equilibrium model 2-97614
electrical equipment, problems in design and construction of current input leads made of porous material 2-58835
electrical properties of materials and their measurement at low temperatures 2-104353
electron microscope, attainment of substrate temp. of 25K 2-79589
electron microscope cold stage design and operation 2-113082
fibre-optic cables, loose-sheathed, cold-induced losses 2-114442
fibre-optic sensor for cryogen level 2-74402
Fourier transform spectrometer, balloon-borne, for atm. IR emission meas. 2-117474

cryogenics continued

- freeze-fracturing at low temperatures. I. A device for fracturing biological specimens at 77-10K under high vacuum 2-84605
heater and controller for safe, rapid warming of helium Dewars 2-53774
Helsinki University of Technology, Low Temperature Laboratory 2-89721
insulation design, Indian imports 2-64053
integrated multiple mixing chamber 2-84632
liquid level indicator for liq. He and liq. N₂ (Chinese) 2-107297
metastable chiral liq. cryst. struct., prod. by rapid cooling 2-65855
methane with solid CO₂, cryogenic phase behaviour and saturated phase enthalpy relationship 2-74417
Michelson interferometer, He-cooled, for far-IR astronomy on GIRL 2-117595
miniature cryogenic refrigerator for satellite borne IR detector coding 2-89729
nuclear refrigeration, limitations for, ultralow temp. achievement 2-107331
organic materials, cryoprotection, electron microscopy with cold stages 2-113080
organic specimens, electron microscope irradi. at 4K, props. 2-115120
physics data handbook 2-58565
physics near 0K, review 2-107330
pre-knock-on concept in electron microscopy 2-115297
resistance thermometer only slightly sensitive to action of magnetic fields 2-74413
review of developments from O₂ liquefaction to nucl. cooling 2-112910
small leaks, behaviour in presence of liq. or gaseous He at 4.2K 2-74425
solid gases, review 2-115121
state-selected beam low temp. H₂ maser, recent progress 2-58797
Stirling cycle mechanical refrigerators for gamma-ray spectrometers, orbital performance 2-113087
Stirling-cycle cryocooler, conical, low power, 9K 2-74420
superconducting lens design [for electron microscopes] 2-113081
superconducting solenoid for NMR at ultra-low temps. 2-58872
superconducting winding construction and design (Slovak) 2-69181
superconductive magnetic systems cryogenic current leads theoretical and engineering design problems, mathematical models and calculation methods (Slovak) 2-69182
superconductive windings cooling by helium in various phase states, calculation fundamentals (Slovak) 2-69180
temperature sensors, calibration at boiling points of cryogenic liqs. 2-89708
TFTR neutral beam test cell cryogenics 2-80341
thermal noise meas. using Josephson junction thermometer, effect of additive noise and bandpass filter 2-112902
thermometry, recent developments 2-58820
transducer, differential pressure, sensitive, mag. field independent, for low temp. use 2-74421
tubular superconductor pulsed dipole magnet with circulating cryostatic system 2-64076
vacuum-tight cement mounting of optical windows in crystals 2-74423
waveguide cryogenic microwave noise standard 2-74471
Al₂O₃ cold conductor for obtaining intermediate temperatures 2-74424
Ar, liquid, elec. breakdown at cryogenic temp., press. depend. 2-93111
CO closed-loop CW elec. discharge laser with cryogenically cooled active medium 2-114320
Ge gamma-ray spectrometer system using closed-cycle cryogenic refrigerator, performance study 2-70030
Ge, thermal conductivity at low temp.: 2-76759
H₂ and O₂ cryogenic storage for Space Shuttle 2-79587
H₂ masers, low temp., using liquid He coated walls 2-60056
N₂, liquid, elec. breakdown at cryogenic temp., press. depend. 2-93111
Xe gas recovery apparatus used in computerised tomography studies 2-79590
- cryopumping**
air desorption from water film, cryotrapping vacuum pump appl. 2-86976
cryosorption vacuum pumping of hydrogen and helium mixtures for fusion reactors 2-75052
diffusion pump, and cryopump, comparison on MMA 29X45 ft vac. chamber 2-74435
high vacuum pumps, turbomolecular or cryopumps, selection criteria (German) 2-93391
JET, large scale cryopump system design 2-75051
molecular sieves, indigenous, appl. in cryosorption pumping 2-69187
regeneration of high-vacuum cryopumps 2-69186
small leaks, behaviour in presence of liq. or gaseous He at 4.2K 2-74425
thin film, deposition and characterisation 2-64058
thin film deposition, cryopump application in industrial vacuum technology (German) 2-79602
vacuum pump technology, theory, operations and appl. 2-53777
vacuum system, 20000 l s⁻¹, GANIL particle accelerator 2-84648
H cryosorption pumping, with the ZDB-150 type cryopump, cooled by 2-stage closed cycle refrigerator 2-74434
³H cryopumping, blocking by ³He 2-84649
He cooled immersed condensation-sorption forevacuum pump 2-74432
- cryosopes** *see cryoscopy*
- cryoscopy**
gas analysis, samples purity determ. by cryoscopic instrument 2-57660
purity of organic compounds determ., chromatography and spectrometry appl. 2-57659
- cryosorption** *see sorption*
- cryostats**
AC susceptibility bridge, and cryostat, for 2-300K meas. 2-112935
chamber design for positron annihilation research at -195+800°C 2-107329
diamond-anvil cell, appln. to electrical resistance meas. at high pressures and low temps. 2-58847
far IR direct absorbance meas. using cryostat insert 2-58917
heat exchange study and long-life cryostat dev. (Ukrainian) 2-112907
heat sink for electrical leads in vacuum cryostat 2-79591
IR spectroscopy, low temp., of gases and liquids, cryostat appl. (Spanish) 2-84720
microprocessor-controlled continuous-flow cryostat for single-crystal X-ray diffraction in the range 10-300K 2-97849
microspectroreflectometry cryostat using microminiature refrigerator 2-107332
phosphors, luminescence study, cryostat design 2-58834
solder-sealed liquid helium 2-84634

cryostats continued

- superconducting emitter, losses caused by radiotransparent cryostat 2-112926
- temperature stabilization of samples at low temperatures in an ultrahigh frequency field 2-101405
- thermally stimulated depolarisation currents, meas. apparatus 2-79561
- thermoelectric cryostat, for examination of semiconducting detectors (*Russian*) 2-58831
- vacuum seal, demountable, use in cryostat construction 2-89720
- He bath, mol. beam method calibration of ionisation gauge 2-53779
- He cryostat, continuously filled, temp. stabilisation 2-112905
- He dewars, design and performance for long duration testing of large samples 2-74418
- He flow cryostat, high voltage, for solid insulator surface strength study in vac. 2-64049

cryotrons

- modulation-amplification-demodulation amplifier for weak sonic and infrasonic radio signals 2-89052

crystal atomic structure

- see also *crystal atomic structure of alloys*; *crystal atomic structure of elements*; *crystal atomic structure of inorganic compounds*; *crystal atomic structure of organic compounds*; *electron diffraction crystallography*; *lattice constants*; *neutron diffraction crystallography*; *space groups*; *superlattices*; *X-ray crystallography*
- Archimedean truncated octahedron, cryst. structs. with geometric units of m3m symm. 2-81704
- block-diagonal least squares matrices, standard deviations 2-81694
- cavities in dense random packings 2-65886
- centrosymmetric case, heavy atom arrangement, eight-fold multiple soln. (*Chinese*) 2-109723
- centrosymmetric case, heavy atom arrangement, four-fold multiple soln. (*Chinese*) 2-109724
- computer investigations of correspondence between cryst. habit and atomic struct. 2-65909
- concepts of crystal, order disorder cryst., and max. degree of order cryst. 2-103670
- coordination radii in diamond, zinc blende and CaF₂ structs. 2-94956
- crystal struct. determ. using partial Patterson function 2-86603
- crystal structures containing heavy atoms, multiple soln. appearance (*Chinese*) 2-103675
- crystallography, book 2-112666
- crystals, flexoelectric effect and cryst. struct. 2-87699
- cubic crystal structures, homogeneous frameworks, data collection 2-91854
- dihydrates, MM'O₄·2H₂O, structural relationships 2-55808
- direct methods with anomalous dispersion 2-109707
- electron density distrib. construction method 2-86602
- electronic structures of solids, using mol. orbital techniques, CsCl structs. 2-54754
- high resolution TEM atomic density patterns 2-60846
- hydrated crystalline structures, packing (*French*) 2-71381
- incommensurate modulated structures, excitations dynamic struct. factors, theory 2-98208
- interactive dynamic molecular display 2-97947
- magnetic groups corepresentation, character table 2-76357
- maximal equitranslational subgroups of the line groups 2-76356
- minerals, structural patterns, structural genetic trends 2-86605
- molecular structure, with probability ellipsoids of atomic thermal vibr., graphical representation, ELLIDUS program 2-55811
- monohydrates, MM'O₄·H₂O, structural relationships 2-55807
- noncentrosymmetric structure, determ. by phase degeneration (*Chinese*) 2-109725
- normalised struct., amplitudes, calc. without knowledge of chem. comp. 2-65889
- normalised struct. factors, error estimation 2-109706
- normalised struct. factors, overall temp. factor estimation 2-109705
- normalised struct. factors, scaling function choice 2-109704
- one-dimensional conductors, neutron scatt., struct., lattice dynamical, and mag. props. 2-91726
- ordered crystal, cluster figures prob. weights calc. 2-91833
- P-symmetry 3-D point group appl. to 6-D symm. group derivation 2-115168
- P-symmetry point groups as semidirect products 2-65902
- point groups, finite double, subgroups 2-60906
- reflection-rotation group orientations 2-95067
- secondary extinction correction (*Chinese*) 2-97945
- small-molecule cryst. structs., interactive computer display and anal. 2-97946
- special point ordering 2-60905
- symmetrized multipole analysis of coupled orientation-translation distributions 2-60893
- tight-binding bonds, electronic struct., cryst. struct. depend. 2-56417
- two dimensional crystal, static structure factor, finite size effects on Bragg peaks 2-76330
- Voronoi polyhedra and cluster recognition 2-109708
- X-ray structure factors calc. from symm. operators 2-97856

crystal atomic structure of alloys

- A15 intermetallic cpds., linear thermal expansion coeff., real struct. influence 2-56223
- binary phases with α -Mn cryst. struct., computer prediction 2-76366
- crystallographic parameters (*Russian*) 2-91872
- equiatomic, stability criteria for AuCu and CsCl structs. 2-65926
- intermetallic phases, valence rules 2-81697
- Ising model, homogeneous long range and antiferromag. order, kinetic theory 2-103669
- point groups, tree flow charts, teaching and indexing appl. 2-65903
- rare earth alloys, R₂Ga₂Co₂ (R=Sm,Gd,Tb,Dy,Ho,Er,Tm,Lu,Y), cryst. struct. study 2-115180
- rare earth alloys, RCoSn, cryst. struct. and mag. susceptibility, 78 to 800°C (*Russian*) 2-55891
- rare earth alloys, RInZn, lattice parameters and struct. characts., X-ray diff. study 2-91876
- rare earth alloys, RNiAl₂ (R=Y, Gd, Tb, Dy, Ho, Er, Tm, Kb, Lu), mag. susceptibility and cryst. struct. (*Russian*) 2-115968
- rare earth alloys, RPbCu, lattice parameters and struct. characts., X-ray diff. study 2-91876
- rare earth ternary alloys, RPtSi (R=La, Ce, Pr, Nd, Sm, Gd), cryst. struct. 2-65922
- rare earth-copper-gallium system, RCu₂RGa₂, sections, phase form, and crystallographic characts. (*Ukrainian*) 2-83080

crystal atomic structure of alloys continued

- rare earth-gallium-nickel system, phase comp. and crystallographic characts. (*Ukrainian*) 2-83079
- rare earth-Pd alloy, B addition effects on lattice size 2-71396
- rare earth-transition metal intermetallics, RM₂Al₆, (M=Cu, Mn, Fe), mag. props. 2-61734
- steel, Cr-Mo, FIM obs. 2-67285
- steel, Cr-Ni-Mo-Mn, Mo distrib. during long-term holding between 554 and 654°C (*French*) 2-72700
- transition metal alloying, volume effects 2-116421
- transition metals and alloys, omega phase formation, effect on mech. props. 2-77806
- Ag-based solid solns. with group I to VB solutes, at. size and lattice parameters 2-109748
- Al-Ce(Gd)(Dy)(Tm) thin films, crystallographic phases following electron beam annealing 2-55888
- Al-Cu, aged, imaging by FIM 2-55885
- Al-Cu (4 wt.%), θ' precipitates, lattice image obs. 2-76363
- Al-Mn extended solid soln., as-quenched, conc. depend. of hardness and lattice parameter 2-116518
- Al-Si (20 wt.%), hypereutectic alloy, effect on cast struct. of P and Na additions (*Japanese*) 2-55890
- Al-Si(11.3 wt.%), superconducting props., heat treatment effects (*Chinese*) 2-98778
- Al-Ti, Al₂Ti₃ struct., electron and X-ray diff. study 2-60926
- Al-Zn-Cu, electron diff. determ. of soft directions in cryst. lattice at premartensite stage 2-60925
- Al₂O₃-Y₂O₃ dispersion strengthened alloys, convergent beam diff. anal. of dispersoids 2-99436
- Au-based solid solns. with group I to VB solutes, at. size and lattice parameters 2-109748
- Au-Cd (33 at.%), hexagonal type antiphase domain struct., lattice modulation, X-ray diff. study 2-65924
- Au-Cu long period ordered alloys, incommensurate statistical struct., high resolution electron microscopy 2-71397
- Au-Mn, structure, high resolution electron microscope and electron diff. study of Au₃Mn phase 2-86627
- Au-Mn system, periodic antiphase boundary structs. derived from DO₂₂ struct. 2-81716
- Au-Zn, incommensurate two-dimens. antiphase struct., HVEM study 2-97995
- Au₁₀In₃, cryst. struct. 2-97998
- Au₂Mn₆, antiphase struct., one-dimensional, high-voltage high-resolution electron microscopy study 2-60923
- Au₂Mn₁₃, superstructure, diff. studies 2-86628
- Au₂Mn disordered alloy, short-range order and ferromag. props., X-ray diff. study 2-97990
- BaCuSn₂, cryst. struct., stability criteria (*German*) 2-65925
- Bi-Tl alloys, cryst. struct. and heats of formation, X-ray and metallographic study 2-91873
- Ca-Pd, phase diagrams and intermetallic phase cryst. struct., X-ray and DTA study 2-109955
- Ca-Sr-Ba, alloying behaviour, cryst. struct., stoichiometry and phase diagrams 2-109746
- Ca₂Cu, with trigonal-prismatic coordination, struct. study 2-103692
- CaNi₂H_x, cryst. struct., hydriding, X-ray diff. study 2-91875
- Ca-Sn system, phase struct. and heat of form. 2-109745
- Ce₂Co_{17-x}Ti_x (T=Ti, V, Cr, Mn, Fe, Cu, Zr, Hf), mag. and crystallographic props. 2-72200
- Ce₂Co_{17-x}Zr_x, struct. and mag. props. 2-61741
- Ce(Mn,Ni)₁₁, cyclic intergrowth and crystal structures 2-65975
- Co-B, phase comp. and cryst. struct. meas. 2-88055
- Co-W-C, n-carbides, struct. stability (*German*) 2-83097
- Co₂Mn_{1-x}Ti_xSn Heusler system, mag. and chem. ordering 2-93073
- Co₂Ni_{1-x}MnGe, cryst. and mag. struct. 2-104581
- Cr-Fe-C alloy with precip. (Cr,Fe)₂₃C₆ phases, nonrandom site occupation, parameters 2-72705
- Cr-La (0.3 wt.%), films, dislocations, struct. and composition 2-115600
- Cr-Mo and G-V solid soln. systems, high-temp. X-ray investigs., lattice and thermal props. (*Russian*) 2-66156
- Cr(Mo)(W)-Gd-B, phase comp. and cryst. struct. 2-116426
- Cr₂Si-type struct., at. dias. in voids rel. to unit-cell dimensions 2-109747
- Cu-based solid solns. with group I to VB solutes, at. size and lattice parameters 2-109748
- Cu-Pd long period ordered alloys, incommensurate statistical struct., high resolution electron microscopy 2-71397
- Cu-Zn-Al alloy, martensite structures for various quenching conditions 2-93510
- CuAu II, modulated struct., antiphase domains, Fourier synthesis 2-81715
- Cu₃Cd₁₆, cryst. struct. (*German*) 2-76367
- Cu₃Mg-type struct., at. dias. in voids rel. to unit-cell dimensions 2-109747
- Cu₄₀Zr₄₀O₂₀ alloy, polyphased microcryst.-amorphous, high resolution imaging 2-71356
- DyPd_{1-x}Pt_x(Ni_x), phase relationships and struct., 2-109744
- Er(Mn_{1-x}Cu_x)₂, quaternary system, HCP struct., stability, Cu effects investig. 2-115179
- Er₂Si₂C₃, solubility of C and its effects on struct., X-ray and hardness study 2-109997
- Fe, martensite produced by cooling austenite with coherent inclusions (*Russian*) 2-67347
- Fe-Al-C, abnormally high tetragonality of martensite lattice, origin 2-97996
- Fe-B, phase comp. and cryst. struct. meas. 2-88055
- Fe-Cr-Co-W, mag. props. and cryst. struct. (*Russian*) 2-92970
- Fe-Mg, cast, nodular, mech. props. and cryst. struct., effect of heat treatment 2-83113
- Fe-Mn alloys, γ - α polymorphic transition and α -phase struct. (*Russian*) 2-103684
- Fe-Ni Invar alloys, high-temp. superstruct., X-ray diff. study (*Russian*) 2-61154
- Fe-Ni-Al system, phase equilb. and cryst. struct. of ternary phases 2-99399
- Fe-Ni-Si (18.3 at.%), martensite aging, precipitated intermetallic phase struct., electron microscopy study (*Russian*) 2-93514
- Fe-Si (3 wt.%), synchrotron X-ray topography, multiteroscopic imaging technique 2-81624
- Fe-W-C, n-carbides, struct. stability (*German*) 2-83097
- (Fe₁₋₂₅Sb)_{1-x}(Fe_{1.68}Sn)_x, solid solns., magnetisation, Curie temps. and lattice const. meas. 2-76365

crystal atomic structure of alloys continued

- Ga-Ti, Ga,Ti₃ struct., electron and X-ray diffr. study 2-60926
 GdNi_{1-x}Pt_x, phase relationships and struct., 2-109744
 Gd_{1-x}R_x (R=rare earth), phase relationships and struct., 2-109744
 Hf-Nb-Ga and Hf-Ti-Ga solid solns., mag. and X-ray struct. investig. (Russian) 2-67292
 HfV,H₂, Laves phase, H ordering, thermodynamic description 2-86629
 Ho,Ga₂Co₇, cryst. struct. study 2-115180
 La-Mn-Co(Ni), phase diagrams, isothermal sections at 400 and 600°C 2-83092
 LaCo_{0.52}Sn₂, cryst. struct., stability criteria (German) 2-65925
 LaCu_{0.36}Sn₂, cryst. struct., stability criteria (German) 2-65925
 LaFe_{0.34}Sn₂, cryst. struct., stability criteria (German) 2-65925
 LaNi_{0.74}Sn₂, cryst. struct., stability criteria (German) 2-65925
 LaNi_{0.5}Sn, mag. susceptibility, cryst. struct., X-ray diffr. study (Ukrainian) 2-103693
 Mg-Al-Y system, phase diagram, isothermal sections at 400°C 2-83091
 Mn₁₁Al_{0.99}, metastable alloy, mag. and struct. props., X-ray and neutron diffr. and DSC meas. 2-72163
 MnSi_{0.25}, quenched alloy, cryst. struct., cyclic fouling method, electron diffr. and TEM study 2-91880
 MoC_x, metastable semicoherent precipitate struct. anal. by diffr. contrast image matching 2-76685
 Na₂Ga₃, cryst. struct. 2-65921
 Nb-H system, hydride phase transition, low temp. 2-57344
 NdNi_{0.5}Sn, mag. susceptibility, cryst. struct., X-ray diffr. study (Ukrainian) 2-103693
 Ni-B, phase comp. and cryst. struct. meas. 2-88055
 Ni-W, directionally crystallized eutectic, crystallographic struct., electron microscopy study (Russian) 2-91870
 Ni₃P, metastable phase struct. (Chinese) 2-109743
 Ni₃Sn₄, X-ray struct. refinement 2-55886
 Ni₃ZnGa₄, crystal struct., phase diagram meas. 2-109749
 Ni₃Zr₅, phase, cryst. struct. and thermal expansion, X-ray study 2-97992
 (Pd,Si)Al, metastable phase, cryst. struct. and phase anal. (German) 2-103694
 Pd-Cd system, phase stability, struct. studies 2-99392
 Pd,Mn ordered alloy, coincidence patterns, high resolution electron microscopy study 2-86528
 PrNi_{0.5}Sn, mag. susceptibility, cryst. struct., X-ray diffr. study (Ukrainian) 2-103693
 RNi_{0.5}Ga, mag. susceptibility and cryst. struct. meas. (Russian) 2-61695
 Se-Si-M (M=Mn, Fe, Co, Ni, Cu), phase diagrams rel. to struct. chars. 2-72669
 Si-R-M (R=Y, Ce, Ti, Zr, Hf, Sc, and M=Mn, Fe, Co, Ni, Cu), phase diagrams rel. to struct. chars. 2-72669
 Sm-Co-Cu-Fe-Zr, permanent mag., struct., sintering and annealing effects (Russian) 2-88226
 Sm-In system, phase equilibria, cryst. struct., DTA, X-ray and metallographic study 2-92156
 SmCo_{0.5}Sn(Fe), alloying addition effect on X-ray diffr. relative intensity (Chinese) 2-97993
 Sm₂Co_{17-x}, struct. and mag. props. 2-61741
 Sm(Co_{0.36}U_{0.14})₇, struct. and coercivity, heat treatment effects (Russian) 2-88227
 Sm₂Co_{17-x}T_x (T=V, Ti, Zr, Hf), mag. props. 2-72171
 Sm₂Ni₁₀, polytypes, cryst. struct., electron diffr. and microscopy study 2-91877
 Sm_{1-x}R_xNi (R=rare earth), phase relationships and struct., 2-109744
 Sr₆Mg₂₃ and Sr₅Mg₁₈, cryst. struct. relationships 2-60927
 Sr₉Mg₃₈, cryst. struct. determ. 2-91869
 Ti_{0.5-x}Y_xMn_{0.5}, mag. and crystallographic chars. 2-56854
 Ti-Mo (10 at.%), struct. after low temp. ageing, X-ray and electron microscopy study (Russian) 2-93538
 Ti-V(Mn), anomalous solid soln. struct. (Russian) 2-97994
 TiAl₃Ga_{2-x}, cryst. struct. study 2-55889
 VAl_{0.42}, one-particle pot. determ., cryst. struct., lattice dynamics 2-109938
 γ-V₂DO_{0.75}, incommensurate density modulations, electron diffr. and TEM study 2-91878
 V₃N₄ and V₃₂N₁₆, N ordering, neutron and electron diffr. obs. 2-91879
 V₃Si, film, production, struct. and Tc 2-110527
 V₂Zr(Hf)(Ta) superconducting Laves phase, cryst. struct. (Russian) 2-91871
 V-Al-Ge system, ternary opds. existence and struct. 2-57333
 Y-Cu-Ga system, phase form. and crystallographic chars. (Ukrainian) 2-83080
 Y(Al_{1-x}Fe_x)₂, mag. and cryst. struct., magnetisation and Mossbauer spectra study 2-72150
 Y(Co_{1-x}M_x)₃, M=Ni, Cu, Al, Ti, V, Cr, Mn, Fe, struct. and mag. props. 2-91874
 Y(Fe_{1-x}Co_x)₂, crystal struct. deform., elastic props. (Russian) 2-92074
 Y₂(Ni_{0.5}S_{0.5})₃Sb₂, Ta₃B₄-type cryst. struct., X-ray diffr. study 2-97991
 YBa₂, mixed valence states, cryst. struct. and transformations, X-ray study 2-104319
 Yb₂Ir₃, cryst. struct. 2-55887
 YbNi_{1-x}Cu_x, mixed valence states, cryst. struct. and transformations, X-ray study 2-104319
 Zn-Fe, delta phase stability meas. 2-111144
 Zr-Ti-Ga solid solns., mag. and X-ray struct. investig. (Russian) 2-67292

crystal atomic structure of elements

- diamond, lattice const., and internal X-ray diffractometer with uniaxial stress apparatus study 2-65797
 diamond, natural, type Ia, platelet formation, mechanism and structure 2-81712
 diamond, structure, symm. and twinning 2-86621
 diamond, X-ray phases, expt. determ. and appl. to direct method 2-97842
 electronic struct., correlation with isoelectronic molecules, c.f. with As and Se 2-54772
 graphite, electronic and struct. props., EELS and secondary electron emission study 2-110999
 rare earth small particles, cryst. struct. and mag. props. 2-77330
 transition metals, normal mode vibr. freqs. and struct. props., total energy calcs. 2-103688
 Al, pure, imaging by FIM 2-55885
 As, electronic struct. correlation with isoelectronic molecules, c.f. with graphite and Se 2-54772
 Au (011) crystal in deviated Bragg condition, electron microscopy, petal and horseshoe shaped contrasts 2-71394

crystal atomic structure of elements continued

- Au film, condensed, lattice dynamics and substruct. (Russian) 2-92425
 Be, electronic and struct. props., HF ab initio calc. 2-82218
 Be, metallic, core expansion calcs. 2-81709
 Be, structure factors, primary and secondary extinction correction 2-109742
 Cd, phonon spectra and cryst. struct. 2-115370
 Cu cold worked, local struct. EXAFS study 2-60921
 Cu whiskers, atomic scatt. factors using Pendellosung intensity beat meas. 2-81713
 Fe, charge asphericity, electron density distrib. 2-115177
 I₂, solid, cryst. struct., pressure effects 2-115176
 K₂H, lattice relax. and crystallographic distortion around impurity 2-103914
 Kr, growth and cryst. struct. 2-93394
 Li:H, lattice relax. and crystallographic distortion around impurity 2-103914
 Mo, diffusion of ¹⁸⁵W, via grain boundaries and defects 2-71718
 Na:H, lattice relax. and crystallographic distortion around impurity 2-103914
 Nb, diffusion of ¹⁸⁵W, via grain boundaries and defects 2-71718
 Ni, electrodeposited, cryst. struct., positron annihilation, Mossbauer and X-ray study 2-104178
 α-O₂, solid, cryst. struct. 2-55884
 P, liq. and plastic cryst. phase, neutron diffr. study 2-97900
 Pb, splat cooled excess vacancy conc., lattice parameter and elec. resist. meas. 2-71440
 Se, electronic struct. correlation with isoelectronic molecules, c.f. with As and graphite 2-54772
 Si, atomic images in electron microscopy 2-71393
 Si, lattice const., and internal X-ray diffractometer with uniaxial stress apparatus study 2-65797
 Si, self ion implanted, residual lattice disorder after pulsed laser irradi. 2-76494
 α-U, atomic displacements incommensurable CDW 2-103691
 α-U, field ion microscopy 2-86622
 W (001) surface atomic structure, reconstruction, FIM study 2-66331
 W, diffusion of ¹⁸⁵W, via grain boundaries and defects 2-71718
 Xe, growth and cryst. struct. 2-93394
 Zn, phonon spectra and cryst. struct. 2-115370

crystal atomic structure of inorganic compounds

- Se₃I₂ 2-71415
 A15 compounds, cell dimensions of stoichiometric phases 2-81745
 AN³⁺B³⁻ compounds, X-ray struct. amplitudes, anharmonic core vibr. effects 2-81762
 Ag₂P₂S₆, crystal struct. determ. (French) 2-71400
 alkali metal cpds., M₂[UO₂(MoO₄)₂], (M=Na, K, Rb), solid-phase synthesis, composition determ. 2-72618
 alkaline earth compounds, A₂BC₂O₂₀ (A=Sr,Ba; B=Ti,Ge,Sn; C=Al,Ga), cryst. struct. and luminesc., neutron diffr. obs. 2-60935
 amphiboles, calcic, Fe²⁺ identification in M4 site, extended Huckel method 2-91899
 amphiboles, calcic, Fe²⁺ identification in M4 site, optical spectrum 2-93172
 antimonates, R₂Sb₂O₁₂ (R=Sc,In,Ln,Pr,Tb,Yb), cryst. struct. and dielec. props. 2-109755
 borates, classification and crystal-chemical role of mol. water, thermal decomp. 2-78088
 Ca₁₀7H₂O, cryst. struct. determ., X-ray and neutron diffr. data 2-55897
 chalcopyrite crystals, struct. corrs., tetragonal distortion, thermal expansion coeff. 2-109764
 clathrate hydrates, cryst. struct. frameworks 2-98026
 cobalt salicylate complex, mag. susceptibility, cond., thermal and chemical anal. 2-86639
 cubic oxide phases with perovskite struct., electronic expansion factor 2-60918
 diamond-N₂, structural imperfection annealing, struct. 2-81766
 diamond particles, vapour deposition from methane-H₂ mixture 2-77744
 elbaite, Al-rich, cryst. struct. refinement 2-103729
 fluorinates, struct. modifications, IR and Raman investig. 2-87771
 garnets, crystal habit and atomic struct., correspondence, computer investigations 2-65909
 graphite intercalated with alkali metals, discommensuration struct. of mass density waves, thermodynamic theory 2-98017
 graphite intercalation compounds, staged structs. 2-109765
 graphite intercalation cpd. with alkali atoms, orientation of discommensurations 2-103721
 ice, lattice parameters, Raman and X-ray study 2-104872
 II-VI semiconductors, film deposition on mica, effect of island sublayers of Ag 2-88005
 III-V semiconductors, high pressure phases, pseudopotential calcs. 2-103723
 IV-VI semiconductors, phase transitions and optical props. 2-91861
 lanthanide oxybromides, Matlockite-type struct., normal coord. anal. 2-66141
 lanthanide oxychlorides, Matlockite-type struct., normal coord. anal. 2-66141
 lanthanide sodium perhenates, R₂Na (ReO₄), cryst. chem. and phase diagrams, X-ray study (French) 2-109956
 Laves phase, thermal stability, H sorption 2-87014
 leucosapphire, block struct. and disorientation, X-ray and optical polarisation study 2-103733
 LiUO₂AsO₄4D₂O, cryst. struct., powder neutron diffr. study 2-65936
 mica, oxybiotite, coexisting 1 M and 2 M₁ cryst. struct., polytypism 2-91856
 micas, 1 M, distortions of octahedra and octahedral sheets rel. to stability 2-60960
 minerals, space group ambiguity resolution, optical SHG study 2-115187
 multile form. kinetics, grain comp. and component activity effects 2-72771
 olivines, cryst. struct., interatomic pot. function method 2-97979
 perovskites of type A²⁺B²⁺M²⁺O₆, order-disorder phenomena (German) 2-91857
 piezoelectric ceramics, development and production 2-88031
 proustite, structural phase transitions, NQR investig. 2-110720
 pyrrargyrite, structural phase transitions, NQR investig. 2-110720
 pyrogermanates, struct., IR and Raman vibr. spectroscopy 2-87759
 pyrosilicates, struct., IR and Raman vibr. spectroscopy 2-87759

crystal atomic structure of inorganic compounds continued

- quartz, displacive phase transformations, coexistence of structurally different regions 2-61121
- α -quartz, synthetic, twisted crystals as Brazil penetration twins 2-98116
- quartz, zonal struct. study 2-98042
- rare earth compounds, $R_2Cu_2O_5$ ($R = Lu, Yb, Tm, Ho, Er, Dy, Tb, Y$), cryst. struct. data 2-81757
- rare earth compounds, $R_2Ga_2O_5$, mag. props., struct., anal. 2-66763
- rare earth compounds, R_2HfSi_2 , cryst. struct. and mag. props. 2-55946
- rare earth cpds., $R_2-Sr_{2-x}Cu_2O_{6-3/2}$ ($R = Sm, Eu, Gd$), cryst. struct. and elec. props., O vacancies (French) 2-91917
- rare earth cpds., $R(AlMn^{2+})_2O_4$, cryst. struct. 2-60945
- rare earth cpds., $R(GaM^{2+})_2O_4$ ($M = Mg, Mn, Co, Cu, Zn$), cryst. struct. 2-60945
- rare earth cpds., $RBaCuO_5$ ($R = Sm, Eu, Gd, Dy, Ho, Er, Kb$), crystal structure (French) 2-91914
- rare earth fluorides, cation framework rearrangement in solid-phase reactions 2-98027
- rare earth hydroxycarbonates, optical and struct. studies 2-116169
- rare earth oxides, complex, high-resolution electron microscopy 2-97880
- rare earth silicides, $Si K_{\alpha}$ emission spectra, energy shift, cryst. struct. effects 2-99227
- rare earth titanates, $R_2O_3 \cdot 2TiO_2$, prep. by coprecipitation, crystal struct. 2-72610
- rare earth-transition metal silicides, germanides and gallides, cryst. struct., X-ray diff. study 2-109760
- rhombohedral perovskites, $R\bar{3}C$ symmetry, structural relationships 2-115166
- silicite, crystallographically distinct tetrahedral sites, resolution by solid state NMR 2-71424
- silicate classification based on cryst. chem. 2-103730
- spinel, crystal habit and atomic struct., correspondence, computer investigations 2-65909
- spinel, role of crystal field theory in determ. struct. 2-71937
- $5SrO \cdot 4Al_2O_3 \cdot H_2O$, cryst. struct. refinement 2-55903
- synthesis and cryst. struct. (French) 2-91915
- ternary semiconducting compounds, with chalcopyrite-type struct., structural parameter eqn. 2-81763
- tetragonal-packed crystal structures, theory 2-97968
- transition metal complexes, M(hexamethylenetetramine) SO_4 , struct., mag. moments, IR study 2-77517
- transition metal complexes with 4-cyanopyridine N-oxide, struct., vibr., mag. moments, IR study 2-77518
- transition metal dichalcogenides, layered, low dimensional conductors, phys. props., review (Japanese) 2-82335
- transition metal dichalcogenides, struct. rel. to lubrication performance 2-109901
- wurtzite derivatives and related dipolar tetrahedral structs. 2-81755
- wurtzite derivatives and related dipolar tetrahedral structs. 2-81756
- zeolite, VSZ-4 crystals, hydrothermal growth and characteris. 2-99311
- ZSM-5, siliceous zeolite catalyst, crystallographically distinct tetrahedral sites, resolution by solid state NMR 2-71424
- $AgSCN$, cryst. struct. and polymorphism, X-ray powder diff. 2-115191
- $Ag_{0.7}CF_3$, non-stoichiometric layer cpd., cryst. struct. determ. 2-103700
- $AgFeCl_4$, cryst. struct., mag., optical, and ionic cond. props. 2-92266
- $Ag_2HgI_2(NO_3)_2 \cdot H_2O$, cryst. struct. determ. 2-71411
- $Ag_2IF_2 \cdot H_2O$, cryst. struct., XPS, X-ray and neutron diff. study 2-76389
- $Ag_2I_2F_2 \cdot 2.5H_2O$, cryst. struct. 2-65929
- $Ag_6I_{12}P_2O_7$, single cryst. growth and struct. determ. 2-81751
- $AgInS_8$, two-temp. synthesis, lattice period 2-77725
- $AgSBr_{0.5}I_{0.5}$, superionic conductor, cryst. struct. and phase transition study 2-109758
- Ag_2Se , polymorphic transition and cryst. struct., electron microscopy study 2-86610
- $AgTaS_2$, intercalation cpd., electron diff. investig. of superlattices, struct. and CDW 2-103720
- $AgTiS_2$, disordered stage II, c-axis parameters, X-ray study 2-109772
- $AgTiS(Se)(Te)$, prep. and semicond. growth, cryst. struct., elec. props. (French) 2-87971
- Al wedge, refractive index and struct. factor using anomalous X-ray transmission in perfect Si crystal 2-77467
- Al-Te, vitreous and crystalline materials, short range order, Mossbauer and electron spectra 2-103657
- $Al_{1.6}Fe_{0.4}Mg_{0.4}TiZn_{0.6}(Ga,Mn,Na)_2O_{30}(OH)_2$, hogbomite-8H, cryst. struct. 2-91901
- $\alpha-Al_2O_3$, charge density and elec. field gradients 2-115183
- $\alpha-Al_2O_3$ crystal, hydrothermally grown, cryst. habit 2-65941
- Al_2O_3 , dry impregnation of $M(NO_3)_3$ ($M = Be, Mg, Ca, Sr, Ba$) and MoO_3 , cryst. struct. 2-109761
- $\beta-Al_2O_3/La_2O_3:Eu^{3+}$, optical props., struct., dye laser site-selective excitation and X-ray diff. obs. 2-61959
- $\beta-Al_2O_3-Ag_2O(Na_2O)$, cryst. struct., X-ray powder diff. 2-115190
- $Al_2O_3 \cdot XO_2 \cdot Na_2O$ ($X = Si, Te, Ge$), ionic conductor, elec. props. and struct. 2-110030
- Al₂O₃, hexagonal phases, X-ray powder diff. data 2-76388
- $2Al_2O_3 \cdot CO_2 \cdot 15H_2O$, structural characteristics, X-ray, IR spectra, DTA and electron microscopy study (Bulgarian) 2-76385
- $3Al_2O_3 \cdot 4SO_3 \cdot 8H_2O$, cryst. data 2-81743
- Am, phase transitions under press., cryst. struct., X-ray diff. study 2-92192
- ^{39}Ar submonolayers on Grafoil, struct. and phase transitions, neutron diff. study 2-98488
- $AsH(PO_3)_2 \cdot H_2O$, synthesis and struct. determ. 2-86631
- $As_2O(SO_4)_2$, cryst. struct. determ. (French) 2-91890
- $(As_2O)_2(SO_4)_2$, cryst. struct. refinement (French) 2-71408
- $As_2(SO_4)_2$, cryst. struct. and covalence bonds (French) 2-71403
- BH electron density, pseudotom expansion 2-60931
- BN, cryst. and band struct., EELS obs. 2-109874
- BN, graphitelike, interlayer reaction energy and relative stability of various cryst. modifications 2-65972
- BN, high-temp. stability in O_2 , cryst. struct. influence 2-72858
- $B(OTeF_3)_3$, cryst. struct., X-ray diff. study 2-81737
- $Ba(B_2O_3)_2$, cryst. struct. determ. (Chinese) 2-109750
- $BaCa(CO_3)_2F$, huanghoite, lattice parameters and stacking faults, electron diff. study (Chinese) 2-91903
- $BaCe(CO_3)_2F$, huanghoite, superstruct., X-ray diff. study (Chinese) 2-91904
- $BaCe_2(CO_3)_3F_2$ and related fluorocarbonates, cryst. struct., disorder stacking and intergrowth, X-ray study (Chinese) 2-91905

crystal atomic structure of inorganic compounds continued

- Ba_2CoFeF_9 , cryst. struct., cationic ordering, X-ray diff. study (French) 2-86646
- $BaCrO_3$, 14-layer polytype, cryst. struct. 2-55910
- BaF_3 , impurity effects on lattice parameter, microhardness and refractive index 2-98140
- $BaF_2 \cdot (Y,R)F_3$ ($R = \text{rare earth}$) system, phase diagrams and phase struct. 2-109954
- $Ba_2Fe_2S_4$, cryst. struct., 2-D array of FeS_4 tetrahedra, X-ray diff. obs. 2-60941
- $BaGeAl_2(Ga_2)_2O_{10}$, cryst. struct., X-ray and electron diff. study 2-81760
- $BaMoO_4 \cdot La_2(MoO_4)_2$, phase diagram, structural characteristics of $BaLa_2(MoO_4)_4$ 2-77809
- $Ba(Nb_2O_7)_2 \cdot H_2O$, pyroelectric cryst., struct., neutron diff. study 2-86635
- $BaNb_2O_6$ single crystals, flux growth, X-ray diff. obs. of columbite struct. 2-99313
- $BaO-CaO-Sc_2O_3$ system, cryst. struct. and phase diagrams, X-ray diff. study 2-91921
- $(Ba_{0.75}Pb_{0.16}Na_{0.16}K_{0.04})(Mn,Fe,Al)_8(O,OH)_{16}$, cryst. struct., symm. and cation displacements 2-65928
- $BaPt_2S_3$, synthesis and struct. (German) 2-86637
- $Ba_2Re_2S_{11}$, synthesis, cryst. struct., and mag. props. 2-55940
- $BaTiAl_6(Ga_2)_2O_{12}$, cryst. struct., X-ray and electron diff. study 2-81760
- $BaTiO_3 \cdot R_2O_3 \cdot 3TiO_2$ ($R = La, Pr, Nd, Sm$), formation of $BaR_2Ti_4O_{12}$, dielec. props. 2-71417
- $BaZnGeO_4$, cryst. struct. of room temp. supercond. 2-65937
- Be film, struct., condensation rate effects, supercond. transition temp. (Russian) 2-98477
- B-BeO, tetragonal-packed crystal structures, theory 2-97968
- $Bi_{12} [A^{+11/12}B^{+1/2}O_{20} (A=Fe, Co, Ga, B=P, As, V, Bi), \text{ sillenite struct., tetrahedral environment of cations A and B (French) 2-91913}$
- $\alpha-BiAsO_4$, Roseveltite, cryst. struct., X-ray diff. study 2-81736
- $Bi_{12}Ge_2Si_4 \cdot xO_{20}$ single crystals with low sound speed, Czochralski growth methods 2-62058
- $Bi_{24-x}La_xWO_6$, cryst. struct., electron microscopy lattice imaging method 2-60943
- Bi_2O_3-BaO system, rhombohedral phase, cryst. struct., superlattice existence, electron microscope study 2-60947
- CH electron density, pseudotom expansion 2-60931
- C_6K , intercalation cpd., struct., dynamics, neutron diff. obs. 2-109763
- $C_6KD_{2/3}$, intercalation cpd., struct., dynamics, neutron diff. obs. 2-109763
- $C_6KD_{2/3}$, intercalation cpd. formation kinetics, neutron diff. obs. 2-111484
- $C_6KH_{2/3}$, intercalation cpd., struct., dynamics, neutron diff. obs. 2-109763
- $C_6KH_{2/3}$, intercalation cpd. formation kinetics, neutron diff. obs. 2-111484
- CO_2 , cryst. struct. at 90K, neutron powder diff. study 2-65939
- $CO_2Si_2O_6$, cryst. struct., net atomic charges and electron density distrib., X-ray diff. study 2-91935
- CS_2 , struct., neutron powder profile refinement 2-55904
- $Ca_3Al_2P_2Si_2O_{15}$, crystal struct. and chem. formula confirmation 2-91902
- $Ca_{10-x}Cd_x(PO_4)_6F_2$, cryst. cell dimensions and site occupancy factors, X-ray study 2-109767
- $CaCe(CO_3)_2F_2$ and related fluorocarbonates, cryst. struct., disorder stacking and intergrowth, X-ray study (Chinese) 2-91905
- $CaFe_2O_4$, struct., relationship to rutile and hollandite type struct. 2-60934
- $Ca_2Fe_2O_{12}$, cryst. struct., X-ray diff. study (French) 2-91928
- $CaFe_2O_4(FeO)_n$, $n=1,2,3$, cryst. struct., bond lengths 2-103716
- $Ca_2Ga_2GeO_7$, cryst. struct. anal. 2-115203
- $Ca_4La(NH_4)Si_4P(V, As)_2O_{26}$, solid phase synthesis, apatite struct. 2-111067
- $CaLa_{1-x}Y_xCrO_4$ solid solns., struct. and mag. study 2-76391
- $Ca_2Mg_{1-x}Fe_xSi_2O_7$ crystalline phase anal. 2-71416
- $CaMgSi_2O_6-CaTiAl_3O_6$, diopside, crystal struct., Ti^{4+} role 2-86655
- $Ca_2Mn_2O_7$, cryst. struct. determ. 2-91892
- $CaO-Ga_2O_3-GeO_2$ system, phase form. 2-111150
- $CaSO_4 \cdot 1/2H_2O$, crystal size determ., electron microscopy 2-98013
- $CaSO_4 \cdot 2H_2O$, gypsum, cryst. struct., neutron diff. refinement 2-65931
- $CaSe_2S_4$, cryst. struct. refinement by powder neutron diff. 2-81732
- $CaSeSi_2O_6(OH)$, cascandite, cryst. struct., X-ray diff. study 2-98009
- $CaSeO_4$, cryst. struct. determ. (French) 2-76379
- $Ca_2(Si_6O_{18})(CO_3)_2 \cdot 2H_2O$, orientational disorder of diatomic or polyatomic ions 2-81723
- $Ca_2Si_2O_4H_2$, K-phase cryst. struct. determ. 2-86651
- $Ca_3Si(OH)_6CO_3SO_4 \cdot 12H_2O$, carbonate group deviation from coplanarity 2-86650
- $Ca_1-xSr_x(PO_4)_3 \cdot (VO_4)_2(OH)_2$, struct., isotope effects, IR obs. 2-57104
- $Ca_6Zr_9O_{48}$, existence and stability in ZrO_2 -CaO system, phase diagram 2-81759
- $Ca_2Zr_2TiO_{16}$, calzirtite, fluorite-related superstruct., cryst. struct. determ. 2-55934
- $Cd(BrO_3)_2 \cdot 2H_2O$, cryst. struct., X-ray diff. study 2-60933
- $Cd_3(GeO_4)_2$, crystal struct. from diffractometric data 2-76400
- $Cd_3(Ge_2O_7)_2$, crystal struct. from diffractometric data 2-76400
- $CdGeP_2$, prep. and struct., vapour transport method 2-93392
- CdI_2 , melt-grown single crystal, polytypism, X-ray diffraction study 2-111051
- CdI_2 , polytypism, mag. field effects during solution growth, X-ray study 2-109751
- $CdIn_2S_4$ spinel, lattice thermal expansion, 28 to 685°C 2-104033
- $Cd_3KCl_4 \cdot 4H_2O$, cryst. struct., X-ray diff. study, least squares refinement (French) 2-81740
- $Cd_2MgCl_6 \cdot 12H_2O$, cryst. struct. determ. (French) 2-55919
- $CdNi_2Cl_6 \cdot 12H_2O$, X-ray cryst. struct. determ. (French) 2-55918
- $\alpha-Cd(OH)_2SO_4$, cryst. struct. study (French) 2-76368
- $Cd_2(OH)_2(SO_4)_2 \cdot H_2O$, cryst. struct. (French) 2-65932
- $CdRCrO_3(Ta, Zr)$ ($R = \text{rare earth}$), electrophysical props. 2-87645
- CdTc, high resolution lattice imaging TEM study 2-76401
- $CdTe(110)$, surface atomic struct., LEED 2-76252
- $CdTi_2Se_4CdTi_2Te_4$, phase equilibria 2-71616
- $CeAsO_4$, cryst. struct., IR and Raman vibr. spectra, X-ray diff. study 2-65957
- $Ce_2B_2C_2$, cryst. struct. 2-55939
- $CeCO_3F$, cryst. struct., disorder stacking and intergrowth, X-ray study (Chinese) 2-91905
- $CeNH_4(PO_3)_4$, X-ray structural investigation 2-76383

crystal atomic structure of inorganic compounds continued

- $\text{Ce}_2(\text{SO}_4)_3 \cdot 5(\text{H}_2\text{O})$, crystal synthesis and struct., X-ray, Raman spectra and thermal anal. 2-67205
 CeScO_3 , prep., cell const., mag. props. 2-71423
 Co complex, di(p-nitrobenzoate)tetraquocobalt(II) dihydrate, cryst. and mol. struct. 2-98032
 $\text{CoFe}_2\text{In}_2\text{O}_8$, In^{3+} cation distrib., mag. props. 2-98868
 CoMn_2O_4 , cation distribution, X-ray diff. study 2-60958
 $\text{Co}_{0.33}\text{Na}_{0.67}\text{Pt}_2\text{O}_8$, non-stoichiometric, anal. of internal struct. di stortions, neutron diff. study 2-103697
 $\text{Co}_3\text{U}_2\text{O}_8$, cryst. struct. and struct. modification, X-ray diff. study (French) 2-115200
 $(\text{Cr}, \text{Fe}, \text{Al}, \text{Mg})_2\text{O}_3$ spinel, cation atom distrib., channelling effect in electron-induced X-ray emission 2-98018
 $\text{Cr}_2\text{Nb}_2\text{Se}_{10}$, low dimensional conductors, cryst. struct., X-ray diff. study 2-115197
 $(\text{Cr}_2\text{O}_3)_{14}$, dimeric units, correl. struct., antiferromag. and ferromag. props. 2-109752
 CrP_2Se_2 , synthesis and cryst. struct., X-ray and electron diff. study 2-109770
 Cs-In , phase diagram, cryst. struct., liquid immiscibility, X-ray diff. study 2-66176
 $\text{CsBa}(\text{NH}_3)_2$, synthesis and NH_4CdCl_3 -type cryst. struct., X-ray study (German) 2-98019
 $\alpha\text{-CsCuCl}_3$, Jahn-Teller distorted struct. 2-55893
 CsCu_2Cl_3 , solid electrolyte, cond. and struct. props. 2-82016
 $\text{CsCu}_2\text{M}_2\text{O}_7$ ($\text{M}=\text{Nb}, \text{Ta}$), intergrowth of hexagonal and perovskite-like structs. 2-65962
 $\text{Cs}_2\text{Cu}_2\text{Se}_4$, fragment framework struct. (German) 2-65958
 CsGeO_3 , cryst. struct., lattice energy, X-ray diff. study (German) 2-86643
 CsHSO_4 , ferroelectric phase transition 2-86855
 $\text{Cs}_2\text{-K}_2\text{BiCl}_6$ solid soln., phase transitions and cryst. struct. 2-81948
 $\alpha\text{-CsNd}(\text{PO}_3)_3$, struct. and luminesc. props. 2-65948
 CsOsO_3 , N, cryst. struct., coord. number, X-ray diff. study (French) 2-81724
 CsRfO_3 , crystals ($\text{R}=\text{rare-earth ions}$), growth, struct., IR spectra 2-98023
 Cs_2S_8 , synthesis and cryst. struct. (German) 2-55941
 $\text{CsSbF}_4\text{SO}_4$, synthesis and cryst. struct. (French) 2-91915
 Cs_2SiO_3 , cryst. struct., lattice energy, X-ray diff. study (German) 2-86643
 CsTiF_6 , struct. and mag. studies, antiferromagnetism, X-ray and neutron diff. study 2-65966
 $\text{Cs}_2\text{Ti}_2\text{O}_7$, non-stoichiometric, sheet struct., electron microscopy study (French) 2-86645
 Cs_2UF_6 , tetragonal cryolite-type lattices 2-71419
 $\text{Cs}_2\text{UO}_2\text{P}_2\text{O}_7$, prep. and struct. 2-86632
 $\text{Cs}_2\text{V}_3\text{P}_{12}\text{O}_{36}$, cryst. struct., X-ray diff. study 2-65970
 $\text{CsYb}_2\text{F}_{10}$, cryst. struct., X-ray study (French) 2-76392
 $\text{Cs}_2[\text{NpCl}_2\text{O}_4]$, cryst. struct. determ. 2-91896
 Cu complex, α -bis(N-methylsallylaldiminato)Cu(II), incommensurate phase, X-ray study 2-79755
 Cu complex, bis-(adiponitrile)copper(I) nitrate, orientational disorder of diatomic or polyatomic ions 2-81723
 Cu complex, C(II) α -thiopicolinanilide, X-ray diff., crystal struct. 2-76396
 $\text{CuAgH}_3(\text{AsO}_4)_2$, cryst. struct. study (French) 2-71401
 CuAlO_3 , delafossite-type cpd., cryst. struct. parameters 2-60942
 Cu_2BiS_6 , chalc., modulated struct. 2-91900
 $\text{Cu}_2\text{CrO}_5\text{PS}_3$, cryst. struct. and mag. props. 2-60946
 $\text{CuGa}_{10}\text{In}_{1-2}\text{S}_{12}$ solid solns., growth and props. 2-83017
 $\text{Cu}_2\text{Hg}_2\text{As}_2\text{S}_{12}$, aktoshtite, cryst. struct., isotypy with $\text{Cu}_6\text{Zn}_3\text{As}_4\text{S}_{12}$ 2-103727
 CuI , cryst. struct. determ. 2-76375
 CuIn_2S_8 spinel, lattice parameters, temp. depend., 28 to 685°C 2-104032
 CuIn_2S_8 , two-temp. synthesis, lattice period 2-77725
 $\text{CuIn}_2\text{Se}_3\text{S}_2$, cryst. struct. determ. 2-86648
 CuIn_2Te_8 , cryst. struct. and microstruct., electron microscopy study 2-115198
 CuMn_2O_4 , cation distribution, X-ray diff. study 2-60958
 $\beta\text{-CuNCS}$, 2H polytype, prep. and cryst. struct. refinement 2-71412
 $\text{Cu}(\text{NO}_3)_2 \cdot 2.5\text{H}_2\text{O}$, cryst. struct. PMR and DMR study 2-81717
 CuO , sputtered thin films, struct. and elec. props., O_2 pressure effects, X-ray study 2-72093
 Cu_2O , cryst., struct. factors, Coulomb and Slater pots., cryst. field theory 2-86630
 CuSe , superlattice struct., polymorphism and elec. props. (French) 2-66556
 $\text{Cu}_2\text{Si}_2\text{S}_7$, cryst. struct., X-ray diff. study (French) 2-98002
 CuSn_3S_8 , cryst. struct. determ. (French) 2-55909
 $\text{Cu}_8\text{Ta}_3\text{O}_8$, Cu(I) and Cu(II) distrib. in LiNbO_3 :F struct. 2-71414
 $\text{Cu}_5\text{Ta}_3\text{O}_{30}$, hexagonal, cryst. struct., X-ray diff. study 2-60951
 Cu_2Te , phase transitions during heating and isothermal annealing 2-81944
 $\text{Cu}_2\text{Te}_{0.68}\text{S}_{0.32}$, phase transitions during heating and isothermal annealing 2-81944
 $\text{Cu}_2\text{V}_2\text{O}_7$, struct. and physical props., EPR, DTA, mag. and X-ray diff. study (French) 2-81761
 $\text{Cu}_2(\text{VO}_4)_2$, cryst. struct., R value, X-ray diff. study (French) 2-81731
 $\text{Cu}_6\text{Zn}_3\text{As}_4\text{S}_{12}$, nowackiite, cryst. struct., isotypy with $\text{Cu}_2\text{Hg}_2\text{As}_2\text{S}_{12}$ 2-103727
 DTaWO_6 , cryst. struct. determ. 2-91884
 Dy-Fe intermetallic cpds., mag. and cryst. props., X-ray and Mossbauer study 2-92877
 $\text{Dy}(\text{Fe}, \text{Al}_{1-x})_2$, Laves phases, mag. and cryst. props., X-ray and Mossbauer study 2-92899
 Dy_3NiSi_2 , cryst. struct., Gd_3NiSi_2 type, X-ray diff. study 2-65961
 Dy_2SiO_8 , Czochralski growth two crystalline struct. modifications 2-87968
 DyTaO_4 , cryst. struct. study 2-98038
 ErTaO_4 , cryst. struct. study 2-98038
 EuBiS_4 , cryst. struct. refinement (French) 2-71404
 EuGa_2Se_4 , cryst. struct. and mag. props. (French) 2-55949
 Eu_2O_3 , plasma sprayed, X-ray struct. investig., plasma jet enthalpy effect 2-99577
 Eu_2SnS_5 , cryst. struct. determ. (French) 2-55916
 FH electron density, pseudoatom expansion 2-60931
 $(\text{Fe}, \text{Mn})_2(\text{PO}_4)_2$ grafitonite-type solid solns., cation distrib. 2-115186
 Fe thin film, struct., X-ray diff. study 2-104200
 FeB , cryst. struct. of low temp. modification 2-62106

crystal atomic structure of inorganic compounds continued

- $\text{FeFe}_2\text{-In}_2\text{O}_8$, In^{3+} cation distrib., mag. props. 2-98868
 $\text{Fe}_2\text{Ga}_2\text{S}_3$, 3R polytype, cryst. struct. determ. (French) 2-55929
 $\text{Fe}_2\text{Mo}_2\text{O}_8$, cryst. struct. determ. 2-76376
 FeO , wustite, struct. and morphology, vacancy and interstitial clusters (French) 2-86644
 FeO_x , berthollide type, reactive sputtering prep., struct. and props. 2-82158
 $\text{Fe}_2\text{-O}$, wustite, 3-D modulated struct., six dimensional anal. 2-81728
 Fe_2O_4 , magnetite, cryst. struct. below Verwey transition temp., neutron diff. study 2-103699
 Fe_2O_4 , magnetite, mag., elec., and crystallographic props., low temp. anomalies 2-82586
 FeOCl intercalates with Lewis base, Fourier transform IR obs. of struct. 2-116166
 $\gamma\text{-FeOOH}$, mechanochemical reaction effects on struct. and surface, IR and X-ray anal. 2-116726
 Fe_2P , FeP and FeP_2 powders, Mossbauer spectroscopy 2-116105
 $\text{Fe}_2(\text{PO}_4)_3$, O_2 prep., cryst. struct., mag. props. and Mossbauer spectrum (French) 2-81749
 FeS , polymorphism at high temps. and press., X-ray diff. study 2-97976
 $\text{Fe}_2\text{Si}_2\text{O}_8$, cryst. struct., net atomic charges and electron density distrib., X-ray diff. study 2-91935
 FeTiO_3 spinel, natural, oxidation-reduction reactions, electron microscopy 2-72986
 $\text{Fe}_{0.9}\text{Ti}_{0.1}\text{Se}_2$, cryst. struct., elec., mag., and optical props. 2-81746
 FeVNbSe_{10} , low dimensional conductors, cryst. struct., X-ray diff. study 2-115197
 $\text{Fe}_3\text{V}_2\text{O}_{13}$, cryst. growth, elec. resist., Mossbauer spectra, and mag. susceptibility 2-83014
 Fe_2WO_6 , prep. and characterisation, struct., mag., elec. and photoelectric props. 2-76390
 FewO_3 , prep., elec., mag. and structural props. 2-92682
 Ga-Te , vitreous and crystalline materials, short range order, Mossbauer and electron spectra 2-103657
 GaAs , struct. changes in high elec. field, X-ray diff. study 2-98043
 GaAsSe , struct. images in high resolution electron microscopy study 2-65965
 $\text{Ga}_2\text{Mo}_2\text{S}_4$, preparation and crystallochem. props. 2-65949
 GaP thin film, vacuum deposited, heteroepitaxial growth, struct., characterisation 2-87985
 Ga_2Se_3 , ordered and disordered phases, struct., electron diff. and microscopy obs. 2-60957
 $\text{GaSe}_{1-x}\text{S}_x$, polytype phase transition X-ray diff. obs. 2-60912
 $\text{Ga}_2\text{Sn}_2\text{Fe}_{1-x}\text{O}_4$, Mossbauer study of A site cation arrangement 2-9307
 GdCoSi , synthesis, mag. props. and struct., X-ray and mag. torsion balance anal. 2-72176
 Gd_2CrSe_6 , single crystal growth 2-87959
 GdCu_2 , mag. and crystallographic props., Mossbauer effect, H absorption effects 2-82758
 $\text{GdMn}_2\text{-GdNi}_2$ intermetallic cpds., struct., mag. and elec. props. 2-92878
 GdMnSi , synthesis, mag. props. and struct., X-ray and mag. torsion balance anal. 2-72176
 $\text{GdNa}(\text{ReO}_4)_4 \cdot 4\text{H}_2\text{O}$, cryst. struct. (French) 2-65930
 GdNbO_4 , 4H, cryst. struct. refinement 2-103726
 Gd_2SiO_5 , struct. and defects, high resolution electron microscopy study 2-65952
 GdTaO_4 , cryst. struct. study 2-98038
 $\text{Ge-In}(\text{Mn})\text{-Te}$, X-ray investigation of GeTe-based solid solutions 2-109756
 Ge-Si-H , amorphous sputtered alloys, elec., optical and struct. props. 2-98644
 $\text{Ge}_2\text{-RbI}$ (CsI) system, cryst. structs., DTA and X-ray diff. study (French) 2-109766
 $(\text{GeO})_2\text{Ga}_2\text{S}_3$, cryst. struct. determ. (French) 2-91886
 $\text{Ge}_{1-x}\text{Pb}_x\text{Te}$ solid soln., physicochem. investig. 2-104008
 GeS_2 , polarised far IR transmission spectra meas., lattice structure 2-82836
 H_2MoO_4 solid state struct., H attachment study 2-98014
 HfNbO_3 , cubic perovskite, ion exchange prep. from LiNbO_3 , characterisation 2-60953
 $\text{HfNbO}_3 \cdot x\text{H}_2\text{O}$, proton conductor, charact. 2-104054
 $\text{HSbO}_3 \cdot x\text{H}_2\text{O}$, proton conductor, charact. 2-104054
 $\text{H}_2\text{SnCl}_6 \cdot 10\text{H}_2\text{O}$, cryst. struct. study (German) 2-76373
 HTaO_3 , cubic perovskite, ion exchange prep. from LiTaO_3 , characterisation 2-60953
 $\text{H}_2\text{Ta}_2\text{O}_6$, defect pyrochlores, cryst. struct., neutron diff. study 2-60950
 $\text{HTaO}_3 \cdot x\text{H}_2\text{O}$, proton conductor, charact. 2-104054
 HTaWO_6 , defect pyrochlores, cryst. struct., neutron diff. study 2-60950
 $\text{HTaWO}_6 \cdot \text{H}_2\text{O}$, defect pyrochlores, cryst. struct., neutron diff. study 2-60950
 HTiNbO_5 , localisation of H, cryst. struct., neutron powder diff. obs. 2-60937
 $\text{HfO}_2\text{-MgO}$, phase equilibria, 1670 to 3070K 2-72682
 HfOS , vapour phase synthesis, X-ray characterisation 2-105058
 $\text{Hf}(\text{SO}_4)_2 \cdot \text{Na}_2\text{SO}_4 \cdot 3\text{H}_2\text{O}$, crystal struct. determ. 2-76398
 $\text{Hf}(\text{SO}_4)_2 \cdot 2\text{Na}_2\text{SO}_4 \cdot 2\text{H}_2\text{O}$, crystal struct. determ. 2-76397
 HfSiO_4 , cryst. struct. refinement 2-115185
 $\text{Hf}_2\text{AlF}_5 \cdot 2\text{H}_2\text{O}$, cryst. struct. determ. 2-55894
 $\text{Hg}_8\text{-AsF}_6$, one-dimensional cond., phys. props., review (Japanese) 2-82334
 HgHPO_4 , cryst. struct., Patterson method 2-55898
 HgINO_3 , cryst. struct. refinement 2-71410
 HgMo_6S_8 , high press. superconducting phase, cryst. struct., critical field (Russian) 2-56762
 HgNH_2NO_3 , naturally occurring, cryst. struct. 2-81753
 HgNaPO_4 , cryst. struct. determ. 2-55920
 HgO , struct. of new form produced by exposing Hg to open air 2-55944
 $\text{Hg}_2\text{Re}_2\text{O}_{10}$, cryst. struct. determ. (French) 2-103703
 $\text{Hg}_3\text{-SbF}_6$, one-dimensional cond., phys. props., review (Japanese) 2-82334
 HoNbO_4 , cryst. struct. refinement 2-103726
 $\text{In}_{32}\text{ON}_{17}\text{F}_{43}$, cryst. struct. (French) 2-65934
 $\beta\text{-In}_2\text{S}_3$, two-temp. synthesis, lattice period 2-77725
 InSe , cryst. grown from melt, struct. transition, X-ray diff. study 2-55942
 InSe , cryst. struct. and Raman spectra 2-98036
 InSe , press. induced nonlayer struct., X-ray diff. study 2-103713
 $\text{In}_2\text{WO}_{12}$, cryst. struct., relation to fluorite struct., X-ray diff. study 2-81726

crystal atomic structure of inorganic compounds continued

- (K, Bi³⁺, Bi²⁺) pyrochlore, thermally induced cation migration, structural study 2—66285
 (K, Na)₂-(H₂O)_x[UO₂SiO₄]₂·H₂O, boltwoodite, cryst. struct., symm. twinning 2—86653
 K feldspars, non-centrosymm., SHG test 2—115192
 K₂Ag₂Se₃, prep. and cryst. struct. 2—65959
 K₂Ba₂Si₁₀O₄₀, cryst. struct., X-ray diff. study 2—103695
 (K_{0.90}Na_{0.10})(Ti, Fe, Mg)₂O₁₆, cryst. struct., symm. and cation displacements 2—65928
 (K_{1-x}Na_x)(Ti_{6-x}Mg_xFe_{1-x})O₁₆, structural refinement 2—55922
 KBi(CrO₄)(Cr₂O₇)·H₂O, cryst. struct. determ. (*French*) 2—91883
 KC₈, intercalation compound, cryst. and band struct., Fermi surface, de Haas-van Alphen effect 2—82227
 K₂Ca(CO₃)₂, synthetic fairchildite, struct., X-ray study 2—60961
 K₂Ca(PO₄)₂, R-rare earth, Nd³⁺, Eu³⁺ and Gd³⁺ local struct., probes, luminescence study 2—103715
 KCdF₃, cryst. struct. study 2—98016
 KClO₄, cryst. struct., deform. density in complex anions, neutron diff. study 2—103698
 KCuF₃, Jahn Teller distorted, anharmonic vibr. and electron density distrib. 2—81920
 KCu₂M₂O₂₁ (M=Nb, Ta), intergrowth of hexagonal and perovskite-like structs. 2—65962
 K₂Eu(NH₄)₆, K₂Y(NH₄)₆ and K₂Yb(NH₄)₆, cryst. struct. and IR spectra, exp. determ. (*German*) 2—98022
 K₄Fe(CN)₆·3H₂O, vibrational spectrum and water of crystn. sublattice struct. in ferroelec. phase 2—72506
 K₂FeO₄, cryst. struct. study 2—103701
 KFe₂[PO₄]₃, crystal. struct., X-ray diff. study 2—65971
 K₂(Ga₂Ge_{1-x})O₁₀, ionic cond. and cryst. chem. (*French*) 2—92269
 K₂GaPbW₁₁O₃₉·16H₂O, cryst. struct. X-ray diff. and Fourier synthesis study (*French*) 2—81722
 K₂H₂(S₂I₂O₁₄), monoclinic, cryst. struct., X-ray diff. study (*French*) 2—60948
 KHo₂F₇, cryst. struct., X-ray diff. study (*French*) 2—81725
 KIO₃·2HIO₃, proton conductivity, permittivity, cryst. struct. 2—86931
 K_{1-x}(Li_{1.45}Sb_{0.55})₂O₁₆, hollandite phase, cryst. struct. and ionic cond. meas. (*French*) 2—103717
 K(Mg, Fe)₂AlSi₂O₁₀F₂, fluorophlogopite, cryst. struct. anal. 2—98041
 K₂Mg₂(Si_{4-x}Al_x)₂O₂₀(OH)₄·4H₂O, water uptake, charge layer depend. 2—86617
 KMnCl₃, cryst. and mag. struct., paramag.-antiferromag. transition, neutron diff. study 2—86641
 KMnCl₃, struct. types and phase transformations, X-ray diff. study 2—103710
 K_{0.01}Na_{0.01}(Mg_{0.91}Fe_{0.09}Mn_{0.01})Al_{3.98}Si_{0.01}O₁₈, cordierite 2—91829
 (K_{0.94}Na_{0.05}Si_{0.01})(Mn_{0.94}Fe_{0.05}Al_{0.01})₂(OH)₄, cryst. struct., symm. and cation displacements 2—65928
 K(Nb,Ta)O₃, ceramic, solid solutions, temp., conc. and freq. depend. of dielectric constant 2—111124
 KNbO₃, single cryst., struct. props., growth conditions influence (*Russian*) 2—98034
 KNb₂O₆, layered, cryst. struct., X-ray diff. study (*French*) 2—98006
 K₂Nb₂O₁₇, layer type ferroelec., rel. to KNb₂O₆, chem. and crystallographic props. 2—110779
 K₂Nd(PO₃)₄, struct., synthesis and optical props. 2—81765
 K₂NiCl₃, symmetry modes and distorted phase struct. 2—103685
 K₂O·TiO₂, crystallographic study, X-ray obs. 2—81767
 K₂O₃N, cryst. struct. determ., Scheelite type struct. (*French*) 2—76370
 KPbCr₂F₆, structural and mag. props., X-ray diff. and EPR study 2—60949
 K₂PbCu(NO₃)₆, cooperative Jahn-Teller system, incommensurate phase struct. 2—66507
 KPbF₂Cl(Br)(I), PbBiO₂Cl type struct., cryst. struct. and prep. 2—103718
 K₂SiO₃, cryst. struct., lattice energy, X-ray diff. study (*German*) 2—86643
 K₂UF₆, tetragonal cryolite-type lattices 2—71419
 KVO₃·H₂O, topotactic dehydration, competing struct. reaction mechanisms 2—62396
 K₂WO₄-Rb₂WO₄, solid solutions, phase diagram, X-ray and DTA study 2—88064
 KYb(PO₄)₄, monoclinic struct. with anion chain struct. 2—65947
 K₂Yb₂[Si₂O₇](OH), cryst. struct. and [Si₂O₇] radical polymorphism, X-ray diff. study 2—55951
 K_{1-x}Zn_{1-x}Al_xPO₄, ionic cond. and cryst. struct., comp. dependence meas. 2—104053
 K₂(Zn_{1-x}Ge_{x-1/2})O₂, ionic cond. and cryst. chem. (*French*) 2—92269
 K₁₂[As₂W₁₈O₆₄Cu₃(H₂O)₁₂]·11H₂O, X-ray cryst. struct. determ. 2—55926
 La-Ni-O system, phase struct., electron microscopy and X-ray diff. study 2—91919
 LaAsO₄, cryst. struct., IR and Raman vibr. spectra, X-ray diff. study 2—65957
 La(BO₃)₃, refined cryst. struct. 2—55954
 La_{2-x}Ba_xZn_{2-x}O_{10-2x}, cryst. struct. (*French*) 2—81750
 La_{1.33}Ga_{0.25}Si_{2.25}, single-cryst. X-ray cryst. struct. determ. (*French*) 2—55930
 LaGaS₃, cryst. struct., X-ray diff. study, least squares technique (*French*) 2—81739
 La_{1-x}Gd_xAl₃, cryst. struct., mag., elec. and ESR props. 2—92564
 LaH₂, disorder of site occupation 2—91910
 LaIrSi, cryst. struct., supercond. transition temp., mag. props. 2—65969
 LaIrSi, cryst. struct., X-ray diff. study 2—81729
 LaNbO₄, cryst. struct. refinement 2—103726
 La_{0.33}NbO₃, thermal quenching prep., crystallisation and struct. 2—91924
 LaNi₄Al_{0.5}D_{4.5}, neutron diff. struct. study 2—71422
 (LaO)₄As₂S₆, cryst. struct. determ. (*French*) 2—91886
 LaRh₂Ge₄, cryst. struct. determ. 2—91895
 LaRhSi, cryst. struct., supercond. transition temp., mag. props. 2—65969
 LaSe, cryst. twin law (100), form B, cryst. struct. determ. and refinement (*French*) 2—55905
 LaSe, cryst. twin law (201), form A, cryst. struct. determ. and refinement (*French*) 2—55906
 La_{1-x}Sr_xCoO₃, X=0.2 to 1.0, elec. cond., influence of prep. and comp. 2—87257
 La₂Ti₂O₇, high-temp. modifications, cryst. struct. determ. 2—55928
 La₂Ti₂O₂₄, indexed X-ray diff. data 2—103704
 La_{0.84}Sr_{0.16}MnO₃, cryst. struct. and elec. cond. 2—81748
 Li intercalated dichalcogenides, props. and electrode appls. 2—57691
 Li_{1-x}Ag_xSO₄, solid electrolyte, cryst. struct. at 565°C 2—91934
 LiCe(MoO₄)₂, synthesis, structural characterisation 2—86633

crystal atomic structure of inorganic compounds continued

- LiClO₄·3H₂O, pyroelectric, neutron diff. refinement 2—55902
 LiD₂(SeO₃)₂, ferroelec., cryst. struct., neutron diff. study 2—81733
 LiFeCl₄, cryst. struct., mag., optical, and ionic cond. props. 2—92266
 Li_{0.5}Fe₂+0.5Mn_{1-x}O₂, ferrites, struct. and mag. parameters 2—71418
 Li₂Fe₂O₃, cryst. struct., powder X-ray diff. study 2—91927
 Li₂Fe₂O₄, cryst. struct., powder X-ray diff. study 2—91927
 LiFeSnO₄ phase, cryst. struct. charact. 2—65942
 Li₂GeO₄, tetragonal-packed crystal structures, theory 2—97968
 Li₂GeO₄-Al₂O₃, solid electrolytes, cationic cond. and struct. 2—110031
 LiI₂D₂O ionic conductor, struct. props., neutron scatt. study 2—86640
 LiMgPO₄, olivine type cpd, cryst. struct. and cryst. chemistry 2—115189
 LiMoO₂, insertion cpd., cryst. struct., neutron powder diff. study 2—98024
 Li₂Na(NH₄)₄, LiH₂ related cryst. struct., X-ray study (*German*) 2—98021
 LiNbO₃, amorphous and polycryst. thin films, RF sputtering, struct., refractive index, X-ray study 2—72624
 LiNbO₃, elec. field induced ionic displacement and bonding electron redistribution, modulation X-ray diff. study 2—81718
 LiNbO₃, shock loaded, crystallographic props. 2—71413
 LiNdP₂O₇, crystal struct. (*Chinese*) 2—98011
 Li₂O-Al₂O₃-SiO₂-TiO₂ glass ceramics, cryst. props., grain growth, electron and X-ray study 2—66244
 LiPN₃, cryst. struct., bond angles, X-ray diff. study (*French*) 2—103711
 Li₂PO₄, cryst. struct. and electrostatic energy 2—81755
 LiPS₄, cryst. struct., X-ray diff. study (*French*) 2—98000
 Li₂P₂S₆, synthesis, cryst. struct. and vibr. anal., X-ray diff. study (*French*) 2—103714
 LiPbF₂Cl(Br)(I), PbBiO₂Cl type struct., cryst. struct. and prep. 2—103718
 Li_{0.66}Pt_{0.34}O₄, non-stoichiometric, anal. of internal struct. distortions, neutron diff. study 2—103697
 LiReO₃ and Li₂ReO₃, cryst. struct., neutron diff. powder profile anal. 2—81754
 Li₂SiO₄ (Li₂PO₄)(Li₂ZnSiO₄) (Li₂Zn_{0.5}GeO₄), tetragonal-packed crystal structures, theory 2—97968
 LiTaO₃, elec. field induced ionic displacement and bonding electron redistribution, modulation X-ray diff. study 2—81718
 9LiTaO₃·Ta₂O₅, cryst. struct., powder neutron diff. study 2—65935
 LuPO₄·Nd₂·Eu₂, optical spectra, crystal field interactions 2—67074
 LuRh₂B₄, cryst. struct. determ. 2—55923
 LuTaO₄, cryst. struct. study 2—98038
 Lu₂V₂O₇, cryst. struct., rel. to mag. props., superexchange pathways 2—91923
 Lu_{1-x}(Y_{1-x})Gd_xAl₃, cryst. struct., mag., elec. and ESR props. 2—92564
 MX₂O₄ cpds., SnPb₂O₄, NiSb₂O₄, ZnSb₂O₄ and Pb₂O₄, struct. evolution, dilatation, vibr., rigidity (*French*) 2—91911
 (Mg_{0.5}Fe_{0.08}Fe_{0.42}Al_{0.14})(Si_{3.66}Al_{0.34})O₁₀(OH)₈, lizardite, cryst. struct., polymorphism 2—98008
 Mg_{0.4}Fe_{0.6}O₄, cryst. struct. determ., cryst. defects 2—91888
 Mg_{1.6}H₂O, cryst. struct., neutron diff. data 2—55896
 MgIn₂S₄, partially-inverse spinel, cryst. struct. and far IR absorpt. meas. 2—91906
 Mg₂KH(AsO₄)₂·15H₂O, X-ray cryst. struct. determ. 2—55908
 Mg₂KH(PO₄)₂·15H₂O, X-ray cryst. struct. determ. 2—55908
 MgMoO₄, cryst. struct., modified closest packing with two types of tetrahedra 2—103725
 Mg(NCS)₂·4H₂O, cryst. struct. determ. 2—76408
 MgNa₂O₄·7H₂O, cryst. struct. determ. 2—55907
 MgNb₂O₆ single crystals, flux growth, X-ray diff. obs. of columbite struct. 2—99313
 Mg₂PN₃, wurtzite type cryst., evidence for PN₄ tetrahedra (*French*) 2—65967
 Mg₂P₂O₇·2H₂O, synthetic, X-ray cryst. struct. determ. 2—55900
 MgS₂O₃·6H₂O, cryst. struct. determ. 2—91893
 MgSiO₃, single-crystal X-ray diff. study 2—115184
 Mg₂SiO₄, olivines, cryst. struct., interatomic pot. function method 2—97979
 Mg₂Si₂O₆, cryst. struct., net atomic charges and electron density distrib., X-ray diff. study 2—91935
 MgUO₂(SO₄)₂·11H₂O, X-ray diff., crystal struct. 2—76394
 (Mn,Fe)₂Si₂O₇(OH,Cl)₁₀, McGillite, one-layer monoclinic struct., electron microscopy and electron diff. study 2—115181
 (Mn,Fe)₂Si₂O₇(OH,Cl)₁₀, McGillite, polytypism and disorder, electron microscopy study 2—115182
 Mn₂(CO)₁₀, cryst. struct., bonding, charge density 2—55901
 MnCl₂-graphite intercalation cpd., charge transfer and islands, X-ray diff. study 2—91932
 Mn_{0.25}Ga_{0.75}Si₃, cryst. struct., least squares method (*French*) 2—65963
 MnH₂P₂O₆·2H₂O, cryst. struct. determ. 2—91881
 (Mn_{1-x}M_x)(PO₃)₂ (M=Fe, Mg, Co, Ni, Cu, Zn, Ca), cryst. struct. and homogeneity ranges, X-ray diff. study 2—115195
 MnNi₂O₄, struct., elec. cond. and X-ray spectra 2—65954
 MnO₂, struct.-activity relationships rel. to cell performance 2—109753
 nMn-SiO₂-MnF₂ (1<n<4), unit-cell consts., X-ray powder diff. data 2—115194
 MnTe-Te system, crystallographic phase diagram 2—61795
 Mn₂ZrF₆·6H₂O, cryst. struct. determ. 2—86647
 Mo chalcogenides, ternary, Chevrel phase high field superconductors, review 2—66708
 Mo complex, MO₂(OAc)₆(OCH₃)₂(H₂O)₂(CF₃CO₂)₂, cryst. struct., space and Laue group changes 2—65901
 MoGa₃(CuS)_{0.005}, cryst. struct., X-ray diff. study 2—65953
 MoO₃, reduced from Mo₂O₃ and CS oxides 2—92177
 Nd₂DSeO₄, cryst. struct., X-ray diff. study 2—98003
 NH₄ electron density, pseudoatom expansion 2—60931
 NH₄AlF₄, ordered and disordered struct., neutron diff. study 2—65913
 (NH₄)₂Al(SO₄)₂·12H₂O, X-ray and neutron diffraction study 2—60959
 NH₄Cl, orientational disorder of diatomic or polyatomic ions 2—81723
 NH₄IO₃·2HIO₃, proton conductivity, permittivity, cryst. struct. 2—86931
 (NH₄)₂P₂O₁₂·2Te(OH)₂·2H₂O, cryst. struct. 2—60944
 (NH₄)₂SO₄, paraelec.-ferroelec. phase transition, low temp., thermal anal. 2—104822
 (NH₄)₂Sn(HPO₃)₂, cryst. struct., X-ray study, block-diagonal least squares method 2—81727
 (NH₄)₂TiF₆, cryst. struct., hydrogen bonds 2—91891
 (NH₄)₂ZnCl₄, cryst. struct. in ferroelec. phase 2—71409
 (NH₄)₂ZnCl₄, cryst. struct. study 2—98039
 (NH₄)₂ZnCl₄, phase transitions, X-ray structural study 2—65911
 (NH₄)₂ZnCl₄, X-ray structural study of successive phase transitions 2—65912

crystal atomic structure of inorganic compounds continued

- (NH₄)₂[Pt(OH)₆], cryst. struct., least squares refinement, X-ray diff. study (*German*) 2-71730
 N₂O₄, cryst. struct., neutron diff. study, ab initio calcs. 2-76386
 NS₂⁺, AlCl₄⁻, cryst. struct. determ. (*German*) 2-76380
 Na intercalated dichalcogenides, props. and electrode appls. 2-57691
 Na₃AsS₃·8D₂O, H-bonds, neutron diff., X-ray diff. and vibr. spectroscopic studies 2-55933
 Na₂Be₂Si₂O₉, cryst. struct. determ. 2-55912
 Na₂C₂₄Al₁₀Si₁₀O₄₀, cryst. struct., X-ray diff. method 2-115188
 Na₇C₃₀Si₆Al₆O₂₄·CO₂·2H₂O, cryst. struct., neutron diff. refinement 2-103728
 NaCaVO₄, cryst. struct. refinement by powder neutron diff. at 300K 2-76374
 NaCd(HCO₃)₂, cryst. growth and struct. characterisation, etching, X-ray diff. and IR study 2-91920
 Na₂Cl[B(OH)₄], cryst. struct. refinement (*German*) 2-55917
 NaCrS₂, a new mineral from a meteorite (caswellisilverite) 2-68681
 NaGdSi₃O₈·xNaOH (x=0.2), cryst. struct. refinement 2-76372
 Na_{0.13}(H₂O)_{0.26}TaS₂ intercalation cpd., cryst. struct., X-ray diff. study 2-91099
 Na₉H₂PO₃, cryst. struct. determ. 2-76377
 NaHSO₄, cryst. struct. determ. 2-55899
 Na₂H₆(PMo₆V₆O₄₀)·16H₂O, cryst. struct. and vibr. spectra 2-98030
 NaKTeO₄·3H₂O, cryst. struct. refinement (*French*) 2-71399
 Na₃La(MoO₄)₃, cryst. struct. and interat. distances 2-103731
 NaLa(SO₄)₂, X-ray cryst. struct. determ. 2-55953
 Na₂La(WO₄)₂, cryst. struct. and interat. distances 2-103731
 Na₃Li₂Fe₂F₁₂, garnet cryst. struct., bond lengths and angles, X-ray diff. study (*German*) 2-91936
 Na₂LiYSi₂O₈, cryst. struct., X-ray study, block-diagonal least squares method 2-81720
 Na₂MgAlF₇, weberite, space group, X-ray diff. study 2-103676
 NaNO₃, paraelectric phase, molecular dynamics computer simulations, struct. 2-98035
 Na₁₁(Na,Ca)₂Ca₂Ce_{0.67}[Si₄O₁₂][P O₄]₄, phosinaite, cryst. struct. determ. 2-86649
 NaNp₂F₉, cryst. struct. anal. 2-91894
 (Na₂O)_{1.24}Al₂O₃(SiO₂)_{2.01}·1.87 H₂O, basic cancrinite, cryst. struct. study 2-71407
 NaOH (NaOD), cryst. struct. and struct. transitions, X-ray and neutron diff. and sp. ht. study 2-97972
 Na₂PMo₆V₆O₄₀·15H₂O, cryst. struct. and vibr. spectra 2-98029
 Na₂PO₃·S₁₂H₂O, disorder in cryst. struct. 2-65938
 NaPbF₂Cl(Br)(I), PbBiO₂Cl type struct., cryst. struct. and prep. 2-103718
 Na_{0.73}Pt₂O₄, cryst. struct., neutron powder diff. study 2-55927
 Na₁₀Pt₂O₄, cryst. struct., neutron powder diff. study 2-55927
 Na₂ScSi₂O₇, cryst. struct. and ionic cond. mechanism 2-91933
 Na₂Sr₃₋₂R₂(PO₄)₂, R=La to Tb, Nd³⁺, Eu³⁺ and Gd³⁺ local struct., probes, luminescence study 2-103715
 Na₂Tb(WO₄)₂, cryst. struct. and interat. distances 2-103731
 Na₂(Ti,Mg)(O,F)₄, cryst. struct., cond. channels 2-86652
 Na₂(Ti, Mg)(O, F)₄, solid electrolyte, Na cation distrib. (*Russian*) 2-56249
 Na₂Ti₂O₇, γ-ray effects investig. 2-76502
 Na₂Ti₉O₁₉ structure determ. by convergent-beam electron diff. and 1 MeV struct. imaging 2-60930
 Na₂WO₃·F₄, prep. and cryst. struct., X-ray diff. study (*French*) 2-109771
 NaY zeolite, crystallisation, IR spectroscopy 2-71385
 Na₂YSi₂O₇, cryst. struct. study 2-115202
 Na₂YSi₂O₁₂, cryst. struct. and ionic cond. mechanism 2-91933
 Na₂Y(SiO₄)₂O₂, cryst. struct., X-ray study, block-diagonal least squares method 2-81738
 Na₂Zn₃[Fe(CN)₆]₂·xH₂O, cryst. struct., X-ray diff. study 2-81719
 Na₂ZrSi₃O₉·2H₂O, cryst. struct. study 2-98040
 Na₂ZrSi₃O₉·3H₂O, cryst. struct. study compounds 2-115201
 Na₂ZrW₂O₁₂, cryst. struct., combined wolframite-scheelite character 2-98025
 Na₂[BO₂(OH)]₂, cryst. struct. determ. 2-76381
 Na₂[Co(NCS)₄]·8H₂O, cryst. struct. 2-65933
 Na₄H₂As₂Mo₂O₂₆·6H₂O, cryst. struct. determ. 2-55921
 Na₆(Th(PO₄)(P₂O₇))₂, cryst. struct. determ. 2-55913
 Nb mixed oxides, stoichiometric and nonstoichiometric, cryst. struct. 2-91918
 NbH_{0.89}, behaviour of H in Nb, optical microscopy, SEM and ion microprobe anal. 2-83130
 Nb₂O₅, metastable struct. modification, disintegration and reduction products, electron microscope study (*German*) 2-65956
 Nb₂O₅-PbO system, pyrochlore phases, cryst. struct. and solid solubility, X-ray diff. study (*French*) 2-86642
 NbS₃, cryst. struct., semicond. elec. props. 2-60954
 NbSe₃, cryst. struct., semicond. elec. props., X-ray diff. study 2-60954
 Nb₂Si, film, production, struct. and Tc 2-110527
 Nd-In system, phase diagrams and lattice spacings of cpds. 2-111141
 NdAsO₄, cryst. struct., IR and Raman vibr. spectra, X-ray diff. study 2-65957
 Nd₄₋₂·Ba_{2+2x}Zn_{2-x}O_{10-2x}, cryst. struct. (*French*) 2-81750
 NdIrSi, cryst. struct., magnetisation and susceptibility 2-65969
 Nd(MoO₄)(ReO₄), cryst. struct. determ. (*French*) 2-91882
 Nd(NO₃)₃·6H₂O, cryst. struct. 2-81758
 (NdO₂)₂CO₂, type Ia and II, optical absorption spectra and electron diff. patterns 2-116204
 Ni complex, (tetraazaporphyrinato)Ni(II), doubly mixed valence mol. cond., struct., mag. and charge transport props. 2-71953
 Ni complex, bis(oxamide oximate)nickel(II) oxamide oxime, cryst. struct., space and Laue group changes 2-65901
 Ni complex, Ni₂ en EDTA·4H₂O, cryst. struct. 2-98031
 Ni₂Cu_{1-x}Fe₂O₄, spinel ferrite, influence of Ni²⁺ ions on distrib. of Mg²⁺ ions, magnetisation meas. 2-60938
 Ni₂Mg_{1-x}Fe₂O₄, spinel ferrite, influence of Ni²⁺ ions on distrib. of Mg²⁺ ions, magnetisation meas. 2-60938
 NiMn₂O₄, cation distribution, X-ray diff. study 2-60958
 Ni₂NbBO₆, cryst. struct. refinement 2-71406
 NiO-Y₂O₃, directionally solidified eutectic, crystallography 2-109762
 Ni₁₂P₃, cyclic intergrowth and crystal structures 2-65975
 Ni₁₀Zn_{0.7}Fe₂O₄·Ti⁴⁺, magnetisation and cryst. struct. study 2-72724
 Np₂Se₆, crystallographic and mag. studies 2-86638
 OH electron density, pseudoatom expansion 2-60931
 PB₂O₄, X-ray cryst. struct. determ. 2-55938

crystal atomic structure of inorganic compounds continued

- P₂W₂O₃₂, cryst. struct. determ., single-cryst. X-ray anal. 2-55895
 P₂W₂O₃₂, cryst. struct. determ. 2-91889
 PaP₂, prep. and cryst. struct. (*French*) 2-65955
 Pa₂F₄, prep. and cryst. struct. (*French*) 2-65955
 Pb₂AlNbO₆, prep., polymorphic transition from pyrochlore to perovskite struct. 2-77787
 Pb₂Bi₂(PO₃)₂O₂, Czochralski growth, cryst. struct., X-ray diff. study 2-91922
 β-PbF₂, anharmonic thermal vibrs. and at. pots., temp. depend. 2-115380
 PbFe_{1-x}Ga_xO₁₉ single crystal, prep. and characs. 2-72617
 Pb₂GeGa₁₀O₂₇, cryst. struct. and luminesc., neutron diff. obs. 2-60935
 PbGe₂O₇, polymorphism, cryst. struct., and dielec. props. 2-109754
 PbHAsO₄, ferroelectric, neutron diff. structural study 2-82798
 Pb_{1-x}M_xGe₂O₇ (M=Sr, Ba), polymorphism, cryst. struct., and dielec. props. 2-109754
 Pb₂MnTaO₆, prep., polymorphic transition from pyrochlore to perovskite struct. 2-77787
 PbMo₂S₄, high press. superconducting phase, cryst. struct., critical field (*Russian*) 2-56762
 Pb₂Nb₂O₅, pyrochlore type, cryst. struct. determ. (*German*) 2-65974
 PbO-Ta₂O₅ system, pyrochlore related structs., X-ray diff. study 2-103712
 PbO₂ positive battery plate, cryst. struct., neutron diff. study 2-91926
 Pb₂O₄, orthorhombic, lattice parameters as function of temp., struct. evolution (*French*) 2-60929
 PbO(ZrO₂) powder, shock-induced chem. and struct. modifications 2-76583
 PbS, lattice period, influence of composition and γ-irradiation 2-76382
 PbSe₂S₄, X-ray struct. refinement by powder neutron diff. 2-81732
 Pb₁₁Si₁₀O₁₇, X-ray cryst. struct. determ. (*German*) 2-55911
 PbZrO₃, antiferroelec. phase, space group and O atom coordinates, electron diff. study 2-109759
 PbZr_{1-x}Ti_xO₃, Ti distrib., ferroelectric transition 2-86654
 Pd complex, bis(en)palladium(II) dichlorobis(en) palladium(IV) tetrachlorate, cryst. struct. 2-65940
 PrAsO₄, cryst. struct., IR and Raman vibr. spectra, X-ray diff. study 2-65957
 Pr₂Sb₂S₁₅, cryst. struct. 2-55952
 Pt complex, (π-allyl)palladium complex ion pair, NMR and X-ray crystallography 2-87600
 Pt complex, cis-dichlorobis(glycine)Pt(II), X-ray struct. study 2-76395
 pt complex, dihydroxy-ethylenediamine-malonatoplatinum, cryst. and mol. struct. (*Chinese*) 2-98010
 Pt complex, Pt(en)₂Pt(en)₂Cl₂(4/2)CuCl₄, cryst. struct., space and Laue group changes 2-65901
 PuCoC₂, ternary compound struct., X-ray diff. anal. 2-102040
 PuNiC, ternary compound struct., X-ray diff. anal. 2-102040
 R₂GeBe₂O₇ (R=La, Pr, Sm, Gd, Dy, Er), cryst. struct., prep. and mag. susceptibility meas. 2-103719
 R₂SiO₃, single crystal growth, struct. and optical characteristics 2-87968
 R₂Nb₂Sn₁₂, supercond./mag. cmpds., struct. distortion in primitive cubic phase 2-76403
 RbCaF₃ lattice parameters and thermal expansion coeffs., precise determ. 2-92237
 RbCdCl₃, cubic, lattice parameters, temp. variation, thermal expansion coeff. 2-98310
 RbCe(SeO₄)₂, lattice parameters, X-ray powder diff. data 2-115193
 RbCuCl₃, Jahn-Teller phase transitions and phase struct., X-ray diff. study 2-98266
 RbCu₂M₂O₂₁ (M=Nb, Ta), intergrowth of hexagonal and perovskite-like structs. 2-65962
 RbDSeO₄, cryst. struct., X-ray diff. study 2-98003
 Rb₂Eu(NH₂)₆, Rb₂Y(NH₂)₆ and Rb₂Yb(NH₂)₆, cryst. struct. and IR spectra, ext. determ. (*German*) 2-98022
 β-Rb₂FeF₃·H₂O, 1-D antiferromag., cryst. struct., mag. and Mossbauer study 2-92879
 Rb₂GeO₃, cryst. struct., lattice energy, X-ray diff. study (*German*) 2-86643
 Rb₂(H₂O)₁₀[Pt(CN)₄](O₃SO₃H·SO₃)_{0.5}·0.8H₂O, cryst. struct., elec. cond. 2-91929
 Rb(H₂SD_{0.55})₂PO₄, cryst. struct., bond lengths, neutron diff. study 2-91908
 RbLa(SeO₄)₂, lattice parameters, X-ray powder diff. data 2-115193
 β-RbLu₂F₁₀, cryst. struct. determ. (*French*) 2-55915
 T-RbMnBr₃, cryst. struct. determ. (*German*) 2-76369
 Rb₂Mn₂Br₇, X-ray cryst. struct. determ. 2-55936
 RbNd(SeO₄)₂, lattice parameters, X-ray powder diff. data 2-115193
 RbOsO₃N, crystal struct. 2-91912
 RbPr(SeO₄)₂, lattice parameters, X-ray powder diff. data 2-115193
 Rb₂SiO₃, cryst. struct., lattice energy, X-ray diff. study (*German*) 2-86643
 β'-RbSm(PO₃)₃, X-ray structural investigation 2-76384
 Rb₂UF₆, tetragonal cryolite-type lattices 2-71419
 Rb₂UO₂P₂O₇, prep. and struct. 2-86632
 Rb₂ZnBr₄(Cl₄), superstructure selection rules 2-103739
 Rb₂ZnCl₄, intermediate phase, average structure, X-ray determ. 2-98007
 ReP₂O₇, isomorph of ZrP₂O₇, synthesis and struct., X-ray study 2-115196
 Rh complex, cis-[Rh(en)₂Cl₂]Cl·HgCl₂, synthesis and cryst. struct. 2-98028
 (Rh_{1-x}Cr_x)₂Te₄, paramag. susceptibility, elec. resist. and lattice consts. meas. 2-72136
 RhMnGe, cryst. struct. distrib. of metallic elements (*French*) 2-55947
 RhMnSi, cryst. struct. distrib. of metallic elements (*French*) 2-55947
 SBH(PO₄)₂·H₂O, synthesis and struct. determ. 2-86631
 SF₆, crystal struct. below 94K, electron diff. study 2-98001
 (SN)_x, cryst. struct., prep., band struct., Fermi surface and Meissner effect (*Japanese*) 2-82212
 SbBr₃ addition cpds, cryst. struct. and CT from NQR data 2-110718
 SbCl₃ addition cpds, cryst. struct. and CT from NQR data 2-110718
 Sb₂Ge₂O₁₂, synthesis, struct. and props. 2-111047
 SeCo₂H₃·4, Laves phase, thermal stability, H sorption effects of U and Ti doping 2-87014
 Se₂Cr₂Si₂, cryst. struct., Laue rotating and precession study 2-65960
 Se₂Ni₂Ge₂, with Gd₂Cu₂Ge₂ type struct., cryst. struct. study 2-76371
 SeNi₂H₃·4, Laves phase, thermal stability, H sorption 2-87014
 Si, synchrotron X-ray topography, multistereoscopic imaging technique 2-81624
 Si·O, polycrystalline films, prep. and props. 2-72629
 Si₃Al₄N₄C₃, new compound with wurtzite struct. 2-57321

crystal atomic structure of inorganic compounds continued

- $\text{Si}_4\text{Al}_8\text{Al}_{13.32}\text{O}_{19.68}(\text{OH})_{14.71}\text{F}_{3.61}\text{Cl}$, X-ray cryst. struct. determ. 2-55932
 $\text{Si}_4\text{Al}_{9.5}\text{Al}_{1.05}\text{O}_{19.95}(\text{OH})_{13.96}\text{F}_{4.09}\text{Cl}$, X-ray cryst. struct. determ. 2-55932
 SiC , 66R polytype, cryst. struct. determ. 2-91885
 SiC , polytypes of $[[44],43]$, struct., X-ray and electron diffr. study 2-65951
 Si_3N_4 ceramic, prep., props. and appls., book contrib. 2-116420
 Si_3N_4 structure form. mechanism 2-103708
 $\text{Si}_3\text{N}_4\text{-SiO}_2\text{-La}_2\text{O}_3$ system, phase relationships 2-105134
 $\text{SiO}_2\text{:P}(\text{Bi})(\text{Pb})$, growth on Si, X-ray spectra 2-77960
 $\text{Si}_2\text{S}_3(\text{Se}_2)$, cryst. struct. determ. 2-76378
 Sm-In system, phase diagrams and lattice spacings of cpds. 2-111141
 SmNiSi_2 , cryst. struct., Gd_3NiSi_2 type, X-ray diff. study 2-65961
 $\text{Sm}_{1-x}\text{U}_x\text{O}_{2+x}$, mixed oxide lattice parameters 2-59462
 $\text{SnCl}_2\cdot x\text{H}_2\text{O}$, $x=1.5$ and 2, ^{119}Sn NQR spectra, Zeeman effect, PMR 2-61787
 $\text{SnMn}_2\text{C-CuMn}_3\text{N}$, perovskite, local effects and short range magnetic interactions (French) 2-72137
 SnMo_2S_8 , high press. superconducting phase, cryst. struct., critical field (Russian) 2-56762
 SnNbO_4 , cryst. struct. refinement 2-103726
 SnO_2 bent cryst., high resolution electron microscope and electron diffr. images 2-76402
 SnS_2 , structural polytypism rel. to environments of formation 2-76338
 Sn_2S_3 , cryst. struct., X-ray diff. study 2-98005
 $\text{SrAl}_2\text{O}_3\text{-SrGa}_2\text{O}_4$, isostructural series, solid solutions of polymorphic modifications 2-109757
 $\beta\text{-SrAl}_2\text{O}_3$, cryst. struct. determ. 2-71405
 SrBiSe_3 , prep. and cryst. struct., X-ray study (German) 2-109768
 $\text{Sr}_2\text{La}(\text{Nd})_2\text{Si}_4\text{P}(\text{V}, \text{As})_2\text{O}_{26}$, solid phase synthesis, apatite struct. 2-111067
 $\text{SrNaPO}_4\cdot 9\text{H}_2\text{O}$, cryst. struct. X-ray diff. study, full matrix least squares technique 2-81721
 $\text{Sr}_2\text{Nd}_{1-x}\text{FeO}_{3-x}$, solid soln., superstructure, microdomains, electron diffr. and microscopy study 2-91925
 $\text{SrO-Sc}_2\text{O}_3\text{-CaO}(\text{BaO})$, system, cryst. struct. and phase diagrams, X-ray diff. study 2-91921
 $\text{Sr}_2\text{Rd}_2\text{S}_{11}$, synthesis cryst. struct. 2-55940
 SrSc_2S_4 , cryst. struct. refinement by powder neutron diffr. 2-81732
 SrSiO_3 , α -, β -, δ -, forms, struct. and high-pressure polymorphism 2-55931
 $\text{SrSiO}_3\text{-BaGeO}_3$, solid solutions, phase reactions, IR spectra 2-72693
 $\text{SrVO}_4\text{-EuVO}_3$, perovskite struct., prep. and props. of solid solns. 2-72646
 $\text{TaH}(\text{PO}_4)_2\cdot 2\text{H}_2\text{O}$, layered struct., thermodecomposition 2-71420
 $\beta\text{-Ta}_2\text{O}_5$, vibr. spectra and X-ray diff. obs. of cryst. struct. 2-98012
 TaS_3 , cryst. struct., semicond. elec. props. 2-60954
 TaSe_2 (2H), discommensurations in commensurate CDW states 2-71426
 TaSe_2 (2H) structure, CDW, interlayer interactions effects 2-76950
 TaSe_3 , cryst. struct., superconducting props. 2-60954
 TaSe_2 (2H), incommensurate CDW phases 2-103752
 TaWO_5 , defect pyrochlores, cryst. struct., neutron diffr. study 2-60950
 Tb-In system, phase diagrams and lattice spacings of cpds. 2-111141
 Tb_2NiS_3 , cryst. struct., Gd_2NiS_3 type, X-ray diff. study 2-65961
 TbO_3 , struct. of intermediate phases, TEM and electron diffr. obs. 2-60940
 $\alpha\text{-Te}_2\text{MoO}_7$ and $\beta\text{-Te}_2\text{MoO}_7$, industrial oxidation catalysts, X-ray diffr. and electron microscopy study 2-61157
 $\text{Te}(\text{OH})_2\cdot \text{Rb}_2\text{P}_2\text{O}_6\cdot \text{H}_2\text{O}$, cryst. struct. determ. (French) 2-55935
 $\text{Te}(\text{OH})_2\cdot \text{Ti}_2\text{SO}_4$, cryst. struct., X-ray study, Patterson method 2-81734
 $\text{TeO}_2\cdot \text{HPO}_4$, cryst. struct. determ. 2-91898
 ThB_4 , cyclic intergrowth and crystal structures 2-65975
 ThMn_{12} , cyclic intergrowth and crystal structures 2-65975
 $\text{ThNb}_2\text{O}_{12}$, slow-cooled sample, Th-vacancy ordering 2-60928
 TlCl , fused single-cryst., struct. and props., melting conditions influence 2-81779
 TlFeS_3 , orthorhombic type cryst. struct., X-ray diff. anal. 2-103696
 TlMnS_3 , orthorhombic type cryst. struct., X-ray diff. anal. 2-103696
 TlN , ultradisperse particles, struct., neutron diffraction 2-73017
 $\text{TiN}_{0.95}\text{O}_{0.05}$ powder, cryst. struct. characts., X-ray diff. study 2-65950
 TiO_2 , rutile, determ. of O x parameter by neutron powder methods 2-71398
 TiO_2 , rutile, tetragonal-packed crystal structures, theory 2-97968
 TiS_7 , structural and electronic characteristics 2-115749
 TiTaO_4 , struct. and mag. props. 2-86634
 $\text{TlBiTe}_2\text{-2PbTe}$ cross section, solid soln. form., physicochem. and electro-phys. props. 2-57337
 Ti_3BiTe_6 , thermoelec. props. and cryst. struct. 2-110374
 $\text{TiCu}_2\text{TaO}_{21}$, intergrowth of hexagonal and perovskite-like structs. 2-65962
 TlF-SnF binary system, cryst. struct., ionic cond. and thermal behaviour (French) 2-109769
 $\text{Ti}_2\text{MnAs}_2\text{S}_5$, synthetic, cryst. struct. determ. 2-65973
 TiMnCl_3 , struct. types and phase transformations, X-ray diff. study 2-103710
 Ti_3SbS_4 , synthetic, X-ray studies 2-60963
 $\text{Tm}_2\text{V}_2\text{O}_7$, cryst. struct., rel. to mag. props., superexchange pathways 2-91923
 U complex, UO_2SO_4 (urea), cryst. struct. 2-98033
 U_2C_3 , neutron irradiat., mag. susceptibility, Neel temp., lattice consts. 2-66073
 $\text{UO}_2\text{SeO}_4\cdot 4\text{H}_2\text{O}$, O, crystal struct. 2-76393
 $\text{UO}_2\cdot \text{WO}_3\cdot \text{Na}_2(\text{K})_2(\text{Rb})_2(\text{Cs})_2\text{WO}_4$, solid-phase synthesis, struct., IR and luminesc. spectra 2-87752
 U_2Si_3 , cyclic intergrowth and crystal structures 2-65975
 V-Ni-P , phase diagram at 1070K, phase anal. 2-83099
 V-O system, cryst. geometric characts., X-ray and electron diffr. study 2-103732
 $\text{V}_6(\text{C,N})_{0.77 \text{ to } 0.83}$ trigonal ordering, neutron diffr. study 2-86849
 VF_3 , cryst. struct. determ. 2-55924
 $\text{V}_9\text{Mo}_4\text{O}_{40}$, prep. and X-ray characterisation 2-65964
 V_2O_5 e-phase, deposition phase superstructure cell characts. (Ukrainian) 2-103706
 V_2O_5 , high temp. modification, cryst. struct. at 458K 2-71402
 $\text{V}_{2-x}\text{S}_{2-x}$, microsyntactic intergrowth, high resolution TEM obs. 2-91851
 $\text{VOAsO}_4\cdot n\text{H}_2\text{O}$, layered structure, interaction between $[\text{VOXO}]^\infty$ layers 2-71421
 $\text{VOPO}_4\cdot n\text{H}_2\text{O}$, layered structure, interaction between $[\text{VOXO}]^\infty$ layers 2-71421
 $\text{VOSO}_4\cdot 3\text{D}_2\text{O}$, cryst. struct. determ., hydrogen bonding 2-91897
 $\text{V}_{1-x}\text{Se}_x\text{-IT}$, cryst. struct., X-ray diff. study 2-81735
 W-O system, phase struct., X-ray diffr. and electron microscopy study 2-60952

crystal atomic structure of inorganic compounds continued

- WO_3 , electrochemical electrode, struct. changes in Li-organic electrolyte cells 2-115204
 $\text{YAl}_3(\text{BO}_3)_4$, crystal struct. study 2-76399
 Y-BaCuO_4 , crystal structure (French) 2-91914
 $\text{Y-GeBe}_2\text{O}_7$, cryst. struct., prep. and mag. susceptibility meas. 2-103719
 YH_2 , disorder of site occupation 2-91910
 YTaO_4 , cryst. struct. study 2-98038
 YbAlB_4 , mixed valence cpd., elec. resist., mag. susceptibility, sp. ht. 2-56517
 YbNbO_4 , cryst. struct. refinement 2-103726
 $\text{YbTe-Sb}_2\text{Te}_3$, cross-section of Yb-Sb-Te system, expt. study 2-88062
 $\text{Yb}_2\text{V}_2\text{O}_7$, cryst. struct., rel. to mag. props., superexchange pathways 2-91923
 $\text{ZnCr}_2\text{Fe}_{2-x}\text{O}_4$ spinels, cation atom distrib., channelling effect in electron induced X-ray emission 2-81742
 ZnMn_2O_4 , cation distribution, X-ray diffr. study 2-60958
 ZnNb_2O_6 single crystals, flux growth, X-ray diff. obs. of columbite struct. 2-99313
 $\text{ZnO-B}_2\text{O}_3\text{-Li}_2\text{O-H}_2\text{O}$ system, crystallisation, characterisation by X-ray diffr. 2-103962
 ZnS films, struct. and dislocation density, X-ray diffr. study 2-104203
 ZnS , struct., twinning and thermal cond. 2-81744
 ZnSb_2O_4 , cryst. struct. and cryst. growth from Sb_2O_3 flux 2-98004
 $\text{Zn}_2\text{Sn}_2\text{Fe}_{2-x-y}\text{O}_4$, Mossbauer study of A site cation arrangement 2-93071
 Zr-Co , melt spun alloys, struct. and supercond. props., X-ray diffr. study 2-87437
 $\text{Zr}(\text{Ca}, \text{Mn})_2(\text{Fe}, \text{Al})_2\text{Ti}_2\text{O}_{16}$, cubic cryst. cpd. found in Radwaste ceramic, characteris. 2-103705
 ZrCr_2D_4 , phase transition, X-ray and neutron diffr. studies 2-103686
 $\text{ZrHNa}(\text{PO}_4)_2$, γ -ray effects investig. 2-76502
 $\text{ZrO}_2\text{-Gd}_2\text{O}_3(\text{Eu}_2\text{O}_3)$ single crystals of tetragonal struct., Raman scatt., domain struct. existence 2-93191
 $\text{ZrO}_2\text{-Y}_2\text{O}_3\text{-Nd}_2\text{O}_3$, ceramic, thermal aging rel. to struct. and electrophysical props. 2-111208
 $\text{ZrO}_2(\text{-PbO})$ powder, shock-induced chem. and struct. modifications 2-76583

crystal atomic structure of organic compounds

- α -alffa mosaic virus coat protein, orientation in hexagonal cryst. array, X-ray diffr. study 2-99877
 $\text{N-alkyl-phenazinium TCNQF}_4$ salts, solid-state props. 2-87574
 α -ammonium hydrogen oxalate hemihydrate, transition to ferroelectric monoclinic phase, struct. study 2-92191
 α -anilide thiosemicarbazone hemihydrate, pyrocracemic, cryst. and mol. struct. 2-103743
 $1,4\text{-anthraquinone}$ single cryst., polarised IR absorpt. and Raman spectra, oriented-gas model 2-93192
 $2\text{-aryl-1,2-dihydro (4H) thieno}[2,3\text{-c}]\text{benzo}[e]\text{pyrane-4-ones}$, IR and NMR spectroscopic props. (French) 2-110863
 $\text{cis-o,o'-azodioxystyrene}$, cryst. struct., X-ray diffr. study 2-65978
 $\text{benzaldehyde thiosemicarbazone}$, lattice parameters, space group, X-ray diffr. study 2-109776
 $\text{N-benzene sulphonyl DL-}\alpha\text{-alanine}$, cryst. and mol. struct., X-ray study 2-99882
 $\text{benzene-Cl}_2(\text{Br}_2)$, cryst. struct., space and Laue group changes 2-65901
 benzoic acid , crystal structure determ. by X-ray and neutron diffraction 2-60969
 $\text{bis(dimethylbenzyl)silyl}$ peroxide, X-ray struct. study, conformational calcs. 2-76417
 $\text{bis(dimethyl-p-chlorophenyl)silyl}$, X-ray struct. study, conformational calcs. 2-76417
 $\text{bis(trifluoromethyl)pyruvic acid cyclohexylamide}$ crystal and mol. struct., X-ray anal. 2-78087
 $\text{bis(trimethylammonium)hexachlorotellurate(IV)}$, cryst. struct. 2-76415
 $\text{bis (4,4-dimethyl-2,5-cyclohexadiene-1-ylidene)}$, crystal and mol. struct., bond lengths and angles 2-98058
 $9,9\text{'-trans-bis-telluraxanthenyl}$, cryst. and mol. struct. 2-98060
 $9\text{-bromo-10-methylanthracene}$, diffuse X-ray scatt. anal. 2-109773
 $\omega\text{-bromo-2-acetonaphthalene}$, cryst. struct. study 2-81768
 $\omega\text{-bromo-4-chloroacetophenone}$, cryst. struct. 2-103736
 6-bromoquinoline , crystallographic data 2-98051
 $\text{bromotris[tetracarboxyl(triphenylphosphine)manganio] tin (IV)}$, cryst. struct. 2-76413
 $\alpha\text{-bungarotoxin}$ structure by averaging electron density of noncrystallographically related mols. 2-60964
 $t\text{-butyl cyanide}$, high temp. disordered phase, struct. determ. by neutron scatt. method 2-109779
 $\text{cadmium thiocyanate isothiocyanate dibenzoylhydrazine}$, cryst. and mol. struct. 2-115213
 $\text{calcium homophthalate dihydrate}$, cryst. struct. 2-98052
 $\text{calcium oxalate trihydrate}$, growth morphology rel. to urinary stone research 2-76335
 $\text{Cambridge Connectivity Files}$, computer-aided generation 2-115205
 chloramil , phase diagram under press., order parameter variations 2-109977
 $9\text{-chloro-2,3-dihydro[1,3]thiazino[3,2-a]benzimidazole-4(3H)-one}$, preliminary crystallographic study 2-81770
 $1\text{-chloroadamantane}$, plastic phase, cryst. struct., X-ray diffr. study 2-65980
 $\text{copper (II) complex, with N,N-dimethylpyruvamide 4-phenylthiosemicarbazone}$, cryst. and mol. struct. 2-81776
 cresacine , cryst. and mol. struct. 2-115208
 18-crown-6 , mol. mechanics, struct. flexibility, ligand specificity and macrocyclic effect 2-109777
 $18\text{-crown-6-alkali complexes}$, mol. mechanics, struct. flexibility, ligand specificity and macrocyclic effect 2-109777
 $\text{cryst. struct. determ. 2-91945}$
 $4\text{-cyanophenyl-4-n-pentylbenzoate}$, cryst. and mol. struct. 2-103737
 $4\text{'-cyanophenyl-4-n-pentylcyclohexanoate}$, nematogenic compound, crystal and mol. struct. meas. 2-91939
 $\text{cyclo(tetrakis(5-5-butyl-2-acetoxy-1,3-phenylene) methylene-acetic acid (1:1) clathrate}$, crystal and mol. struct. 2-90423
 $2,2\text{'-cycloxydine hydrochloride}$, cyclonucleoside cryst. and mol. struct., X-ray study 2-99883
 $\text{cycloocta-1,5-dienyl acetylacetonato platinum tetrafluoroborate}$, cryst. and mol. struct., X-ray study 2-98053
 cytosine , electron diffr. data, cryst. bending effect 2-60965
 DBTTF , electron donor, cryst. struct. 2-98065

crystal atomic structure of organic compounds continued

- 1,1,1,1,2,2,3,3,3-decacarbonyl-2,3,2,3-di- μ -chloro-triangulo-triosmium
cryst. struct. 2-76409
- 2'-deoxy-2'-fluorocytidine, crystal struct. determ. from 3-D X-ray data
2-91940
- deuteromethane, intermediate phase struct., X-ray studies (*Russian*)
2-98050
- 1,6-di(p-tolyl)-perfluorohexa-1,3,5-triene, smectic liq. cryst., struct., X-ray
diff. study 2-86554
- 7-(p-N,N-di-(n-propyl)aminophenyl)-7,8,8-tricyanoquinodimethane, crystal
and mol. struct. 2-75457
- 1,4-diacyl-1,4-dihydro-2,3-diphenylpyrazine cryst. struct. and conform.
anal. 2-75310
- dibenzeneitanium, struct., spectra, chem. props. 2-67045
- dibenz-18-crown-6 yttrium isothiocyanate complex, cryst. struct. determ.
(*Chinese*) 2-109774
- dibenzyl, cryst. struct. and elastic props. at 293K and 110K 2-60967
- dicalcium barium propionate, short-range order, optical transform study
2-98044
- dicalcium strontium propionate, structure and polarisation of ferroelectric
phase 2-71431
- dichloro(phthalocyaninato)niobium (IV), cryst. struct. determ. 2-76412
- N,N-diethylpyrrolamide thiosemicarbazone monohydrate, cryst. and mol.
struct. 2-98068
- dihydro-10,11(quinuclidinyl 3)-5-5H-dibenzo[b,f]azepine (quinupramine),
crystallographic data (*French*) 2-81772
- 2,6-dimethoxybenzoic acid, cryst. struct. determ. 2-76406
- 2,3-dimethoxybenzoic acid, cryst. struct. redetermination 2-76405
- 2-(3',5'-dimethyl-1'-pyrazolyl)benzothiazole, preliminary crystallographic
study 2-81770
- dimethylphenazine PF₆(M₂PPF₆), X-ray struct. determ. 2-91944
- 10,10-dimethylphenothiosiline, cryst. struct. 2-98064
- N,N'(trans)-dimethylquinacridone crystals, X-ray struct. study 2-91942
- 3,3-diphenyl-2-butyrolactone, X-ray crystals, struct. 2-98059
- diphenylarsenous acid, cryst. and mol. struct. 2-103740
- DMTMTTF based ionic radical salts, electrolytic cryst. growth, cond. and
struct. data 2-93403
- enniatin B.Na,Ni complex, cryst. struct. determ. 2-86659
- erbium formate dihydrate, cryst. struct. determ. 2-86660
- (+)-o-ethyl o-phenyl phosphorothioic acid, cryst. struct. and absolute mol.
configuration (*Chinese*) 2-98048
- ethylene, correlations in multipole refinements of cryst. struct. 2-103735
- extended molecules, crystal chem. and morphology 2-65907
- ferrocene, cryst. struct. determ. 2-91937
- ferrocene, struct., lattice energy and order-disorder transition, X-ray study
2-115206
- ferrocene cryst., static disorder, mol. configuration, X-ray and lattice
energy study 2-115207
- fluoranthenyl cation radical salts, cryst. struct., phase transitions and electro-
chem. crystallisation 2-71430
- 1-fluoroadamantane, C₁₀H₁₅F, plastic phase, cryst. struct., X-ray diff.
study 2-98045
- fluoroanthenyl radical cation salts—a new family of organic metals
2-92579
- 2-formyl furan thiosemicarbazone, lattice parameters, space group, X-ray
diff. 2-109776
- α -D-galactopyranose, H-bond system, theoretical determ. 2-98049
- glyoxime, cryst. struct. at 9K, neutron diff. study 2-96431
- graphite lamellar compounds with K and benzene, struct. and trans-
formations 2-98069
- guanyl-RNase C₂, microfungi, *Asp. clavatus*, crystn. modifications
2-57779
- (4-halogenbenzoyloxymethyl)trifluorosilanes, crystal and mol. struct., X-
ray diff. 2-75146
- hexaaziridinyclotri(phosphazene)tris(carbon tetrachloride), cryst. struct.,
space and Laue group changes 2-65901
- hexachlorophene derivatives, cryst., ³⁵Cl NQR spectra, struct., bonding,
mol. conformation 2-93053
- 2,4-hexadiyne, cryst. struct., dynamics, model calcs. 2-81774
- hexahelicene, lamellar twinning explaining nearly racemic composition
2-55984
- hexaphenylisomelamine and hexaphenylmelamine, cryst. and mol. struct.
2-103742
- 5-hexyl-2-(4-bromophenyl)-1,3-dioxane, smectogenic, cryst. and mol.
struct. 2-65847
- hydrocarbons, polycyclic aromatic, films, struct. and props., substrate
temp. effect 2-104205
- imidazo (3,4-d)-(1,2,4)-triazene-3 (4H)-thione, cryst. and mol. struct.,
X-ray study 2-98054
- immunoglobulin, human, Ig G1, cryst. struct. calc., multiple isomorphous
replacement method 2-116873
- intercalation compounds of semiconductor/dielectric/organic mol., struct.
(*Russian*) 2-60966
- iodomethylgermatene, X-ray diff., crystal and mol. struct. 2-76422
- koumine hydroxide, cryst. struct. and absolute mol. configuration
(*Chinese*) 2-98047
- lead phthalocyanine, triclinic form, cryst. struct. 2-71428
- linearly disordered crystal, electron density distrib. describing Bragg scatt.
2-109625
- liquid crystals, unit cell dimensions and space groups 2-60968
- lithium formate monodeuterate, molecular interaction energy, electron dis-
trib. 2-86619
- lysozyme in D₂O, dynamics of Overhauser effects 2-85853
- macromolecular structure refinement with X-ray and neutron diff. data
from single crystals. 2-60840
- magnesium formate monoclinic and orthorhombic forms, struct. and ther-
mal stability, X-ray diff. and IR spectra obs. (*French*) 2-60939
- mercaptoacetaldehyde, cryst. and soln., mol. struct., PMR, Raman and IR
study 2-93205
- mercaptoacetone, cryst. and soln., mol. struct., PMR, Raman and IR
study 2-93205
- methane, intermediate phase struct., X-ray studies (*Russian*) 2-98050
- 10-methyl-10-chloromethylphenothiosiline, cryst. struct. 2-98064
- 2-methyl-1-oxojololidine cryst., X-ray struct. study 2-91941
- 1-methyl-2-carbamaterane, cryst. and mol. struct. 2-98063
- methylammonium aluminium alum, X-ray and neutron diffraction study
2-60959
- methylene oxalate, cryst. struct. space and Laue group changes 2-65901
- 3,4-methylenedioxy-cinnamoyl piperidine, cryst. struct. determ. (*Chinese*)
2-98046

crystal atomic structure of organic compounds continued

- 1-methylgermatene, 3,7,10-carbonyl containing analogues, X-ray struct.
anal. and NMR spectra 2-96766
- 1-methylmercury-2-ethoxymethyl-o-carborane, crystal struct., X-ray diff.,
study 2-76421
- naphthalene, diamagnetic anisotropies, crystalline and molecular (*French*)
2-61690
- naphthalene, cryst., temp. depend. of thermal motion 2-103734
- 1,8-naphthalenephenylphosphite, cryst. and mol. struct., X-ray diff. study
2-55963
- neodymium(III) p-aminobenzoate, crystal and mol. struct., X-ray diff.
2-76420
- nonacarbonyl- μ_3 -chloromethylidyne-tri- μ -hydrid-triangulo-trimithorium,
cryst. struct. 2-76411
- norsequipenoid lactone, cryst. struct. determ. (*Chinese*) 2-109775
- nylon 11, lamellar single crystals, polymorphism 2-71432
- organosiloxanes, intermolecular distances and mol. environment in cryst.
state 2-97987
- organotin benzylates, synthesis, elemental anal., struct., IR obs. 2-110868
- pancreatic polypeptide, avian, cryst. struct. anal. at 1.37 Å resolution
2-105651
- pentasodium trans-tetracyanodisulphitocobaltate (III) tridecahydrate, cryst.
struct. 2-76410
- (perylene)₂PF₆·1.08 CH₂Cl₂ and AsF₆ analogue, X-ray struct. determ.
2-91944
- phenylacetyl iodide, cryst. struct. study (*French*) 2-76407
- 1-phenylgermatene-3-one, X-ray struct. anal. and NMR spectra
2-96766
- piperazinium bis(n-alkanoates), synthesis and cryst. data (*French*)
2-81771
- PMR, wide-line second moment, rel. to unit cell proton density 2-103570
- pyridine and bis(p-hydroxybenzoato)tris(pyridine)CdII mol. complex, crys-
tal struct. 2-76419
- quaterylene, thin film growth, grain boundary struct., electron microscopy
2-81775
- β -quinol-methanol clathrate static and dynamic struct., ¹³C NMR and H⁺
T₁ meas. 2-104730
- sodium diiodophosphate, transition struct. at phase transition (*Russian*)
2-61842
- sodium formate, deform. density maps from neutron and X-ray diff. stud-
ies 2-71427
- sodium phthalate, cryst. struct. 2-103741
- spiogram, photochromic, cryst. and mol. struct. 2-115210
- 4-spirotetrahydrofuryl-2'-2-spirocyclohexyl-1,2,3,4-tetrahydroquinoline and
nitroxyl radical formed in oxidation, cryst. and mol. struct. 2-98062
- strontium tartrate tetrahydrate, Co²⁺ centres, optical absorpt. studies
2-115220
- TCNQ salt, 1,1'-bicobaltocene[Co(III)Co(III)]TCNQ, synthesis and
struct. 2-93774
- TCNQ salt, (DEPE)(TCNQ)₄(H₂O)₂ subtle struct. changes, explanation
of elec. cond. variations 2-55962
- TCNQ salt, (Me₂eP)(TCNQ)₂, cryst. struct. and lattice distortion
2-109780
- TCNQ salt, DBTTF-2,5-TCNQF₂, charge transfer salt, cryst. struct.
2-98065
- TCNQ salt, DBTTF-TCNQ, charge transfer salt, cryst. struct. 2-98065
- TCNQ salt, DBTTF-TCNQF₄ charge transfer salt, struct. high temp.
phase transition obs. 2-109778
- TCNQ salt, DEDMTSF-TCNQ, phys. props., review 2-86656
- TCNQ salts, N-alkyl-phenazinium TCNQ, solid-state props. 2-87574
- TCNQ salts isostructural with [1,2-bis(1-ethyl-4-
pyridinium)ethylene]_{0.88}(TCNQ)₄(H₂O)₂, elec. and struct. props.
2-92582
- telluraxanthene, cryst. and mol. struct. 2-98060
- exo-exo-3,4,5,6-tetrachlorotricyclohexadiene-3,5-diene-9,10-dicarboxylic acid,
mol. and crystal struct. 2-75147
- 1,1,7,7-tetramethyl-3,5,9,11-tetraphenyltricyclohexasiloxane, struct., X-ray
diff. 2-76418
- tetramethylammonium tetrabromocuprate, cryst. struct. and incommensu-
rate-commensurate phase transition 2-65977
- tetramethylammonium tetrachlorocobaltate, low temp. phase struct., X-ray
diff. study 2-98055
- tetramethylammonium trichloromanganate(II), orientational disorder of
diatomic or polyatomic ions 2-81723
- tetraphenyl antimony chloride, cryst. struct. study 2-115211
- tetraselenotetracene, polymorphism 2-91943
- tetraselenotetracene, prep., purification and polymorphism 2-76423
- tetraselenotetracene charge transfer salts, TSeT(PF₆), TSeT(AsF₆), struct.
and semicond. elec. cond. 2-65981
- tetratellurotetracene, cryst. struct. 2-91943
- 2-thiopyridone, cryst. struct., X-ray and neutron diff. study 2-71429
- thiosemicarbazone, cryst. and mol. struct. 2-115212
- thiurea, superstructure selection rules 2-103739
- TMTSF-ReO₄, metal-insulator transition 2-71867
- (TMTSF)₂(2,5-TCNQBr₂), struct. and phys. props. 2-55961
- (TMTSF)₂AsF₆, highly conductive, spin charge separation hypothesis
based on struct. 2-55958
- (TMTSF)₂AsF₆, supercond., spin-charge separation 2-65976
- (TMTSF)₂BrO₄, change in Se network dimensionality from mol. and
cryst. struct. 2-55960
- (TMTSF)₂ClO₄, cryst. struct. determ. 2-91945
- (TMTSF)₂ClO₄, organic II donors, electrochemically grown salts, super-
cond., synthesis and study 2-65750
- (TMTSF)₂FSO₃, change in Se network dimensionality from mol. and
cryst. struct. 2-55960
- (TMTSF)₂FSO₃, dipolar anion effect on mag. and conduct. props.
2-87232
- (TMTSF)₂PF₆, cryst. struct. determ. 2-91945
- (TMTSF)₂PF₆, highly conductive, spin charge separation hypothesis based
on struct. 2-55958
- (TMTSF)₂X salts, prep. struct. and anion effects 2-55957
- TMTSF salts, struct. and props., exptl. evidence for importance of inter-
chain couplings 2-55959
- (TMTTF)₂PF₆, struct. and props., exptl. evidence for importance of inter-
chain couplings 2-55959
- (TMTTF)₂X series, phys. props., role of counterion ordering 2-92469
- TMTTF salt, TMTTF.HgCl₂, cryst. struct. determ. 2-86658
- toluene, β -phase, cryst. struct., X-ray diff. study 2-76416
- tri-n-butylphosphine oxide hydrate, cryst. struct. frameworks 2-98026
- tribromotris(4-methylpyridine)molybdenum (III), cryst. struct. 2-76414

crystal atomic structure of organic compounds continued

- trimethyl(trimethylsilylmethyl)ammonium iodide, cryst. and mol. struct. 2-115209
 trimethylammonium germanium trichloride, cryst. struct., X-ray diffr. study 2-65979
 6,9,12-trioxo-2-thioxo-1,3-diazacylotetradecane, cryst. and mol. struct. 2-98066
 1-triphenylphosphazo-1-dimethyl-amino-2,2-dicyanoethylene, cryst. struct. and spectral study 2-98061
 tris(thiosemicarbazide)cobalt(III)chlorides, geometric isomer cryst. struct. 2-98067
 TTF-TCNQ, lattice energy, struct., and stability of models with segregated and mixed states 2-115172
 TTF-TCNQ films, struct. and props., substrate temp. effect 2-104205
 (urea)₃CuO₃H₂O, cryst. struct. and IR spectrum 2-81773
 xanthone, X-ray crystallographic study 2-81769
 Cd(II) complex, 2-aminobenzothiazole cadmium, conductometric, IR and Raman study 2-110867
 2'-deoxy-2'-fluorouridine, crystal struct. determ. from 3-D X-ray data 2-91940
 N,N'-diebenzyl-N,N'-dihydrophenazinium iodide, chain cpds., diffuse X-ray scatt. and order-disorder effects 2-98057
 N,N'-diethyl-N,N'-dihydrophenazinium iodide, chain cpds., diffuse X-ray scatt. and order-disorder effects 2-98057
 Fe complex, [NH₄][Fe(3,5-dichlorosalicylalthiosemicarbazone)₂], cryst. struct. 2-103744
 Hg(II) complex, 2-aminobenzothiazole mercury, conductometric, IR and Raman study 2-110867
 Ir complex, iridium (I) dicarbonyl complex of 4,7-bis(dicyanomethylidene)-4,7-dihydro-1,10-phenanthroline, synthesis and solid state props. 2-92596
 1,4,7,10,13-pentaoxacyclopentadecane (15-crown) nitrate praseodymium, cryst. struct., X-ray study (Chinese) 2-91938
 TCNQ complexes, substituted morpholinium, cryst. struct. and elec. cond. 2-86657
 Zn(II) complex, 2-aminobenzothiazole zinc, conductometric, IR and Raman study 2-110867

crystal binding

- see also binding energy; lattice energy*
 alkali halides, cryst., van der Waals pots. calcs. 2-97983
 alkali halides crystals, repulsive hardness param. and ionic props. correl. 2-109732
 alkali metal clusters, binding energy, cryst. growth, HMD method 2-115158
 alkaline earth chalcogenides, cryst., van der Waals pots. calcs. 2-97983
 alkaline earth chalcogenides, crystals, repulsive hardness param. and ionic props. correl. 2-109732
 binary brasses, effects of exchange and correlation on stability 2-56450
 bromotris[tetracarboxyl(triphenylphosphine)manganio] tin (IV), cryst. struct. 2-76413
 chalcides, melting point relations 2-92161
 CND0/2-FPP polarizabilities for model molecules, rel. to cohesive energy of organic crystals 2-85564
 covalent-ionic bonding transition, octahedral-tetrahedral coordination energy 2-76663
 cubic compounds, binary and ternary, effective ionic charges rel. to optical dielec. const. 2-57005
 cubic oxide phases with perovskite struct., electronic expansion factor 2-60918
 1,1,1,1,2,2,2,3,3,3-decacarbonyl-2,3,2,3-di-μ-chloro-triangulo-triosmium cryst. struct. 2-76409
 FCC lattice, long range interaction of atoms, Madelung const. 2-103690
 fluorite type AB₂ crystals, cohesion and thermodynamical props., Debye temp., Gruneisen and force const. 2-61169
 halides, melting point relations 2-92161
 heavy element materials, electronic press., self consistent relativistic LMT0 calcs. 2-92499
 hexachlorophene derivatives, cryst., ³⁵Cl NQR spectra, struct., bonding, mol. conformation 2-93053
 high press. struct. phase transitions, first principles total energy calcs. 2-66207
 inert gas atoms, crystals, repulsive hardness param. and ionic props. correl. 2-109732
 inert gas solids, van der Waals pots. calcs. 2-97983
 intercalant lattice, cohesion, electrostatic effects, sandwich model 2-103689
 ionic crystal, localized effective charge parameter, strain depend. 2-97984
 ionic crystal, NaCl struct. cohesive and surface energy eval. 2-65915
 ionic crystal, surface charge effects on electrostatic energy 2-81708
 ionic solids, ionic radii and second neighbour repulsion 2-55880
 ionic solids, van der Waals pots. calcs. 2-97983
 lithium formate monodeuterate, molecular interaction energy, electron distrib. 2-86619
 metals, interionic interactions model, elastic const. and phonon spectra calc. 2-81711
 nitrides, two-component, binding classification, spatial correlation of valence electrons 2-115174
 nonacarbonyl-μ₃-chloromethylidyne-tri-μ-hydrid-triangulo-trimithierium, cryst. struct. 2-76411
 organosiloxanes, intermolecular distances and mol. environment in cryst. state 2-97987
 oxides, melting point relations 2-92161
 potassium deuterium furan 2,5-dicarboxylate, cryst., vibr. spectra and H bonding (French) 2-67056
 potassium hydrogen furan 2,5-dicarboxylate, cryst., vibr. spectra and H bonding (French) 2-67056
 β-quartz, lone pair compounds, charge distrib. determ. 2-81707
 silica forms, lone pair compounds, charge distrib. determ. 2-81707
 silicate minerals, electronic and ionic polarizabilities 2-90732
 silicates, bonding, computational quantum chemistry study 2-97980
 sodium phthalate, cryst. struct. 2-103741
 TCNQ salt, DBTTF-TCNQF4 charge transfer salt, struct. high temp. phase transition obs. 2-109778
 transition metal disilicides, binding, two-correlations model 2-92498
 transition metal hydrides, low-temp. stable states, interstitial sublattices 2-86618
 Al, high press. struct. phase transitions, first principles total energy calcs. 2-66207
 As₂O(SO₄), cryst. struct. determ. (French) 2-91890

crystal binding continued

- Be compounds, two-component, cryst. binding 2-86620
 C₈K, cryst. dynamics and binding, inelastic neutron scatt. obs. 2-109736
 C₈KD₂/3, cryst. dynamics and binding, inelastic neutron scatt. obs. 2-109736
 C₈KH₂/3, cryst. dynamics and binding, inelastic neutron scatt. obs. 2-109736
 CuI, cryst. struct. determ. 2-76375
 CuMO₂ (M=Fe, Cr, Ga), characterisation and chem. bonding, X-ray absorption study (French) 2-82955
 CuM₂O₄ (M=Fe, Cr, Ga), characterisation and chem. bonding, X-ray absorption study (French) 2-82955
 GaAs, bonding, charge density anal., X-ray diffr. study 2-81710
 GaS, layer compounds, electronic structs. and ionicity, bond orbital model 2-86613
 GaSe, high symm. layer cryst., interlayer force constants, linear chain model 2-71390
 GaSe, layer compounds, electronic structs. and ionicity, bond orbital model 2-86613
 H-bonded crystals, isotope, tunnelling effects 2-77459
 InSe, layer compounds, electronic structs. and ionicity, bond orbital model 2-86613
 KC₂₄, stage two intercalation compound, in-plane charge distribution, XPS study 2-62046
 KC₈, stage one intercalation compound, in-plane charge distribution, XPS study 2-62046
 KHo₂F₇, cryst. struct., X-ray diffr. study (French) 2-81725
 K₂Mg₆(Si₄-xAl_x)₂O₂₀(OH)₄·4H₂O, water uptake, charge layer depend. 2-86617
 Mg, high press. struct. phase transitions, first principles total energy calcs. 2-66207
 MnCl₂, high symm. layer cryst., interlayer force constants, linear chain model 2-71390
 NS₂⁺AlCl₄⁻, cryst. struct. determ. (German) 2-76380
 NaCl lattice, evolution of three-body interatomic forces and formulation of general model 2-76361
 Nb-H, low-temp. stable states, interstitial sublattices 2-86618
 Ni₂Zn₂Ga₄, crystal struct., phase diagram meas. 2-109749
 β-PbF₂, anharmonic thermal vibr. and at. pots., temp. depend. 2-115380
 SiC, phonon dispersion, atomic force const. 2-86808
 Si₃N₄ film stability, stoichiometry deviation effect 2-115632
 SiS₂(Se₂), cryst. struct. determ. 2-76378
 SnS₂, electronic props., Phillip's ionicity calc. 2-66440
 SnSe₂, electronic props., Phillip's ionicity calc. 2-66440
 Ta-H, low-temp. stable states, interstitial sublattices 2-86618
 TiInSe₂, Raman spectrum, first order, hydrostatic press. effect 2-87794
 TiS, Raman spectrum, first order, hydrostatic press. effect 2-87794
 U-Ti alloys, bonding, Auger spectra study 2-65920
 VOAsO₄·nH₂O, layered structure, interaction between [VOXO]₂²⁺ layers 2-71421
 VOPO₄·nH₂O, layered structure, interaction between [VOXO]₂²⁺ layers 2-71421

crystal chemistry

- see also crystallography*
 A_{2-x}B_x^{VI} semiconducting cpds., nonstoichiometric, physicochem. props. 2-104005
 alkali halides, effective charges and ionicity 2-71389
 clathrate hydrates, cryst. struct. frameworks 2-98026
 concepts of crystal, order disorder cryst., and max. degree of order cryst. 2-103670
 crystal structure, geometric description 2-65905
 crystallographic pedigree, origin, theory 2-97967
 dihydrates, MM'O₄·2H₂O, structural relationships 2-55808
 electron microscopy, high-resolution, role in development of solid state chem. 2-97880
 graphite, electronic struct., correlation with isoelectronic molecules, c.f. with As and Se 2-54772
 II-VI semiconductors, electronic surface states, review 2-110411
 metal-semiconductor interface interaction studied by soft X-ray photoemission spectroscopy 2-110051
 monohydrates, MM'O₄·H₂O, structural relationships 2-55807
 organic molecules, extended, crystal chem. and morphology 2-65907
 organic-inorganic intercalation cpds., low dimensional, photopolymerization 2-92584
 rare earth fluorides, cation framework rearrangement in solid-phase reactions 2-98027
 semiconductor crystal growth, doping profiles homogeneity, crystal chem. anal. 2-55872
 silicate classification based on cryst. chem. 2-103730
 simple crystals, high-pressure transformations, structural considerations 2-66127
 solid state physicists and crystal chemists 2-84428
 tourmalines, cryst. chem. aspects 2-103729
 transition metal cluster chemistry and implications for hydrogen embrittlement, alloy behaviour and metal catalysts 2-91832
 wurtzite derivatives and related dipolar tetrahedral structs. 2-81755
 wurtzite derivatives and related dipolar tetrahedral structs. 2-81756
 Am₂WO₃, synthesis, X-ray powder diffr., Mossbauer spectra 2-62086
 As, electronic struct., correlation with isoelectronic molecules, c.f. with graphite and Se 2-54772
 CdCl₂, adsorption of N₂ and Ar, surface homogeneity effect 2-115563
 CdCr₂S₄ crystal, ferromag. resonance, nonstoichiometry effect 2-104709
 CrAl₂S₄⁺, spinel, homogeneity region 2-76695
 CsRPO₃ crystals (R≡ rare-earth ions), growth, struct., IR spectra 2-98023
 Cu_{2-x}B_x^{VI}, preparation by solid-phase mass transport, elec. props. 2-111066
 Ga₂Mo₂S₄, preparation and crystallochem. props. 2-65949
 Ge_{1-x}Pb_xTe solid soln., physicochem. investig. 2-104008
 (Hg,Cd)Te, photochemical oxidation 2-111345
 HgTe, stoichiometric deviation, X-ray diffr. investig. 2-104007
 InAs, homogeneity regions, calc. 2-86892
 InSb, homogeneity regions, calc. 2-86892
 InSb, homogeneity region, intrinsic defect concs. 2-104004
 InSb, photoelec. method of nonhomogeneity meas. 2-92679
 K₂(Ga₂Ge₂)O₇, ionic cond. and cryst. chem. (French) 2-92269
 K₂PbF₂Cl(Br)(I), PbBi₂O₇Cl type struct., cryst. struct. and prep. 2-103718
 K₂WO₄·Rb₂WO₄, solid solutions, phase diagram, X-ray and DTA study 2-88064
 K₂(Zn_xGe_{1-x/2})O₇, ionic cond. and cryst. chem. (French) 2-92269

crystal chemistry continued

- LiMgPO₄, olivine type cpd. cryst. struct. and cryst. chemistry 2-115189
 LiPbF₂Cl(Br)(I), PbBiO₂Cl type struct., cryst. struct. and prep. 2-103718
 (NH₄)₂P₂O₇·2Te(OH)₂·2H₂O, cryst. struct. 2-60944
 NaPbF₂Cl(Br)(I), PbBiO₂Cl type struct., cryst. struct. and prep. 2-103718
 Na₂ZrW₂O₁₂, cryst. struct., combined wolframite-scheelite character 2-98025
 Nb-Al-C alloys, fast quenched, metallography and X-ray anal. 2-111207
 α-Nb₂O₅, nonstoichiometric anal. at elevated temp. 2-87267
 NiSi, composition changes due to Ar⁺ ion bombardment, AES meas. 2-103866
 Np₂WO₃, synthesis, X-ray powder diff., Mossbauer spectra 2-62086
 PtSi, composition changes due to Ar⁺ ion bombardment, AES meas. 2-103866
 Pu₂WO₃, synthesis, X-ray powder diff., Mossbauer spectra 2-62086
 Sb₂S₃, UV and dielec. props. 2-99148
 Se, electronic struct., correlation with isoelectronic molecules, c.f. with As and graphite 2-54772
 Si-Al(Ga), refinement of boundaries of regions of homogeneity 2-111168
 Si-SiO₂ interface morphology 2-56371
 Si₃N₄ film stability, stoichiometry deviation effect 2-115632
 TiN_x-TiB₂ system reaction, polythermal cross-sections 2-105133
 TmSe, stoichiometry, press. effects, lattice parameter, resistivity 2-56203
 ZnO:Co nonstoichiometric single cryst., growth and elec. props. 2-77051
 ZnO-based green phosphor, mechanism of formation in presence of ZnS 2-111508
 ZnSe crystals stoichiometry when obtained from melt 2-104006
 ZrO₂, structural chemistry 2-97977

crystal classes *see* **crystal symmetry****crystal cleavage** *see* **brittle fracture****crystal defects**

- see also* Cottrell atmospheres; crowdions; crystal inclusions; crystal microstructure; defect electron energy states; disclinations; dislocations; grain boundaries; impurity-defect interactions; phonon-defect interactions; point defects; stacking faults; twinning
 accumulation and annealing kinetics, spatial correlations (Russian) 2-81815
 alkali halides, sputtering, electron and photon induced 2-99232
 alloy, ferromag., cold rolling induced mag. anisotropy use for cryst. defect analysis (Russian) 2-67574
 analysis using dilatometry and self-diffusion, review 2-60972
 anthracene cleavage planes, etching in H₂SO₄-formic acid soln. 2-109781
 atomic, molecular and solid state theory, and computational quantum chemistry, conference, Flagler Beach, FL, USA (March 1981) 2-79267
 austenite, bainitic transformation kinetics, US treatment effect (Russian) 2-67325
 binary alloys and pure metals 2-115215
 bubble garnets, Ne ion implantation, damage profile, Rutherford backscatt. and channelling study 2-71524
 channels in crystals., optical microscopy, X-ray topography, and contrast calcs. (French) 2-98071
 conference, Les Houches, France (July-Aug. 1980) 2-89447
 continuous damage theory, statistical aspects 2-81288
 corundum crystals grown from cryolite flux, surface microtopographs, spiral growth mechanism 2-76343
 crystallography, cryst. struct., book 2-112666
 cuprous halides, cryst. growth techniques and defect chemistry, re view 2-83015
 diamond:N₂, structural imperfection annealing, struct. 2-81766
 diamond, electron channelling radiation, temp. and crystal defect effects 2-81849
 diamond, platelet defects, {100}, struct. 2-71477
 diamond, variety III, internal structure X-ray section topography study 2-109785
 diamonds, electron diffraction patterns, 'spike' diffuse reflections 2-81634
 dielectric film in MOS capacitor, localized conduction 2-61633
 elastic isotropic medium, mechanical interaction of points defects and volume defects near curved surfaces 2-56005
 electron microscopy, high-resolution, role in development of solid state chem. 2-97880
 electron microscopy image calc., display and comparison, integral and dedicated computer system 2-95562
 electron scatt. theory, periodic continuation methods 2-109638
 eutectic thin film struct. growth, nonlinear model 2-115587
 ferroceramic, internal struct. defects influence on applcs. in technology, two-dimens. heat receivers 2-66995
 ferroelectrets, exoemission visualisation of defects 2-67200
 films, defect growth, computer simulation 2-92417
 α-HgI₂ single crystals, plastic defects, X-ray topographs 2-109784
 II-VI semiconductors, impurities and imperfections (Japanese) 2-91950
 imaging of lattice defects by double diffractometric transmission topography 2-71289
 insulating crystals, defects, conf., Riga, USSR (May 1981) 2-68967
 internal friction and Young's modulus defects due to dislocation motion anharmonism 2-115353
 ion channelling techniques for defect and surface studies, review 2-71535
 ionic crystals, defect volume formation 2-71436
 ionic lattice, thermodynamic factor for diffusion, effect of defect assoc. 2-61189
 irradiated metals, defect clusters, generation rate, distrib. profile 2-98079
 lattice defect obs. with electron interference microscopy (Russian) 2-86529
 liquid crystal, chiral smectic C, double dechiralisation wall defects (French) 2-55837
 low dimensional conductors, irradiation effects and role of disorder, review 2-87233
 magnetic superconductors, fluctuations and defects in spiral state 2-92849
 metals, chemicothermal treatment in glow discharge, ion bombardment effect 2-111376
 nematic liquid cryst., hydrodynamic instability, convective struct., defects 2-71349
 nonlinear kinematics of line struct. 2-76425
 NQR line shape broadening by cryst. defects 2-110715
 organic conductors, X-ray irradi. induced defects, damage prod. mechanisms 2-92032
 overlayer ordering and epitaxy, thermodynamics 2-110205
 piezoelectric ceramics, development and production 2-88031

crystal defects continued

- piezoelectric crystal microscopic defects, surface Rayleigh wave interactions 2-110124
 plastic flow 2-86775
 polybis-p-toluene sulphonate diacetylene, single cryst. perfection, synchrotron radiation topography, defects role in solid-state polymerisation 2-71373
 powder metallurgy materials, interaction between defects and basic material 2-83057
 propellant, solid, shock-induced instability due to crack-like defects 2-78106
 quartz, defects and Q-values of -18.5° X-cut bar 2-91949
 quartz crystal, splitted Laue-spots intensity change at piezodeformation (Russian) 2-81777
 quartz resonators, high temp. resonance loss and IR characterisation 2-99137
 quasi-two-dimensional crystals, imperfect, diffuse X-ray and thermal neutron scatt. 2-71287
 radiation strength of optical coatings, depend. on chem. binding energy of struct. defects 2-90966
 rare earth perovskites R_{1-x}B_xCoO₃, RPy_{1-x}La_xEu_{1-x}Dy_{1-x}Gd_{1-x}, B=Ca,Sr, Mossbauer emission studies 2-87631
 SEM EBIC analysis of defects using controlled low temps. 2-65823
 semiconductor crystal, doping striations, laterally advancing terraces, feathering 2-115277
 semiconductor crystal with thin disruptive layer, external photoeffect during Bragg diff. 2-105051
 semiconductor ion-implanted layer, SEM with secondary-electron collector 2-86998
 semiconductor materials nonradiative processes and defects, obs. by acoustic spectroscopy 2-53446
 semiconductors, defect characterisation by junction spectroscopy, review 2-71920
 semiconductors, defects, conf., Boston, MA, USA (Nov. 1980) 2-68965
 semiconductors, thermal defects 2-103746
 semiconductors EPR of defects, review 2-72349
 single crystals, β-γ induced ang. correl., nucl. quadrupole interaction invest. 2-110313
 single-crystal inhomogeneity geometry anal. using light-scatt. method 2-82871
 solar cell, back-surface-field, efficiency reduction by edge defects, developed perimeter model 2-116826
 solar cell efficiency reduction by bulk defects across back-surface field junction 2-78209
 SOS:Si films, characterisation of defect reduction and Al redistrib. 2-91947
 SOS epitaxial films, defects and strain after CW laser annealing, Rutherford backscatt./channelling and TEM study 2-81799
 SOS films, effect of high-temp. H₂ annealing 2-93543
 SOS films, model for X-ray rocking curve half-widths interpretation 2-91977
 SOS films, near-surface crystallinity meas. by UV reflectance 2-93218
 SOS films, rel. between crystallinity and electronic props. 2-92514
 SOS films, sapphire substrate orientation influence on crystn. quality and SOS/MOS mobility 2-91948
 steel, austenitic, strain hardening, depend. on struct. parameters 2-77844
 steel, austenitic stainless, fatigue threshold, effects of environment, stress ratio and defect size (Japanese) 2-11287
 steel, Cr, cast, fatigue threshold, effects of environment, stress ratio and defect size (Japanese) 2-11287
 structural phase transitions, critical dynamics in the presence of relaxing defects 2-76635
 superconducting magnet alloys, neutron irradi. effects, review 2-110553
 TCNQ salt, N-n-propylquinolinium(TCNQ)₂ powders, pure and irradi., IR spectra 2-93189
 TCNQ salts, Qn(TCNQ)₂, quasi one-dimens. conductors, dielec. const., localised electrons by defects 2-104798
 TGS, nonequib. ferroelec. cryst., relax. currents 2-110341
 TGSe, crystalline, X-ray topography and laser tomography 2-71290
 three-dimensional lattice, two-dimens. defect, local critical exponent 2-74358
 (TMTSF)_xPF₆, low temp. cond., Hall effect and magnetoresist., effect of radiation damage 2-87240
 (TMTSF)_xPF₆ superconductor, X-ray irradiation induced defects 2-92031
 TMTSF-DMTCNQ superconductor, X-ray irradiation induced defects 2-92031
 topology of non-uniform media in condensed matter physics 2-98070
 transition metal dichalcogenides, layered, low dimensional conductors, phys. props., review (Japanese) 2-82335
 transition metals, recombination-emission spectra fine struct. 2-61963
 transparent materials, absorbing defect role in laser damage 2-65287
 transparent materials, laser damage, microdefect characts. determ. from statistical relations 2-70601
 tunnelling centres decay rates, phonon coupling effects, instanton theory 2-81778
 two-dimensional, appl. of Van der Pauw's method 2-115787
 two-dimensional struct., shock-induced signals, microscopic constraints 2-76584
 unified theory of defects and stresses 2-109178
 wafer, single crystal, lapping and polishing damage investig. by X-ray double- and triple-crystal diff. (Chinese) 2-93690
 X-ray image, of a packing defect in Bragg case 2-55987
 X-ray scattering by crystal with surface defects 2-86499
 X-ray topography, multibeam method, double-cryst. arrangement 2-91719
 α-Ag₂S, nonstoichiometry investig. 2-86932
 Al, magnetic field influence on defect struct. during plastic deform. (Russian) 2-103882
 Al-SiO₂-Si system, hydrogenation of defects at the Si-SiO₂ interface 2-56373
 AlN, multilayer polytypes and packing defects 2-55878
 AlN:Cr, sintered, dielec. losses, lattice defect types (French) 2-77448
 As₂Se_{3-x} thin film, photoinduced defects, isothermal annealing characts. (Russian) 2-103745
 Au film, (111), vapour deposited, surface and inclined planar defect electron-microscope images 2-71844
 Bi, etching of cleavages in HNO₃-propionic acid solns. 2-109782
 Bi₂Se₃:Cd(In) monocrystals, struct. non-homogeneity visualisation using holographic interferometry 2-115216
 Ca thin film, elec. cond. and defect density, annealing study 2-77206

crystal defects continued

- CaTiO₃, acceptor doped, defect struct. at elev. temps. 2-92019
 CdF₂/Eu, defect chem., site selective spectrosc. obs. 2-104918
 CdO, compacts, annihilation of defects, study by elec. resist. meas. 2-116418
 CdS, defects lattice imaging by electron microscopy 2-65983
 CdS, shock induced defects and transition 2-71555
 p-CdSiAs₂, crystals, H⁺ irradiated, elec. props. study 2-76527
 CdTe, defects evaluation using simple cathodolum. technique 2-77597
 CdTe, light scatt. by inhomogeneities, IR absorpt. and etching meas. 2-77543
 CoO, charge transport, lattice defects 2-104401
 CoSi₂-Si interface, lattice imaging 2-115609
 Cu, 30 keV Cu⁺ ion bombarded, temp. depend of sizes of defects 2-56047
 Cu vacuum evaporated films, defect density and elec. props. from annealing study of elec. resistance 2-110495
 Cu-¹¹¹In, defects obs. by channelling and perturbed $\gamma\gamma$ ang. correl. 2-81844
 CuBr-CuI system, physicochem. props. 2-111512
 Cu₂O crystal, dark current-voltage characs. rel. to struct. defects 2-77052
 Fe, cast, high strength, γ - γ phase transform., effect of initial struct. and heating rate 2-72695
 Fe, pure, trapped H, thermal anal. 2-66290
 Fe surface (110), CO adsorption, thermal desorpt. spectroscopy, dissociation enhancement by surface defects 2-98464
 Fe-Cr-Ni alloys, neutron irradiated, defect recovery 2-66074
 Fe-Si, multistereo synchrotron X-ray topography, defects depth determ. 2-91722
 Fe-Si (3 wt. %), cryst. defects, neutron diffr. topography study 2-86519
 Fe-Si (3 wt. %) alloy, cold rolling induced mag. anisotropy use for cryst. defect analysis (*Russian*) 2-67574
 FeSi₃-MnSiO₃, metasilicate glass, crystn. high-resolution EM 2-97936
 Ga_{1-x}Al_xAs LPE layers, dislocations config. TEM study (*Chinese*) 2-67670
 GaAs, anodic oxide film, struct. inhomogeneity 2-87096
 GaAs, donor defect, H passivation 2-87173
 GaAs substrates and GaAs-Al_{0.2}Ga_{0.8}As DH epitaxial wafer, defects meas. by X-ray topography (*Chinese*) 2-67669
 GaAs:Cr, semi-insulating, photoelectrochem. etching and defect characterisation 2-98072
 GaAs-Pd Schottky barrier diodes, electron irradi., piezoelec. phenomena, deep level effects 2-115893
 β -Ga₂O₃, single cryst., valence force field, Raman study 2-77514
 GaP S LEC epitaxial layer, microdefects and dislocation generation, TEM study 2-115236
 Gd₂Ga₂O₇, cryst. growth and prep. defects, bubble memory substrates appl. 2-93405
 Gd₂SiO₅, struct. and defects, high resolution electron microscopy study 2-65952
 Ge, defect annealing, electron induced, stimulated by 'additional lighting' (*Russian*) 2-103825
 Ge, gamma-ray induced defects, thermal and electrical stability 2-92033
 n-Ge:Sb, defect cluster form. and shaping after high-energy particle irradi. 2-76535
 He, solid, lattice defects (*Chinese*) 2-61249
 He, charge capture by defects appearing during coding below half melting temp. (*Russian*) 2-82068
 HgCdTe epitaxial layers, implantation-induced defects behaviour 2-87379
 HgCdTe, physics and chemistry, workshop, Minneapolis, MN, USA (Oct. 1981) 2-89437
 Hg_{1-x}Cd_xTe crystals, second phase investig. 2-92225
 InAs, homogeneity regions, calc. 2-86892
 InGaAsP-InP DH LED, aged, dark defects 2-91974
 InGaAsP-InP layers, catastrophic degradation, laser induced 2-61022
 InP:Fe, electron irradiated, EPR study 2-104690
 InSb, homogeneity regions, calc. 2-86892
 InSb, homogeneity region, intrinsic defect concs. 2-104004
 InSe, crystal growth and defect evaluation (*Japanese*) 2-87958
 KOsO₄N, single cryst., γ -irrad., paramag. d³ defect, EPR investig. 2-93009
 LaFeO₃, electronic cond., Seebeck coeff. and defect struct. 2-110349
 La₂Ti₂O₇, non-stoichiometric disorder, high temp. elec. cond. study 2-98075
 MgO crystal, elec. breakdown at high temp. 2-77450
 MgSiO₃-MnSiO₃, metasilicate glass, crystn. high-resolution EM 2-97936
 Nb superconducting resonator, Q-factor, electrolytic oxidation effect 2-116618
 Nb-Co, residual induction of individual particles, powders and massive specimens 2-72288
 Nb₂O₅, metastable struct. modification, disintegration and reduction products, electron microscope study (*German*) 2-65956
 Nd³⁺:glass laser, time, energy and spectral characs., γ -ray induced defect influence 2-55169
 Nd³⁺:YAG laser; time, energy and spectral characs., γ -ray induced defect influence 2-55169
 Ni single crystal, laser irradiated, epitaxial regrowth and defects 2-61031
 Ni-base superalloys, P/M, fatigue crack initiation, effect of defects, surface-subsurface transition 2-67519
 Ni₂Cr, laser damages, comparison with tensile deform. and neutron irradiation effects 2-66047
 NiSi₂-Si interface, lattice imaging 2-115609
 POC₁ deposition, microdefects form. in IC masking oxide during unintentional P diffusion 2-71721
 (Pb,Sn,Ge)Te, dielectric props., defects influence 2-93101
 Pb₂Ge₂(O,F)₁₁, ferroelectric crystals, growth, Curie point, dielectric const. 2-72616
 PbO₂, defect struct., X-ray diffr. and TEM 2-76446
 Pb_{0.8}Sn_{0.2}Te, intrinsic defects, mag. susceptibility study 2-115217
 Pb_{1-x}Sn_xTe-PbTe(BaF₂), heterojunction, defect form. 2-92374
 PbTe, intrinsic defects, mag. susceptibility study 2-115217
 PbTe single crystals grown by vertical Bridgman technique, micro-size defects 2-97958
 Pb(Zr,Ti)O₃, composition piezoelectric ceramic preparation and props. 2-88030
 Pt alloys, dilute, neutron irradiated, influence of impurities and radiation doping on defect production 2-76511
 Si, back-surface damage regions, gettering of mobile O, defect stability, annealing and water vapour effect 2-56255

crystal defects continued

- Si, back-surface damage regions, gettering of mobile O, defect stability, O diffusion 2-56256
 Si, Czochralski crystals, intrinsic gettering study 2-76430
 Si, Czochralski grown, thermally induced microdefects, nucleation and growth obs. 2-57379
 Si Czochralski grown crystals, microdefects and their appl. as gettering sites 2-91992
 Si Czochralski wafers, photoluminesc. method to characterise in-depth profile of thermally induced defects 2-93243
 Si, dislocation free (*Russian*) 2-92045
 Si, electron channelling radiation, temp. and crystal defect effects 2-81849
 Si epitaxial layers, defects anal., ion backscatt. and channelling techniques appls. (*Chinese*) 2-92376
 Si film on SiO₂, zone recrystallized, elec. props. of line defects 2-66668
 Si, heat treated wafers, metal decorated haze microdefects, TEM and energy dispersive X-ray anal. 2-91946
 Si, impurity defect struct. form. by ion implantation, amorphous and cryst. comparison 2-103790
 Si, ion implanted, residual defects after pulsed laser annealing 2-71502
 Si, ion irradi. by intense pulse, defect production, proton backscatt. study 2-109865
 Si, melting and cryst. growth, X-ray topographic obs. 2-65900
 Si, multistereo synchrotron X-ray topography, defects depth determ. 2-91722
 Si, neutron transmutation doping, conf., Copenhagen, Denmark (Aug. 1980) 2-74166
 Si p-n junction, nonequilibrium lattice defects, effect on current-voltage characs. 2-115879
 n-Si, proton-irradiated, radiation defect clusters, struct. and props. 2-81833
 Si, radiation damage, defect study 2-66068
 Si, swirl defect form. during melt growth 2-65984
 Si thin films, D passivation of grain boundary dangling bonds 2-76478
 Si wafer, microscopic defects, positron annihilation study 2-82951
 Si wafers, thermally-induced defects characterisation by room-temp. photoluminesc. 2-87837
 Si:As, ion irradiated, point defect chains, high resolution TEM study 2-71479
 Si:Gd, crystal microstruct., Gd accumulations, electron radiation-induced defects 2-86891
 Si:H, FZ cryst., anomalous defect form. by H doping 2-71476
 Si:O, Czochralski grown, defect obs. after high temp. treatment 2-76427
 Si:P, radiation doped, recombinational props. and elec. cond., thermal treatment effect (*Russian*) 2-71995
 Si-on-sapphire, cryst. defects reduction by room temp. ion implantation 2-92012
 Si-SiO₂, thermal oxide, γ -irrad., defects and impurities, EPR study 2-98158
 SiC particles, paramagnetic defects treatment effects, ESR study 2-87593
 SiO₂, breakdown statistics and defect densities, theoretical and expt. study 2-110770
 SiO₂ films, on Si substrate, origin and elimination of defects 2-65982
 SrMO₄Eu₂(MO₄)₂ (M=Mo, W), defect formation, electrochemical props. 2-109783
 SrTiO₃, with excess SrO, defect struct. 2-104370
 TaS₂, irradiation induced defect pinning of CDW, electron diffr. study 2-66064
 TaS₂(1T), irradiation induced defect pinning of CDW, electron diffr. study 2-66064
 Ti, ion beam induced radiation defects and stimulated trapping efficiency 2-76516
 TiN, ion beam induced radiation defects and stimulated trapping efficiency 2-76516
 α -U, field ion microscopy 2-86622
 W, ion beam induced radiation defects and stimulated trapping efficiency 2-76516
 YAG:Nd crystals, Czochralski grown, defect disclosure by thermolum. 2-93289
 YAG:Nd crystals, radiation colour centres rel. to growth defects, absorpt. and luminesc. obs. 2-71445
 ZnS, planar defects, luminescence study 2-82889
 ZnSe crystals, vol. defect influence on absorpt. at 10.6 μ m wavelength 2-55284
 p-ZnSiAs: crystals, H⁺ irradiated, elec. props. study 2-76527
 α -Zr(PO₄)₂M₂ (M=Li⁺, Na⁺, K⁺, Cs⁺) Mg K α ESCA spectra, shake up struct. enhancement by sputtering 2-57252

crystal dislocations see dislocations

crystal electron states see electron energy states (condensed matter)

crystal energy see lattice energy

crystal etching see etching

crystal faces

- cholesterol, anhydrous, crystal habit, solvent and crystn. effects 2-55868
 ice single crystal growth and evaporation from vapour phase, interface kinetics, meas. in water vapour environment 2-97960
 α -Al₂O₃ crystal, hydrothermally grown, cryst. habit 2-65941
 CaCO₃, calcite, etch pits orientation on cleavage faces 2-60992
 CdCl₂, cleavage faces, TEM investig. by surface decoration 2-66328
 CdS, single and bicryst. growth from vapour, polarity influence 2-57279
 GaSb pulled crystals, twin pits in facet regions 2-86668
 InSb cleavage faces, decoration of steps 2-110114
 K₂Cr₂O₇ crystals grown from aqueous soln., growth hillocks obs. 2-979
 KH₂PO₄, KD₂PO₄, growth features of prismatic faces, refl. microscop. obs. 2-115160
 KH₂PO₄ type crystals, taper effect rel. to growth soln. bulk supersaturation 2-109713
 NH₄H₂PO₄, crystals, dislocation-free, dipyrmaid faces, growth from soln., growth stoppages in presence of impurity obs. 2-65899
 NH₄H₂PO₄, growth features of prismatic faces, refl. microscopy obs. 2-115160
 Si, deformed (100) oriented single crystals, single slip deform. and nature 2-92086
 SiC, 6H-type, double spiral interpretation 2-109714
 SnI₄ single cryst., [111] faces, microstruct. 2-66327
 SrSO₄(001) surface, stratigraphical etch patterns 2-61263
 TiO₂ surface (001) thermal faceting 2-86992

crystal field interactions

- see also crystal hyperfine field interactions
alkaline earth orthosilicates, vibr., isotope shift, IR and Raman study 2-77507
antiferromagnet, phase equilib. curve in case of strong cryst. field anisotropy (*Russian*) 2-82594
atomic, molecular and solid state theory, and computational quantum chemistry, conference, Flagler Beach, FL, USA (March 1981) 2-79267
chalcopyrite compounds, ternary, energy band features rel. to electronegativity scale 2-61347
chloropentamethylbenzene, single cryst., vibr., IR study 2-57105
core p-vacancy levels in crystal field, multiplet struct. calcs. 2-98580
dynamic crystal field models 2-56528
electron kinetic energy term contribution to cryst. fields 2-76996
fⁿ electron systems, cryst. field parameters, angular overlap model calcs. 2-92537
f-electron system in cryst. field environment of octahedral symm., NMR isoshielding diagrams 2-77391
finite crystal, Bloch electrons, Stark ladders 2-66509
galvinoxyl radical, anomalous phase transition, EPR spectra, zero-field splitting 2-104703
Heisenberg paramagnet, S=1, with easy-planar anisotropy, spin fluctuations 2-66764
hexamethylamine nickel iodide, EPR spectrum 4.2 to 300K (*Russian*) 2-66901
II₃-V₂ semiconductors, level ordering calc. 2-71941
II-VI semiconductors, optical props. of 3d transition metals 2-110286
ionic crystals, local fields due to electronic distortion, multipolar excitons 2-76997
lanthanide ions, effect of spin-polarisation on cryst. field 2-82301
lanthanide ions, orbit-lattice interaction, superposition model anal. for arbitrary symmetry 2-87203
lanthanum ethyl sulphate:Gd³⁺, spin lattice relax., Gd³⁺ splitting under press., ESR study 2-82713
localised defect electronic struct. calc. method 2-115698
magnetic dilute alloy, spin glass behaviour 2-92937
mean internal potential, rel. to density in condensed substances 2-110311
metals, crystal fields, fractional parentage coeffs. 2-87205
neodymium ethylsulphate nonahydrate, ligand field theory 2-92541
noble metal-rare earth alloys, dil., magnetotransport and EPR props. 2-104355
noble metals with rare earth impurities, magnetotransport and EPR props. 2-66528
optical absorpt. and fluoresc. spectra, crystal field anal. 2-72525
paramagnetic ions doped in paramag. hosts, EPR studies, review 2-116060
praseodymium ethylsulphate, crystal field splittings by polarisable ligands 2-92539
rare earth alloys, amorphous, induced mag., singlet-singlet model 2-104560
rare earth alloys, amorphous, resistivity and magnetoresist., crystal field and exchange interactions 2-92560
rare earth rhodium borides, RRh₂B₄, mag. transition temp., effect of crystalline elec. field 2-104616
rare earth trifluorides, lattice self-pots., photoelectron spectroscopic determ. 2-62042
rotational invariants in crystal-field theory 2-110312
s-f model with Coulomb repulsion, thermodynamics of two atomic cluster spin 1/2 2-66822
semiconductors, cubic, paramagnetic centre relax. with exciton interactions 2-61760
spinel, role of crystal field theory in determ. struct. 2-71937
(TCNQ)₂ complex, mag. props. singlet triplet activation energy, ESR obs. 2-56914
transition metal (3d)ⁿ ions, sp. ht. contrib. from spin-phonon interaction 2-92232
van Vleck ions coupled to electron gas, induced mag., calc. in narrow-band limit 2-61681
zeolite crystals, cluster models, CNDO/2 calcs. including their electrostatic field and its effect on interacting moles. 2-115717
trans-[(NH₃)₄(CN)₂]⁺, vibr. fine struct. of polarised absorpt. band 2-72471
Ag-rare earth (001) and (111), dil., orbit-lattice coupling parameters, magnetostriction meas. 2-72327
Au, resonant coherent excitation of B, C, N, O, F ions 2-76537
B₂O₃-K₂O-Ti₂O (14, 1 mol.%) glass, Ti³⁺ centre interaction with laser radiation (*Russian*) 2-105009
Bi₂GeO₂₀:Cr, light induced charge transfer processes, optical absorption and EPR 2-99159
Bi₂SiO₂₀:Cr, light induced charge transfer processes, optical absorption and EPR 2-99159
BiVO₄:Gd³⁺, EPR spectra, g-factor, spin Hamiltonian monoclinic symmetry (*Russian*) 2-93001
CaF₂:Re³⁺, point group crystal field and superposition model 2-92538
Ca₂NaMg₂V₃O₁₂, ESR and optical absorpt. spectra of red V ions 2-110624
n-Cd₂As₂, ultrathin films, effective mass, effect of size quantisation 2-98526
CdWO₄:Ni^{II}, electronic ligand-field spectrum meas. 2-72526
CeAg_{1-x}In_x, cryst. field excitations 2-61419
Ce₂La_{1-x}Be₃, mixed valence and Kondo behaviour, lattice const. elec. resist. susceptibility 2-56515
CeSb_{1-x}Te_x, elec. and mag. props. 2-66523
Ce₃-Sc₃Al₂, volume collapse and spin fluctuation behaviour 2-55892
CeSO₃, prep., cell const., mag. props. 2-71423
Co complex, [Co(C₆H₅NO)₆][CoCl₄], bimetallic, two mag. subsystems, sp. ht. and susceptibility meas. 2-66825
Co complex, Co(acac)₃, cryst. field splitting, UV absorpt. study 2-67072
CoBr₂, cryst. field splitting, UV absorpt. study 2-67072
CoCl₂, cryst. field splitting, UV absorpt. study 2-67072
CoF₂, cryst. field splitting, UV absorpt. study 2-67072
C₂⁺ pairs, interacting mag. ions, D_{3h} symmetry 2-98874
CrBr₃, 3p spectra splitting of transition metal ions in XPS 2-57247
CrCl₃, 3p spectra splitting of transition metal ions in XPS 2-57247
CrCl₃·6H₂O, cryst. field splitting, K X-ray absorpt. spectra, MO theory 2-62017
CrF₆³⁻ octahedral cluster, quintet-triplet electronic transitions, nephelauxetic effects 2-75175
Cs₂NaErCl₆, fluoresc. spectra and lifetimes 2-110922
Cs₂NaErCl₆:Er³⁺, optical absorpt. spectra and crystal field anal. 2-82882

crystal field interactions continued

- Cs₂NaYCl₆:Eu³⁺, optical emission spectra and cryst. field anal. 2-104934
Cs₂NaYCl₆:Pr³⁺, optical emission spectra and cryst. field anal. 2-104935
Cu, dilute alloys, electric field gradient 2-115718
Cu, localised defect electronic struct. calc. method 2-115698
Cu-Mn spin glass alloys, origin of anisotropy 2-72211
CuFeO₃, Sternheimer quadrupole factors 2-98603
CuGaSnSe₄ energy gap values, temp. var., optical refl. study 2-56438
Cu₂O, cryst., struct. factors, Coulomb and Slater pots., cryst. field theory 2-86630
Dy-Fe intermetallic cpds., mag. and cryst. props., X-ray and Mossbauer study 2-92877
DyAl, mag. moments and anisotropy, neutron diffr. and cryst. field calc. 2-115976
Dy₂O₃, spectral and heat capacity Schottky contribs. 2-81975
Er₂O₃, spectral and heat capacity Schottky contribs. 2-81975
Er, Pr, Sb, impurity nearest-neighbour distances, EXAFS study 2-82957
EuCl₃, crystal field splittings by polarisable ligands 2-92539
Fe complex, Fe(bipyridyl)₂²⁺ electronic struct. of metal-to-ligand CT states 2-92535
Fe(ClO₄)₃, eutectic frozen aq. soln., ligand fields, Mossbauer study 2-92543
Fe(ClO₄)₃, frozen aq. soln., ligand field distrib., Mossbauer study 2-104762
FeCl₃·6H₂O, cryst. field splitting, K X-ray absorpt. spectra, MO theory 2-62017
Fe(III) compounds, pressure-induced spin state transition, ligand field theory 2-82300
Fe(III) compounds, high spin, X-band EPR spectra in rhombic ligand fields, computer simulation 2-87582
Fe(III) protein complexes, X-band EPR spectra in rhombic ligand fields, computer simulation 2-87582
Fe(II)=Fe(III), mol. crystals, cooperative mol. distortive transitions, ligand field theory 2-76649
GaAs:Cr, optical absorpt. spectroscopy on Cr-related defects 2-57129
GaAs:V, photoluminesc., optical absorpt., and ESR study 2-82916
β-Ga₂O₃, single cryst., valence force field, Raman study 2-77514
GaP:Cr, optical absorpt. spectroscopy on Cr-related defects 2-57129
GaP:Fe³⁺, tetrahedral paramag. complex, distortions effects, ESR study 2-110633
GaP:V, photoluminesc., optical absorpt., and ESR study 2-82916
GaP:N, N-N pair exciton spectra, J-J coupling and local field effects 2-82248
Gd₂MoO₇:Eu³⁺, spectroscopic props. 2-93254
Gd₂O₃, C-type, Stark levels, cryst. field splitting, UV study 2-66505
GdOBr:Eu³⁺, cryst. field effects, fluoresc. study 2-66503
GdOCl:Ti³⁺, Stark level, cryst. field anal., fluoresc. study 2-66504
KCl:Pb²⁺, EPR study 2-56930
KEr(MeO)₂, (Me=W, Mo), Nd³⁺ and Er³⁺ ion spectra in crystal fields, Stark struct. 2-76999
K, FeF₆, spin wave anal., neutron scatt. 2-82580
K₂Gd(MeO)₄, (Me=Mo, W), Nd³⁺ and Er³⁺ ion spectra in crystal fields, Stark struct. 2-76999
KLiSn²⁺, cryst. field effects, visible-UV study 2-72523
KLiSn²⁺, spectral line shape, visible-UV study 2-72524
KLu(MeO)₂, (Me=Mo, W), Nd³⁺ and Er³⁺ ion spectra in crystal fields, Stark struct. 2-76999
KSc(MeO)₄:Cr monocystals, ferroelastic phase transitions, C₃²⁺ EPR 2-115404
K₂SnCl₆:Os(IV), power luminesc. spectra and electronic levels 2-77585
KTaO₃:Fe³⁺, cubic cryst. field splitting, anomalous temp. effect, EPR study 2-77366
KY(MeO)₂, (Me=Mo, W), Nd³⁺ and Er³⁺ ion spectra in crystal fields, Stark struct. 2-76999
(La,Gd)B₆, single cryst., exchange interaction and cryst. field splitting, ESR 2-104696
LaCl₃:rare earth metal ions, single-electron cryst. field, multipole contrib. 2-71938
La₂MoO₇:Eu³⁺, spectroscopic props. 2-93254
LaOBr(I):Eu³⁺, cryst. field effects, fluoresc. study 2-66503
(LaO)₂CO₃, type Ia and II polymorphs, Eu doped, site selective excitation of fluorescence 2-116226
LaOCl:Ti³⁺, Stark level, cryst. field anal., fluoresc. study 2-66504
α-LiO₂:Ni²⁺, impurity ground state level splitting, EPR study 2-56530
LiNbO₃:Eu³⁺, polarised optical absorption bands, splitting 2-82835
LiNbO₃:Ni²⁺, impurity ground state level splitting, EPR study 2-56530
LiYF₄:Nd³⁺, oscillator strengths and Nd³⁺ optical absorption lines 2-116175
LuPO₄:Nd³⁺, Eu³⁺, optical spectra, crystal field interactions 2-67074
MgMn, dilute mag. alloy, spin glass behaviour 2-92937
Mg₂Si₂O₇(OH)₄, electronic absorpt. spectra, crystal field parameters 2-104907
Mg_{1-x}Ti_xFeO₄ spinel, mol. field coeffs. and exchange interactions 2-66801
MgWO₄:Ni^{II}, electronic ligand-field spectrum meas. 2-72526
MnBr₂, Mn²⁺ 3d shells, effective occupation number calc. 2-92503
MnCl₂, Mn²⁺ 3d shells, effective occupation number calc. 2-92503
MnF₂, Mn²⁺ 3d shells, effective occupation number calc. 2-92503
NaF, electron density by γ-ray diffractometry 2-76998
α-NaFeO₃, Sternheimer quadrupole factors 2-98603
β-Na_{0.33}V₂O₅, quasi-1D-conductor, nuclear quadrupole effect and phase transition 2-56970
NdAlO₃, paramag. susceptibility and optical spectra (*French*) 2-92856
NdCl₃, paramag. susceptibility and optical spectra (*French*) 2-92856
NdF₃, paramag. susceptibility and optical spectra (*French*) 2-92856
NdH₃, low temp. sp. ht., mag. transition, mag. susceptibility 2-61164
NdOCl, paramag. susceptibility and optical spectra (*French*) 2-92856
Ni complex, hexakis-3 crystal field interactions [-imidazole Ni(II)] nitrate, EPR fine struct. 2-72336
Ni(BF₄)₂·6NH₃, cryst. field distortion parameter, EPR linewidth and phase transition temp. meas. 2-61420
Ni(ClO₄)₂·6NH₃, cryst. field distortion parameter, EPR linewidth and phase transition temp. meas. 2-61420
NiPS₃, electronic states, reflectivity, optical absorpt., XPS 2-57246
Os complex, Os(bipyridyl)₂²⁺ electronic struct. of metal-to-ligand CT states 2-92535
Pb₂Ge₂O₇:Nd³⁺, cryst. growth and spectroscopic props. 2-99178
Pd/Si system, intrinsic and Si-stabilised oxides, Auger and UPS study 2-67160

crystal field interactions continued

- PrBe₃, Van Vleck paramag., cryst. field effects, magnetisation, resist. and NMR 2-72140
 PrCl₃, crystal field splittings by polarisable ligands 2-92539
 PrIn₃, singlet ground state system, Hall effect meas. and calc. 2-98625
 PrNi₂, Laves phase, cryst. field 2-98598
 PrNi₃, elec. and thermal cond., 0.5 to 20K, cryst. field effects 2-56549
 RCl₆H₂O:Gd³⁺, (R=Nd,Sm,Eu,Tb,Dy,Ho,Er,Tm), cryst. field parameters, spin Hamiltonians, polarisability tensors 2-87206
 Rb₂SmCl₆:Os(IV), power luminesc. spectra and electronic levels 2-77585
 Ru complex, Ru(bipyridyl)₃²⁺, electronic struct. of metal-to-ligand CT states 2-92535
 Si:Mn, B₂Mn²⁺B⁻ pairs, EPR study 2-110628
 SmB₄:Eu³⁺, local cryst. fields, EPR study 2-92999
 SrF₂:Re³⁺, point group crystal field and superposition model 2-92538
 ThCl₃, crystal field splittings by polarisable ligands 2-92539
 ThBr₃:U⁴⁺, incommensurate, optical absorption spectrum, lineshape anal. 2-110899
 ThCl₃:Pa⁴⁺, absorpt. and emission spectra, spin-orbit and crystal field parameters 2-99158
 TmAg, mag. props., mag. struct. and cryst. field scheme, neutron scatt. study 2-115978
 TmAsO₄, local props. of Tm³⁺ and Yb³⁺, ¹⁶⁹Tm and ¹⁷⁰Yb Mossbauer meas. 2-99006
 TmSe, trivalent and intermediate valent, spin dynamics, inelastic neutron scatt. meas. 2-72156
 Tm₂V₂O₇, ferromagnetic behaviour, cryst. field effects 2-104591
 Tm_{0.1}Y_{0.9}Ag, mag. props., mag. struct. and cryst. field scheme, neutron scatt. study 2-115978
 VCl₃, 3p spectra splitting of transition metal ions in XPS 2-57247
 YAG:Er³⁺, fluoresc. spectra of Er³⁺, energy level diagram 2-67097
 Y₂Al₂Fe₂O₁₂, mag. circular dichroism and IR absorption spectra of A₁-E transition 2-87749
 YAlO₃:Nd³⁺(Er³⁺)(Dy³⁺), luminescence and cryst. field splitting 2-116239
 YIG, amorphous, electric field gradient sign distrib., Mossbauer study 2-82765
 YIG:Si(Ge), magnetocrystalline anisotropy of Fe²⁺ at zero temp. 2-56848
 Y₂MoO₆:Eu³⁺, spectroscopic study 2-93254
 Y₂O₃:Ce³⁺(Sm³⁺)(Dy³⁺)(Yb³⁺)(Nd³⁺)(Er³⁺), energy levels, cryst. field anal., fluoresc. and IR study 2-72534
 Y₂O₃:Gd³⁺, Stark levels, cryst. field splitting, fluoresc. study 2-66505
 YOB:Eu³⁺, cryst. field effects, fluoresc. study 2-66503
 YOCl Tb³⁺, Stark level, cryst. field anal., fluoresc. study 2-66504
 Y₂R₁-₂Pd₃, (R=Pr,Nd,Tb,Dy,Ho,Er,Tm), cryst. field parameters and cryst. field linewidths 2-87204
 YbAsO₄, mag. ordering, ¹⁷⁰Yb Mossbauer meas. 2-99006
 Yb₂O₃, spectral and heat capacity Schottky contribs. 2-81975
 Yb₂O₃:Gd³⁺, Stark levels, cryst. field splitting, fluoresc. study 2-66505
 Yb₂V₂O₇, ferromagnetic behaviour, cryst. field effects 2-104591
 ZnMn, dilute mag. alloy, spin glass behaviour 2-92937
 ZnO:Cu, deep Cu centre, lattice distortion effects, SCF-LCAO cluster calc. 2-104297
 Zn₃P₂, AC photocond., spectral response 2-77109
 ZnS:Eu, influence of cryst. lattice field on Eu²⁺ emission spectra 2-87866
 p-ZnSnP₂, Schottky diodes, current-voltage charact., photosensitivity and recomb. radiation spectra 2-115863
 ZnWO₄:Ni^{II}, electronic ligand-field spectrum meas. 2-72526

crystal field splitting see *crystal field interactions*

crystal field theory see *crystal field interactions*

crystal fields see *crystal field interactions*

crystal growth

- see also *crystal growth from melt; crystal growth from solution; crystal growth from vapour; crystal purification; crystallisation; dendrites; epitaxial growth; nucleation*
 aligned columnar microstructure, preferential growth in reduced gravity 2-62117
 alkali metal cpds., M₂[UO₂(MoO₄)₂], (M=Na, K, Rb), solid-phase synthesis, composition determ. 2-72618
 amorphous, ion implanted, ultrarapid cryst. growth and impurity segregation during laser annealing 2-86722
 anthracene, slip planes crystal growth and photodimerisation 2-86598
 book, growth mechanisms and Si₃N₄ 2-112667
 directional crystallisation apparatus for growing complex solid solns. (*Russian*) 2-72609
 effect of long-range interactions 2-76332
 eutectic thin film struct. growth, nonlinear model 2-115587
 hollow dislocation core, Monte Carlo simulation 2-91849
 ice crystals formation by artificial nucleation, vars. of crystal habit at early growth stages 2-100484
 III-V polycrystalline semiconductor systems modelled by computing technique, phase diagrams (*Czech*) 2-83013
 impurity incorporation kinetics 2-86687
 interference microscopy in field of crystal growth 2-69243
 morphology of growth spirals, book contrib. 2-115162
 N-component system, step growth, master eqn. approach in column variables 2-91852
 narrow band-gap semiconductors, crystal growth, review 2-93390
 narrow gap semiconductors, conference, Linz, Austria (Sept. 1981) 2-89445
 nonlinear phenomena at phase transitions and instabilities, conf., Geilo, Norway (Mar.-Apr. 1981) 2-94882
 particle growth by difference approx. 2-60904
 quantum crystals, growth kinetics (*Russian*) 2-104114
 semiconductors, doping profiles homogeneity, crystal chem. anal. 2-55872
 Spacelab payload for materials science expts. 2-116346
 spiral growth, hollow dislocation core form., stress influence 2-98086
 surface diffusion and heterogeneous nucleation on solid substrates 2-76813
 surface step growth, master eqn. approach 2-98403
 Ag halide emulsion microcrystal growth, effect of polyvalent cations (*Russian*) 2-53871
 AsH(PO₃)₂, H₂O, synthesis and struct. determ. 2-86631
 BaMo(W)O₄, scheelite struct., cation diffusional mobility, solid phase synthesis appl. 2-86923
 Ba₂NaNb₂O₇, crystal growth and characterization, high SH output power (*Chinese*) 2-77117
 Bi₂GeO₃, computer controlled growth method (*Japanese*) 2-105055

crystal growth continued

- Bi₂Te₃:CdCl₂(Te) crystal growth using directional crystallisation apparatus for growing complex solid solns. (*Russian*) 2-72609
 CaCO₃, nucleation rate, crystallisation kinetics 2-71384
 CaMo(W)O₄, scheelite struct., cation diffusional mobility, solid phase synthesis appl. 2-86923
 CaO, surface area and morphologies of samples produced from decomp. of CaCO₃ crystals 2-76353
 Cu₂-B₂O₃, preparation by solid-phase mass transport, elec. props. 2-111066
 CuCl in glassy matrix, growth kinetics of microcrystals obs. 2-103661
 CuGaIn₂S₄, solid solns., growth and props. 2-83017
 Hg₂Cl₂, growth-induced inhomogeneities, electron optical investigation 2-109710
 InSe, crystal growth and defect evaluation (*Japanese*) 2-87958
 LiNbO₃, computer controlled growth method (*Japanese*) 2-105055
 SBH(PO₃)₂.H₂O, synthesis and struct. determ. 2-86631
 Si, large grain growth on SiO₂ by selective laser annealing 2-116358
 SrMo(W)O₄, scheelite struct., cation diffusional mobility, solid phase synthesis appl. 2-86923
 Sr(NO₃)₂, growth strains, synchrotron radiation X-ray section topography study 2-86512
 Ta₂N, high temp. nitriding of Ta, kinetics 2-81700
 TiSbSe, layer cryst., electrophys. parameters, growth conditions depend. 2-104375
 UO₂WO₄-Na₂(K₂)(Rb₂)(Cs₂)WO₄, solid-phase synthesis, struct., IR and luminesc. spectra 2-87752
 V₂O₅-₁, microsyntactic intergrowth, high resolution TEM obs. 2-91851
 YAG, computer controlled growth method (*Japanese*) 2-105055
 ZnO:Co nonstoichiometric single cryst., growth and elec. props. 2-77051

crystal growth from gel

- cuprous halides, cryst. growth techniques and defect chemistry, re view 2-83015
 holography in crystal growth, review 2-81699
 sodium hydrogen oxalate monohydrate, prep. and morphology, X-ray diff. 2-115159
 BaMoO₄, periodic precip. in SiO₂ gel, elec. and mag. fields effects 2-93397
 CaCO₃, calcite, rhythmic crystn. in agar gel, impurity addition effect 2-55867
 Mg(OH)₂, periodic crystallisation in agar-agar gel 2-116350
 MoO₃-Al₂O₃ system, reaction and degree of cryst., effect of prep. conditions 2-67206
 NaY zeolite, crystallisation, IR spectroscopy 2-71385
 PbBr₂, large needles and single crystals, growth in silica gel 2-93395
 PbCl₂ 2-93395

crystal growth from melt

- see also *liquid phase epitaxial growth; zone melting*
 alkali halides, single crystal growth using a simple rot. puller in air and protective atmospheres 2-62059
 binary alloy, solutal convection on morphological stability 2-91850
 binary melt, crystallisation, nonequilib. two-phase zone model, convection effects 2-109719
 Bridgman-Stockbarger growth, programmed and oscillatory motion 2-60901
 Bridgman-Stockbarger technique, freezing rate deviation from very low translation rates 2-97951
 Bridgman-Stockbarger technique, freezing rate deviation from moderate translation rates 2-97952
 Bridgman-type crystal growth, thermal modelling, analytical one dimens. analysis 2-109715
 Bridgman-type crystal growth, thermal modelling, analytical two dimens. analysis 2-109716
 circular anisotropic particle grown from melt, morphological stability of shape 2-65898
 constant diameter growth, by controlling melt level 2-55873
 cuprous halides, cryst. growth techniques and defect chemistry, re view 2-83015
 Czochralski and CACRT crystal growth numerical simulation of convective flow in melt 2-105064
 Czochralski classical growth method and CACRT, free and forced convection simulation 2-76339
 Czochralski crystal puller automated by the weighing method 2-67208
 Czochralski grown crystal, residual stresses calc. 2-91853
 Czochralski growth, by controlling melt level 2-55873
 Czochralski growth, crystn. rate behaviour under change of system parameters, theory 2-111054
 Czochralski growth apparatus, automatic, phantom controlled 2-67209
 Czochralski growth system, mech. instability effects on crystallisation rate 2-87965
 Czochralski growth system, melt temp. effects on crystallisation rate 2-87964
 Czochralski method, control problem numerical simulation for single crystal growth (*Ukrainian*) 2-103672
 Czochralski method, monitoring diameter variation using CCTV on meniscus 2-111058
 Czochralski oxide melts, flow transitions 2-60899
 Czochralski silicon solar cell modules: present cost and future prospects 2-83498
 diamond, crystallisation mechanism in system of C in a metal melt 2-81701
 edge-defined film-fed growth, heat transfer effect on interface shape and solute segregation 2-97955
 garnet melt, simulated, fluid flow patterns 2-97953
 horizontally directed crystallisation, heat transfer processes (*Russian*) 2-67211
 II-VI compound crystal growth, characterisation and device appls., conf., Durham, England (April 1982) 2-107003
 II-VI semiconductors, bulk and epitaxial growth, impurity role 2-116347
 Kypopoulos grown crystals, cryst. shape 2-65908
 laser-II, conf. proceedings held at Kanpur, India, March 1979 2-58530
 microcomponent concentration influence on plane crystn. front stability 2-55870
 molten metal crystallisation via cooling sheath, variational methods (*French*) 2-71383
 oxide, interface shape control using IR radiation convergence type heater in F2 growth 2-93410
 polyethylene, extended chain single cryst. growth rate and morphology, optical microscopy study 2-91838

crystal growth from melt continued

- solidification, unidirectional, axial temp. characteristics, numerical calc. 2-66181
 supercooling by faceting the phase boundary during pulling 2-115161
 television measuring system for crystal growth parameter determ. (*German*) 2-69151
 temperature fields, calc. using heat flow potential 2-65896
 unsteady Czochralski growth, test of boundary layer model 2-91848
 AgBr single crystal IR fibres 2-99318
 Ag₁₆Te₃P₂O₇, single cryst. growth and struct. determ. 2-81751
 AgIn₂S₈, two-temp. synthesis, props. 2-77725
 AgTiS₂(Se)(Te), prep. and semicond. growth, cryst. struct., elec. props. (*French*) 2-87971
 Al, bicrystal grown from melt, crystal boundary behaviour (*Japanese*) 2-104173
 Al, residual electrical resist. meas., correlation with dislocation density and cryst. growth from melt (*Russian*) 2-98614
 Al-Sb multilayered film, laser induced crystn. 2-61316
 Al-Si, bicrystal grown from melt, crystal boundary behaviour (*Japanese*) 2-104173
 Ba₂NaNb₂O₁₅, rotational striations and diffusion 2-115157
 BaO-SrO-Na₂O-Nb₂O₅ system, cryst. growth and electromech. characts. 2-87693
 BaS(BaSe), optic phonon IR reflection spectra and cryst. growth, expt. study 2-99117
 Ba₂-Sr₂Ti₂Si₂O₈, crystal growth and SAW props. 2-87970
 BaWO₄, cryst. growth from Na₂WO₄ melt, nucleation mechanism, and kinetics induction period meas. 2-91836
 BaWO₄, crystal growth from melt, diffusion controlled, activation parameters, DTA 2-65891
 Bi, Bridgman and zone-levelling cryst. growth, preferred orientation, effect of growth mode 2-111055
 Bi, crystal growth from melt, effect of container shape on (111) plane orientation 2-86597
 Bi₂Ge₂Si₂O₁₀ single crystals with low sound speed, Czochralski growth methods 2-62058
 (Bi,Sb)_{1-x}(Te,Se)_x, orientated thermoelec. material, Bridgman method prep. technique 2-105061
 Ca₂Al₂SiO₇-Ca₂SiO₄, nucleation and cryst growth from melt. 2-72614
 CaF₂-HoF₃(ErF₃), cryst. growth from melt, laser props. 2-105063
 Ca(NO₃)₂.4DMSO, cryst. growth rate from melt, cryst. morphology 2-111053
 CaO-Ga₂O₃-GeO₂ system, phase form. 2-111150
 CaS(CaSe), optic phonon IR reflection spectra and cryst. growth, expt. study 2-99117
 Cd₂Hg_{1-x}Te, compositional uniformity, directed 'crystn.' from melt 2-76333
 CdI₂, melt-grown single crystal, polytypism, X-ray diffraction study 2-111051
 CdS:O content, activation anal. 2-86702
 (Ce, Tb)MgAl₁₁O₁₉ single crystal, prep. and X-ray charact. 2-87973
 CoCl₂, anhydrous single crystals, in-situ purification and Bridgman growth 2-111060
 Cs₂UO₂P₂O₇, prep. and struct. 2-86632
 Cu, liq., Czochralski classical growth method and CACRT, free and forced convection simulation 2-76339
 Cu-Sn(100) surface struct., LEED obs. (*Japanese*) 2-115511
 CuGaIn₂Se₂ solid solns., phase diag., cryst. growth and dislocation struct. 2-86636
 CuIn₂S₈, two-temp. synthesis, props. 2-77725
 Dy₂SiO₅, Czochralski growth two crystalline struct. modifications 2-87968
 FeAl₃, intermetallic, cryst. growth by dissolving Fe alloy in liq. Al bath 2-111165
 FeCl₂, (Fe,Co)Cl₂, (Fe,Mg)Cl₂, anhydrous single crystals, in-situ purification and Bridgman growth 2-111060
 Fe₂SiO₄, fayalite, melt-grown, Fe²⁺ content, Mossbauer effect 2-93069
 GaAs, bulk Bridgman crystals, O related gettering of Si during growth 2-61005
 GaAs, crystal growth-property relationships, Bridgman-type apparatus for study 2-86612
 GaAs dislocation-free crystal prod. by doping, necking procedure in LEC growth 2-76337
 GaAs, grown by Bridgman method, props. 2-98675
 GaAs, LEC grown, effect of water content of B₂O₃ encapsulant on purity and stoichiometry 2-103674
 GaAs, LEC growth, donor impurities, photoluminescence evaluation 2-116230
 GaAs, LEC growth of homogeneous undoped semi-insulating crystals, with in-situ melt purification 2-93408
 GaAs, liquid encapsulated Czochralski growth, dislocation form. 2-81785
 GaAs, liquid encapsulated Kyropoulos growth method 2-99323
 GaAs, liquid encapsulated Czochralski, compensation mechanism, melt stoichiometry 2-111057
 GaAs recombination-type semi-insulating material prep. for high power CO₂ laser windows (*Chinese*) 2-99317
 GaAs, semi-insulating, bulk growth by LEC 2-57283
 GaAs, semi-insulating behaviour and thermal stability, stoichiometry effect 2-110348
 GaAs semi-insulating bulk crystal growth by Liquid Encapsulation Czochralski process, Ga inclusion minimization 2-67212
 GaAs semi-insulating wafer, dislocation density and sheet resistance variations 2-109801
 GaAs, undoped semi-insulating LEC grown, growth striation etching 2-76350
 GaAs:Cr, Fe liquid encapsulated Czochralski cryst., SIMS 2-115270
 GaAs:Cr, generation of paramagnetic defects, EPR study 2-66906
 GaAs:Fe, Cr, LEC grown, impurity densities and Fe(Cr) redistrib. 2-98146
 GaP, large diameter single cryst., computer controlled LEC growth 2-99327
 GaP:B grown by LEC technique, IR absorpt. band, resonant and gap modes 2-99157
 GaP:S LEC epitaxial layer, microdefects and dislocation generation, TEM study 2-115236
 GaSb, Czochralski growth of low dislocation density crystals, X-ray study 2-93407
 GaSb, melt-grown single cryst., defect etchant for dislocations and growth striations 2-91972
 GaSb, single cryst. Czochralski growth, twinning, seed cryst. polarity effects 2-99319

crystal growth from melt continued

- GaSb single crystals, Czochralski growth under reducing conditions 2-99321
 Gd₃Ga₂O₇, cryst. growth and prep. defects, bubble memory substrates appl. 2-93405
 Gd₃Ga₂O₇:Nd crystals grown by Czochralski method, Nd effective distrib. coeff. 2-76481
 Ge film, laser induced crystn. 2-61316
 Ge high-purity crystals, H conc. and distrib. 2-70051
 Ge, high-purity single crystals, C content and distrib. 2-70052
 InP, agitated gas flow technique for high press. synthesis (*Chinese*) 2-99320
 InP, LEC grown semi-insulating, effect of Fe content on thermal stability 2-97966
 InP, photoluminescence of synthesis-solute-diffusion and LEC grown cryst. 2-93259
 InP, semi-insulating single crystals, high quality, grown by automatic diameter control system 2-99326
 InP, single crystals, dislocation free, cryst. growth by LEC technique 2-97965
 InP:Mn, single crystal Czochralski growth and props. 2-93406
 InP:Sb, LEC single crystal growth, Sb dopant distrib. coeff. 2-93412
 β-In₂S₃, two-temp. synthesis, props. 2-77725
 InSb melt, suppression of thermal convection by transverse mag. field 2-86600
 InSb, pulled crystals, Czochralski growth, impurity distrib., US vibr. effects 2-116357
 InSb:Ti, cryst. growth and p-n junction form., zero cavity growth 2-82452
 InSe, cryst. grown from melt, struct. transition, X-ray diff. study 2-55942
 InSe large single crystals grown from stoichiometric, non-stoichiometric melts 2-93411
 KCl, Kyropoulos grown crystals, cryst. shape 2-65908
 Li₂B₂O₅.5H₂O, growth and growth mechanism 2-97963
 Li₃N, Li⁺ conductivity, primary cell application 2-92270
 Li₃N:D, H, Czochralski growth and doping method 2-111061
 LiNbO₃, Czochralski-grown single crystals, growth striations and ferroelectric domain struct. 2-93129
 LiNbO₃, ferroelectric domain struct. and growth striations (*Chinese*) 2-110793
 LiNbO₃-Fe₂O₃ solid soln. single cryst., congruently melting, phase transition 2-98264
 Li₂SiO₃(GeO₃), Czochralski growth, pyroelec., dielec., elastic props. 2-110775
 LiTaO₃ large cryst., Czochralski grown, low angle tilt boundaries, edge dislocations and cracking 2-91843
 LiTaO₃ substrate fabrication and characterization for pyroelectric sensors 2-87969
 MgCl₂, anhydrous single crystals, in-situ purification and Bridgman growth 2-111060
 MnO-Al₂O₃ system, growth by Verneuil method, phase composition 2-105062
 Na₂GeO₃, Czochralski growth, pyroelec., dielec., elastic props. 2-110775
 Na₂PO₃F, prep. from mixture of Na₂CO₃, H₃PO₄ and NH₄HF₂ 2-72615
 α-Na₂Si₂O₇, single crystal growth from melt 2-111063
 NbC_x, single cryst., prep., struct. and mech. props. 2-98108
 Ni-Al-Cr dendritic monocystals, solidification, coarsening and microsegregation 2-99413
 Ni₂₀Ti₃B₈ r-phase crystals, Czochralski growth and cryst. props. 2-111062
 O content, activation anal. ZnSe:O 2-86702
 P, black, high press. and temp. cryst. growth and elec. resist. meas. 2-92619
 P, black, single cryst. growth from melt, X-ray structural characterisation 2-111056
 Pb circular crystals, growth from melt, grain boundaries and solid-liq. interface normal orientation 2-87966
 Pb₈Bi₂(PO₄)₆O₂, Czochralski growth, cryst. struct., X-ray diff. study 2-91922
 PbFe_{2-x}Ga_xO₁₀ single crystal, prep. and characts. 2-72617
 Pb₂Ge₂(O,F)₁₁, ferroelectric crystals, growth, Curie point, dielectric const. 2-72616
 Pb₂Ge₂O₁₁:Nd³⁺, cryst. growth and spectroscopic props. 2-99178
 Pb₂Hg_{1-x}Te, single crystal growth by Czochralski method 2-99322
 Pb₂KNb₂O₁₅, phase determ. and growth for good quality crystals 2-97957
 PbS, growth of single crystals from natural galena 2-116356
 Pb_{1-x}Sn_xTe single cryst. growth, by vapour-melt-solid mechanism 2-62060
 PbTe, bulk crystal, synthesis by iodide method, elec. and struct. characterisation 2-67210
 PbTe, heterogeneous nucleation, statistical thermal anal. 2-65892
 PbTe single crystals grown by vertical Bridgman technique, micro-size defects 2-97958
 PbZr_{1-x}Ti_xO₃, Ti distrib., ferroelectric transition 2-86654
 R₂SiO₅, single crystal growth, struct. and optical characteristics 2-87968
 RbFeS₂, Bridgman growth, Mossbauer hyperfine fields and Fe⁵⁷ resonant fraction 2-77002
 Rb₂UO₂P₂O₇, prep. and struct. 2-86632
 Si 3 inch solar cells, fabricated in fluidised-bed reactor, charact. 2-88438
 Si and GaAs substrate manufacture (*German*) 2-76431
 Si as-grown Czochralski crystal, nucleation temperature of large oxide precipitates 2-91841
 Si, cryst. growth from melt., temp. field control by IR television technique 2-111052
 Si crystal growth by Czochralski method, SiO conc. control by US vibration of immersed plate 2-111059
 Si crystals growth for use in solar cells, methods and economics (*Italian*) 2-93409
 Si, Czochralski and CACRT crystal growth numerical simulation of convective flow in melt 2-105064
 Si, Czochralski crystal growth through axial mag. field fluid flow damping, apparatus 2-72613
 Si, Czochralski crystal growing furnace, quality considerations 2-99324
 Si, Czochralski crystals, intrinsic gettering study 2-76430
 Si, Czochralski grown, thermally induced microdefects, nucleation and growth obs. 2-57379
 Si, Czochralski grown, yield stress, O precip. and dissolution effects 2-57365
 Si, Czochralski growth, dynamic O equilib. in melts 2-60895

crystal growth from melt continued

- Si, dislocation free, formation of self-order agglomerates during cryst. growth 2-81782
 Si, edge-defined film-fed growth, heat transfer effect on interface shape and solute segregation 2-97955
 Si, melting and cryst. growth, X-ray topographic obs. 2-65900
 Si ribbon, edge-defined film-fed growth, ambient-meniscus melt interactions associated with impurity transport 2-97950
 Si ribbon growth under electron bombardment, thermal gradients and stresses induced, application in solar cells 2-83016
 Si seed crystal fabrication for use with Czochralski method 2-99325
 Si single crystal, pedestal grown, resistivity radial distrib. 2-104365
 Si solar cells, fabrication and props. using squarely shaped crystals 2-88439
 Si, solar cells, production of large area polycryst. sheets from melt 2-99783
 Si, swirl defect form. during melt growth 2-65984
 Si, temperature fields, calc. using heat flow potential 2-65896
 SiO₂, C, Czochralski grown, O related donors, 700 to 800°C, expt. study 2-56469
 SiO₂ crystal, Czochralski grown, deformed, dislocation configurations 2-76448
 SiO₂ crystals, indentation rosettes and dislocation locking by O 2-98111
 SnS₂, structural polytypism rel. to environments of formation 2-76338
 SrS(SrSe), optic phonon IR reflection spectra and cryst. growth, expt. study 2-99117
 SrTeO₃, ferroelastic state 2-66109
 Ti_{1-x}AsSe₃, seeded growth 2-62061
 TlPbI₃, Tl₂PbI₃, Tl₂PbBr₃, crystal growth, elec. and optical props. 2-87967
 TlSnI₃, Tl₂SnI₃, crystal growth, elec. and optical props. 2-87967
 Tm₂(Tm, Ga_{2-x})/Ga₂O₃, Czochralski growth, optical and X-ray topography quality obs. 2-93413
 V₂O₅ crystals, US vel., anomalous temp. depend. 2-66135
 YAG, interface shape control using IR radiation convergence type heater in F2 growth 2-93410
 YAG, single cryst., Czochralski grown, dislocations and inclusions, birefringence study (*Chinese*) 2-109709
 YAG:Cr³⁺, Czochralski grown, colour centres, optical absorption spectra study 2-91959
 YAG:Nd crystals, Czochralski grown, defect disclosure by thermolum. 2-93289
 YAG:Nd crystals, radiation colour centres rel. to growth defects, absorpt. and luminesc. obs. 2-71445
 Y:Al₂O₃:Tb single crystal, phosphor's produced by ion implantation 2-76472
 YIG:Pr⁴⁺, cryst. growth from melt, spontaneous magnetisation and mag. anisotropy meas. 2-77273
 ZnS:O content, activation anal. 2-86702
 ZnSb₂O₄, cryst. struct. and cryst. growth from Sb₂O₃ flux 2-98004
 ZnSe, bulk and epitaxial growth, impurity role 2-116347
 ZnSe crystals, vol. defect influence on absorpt. at 10.6 μm wavelength 2-55284
 ZnSe crystals stoichiometry when obtained from melt 2-104006
 ZnWO₄, cryst. growth and scintillation props. 2-57282

crystal growth from solution

- see also crystal growth from gel; liquid phase epitaxial growth*
 adrenocorticotrophic hormone oligopeptides, crystallisation expts. 2-78283
 alkaline earth compounds, precipitation, of sparingly soluble salts from aq. soln. heterogeneous nucleus numbers meas. 2-66229
 alkaline earth metal hydroxosalts, M₂[Ay(OH)]₂H₂O (A=Be, Zn, Cr^{III}, Fe^{II}, Al, Ga, Ti, Zr, Sn^{IV}, Sb^V), precip. from aq. soln. 2-67726
 alkaline earth salts, cryst. growth from aq. soln., laboratory and industrial studies, review 2-111042
 batch crystallisation expts., cryst. growth rates 2-76345
 bis(benzylammonium)tetrachlorochromate(II), 2D ionic ferromagnet, cryst. growth 2-111049
 calcium oxalate, precipitation, nucleation and growth kinetics, temp. effect 2-76336
 cholesterol, anhydrous, crystal habit, solvent and crystn. effects 2-55868
 corundum crystals grown from cryolite flux, surface microtopographs, spiral growth mechanism 2-76343
 crystalliser, two-vessel Walker-Kohman apparatus 2-93396
 cuprous halides, cryst. growth techniques and defect chemistry, re view 2-83015
 DMTMTTF based ionic radical salts, electrolytic cryst. growth, cond. and struct. data 2-93403
 electrolyte cryst.-aq. soln. interfacial tensions, from crystn. data 2-60902
 flux crystal growth, control of spontaneous nucleation, expt. study 2-105060
 α-HgI₂, single crystals, plastic defects, X-ray topographs 2-109784
 holography in crystal growth, review 2-81699
 ice crystals in low temp. electrolyte solns., controlled nucleation and quasi-ordered growth 2-60903
 II-VI compound crystal growth, characterisation and device appls., conf., Durham, England (April 1982) 2-107003
 interaction theory, growth rate for surface reaction limited cryst. growth 2-76352
 K₂Cr₂O₇, growth morphology, by solvent evaporation method 2-91835
 lithium formate solutions, refr. index, density and elec. cond. meas. near saturation temp. 2-76719
 mixed crystal growth, from ideal dilute soln. 2-60900
 nucleation, two-dimensional, nucleus size dependence of interfacial tension calc. 2-65893
 piezoelectric quartz crystals growth using quartz from Trun, Bulgaria, as raw material 2-116353
 polyethylene, lamellar thickening from isothermal soln. annealing 2-67373
 quartz, automated hydrothermal system of RADCE/ESM 2-99315
 quartz, microtwinning, interferometry study 2-115248
 quartz, synthetic, growth, seed influence on dislocation density (*French*) 2-76351
 quartz crystal, growth history 2-93401
 quartz crystal hydrothermal growth, autoclave design 2-67204
 rare earth disilicates, single cryst. growth from (Bi₂O₃+V₂O₅):SiO₂ flux, solubility data applic. 2-105059
 rare earth titanates, R₂O₃·2TiO₂, prep. by coprecipitation, crystal struct. 2-72610
 sodium urate crystals, growth morphologies 2-76348
 SrWO₄, solubility in metal chloride melts, crystallisation 2-86874

crystal growth from solution continued

- stoichiometric crystal, A-B, theory of growth 2-65894
 sulphides, crystallisation from KSCN melts, solubilities 2-111043
 tetraselenotetracene, prep., purification and polymorphism 2-76423
 TGS, single crystal, growth from soln. and morphological studies 2-65895
 (TMTSF)₂ClO₄, organic Π donors, electrochemically grown salts, supercond., synthesis and study 2-56750
 (TMTSF)₂X, organic metal and supercond., chemistry and electrocrystallisation 2-55871
 transition metal compounds, precipitation, of sparingly soluble salts from aq. soln. heterogeneous nucleus numbers meas. 2-66229
 TTFX, (X=halide, NO₃) highly conductive thia adducts, electrocrystn. 2-93402
 two-dimensional crystal growth problem, rate constants 2-76346
 zeolite, VSZ-4 crystals, hydrothermal growth and characteris. 2-99311
 Ag, single crystal, electrocrystallisation, conc. non-homogeneity 2-91834
 α-Al₂O₃ crystal, hydrothermally grown, cryst. habit 2-65941
 AlPO₄, recent progress on cryst. growth, dielectric const. meas. 2-99314
 Ba(ClO₄)₂·H₂O, crystalloluminescence and mechanoluminescence spectra 2-110947
 Ba(NO₃)₂, stacking faults and dislocations due to liquid inclusion presence 2-91989
 BaNb₂O₆ single crystals, flux growth, X-ray diff. obs. of columbite struct. 2-99313
 BaPb_{1-x}Bi_xO₃, cryst. growth from molten KCl solvent and supercond. props. 2-77719
 BaSO₄, growth rate in suspension, influence on inhibitor conc. 2-116352
 BaWO₄, solubility in metal chloride melts, crystallisation 2-86874
 Be₂Al₂Si₂O₁₈:Cr, emerald cryst., MM wave quantum amplification 2-93329
 BiP₂O₇-NdP₂O₇, prep. and props. of solid solutions 2-72611
 CaHPO₄·2H₂O, crystallisation, representation of growth curves 2-76340
 Ca(NO₃)₂, crystal growth from conc. aq. soln. 2-55869
 CaO single crystals, dendritic growth from molten CaCl₂ 2-92430
 Ca₁₀(PO₄)₆(OH)₂, dissoln. kinetics, acidity constant for HPO₄²⁻ surface complex 2-60896
 Ca₃(PO₄)₂OH, hydroxyapatite, crystallisation, representation of growth curves 2-76340
 CaSO₄·2H₂O, gypsum, cryst. growth at low supersaturation, screw dislocation controlled 2-109717
 CaTiO₃, kinetics of formation, hydrothermal conditions 2-111453
 CaWO₄, solubility in metal chloride melts, crystallisation 2-86874
 CdCl₂·2.5H₂O, purification, by distillation and sublimation in vacuum 2-77720
 CdCr₂Se₄, single cryst. growth from soln. in melts in different salts 2-111046
 CdI₂, polytypism, mag. field effects during solution growth, X-ray study 2-109751
 Cd₂Pb_{1-x}S_x film, growth kinetics, chem. deposition from aq. soln. 2-110190
 CdS soln. growth using Te as solvent 2-93398
 CdS-CdSe, struct. and phase comp. of precip. and films 2-110191
 CdSe soln. growth using Te as solvent 2-93398
 CdTe, bulk grown and epitaxial samples, minority carrier diffusion length 2-115776
 CdTe, modified solvent evaporation cryst. growth and characterisation 2-111050
 Ce₂(SO₄)₃·5(H₂O), crystal synthesis and struct., X-ray, Raman spectra and thermal anal. 2-67205
 CoCo, antiferromag., cryst. growth and mag. props. 2-66792
 Co(NH₄)₂(SO₄)₂·6H₂O, cryst. growth from aq. soln., mag. field effect 2-109712
 CrCl₃, purification, by distillation and sublimation in vacuum 2-77720
 CsRPO₂ crystals (R≡ rare-earth ions), growth, struct., IR spectra 2-98023
 Cu(NH₄)₂(SO₄)₂·6H₂O, crystal growth from aq. soln., mag. field effect 2-109711
 Fe(NH₄)₂(SO₄)₂·6H₂O, crystal growth from aq. soln., mag. field effect 2-109711
 α-Fe₂O₃, flux growth by fast cooling from low soaking temps. 2-111048
 GaAs bulk crystals soln. grown by slow cooling, const. temp. steady-state processing macrosegregation 2-91845
 GdGa₂O₃, garnet, formation, DTA and X-ray phase anal. 2-67207
 InP, photoluminescence of synthesis-solute-diffusion and LEC grown cryst. 2-93259
 InSe large single crystals grown from stoichiometric, non-stoichiometric melts 2-93411
 K₂Al₂(SO₄)₄, crystal growth kinetics from soln., metastable zone width 2-91837
 K₂Al₂(SO₄)₄·24H₂O, batch precipitation by mixing component aq. solns. 2-116351
 KAl(SO₄)₂·12H₂O, nonuniform soln. growth 2-77722
 KCl:Pb²⁺, (100) and (111) face crystal growth rates, Pb²⁺ effects (*Russian*) 2-65897
 KCl-NaCl two-phase mixed cryst., etching obs. of impurity ion defects 2-55988
 K₂Cr₂O₇, crystals grown from aqueous soln., growth hillocks obs. 2-97962
 K₂Cr₂O₇, etching, revelation of dislocations, rel. to cryst. growth 2-91969
 K(D₂H_{1-x})₂PO₄ CC crystals, solution growth, for electrooptic devices 2-111041
 KH₂PO₄, KD₂PO₄, growth features of prismatic faces, refl. microscopy obs. 2-115160
 KH₂PO₄, KD₂PO₄, large single crystal growth from soln. for laser technology 2-116354
 KH₂PO₄ type crystals, taper effect rel. to growth soln. bulk supersaturation 2-109713
 KNbO₃ single cryst., struct. props., growth conditions influence (*Russian*) 2-98034
 2 K₂SO₄·Na₂SO₄, crystalloluminescence and mechanoluminescence spectra 2-110947
 La₂O₃-PbO-B₂O₃ fluxed-melt system, solubility and relative supersaturation 2-93400
 LiCeP₂O₁₂ crystals, growth and spectral properties (*Chinese*) 2-99163
 LiErP₂O₁₂ crystals, growth and spectral properties (*Chinese*) 2-99163
 LiEuP₂O₁₂ crystals, growth and spectral properties (*Chinese*) 2-99163
 LiHoP₂O₁₂ crystals, growth and spectral properties (*Chinese*) 2-99163
 LiIO₃ crystal growth by reagent method SHG of Nd:YAG laser 2-114371
 α-LiIO₃, crystallisation from solution characteristics meas. 2-86599
 α-LiIO₃, impurity distrib. in single crystal growth from soln. 2-71386

crystal growth from solution continued

- LiNdP₆O₁₂, crystal struct. (*Chinese*) 2-98011
 LiPrP₆O₁₂ crystals, growth and spectral properties (*Chinese*) 2-99163
 MgHPO₄·3H₂O, newberyite, crystn. and effect of pH and conc. 2-62055
 MgNH₄PO₄·6H₂O, struvite, crystn. and effect of pH and conc. 2-62055
 MgNb₂O₆, single crystals, flux growth, X-ray diffr. obs. of columbite struct. 2-99313
 Mg(OH)₂, periodic crystallisation from gel media, spacing coeff., flocculation value 2-87961
 MgSO₄·7H₂O, contact nucleation at low impurity levels 2-76334
 MgWO₄, solubility in metal chloride melts, crystallisation 2-86874
 Mn-Zn ferrite synthesis from Na₂O-B₂O₃ flux under CO-CO₂ ambients 2-72612
 MnCO₃, antiferromag., cryst. growth and mag. props. 2-66792
 NH₄Br dendritic crystal growth in capillary, quantitative meas. on morphology 2-98506
 NH₄H₂PO₄ crystals, dislocation-free, pyramidal faces, growth from soln., growth stoppages in presence of impurity obs. 2-65899
 NH₄H₂PO₄, dislocation free growth 2-116355
 NH₄H₂PO₄, growth features of prismatic faces, refl. microscopy obs. 2-115160
 NH₄H₂PO₄, large single crystal growth from soln. for laser technology 2-116354
 NH₄H₂PO₄ single crystals, effect of supersaturation swing in cryst. growth 2-99312
 NaCd(HCO₃)₂, cryst. growth and struct. characterisation, etching, X-ray diffr. and IR study 2-91920
 NaIO₃ single crystals, growth and characterisation 2-62056
 NdP₆O₁₄, admixtures influence on crystallisation and props. 2-93399
 NiCO₃, antiferromag., cryst. growth and mag. props. 2-66792
 Ni(NH₄)₂(SO₄)₂·6H₂O, crystal growth from aq. soln., mag. field effect 2-109711
 PbS₂Se_{1-x}, thin film deposition, soln. growth technique 2-93461
 PbTe, cryst. growth from soln., travelling heater method, gravitation effects 2-111044
 PbTe, cryst. growth from soln. by travelling heater method, gravitation effects 2-111045
 PbTe crystal growth by travelling heater method 2-93404
 PbWO₄ crystals, flux growth and elec. props. 2-77721
 Pb(Zr,Ti)O₃, single cryst., ferroelec., growth conditions and effect on growth features 2-77724
 PbZr_{1-x}Ti_xO₃, Ti distrib., ferroelectric transition 2-86654
 Sb₂Ge₂O₁₂, synthesis, struct. and props. 2-111047
 Sb₂Se₃ photoelectrochemical cells chemically deposited thin film electrode deposition and behaviour affecting parameters 2-67865
 SiC, 6H-type, double spiral interpretation 2-109714
 SiP, single crystal, prep., p-T projection of three-phase equilib. line, DTA study 2-87963
 SnS₂, structural polytypism rel. to environments of formation 2-76338
 YAG, flux grown, surface and bulk growth-induced strains 2-57280
 Y₃Fe₅AlO₁₂ single crystals, stability region and growth conditions in BaO-B₂O₃-BaF₂ solvents 2-62057
 Y₃Fe₅GaO₁₂ single crystals, stability region and growth conditions in BaO-B₂O₃-BaF₂ solvents 2-62057
 Zn(NH₄)₂(SO₄)₂·6H₂O, crystal growth from aq. soln., mag. field effect 2-109711
 ZnNb₂O₆ single crystals, flux growth, X-ray diffr. obs. of columbite struct. 2-99313
 ZnO, single cryst., piezoelec. semicond., hydrothermal growth and charact. 2-77723
 ZnO soln. growth using Te as solvent 2-93398
 ZnS soln. growth using Te as solvent 2-93398
 ZnSe soln. growth using Te, Se and As₂Se₃ as solvents 2-93398

crystal growth from vapour

- see also vapour phase epitaxial growth
 cuprous halides, cryst. growth techniques and defect chemistry, re view 2-83015
 CVD, bibliography (1960-1980) 2-58578
 expansive convection, in vapour transport across horizontal rectangular enclosures 2-60898
 heterogeneous equilibria, in vapour phase crystal growth systems 2-97954
 α-HgI₂ single crystals, plastic defects, X-ray topographs 2-109784
 ice single crystal growth and evaporation from vapour phase, interface kinetics 2-97959
 ice single crystal growth and evaporation from vapour phase, interface kinetics, meas. in water vapour environment 2-97960
 ice single crystal growth and evaporation from vapour phase, interface kinetics, meas. under N₂ partial press. 2-97961
 II-VI compound crystal growth, characterisation and device appls., conf., Durham, England (April 1982) 2-107003
 II-VI semiconductor, bulk and epitaxial growth, impurity role 2-116347
 orientation dependent desorption energy 2-109718
 relaxation curve of cryst.-vapour system using BCF theory 2-91846
 single crystal, morphological stability of vapour grown crystals 2-115170
 V-VI compounds, chem. transport during crystn. from vapour 2-81698
 AgCl whisker-like crystals grown from vapour phase, light and electron microscopic obs. 2-98507
 AlCl₃, thorough purification, reduction of impurities in Al vapour 2-99308
 CaS, prep., crystal growth by CVT and luminescence 2-116349
 CdCl₂·2.5H₂O, purification, by distillation and sublimation in vacuum 2-77720
 CdCr₂Se₄In, Ag defect single cryst. growth, elec. and mag. characts., dopant influence 2-91842
 CdGeP₃, prep. and struct., vapour transport method 2-93392
 CdS, single and bicryst. growth from vapour, polarity influence 2-57279
 CdS single crystals grown from vapour phase, impurities and hexagonal spiral pits 2-76342
 CdTe, obliquely deposited film, substructure, piezoelectric charge, high-voltage photo-cmf 2-87433
 CdTe, single crystals, grown from vapour, X-ray topography study (*German*) 2-60993
 CrCl₃, purification, by distillation and sublimation in vacuum 2-77720
 Fe₃Mo₂O₈, cryst. growth, morphology, elec. and mag. props. 2-87960
 α-Fe₂O₃·Zr single crystals, growth and photoelectrochemical study 2-62052
 Fe₂S₃V₂O₁₃, cryst. growth, elec. resist., Mossbauer spectra, and mag. susceptibility 2-83014
 GaAs-Cl₂ system, complex heterogeneous equilibria 2-97954

crystal growth from vapour continued

- Gd₂CrSe₆, single crystal growth, crystal struct. 2-87959
 Ge, chemical transport with H₂O, transport rate depend. on solid phase comp. (*German*) 2-11039
 Ge transport by GeI₄, GeI₂, CVD numerical model 2-97956
 GeAs₂, chem. vapour transport, thermodynamics and kinetics 2-97949
 GeS₂, relaxation curve of cryst.-vapour system using BCF theory 2-91846
 GeSe single crystal growth from vapour, phenomenological description 2-91840
 HfC whiskers, growth by CVD (*Japanese*) 2-105057
 HfOS, vapour phase synthesis, X-ray characterisation 2-105058
 Hg₂Cl₂, single crystal, apparatus for selfcontrolled growth from vapour 2-11037
 HgI₂, counters, purification, crystal growth, device fabrication 2-80393
 IrO₂, single cryst. growth from vapour 2-62054
 Kr, growth and cryst. struct. 2-93394
 NpAs₂, single cryst. growth by chem. transport 2-67202
 Np₂As₄, single crystal, sublimation-grown, cryst. perfection 2-93391
 PbTe, polycrystalline, sublimation-grown, cryst. perfection 2-93391
 Ru_{1-x}Ir_xO₂, single cryst. growth from vapour 2-62054
 RuO₂, single cryst. growth from vapour 2-62054
 RuO₂, single cryst. growth by open flow chemical vapour transport technique 2-99310
 SbSI, cryst. growth from vapour, Plackett-Burman method 2-67203
 SbSI single crystal, ferroelec., low temp. growth 2-77718
 Si crystals growth for use in solar cells, methods and economics (*Italian*) 2-93409
 Si, orientation dependent desorption energy 2-109718
 Si-H-P system, complex heterogeneous equilibria 2-97954
 SiC 2H crystals, growth by hydrogen reduction of methyltrichlorosilane 2-111038
 SnS₂, structural polytypism rel. to environments of formation 2-76338
 Ir₂O_{2x-1} (x=2 to 9), single cryst. growth by CVD 2-105056
 TiS₂, structural and electronic characteristics 2-115749
 Xe, growth and cryst. struct. 2-93394
 Y₂O₃ phosphor, Eu³⁺ activated, chem. transport method cryst. growth, red luminesc. 2-111040
 Yttrium crystals, vapour condensation growth, BCC to FCC, FCC to HCP transitions 2-76349
 Zn single crystal, morphological stability of vapour grown crystals 2-115170
 Zn_{1-x}Cd_xS, single crystals, growth by I₂ transport, depend. of struct. on growth conditions 2-99309
 Zn_{1-x}Cd_xS-Cu₂S single crystal photovoltaic cell, optimum performance 2-116822
 ZnS, single crystals, growth by I₂ transport, depend. of struct. on growth conditions 2-99309
 ZnS:Li, iodine transport grown, channelling and ionoluminesc. spectra study 2-66058
 Zn_{1-x}(S,Se)_{1-x} single crystals, vapour growth and stoichiometry control 2-93393
 ZnSe, bulk and epitaxial growth, impurity role 2-116347
 ZnSe crystal vapour phase growth, longit. stress during fabrication cooling time 2-91844
 ZnSe, low temp. single crystal growth, chemical vapour transport 2-116348
- crystal hyperfine field interactions**
 Γ₁, doublet system, cubic, mag. resonance, nuclear interactions in mag. field 2-93026
 Γ₂ quadruplet, Mossbauer spectra in presence of spin-lattice relax., hyperfine interaction 2-93081
 alkali halide:Ag(Cu), ligand relax., isotropic superhyperfine const. anal. 2-109816
 alkali metal halide crystal, triplet excitons, hyperfine interactions ESR optical registration study 2-87629
 ammonium oxalate: Cu²⁺, EPR study 2-110627
 amorphous materials, effect of EFG sign on ⁵⁷Fe Mossbauer spectra 2-99007
 antishielding of ions in solids, Sternheimer factor and lattice dynamic effects 2-77001
 cooperative Jahn-Teller effect, charge and charge-orbital ordering, NQR spectral effects 2-93058
 copper calcium acetate hexahydrate, linear chain complex, EPR spectra, temp. depend. 2-61756
 cubic crystals, nucl. mag. relax. induced by lattice defect dynamics 2-104736
 1,2-diformylhydrazine, temp. depend. of ¹⁴N NQR 2-104738
 electric quadrupolar Hamiltonian representation 2-92540
 electric quadrupole splitting, sign and magnitude, differential resonance displacement 2-66947
 electronic struct. and magnetism 2-104241
 f-electron hyperfine interactions, point-dipole approx. calcs. 2-61421
 FCC metals, self-interstitials, hyperfine interaction evidence; theoretical anal. 2-71437
 ferrite spinel, nuclear spin echo in domain walls, pulsed mag. field effects 2-87625
 ferrites, spinel-type, hyperfine mag. field, press. effect 2-104780
 garnet ion implanted bubble films, CEMS characterisation 2-72387
 graphite intercalation cpd. with FeCl₃, reduction and Fischer-Tropsch reactions, Mossbauer study 2-116692
 heteronuclear spin system, NMR, S>1/2 nuclei quadrupole interaction 2-93017
 imidazole, cryst., electric field gradient calcs. from X-ray diffr. data 2-98602
 inert gas atoms, Sternheimer shielding-antishielding factor, nucl. quad. interactions 2-92547
 Knight shift, spin-orbit and many-body effects 2-72366
 line shape broadening by cryst. defects 2-110715
 magnetic thin film, nuclear spin echo in domain walls, pulsed mag. field effects 2-87625
 magnetically diluted cryst., paramag. impurities, NMR line shape, exchange interaction effects 2-66930
 malonic acid, single crystals, EFGs, quadrupole coupling consts. and σ tensors, D NMR obs. 2-93023
 metals, FCC, vacancy migration, trapping and clustering by γ-ray spectra 2-56996
 metals, H impurity electronic struct., μSR studies, review 2-99014
 microcrystals, mag. props. study by Mossbauer spectroscopy 2-93090
 muonium, anomalous, depolarisation in crystals, during fast diffusion 2-76750

crystal hyperfine field interactions continued

- NQR, effects of asymmetry parameter for gradient tensor, for nuclei with $I=3/2$ 2-93056
- paramagnets, double gamma reson. study 2-116104
- quartz, muonium hyperfine freqs, meas. technique 2-99015
- quartz, natural smoky, ESR study 2-98959
- Raman spin lattice relax. applied to S-electron ions, Kramers doublets with hyperfine interaction 2-61751
- rare earth alloys, amorphous, mag. props., nonaxial crystal field model 2-77301
- rare earth alloys, RCO_2 , C15 type, ^{59}Co NMR study, hyperfine field anisotropy 2-66934
- rare earth alloys, RMn_2 ($\text{R}=\text{Tb}$, Dy , Er), mag. dipole, elec. quadrupole hyperfine parameters determ., NMR spectra 2-116087
- rare earth compounds, $\text{RMn}_2\text{Si}_2(\text{Ge}_2)$, NMR studies in ferromag. state 2-82730
- rare earth compounds, RRh_2B_4 , cryst. elec. field 2-87207
- rare earth orthoferrites, RFeO_3 , local and exchange field inhomogeneity, NMR study 2-87209
- rare earth-Co alloys, RCO_2 , ($\text{R}=\text{Pr}$, Nd , Sm , Gd , Tb , Dy , Ho , Er and Tm), anomalous hyperfine field and orbital moment 2-56973
- semiconductors doped with 3d metals, light absorption perturbation theory 2-104828
- single crystals, β - γ induced ang. correl., nucl. quadrupole interaction invest. 2-110313
- $\text{Sm}_2(\text{Mn}_{1-x}\text{Fe}_x)_{23}$, mag. props. study 2-87542
- strontium tartrate tetrahydrate, X-irradiated, ESR 2-82718
- tetrafluoromethane, elec. hyperfine interaction at F site, TDPAD study 2-82303
- tetrameric antiferromagnetic clusters, hybrid states, Mossbauer spectra 2-82759
- TGS: Cu^{2+} crystals, ^{14}N quadrupole interactions, ENDOR obs. 2-110730
- tris(sarcosine) calcium bromide: Cu^{2+} hyperfine spectra, ESR study 2-61754
- Ag dilute alloys, electric field gradients, point defects, PAC meas. 2-93085
- Ag, proton irradi., In-vacancy interaction, TDPAC study 2-56004
- AgCl, triplet excitons, hyperfine interactions ESR optical registration study 2-87629
- AgClS , S centre, ENDOR study 2-93063
- $\text{AgCl}(\text{Br})$, neutron irradi., Frenkel defects, struct., and annealing, NMR study 2-91952
- AgIn dilute alloy, internal oxidation, TDPAC study 2-93080
- Al, self-interstitials, hyperfine interaction evidence, theoretical anal. 2-71437
- $\alpha\text{-Al}_2\text{O}_3$, charge density and elec. field gradients 2-115183
- $\alpha\text{-Al}_2\text{O}_3\text{:V}$, zero field splitting, g-factors (Chinese) 2-110310
- Au dilute alloys, elec. field gradients, point defects, PAC meas. 2-93085
- $\text{BaFeSi}_3\text{O}_{10}$, gillespite, Fe^{2+} Mossbauer spectra, mag. relax. effects 2-61793
- Be, elec. quadrupole interaction and its temp. variation at ^{100}Rh 2-56987
- Bi, strong ^{206}Po probe atom depend. of elec. field gradient 2-56532
- $\text{CaF}_2\text{:H}$, contribs. of H zero-point vibr. to F transferred hyperfine consts. nearest neighbour to H^0 centre 2-76627
- $\text{CaF}_2\text{:Tm}^{2+}$, uniaxial stress effect on ENDOR, hyperfine parameters 2-72378
- $\text{CaF}_2\text{:V}^{3+}(\text{Ti}^{2+})$, transferred hyperfine interaction 2-66506
- $\text{CaF}_2\text{:PrF}_3(\text{NdF}_3)(\text{SmF}_3)$, radiation induced F^- interstitials, TDPAC study 2-98163
- $\text{Ca}_2\text{NaMg}_2\text{V}_2\text{O}_{12}$, tetrahedral sites and elec. field gradient distrib., ^{51}V NMR study 2-110665
- $\text{CaWO}_4\text{:Ho}^{3+}$, NMR study of EM and sound energy absorpt. (Russian) 2-61778
- $\text{CdCo}_4\text{Fe}_2\text{O}_8$, mag. props. and lattice dynamics, Mossbauer effect study 2-77426
- $\text{CdCu}_2\text{-Fe}_2\text{O}_4$, mag. props., hyperfine interaction, Mossbauer study 2-116103
- CdSe , temp. depend. of EFG, TDPAC study 2-93072
- Ce-Fe, nuclear orientation and NMR in oriented nuclei 2-61776
- Co complex, N,N'-ethylenebis(acetylacetonatiminato) Co(II) , ENDOR and double ENDOR expt., hyperfine tensors 2-104744
- Co, electric quadrupole splittings, elec. field gradient 2-66948
- Co^{19}F , temp. depend. of local mag. fields 2-82760
- Co^*H , impurity electronic struct. and hyperfine fields 2-110292
- Co^{59}Mn , NMR ON study 2-98971
- Co^{59}Nb , NMR ON study 2-98971
- $\text{CoFe}_2\text{-O}_4$, ^{57}Fe Mossbauer study 2-77428
- Co(II) complex, N,N'-ethylenebis(acetylacetonatiminato) Co(II) EPR/ENDOR and semiempirical calcs. study 2-116089
- $\text{CoMn}_{3-x-y}\text{Fe}_x\text{O}_4$, hyperfine interactions, Mossbauer study 2-72393
- $\text{CoMn}_{3-x-y}\text{Fe}_y\text{O}_4$, solid solns., Zeeman spectra, Mossbauer study 2-61792
- $\text{CoMn}_{1-x}\text{Ti}_x\text{Sn}$ Heusler system, mag. and chem. ordering 2-93073
- $^{57}\text{CoCl}_3$, frozen aq. soln., electron capture after-effects, Mossbauer study 2-104768
- $\text{CsCdF}_6\text{:Mn}^{2+}(\text{Ni}^{2+})$, spin transfer parameters, core electrons effects 2-87627
- CsFeF_4 , elec. field gradient, polarisable point charge model and Mossbauer spectra 2-115721
- $\text{Cs}_2\text{NaHoF}_6$, elpasolite, hyperfine splitting meas. by enhanced Ho^{165} NMR 2-61775
- Cs_2Sb , solid compound semiconductor, chemical bonding, ^{133}Cs -NMR spectra 2-56957
- Cu alloys, dilute, elec. field gradient, valence and size effect contribs. 2-104325
- Cu complex, triphenylphosphine Cu(II) complexes, ^{31}P NMR, quadrupole effects 2-72360
- Cu dilute alloys, electric field gradients, point defects, PAC meas. 2-93085
- Cu $\text{II}/\text{Ni II}$ mixed ligand chelate complex, single cryst., ^{63}Cu and ^{31}P ENDOR study 2-66952
- Cu^+ ion implanted with Xe^+ , Xe-defect configuration spatial anisotropy, ^{133}Xe TDPAC study 2-61044
- Cu, positive muon depolarisation, 5 to 365 K 2-82766
- Cu-Cr(Fe) , ($-\text{Mn}$), dilute alloys, ionic model, energy level splitting, NMR study 2-66932
- CuII/ZnII bis-(diethyl-dithiocarbamate), ^{13}C ENDOR study 2-77418
- $\text{Cu}_{1-x}\text{M}_x\text{Fe}_2\text{O}_4$ ($\text{M}=\text{Mn}$, Ni), spin struct. and hyperfine fields, Mossbauer study 2-66959
- Dy-Fe, hyperfine fields, Mossbauer spectra obs. 2-99005

crystal hyperfine field interactions continued

- Dy-Fe intermetallic cpds., mag. and cryst. props., X-ray and Mossbauer study 2-92877
- DyAg, cryst. and amorphous, electronic relax. and hyperfine fields, Mossbauer study 2-116098
- DyAl_2 , paramagnetic, hyperfine interactions 2-98974
- DyFe_2 , hyperfine fields, Mossbauer spectra obs. 2-99005
- DyFe_2Al_8 , Mossbauer study 2-87636
- $\text{Dy(Fe,Al}_{1-x})_2$ Laves phases, mag. and cryst. props., X-ray and Mossbauer study 2-92899
- DyNi_5 , ^{181}Ta TOPAC meas. of non-axial quadrupole interaction 2-93089
- DyVO_4 , mag. relax. study 2-98989
- ErCo_2 , ^{59}Co Knight shift anisotropy, spin echo study 2-110668
- ErFe_2H_x , spin reorientation temp., hyperfine fields, Mossbauer study 2-93082
- ErNi_5 , ^{181}Ta TOPAC meas. of non-axial quadrupole interaction 2-93089
- Eu intermetallics, hyperfine field, press. depend. 2-92550
- Eu intermetallics, hyperfine field, press. depend. 2-92551
- EuFe_2Al_8 mixed valence cpd., magnetically ordered, XPS study 2-56513
- $\text{Eu}_{1-x}\text{Gd}_x\text{S}$ spin glass, mag. relax., Mossbauer study 2-66833
- EuPd_2Si_2 , cooperative config. change, isomer shift meas. 2-66964
- $\text{Eu}_{0.99}\text{R}_{0.01}\text{Se}$ ($\text{R}=\text{Sr}$, Sm), hyperfine fields at ^{153}Eu , NMR study 2-66924
- EuTe, transferred hyperfine fields, effect of high press. and high mag. fields, Mossbauer study 2-104779
- $\text{EuYb}_{1-x}(\text{NH}_3)_6$, dilute alloys, EPR spectra, Eu^{2+} hyperfine struct. 2-104684
- ^{151}Eu atoms and mols. in solid Ar, matrix isolation and Mossbauer study 2-54807
- F, solid, electric hyperfine interactions 2-93088
- $(\text{FeCo})\text{Si}_{1-x}$ solid solns., Mossbauer effect study of mag. behaviour 2-61797
- Fe alloys, dilute, muon spin rot. studies of local mag. fields 2-72394
- Fe catalysts, Fischer-Tropsch, Mossbauer study of surface effects 2-82750
- Fe complex, $[\text{FeF}_6]^{3-}$, superhyperfine interactions, Hartree-Fock-Roothaan calc. 2-87210
- Fe complex, bromobis(diethyldithiocarbamate)iron(III), mag. susceptibility, Mossbauer study 2-87632
- Fe, muon spin rot. studies of local mag. fields 2-72394
- Fe, NMR on oriented ^{19}Ir 2-98977
- Fe^{19}Au , elec. quadrupole interaction, NMR-ON meas. 2-116075
- Fe:H, impurity electronic struct. and hyperfine fields 2-110292
- Fe_2O_3 , vel. depend. of transient mag. field of O 2-56534
- Fe^{52}Mn , NMR ON study 2-98971
- Fe-Al, Mossbauer spectra hyperfine struct. and ordering anal., density function reconstruction 2-87643
- Fe-Al-Sn, Mossbauer study of spin and charge density changes 2-116102
- Fe-As(Ga)(Ir)(Mn)(Nb)(Ru)(V), dil., impurity hyperfine fields, press. and temp. depend. 2-104610
- Fe-Mn ferromagnetic solid soln., electron density perturbation, residual resistivity 2-77019
- Fe-Sn, hyperfine field, isomer shift, spin and charge density changes, Mossbauer study 2-93083
- Fe_3Al , hyperfine field and mag. moment, Mossbauer study 2-72380
- $\alpha\text{-(Fe}_{1-x}\text{Al}_x)_2\text{O}_3$, Mossbauer study 2-87637
- $\alpha\text{-Fe-FeB}$, Mossbauer spectra 2-61803
- Fe_3B , high-press. Mossbauer study 2-56994
- $\text{Fe}_3\text{B}_{1-x}\text{Si}_x\text{C}_2$, amorphous, Mossbauer study 2-99013
- $\text{Fe}_{1-x}\text{Cr}_x\text{BO}_3$, ferrimagnet, Mossbauer study 2-72381
- $\text{Fe}_{0.968-x}\text{Mn}_x\text{Si}_{0.032}$ system, Mossbauer and mag. studies 2-82761
- $\text{Fe}(\text{MoO}_4)_3$, ferroelastic transition, Mossbauer and elec. cond. study 2-116101
- FeNi alloys from Fe meteorites, order-disorder transitions, Mossbauer spectra study 2-67328
- $(\text{Fe}_{0.25}\text{Ni}_{0.75})_3\text{B}$, high-press. Mossbauer study 2-56994
- Fe_2O_3 film, surface mag. hyperfine interactions, Mossbauer study 2-72391
- $\text{Fe(Pd}_{1-x}\text{Au}_x)_3$, atomic ordering, quadrupole splitting in Mossbauer spectra 2-104783
- FeSi_{1-x} amorphous thin film, mag. anisotropy, Mossbauer and ESR study 2-93087
- $\text{Fe}_{80-x}\text{Sn}_{20-x}$ amorphous ferromagnet, Sn and Fe hyperfine fields, Mossbauer study 2-92552
- $\theta\text{-Fe}_{0.35}\text{V}_0.65$, elec. field gradient, Mossbauer study 2-104759
- $\text{Fe}_{1-x}\text{V}_x\text{Si}$, Mossbauer study of Fe hyperfine fields 2-87635
- ^{57}Fe , Mossbauer spectra of finite thickness cryst., elec. field gradient and electronic ground state determ., theory 2-93079
- GaAs, optical detection of NMR, nuclear relax. near shallow donors 2-82747
- Gd intermetallic cpds., charge transfer and isomer shift, ^{155}Gd Mossbauer spectra 2-104777
- Gd-As, dil., As hyperfine interaction, IPAC study 2-92544
- GdAl_2 , paramagnetic, hyperfine interactions 2-98974
- GdCu_2 , mag. and crystallographic props., Mossbauer effect, H absorption effects 2-82758
- GdNi_{1-x} , amorphous hyperfine fields, magnetisation, Mossbauer study 2-104764
- GdRh_2B_4 , cryst. elec. field determ., Mossbauer study 2-87207
- $\text{Gd}_2\text{Y}_{1-x}\text{Fe}_x$, indirect exchange param. 2-71942
- $\text{GeO}_2\text{:Zn(Mg)}$, X-irrad., hole centre ESR study 2-87592
- HC, BSiO_3 , quadrupole lines dipolar struct., ^{13}B NMR study 2-110658
- HfO_2 , crystal, α -phase, NQR spectra, hydrostatic pressure effect 2-93049
- Hf^{171}Cd , ^{111}Cd probe nuclei elec. field gradient temp. depend., TDPAC study 2-104326
- HfO_2 , temp. depend. of EFG, TDPAC study 2-93072
- $\text{HfSiO}_2\text{:Nd}^{3+}(\text{Yb}^{3+})$, EPR study 2-72341
- $\text{Hg}_2\text{-MnSe}$, microwave and far IR magnetotransmission studies 2-98955
- Ho, coupled spin system in external field, zero energy mode 2-92548
- $\text{HoCo}_2(\text{Fe}_{1-x})$, magnetic excitations study 2-110573
- $\text{Ho}(\text{Co}_{1-x}\text{Ni}_x)_2$, mol. moments rapid changes, magnetisation and spin-echo NMR study 2-72167
- $\text{Ho}_{1-x}\text{Y}_x\text{Co}$, Curie temp., magnetisation and NMR, Co local environment effect 2-116071
- InP, (n, γ)-induced point defects, NMR study 2-98980
- InSb, (n, γ)-induced point defects, NMR study 2-98980
- Ir-Fe dil. alloy, high field Mossbauer study 2-99001
- $\text{Ir}_{1-x}\text{Pt}_x$, Mossbauer spectra, localised moment continuous formation 2-82763
- KCl:Ga^{100} , hyperfine consts., relativistic many body calc. 2-104327

crystal hyperfine field interactions continued

- KCl:H, I, relaxed excited state of atomic H centres, ODMR study 2-99000
- KCl:KCN irradi. single cryst., EPR study 2-77375
- KCl:Ru(I)(CN)₅³⁻, EPR superhyperfine interactions 2-104699
- ⁴¹KCl(³⁹KCl), F-centres, relaxed excited states, ODMR study 2-61790
- KFeF₄, elec. field gradient, polarisable point charge model and Mossbauer spectra 2-115721
- K₂FeF₆, field depend. magnetisation curves, Mossbauer study 2-77435
- K₂MgF₆:Tm³⁺, paramagnetic centres, ENDOR, transferred hyperfine interaction parameters 2-61789
- K₂ZrF₆, high resolution TDPAC meas. 2-56988
- LaF₃:Er³⁺, mag. field depend. optical dephasing 2-104856
- LiH₃(SeO₃)₂:Cu²⁺, EPR spectra, g and A matrices, Q tensor 2-82709
- d-LiO₃:Mn²⁺, superhyperfine and ⁶Li quadrupolar interactions, ENDOR and RF discrete saturation study 2-56535
- LiNbO₃:Fe, single cryst., Mossbauer spectroscopy 2-110733
- Li₂TiSi₂, elec. field gradient, anisotropic shift, tetrahedral site occupation and atomic motion NMR study 2-66943
- LiYF₄:Pr³⁺ hyperfine struct., NQR studies 2-66949
- LuPO₄:Cm³⁺, EPR, g-factors, excited state doublet wave function 2-104700
- Mg-Mn, dilute, cryst. field effect on magnetisation 2-82660
- Mn complex, [MnF₆]⁴⁻, superhyperfine interactions, Hartree-Fock-Roothaan calc. 2-87210
- MnTe, antiferromag. semicond., Mossbauer and X-ray study 2-61795
- NH₄Cl:Ni, γ-irrad., off-centre impurity model, EPR investig. 2-82701
- NH₄FeF₄, elec. field gradient, polarisable point charge model and Mossbauer spectra 2-115721
- NH₄IO₄, temp. depend. of ¹²⁷I, nucl. quadrupole coupling 2-110714
- NH₄ReO₄, temp. depend. of ¹²⁷I, nucl. quadrupole coupling 2-110714
- Na₃Al₃F₁₄:Fe³⁺, superposition model for cryst. field parameters, EPR study 2-110632
- NaCl, dislocation density determ. from NMR quadrupolar linewidth meas. 2-98114
- NaCl, quadrupolar energy relax., reson. acoustic field excitation 2-110680
- Na₃Fe(CN)₆.2H₂O, ⁵⁷Fe elec. hyperfine field, polarised Mossbauer study 2-93078
- NaNO₂:Ag⁺, triplet state, quadrupole interaction, optically detected ESR and ENDOR 2-116093
- NaNbO₃, antiferrodistortive transition, order parameter crit. behaviour, NMR study 2-92183
- Nb, positive muon depolarisation, 5 to 365 K 2-82766
- Nb-Fe inhomogeneous system, laser irrad., internal field at ⁵⁷Fe, atom redistrib. and antiferromag. suppression (*Russian*) 2-66929
- Nb₂O₅:Gd³⁺, monoclinic-orthorhombic ferroelastic transition, EPR study 2-61763
- NdFe₂, Laves phase cpds., correlation of ⁵⁷Fe hyperfine interactions with Fe-Fe distance 2-56985
- Ni, NMR on oriented ¹⁹⁴Ir 2-98977
- Ni₂H₂, impurity electronic struct. and hyperfine fields 2-110292
- Ni⁵²Mn, NMR ON study 2-98971
- Ni-Mn(Pt), dil. impurity hyperfine fields, press. and temp. depend. 2-104610
- Ni₃Mn_{3-x-y}Fe₂O₄, hyperfine interactions, Mossbauer study 2-72393
- Ni₃Mn_{3-x-y}Fe₂O₄, solid solns., Zeeman spectra, Mossbauer study 2-61792
- Pb-²³⁷Np, ion implanted, 5f electron localisation and relax., TDPAC study 2-56991
- Pb₂Ge₂O₁₁:Gd³⁺, hyperfine interaction, discrete saturation, ESR study 2-104697
- Pb₂Ge₂O₁₁:Mn²⁺, ESR spectra, hyperfine interactions 2-87585
- Pb, nuclear mag. relax. and Knight shift meas. 2-66941
- β-PdH₃, electronic hyperfine coupling, PMR study 2-72371
- Pr alloys, amorphous, mag. props., nonaxial crystal field model 2-77301
- Pr, hyperfine interactions, mag. impurities and antiferromag. ordering 2-104582
- PrAg_{1-x}Cu_x, quadrupole interactions and struct. instabilities, neutron diff. and magnetisation study 2-71943
- PrCo₂, ⁵⁹Co Knight shift anisotropy, spin echo study 2-110668
- PrFe₂, Laves phase cpds., correlation of ⁵⁷Fe hyperfine interactions with Fe-Fe distance 2-56985
- Pr_{1-x}Y_xCo₂, Curie temp. magnetisation and NMR, Co local environment effect 2-116071
- ⁸⁷RbCl (⁸⁷RbCl), F-centres, relaxed excited states, ODMR study 2-61790
- RbCl:H, I, relaxed excited state of atomic H centres, ODMR study 2-99000
- RbFeCl₃.2H₂O, Mossbauer study of critical fluctuations 2-99011
- RbFeF₄, elec. field gradient, polarisable point charge model and Mossbauer spectra 2-115721
- β-Rb₂FeF₆.H₂O, 1-D antiferromag., cryst. struct., mag. and Mossbauer study 2-92879
- RbFeS₃, Bridgman growth, Mossbauer hyperfine fields and Fe⁵⁷ resonant fraction 2-77002
- Re host, elec. field gradient at probe nuclei, comparison with cond. electron charge shift model 2-56533
- Rh-Cr dil. alloys, low temp. nucl. orientation meas. 2-92546
- SeFe₂, hydrogenated, ⁵⁷Fe Mossbauer spectroscopy 2-72388
- Si, ion implanted, hyperfine interaction study after thermal and laser annealing 2-99008
- Si:Fe, electron beam irrad., EPR spectra 2-56920
- Si:Mn, B, Mn¹⁺B⁺ pairs, EPR study 2-110628
- Si:P, heavily doped, as amorphous antiferromagnet 2-77283
- SiC:N (6H), exchange-coupled vacancy pairs, ESR study 2-116062
- SmCo₇, NMR study of hyperfine interactions 2-56974
- SmFe₂, hyperfine fields, Mossbauer spectra obs. 2-99005
- SmFe₂, Laves phase cpds., correlation of ⁵⁷Fe hyperfine interactions with Fe-Fe distance 2-56985
- SrF₂:Eu²⁺, ESR study of forbidden transitions 2-92998
- SrF₂:Ti³⁺, transferred hyperfine interaction 2-66506
- SrF₂:Tm³⁺, uniaxial stress effect on ENDOR, hyperfine parameters 2-72378
- Ta, positive muon depolarisation, 5 to 365 K 2-82766
- Te:Cd, charge carrier governed temp. depend. of EFG for ¹¹¹Cd, TDPAC meas. 2-56982
- Ti host, elec. field gradients at probe nuclei, comparison with cond. electron charge shift model 2-56533
- TmCo₂, ⁵⁹Co Knight shift anisotropy, spin echo study 2-110668
- TmFe₂, cubic Laves phase, Mossbauer study 2-66961

crystal hyperfine field interactions continued

- TmFe₂Al₃, Mossbauer study 2-87636
- Tm₂Se, local prop. variation, Mossbauer study 2-87633
- (Tm₂Y_{1-x})₂(SO₄)₃.8H₂O, effect of dilution on mag. ordering 2-66812
- V, positive muon depolarisation, 5 to 365 K 2-82766
- VC₂O₇, quadrupole effects and chem. bonding 2-110723
- VO₂-CrNbO₄ (FeNbO₄), solid solns., phase transitions, ⁵¹V 2-110669
- W¹⁸³ ion implanted with Xe¹³³, Xe-defect configuration spatial anisotropy, ¹³³Xe TDPAC study 2-61044
- ¹⁸⁴W 4⁺ and 6⁺ rot. states, gyromag. ratios from Larmor precession 2-69517
- YAlO₃:Pr³⁺, two-pulse photon echo ENDOR study 2-98997
- YCo₂, ⁸⁹Co Knight shift anisotropy, spin echo study 2-110668
- YCO₂ powders, ferromagnet and Mossbauer props., grinding effects (*Russian*) 2-87546
- Y₂(Co_{1-x}Mn_x)₃, Y transferred hyperfine fields, NMR study 2-66951
- YIG, amorphous, second order quadrupole shift in Mossbauer spectrum 2-77440
- Y₂O₃:Gd³⁺, ESR absorption spectra, hyperfine structure 2-66911
- YOCi:Eu³⁺, cryst. field parameters, overlap model 2-82298
- Yb_{1-x}Eu_x, mag. interactions, Mossbauer, magnetisation and resist. meas. 2-72382
- Yb₂(SeO₄)₃.8H₂O, mag. susceptibilities, paramag. Curie temp., thermal and hyperfine props. 2-61691
- Zn, electric quadrupole interaction, Mossbauer study, freq. modulation technique 2-93084
- Zn-Cr, dilute, cryst. field effect on magnetisation 2-82660
- Zn-Mn, dilute, cryst. field effect on magnetisation 2-82660
- ZnO:In, ODMR and ENDOR study 2-82748
- ZnS:Ge³⁺ (Sn³⁺), photosensitive EPR, g-factors and hyperfine interaction 2-77369
- (Zr_{0.9}Hf_{0.1})Fe₂, hyperfine mag. field at ¹⁸¹Ta, radiation defects influence, TDPAC meas. 2-56986
- Zr_{1-x}Hf_xFe₂, isomer shift and quadrupolar interaction, Mossbauer study 2-104778
- ZrSiO₄:Nd³⁺ (Yb³⁺), EPR study 2-72341

crystal imperfections see crystal defects

crystal inclusions

- alkali halide crystal optical losses in middle IR band, influence of microinclusions 2-87800
- alloys, equiaxed two-phase, fracture in alloys with isolated plastic particles 2-77937
- alloys, equiaxed two-phase fracture in alloys with isolated elastic particles 2-77936
- ceramic polycrystals, struct. reliability, processing-depend. phenomenon 2-77908
- dislocations, rectilinear, equilib. splitting theory, stacking fault energy (*Russian*) 2-65996
- elasticity theory of coherent inclusions by means of non-metric geometry 2-60971
- electrodeposited films, inclusions, direct obs. by TEM 2-92389
- elliptic inclusion in anisotropic solid of cubic symmetry 2-97382
- elliptical inclusions oriented in (100), (110) and (111) directions in cubic crystals, elastic energy calc. (*Chinese*) 2-61001
- ferroelectric with ellipsoidal particle mixture, randomly oriented, mag. permeability (*Russian*) 2-98917
- ferromagnet, Barkhausen coercivity, domain wall motion 2-82639
- garnet, in diamond, state of Earth's upper mantle 2-62929
- inhomogeneous thin films, thermoelec. props., effective medium method 2-115915
- K₂Cr₂O₇, growth morphology, by solvent evaporation method 2-91835
- microstructural features, computational models 2-76694
- polycrystalline sample, grain growth with grain boundaries of different mobility (*Russian*) 2-115250
- powder metallurgy materials, interaction between defects and basic material 2-83057
- quartz, synthetic, defects, effect on vibr. characts. and resonator performance 2-99044
- ruby, picosec. laser pulse train scatt. on randomly distrib. inclusions (*Russian*) 2-93211
- semiconductors, exciton bound state form. in cryst. microinclusions, reflection spectra (*Russian*) 2-92484
- semiconductors, internal Schottky barriers 2-66620
- solidifying ingot, variable comp. nonmetallic inclusions form. in two-phase zone 2-99414
- spherical inclusions in spatially dispersive medium, EM wave scatt. 2-75497
- steel, alloy, heat treatment into lower bainite, C distrib., alloying elements influence (*Russian*) 2-67389
- steel, C-Mn, hot ductility, effect of non-metallic inclusions 2-83196
- steel, cold formability, effect of microstruct. 2-99456
- steel, Cr, fracture toughness, correl. with sulphide inclusion level (*German*) 2-93615
- steel, Cr-Ni-Mo, fracture, nonmetallic inclusions shape influence 2-72819
- steel, crack initiation, stable crack growth resist., rel. to inclusion distrib. 2-57436
- steel, embrittlement after hardening, impurities influence 2-88192
- steel, high strength, fatigue crack initiation at inclusions, theory 2-67523
- steel, leaded, brittle fracture cause 2-111310
- steel, lightly doped, pulsed elec. field action near voids and nonmetallic inclusions (*Russian*) 2-67572
- steel, low alloy, fatigue failure at inclusions, influence of vacant lattice sites 2-83199
- steel, low C, cold forming, bendability, tensile props. and particle struct. 2-88128
- steel, low-alloy, embrittlement after hardening, impurities influence 2-88192
- steel, low-C, chem. capped, anomalous struct. layers form. 2-105185
- steel, low-C, impact toughness, simultaneous influence of C and S 2-111311
- steel, stainless, corrosion fatigue crack initiation mechanisms, influence of corrosion conditions 2-116594
- steel, vacuum-melted, strengthening using combined cyclic elec. heat treatment and thermomech. heat treatment 2-72711
- steel-inclusion boundary, interphase props. and degree of struct. refinement 2-72685
- Ag electrodeposited films, inclusions, direct obs. by TEM 2-92389
- Al alloys 7075, acoustic emission and inclusion fracture 2-62298
- Al-Ag, thermal expansion of inclusions 2-61180

crystal inclusions continued

- Al-C alloy, dispersion hardening, mech. alloying in attrition mill, struct. obs. 2-11113
 Al₂O₃, dense, steam-enhanced impurity segregation 2-11116
 Ba(NO₃)₂, stacking faults and dislocations due to liquid inclusion presence 2-9189
 Bi₂Se₃/Cd(In) monocrystals, struct. non-homogeneity visualisation using holographic interferometry 2-115216
 Co-Cr alloy, incipient melting phenomena, morphological obs. 2-93501
 Cu electrodeposited films, inclusions, direct obs. by TEM 2-92389
 Fe alloy, martensite produced by cooling austenite with coherent inclusions, cryst. struct. calc. (*Russian*) 2-67347
 Fe-Cr-Ti-Mo-TiO₂, dispersion strengthened, void swelling in HVEM, influence of fabrication procedure 2-111189
 Fe-Cu, thermal expansion of inclusions 2-61180
 Fe-Ti-V-N system, complex nitrides form. in liq. metal 2-67295
 GaAs semi-insulating bulk crystal growth by Liquid Encapsulation Czochralski process, Ga inclusion minimization 2-67212
 InP, inclusions 2-71433
 KAl(SO₄)₂·12H₂O, nonuniform soln. growth 2-77722
 KCl, synthetic single cryst., thermal gradient migration of brine inclusions 2-56264
 NaCl, synthetic single cryst., thermal gradient migration of brine inclusions 2-56264
 Ni alloys, C/O gas bubble form., thermodynamic requirements 2-105116
 Ni electrodeposited films, inclusions, direct obs. by TEM 2-92389
 Ni-Al, thermal expansion of inclusions 2-61180
 Ni-base superalloys, P/M, fatigue crack initiation, effect of defects 2-67518
 Ni-Cr-Co-W-Al-Ti-Nb-Hf system, refractory as-cast alloy, phase comp., struct. transforms. during high-temp. heating 2-99434
 Pb_{1-x}Sn_xTe MBE film struct. 2-104184
 Si, bent, strain conc. factors around holes and inclusions, X-ray topography study 2-98189
 Si particle reinforced Al, SASI-50 composite, internal stresses and dimens. instability under cyclic thermal load 2-62210
 Si₃N₄, defect charact. in short wavelength regime 2-62292
 Si₃N₄, slip cast reaction bonded, α/β ratio, effect of α -Si₃N₄ grog additions 2-93493
 steel, Al, US treatment effect on C redistrib. and austenitic-martensitic transform. (*Russian*) 2-67331
 Ti-Al-Sn-Zr-Mo prealloyed spherical powders, consolidation 2-77777
 TiC, fused single-cryst., struct. and props., melting conditions influence 2-81779
 V-O system, cryst. geometric characts., X-ray and electron diff. study 2-103732
 V₂O₅ crystals, US vel., anomalous temp. depend. 2-66135
 YAG, single crystal, Czochralski grown, dislocations and inclusions, birefringence study (*Chinese*) 2-109709
 ZnO varistor, influence of SiO₂ inclusions 2-66241
 ZnS:Cu₂S single crystal, microbrittleness, impurity effects 2-83210

crystal internal fields see *crystal field interactions***crystal interstitials** see *interstitials***crystal lattice structures** see *crystal atomic structure***crystal microphones** see *microphones***crystal microstructure**

- for microstructural changes, see also *phase transformations, hardening, heat treatment, metalworking*
 see also *crystal defects; crystal inclusions; crystallites; dendritic structure; domain boundaries; domains; electron microscope examination of materials; eutectic structure; grain boundaries; grain size; Guinier-Preston zones; mosaic structure (microstructure); noncrystalline state structure; precipitation; segregation; subboundary structure; superlattices; texture; X-ray diffraction examination of microstructure*
 Al₅ compounds, prep. by electron beam evaporation, superconductivity and phys. props. (*Russian*) 2-66688
 aligned columnar microstructure, preferential growth in reduced gravity 2-62117
 alloy, binary melt, nonequib. model of two-dimens. cellular solidification 2-67319
 alloys, antiphase order-disorder transitions (*French*) 2-86865
 alloys, FCC supersaturated, multiple-layer intermediate martensitic struct. form. (*Russian*) 2-66017
 bronze-graphite antifriction material, sintered, struct. and mech. props. 2-67556
 ceramic-like body, process design, prod. from recycled waste glass, microstruct. and devitrification 2-111127
 composite, in situ, directed solidification, forced convection influence on microstruct. (*French*) 2-77818
 composite materials, two-component, upper bounds to average field enhancement factors 2-82854
 computational models 2-76694
 diamond, containing lonsdaleite, ESR spectra, structural defects 2-72344
 graphite, He⁺ bombardment, microstruct. changes 2-76524
 metallic limiters in Doublet III, changes in near-surface microstructure 2-74901
 microstructural stability, geometrical aspects 2-105168
 morphological changes in equiaxed grain structures studied by computer simulation (*Japanese*) 2-55875
 polypropylene copolymer, injection moulded, microstruct. effect on dynamic fatigue props. 2-57447
 prime candidate alloys, path A, rapidly solidified, microstruct. 2-85210
 pulsed electron and cyclotron beam irradiation, microstructure evolution 2-76505
 refractory metals, hardmetals and special materials, trends, conf., Reutte, Austria (June 1981) 2-101115
 β -SiAlon, density, microstruct. and strength, heating rate effects 2-116467
 single phase polycrystals, microcrack zone formation 2-103887
 sintered materials, brittle fracture microstruct., comparative investig. by SEM and replica TEM 2-67695
 SOS films, sapphire substrate orientation influence on crystn. quality and SOS/MOS mobility 2-91948
 stainless steel-C films prepared by reactive magnetron sputtering, optical constants and microstructure 2-99838
 steel, alloy, heat resistant, creep under different temp. and force conditions 2-67460
 steel, alloy, heat treatment into lower bainite, C distrib., alloying elements influence (*Russian*) 2-67389
 steel, alloy, roll, heat treatment influence on struct. and props. 2-67393

crystal microstructure continued

- steel, austenitic stainless 316, degradation of props. during irradi., preirrad. microstruct. development 2-69865
 steel, austenitic stainless, types 304-SS and 316-SS, exposed to liq. Li, microstructural changes 2-80169
 steel, austenitic stainless 316, He embrittlement, microstruct. aspects 2-71518
 steel, austenitic stainless 316, rapidly solidified Al₂O₃ dispersion strengthened, microstruct., path A alloys 2-88094
 steel, austenitic stainless 316, yield strength changes during fission or fusion irradi., microstruct. origins 2-71507
 steel, austenitic stainless 316, Ti effect on microstructs. changes rel. to void swelling 2-86741
 steel, carburised and nitrided cases, struct. criteria for quality eval. 2-62280
 steel, cold forgeability, effect of microstruct. 2-99456
 steel, Cr-Mo, FIM obs. 2-67285
 steel, Cr-Mo, heat resist., partially recryst. struct. effect 2-67399
 steel, Cr-Mo, vacuum carburised, SCM 420, fatigue strength, carburised layer microstruct. effects (*Japanese*) 2-105304
 steel, Cr-Mo type HT-9, microstruct. effect on mech. props. rel. to fusion reactor apps. 2-88108
 steel, Cr-Mo-V martensitic stainless, weldments, transform. and tempering 2-88107
 steel, Cr-Ni-Mo-Mn, Mo distrib. during long-term holding between 554 and 654°C (*French*) 2-72700
 steel, Cr-Ni-Mu (1.9, 0.85, 0.76 wt.%) original struct. and heating rate influence on props. after hardening from intercrit. range 2-72736
 steel, Cr-Ni-Ti(Al), austenitic, rel. between struct., internal stress, and creep rate 2-83177
 steel, CrMoV, temper embrittlement rel. to heat treatment 2-83232
 steel, heat resistant, die, struct. and mech. props., alloying effect 2-111243
 steel, high-speed, effect of determ. under superplasticity conditions 2-62176
 steel, high-speed, struct. and props., Ce addition effect 2-111242
 steel, HSLA, tempered Nb-bearing, fatigue crack initiation and propag. 2-111292
 steel, hypoeutectoid, spheroidising treatment from various initial conditions, struct. form. 2-99451
 steel, KhN77TiYr, dynamic recrystallisation and work hardening (*Russian*) 2-105178
 steel, low-alloy, hardness and brittleness of nitrided case 2-62282
 steel, low-alloy, low-pearlite, V addition effect on struct., phase comp., and mech. props. 2-72818
 steel, low-alloy, with different Ti concs., phase comp., microstruct., and mech. props. 2-72827
 steel, martensite plate size distribution, determ. by kernel estimation 2-88081
 steel, medium C, mech. props. in dynamic deform., struct. and ultrasonic vibrs. influence 2-72772
 steel, mild, plastic deform. in metal cutting 2-105267
 steel, Mn, struct. and phase comp., tempering temp. influence 2-105199
 steel, Mn-Cr-Mo-Nb, austenitic, heat resisting, props. and microstruct. (*Korean*) 2-57534
 steel, Ni, low C, heat treatment and O₂ cutting influence on struct. and props. 2-72732
 steel, Ni, Mn and Ni-Mn based, maraging, economically alloyed, heat treatment influence on struct. and props. 2-67394
 steel, Ni-Cr (30.30 wt.%), high temp. carburisation correl. with creep-rupture props. 2-62265
 steel, rail, high-strength, hardenability, chem. comp. influence 2-72730
 steel, stainless, Cr-Ni-Al, sheet, fractographic investigation of failure 2-72823
 steel, stainless, duplex austenite-ferrite alloys, weld metal microstructures, heat treatment, TEM, EDS study 2-67406
 steel, stainless, maraging, susceptibility to warm embrittlement 2-67531
 steel, stainless, maraging, tempering and struct. influence on temp. depend. of mech. props. 2-67396
 steel, stainless, Ni-Cr-Mo-Nb-Al, precip.-hardening, struct. and props. after heat treatment 2-72728
 steel, stainless, Type 304, shock-loaded, transform. mechanism and α' -martensite morphology 2-93509
 steel, stainless, type-348, neutron irradiated, microstruct. and rel. to creep and hardening 2-105231
 steel, stress-relieved SAW metal, Nb microalloyed, mech. props. and microstruct. 2-105192
 steel, structural, fracture toughness rel. to strength, struct. aspects 2-77946
 steel, supercooled austenite, decomp. products morphology changes during continuous cooling, HTMT influence 2-105159
 steel cold-drawn boron treated, rapid heat treatment effect on microstruct. and tensile props. 2-116466
 steels, AISI 302, 304, 316, 347, C-precipitation influence on low temp. impact strength, corrosion, austenite stability 2-57508
 steels, austenitic stainless types 316, 347, high flux reactor irradi., microstruct., TEM study 2-80118
 steels, influence of duplex microstruct. on fatigue crack growth in near-threshold region 2-111294
 superplastic forming processes, influence of material parameters and microstruct. 2-83184
 superplasticity review 2-83182
 surface, ion bombardment self-decoration, cryst. microstructure study 2-111337
 thin film, optical props., microstruct. effects on dielectric function 2-82943
 two-phase sintered materials, microstruct.-field prop. correl. (*French*) 2-77831
 Zircaloy, neutron irradi., microstruct. and dimens. changes, irradi. growth theory 2-109848
 Ag-Cu, ion sputtered, surface topography 2-105025
 Al, commercial purity, microstruct. development during rolling 2-83136
 Al, conventionally and shock-wave-deformed, correlation between texture and substruct. 2-99445
 Al, in-situ study of subboundary props. during creep, HVEM 2-71462
 Al, irradiated with Al ions, pure and He doped 2-86747
 Al, microstructural evolution during 600 MeV proton irradi., He prod. rate effects 2-86746
 Al, single cryst., microstruct. development by internal isothermal friction (*French*) 2-116487

crystal microstructure continued

- Al-Al₂Pt₃, unidirectionally solidified eutectic, microstruct. and mech. props. 2-116434
 Al-Cu (4 wt.%), resistivity maximum during Guinier-Preston zone formation 2-82319
 Al-Cu alloy 1201, superplasticity conditions 2-62179
 Al-cu alloys solidified under high press., Cu segregation (*Japanese*) 2-116449
 Al-Ge (4 wt.%), superplastic deform. mechanism 2-83190
 Al-Li-Cu-Zr-Cd system alloys, microstruct.-prop. rels. 2-111210
 Al-Mg, microstruct. development during rolling 2-83136
 Al-Mn (1.2 wt.%), rapid solidification with pulsed laser, microstructural and surface modification 2-67323
 Al-Si, fracture, fractographic features 2-111302
 Al-Si (11.3 at.%), fast quenched eutectic alloy, effect of heat treatment on supercond. props. 2-61654
 Al-Si (11.3 wt.%), superconducting props., heat treatment effects (*Chinese*) 2-98778
 Al-Zn-Mg-Cu-Cr, 7XXX series alloys, influence of microstruct. and strength on fracture 2-111293
 Al₂O₃ fibre, prep. and changes of microstruct. by heat treatment (*Japanese*) 2-116417
 Al₂O₃-ZrO₂-Cr₂O₃-SiO₂, ER 216 refractory material, fusion cast, zonality of ruby (*Czech*) 2-86896
 AuGeNi-InP contact, electron microscopy investig. 2-66379
 B fibre reinforced Al, interface struct. and strength 2-77942
 BaPb_{1-x}Bi_xO₃ solid soln., microstruct. and supercond. 2-110518
 BaTiO₃·Y₂O₃ (Nb₂O₅), elec. props., phase composition, valence state of cations 2-110347
 BaTiO₃·Bi₂Ti₂O₇ low temp. sintered ceramics, microstruct. and elec. props. 2-88035
 Bi_{1-x}BiCl_x, phase diagram, eutectic point, crystn. range 2-99405
 C fibre, microtexture and structure, TEM and electron diff. obs. (*French*) 2-78058
 C-C composite, prep. by CVD and characts. (*French*) 2-77764
 Cd laser-photodeposited film, optically induced microstructures, TEM and SEM obs. 2-98486
 Cd-Ge-As glass system, aligned crystallisation, heat transport and interface kinetics 2-71365
 Cd-Sb-Ge system, DTA, microstruct. and microhardness 2-105130
 CdTe, obliquely deposited film, substructure, piezoelectric charge, high-voltage photo-emf 2-87433
 Co-Cr-Al-Y (22, 11, 0.5 wt.%) coating, oxide form. at 700°C 2-116621
 Co-Fe-Cu-Hf-Sm, permanent magnet, microstruct., SEM study 2-92224
 Co-Fe-Cu-Zr-Sm(Ti), permanent magnet, microstruct., SEM study 2-92224
 Co-Ge-Te, phase equilibrium cross-sections 2-72679
 CoSi₂-Si system, epitaxy, effects of nucleation and growth 2-115610
 Cr-Cr₂O₃ solar black chrome film, microstruct., comp., plating process variables, thermal ageing effects, performance 2-93943
 Cr-MgO, sintered, struct. and mech. props. 2-67544
 Cr-MgO condensates, second phase particles distrib. (*Russian*) 2-67314
 Cr-MgO-B, struct. and mech. props. 2-72783
 Cu, dispersion strengthened, prep. from internal oxidation of sputtered powders, struct. and props. (*Russian*) 2-67238
 Cu, subjected to critical work-hardening, annealing phenomena (*French*) 2-99463
 Cu-Al (7.5 wt.%), fatigue crack growth rel. to plastic zone depth in air and vac. 2-77943
 Cu-Al-Zu, damping capacity, quenching and Zn addition effects 2-116441
 Cu-Bc, TEM obs. of microstruct. evol. in simulated ion irradi. alloys 2-86745
 Cu-Cd, struct. of alloy obtained on Fe single crystals by electrolysis (*Polish*) 2-67283
 Cu-Pb, microstruct., mech., elec., and mag. props., depend on synthesis conditions 2-56748
 Cu-Si, rolled, microstruct. and texture 2-111204
 Cu-Su-Cr, struct. and mech. props., Cr effect 2-111244
 Cu-Ti alloy, thin foil, microstruct. changes 2-71826
 Cu-Zn-Al, shape memory alloys, review 2-88143
 CuInTe₈, cryst. struct. and microstruct., electron microscopy study 2-115198
 Cu₂S thin films prep. by Activated Reactive Evaporation, elec. and optical props. 2-99354
 Fe alloy, friction glazing, surface melting interpret. of white etching areas 2-67550
 Fe, cast, nodular, statistical study of graphite and pearlite (*German, English*) 2-111423
 Fe-(Si)-C, grey, microstruct. and abrasive wear mechanism (*French*) 2-116557
 Fe-Cr, packet martensite, struct. changes during annealing, electron microscopy study (*Russian*) 2-99425
 Fe-Cr-Al alloys, rapidly quenched, microstruct., mech. props., elec. cond. 2-111332
 Fe-Cr-Co-Mo-Ti (24, 15, 2, 0.5 wt.%), magneto alloy, machinable, microstruct. and props. (*Chinese*) 2-72261
 Fe-Cr-Co-Nb-Al alloy, high-coercivity, microstruct. rel. to mag. props. 2-111333
 Fe-Mn alloy, microstruct. and phase transform. mechanism, lenticular struct. origin 2-99424
 Fe-N thin films, RF sputtered, static mag. and Mossbauer study 2-82641
 Fe-Ni, ferrite-austenite orientational relationships during $\gamma \rightarrow \alpha$ transformation (*Russian*) 2-93505
 Fe-Ni, packet martensite, struct. changes during annealing, electron microscopy study (*Russian*) 2-99425
 Fe-Ni martensitic alloys, tempering behaviour in cryst. microstruct. (*Korean*) 2-83144
 Fe-Ni-Co-Ti (23, 10, 10, wt.%), martensitic transformation 2-83118
 Fe-Ni-NbC, phase equilib., struct., mag. props. and hardness (*Russian*) 2-67291
 Fe-Triballoy 700 mixture, sintering temp. effect on microstruct. and mech. and tribological props. 2-77775
 Fe₃B₁₇, amorphous struct. formation on laser irradi. 2-82960
 (Fe_{1-x}Ni_x)_{78-y}Cr₂Si₂B₁₂, glass, magnetisation, crystn. and microstruct. 2-77322
 GaAs-Au interface, solid state reactions, cryst. struct. and microstruct. correlation 2-115616
 Ge, textured optical storage medium, microstructure, reflective spots 2-65321

crystal microstructure continued

- Hg_{1-x}Cd_xTe crystals, second phase investig. 2-92225
 Hg_{1-x}Cd_xTe wafers, metallographic obs. of compositional inhomogeneities 2-111411
 InGaAsP relationship between struct. and props. 2-71486
 InP relationship between struct. and props. 2-71486
 K₂O-MgO-SiO₂, fluorine containing melt, prep. of microceramics by solidification (*Japanese*) 2-83074
 LaB₆-Co(Ni) systems, wetting and contact reactions 2-77780
 LiF single crystals, push-pull fatigue at high temps., microstructs. 2-105276
 Li₂O-Al₂O₃-SiO₂-TiO₂ glass ceramics, cryst. props., grain growth, electron and X-ray study 2-66244
 Mg-Li-Y system, isothermal sections and mech. props. in Mg-rich region 2-111142
 Mg-Mg₂Cu-AgMg system, partial phase diagram, eutectic and peritectic reactions 2-57334
 Mo coatings, high-hardness, vac.-arc discharge plasma deposited, struct. 2-72871
 Mo, ion implantation effect on microstruct., TEM obs. 2-71522
 Mo, polycrystalline, creep props. and microstruct. precreeping effects, TEM obs. 2-105243
 Mo-Hf-C, powder metallurgical, props. 2-111228
 Mo-Ti and alloy TZM, void swelling behaviour under heavy ion bombard. 2-86744
 Mo-Ti-Zr-C, powder metallurgical, props. 2-111228
 Mo-ZrO₂ condensates, second phase particles distrib. (*Russian*) 2-67314
 Na₂YSi₂O₇ ceramic superionic cond., sintering prep. and characterisation 2-83056
 Nb alloys, cast, heat treatment effect on struct. and props. 2-72733
 Nb, mech. props. and struct., influence of long high-temp. holds 2-88114
 Nb-Hf-Ti (10, 1 wt.%), hot isostatically pressed powder compact, creep 2-116504
 Nb-W, mech. props. and struct., influence of long high-temp. holds 2-88114
 NbC coatings, appl. to hard-metal tools 2-72883
 NbC_x, single cryst., prep. struct. and mech. props. 2-98108
 NbH_x, twin boundary motion, sound attenuation study, microstruct. effects 2-81897
 NbN(C), single cryst., prep. and supercond. props. (*Japanese*) 2-92808
 Ni alloys, quantitative evaluating exposures, stereological models 2-83313
 Ni, subjected to critical work-hardening, annealing phenomena (*French*) 2-99463
 Ni superalloys, NIM80A, NIM90, NIM105, IN738, IN939, long-term growth of γ' particles 2-105153
 Ni₂He, ion implanted, damage profiles, swelling due to Ni ion irradi. 2-103805
 Ni-Al-Nb-Ti high-temperature strength alloys, mech. props. prediction, struct. factors influence 2-72771
 Ni-based superalloys, phase identification, by interference film microscopy 2-62322
 (Ni)-Co-Cr-Al-Y coatings, on IN-100 and Udimet 520 superalloys, microstruct. stability 2-99462
 Ni-Cr, aluminide coatings, form. kinetics and microstruct. 2-116620
 Ni-Cr alloys, short-range order, discontinuous creep 2-99496
 Ni-Cr-Mo-W, heat-resist., struct. and strength characts. estimation on temp. and time basis 2-111250
 Ni-Cr-Nb-Mo-Al-Ti, heat-resistant, homogenisation effect on struct. and plasticity 2-62181
 Ni-Ti, close to equiatomic, hardening and shape memory effect 2-72737
 Ni-W-Co-Cr-Al-Nb-C eutectic CoTaC-741 alloy autoradiographic investig. of Pm distrib. 2-105176
 Ni-Zr cast superalloy, solution and transform. of Ni₃Zr (*Chinese*) 2-62098
 Ni-Zr-Co-Cr-Al-Ti powders, rapidly solidified, shock wave consolidation 2-62089
 (Ni_{0.6}Fe_{0.4})_{0.89}V_{0.11}, substruct. develop. during cold working, neutron diff. and microscopical obs. 2-83133
 Pb alloys, ternary, US crystallisation (*Russian*) 2-67201
 Pd-In-Sc system, polythermal PdIn-PdSc cross-section investig. 2-57332
 Pd₈₀Si_{14.8}Cu₅, eutectic, laser beam interaction 2-99435
 Pt sputtered thin film, microstruct. and dislocation density, X-ray, diff. study 2-104201
 Si, amorphous film, laser crystallisation, rel. to density 2-56407
 Si, crystn., picosecond laser pulse irradiation 2-66043
 Si, polycrystalline, grain growth mechanisms 2-115424
 Si₃Gd, crystal microstruct., Gd accumulations, electron radiation-induced defects 2-86891
 Si₃H amorphous film, glow discharge deposited, heterogeneities and surface effects 2-92420
 Si₃H amorphous sputtered film, microstruct. and H bonding environments 2-76847
 Si/SiC system, interfacial energy and Si+C reaction rel. to sintering 2-55981
 β -SiAlON solid soln. containing different amounts of amorphous grain boundary phase, TEM obs. 2-92223
 SiC, He⁺ bombardment, microstruct. changes 2-76524
 SiC, polycryst., containing excess Si, neutron irradiated, microstruct. study 2-71514
 Si₃N₄, oxidised, hot pressed, microstruct. and subcritical crack growth 2-116530
 Si₃N₄, SiC, SiAlON, sintered microstruct. and property charact. 2-57323
 Si₃N₄·Y₂O₃, sintering behaviour and microstructural development 2-93480
 Si₃N₄·Y₂O₃ (6 wt.%), density, microstruct. and strength, heating rate effects 2-116467
 Sm-Co-Cu-Fe-Zr, permanent mag., struct., sintering and annealing effects (*Russian*) 2-88226
 Sm(Co, Cu, Fe)_{8-7.2} cast hard mag. alloys, fine struct. after heat treatment 2-99465
 Sm₂(Co, Fe, Cu, Zr)₁₇ sintered permanent magnets, coercive force and struct., Sm content effect 2-72278
 SmCo₅ sintered permanent magnets, fine struct. and mag. props. (*Russian*) 2-104664
 Sm(Co_{0.69}Fe_{0.22}Cu_{0.07}Zr_{0.02})_{7.25}, magnetic hardening 2-72283
 Sn, vacuum deposited thin films, microstruct. 2-116369
 Sn-Pb (15 wt.%), acceleration forces influence on dendritic growth and grain struct. 2-67316
 Sr₂Nd_{1-x}FeO_{3-y} solid soln., superstructure, microdomains, electron diff. and microscopy study 2-91925
 TaC, single cryst., prep. and supercond. props. (*Japanese*) 2-92808

crystal microstructure continued

- Tb-Fe amorphous films, struct., decomposition, crystallisation (*Chinese*) 2-104176
 Ti alloy, near- α IMI 829, weldment, struct. and transform. characts. 2-116439
 Ti alloy VT3-1, fracture toughness, struct. and hot rolling temp. influence 2-105324
 Ti alloy weldments, dissimilar, solute banding effect on transforms. 2-93503
 Ti alloys, two-phase, β - α + β transition, α -phase struct. study (*Russian*) 2-116437
 Ti, neutron irradi., strength changes 2-71510
 Ti-Al-Mo-Zr, Cu coated, plastic deform. and diffusion annealing effect on props. 2-67645
 Ti-Al-Sn-Zr-Mo prealloyed spherical powders, consolidation 2-77777
 Ti-Al-V, mech. props. after β -annealing 2-67398
 Ti-Al-V (6.4 wt.%), laser welded, microstruct. and mech. props. 2-77935
 Ti-Al-V alloy, improvement of fatigue life by ion implantation 2-57444
 Ti-Al-Zr-Mo-W system, equil. diagram, struct. and props., influence of Zr, Mo and W 2-57331
 Ti-Al-Zr-Mo(W), cooling rate effect on struct. 2-67315
 β -Ti-Mn(V)(Mo-V), magnetic susceptibility variation with ageing rel. to microstruct. changes 2-83247
 Ti-Nb-Si-Ge foil, struct. and supercond. props. (*Russian*) 2-92818
 TiB₂-W(Mo)(Cr), sintering and props. 2-111109
 TiC CVD coating on cemented carbides, effects of exptl. parameters on preferred orientation 2-92397
 TiC coating, chemical vapour deposited onto cemented carbide, microstruct. study 2-56389
 TiC coating on graphite for Doublet III limiters, process evaluation and characterisation 2-74899
 TiC coatings, appl. to hard-metal tools 2-72883
 TiC-W(Mo)(Cr)(Nb), sintering and props. 2-111109
 TiN-W(Mo)(Cr)(Ta)(Nb), sintering and props. 2-111109
 TiBTe₂-2PbTe cross section, solid soln. form., physicochem. and electro-phys. props. 2-57337
 TiInTe₂-TiUeTe₂, reactions, microhardness and elec. cond. 2-111167
 V, neutron irradi., preimplantation of He effect on microstruct. 2-85215
 V, neutron irradi., strength changes 2-71510
 V-Cr-Ti (1.0,1 wt.%), neutron irradi., preimplantation of He effect on microstruct. 2-85215
 V-Ni-P, phase diagram at 1070K, phase anal. 2-83099
 V-Sn-Cu system, phase comp., stoichiometry and homogeneity, microstruct., X-ray and microhardness study 2-66172
 V-Ti (20 wt.%), He injected and neutron irradi., tensile props. and microstruct. 2-71509
 VC coatings, appl. to hard-metal tools 2-72883
 (V_{0.99}Cr_{0.01})₂O₃, metal-insulator transition, domain effects 2-76928
 W-O system, phase struct., X-ray diffr. and electron microscopy study 2-60952
 Y-Ir system, supercond. transition temp., heat capacity and susceptibility meas. 2-82508
 YIG, microstruct. and grain size, ferromagnetic resonance and ESR study 2-115425
 Zn laser-photodeposited film, optically induced microstructures, TEM and SEM obs. 2-98486
 Zn-Al, steady state creep near eutectoid transformation, microstructural anal. 2-77868
 Zn-Sb system, crystallisation characts., metastable states, phase diagrams X-ray diffr. study 2-81935
 ZnO, film, obtained by oxidation of ZnSe, for US transducers 2-86194
 Zn films, struct. and dislocation density, X-ray diffr. study 2-104203
 ZnS:Cu₂S single crystal, microbrittleness, impurity effects 2-83210
 ZrC, CVD, microstructs. 2-105169
 ZrC coatings, appl. to hard-metal tools 2-72883
 ZrO₂, sputter deposited, microstruct. control 2-115619
 ZrO₂-CaO(Y₂O₃), sputter deposited, microstruct. control 2-115619
 ZrO₂-Gd₂O₃ cubic lattice solid solution microstructure 2-116624
 ZrO₂-Y₂O₃-Bi₂O₃, Bi₂O₃ effect on elec. and mech. props. 2-67265

crystal morphology

- alkaline earth compounds, precipitation, of sparingly soluble salts from aq. soln. heterogeneous nucleus numbers meas. 2-66229
 alkaline earth salts, cryst. growth from aq. soln., laboratory and industrial studies, review 2-11042
 barite, morphological lattice and reciprocal crystal 2-115169
 calcium oxalate trihydrate, growth morphology rel. to urinary stone research 2-76335
 cerussite, morphological lattice and reciprocal crystal 2-115169
 computer investigations of correspondence between cryst. habit and atomic struct. 2-65909
 Czocharlski growth apparatus, automatic, phantom controlled 2-67209
 diamond, laser radiation effect on morphological and phys. characts. (*Russian*) 2-71497
 diamond, variety III, internal structure X-ray section topography study 2-109785
 growth spiral morphology, book contrib. 2-115162
 ice crystals formation by artificial nucleation, vars. of crystal habit at early growth stages 2-100484
 ice VI, morphological obs. 2-86608
 K₂Cr₂O₇, growth morphology, by solvent evaporation method 2-91835
 Kryptopoules grown crystals, cryst. shape 2-65908
 organic molecules, extended, crystal chem. and morphology 2-65907
 quartz, microtwinning, interferometry study 2-115248
 single crystal, morphological stability of vapour grown crystals 2-115170
 sodium hydrogen oxalate monohydrate, prep. and morphology, X-ray diffr. 2-115159
 sodium urate crystals, growth morphologies 2-76348
 solidification, unidirectional, axial temp. characteristics, numerical calc. 2-66181
 steel, alloy type, carbide precipitates, comp. and morphology, STEM and X-ray microanalysis, replica technique 2-67352
 TGS, single crystal, growth from soln. and morphological studies 2-65895
 transition metal compounds, precipitation, of sparingly soluble salts from aq. soln. heterogeneous nucleus numbers meas. 2-66229
 trigonal-prismatic atomic coordination, struct. classification 2-86609
 Ag dendrites and single crystals., electrolytic growth in gel media, surface morphology, SEM study 2-87962
 Ag, single crystal, electrocrystallisation, conc. non-homogeneity 2-91834

crystal morphology continued

- Al electroplating Fe and steel in AlCl₃ based molten salt mixtures 2-62285
 Al-Ni-Co-Cu-Ti, Alnico 8 alloy, α - γ transformation, α , phase precipitation, coercive force study 2-91858
 Au particles vacuum deposited onto AgBr films, habit 2-110194
 CaHPO₄·2H₂O, crystallisation, representation of growth curves 2-76340
 Ca(NO₃)₂·4DMSO, cryst. growth rate from melt, cryst. morphology 2-111053
 Ca₃(PO₄)₂·OH, hydroxyapatite, crystallisation, representation of growth curves 2-76340
 CdS epitaxial layer preparation in Cd(CH₃)₂·(CH₃)₂S-H₂ system 2-87996
 CdS powder particle perfection, fused CdCl₂ and Na₂S_x solvent effects 2-105066
 CdSnAs₂, films, prop. by LPE 2-72634
 Cu-Cr sputtered thin film, precipitate morphologies, annealing effects, electron microscope and EDX study 2-67353
 Fe₂Mo₂O₈, cryst. growth, morphology, elec. and mag. props. 2-87960
 FeO, wustite, struct. and morphology, vacancy and interstitial clusters (*French*) 2-86644
 Ga₁In_{1-x}As films, vapour growth from In/Ga alloy source, characterisation 2-99351
 GaN epitaxial layer, optimized growth conditions 2-66391
 KCl, Kryptopoules grown crystals, cryst. shape 2-65908
 NH₄Br dendritic crystal growth in capillary, quantitative meas. on morphology 2-98506
 γ - γ Ni-Al(Ti) two phase bicrystal, morphological crystallographic features 2-87076
 Pb on graphite, morphological change mechanisms during equil. shape establishment 2-91839
 PbTe epilayers, LPE growth from supercooled solns., improved morphology 2-110192
 Si, wafer shape, double-crystal topographical investigation after oxidation 2-115243
 Si₃N₄, reactive sputter-coated reaction-bonded 2-99336
 TaC single-crystal powders, morphology, hardness, and grinding ability 2-83230
 TiC single-crystal powders, morphology, hardness, and grinding ability 2-83230
 tiO single crystals, ordered modification with O, crystal-geometrical features (*Ukrainian*) 2-65945
 Zn single crystal, morphological stability of vapour grown crystals 2-115170
 ZnO film, electronic props., defects, morphology and adsorp. depend. 2-104515

crystal orientation

- Cu Cu, Cu-Al, deform., effect of low-temp. irradi. 2-93564
 cytosine, electron diffr. data, cryst. bending effect 2-60965
 distorted cryst. shapes, asymmetry measures 2-86607
 goniometer for large single crystals 2-97855
 growth from vapour phase, orientation dependent desorption energy 2-109718
 ice single crystal growth and evaporation from vapour phase, interface kinetics, meas. in water vapour environment 2-97960
 ice VI, morphological obs. 2-86608
 III-V semiconductors, platelet optical orientation, nondestructive determ. (*Czech*) 2-76358
 lattice reorientation during plastic deformation, vorticity eqn. 2-83811
 orientation relationships, calc. with programmable pocket calculator 2-60911
 semiconducting systems, tolerance classes and spaces 2-86604
 SOS films, sapphire substrate orientation influence on crystn. quality and SOS/MOS mobility 2-91948
 steel, low alloy, quenched, lath martensite struct., TEM study 2-111420
 texture functions, three-dimens., method for determ. 2-60910
 texturised materials, crystallite orientation distrib. function, model components 2-109728
 texturised samples, orientation distrib. function, reproduction method from reduced pole figures 2-109730
 texturized sample, crystallite orientation distrib. function, reduced pole figures and ghost correction 2-109729
 transition metals and alloys, group IVB, α - ω transform. crystallography 2-91860
 trigonal-prismatic atomic coordination, struct. classification 2-86609
 TFT-TCNQ films, struct. and props., substrate temp. effect 2-104205
 X-ray diffractometry, cryst. orientation matrix coeffs. and lattice const., computer program 2-115098
 Ag, electrodeposited, oriented growth of single cryst. on as-grown crystals. 2-104179
 Al-Cu (4 wt.%) single crystals., containing θ'' precipitates, cyclic stress/strain response 2-99495
 Au particles vacuum deposited onto AgBr films, habit 2-110194
 Cu, deformed single crystals., near surface and bulk dislocations, X-ray line broadening study 2-116490
 Cu, single crystals., plastically deformed, dislocation anelasticity in kHz range (*German*) 2-83162
 Cu, single crystals., strain hardening at high strains and dynamic recovery 2-116457
 GaAs cylindrical cryst., O₂ adsorp., orientation depend. 2-110146
 KVO₃·H₂O, topotactic dehydration, competing struct. reaction mechanisms 2-62396
 Mo, cold-worked, deform. and slip behaviour, cryst. orientation effect 2-99502
 Mo single crystals, fatigue failure features 2-77944
 γ - γ Ni-Al(Ti) two phase bicrystal, morphological crystallographic features 2-87076
 Ni₃(Al,Nb), single crystals., tension/compression flow stress asymm. 2-67418
 Si film, large grain polycryst., crystallographic orientation, grid-of-etch-pits technique 2-115591
 Si, stacking faults for specimen surface crystal orientation deviation from (111) plane (*Chinese*) 2-91988
 Si surface, crystallographic orientation determ., micro-probe RHEED technique 2-60843
 SiC, 6H-type, double spiral interpretation 2-109714
 V, low temp. internal friction peaks, effects of deform. temp., orientation and H 2-72752

crystal orientation continued

VN heteroepitaxy on sapphire (*Russian*) 2-71814
 ZrO₂ on Zr (0001) crystallographic relationship, transmission electron diff. study 2-109727

crystal oscillators *see crystal resonators***crystal properties**

see also crystal chemistry
 quantum BBGKY hierarchy for crystal 2-65890

crystal purification

see also zone refining
 chrysene crystal, purification and decay time of delayed fluorescence 2-76483
 AlCl₃, thorough purification, reduction of impurities in Al vapour 2-99308
 CdCl₂·2.5H₂O, purification, by distillation and sublimation in vacuum 2-77720
 CdI₂, single cryst. purification and growth by zone refining, X-ray diff. obs. of polytypism 2-93415
 CoCl₂, anhydrous single crystals, in-situ purification and Bridgman growth 2-111060
 CrCl₃, purification, by distillation and sublimation in vacuum 2-77720
 FeCl₃, (Fe₂Co)Cl₃, (Fe₂Mg)Cl₃, anhydrous single crystals, in-situ purification and Bridgman growth 2-111060
 GaAs, LEC growth of homogeneous undoped semi-insulating crystals, with in-situ melt purification 2-93408
 MgCl₂, anhydrous single crystals, in-situ purification and Bridgman growth 2-111060
 PbTe, polycrystalline, sublimation-grown, cryst. perfection 2-93391
 W, high-purity, prep. scheme 2-105105
 ZnSiP₂, ZnSiAs₂, purification by sublimation in hermetically sealed system 2-93389

crystal resonant gamma-ray interactions *see Mossbauer effect***crystal resonators**

see also piezoelectric oscillations
 deflection of circular piezoelectric bending elements with passive substrate plate (*German*) 2-109197
 flicker noise, statistical model 2-63985
 frequency noises analysis in quartz resonators 2-63966
 GT-type quartz crystal plates, frequency eqn. and characts, 2-60338
 piezoelectric ceramic strips, energy trapping of width-shear vibrs. 2-87691
 piezoelectric crystal blank, dissymmetry used for Φ , Θ angle sign determ. by non destructive method 2-88302
 piezoelectric crystal blanks, polarity determ. apparatus 2-95401
 piezoelectric resonators in DC elec. field 2-87678
 quartz, piezoelec. resonance detect., appl. to determ. of plasma jet characts. in spraying 2-76206
 quartz, synthetic, defects, effect on vibr. characts. and resonator performance 2-99044
 quartz, X-ray goniometry of modified doubly rotated cuts 2-97858
 quartz crystal tuning fork with modified basewidth for high Q, finite element anal. and expts. 2-81197
 quartz doubly rotated crystals, automated meas. of angles of cut 2-97859
 quartz oscillators, new advances and impact on quantum standards 2-63965
 quartz piezoacoustic tunable resonator 2-70804
 quartz resonator, third overtone, eqns. of motion of elastic plates 2-109220
 quartz resonator pressure sensor, sea depth measurement with great precision (*German*) 2-78864
 quartz resonator thermometry developments 2-53761
 rectangular cantilever crystal plates, stresses under transverse loading 2-97430
 Rochelle salt, nonlinear resonator, period multiplication, chaotic behaviour 2-99062
 three-frequency parametric interaction in a rectangular piezoelectric resonator 2-114520
 BiGeO₁₂ resonators, influence of polarising field 2-87681
 CdS, piezoelec., US luminesc., freq. depend. meas. 2-61994
 LiNbO₃ resonators, influence of polarising field 2-87681
 Li₂O-SiO₂-B₂O₃ glass ceramics, piezoelec. reson. meas., crystal resonators appl. 2-82786

crystal structure

see also crystal atomic structure; crystal microstructure; crystal morphology; crystal orientation; crystal symmetry; crystallography; granular structure; polymorphism
 coordination compound crystals, contact conformers 2-92069
 direct method and isomorphism replacement integration methods 2-81702
 electron microscopy, high-resolution, application to chem. problems 2-97878
 electron microscopy, high-resolution, role in development of solid state chem. 2-97880
 electron microscopy image calc., display and comparison, integral and dedicated computer system 2-95562
 EM, high resolution applied to chem. problems, conf., New York, USA, (Aug. 1981) 2-94904
 geometric description 2-65905
 lanthanide metals, bond hybrids and struts. 2-96418
 space filling, nonperidic central, with icosahedral symmetry, using 7 elementary cells 2-60908
 structural sorting diagram interpretation for AB compounds 2-81696

crystal surface and interface vibrations

adsorbed atoms, localised modes linear response theory study 2-82115
 adsorbed atoms, vibrating, electronic struct., mag. field effect, theory 2-110435
 adsorbed diatomic molecules, dissociation, surface mag. field, laser and phonon continuum effects 2-87063
 adsorbed molecules, energy loss intensities, role of electrodynamic interactions 2-62029
 adsorbed species, vibr. spectra overtones 2-87005
 Al, surface, LEED temp. depend. study 2-56307
 alkali halide single crystal surface, inelastic He beam scatt. 2-99254
 atom-phonon interaction at a surface 2-98425
 atom-surface scattering, Debye-Waller factor, angular and temp. depend. 2-111016
 atom-surface scattering, Debye-Waller factor 2-56322
 atom-surface scattering, energy and angular distrib. of scattered atoms 2-99257
 bicrystal interface modes, size of boundary effects, theory 2-98423
 conference on surface science, Liverpool, England (April 1981) 2-58538

crystal surface and interface vibrations continued

desorption entropy, surface wave theory 2-56333
 diamond (111), adsorbed H termination, EELS study 2-110145
 dynamics of systems with two interfaces 2-115523
 EELS, surface vibrational spectroscopy 2-112669
 fluoromethane, adsorbed on NaCl, IR laser induced desorption by multi-quantum vibr. excitation 2-104136
 graphite surface (0001), atomic vibr., He atoms scatt. study 2-56324
 high-resolution vibrational electron energy-loss spectroscopy of solid surfaces, apparatus 2-89869
 inelastic atom-surface scattering, theory, 3-D treatment 2-82978
 ion inelastic scatt. at surface, collective modes and surface-channelled ions 2-57233
 isotropic elastic media, low-temperature interface specific heat due to localized modes 2-76704
 LEED, temp. depend. in pseudoharmonic approx. 2-76250
 liquid-solid interface inertia 2-109962
 metal (100) surface, BCC and FCC, atom motion dynamics 2-66340
 metal surface, adsorbed mol. vibr., charge transfer effects, EHD model 2-56323
 metal surface, chemisorbed mol., vibr. state, electron-hole pair excitation 2-115526
 metal surface, phonons and collective excitations, hydrodynamic model 2-104138
 metal surface, second harmonic generation with surface plasmon excitation 2-60163
 metal surface, sticking and inelastic scatt., electron-hole pair creation mechanism 2-99258
 metal surfaces, adsorpt. of H(H₂), electronic damping of adsorbate vibrations 2-104135
 metallic film, local phonon density of states and its influence on 'supercond. props. 2-56321
 metals, adsorbed vibrationally excited molecules, indirect vibr. coupling, jellium model 2-82116
 optical phonons, radiative decay in polarisable cylinders, theory 2-110431
 order, disorder, nucleation and energy changes 2-98399
 periodic adatom overlayer, adatom vibr. mode freq. estimation 2-87006
 phonon physics, conference, Bloomington, IN, USA (Aug.-Sept. 1981) 2-53414
 piezoelectric semiconductor film, surface phonon amplification, nonparabolicity effect 2-76795
 polaron, ground-state energy, phase diagram 2-56657
 α -quartz, ion irradi., surface polaritons, ATR study 2-57133
 Raman scattering by surface polaritons under conditions of resonance with the transition layer 2-77539
 semiconductor, spatially extended optical interface modes 2-66339
 semiconductor, surface waves at interface between two solid-state plasma media 2-115527
 solid-solid interfacial wave propag., influence of external press. 2-61272
 Toda lattice, impurity localised vibr. mode, perturbation theory based on universe scatt. method 2-103928
 triangular lattice, surface dynamics and thermodynamic props. anal. 2-76796
 two-dimensional systems, electronic props., conf., New London, NH, USA (Aug. 1981) 2-58536
 US study of interface elastic props. 2-83340
 Ag (100), adsorbed Cl⁻, fractional coverage, dipole sum calcs., appl. to enhanced Raman spectra 2-87004
 Ag film, adsorbed mol. charge transfer excitation, EELS obs. 2-62027
 Ag with adsorbed pyridine, coadsorbed CO, effect on surface enhanced Raman spectra 2-87031
 α -Al₂O₃, microcrystals, surface modes, IR study 2-93206
 Al₂O₃, phonon spectrum thermalisation obs. by freq. crossing 2-61220
 Au thin film on sapphire substrate, surface phonon scatt. 2-82114
 BaTiO₃(100) surface, dynamic lattice characts, LEED study 2-115528
 α -Cr₂O₃, microcrystals, surface modes, IR study 2-93206
 CsBr, surface phonon polariton, far IR dielec. const. determ. in reststrahlenband, laser spectroscopy 2-99085
 Cu, (110) surface, oscill. relax. investig. 2-104137
 Cu surface (100), adsorbed CO, IR spectra study 2-56359
 Cu surface (111), O₂ chemisorpt. 2-110155
 Cu-Ni (40 wt%), physisorbed ³He desorpt. kinetics, prefactors and compensation effect 2-98458
 CuK₂(SO₄)·6H₂O/⁴He, phonon bottleneck, thermal resist. meas. 2-76760
 α -Fe₂O₃, microcrystals, surface modes, IR study 2-93206
 He, normal liq., thermal boundary resist. with small particles 2-82062
 *He, liq. and solid, Kapitza resistance meas. 2-110064
 *He, liquid-solid interface, phonon transmission, Kapitza resist. 2-98365
 *He solid-liq. interface, quantum state, crystn. waves 2-115490
 n-InSb film, surface phonon amplification, non-parabolic band struct. effect 2-110126
 KCl, surface phonon dispersion rel. meas. using He atomic beam 2-66143
 KH₂PO₄ small crystals, sp. ht., 1.7 to 25K 2-110005
 LiF film, on LiNbO₃, Raman scattering by surface polaritons under conditions of resonance with the transition layer 2-77539
 LiF, surface phonon dispersion rel. meas. using He atomic beam 2-66143
 NaF, surface phonon dispersion rel. meas. using He atomic beam 2-66143
 Ni (100), adsorbed O(S), ordered struct., EELS spectrum, theoretical anal. 2-67162
 Ni (100) and (111), chemisorption of H, binding props., effective medium theory calc. 2-82137
 Ni (100) and (111) vibr. frequencies of adsorbed H, O, and S 2-98422
 Ni (110), adsorbed H, vibr. modes, EELS study 2-76797
 Ni (111), adsorbed CO, energy loss intensities, role of electrodynamic interactions 2-62029
 Ni, Raney, chemisorption of H₂ and D₂, incoherent neutron inelastic scatt. 2-104142
 Ni surface, (110), adsorbed O, atomic structure, LEED, AES, EELS and work function study 2-66329
 Ni, surface (001), adsorbed CO, core level angle resolved XPS, single scatt. theory, mol. vibr. effects 2-111034
 Ni with chemisorbed H, surface vibr. spectroscopy 2-87033
 Ni-Fe-Cr, Nichrome, phonon-induced desorption of He, crit. cone 2-92349
 Ni(100), with adsorbed O, electron energy loss spectroscopy 2-87029
 O₂ adsorbed periodic overlayer on Ni(100), adatom vibr. mode freq. estimation 2-87006

crystal surface and interface vibrations continued

- Pd(111), chemisorbed acetylene, surface vibr., LEED and EELS study 2-71787
 Pt, surface (111), adsorbed CO, vibrational spectroscopy, EELS and IR 2-110125
 Si (100) and (111), dissociative chemisorption of water, EELS study 2-87051
 Si surface (111), electron-photon interaction and metal-insulator transition 2-87358
 Si surface (111), RHEED, geometrical surface wave resonance 2-76783
 SiO₂ film, on Si (001) substrate, surface Brillouin scatt., strong interf. effects 2-72518

crystal symmetry

see also *crystallography*; *group theory*

- 4d transition metals, positron wave function, anisotropy 2-62011
 A15 (O₁³-Pm3n) struct., symm. changes, Landau approach 2-71609
 A15 structure, symm. changes at second-order phase transitions, chain criterion and Landau theory 2-71610
 acoustic gyrotropic tensor, non-zero coeffs. 2-61072
 alkali halides, ion dynamics, anion-cation mirror symm. 2-81911
 alloys, ordering transitions, thermodynamic theory (*Russian*) 2-92150
 antiferroite crystals, cubic, distorted, halogen NQR, group theoretical classification 2-82743
 Archimedean truncated octahedron, cryst. structs. with geometric units of m3m symm. 2-81704
 boracites, symmetry related prop. tensors, pyroelectric and ferroelectric props. 2-99064
 centrosymmetric case, heavy atom arrangement, eight-fold multiple soln. (*Chinese*) 2-109723
 centrosymmetric case, heavy atom arrangement, four-fold multiple soln. (*Chinese*) 2-109724
 colour groups, appl. to tensor fields in crystals. 2-103680
 constraint eqn. treatment in least-squares refinement 2-109720
 crystal struct. determ. using partial Patterson function 2-86603
 crystal structure, geometric description 2-65905
 crystal structures, special point ordering 2-60905
 crystal structures containing heavy atoms, multiple soln. appearance (*Chinese*) 2-103675
 crystallographic pedigree, origin, theory 2-97967
 cubic, space groups, Dirichlet domains (*German*) 2-60909
 cubic, symmetry requirements of W_{lmn} with odd l 2-109726
 diamond, structure, symm. and twinning 2-86621
 direct method and isomorphous replacement integration methods 2-81702
 distorted cryst. shapes, asymmetry measures 2-86607
 electron density distrib. construction method 2-86602
 ferroelectric and incommensurate phase transitions, symm. aspects, unit cell multiplication 2-110784
 finite crystal symm. 2-103678
 four-dimensional cube symmetry group, structure and representation 2-95263
 incommensurate crystals, superspace group symm. diagrams 2-65906
 incommensurate phases, symm. jumps in presence of devil's ladder 2-86833
 incommensurate phases in tetragonal tungsten bronze struct., Landau free energy and symm. anal. 2-66213
 incommensurate systems, dynamical equations, superspace symm. 2-66138
 lanthanide ions, orbit-lattice interaction, superposition model anal. for arbitrary symmetry 2-87203
 Mackay icosahedra relax. study 2-109721
 magnetic groups corepresentation, character table 2-76357
 magnetic line groups 2-92870
 magnetic point groups, Molien generating functions, invariants and covariants 2-115167
 matrix method for lattice symmetry determination 2-115165
 maximal equitranslational subgroups of the line groups 2-76356
 minerals, structural patterns, structural genetic trends 2-86605
 molecular symm. axis orientation, least-squares method 2-115163
 noncentrosymmetric structure, determ. by phase degeneration (*Chinese*) 2-109725
 organic molecules, extended, crystal chem. and morphology 2-65907
 orthorhombic cryst., symmetry element projections of space group 2-86601
 P-symmetry 3-D point group appl. to 6-D symm. group derivation 2-115168
 P-symmetry point groups as semidirect products 2-65902
 pentagonal symm., role in nonclassical crystallography 2-65904
 point groups, tree flow charts, teaching and indexing appl. 2-65903
 probability density functions, cumulative distrib. functions, normalised struct. amplitude moments, generalised statistics 2-81705
 regular Dirichlet partitions for two-dimensional similarity-symmetry groups 2-97970
 rhombohedral perovskites, R3C symmetry, structural relationships 2-115166
 semiconducting systems, tolerance classes and spaces 2-86604
 space and Laue group changes in published cryst. structs. 2-65901
 space filling, nonperiodic central, with icosahedral symmetry, using 7 elementary cells 2-60908
 space group symbols, derivation of symm. operations, computer program 2-97969
 space groups, n-tet phase invariants and embedded semiinvariants 2-81703
 space groups origins rel. to Archimedean truncated octahedron in cubic cryst. structs. 2-115164
 symmetry in condensed matter physics 2-103681
 tensor fields on crystals 2-55874
 ternary compounds, structural types related by polymorphic transitions 2-86606
 trigonal-prismatic atomic coordination, struct. classification 2-86609
 two-dimensional, surface tension effects, theory 2-103677
 two-phase semivariant evaluation and use, SIR program 2-109722
 wurtzite derivatives and related dipolar tetrahedral structs. 2-81756
 X-ray diffractometry, cryst. orientation matrix coeffs. and lattice const., computer program 2-115098
 X-ray structure factors calc. from symm. operators 2-97856
 (Ba_{0.7}Pb_{0.16}Na_{0.10}K_{0.04})(Mn,Fe,Al)₈(O,OH)₁₆, cryst. struct., symm. and cation displacements 2-65928
 BaTiO₃, phase transition, bond symm. (*French*) 2-87714
 In₂WO₁₂, cryst. struct., relation to fluorite struct., X-ray diffr. study 2-81726

crystal symmetry continued

- (K,Na)₂₋₄(H₂O)₄[UO₂SiO₄].H₂O, boltwoodite, cryst. struct., symm. twinning 2-86653
 K feldspars, non-centrosymm., SHG test 2-115192
 (K_{0.98}Ba_{0.15})(Ti, Fe, Mg)₈O₁₆, cryst. struct., symm. and cation displacements 2-65928
 K₂H(SeO₄)₂, ferroelastic transition and twin structs., X-ray and optical study 2-86854
 KND₂, phase transitions, group theory anal. of symmetry reduction 2-81950
 (K_{0.98}Na_{0.25}Sr_{0.13}Ba_{0.10})(Mn,Fe,Al)₈(O,OH)₁₆, cryst. struct., symm. and cation displacements 2-65928
 K₂PbCu(NO₃)₆, cooperative Jahn-Teller system, incommensurate phase struct. 2-66507
 (Mg,Fe)₂Al₄Si₅O₁₈ in H₂O, cordierite, high press. phase transition 2-92172
 (NH₄)₂ZnCl₄, ferroelec., phase transition sequence, X-ray diffr. and NQR study 2-76360
 NbP₂O₁₄Gd³⁺, monoclinic-orthorhombic ferroelastic transition, EPR study 2-61763
 Tb₂Co₃, mag. anisotropy, cryst. symmetry effects 2-92901
 β-ThBr₄, phase transform., cryst. symmetry, NQR study 2-110704
 β-ThCl₄, phase transform., cryst. symmetry, NQR study 2-110704
 UCl₄, phase transform., cryst. symmetry, NQR study 2-110704
 Yb₂O₃, grain boundaries, interface crystallography (*French*) 2-86685
 ZnSO₄.7H₂O.VO²⁺, EPR anal. 2-56916
 ZrO₂, polymorphism, high press. transitions, Raman spectra study 2-91859

crystal whiskers see *whiskers (crystal)***crystalline-amorphous transformations** see *amorphisation***crystallisation**

- see also *crystal growth*; *dendrites*; *heat of crystallisation*; *nucleation*
 adrenocorticotrophic hormone oligopeptides, crystallisation expts. 2-78283
 aluminosilicate glass, crystallised, of distilled water, effects on microhardness and microbrittleness 2-99525
 amorphous thin films, pulsed energy beam crystn., struct. features 2-60888
 anorthite, glass form., transient nucleation in non-isothermal crystn. 2-109685
 anorthite-gehlenite system, crystn. of glass-forming melts 2-71371
 batch crystallisation expts., cryst. growth rates 2-76345
 boundary, discontinuity surface model, energy balance 2-86844
 bubble migration inside a liq. drop in a space laboratory 2-57312
 calcium oxalate trihydrate, growth morphology rel. to urinary stone research 2-76335
 chalcogenide amorphous semiconductors, nonisothermal crystallisation kinetics 2-103651
 chlorobenzene/cis-decalin mixtures, mol. rot. in glassy, amorphous, and cryst. phases, NMR and DSC study 2-103630
 cholesterol, anhydrous, crystal habit, solvent and crystn. effects 2-55868
 cholesteryl hexanoate, phase transitions, high press. study 2-71642
 cholesteryl pentanoate, phase transitions, high press. study 2-71642
 circular anisotropic particle grown from melt, morphological stability of shape 2-65898
 Co, electrocrystallisation during deposition of mag. thin films (*Russian*) 2-77761
 crystal surface mass transfer processes in crystallisation and melting 2-103963
 Czochralski growth system, mech. instability effects on crystallisation rate 2-87965
 Czochralski growth system, melt temp. effects on crystallisation rate 2-87964
 diamond, crystallisation mechanism in system of C in a metal melt 2-81701
 dienes, photopolymerising chiral cryst. with topochem. products, optical activity amplification 2-110807
 EBBA, melting and crystn. processes, thermal anal. 2-92198
 elastomers, crystallising, λ-relax. processes and crystallisability (*Russian*) 2-65885
 equilibrium fluids, crystn. and ordered struct. formation, mol. theory 2-56161
 Fe₂Co₇Si₁₃B₁₀ (Fe₄₀Ni₄₀P₁₄B₆), glassy, free vol., positron annihilation study 2-104987
 float glass, effect of 5% hematite on devitrification behaviour Mossbauer and X-ray study 2-109686
 fluoranthenyl cation radical salts, cryst. struct., phase transitions and electrochem. crystallisation 2-71430
 gel to glass transform. by sintering, densification and crystn. phenomena 2-77794
 glass formation, continuous cooling approx. 2-55855
 graphite-diamond transition, penetration of liq. metals, high static press. 2-82082
 hard sphere system, statistical theory 2-97964
 histones H3 and H4 from calf thymus, cryst. of tetramer 2-99891
 horizontally directed crystallisation, heat transfer processes (*Russian*) 2-67211
 ice, nucleation in MgAl₂ (M=Rb, K, NH₄) 2-86829
 interface temp., DTA and DSC meas. errors anal. 2-103628
 kinetic theory 2-103954
 kinetics from solutions in solvents with various dielec. const. 2-103961
 liquid-solid interface inertia 2-109962
 liquids, acoustic wave absorption and acoustic wave velocity, theoretical analysis 2-71583
 MBBA, disorder-cryst. transition in frozen liq. cryst. state, X-ray diffr. obs. 2-60891
 metal cooling in moulds, numerical solutions of one dimensional problem 2-97364
 metallic glasses, crystallisation, positron annihilation study 2-104989
 metallic glasses, thermal transform., composition effects, DSC obs. 2-81962
 microcomponent concentration influence on plane crystn. front stability 2-55870
 microgravity research in space 2-57278
 molten metal crystallisation via cooling sheath, variational methods (*French*) 2-71383
 monomolecular layer, on contracting surface, model 2-76811
 Mossbauer studies of crystallisation, glass transition and struct. relaxation in nonmetallic glasses 2-104752
 multicomponent systems, layered convection and crystal layers rel. to magma chambers 2-106116

crystallisation continued

- Nylon 12, α form, formation from melt and quenched state under high press., DTA and X-ray study 2-72684
- nylon 12, soln. crystn., morphology, crystal form and thermal behaviour 2-91818
- o-terphenyl, glass form., transient nucleation in non-isothermal crystn. 2-109685
- PET crystallisation, press. effect 2-109692
- PET films, physical ageing in glassy polymer, IR spectra 2-103667
- st-PMMA, struct. changes on drawing, absorpt. and desorpt., solvent-induced crystallisation, IR spectra 2-109698
- poly(1,3-dioxolane), crystallisation, morphology and growth rate, temp. and mol. wt. effects 2-76355
- poly(1,3-dioxolane), crystallisation kinetics 2-76354
- poly(ethylene oxide)-PMMA, spherulitic crystallisation, light microscopy study 2-109701
- poly- ϵ -caproamide, form., crystallisation 2-78095
- polydiacetylenes, struct.-property rels., colour changes 2-71375
- polyether-MDI-butenediol based urethanes, structure-property behaviour, composition ratio behaviour 2-91827
- polyethylene, branched, partial crystallisation, molecular model 2-109700
- polyethylene, calc. of free surface energy at cryst.-melt interface on crystn. (Russian) 2-56299
- polyethylene, linear, absolute integrated small-angle X-ray scatt. obs. during crystn., mass density determ. 2-115150
- polyethylene, linear fraction, crystallised at different temps., quantitative electron microscopic obs. 2-65875
- polyethylene, super-high mol. wt., morphology from melt 2-97937
- polyethylene, ultrahigh mol. wt., isothermal crystn. kinetics 2-103665
- polyethylene oxide fractions, fractionation in mixtures during crystn. 2-91817
- polyethylene oxide fractions, supermol. struct., mol. wt. and crystn. conditions depend. 2-115151
- polyethylene oxide-polyvinyl acetate blends, compatibility assessment using morphology, mech. and thermal props. 2-109694
- polyethylene single cryst., chain folding, mixed-cryst. IR obs., effect of crystn. temp. 2-110850
- polyethylene terephthalate film, crystn. of cyclic oligomers, annealing and solvent exposure effects 2-76328
- polyethyleneterephthalate fibres, undrawn, crystn., effect of mech. stress 2-65874
- polymer, degree of crystallinity, volumetric meas. 2-71360
- polymers, crystallisation kinetics studied using differential scanning calorimetry 2-109702
- polypropylene, crystallising, impurity diffusion rel. to annealing 2-104049
- polypropylene, isotactic, isothermal crystn. kinetics 2-103665
- polypropylene film, orientated, crystn. of partial melt during annealing (Russian) 2-65873
- polypropylene films blended with ethylene-propylene copolymers and polyisobutylene, morphology, crystallisation, melting 2-65881
- polystyrene, isotactic, crystallisation from bulk, low density crystalline form 2-86594
- polystyrene-polyethylene oxide (polyisoprene) block copolymer-solvent systems, liq. cryst. textures 2-115130
- PTFE, phase transitions, positron lifetime study 2-104988
- pyroceramic cement, vitreocrystalline, struct. and mech. props. after heat treatment 2-72723
- quartz, synthetic, growth, see influence on dislocation density (French) 2-76351
- SrWO₄, solubility in metal chloride melts, crystallisation 2-86874
- steel, high-speed, type R6M5, powders, primary crystn. features at high cooling rates (Russian) 2-62112
- steel, phase and struct. transitions caused by laser heating, original struct. effect (Russian) 2-77814
- steel, stainless, amorphous, crystn. behaviour, effect of heavy ion irradiation 2-81676
- steel, stainless, amorphous, form. and stability, with W or Ti 2-81675
- sulphides, crystallisation from KSCN melts, solubilities 2-11043
- tetrabenz(o,a,d,j)perylene film, impurity controlled, crystn. rate, absorpt. and fluorescence spectra study 2-56395
- transition metal silicide films, amorphous-cryst. transition, size effects, elec. cond. study 2-92407
- TTFX₂ (X=halide, NO₂) highly conductive thia adducts, electrocrystn. 2-93402
- V-VI-VII compounds, chem. transport during crystn. from vapour 2-81698
- water, grapevine tissue, possible mechanism of process, ¹H NMR obs. 2-111615
- water crystallisation in plant tissues 2-57783
- zeolite, VSZ-4 crystals, hydrothermal growth and characteris. 2-99311
- AgI-Rb(KI), eutectic mixture, impurity behaviour during crystn. refining 2-111064
- AgSbSe, film, growth and cryst. 2-115620
- Al, residual electrical resist. meas., correlation with dislocation density and cryst. growth from melt (Russian) 2-98614
- Al-Ce(Gd)(Dy)(Tm) thin films, crystallographic phases following electron beam annealing 2-55888
- Al-Cu films, amorphous, crystallisation 2-71837
- Al-Sb multilayered film, laser induced crystn. 2-61316
- Al₂O₃, deposited on cemented carbides, increase in wear characts. (Korean) 2-62073
- Al₂O₃-ZrO₂-Cr₂O₃-SiO₂, ER 216 refractory material, fusion cast, zonality of ruby (Czech) 2-86896
- As₄₀Se₆₀, amorphous, crystallisation, scanning calorimetry and X-ray diff. study 2-91780
- B₂O₃-Li₂O-LiCl amorphous fast ionic conductor, crystallisation effects on cond. 2-115454
- B₂O₃-SiO₂ gels, crystn. rel. to glass prep. 2-76309
- BaWO₄, cryst. growth from Na₂WO₄ melt, nucleation mechanism, and kinetics induction period meas. 2-91836
- BaWO₄, solubility in metal chloride melts, crystallisation 2-86874
- Bi amorphous film, crystn. under gaseous He stream, T \leq 4.2K (Russian) 2-115586
- Bi thin film, avalanche crystallisation (Russian) 2-61131
- Bi₂-BiCl₃, phase diagram, eutectic point, crystn. range 2-99405
- Bi₂-Sb₂, amorphous film, crystn. under gaseous He stream, T \leq 4.2K (Russian) 2-115586
- C foils behaviour under ion irradiation 2-66076
- Ca phosphates, crystallisation, homopolymer additive effect 2-76341
- Ca₂Al₂SiO₇-Ca₂SiO₄, nucleation and cryst growth from melt. 2-72614

crystallisation continued

- CaCO₃, calcite, rhythmic crystn. in agar gel, impurity addition effect 2-55867
- CaCO₃, nucleation rate, crystallisation kinetics 2-71384
- CaHPO₄·2H₂O, crystallisation, representation of growth curves 2-76340
- Ca₂(PO₄)₂·OH, hydroxyapatite, crystallisation, representation of growth curves 2-76340
- CaWO₄, solubility in metal chloride melts, crystallisation 2-86874
- Cd-Ge-As glass system, aligned crystallisation, heat transport and interface kinetics 2-71365
- CdGa₂Te₄, amorphous film, structural ordering, effect of group I metal impurities 2-87114
- Cd₂Hg_{1-x}Te, compositional uniformity, directed crystn. from melt 2-76333
- CdI₂, polytypism, mag. field effects during solution growth, X-ray study 2-109751
- Co-Gd amorphous films, struct. and mag. props., Mossbauer study (Russian) 2-77429
- Co₇₀Fe₂₀Si₁₀B₁₀, amorphous, crystn., Mossbauer and X-ray diff. study 2-103636
- Co₂Si₃, chimney-ladder structs., formed by high-temp. and pressure treatment 2-88022
- Cr-Ni (45 wt.%) film, amorphous sputtered, crystn. 2-110211
- Cu-Ag, amorphous films with high stability 2-104196
- Cu-Cd, electrocrystn. on (111) plane of Cu single cryst. 2-62085
- Cu₂MnIn(Al)(Sn) films, struct., mag. and transport props. 2-60889
- Cu₂Zr₄₀, amorphous, initial quench effect on thermal behaviour 2-91813
- Cu₂Zr₄₀, (25 \leq x \leq 70) metallic glasses, crystn. characts. 2-97928
- D₂O cubic ice, homogeneous nucleation and crystallisation in LiCl·D₂O electrolytic glass 2-81684
- Dy-Cu amorphous films, crystallisation, TEM and electron diff. study 2-92415
- Fe-B alloy, amorphous, heat treatment conditions influence on crystn. and struct. (Russian) 2-65868
- Fe-B alloy, quenched from liq state, crystn., microstruct. and hardness 2-111165
- Fe-B metallic glasses, crystn., calc. and calorimetric meas. 2-71369
- Fe-B metallic glasses, rare earth additives, mag. props. study 2-87498
- Fe-B-Cr(Co)(Ni), metallic glasses, crystn. behaviour 2-71368
- Fe-B-Si amorphous ribbon, crystn., domain struct. and magnetisation study 2-71363
- Fe-B-Si metallic glass, crystn. kinetics, DSC study 2-71364
- Fe-B-Si-Co(C), Metglas 2605, Mossbauer and magnetoelastic coupling 2-77432
- Fe-Bi-Si metallic glass, form. and mag. props. 2-103648
- Fe-Co-Bi, amorphous film, magnetisation, Mossbauer study 2-72263
- Fe-Ni-B based amorphous ferromagn., aging effects on mag. props. 2-98909
- Fe-Ni-Mo-B, metallic glasses, annealed, phase transforms 2-67302
- Fe-Ni-S-P system, meteorite origin model 2-100843
- Fe-Si-C, melts, crystn. of primary graphite 2-72687
- FeAl₃, intermetallic, cryst. growth by dissolving Fe alloy in liq. Al bath 2-111165
- Fe_{1-x}B_x glass, crystn. kinetics, Mossbauer and DSC study 2-103632
- Fe₃₀B₇₀, amorphous, aging effects on mag. props. 2-98909
- Fe₃₀B₇₀, amorphous, crystn., annealing, elec. resist. meas. 2-55853
- Fe₃₁S₆₉, amorphous, struct. and crystn. study by Mossbauer spectroscopy (Russian) 2-93075
- Fe₃₄B₆₆-C₄₀ glassy, crystallisation, magnetisation 2-55862
- Fe₇₈B₂₀Mo₂, amorphous, crystn., annealing, elec. resist. meas. 2-55853
- Fe₇₈B₂₀Mo₂-C₂₀, Metglas 2605SC, at. rearrangements and cryst. transforms., Mossbauer study 2-103655
- Fe₈₁Si₁₉Si₁₅C₁₅, metallic glass, crystn. kinetics study using thermoelec. power meas. 2-86575
- Fe₈₀Si₂₀Si₁₅-Ge_x, amorphous, Curie temp. and crystn. behaviour 2-87496
- Fe_{80-x}Co₂₀B₂₀ (Fe_{80-x}C₂₀B₂₀), amorphous, crystn., Mossbauer study 2-103633
- Fe₇₂Cr₇P₁₂C₉Si₃, amorphous, appearance pot. spectroscopy, electronic struct. effects 2-105005
- (Fe_{1-x}Ni_x)₇₀B₃₀, amorphous, magnetisation and crystals. 2-72266
- Fe₆₀Ni₄₀B₂₀, C₂₀-Fe₆₀B₁₀Si₂ and Co₂₀Fe₄₀Ni₂₀(SiB)₂₀, amorphous, crystn. in RF mag. field, Mossbauer study 2-103634
- Fe₆₀Ni₄₀B₂₀, metallic glass, Vitrovac 0040, crystallisation, TEM obs. 2-116474
- (Fe_xNi_{1-x})₈₀B₂₀, glass, mag. props. and crystn., Mossbauer study 2-104754
- Fe₇₂Ni₂₈Cr₂P₁₂B₆ metallic glass, crystn., hardness and tensile deformation meas. 2-91784
- (Fe_{1-x}Ni_x)_{78-x}Cr₂Si₂₀B₁₂, glass, magnetisation, crystn. and microstruct. 2-77322
- Fe₆₀Ni₄₀Mo₁₀B₁₃, metallic glass, crystn., TEM study 2-65867
- Fe₆₀Ni₄₀Mo₁₀B₁₈, metallic glass, struct. evolution during crystallisation 2-109682
- Fe₆₀Ni₄₀P₁₄B₂₀, amorphous activation energy of crystallisation 2-81681
- Fe₆₀Ni₄₀P₁₄B₂₀, amorphous, mag. anisotropy and atomic short-range order, Mossbauer study 2-104607
- Fe₆₀Ni₄₀P₁₄B₂₀, amorphous films, STEM obs. of crystn. 2-109688
- Fe₆₀Ni₄₀P₁₄B₂₀, Metglas 2826, early crystn. behaviour, nucleation mechanisms 2-93500
- Fe₆₀Ni₄₀P₁₄B₂₀, Metglas 2826, crystn. kinetics, effect of tensile stress 2-103652
- Fe₆₀Ni₄₀P₁₄B₂₀, amorphous, electron state of Fe (Russian) 2-76905
- Fe_{78-x}R₂₂Si₁₀B₁₂, R=Re, Ru, Os, Ir, Pd, Pt, metallic glass, thermal stability 2-109688
- Fe₂Si₃B₅, glass, crystn., Mossbauer study 2-103637
- FeSiO₃-MnSiO₃, metasilicate glass, high-resolution EM 2-97936
- GaAs:Si LPE layer, photolum., and carrier conc. (Russian) 2-99174
- GaP layer, liq. phase electroepitaxy from limited and unlimited sources, growth kinetics 2-56380
- GdGa₂O₇, garnet, formation, DTA and X-ray phase anal. 2-67207
- Ge amorphous film, crystallisation boundary dynamics in CW laser irradiation 2-81680
- Ge amorphous film, explosive crystallisation, temp. and thickness effects 2-65860
- Ge amorphous films, time-resolved TEM of pulsed crystn. 2-82167
- Ge epitaxial layers, LPE growth in γ -radiation field, struct. and electro-physical parameters 2-115599
- Ge film, amorphous, electron beam annealing in TEM 2-71503
- Ge film, laser induced crystn. 2-61316
- Ge film, laser-crystallised, crystallite morphology and defect struct.; TEM and SEM study 2-66402

crystallisation continued

- GeO₂-Bi₂O₃-Ti₂O₃ glass formation, optical appl. 2-77847
 GeSe₂ glass, reversible quasicrystn., Raman scatt. study 2-81685
 He, crystallisation waves 2-104113
 He solid-liq. interface, quantum state, crystn. waves 2-115490
 Hf-Nb-Si, amorphous, supercond. props. and microstruct. after induced crystn. 2-98785
 Hf-V-Si, amorphous, supercond. props. and microstruct. after induced crystn. 2-98785
 In₂S₃, crystal growth from amorphous phase, electron-diffraction study (*Russian*) 2-92384
 K₂Al₂(SO₄)₄, crystal growth kinetics from soln., metastable zone width 2-91837
 K₂WO₄-Rb₂WO₄, solid solutions, phase diagram, X-ray and DTA study 2-88064
 K₂ amorphous film, crystn. under gaseous He stream, T≤4.2K (*Russian*) 2-115586
 La_{0.33}NbO₃, thermal quenching prep., crystallisation and struct. 2-91924
 La₂O₃-PbO-B₂O₃ fluxed-melt system, solubility and relative supersaturation 2-93400
 LiAlSiO₄, β-eucryptite crystallisation from glass, laser Raman spectra 2-71366
 α-Li₂O, crystallisation from solution characteristics meas. 2-86599
 Li₂O-H₂O-LiOH-H₂O, phase equilibria, microscopic obs. 2-86599
 Li₂O-Na₂O pseudobinary system, phase diagram and amorphous state crystn. kinetics, expt. study (*Chinese*) 2-91778
 Li₂O-Al₂O₃-SiO₂ gels, crystn. rel. to glass prep. 2-76309
 Li₂O-SiO₂ glass, phase separation, Raman spectroscopy study 2-92212
 Mg₂Al₂Si₂O₁₀-TiO₂, changes in spectral props. at initial stages of crystn. 2-72529
 MgHPO₄·3H₂O, newberyite, crystn. and effect of pH and conc. 2-62055
 MgNH₄PO₄·6H₂O, struvite, crystn. and effect of pH and conc. 2-62055
 Mg(OH)₂, periodic crystallisation from gel media, spacing coeff., flocculation value 2-87961
 Mg(OH)₂, periodic crystallisation in agar-agar gel 2-116350
 MgSiO₃-MgGeO₃, phase relation diagram, physicochemical anal. 2-66175
 MgSiO₃-MnSiO₃, metasilicate glass, high-resolution EM 2-97936
 MgWO₄, solubility in metal chloride melts, crystallisation 2-86874
 Mg₁₀Zn₁₀, amorphous, crystn., positron annihilation, X-ray diffr. and elec. resist. study 2-103635
 Mn-Bi amorphous films, crystn. 2-98480
 MoO₃-Al₂O₃ system, reaction and degree of cryst., effect of prep. conditions 2-67206
 Na₂O-Fe₂O₃-Al₂O₃-SiO₂ glass with decorative cryst. surface film, synthesis 2-67275
 Na₂O-SiO₂ gels, crystn. rel. to glass prep. 2-76309
 Na₂O-SiO₂ gels prep. for gel-glass process, action of atmospheric agents 2-76317
 Na₂O-SiO₂ glass, phase separation, Raman spectroscopy study 2-92212
 Na₂O-SiO₂-B₂O₃ glass, phase separation, Raman spectroscopy study 2-92212
 NaY zeolite, IR spectroscopy 2-71385
 Nb-Si, shock synthesis by gun method 2-77769
 NbO₂ films, RF sputtered, crystallisation, DTA and elec. cond. 2-104441
 Nb₈₁Si₁₉, amorphous, crystn. under high press. and form. of Al₁₅ phase 2-86572
 Nd-Fe alloys, melt-spun, mag. hardening and crystn. props. 2-88228
 NdP₂O₄, admixtures influence on crystallisation and props. 2-93399
 Ni-Cr alloy film, amorphous, struct. and crystn. 2-55863
 Ni-Cr based refractory eutectic alloy, electron microscopy study (*Russian*) 2-98298
 Ni₃P, metastable phase struct. (*Chinese*) 2-109743
 Ni_{8-x}R_xSi₂B₁₂, R=Re, Ru, Os, Ir, Pd, Pt, metallic glass, thermal stability 2-109681
 NiZr₂ metallic glass, diffusion rates of Pb, Pt and Au, pretreatments effect 2-71726
 Pb alloys, ternary, US crystallisation (*Russian*) 2-67201
 Pb circular crystns., growth from melt, grain boundaries and solid-liq. interface normal orientation 2-87966
 Pb film, reducing grain size by use of nucleants 2-104188
 PbO-SiO₂, effect of P₂O₅ on crystallisation 2-109683
 PbO-SiO₂ glass, crystn. kinetics, 500° to 725°C 2-86574
 PbO-V₂O₅, equimolar system, new phases 2-93496
 (PbO)_mSiO₂ glass, M=1, 2, 4, struct. and devitrification, ²⁹Si NMR study 2-110655
 PbTiO₃, amorphous ferroelec., time depend. dielec. const. during annealing 2-109676
 PbTiO₃, amorphous state and crystn. process, Raman scatt., SEM, and dielec. meas. 2-81677
 PbTiO₃, ferroelec., Raman scatt. from amorphous state, rel. to crystallisation process 2-57091
 Pd₂Ge, metallic glass, crystn. kinetics 2-81682
 Pr-Fe alloys, melt-spun, mag. hardening and crystn. props. 2-88228
 Pr₂(Fe_{0.9}B_{0.1})_{2-x}, amorphous, crystn. and mag. moments study 2-71362
 Re₂Ge₂, chimney-ladder structs., formed by high-temp. and pressure treatment 2-88022
 Sb amorphous film, crystallisation, film thickness effects 2-97922
 Sb evaporated thin films, simulation of oriented crystallisation 2-71821
 Sb film, amorphous, vacuum deposited, estimation of density changes associated with growth 2-71838
 Sb, thin films, crystn., time-resolved TEM study 2-53898
 Sb-O-Te system, metastable phase vitrification and crystn. 2-103647
 Sb-Zn, amorphous, form. and crystn. 2-76322
 Sb-S₂, amorphous and glassy, struct. rel. to As₂X₃ glass struct. 2-86573
 SbSi, cryst. growth from vapour, Plackett-Burman method 2-67203
 SeF₃-BaF₂-YF₃(ThF₄)(NaF), glass, phys. props. (*French*) 2-91809
 SeF₃-ThF₄-YF₃, glass, phys. props. (*French*) 2-91809
 Se, amorphous, crystallisation, scanning calorimetry and X-ray diffr. study 2-91780
 Se amorphous film, stress effects on crystallisation 2-86569
 Se amorphous vacuum condensates, cryst. 2-104181
 Se-binder photoconductive layer, trigonal, formed by situ reduction and crystallisation, photocond. behaviour 2-87333
 Se-Te chalcogenide amorphous semiconductors, nonisothermal crystallisation kinetics 2-103651
 Se-Te liq. and cryst. semicond., elec. transport and struct. props. 2-115746
 Se(I), vitreous, thermal crystn., DTA study 2-115143
 Se₉₉Bi_{0.01}, amorphous, crystn., elec. cond. meas. 2-55860

crystallisation continued

- Si, amorphous film, laser beam induced crystn., optical recording appl. 2-65325
 Si amorphous films, time-resolved TEM of pulsed crystn. 2-82167
 Si amorphous layer, low-temp. recrystallisation by high-energy ion beam annealing 2-65861
 Si, amorphous UHV deposited film on Si(111), epitaxial regrowth 2-104197
 Si film, patterned and CW laser crystallised on amorphous substrate 2-61315
 Si films, microscopy during laser melting 2-66403
 Si films, on glass, laser crystn. 2-66382
 Si, ion bombarded and annealed, UPS and RBS investig. 2-103857
 Si, laser annealing, review 2-98157
 Si, microcrystalline, plasma deposited, charact. 2-92405
 Si ribbon growth, using electron bombardment 2-66387
 Si, zone melting contamination with C 2-87972
 Si:Bi, ion implanted, impurity redistrib. after Nd laser pulse irradi. 2-115265
 Si:H, amorphous film, laser induced crystn. 2-55849
 Si₃N₄, ultrafine amorphous powder, crystallisation during sintering 2-11132
 SiO₂ and SiO₂-TiO₂ glasses prep. by sol-gel process 2-77795
 SiO₂-Al₂O₃-MgO gel glasses, prep. and crystn. characts. 2-76319
 SiO₂-Fe₂O₃ system, gel-glass transform., Mossbauer spectra, thermal anal., and X-ray diffr. 2-76318
 SnO₂ films, pyrolytic prep., optical selectivity and crystallisation 2-87887
 Superconducting films, amorphous and cryst., tunnelling expts. 2-92827
 TaC single-crystal powders, morphology, hardness, and grinding ability 2-83230
 Tb-Fe amorphous films, struct., decomposition, crystallisation (*Chinese*) 2-104176
 Te, amorphous thin film, crystallisation, electronic structure, UV photoemission study 2-71355
 Te-Si-Pb glasses, preheating effect on crystn. kinetics 2-97926
 Ti-Al-Zr-Mo(W), cooling rate effect on struct. 2-67315
 Ti-Co, amorphous, thermal stability study 2-104029
 TiC single-crystal powders, morphology, hardness, and grinding ability 2-83230
 Ti₈₀Pd₂₀ amorphous superconductor, T_c study 2-72096
 Ti-Se-Te, vitrification, physicochemical props. 2-76313
 V₂O₅ amorphous phase, hydrated 2-55847
 V₂O₅-P₂O₅ glass alloys, forming in electrochemical cells, threshold switching 2-67276
 Y₂Fe₄AlO₁₂ single crystals, stability region and growth conditions in BaO-B₂O₃-BaF₂ solvents 2-62057
 Y₂Fe₄GaO₁₂ single crystals, stability region and growth conditions in BaO-B₂O₃-BaF₂ solvents 2-62057
 Yb thin film, avalanche crystallisation (*Russian*) 2-61131
 Zn, electrodeposited, incoherent nucleation and dislocation struct. 2-109952
 Zn-Sb system, crystallisation characts., metastable states, phase diagrams X-ray diffr. study 2-81935
 ZnO-B₂O₃-Li₂O-H₂O system, crystallisation, characterisation by X-ray diffr. 2-103962
 ZnO-Al₂O₃ garnite, behaviour of Cr³⁺ and Fe³⁺ ions 2-98296
 ZnS:Mn, Cu, Cl DC electrolum. films, field enhanced changes in comp. and struct. 2-116623
 Zr-Cu, crystalline and amorphous, enthalpy effects 2-61174
 Zr-Fe(Co)(Ni)(Rh)(Pt), amorphous, thermal stability study 2-104029
 Zr_{1-x}Co_x, crystallisation and struct. transition, X-ray and thermal anal. 2-109677
 Zr_{1-x}Ni_x, amorphous, phase transforms., X-ray diffr., DSC, and TEM study 2-97934
 ZrO₂, crystallisation and transform. under hydrothermal conditions 2-111170
 ZrSiO₄ glaze, crystn. kinetics, particle disperseness depend. 2-103658
- crystallite texture** *see texture*
- crystallites**
see also crystal microstructure
 alkaline earth compounds, precipitation, of sparingly soluble salts from aq. soln. heterogeneous nucleus numbers meas. 2-66229
 axial edge dislocation, calc. of X-ray distortion distributions 2-115090
 bromanil, organic semicond., epitaxial growth mechanism on KCl 2-92391
 cellophane, fine struct., X-ray and electron diffr. obs. 2-103666
 corundum crystals grown from cryolite flux, surface microtopographs, spiral growth mechanism 2-76343
 film, ferromag., elastic strains in crystallite boundaries, segregated pt. defects effect on induced anisotropy (*Russian*) 2-66877
 iodanyl, organic semicond., epitaxial growth mechanism on KCl 2-92391
 polyamide 6, struct. parameters variation resulting from fatigue failure process (*Polish*) 2-83219
 polyesters, rigid-chain, thermotropic liq. cryst., crystallites 2-76303
 polyethylene, crystallites and lattice distortions, temp. depend. (*Russian*) 2-65884
 polyethylene, extruded, microstruct. study by electron microscopy 2-91826
 polyethylene, linear fraction, crystallised at different temps., quantitative electron microscopic obs. 2-65875
 3-Dpolymer spherulite, disorder effect in twist angle on light scattering 2-87804
 texturised materials, crystallite orientation distrib. function, model components 2-109728
 texturised samples, orientation distrib. function, reproduction method from reduced pole figures 2-109730
 texturized sample, crystallite orientation distrib. function, reduced pole figures and ghost correction 2-109729
 transition metal compounds, precipitation, of sparingly soluble salts from aq. soln. heterogeneous nucleus numbers meas. 2-66229
 TTF-TCNQ films, struct. and props., substrate temp. effect 2-104205
 X-ray Laue photography determ. of crystallite dimensions in polycryst. materials 2-65801
 Al₂Mg(OH)₂·(Si₂O₅)₂(Ca,Na)₄·4H₂O, bentonite, texture changes during vib. grinding and after ageing (*Czech*) 2-88101
 BaTiO₃:Y₂O₃ (Nb₂O₅), elec. props., phase composition, valence state of cations 2-110347
 Bi₂WO₆ powders, obtained in presence of fused salts, morphology 2-97971

crystallites continued

- CdGa₂Te₄, amorphous film, structural ordering, effect of group I metal impurities 2-87114
 Cd_{1-x}Zn_xS films, electron bombardment evaporation, visible absorpt. spectra meas., crystallite size determ. 2-72572
 Cd_{1-x}Zn_xS-Cu₂S thin film solar cell with improved ternary cpd. layer 2-116821
 Cu-Cd film on Cu (111), struct., electrolyte effect 2-61312
 Cu₆₀Zr₄₀O₂ alloy, polyphased microcryst.-amorphous, high resolution imaging 2-71356
 Fe acicular particles, mag. props. and morphology, heat treatment effects 2-77328
 Fe₂O₃, goethite-derived, origin of preferential X-ray line broadening 2-79837
 Ge film, laser-crystallised, crystallite morphology and defect struct; TEM and SEM study 2-66402
 MgO smoke crystal surfaces, electron microdiff. studies of potential field 2-71296
 Ne physisorbed on Grafoil near monolayer completion, neutron diff. and vapour press. study 2-98462
 Ni-Co galvanic coatings, struct., corrosion resist. and mech. props. 2-57540
 NiO supported on B modified SiO₂, dispersion of Ni determ. by TEM and XPS meas. 2-56202
 Pb on graphite, morphological change mechanisms during equilb. shape establishment 2-91839
 Pd wetting phenomena, alternating heating in O₂ and H₂ 2-86974
 Se_{0.99}Bi_{0.01}, amorphous, crystn., elec. cond. meas. 2-55860
 Si, amorphous film, laser crystallisation, rel. to density 2-56407
 Si film, deposited in SiCl₄-H₂ RF discharge, struct. and optical props. 2-61313
 Si:F,H,P films, critical vol. fraction of crystallinity for conductivity percolation 2-56379
 Si:H microcrystalline glow discharge films, phys. props., substrate bias effect 2-87109
 Si:O, polycrystalline films, prep. and props. 2-72629
 SiC, self-bonded, reactively sintered, mobility of intracrystallite boundaries, prep. conditions and additives influence 2-67270
 SrTiO₃, matrix material for molten carbonate fuel cell electrolyte structs. 2-88426
 W, effects of foreign element additions on reduction of WO₃ (German) 2-105102

crystallographic shear

- reverse martensitic $\alpha \rightarrow \gamma$ transformation, crystallographic parameters, shear effects, computer calc. (Russian) 2-88079
 soft-sphere crystals, shear-induced melting, thermodynamic props. 2-71621
 Al-Al₂Pt₅, unidirectionally solidified eutectic, microstruct. and mech. props. 2-116434
 Al-Cu (2.8 wt.%) alloy, aged, lattice rotations, necking and localised deform. in FCC single crystals 2-71546
 CaTiO₃ with excess CaO, elec. cond. meas. and struct. model 2-104372
 Cu, lattice rotations, necking and localised deform. in FCC single crystals 2-71546
 Ti₂O₇, crystallographic shear phase, oxidation, defects, electron microscope study 2-91985
 TiO₂(B) to anatase transformation, crystallographic shear explanation (French) 2-66206
 V₂O_{5-x}, microsyntactic intergrowth, high resolution TEM obs. 2-91851
 WO₃ electrochemical electrode, struct. changes in Li-organic electrolyte cells 2-115204

crystallography

- see also crystal atomic structure; electron diffraction crystallography; gamma-ray diffraction; isomorphism; lattice constants; neutron diffraction crystallography; space groups; X-ray crystallography
 applications of γ -ray diffractometry 2-103568
 book, mathematical techniques in crystallography and materials science 2-94931
 computing techniques in crystallography 2-55866
 difference structures, improved method for solving (Chinese) 2-76232
 fiber diffraction data, phasing using isomorphous replacement and layer line splitting 2-97834
 gamma-ray crystallography and related techniques 2-65816
 hemeproteins, EPR crystallography, direction cosines 2-83710
 Karle-Hauptman determinantal method for phase determ. of small structs. 2-79836
 macromolecules, phase problem, determinantal soln. using stereochem. information 2-97833
 molecular structure, with probability ellipsoids of atomic thermal vibr., graphical representation, ELLIDS program 2-55811
 pentagonal symm., role in nonclassical crystallography 2-65904
 protein crystallography, RESTRAIN, restrained least squares refinement program 2-68207
 secondary extinction correction 2-60831
 simple crystals, high-pressure transformations, structural considerations 2-66127
 space lattices and their lattice planes, coincidence coeffs. 2-103679
 structure of crystals, book 2-112666
 surface periodicity, crystallography and structure, book contrib. 2-66334
 ternary semiconducting compounds, with chalcopyrite-type struct., structural parameter eqn. 2-81763
 unit cell axes derivation from dimensions of Buerger-reduced cell 2-81614

crystals

- see also bicrystals; crystal structure; crystallography; dendrites; epitaxial layers; liquid crystals; plastic crystals; whiskers (crystal)
 No entries

Curie point see Curie temperature; ferroelectric Curie temperature

Curie point writing see thermomagnetic recording

Curie temperature

- see also ferroelectric Curie temperature
 apatites, rare-earth containing, mag. props. 2-92875
 C DyCo_{1-x}Fe_x alloys, lattice parameters and mag. characs. 2-56891
 dysprosium ethylsulphate, crossover to mean-field behavior at marginal dimensionality 2-77316
 dysprosium ethylsulphate, Landau eqn. of state near T_c 2-66839
 ferromagnet, classical, multicomponent, mean field crit. temp. bounds and correlation inequalities 2-110596
 ferromagnetic ferroelectrics, NMR line shape and width (Russian) 2-98972

Curie temperature continued

- ferromagnetic semiconductor, broad band, density of states in vicinity of Curie point, Dyson eqn. soln. 2-66412
 ferromagnetic semiconductor, critical shift of cond. bound bottom 2-77255
 ferromagnetic semiconductor, homogeneous state instability 2-92932
 film, ferromagnetic, susceptibility and spin correlation time near Curie point, Valenta model 2-72306
 Heisenberg-Ising ferromagnet, with uniaxial anisotropy, Curie temp. calcs. 2-66806
 Hubbard model, local moments 2-82606
 Invar 2-66886
 Ising model, spin glass of site-random with first and second neighbour interactions, transition temps. 2-110598
 itinerant electron magnets, magnetovol. effects, crit. temp. press. depend. calc. 2-66886
 itinerant ferromagnet, press. depend. of mag. props. 2-87502
 itinerant-electron ferromagnet, electron-phonon interaction effects 2-92855
 low Curie temp. magnetic material characteristics for thermosensors (Japanese) 2-69209
 magnetite, ferri-paramagnetic transition at high-press. at Curie point 2-106108
 magnons at the Curie temperature 2-66793
 metal, ferromag., magnetic props. of the generalised model 2-77326
 metallic glasses, N as potential alloying element 2-83078
 metals, magnetic surface states, angle resolved photoemission studies 2-66604
 mixed magnetic systems, susceptibility in presence of chem. short range order 2-77256
 mullite form. kinetics, grain comp. and component activity effects 2-77271
 nickel diglycine dihydrate, antiferromag., mag. susceptibility study, 0.6 to 120K 2-77272
 order-disorder first order transitions, high press. effects (Russian) 2-87492
 rare earth alloys, RNiAl₂ (R=Y, Gd, Tb, Dy, Ho, Er, Tm, K, Lu), mag. susceptibility and cryst. struct. (Russian) 2-115968
 rare earth alloys R₂(Co_{1-x}Fe_x), magnetic anisotropy phase diagram 2-98883
 rare earth alloys RAlGa, mag. props. study 2-72141
 rare earth compounds, R₂Ga₃, mag. props., struct., anal. 2-66763
 rare earth compounds, R₂HSi, cryst. struct. and mag. props. 2-55946
 rare earth small particles, cryst. struct. and mag. props. 2-77330
 s-f model with Coulomb repulsion, thermodynamics of two atomic cluster spin $1/2$ 2-66822
 Sm₂(Mn_{1-x}Fe_x)₂₃, mag. props. study 2-87542
 spin orientation phase transition near the Curie temperature (Russian) 2-87509
 square spin ferromagnet, Curie temp. with first, second and third neighbour interaction 2-110578
 transition metal clusters in activated intermetallic hydrogen sorbers, ferro-mag.-paramagnetic transition 2-66233
 transition metals, ferromag., strong short range mag. order above Curie temp. 2-110594
 transition metals, ferromagnetic, mag. props. above T_c 2-66788
 transition metals, local moments and magnetic ordering 2-77289
 BaCo₂Ti₂Fe₂O₁₀, magnetocryst. anisotropy temp. depend., ferromag. reson. and magnetisation study 2-56849
 BaFe₂O₁₀Gd(Dy)(Ho)(Er)(Yb), dopant effects on mag. props. 2-92968
 BiYIG, film, bubbles, mag. props. 2-72315
 CaAl₂-Y₂CrO₄ solid solns., struct. and mag. study 2-76391
 Ce₂Co_{17-x}T_x (T=Ti, V, Cr, Mn, Fe, Cu, Zr, Hf), mag. and crystallographic props. 2-72200
 Ce₂Co_{17-x}Zr_x, struct. and mag. props. 2-61741
 (Cr_{1-x}Co_x)₂MnSn Heusler alloy, mag. transition 2-72203
 Co amorphous alloys, Curie temp. and mag. thermal expansion, press.-depend. meas. 2-72323
 Co-V FCC alloy, quenched from 1200°C, elec. resist. 2-104345
 Co₂Ni_{1-x}Mn_xGe, hexagonal, mag. props. 2-56835
 CoO-Al₂O₃-SiO₂ glass, high temp. susceptibility and paramag. Curie temp. study 2-72168
 xCr₂O₃(1-x)3B₂O₃-PbO glasses, EPR and mag. susceptibility studies 2-98946
 (Cr_{1-x}V_x)_{0.4}Te, mag. phase diagram, thermomagnetic props., mag. moments 2-87494
 Cu/Ni compositionally modulated films, magnetisation and Curie temp. meas. 2-87533
 Cu-Fe dil. alloys, internally oxidised, elec. and mag. props. 2-98620
 Cu-Ni compositionally modulated film, Arrott plots, computer anal. 2-72304
 Cu-Ni compositionally modulated thin film, mag. behaviour, struct. 2-98920
 CuFe₂O₄ ferrite, elec. cond. mechanism, phase transformation, heat treatment effects 2-71981
 CuO-B₂O₃-K₂O glass, ¹¹B NMR and mag. susceptibility 2-104587
 (CuO)₂(2B₂O₃PbO)_{1-x} glasses, EPR study of mag. behaviour 2-110631
 Cu₂Zn_{1-x}Fe_xO₄ system, Curie temp., cation distrib., magnetisation 2-56851
 Cu₂Zn_{1-x}Fe_xO₄ system, elec. resistivity and Curie transition 2-87256
 Dy₂Fe₂₃, cryst. and mag. props. 2-86626
 Dy(FeAl_{1-x})₂ Laves phases, mag. and cryst. props., X-ray and Mossbauer study 2-92899
 Dy_{2-x}Y_xFe₁₇, mag. props. 2-115984
 ErCo₂-Fe₂, Laves phase cpds. and their hydrides, mag. behaviour 2-56855
 ErFe₂, spin wave temp. depend. 2-104598
 EuRh₂B₂, itinerant mag. ordering 2-104578
 EuS, EPR linewidth, reson. field, and spin-spin relax. near Curie temp., shape depend. 2-66910
 Eu₂Sr_{1-x}S alloys, ferromag., magnetisation meas., mag. eqn. of state 2-116001
 Fe magnetism, fluctuating local band theory 2-82558
 Fe whiskers, dynamic mag. response near T_c 2-66781
 Fe-B metallic glasses, rare earth additives, mag. props. study 2-87498
 Fe-B metallic glasses, transition metal substituted, mag. props. and thermal stability 2-87497
 Fe-Co-Bi, amorphous film, magnetisation, Mossbauer study 2-72263
 Fe-Co-V, Vicalloy-2, phase and struct. transitions, mag. props. (Russian) 2-61714

Curie temperature continued

Fe-Cr system, lattice dynamical parameters, X-ray diff. study (*Russian*) 2-61101
Fe-Cr-B amorphous Invar alloy, Curie temp. and high field susceptibility, press. effects 2-72322
Fe-Ni, atomic ordering effects on mag. props., superlattice form., TEM study 2-92966
Fe-Ni-Al-Co-Cu-Ti, thermomag. treatment, struct. form. and mag. props. 2-62152
Fe-Ni-Cr alloy, sp. ht. and magnetis. near Curie pt., anomalous behaviour (*Russian*) 2-66836
Fe-Ni-Mo-B ferromag. metallic glasses, mag. and neutron diff. meas. 2-116027
Fe-Ni-NbC, phase equilb., struct., mag. props. and hardness (*Russian*) 2-67291
Fe-Ni-P-B based metallic glasses, Mossbauer study under press. 2-72385
Fe₄Zr₂₆, amorphous, mag., Mossbauer, and resist. study 2-72384
Fe₄Al_{0.8-1}B_{0.2} amorphous films, mag. and transport props. 2-72296
Fe₄B_{0.00-0.01}, amorphous, mag. ordering temp., hyperfine fields, Mossbauer study 2-104755
(Fe_{0.8}B_{0.18})_{0.9}R_{1.1} (R=Pr, Nd, Sm, Gd, Tb, Dy, Ho, Er), amorphous, exchange interactions 2-72185
Fe₈₁B₁₄Si₄, metallic glass, struct. relax., effect of quench rate 2-81683
Fe₈₁B₁₃Si₃C₂, amorphous, Mossbauer study 2-99013
Fe₈₀B₁₅Si_{5-x}Ge_x, amorphous, Curie temp. and crystn. behaviour 2-87496
Fe₈₀Hf₁₉, amorphous, mag., Mossbauer, and resist. study 2-72384
(Fe_{1-x}Mo_x)₇₇P₁₆B₇Al₃, amorphous, anomalous crit. behaviour, random anisotropy effects 2-72232
(Fe₉Ni_{1-x})₈₀B₂₀, glass, mag. props. and crystn., Mossbauer study 2-104754
Fe₉₁Ni₉B₁₆P₄, amorphous, mag. phase transition, magnetisation and DC susceptibility meas. 2-56857
Fe₉₁Ni₈₇B₁₉Si, amorphous, critical mag. behaviour, mag. order disorder transition 2-66821
Fe₇₃Ni₁₆Cr₁₁P₁₂P₆, amorphous, Mossbauer study under press. 2-72385
(Fe_{1-x}Ni_x)₇₈₋₇₉-Cr₂₁Si₂₀B₁₂, glass, magnetisation, crystn. and microstruct. 2-77322
Fe₇₁Ni₆₈P₁₄B₃, amorphous, elec. resist. near ferromag. transition 2-87218
Fe₇₁Ni₆₈P₁₄B₃Al₃, amorphous, elec. resist. near ferromag. transition 2-87218
20Fe_{0.8}O_{0.8}(3B₂O₃(1-x)PbOxAs₂O₃) glass, mag. reciprocal susceptibility, paramag. Curie temps., consts. 2-110570
Fe₂P, Curie temp., uniaxial stress effect, expt. study 2-87495
Fe₂P, orientational phase transition near Curie temp., press. study 2-116008
Fe₂Pd_{82-x}Si₁₈, amorphous, spin glass-ferromag. transitions and crit. lines, magnetisation meas. 2-77302
Fe₂Pt, magnetisation near Curie temp. 2-72275
Fe₂S₃, pyrrhotites, mag. transitions near Curie point 2-87506
(Fe_{1-x}Sb_x)_{1-x}(Fe_{1.6}Sn), solid solns., magnetisation, Curie temps. and lattice consts. meas. 2-76365
FeZn ferrite, Cu²⁺ substituted, Jahn-Teller effect on ground states 2-66502
GdAl₂, transport and thermal props., critical behaviour near Curie point 2-116005
GdCoSi₃, synthesis, mag. props. and struct., X-ray and mag. torsion balance anal. 2-72176
GdCu₂, mag. and crystallographic props., Mossbauer effect, H absorption effects 2-82758
GdMnSi₃, synthesis, mag. props. and struct., X-ray and mag. torsion balance anal. 2-72176
Gd₂Y_{1-x}Fe_x, indirect exchange param. 2-71942
HgCr₂Se₄, mag. semicond., elec. optical and mag. studies 2-87288
HoCo₂-Fe_x, Laves phase cpds. and their hydrides, mag. behaviour 2-56855
Ho_{1-x}Y_xCo₂, Curie temp., magnetisation and NMR, Co local environment effect 2-116071
La_{1-x}Ca_xCoO₃, perovskite, prep., ferromagnetic props., rhombohedral distortion 2-61737
(La_{0.8}Ca_{0.2})MnO_{3-y}, elec. resist. and thermolec. power 2-66551
La₂Co₇, mag. props., PAC study 2-66954
La₂Co₇-LaMnO₃, magnetic susceptibility and hysteresis loops meas. 2-72726
La₂Gd_{1-x}TiO₃, solid solns., mag. behaviour, mean field model 2-104659
LiTbF₄, crossover to mean-field behavior at marginal dimensionality 2-77316
LiTbF₄, Landau eqn. of state near T_c 2-66839
Li_{0.5-x/2}Zn_{1/2}Fe_{3-x/2}O₄ ferrite, magnetisation curves 2-72274
Mg_{1-x}Mn_xFe₂O₄ ferrites, electr. resistivity and cation distrib. 2-110343
Mn-Zn ferrite synthesis from Na₂O-B₂O₃ flux under CO-CO₂ ambients 2-72612
Mn₁₁Al_{0.89}, metastable alloy, mag. and struct. props., X-ray and neutron diff. and DSC meas. 2-72163
Mn_{1-x}Cr_x(Fe)₂B, Invar like props. 2-72174
MnO, critical dynamics near Curie temp., US attenuation study 2-98928
MnO-Al₂O₃-SiO₂ glass, high temp. susceptibility and paramag. Curie temp. study 2-72168
MnSb, thermal and elec. props. 2-104087
Mn₂Si₂Sn, spontaneous magnetostriction and Curie temp. press. depend. meas. (*Russian*) 2-116043
NH₃ adsorbed on Ni surface, decomposition rate, magnetocatalytic effect absence 2-99709
Nd₂Ge₃, mag. transition temp., mag. ordering effects on elec. and thermal props. 2-87507
Ni, magnetism, fluctuating local band theory 2-82558
Ni, paramag. susceptibility, temp. depend., small Pd additions influence 2-98842
Ni platelets, dynamic mag. response near T_c 2-66781
Ni, sp. ht. and resist. meas. crit. parameters, explanation for rounding 2-92929
Ni-Cu-Al, FMR and mag. props. 2-77384
Ni-Fe (24 to 35 at.%), Curie temp. meas. by Mossbauer expts. 2-77290
Ni-Ti (102wt.%), liquid quenched modulated struct. alloy, ageing (*Japanese*) 2-105193
NiSiF₆·6H₂O, Curie temp., anomalous press. depend. (*Russian*) 2-115999
NiZn ferrite, Cu²⁺ substituted, Jahn-Teller effect on ground states 2-66502
Ni₁₀Zn₉₀Fe₂O₄Ti⁴⁺, magnetisation and cryst. struct. study 2-77274
Pd-Fe, dil. thin film, AC susceptibility, ion irradi. effects, rel. to supercond. 2-56828
Pd_{77.5-x}Cu₆Si₁₆Fe_x, amorphous, elec. and mag. props. 2-72169

Curie temperature continued

Pr_{1-x}Y_xCo₂, Curie temp. magnetisation and NMR, Co local environment effect 2-116071
Rb₂Cr_{1-x}Cd_xCl₄, mag. props. study 2-87505
Rb₂Cr_{1-x}Mn_xCl₄, mag. props. study 2-87505
RbNiF₃, Heisenberg ferrimagnet, mag. susceptibility, optimal transformation method 2-77277
Sm₂Co_{17-x}, struct. and mag. props. 2-61741
Sm₂Co_{17-x}T_x (T=V, Ti, Zr, Hf), mag. props. 2-72171
Tb-Gd alloys, magnetocaloric effect and mag. props. 2-72209
TbCO_{2-x}Fe_xHy, lattice parameters and mag. characs. 2-56891
TbFe₂ amorphous film, mag. and elec. props. (*Chinese*) 2-104750
Tb₂Si₄, magnetic, thermal, and elec. props. 2-72177
Th_{2-x}Y_xMn₃, mag. and crystallographic characs. 2-56854
U₂Te₃, cubic, ferromagnetic struct. study, neutron diff. patterns 2-104586
VPt₃, FCC and tetragonal, ferromagnetic props., critical behaviour 2-82603
Y-Co alloy, Y₂Co₁₉ phase identification by thermomag. anal. 2-77292
Y-Co amorphous powders, mech. grinding prep., struct. and mag. props. (*Russian*) 2-61742
Y(Al_{1-x}Fe_x)₁₂, mag. and cryst. struct., magnetisation and Mossbauer spectra study 2-72150
YCo₂ powders, ferromagnet and Mossbauer props., grinding effects (*Russian*) 2-87546
Y₂Co₃, elec. resist., mag. susceptibility, and magnetisation, press. depend. 2-104590
Y(Co_{1-x}M_x)₅, M=Ni, Cu, Al, Ti, V, Cr, Mn, Fe, struct. and mag. props. 2-91874
YFe₂, amorphous, melt-spinning prep., mag. props. 2-72267
Y(Fe_{1-x}Al_x)₂, Fe moment localisation, mag. props. 2-82572
YIG phase containing glass ceramics, prep. and mag. characs. 2-67278
YIG, saturation magnetisation and Curie temp. relationship meas. 2-116036
YMn_{2-x}Co_x, mag. order occurrence, comp. depend. 2-82646
Yb₂(SeO₄)₃·8H₂O, mag. susceptibilities, paramag. Curie temp., thermal and hyperfine props. 2-61691
Zr(Fe_{1-x}Al_x)₂, Fe moment localisation, mag. props. 2-82572

curium
see also nuclei with
targets prep. for superheavy element synthesis 2-108185
²⁴⁶Cm, A=242, 244, production in a nuclear reactor 2-113803
LuPO₄:Cm³⁺, EPR, g-factors, excited state doublet wave function 2-104700

curium compounds
No entries

current (electric) see electric current

current algebra
see also elementary particle theory; hadron current; light cones; quantum field theory
3π final state interactions, simplified parametrisation 2-95697
A=2 nuclei, axial currents, time component, pion exchange 2-95930
Adler-Weisberger sum rule saturation in quark shell model, general proof 2-69431
baryonic current sum rules and chiral symmetry breaking 2-59066
CP₁^{N-1} model with quarks on lattice, lattice fermion, pion mass, PCAC 2-69338
gauge theories, time-non-local conserved currents 2-95594
hyperon semileptonic decays, critical anal. 2-64323
lattice QCD, axial current matrix element evaluation, quenched approx. 2-101560
local current algebra, representations of group of diffeomorphisms 2-101608
massive meson prod. in an external field, prod. probabilities (*Russian*) 2-113204
N=1 supersymmetric Maxwell theory in 10 dimens., supercurrent, N=4 supergravity 2-79780
N=1 supersymmetric Yang-Mills theory, two loop axial anomaly 2-59032
neutron DD β-decay, Goldberger-Treiman relation, chiral symmetry breaking corrections 2-69611
nonlinear σ-model, conserved currents 2-95595
nonlocal conserved currents in supersymmetric generalized nonlinear sigma models 2-89913
para-Lorentzian dynamics, conserved-vector and nonconserved-axial weak currents 2-95735
partial conservation of the U(1) current 2-59065
PCAC condition in quark model, G_A/G_V for vector mesons and ωππ coupling constant 2-95786
pionic decays, current-algebra sum rules saturation in quark shell model nonrelativistic expansion 2-69430
QCD, dynamical chiral symm. breaking, pseudoscalar meson spectra (*Russian*) 2-95771
semileptonic processes mediated by W, O(α) corrections, large m_u, m₂ behaviour 2-59114
SL(2,C) gauge theory of gravitation and Noether's theorem, conserved vector current 2-95198
SU(2) gauge field, spherically symmetric static sourceless soln., currents, symmetry breaking 2-53917
super chiral fields, hidden symm., Noether currents and algebraic struct. 2-53972
supercurrent anomaly in analytic regularisation, supersymmetric Yang-Mills 2-113167
two-quark process at twist four level, current product expansion 2-59064
weak current algebra, composite W bosons and weak interactions universality 2-101683
e⁺e⁻→μ⁺μ⁻, cross section, Majorana neutrino test 2-113260
η→γγ(π⁺π⁻γ)(π⁰γγ)(3π), coloured quark field theory, PCAC approx. 2-89967
η, mass, perturbative QCD estimate, U_A(1) current 2-64278
K⁺Λ production by the weak charged current, final state interaction effect 2-101637
μ⁺→e⁺ν_eν̄_μ 2-113271
pp→K⁺K⁰4π⁰, partially conserved axial-vector current hypothesis, branching ratios 2-113293
pp→K⁺K⁰π⁰π⁰(K⁺K⁰), current algebra and PCAC appl. 2-84906
ππ scattering length, current algebra and S*(980) background contrib. 2-95716
ρ(1600) parameters, from e⁺e⁻→4π[±] width, current algebra calc. using τ→ρν 2-74629

current algebra continued

$^{12}\text{C}(\gamma, \pi^+)^{12}\text{B}$, nuclear form factors in timelike region and pion photoproduction 2-64395

^3H beta-decay, axial vector test 2-79982

$^6\text{Li}(\gamma, \pi^+)^6\text{He}$, nuclear form factors in timelike region and pion photoproduction 2-64395

current control, electric *see electric current control***current density**

see also critical current density (superconductivity); electron density
200 GW light ion beam power transport for fusion reactor ignition 2-90303

A15 continuous filamentary superconductors, metallurgy 2-67263
conducting halfplane, currents induced by plane wave at arbitrary incidence 2-102689

electron beam, steady, propag. in air, current density meas. 2-60007
multicomponent target, secondary ion emission, current density effects 2-99275

optogalvanic effect applications to opening switches 2-97824
phase electrodes, current density distrib. in point-to-plane configuration 2-103518

semiconductor homogeneous slab on high-resist. substrate, spreading resistance, mixed boundary value solns. 2-115743

sputtering DC discharge, current-voltage-meas. characteristics calc. 2-57285

steel, lightly doped, pulsed elec. field action near voids and nonmetallic inclusions (*Russian*) 2-67572

steel, stainless 2-88257

Al-Si Schottky diode with surface layer, current-voltage characts. (*Rumanian*) 2-66621

Fe foil, electroforming at high current density 2-99359

Pb-Sn-Te diode laser, recombination mechanisms and lasing threshold 2-90896

Si n-p solar cell, physical behaviour in concentrated sunlight 2-93910

Si, polycrystalline, conduction mechanism, diffusion theory and extended state mobility model 2-92608

ZnS:Mn AC electrolum. thin film device, Mn^{2+} emission saturation 2-116265

current distribution

see also current density
coronas, space charge dominated, Warburg law and saturation current, approx. theory 2-55802

electromagnet, Fe-free, proximity effect, current distrib. calcs. 2-65130

magnetic field synthesis, Fredholm integral eqn. regularisation technique 2-55014

stimulation therapy, elec. current field models with four electrodes in middle-freq. range 2-88642

current fluctuations

see also noise
biomembrane, elec. excitable, variance of conductance fluctuations 2-78315

metallic thin films, fluctuations in dissipative steady states, theory 2-104507

nonequilibrium, irreversible thermodynamics 2-84584

semiconductors, compensated, generation-recombination noise during injection breakdown 2-82414

thermoelectric nonlinear fluctuation phenomena, theory 2-91582

Ag point contacts, low freq. elec. fluctuations 2-110449

Au point contacts, low freq. elec. fluctuations 2-110449

CdS, electro-acoustic current fluctuations 2-98702

Cu point contacts, low freq. elec. fluctuations 2-110449

Ge, galvanomagnetocombinational elements, fluctuation processes 2-87351

current measurement, electric *see electric current measurement***current transformers**

see also electric current control; electric current measurement
electrical measurements and standards, progress in instrumentation (*Rumanian*) 2-74382

error calculation for electronic compensation implementation (*Rumanian*) 2-89739

current transients *see transients***currents algebra** *see current algebra***curvature measurement**

coarsening kinetics, integral mean curvature meas. 2-111185

cornea, human, mean shape anal. 2-105696

curvature of field *see aberrations***curve fitting**

AES of solid surface, microcomputer based data acquisition and control system 2-116304

alpha-decay, half-life, fit to semiempirical relationships, self-improving parameter program 2-64377

exponential data, deviation detection using integration and difference plots 2-63956

radioactive decay curves with background, noniterative method for fitting 2-96410

silicate glasses, Raman spectra, curve fitting 2-116161

customs and excise *see tariffs***cutting**

see also machine tools; machining
cleaving tool for semiconductor lasers, for facet mirror form 2-65418

fission reactor fuel, destructive analysis, meas. and shearing machine 2-107973

metal processing with gas transport CO_2 laser, cutting and heat treating 2-116611

metal-cutting machines in the optical industry 2-109094

optical glass gauges fabrication, by abrasive cutting (*German*) 2-114478

radioactive materials, cutting, underwater electric arc saw appl. 2-108165

steel, C, ground and at layers, X-ray stress meas. (*Japanese*) 2-78012

steel, mild, plastic deform. in metal cutting 2-105267

steel, Ni, low C, heat treatment and O_2 cutting influence on struct. and props. 2-72732

tool carbonitriding in salt baths 2-67643

Fe-Si, electric steel sheets, fully processed mag. anisotropy, cutting strains effect 2-82590

Fe-Si, electric steel sheets, semi-processed, mag. anisotropy, cutting strains effect 2-82591

Hg_2Cl_2 , plasmatic etching, study of treated surface layer 2-111336

MgO single cryst., cathodum. from cutting damage 2-93286

Si_3N_4 -refractory compound cutting tool ceramics, mech. props. 2-72842

CVD *see chemical vapour deposition***CVD coatings**

antireflection coatings design criteria for optimising plasma-assisted CVD nitride films, application in solar cells 2-105085

optical fibre, modified CVD preform, central dip reduction by F etching during collapse 2-65384

optical fibre fracture parameters and testing (*French*) 2-70694

phosphosilicate glass, annealing encapsulant for InP 2-116585

phosphosilicate glass, annealing encapsulants for InP, AES and SIMS study 2-116584

phosphosilicate glass, diffusion of P from CVD phosphosilicate glass into Si 2-66295

phosphosilicate glass film, H_2O absorpt. and densification 2-115630

polystyrene film, plasma polymerised, elec. breakdown, theoretical anal. 2-66989

polystyrene film, plasma polymerised, elec. breakdown meas. 2-66988

SOS epitaxial films, defects and strain after CW laser annealing, Rutherford backscatt./channelling and TEM study 2-81799

SOS structures, CVD growth, surface defect and strain reduction by ion implantation and solid phase epitaxy 2-66384

Al-Mo, erosion yields by vacuum arcs in mag. field, temp. depend. 2-74917

$\text{Al}_x\text{Ga}_{1-x}\text{As}$ MOCVD quantum well heterostruct. laser, visible operation 2-114268

AIN CVD films, comp., kinetics, and mechanism of growth 2-87100

AIN on sapphire SAW delay lines, zero temp. coeff. 2-86185

Al_2O_3 , deposited on cemented carbides, increase in wear characts. (*Korean*) 2-62073

B, first wall coatings by plasma CVD 2-74910

BiC, first wall coatings by plasma CVD 2-74910

Bi_2S_3 thin film, semicond. liq. junction solar cell and chalcogenide props. 2-78212

Cd laser-photodeposited film, optically induced microstructures, TEM and SEM obs. 2-98486

$\text{Cd}_{1-x}\text{Zn}_x\text{S}$ films, electron bombardment evaporation, visible absorpt. spectra meas. 2-72572

FeO_x film, iron carbonyl oxidative pyrolysis formation struct. and chem. comp., expt. study 2-56399

GaAlAs, metalorganic CVD, electronic defect levels study 2-71922

GaAlAs-GaAs MOCVD grown wavelength division solar cells, fabrication and characts. 2-105572

$\text{Ga}_{1-x}\text{Al}_x\text{As}$, MOCVD grown, elec. props. of Se and Zn 2-98774

$\text{Ga}_{1-x}\text{Al}_x\text{As}$ single quantum well visible laser, MOCVD grown, low threshold and high efficiency obs. 2-96971

$\text{Ga}_{1-x}\text{Al}_x\text{As}:\text{Zn}$, metalorganic CVD film, elec. cond. 2-56733

GaAs film, laser CVD deposition and characts. 2-82162

GaAs: S , MOCVD epitaxial layer, S donors, photothermal ionisation study 2-98569

GaAs- Si_3N_4 interface quality improvement by surface treatment and annealing 2-110487

HN, CVD coatings, optical props., Kramers-Kronig anal. 2-87888

$\text{In}_{0.5}\text{Ga}_{0.47}\text{As-InP}$ heterojunction, two-dimensional electron gas study 2-77161

$\text{In}_{0.5}\text{As}$ films, reactive evaporation prep. and elec. resist. meas. 2-105088

Mo film on Si, ion beam induced interfacial reactions, TEM obs. 2-110050

Nb_2Ge film, EXAFS study, superconducting props. 2-99225

Nb_2Sn CVD superconducting tapes, dynamic stability 2-104554

Ni-P chemically formed coatings struct. and props. (*Russian*) 2-92400

Si, amorphous CVD layer, localized state density meas. by field effect method 2-56737

Si, amorphous film, gap state density, high freq. capacitance-voltage determ. 2-56429

Si, amorphous film, plasma enhanced CVD 2-72631

Si, CVD, amorphous, post-hydrogenated, doping effects, cond. and EPR meas. 2-66679

Si CVD film, polycryst., threshold and memory switching 2-115830

a-Si CVD films, anneal-stable, struct. order, Raman scatt. study 2-81679

Si epitaxial and recrystallised films, carrier lifetimes, MOS capacitance study 2-92787

Si films, on glass, laser crystn. 2-66382

Si layers, high rate vacuum deposition for solar cells 2-105086

Si polycrystalline layer growth kinetics at reduced press. (*Bulgarian*) 2-83032

Si, recrystallised CVD film; laser irradi., surface topography characts. 2-82086

$\text{Si}:\text{As}(\text{P})$, CVD film, elec. characts., grain size, effects of impurity conc. and heat treatment 2-82487

$\text{Si}:\text{B}$, polycrystalline, B^+ ion implantation, heat treatment effects 2-103795

$\text{Si}:\text{H}$, amorphous, homogeneous CVD prep. and struct., comp. and photocond. props. 2-87085

$\text{Si}:\text{H}$, amorphous, post-hydrogenated CVD Schottky diode solar cell 2-99796

$\text{Si}:\text{H}$, amorphous Schottky barrier solar cells; CVD prep., electronic props. 2-83484

$\text{Si}:\text{N}$, amorphous CVD film, elec. cond., field effect and gap state density meas. 2-87193

Si-enriched layers on Ni, obtained by CVD, characterisation 2-105084

$\text{Si}:\text{O-N}$ systems, quantitative Auger microanal. 2-82164

SiC CVD coatings on Mo, surface damage under D^+ irradiation 2-76523

SiC film on Mo, D^+ irradiation effect 2-66081

SiC plasma enhanced CVD 2-72631

SiN film, plasma enhanced CVD coating, phys. and elec. props. 2-115629

Si_3N_4 CVD layers in MNOS struct., depth inhomogeneity, pot. distrib., effective resist. and etch rate exam. 2-92769

Si_3N_4 film, CVD deposition and AC dielec. props. meas. 2-82783

Si_3N_4 film in MNOS struct., stoichiometry variation rel. to memory traps 2-82163

Si_3N_4 film on Si, very high charge densities for inversion layer solar cells 2-61608

Si_3N_4 formed by plasma enhanced CVD 2-111082

Si_3N_4 layer on InP substrate, pyrolytic and plasma-enhanced CVD process, elec. props. 2-56710

Si_3N_4 , low-pressure CVD layer anal. using Rutherford backscattering spectrometry 2-116314

Si_3N_4 plasma enhanced CVD 2-72631

CVD coatings continued

- Si₃N₄ thin films, backscattering anal. and nuclear reaction meas. (*Chinese*) 2-66389
- Si₃N₄:H CVD film, chem. bonding changes and elec. effects 2-115930
- Si₃N₄/SiO₂/Si₃N₄ sandwich membranes, X-ray lithography masks, optically-transparent 2-87117
- Si₃N₄+SiO₂ film, plasma enhanced CVD 2-72631
- SiO₂, annealing encapsulant for InP, AES and SIMS study 2-116584
- SiO₂, annealing encapsulant for InP 2-116585
- SiO₂ CVD layer on Hg_{1-x}Cd_xTe native oxide, reduction 2-111516
- SiO₂ film, plasma enhanced CVD 2-72631
- SiO₂ formed by plasma enhanced CVD 2-111082
- SiO₂ glass film, CVD, step coverage 2-98475
- SiO₂ layer on InP substrate, pyrolytic and plasma-enhanced CVD process, elec. props. 2-56710
- SiO₂, oxidation protection on Nb stabilised stainless steel in CO₂ 2-67620
- SiO₂ thin films, effects of humidity on stress 2-92427
- SiO₂-InP interface, plasma-enhanced CVD growth, XPS and TEM study 2-110169
- SiO₂-Si₃N₄ formed by plasma enhanced CVD 2-111082
- SiO₂ film, semi-insulating polycryst., optical absorpt., depend. on annealing conditions 2-61999
- Si₃O₂N₂ film, pyrolytic CVD, chem. characterisation by Auger signal decomposition 2-110990
- SnS₂ films, optical absorpt. edge meas. 2-87885
- Ta protective coatings on Al, Cu, AISI 316L, Inconel 600 for fusion reactor appl. 2-74911
- TiB₂ coating on C fibres (*Russian*) 2-67583
- TiC CVD coating on cemented carbides, effects of exptl. parameters on preferred orientation 2-92397
- TiC, CVD coatings, 2 keV D bombardment, sputter yield, surface modification 2-74925
- TiC coating, chemical vapour deposited onto cemented carbide, microstruct. study 2-56389
- TiC coating on C fibres (*Russian*) 2-67583
- TiC coating on graphite for Doublet III limiters, process evaluation and characterisation. 2-74899
- TiC film, laser CVD deposition and chars. 2-82162
- TiC-Mo, erosion yields by vacuum arcs in mag. field, temp. depend. 2-74917
- TiC(N) on tool steels (*Hungarian*) 2-57305
- TiN, CVD coatings, optical props., Kramers-Kronig anal. 2-87888
- TiN, TiC layers, CVD, nucleation and kinetics 2-83034
- TiN_x amorphous film, CVD on TiB₂ interlayer, Vickers microhardness 2-76854
- TiO₂ film, laser CVD deposition and chars. 2-82162
- W, low temp. CVD from W(CO)₆ 2-87102
- Zn laser-photodeposited film, optically induced microstructures, TEM and SEM obs. 2-98486
- ZnO thin films, c-axis oriented growth on Si, CVD method 2-62072
- ZnS, Se_{1-x} thin film, high elec. cond. props. meas. and CVD prep. 2-98768
- ZnSe grown by organometallic CVD on GaAs, blue cathodoluminesc. obs. at room temp. 2-104969
- ZnSe-GaAs heterojunction, photovoltaic props. meas. 2-73121
- ZrC, CVD, microstructs. 2-105169
- ZrN, CVD coatings, optical props., Kramers-Kronig anal. 2-87888
- CVD epitaxial growth** see vapour phase epitaxial growth
- CVD thin films** see CVD coatings
- cyanogen, C₂N₂** see carbon compounds
- cyclopentadienylides** see organometallic compounds
- cyclotron resonance**
- for ion cyclotron resonance spectroscopy see mass spectroscopy; for ion cyclotron resonance heating see plasma heating
- see also diamagnetism; dopplers
- autoresonance cyclotron charge acceleration in inhomogeneous plasma (*Russian*) 2-109511
- electron beam in spiral decelerating structure, slow cyclotron wave resonant instability 2-90340
- electron gas, 2-D, cyclotron resonance lineshape, memory function theory 2-56943
- electron gas, 2-D, cyclotron resonance linewidth, impurity and phonon scatt. density matrix formulation 2-56942
- electron gyro-resonant accelerator design 2-85426
- Fermi surface, anisotropic Doppler shifted cyclotron reson. 2-87132
- free electron laser, relativistic electron beam, low gain near cyclotron reson. 2-85983
- magneto-transport in the two dimensional Lorentz model 2-87211
- maser configuration, cyclotron reson., operation at higher cyclotron harmonics 2-96877
- metallic thin films, electrodynamic props., cyclotron reson. (*Russian*) 2-56945
- metals, nonlinear cyclotron resonance theory, second harmonic generation 2-98965
- MOS structure, two-dimensional space-charge layer in a tilted magnetic field 2-82466
- plasma resonators, composite reson. 2-109535
- Raman-type free electron lasers, operation 2-114294
- semiconductor, impurity screening in strong mag. fields and influence on transverse cond. 2-92667
- semiconductor, streaming motion and population inversion of hot carriers, crossed elec. and mag. fields 2-98668
- semiconductors, nondegenerate, quantum limit cyclotron resonance linewidth 2-104705
- semiconductors, temperature depend. cyclotron resonance linewidth, influence of Landau level broadening 2-77378
- superlattice semiconductors, Stark-cyclotron-phonon reson. 2-77107
- T-10 Tokamak heating at first harmonic of electron cyclotron resonance (*Russian*) 2-60773
- transition metals, cyclotron masses and many-body effects, relativistic APW calc. 2-56426
- two-dimensional metals, effects of mag. field on dielec. const. and cond. 2-56451
- two-dimensional systems, electronic props., conf., New London, NH, USA (Aug. 1981) 2-58536
- Wigner cryst., 2-D quantum, cyclotron resonance, optical conductivity, memory function technique 2-56940
- AlGaAs-GaAs heterostructure, modulation doped, reson. light scatt. in strong mag. fields 2-61921

cyclotron resonance continued

- Au, cyclotron masses anisotropy 2-98964
- Bi cyclotron resonance, nonlinear effects (*Russian*) 2-82721
- Cu interelectron interaction parameters, possibility of determ. 2-92443
- Cu₂O, relaxed excitons, optical and cyclotron reson. study 2-76938
- GaAs, far IR magneto-absorption, Zeeman effect, cyclotron resonance 2-99099
- GaAs, photoexcited electron system, far IR magnetoabsorpt. and cyclotron reson. study 2-87744
- GaAs-Al_xGa_{1-x}As heterojunction FET, 2-D electrons, far-infrared cyclotron resonance 2-56941
- GaAs-Al_xGa_{1-x}As heterostructure, cyclotron and plasmon emission from two-dimens. electrons 2-61770
- GaAs-AlGaAs heterojunction, 2-D electron gas, cyclotron resonance of photoconductivity 2-66920
- p-Ge, distrib. function and negative differential cond. calcs. at heavy hole cyclotron reson. 2-115797
- Ge, hot hole cyclotron resonance (*Russian*) 2-82720
- HgI₂, red, cyclotron reson. of electrons and holes, anisotropy of effective masses 2-82719
- n-HgMnTe, optical determ. of exchange interaction 2-104605
- HgSe, far IR magnetotransmission, cyclotron and spin-flip resons. 2-57066
- InAs-GaSb, semimetallic superlattices, subband widths, cyclotron resonance and far infrared magnetotransmission study 2-56709
- InAs-GaSb multiheterojunction, double cyclotron resonance and interband transitions 2-61574
- n-InAs-GaSb superlattice, cyclotron resonance and Shubnikov de Haas study 2-87131
- In_{0.53}Ga_{0.47}As-InP heterojunction, two-dimensional electron gas study 2-77161
- InP (100), electron cond. in surface subbands 2-115846
- InP, MIS struct., electron subbands, magnetocapacitance oscills. cyclotron resonance and surface cond. meas. 2-56708
- InSb, far IR cyclotron resonance under intrinsic photoexcitation, electron temp. 2-93013
- n-InSb, far IR studies of bound and free carriers as function of hydrostatic press. 2-93238
- n-InSb, free carrier Faraday effect at subMM freq., static elec. field influence 2-99094
- p-InSb inversion layer, electron-phonon interaction, cyclotron resonance study 2-56939
- InSe, cyclotron resonance of electrons bound at defects, internal accumulation layer formation 2-56944
- p-InSb, photoexcited electron system, spin relaxation 2-104706
- NO₂, adsorbed on Cu surface, reaction, UHV ESR obs. 2-67765
- Ne, nonlinear cyclotron electron resonance spectrum in nonuniform field (*Russian*) 2-86381
- Pb_{1-x}Ge_xTe, band struct., cyclotron reson. study 2-56439
- PbTe epitaxial layer, optical four-wave mixing 2-93315
- Si (100) electron inversion layers, magnetoplasmon interaction with cyclotron reson. harmonics 2-110482
- Si, impurity scatt. within electron-hole liq., far IR and millimetre wave studies 2-99110
- cyclotrons**
- see also microtrons; synchrocyclotrons
- beam, neutral beam profiles and computer-controlled emittance measuring device 2-102312
- drift orbit cyclotron, electron acceleration, theory and expt. study 2-90328
- electron cyclotron maser, basic model anal. 2-65195
- EM waves direct conversion into hard radiation on free electrons at cyclotron autoreson. 2-113781
- GANIL particle accelerator, cryogenic pump of 20000 l s⁻¹ 2-84648
- heavy ion acceleration in ring cyclotron to relativistic energies 2-80357
- ion+atom collisions, USSR-Hungary joint study programme (*Russian*) 2-85792
- magnetic inflection channel for RIKEN SSC, model study 2-85458
- Milan superconducting cyclotron, project status 2-90331
- Moscow Institute of Engineering Physics cyclotron, modernisation. 2-96336
- proton, superconducting magnet model, design 2-96341
- radial-longitudinal coupling and focusing complementarity 2-85427
- relativistic electron beams, helical, theory of generation 2-107452
- RF beam burst phase shift corrector 2-75087
- RF system for cyclotron, resonant freq. reduction method using ceramic vacuum capacitor (*Chinese*) 2-59573
- RIKEN IPCR heavy ion accelerator, design and appls. (*Japanese*) 2-64712
- RIKEN SCC, sector magnet trim coils, model test (*Japanese*) 2-64716
- RIKEN SCC, sector magnet trim coils configurations, current optimisation (*Japanese*) 2-64715
- RIKEN SSC, beam handling system 2-85461
- RIKEN SSC, beam transport system 2-85460
- RIKEN SSC, injection and extraction harmonic coils 2-85459
- RIKEN SSC, neutron shielding, dose rate (*Japanese*) 2-64722
- RIKEN SSC, sector magnet design, pole final design (*Japanese*) 2-64714
- RIKEN SSC, sector magnet design, TRIM code (*Japanese*) 2-64713
- RIKEN SSC, sector magnet structural anal. by finite element method (*Japanese*) 2-64717
- RIKEN SSC, vacuum system design (*Japanese*) 2-64721
- RIKEN SSC beam orbit calc. programs, ACCEL, INJECT, INJHARM, EXTRACT, EXTHARM (*Japanese*) 2-64719
- RIKEN SSC beam orbit calc. programs, EQUIOT and ACCELP (*Japanese*) 2-64718
- RIKEN SSC injection bending magnet, design and model study 2-85429
- RKEN SSC, RF resonator, design study and model test (*Japanese*) 2-64720
- SCC, isochronous mag. field, field imperfection effect 2-85428
- stationary orbit properties of a 4-fold symmetrical radial sector cyclotron (*Chinese*) 2-59583
- superconducting, neutron therapy appl., RF cavity struct. 2-96340
- e⁺e⁻ pair coherent accel. at nonlinear cyclotron autoreson. 2-113795
- H recovery system 2-108168

Czocharalski method see crystal growth from melt

D-layer see D-region

D mesons

- charmed meson decay via colour octet decays of c-quarks, D⁰, D⁺ 2-54069

D mesons continued

- four-quark scalar charm mesons, with charm, implications, SU(6)_c theory 2-101589
 limits on D^0 - \bar{D}^0 mixing and bottom particle prod. cross section 2-84923
 nonleptonic decays, coupled channel unitarity appl. 2-95823
 spectroscopy of hadrons containing one heavy quark, D and F weak decay 2-84882
 unitarised quark model, axial meson props., A_1 , B, D, E, H, Q_1 , Q_2 , $\chi(3507)$ 2-107639
 D-hadrons, amplitude helicity suppression, relativistic quark models 2-54148
 D-K π , quark dynamics 2-107658
 D-K π , weak decays using QCD corrected hamiltonian and $1/N_c$ expansion 2-101709
 D-K $\pi(\pi\pi)$ (KK), exclusive decay study 2-101706
 D semileptonic and nonleptonic weak decays, branching ratios, quark mass effects 2-64320
 D^0 , nonleptonic decays by $c\bar{q}$ annihilation, two-gluon radiation 2-59143
 D^0 meson lifetime meas. 2-64319
 D^0 semileptonic decay branching ratio 2-84923
 D^0 - \bar{D}^0 system, discrete symm. breakdown test 2-74626
 D^0 , D^0 lifetime meas. in LEBE-EHS expt. 2-79916
 D^0 (D^0) meson lifetime meas., review 2-79865
 D^0 - D^+ , decay rates in quark model 2-95786
 e^+e^- annihilation, 29 GeV, D^{*+} prod. 2-101741
 $e^+e^- \rightarrow D^*X$, 10.4 GeV, inclusive charged prod. 2-101744
 γN , charmed hadron inclusive photoproduction in VDM (Russian) 2-74694
 γN -DD, 40-150 GeV, D^{\pm} lifetime, electronic meas. 2-69454
 $\nu(p)N \rightarrow \mu^-(\mu^+)CCX \rightarrow \mu^-(\mu^+ \mu^+ \mu^-)X$, diffractive charm-anticharm prod. model 2-89959
 pN, 350 GeV, charm particle pairs forward prod. study 2-84922
 pp-DX, 10^2 - 10^7 GeV, multiple prod. model (Russian) 2-59197
 $\pi^- N$, 278 GeV, charm particle pairs forward prod. study 2-84922
 $\pi^- N$, 278 GeV, limits on D^0 - \bar{D}^0 mixing and bottom particle prod. cross section 2-84923
 $\pi^- p \rightarrow D^{*+}X$, 16 GeV/c, peripheral prod. cross-section 2-64344
 D^0 - \bar{D}^0 transition amplitudes in six-quark model 2-54105

D-region

- aeronautical parameters and density, seasonal var. 2-106405
 disturbances of winter-time mid-latitude D-region 2-63164
 electron collision frequency in D and E-regions, estimation from LF wave propag. expt. 2-112216
 electron concentration, diurnal variations, use of Arecibo 430 MHz incoherent scatter radar 2-83962
 electron density temporal variability obs. from Tromsø 2-73766
 hydrated cluster ion formation rates and winter anomaly 2-63168
 nocturnal D-region, characts. from VLF waves 2-84010
 physics and forecasting radiowave propag. 2-94559
 radio wave absorption, influence of water vapour concs. 2-112201
 SFA type dependence at low freq. 2-58195
 UHF radiowave heating expt. and aeronomic implications 2-68557
 VLF radiowave amplitude changes due to ionisation enhancements 2-100627

D/A conversion see digital-analogue conversion

damage, radiation see radiation effects

damming see dams

damping

- see also dislocation damping; internal friction
 alloy, dissipative properties under cyclic tension-compression, static tension effect 2-99631
 annular double-plate systems, internally damped, axisymmetrical steady-state response 2-103085
 beams, thin-walled open section, free vibr. with unconstrained damping 2-97427
 cantilever beams, material damping 2-65504
 double-beam system interconnected by several springs, internally damped, steady-state response 2-81158
 elastic elements of systems with many degrees of freedom, vibr. damping 2-75849
 elastic system combination parametric resonances 2-114713
 floating elastic plate, optimisation of wave-damping props. (Ukrainian) 2-103015
 gas laser, pulsed, flow conditioning and pressure damping of shock waves 2-55195
 gravity waves, surface-active material effect 2-75979
 gyroscope rotor, conducting, nutation active damping 2-94997
 Hamiltonian-Jacobi solutions for particle in dissipative medium 2-107165
 impulse-absorbing pneumatic cylinder, modelling 2-114534
 internal friction measured in free decay, corrections due to inhomogeneous strains 2-105210
 internal friction measured in free decay, corrections due to inhomogeneous strains 2-105211
 magnetostriuctive polycryst. material vibrs., hysteresis damping, phenomenological theory 2-66883
 metal, ferromagnetic, strain amplitude dependent damping, mech. model (Japanese) 2-56904
 multidimensional linear systems with variable parameters, stability theorems 2-97365
 nonlinear nonconservative system, component mode anal. 2-75892
 nutation synchronous motion of a free gyroscope with an annular damper (Chinese) 2-79346
 plate, circular, rigid-plastic, in a damping medium, dynamic response 2-103082
 PMMA, beams, by coated beam method 2-67675
 polydimethylsiloxanes, performance as damping fluids 2-115323
 polyester resin, meas. by coated beam method 2-67675
 polymers, US velocity and damping coefficient measuring device 2-62309
 polystyrene powder, rheological studies on compaction (Japanese) 2-83077
 quadrupole formula for gravit. radiation rel. to fundamental mode damping 2-106518
 rapid measurement of oscillations' decrement assisted by structural properties 2-58602
 reduced impedance method anal. 2-79345
 relaxation time approx. for second order quantum response 2-112841
 rods, viscoelastic, stability under influence of sliding force, thermomech. coupling effect 2-65498
 rotating asymmetrical solids, damping nutations 2-91227

damping continued

- rubber solution, temp. transitions, mech. losses, vibr. freq., effective viscosity, struct. development (Russian) 2-65837
 shaft, rotating axially loaded homogeneous, stability behaviour 2-75874
 single-degree-of-freedom system with quadratic-velocity damping, optimal isolation 2-55413
 steel, cyclic fatigue strength, rel. to damping ability 2-111317
 steel, cyclic strength and damping capacity, effect of stability of austenite struct. in deform. 2-111307
 steel, multicycle loading with inhomogeneous states of strain, damping and failure 2-99625
 structural vibration anal., freq. depend. damping, transfer functions and numerical Fourier transform. 2-75888
 subsonic flexible tube flutter anomaly, fluid and structural damping model 2-91545
 suspension of rigid rods, bimodal and polydisperse, damped oscillations in viscosity 2-75916
 suspension of rigid rods, monomodal, damped oscillations in viscosity 2-75915
 thermoelastic thin plates, vibration dynamics 2-97415
 three mode 50 kg gravitational antenna, Q-factor at liq. He temps. 2-79461
 two-rotor gyrocompass, natural oscillations damping, Newtonometer appl. (Ukrainian) 2-75846
 vibrating bodies, thermoelastic damping theory 2-81277
 viscoelastic damping layers, effect on sound field generated in waveguides by flexurally vibrating plates 2-60290
 viscoelastic layer situated in water next to flexurally vibrating plate, vibration damping properties 2-61274
 viscoelastic material, linear, stress response and energy dissipation under periodic triangular strain loading 2-114675
 waveguide with cutoff frequency, distinctions between boundary and distributed damping 2-109108
 Cu-Al-Zn, damping capacity, quenching and Zn addition effects 2-116441
 Cu-Mn-Al alloy, influence of static tension on vibration damping behaviour (Japanese) 2-97416
 Fe-Al(Cr), elastic modulus and internal friction, mag. field effect 2-116050
 Fe₃₂Ni₃₆Cr₁₄P₁₂B₆, Metglas, heat treatment effect on internal friction 2-62151
³He-H₂ solution, saturated, vibr. wire behaviour, mean free path effect and boundary limitations 2-76765
 Ni-Co, relation between damping capacity and magnetomech. props. 2-57397
- dams**
 see also civil engineering; hydroelectric power stations
 Kremasta reservoir earthquake sequence induced by filling (N.Greece) 2-88774
 Nurek Reservoir, Tadzhik, USSR, weak earthquake focal mechanism 2-57990
 Xinfengjiang reservoir, China, parameters of 1966 earthquake (Chinese) 2-57979
- dark space** see discharges (electric)
- data acquisition**
 see also CAMAC; data handling; indicators; recorders
 Advanced Toroidal Facility, data system design considerations for a pseudo-steady-state device 2-80231
 air pollution detection, airborne data acquisition system 2-99869
 airborne meteorological data acquisition and communications system ASDAR 2-68527
 Alcatel, high speed digital data acquisition system data acquisition 2-74995
 area detector data acquisition system for macromolecules X-ray studies and other diff. expts. 2-85478
 ASDEX fusion exptl. data collection system 2-80229
 BESSY experimental facility, status report 2-85415
 Beta II field reversed plasma gun exptl., data acquisition system 2-74992
 C-CD leased read-out for charged particle identifier 2-64800
 calorimetric system, automation 2-84602
 charged particles meas. from fast neutron induced reactions in close geometry 2-108309
 circular dichroism spectropolarimeter, microcomputer automated 2-89790
 computer control at Technical University of Dresden 2-85512
 computerised air quality control system 2-62544
 cryogenic STEM, integrated approach to data acquisition 2-113057
 data measuring control complexes for Angara-5 fusion reactor 2-54658
 deep level transient spectroscopy using CAMAC components 2-101469
 detectors for high-energy neutrino interactions 2-70105
 digital US C-scan image construction using electronic ordered dither microprocessor-based techniques 2-62303
 Doppler tracking standard acquisition system 2-58131
 Doublet III, data acquisition and control system for Thomson profile diagnostic 2-80226
 Doublet III, data acquisition system, expansion and redundancy 2-74993
 Doublet III, distributed computer system, data management 2-80224
 Doublet III Doppler ion diagnostic software system using Northern 1710-31 and LSI-11/2 2-74998
 EG data acquisition reduction and analysis, microcomputer based 2-117100
 ECG microprocessor-based data acquisition, reduction and anal. system, design, implementation 2-94242
 electron micrograph analysis computer system 2-107462
 electron microscopy, computer applications 2-107473
 electron microscopy, microscope-computer interactions and atomic resolution and spectroscopy, conf., Atlanta, GA, USA (Aug. 1981) 2-107013
 ELMO Bumpy Torus, plasma heating system instrumentation and control design 2-64662
 ELMO Bumpy Torus data acquisition system 2-64661
 energy-conserving house simulation, monitoring and data analysis 2-57764
 environmental monitoring and control hardware selection (Russian) 2-62541
 Fermilab collider detector facility data acquisition system 2-59673
 FFTF MIDAS computerized operational work control system 2-69793
 FILE-1B aircraft flight test program [Earth observation] 2-73730
 fishing trawl Door Instrumentation System 2-94543
 fusion experiments, data acquisition and communications computer network 2-80227
 geologic materials, laboratory meas. of ultralow permeability 2-106364

data acquisition continued

GMS-2 geostationary meteorological satellite, USB Tracking, Telemetry and Command system (*Japanese*) 2-83965
 Hot Fuel Examination Facility, data acquisition and process control system 2-107968
 Hot Fuel Examination facility, element laser profilometer system 2-107967
 Hot Fuel Examination facility, subassembly profilometer 2-107966
 Intense Pulsed Neutron Source distributed processing data acquisition system 2-59585
 jitter debugging in two laser experiments 2-55237
 laboratory minicomputer techniques, book 2-107313
 laser Doppler anemometry using microprocessor-based data logging and processing 2-79547
 laser spectroscopy, LSI-11/2 microcomputer-based data acquisition system 2-79686
 laser spectroscopy, parallel detection technology 2-112996
 laser system and data analysis techniques for absorbing and non-absorbing excited transients 2-84717
 levelling database implementation 2-57964
 low-compression theta-pinch pulse power systems and diagnostics 2-91660
 magnetic field dosimeter with data acquisition capabilities 2-53798
 materials testing, data acquisition and eval., microcomputer appl. (*German*) 2-116658
 MFTF superconducting magnet system low level signal data acquisition system 2-74996
 MFTF-B plasma diagnostics system instrumentation and data acquisition system 2-80288
 microanalysis using charged particle accelerators, control and data handling system 2-95546
 microcomputer based data acquisition for audio signals 2-75800
 microcomputer controlled data acquisition system for lightning strike current recording 2-68538
 microcomputer system for acquisition and processing of video data 2-79548
 microcomputer-based data-logging system, efficient use with a special-purpose control language interpreter 2-84599
 microcomputer-controlled system for recording rapid changes of US wave vel. and attenuation 2-84600
 microprocessor controlled Mossbauer spectroscopy, software package 2-107476
 microprocessor-based spectrometer control and data acquisition system for Raman spectroscopy 2-84601
 microprocessor-controlled magneto-optics apparatus 2-112878
 mm waves experiments, data acquisition and processing system (*Japanese*) 2-58129
 modular memory subsystems, geophys. instrumentation package 2-100574
 Mossbauer spectrometer, with constant velocities, recording unit 2-107478
 multidimensional expts. on nucl. interactions, measuring and computing complex 2-108326
 multiparameter matrix signal averaging system 2-112879
 multiparameter multichannel anal. system for X-ray sources 2-84767
 National Synchrotron light source, data acquisition and control system 2-59672
 neutron beam instruments, control and data acquisition 2-59674
 neutron time of flight spectrometer, GNEIS, data acquisition system 2-64741
 NMR spectrometer, microprocessor-based data acquisition and anal. system 2-89780
 Nova, control system, data acquisition, architecture and system design 2-75023
 Nova alignment and laser diagnostic systems, data acquisition 2-75019
 Novanet, a local computer network, and nova target data acquisition system 2-75024
 nuclear medicine, data acquisition and processing unit (*French*) 2-68122
 nuclear power plant, 32-bit microcomputer use for data acquisition 2-85207
 nuclear power plant remote data acquisition and display system 2-85196
 nuclear reactor fuel element manufacturing, computer data acquisition system 2-102093
 nuclear science and power systems conf., San Francisco, CA, USA (Oct. 1981) 2-58528
 oceanography, one-bit microprocessor controlled data acquisition system [for wave recorders] 2-83978
 Oldbury nuclear power station, computerised monitoring and control system 2-108053
 particle accelerators, computerised data acquisition and monitoring system 2-108327
 Particle Beam Fusion Accelerator Performance Monitoring and Evaluation System 2-96409
 physiology laboratory, use of computer-oscilloscope combination 2-100172
 S-1 Spheromak, control and data acquisition systems 2-74974
 SABRE, PDP-11/10 computer-based assessment system for body radioactivity 2-90421
 sample-hold cct. with analogue multiplexer for multidetector systems 2-108304
 seismic data telemetering, collection, processing and storage system 2-106324
 spent nuclear fuel reprocessing, remote control using computerised X-ray fluorescence 2-64557
 STEM, digital image recording, image display and characterisation 2-107471
 STEM, energy filtered images, simultaneous collection and processing 2-107470
 STEM data acquisition and display system 2-107469
 STEM system, computer control, EELS acquisition 2-107466
 STEM-computer interfacing 2-107468
 Super-PETT, positron emission transaxial tomograph, data acquisition aspects 2-73339
 tensometric data acquisition systems 2-95365
 TEXTOR, control and data acquisition system 2-74963
 TFR Tokamak expt. data acquisition system 2-74994
 time projection chamber, data acquisition system 2-64758
 TMX, ECRH diagnostic system control and data systems 2-80232
 two-dimensional anal. of solid materials using nucl. microprobe, techniques development and comparison 2-95547

data acquisition continued

weather forecasting data collection and processing, limitations and future trends 2-73625
 weather station as example for microcomputer sensorics (*German*) 2-100440
¹²C(p,p), list-mode study of bremsstrahlung spectra near reson. and time delays 2-90100

data communication equipment
see also telemetering equipment
 EBT, CAMAC based inter-computer communication system 2-85370
 environmental monitoring and control hardware selection (*Russian*) 2-62541

data communication systems
 data transmission alternatives deep geological nuclear waste repositories 2-64470
 deep geological nuclear waste repositories, data transmission alternatives assessment 2-64470
 EBT, CAMAC based inter-computer communication system 2-85370
 hydrometeorological institute in Czechoslovakia, regional telecommunication centre (*Czech*) 2-58127
 integrated optoelectronic devices for faster and more reliable data transmission 2-81124
 medical diagnostic data transmission via standard telephones 2-68191
 optical fibre communications, from research to appls. (*Italian*) 2-70680
 optical fibre spark discharge welding for optical data transmission (*Czech*) 2-55365
 optical fibre technology, history and future 2-97227
 optical fibre technology, research in the 1980s 2-97187
 semiconductor light sources, comparison of uses of lasers and LEDs 2-97228
 transmission of data over high freq. links 2-63169
 underwater acoustic communications 2-97257

data compression
see also information theory
 Cluster Compression Algorithm for Landsat image data 2-78273
 ECG signal data compression using high-speed computer processor 2-57913
 measuring instrument systematic error, correction via data compression (*Russian*) 2-79523
 principal components method in NDT, multiparameter flaw detection 2-116675
 seismic prospecting, system for automatic testing of PROGRESS digital stations (*Russian*) 2-94535
 STEM, multiple signals description 2-113056

data dictionaries *see database management systems*

data handling
see also data reduction and analysis
 Amsterdam proton microbeam and its appl. 2-95549
 detectors for high-energy neutrino interactions 2-70105
 FBR fuel optimisation using data bank system BESEX 2-85150
 gas chromatography with Fourier transform IR spectroscopy detection, interferometer stability, error sources 2-116753
 geodesy data, Helmer blocking, top-down strategy 2-57957
 Melbourne scanning proton microprobe developments 2-95543
 microanalysis using charged particle accelerators, conf., Namur, Belgium (Sept. 1981) 2-94883
 microanalysis using charged particle accelerators, control and data handling system 2-95546
 multiprocessor system hardware based on MC68000 microprocessor 2-64805
 position sensitive photomultipliers 2-90375
 scanning PIXE meas. with Eindhoven cyclotron, data handling 2-95548
 Si(Li) detector and data processing system for energy-dispersive X-ray microanalysis 2-90373

data loggers
 AC magnetic meas. from 4.2 to 300K 2-64006
 graphite, irradiation-induced creep testing, computer-supervised data logger 2-69762
 magnetic tape data recorders and their uses 2-95398
 modular memory subsystems, geophys. instrumentation package 2-100574
 multichannel analog recorders, digital AGC for seismic signals 2-73712
 phase-frequency characteristics of recording systems 2-95302

data processing *see DP industry*

data processing (administrative) *see administrative data processing*

data processing industry *see DP industry*

data reduction and analysis
see also data acquisition
 A/D converter interface with data reduction facilities for nuclear physics expts. 2-64793
 Advanced Toroidal Facility, data system design considerations for a pseudo-steady-state device 2-80231
 ambulatory ECG recordings 2-88674
 automatic peak search method in gamma-ray spectra 2-108311
 calorimetric system, automation 2-84602
 ceramics, phase diagrams, quasibinary and quasiternary, computer-based calc. 2-62101
 chromatography automation 2-78147
 computerised air quality control system 2-62544
 computerised gamma-ray spectrometry 2-58979
 cosmic ray ion chambers, digital recording system 2-117606
 Doublet III, data acquisition and control system for Thomson profile diagnostic 2-80226
 ECG component analysis using a computer 2-117143
 ECG data acquisition reduction and analysis, microcomputer based 2-117100
 ECG microprocessor-based data acquisition, reduction and anal. system, design, implementation 2-94242
 EEG, statistical data analysis, computer managed 2-117144
 electron diffractograms, digital processing of lattice images 2-115107
 electron micrographs, performance evaluation of scanning microdensitometer 2-112950
 experimental data acquisition and handling, system based on HP-1000 minicomputer and IEEE-488 standard 2-84598
 exponential data, deviation detection using integration and difference plots 2-63956
 eye and contact lens movement meas. using motion picture camera 2-111766
 FILE-IB aircraft flight test program [Earth observation] 2-73730

data reduction and analysis continued

- FLYSPEC, neutron spectra measured by NE213 and stilbene spectrometers, unfolding method 2-102318
 foot-ground pressure, comparative display of dynamic data by data compression method 2-100137
 fusion experiments, data acquisition and communications computer network 2-80227
 gas chromatography with Fourier transform IR spectroscopy detection, algorithms and techniques 2-116750
 gas chromatography with Fourier transform IR spectroscopy detection, systems design requirements 2-116752
 geodesy data, Helmer blocking, top-down strategy 2-57957
 graphical methods for investigating fit to Fisher distrib. 2-68509
 high energy physics, dual display system for multidimens. data anal. 2-54735
 III-V and II-VI compound phases, ternary systems calc. 2-62102
 IUE data reduction, parameterisation of motion of IUE reseau grids and spectral formats 2-68616
 laboratory minicomputer techniques, book 2-107313
 large geodetic network adjustment, algorithms 2-57959
 low energy backscattering spectra anal. for samples implanted with heavy impurities 2-82977
 LWR pressure vessels, neutron fluence determ., data reduction and anal. 2-69794
 mm waves experiments, data acquisition and processing system (*Japanese*) 2-58129
 Mossbauer spectra anal., microcomputer system 2-101389
 network and photogrammetric block adjustment, reordering algorithm 2-57958
 palaeomagnetic data analysis method, for inclination data 2-73431
 Pioneer Venus, multiprobes subsonic drag determ. from flight data 2-94577
 portable microcomputer unit for Pu γ -ray spectra anal. 2-74394
 resolution convection, algorithm, with error anal. 2-89648
 rounding of data using BASIC computer subroutine 2-78851
 SABRE, PDP-11/10 computer-based assessment system for body radioactivity 2-90421
 seismic data deconvolution, algorithm for ICL DAP 2-100283
 seismic data processing by microearthquake networks for teleseismic P-waves (*Japanese*) 2-94510
 semiconductor spectra, prospects for near state-of-the-art anal. in laboratory 2-58978
 solar irradiance deficits determ., data reduction techniques 2-116789
 spark-source photographic mass-spectra, program for automated processing (*Russian*) 2-83421
 spectrum anal., peak search algorithm quality, computer study 2-79546
 spent nuclear fuel reprocessing, remote control using computerised X-ray fluorescence 2-64557
 STEM, image processing 2-113071
 telephotometer, field testing and data analysis for prototype automated field instrument 2-112186
 thermal diffusivity meas., flash method, thermogram interpretation (*French*) 2-65466
 weather forecasting data collection and processing, limitations and future trends 2-73625
 X-ray fluorescence spectra obtained with Hg₁ detector, computer anal. 2-58980
 X-ray profile-fitting method for the analysis of diffractometer intensity data 2-97844

data structures

- Ising systems, Monte Carlo simulation using data structure 2-53687
 programming methodology based on data abstraction 2-106323

data tables *see collections of physical data***data transmission equipment** *see data communication equipment***data transmission systems** *see data communication systems***database management systems**

- Canada's National Gravity Data Base, organisation and management 2-106322
 Doppler geodetic point positioning database at DMA 2-57961
 Doublet III, distributed computer system, data management 2-80224
 Doublet III data archival anal. retrieval system 2-80228
 Earth tides database 2-57963
 FBR fuel optimisation using data bank system BESEX 2-85150
 geodesy, programming methodology based on data abstraction 2-106323
 geodetic data bases in Poland 2-57965
 geodetic data management standardisation 2-57960
 gravimetric data management at Bureau Gravimetricque International (BGI), software 2-106321
 MFTF database notification facility 2-85369
 MFTF device configuration management system 2-74966
 MFTF distributed database management system 2-85368
 nuclear power, data base management applications 2-105542
 river water quality data, interactive data management system 2-58095
 TMX, ECRH diagnostic system control and data systems 2-80232

dating, Earth *see geochronology***dating, radioactive** *see radioactive dating***Davydov splitting**

- crystals, vibr. spectra, Davydov double resonance 2-61897
 molecular chain, Davydov soliton, acoustic wave dispersion effects, theoretical anal. (*Russian*) 2-59983
 α,β -perylene, optical absorpt., exciton-lattice interaction 2-87809
 phenanthrene, variable wave vector second harmonic generation, Davydov components 2-75628
 tetraphenyl germanium, triplet state, interphenyl interactions, phosphoresc. obs. 2-90614
 tetraphenyl lead, triplet state, interphenyl interactions, phosphoresc. obs. 2-90614
 tetraphenyl silicon, triplet state, interphenyl interactions, phosphoresc. obs. 2-90614
 tetraphenyl tin, triplet state, interphenyl interactions, phosphoresc. obs. 2-90614
 tetraphenylmethane, triplet state, interphenyl interactions, phosphoresc. obs. 2-90614
 InS, IR study of Davydov splitting 2-87796
 Pb₂Cd_{1-x} crystal, interlayer interactions, Raman phonon spectra (*Russian*) 2-104893

Davydov states *see Davydov splitting***dawn** *see twilight***dawn chorus** *see atmospheric***dayglow** *see airglow***d.c. amplifiers**

- TFFR, DC coupled auto zeroing low noise high impedance amplifier 2-74990

d.c. generators*see also homopolar generators*

- characteristics of a small wind-power system with DC generator 2-99758
 dynamics, magnetic field generation by a differentially rotating cylinder, model 2-85864
 geomagnetic flux reversals, dynamo theories, multivibratory dissipative structure 2-100249

d.c. machines*see also d.c. generators; d.c. motors*

- superconducting, worldwide development review, Polish uses (*Polish*) 2-53775

d.c. motors

- artificial heart using electronically commutated brushless DC motor 2-94253
 DC motors phase-locked loop control by optical tachometers, velocity and direction information recovery techniques 2-74404
 myoelectric hand controller with proportional control 2-68200
 permanent magnet, new high energy permanent magnets props. related to DC motor parameters 2-77319

d.c. sputtering

- discharge, current-voltage-pressure, characteristics calc. 2-57285
 planar magnetron characteristics at high power input rel. to film deposition 2-57291
 reactive sputtering and cosputtering of elemental targets 2-111074
 tunnel magnetron characteristics and discharge diagnostics w.r.t. deposition and surface treatment 2-55806
 Al thin film deposition in Ar using DC planar magnetron sputtering, O₂-partial press. condition effects 2-57294
 CdS films reactive DC sputtering on glass substrate in Ar and H₂S atmosphere 2-105072
 Ge, film, deposition by DC and RF double cathode sputtering (*Japanese*) 2-62065
 Nb-Ge film, DC magnetron sputtering and supercond. props. meas. 2-72097
 Nb₃Ge(Si), d.c. sputtered, quenching effect on metastable compd. 2-93544
 RuO₂ film, reactively sputtered, electronic struct. 2-110515
 Ti film, reactive magnetron sputtering 2-87980
 Ti thin film deposition in Ar using DC planar magnetron sputtering, O₂-partial press. condition effects 2-57294
 TiO₂ film, reactive magnetron sputtering 2-87980
 V₂Si film, magnetron sputtering and supercond. props. 2-77738
 ZnO film, c-axis orientation, energetic atom bombardment influence 2-98476

DDC *see direct digital control***de Haas-van Alphen effect***see also diamagnetic properties of substances; diamagnetism*

- electron gas, two-dimensional, in strong mag. field 2-56454
 graphite intercalation compounds, acceptor-type, pressure effect on electronic props. 2-56425
 mixed valence compounds, de Haas-van Alphen effect, theory 2-92442
 Au, cyclotron masses anisotropy 2-98964
 CeSn, mixed valent cpd., Fermi surface props. 2-56427
 Cu-Mn, dil. mag. impurity system, spin-resolved scatt., de Haas-van Alphen study 2-82563
 Cu₂Au, Fermi surface, de Haas-van Alphen meas. 2-104229
 Hg_{1-x}As_xF₂(SbF₆), Fermi surface, de Haas-van Alphen freqs. 2-76900
 KCa, intercalation compound, cryst. and band struct., Fermi surface, de Haas-van Alphen effect 2-82227
 Lu, Fermi surface meas. 2-66421
 Ni₂Al, de Haas-van Alphen effect and band struct. 2-66422
 Pt, conduction electron g-factor anisotropy, de Haas-van Alphen effect meas. 2-92445
 Rb, martensitic transform. obs., de Haas-van Alphen meas. 2-93507
 ReO₃, press. induced Fermi surface changes 2-76901

debugging, program *see program debugging***Debye-Huckel theory**

- electrolytic soln., surface tension, self-consistent theory 2-98385
 polystyrene, charged spheres in colloidal suspension, spatial correl. calcs. 2-105520
⁴He superfluid films, vortices, finite freq. nonlinear effects, Debye-Huckel approx. 2-66313
 PbF₂, Debye screening length saturation, free energy 2-86929

Debye-Scherrer cameras *see cameras; X-ray crystallography apparatus***Debye temperature***see also specific heat*

- Al, surface, LEED temp. depend. study 2-56307
 chalcogenides, group IV, low temp. sp. heat anal. using Debye temp. 2-71661
 cubic crystals, Debye temp. calc. 2-92137
 desorption kinetics, surface phonon modes, Debye temp., quantum statistical theory 2-71803
 fluorite type AB₂ crystals, cohesion and thermodynamic props., Debye temp., Gruneisen and force const. 2-61169
 hexagonal crystals, Debye temp. calcs. 2-61102
 inert gas crystals, Salter vap. press. eqn., anharmonic effects 2-115381
 inert gas solids, lattice dynamics and thermodynamic props., zero point motion and three body effects 2-109941
 inhomogeneity and anisotropy (*Chinese*) 2-76630
 lanthanum ethyl sulphate:Gd³⁺, spin lattice relax., Gd³⁺ splitting under press., ESR study 2-82713
 orthorhombic crystals, Debye temps. 2-98234
 PLZT, glass-like behaviour in specific heat, Debye temp. 2-71664
 polymorphism, thermodynamic props., lattice dynamics and polymorphic transitions, review 2-109731
 quartz, thermal expansion, Gruneisen functions and static lattice props. 2-98313
 tetragonal crystals, elastic Debye temp. determination, heat capacity 2-86824
 tetragonal crystals, hemihedral group, Debye temp. calc. 2-109939
 (TSeT)₂Br, 1-D organic metal, low-temp. specific heat (*Russian*) 2-104020
 Al(111), appl. of r-factor anal. of effect of non-structural parameters in LEED 2-56306

Debye temperature continued

- Au film, condensed, lattice dynamics and substruct. (*Russian*) 2-92425
 Cd₃As₂, sp. ht., 1.7 to 30K 2-86901
 Cd₃Co₄, sp. ht., mag. props. and lattice dynamics, Mossbauer effect study 2-77426
 CdGeAs₂, chalcopyrite, elastic behaviour, US wave vel. study 2-61052
 CdTe_{1-x}Se_x, sp. ht. and thermodynamic props. 2-81973
 Cd_{1-x}Zn_x, elastic consts., temp. depend., compressibility, Debye temp., US meas. 2-99468
 CeF₃:Gd³⁺ single crystals, temp. variation anal. of EPR linewidths 2-98957
 Co, FCC, cryst. dynamics 2-86813
 Co₉₀Zr₁₀ and Co₉₀Zr₄₀, amorphous, sp. ht., susceptibility, resist. 2-72224
 Cr-Mo and G-V solid soln. systems, high-temp. X-ray investigs., lattice and thermal props. (*Russian*) 2-66156
 Cs₅O₃, low temp. specific heat 2-92227
 Cs₅O₃, low temp. specific heat 2-92227
 CuGaSe₂(Te₂), specific heat, Debye temp., entropy 2-92231
 CuInTe₂, specific heat, Debye temp., entropy 2-92231
 FeF₃, elastic constants between 1.5 and 298K 2-115327
 Fe₂(MoO₄)₃, ferroelastic transition, Mossbauer and elec. cond. study 2-116101
 Fe₂P, ferromag., sp. ht. meas. 2-92930
 Fe₉₀Zr₁₀, amorphous, sp. ht., susceptibility, resist. 2-72224
 GaP, sp. ht., temp. depend., thermodynamic props. 2-86898
 KH₂PO₄ small crystals, sp. ht., 1.7 to 25K 2-110005
 LaS₂, heat capacity in superconducting and normal states 2-82521
 MX₂O₄ cpds., SnPb₂O₄, NiSb₂O₄, ZnSb₂O₄ and Pb₂O₄, struct. evolution, dilatation, vibr., rigidity (*French*) 2-91911
 (Mo₉₀Ru₁₀)₄₀, B₂, metallic glasses, low temp. sp. ht. 2-104019
 (NiO₂)BeF₄, Debye temp. and sound vel. calc. from elastic consts. 2-81919
 Na, phonon dispersion and thermophysical props. 2-56118
 NaNO₂, specific heat at low temp. 2-76701
 α-NiSO₄·6H₂O, elastic consts., temp. depend., ultrasonic meas. 2-98179
 P, amorphous and cryst., vibr. spectra, inelastic neutron scatt. meas. 2-56139
 PdH₂(D₂), elastic moduli, optical phonon contrib. 2-115329
 Pt surface(100), 1×1-hexagonal transition LEED study 2-115508
 Rb₂Cs₃O₃, low temp. specific heat 2-92227
 RbFeS₃, Bridgman growth, Mossbauer hyperfine fields and Fe⁵⁷ resonant fraction 2-77002
 Se, amorphous, liq. and solid, struct. and phys. props., uniaxial compression effects 2-71352
 Si dislocation crystal, X-ray Laue diff., dynamical oscillations obs. 2-115241
 β-SiC, phonon dispersion, bond-bending force model 2-76617
 Sn-O amorphous system, bonding struct. and lattice dynamics, Mossbauer study 2-104770
 SnPb₂O₄, struct. evolution, dilatation, vibr., rigidity (*French*) 2-91911
 Tb₂Si₄, magnetic, thermal, and elec. props. 2-72177
 Ti₆₀Be₄₀Zr₁₀, specific heat, superconducting T_c 2-87448
 TiN_{1-x}, low temp. specific heat 2-82520
¹⁰W, force const. and Debye temp. in Mossbauer studies, temp. depend. calc. 2-66955
 Y-Ir system, supercond. transition temp., heat capacity and susceptibility meas. 2-82508
 YFe₂, amorphous and crystalline, Mossbauer study 2-110734
 Y(Fe_{1-x}Co_x)₂ crystal struct. deform., elastic props. (*Russian*) 2-92074
 ZnO, mean-square dynamic displacements and X-ray characteristic temp. 2-66157
 α-ZnP₂, lattice dynamics, X-ray diff. study 2-56146
 ZnS, mean-square dynamic displacements and X-ray characteristic temp. 2-66157
 ZnSe, mean-square dynamic displacements and X-ray characteristic temp. 2-66157
 Zr₇₀Ni₂₀, amorphous supercond., lattice sp. ht. and thermal cond., 0.1 to 5K, thermal annealing effect 2-56779

Debye-Waller factors

- see also lattice dynamics*
 atom-surface scattering, Debye-Waller factor, angular and temp. depend. 2-111016
 atom-surface scattering, Debye-Waller factor 2-56322
 defect-induced lattice displacements, static Debye Waller factor, Bragg scatt., intensities 2-92138
 graphite surface (0001), atomic vibr., He atoms scatt. study 2-56324
 polyethylene, polycrystalline, neutron inelastic scatt., polarisation props. of optical phonons 2-61099
 semiconductors, substitutional impurity vibr., Debye-Waller factors, Green's function calc. 2-56135
 submonolayer film on elastic substrate, incommensurate struct., phase diag., Debye-Waller factor (*Russian*) 2-82178
 TGS, ferroelec. transition Debye-Waller factor and thermal expansion coeff. 2-57024
 three-dimensional uniaxial cpds., domain wall dynamics near commensurate-incommensurate transition 2-76636
 Ag, Debye-Waller factor calcs. 2-103932
 Al, Debye-Waller factor calcs. 2-103932
 As, amorphous, temp. depend. of EXAFS 2-105002
 Au, Debye-Waller factor calcs. 2-103932
 BaTiO₃, ferroelec. transition Debye-Waller factor and thermal expansion coeff. 2-57024
 CaWO₄:Eu²⁺ and CaWO₄-BaWO₄:Eu²⁺ phosphors, luminesc. props. 2-57150
 Co, FCC, cryst. dynamics 2-86813
 Cu (110), O₂ adsorption, Debye Waller factor, surface struct., He scatt. study 2-87070
 Cu, Debye-Waller factor calcs. 2-103932
 Ge, Debye-Waller factors 2-98235
⁴He, superfluid, ripplon scatt. from 2D Wigner lattice, electron lattice mobility meas. 2-61231
 KH₂PO₄, ferroelec. transition Debye-Waller factor and thermal expansion coeff. 2-57024
 Li, Debye-Waller factor calc. method 2-81923
 Na, phonon dispersion and thermophysical props. 2-56118
 Ni, atomic motions, Debye-Waller factors, neutron scatt. studies 2-97948
 Ni, Debye-Waller factor calcs. 2-103932
 Rb, Debye-Waller factor calc. method 2-81923
 RbCaF₃, lattice dynamics, Debye-Waller factor near 195K phase transition 2-76609

Debye-Waller factors continued

- Si, Debye-Waller factors 2-98235
 SiC (3C), optical phonons and transverse effective charge, temp. depend., 77 to 750K, Raman study 2-82861
 VAl₁₀4₃, one-particle pot. determ., cryst. struct., lattice dynamics 2-109938
 V₃Si, Debye-Waller factor, temp. depend., 8 to 293K 2-56143
 α-ZnP₂, lattice dynamics, X-ray diff. study 2-56146
decay periods (radioactive) *see radioactive decay periods*
decay schemes (radioactive) *see radioactive decay schemes*
decay theory (nuclear) *see nuclear decay theory*
decision theory *see decision theory and analysis*
decision theory and analysis
see also Bayes methods; dynamic programming
 measurement and level assessment using multiattribute utility theory 2-96220
 multisensor ocean surveillance data fusion system architecture 2-63148
 optimal signal detection in ECG 2-62811
 seismic pattern recognition, syntactic approach 2-62903
 stress corrosion cracking, in, expert system to predict risk 2-57544
decoding
see also demodulation
 vowels structure and duration, together specify fricative voicing 2-109128
decomposition
microstructure features and processes only; for other aspects see dissociation and pyrolysis
see also spinodal decomposition
 fission reactor, pressure vessel steel and concrete, temp. effects 2-64482
 α-Sialon, stability at high temps. 2-83145
 steel, low C austenitic, supercooled austenite, abnormal decomp. 2-72666
 steel, martensitic, Cr, precip. and decomp., DSC study (*Korean*) 2-62128
 steel, stainless, maraging, susceptibility to warm embrittlement 2-67531
 steel, supercooled austenite, decomp. products morphology changes during continuous cooling, HTMT influence 2-105159
 steels, alloy and C, martensite struct. after quenching and tempering (*Russian*) 2-99460
 Al-Ru (10-15 wt.%), rapidly quenched, phase transform 2-77823
 Al-Zn alloys, cellular decomp. 2-83120
 Al-Zn-Mg, aged at 20, 80 and 120°C, decomp., quench conditions influence (*French*) 2-72743
 Al-Zn-Mg, decomp. kinetics, effect of small Mg additions 2-99388
 CdS, Te₂, solid soln. films, vacuum deposited, condensation diagram and phase changes meas. 2-110208
 Cu₂MnAl, Heusler alloy, decomp. of β-phase 2-88086
 Fe:N, ion implanted, temp. stimulated outgassing 2-111205
 Fe-Cr-Co-Nb-Al alloy, high-coercivity, microstruct. rel. to mag. props. 2-111333
 Fe-Ni-Al-Co-Cu-Ti, thermomag. treatment, struct. form. and mag. props. 2-62152
 Fe-Ni-Ti type N26T3 alloy, martensitic transform. in austenite 2-105145
 Fe_{1-x}B_x, glass, crystn. kinetics, Mossbauer and DSC study 2-103632
 Li₂NaPO₄, synthesis and props. 2-111102
 Li₂O₃·SiO₂·TiO₂, glass, isothermal cross-section, phase decomposition 2-72706
 Na₂O·B₂O₃·CeO₃·3Nb₂O₅·(Al₂O₃) porous glass ceramic 2-77811
 Nb alloys, cast, heat treatment effect on struct. and props. 2-72733
 Nb-Zr-N, strengthened by ZrN precip., ageing characts. 2-83132
 Nb₂O₅, metastable struct. modification, disintegration and reduction products, electron microscope study (*German*) 2-65956
 Ni and Ni-C solid solutions, microhardness, effect of neutron irradi. 2-103847
 SiC (6H), graphitisation by electron beam irradi., electron diff. study 2-76503
 Ti-Al-Mo, α' phase form. and decomp. (*Russian*) 2-99385
 Ti-V-Cr-Mo, VT3-1, α' phase form. and decomp. (*Russian*) 2-99385
 TiBTe₂-2PbTe cross section, solid soln. form., physicochem. and electro-phys. props. 2-57337
 Y(Co,M)₃, (M=Ni, Cu, Al, Ti, V, Cr, Mn, Fe), metastable character, decomposition behaviour, precipitation 2-67342
 Zn-Al (22 wt.%), eutectoid decomp. kinetics (*German*) 2-67287
decomposition, spinodal *see spinodal decomposition*
decomposition, thermal *see pyrolysis*
decorative coatings
 ion bombardment self-decoration, cryst. microstructure study 2-111337
 Cr black plating, present status and appls. 2-62286
deep level transient spectra *see deep level transient spectroscopy*
deep level transient spectroscopy
see also deep levels
 computer simulation of deep states profile calcs. from transient capacitance data 2-87170
 computer-controlled acquisition of capacitance transient data 2-101469
 constant capacitance DLTS and ODLTS spectra, junction struct. effects 2-115878
 constant capacitance DLTS system, anal. and design considerations 2-76965
 DLTS measurement assembly with general-purpose correlation facility (*German*) 2-84714
 external generation of gate delays in boxcar integrator 2-53792
 n-InP, DLTS study 2-76967
 isothermal capacitance relax. study of electron capture coeffs. of deep centers with continuous energy spectrum 2-61405
 isothermal capacitance transient spectroscopy, meas. method 2-84660
 MBE growth using Pb flux and elec. characterisation 2-87987
 measuring instrument, construction and appls. (*Japanese*) 2-89821
 microcomputer-based apparatus for DLTS and C-V meas. 2-95332
 MIS structs., relationship between charge- and current-based DLTS 2-87180
 MOS capacitor struct., interface state density deduced from DLTS and Terman meas. 2-98748
 semiconductor thin film, deep level conc. from capacitance transient spectroscopy, errors 2-72084
 semiconductor-insulator interface states, const. capacitance DLTS method 2-77141
 semiconductor-insulator interface states, const. capacitance DLTS studies, review 2-110484
 semiconductors, deep levels characterisation by electrochem. photocapacitance spectroscopy 2-76968
 semiconductors, defect characterisation by junction spectroscopy, review 2-71920

deep level transient spectroscopy continued

- semiconductors, DLTS and C^2 -DLTS, analysis 2-56470
 semiconductors, neutron irradi., deep level transient spectroscopy 2-115695
 Al-SiO₂-Si, MOS capacitor, electron irradi., interface state spectrum, gate bias effect, DLTS study 2-66640
 Al-SiO₂-Si MIS capacitor, DLTS study 2-115896
 AlGa_{1-x}As_xSi MBE layers, deep electron traps, annealing characts. DLTS study 2-98589
 n-CdS, deep level transient spectroscopy of electron traps 2-115693
 CdS epitaxially grown layers, deep level transient spectroscopy of carrier traps 2-115692
 CdS, hot wall epitaxial growth, elec. props. 2-93430
 CdS-Au Schottky diode, $C = f(V)$ charact., deep electron trap and interface states effect 2-115860
 CdS-Cu₂S heterojunction, electron and hole traps, deep level transient spectroscopy 2-115873
 CdTe, DLTS study of deep electron traps 2-92516
 n-CdTe, deep level transient spectroscopy of electron traps 2-115693
 CdTe epitaxial layers, charact. and annealing behaviour of deep levels 2-104288
 CdTe epitaxially grown layers, deep level transient spectroscopy of carrier traps 2-115692
 CdTe, hot wall epitaxial growth, elec. props. 2-93430
 n-CdTe:(In), deep levels, DLTS study 2-87176
 GaAs, ion implanted and annealed, defect conc. distrib. study 2-71923
 GaAlAs DH LEDs, recombination-induced deep level form., DLTS study 2-98588
 Ga_xAl_{1-x}As, MBE grown, persistent photocond. centres, capacitance spectroscopy meas. 2-98688
 GaAs, deep level transient spectroscopy using CAMAC components 2-101469
 GaAs, donor defect, H passivation 2-87173
 GaAs, grown by Bridgman method, props. 2-98675
 n-GaAs, high-purity, epitaxial, H₂ passivation of deep donor centres obs. by DLTS 2-98570
 GaAs MESFETs, deep level impurities, effects on small signal and LF noise props. 2-98586
 GaAs MOS interface states, DLTS and photoionisation study 2-110488
 GaAs, proton irradiated, profiles interpretation obtained by C(V) technique 2-98663
 GaAs, proton-bombarded, deep levels study 2-66474
 GaAs, semi-insulating behaviour and thermal stability, stoichiometry effect 2-110348
 GaAs, VPE and Czochralski grown, pulsed Nd:YAG laser annealing of defects, implanted sample obs. 2-56026
 GaAs:Ag(Au), LEC grown, DLTS study 2-98572
 GaAs:Cr, Si implanted, thermally annealed, semi-insulating, deep levels 2-76966
 GaAs:Si, ion implanted and proton irradi., deep levels, laser beam annealing 2-98587
 GaAs:(Ge), MBE grown, deep levels and photoluminesc., MBE As₂/As₄ flux ratio effects 2-99341
 GaAsP, deep level studies on traps showing nonexponential kinetics 2-115689
 GaAs_{0.6}P_{0.4}Te, electron trap spectrum obs. by DLTS and transient capacitance meas. 2-87302
 GaP, deep level studies on traps showing nonexponential kinetics 2-115689
 Ge, deep metal-related centres obs. by DLTS 2-87186
 Ge, deep metal-related centres obs. by capacitance spectroscopy 2-92523
 Ge, gamma irradi., defect levels, DLTS study 2-76980
 Ge, gamma irradiated, use of thermal annealing for radiation hardening 2-56032
 Ge, high purity, detectors, correl. between DLTS meas. and performance 2-70060
 Ge:Cu p-n junction, reversed biased, Cu²⁺ centres mobility, DLTS study 2-98336
 Ge:Nd(Gd)(Tb)(Ho)(Tm)(Er), deep level impurity states, DLTS study 2-56477
 Hg_{1-x}Cd_xTe, deep level defect traps, DLTS study 2-87175
 n-InP, electron bombarded, defect states, DLTS study 2-87171
 InP MOS interface states, DLTS and photoionisation study 2-110488
 InP:Co, deep levels, elec. and optical meas. 2-76971
 InP:Fe, deep level optical spectroscopy 2-61400
 InP:Fe(Cr), VPE layers, deep impurity levels DLTS and DLOS study 2-98590
 InSb:Si, p-n junction diodes, hole traps, DLTS study 2-110452
 n-In_{1-x}Sn_xO_{3-y}p-InP solar cell, electron trap characterisation by DLTS 2-92513
 PbTiO₃-Si, RF sputtered, ferroelec.-semicond. interface states, DLTS and capacitance study 2-98746
 Pd/n-Si Schottky diodes, H₂ gas induced DLTS signal, gas detector appl. 2-7178
 Si, Czochralski wafers, effects of crystal defects on deep levels, TEM and DLTS obs. 2-92507
 Si, doping by neutron transmutation, electron traps anal. by DLTS (*Chinese*) 2-92643
 Si, electron and γ -irrad., defect prod. and lifetime control 2-109833
 n-Si, electron irradi., low-lying electron trap, transient capacitance studies 2-71921
 Si, laser-induced acceptor defects, H₂ passivation, DLTS study 2-115697
 Si, radiation defect laser annealing 2-103814
 Si:Au, acceptor level electron cross-section, DLTS study 2-115772
 Si:Au, mid-gap level investigation by DLTS and transient capacitance meas. 2-104286
 Si:Au, mid-gap levels investigation by DLTS and transient capacitance meas. (*Chinese*) 2-66473
 Si:Au, minority carrier capture cross section meas. 2-66569
 Si:Au p-n diode, DLTS and C^2 -DLTS, analysis 2-56470
 Si:B, interstitial B negative-U props., EPR 2-71908
 Si:B, trap levels, DLTS study 2-56472
 Si:C ion implanted, defect states, DLTS study 2-56471
 Si:F, H, amorphous, density of localised states, DLTS study 2-98591
 Si:H, amorphous, DLTS response due to localized states 2-56492
 Si:H, amorphous, obs. of photoinduced changes in gap states bulk density 2-66472
 p-i-n-Si:H, amorphous solar cell struct., deep electron traps 2-56493
 Si:H, implanted, radiation defects study by DLTS 2-92522
 Si:O⁺, implanted, deep level defects study by DLTS (*Chinese*) 2-92506
 n-Si:P, B ion implanted, deep level profiles 2-98571

deep level transient spectroscopy continued

- Si:P, O, electron and neutron irradi., point defects and colour centres, DLTS study 2-103754
 Si:P crystal, γ -induced point defects, H passivation 2-103758
 Si:Pt, minority carrier capture cross section meas. 2-66569
 Si:S, impurity related defect centres, DLTS and optical absorpt. study 2-71919
 Si:Zn, Cr(Fe)(Mn)(V), donor-acceptor complexes, DLTS and TSC meas. (*German*) 2-98579
 Si-SiO₂ interface props. studied by constant capacitance DLTS method 2-61606
 Si-SiO₂ MOS struct. with PbTiO₃ layer, electronic props., laser annealing effect 2-82792
 n-Si-SiO₂ MOS structure, interface minority carrier traps, optical DLTS study 2-77186
 n-ZnSe, deep level transient spectroscopy of electron traps 2-115693
 ZnSe, LPE grown, deep electron traps, TSC, photocapacitance and DLTS study 2-56466
 ZnSe, Zn-annealed, deep levels and associated carrier recomb. processes 2-110289
 p-ZnTe, deep level transient spectroscopy of hole trap 2-115693

deep levels

- see also *deep level transient spectroscopy*
 electrophotographic plate, residual voltage, carrier trapping and release parameters 2-110280
 II-VI semiconductors, amphoteric exciton trapping by 3d impurities 2-76937
 II-VI semiconductors, deep levels, junction space-charge techniques 2-110285
 III-V compounds, dislocation deep levels, occupation statistics 2-104289
 III-V semiconductors, role of deep states and defect reaction (*Japanese*) 2-92524
 molecular crystal, off-diagonal trapping from deep traps 2-72004
 MOS capacitors, X-ray irradi. effects, deep traps 2-77194
 Schottky-barrier diodes, thermal filling effects on const. capacitance transient spectroscopy 2-66483
 semiautomatic system for measuring the nonequilibrium capacitance of semiconductor structures 2-112921
 semiconductor, carrier conc., deep levels effect in case of strong compensation 2-110368
 semiconductor, deep donor binding energy, g-value calc. 2-92517
 semiconductor, deep level and shallow impurity profile simultaneous meas. with C-V method (*Chinese*) 2-92505
 semiconductor, deep levels, phonon-assisted tunnel ionisation, quantum theory 2-87185
 semiconductor, deep levels, position and capture cross section, thermally stimulated capacitance method 2-61402
 semiconductor, heavily doped, band tailing, deep fluctuation levels 2-76972
 semiconductor, many-valley, single donor impurities, core excitons shallow-deep instability 2-82282
 semiconductor, many-valley, single-donor impurities and core excitons, real-space eqn. 2-82281
 semiconductor, two bands model for nonradiative multiphonon recomb. at deep level defects 2-116233
 semiconductor deep level meas. techniques using precision thermometry 2-69173
 semiconductor films, quantized, light absorpt. by two-photon transitions in neutral deep impurity centres 2-77611
 semiconductor films, quantized, two-photon interband absorption with participation of deep impurity centres 2-56476
 semiconductor Schottky barriers, space charge region, dynamic response, gap states 2-87182
 semiconductors, cubic, paramagnetic centre relax. with exciton interactions 2-61760
 semiconductors, deep centres concentration, determ. by rapid capacitance relax. meas. of p-n junctions and Schottky barriers 2-69201
 semiconductors, deep impurities and complex band struct., Γ_1 states model 2-92515
 semiconductors, deep impurities and critical points, photoionisation spectrum 2-76969
 semiconductors, deep impurity centre photoionisation for case of photon energy deficit, light absorption coeff. 2-61934
 semiconductors, deep level determ., deep level Fourier spectroscopy method 2-66479
 semiconductors, deep levels, book 2-89491
 semiconductors, diamond and zinc-blende structur., point defect energy spectrum calc. 2-115709
 semiconductors, evaluation of tight-binding models for deep defect levels 2-71914
 semiconductors, II-VI and III-V, luminescence of deep transition metal centres 2-57152
 semiconductors, thermal filling effects in capacitance expts. on deep levels 2-66481
 SOS films, rel. between crystallinity and electronic props. 2-92514
 AlAs (110) surface, deep defect levels and Schottky barrier calc. 2-110413
 AlGa_{1-x}As_xSi MBE layers, deep electron traps, annealing characts. DLTS study 2-98589
 Al₂O₃ in MIMS struct., deep trapping levels, photoelec. spectrosc. obs. 2-82405
 Au-CdS Schottky structure, anal. of admittance spectroscopy method 2-115701
 BiI₃, deep level photoluminescence (*Russian*) 2-93153
 CdGa₂S₄, semicond., localised states, impurity absorption and photocond. spectra 2-110298
 CdS, high resistivity, semi-insulating, thermoelectric props., influence of deep traps, TSC study 2-66577
 CdS, recharge-enhanced transforms. of donor-acceptor pairs and clusters 2-61390
 CdS solar cells, deep trap levels obs. by capacitance meas. 2-88431
 CdS:Te film, vacuum deposited, dark cond. and photocond. meas., doping effects 2-61623
 CdS/Cu₂S thin film solar cell, freq. depend. capacitance studies 2-88430
 CdS:electrolyte contacts, surface-sensitive photoelectric effects 2-61585
 CdSe:electrolyte contacts, surface-sensitive photoelectric effects 2-61585
 CdTe epitaxial layers, charact. and annealing behaviour of deep levels 2-104288
 CuCl, deep impurity level theory 2-66486

deep levels continued

- Fe₂O₃ semiconductor electrodes with deep impurity level (*Japanese*) 2-115690
- GaAs and related cpds., conf. Oiso, Japan (Sept. 1981) 2-94906
- GaAs, bulk Bridgman crystals, O related gettering of Si during growth 2-61005
- GaAs, deep acceptor at 77 MeV, photoluminesc. study 2-57145
- GaAs, deep impurity profile, persistent photocurrent meas. technique 2-115267
- GaAs, deep levels, optical matrix elements and cross sections, impurity superlattice model 2-56467
- GaAs electron capture by multiphonon emission at A and B levels 2-61947
- GaAs, electron irradi., luminescence of deep radiative centres obs. 2-57187
- GaAs, electron traps and deep levels 2-98583
- GaAs, electron-bombarded, IR absorpt. spectra, 'shallow' levels 2-72507
- n-GaAs epitaxial layer on semi-insulating GaAs:Cr, IR irradi., current ionisation due to deep level photoionisation 2-66626
- n-GaAs, high-purity, epitaxial, H₂ passivation of deep donor centres obs. by DLTS 2-98570
- GaAs, LEC grown, photoluminescence, deep acceptor levels 2-99191
- GaAs, liquid encapsulated Kyropoulos growth method, deep centre conc. decrease 2-99323
- GaAs MESFET, normally-off, deep levels, photoinduced current spectroscopy study 2-110281
- GaAs MESFETs, deep level impurities, effects on small signal and LF noise props. 2-98586
- GaAs, proton irradiated, profiles interpretation obtained by C(V) technique 2-98663
- GaAs, semi-insulating, anti-Stokes luminesc. and deep centre EL2, expt. study 2-87830
- GaAs, semi-insulating LEC, deep level nonuniformity distrib., photolum. spectroscopy 2-76964
- GaAs, semi-insulating props., compensation by deep levels 2-56465
- GaAs:Cr, deep level optical spectroscopy 2-71902
- GaAs:Cr, deep level photoluminescence, vacancies and annealing 2-99190
- GaAs:Cr, Fe liquid encapsulated Czochralski cryst., SIMS 2-115270
- GaAs:Cr, Si implanted, thermally annealed, semi-insulating, deep levels 2-76966
- GaAs:Cr²⁺, deep levels, EPR spectra study 2-77365
- GaAs:Cu, luminescence, deep centres in bound exciton form. 2-104960
- GaAs:Fe(O), ion implanted and electron irradi., deep levels and electron traps, annealing 2-98584
- GaAs:In, elec. cond., Hall effect and deep levels 2-115760
- GaAs:Mg(Cr)(Mn)(Fe), epitaxial layers, impurity redistrib., SIMS study 2-98344
- GaAs:O, deep electron traps, elec. and optical props. 2-98585
- GaAs:Si, ion implanted and proton irradi., deep levels, laser beam annealing 2-98587
- GaAs:Sn LPE layer, deep level free-to-bound fluorescence line, shapes 2-77564
- GaAs:V, photoluminesc., optical absorpt., and ESR study 2-82916
- GaAs/Al_{0.3}Ga_{0.7}As interface, MBE grain, deep levels obs. 2-56463
- GaAs-Ga_{1-x}Al_xAs DH laser, deep level luminescence spectra (*Chinese*) 2-65217
- GaAs-Ga_{1-x}Al_xAs double heterojunction laser, deep level luminesc. 2-102790
- GaAs-Pd Schottky barrier diodes, electron irradi., piezoelec. phenomena, deep level effects 2-115893
- GaAs_{0.3}P_{0.7}As N VPE LEDs, deep centre studies by photocapacitance method 2-56637
- GaP, donor-Ga vacancy complex form., electron trap behaviour 2-115688
- GaP LED, deep level, luminesc. study 2-110949
- GaP p-n junction, LED, thermally stimulated noise 2-104444
- GaP:V, photoluminesc., optical absorpt., and ESR study 2-82916
- Ge, deep impurity photoionisation, electron-phonon interactions, photoconductivity study 2-61520
- Ge, deep metal-related centres obs. by DLTS 2-87186
- Ge, deep metal-related centres obs. by capacitance spectroscopy 2-92523
- Ge:B, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
- Ge:Pb, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
- Ge:S, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
- Ge:Zn, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
- HgCdTe, physics and chemistry, workshop, Minneapolis, MN, USA (Oct. 1981) 2-89437
- Hg_{1-x}Cd_xTe, deep level defect traps, DLTS study 2-87175
- Hg_{1-x}Cd_xTe, defect energy levels, deep levels, chemical trends 2-87184
- Hg_{1-x}Cd_xTe, impurity-to-band tunnelling 2-87179
- p-Hg_{1-x}Cd_xTe, nonradiative recomb. at deep impurity levels 2-92527
- Hg_{1-x}Cd_xTe, shallow and deep defect levels, alloy broadening, pseudopot. theory 2-87177
- In_{0.3}Ga_{0.7}As/InP heterostruct. avalanche photodiodes, deep levels 2-110284
- In_{1-x}Ga_xAs_{1-y}P_y, antisite defects, deep levels, alloy composition depend. 2-110297
- In_{1-x}Ga_xP:Te(Se)(Cd)(Zn)(Si)(O), epitaxial film, photo-, electro- and cathodoluminescence involving deep levels 2-116258
- InP, surface defects and Fermi-level pinning 2-82431
- InP:Co, deep levels, elec. and optical meas. 2-76971
- InP:Fe(Cr), VPE layers, deep impurity levels DLTS and DLOS study 2-98590
- InP:Mn(Fe) and undoped, deep level photolum. study 2-104930
- n-InP-Al Schottky barrier, prep., photocurrent, I-V and C-V characs. study 2-61552
- InSb:Ge(Cd)(Mn)(Zn)(Cr), deep levels in band gap, photocond. study 2-115706
- PbSe, Te_{1-x}, localised deep defect states 2-92530
- Pb_{1-x}Sn_xTe: Cd(In), photoluminesc. study 2-93279
- Si beveled substrate, relationship between carrier distrib. and dopant atomic distrib. 2-66034
- Si, Czochralski wafers, effects of crystal defects on deep levels, TEM and DLTS obs. 2-92507
- Si, deep impurity photoionisation, electron-phonon interactions, photoconductivity study 2-61520
- p-Si, deep level determ., deep level Fourier spectroscopy method 2-66479
- Si, laser annealed, quenched-in defect levels, DLTS study 2-61389

deep levels continued

- Si, neutron irradi., deep defect levels with continuous energy spectrum, electron capture coeffs., isothermal capacitance relax. study 2-61405
- Si p-n diodes, current controlled negative resist obs. 2-56681
- Si: Au, B, counterdoped, anal. of transient photocond. 2-66584
- Si: Au, deep Au impurity centre, donor and acceptor levels 2-104306
- Si: Au, thermal capture of acceptor deep level, Huang-Rhys factor 2-82276
- Si: Au(Pt), anal. of admittance spectroscopy method 2-115701
- n-Si: Cr, donor levels, photocapacitance and photocond. spectra 2-115707
- p-Si: Fe, interstitial Fe and Fe-acceptor pairs, DLTS and Hall effect study 2-66476
- Si: Fe, local electronic struct., molecular cluster method based on HF approx. 2-92533
- Si: Fe, B, Fe donor activity on heat treatment, elec., DLTS and EPR meas. 2-71911
- Si: Fe(V)(Ti)(Mn), deep levels under hydrostatic press., isothermal capacitance study 2-66477
- a-Si: H, P, photoinduced absorpt. in picosec. range due to deep hole traps 2-72527
- Si: H films, amorphous, dependence of gap on hydrogen content, photoluminesc. and IR spectra study (*Chinese*) 2-110903
- Si: N, deep levels meas. 2-92511
- Si: P, neutron transmutation doping, radiation defects, electrical activity, annealing 2-86738
- Si: Se, donor level photoionisation cross-sections, IR spectra and photocond. study 2-56484
- Si: Zn, Co, epitaxial layers, doping laws and electrophysical props. 2-66025
- Si-sapphire, SOS, heteroepitaxial, hydrogenation induced improvement in electronic props. 2-66669
- Si-SiO₂ interface, Si ion implantation, defects, deep levels, annealing, C-V characs. study 2-61403
- SiC (6H), vacancy deep levels traps, EPR, optical absorpt. and Hall effect study 2-56483
- ZnO: Cu, deep Cu centre, lattice distortion effects, SCF-LCAO cluster calc. 2-104297
- ZnS: Cu, donor-acceptor recombination, ODMR study 2-99185
- ZnS(Se), Z 2-116235
- ZnSe, heteroepitaxial, deep defects 2-92512
- ZnSe, LPE grown, deep electron traps, TSC, photocapacitance and DLTS study 2-56466
- ZnSe: Ag(Au) LPE layers, luminesc. spectra, acceptor levels 2-116250

defect electron energy states

- see also colour centres; deep levels
- alkali halide crystals, localisation struts. calcs. (*Russian*) 2-56486
- BCC transition metals, vacancy clusters, binding energies and electronic struct., tight binding calc. 2-109789
- chalcogenide glasses and amorphous semicond., at. defects, review 2-65869
- connected electron states on a centre of small radius in a magnetic field (*Russian*) 2-71912
- core p-vacancy levels in crystal field, multiplet struct. calcs. 2-98580
- diamond, GR1 centre, vibronic model, rel. to MCD spectrum 2-67087
- feldspars, X-ray irradi. defects, thermoluminesc. and optical absorpt. study 2-110958
- Fermi-Dirac statistics appl. to defects in solids 2-56481
- higher-order ion-size effects in pseudopotential theory 2-71904
- ideal vacancy and surface states, tight binding calcs. 2-104227
- III-V semiconductor-metal interface, Schottky barrier form. due to surface antisite defects 2-61556
- III-V semiconductors, defect electronic struct., tight-binding calcs. 2-76978
- III-V semiconductors, role of deep states and defect reaction (*Japanese*) 2-92524
- insulator surfaces, electronic struct. of point defects, review 2-61539
- isotopic disorder, resultant Anderson localisation 2-82292
- localised defect electronic struct. calc. method 2-115698
- metals, electronic props. of point defects, review 2-92519
- nonlinear lattice relaxation by a regional virial theorem 2-56480
- polyvinylcarbazole, nitrated, exciton migration and localisation on defect and impurity levels, luminesc. obs. (*Ukrainian*) 2-82896
- proton irradi., rearrangement of intrinsic defects during annealing, Hall coeff. meas. 2-109863
- α -quartz, electronic struct., cyclic cluster calc. 2-61393
- quasiband cryst. field calc. method 2-115698
- ruby, Anderson localisation and transition, off-diagonal dipolar interactions 2-87148
- semiconductor, amorphous film, gap states, xerographic spectroscopy 2-77213
- semiconductor, dislocation electron energy spectrum, Hubbard correlations 2-104309
- semiconductor, neutral defect excited states 2-110287
- semiconductors, defect characterisation by junction spectroscopy, review 2-71920
- semiconductors, diamond and zinc-blende structures, point defect energy spectrum calc. 2-115709
- semiconductors, dislocations, electronic and mech. props. 2-66488
- semiconductors, electric-dipole transitions in intervalley multiplets 2-115708
- semiconductors, electronic struct. induced by short-ranged defects, calc. method 2-104296
- semiconductors, ideal vacancy and surface states 2-104226
- semiconductors, multiphonon release of trapped electrons, theory 2-92650
- semiconductors, neutron irradi., deep level transient spectroscopy 2-115695
- semiconductors, point defect induced electronic struct., calc. method 2-76981
- simple-cubic tight-binding solid, vacancy-vacancy effective interaction in bulk and on surface 2-56008
- transition metals, vacancy clusters, electronic struct., binding energy, atomic relax. 2-87174
- Wannier functions, model Hamiltonian 2-56474
- As₂S₃ and As₂S₅, optically induced localised states, photolum. and EPR 2-57164
- CaO, F₂²⁺ defect, hole burning, optical spin-echo spectra 2-104298
- CaS: Sm, phosphors, phosphorescence decay, trapping parameters 2-61941
- CdGa₂S₄, electroabsorption, luminescence studies 2-61875
- CdSe, photocond., struct. and defect levels 2-115811

defect electron energy states continued

- CdTe, bipolar photo-Hall effect and photocond. meas., defect model 2-115812
 p-CdTe, imperfection anal. by photoHall effect and bipolar photocond. meas. 2-77114
 Cu, localised defect electronic struct. calc. method 2-115698
 CuInS₂, photoluminescence, broad band emission, defect electron states 2-93249
 CuInTe₂, electrical characs. 2-92648
 CuInTe₂, neutron irradi., elec. props. and defect levels 2-71982
 CuTiSe₂, ternary semicond., liq. and solid, dielec. relax., defect electron states 2-61829
 Fe, ferromagnetic, single particle and collective excitations, EELS study oxidation effects 2-76915
 α-Fe, scattered wave functions and electronic states 2-87172
 GaAs, ion implanted and annealed, defect conc. distrib. study 2-71923
 GaAlAs, metalorganic CVD, electronic defect levels study 2-71922
 GaAs (110), chemisorption of Ge, surface defect states 2-56659
 GaAs, deep level elec. field induced phonon assisted tunnel ionisation 2-71909
 GaAs, defect energy level press. depend. 2-104295
 GaAs, electrical defect, Hall effect, SIMS and mass spectra meas. 2-76984
 GaAs, electronic struct. induced by short-ranged defects, calc. method 2-104296
 GaAs, gamma-irradiated, near-intrinsic emission intensity, nontrivial annealing induced increase 2-93260
 GaAs, proton-bombarded, deep levels study 2-66474
 GaAs, radiative recomb. and light absorpt., dislocations effect 2-104962
 GaAs, VPE and Czochralski grown, pulsed Nd:YAG laser annealing of defects, implanted sample obs. 2-56026
 GaAs:B, electron irradiated, IR study of annealing 2-56033
 GaAs:Cr, optical absorpt. spectroscopy on Cr-related defects 2-57129
 GaAs:Cr, spin dependent carrier capture, ODMR study 2-98998
 GaAs_{1-x}P_xO, point defect induced electronic struct., calc. method 2-76981
 GaP, deep level elec. field induced phonon assisted tunnel ionisation 2-71909
 GaP, Frenkel core-exciton energy, environmental effects 2-87152
 GaP, ODMR study of P_{Ga} antisite defect 2-98573
 GaP:Cr, optical absorpt. spectroscopy on Cr-related defects 2-57129
 Ga₂S₃(Se₂)(Te₂), random defect semicond., electronic props. 2-115653
 GaSb, native defects, MS-Xa calcs. 2-82270
 Ge, gamma irradi., defect levels, DLTS study 2-76980
 Ge, gamma irradiated, use of thermal annealing for radiation hardening 2-56032
 n-Ge:As(Sb), 1.5 MeV electron irradi., defect levels, DLTS study 2-92508
 Ge:H, interaction of H with point defects, under ⁶⁰Co gamma-irrad. 2-115279
 Hg_{0.7}Cd_{0.3}Te, carrier lifetime meas. by population modulation spectroscopy 2-92658
 Hg_{1-x}Cd_xTe, bulk vacancy electron states, tight binding calc. 2-87178
 Hg_{1-x}Cd_xTe, defect energy levels, deep levels, chemical trends 2-87184
 Hg_{1-x}Cd_xTe, shallow and deep defect levels, alloy broadening, pseudopot. theory 2-87177
 InAs, electron irradi., vacancies and defect states, positron annihilation study 2-116295
 n-InP, electron bombarded, defect states, DLTS study 2-87171
 p-InSb, radiation damage and recovery effects 2-66066
 n-InSb, strong coupling between reson. state and cryst. lattice, Hall coeff. meas. 2-92531
 InSb, thermal acceptors influence on electrophys. props. during annealing 2-56577
 InSe, cyclotron resonance of electrons bound at defects, internal accumulation layer formation 2-56944
 In₂Te₃, random defect semicond., electronic props. 2-115653
 KCl crystal, energy parameters for F_A(II) centres and F_A(II) like defects, radiative transitions 2-93257
 KCl:Ga³⁺(In³⁺), hyperfine consts., relativistic many body calc. 2-104327
 KCl-Li, F_A(II) centre relaxed excited state, second order perturbation theory 2-76974
 KaTaO₃:Ni, ESR lines and photocurrent kinetics 2-98942
 β-LiAl, positive carrier conc. rel. to Li vacancies, Hall effect and lattice parameters study 2-56552
 LiTaO₃, F⁺ centre, pot. energy of point ion lattice, Schrodinger eqn. 2-76973
 MgAl₂O₄, spinel, γ- and X-irrad., defect trap levels TSC and thermoluminesc. study 2-56608
 MgO, plastic deform., cathodoluminescence and photoluminesc. of slip bands, SEM study 2-67125
 Mo, scattered wave functions and electronic states 2-87172
 n-Pb_{1-x}Sn_xSe, native defect energy levels, Hall study, 4.2 to 300K 2-92529
 Pb_{1-x}Sn_xTe films, ion implantation induced defect levels, Hall meas. 2-92528
 Pb₃Sn_{1-x}Te:In, Fermi level stabilization by defects at low temp., mechanism 2-66487
 Se, glassy, bonding coord. defect, positive-U system 2-110303
 Si, 20 MeV proton bombard., radiation defect parameters 2-92056
 Si (111) chemisorbed H, Cl, Ag, vacancy and chemisorptive bond elec. struct. 2-82417
 a-Si, dangling bond centres energy level, ODMR study 2-110732
 Si, deformed, dislocation defect states 2-66489
 Si, dislocation lines, elec. props. 2-92521
 p-Si, electron irradiated, elec. level of vacancy 2-115696
 Si, epitaxial, neutron irradi., A and E centre study 2-103756
 Si, gamma-ray irradi., metastable Frenkel pair form., elec. props. 2-115289
 Si, grain boundary density of states, photocapacitance meas. 2-87187
 Si, laser annealed, quenched-in defect levels, DLTS study 2-61389
 Si, laser-induced acceptor defects, H₂ passivation, DLTS study 2-115697
 Si, neutron and electron irradi., divacancy charge, IR study 2-76431
 Si, neutron irradi., deep defect levels with continuous energy spectrum, electron capture coeffs., isothermal capacitance relax. study 2-61405
 n-Si, neutron irradi., photoexcitation props. of IR active defects 2-115694
 Si, p-n junction, dislocation energy levels, determ. using photoelectret and thermoelectret states 2-61580
 Si p-n junction, graded dislocation, capacitance-voltage meas. 2-104293
 n-Si, plastically deformed, elec. cond. meas., dislocation levels effect 2-82364

defect electron energy states continued

- Si, point defects, negative-U props., expt. study 2-71918
 Si, proton irradi., defect centre form., electrophys. props. 2-76534
 Si, vacancy and chemisorptive bond elec. struct. 2-82417
 Si:B, electron irradi., B interstitial, capacitance bridge meas. 2-56034
 Si:B, interstitial B negative-U props., EPR 2-71908
 Si:B, US investigation of acceptor ground state, distrib. of splittings 2-98577
 Si:C, ion implanted, defect states, DLTS study 2-56471
 Si:Ga, electron irradi., luminesc. of traps 2-61969
 Si:H, amorphous, elec. cond., effects of H₂O and NH₃ adsorbates, oxidation and light exposure 2-71984
 Si:H, dislocation donor and acceptor states (*Russian*) 2-92525
 Si:H, F, amorphous, ODMR study 2-93065
 Si:H, N(Ga), amorphous film, ion implanted, photocond. and energy spectrum 2-92698
 Si:H amorphous glow discharge films, elec. and optical props., elec. and mag. field effects 2-82407
 a-Si:H and a-Si:H:F, dangling bond centres energy level, ODMR study 2-110732
 Si:H, neutron irradi., defect states from IR absorpt. (*Chinese*) 2-110279
 Si(H,F), amorphous, dangling bond ESR, effect of H or F, Huckel mol. orbital calc. 2-56933
 Si(H,O), interaction between dislocations and H or O, elec. and luminesc. props. (*Russian*) 2-56487
 Si:P shallow radiation induced defect levels, annealing, AC conductance study 2-76970
 Si:P₂(P₂), multiple scatt. Xα mol. cluster model of complex defects 2-76977
 Si-SiO₂, interface electronic struct. 2-56711
 SiC (6H), vacancy deep levels traps, EPR, optical absorpt. and Hall effect study 2-56483
 SiC:N (6H), exchange-coupled vacancy pairs, ESR study 2-116062
 SiO₂, E' centres, Huckel calc. of ¹⁷O, ²⁹Si and ¹H hyperfine splitting 2-76975
 SiO₂, fused silica, nonbridging O defect center, dynamic Jahn-Teller effect study 2-87194
 SiO₂, impurity and defect electron states, tight-binding model 2-82288
 n-Si, hole injection from ions in soln. 2-56690
 α-Sn, n-type, electron irradi., acceptor point defects, elec. resist., thermoelec. power and Hall effect study 2-61394
 ZnSe, vacancy defect energies 2-98574
 ZrNiH₂, interstitial site occupation of H atoms 2-86664

defects, crystal see crystal defects

defibrillators

- see also patient treatment
 analyser, microprocessor-based 2-57930
 Hewlett-Packard Model 78660A portable defibrillator-monitor 2-83698
 transthoracic impedance, delivered energy and peak current determ. during defibrillation episodes 2-73393
 ultrahigh-energy H₂ thyatron/SCR bidirectional waveform device 2-83726

deformation

- see also bending; cold working; creep; drawing (mechanical); elastic deformation; elongation; ferroelasticity; plastic deformation; shape memory effects; thermomechanical treatment
 bubbles, deformation in high-velocity gas injection 2-91513
 cholesteric-nematic mixture, compressional deform. response 2-97912
 curvilinearly fibre reinforced composites, stress anal. 2-114643
 ductile single crystal, nonuniform and localised deform. anal. 2-81875
 Earth, elastic viscoelastic response to surface loading rel. to Lake Bonneville 2-106070
 Earth, seismo-tectonic deform. in Vrancea region, Rumania 2-117235
 Earth crust, coseismic and other short term strain changes obs. in South Africa 2-105957
 Earth crust, deformation as long-term forerunner of series of strong earthquakes 2-117234
 Earth crust, in situ meas. of tectonic stresses in mainland Greece by overcoring 2-94348
 Earth crust, investigation of seismic-tectonic deform. of Peter I Ridge, USSR 2-73499
 Earth crust, strain pattern and tectonics of Hellenic trench from Sea-Beam and submersible observations 2-94350
 Earth crust, stress-strain state of Garm region, USSR, rel. to seismic jointing, and erosion patterns 2-73474
 Earth interior, contrib. of strain nucleate to stress field in semi-infinite elastic medium 2-100332
 Earth surface, deform. and inclination var. in Kuril Islands as precursor of Shikotan earthquake, (1978 December 7) 2-73480
 Earth surface, quasi-static strains and tilts due to faulting in layered half-space with viscoelastic layer 2-100205
 Earth surface vertical displacements, effects on gravitational field 2-73419
 elastic-plastic tubes, internal pressure, strain, bifurcation 2-60420
 elastomers, transparent, degree of crystallinity under stretching (*Russian*) 2-67465
 f.c.c. crystal, deformation. pot. and operator associated with {110} screw dislocation 2-76569
 ferrofluid droplets, in mag. field, deform. study 2-56303
 fibre reinforced composite with rigid curvilinear crack and interface crack, antiplane deform. 2-97456
 fluid mechanics, and polymer processing, deform. rate softening of memory 2-65554
 fluorescence polarisation meas., rel. to uniaxial deform. models 2-103133
 free surface problems induced by motions perturbing the natural state of simple solids 2-75856
 highly filled polymeric rubber composites, struct. changes under stretching, acoustic obs. (*Russian*) 2-109703
 homogeneously deformable body mechanics, high symmetry dynamical models 2-95013
 hyperelastic material, plane deformations using principal stretches 2-60413
 inhomogeneously stressed cryst., dislocation and vacancy kinetics (*Russian*) 2-76439
 internal strain description 2-76566
 internal strains from generalised forces, theoretical study 2-61080
 isothermal fluid cylinder in presence of inertia, surface tension and gravity 2-91368
 liquids, high press. obs., strain, Eulerian representation 2-104791

deformation continued

- E Mediterranean ridge, distrib. of folding and faulting of sediments from Sea-Beam obs. 2-100369
 moving interfaces 2-77830
 nonlinear viscoelastic polymer, unloading process, birefringent effect 2-109201
 nonuniform deformation in tension, stress, necking 2-114686
 PMMA, microdeformations in glass transition region, electron microscopic studies 2-109887
 1,2-polybutadiene characterisation above glass transition temp. 2-72774
 1,2-polybutadiene viscofluid, strength characterisation in uniaxial extension 2-72829
 polymer, glassy, free vol. fraction, excess entropy and mech. deform. 2-61176
 polystyrene, microdeformations in glass transition region, electron microscopic studies 2-109887
 polystyrene film, biaxially oriented, glassy, gas transport, effect of tensile strain, time and temp. 2-61205
 porous media, liquid and gas flow, deformation effects 2-86331
 quartz bar, piezoelectric, mech. behaviour, heat influx at one end 2-72424
 revolving plate, thermopiezoelectric material, enclosing γ -ray source, stress and elec. induction 2-65483
 rocks, US radiation from crack in strained rock specimen 2-117295
 shell, cylindrical, thickness variation effect on axisymmetric vibrs. 2-75880
 solid solution, deformable crystal lattice model (Russian) 2-91855
 spalling rupture under shock deformation, modelling 2-81885
 steel, martensitic, fracture, delayed, high temp. deformation influence (Russian) 2-93586
 steel plate, impact by polymer bonded explosive, radiographic study 2-78107
 structurally nonuniform media, deformation mechanics 2-114642
 tidal deformation of viscoelastic body, cations for Earth rot. 2-105887
 time-dependent phenomena obs. using holographic interferometry partial exposure method (German) 2-81303
 two-dimensional lattice, interaction energy between charged particles, lattice type depend. (Russian) 2-56667
 viscous bodies, under various modes of loading, deformation and stress calc. (Czech) 2-109262
 viscous liquid flow in bent tube undergoing deformation 2-60645
 wind tunnel models, position and deform. meas. using optical sensor (French) 2-107300
 X-ray diffraction amplitude in slightly deformed cryst. Takagi eqn., perturbative soln. (Chinese) 2-76233
 Cu, fracture and deformation props. meas. at elevated temperatures (Russian) 2-88158
 Fe, fracture and deformation props. meas. at elevated temperatures (Russian) 2-88158
 Fe whiskers, dislocations by stress appl., X-ray transmission topography 2-115634
 $\text{Fe}_3\text{Ni}_3\text{Cr}_1\text{P}_{12}\text{B}_6$, amorphous and polycryst., He ion bombardment 2-103856
 LiF crystal, dielec. losses under deform. by conc. load 2-66984
 Nb₃Sn monofilamentary wire, bronze processed, supercond. props., strain-induced phase transition effects 2-98783
 Ni₂Cr, laser damages, comparison with tensile deform. and neutron irradiation effects 2-66047
 Pb and Pb-Bi (In) films, strain relax. meas. on Si substrates 2-82189
 Si cryst., perfect, oxidation-induced anisotropic deforms., dynamical X-ray diffr. 2-86517
 Si, electron-hole drops, stress depend. kinetics, luminesc. study 2-76936
 Si wafers, surface deform. meas. using interferometric techniques 2-84691
 SiC whisker reinforced Al alloy composites, deform. behaviour 2-105250
 SiC:B, Al epitaxial layers, lattice deformation and perfection, X-ray study 2-92406
 Sr(NO₃)₂, growth strains, synchrotron radiation X-ray section topography study 2-86512
 UO₂, polycryst., creep behaviour 2-86779
 YIG:La, Ga(Tm, Ca, Ge) films, Ne⁺ implanted, magnetisation, FMR and X-ray study 2-98967
 Zr fibre texture by time-of-flight neutron diffr. 2-57370

deformation lines *see* Luder's bands**degenerate semiconductor materials** *see* degenerate semiconductors**degenerate semiconductors**

- see also heavily doped semiconductors; superconducting semiconductors*
 galvanomagnetic effects, nonlinear, Kane spectrum of electrons (Russian) 2-92660
 hot electron inelastic scatt. by opt. phonons, Fermi surface shape, theoretical anal. (Russian) 2-61477
 p-type, Auger recomb. process, four-band Kane model 2-115782
 US propagation, band struct. effect 2-86800
 Cd₂P₂(As₂), far IR reflectivity meas. 2-93210
 Co_{0.7}Co_{0.3}Cr₂S₄-Se₂, ferrimag. semicond., elec. cond. and thermoelec. coeff. meas. 2-115763
 Cu_{1-x}S-CdTe, p-n heterojunction phototransducers 2-104478
 Cu_{2-x}S, CDW and struct. transition, X-ray diffr. study 2-92189
 GaAs:Te, MBE grown, elec. cond. and photoluminesc. props. meas. 2-56734
 p-GaSb, conduction electron spin relax., 4.2 to 77K 2-93008
 n-(Hg,Cd)Te, degenerate, two-band Auger recombination lifetime 2-93336
 Hg_{1-x}Cd_xTe-native oxide MIS struct., elec. props. meas. 2-87399
 Hg_{1-x}Fe_xSe, zero gap mixed cryst., IR magnetooptical absorption 2-99098
 In_{0.5}Gd_{0.5}As:Te degenerate LPE layers, electron mobility 2-61620
 n-InSb, quantum oscils. in magnetoacoustic attenuation 2-77132
 n-InSb-Al_{0.1}O_{1.9}Al MOS struct., quantum size effects and negative resist. obs. 2-77187
 n-Si, heavily doped, electron light scatt., theory 2-110880
 Sn_{1-x}Cr_xTe degenerate mag. semiconductor, struct. transform.-induced mag. ordering 2-56852
 TiSbSe₂-PbSe, phase diagram and physicochemical and electrophysical props. determ. 2-88067
 ZnO thin films, bias sputtered, electrical and optical props. 2-104395

detectors

No entries

delay circuits*see also delay lines; phase shifters*

photographic timers, electronic appls. (Spanish) 2-58940

delay elements (circuits) *see* delay circuits**delay lines***see also acoustic delay lines*

- active microwave delay line for reducing the dead time in electron-spin echo spectrometer 2-79639
 garnets, inhomogeneously magnetised, magnetoelastic and magnetostatic waves, microwave delay line appl. 2-104603
 microwave and MM-wave transmission/reflection test sets, delay-line based techniques 2-107340
 optical 70 fs pulses, amplification to gigawatt powers 2-97165
 optical delay line for solid laser cavity, constrained mode locking 2-75608
 optical fibre delay line with microbend taps for GHz signal processing 2-97176
 optical four-wave mixing in nonlinear delay lines for time-domain signal processing 2-70618

delayed neutrons

- counter arrays optimal positioning in delayed neutron emission probability studies 2-113839
 density isomer search from multiple delayed neutron emission in (α ,X), (α ,X,X) (Russian) 2-107746
 reactor, stability to Xe oscils., neutron height distrib. shape effect 2-64574
²⁴¹Am(n,f), delayed neutron yields 2-54453
²⁴⁰Cf(n,f), delayed neutron yield meas. 2-101953
²³⁷Np(n,f), delayed neutron yields 2-54453
²³⁹Pu(n,f), A=238,240,241, delayed neutron yields 2-54453
⁸⁶Rb, A=93-100, β -delayed neutron emission to excited states in Sr isotopes 2-95978
²³²Th (γ ,f), delayed neutron yield meas. 2-101953
²³²Th(n,f), delayed neutron yield meas. 2-101953
 U in spent fuels and waste solids, delayed neutron interrogator control system 2-74855
²³³U(n,f), delayed neutron yields 2-54453

delayed protons

- ⁵¹Cl decay, β -delayed protons, half life 2-64376
⁹⁵Pd 21/2⁺ spin gap isomer, beta delayed proton emission from ⁵⁸Ni(⁴⁰Ca,X) 2-90005
¹⁴⁷Tm direct and beta-delayed proton decay from ⁹²Mo(⁵⁸Ni,X) 2-69615

delays*see also delay circuits; distributed parameter systems*

- chromometer scales comparison errors reduction, using meteoric propagation of radio waves 2-69146
 DH lasers, electro-optical delay time depend. on injection pulse current (Chinese) 2-90886
 physiological oscillators intercoupled via pure time delays, mode anal. 2-83538

delta modulation

US frequency-tracked gated-pulse spectral analyser 2-78056

demagnetisation*see also magnetisation*

- ALNICO steel, mag. props. (Chinese) 2-72262
 alternating field demagnetization appl., coil design 2-58161
 averaging demagnetisation curves for specimens of magnetically hard materials 2-79623
 rare earth-Co magnets, demagnetization curves, 300 to 1000K 2-72293
 testing highly coercive materials, in closed magnetic loop 2-58860
 Ce_{1-x}Y_xAl₃, demagnetization, mag. susceptibility and sp. ht. 2-56892
 Fe-Si, single cryst., domain struct. depend. on freq. of demagnetising fields 2-87526
 Mn-Zn ferroferrites, loss relationships, response to mag. disturbance 2-82627
 R₂(Co-M)₁₇ (R=rare earth), residual induction, mag. props., permanent magnets appl. 2-82662
 SiFe, stacked H-I-B sheets, domain interactions, eddy current losses 2-82679

demagnetisation, adiabatic *see* magnetic cooling**Dember effect**

- latent image formation obs. by intermittent Dember effect meas. 2-62420
 molecular aggregates, trapped electrons, photinduced diffusion, absorpt spectrum 2-87320
 KBr(Cl), carrier drag by photons 2-104432
 Mn_{1-x}Zn_xFe₂O₄, spinel ferrite, charge transfer transitions in Dember photoEMF 2-110401
 NaCl, carrier drag by photons 2-104432
 Ni_{1-x}Zn_xFe₂O₄, spinel ferrite, charge transfer transitions in Dember photoEMF 2-110401

demodulation*see also modulation*

- biomedical Doppler demodulator, freq. shift max. freq. follower, amplitude correction 2-68081
 fibre interferometric sensor, synthetic-heterodyne demodulation technique 2-81101
 AgCl(Br), optical fibre, middle IR, heterodyne detection and radiometry appl. 2-65381

demonstrations*includes student experiments**see also student laboratory apparatus*

- apparatus for photoacoustic effect demonstrations 2-94965
 Biot-Savart and mag. force laws, simple Ampere demonstrations 2-79306
 brachistochrone, expt. study 2-89503
 classroom tightrope walking 2-79325
 Coriolis force simulation 2-63786
 Coulomb's law, note on expt. determ. 2-79319
 cylindrical wire, eddy currents study, undergraduate laboratory expt. 2-79313
 electron interaction with matter, undergraduate laboratory expt. 2-63779
 expanding universe, elastic rope and styrofoam balls model 2-79333
 Fabry-perot scanning interferometer for student meas. of spectral line splittings 2-79304
 frictional force rotator, demonstration equipment 2-94951
 light beam fluctuations, student expt. 2-79305
 light scattering demonstration 2-79326
 longitudinal wave motion, mag. coupled analog system 2-79331
 monkey-and-hunter demonstration, optoelectronic version 2-79324
 nuclear relaxation times, CW NMR investig. 2-89505
 nuclear spins in Earth's mag. field, obs. apparatus 2-107042
 rhodamine 6G solution laser for demonstrations 2-94967
 schlieren optical system utilising Schmidt-Cassegrain telescopes 2-107055

demonstrations continued

- singing, vocal source function formant filtering 2-79329
- systolic blood press. meas. using sphygmomanometer, errors 2-89504
- triple reflector using mirror wall tiles 2-107056
- vane rotating in fluids, dimens. anal., classroom expt. 2-68988
- vibrating string, reson. spectra, oscilloscope expts. 2-79332
- vision threshold measurement, undergraduate laboratory expt. 2-79315
- α -particles, energy straggling effect 2-79318
- N_2 laser, for educational appls. 2-79330

dendrites

- see also *crystal growth*
- binary melt, crystallisation, nonequilib. two-phase zone model, convection effects 2-109719
- Ag dendrites and single crystals, electrolytic growth in gel media, surface morphology, SEM study 2-87962
- Ag, electrodeposited, oriented growth of single cryst. on as-grown crystals. 2-104179
- CaO single crystals, dendritic growth from molten $CaCl_2$ 2-92430
- NH_4Br dendritic crystal growth in capillary, quantitative meas. on morphology 2-98506
- Pd electroplating process in dendrite growth, gelatin additive in bath 2-71845
- Si, dendritic web grown, dislocation struct., TEM and SEM study 2-91975

dendritic crystals see *dendrites***dendritic structure**

- alloys, solidification, primary dendrite arm spacing 2-105138
- Ag-Cu-Ti(Al)(Mg)(Ni), dendritic segregation, effect of alloying additions (Polish) 2-67338
- Al alloys, ternary and quaternary, solidification, estimate of interdendritic undercooling 2-111163
- Al-Al₂O₃, unidirectionally solidified eutectic, microstruct. and mech. props. 2-116434
- Al-Cu (10 wt.%), rheocast, microstruct. and mech. props. 2-99420
- Al-Cu alloy ingots, columnar equiaxed transition 2-105135
- Al-Cu-Mg-Zn-Cr powder, effect of compression by high omnidirectional pressure on struct. and props. 2-72654
- Al-Cu(Si), primary dendrite arm spacing, solidification conditions effects (Japanese) 2-57342
- Al-Si(Cu) ingots, equiaxed cryst. formation by electromag. stirring (Japanese) 2-83105
- Al-Zn (45 wt.%), corrosion protection coating, SIMS study 2-93683
- Co-Cr alloy, incipient melting phenomena, morphological obs. 2-93501
- Fe-B alloy, quenched from liq state, crystn., microstruct. and hardness 2-111166
- Fe-FeSi, hypereutectic films, solidification, lamella to dendritic struct. transition 2-57341
- Fe-Si (5 wt.%) alloy, supercooled ingots, cryst. struct. features 2-67318
- Ni-Al-Cr dendritic monocrystals, solidification, coarsening and microsegregation 2-99413
- Ni-base alloys, anisotropic, creep transients in deform. 2-83163
- Ni-Ni₃Al system, microdendritic precipitation 2-111179
- Ni-Ni₃Si₂ system, microdendritic precipitation 2-11179
- Ni₃(Al, M), (M=Ti, Nb, Hf, Mo, W), heat-resistant, dendritic segregation 2-72698
- Sm-Co-Cu-Fe-Zr, permanent mag., struct., sintering and annealing effects (Russian) 2-88226
- Sm(Co, Cu, Fe)_{6.8-7.2} cast hard mag. alloys, fine struct. after heat treatment 2-99465
- Sm₂(Co_{1-x}M_x)₁₇, M=Mn, Zr, struct. and mag. props. 2-72280
- Sn-Pb (15 wt.%), acceleration forces influence on dendritic growth and grain struct. 2-67316

dense fluids, theory see *liquid theory***densification**

- see also *density; powders; sintering*
- borosilicate glass, shock wave compression up to 170 kbar 2-71559
- brass, atomised powder prod. and characters. 2-67251
- brittle powder media, densification behaviour prediction method 2-99367
- bronze-graphite antifriction material, sintered, struct. and mech. props. 2-67556
- CC, AlN sintering, effect of $CaCO_3$ addition 2-105109
- ceramic, densification kinetics during press. sintering, porosity effect 2-116416
- ceramic, powder compaction charact. 2-116415
- compact strength, rel. to shear-normal stress curve obtained from uniaxial compression 2-116400
- current-conducting pastes based on polymer binders and fine Ag and graphite powders, prep. and electrophys. props. 2-99384
- diamond, densified, laser treatment (Russian) 2-66045
- fission reactor fuel, ceramic, fabrication by hot impact densification 2-102099
- gel to glass transform. by sintering, densification and crystn. phenomena 2-77794
- glass thin films, sol/gel prep. and characterisation, SIMS study 2-82093
- metal based composites, porous, stress-strain state during compression 2-116414
- metal powder pressing, external friction coeff. rel. to applied press. 2-67244
- metallic glass-metal matrix composite, fabrication feasibility using vac. hot pressing 2-99372
- metallic powders, TEM, new thinning technique 2-88321
- Metglas 2826, Ni-Fe-base metallic glass, dynamically compacted, mech. props. 2-99527
- organic crystals, dynamic compaction under shock 2-72648
- phosphosilicate glass film, H_2O absorpt. and densification 2-115630
- piezoceramic, explosively compacted, elec. domain struct. (Russian) 2-66990
- polymer powders, compaction conditions on press. and density variations 2-72664
- polymeric powders, cold compaction, SEM study 2-111134
- polystyrene powder, rheological studies on compaction (Japanese) 2-83077
- porous material, plasticity theory coefficients determ. procedure, relative density depend. (Russian) 2-77777
- powder compacts, densification during sintering, dislocation multiplication 2-116399
- powder compacts, density depend on particle size 2-116403
- powder pressing equation variants, stat. probability basis 2-67236
- powders, initial stages of pressing 2-77767

densification continued

- spherical powders, densification, influence of increasing particle coordination 2-116398
- steel, C-tool, hot-isostatic powder densification 2-57316
- steel, high-speed, powder prod. by pneumoacoustic atomisation, mech. characts. 2-67250
- steel, low alloyed powders and compacts, hot ductility, correl. with other props. 2-88148
- steel-TiC composite with 10R6M5 high-speed steel, high-density material, processing parameters, struct. and mech. characts. 2-67262
- Synroc-B, powder prep. and densification for fabrication 2-93478
- water reactor fuel, performance-related characts. 2-85133
- white cast Fe powders, enhanced densification by cyclic phase transformations under stress 2-111110
- Al-rare earth alloy granules, resist to deform. 2-116412
- Al-C alloy, dispersion hardening, mech. alloying in attrition mill, struct. obs. 2-111113
- Al-Cu-Mg-Zn-Cr powder, effect of compression by high omnidirectional pressure on struct. and props. 2-72654
- Al-Mg spinel, LiF doped, compaction and recrystn. kinetics 2-93482
- Al-steel-Pb admixed alloys, wear-resistant, prod. by dynamic compaction 2-88025
- Al-transition metal alloy granules, resist to deform. 2-116412
- Al-Zn-Mg granules, resist to deform. 2-116412
- AlN ceramics, explosive compaction 2-83069
- AlN polycrystalline ceramic formation, mech. props. (Japanese) 2-88044
- Al₂O₃ ceramics, explosive compaction 2-83069
- Al_{0.99}Si_{0.04}CrO₃ ceramic, sintering and dielectric props. 2-62094
- β -Al₂O₃-Na₂O, densification kinetics 2-62095
- B ceramics, explosive compaction 2-83069
- B₂O₃-Na₂O-PbO(CdO) glasses, press. induced struct. changes, ESR study 2-110637
- BaAl₂Ti₆O₁₆, powder prep. and densification for fabrication 2-93478
- CaTiO₃, perovskite, powder prep. and densification for fabrication 2-93478
- CaZrTi₂O₇, zirconolite, powder prep. and densification for fabrication 2-93478
- Cu powder, atomised, prod. and characts. 2-67243
- Fe powder, atomised, pressing behaviour, zinc stearate lubricant effect 2-67245
- Fe-Cu, sintered, mech. props., effect of steam treatment and age-hardening 2-88097
- KNbO₃, sintering characts. and dielec. props. 2-105108
- La₂O₃-SiO₂, hot pressing, accretive recrystallisation 2-77785
- Mo, electropulse compacted, porosity influence on elastic moduli 2-111223
- Mo fibre reinforced Fe and Cu composites, porous, stress-strain state during compression 2-116414
- NaCl, ultrapure, particle size influence on sintering kinetics 2-99366
- Na₂O-SiO₂ glasses, mech. props., finite element method calcs. 2-111232
- Ni-Ti sintered specimens pressed from powder mixture, phase comp., mech. and elec. props. 2-67248
- Ni-Zr-Co-Cr-Al-Ti powders, rapidly solidified, shock wave consolidation 2-62089
- Si₃N₄, amorphous, explosive compaction 2-83069
- Si₃N₄, C+N₂ interaction in sintering furnaces 2-105097
- Si₃N₄, densification by high pressure hot-pressing 2-93477
- Si₃N₄, slip cast reaction bonded, α/β ratio, effect of α -Si₃N₄ grog additions 2-93493
- Si₃N₄, ultrafine amorphous powder, crystallisation during sintering 2-111132
- Si₃N₄-Y₂O₃, sintering behaviour and microstructural development 2-93480
- TiN, fabrication by hot isostatic pressing 2-83075
- TiN powder, shock treatment effect, microstrain increase 2-105112
- UO₂, densification, fission-induced 2-76508
- UO₂-PuO₂ pellets fabrication using granular technique, process parameter influence 2-85162
- W, electropulse compacted, porosity influence on elastic moduli 2-111223
- W powder, activated sintering mechanism, defective struct. influence 2-67253
- W-K-Si-Al, bubble-strengthened, swelling during sintering 2-105101
- WC-TiC-TaC binderless cemented carbides, effect of hot isostatic pressing 2-111120
- Y₂O₃, hot pressing, accretive recrystallisation 2-77785

densimeters see *densitometry***densitometers** see *densitometry***densitometry**

- see also *photometry*
- air bubbles in pulp, effect on meas. accuracy (Chinese) 2-58876
- attenuator optical density meas., densitometric device 2-112954
- automated gamma densitometry of fuel pellets, rods, and control rods, 2-80073
- coronary obstruction severity, densitometric assessment from monophasic views 2-88664
- coronary stenosis degree, meas. by digital densitometry 2-88663
- CR-39 plastic detector, computerised method for automatic track evaluation using microdensitometer 2-64839
- dots, opaque, monosized, clustered distrib., density and granularity 2-74325
- electron diffractograms, digital processing of lattice images 2-115107
- fibre optic densitometer, 2D, for autoradiogram grain density quantitation 2-105870
- gel, direct densitometry using modified microphotometer 2-78502
- general principles and appls. (German) 2-58875
- Los Alamos L₁₁₁ edge densitometer for U, Pu conc. meas. in reprocessing solns. 2-69758
- microdensitometer, scanning, performance evaluation, digitisation of electron micrographs 2-112950
- microdensitometer positioning errors, random, transfer-function approach 2-84684
- microphotometer automatic digital 2-coord. astronomical photographs (Russian) 2-78965
- microscopic equipment, methods, appls. and related topics, list of publications 2-53449
- MTF measurement system, new development in image quality meas. 2-107379
- neurotransmitter receptors, quantitative densitometry, autoradiographs procedure 2-62862
- photographic equidensitometry, chromosome image study 2-62867

densitometry continued

video/microscope densitometric system for cellular and nuclear props. study 2-111829
 Rn isodose curve drawing using microdensitometer-computer ensemble 2-64838

density

see also *atmospheric pressure and density; density measurement; density of gases; density of liquids; density of solids*
 acoustic microscopy appls. to density and elasticity obs. 2-70794
 astronomical objects, density scaling of angular momentum versus mass universal relationship 2-63235
 cosmological density fluctuations, rel. to multipole moments in Rubin-Ford data 2-106892
 Earth crust, spectrum interpretation of gravity anomalies due to horizontal slab like bodies with lateral density var. 2-111841
 earth crust and upper mantle, density is precambrian terrains of NW Australia from regional gravity studies 2-117256
 equilibrium fluid phases, surface tension along interface 2-103938
 N./Atlantic Ocean, obs. of small-scale shear and density struct. 2-88879
 oceanic crust, rock density distrib. curves for mid-ocean ridges in tropical zone 2-117263
 quasi-stellar objects, luminosity and density evolution in rotating mag. superstars model 2-106952
 Universe, stochastic density fluctuations in radiation era 2-106969

density, atmospheric see *atmospheric pressure and density*

density, vapour see *density of gases*

density measurement

see also *hydrometers*

albedo electron densitometry methods, two-channel methods 2-112873
 atmosphere specific gas density meas., using Pb-salt diode laser 2-57758
 calibration procedure, Si-Al electrical steel sheet meas. (German) 2-53740
 ethanol-n-heptane, vapour-liquid equilibria, ebulliometric technique 2-98252
 ethanol-n-nonane, vapour-liquid equilibria, ebulliometric technique 2-98252
 hedero sediments, acoustic props. rel. to density and thickness meas. 2-75752
 laser-ray scattering apparatus (German) 2-81420
 light scattering cell, high press., adapted to density meas. 2-74388
 liquids, review of methods and equipment available in Spain (Spanish) 2-53738
 lung density, clinical system for in vivo meas. using Compton scatt. 2-94173
 lung density, in vivo meas., influence of certain phys. and physiological factors 2-94174
 neutral gas, reduced-density channel, meas. by laser deflection technique 2-58790
 optoelectronic, using functional equation of radiation flux 2-58836
 physico-chemical magnitudes, metrological assurance (Rumanian) 2-74381
 porous material, albedo electron densitometry, single channel method 2-89694
 powder metallurgy materials, density measurement, albedo electron method 2-83327
 smoke density meter using photometric detectors, railways appl. 2-64092
 two-phase flow in pipe meas. by capacitive methods (German) 2-81424
 US sensor for simultaneous meas. of level, temp. and density 2-65435
 viscous liquids and slurries, new on-line density meter 2-89693

density of gases

Bose gas, weakly interacting, density distrib. in external pot. 2-53660
 ethylene, press.-density-temp. meas. 2-71055
 high-pressure gas targets for radionuclide prod., opt. obs. of intense particle beam influence 2-113794
 neutral gas, reduced-density channel, meas. by laser deflection technique 2-58790
 polar substances, vapour-liq. equilb., dipole hard sphere perturbation theory 2-66189
 Ar, adsorbed on Ag (111), two-dimens. gas phases 2-61293
 He, thermodynamic parameters in centrifugal force field 2-115434
 He-CO₂, dense gas, interdiffusion coeffs. meas., density depend. 2-103247
 Kr, adsorbed on Ag (111), two-dimens. gas phases 2-61293
 N₂ underexpanded jet, compressible flow density meas. by LIF 2-97581
 Xe, adsorbed on Ag (111), two-dimens. gas phases 2-61293

density of liquids

see also *hydrometers*

n-alkene-n-alkyne mixtures, intermol. interactions, thermodynamic and optical props. (German) 2-85764
 trans-4-alkyl(4-cyanophenyl)-cyclohexanes, nematogenic homologous series, orientational order 2-109665
 4-alkylphenyl 4-alkoxybenzoate mixtures, anisotropic props. rel. to mol. length 2-76282
 amines in aq. soln., limiting excess vol., temp. effect 2-66100
 aqueous electrolyte soln., ionic contrib. to partial molal vol. 2-66101
 aqueous non-electrolytes, at infinite dilution estimation of solute-solvent interaction from ultrasonic studies 2-76593
 benzene, equation of state, elastic and thermal props. (Russian) 2-86827
 benzene, liq., sp. ht., sp. vol. and thermal expansion coeff. study 2-115426
 binary liq. mixtures, entropy of mixing, mass density and viscosity meas. 2-86917
 1,2-bis-[4-n-alkyloxybenzoyl]-hydrazines, thermotropic cubic mesophases, expt. study 2-65849
 butylbenzene, liq., equation of state, elastic and thermal props., density, US vel. study (Russian) 2-92144
 castor oil, thermodynamics props. as a function of temp. and press., using sound vel. and density data 2-61166
 cholesterol-1-hexadecanol smectic liquid crystal mixtures 2-61066
 cholesteryl benzoate (laurate), refr. indices, densities, polarisabilities, and mol. order 2-60876
 cholesteryl myristate/ethyl p-aminobenzoate liquid crystalline mixtures, US vel., density and compressibility study 2-71581
 COC, optical anisotropy in smectic and cholesteric phases 2-77472
 o-dichlorobenzene-cyclohexane(carbon tetrachloride), molar and available vol., free length, isentropic compressibility meas. 2-86770
 p-(p-ethoxyphenyl) azo phenyl undecylenate, liq. cryst. phase transitions, specific vol. and US vel. study 2-92199
 ethylbenzene, equation of state, elastic and thermal props. (Russian) 2-86827

density of liquids continued

ethylene, press.-density-temp. meas. 2-71055
 hard sphere system in limited volume, density and isothermal compressibility coeff. changes (Ukrainian) 2-56064
 hexafluorobenzene, liq., sp. ht., sp. vol. and thermal expansion coeff. study 2-115426
 hexylbenzene, liq., equation of state, elastic and thermal props., density, US vel. study (Russian) 2-92144
 N-p-hexyloxybenzylidene-p-toluidine, refr. index, density, and order parameter meas. in liq. cryst. phases 2-103601
 hydrocarbons, critical temp., density and pressure parameters 2-103967
 light scattering cell, high press., adapted to density meas. 2-74388
 liquid metals, kinetic theory, generalised density expansion, resistivity 2-76277
 lithium formate solutions, refr. index, density and elec. cond. meas. near saturation temp. 2-76719
 measurement review of methods and equipment available in Spain (Spanish) 2-53738
 molecular complexes, det. of equilibrium const. using US meas. 2-93806
 Na₂SO₄ aq. solns., densities and apparent molar vols. 2-98176
 n-nonane, thermal cond. meas., density depend. 2-92294
 nonassociated liquids, equation for free volume, mol. diameters determ. 2-55829
 nonviscous liquid, surface sp. ht., vibr. contrib. 2-56325
 N-p-octyloxybenzylidene-p-toluidine, refr. index, density, and order parameter meas. in liq. cryst. phases 2-103601
 organic liquids, densities, viscosities and flow behaviour models 2-82003
 organic liquids and mixtures, study of acoustic parameters using US vel. and density data 2-71578
 PBI/formic acid solns., experimental determination 2-56092
 polar substances, vapour-liq. equilb., dipole hard sphere perturbation theory 2-66189
 polystyrene networks, specific vol. meas. at different degrees of swelling 2-109660
 pyridine-chloroform-methanol (n-butanol) mixtures, degree of mol. interaction and other thermodynamic props. 2-71574
 toluene, equation of state, elastic and thermal props. (Russian) 2-86827
 tri-n-octylammonium halides, benzene solns., viscosity, partial molar vols. and expansibilities 2-110025
 1,2,4-trichlorobenzene-n-decane-n-tetradecane mixtures, melting, density, viscosity and thermodynamic props. 2-71666
 n-undecane, thermal cond. meas., density depend. 2-92294
 water, nonBoussinesq convective behaviour near maximum density 2-70951
 water, Rayleigh-Benard convection, max. density region effects (German) 2-97546
 AgCl-LiCl molten soln., surface tension, activity and thermodynamic props. and density meas. 2-76778
 Al, high-purity, viscosity and density, 670-950°C 2-66272
 CS₂, liquid, self-diffusion under press. 2-66267
 CaCl₂ solns., densities rel. to salt effect on vap.-liq. equilb. 2-71538
 CaO-Al₂O₃-CaF₂ melt, struct., anion packing 2-71325
 CaSiO₃-CaMgSi₂O₆-CaMgSiO₃ system, densities of melts 2-86771
 Fe-Si(Mo)(C), liq., density, influence of Si, Mo and C 2-61048
 He II, superfluid, vortex line struct. near λ point (Russian) 2-61234
 He, thermodynamic parameters in centrifugal force field 2-115434
³He, thermal conductivity near liquid-vapour critical point 2-56288
⁴He, density relax. on transition from two-phase to one-phase state (Russian) 2-71747
⁴He, superfluid, adsorbed film, density profile calc. 2-104109
 Hg thermodynamic props., density and elec. cond. in metal-nonmetal transition range 2-61170
 Hg-Cd-(Bi)-(Na)-(Pb) dilute liq. alloys, thermodynamic and elec. props., density and vol. of mixing 2-61171
 Hg-Cs, liq. alloys, molar vol. and thermal expansion coeff. meas. 2-109879
 Hg-Tl, liq. alloys, molar vol. and thermal expansion coeff. meas. 2-109879
 KF-ThF₄ melt, density and kinematic viscosity temp. depend. 2-113675
 LiNO₃-NH₄NO₃ binary melts, Chelma effect, internal mobility meas. 2-66271
 MgCl₂ aq. solns., densities and apparent molar vols. 2-98176
 MgSO₄ aq. solns., densities and apparent molar vols. 2-98176
 NaCl, aq. soln., volumetric props., data tables 2-94921
 NaCl aq. solns., densities and apparent molar vols. 2-98176
 NaF-ThF₄ melt, density and kinematic viscosity temp. depend. 2-113675
 Se-Te, liquid, thermodynamic and elec. props., inhomogeneous struct. model 2-98314
 UCl₄-CaCl₂ melt, density and surface tension meas. 2-113676
 UCl₄-MgCl₂ melt, density and surface tension meas. 2-113676
 Zn-Bi alloys, molten, density and surface tension 2-61259

density of solids

amorphous metal ribbon reinforced resin matrix composite, mech. props. 2-57410
 6-bromo-quinoline, crystallographic data 2-98051
 diamine cured epoxy resins, microballoon filled, acoustic. mech. and phys. props. 2-60322
 E-glass fibres, struct. sensitive meas. rel. to prep. conditions 2-93484
 explosive, Grueneisen parameter meas. 2-76629
 femur, human, material props. and strength behaviour of compact bone tissue (German) 2-105710
 glass, single-component, struct. in glass transition region, temp. depend. 2-103656
 insulating film deposition technology, secondary passivation 2-62075
 mean internal potential, rel. to density in condensed substances 2-110311
 nylon 6/inorganic salt fiber, struct. and dynamic mech. behaviour, drawing effect 2-109695
 poly(phenylene oxide), tensile props. and density, effect of residual stresses 2-67401
 polycarbonate-copolyester miscible blends, mech. props. 2-72775
 polyethylene, crosslinked low-density, drawing depend. of mech. and transport props. 2-93549
 polyethylene, linear, absolute integrated small-angle X-ray scatt. obs. during crystn., mass density determ. 2-115150
 porous material, plasticity theory coefficients determ. procedure, relative density depend. (Russian) 2-77877
 rare-earth substituted chlorophosphate apatites, prep., lattice parameters, X-ray diffr. obs. 2-60936
 Se-Sn-As system, chalcogenide glasses, glass transition temp., mech. and elastic props. 2-109687

- density of solids** continued
semiconductor thin film, dielectric function spectra, density and surface roughness 2-82943
 β' -SiAlon, density, microstruct. and strength, heating rate effects 2-116467
steel, high speed, prods. produced by powder metallurgy 2-77776
steel, powdered material improvements 2-72649
steel, Si-Al, density determ. and calibration procedure (*German*) 2-53740
steel-TiC composite with 10R6M5 high-speed steel, high-density material, processing parameters, struct. and mech. characts. 2-67262
thin film densities, appl. of Rutherford backscatter spectroscopy 2-87118
X-ray absorption edges, chemical shifts, use in density determinations, theory 2-77622
 $\text{Al}_2\text{O}_3\text{-SiO}_2$ refractory fibre, apparent thermal cond. rel. to phys. props. 2-115475
 $\text{Al}_2\text{O}_3\text{-ZrO}_2\text{-MgO}$ and ZrO_2 effects on microstruct. and mech. props. 2-88038
B, metallic vapour-quenched thin film with Al type cryst. struct. 2-110214
 $\text{Bi}_{1-x}\text{Ge}_x\text{Si}_{1-x}\text{O}_{20}$ single crystals with low sound speed, Czochralski growth methods 2-62058
 CO_2 , thermal expansion, X-ray diff. study, 5 to 195K (*Russian*) 2-81991
Co-Al- $\text{Al}_2\text{O}_3\text{-SiO}_2$, glass chem. interactions, molar vol. change 2-72985
Ca-P amorphous alloys, contraction during struct. relax., heat treatment effects 2-71674
Cr-Cu alloy film, mech. props., thickness depend. 2-115628
CrCoFe permanent magnet, powder metallurgy processing 2-72652
Cu-P solid solution, density and other props. meas. (*Russian*) 2-92206
CuBr-CuI system, physicochem. props. 2-111512
 $\text{Cu}_{48}\text{Zr}_{32}$, amorphous, elastic moduli, hardness and density 2-99472
Fe-B, amorphous, elastic moduli, hardness and density 2-99472
Fe-Ni-Ti, phys. props., reverse martensitic transform. effect (*Russian*) 2-67334
Fe-Si-Al, dil. alloy, mech. props., elec. cond. and mag. losses meas. 2-83217
 $\text{Fe}_{40}\text{Ni}_{40}\text{B}_{20}$, amorphous, neutron irradiation and annealed density changes 2-109850
 $\text{Fe}_{40}\text{Ni}_{30}\text{Mo}_{10}\text{B}_{18}$, amorphous, elastic moduli, hardness and density 2-99472
GaP:Zn, density, plastic deform. effects, defect struct. 2-71545
GaSe-Sb, phase diagrams, immiscibility of liq. phase, expt. study 2-71614
GaSe-Sb- Se_3 , phase diagrams, immiscibility of liq. phase, expt. study 2-71614
Ge-Se(S)-As amorphous films, obliquely deposited, Urbach tail, photoinduced changes 2-93309
 $\text{GeO}_2\text{-Bi}_2\text{O}_3\text{-Ti}_2\text{O}_3$ glass formation, optical appl. 2-77847
In-Bi alloys, US vel. and internal friction investigation 2-71585
 KCl:Sr^{2+} solid solns., solvus, impurity precipitation, density meas., thermodynamic anal. 2-92217
 KNbO_3 single crystal, struct. props., growth conditions influence (*Russian*) 2-98034
 $\text{K}_2\text{O-B}_2\text{O}_3\text{-Al}_2\text{O}_3$ glass, Al^{3+} with non-bridging O, density, refr. index and microhardness determ. 2-109684
 $\text{La}_{2-x}\text{R}_x\text{CuO}_4$ (R=Pr, Nd), struct. transitions, elec. props., semicond.-metal transition 2-81949
 $\text{La}_2\text{Cu}_{1-x}\text{Ni}_x\text{O}_4$, struct. transitions, elec. props., semicond.-metal transition 2-81949
 La_2O_3 hot pressing, accretive recrystallisation 2-77785
 $\text{La}_0.84\text{Sr}_{0.16}\text{MnO}_3$, cryst. struct. and elec. cond. 2-81748
LiF, plastic deformation under tension and compression, density changes, dislocation form. 2-61057
 LiFeSnO_4 phase, cryst. struct. characts. 2-65942
 $\text{Li}_2\text{O-LiCl-B}_2\text{O}_3$ system glasses, struct., glass transition and density meas. 2-91793
Mo alloy TZM, void swelling after high fluence neutron irradiation 2-85213
 N_2O , thermal expansion, X-ray diff. study, 100 to 182K (*Russian*) 2-81991
 $\text{NaCl:Ca}^{2+}(\text{Cd}^{2+})(\text{Ni}^{2+})(\text{Pb}^{2+})$, microhardness and bulk density meas., precip. and impurity-dislocation interactions 2-115345
 $\text{Na}_2\text{O-B}_2\text{O}_3\text{-SiO}_2\text{-Nb}_2\text{O}_5$ glass props., Nb_2O_5 influence 2-71648
 $\text{Na}_2\text{O-Li}_2\text{O-SiO}_2$ glass, energetics, from acoustic meas. 2-71590
 $\text{Na}_2\text{O-SiO}_2$ glass, energetics, from acoustic meas. 2-71590
Nb-Ti anelastic relax., elec. resist. and density determ., internal friction spectra 2-11222
NiGa, vacancy conc. and mobility 2-103751
 Ni_{1-x}O , sintered, grain growth, influence of O_2 partial press. 2-116476
 $\text{Rh}_{92-99}\text{-B}_{10-8}$ glasses, struct., mech. and elec. props. 2-103650
Sb film, amorphous, vacuum deposited, estimation of density changes associated with growth 2-71838
Se, amorphous, liq. and solid, struct. and phys. props., uniaxial compression effects 2-71352
Si, amorphous film, laser crystallisation, rel. to density 2-56407
SiN film, plasma enhanced CVD coating, phys. and elec. props. 2-115629
 Si_3N_4 , SiC, SiAlON, sintered microstruct. and property charact. 2-57323
 Si_3N_4 , sintered, hot isostatic pressing, effect on mech. props. (*Japanese*) 2-67266
 $\text{Si}_3\text{N}_4\text{-Y}_2\text{O}_3$ (6 wt.%), density, microstruct. and strength, heating rate effects 2-116467
SiO film, step coverage growth, computer calc. 2-82176
 $\text{SiO}_2\text{-B}_2\text{O}_3$ system, glass form. by gel process from metal alkoxides 2-88048
 ThO_3 , calcination and sintering, theoretical and expt. studies 2-85165
Ti-Al-Sn-Zr-Mo prealloyed spherical powders, consolidation 2-77777
 $\text{TiB}_2\text{-W(Mo)(Cr)}$, sintering and props. 2-111109
 TiC-W(Mo)(Cr)(Nb) , sintering and props. 2-111109
 $\text{TiN-Al}_2\text{O}_3$ composites, hot pressed, props. rel. to TiN conc. 2-72753
 $\text{TiN-W(Mo)(Cr)(Ta)(Nb)}$, sintering and props. 2-111109
Ti-Se-Te, vitrification, physicochemical props. 2-76313
UC, density, lattice parameters and elec. resist. up to 100 kbar 2-76387
 $\text{V}_2\text{O}_5\text{-P}_2\text{O}_5$ glasses, struct. characterisation, density and molar volume 2-65872
W-Cu(Ag), powder metallurgy factors affecting elec. contact props. 2-116408
 Y_2O_3 hot pressing, accretive recrystallisation 2-77785
- density of states, electron** see *electronic density of states*
deoxyribonucleic acids see *DNA*
deperming see *demagnetisation*
desalination
assessment of the market potential for small solar powered desalination plants 2-67824
comparison of solar RO and solar thermal desalination systems 2-67829
computer code for designing wind and solar powered desalting plants 2-67832
design and operation experience with solar powered multistage desalination plants 2-67830
design of a commercial solar-powered greenhouse with irrigation water from saline water sources 2-67825
design of a small solar-powered desalination system 2-67827
development of a marine osmotic solar still for sea water desalination 2-67834
engineering design of a 6000 m³/day seawater hybrid RO-ED helio desalting plant 2-67833
introduction to new energy sources for desalination 2-67823
multiple-effect solar distiller for fresh water supply, design features 2-67831
photovoltaic/electrodialysis power desalination system, investigation 2-67835
seawater, drag and heat transfer in thermal desalination 2-75958
seawater desalination plant using low grade geothermal heat 2-93868
small capacity solar-powered distillation plants in Australia 2-67828
solar and wind energy appls. 2-73070
solar energy as a source for production of power and desalinated water 2-93874
test results from a solar boiler for saline water distillation 2-67826
trends in the application of solar energy to water desalination 2-93873
wind and solar powered reverse osmosis desalination units—design, start up and operating experience 2-67813
- desalting** see *desalination*
design aids
see also *design engineering; nomograms*
oil-spray flames, burning processes studies, gas turbine low NO_x combustor design appls. 2-62403
- design engineering**
displays design w.r.t. perceptibility, under various illumination conditions 2-78341
energy transfer systems for implantable medical devices, design methods 2-78494
fault tree analysis package for design engineers 2-85192
- desk calculators** see *calculating apparatus; electronic calculators*
desk-top computers see *minicomputers*
desorption
absorbing molecule physisorption cross section on transparent substrate 2-115529
air desorption from water film, cryotrapping vacuum pump appl. 2-86976
atom-surface scattering, energy and angular distrib. of scattered atoms 2-99257
atomistic or molecular processes on clean surfaces: recent advances 2-110130
biomolecule desorption yields for high and low energy primary ions 2-98430
biomolecules, rel. depend. of fast heavy ion induced desorption 2-94127
biorganic solids, ion induced desorption of mols., conf., Uppsala, Sweden (June 1981) 2-94884
catalization in laser desorption mass spectrometry 2-98433
chemisorption bond making and breaking 2-98431
chemisorption monolayer of atoms at surface, diffusive kinetic model (*Russian*) 2-110164
concrete, for large vac.-system construction, compressive strength and outgassing characts. 2-83175
 β -copperphthalocyanine, O_2 thermal desorption, exciton dissociation, XPS study 2-92342
covalent and ionic systems Auger induced decomposition/dissociation 2-76834
crystal growth from vapour, orientation dependent desorption energy 2-109718
diamond (110), H desorption, electronic struct. transformation, EELS study 2-56658
diamond (111), adsorbed H, photoemission and photon-stimulated ion desorption study 2-110144
directed desorption as a probe of the structure of the desorption site 2-71802
DNA, molecular modification, fast heavy ion induced desorption. mass spectrometry 2-100170
electron and photon stimulated desorption 2-88377
electron stimulated, quantum theory, nonlinear corrections 2-87021
entropy, surface wave theory 2-56333
ergosterol, desorption, fast heavy ion induced 2-98429
ergosterol, desorption yield as function of fast heavy ion beam angle of incidence 2-87058
ESD, angular resolved, for surface struct. determ. 2-110107
fast ion induced, polarization field 2-98432
field evaporation, charge exchange mechanism, activation energy formulae 2-87054
glass, Auger signal decay due to Na desorption and diffusion, theory 2-77634
glycylglycine, desorption, fast heavy ion induced 2-98429
glycylglycine, desorption yield as function of fast heavy ion beam angle of incidence 2-87058
graphite, nucl. grade, particulate, kinetics and equil. of Cs sorption and desorption 2-74796
graphite, of I rel. to fission reactor coolant distrib. 2-80123
graphite, physisorption kinetics of ^3He , mean field theory, compensation effect near monolayer coverage 2-87046
group III arsenide MBE layers, composition, substrate temp. effect 2-87098
hydrogenated species at surface of solid material, chemical effects induced by MeV ion beams 2-93852
II-VI single crystal, intrinsic defects, formation kinetics in coexistence with equl. vapour phase 2-86662
Inconel 600, mechanically polished and sand- and bead-blasted, thermal outgassing props. 2-110161

desorption continued

- Inconel 600 surfaces, H₂ and CO adsorpt. behaviour under laser-induced thermal desorpt. 2-66357
inelastic ion-surface collisions, conf., Feldkirchen-Westerham, Fed. Rep. of Germany, (Sept. 1980) 2-74161
influence of heat, sound, photons and electron-hole pairs 2-87036
ion form. by rapid energy transfer, pulsed laser induced desorption 2-115534
ion induced, surface chemistry 2-99701
kinetic equations 2-61283
kinetic model for desorption of paired adatoms 2-98434
kinetic theory of gas-surface interaction 2-115536
kinetics, surface phonon modes, Debye temp., quantum statistical theory 2-71803
metal hydrides, Advanced Study Institute, Rhodes, Greece (June 1980) 2-74142
methanol, thermal desorpt. and decomp., on Pd(100), spectrosc. obs. 2-92344
methanol monolayers, H⁺ in electron stimulated desorpt. 2-87020
misch metal-Ni-Si alloys, H absorpt.-desorpt. characts. 2-87024
molecular ion formation from liquids and solids 2-98384
nonlinear desorpt. process with Dirichlet boundary conditions and power function variation, conc. profiles 2-99704
nonlinear diffusion problem with power rel. between diffusion coeff. and conc., desorpt. times computation 2-99703
organic acids, laser desorpt. mass spectroscopy 2-69295
organic compounds, SIMS, fast evaporation model 2-105033
organic solid, ion impact, mol. ion form, mechanism 2-99247
organic solids, thermal desorpt. prod. of gas phase ions, mass spectrometry appl. 2-115535
peptides, desorption of chromophor ions under laser irradi. (Russian) 2-105763
pharmaceuticals, trace anal. by combined liq. chromatography/desorpt. mass spectrometry 2-99731
photodesorption efficiency, of mols., apparatus using a pulsed method 2-84732
photon stimulated, appls. 2-92369
st-PMMA, struct. changes on drawing, absorpt. and desorpt., solvent-induced crystallisation, IR spectra 2-109698
PMMA-methanol system desorption and resorption of methanol, kinetic curves (Russian) 2-76800
rate constants, quantum theoretical evaluation 2-87074
rate constants for surface processes, desorption and hopping 2-56350
secondary ions desorbed by fission fragments, energy spectra, time-of-flight method 2-99243
site populations, continuously distributed activation energy, tempering schedules 2-110162
steel, austenitic stainless, H recycling props. 2-74934
steel, stainless, type 316, H⁺ impact, D desorption, in Tokamak first walls 2-69845
surface (111) and stepped surface (755), adsorbed K and K₂O monolayers, LEED, AES and TDS 2-56365
surface and ultrathin film, structural characterization by secondary electron emission 2-87923
surface bound portions, theory of desorption 2-87195
surface physics, conf., Bechyně, Czechoslovakia (Sept.-Oct. 1980) 2-89457
surface structure, extended adsorption fine struct. anal., review 2-110097
thermally desorbed atoms, ang. distrib., quantum mech. model 2-76823
thermally desorbed mols., ang. and rel. distrib. obs. 2-61277
times, from rate eqn., master eqn. and Fokker-Planck eqn. 2-61284
transition metal surfaces, mech. of near threshold stimulated desorption of protons 2-87045
transition metals, solubility of H₂, surface effects, kinetic model 2-76836
transition metals, stimulated proton desorption 2-87027
vacuum devices, thermal desorption meas. for estimating bakeout characts. 2-76830
valine, energetic ¹⁶O ion bombardment, desorbed secondary ion yield as function of ionic charge state 2-99242
vitamin D-metabolites from human plasma and mass spectrometric analysis by fast heavy ion induced desorption 2-100171
Ag (110), SO₂ chemisorption, atomic O effects, UPS, LEED and thermal desorpt. study 2-76824
Ag surface, adsorbed pyridine, resonantly stimulated desorption by polarised IR laser radiation 2-104149
Al film, evaporated, oxidation studied by AES, EELS and electron stimulated desorpt. 2-76855
Al, thermal outgassing props. between 20°C and 320°C 2-59544
β⁺-Al₂O₃-Na₂O(Na₂O-Li₂O)(Ag₂O), dehydration reactions, DTA and TGA study 2-78091
Au film, adsorption of water, work function and thermal desorption mass spectrometry study 2-98468
Ca+Br, surface reaction, chemical equil., desorpt. and reaction kinetics (German) 2-78123
Ca+Cl, desorpt. kinetics, dissociation and recombination rate consts., temp. depend. (German) 2-78124
Ca+Cl, surface reaction, chemical equil., desorpt. and reaction kinetics (German) 2-78123
CaF₂, IR laser-induced desorption of H₂O and hydrocarbons from optical surface 2-115530
CaNi₂, H₂ and D₂ desorpt. isotherms meas., H₂ storage appl. 2-105506
CdSe thin film, resist. modification during O₂ or CO thermal desorption (French) 2-98773
Ce, oxidised, resonant photon stimulated ion desorption 2-87048
Co, adsorption and decomp. of water, LEED, UPS, surface pot., and thermal desorption study 2-104160
Cr (100), chemisorption of Cl and surface chloride form., struct. and kinetic study 2-66366
CsI, desorption, fast heavy ion induced 2-98429
CsI, desorption yield as function of fast heavy ion beam angle of incidence 2-87058
Cu, adsorption of NO on (100) and (110) surfaces, EELS, LEED and TSD studies 2-110128
Cu, of H₂ sorption parameters estimation (Russian) 2-87075
Cu surfaces (100) and (111), desorpt. of H₂ and D₂, fast vel. distrib. 2-98446
Cu with adsorbed CO, laser flash desorption, surface diffusion 2-87039
Cu-Ni (40 wt.%), physisorbed ³He desorpt. kinetics, prefactors and compensation effect 2-98458
Fe surface (100), coadsorpt. of CO and H₂ 2-56363

desorption continued

- Fe surface (110), CO adsorption, thermal desorpt. spectroscopy, dissociation enhancement by surface defects 2-98464
γ-Fe₂O₃ aq. suspensions, H⁺ adsorpt. desorpt. kinetics, press. pump method 2-71792
Fe₂O₃ aq. suspensions, H⁺ adsorpt. desorpt. kinetics, press. pump method 2-71792
FeOOH aq. suspensions, H⁺ adsorpt. desorpt. kinetics, press. pump method 2-71792
GaAs/Sn, Te MBE layer, doping using SnTe source 2-92004
H adsorbed on W(001), desorption kinetics and surface restructuring 2-87025
H₂, from transition metals, effects on field evaporation and field ion microscopic imaging (German) 2-103569
H₂O, desorption and absorption on quartz glass ampoules during Ge chem. transport (German) 2-93440
⁴He, film, desorption kinetic meas. 2-71761
Ir (100) and (110), H₂ thermal desorption, field emission thermal desorption study 2-92352
Ir, adsorbed C, oxidation kinetics, thermodesorption spectrometry study 2-66373
Ir surface (110), interaction of H₂ and cyclopropane, thermal desorpt. mass spectrometry study 2-87062
Ir tape, covered by graphite monolayer, adsorpt. of K 2-115569
KCl, electron stimulated desorption of excited alkali atoms 2-87026
KCl surfaces, adsorbed pyridine, desorpt., IR laser stimulated 2-76807
KCl with adsorbed pyridine, gas-surface interactions, IR laser stimulated 2-87037
K₂O monolayer on Pt(111) and stepped (755) surfaces, LEED, AES and TDS studies 2-56365
LaB₆, of Cs, discrete binding states 2-87069
LaNi₅, Ni microprecipitates produced by cyclic H absorpt. and desorpt., ⁶¹Ni Mossbauer study 2-66953
LiF, optical radiation from photon-stimulated desorption of excited atoms 2-110934
MgO surface, UV irradi., thermal desorpt. of isotopically exchanged O₂ 2-66351
Mo, desorption of D on heating following D⁺ implantation 2-92366
Mo, electron-stimulated desorption of O⁻ 2-61294
Mo, empirical pair potentials for He interaction with substitutional Ne(Ar) 2-65065
Mo film, sputtered, plasma etching in NF₃ gas mixtures 2-105350
Mo irradiated with Ar ions, defects study using thermal desorption spectrometry 2-76517
Mo monocrystal, (110) surface, chemisorbed gas, desorption by low-energy ions 2-74923
Mo, polycrystalline, He thermal desorpt. spectra, surface relax. effects 2-115547
MoSi₂ film, sputtered, plasma etching in NF₃ gas mixtures 2-105350
NaCl, electron stimulated desorption of excited alkali atoms 2-87026
NaCl, optical radiation from photon-stimulated desorption of excited atoms 2-110934
Nb (110) and O-contaminated Nb (100), electron stimulated desorption of H⁺ 2-110153
Ni (100), H₂ and CO coadsorpt., temp. programmed desorpt. study 2-76827
Ni (100), photon stimulated desorption of CO and NO, multi-electron excitations 2-104156
Ni (110), chemisorption of Cl 2-56346
Ni (111), adsorption of water, preadsorbed O effect of azimuthal ordering 2-104157
Ni, low temp. release of ion-implanted He 2-82118
Ni, of H₂, angle resolved flash desorption technique 2-71801
Ni, polycrystalline, chemisorbed gas, desorption by low-energy ions 2-74923
Ni surface, adsorbed ethylene, SIMS and thermal desorpt. study 2-56353
Ni, surface (111), O predosed, NH₃ interaction 2-110156
Ni surfaces, dehydrogenation of cyclohexane, cyclohexene, and cyclohexadienes to benzene 2-83415
Ni vicinal surfaces, oxidation of C 2-78137
Ni with adsorbed pyridine, gas-surface interactions, IR laser stimulated 2-87037
Ni-Fe-Cr, Nichrome, phonon-induced desorption of He, crit. cone 2-92349
Ni+ethylene surface reaction, SIMS and thermal desorpt. mass spectra 2-105514
PbI₂ film surface layer, band gap illumination effects 2-92368
PbI₂ surface, photolysis and conductivity, desorption, quadrupole mass spectra study 2-66617
Pd (110), chemisorpt. of Cl 2-56346
Pd (111), chemisorption of Br and dibromide form. 2-66364
Pd, chemisorption of CO, segregated P effect 2-115557
Pd islands, interaction of CO and O₂ thermal desorpt. and AES studies 2-56361
Pd, of H₂, hardness and topology changes 2-93606
Pd surface (100), initial oxidation, LEED, EELS and AES studies 2-56314
Pd-SiO₂-Si struct., isothermal H₂ desorpt. 2-110135
Pd(100) with adsorbed H, correlation between photoemission and photon stimulated desorption 2-92351
Pd(100) surface, exposed to H⁺, electron stimulated desorption 2-76820
Pt (110) chemisorpt. of Cl 2-56346
Pt (111), adsorption and surface reactions of O₂, CO, and ethylene, EELS and thermal desorption study (German) 2-98469
Pt (111), adsorption and surface reactions of ethylene and O 2-105511
Pt (111), NO adsorption-desorption kinetics, mol. beam study 2-104144
Pt (111), water form. from coadsorbed O and H, XPS and temp. programmed reaction obs. 2-83411
Pt, adsorbed CO, oxidation, photocatalytic effect 2-111519
Pt, of O, ion induced 2-115562
Pt, surface (110), nonreconstructed, prep., thermal stability and adsorpt. characts. 2-115515
Pt surface (111) and stepped surface (755), adsorbed K and K₂O monolayers, LEED, AES and TDS 2-56365
Pt surface (321), kinked, adsorpt. of CO 2-61292
Pt surfaces, dehydrogenation of cyclohexane, cyclohexene, and cyclohexadienes to benzene 2-83415
Pt/TiO₂, of H₂ and CO, thermal desorpt. 2-105502
Pt-S, of CO, effect of S layer, AES and temp. programmed desorption study 2-66369

desorption continued

- Pt(110) with adsorbed CO and NO, surface phase study 2-86985
 Pt(111) with adsorbed carboxylates, struct. and reactivity 2-87035
 Pt(111) with adsorbed NO, desorption, molecular beam study 2-87038
 Re(0001) adsorbed water layer, stability under electron impact (*French*) 2-76808
 Re(0001), adsorption of benzene studied by thermal desorpt., Auger spectra and LEED between 100 to 300K (*French*) 2-110141
 Rh (100) 2-56354
 Ru (001), adsorption of N₂O, XPS, UPS, and thermal desorption study 2-61296
 Ru (001), adsorption of water, IR study 2-67060
 Ru (001), NO thermal desorpt., state selected vel. meas. 2-87019
 Sb overlayer on GaAs(110), LEED/AES/XPS/TDS characterization 2-87060
 Si (111), surface segregation of H by photon stimulated desorption at Si K edge 2-110154
 Si adatoms on W surfaces, atomic processes, direct obs. by FIM 2-115570
 Si, adsorption of O₂, pulsed laser atom-probe study 2-110129
 Si film, deposited in SiCl₄-H₂ RF discharge, struct. and optical props. 2-61313
 Si surface, (111), In adatoms desorpt. and film growth, RHEED study 2-92367
 Si, surfaces (111) and (100), ionization and desorpt. kinetics, atomic beam interaction study 2-115566
 Si:Ga, doping during MBE, AES and isothermal desorpt. spectra study 2-109819
 SiO₂ gels, surface characts., effect of inclusion of polyglycol 4000 2-78143
 Si(100) with adsorbed H, stimulated H⁺ desorption correlation with localised state 2-115551
 Si(111), stepwise oxidation and nitridation study 2-88246
 SnO₂ ultrafine particle film, Hall effect meas. and elec. cond. model 2-87425
 SnTe, of H₂, elec. cond. and Hall effect 2-115923
 Sr+Cl, desorpt. kinetics, dissociation and recombination rate consts., temp. depend. (*German*) 2-78124
 Ta (110), O-contaminated, electron stimulated desorption of H⁺ 2-110153
 Te, adsorbed layer on W(110), multiple commensurate-incommensurate transitions, LEED study 2-115560
 Ti (001), adsorption of water, photon stimulated desorption and UPS study 2-115553
 Ti (001), photon stimulated desorption of methanol, UPS 2-104143
 Ti, neutron-irradiated, H absorption and desorption rate constants 2-76817
 Ti(001), with adsorbed H₂O, desorption study 2-87028
 TmFe₂H₆, heat and entropy of formation and absorption, H₂ desorption isotherms 2-110012
 UO₂, sintered, retention and release of water 2-90222
 W (100), adsorption of Se, AES, LEED, work function, and thermal desorption meas. 2-66362
 W (110), adsorbed CO, neutral particle electron stimulated desorpt., reson. contributions meas. 2-56331
 W (110), chemisorption of H, photoemission and electron stimulated desorption study 2-87049
 W, adsorbed methane and CO, interactions, ESD and flash desorpt. study 2-110163
 W, electron stimulated desorption of methane 2-98467
 W, electron-stimulated desorption of O⁻ 2-61294
 W, empirical pair potentials for He interaction with substitutional Ne(Ar) 2-65065
 W, field adsorption of Ne, electron-stimulated field desorption study 2-105053
 W, quantum effects in electron stimulated desorption of H₂ and O₂ 2-76801
 W surface, Na scatt. and electron stimulated desorption, theory of nonadiabatic processes of adsorbates 2-115543
 W surface (100), C₂H₂/Cl₂ and I₂ thermal desorption, Auger spectra study 2-87067
 W surface (110), thermal desorption of Xe 2-61290
 W:Ag,He, ion implanted, He precipitation at substitutional Ag atoms He desorption study 2-92218
 W(110) with adsorbed CO, core-level processes in electron stimulated desorption 2-110151
 Xe, solid, of Ar and neon, transition state theory rate consts. 2-111514
 ZnO surfaces, decomp. of ethanol and acetaldehyde, thermal desorption and surface cond. meas. 2-105508
 ZnO, thermodesorpt. of atomic O 2-67768

detection (demodulation) see demodulation**detectors**

- see also electric sensing devices; hydrophones; infrared detectors; microwave detectors; nonelectric sensing devices; particle detectors; photodetectors; ultraviolet detectors
 fibre-optic sensors (*German*) 2-91051
 harmonic oscillator with mass M=389 kg, meas. of Brownian noise 2-53654
 nonidentical sensors, optimal struct. of sensor systems, contradictory failures 2-101394
 optical fibre transducers 2-97215
 optics, conf., Los Alamos, NM, USA (Apr. 1981) 2-94889
 thermal equilibrium of detectors for atmospheric humidity measurement (*French*) 2-95388

determinants

- see also matrix algebra
 applications 2-69000
 dynamic systems, parametrically excited, stability anal., generalised Hill's method 2-101162

detonation

- see also explosions; shock waves
 acetylene-O₂ mixture, transition from burning to detonation 2-83387
 compressed detonation wave in a gas 2-114836
 cylindrical charge, detonation initiation shock wave effects 2-114848
 divergent quasistationary detonation wave 2-75996
 explosive, aquarium test, shock press. anal. 2-74442
 explosive, polymer bonded, high explosive detonation products in varying O₂ atmospheres 2-78105
 explosive, polymer bonded, impact on steel plate, radiographic study 2-78107

detonation continued

- explosive, polymer bonded, thin pulse initiation 2-78104
 explosive, shocked, vibronic relaxation, press. depend. 2-76605
 explosive, solid, detonation, crit. conditions 2-57617
 explosive detonation press. meas. by aquarium technique, charge diameter effect 2-74443
 explosive-metal interaction problems with complex sliding surfaces, three-dimens. dynamic analysis 2-91372
 fast reactions in energetic systems, conf., Preveza, Greece (July 1980) 2-58544
 gasdynamics of detonations and explosions, conf., Göttingen, FRG (Aug. 1979) 2-58549
 imploding detonation waves 2-86294
 liquid dispersion modelling, hydrodynamic instability factors (*Ukrainian*) 2-60506
 microstructural features, computational models 2-76694
 mullite powders, effect of explosive shock waves 2-98199
 nonlinear ordinary differential eqns. arising from 1-D steady combustion problems 2-91478
 pentaerythritol tetrinitrate cryst., γ -irradiated, plane shock initiation 2-78108
 pentolite sphere detonation, shock wave generation in water 2-76558
 relativistic waves, rel. to bubble growth in false vacuum decay 2-69073
 spherically converging shock wave propag. study 2-81280
 spray-deposition of coatings, systematic anal. 2-67596
 TH 50/50, explosion initiation by short duration shocks 2-114847
 TNT, explosion initiation by short duration shocks 2-114847
 TNT, high explosive detonation products in varying O₂ atmospheres 2-78105
 wave entry into expanding channel 2-81357
 Cu plate, accelerated by reacting and detonating explosives, free surface vel. meas. 2-76591

detonation spraying see powder spraying**deuterium**

- adsorbed on diamond (111), H termination, EELS study 2-110145
 adsorbed on metal surface, diffusion coeffs., FEM 2-115555
 adsorption on Si(111)-(7 \times 7), nuclear microanal., LEED and ion scatt. study 2-76821
 atmosphere precipitation, D/H isotopic comp. in E United States rel. to storm trajectories 2-68444
 atmosphere vertical distrib., model involving cloud and rain 2-83928
 atom, Balmer α -line, collinear laser spectroscopy, metrological appl. 2-95485
 atom, excited state, from 'mol.' dissociation, translational energy distrib. 2-70429
 Brillouin scattering, of fluid and solid, meas. under high press. by fabry-Perot interferometer (*Japanese*) 2-64104
 C:H(D), ion-implanted impurity retention, release and isotope exchange 2-69848
 chemisorption on Raney Ni, incoherent neutron inelastic scatt. 2-104142
 D-T: ³He, liq., anomalous vapour press. meas. 2-66188
 desorption from Cu(100) and Cu(111), fast vel. distrib. 2-98446
 desorption from Mo on heating following D⁺ implantation 2-92366
 desorption from stainless steel, following H⁺ impact, in Tokamak first wall 2-69845
 diffusion in Cu-Er(Zr)(Ti) dil. alloy, permeation rate meas., trapping impurities effect 2-56254
 diffusion in dil. Ni and FCC Co alloys, mag. aftereffect meas. 2-82027
 diffusion in metals, isotope effects, theory 2-98341
 diffusion in Nb and Ta, N interstitials effect 2-104067
 diffusion in W (110), tunnelling 2-82030
 dissolved in Fe, lattice dilation obs. 2-104066
 electron impact dissociation, at. translational energy distrib. 2-70429
 film, erosion by 2 keV electrons 2-99237
 fusion reactor, D pellet injection technique for plasma refuelling 2-74939
 gas, stimulated Raman scatt., higher component generation, role of parametric effects 2-97113
 glow discharge, high-voltage, impurity effects and neutron tube appl., theory 2-113788
 graphite:D, implants thermal release, He-induced damage influence 2-76468
 inosyl (3'-5') inosine, dinucleoside monophosphate, D exchange rates 2-72983
 ion radial acceleration in virtual cathode region during relativistic electron beam injection (*Russian*) 2-76144
 ion reflection from C surface, 32-2000 eV 2-116316
 ions, backscattering from plasma-solid interactions 2-60758
 isotope (¹⁸O,T,D) measurement techniques for hydrological purpose 2-73718
 isotope distribution equilibrium in Pd/H₂-H₂O system, Pd use in isotope separation 2-111509
 isotope effects on outer-sphere electron-transfer reactions 2-78083
 isotope separation by 2,2-dichloro-1,1,1-trifluoroethane multiple-photon dissociation in two-frequency CO₂ laser field (*Chinese*) 2-96753
 laser, mid IR operation obs. 2-96901
 liquid, surface tension temp. depend., quantum effects 2-56302
 metal-D system, FCC and BCC, energy and wave functions of interstitial D 2-109787
 molecule, electron impact ionisation, D⁺ prod. via autoionising states 2-70431
 molecule, photoelectron ang. distrib., vibr. and rot. struct. 2-70337
 molecule, rot. and vibr. consts., photoionisation photoelectron obs. 2-96634
 molecule in nematic solvents, ¹H and ²H NMR meas., environmental effects 2-85699
 neutral, ionisation in Tokamak plasma, Fe ions contrib. 2-109459
 physisorption on solid inert gases and SF₆, sorption energy determ. 2-87013
 Z-pinch, dynamics with D₂ and D₂-Ar mixtures 2-65744
 plasma, heating by RF in ion cyclotron range on TFR 2-86446
 plasma, neutral beam heating in W VII-A stellarator 2-81528
 primordial abundances, cosmology and neutrino physics, review 2-84356
 solid, electron emission by bombardment with 1-3 keV electrons 2-105014
 solidification temp., effect of Ne and ⁴He impurities (*Russian*) 2-56157
 solubility in V film, press.-comp. isotherms, vibrating quartz microbalance meas. 2-98501
 solubility in Zr-Al meas., getter appl. 2-86878
 spectrometer and sample technique for D anal. of enriched water samples 2-53852

deuterium continued

- spin aligned, ground-state energy, Monte Carlo calc. 2-86972
 spin polarised, quantum gas props. 2-110088
 steel, stainless, types 304 LN and 12R72HV, CC D trapping, α -irrad. effect 2-69844
 thermotransport in V, Nb and Te 2-82029
 thunderstorms, D content in water vapour entering storm 2-78776
 Venus atmosphere, obs. of D enrichment and rel. to water loss 2-68646
 Al:D, defect trapping of implanted D 2-92020
 C:D, H isotope exchange, depth resolved meas. 2-69847
 Cu, deuterium trapping by impurities 2-82007
 D I in ϵ Persei line of sight, UV obs. 2-117716
 D, muonic, hyperfine transitions via reson. d,d formation at 34K 2-85844
 D⁻, Lamb-shift polarised ion sources, review 2-75075
 D⁻ polarised ion source design and performance 2-90333
 D⁻ production by double electron capture, Cs supersonic jet 2-54702
 D⁰ reflected particle charge states for grazing incidence on Ni and Cs 2-77646
 D⁺ impurity ion sputtering of fusion reactor materials, depend. on incident angle 2-74922
 D⁺ ions electronic energy loss in single crystal Au films at 600 eV-15 keV 2-66087
 D⁺ plasma, ISX-B Tokamak, neutral beam injection, high beta study 2-81496
 D⁺ reflected particle charge states for grazing incidence on Ni and Cs 2-77646
 D/H ratio in Venus atmosphere, outgassing implications 2-100793
 D/H ratios in tree cellulose, climatic significance 2-89000
 D-H plasma, dispersion relation near two-ion hybrid reson. 2-65716
 D-T content in glass microballeons, X-ray counting method 2-85242
 D-T filled ICF target, positioning and freezing using cold mol. beam and quadrupole elec. field 2-85245
 D-T mixture in glass shell, tritium, induced X-ray emission 2-67774
 D-T mixtures, lasers for compression and fusion 2-69815
 D-T plasma, ion tails and neutron rates due to lower hybrid waves, quasi-linear calc. 2-109541
 D-T spherical high-temp. plasma in radial adiabatic expansion, analytical treatment 2-114968
 D-T Tokamak reactors, plasma edge and divertor characts. 2-65747
 D+Cl₂—DCl+Cl, kinetic isotope effect, pot. energy surface 2-57598
 D+F₂ collinear reactions, semi- and quasi-classical probabilities calcs. 2-105473
 D+H₂ activation energy, temp. depend. 2-62393
 D+H⁺, charge transfer collisions within energy range 0.1-150 eV 2-90659
 D+HCl, reaction kinetics, infinite-order-sudden method 2-88348
 D+HCl reaction, abstraction vs. exchange study 2-83357
 D+N₂O, N₂O vibr. relax., shock tube study 2-90666
 D+He, electron detachment cross sections meas. 2-59927
 D⁺+(H₂O)_n, solvating collisions, trajectories calcs., mechanism 2-90654
 D⁺+alkaline earth vapour, D⁺ prod. by charge transfer, interaction energies 2-96727
 D⁺+foil, beam foil level excitation, foil thickness depend. 2-75390
 D⁺+H₂—HD+H⁺ reactions, drift tube investig. in relative energy range 0.04 to 0.3 eV 2-57606
 D⁺+He(Ne)(Ar), electron capture probabilities 2-102609
 D₂, adsorpt. and desorpt. with Co on Rh (100), LEED and thermal desorpt. study 2-56354
 D₂, adsorption on ZnO, coverage induced IR freq. shifts 2-115539
 o-D₂, capillary const. and surface tension, 20 to 36K (*Russian*) 2-82081
 D₂, solid film, keV light ions stopping power study 2-113837
 D₂⁺ reflected particle charge states for grazing incidence on Ni and Cs 2-77646
 D₂-⁴He system, three-phase vapour-liquid-solid equilb. (*Russian*) 2-56157
 D₂-D₂ collision pairs, absorpt. spectra of IR fundamental band, overlap parameters 2-96561
 D₂-ortho molecular under press., rot.-libration transition 2-61127
 D₂⁺+He⁺, single focusing mass spectrometer with large incident and exit angles (*Japanese*) 2-113034
 D₂+ArD⁺, deuteron transfer reaction, rate coeff. 2-70409
 D₂+ArH⁺, proton transfer reactions, rate coeffs. 2-70409
 D₂+BH₃, UV-laser photochemistry, rate consts. meas., reaction mechanism 2-62413
 D₂+CO, rot. excitation at 87.2 meV, differential cross sections, classical path calc. 2-108673
 D₂+F, collinear reactive scatt. resons. 2-111469
 D₂+F, reactant-product angular momentum coupling, classical mechanical theory appl., Franck-Condon transition 2-72971
 D₂+F⁺(Cl⁻), reactive scatt. 2-88345
 D₂+H₃⁺—HD₂⁺+H₂, reaction dynamics, reactant vibr. excitation effect on product energy and angle distrib. 2-62388
 D₂+He(He⁺), collision spectrosc., triatomic mol. orbital promotion model 2-96691
 D₂+methyl ion-d₀-(d₁)-(d₂)-(d₃), isotope exchanges and collisional assoc. 2-105462
 D₂+Mu, kinetic isotope effects, transition state theory, quantum calcs. 2-88347
 D₂+Na⁺, electronic to vibr.-rot. and translational energy transfer process, ang. distrib. 2-85791
 D₂+T₂, liq. and solid, chem. exchange reactions, IR spectra study 2-96301
 D₂⁺+Ar, proton and charge transfer, coupling 2-102571
 D₂, IR and visible electric emission spectra 2-113974
 D₂, laser spectroscopy, reson. obs. 2-102493
 D₂, Rydberg spectra 2-75299
 D₂⁺+foil, beam foil level excitation, foil thickness depend. 2-75390
 DT gas filled spherical targets, heavy-ion-fusion, scaling laws 2-74940
 D₂⁺ foil, beam foil level excitation, foil thickness depend. 2-75390
 H-D isotope exchange in Tokamaks, H recycling and impurities 2-71189
 H⁺+D₂—HD+D⁺ reactions, drift tube investig. in relative energy range 0.04 to 0.3 eV 2-57606
 HD(TD), muonic mols., deexcitation rates calc. (*Russian*) 2-70455
 Li₃N:D, H, Czochralski growth and doping method 2-111061
 Mo:D, ion-implanted, permeation and re-emission rate, rel. to irradiation damage 2-74937
 Ni:D, ion-implanted, permeation and re-emission rate, rel. to irradiation damage 2-74937
 Ni:D⁺, ion implanted, impurity defect trapping, ion beam anal. studies 2-81812

deuterium continued

- Ni:He⁺, D⁺, ion implanted, D trapping, ion beam anal. studies 2-81813
 Pd₈Au_{0.2}:D, lattice location of implanted D 2-71488
 SiO₂:D, fused, implanted ions trapping and release 2-76467
 SiO₂:D,H, fused, implanted ions trapping and release 2-76467
 TiC(H,D), ion-implanted impurity retention, release and isotope exchange 2-69848
deuterium compounds
see also heavy water
 anhydrous, H bonds in metastable forms, spectrosc. investig. 2-57078
 ternary mixture of H/D/T compounds, CO₂ laser isotope separation 2-62412
 X¹⁺ state, pot. energy function calcs. 2-114065
 DCN, elec. field gradients, semi-empirical SCF MO calcs. 2-108387
 DCN, vibr.-states, N isotope, dipole moments, laser Stark reson. spectra 2-90594
 DCO⁺ in dense molecular clouds, ionization state 2-63574
 DCO⁺/HCO⁺ abundance ratio in dense interstellar clouds, temp. depend. 2-94806
 D₂CO, microwave transitions studied in intracavity absorbers using off-resonant response of IR lasers 2-108484
 DCP⁺, electron impact excited $\tilde{A}^2\Sigma^+$ — $\tilde{X}^2\Pi$ emission spectra 2-80640
 DCl in CCl₄, IR spectra, solute-solvent interactions 2-102478
 DCl, liq., vibr. energy relax., predissoc. 2-113954
 DCl(DBr)-fluoromethane complexes, in liq. Ar and Kr solns., spectral and energy parameters, 900-4000 cm⁻¹ 2-59802
 DF, elec. field gradients, semi-empirical SCF MO calcs. 2-108387
 DF-CO₂, intracavity knife-edge diff. screen laser on D₂-F₂-CO₂-O₂-He gas mixture 2-85993
 DF-CO₂, pulse-periodic chemical laser, 16 μ stimulated emission feasibility 2-55138
 DF-HF chemical laser, rotational nonequilibrium analysis 2-80941
 DF+DF, vibr. relax. studied by 3-D quasiclassical trajectories and cross correl. method 2-59909
 DI, visible and UV spectra, electronic struct. 2-85682
 D₂O, adsorption on montmorillonite, hydration vibr., IR obs. 2-62426
 D₂O cubic ice, homogeneous nucleation and crystallisation in LiCl.D₂O electrolytic glass 2-81684
 D₂O laser emission investigation at 50, 66, 83, 111 and 116 μ m 2-102779
 D₂O, microwave transitions studied in intracavity absorbers using off-resonant response of IR lasers 2-108484
 D₂O, normal coordinate treatment and force constant refinement in cartesian coordinates 2-113953
 D₂O, optically pumped laser, wave interaction, for IR emission study 2-55128
 D₂O, rot.-vibr. spectra in 9160-9390 cm⁻¹ region, rot. and centrifugal consts. 2-108497
 D₂O, supercooled, sound velocity anal., Brillouin light scatt. study 2-76597
 D₂O-H₂O-isobutyric acid, phase behaviour near critical point, phase diagram, scatt., ang. depend. 2-61119
 D₂S, polarisability variation, D-isotope effect, rot. Raman and Rayleigh scatt. study 2-75292
 D₂S, rot. Raman spectra and principal optical polarisabilities (*French*) 2-75290
 DT induced of Pt:O coating, DT induced disruption on glass microsphere 2-115594
 DT, liquid, homogeneous nucleation temp. meas. 2-104095
 DT, liquid, surface tension temp. depend., quantum effects 2-56302
 DTaWO₆, cryst. struct. determ. 2-91884
 HF/DF recirculating laser, high-repetition-rate 2-65255
deuteron effects
 gas targets, high-press., opt. obs. of intense particle beam influence, radionuclide prod. 2-113794
 ion implantation of H⁺(D⁺), atomic displacements, residual resist. study 2-98121
 Au, ion implantation of H⁺(D⁺), atomic displacements, residual resist. study 2-98121
 Cr, ion implantation of H⁺(D⁺), atomic displacements, residual resist. study 2-98121
 Ni, ion implantation of H⁺(D⁺), atomic displacements, residual resist. study 2-98121
 Pd, ion implantation of H⁺(D⁺), atomic displacements, residual resist. study 2-98121
 Pt, ion implantation of H⁺(D⁺), atomic displacements, residual resist. study 2-98121
 Si-C-Al-O film on Mo, D⁺ irradiation effect 2-66081
 SiC film on Mo, D⁺ irradiation effect 2-66081
deuteron interactions *see deuteron-nucleus reactions; hadron-deuteron interactions; lepton-deuteron interactions; meson-deuteron interactions; photon-deuteron interactions; proton-deuteron interactions*
deuteron-nucleus reactions
for inelastic deuteron-nucleus scattering, see 'deuteron-nucleus scattering'
see also nuclear fusion
 cross section in intranuclear cascade model 2-85021
 fusion of D-T mixtures catalysed by muons 2-80045
 meson production reaction 2-54370
 nuclear props. at intermediate energy with light ion probes 2-54371
 relativistic polarised deuteron fragmentation, test of deuteron six-quark nature 2-96015
 (d,np) breakup reactions, coupled discretised continuum channel method based on three-body model 2-101901
 (d,p), effective interactions, DWBA theory appl. 2-96019
 (d,p) on A=12-120, deuteron transfer reactions, nonorthogonality overlaps 2-96016
 (d,p) sub-Coulomb meas., asymptotic D to S state ratio of ²H wave function determ. 2-84964
 (d,x), antisymmetrised reactions, nonorthogonality overlaps, Pauli principle 2-96017
 (d,X), light fragment formation, coalescence approach, snowball model 2-90113
⁴Al(d, α), A=36, 38, 16 meV, tensor anal. powers, α -particle D-state effects 2-90082
⁴Ar(d, α), A=36, 38, 16 MeV, vector and tensor pol. d, cross section and analysing power meas. 2-54402
⁴B(d,p), A=10, 11, 12 MeV, vertex constants, spectroscopic factors, DWBA anal. (*Russian*) 2-59369
¹⁰B(d, γ), 48-170 keV, γ -rays prod., total cross section meas. 2-54401

deuteron-nucleus reactions continued

- ⁹Be(d,n γ), 48-170 keV, γ -rays prod., total cross section meas. 2-54401
⁹Be(d,p), 12 MeV, vertex constants, spectroscopic factors, DWBA anal. (Russian) 2-59369
⁹Be(d, α), 2.5 MeV, quasi-free effect search, α -clustering 2-64414
²⁰⁹Bi(d, γ), ^{211,213}Po, 8-11.5 MeV, cross section meas. 2-85060
¹²C(d, α)¹⁰B, isospin-forbidden reaction, coupled-channel calc. 2-54400
¹²C(d,p), 12 MeV, vertex constants, spectroscopic factors, DWBA anal. (Russian) 2-59369
¹³C(d,t), time reversal test, use of molecular beams 2-69666
⁴⁰Ca(d,p), 12 MeV, vertex constants, spectroscopic factors, DWBA anal. (Russian) 2-59369
¹¹⁰Cd(d,n), ¹¹⁰In, level density, spin depend., moment of inertia ratio 2-90019
¹¹³Cd(d,p)¹¹⁴Cd, energy level scheme 2-113491
⁵⁹Co(d,³He)⁵⁸Fe, 33.3 MeV, ang. distrib. anal. ⁵⁸Fe levels in particle vibr. coupling model 2-54404
^ACr(X), A=52-54, 13.6 MeV, total cross-section, isotope/isotone effects (Russian) 2-59368
¹⁵³Eu(d,p)¹⁵⁴Eu, rotational bands 2-113499
⁵⁴Fe(d,³He), 80 MeV, finite range effects, DWBA calcs. 2-113517
¹H(d,d'), 2.95 GeV/c, coherent interaction, one-pion prod. 2-74765
²H(d, nnp)¹H, four body break-up reaction 2-85059
²H(d,n)³He, charge symmetry violation in low energy interaction 2-107921
²H(d,n)³He neutron source using gas target, energy and angle straggling effects 2-64727
²H(d,p), intermediate energies, u-channel exchange, diagrams and anal. (Russian) 2-101898
²H(d,p,t), charge symmetry violation in low energy interaction 2-107921
²H(d,pp)2n, 15.1 MeV, singlet deuteron intermediate state 2-54408
²H(d,n), 50 MeV, polarisation, time reversal and charge symmetry 2-69639
⁴He(d, γ)⁶Li, reaction rate rel. to primordial synthesis of ⁶Li 2-112626
⁴He(d,pn)⁴He, tensor analyzing powers for deuteron breakup reaction 2-85058
¹⁹³Ir(d,³He), 40 MeV, ¹⁹²Os levels, spectroscopic factors, DWBA anal., supersymmetric coupling test 2-113366
⁷⁸Kr(d,p)⁷⁹Kr, 11 MeV, differential cross section and vector analysing power meas. 2-54403
^{Li}, thick target neutron yields, neutron environment calc. for d+Li facilities 2-85229
⁶Li(d,dd)⁴He, quasifree scatt., theoretical anal. 2-59594
⁶Li(d,n γ), 48-170 keV, γ -rays prod., total cross section meas. 2-54401
⁶Li(d,p)⁸B, pion prod. in exclusive kinematical region 2-80004
⁷Li(d,p)⁸Li, 0.78 MeV, cross section meas. 2-85062
⁷Li(d,p)⁸Li, absolute cross section and solar neutrino capture rates 2-85063
⁹⁸Mo(d,p), ⁹⁹Mo spin and parity determination of low-lying states 2-113359
¹⁰⁰Mo(d,t), ⁹⁹Mo spin and parity determination of low-lying states 2-113359
¹⁴⁶Nd(d,p), 12.1 MeV, ¹⁴⁷Nd levels, transitions, spectroscopic factors, DWBA anal. 2-90016
¹⁴⁸Nd(d,t), 12.1 MeV, ¹⁴⁷Nd levels, transitions, spectroscopic factors, DWBA anal. 2-90016
⁵⁸Ni(d,X), 80 MeV, inelastic scattering and inelastic breakup, adiabatic approx. 2-113516
⁵⁸Ni(d, α), 80 MeV, ⁵⁶Co level spin determs. from vector anal. power ang. distrib. 2-54257
⁵⁸Ni(d,np) breakup reactions, coupled discretised continuum channel method based on three-body model 2-101901
¹⁸O(d, α), 52 MeV, ¹⁶N stretched configuration states, J π , anal. power, DWBA anal. 2-101805
^APd(d,Xn), A=104, 105, 106, 110, Ag isotopic yields 2-64417
²¹⁰Po(d,p)²¹¹Po, core-particle model interpretation 2-95894
¹⁰²Ru(d,p), 45 MeV, ¹⁰³Ru states, J π , spectroscopic factors, DWBA anal. 2-79949
¹⁰²Ru(d, α), 20 MeV, ¹⁰²Tc excited states, proton-neutron interaction study 2-54417
³²S(d, α), 16 MeV, tensor anal. powers, α -particle D-state effects 2-90082
³²S(d, α), 16 MeV, vector and tensor pol. d, cross section and analysing power meas. 2-54402
³²S(d, α), 40 MeV, ³⁰P levels, J π , spect. factors, DWBA anal. 2-113365
³²S(d,p), spectroscopic factors, ³²S spectra, transition probability, semiphenomenological model 2-84955
³⁴S(d, α), 52 MeV, ³²P stretched configuration states, J π , anal. power, DWBA anal. 2-101805
⁴⁵Sc(d,X), 13.6 MeV, total cross-section, isotope/isotone effects (Russian) 2-59368
^ASe(d,⁶Li)Ge, A=74,76,78,80,82, 45 MeV, first excited 0⁺ states in Ge isotopes 2-74733
²⁸Si(d,p)²⁹Si, intermediate resonances obs., 1.0 to 2.5 MeV range 2-59365
¹⁵⁴Sm(d,⁶Li), 33 MeV, ¹⁵⁰Nd α -cluster states, rot. bands 2-107729
¹⁵⁴Sm(d, γ)¹⁵⁶Gd, cross-section and excitation function meas. 2-101905
¹¹⁷Sn(d,t), 40 MeV, ¹¹⁷Sn deep hole states, J π , anal. power, DWBA anal. 2-89994
^{Ta}(d,X), 4.2 GeV/c, pion prod. characts. 2-85064
^{Ta}(d,X), 4.2 GeV/c, π^- prod., angular and momentum characts. (Russian) 2-113518
^{Ta}(d,X), 8 GeV, cc Rb, In, Cs isotopic distrib. (Russian) 2-54398
²³²Th(d,f), 70-1000 MeV, fission fragment ang. correlations, momentum transfer 2-59429
^{Ti}(d,X), 13.6 MeV, total cross-section, isotope/isotone effects (Russian) 2-59368
²³⁵U(d,pf), 13.5 MeV, ²³⁴U fission, energy dissipation, fragments, evaporation, liquid drop model (French) 2-90177
²³⁵U(d,pf), 11.7 MeV, neutron prod. thresholds (Russian) 2-59436
²³⁸U(d, γ) cross-section and excitation function meas. 2-101905
⁵¹V(d,X), 13.6 MeV, total cross-section, isotope/isotone effects (Russian) 2-59368

deuteron-nucleus scattering

- Dirac phenomenology 2-85061
 elastic and inelastic scatt., review 2-54369
 projected three-body theories 2-85066
 (d,d), double folding model anal. 2-90120
 (d,d'), A=16-232, 20 MeV, evidence for different proton and neutron deformations, transitions 2-69521
⁶Li(d,d), single channel resonating group calcs. 2-96009

deuteron-nucleus scattering continued

- ⁵⁸Ni(d,X), 80 MeV, inelastic scattering and inelastic breakup, adiabatic approx. 2-113516
²⁰⁸Pb(d,d), giant dipole reson. Coulomb excitation 2-54344
deuteron photodisintegration
 γ d \rightarrow pn, 180-600 MeV, differential cross section meas. in dibaryon reson. energy range 2-59328
²H(γ , p), relativistic and mesonic corrections to forward cross section 2-54355
²H(γ ,n)¹H, 400 and 500 MeV, proton pol. study (Russian) 2-85027
²H(γ ,n,p), 19.8 MeV, asymmetry function $\Sigma(\theta)$ 2-90077
²H(γ ,n,p), 20-150 MeV, asymmetry function and relative photoneutron yield calc. 2-64394
²H(γ ,p), pol. γ , 80-600 MeV, cross section asymmetry 2-95984
²H(γ ,pn), 0.3-0.7 GeV, polarised target asymmetry 2-64388
²H(γ ,pn), 80-600 MeV, polarised photon, photodisintegration cross section asymmetry meas. (Russian) 2-90088
deuteron polarisation
 No entries
deuteron scattering see deuteron-nucleus scattering; hadron-deuteron scattering; lepton-deuteron scattering; meson-deuteron scattering; photon-deuteron scattering; proton-deuteron scattering
deuterons
 see also cosmic ray deuterons
 cellulose acetate solid state track detector, p, d and α registration (Chinese) 2-96393
 Coulomb disintegration at low energies, theory (Russian) 2-59222
 elastic EM form factors, parton light-cone approach, quark interchange 2-95837
 heavy ion energetic reactions, deuteron prod., entropy deduction, effective binding forces 2-80032
 nuclear force and binding energy of quark model, double well cluster model calc. 2-59245
 six-quark drop model, total weight (Russian) 2-101824
 gd \rightarrow ed, EM form factor meas. procedure 2-113276
²H(d, nnp)¹H, four body break-up reaction 2-85059
²H(γ , n)p, neutron polarisation, theory (Russian) 2-59164
 Ni, K-shell ionisation by protons, deuterons and alpha particles at low projectile energies 2-102632
developers (photographic) see photographic materials
development, photographic see photographic process
development management see research and development management
diagnosis, patient see patient diagnosis
diagnostics, particle beam see particle beam diagnostics
diagnostics, plasma see plasma diagnostics
diagrams
 see also Feynman diagrams; flowcharting; nomograms; phase diagrams
 artificial heat with pneumatic drive, block diagram 2-78496
 n-point functions, for differential eqns. with source, diagrammatic soln. construction 2-63853
 parquet diagram alternatives to variational calcs., zero temp. quantum fluid appls. 2-104092
dialogue systems see interactive systems
diamagnetic properties of substances
 see also de Haas-van Alphen effect; diamagnetism
 aromatic compounds, condensed, cryst. and mol. diamag. susceptibility and anisotropy calc. (French) 2-96770
 p,p'-di-n-heptylazoxybenzene, diamag. susceptibility, ¹H NMR, chem. shift 2-98979
 graphite, magnetisation in ultraquantum limit in fields up to 400 kOe 2-92861
 graphite diamagnetic suspension in const. mag. field 2-110609
 liquid cryst. mixtures, diamagnetic susceptibility anisotropies, ¹H NMR study 2-65850
 naphthalene, diamagnetic anisotropies, crystalline and molecular (French) 2-61690
 organotin compounds, diamag. susceptibilities semiempirical calcs. 2-56819
 polymers, electron delocalisation, diamag. anisotropy study 2-98838
 semiconductor exciton, diamagnetic, absorpt. spectra in strong mag. field, theoretical anal. (Russian) 2-76939
 TCNQ salt, 1-methyl-3-ethyl-2,2'-quinosenelenacyanine-(TCNQ)₂, mag. susceptibility, spin dynamics, elec. cond. and EPR study 2-66759
 TCNQ salt, HMTSF-TCNQ, mag. susceptibility anisotropy, 1.7 to 300K, torsion method 2-92859
 TCNQ salts, alkali-crown ether-TCNQ systems, mag. props., vibr., ESR and UV study 2-110563
 (TMTSF)₂FSO₃, bipolar anion effect on mag. and conduct. props. 2-87232
 Ag-Mg alloy, liq. and solid, conc. and temp. depend. of mag. susceptibility 2-56826
 AgTiTe₂-Ti, liq., elec. cond., diamag. susceptibility and thermopower 2-56586
 Al-Zn, NMR and diamag. susceptibility meas. (Russian) 2-93020
 Ba₂ReO₆, synthesis, cryst. struct., and mag. props. 2-55940
 Bi, magnetostriiction in quantising mag. fields 2-116048
 Bi-BiCl₃, liq. state, mag. susceptibility meas. 2-92857
 CuBr-CuI system, physicochem. props. 2-111512
 Ge:As, donor ground state, diamag. and Zeeman shifts, four-wave mixing spectroscopy 2-99096
³He, liq., magnetic susceptibility in high mag. fields, manometric meas. 2-82560
⁴He, liq., magnetic susceptibility in high mag. fields, manometric meas. 2-82560
 In-InBr₃, liq. state, mag. susceptibility meas. 2-92857
 In-InCl₃, liq. state, mag. susceptibility meas. 2-92857
 InSb, Wannier-Mott exciton at absorpt. edge, quasione dimens. state in strong mag. field, expt. study 2-61369
 La, magnetic susceptibility, 77 to 293K, diamag. and paramag. contribs. 2-56824
 NH₄ZnF₃, proton reson. and crit. relax. 2-98988
 Na-In, liq. and solid, mag. susceptibility 2-82577
 Ni-Ti/Cu multifilamentary supercond., proximity effect, diamag. transitions obs. 2-61664
 Se, magnetic susceptibility constants meas. for amorphous, cryst. and powders 2-87474
 SiC, mag. susceptibility meas. 2-61692

diamagnetic resonance *see cyclotron resonance*

diamagnetism

see also cyclotron resonance; de Haas-van Alphen effect; diamagnetic properties of substances

band structure calcs. 2-82557

colloids, particle aggregation in high mag. fields 2-104681

fluids in electric and magnetic fields: pressure variation and stability 2-75490

organogermanium compounds diamag. susceptibilities, semiempirical calc. 2-82861

semiconductors, diamagnetism of two-electron deep impurity centres 2-104573

superconducting superheated granules, diamagnetic interactions 2-56765

CdS, two-photon magnetospectroscopy of A-exciton states 2-104260

diameter measurement

calibration reticle for optical fiber near-field core diameter measurements 2-107302

cylinder diameter meas. using IG-113 interferometer 2-107301

Czochralski crystal growth, monitoring diameter variation using CCTV on meniscus 2-111058

fibres, transparent, sizing using light scatt., refractive index, correction factors 2-58781

fly rhabdome, refr. index and dia. meas. 2-78328

girdling method, friction effect correction 2-63973

hygroscopic particle mean diameters as functions of relative humidity and integration limits 2-116729

mean diameter of threads, using spring-loaded device 2-63974

quartz tube, inside to outside dia. ratio meas. technique using forward scatt. light field (*Chinese*) 2-63970

tracheal diameter, direct dynamic meas. transducer 2-73403

diamond

(111)-(2X1) surface, dimerised chain model reconstruction 2-77153

band structure, first principles calc. using localised basis set 2-110236

bond polarizabilities, transferability from saturated hydrocarbons 2-70443

channelled electrons, radiation from 2-dimens. mol. bound states 2-92065

composite, textile yarn guide applic. feasibility 2-72893

crystallisation mechanism in system of C in a metal melt 2-81701

densified, laser treatment (*Russian*) 2-66045

detectors at room temp., present status 2-90366

diamond: Sn, cordency and compression effects on isomer shift of impurities 2-56989

diamond:N₂, structural imperfection annealing, struct. 2-81766

diamond:N, A-T₂ splitting, Jahn-Teller distortions, EHT calc. 2-82277

diamond:N, ion implanted, cathodoluminescence of impurity-defect complexes 2-116276

diamond:N, ion implanted, defect form., annealing and interactions, cathodoluminescence study 2-116277

diamond:N, vacancy-related colour centres, spectroscopic study 2-98082

diamond:Sb(N), ion implanted, defects, elec. cond., EPR study 2-66027

diamond, containing lonsdalite, ESR spectra, structural defects 2-72344

diamond, electron-irradiated, annealed, 1450 cm⁻¹ IR absorption 2-110847

diamond as an optical material for space optics 2-70635

electron band calcs., material aspects of correlation corrections 2-71895

electron channelling, sharp-line and broad-continuum radiation 2-81847

electron channelling radiation, temp. and crystal defect effects 2-81849

electron diffraction patterns, 'spike' diffuse reflections 2-81634

electron impact, small angles of incidence, radiation spectra (*Russian*) 2-92062

electron irradi., coherent bremsstrahlung and channeling radiation meas. 2-77614

epitaxial growth on Ni, irradiation with C ions, ESR spectra 2-77371

explosive shock synthesis prod., polycrystalline, polishing performance 2-72921

formation, from glassy C under high pressure and temp. conditions 2-99363

formation under natural conditions (*Russian*) 2-83813

friction and wear, against metals 2-88210

garnet inclusions and state of Earth's upper mantle 2-62929

graphite-diamond dynamic phase transition due to shock wave propagation 2-71629

graphite-to-diamond conversion, transition metal lamellar compounds of graphite as catalysts 2-67330

grinding, alloy steel, influence on fatigue resist. 2-67543

ground state, electron correlations 2-61380

hardness testing by microindentation method 2-116668

impurity screening many-body effects 2-110295

internal structure of variety III diamonds, X-ray section topography study 2-109785

IR absorption spectrum of synthetic diamond, anomaly 2-93236

laser radiation effect on morphological and phys. characts. (*Russian*) 2-71497

lattice, optically induced dipoles, effect on nonlinear refr. index 2-116144

lattice, self-avoiding walks, collapse transition and crossover scaling 2-107257

lattice const., and internal X-ray diffractometer with uniaxial stress apparatus study 2-65797

metal-diamond interface, effect of electronic struct. of diamond surface on strength 2-82418

micropowder, oxidation rate, dispersity effect 2-105440

micropowder, thermal ovaling 2-88018

microstrength meas. 2-93743

monocrystal, high-energy electrons radiation spectra (*Russian*) 2-57204

muonium states, occurrence and hyperfine transitions 2-61807

natural, ion channelling critical angles 2-98175

natural, type Ia, platelet formation, mechanism and structure 2-81712

natural and synthetic, ESR spectrum of N impurities 2-87587

nonlinear screening of negative point charges 2-82261

particles, vapour deposition from methane-H₂ mixture 2-77744

photocathode, stable, high efficiency, VUV radiation 2-111021

photoelasticity, elec. field induced ionic contribs. 2-67020

photoluminescence, GR1 band, Jahn-Teller effect and stress-induced dichroism 2-57147

platelet defects, {100}, struct. 2-71477

platelet-containing, spike electron diffraction patterns 2-76247

positron lifetimes, systematic study 2-57207

powder, penetration, of liq. metals, high static press. 2-82082

semiconducting, as ultrafast room temp. IR detector, time-resolved photocond. response 2-79675

diamond continued

semiconducting, electron irradiated, photocond. meas. 2-98692

semiconducting, surface struct. and electron states 2-98395

stopping power of diamond for low energy electrons 2-66098

structure, symm. and twinning 2-86621

surface, (111), (1X1) struct., strongly correlated surface state band model 2-110418

surface, (111), adsorbed H, photoemission and photon-stimulated ion desorpt. study 2-110144

surface, (111), adsorbed H H termination, EELS study 2-110145

surface, (111), relax. and reconstruction, CNDO/2 calcs. 2-82097

surface, electronic struct. and H₂ chemisorption, ab initio atom cluster model 2-115641

surface (110), electronic struct. transformation, EELS study 2-56658

surface (111), reconstructed, electronic states, angle-resolved photoemission study 2-57257

surface states, exactly soluble models 2-87357

synthetic, magnetoresistance 2-77097

tensor fields on crystals 2-55874

type I, annealed, electron irradiated, 1450 cm⁻¹ IR absorption 2-110847

type Ia, cathodoluminescence from giant platelets and 2.526 eV vibronic system, plastic deform. effects 2-72561

type Ia, N₂ detection at {100} platelets with EELS 2-103786

ultrarelativistic positron radiation emission (*Russian*) 2-109876

uniaxial stress splitting of photoluminescence transitions at optical centres 2-72537

vibronic model for GR1 centre rel. to MCD spectrum 2-67087

X-ray phases, expt. determ. and appl. to direct method 2-97842

yellow-luminescing brown, optical meas. 2-72538

diamond:Fe, ion implantation study by conversion electron Mossbauer spectroscopy 2-77427

N aggregation kinetics 2-81809

diaphragms

see also valves

resonant diaphragm pressure gauge, using piezoelectric transducer 2-95359

semiconductor pressure sensors with integrated piezo-resistive resistance bridge (*German*) 2-101396

water electrolysis, electrocatalysts and separators for use in KOH and LiOH solutions 2-62407

dichroism

see also magnetic circular dichroism; pleochroism

absorption spectrum and circular dichroism simultaneous meas. in synchrotron spectrometer 2-85712

alanine (-d_α), CH stretching vibr. circular dichroism, localised MO calcs. 2-108448

alanine (-d_α), CH stretching vibr. circular dichroism and fixed partial charge calcs. 2-108447

alanine (-d_β), IR vibr. circular dichroism, vibr. anal. and Raman spectra 2-108446

allylbenzene-(R)-3,7-dimethyl-7-octene copolymers, opt. active, chiroptical props., main chain-side group distance depend. 2-61867

anisotropic chromophores, associate induced linear dichroism, dispersive contribs. 2-108597

apomyoglobin-chlorophyllide, high mol. wt. complexes, giant circular dichroism obs. 2-88507

azo dyes for guest-host. liq. cryst. cell. dichroic ratio meas. 2-61868

bacteriorhodopsin in purple membrane, photoselection and circular dichroism 2-67969

chiral molecules, vibr. circular dichroism, mid-IR FT study 2-96609

chiral molecules consisting of two polyacene chromophores, circular dichroism spectra, vibronic anal. 2-70310

chloroplasts, subchloroplast particles and pigment-protein complexes, spectral anisotropy 2-67977

circular dichroism spectroscopy, use in erythrocyte membrane phototoxicity study 2-116999

diamond, GR1 luminesc. band, Jahn-Teller effect and stress-induced dichroism 2-57147

DNA from old rat tissues, circular dichroism spectrum similarity to γ-irrad. DNA 2-105785

dyes, self-diff. of light by means of induced dichroism lattices 2-108942

gadolinium tris(oxydiacetate), electronic absorpt. and circ. dichroism spectra 2-80581

gases, molecular, induced dichroism 2-96611

Gaussian sum rules for optical functions 2-99086

Haidinger's brushes and macular pigment dichroism 2-88544

light-harvesting chlorophyll a/b-protein complex, fine struct. of circular dichroic spectrum 2-67946

linear dichroic IR spectroscopy, theory and appls. 2-74521

linear dichroism, optical rotatory dispersion and circular dichroism in IR region, meas. using differential method 2-107420

liquid crystal/dye mixtures, UV stability determ., quantitative method 2-62416

molecular spectroscopy, conf., Albena, Bulgaria, (Oct. 1980) 2-107020

molecules, oriented optically active, circular dichroism in continuous absorpt. region 2-59836

myosin molecule, protein complex bound to rod part, secondary struct., circular dichroism spectra 2-99879

2-aminoanthraquinone-PVA covalent bonding, linear dichroism spectra obs. 2-54886

nucleosides related to cytidine and uridine, opt. activity and electronic absorpt. spectra, CNDO calcs. 2-78288

phenoxazone 9, ultrafast dichroism meas. using ultrafast polarisation spectroscopy 2-102515

pinenes, matrix-isolated, vibr. circular dichroism 2-80696

st-PMMA, struct. changes on drawing, absorpt. and desorpt., solvent-induced crystallisation, IR spectra 2-109698

poly-N-vinyl-3-methyl-2-pyrrolidones, opt. active, synthesis and characteris. 2-61866

PTFE films, macromol. orientation, IR investig. (*Russian*) 2-110873

rhodamine 6G, ultrafast dichroism meas. using ultrafast polarisation spectroscopy 2-102515

spatially inhomogeneous anisotropy, meas. in scattered light 2-108784

spectropolarisation instrument, type DKH-R-01, circular dichroism study and calibration 2-53819

symmetry restrictions for natural and induced circular dichroism and optical activity for all point groups 2-110809

trioxane, piezoelectric cryst., lattice modes, Raman and IR study 2-72478

Weigert effect, use for optical data processing (*Dutch*) 2-58924

dichroism continued

- CdP₂, wide band semiconductor, two-photon and two-step transitions, linearly circular dichroism 2-108934
 CuCl, excitonic mol. broadening under giant two-photon excitation, circular dichroism and light depolarisation study 2-66454
 Ge, radiation defects, light sensitivity and space orientation, IR spectra study 2-87826
 InBr, direct and indirect exciton spectra, absorption and reflection study 2-56446
 KBr, piezorefractivity studies on refl. structs. near 8.6 eV 2-82822
 KI:OH⁻, electrochromism and paraelectric alignment 2-104848
 NHDt, vibrational intensities, dichroism, Raman, IR spectra, orbital polarisability model 2-108451
 Rh complex, 1,3-propanediaminetetraacetate(rhodate(III) ion, circular dichroism 2-110810
 (Y,Nd)Al₃(BO₃)₄, optical rotation saturation and circular dichroism 2-104843
 YAl₃(BO₃)₄, optical rotation saturation and circular dichroism 2-104843
 ZnP₂, wide band semiconductor, two-photon and two-step transitions, linearly circular dichroism 2-108934
 ZnSe, wide band semiconductor, two-photon and two-step transitions, linearly circular dichroism 2-108934

dictionaries *see glossaries***dielectric breakdown** *see electric breakdown***dielectric constant** *see permittivity***dielectric depolarisation***see also dielectric polarisation*

- bromobenzene solution in dimethyl formamide, elec. cond. and vol. charge (Russian) 2-61534
 impurity-vacancy dipoles, photoinduced polarisation and depolarisation, theory 2-104799
 photoinduced, impurity-vacancy dipole orientation 2-77446
 polyethylene, chlorinated, as impact modifier for PVC, mech. and dielec. relax. obs. 2-81692
 polypropylene electret, vapour induced depolarisation currents 2-87658
 polyvinylidene fluoride, thin film magnetoelectret, thermally stimulated discharge current obs. 2-99025
 polyvinylidene fluoride film, uniaxially stretched, piezoelec. retention, stress relaxation effect 2-72428
 TGS, ferroelec. transition, depolarisation field, Brillouin spectra line breadth study 2-67068
 vapour induced depolarisation currents 2-87657
 NH₄Cl crystal, elec. field- and self-induced polarization 2-104802
 PbO-SiO₂ glass, electron and gamma irradiated, charge trapping and release 2-57013
 Sr_{1-x}Nd_xF_{3-x/2}, solid soln., space charges, depolarisation, ionic thermocurrent study 2-87671
 V₂O₅-P₂O₅ glass, metal-semicond.-metal struct., dielec. depolarisation currents and loss meas. (Russian) 2-61612

dielectric devices

- see also capacitors; ferroelectric devices; insulators; piezoelectric devices; pyroelectric devices; space-charge limited devices*
 particle detectors, operating props. (Russian) 2-90401
 pressure pulses, meas. using dielec. sensor 2-58778
 tuning filter, multilayer, appln. in CC N₂ laser pumped dye laser 2-60115

dielectric function

- alkali metal (110) surface, adsorbate-induced surface states effect on optical props. 2-104452
 alkali metals, vacancy energy characts. from effective pair pots. (Russian) 2-60974
 charged impurity, hypernetted chain theory 2-98567
 charged particle energy losses in condensed matter 2-98172
 composite materials, two-component, upper bounds to average field enhancement factors 2-82854
 composites, two-component, effective dielec. function, bounds on allowed values at finite freqs. 2-82260
 degenerate electron liquids, metallic densities, dielec. function and local field correction calcs. 2-104275
 degenerate electron system, electrical transport 2-92556
 disordered media, macroscopic props., conf., New York, USA (June '81) 2-94915
 disordered systems, metal-insulator and supercond. transitions, polarisation catastrophe, freq. depend. 2-71869
 electron gas, two-dimensional, in strong mag. field 2-56454
 electron liquid, strongly coupled, dielec. screening function at metallic and lower densities 2-56456
 excitonic molecules, non-linear optical response and optical bistability, polariton dispersion, dielec. function calc. 2-55246
 graphite acceptor intercalate, stage 1 model, electronic struct., optical and energy loss props., LCAO calc. 2-61346
 homogeneous interacting electron gas theory 2-71892
 III-V compounds, dislocation deep levels, occupation statistics 2-104289
 inhomogeneous conductor, surface excitation dispersion calc. method 2-76960
 inverse dielec. matrix, off diagonal elements, inelastic X-ray scatt. study 2-110974
 ion straggling and energy loss in dense plasmas 2-103392
 metal-adsorbed mol. system, enhanced IR absorption and reflection spectra study 2-77527
 metals, acoustic plasmon formation conditions 2-76953
 metals, optical props., data collection 2-93138
 metals, pseudopotential elastic const. calcs. (Chinese) 2-109880
 metals, simple, electron energy loss, review 2-57222
 metals, zone integration method for joint densities of states 2-110230
 metals and alloys, elect. struct., symposium, Gaussig, Germany (Apr. '81) 2-68968
 narrow-gap semiconductor, excitonic insulator, optical absorpt. with various phases of order parameter, theory 2-110805
 one dimensional CDW distorted solid, charge density fluctuations, dielec. function calc. 2-71893
 one-dimensional system, plasmon spectra and exchange contributions, tight binding model 2-76957
 optical props., 0.5 to 9.5 eV, electronic struct. 2-57125
 optical scattering from rough surfaces, integral eqn. perturbative method 2-57034
 polar semiconductors, complex dielec. const. of free carriers, quantum theory 2-110799
 polyacetylene:AsF₆(I₂), pure and doped, electronic struct. as meas. by EELS 2-67161

dielectric function continued

- polyacetylene, momentum depend. dielectric function 2-110275
 Rochelle salt, ferroelec., dynamic study 2-56104
 semiconductor, direct-gap, highly excited, optical dielec. function in moment-conserving approx. 2-57044
 semiconductor, electrostatic charge energy, effects of dielec. function spatial dispersion, field emission current 2-77711
 semiconductor, Thomas-Fermi eqn. for negative ion pot. 2-110294
 semiconductor thin film, dielectric function spectra, density and surface roughness 2-82943
 semiconductors, direct gap, optical absorpt. and refr., complex optical dielec. function 2-93139
 semiconductors, electron energy loss, review 2-57222
 semiconductors, heavily doped, impurity ion screening 2-104278
 semiconductors, III-V and II-VI, Thomas-Fermi nonlinear dielec. screening 2-56459
 semiconductors, nonlinear screening of negative point charges 2-82261
 semiconductors, wave-vector-dependent dielectric function, calcs. 2-104277
 semiconductors and insulators, dielectric function and exchange correlation potential, energy gap 2-87166
 solid-state plasma polarisation field of charged relativistic particle 2-104803
 superconductor, longitudinal collective mode excitation, dielec. response functions 2-98806
 suspension of spherically symmetric particles, bounds for effective dielec. const. 2-92494
 suspension of uniform spheres, bounds for effective dielec. const. 2-92495
 TCNQ salt, C₅₂(TCNQ), cryst., polarised IR reflection spectra meas. 2-93171
 thin film, optical props., microstruct. effects on dielectric function 2-82943
 thiourea, submillimeter dielec. spectra, 85 to 300K 2-110744
 two-dimensional electron gas, dynamic correlations, first order perturbation theory 2-76958
 two-dimensional metals, effects of mag. field on dielec. const. and cond. 2-56451
 water, liquid, low-energy electrons stopping power, theory 2-86765
 water, liquid, stopping power, density effect calc. 2-86766
 Al, Fermi density effect on stopping power 2-56060
 Al, vacancy energy characts. from effective pair pots. (Russian) 2-60974
 Al₂O₃, amorphous and polycrystalline, dielec. function, lineshape anal., EELS study 2-76955
 Al₂O₃, optical consts. of amorphous, polycryst., α,γ phases, EELS study 2-57224
 Au-MgO cermet thin films, cosputtered, reflectivity meas., percolation threshold and grain size effects 2-82942
 BaMnF₄, submillimeter dielec. spectra, 85 to 300K 2-110744
 Cd₃P₂(As₂)₃, far IR reflectivity meas. 2-93210
 CdSe_{1-x}S_x films, soln. grown, struct. and optical props. 2-56388
 β -CoAl, optical absorpt. spectra meas. 2-82866
 CoP₃(As₃)(Sb₃), far IR reflection spectra meas. and dielec. function and lattice dynamics calc. 2-110855
 Cu surface, clean and O₂ covered, dielec. functions, ellipsometry study 2-87737
 Cu-Zr metallic glass, sputtering prep. and props. 2-82948
 Dy, magneto-optical reson. and complex refractive index, polarimetric study 2-72466
 Ge, dielectric matrix, exchange-correlation functional, local density formalism 2-76956
 Hg-Xe system, metal-insulator transition 2-66451
 Ho, magneto-optical reson. and complex refractive index, polarimetric study 2-72466
 In, vacancy energy characts. from effective pair pots. (Russian) 2-60974
 InAs, far-IR dielec. response at room temp., dispersive Fourier transform spectroscopy, phonon freqs. 2-116165
 In_{0.5}Ga_{0.5}As surfaces (100), peroxide etch chemistry 2-111515
 IrO₂, optical props., 0.5 to 9.5 eV, electronic struct. 2-57125
 KCl single cryst., dielec. const. 2-99021
 KC_x(x=8, 24) intercalation compounds valence and core-electronic excitations, EELS study 2-87167
 KMgF₃, electronic energy band struct. 2-82225
 MgO film, IR spectra study of optical vibr. modes 2-67133
 MgO smoke particles, surface plasmons, low electron energy loss imaging 2-67168
 NaCl, laser-induced primary defect form. role in optical breakdown 2-66057
 NaCl, tightly focused intense laser beam deform., multiphoton-polaron and avalanche breakdown models 2-66056
 NbSe₃, nonlinear dielec. props. below Peierls transition at 145K 2-92496
 PbMg_{1/3}Nb_{2/3}O₃, reflectivity, dielectric const., electrooptic effect, vacuum UV reflection spectra obs. 2-61924
 PbTiO₃, reflectivity, dielectric const., electrooptic effect, vacuum UV reflection spectra obs. 2-61924
 Rh, dielec. function, empirical band calc. 2-66435
 Sb₂S₃, UV and dielec. props. 2-99148
 SSI, thermolulated spectroscopy of band gap region 2-110823
 SiO₂ thin layers, thickness and effective optical index, ellipsometry study 2-110968
 SiO₂, electronic and optical props., dielec. function 2-56458
 Sn, liquid, dielectric function calcs. 2-76959
 SnO₂F films, spray prep. and elec. and optical props. 2-105069
 Tb, magneto-optical reson. and complex refractive index, polarimetric study 2-72466
 TmSe, mixed valent cpd., dielec. response, anomalous features 2-56457

dielectric heaters *see dielectric heating***dielectric heating**

- coal, dielectric properties, frequency-dependence application in industrial heating 2-104808

dielectric hysteresis

- azoxybenzene, switching transients 2-110785
 ceramic, TBK-3, coupling and piezoelec. coeffs., hysteresis, neutron irradiation effects 2-82804
 dicalcium strontium propionate, switching transients 2-110785
 DOBAMBC-MBACAB, smectic C-A mixture, ferroelectricity, phase diagrams 2-99075
 ferroelectric double hysteresis loop near first order transition 2-87716
 ferroelectrics, optical bistability, hysteresis, four-wave inversion of wavefront 2-81030

dielectric hysteresis continued

- lithium ammonium thallium tartrate monohydrate mixed cryst., dielec. and elastic props., antiferroelec. obs. 2-116134
 polyvinylidene fluoride, ferroelec. hysteresis at high temp. 2-116125
 tris-sarcosine calcium chloride, brominated, dielec. props., press. and temp. depend. 2-61820
 (Ba,Sr)TiO₃ films on Si substrate, ferroelec. behaviour 2-66996
 BaTiO₃, dielec. props. near ferroelec. transition, domain struct., mag. field effects 2-104825
 Fe₂O₄, electronic superstruct. 2-71866
 Fe₃O₄, magnetite, ferroelec. hysteresis loops, spontaneous polarisation study 2-87715
 KH₂PO₄ lossy crystals, dielec. and ferroelec. props. 2-82776
 (NH₄)₂BeF₄, commensurate-incommensurate polar transition, dielectric hysteresis (*Russian*) 2-82799
 PLZT 7/65/35, ceramic, domain switching, one-dimens. polar responses 2-67010
 Pb₂(Ge₂O₇), ferroelec., acoustic emission from domain wall motion 2-99077
 Pb₂(Ge₂O₇), Gd³⁺, ferroelec., EPR line intensity, ferroelec. hysteresis 2-116059
 Pb₂InNbO₆, elec. props., band gap energy 2-110395
 PbMoO₄, (M=Ti, Zr, Hf), elec. props., band gap energy 2-110395
 PbScNbO₆, elec. props., band gap energy 2-110395
 PbTiO₃, 180° polarisation switching and dielec. props. associated with point defects 2-82803
 PbZr_{0.15}Ti_{0.85}O₃, solid soln., ferroelec.-paraelec. transition, tricritical point 2-93126
 SbSI ferroelec., relax. processes, spontaneous polarisation screening 2-110780

dielectric-loaded waveguides

- loss-tangent meas. by node-displacement method, dielec. thickness determ. 2-101407

dielectric loss angle *see dielectric losses***dielectric loss-angle measurement** *see dielectric loss measurement***dielectric loss measurement***see also dielectric losses*

- EM parameters of materials meas., HF and UHF range, COMECON metrological provisions 2-58801
 ferroelectric material, microwave dielect. props., general purpose meas. system at 4.2 and 300K 2-69205
 ferroelectrics, dielectric props. meas. in microwave range 2-95405
 isoamyl alcohol, meas. method and temp. depend. (*Russian*) 2-66979
 node-displacement method, dielec. thickness for loss-angle meas. 2-101407
 paint film deterioration testing using MOS-FET meter 2-116678
 pentachloronitrobenzene monocrystal 10 GHz dielectric absorption and anisotropic permittivity obs. (*Japanese*) 2-72420
 planar capacitors in SHF range 2-58845
 resonance technique based apparatus for solid and liquid dielectrics, in microwave range 2-53787
 verification facility for loss angle meas. of solid dielectrics 2-58844

dielectric losses*see also loss angle*

- alamethicin in octanol/dioxane, voltage-dependent pore former, struct. and dipolar props. 2-111616
 n-alkane liquids, complex permittivity, far IR absorpt. spectra study 2-93098
 n-alkanes, liq., permittivity, relax. times, microwave dielectric losses 2-61827
 amines, primary, soln., dielectric loss, microwave spectra (*German*) 2-66985
 amyl acetate solns., microwave absorpt. 2-87914
 antimonates, R₃SbO₁₂ (R=Sc,In,Ln,Pr,Tb,Yb), cryst. struct. and dielec. props. 2-109755
 barrier layers, charge relax. 2-61582
 benzenes, halogenated, in decalin, dielectric and far IR study, γ -process charact. 2-61892
 bis(tetradecylammonium) zinc chloride, phase transitions, room temp. to 438K, thermal, dielec., and optical meas. 2-56176
 carbon tetrachloride, liq., optical and dielec. parameters meas. in 3 mm to 50 μ m range 2-99084
 ceramics, low freq. dielectric props. (*Chinese*) 2-104788
 cetyl alcohol, solid form, dielec. behaviour and mol. rot. 2-66980
 cholesteryl 2,2,3,3-tetrafluoropropionate, crystalline, phase transition, dielec. const. and permittivity study 2-72399
 chromatophores of Rhodospirillum rubrum, microwave photolosses obs. 2-57848
 clay, kaolinitic, dielec. props., firing temp. effect 2-99020
 coal, dielectric properties, frequency-dependence application in industrial heating 2-104808
 dicyclohexylamine, solns., dipole reorientation, dielect. loss, microwave absorpt. (*German*) 2-66986
 diphenylamine, solns., dipole reorientation, dielect. loss, microwave absorpt. (*German*) 2-66986
 ferroelectric material, microwave dielect. props., general purpose meas. system at 4.2 and 300K 2-69205
 ferroelectrics loss tangent measurement after superimposing DC bias voltage (*Slovak*) 2-72432
 isoamyl alcohol, meas. method and temp. depend. (*Russian*) 2-66979
 kaolinite, freq. and temp. variation of dielec. props. 2-68337
 low-frequency modes effect, in solids 2-72419
 low-loss dielectrics, MM wave absorpt. meas. using untuned cavity resonator 2-99030
 N-methylidiphenylamine, solns., dipole reorientation, dielect. loss, microwave absorpt. (*German*) 2-66986
 methylene chloride, in decalin, dielectric and far IR study, γ -process charact. 2-61892
 NQR, alternating electric field effect, in dielec. dispersion region 2-93054
 oligooxypolypropylene, filled, mol. mobility, dielec. loss obs., filler conc. effect (*Russian*) 2-66977
 perylene-chloranil complex, dielec. props., hopping cond. 2-72417
 polar molecule binary mixtures in dil. soln., dielec. relax. 2-61828
 poly(dimethyl siloxane), anomalous dielectric relax. meas. 2-110759
 poly- γ -benzyl-L-glutamate, solid and solns., dielectric susceptibility meas. 2-61826
 polyacetylene films, dielectric props. 2-87646
 polyester, linear, struct. effect on dielectric loss and volume resistivity (*Chinese*) 2-72412

dielectric losses continued

- polyethylene films, plasma-polymerised, dielec. losses, effect of H₂ treatment 2-61824
 polyethyleneterephthalate fibre, β_2 relax., dielec. meas. 2-104805
 polypropylene, isotactic, dielec. relax. and loss, impurity effects 2-110757
 polystyrene films, soln. grown, dielec. props. 2-66982
 polyvinylidene fluoride films, pyroelec. coeff. and dielec. const. and losses, heating effects 2-93118
 PVC electrical characters. deterioration when irradiated by Co⁶⁰ γ -rays (*Japanese*) 2-56031
 rigid polar molecules, in soln., dielec. props. and solvent viscoelastic behaviour 2-110758
 space charge characts., EDTA influence 2-93110
 TGS, ferroelectric, low freq. dielec. losses meas. near phase transition of second kind 2-57017
 triphenylamine, solns., dipole reorientation, dielect. loss, microwave absorpt. (*German*) 2-66986
 trissarcosine calcium chloride, deuterated, dielec. props., temp. and press. depend. meas. 2-99071
 trissarcosine calcium chloride, ferroelec., dielec. loss tangent, hydrostatic press. effects meas. 2-116115
 AgBr emulsion grains, space charge characts., effect of soln. pAg and pH 2-72418
 AgBr, space charge characts., EDTA influence 2-93110
 Ag₂TeSe₂, semicond., solid and liq. states, dielec. relax. and AC cond. 2-110754
 Al-Al₂O₃-Au struct., dielec. props. meas. at low freq. (*French*) 2-72075
 Al-AlN-Al, ion plated thin film capacitor, dielec. and AC cond. props., annealing effects 2-61825
 AlN:Cr, sintered, dielec. losses, lattice defect types (*French*) 2-77448
 Al₂O₃ film, electron beam evaporation prep., appl. to GaAs MOS diodes 2-62068
 Al₂O₃ film, low freq. dielec. loss meas. 2-116118
 Al(OH)₃ layers in Al electrolytic capacitors, dielectric props. and elec. cond. meas. 2-104809
 BaBrF, mixed dihalides, temp. depend. of dielec. behaviour, 100-600K 2-66968
 BaTiO₃-R₂O₃-3TiO₂ (R=La, Pr, Nd, Sm), formation of BaR₂Ti₄O₁₂, dielec. props. 2-71417
 Bi₂(Ti₂W₂)₃₀, ceramic ferroelectricity, permittivity and losses 2-87701
 CdRCr_{0.5}Ta_{1.5}O₇ (R=rare earth), electrophysical props. 2-87645
 CsH₂PO₄, one-dimens. ferroelec., crit. slowing down, dielec. meas. 2-77458
 Cu₂TeSe₂, ternary semicond., liq. and solid, dielec. relax., defect electron states 2-61829
 GeO₂, vitreous, dielec. relax. and losses, elec. cond. 2-99032
 KCl single cryst., dielec. const. 2-99021
 KCl, X-ray irradiated, dielectric props. study 2-66973
 KCl:BaTiO₃ composite crystals, dielect. props. under DC biasing fields 2-104790
 KH₂PO₄ lossy crystals, dielec. and ferroelec. props. 2-82776
 KNbO₃, sintering characts. and dielec. props. 2-105108
 KTaO₃, dielec. nonlinearity, losses, and parametric interactions at UHF 2-99072
 LiF crystal, dielec. losses under deform. by conc. load 2-66984
 LiF:Mg, impurity-vacancy pair clustering, trimer form., dielec. losses and TSC meas. 2-115419
 Li₂O-Na₂O-SiO₂ glass, polarisation and cond. mechanism 2-87656
 Mg_{1-x}Mn_xFe_{0.34} ferrite, abrupt behaviour of dielec. const. and loss tangent 2-66970
 MgO:Li⁺ crystal, dielec. behaviour 2-87661
 MgO:Ti(Gd), single cryst., dielec. props. 2-110741
 MgTiO₃, ceramics, dielec. props. deviation 2-87647
 NH₄HSeO₄, ferroelec. transitions, dielec. const., dielec. loss and DTA study 2-93121
 (NH₄)₂SO₄, paraelec.-ferroelec. phase transition, low temp., thermal anal. 2-104822
 (NH₄)₂SnCl₆ and other ammonium salts, NH₄⁺ reorientation, dielec. and NMR studies 2-93108
 NaCl, X-ray irradiated, dielectric props. study 2-66973
 (Nb,Pb)(Zr,Ti,Zn)O₃ piezoceramics, influence of static compression on props. 2-72426
 Nd₂O₃ films, electron beam evaporated, dielec. props. meas. 2-72422
 PLZT-Pb(Zn_{1/3}Nb_{2/3})O₃ piezoelec. ceramics, electromech. props. 2-87696
 α -PbGeO₉, ferroelectric, dielec. and pyroelec. props. 2-61845
 PbGeO₉, polymorphism, cryst. struct., and dielec. props. 2-109754
 Pb_{1-x}M_xGeO₉ (M=Sr, Ba), polymorphism, cryst. struct., and dielec. props. 2-109754
 Pb(Zr,Ti)O₃-polymer composites, preparation and props. 2-88045
 PbZrO₃ ceramic, dielec. props., X-ray irradi. effect 2-110745
 RbH₂PO₄, crystals, amplitude depend. of dielec. characts. 2-57008
 RbHSeO₄, deuterated, ferroelec. transitions, isotope effects, DTA and dielec. study 2-87707
 RbHSeO₄, ferroelec. transitions, dielec. const., dielec. loss and DTA study 2-93121
 Sb₂S₃, UV and dielec. props. 2-99148
 Si:P, electron irradi. damage, capacitance and dielec. loss meas. 2-92037
 Sr₂Ba_{1-x}Nb₂O₆, poled, dielec. props. rel. to pyroelec. detection 2-110777
 SrBrF and SrClF, mixed dihalides, temp. depend. of dielec. behaviour, 100-600K 2-66968
 SrTiO₃, dielec. nonlinearity, losses, and parametric interactions at UHF 2-99072
 SrTiO₃ dielect. resonators nonlinear losses at 4.2K 2-72415
 TeO₂ thin films, dielectric studies 2-93114
 V₂O₅-P₂O₅ glass, metal-semicond.-metal struct., dielec. depolarisation currents and loss meas. (*Russian*) 2-61612
 Yb₂O₃ thin films, dielec. loss factor and capacitance 2-110760
 ZnO-Bi₂O₃-CoO-MnO-Sb₂O₃, ceramic, influence of comp. on dielectric losses 2-87660
 ZnSe Film, DC cond. mechanism and dielectric props. 2-104510

dielectric materials

- see also antiferroelectric materials; dielectric thin films; electrets; ferroelectric materials; glass; insulating materials; insulation; piezoelectric materials*
 behaviour and electrical and thermal stresses (*Italian*) 2-56999
 reference materials certification for permittivity meas. 2-53788

dielectric measurement

- see also dielectric loss measurement; permittivity measurement*
 bridge sampling methods 2-101427

dielectric measurement continued

- computational methods for ferroelectric measurements (*Chinese*) 2-61836
dispersion meas. method by time domain spectroscopy, appl. to dielec. relax. study (*Japanese*) 2-116113
electrophysical characs. meas. for dielectrics, new apparatus 2-101411
EM radiation parameters of dielectrics, instrum. for meas. (*Polish*) 2-107409
evaluation of dielectric parameters of solids at microwave freq. 2-53786
films, polarisation distrib., numerical evaluation from thermal-pulse data 2-93103
ice dielectric props. meas. technique for low temps. (*Japanese*) 2-89746
light-probe measurement of electric field strength in dielectrics charged by electron bombardment 2-112920
low-temp. dielectric cell, usable up to 10 MHz 2-69202
meter for measurement of dielectric surface charge density 2-74466
NDT inspection, theoretical-game optimization 2-93738
parameter measurement of biological materials, using spiral resonators (*Russian*) 2-95402
piezoelectric ceramic thin cylindrical tubes, dielectric variables meas. method 2-74437
polyethyleneterephthalate thin films, charge distrib., electron beam meas. method 2-93113
relaxation meas. in ultralow frequency region 2-101420
spectrometer for relax. process obs. in biological objects 2-78501
spectroscopy, time-domain, precautions in use with biological and other lossy dielectrics 2-88708

dielectric phenomena

- see also *dielectric hysteresis; dielectric losses; dielectric properties of substances; dielectric relaxation; dielectric resonance; electric strength; ferroelectricity; photodielectric effect; piezoelectricity; solvated electrons*
EM wave polarisation change of refl. from dielectric media 2-65134

dielectric polarisation

- see also *Barkhausen effect; dielectric depolarisation*
alkali metal halides, dielectric const. press. derivative 2-104797
Bi-based layer-structured ferroelectric ceramics, dielectric and piezoelectric props. 2-116122
biological materials, piezoelectric effects 2-88561
bromobenzene solvaton in dimethyl formamide, elec. cond. and vol. charge (*Russian*) 2-61534
centrosymmetric dielectrics, thermopolarisation effect (*Russian*) 2-61835
comb-like polymers, solns., intramol. structuration investig. (*Russian*) 2-65120
computational methods for ferroelectric measurements (*Chinese*) 2-61836
dicalcium strontium propionate, structure and polarisation of ferroelectric phase 2-71431
dielectric dispersion due to space-charge polarisation, numerical anal. using hopping method 2-116109
DOBAMBC-MBACAB, smectic C-A mixture, ferroelectricity, phase diagrams 2-99075
electret state, induced polarisation paramagnetism 2-110749
electric polarisation of anisotropic media under external influences, symmetry aspects 2-99045
ferroceramic, internal struct. defects influence on appls. in technology, two-dimens. heat receivers 2-66995
ferroelectric, charged impurity centre ionisation by polarisation reversal, luminescence 2-6986
ferroelectric, polarisation echoes, domain theory 2-57030
ferroelectric, second order phase transition, phys. props. under elec. and mag. fields 2-110782
ferroelectric and incommensurate phase transitions, symm. aspects, unit cell multiplication 2-110784
ferroelectric semicond. p-n junction, capacitance, spontaneous polarisation and pyroelectric current 2-115881
ferroelectric semicond. p-n junctions, polarisation switching and pyroelec. current 2-110453
ferroelectric semiconductor, highly doped and compensated, model, anomalous photovoltaic 2-110384
ferroelectrics, thermodynamics near second order phase transition in external fields 2-110783
films, polarisation distrib., numerical evaluation from thermal-pulse data 2-93103
free surface, spontaneous polarisation theory 2-66975
glow discharge electrode design allowing for polarisation and space charge effects 2-91709
grains, absorption spectrum, dipole approx. 2-104826
L-n-hexyloxybenzylidene-n'-amino-2-chloropropylcinnamate, spontaneous polarisation (*Russian*) 2-82773
impurity-vacancy dipoles, photoinduced polarisation and depolarisation, theory 2-104799
inert gases, second dielec. virial coeffs. 2-104801
insulating film, ionic space charge distrib. and polarisation 2-116120
insulating film, ionic space-charge distrib. and polarisation 2-57018
insulators, crystalline, electrothermal effect 2-61822
lattice of polarisable points, response to imposed elec. fields 2-104800
local field effects and effective-medium theory, microscopic aspects 2-107041
methane, second dielec. virial coeffs. 2-104801
perovskite ferroelectrics, γ -ray effects on dielectric and electro-optical props. (*Russian*) 2-61809
photoinduced, impurity-vacancy dipole orientation 2-77446
phthalocyanine thin films, metal-free, photocond. and photovoltaic effects 2-72023
piezoceramics, polarisation using high-voltage pulses (*Russian*) 2-99043
piezoelectric ceramics in layer struct. oxide family, elec. props. 2-93115
pivalonitrile, solns., dielec. polarisation and nonlinear dielectric effect 2-110747
polar materials, correl. functions, dielectric far-IR absorpt. study 2-116110
polarisation distrib., numerical evaluation from thermal-pulse data 2-93103
polyethyleneterephthalate thin films, charge distrib., electron beam meas. method 2-93113
polymer electrets, piezoelectricity 2-57019
polypyromellitimide, Hugoniot cusp, low press. 2-76581
polypyromellitimide, shock induced elec. polarization, mol. struct. effect 2-77444
polystyrene, shock induced elec. polarization, mol. struct. effect 2-77444
polysulphone, Hugoniot cusp, low press. 2-76581
polysulphone, shock induced elec. polarization, mol. struct. effect 2-77444

dielectric polarisation continued

- polyvinylidene fluoride drawn films, NMR second moments, poling effects on anisotropic temp. changes 2-93019
polyvinylidene fluoride film, thermal expansion 2-92426
polyvinylidenefluoride thick films, piezoelectricity 2-77454
Rochelle salt, ferroelectric, acoustic emission, threshold elec. field 2-92701
semiconductor-nematic liq. cryst. system electroreflection, dielec. polarisation 2-104854
smectic liquid crystals, chiral, ferroelec. props. and appls. 2-82789
solid-state plasma polarisation field of charged relativistic particle 2-104803
TGS, ferroelec. transition, polarisation relax. time, high press. Brillouin scatt. study 2-87802
TGSe-deuterated TGSe system, tetracritical point 2-57026
tris-sarcosine calcium chloride, brominated, dielec. props., press. and temp. depend. 2-61820
trissarcosine calcium chloride, deuterated, dielec. props., temp. and press. depend. meas. 2-99071
vertex model, two-dimens., ice type, free energy, polarisation 2-95275
vibron ferroelectrics, phase transition, Jahn-Teller effect, mag. field effects (*Russian*) 2-82801
vinylidene fluoride-tetrafluoroethylene copolymer, pyroelectricity and charge transport 2-72430
vinylidenefluoride/trifluoroethylene ferroelec. copolymer, piezoelec. and polarisation 2-110776
As₂Sb_{1-x}SI ferroelec., tricrit. points, dielec. meas. 2-93127
As₂Sb_{1-x}SI, phase transitions, permittivity, polarisation (*Russian*) 2-77461
Au-FeF₃-Au struct., FeF₃ film polarisation 2-61821
(Ba,Sr)TiO₃ films on Si substrate, ferroelec. behaviour 2-66996
Ba₂Sr_{1-x}Nb₂O₆ photorefraction and photoelec. props., ferroelec. polarisation 2-110394
BaTiO₃, dielec. props. near ferroelec. transition, domain struct., mag. field effects 2-104825
BaTiO₃, polarisation in cubic phase 2-87734
BaTiO₃-R₂O₃·3TiO₂ (R=La, Pr, Nd, Sm), formation of Ba₂Ti₄O₁₂, dielec. props. 2-71417
Bi₂Sb_{1-x}SI ferroelec., tricrit. points, dielec. meas. 2-93127
Bi₂Sb_{1-x}SI, phase transitions, permittivity, polarisation (*Russian*) 2-77461
CaF₂, fluoride, thermoluminescence rel. to pretreatment history 2-72566
CdRCrO₃Ta_{1-x}O₇ (R=rare earth), electrophysical props. 2-87645
CsD₃PO₄, ferroelectric fluctuation relax. time near transition point, US dispersion study 2-82770
FeF₃ granular films, dielec. polarisation, AC cond. and TSC study 2-82774
Fe₂O₃, magnetite, ferroelec. hysteresis loops, spontaneous polarisation study 2-87715
KCl, crystals, surface polarisation by blocked point defects, TSC study 2-110750
KD₂PO₄, light scatt. study of acoustic phonon damping 2-86804
KH₂PO₄ type crystals, ferroelectric resonance and nonlinear effect (*Chinese*) 2-61848
K_{1-x}Li_xTaO₃, ferroelectric, dipole-dipole interactions, EPR line width study (*Russian*) 2-82805
 α -LiIO₃, bulk photovoltaic and photorefractive effects 2-110387
LiNbO₃, ferroelectric domain struct. and growth striations (*Chinese*) 2-110793
LiNbO₃, in Cs vapour, thermionic emission 2-72595
LiNbO₃-PbTe system, ferroelec. polarisation effect on elec. cond. of semicond. layer 2-110503
Li_{0.2}SiO₃ glass, polarization activation energy evaluation from TSD currents 2-99024
Mg_{1-x}Mn_xFe_{0.5}O₄ ferrite, abrupt behaviour of dielec. const. and loss tangent 2-66970
Mo(100), change in surface polarisability with oxidation, XPS of physisorbed Xe 2-77451
(NH₄)₂BeF₄, dielec. props. near nonpolar-incommensurate-polar phase transitions 2-104824
(NH₄)₂BeF₄, commensurate-incommensurate polar transition, dielectric hysteresis (*Russian*) 2-82799
(NH₄)₂BeF₄, ferroelec., incommensurate phase, quadrupole moment, homogeneous mech. stress effects 2-57023
NH₄Cl crystal, elec. field- and self-induced polarization 2-104802
NH₄HSO₄, ferroelec., dielec. susceptibility dispersion, high freq., dipole ordering 2-87666
NaNO₃, microcrystals, ferroelec. phase transition 2-87706
Ni-Zn ferrite/Pb(Zr,Ti)O₃ ceramic composite, dynamic magnetoelectric effect 2-116049
NiF, film, granular, elec. cond. and dielec. polarisation meas. 2-72094
PLZT ceramic, transparent ferroelectric, dielec., optical and semicond. props., reduction effect (*Russian*) 2-99668
PbDPO₄, quasi-one-dimens. ferroelec., spontaneous polarisation and dielec. const., Ising model theory 2-74359
Pb₂Ge₂O₇·Gd³⁺, ferroelec., EPR line intensity, ferroelec. hysteresis 2-116059
PbMg_{1/3}Nb_{2/3}O₃, pyrocurrents, dielectric polarisation (*Russian*) 2-61834
Pb(Mg_{1/3}Nb_{2/3})O₃ type materials, electrostrictive effect 2-87683
Pb_{0.5}Sb_{0.5}Te:In, photorefractive behaviour and Hall coeff., expt. study 2-87708
PbTiO₃-PbZrO₃-PbNb_{1/2}Zn_{1/2}O₃-PbNb_{1/2}Mn_{1/2}O₃, stability of electrophysical props. 2-99059
Pb(Zr,Ti)O₃, impurity doping effects 2-86689
Pb(Zr,Ti)O₃, piezoelectric effect 2-87686
Pb(Zr,Ti)O₃, poling method 2-87653
Pb(Zr,Ti)O₃ solid solns., piezoceramic fatigue strength, influence of polarisation on cyclic strength 2-72797
RbH(DSO₄) ferroelec., dielec. susceptibility dispersion, high freq., dipole ordering 2-87666
RbHSeO₄, deuterated, ferroelec. transitions, isotope effects, DTA and dielec. study 2-87707
Rb₂ZnCl₆, phase transitions, Raman scatt., dielec. const. and spontaneous polarisation study 2-72510
SbSbBr_{1-x} phase transitions, permittivity, polarisation (*Russian*) 2-77461
SbSI ferroelec., relax. processes, spontaneous polarisation screening 2-110780
SbSe₂S_{1-x}I and SbSbBr_{1-x}, ferroelec., tricrit. points, dielec. meas. 2-93127

dielectric polarisation continued

SbSe₂S_{1-x}I_x phase transitions, permittivity, polarisation (*Russian*) 2-77461

(Sr,Ba,Ca)Nb₂O₆, diffuse ferroelec. phase transition, optical and dielec. props. study 2-61844

SrTiO₃, phase transition study 2-87705

dielectric power factor *see* power factor

dielectric properties of gases

ionization wave sustained by intense monochromatic radiation (*Russian*) 2-109452

molecular gases, in nonuniform electrostatic fields, dielec. theory 2-81442

nonpolar fluid, dielec. permittivity 2-77443

nonpolar fluid, dielectric const., deviation from Clausius-Mossott; eqn. 2-99023

perfluorocarbon gas dielectrics fragmentation under low energy electron impact 2-103272

Hg, dielectric anomaly and vapour-liq. phase transition 2-66192

Hg, gaseous, electron stabilisation of high-density fluctuations 2-86379

dielectric properties of liquids and solutions

abietic acid, supercooled, dielec. relax., viscosity and DC cond. meas. 2-57016

adhesive, dielec. monitoring of bonding process, correl. of dielec. props. with curing thermostat resin props. 2-111449

n-alcohols, dielec. relax., time-domain spectrosc. obs. (*French*) 2-99027

aligned nematics, dielec. spectrosc. and mol. theory 2-65853

n-aliphatic alcohols, dipole relax., spectrosc. obs. 2-61823

n-alkane liquids, complex permittivity, far IR absorpt. spectra study 2-93098

n-alkanes, liq., permittivity, relax. times, microwave dielectric losses 2-61827

n-alkanes, soln. and gas phase, intramolecular interactions, polarisabilities, light scatt. 2-55698

4-n-alkoxy-benzylidene-amino-4'-cyanobiphenyls, smectic liq. cryst., dielec. relax. meas. 2-110753

4-n-alkyloxybenzylidene-4'-n-hexylanilines, smectic phase, reorientation of long mol. axis, dielec. dispersion study 2-65848

4-alkylphenyl 4-alkoxybenzoate mixtures, anisotropic props. rel. to mol. length 2-76282

amines, primary, dielec. permittivity and relax. meas. at microwave freqs. 2-116116

amines, primary, soln., dielectric loss, microwave spectra (*German*) 2-66985

aqueous ionic solutions, static permittivities 2-82769

benzonitrile liq., motional param. from spectral profiles 2-71317

binary liq. mixtures, with upper crit. point, dielec. relax. meas. 2-72413

breakdown strength, electrode area effect 2-93109

bromobenzene solution in dimethyl formamide, elec. cond. and vol. charge (*Russian*) 2-61534

bromobenzene, in cis-decalin, glassy phase, dielec. relax., mol. shape effect 2-82775

butanol solution in n-decane, dielec. permeability, temp. depend. (*Russian*) 2-66967

n-butyl chloride, in cis-decalin, glassy phase, dielec. relax., mol. shape effect 2-82775

4-n-butyl-4'-n-dodecyloxyazobenzene, liq. cryst. phase transitions, dielec. relax. 2-116114

carbon tetrachloride, liq., optical and dielec. parameters meas. in 3 mm to 50 μ m range 2-99084

carboxylferrocene, dielectric absorpt. and relax. times, molecular dynamics, thermodynamics parameters 2-72410

charged hard sphere-dipolar hard sphere mixture near charged wall, interfacial struct. 2-115498

cholesteryl linoleate, dielec. props. in smectic, cholesteric and isotropic phases 2-99031

comb-like polymers, solns., intramol. structuration investig. (*Russian*) 2-65120

cresol in n-heptane-paraffin oil soln., relaxation behaviour 2-82780

p,p'-cyano-n-pentylbiphenyl/p-p'-dialkylazoxybenzenes, intermol. forces, dielec. meas. 2-76290

cyanophenyl-thiobenzoate, dielec. const. 2-72401

4-n-decylphenyl-3'-methyl-4'-(4"-nitrobenzoyloxy)benzoate, liq. cryst. props. 2-76293

1,1'-dichloro-ferrocene, dielectric absorpt. and relax. times, molecular dynamics, thermodynamics parameters 2-72410

dicyclohexylamine, solns., dipole reorientation, dielect. loss, microwave absorpt. (*German*) 2-66986

dielectric absorpt. meas. by transmission method (*German*) 2-87652

diethylsuccinate in dioxane-H₂O mixtures, kinetics of acid-catalysed hydrolysis, dielec. const. effect 2-83382

N,N'-dimethyl-p-methylaniline, dielectric relax. data reliability from Higasi and Higasi et al. methods 2-110756

N,N'-dimethyl-p-nitrosoaniline, dielectric relax. data reliability from Higasi and Higasi et al. methods 2-110756

N,N'-dimethyleyclohexylamine, dielec. relax. time and distrib. parameters 2-99029

diphenylamine, solns., dipole reorientation, dielect. loss, microwave absorpt. (*German*) 2-66986

dipolar fluids, computer simulation, pair correl. function, permittivity calcs. 2-65832

L-DOBACPC series, ferroelec. smectic liq. cryst., appl., elec. and optical props. 2-77455

D-DOBAMBC series, ferroelec. smectic liq. cryst., appl., elec. and optical props. 2-77455

E_g, dielec. props. in liq. cryst. 2-104794

ellipsoidal polar molecules, solns. and liqs., static permittivity, Onsager model extension 2-66971

ethyl carbonate, dielectric relax. data reliability from Higasi and Higasi et al. methods 2-110756

ethyl formate, dielec. relax. time and distrib. parameters 2-99029

fluids of classical deformable molecules, dielectric const. 2-61811

formylferrocene, dielectric absorpt. and relax. times, molecular dynamics, thermodynamics parameters 2-72410

free surface, spontaneous polarisation theory 2-66975

gassing of dielectric liquids 2-99038

glucose, aq. solns., permittivity, transmission dielectric time domain spectra 2-110742

glycerol, fast dynamic Kerr effect and dielec. relax. 2-104845

heptane-water-tetraoxyethylene glycol dodecyl ether, low water content, dielec. obs. 2-93830

N-p-hexyloxybenzylidene-p-toluidine, dielec. props. in liq. cryst. 2-104794

dielectric properties of liquids and solutions continued

high viscosity dielectric liquids, prebreakdown phenomena 2-87669

hydrocarbons, liquid, elec. cond. meas. in low elec. field 2-92243

indole-pyridine(quinoline) NH-N bonded complexes, dielectric relax. meas., dipole moments and thermodynamical props. determ. 2-104804

instability due to unipolar ion injection, chaotic regime 2-109420

inter-electrode gap region, electrophys. props. of liqs. determ. and influencing factors (*Russian*) 2-67753

ion mobility, in polar solvent, dielec. saturation and friction 2-71680

isoamyl alcohol, meas. method and temp. depend. (*Russian*) 2-66979

isobutanol solution in n-decane, dielec. permeability, temp. depend. (*Russian*) 2-66967

isopropyl phenol, dielectric relax. data reliability from Higasi and Higasi et al. methods 2-110756

isothiocyanates, phenyl and methyl, molecular association, nonlinear dielectric study 2-88342

ketone liquids, dielec. relax. times and thermodynamic props., UHF study 2-87663

liquid cryst., mol. phys. rel. to device appls. 2-76302

liquid crystal twist cells, electro-optical performance, phys. props., correl. with mol. struct. 2-65856

liquid crystals, near neighbour correlations and dielec. props. 2-104795

liquids, high press. obs., strain, Eulerian representation 2-104791

lutidines, dielectric relax. times, viscosity effect 2-57015

MBBA:cetyl iodide, liq. cryst. phase existence, dielec. props., electrohydrodynamic instabilities (*Russian*) 2-91777

methanol-n-heptane crit. mixture, low freq. dielec. const. meas. 2-82767

methyl formate, dielec. relax. time and distrib. parameters 2-99029

N-methylidiphenylamine, solns., dipole reorientation, dielect. loss, microwave absorpt. (*German*) 2-66986

molecules in nematic host matrix, permittivity, dielectric relax. study 2-66987

n-decane, dielec. permeability, temp. depend. (*Russian*) 2-66967

nematic liquid crystal compositions, optophysical props., temp.-freq. depend. of dielec. anisotropy 2-109669

nitroalkanes in dil. solns., permittivity and dielectric relax. times 2-72411

nitrobenzene, liq., mol. alignment, electric saturation, NMR study 2-56947

nitrobenzene-isooctane mixtures, dielectric const. anomaly near consolute point 2-87649

4-nonanoate-4'-cyanobiphenyl, dielec. relax. meas. in liq. cryst. phases 2-104810

nonpolar fluid, dielec. permittivity 2-77443

nonpolar fluid, dielectric const., deviation from Clausius-Mossott; eqn. 2-99023

nonpolar fluids, dielec. const., quadrupole approx. calcs. 2-104793

nonpolar liquids, permittivity, elec. field effects 2-82768

PCH-1132, dielec. props. in liq. cryst. 2-104794

phenol in n-heptane-paraffin oil soln., relaxation behaviour 2-82780

pivalonitride, solns., dielec. polarisation and nonlinear dielectric effect 2-110747

PMMA-polymethyl acrylate copolymers, benzene soln., chain motion, elementary processes 2-93107

polar fluid, electrostriction, dielectric saturation, statistical mech. study 2-99060

polar hard dumb-bell fluid, dielec. const., Monte Carlo simulation calcs. 2-81646

polar materials, correl. functions, dielectric far-IR absorpt. study 2-116110

polar molecule binary mixtures in dil. soln., dielec. relax. 2-61828

poly(4-chlorostyrene), undiluted, temp. coeff. of the dipole moment 2-80855

poly- γ -benzyl-L-glutamate, solid and solns., dielectric susceptibility meas. 2-61826

polymer solutions, dielectric relax. spectra, time domain reflectometry technique 2-66978

propanol-decanol mixtures, dielec. relax., time-domain spectrosc. obs. (*French*) 2-99028

propionic acid/tri-n-butylamine system, permittivity and viscosity meas. 2-72409

pyrrole pyridine(quinoline), NH-N bonded complexes, dielectric relax. meas., dipole moments and thermodynamical props. determ. 2-104804

rigid polar molecules, in soln., dielec. props. and solvent viscoelastic behaviour 2-110758

rubber, one-component liq., for elec. insulation, prep. and characts. (*Japanese*) 2-83076

smectic B phase, local dipolar order induced by steric effects, dielec. correl. factor 2-91768

smectic liquid crystals, chiral, ferroelec. props. and appls. 2-82789

smectic S_A, S_B and S_E phases, highly ordered orthogonal, mol. relax. 2-72416

sodium carboxymethyl cellulose, aq. solns., permittivity, transmission dielectric time domain spectra 2-110742

thin dipolar fluid films, capacitance 2-104792

time domain reflectometry, dielectric relaxation spectra, GHz region 2-95394

trichloroethane, cyclohexane solns., refr. index, far-IR study 2-57072

triethylamine-I₂ charge transfer complexes and ion pairs, stoichiometry, permittivity effects 2-114063

triphenylamine, solns., dipole reorientation, dielect. loss, microwave absorpt. (*German*) 2-66986

water, book on liq. state of matter 2-94930

water, supercooled liq. permittivity meas., dielectric relax. time 2-66981

water electric breakdown props. in 1 kHz repetitively pulsed burst conditions 2-99042

Ag₂TiSe₃, semicond., solid and liq. states, dielec. relax. and AC cond. 2-110754

CuSO₄, aq. solns., permittivity, transmission dielectric time domain spectra 2-110742

CuTiSe₂, ternary semicond., liq. and solid, dielec. relax., defect electron states 2-61829

HCl, liq., dielectric const. and relax., computer simulation 2-66972

HNO₃, relative permittivity in dinitrogen tetroxide (*Russian*) 2-57009

³He, liquid, permittivity, molar volume and crit. phenomena near λ -point (*Russian*) 2-98371

N₂, liquid, flowing, elec. breakdown, statistical investigation 2-116119

dielectric properties of solids

alkali halide, deform. dipole model analysis using compressible ion theory 2-57000

dielectric properties of solids continued

- alkali halide, static dielec. const. and static polarisability, vol. depend. 2-57001
- anisotropic dielectrics, phenomenological QED 2-79807
- antimonates, $R_3Sb_2O_{12}$ ($R=Sc, In, Ln, Pr, Tb, Yb$), cryst. struct. and dielec. props. 2-109755
- bis(tetradecylammonium) zinc chloride, phase transitions, room temp. to 438K, thermal, dielec., and optical meas. 2-56176
- cetyl alcohol, solid form, dielec. behaviour and mol. rot. 2-66980
- cholesteryl 2,2,3,3-tetrafluoropropionate, crystalline, phase transition, dielec. const. and permittivity study 2-72399
- clay, kaolinitic, dielec. props., firing temp. effect 2-99020
- coal, dielectric properties, frequency-dependence application in industrial heating 2-104808
- cobalt naphthenate, photo-electrect study 2-61818
- cobalt naphthenate, thermo-electret form., surface charge 2-61819
- cubic compounds, binary and ternary, effective ionic charges rel. to optical dielec. const. 2-57005
- 1-cyanoadamantane, compact cryst. and powder, dielec. spectra, vol. fraction dependence, expt. and theoretical study 2-99022
- dielectric-conductor mixtures, permeability meas. in microwave range (*Polish*) 2-53781
- disordered solids, acoustic and dielec. low temp. props., review 2-56094
- dispersion meas. method by time domain spectroscopy, appl. to dielec. relax. study (*Japanese*) 2-116113
- dyes, Brilliant Green and Ehtblau Saltz, permittivity and polarisability calc. 2-93105
- electric dipoles in cryst., mol. field distrib. function calc. 2-93132
- electric field meas. using laser-generated acoustic pulses 2-79614
- ferroelectric, second order phase transition, phys. props. under elec. and mag. fields 2-110782
- ferroelectrics, thermodynamics near second order phase transition in external fields 2-110783
- free surface, spontaneous polarisation theory 2-66975
- ice dielectric props. meas. technique for low temps. (*Japanese*) 2-89746
- insulating films, filamentary electric breakdown model 2-82782
- insulating materials, compatibility between thermal and electrical stresses 2-110767
- ionic crystal, localized effective charge parameter, strain depend. 2-97984
- isopropylammonium copper trichloride (tetrachloride), dielec. const. and pyroelec. current meas. 2-57004
- kaolinite, freq. and temp. variation of dielec. props. 2-68337
- low-loss dielectrics, MM wave absorpt. meas. using untuned cavity resonator 2-99030
- metal film on semiconductor, interface chem. reaction and diffusion 2-86954
- molecular crystal surfaces, energy level bending 2-104449
- molecular crystals, nonlinear optical effects and dielec. props. 2-55248
- naphthalene, magneto-electret, dielec. behaviour 2-104789
- α -nylon 11, ferroelec. transition, dielec. const., thermal expansion and pyroelec. coeff. study 2-116128
- oligoxypropylene, filled, mol. mobility, dielec. loss obs., filler conc. effect (*Russian*) 2-66977
- oxides, ion polarisabilities, nonempirical calc. 2-110752
- pentachloronitrobenzene monocrystal 10 GHz dielectric absorption and anisotropic permittivity obs. (*Japanese*) 2-72420
- permeability at high concs. of excitons 2-93135
- perovskite ferroelectrics, γ -ray effects on dielectric and electro-optical props. (*Russian*) 2-61809
- perylene-chloranil complex, dielec. props., hopping cond. 2-72417
- piezoelectric ceramics in layer struct. oxide family, elec. props. 2-93115
- PMMA, dielectric relax. transitions, separation 2-104806
- PMMA, immersed in transformer oil, anomalous breakdown characs. under direct and impulse stresses 2-110766
- PMMA, space-charged, elec. discharge propag. 2-93112
- poly(hydroxyethyl glutamine), crosslinked, piezoelec., elastic and dielec. consts., hydration effect 2-110774
- poly(vinylidene fluoride) thin film, piezoelec. and pyroelec. props. meas. 2-104815
- poly- γ -benzyl-L-glutamate, solid and solns., dielectric susceptibility meas. 2-61826
- polyacrylonitrile layer, metastable de-excitation spectroscopy and UPS study 2-110516
- polycrystalline p-hydroxybenzaldehyde, dielectric absorption in low-ultralow frequency region, protons dynamical behaviour along chain of H bond (*Japanese*) 2-116108
- polyethersulfone film, dielectric breakdown under DC voltage conds. 2-110764
- polyethylene, crosslinked, steam cured, voltage and freq. dependence of bow-tie trees 2-110765
- polyethylene, low density films, prestressed, impulse breakdown strength 2-87670
- polyethylene, TSC following AC stressing 2-87655
- polyethylene films, plasma-polymerised, dielec. losses, effect of H_2 treatment 2-61824
- polyethylene thin film, piezoelec. and pyroelec. props. meas. 2-104815
- polymeric materials, acoustic emission associated with tree growth 2-110762
- polyphthalocyanine, polymerised, thin film prep. by thermal vaporis. in vacuum, characteris. (*Russian*) 2-93424
- polypropylene, isotactic, dielec. relax. and loss, impurity effects 2-110757
- polypropylene film, electric breakdown under electron irradiation 2-110763
- polypropylene foil condenser, thermoelectret, TSC study 2-72406
- polystyrene film, plasma polymerised, elec. breakdown, theoretical anal. 2-66989
- polystyrene film, plasma polymerised, elec. breakdown meas. 2-66988
- polystyrene film, pyrene doped, thermally stimulated discharge current spectra meas. 2-72408
- polyvinylidene fluoride, pyroelectricity and space charge, expt. study 2-116123
- PVC electrical characs. deterioration when irradiated by Co^{60} γ -rays (*Japanese*) 2-56031
- relaxations, average dipole moment theory 2-87665
- sea ice, complex dielec. const., 0.1 to 40 GHz 2-57002
- semiconductor mesostructure dielectrics 2-61473
- silicate glass, thermally stimulated currents and alkali-ion motion 2-57012
- silicate minerals, electronic and ionic polarisabilities 2-90732

dielectric properties of solids continued

- styrene-isoprene block copolymers, effect of temp. depend. of permitt. on TSC 2-87654
- surface TSC meas., residual gas condensation effects 2-72045
- TCNQ salts, $Qn(TCNQ)_2$, quasi one-dimens. conductors, dielec. const. 2-104798
- TCNQ salts with N-methyl derivatives of pyridine, phys. props. 2-87308
- tetramethylammonium cobalt tetrachloride- d_{12} , dielec. props. and phase transitions 2-109974
- tetramethylammonium copper tetrachloride- d_{12} , dielec. props. and phase transitions 2-109974
- tetramethylammonium zinc tetrachloride- d_{12} , dielec. props. and phase transitions 2-109974
- TGS, ferroelec., submillimetre dielec. spectra 2-87651
- TGS single cryst., permittivity meas. as a function of geometry 2-61815
- thermoelectric effect, theory 2-104403
- thiourea, submillimetre dielec. spectra, 85 to 300K 2-110744
- trissarcosine calcium chloride, deuterated, dielec. props., temp. and press. depend. meas. 2-99071
- trissarcosine calcium chloride, ferroelec., dielec. loss tangent, hydrostatic press. effects meas. 2-116115
- two-sublattice model, piezoelec. and elastic props. 2-87675
- AgBr emulsion grains, space charge characs., effect of soln. pAg and pH 2-72418
- AgCl:Mn²⁺, dielec. relax., ionic thermocurrent method 2-99033
- AgNO₃.NH₃, dielec. dispersion, a- and c-axes 2-110755
- Ag₃SBr_{0.5}I_{0.5}, superionic conductor, cryst. struct. and phase transition study 2-109758
- Ag₂TlSe₃, semicond., solid and liq. states, dielec. relax. and AC cond. 2-110754
- Al-Al₃O₃-Au struct., dielec. props. meas. at low freq. (*French*) 2-72075
- AlN:Cr, sintered, dielec. losses, lattice defect types (*French*) 2-77448
- Al(OH)₃ layers in Al electrolytic capacitors, dielectric props. and elec. cond. meas. 2-104809
- BaBrF₂, mixed dihalides, temp. depend. of dielec. behaviour, 100-600K 2-66968
- BaMnF₄, submillimetre dielec. spectra, 85 to 300K 2-110744
- Ba₂Sr_{1-x}Nb₂O₆, low freq. dielec. spectra, 20 to 200°C 2-61830
- BaTiO₃, polarisation in cubic phase 2-87734
- C, cohesion, polymorphic transition, elastic and dielec. props. 2-60919
- Cd_{0.1}Hg_{0.9}Te, narrow-gap semicond., dielec. const. anomaly 2-93099
- CoSiF₆.6H₂O, anomalous dielec. props. near transition temp. 2-99018
- CsBi(MoO₄)₂, phase transition, uniaxial press. effects, permittivity study 2-109982
- Cs₂D₂PO₄, ferroelec., static and dynamic crit. props. of dielec. const. 2-61813
- Cs₃H₂PO₄, ferroelec., static and dynamic crit. props. of dielec. const. 2-61813
- Cs₃H₂PO₄, one-dimens. ferroelec., crit. slowing down, dielec. meas. 2-77458
- Cs₂HgBr₄(Cl₄)₁₄ wafers, dielec. permittivity temp. depend. 2-66974
- CuTiSe₂, semicond., liq. and solid, dielec. relax., defect electron states 2-61829
- FeF₃ granular films, dielec. polarisation, AC cond. and TSC study 2-82774
- GaAs MIS structure dielectric dispersion prop. meas. at very low freq. (*Japanese*) 2-64069
- Ge, cohesion, polymorphic transition, elastic and dielec. props. 2-60919
- In_{1-x}Ga_xAs_{1-y}P_y LPE system, alloy scattering mobility and energy gap evaluation by dielectric model 2-82485
- KBr:Sr, dielec. relax., impurity-conc. effects 2-104811
- (KBr)_{1-x}(KCN)_x, dielec. props. 2-77442
- KCl:Ca, dielec. relax., impurity-conc. effects 2-104811
- KCl:OH⁻, elec. dipoles, mol. field distrib. function calc. 2-93132
- KH₂PO₄ lossy crystals, dielec. and ferroelec. props. 2-82776
- KTaO₃, dielec. nonlinearity, losses, and parametric interactions at UHF 2-99072
- KTaO₃:Li, dynamics of freezing electric dipoles, dielec. relax. meas. 2-77447
- La₂Sb₂O₁₂, phase transitions, dielec., thermal expansion and second harmonic generation study 2-115406
- LiF:Ni(Co), dielec. relax., impurity-conc. effects 2-104811
- Li₂Ge₂O₇, dielec. props. and phase transition 2-57006
- α -LiIO₃ single crystal, thermal study, 195-265K 2-104014
- LiNbO₃, single crystal, effects of γ -irradiation on dielectric consts. and optical transmission 2-61814
- Li₂SiO₃(GeO₃), Czochralski growth, pyroelec., dielec., elastic props. 2-110775
- MgO films, AC elec. breakdown meas. 2-72421
- MgO:Li⁺ crystal, dielec. behaviour 2-87661
- MgO:Ti(Gd), single cryst., dielec. props. 2-110741
- MgTiO₃ ceramics, dielec. props. deviation 2-87647
- (NH₄)₂BeF₄, dielec. props. near nonpolar-incommensurate-polar phase transitions 2-104824
- NH₄Cl crystal, elec. field- and self-induced polarization 2-104802
- NH₄HSeO₄, ferroelec. transitions, dielec. const., dielec. loss and DTA study 2-93121
- NH₄HSeO₄, ferroelec. transition, dielec. dispersion study 2-116131
- (NH₄)₂SO₄, paraelec.-ferroelec. phase transition, low temp., thermal anal. 2-104822
- (NH₄)₂SnCl₆ and other ammonium salts, NH₄⁺ reorientation, dielec. and NMR studies 2-93108
- (NH₄)₂ZnBr₄, ferroelectric phase transition, NQR study 2-104821
- NaCl:Pb, dielec. relax., impurity-conc. effects 2-104811
- Na₂GeO₃, Czochralski growth, pyroelec., dielec., elastic props. 2-110775
- Na₂MoO₄.2H₂O, deauration process, dielectric const., elec. cond. meas. 2-87648
- Nd₂O₃ films, electron beam evaporated, dielec. props. meas. 2-72422
- PLZT 7/65/35, ceramic, domain switching, one-dimens. polar responses 2-67010
- P₃N₅ gate insulating film, CVD prep., dielec. props. and InP-P₃N₅ MIS device props. 2-99346
- (Pb.Sn.Ge)Te, dielectric props., defects influence 2-93101
- PbGe₂O₆, polymorphism, cryst. struct., and dielec. props. 2-109754
- Pb_{1-x}M_xGe₂O₆ (M=Sr, Ba), polymorphism, cryst. struct., and dielec. props. 2-109754
- PbO-Bi₂O₃, prep. and electrophysical props. of compounds 2-72619
- PbTe epitaxial layer, dielec. const. at 4.2K 2-99017
- Pb(Zn_{1/3}Nb_{2/3})₃O₉-PbTiO₃, ferroelec. transitions, dielec., elastic and piezoelec. study 2-116124
- PbZrO₃ ceramic, dielec. props., X-ray irradiation effect 2-110745

dielectric properties of solids continued

- PbZr_{1-x}Ti_xO₃-polyvinylidene fluoride composite, piezoelec. and dielec. const. and Young's modulus meas. 2-93119
 Pr₂Sb₂O₁₂, phase transitions, dielec., thermal expansion and second harmonic generation study 2-115406
 RbHSO₄ cryst., near ferroelec. phase transition point, elastic and non-linear dielec. props. 2-57007
 RbHSO₄, ferroelec. transitions, dielec. const., dielec. loss and DTA study 2-93121
 Sb₂Ge₂O₁₂, synthesis, struct. and props. 2-111047
 Sb₂S₃, UV and dielec. props. 2-99148
 Si, cohesion, polymorphic transition, elastic and dielec. props. 2-60919
 Si-SiO₂ dielec. props., built-in charge, pulsed annealing effects 2-72066
 Si₃N₄ film, CVD deposition and AC dielec. props. meas. 2-82783
 Si₃N₄, hot-pressed, mech. and dielec. props. 2-67268
 SiO₂, breakdown statistics and defect densities, theoretical and expt. study 2-110770
 SiO₂, elec. breakdown rates and defect densities meas. 2-82781
 α-Sn, cohesion, polymorphic transition, elastic and dielec. props. 2-60919
 (Sr,Ba,Ca)Nb₂O₆, diffuse ferroelec. phase transition, optical and dielec. props. study 2-61844
 Sr,Ba_{1-x}Nb₂O₆, poled, dielec. props. rel. to pyroelec. detection 2-110777
 SrBrF and SrClF, mixed dihalides, temp. depend. of dielec. behaviour, 100-600K 2-66968
 SrCl₂:K, photochemically coloured, thermally stimulated depolarisation currents meas. (Russian) 2-116112
 SrTiO₃, dielec. nonlinearity, losses, and parametric interactions at UHF 2-99072
 Tb₂Sb₂O₁₂, phase transitions, dielec., thermal expansion and second harmonic generation study 2-115406
 V₂O₅-B₂O₃-P₂O₅ glasses, electronic cond. and dielec. relax. rel. to struct. 2-61471
 V₂Si, electron props. and permittivity, optical absorpt. spectra study (Russian) 2-93216
 Yb₂Sb₂O₁₂, phase transitions, dielec., thermal expansion and second harmonic generation study 2-115406
 ZnO-Bi₂O₃-CoO-MnO-Sb₂O₃, ceramic, influence of comp. on dielectric losses 2-87660

dielectric properties of substances

see also antiferroelectricity; dielectric depolarisation; dielectric function; dielectric materials; dielectric measurement; dielectric phenomena; dielectric polarisation; dielectric properties of gases; dielectric properties of liquids and solutions; dielectric properties of solids; electric strength; optical susceptibility; permittivity; piezoelectricity; pyroelectricity
 dynamical Onsager cavity model and dielec. friction 2-93131

dielectric relaxation

see also dielectric resonance

- abietic acid, supercooled, dielec. relax., viscosity and DC cond. meas. 2-57016
 n-alcohols, dielec. relax., time-domain spectrosc. obs. (French) 2-99027
 alcohols, low temperature dielectric relaxation spectroscopy 2-82777
 n-aliphatic alcohols, dipole relax., spectrosc. obs. 2-61823
 n-alkanes, liq., permittivity, relax. times, microwave dielectric losses 2-61827
 4-n-alkoxy-benzylidene-amino-4'-cyanobiphenyls, smectic liq. cryst., dielec. relax. meas. 2-110753
 4-n-alkoxybenzylidene-4'-n-hexylanilines, smectic phase, reorientation of long mol. axis, dielec. dispersion study 2-65848
 amines, in polyethylene matrix, dielectric relax. by inversion and internal relax. 2-57014
 amines, low temperature dielectric relaxation spectroscopy 2-82777
 amines, mol. relax. study by spectral density width (French) 2-85747
 amines, primary, dielec. permittivity and relax. meas. at microwave freqs. 2-116116
 amyl acetate solns., microwave absorpt. 2-87914
 average dipole moment theory 2-87665
 benzonitrile liq., motional param. from spectral profiles 2-71317
 binary liq. mixtures, with upper crit. point, dielec. relax. meas. 2-72413
 biological objects, spectrometer design 2-78501
 bone, dry human compact, elec. relax. props. at infralow freqs. 2-116982
 bromobenzene, in cis-decalin, glassy phase, dielec. relax., mol. shape effect 2-82775
 t-butyl chloride, in cis-decalin, glassy phase, dielec. relax., mol. shape effect 2-82775
 4-n-butyl-4'-n-dodecyloxyazobenzene, liq. cryst. phase transitions, dielec. relax. 2-116114
 carboxyl-ferrocene, mol. dynamics investig. by dielec. relax. meas. 2-87664
 carboxylferrocene, dielectric absorpt. and relax. times, molecular dynamics, thermodynamics parameters 2-72410
 ceramics, low freq. dielectric props. (Chinese) 2-104788
 cholesteryl 2,2,3,3-tetrafluoropropionate, crystalline, phase transition, dielec. const. and permittivity study 2-72399
 cholesteryl linoleate, dielec. props. in smectic, cholesteric and isotropic phases 2-99031
 condensed phase, molecular dynamics, Fokker-Planck approach 2-74328
 cresol in n-heptane-paraffin oil soln., relaxation behaviour 2-82780
 1,1'-dichloro-ferrocene, dielectric absorpt. and relax. times, molecular dynamics, thermodynamics parameters 2-72410
 1,1'-dichloro-ferrocene, mol. dynamics investig. by dielec. relax. meas. 2-87664
 N,N'-dimethyl-p-methylaniline, dielectric relax. data reliability from Higasi and Higasi et al. methods 2-110756
 N,N'-dimethyl-p-nitrosoaniline, dielectric relax. data reliability from Higasi and Higasi et al. methods 2-110756
 N,N'-dimethylcyclohexylamine, dielec. relax. time and distrib. parameters 2-99029
 dipolar solutes in decalin, mol. dynamics rel. to dielec. relax. 2-66983
 dispersion meas. method by time domain spectroscopy, appl. to dielec. relax. study (Japanese) 2-116113
 DNA, molecular dynamics investig. by dielec. relax. meas. 2-88497
 DOBAMBC, ferroelectric, dielectric relax. study 2-87662
 E_g, dielec. props. in liq. cryst. 2-104794
 ethyl carbonate, dielectric relax. data reliability from Higasi and Higasi et al. methods 2-110756
 ethyl formate, dielec. relax. time and distrib. parameters 2-99029
 evaluating method using polarisability plots 2-104807
 formyl-ferrocene, mol. dynamics investig. by dielec. relax. meas. 2-87664
 formylferrocene, dielectric absorpt. and relax. times, molecular dynamics, thermodynamics parameters 2-72410
 glass, nondispersive relax. processes 2-115148
 glycerol, fast dynamic Kerr effect and dielec. relax. 2-104845
 N-p-hexyloxybenzylidene-p-toluidine, dielec. props. in liq. cryst. 2-104794
 indole-pyridine(quinoline) NH-N bonded complexes, dielectric relax. meas., dipole moments and thermodynamical props. determ. 2-104804
 ionic crystals, point defect pair relax. modes, approx. solns. for three-shell model 2-61016
 isopropyl phenol, dielectric relax. data reliability from Higasi and Higasi et al. methods 2-110756
 kaolinite, freq. and temp. variation of dielec. props. 2-68337
 ketone liquids, dielec. relax. times and thermodynamic props., UHF study 2-87663
 liquid, supercooled, nondispersive relax. processes 2-115148
 luidines, dielectric relax. times, viscosity effect 2-57015
 mercaptans, low temperature dielectric relaxation spectroscopy 2-82777
 methyl formate, dielec. relax. time and distrib. parameters 2-99029
 methylpentachlorobenzene, polycryst., mol. dynamics investig., using dielec. relax. meas. 2-99034
 molecular systems with methoxy group, evaluation method 2-104807
 molecules in nematic host matrix, permittivity, dielectric relax. study 2-66987
 multiplicative stochastic process anal. 2-82779
 nematic liq. cryst., dielectric relax., rotational diffusion 2-97921
 nematics, dielectric relaxation and Doolittle's law 2-116117
 nitroalkanes in dil. solns., permittivity and dielectric relax. times 2-72411
 4-nonanoate 4'-cyanobiphenyl, bilayer S_A phase, tilted monolayer cybotactic groups evidence 2-55842
 4-nonanoate-4'-cyanobiphenyl, dielec. relax. meas. in liq. cryst. phases 2-104810
 nonspherical body, rot. Brownian motion, rel. to dielec. relax. 2-58705
 PCH-1132, dielec. props. in liq. cryst. 2-104794
 pentamethylchlorobenzene, polycryst., mol. dynamics investig., using dielec. relax. meas. 2-99034
 perylene-chloranil complex, dielec. props., hopping cond. 2-72417
 phenol in n-heptane-paraffin oil soln., relaxation behaviour 2-82780
 phenols, low temperature dielectric relaxation spectroscopy 2-82777
 PMMA, dielectric relax. transitions, separation 2-104806
 PMMA-polymethyl acrylate copolymers, benzene soln., chain motion, elementary processes 2-93107
 polar molecule binary mixtures in dil. soln., dielec. relax. 2-61828
 poly(bisphenol-A carbonate), effects of thermal history, crystallinity and solvent on transitions and relaxs. 2-86872
 poly(dimethyl siloxane), anomalous dielectric relax. meas. 2-110759
 poly(hydroxyethyl glutamine), crosslinked, piezoelec., elastic and dielect. consts., hydration effect 2-110774
 polycrystalline p-hydroxybenzaldehyde, dielectric absorption in low-ultralow frequency region, protons dynamical behaviour along chain of H bond (Japanese) 2-116108
 polyethylene, chlorinated, as impact modifier for PVC, mech. and dielec. relax. obs. 2-81692
 polyethylene, cryst., relax. effects, stochastic defect diffusion model 2-76326
 polymer solutions, dielectric relax. spectra, time domain reflectometry technique 2-66978
 polypropylene, isotactic, dielec. relax. and loss, impurity effects 2-110757
 polystyrene films, soln. grown, dielec. props. 2-66982
 polyvinyl acetate, dielec. relax. meas. in ultralow freq. region 2-101420
 polyvinyl acetate, nonequil. annealing behaviour, water sorption and glass transition, dielec. and thermal meas. 2-66223
 propanol-decanol mixtures, dielec. relax., time-domain spectrosc. obs. (French) 2-99028
 propionic acid/tri-n-butylamine system, permittivity and viscosity meas. 2-72409
 PVC:lead stearate, dielec. relax., thermally stimulated depolarisation current anal. 2-72414
 pyrrole pyridine(quinoline), NH-N bonded complexes, dielectric relax. meas., dipole moments and thermodynamical props. determ. 2-104804
 relaxation time effect on measured energy relax. time 2-87667
 rigid polar molecules, in soln., dielec. props. and solvent viscoelastic behaviour 2-110758
 smectic S_A, S_B and S_E phases, highly ordered orthogonal, mol. relax. 2-72416
 spectra, time domain anal. (French) 2-99027
 styrene-isoprene block copolymers, effect of temp. depend. of permitt. on TSC 2-87654
 TGS, ferroelec. transition, polarisation relax. time, high press. Brillouin scatt. study 2-87802
 time domain reflectometry, dielectric relaxation spectra, GHz region 2-95394
 trichloroethane, cyclohexane solns., refr. index, far-IR study 2-57072
 ultralow frequency region, meas. 2-101420
 vinyl chloride-vinyl acetate copolymer, dielec. relax. and struct. morphology 2-82778
 water, spectroscopic and transport props., model calcs. and expt. results interpretation 2-91749
 water, supercooled liq. permittivity meas., dielectric relax. time 2-66981
 AgCl:Mn²⁺, dielec. relax., ionic thermocurrent method 2-99033
 AgNO₃:NH₃, dielec. dispersion, a- and c-axes 2-110755
 Ag₂TiSe₃, semicond., solid and liq. states, dielec. relax. and AC cond. 2-110754
 Al₂O₃ film, low freq. dielec. loss meas. 2-116118
 Al(OH)₃ layers in Al electrolytic capacitors, dielectric props. and elec. cond. meas. 2-104809
 Ba₂Sr_{1-x}Nb₂O₆, low freq. dielec. spectra, 20 to 200°C 2-61830
 CsD₂PO₄, ferroelec., static and dynamic crit. props. of dielec. const. 2-61813
 CsH₂PO₄, ferroelec., static and dynamic crit. props. of dielec. const. 2-61813
 CsH₂PO₄, one-dimens. ferroelec., crit. slowing down, dielec. meas. 2-77458
 CuTiSe₂, ternary semicond., liq. and solid, dielec. relax., defect electron states 2-61829
 n-Ge, dielectric relaxation time effect on measured energy relax. time 2-87667
 GeO₂, vitreous, dielec. relax. and losses, elec. cond. 2-99032
 HCl, liq., dielectric const. and relax., computer simulation 2-66972
 KBr:Sr, dielec. relax., impurity-conc. effects 2-104811
 KBr(l), cation size effect on ionic thermocurrents 2-72405
 KCl:Ca, dielec. relax., impurity-conc. effects 2-104811

dielectric relaxation continued

- KTaO₃:Li, dynamics of freezing electric dipoles, dielec. relax. meas. 2-77447
 LiF, cation size effect on ionic thermocurrents 2-72405
 LiF:Ni(Co), dielec. relax., impurity-conc. effects 2-104811
 MgO:Li⁺ crystal, dielec. behaviour 2-87661
 NH₄Cl crystal, elec. field- and self-induced polarization 2-104802
 NaCl, cation size effect on ionic thermocurrents 2-72405
 NaCl:Pb, dielec. relax., impurity-conc. effects 2-104811
 Ni_{0.3}Zn_{0.7}Fe₂O₄, dielectric spectrum, radio and optical freq. 2-99019
 PLZT ceramic; transparent ferroelectric, dielec., optical and semicond. props., reduction effect (*Russian*) 2-99668
 PbO-SiO₂ glass, electron and gamma irradiated, charge trapping and release 2-57013
 Se-As alloy film, amorphous, capacitance changes during struct. relax. 2-91785
 TeO₂ thin films, dielectric studies 2-93114
 V₂O₅-B₂O₃-P₂O₅ glasses, electronic cond. and dielec. relax. rel. to struct. 2-61471

dielectric resonance

- see also dielectric relaxation; paraelectric resonance*
 dielectrics, electromechanical resonances for phase transition studies 2-87702
 dielectrics, electromechanical resonances for study of linear and nonlinear props. 2-87682
 grains, absorption spectrum, dipole approx. 2-104826
 Rochelle salt, electromechanical resonances for phase transition studies 2-87702
 surface shape resonances 2-87718
 tanane, ferroelec. and ferroelastic phase transition, soft acoustic mode 2-93122
 Cd₂As₂, spin-flip resonances, subMM magnetospectroscopy 2-93167
 Gd₂(MoO₄)₃, electromechanical resonances for phase transition studies 2-87702
 KH₂PO₄ type crystals, ferroelectric resonance and nonlinear effect (*Chinese*) 2-61848
 LiF crystal, dielec. losses under deform. by conc. load 2-66984
 SrTiO₃ dielect. resonators nonlinear losses at 4.2K 2-72415

dielectric strength *see electric strength***dielectric susceptibility** *see optical susceptibility***dielectric thin films**

- see also ferroelectric thin films; insulating thin films; optical films; piezoelectric thin films*
 absorptivity attenuation for dielec. films on metal surfaces, IR spectroscopic meas. 2-110965
 conference, Herzlia-on-Sea, Israel (Sept. 1981) 2-79279
 dielectric thin films, composition depth profiling, SIMS, IIR and AES comparisons 2-99287
 ferroelectrics, dielectric props. meas. in microwave range 2-95405
 filamentary electric breakdown model 2-82782
 insulating film, ionic space charge distrib. and polarisation 2-116120
 mass spectrometer, dielectric film form. on ion source 2-69293
 MOS capacitor, localized conduction 2-61633
 permittivity meas., microwave technique 2-89747
 polarisation distrib., numerical evaluation from thermal-pulse data 2-93103
 poly(vinylidene fluoride) thin film, piezoelec. and pyroelec. props. meas. 2-104815
 polyacrylonitrile layer, metastable de-excitation spectroscopy and UPS study 2-110516
 polyethylene thin film, piezoelec. and pyroelec. props. meas. 2-104815
 polyethyleneterephthalate thin films, charge distrib., electron beam meas. method 2-93113
 polymer films, spin coated, associated with semicond. industry, thickness variation 2-62081
 polyphthalocyanine, polymerised, thin film prep. by thermal vaporis. in vacuum, characteris. (*Russian*) 2-93424
 polystyrene film, plasma polymerised, elec. breakdown, theoretical anal. 2-66989
 polystyrene film, plasma polymerised, elec. breakdown meas. 2-66988
 polystyrene film, pyrene doped, thermally stimulated discharge current spectra meas. 2-72408
 polyvinylidene fluoride and poly(vinylidene fluoride-TFE) copolymer dielec. films, polarisation distrib., numerical evaluation from thermal-pulse data 2-93103
 polyvinylidene fluoride film, thermal expansion 2-92426
 secondary ion emission, fission fragment induced 2-99244
 two-layer metal-dielectric film growth model 2-61303
 valine film, secondary ion emission as function of primary ion velocity 2-99245
 water, dielectric thin film, thickness and refractive index determ. 2-82815
 Al-Al₂O₃-Au struct., dielec. props. meas. at low freq. (*French*) 2-72075
 Al₂O₃, amorphous, short-range order struct., change after ion implantation 2-86690
 Al₂O₃ film, low freq. dielec. loss meas. 2-116118
 Al₂O₃ in MIS structures with dielectrics prep. at low temps., charge instability mechanism 2-61601
 (Ba,Sr)TiO₃ films on Si substrate, ferroelec. behaviour 2-66996
 CsCl-RbBr film, secondary ion emission as function of primary ion velocity 2-99245
 FeF₃ granular films, dielec. polarisation, AC cond. and TSC study 2-82774
 GaAs, anodic oxide film, struct. inhomogeneity 2-87096
 MgO films, AC elec. breakdown meas. 2-72421
 Nd₂O₃ films, electron beam evaporated, dielec. props. meas. 2-72422
 NiF₂ film, granular, elec. cond. and dielec. polarisation meas. 2-72094
 PbSiO₃ hydrophobic films, CVD prep. and microelectronic appls. 2-62070
 SiN film, plasma enhanced CVD coating, phys. and elec. props. 2-115629
 Si₃N₄, amorphous, short-range order struct., change after ion implantation 2-86690
 Si₃N₄ film, CVD deposition and AC dielec. props. meas. 2-82783
 SiO₂, amorphous, short-range order struct., change after ion implantation 2-86690
 SiO₂, breakdown statistics and defect densities, theoretical and expt. study 2-110770
 SiO₂ in MIS structures with dielectrics prep. at low temps., charge instability mechanism 2-61601

dielectric thin films continued

- SiO₂ layers, ellipsometric anal. 2-104979
 TeO₂ thin films, dielectric studies 2-93114
 Yb₂O₃ thin films, dielec. loss factor and capacitance 2-110760
dielectric triodes *see space-charge limited devices*
dielectric waveguides
see also optical waveguides
 EM wave polarisation change of refl. from dielectric media 2-65134
 mode selecting characteristics of four-layer dielectric slab waveguide 2-65357
 optical phase-matched dielectric waveguide using artificial anisotropic struct. 2-114430
 planar dielectric waveguide, finite element analysis of discontinuity problems 2-65353
 plasma diagnostics, low temp., UHF interferometer 2-71259
 reflection and transmission problems in open waveguide system, analysis 2-65350
 slab dielectric waveguides, numerical analysis of discontinuities 2-65352
 submillimeter waveguide laser interferometer for plasma diagnostics 2-71258
 surface waves, dimensionality transformation 2-114427
 thin-film waveguides for optical integrated ccts., equivalent network analysis 2-65355

dielectrics *see dielectric materials***diesel-electric power stations**

- SO₂ formation kinetics in oil-fired power station boilers 2-83345

diesel engines *see internal combustion engines***diesel power stations** *see diesel-electric power stations***difference amplifiers** *see differential amplifiers***difference equations**

- Caldirola-Montaldi eqn. for quantum dissipative system, related approx. methods 2-107162
 composite panels buckling behaviour 2-114693
 compressible inviscid flow, 3-D, in annular diffusers 2-91485
 discrete chiral-field hierarchy 2-59002
 elasticity, difference methods for elliptic partial differential equations with nonunique solutions 2-95012
 finite difference calc. of inception field at point electrode on dielectric slab surface in insulating oil 2-104812
 finite difference solution of conduction problems in cylindrical coordinates 2-65446
 general structures, creep induced buckling 2-114692
 heat eqn. with nonclassical boundary conditions, stability in C of difference schemes 2-112842
 magnetic field synthesis, Fredholm integral eqn. regularisation technique 2-55014
 Navier's equation solution in rotational curvilinear coordinates, finite difference eqns. 2-53515
 nonlinear heat conduction eqn. with moving boundary condition, convergence of difference schemes (*Chinese*) 2-109158
 operator forms of difference schemes, appl. to grad, div, curl 2-53489
 pseudoplastic transient flow, numerical and exptl. simulation methods 2-91492
 radiative transfer, analytic soln. of difference eqns. 2-78946
 radiative transfer, comparison of finite difference eqns. 2-89139
 radioactive decay curves with background, noniterative method for fitting 2-96410
 Schrodinger equation, numerical integration, finite difference methods 2-79409
 Schrodinger equation, numerical integration in finite difference schemes 2-79408
 stationary problem with strongly varying coefficients, numerical soln. 2-114605
 steel plates loaded by uniaxial in-plane compression, evaluation of elastic-plastic analyses 2-91265
 three-dimensional diffusion neutronics, mixed finite difference formulation 2-80048
 two-phase flow in vertical cylindrical passage, numerical anal. 2-114871
 Volterra equation, extended, soliton solns. 2-74227
 wave bundle propag. in nonlinear media, variational-difference study (*Russian*) 2-95031
 X-ray crystallography, spherically symm. density distrib., recovery from its self-convolution, computer program 2-65805
 *He, supercritical, free convecting heat transfer from vertical surface, numerical anal. 2-60532

differential amplifiers

- lock-in amp. for optical meas. 2-112946
 spectroscopy amplifiers with time-invariant filters, critical parameters regulation and design aspects 2-64810

differential calculus *see differentiation***differential equations**

- see also boundary-value problems; difference equations; Green's function methods; integro-differential equations; linear differential equations; Navier-Stokes equations; nonlinear differential equations; partial differential equations*
 bistable systems, equilib. strength at deterministic limit of stochastic model 2-89623
 Bloch eqns., randomly driven, differential eqns. 2-89617
 Boussinesq equation, similarity solns. 2-84453
 Cauchy problem stabilisation, class of initial functions processing power growth (*Russian*) 2-70932
 chaos in time delayed differential eqns. (*German*) 2-101334
 completely integrable Hamiltonian systems, operators factorisation 2-53496
 coupled equations, theory 2-107152
 disc, circular, residual stresses creation by heating, optimum control 2-91275
 disordered systems, systematic approx. method 2-98509
 dynamic systems, parametrically excited, stability anal., generalised Hill's method 2-101162
 elastic plates theories via orthogonal polynomials 2-91253
 elasticity, three-dimens. linear theory, complete Tonti-type scheme (*German*) 2-107094
 elastico-visco-plastic media, motion in pipes, hydrodynamic charact. calc. (*Russian*) 2-91365
 electron backscattering, analytic model, 10 to 100 keV 2-116313
 equilibrium sorption dynamics, soln. by method of characts. 2-115545
 equivalence transformations for systems of equations of scalar and spinor fields 2-95653

differential equations continued

- Ermakov systems from Lie symm. theory 2-69048
 Ermakov systems, nonlinear superposition 2-58588
 evolution equations which allow an infinite Lie-Backlund algebra, equivalence (French) 2-89520
 FACSIMILE code for void swelling and creep calc. with vacancy loops 2-67468
 flow-invariant sets for autonomous second order differential equations and applications in mechanics 2-84438
 Hamiltonian systems and Riccati eqn. 2-53495
 Hardy-Littlewood integral inequality, associated differential eqn. m-coeff. 2-58589
 heat and mass transfer processes numerical method for simulation 2-95277
 initial-value problems, iterative soln. (Russian) 2-94984
 invariant tensors, associated first integrals and symm. Lax-like fields appl. 2-79777
 inverse problem for forces independent of velocities 2-89522
 Ising model, on square lattice, exact differential renormalisation group eqns. 2-84535
 Ito type stochastic differential equation control problem 2-84542
 Lagrangian dynamics, inverse problem, Helmholtz conditions approach 2-69008
 laminar massif interaction with discrete system of supports, elastic equilb. (Ukrainian) 2-75845
 linear stochastic differential equations, solns., time correl. functions, cumulant expansion 2-94983
 mass transfer in electrode cells, mathematical modelling (Russian) 2-10552
 measurement facilities dynamic characts. computing, input and output signals integration 2-89649
 MHD oscillatory flow with heat transfer in a flat plate channel 2-76035
 mixed wave-equation problem, solution (Russian) 2-76021
 multimass array of solid bodies lowering the order of system of differential eqns. of motion 2-81220
 multimode optical fibres calc., Helmholtz scalar equation solution (German) 2-91056
 n-point functions, for differential eqns. with source, diagrammatic soln. construction 2-63853
 NMR relaxation caused by spin-rotational interaction, stochastic differential eqn. study 2-82742
 nonlinear boundary value problems in transport processes, monotone method 2-69110
 nonlinear media, wave propag., differential eqns. charact. forms 2-89548
 nonlinear superposition principles 2-53486
 numerical solns. of linearized differential eqns., error propag. 2-89128
 ordinary differential equations and the symmetric eigenvalue problem 2-95133
 oscillator, chaotic behaviour, unstable periodic orbits 2-69088
 partially self-similar spacetimes, ordinary differential eqns. for Bianchi-type cosmologies 2-100730
 pendulum, simple, forced subharmonic oscills. 2-81217
 photons and electrons, wave function eqns. 2-113200
 plate, large inextensional deform., eqns. of motion 2-89537
 plate, variable thickness, stress state eqns. 2-65474
 plate deflection theory, boundary value problems 2-53524
 plate deflection theory, numerical integration methods 2-91242
 quasi-linear evolution eqn., infinitely many Lie-Backlund symmetries 2-84434
 random media, functional methods for waves 2-63827
 reaction kinetics, deterministic and stochastic models and applications (Hungarian) 2-105439
 relativistic charged particle dynamics in plane EM wave field and Redmond field 2-70489
 Sawada-Kotera eqn., canonical character 2-79342
 second-order eqns., cubic spline method, appl. to Thomas-Fermi model 2-64854
 semiconductor quasi variational inequality solution (French) 2-98635
 solar flat plate collectors, efficiency with nonuniform irradiance 2-105592
 solid-fluid mixture vibration problem soln., existence and uniqueness (French) 2-84442
 spectral theory of differential operators, conf., Birmingham, AL, USA (Mar., 1981) 2-89450
 springs, large displacements and dynamic stability, helical finite elements 2-114630
 stellar dynamics paired collision dynamics, regularised system of differential eqns. 2-117712
 stochastic differential eqns. with additive and multiplicative noise, and discrete noisy maps, slaving principle 2-89614
 stochastic differential equations, linear, cumulant expansion for two-time correlation functions 2-101327
 Stokes' in WKB theory 2-95077
 stress analysis by hybrid calculating methods, CYCLO-transmission curve-discs example (German) 2-97480
 thick plate buckling FEM 2-114690
 third-order system with folded slow manifold, bifurcation sequences 2-69090
 three dimensional solid shell transition elements 2-109181
 three-dimensional viscous flowfield computations in a streamline coordinate system 2-86300
 wave bundle propag. in nonlinear media, variational-difference study (Russian) 2-95031
 Weyl theory appl. to N-coupled second order differential eqns. 2-113956
 CS₂ gasdynamic laser, mol. vibr. rot. anal. 2-70549

differential scanning calorimetry see *thermal analysis*

differential thermal analysis see *thermal analysis*

differentiating circuits

- thermogram evaluation, differentiating circuit for determination of elapsed time (German) 2-79571

differentiation

see also *differential equations*

- biological signal processing, digital low-pass differentiation 2-117109
 gait, human, practical evaluation of differentiation techniques for anal. 2-99871
 noninteger order differentiation and its optical implementation 2-114197
 nonpotential interactions, geometrical treatment 2-95052
 scanning Auger microscopy, software 2-113061

diffraction

- see also *acoustic wave diffraction; diffraction gratings; diffractometers; electromagnetic wave diffraction; electron diffraction; neutron diffraction*
 1/f noise and diffraction, unified treatment 2-101494
 clusters, small, scattered electron counting system for nozzle beam studies 2-90405
 elastic waves, plane, diffraction by wedge, three-dimensional problem 2-55483
 grating, particle scatt., relation between general relativity and quantum theory 2-58636
 plane wave diffraction at grating, exact soln. of oblique incidence problem 2-79382
 shear waves, horizontally polarised long wavelength, diffr. by edge cracks, materials testing appl. 2-83304
 surface with randomly distributed steps, diffraction intensity angular distrib. 2-115519
 wedge, scalar wave asymptotic diffraction 2-74229
 Au, surface (110), reconstructed, He diffr. calc. 2-116321

diffraction gratings

see also *holographic gratings*

- absorbed energy meas. by photoacoustic detector in Wood anomaly region 2-91035
 binary grating, used for generation focal-plane flattop laser beam profiles 2-55236
 blazed reflection grating theory 2-109027
 concave, monochromator simple design (German) 2-81060
 corrugated grating structures in diffused waveguides, noncollinear Bragg diffr. 2-60237
 cylindrical grating, aberration corrected 2-55317
 Czerny-Turner grating monochromator, slit width choice 2-55310
 Czerny-Turner type plane grating spectrometer transfer function meas. method 2-90828
 dielectric reflection grating, arbitrary thickness, chain-matrix analysis 2-55316
 dielectrics, brightening using diffr. grating 2-110806
 dye laser simple accurate timing mechanism, novel geometry 2-114340
 dye laser using grazing incidence and Littrow mounted gratings, narrow linewidth operation 2-108899
 dye lasers, Cu laser pumped, prism-expander and grazing-incidence grating cavities 2-102823
 echelle-interferometer Cassegrain spectrograph, appl. to astronomical spectroscopy 2-106534
 Einstein objective grating spectrometer, calibration and efficiency 2-89146
 electrically controlled echelette grating for CO₂ laser wavelength selection and modulation 2-65268
 electromagnetic wave diffraction, numerical anal. by mode-matching method with smoothing procedure 2-90780
 EM wave transformations, boundary-value problems 2-96812
 fast dispersive beam deflectors and modulators, electrooptic tuning 2-86083
 fibre-optic communication line, expt., with spectral multiplexing of LED radiation by diffr. grating 2-114464
 finite grating wave diffr. (Ukrainian) 2-102688
 Fourier gratings, perfectly conducting, efficiency, systematic numerical study 2-109028
 Gaussian beam incident upon thick phase grating, diffr. orders 2-55315
 gaussian optical pulse distortion by diffr. grating 2-91034
 glass optical waveguide, two-dimens. integrated optics diffr. grating and Michelson's echelon appl. 2-65348
 grating analysis by the beam-propag. method 2-102712
 grating interferometer with an unusual fringe direction 2-89795
 grazing incidence toroidal grating monochromator, optical design 2-86079
 groove profiles due to wear of diamond ruling tools 2-70665
 hole grating laser beam sampler, wavefront distortion, exact analysis 2-97039
 image self-reproduction in coherent light 2-81064
 integrated-optic spectrum analyser, folded-type, using butt-coupled chirped grating lenses 2-86133
 integrated-optic wavelength multi- and demultiplexers using chirped grating and ion-exchanged waveguide 2-91091
 interferometers, multiple-beam, selective, using diffr. gratings 2-64103
 interlaced binary diffraction gratings for CO₂ laser beam profile shaper 2-108920
 lamellar lossy gratings in quasistatic limit 2-55064
 laser tuning using microprocessor-controlled laser grating system 2-97047
 Lau effect and grating imaging 2-75515
 linear, positioning errors, diffr. field fluctuations, theoretical anal. 2-60226
 linear grid with a lenticular grating, moire pattern 2-90807
 linear low-noise grating generation with an extended incoherent source 2-91037
 LSI structures monitoring, ellipsometry for test diffr. gratings, basic eqn. 2-101444
 magnetic phase gratings, multiwave diffr. theory, appl. to K₂CuF₄ ferromag. stripe domains 2-57064
 mirror surface ripple effects on image quality, astron., telescope performance appls. 2-108994
 mobile emission spectrometer for reliable recognition of materials 2-99637
 modified Wadsworth monochromator matched to storage ring source, theory 2-86078
 moire fringe formation, unsymmetric, appl. in moire topography 2-95451
 moire fringes, incoherent-and-multiplicative type, review 2-96822
 Moire interferometry near the theoretical limit 2-79651
 moire topography, automatic fringe anal. 2-95452
 moire topography, fringe localisation 2-96823
 moire topography fringe visibility and exposure time enhancement 2-95449
 monochromator, concave-grating, high-efficiency, with wavelength-independ. focusing characts. 2-102912
 monochromator, on-blaze, scanning, for VUV 2-81059
 monochromator design for soft X-ray range 2-84761
 monochromators, prism and diffraction, designed for 200 to 750 nm region, radiation scatt. 2-102913
 multicoated gratings, differential formalism applicable in entire optical region 2-90779
 nematic liquid crystal phase grating, laser-induced, strong optical diffr. 2-60185

diffraction gratings continued

- optimisation of gratings for soft X-ray monochromators 2-84763
 orthogonal-stanes-grating moire, multi-colour and polarisation type sets of filters 2-70660
 perfectly conducting gratings, variational theory, ghost study appls. 2-75511
 phase dielectric gratings, flash effect, diffr. efficiency calc. 2-109030
 phase grating, thick, unslanted, Gaussian beam Bragg diffr., plane-wave decomp. numerical evaluation 2-96825
 photoregistration material, frequency contrast characteristics, light polarisation effect 2-65328
 photoresist grating couplers for planar dielec. waveguides, leakage parameter calc. 2-81074
 plane-wave expansions describing fields diffr. by gratings, comments and reply 2-85886
 planar dielectric grating diffr. theories 2-80893
 planar periodic dielectric graded-index waveguide, optical modes, WKB approx. 2-102923
 plane grating and elliptical mirror config. for soft X-ray region monochromators 2-58989
 plane waveguides at Fresnel-zone distances, diffr. transmission of radiation 2-114424
 plate static and dynamic flexure, grating techniques of slope and curvature meas. 2-103132
 profile construction to yield prescribed diffr. efficiencies 2-60225
 quasioptical wave beams diffraction by periodic gratings 2-90810
 radial-grating shearing interferometer, multiple-order 2-79653
 rectangular transmission grating optimisation for monochromator design appl. 2-86085
 reflecting grating in laser resonator, freq.-selective losses 2-65342
 reflection by gratings, Rayleigh methods, author's reply to comments by A. Wirgin 2-96829
 reflection by gratings, Rayleigh methods, comment 2-96828
 replica gratings contaminated by synchrotron radiation, plasma discharge cleaning 2-86086
 rhodamine 6G dye laser, single-mode tunable, high-efficiency 2-96941
 scanning polychromator with concave diffraction grating 2-109025
 semiconductor laser multiple longit. mode control, feedback system using diffr. grating 2-60105
 semiconductor lasers, longitudinal mode control by rectangular conical diffractor system, wavelength-division-multiplexing transmission 2-55190
 semiconductor, light induced transient grating decay obs. 2-57043
 semiconductor, localised laser etching in aq. soln. 2-57498
 sign convention on order numbers for computer program, optical system ray tracing 2-55314
 sinusoidal and Ronchi, optical addition and subtraction of characters (Chinese) 2-65174
 small-period high-efficiency diffr. grating fabrication method 2-86088
 spatial-period division, deep-UV, using an excimer laser 2-109090
 spectrophotometry, components and quality control 2-58914
 square wave binary amplitude grating, Fresnel image props. 2-70494
 surface plasmon propag. parallel to grooves of large amplitude grating 2-60000
 surface polaritons along a grating, linear EM study 2-109029
 thick phase gratings, higher order modes at off-Bragg angle incidence 2-60224
 thin film optical frequency doubler using a grating coupler 2-97106
 thin film semiconductor waveguides, electrooptic modulation by stationary phase gratings 2-109045
 toroidal grating monochromator, beam line design and performance at ACO storage ring 2-86080
 toroidal grating monochromator design for SURF II 2-86077
 transmission and reflection gratings for soft X-ray anal. 2-84757
 transmission function analysis as grating undergoes a periodic nonuniform motion 2-70504
 transmission gratings use for optical constant meas. in soft X-ray range 2-87726
 unslanted thick phase grating finite beam Bragg diffr., rival theories 2-80894
 wavefront sensing and control aspects in a high energy laser optical train 2-102836
 waveguide diffraction gratings, specially shaped, optical props. 2-65343
 waveguide resonators with distributed Bragg reflectors 2-86101
 X-ray diffraction gratings for synchrotron radiation spectroscopy, fabrication method 2-101506
 Ag gratings in air and electrolyte, plasmon surface polaritons, nonresonant excitation, light scatt. 2-104896
 Ag-gratings, surface plasmon dispersion relations 2-98708
 Au-gratings, surface plasmon dispersion relations 2-98708
 Bi₁₂O₂₀ photorefractive crystals, four-wave mixing expt., interference between signal and its conjugate 2-90972
 CO tunable sealed laser, diffr. grating as coupling-out element in selective resonator 2-55131
 CO₂ laser, double electron beam controlled, freq. selection (Chinese) 2-65246
 CO₂ laser radar using detector arrays, beam profile shaping 2-96964
 CO₂ TE hybrid unstable resonator laser, single longit. and transverse mode operation 2-65198
 DF-CO₂ intracavity knife-edge diffr. screen laser on D₂-F₂-CO₂-O₂-He gas mixture 2-85993
 Ge, diffraction grating, high-density laser-induced transient plasma, picosecond dynamics 2-77628
 Ge, pulsed-laser-annealed, stimulated surface polariton wave scatt. and grating formation, time resolved meas. 2-114359
 LiNbO₃ low-voltage electrooptic deflector 2-60223
 LiNbO₃, x-cut, efficient waveguide Bragg deflection grating 2-102956
 LiNbO₃:Fe electrooptic crystal refractive-index grating, investig. by optical microscopy 2-102916
 LiTaO₃:Fe electrooptic crystal refractive-index grating, investig. by optical microscopy 2-102916
 Se amorphous film, surface relief form. by laser bombardment 2-86728
 Si, free-carrier gratings, diffr. efficiency and decay times meas. 2-86087
 Ti-Ag layered crystals, VPE synthesis, one-dimens. X-ray diffr. grating appl. 2-83040

diffraction instruments *see diffractometers***diffraction model**

- diffraction photoproduction cross section, QCD planar ladder diagram anal. 2-69426
 hadron-hadron diffraction dissociation processes, asymptotic behaviour at very high energies 2-101770

diffraction model continued

- hadrons diffraction dissoci. in additive quark model (Russian) 2-74661
 high mass diffraction dissociation, jets, gluonia, pomeron fragmentation region 2-64308
 inelastic diffraction, simple two-component model, hadron confinement, nuclear matter 2-59134
 quark-hadron form factors, damping, and diffraction scatt. 2-74689
 two-component structure for hadron, diffraction on nucleon and nuclei 2-74672
 vector-meson diffractive photoproduction, polarisation characts. (Russian) 2-54175
 $\gamma\gamma$, high energy, vector meson diffractive prod., energy depend. 2-113317
 $hh \rightarrow \pi X$, high-energy, interference effects, multicluster model 2-101697
 $h\bar{h} \rightarrow 100, 200$ GeV/c, charged multiplicity distrib. universality 2-107704
 K_S^0 regeneration on nuclei, energy depend. 2-54449
 $K^+p \rightarrow pX$, 100-200 GeV/c, high-mass diffractive states, charged multiplicities 2-74707
 μp , 100, 150 GeV, p, p' and 0 diffractive prod., mass distrib. 2-95850
 $\nu(p)N \rightarrow \mu^+ (\mu^-) CXCX \rightarrow \mu^+ \mu^- (\mu^+ \mu^-) X$, diffractive charm-anticharm prod. model 2-89959
 pN , 350 GeV, charm particle pairs forward prod. study 2-84922
 pN , 350 GeV, limits on D⁺-D⁰ mixing and bottom particle prod. cross section 2-84923
 pp , diffractive heavy flavour prod. consequences 2-95886
 pp colliders strong interactions, diffr. and QCD 2-107627
 $p \bar{p} \rightarrow pX$, 100-200 GeV/c, high-mass diffractive states, charged multiplicities 2-74707
 $\pi^- N$, 278 GeV, charm particle pairs forward prod. study 2-84922
 $\pi^- N$, 278 GeV, limits on D⁺-D⁰ mixing and bottom particle prod. cross section 2-84923
 $\pi^- p$, 200 GeV/c, π^0 prod., multiplicity distrib., diffraction dissociation 2-113303
 $\pi^- p$, slope parameter and zero trajectories 2-54206
 $\pi^- p$, slope parameter and zero trajectories 2-54207
 $\pi^- p \rightarrow (pX) (\pi^- X^+)$, 40 GeV/c, single inclusive diffractive prod. study (Russian) 2-54222
 $\pi^- p \rightarrow X$, 200 GeV/c, diffractive dissoci. (Russian) 2-64345
 $\pi^- p \rightarrow pX$, 100-200 GeV/c, high-mass diffractive states, charged multiplicities 2-74707

diffractometers*see also X-ray diffractometers*

- γ -ray, for obs. of coherent and incoherent Mossbauer scatt. 2-66958
 automatic stability checking for DRON-2 diffractometer 2-74479
 pulsed laser wave front monitoring appl. 2-95426
 ultra small angle X-ray and neutron scatt., appl. to H₂ in metals 2-86521
- diffusion**
- see also biotransfusion; diffusion in gases; diffusion in liquids; diffusion in solids; electromigration; membranes; osmosis; permeability; self-diffusion; surface diffusion; thermal diffusion; turbulent diffusion*
 ϕ -kinks, diffusion const., quantum corrections 2-112817
 AP stars, diffusion rel. to abundance stratification detected by curve of growth method 2-68783
 N.Atlantic Ocean, vertical eddy diffusivity from obs. of small-scale shear and density struct. 2-88879
 atmosphere 2-100431
 bistable potential, barrier diffusion, Smoluchowski eqn. eigen anal. 2-79504
 bond-disordered media, electron diffusion 2-56536
 Brillouin peaks diffusion mode coupling 2-81310
 Brownian macroparticles, mutual diffusion coeff. second order conc. corrections 2-107236
 Brownian motion, boson operator representation 2-112820
 Brownian particles, interacting, transport coeffs. 2-74319
 Brownian particles, steady absorption by a sphere 2-95237
 chemical reactions, orientational correl., translational and rot. diffusion 2-99664
 chemical reactions in tubular flow, computation using iterative methods 2-81405
 chemically reactive flow, atmospheric diffusion eqn., numerical soln. 2-55674
 classical diffusion on a random chain 2-53672
 classical particle in random medium, linear response theory 2-84561
 classical particle in random medium, nonlinear response theory 2-84562
 constant of motion, derivation from conservation law 2-89638
 convection diffusion problems, finite element method, error anal. 2-103003
 convection-diffusion eqn., stability of Petrov-Galerkin method for periodic problems (Chinese) 2-109164
 ϵ Coronae Borealis, HgMn star, absorpt., line symmetries rel. to atmospheric diffusion 2-63431
 diffusion controlled reactions, conc. depend. among stationary reactive sinks 2-58749
 diffusion-controlled reactions among stationary sinks, dynamics, scaling expansion approach 2-93751
 disordered system, particle diffusion, long-time tail effects 2-74369
 dissipation systems with translational symmetry, diffusive dynamics, 1-dimens. map model 2-101358
 doubly connected domains of complicated shape, nonlinear diffusion type problem 2-114606
 dyed and fluorescent track detectors, diffusion processes 2-70081
 dynamics and related general EM pot. 2-95240
 einstein's relation 2-89507
 fjords, effect of fjord and coastal circulation interaction on turbulence and diffusion 2-83828
 fluoresc. correlation spectroscopy for determ. diffusion coeff. 2-95243
 fluctuating random surface, diffusion 2-95283
 Fokker-Planck eqn. reduction to diffusion eqn. and radiation boundary condition 2-101304
 Fokker-Planck eqn. with nonlinear drift, exact solns. 2-101354
 Fokker-Planck eqns., class of exact solns. 2-95279
 free stream turbulence, stagnation point heat transfer 2-103159
 gas diffusion in porous media, mass transfer in transition region calc. 2-70995
 geminate reactions, mean recombination time of diffusion controlled processes 2-83342
 generalised diffusion matrix, variational theorem 2-89639
 global bifurcation diagram in ecological interacting and diffusion systems 2-95284

diffusion continued

- v Hercules, Hg Mn star, diffusion rel. top Mn abundance stratification 2-68783
- ϕ Hercules, HgMn star, absorpt. line symmetries rel. to atmospheric diffusion 2-63431
- heterogeneous lattices, random walks, diffusion laws 2-79501
- interacting Brownian particles, diffusion coeffs. calcs. 2-101355
- internal wave, interactions, induced diffusion approx. 2-70971
- ion diffusion and generalised Einstein relations, reson. charge transfer effects 2-71064
- isotropic isobaric-isothermal diffusion anal. 2-58756
- Keplerian motions diffusion by stochastic force, general formalism 2-89117
- lattice, anisotropic dual-medium, random walk, asymptotic behaviour 2-101321
- lattice, symmetric random walks in random environments 2-107234
- Lorentz model, d-dimensional, diffusion and localisation 2-63901
- Maxwell fluid, diffusion of vorticity 2-97568
- membrane, restricted diffusion, neutron incoherent scatt. study 2-83418
- molecular liquid, extended diffusion oscillator model in two dims. 2-91736
- nonequilibrium systems, symmetry breaking and pattern selection 2-63947
- nonlinear, Barrenblatt-Pattile similarity soln., eigenvalues calc. 2-101357
- nonlinear diffusion eqn. $n_i = (n \cdot n_i)_x$, asymptotic behaviour 2-95278
- nonlinear diffusion eqns., travelling wave solns. 2-53705
- nonlinear diffusion equation, large time soln. 2-74368
- nonMarkoffian diffusion in 1D disordered lattice 2-95242
- numerical simulation with conservative difference schemes (German) 2-107278
- oil-in-water microemulsions, high emulsifier content 2-93835
- one dimensional lattice systems, diffusion with random transfer rate 2-101352
- one-dimensional disordered systems, diffusion model response functions 2-79510
- one-dimensional percolation model, AC cond., effect of periodic boundary conditions 2-61429
- one-dimensional random systems 2-101360
- operator compact implicit method of exponential type for diffusion-convection eqns. 2-97539
- oscillation phenomenon in numerical solution of diffusion-convection equation 2-112846
- particle diffusion and heat exchange in stagnant fluidised bed 2-103207
- particle motion, one-dimensional dynamics, stochastic model, freq. and temp. depend. (Russian) 2-79473
- planetary atmospheres, diffusional limits on thermal and nonthermal escape fluxes 2-112359
- position-momentum uncertainty rels. in stochastic mechanics 2-89628
- pseudo-shock waves, with upstream boundary layers, modified diffusion model 2-70986
- random diffusion problems, non-stationary, one-dimens., finite element anal. 2-103012
- random networks, macroscopic props. of disordered media, conf., New York, USA (June '81) 2-94915
- rate theory, dynamic corrections 2-84544
- Rayleigh piston, diffusion modeling 2-58709
- reaction diffusion systems, multivariate master eqn. stochastic derivation 2-93752
- reaction-diffusion systems, rotating spiral waves, Schrodinger eqn. approach 2-83346
- reactive paths in the diffusion limit, frictional coupling effects 2-105443
- Saturn atmosphere, eddy diffusion coeff. determ. 2-112387
- scavenger problem in diffusion-controlled recombination 2-54910
- self-diffusion as an example for the hydrodynamic limit 2-95288
- shear gas flow, diffusion to a particle in arbitrary surface reaction kinetics 2-114926
- solar flare protons, propag. and diffusion coeff. in interplanetary medium 2-100675
- stellar interiors, appl. of turbulent diffusivities to development of convection theory 2-100911
- stochastic reaction-diffusion system, kinetic drumhead models of interfaces 2-112844
- surface and interface diffusion and segregation 2-104128
- synergetics, chaos and order in nature, conf., Schloss Elman, Bavaria, FRG (April-May 1981) 2-58543
- transport-diffusion algorithm and its applications to the Navier-Stokes equations 2-69114
- trapping, one-dimens., excitation time decay 2-84563
- two region slab with eroding boundary, transient mass diffusion problem 2-97683
- unstable state dynamics, master equation evaluation 2-58714
- variational principle for diffusion problem 2-112849
- weak convergence of Markov jump-processes to diffusion process (French) 2-53665
- zitterbewegung-possessing particles, generalised Fokker-Planck equation 2-107276
- Hg-Mn stars, radiative diffusion rel. to Be abundances 2-112448
- O⁺ diffusion equation in ionospheric F₂-layer, approximate soln. 2-112193
- SiO₂ dispersed in cyclohexane, dynamic behaviour, photon correl. spectroscopy 2-109395

diffusion coefficient *see diffusion***diffusion creep**

- migration-assisted, grain boundary diffusion 2-92087
- powder compacts, sintering, one-component, dislocation-activated shrinkage rates (German) 2-93470
- radiation creep, diffusion of point-defects in strained crystal, theory 2-104050
- two-phase, diffusional creep 2-105218
- Al₂O₃, thermal expansion anisotropy, stress meas. 2-76713
- Cu, strength controlling processes, temp. and strain rate effects 2-77891
- Pb and Pb-Bi (In) films, strain relax. meas. on Si substrates 2-82189

diffusion in gases

- see also self-diffusion in gases; thermal diffusion in gases*
- atomic distributions determ. by anomalous methods, increased efficiency 2-114967
- dichlorodifluoromethane, and mixture with N₂, gaseous, thermal cond. and mutual diffusion coeffs. 2-114962
- diffusion combustion, rates and crit. conditions 2-62401
- diffusion screening layer, asymptotic models 2-71053

diffusion in gases continued

- electron, diffusion coeff., Monte Carlo calc. 2-81441
- gas mixture, selective diffusion under the action of radiation 2-103241
- gas mixtures, barodiffusion coeff. calc. (Russian) 2-60703
- hard-sphere gas, vel. distribution, large energy behaviour calc. 2-103237
- ion geminate and homogeneous recombination and fluoresc. quenching, Debye-Smolouchowski eqns. 2-83379
- methane diffusion flame, comparison between CARS and corrected thermocouple temp. meas. 2-107322
- mixtures, binary diffusion, second virial coeff. meas. 2-60697
- molecular gas, vibr. rot. transitions saturation kinetics in diffusion approx. 2-81433
- nonuniform fluids, propag. of density fluctuations, simple models 2-71318
- premixed flames in turbulent flows, mol. diffusion and thermal expansion effects 2-65657
- reactions, diffusion controlled, among static traps, conc. depend. 2-62391
- trichlorofluoromethane, and mixture with N₂, gaseous, thermal cond. and mutual diffusion coeffs. 2-114962
- VPE of GaAs, interdiffusion coeffs. of growth components 2-56382
- Ar-N₂ mixtures, gaseous, viscosities, capillary flow meas. 2-110026
- Br⁻, diffusion coeffs. in inert gases, test of generalised Einstein relation 2-60704
- CO, and binary mixtures, diffusion coeffs., viscosity meas. 2-114960
- He-CO₂, dense gas, interdiffusion coeffs. meas., density depend. 2-103247
- Kr, positron diffusion, elastic cross sections 2-76057
- Li⁺ ions in Ar, Kr and Xe, mobilities and longitudinal coeff. at room temp. 2-60713
- Li⁺ ions in He gas, mobility and diffusion coeff. 2-109437
- N₂, and CO mixtures, diffusion coeffs., viscosity meas. 2-114960
- N₂, NMR linewidths, rot. and orientational relax. times, J-diffusion theory appl. 2-114015
- Na⁺ and Li⁺ in H₂/O₂/Ar flame, ionic diffusion, mobility coeff. and flame temp. determ. by dual laser ionisation 2-105484
- Rn gas, and progeny, diffusion in parallel plate mobility spectrometer 2-109443
- SF₆ diffusion in He buffer due to CO₂ laser radiation (Russian) 2-109444
- Xe, positron diffusion, elastic cross sections 2-76057

diffusion in liquids

see also electromigration; self-diffusion in liquids; thermal diffusion in liquids

- AAHBO, nematic liq. cryst., ESR line shape 2-98937
- absorption and diffusion in medium with spherical sinks 2-78067
- anthracene, and anion, soln., DMF, transfer diffusion theory, verification by elec. cond. meas. 2-115445
- asymmetric top molecules in liqs., mol. rots., J-M extended diffusion models 2-80571
- biological tissues, rectified diffusion and acoustic microstreaming by bubbles 2-57846
- BPHB, nematic liq. cryst., ESR line shape 2-98937
- chemical reactions, diffusion theory 2-111483
- convective diffusion equation, asymptotic solutions, fluid flow, mass transfer and heat transfer 2-91455
- coupled translational and rotational diffusion in liquids 2-53669
- 4-cyano-4'-n-pentylbiphenyl nematic film, diffusion coeffs. meas. by dynamic approach 2-103596
- dibutyl phthalate, liq., glass transition, diffusion, EPR study 2-104704
- diffusion convection equation, solns. 2-91457
- diphenyl butadiene, rot. diffusion, UV picosec. pump-probe spectrosc. 2-80643
- dissolution of solid in liq., diffusion-controlled, growth of new phase layer, kinetic law 2-98294
- dissolved species in pulsating crack, advection-diffusion eqn., numerical soln. 2-91569
- dissolved species in pulsating crack, advective diffusion eqn., upwind numerical soln. 2-91570
- dodecyltrimethylammonium chloride-water, mol. motion and struct., ¹⁴N spin-lattice and spin-spin relax. times 2-82740
- electrolyte solns., diffusion theory 2-81994
- float glass melt, diffusion coeffs. for Fe³⁺ 2-109686
- hemoglobin, solns., O₂ diffusivity investig. 2-88523
- hard spheres mutual diffusion, thermodynamic driving force 2-60849
- hexadecyltrimethylammonium fluoride-water, mol. motion and struct., ¹⁴N spin-lattice and spin-spin relax. times 2-82740
- holographic interferometric meas. technique 2-98319
- incompressible flow problems, Leonard method valid at infinite mesh Reynolds number 2-91382
- intermolecular H⁺ transfer between equivalent mols., diffusion induced tunnelling 2-88339
- ion geminate and homogeneous recombination and fluoresc. quenching, Debye-Smolouchowski eqns. 2-83379
- Liesegang rings, nucleation and growth in concentration gradients 2-105518
- liquid alloys, binary, diffusion coeffs. 2-71686
- liquid metal-O₂ system, correlations for thermodynamic and kinetic props. of gas solutes 2-98286
- malonic acid in soln., dynamic props. from spin relax. of ¹³C labeled methylene group 2-54872
- methylene chloride, liq., IR spectra, rot. diffusion, temp. depend., mol. dynamics simulation 2-57068
- molecular diffusivities in liquids, corrls. for prediction 2-92242
- molten salts, ionic transport props., mass and size effects 2-56230
- mononucleosides, polyion diffusion, doppler shift spectrosc. investig. 2-66263
- nematic and smectic liquid crystals, translational diffusion consts. from pulsed field gradient double quantum open echo decays 2-60872
- nonelectrolytes, particle motion by chem. gradients 2-71684
- nonhomogeneous fluids, motion in presence of diffusion 2-60622
- nonlinear desorpt. process with Dirichlet boundary conditions and power function variation, conc. profiles 2-99704
- nonlinear diffusion problem with power rel. between diffusion coeff. and conc., desorpt. times computation 2-99703
- nonlinear reaction-diffusion, generalised Lagrangian equations 2-67728
- nonuniform fluids, propag. of density fluctuations, simple models 2-71318
- organic liquids, weakly assoc., orientational correl., depolarised Rayleigh scatt. 2-99138
- pattern formation, instability theory, rel. to Liesegang rings 2-105519

diffusion in liquids continued

- plates, reacting, orderly system distributed along a stream, conc. field 2-81402
- poly-n-nonyloxyphenol poly-p-methacryloyl oxybenzoate, hydrodynamic and conform. props. (*Russian*) 2-108755
- polyatomic liquids, tracer diffusion meas., Taylor dispersion method 2-110021
- polydisperse suspension, diffusion, memory effects, projection formalism 2-82000
- polyelectrolyte soln., diffusion of small molecules 2-66269
- polyethylene, molten, diffusion of linear hydrocarbons, hydrostatic press. effects 2-104041
- polyion diffusion in low ionic strength buffers, electrolyte dissipation effects 2-66263
- polyion diffusion in low ionic strength buffers, electrolyte polarisation effects obs. 2-66264
- polymer dilute solns., photon correl. spectroscopy data fitting 2-91752
- polymer gels, diffusion of solutes 2-92249
- polymer melts dynamics and statics of a long chain in a dilute melt of shorter chains 2-56231
- polymer soln., nontangled systems, diffusion-controlled reactions, kinetics study 2-67748
- polyolefins, diffusion of organic cpds., collection of kinetic data 2-107026
- polypropylene, molten, diffusion of linear hydrocarbons, hydrostatic press. effects 2-104041
- protohaeme, diffusion of CO, ligand diffusion effects in solvents 2-78282
- reactions, diffusion controlled, among static traps, conc. depend. 2-62391
- red blood cell suspensions, O₂ diffusivity investig. 2-88523
- self-similar diffusional processes of phase transition, front instability 2-61118
- simple liquid in prefreezing regime, viscoelasticity 2-98177
- sintering, liquid-phase, diffusion-limited, recrystn. of C 2-67234
- solutions, critical slowing down of chemical reactions (*Russian*) 2-88336
- solutions, low viscosity, photoluminesc. quantum yield and excitation energy migration 2-110923
- suspended particles dispersion in uniaxial flow, stochastic theory 2-86327
- suspension, polydisperse, diffusion memory effects, hard sphere approx. at low density 2-82001
- Taylor flow, diffusion coeffs. determ. 2-71046
- tear film, human, Marangoni convection 2-78358
- ternary nonelectrolyte liquid mixtures, diffusion thermoeffect, theory 2-104038
- thin spherical layer, nonsteady state convective diffusion 2-109320
- time dependent transport in a fluid with static traps 2-76718
- toluene-chlorobenzene-bromobenzene, heats of transport, diffusion thermoeffect meas. 2-104039
- transfer diffusion theory, verification by elec. cond. meas. 2-115445
- viscous fluid mixture, equations of motion, thermal and intermol. diffusion, chemical reactions, radiation press. 2-76722
- water, Brownian motion, rot. transport, from light scatt. 2-89626
- Ag, single crystal, electrocrystallisation, conc. non-homogeneity 2-91834
- Al alloys, ternary and quaternary, solidification, estimate of interdiffusion undercooling 2-111163
- Al, dissolution of Cr, kinetic parameters and diffusion coeffs. 700-900°C 2-99395
- alloy film preparation, evaporation kinetics from melt (*Russian*) 2-66393
- CaO-Al₂O₃-SiO₂, liquid-state interdiffusion using multiautomic ion models 2-86914
- CaO-SiO₂ melt at 1600°C, tracer diffusivity 2-81999
- CsF, aq. soln., diffusion coeff. at 40°C 2-115444
- Fe based ternary system, liq., N diffusivity estimation 2-115446
- Fe-base ternary system, liq., H diffusivity estimation 2-115443
- Fe-Cu, sintering, liq. phase, grain coarsening kinetics 2-111111
- Fe-Sn, phase relations and multiphase diffusion 2-99400
- Ga, of P and As, calc. from rate of solution 2-110020
- In-Cu(Ag), liq. binary system, O diffusivity and thermodynamic props. 2-86907
- LiNO₃-AgNO₃ molten mixture, diffusion, elec. cond. and phenomenological coeffs. 2-66265
- Si-Au-Al, distrib. ratio of Al, zone refining with temp. gradient 2-71487
- Si-Sn, phase relations and multiphase diffusion 2-99400
- Ti₂Se₃-¹¹⁰Ag(¹¹³Sn), fused, diffusion of impurities 2-81996

diffusion in plasma see plasma transport processes**diffusion in solids**

- see also electromigration; ionic conduction in solids; self-diffusion in solids; surface diffusion
- adsorption, kinetic models with bulk dissolution 2-110134
- alkali halides, hydrogen centres, interatomic pot., vibr. modes, and diffusion, pseudopot. cluster calc. 2-65992
- alkali metals, F-centres, thermal dissociation energy, electrolytic coloration meas. 2-60977
- alloy, binary, evolution toward equil. shape of θ' precip. by interface diffusion 2-72702
- alloy, irradiat., recoil resolution and particle stability, dissolution and inverse coarsening 2-86719
- alloy steel, hydrogenated, type 40 KH, H interaction with defects during microplastic deformation. 2-105261
- alloys, binary, cubic, tracer diffusion via vacancies, Monte Carlo calc. 2-86938
- alloys, motive force of diffusion and change in the free energy on the phase separation (*Japanese*) 2-56242
- alloys, multicomponent, diffusional reactions, numerical treatment 2-61188
- alloys, multicomponent, with sublattices, diffusion 2-61190
- alloys, single-phase, numerical calcs. of diffusion 2-66276
- atom pair relative displacements for vacancy mechanism from random walk theory 2-56241
- austenite, bainitic transformation kinetics, US treatment effect (*Russian*) 2-67325
- BCC ternary ordering alloys, interstitial diffusion, vacancies effect, theoretical anal. (*Russian*) 2-98338
- biased diffusion of radiation-produced point defects to interactive sinks 2-110045
- binary alloy, composition-modulated films, for studying stability and crit. phenomena in solid solns. 2-56402
- binary system with chem. interaction of components, contract melting props. (*Russian*) 2-66183
- blocking at low particle concs. 2-71697
- brass, diffusion galvanising kinetics 2-111377
- brass, diffusion-induced grain boundary migration 2-103783

diffusion in solids continued

- brass coatings, diffusion formed, AES study 2-87105
- bulk diffusion, influence of dislocations 2-104075
- cavity growth, by coupled surface and grain-boundary diffusion, numerical anal. 2-110048
- chemical diffusion in a one dimensional lattice with two sites inequivalent 2-98325
- coating/substrate interdiffusion, thickness effects analysis using normalised distance and time 2-93653
- composites, anisotropic materials, irreversible hygrothermomech. behaviour, numerical anal. 2-71723
- continuum mechanics, rel. to solid state physics, review (*German*) 2-91232
- coupled diffusion of two species in a slab with an eroding boundary 2-66275
- creep, diffusional, migration-assisted, grain boundary diffusion 2-92087
- creep, dislocation network theory, climb glide, multiplication and pipe diffusion 2-76572
- crystals, two dimensional, defect motion and stress relaxation, shear modulus 2-61208
- cubic crystals, nucl. mag. relax. induced by lattice defect dynamics 2-104736
- defective solid, tracer diffusivity and Haven ratio, temp. depend., Monte Carlo calc. 2-86937
- defective solids, chemical diffusion 2-92292
- defects, bound and unbound, pressure variation of Gibbs energy 2-98348
- diamond, penetration of liq. metals, high static press. 2-82082
- disordered medium, diffusion 2-71699
- doped cryst., dislocation movement, activation energy, impurity diffusion 2-76751
- electrically conducting media, semiinfinite, contact phenomena influence 2-86921
- electron-hole plasma, magnetostatic mode, anomalous diffusion 2-104407
- enhanced diffusion under irradiation, thermodynamic anal. 2-110046
- equilibration of diffusional traps in solids 2-115448
- FCC alloys, very dil., free enthalpy of impurity-vacancy binding 2-81814
- fibre reinforced composite, unidirectional, moisture diffusivity 2-86934
- film growth, ion bombard, implantation of impurity atoms, diffusion and defect interaction study 2-55997
- glass, doped polarisable ion diffusion behavior during ion-exchange process 2-76738
- glass, interdiffusion of alkali and hydronium ions, partial ionisation 2-86947
- glass, planar waveguide fabrication by field-assisted diffusion 2-55331
- glass fibre reinforced epoxy, elec. props. effect of water absorpt. 2-67573
- glass planar optical waveguides, fabrication by Ti⁴⁺ ion exchange diffusion 2-109042
- grain and phase boundary diffusion, conc. phase transitions, theory (*Russian*) 2-98339
- grain boundary migration, diffusion-induced, morphology 2-109811
- Hastelloy C-276 and G, Ni-base stainless alloys, H transport rel. to H embrittlement 2-99539
- III-V semiconductors, acceptor impurity diffusion, self-induced field-effects, theory 2-115466
- III-V semiconductors, of Zn, open tube method 2-92278
- impurity diffusion rate, validity of Brownian-motion theory, phonon modes 2-76748
- integrated optics, waveguide fabrication, glass and LiNbO₃(TaO₃), ion exchange and diffusion processes 2-65411
- intercrystallite crack development by diffusion mass transfer, kinetics 2-81289
- interface diffusion parameters, asymptotic expansions (*Russian*) 2-92370
- interface diffusion width and boundary diffusion coeff., Fisher model, numerical soln. (*Russian*) 2-98349
- interfacial transport, statistical rate theory 2-86944
- interstitial solid solns., thermal transport enthalpy calc. (*Russian*) 2-115461
- ionic crystal, contact melting, external electrostatic field effect (*Russian*) 2-66182
- ionic lattice, thermodynamic factor for diffusion, effect of defect assoc. 2-61189
- irradiated material with point defects, transport eqns. (*Russian*) 2-92251
- irradiated materials, absence of pore formation, vacancy diffusion (*Russian*) 2-56010
- irradiation creep, stress-induced preferential attraction due to anisotropic diffusion 2-103885
- Kapton polyimide film, dual model sorption and transport of SO₂ 2-87042
- kink-pair formation, on dislocations, diffusion theory 2-98347
- light interstitials, diffusion through nonuniformly distributed traps 2-104073
- linear viscoelastic media, diffusion theory 2-114668
- low-molecular cpds. in polymers, translational and rot. diffusion coeffs., rel. to glass transition temps. (*Russian*) 2-76723
- membrane, with selective skin, transient diffusion 2-88376
- metal, void nucleation, stress and temp. driven 2-76429
- metal crystal containing refl. or absorpt. barriers, diffusion mobility of atoms, random walk calc. (*Russian*) 2-61192
- metal film interdiffusion on GaAs and InP, book contrib. 2-61215
- metal film on semiconductor, interactions, book contrib. 2-61213
- metal film on semiconductor, interface chem. reaction and diffusion 2-86954
- metal hydrides, Advanced Study Institute, Rhodes, Greece (June 1980) 2-74142
- metal silicide formation, radioactive ³¹Si marker studies, computer simulation 2-86940
- metal surface layers, effect of spark discharge and electrolytic plasma (*Russian*) 2-62267
- metal-metal interface interactions, similarity to metal-semiconductor interfaces 2-115578
- metal-semiconductor interface interaction studied by soft X-ray photoemission spectroscopy 2-110051
- metal-semiconductor interface interactions, similarity to metal-metal interfaces 2-115578
- metal/Si systems, electron beam induced reactions 2-86955
- metallic glasses, diffusion rates of Au 2-104057
- metallic layer contact system, diffusion-induced boundary migration during heating 2-86952
- metallic particles, sintering, appl. of surface oxide model 2-88020
- metals, diffusion of H, isotope effects, theory 2-98341

diffusion in solids continued

- metals, FCC, internal friction, time evolution under irradiation, peaking effect 2-98196
 metals, FCC, interstitial quantum tunnelling at low temp. 2-115468
 metals, FCC, vacancy migration, trapping and clustering by γ -ray spectra 2-56996
 microscopic hopping and continuum diffusion in vicinity of a defect 2-71696
 MIS and MIM multilayer thin film systems, interfacial reactions, AES study 2-92291
 Mossbauer study of localised diffusion in interstitial cage model calc. 2-56983
 muon jump diffusion, depolarisation in presence of trapping impurities, stochastic model 2-92286
 muonium, anomalous, depolarisation in crystals during fast diffusion 2-76750
 Nernst-Einstein eqn. in high defect solids, tracer and chem. diffusion coeff. 2-76727
 one-dimensional diffusion eqns., free boundary-value problem, nonlinear integral eqn. reduction 2-56243
 particle stability, with recoil resolu. 2-67339
 passive optical elements fabrication of integrated optics 2-86136
 permeation for cylindrical geometry, math. treatment 2-66279
 phase formation kinetics in diffusion zone under mutual diffusion conditions (*Russian*) 2-92148
 phase formation kinetics in diffusion zone under mutual diffusion conditions in elec. field (*Russian*) 2-92149
 phase separation and aggregation of precipitates, change in motive force of diffusion and free energy 2-92157
 phosphates, polymeric vitreous, gas phase synthesis laws 2-111084
 phosphosilicate glass film, H_2O absorb. and densification 2-115630
 planar binary diffusion couples, growth kinetics, thin film and bulk cases 2-86943
 PMMA plus water, sorption kinetics and volumetric changes 2-65880
 point defect migration to dislocations, recomb. effect (*Russian*) 2-98346
 polyethylene, crosslinked low-density, drawing depend. of mech. and transport props. 2-93549
 polyethylene, cryst., relax. effects, stochastic defect diffusion model 2-76326
 polyethylene pipe, sorption and diffusion of solvents 2-71797
 polymer, glassy, nonequil. nature obs. using Fickian diffusion of alkane permeants 2-66292
 polymer glass, Case II diffusion theory 2-92253
 polymer-electrode interface, penetration of metal into polymer based on electrochem. reaction 2-62404
 polyolefins, diffusion of organic cpds., collection of kinetic data 2-107026
 polypropylene, crystallising, impurity diffusion rel. to annealing 2-104049
 polypropylene, diffusion coeff. of phenyl- β -naphthylamine, conc. depend. (*Russian*) 2-76726
 polystyrene film, atactic, effect of thermal history on, gas transport 2-92275
 polystyrene film, biaxially oriented, glassy, gas transport, effect of tensile strain, time and temp. 2-61205
 polystyrene polar mol. systems, mol. rot. mobility study by TSC 2-91823
 positronium, diffusion in crystals, temp. depend. 2-76752
 powders, mass transfer routes in reactions 2-72963
 precipitates, coherent, growth approx., stability 2-56193
 quartz, diffusion of adsorbed Br_2 and acetone 2-66294
 quartz, of Ga, neutron activation anal. 2-66289
 radiation damage phenomena, cascade diffusion theory as general method for modelling 2-103841
 rate theory, dynamic corrections 2-84544
 reaction kinetics, jump diffusion rates effect 2-72979
 reactive diffusion in two component solid soln. 2-61191
 rotational diffusion of mol. in cryst., uniaxial rotator in N-fold pot., Langevin model 2-81695
 self-stress, effect on diffusion in solids 2-115447
 semiconducting MBE films, interface microstruct. props. 2-87082
 semiconductor diffusion processes, numerical solns. of Fokker-Planck eqn. 2-71733
 semiconductor-metal interfacial reaction at room temp. 2-56267
 semiconductors, complementary error function approximations at least squares method 2-71724
 semiconductors, diffusion, vacancy reduction effects, theory 2-115464
 semiconductors, diffusion-mobility relation, statistical thermodynamics 2-71994
 semiconductors, impurity complex formation, theory 2-61017
 semiconductors, radiation stimulated impurity diffusion 2-64730
 sharp line donor-acceptor pair recombination luminesc. 2-104928
 silicate glass, interdiffusion of alkali and hydronium ions, partial ionisation 2-86946
 silicide formation, mechanisms and interfacial layers, book contrib. 2-61214
 sine-Gordon system, kinks, Brownian motion and diffusion const. 2-84530
 sintering, microstruct. development, grain and pore coarsening 2-93469
 sintering by volume diffusion, dynamic computer simulation 2-88021
 slag, Fe-making, diffusion of water and H-bonding species 2-104072
 solar cell efficiency reduction by bulk defects across back-surface field junction 2-78209
 solar energy conversion technologies, solid-solid interface and diffusion, research needs 2-86948
 solid solutions, precipitation, diffusion theory 2-86885
 solid state phase transformations, diffusion controlled ledge growth in a medium of finite extent 2-103976
 spherical powders, densification, influence of increasing particle coordination 2-116398
 steel, 304 stainless, sputter deposited, oxide and sulphide scales, AES and SEM studies 2-88272
 steel, austenitic, strongly radioactive, X-ray microanal. of C diffusion (*French*) 2-67786
 steel, austenitic 304, diffusivity and solubility of H_2 , electrochemical determ. (*Japanese*) 2-104064
 steel, austenitic stainless, diffusion of ^{59}Fe , lattice and grain boundary 2-104048
 steel, austenitic stainless, Mn diffusion 2-71695
 steel, carbide particles, diffusion-controlled precip. and dissoln., computer simulations 2-105157
 steel, cavity growth during diffusion saturation with Ni from vap. phase (*Russian*) 2-104059

diffusion in solids continued

- steel, CC H embrittlement and permeability in H_2S media, quaternary ammonium salts influence 2-67541
 steel, Cr type, H impregnation behaviour and embrittlement resist., microplastic deform. influence 2-99552
 steel, Cr-Mo type, plastic deform. influence on H transport 2-71728
 steel, Cr-Mo-Mb-V, used in vapour generators for fast neutron reactors 2-77826
 steel, Cr-Ni type, low-cycle fatigue, combined influence of external H atm. and preliminary H impregnation 2-99553
 steel, equilibrium between trapped and diffusible H at room temp., obs. using gas-surface reaction 2-88092
 steel, high strength, crack growth rate rel. to H_2 supply under sustained and cyclic loads (*Japanese*) 2-67636
 steel, low alloy and C, ferritic, corrosion mechanism by high temp. water 2-57519
 steel, low-C, decarburisation in intercrit. temp. range, recrystn. of ferrite, grain boundary migration 2-99452
 steel, mild, diffusion bonding, in situ obs. using photoemission electron microscope 2-110177
 steel, permeation of H, surface oxides and tempering treatments influence 2-93680
 steel, reinforcing, decarburisation in corrosive medium 2-88288
 steel, Si-Al bearing electrical, internal oxidation and mag. props., annealing conditions influence 2-72724
 steel, stainless, diffusion and trapping of D, SIMS study 2-76745
 steel, stainless, permeability of H, protective coatings influence 2-67652
 steel, stainless, radiation-induced struct. changes 2-86714
 steel tubes, stainless long time effects in radiation enhanced permeation of H_2 2-98345
 steels, low-alloy, dual-phase, computer simulations of austenite/ferrite diffusional transformations 2-72692
 surface and ultrathin film, structural characterization by secondary electron emission 2-87923
 swelling characteristics for cryst. with diffusional anisotropy under irradiation 2-61021
 ternary diffusion paths, analytical representation 2-104082
 ternary systems, determ. of [D] from single expt. 2-115470
 thin films, diffusion-induced grain boundary migration 2-71735
 thin films, stress relax. and hillock growth 2-115627
 TiN formed by evaporation as a diffusion barrier between Al and Si 2-92394
 transition metal deuterides, NQR by translational diffusion, mean field theory 2-110690
 transition metals and alloys, magnetic and structural transformations, H influence 2-67329
 two sublattice structure, correlation effects in diffusion 2-66278
 two-layer metal-dielectric film growth model 2-61303
 vacancy assisted tracer diffusion, response at small vacancy conc. 2-82008
 Zircaloy-2, diffusion of T, effect of low irradiation damage, O conc., δ -hydride form. 2-82025
 Zircaloy-2, steam oxidised, oxide/ α and α/β phase interface advance kinetics 2-66300
 Ag film, bircryst., gas bubble growth 2-115607
 Ag film, void growth 2-115606
 Ag, of Pt, 1094 to 1232K 2-61204
 Ag-GaAs (001), Ag MBE growth and interfacial diffusion, AES, LEED and SEM study 2-93432
 Ag-Mg, equiatomic, rheological behaviour of β' phase 2-57421
 Ag-Si (111), interface growth, intermixing, UPS study 2-110165
 Ag-Si phase, interdiffusion form., surface struct. anal. by quantitative AES 2-67159
 Ag-Te (Se)(S)(I) diffusion couples, struct. and elec. cond. meas. 2-82033
 AgCl(Br), neutron irradiation, Frenkel defects, struct., and annealing, NMR study 2-91952
 Al alloy 7075, dislocation transport of H, rel. to hydrogen embrittlement 2-83220
 Al alloys, ternary and quaternary, solidification, estimate of interdendritic undercooling 2-111163
 Al, muon diffusion and trapping 2-110049
 Al, pure large-grain, diffusion coeffs. and solubility of H 2-71725
 Al/W/NiSi structure, use of thin W barrier to inhibit Al+NiSi reaction 2-98472
 Al-Ag-Al strip, pressure-welded, interdiffusion layer struct., ultramicrotomed thin section method 2-71738
 Al-Cu, vacancy migration energy, quenching rate 2-86942
 Al-Cu (4 wt.%) alloy, evolution toward equil. shape of θ' precip. by interfacial diffusion 2-72702
 Al-Mg/Al-Al-Mg composite, dislocation struct. and element diffusion resist. 2-82037
 Al-Mn, muon diffusion and trapping 2-110049
 Al-Si, reaction retardation by Ti intermediate layer 2-71737
 Al-transition metal nitride (carbide) films, interfacial reactions, expt. study 2-56368
 Al-Zn (9.87 at.%), defect struct., vacancy migration, effect of H_2O in annealing atmosphere 2-76451
 AlAs interfaces, disloc. surface reactions 2-57250
 AlAs-GaAs superlattice, Zn diffusion and disordering along its layers, expt. study 2-56253
 Al_2O_3 , pressed powder pellets, initial sintering obs. 2-116419
 $\alpha-Al_2O_3$ sintering, voids and boundary migration, electron microscope study 2-113046
 Al_2O_3 sphere in KCl single cryst., crowding mass transfer mechanism in localized stress relaxation (*Russian*) 2-66121
 As, oxidation kinetics, sublimation, rotating specimens 2-72964
 As_2S_3 -Ag, diffusion controlled sensitivity to illumination, image formation characts. 2-101484
 As_2Se_3 -Ag, diffusion and photodoping, optical edge tracing study 2-71722
 Au/Ag thin films, diffusion-induced grain boundary migration 2-71735
 Au/Al thin film diffusion couple, elastic props., SAW vel. study 2-82183
 Au-Ag two-layer film, grain boundary diffusion investig. by elec. resist. method 2-76874
 Au- β -PbF, thin film interface, XPS and elec. meas. 2-87080
 Au-Gc metastable phase form. by ion mixing 2-76754
 Au-Si phase, interdiffusion form., surface struct. anal. by quantitative AES 2-67159
 Au-Si:H, amorphous semiconductors interface reactions and Schottky barrier formation, expt. study 2-110176
 $Ba(NH_3)$, NH_3 diffusion and H^+ shift, PMR obs. 2-82735

diffusion in solids continued

- Ba₂NaNb₃O₁₅, rotational striations and diffusion 2-115157
 BaWO₄, crystal growth from melt, diffusion controlled, activation parameters, DTA 2-65891
 Be, ⁷Be, ³¹S, and ³²P, layer-by-layer radiometric anal. (Russian) 2-61202
 Be, diffusion of C, dislocation damping 2-56262
 Ca(NH₃)₆, NH₃ diffusion and H⁺ shift, PMR obs. 2-82735
 Ca₁₀(PO₄)₆F₂, fission track radiation damage, diffusion to surface, defect absorpt. study 2-99162
 Cd coatings on Fe, H absorption during electrodeposition and H charging 2-77993
 Cd single crystal, morphological stability of vapour grown crystals 2-115170
 Cd_{1-x}Hg_xTe and related materials, self-diffusion and impurity diffusion 2-110033
 CdS-Cu, interface form., Schottky barriers, interdiffusion and chem. processes, XPS study 2-77182
 CdS, Se_{1-x} thin film, growth on CdS substrate by solid-state diffusion, composition control 2-71813
 CdTe, Ag diffused, degradation of elec. and optical props. 2-115751
 CdTe, defect annealing, dynamic obs. at lattice resolution 2-91978
 CdTe, Li diffusion, internal elec. field effects in dissociative mechanism 2-115462
 CdTe-Au electrodes contacts, phys. props., Rutherford backscatt. and AES anal. 2-110168
 Co alloy, FCC, diffusion of H, D, and T, mag. aftereffect meas. 2-82027
 CoO, undoped and Cr doped, segregation and near surface diffusion 2-76682
 Co_{1-x}O, defect diffusion in single- and poly-crystals 2-110047
 CoP, ion implanted, elec. resistivity and channelling studies 2-104337
 Cr black, selective solar absorber, optical response, high temp. substrate oxidation 2-99840
 Cr film interaction with Si, bilayer silicide form. 2-86949
 CrSi₂ formation, diffusion mechanism, ³¹Si radioactive marker study 2-61209
 CrSi₂, formation, radioactive ³¹Si marker study 2-115472
 Cu alloys, oxide particle precipitation, thermodynamic calcs. 2-81969
 Cu, deuterium trapping by impurities 2-82007
 Cu, diffusion and solubility of H₂, electrochem. determ. (Japanese) 2-76743
 Cu, in inert gas matrix, fluoresc. spectrosc. and photoprocesses 2-85577
 Cu, of Ni, partial diffusion coeff. after ion irradi., fusion neutron effects simulation 2-86757
 Cu, of Pt, 1149 to 1352K 2-61204
 Cu, positive muon depolarisation, 5 to 365K 2-82766
 Cu/Ni bilayer system, interfacial diffusion coeffs. meas. during diffusion induced grain boundary migration 2-71739
 Cu/Ni thin films, interdiffusion, Auger study 2-82035
 Cu/Ni ultradisperse layer system, cold homogenisation by mutual diffusion (Russian) 2-104076
 Cu/Si system, diffusion of Cu 2-61210
 Cu/Sn, bimetallic thin films, interfacial reaction kinetics 2-66298
 Cu/Sn bimetallic thin film, interdiffusion and intermetallic phase form. 2-115473
 Cu-C steel multilayer composite, dislocation density and diffusion processes study by thermo-EMF method 2-67381
 Cu-Er(Zr)(Ti), dil., D permeation meas., trapping impurities effect 2-56254
 Cu-Ni, sputter-enhanced diffusion at high temps. 2-92279
 Cu-Ni multilayer films, interdiffusion, Auger electron depth profiling 2-82038
 Cu-Ni Zn system, ternary diffusion paths prediction 2-104082
 Cu-Sb, chemiepitaxial layer formation, during reactive diffusion 2-76849
 Cu-Zn (0.9-8 at.%), intrinsic diffusion coeffs. and vacancy flow factor 2-98350
 Cu-Zn alloys, grain boundary migration, diffusion-induced 2-81794
 Cu₂S-CdS heterojunction solar cell, Cu diffusion effects, theoretica. anal. 2-73115
 Cu₂S-Zn_{1-x}Cd_xS film struct., Cd and Zn cross diffusion, AES, ESCA and atomic absorpt. spectra study 2-66299
 Cu₂S-ZnS:Mn p-n heterojunction DC electroluminesc. structs., degradation theory based on donor diffusion 2-57186
 D₂O ice film, erosion and mol. form. by electronic energy loss of fast ions 2-98171
 Fe, cavity growth during diffusion saturation with Ni from vap. phase (Russian) 2-104059
 α-Fe, high-purity, intrinsic diffusivity of H 2-110042
 Fe, impurity migration stimulated by generation and recombination of Frenkel pair 2-76749
 Fe, lattice dilation by dissolved D 2-104066
 Fe, lattice dilation of dissolved H₂ (Japanese) 2-56261
 Fe, oxidation, high temp., stress effects, SEM obs. 2-99592
 Fe polycrystalline wire, Ni coated, plastic deform. during diffusion homogenisation (Russian) 2-67445
 Fe, pure, trapped H, thermal anal. 2-66290
 Fe-Cr alloy, of S, activation energy, comp. depend. 2-86939
 Fe-Cu, precipitation during annealing, after low temp. electron irradi. (Russian) 2-116445
 Fe-Cu wire reinforced Cu-Fe alloy, age hardening (German) 2-111192
 Fe-N, thermodynamics, kinetics and props., data collection 2-89474
 Fe-Ni (29.9 wt.%) alloy, anomalous diffusion of C, martensitic transform. role 2-71727
 Fe-Si/Zn, diffusion couples, periodic form. of FeSi bands 2-76755
 Fe-Sn, phase relations and multiphase diffusion 2-99400
 Fe-V (2.4 at.%), C diffusivity 2-92282
 Fe_{3-x}O₄, nonstoichiometry, point defects and cation diffusion 2-71435
 Fe_{3-x}Al_xAs₂Be_{1-x}Ga_x p-p-n solar cells, Be diffused doping and elec. props. meas. 2-105557
 GaAs, i-n heterostruct., low temp. diffusion, laser plasma pulse stimulated 2-56263
 GaAs interfaces, dissoc. surface reactions 2-57250
 GaAs, ion implanted, Zn diffusion profiles meas. 2-92285
 GaAs:Cr, photoluminescence, Cr diffusion 2-99184
 GaAs:Cr, Sn, Cr and Sn migration obs. during open tube diffusion 2-98343
 GaAs:Cr₂Si⁺Se⁺Mn, ion implanted, Mn redistribution after annealing, SIMS study 2-86699
 GaAs:Mg(Cr)(Mn)(Fe), epitaxial layers, impurity redistrib., SIMS study 2-98344
 GaAs:S, S diffusion, vacancy reduction effects, theory 2-115464

diffusion in solids continued

- GaAs:Se, ion implanted, pulse diffused n⁺ layers form. using As₂Se₃ diffusion source 2-55998
 GaAs:Si, defect struct., effect of annealing Zn and Cu diffusion 2-55976
 GaAs:Sn, ion implanted, surface accumulation after laser beam annealing, Rutherford backscattering study 2-61006
 GaAs:Te, defect struct. after Cd diffusion 2-103762
 GaAs:Zn, Zn diffusional doping, open-tube method 2-104060
 n-GaAs-metal interfaces, interdiffusion and elec. props. meas. (Chinese) 2-66634
 GaP layer, liq. phase electroepitaxy from limited and unlimited sources, growth kinetics 2-56380
 GaP substrate, impurity outdiffusion by postgrowth annealing 2-115460
 GaP:N, Te VPE layer, minority carrier lifetime, dislocations influence 2-115920
 GaS:Cr, impurity redistribution after implantation with GaAs₂O₃, SIMS and TEM study 2-115276
 Gd:Ar film, ion implanted, impurity depth distrib. 2-110215
 Gd₁₆Co₈₄ sputtered film, amorphous, radioactive tracer diffusion 2-92429
 Gd₃Fe₂O₁₂-Y₃Fe₂O₁₂ system, cation interdiffusion 2-71736
 Gd₃Ga₂O₁₂-Gd₃Fe₂O₁₂ system, cation interdiffusion 2-71736
 Ge, diffraction grating, high-density laser-induced transient plasma, picosecond dynamics 2-77628
 Ge:Al, vol. diffusion of Al, SIMS invest. (German) 2-66274
 n-Ge:As(Sb), heavily doped, press. effects on magnetoconductivity (Russian) 2-56619
 Ge:Cu, in-diffusion and annealing 2-98337
 Ge:Cu p-n junction, reversed biased, Cu²⁺ centres mobility, DLTS study 2-98336
 Ge:In, impurity diffusion, SIMS invest. (German) 2-82031
 Ge:Si, solid solubility, diffusion, decomposition, X-ray diff. study 2-66232
 Ge-Au interface cpdf. formation, valence band and cone level UPS study 2-110175
 GeSe₂/Ag system, Ag sensitisation kinetics and diffusion 2-115589
 Ge₁₈Fe₈₂ amorphous film, diffusion of Au, nucl. backscatt. anal. (French) 2-104069
 Ge(111)-Ag interface, chem. reaction, synchrotron radiation photoemission study 2-61212
 H trapping, generalised anal. 2-56239
 H trapping, irreversible, anal. 2-56240
³He-He quantum crystals, quasiparticle collisional diffusion 2-82072
 n-InP, diffusion of ¹¹⁰Ag from vapour 2-86941
 InP, of Zn, open tube method 2-92278
 InP, photoluminescence of synthesis-solute-diffusion and LEC grown cryst. 2-93259
 InP:Be, ion implanted, migration during annealing, SIMS study 2-98143
 InP:Be, Zn, Cr, Se, doping profiles, SIMS anal. 2-103806
 InP:Cd, diffusion profiles, p-n homojunction form. 2-110038
 InP:Cr(Fe), impurity diffusion, carrier and impurity profiles 2-115467
 InP:Mg(Si), implanted, impurity redistrib. during annealing, SIMS study 2-98144
 InP/InGaAsP double heterogeneous epitaxial wafers, stress induced defect migration 2-92287
 InP-metal interface, Fermi level pinning and chem. struct., XPS study 2-110475
 p-InSe:Zn, annealing behaviour, photoluminesc. study 2-92276
 Ir film on n-Si, silicide form., AES study 2-86951
 Ir-V, contact reaction with Si 2-86950
 IrO₂, VPE growth on TiO₂, chemical interdiffusion, optical absorption and SEM study 2-92401
 KCl, large gas filled pore migration due to temp. gradient 2-56265
 KCl, small pore migration due to temp. gradient 2-56266
 KCl, synthetic single cryst., thermal gradient migration of brine inclusions 2-56264
 KCl(Br):OH⁻, diffusion of H 2-61206
 K₂HfF₆, phase transitions, TDPAAC study 2-92181
 LaD₃, deuterium spin-relax. time, diffusion and hopping 2-104734
 LiNbO₃ single crystals, optical inhomogeneity, high temp. diffusion annealing effect 2-65322
 LiNbO₃, Ti indiffused proton exchanged waveguides, fabrication and characterisation 2-91043
 LiNbO₃:Ti, strip waveguides fabricated by combined metal diffusion and ion implantation 2-75731
 LiNbO₃:Ti optical waveguide fabrication, Ti diffusion process, expt. study 2-65347
 MgO-FeO-Fe₂O₃, cation interdiffusivity in magnesiowustite solid soln., O₂ press. depend. 2-76753
 Mo, diffusion of ¹⁸⁵W, via grain boundaries and defects 2-71718
 Mo, diffusion of interstitial atoms, elastic aftereffect meas. (German) 2-71734
 Mo film on Si, ion beam induced interfacial reactions, TEM obs. 2-110050
 Mo film on Si, MoSi₂ formation, impurity effects 2-115580
 Mo, interaction with molten Cu 2-72873
 Mo:D, ion-implanted, permeation and re-emission rate, rel. to irradi. damage 2-74937
 Mo:H, diffusion and permeability 2-82023
 Mo:O delayed recrystn. during annealing, O effects, electron microscopy study (Russian) 2-88099
 Mo-Cr powder mixtures, alloy form. during sintering 2-83065
 Mo-Si (111) interface reactions, synchrotron UPS and AES studies 2-110173
 Mo-Si interface, MoSi₂ formation kinetics meas. during CW laser scanning 2-92025
 Mo-W bilayer film, solid state silicide form., annealing and ion implantation effects 2-92371
 Mo₂O₃ and Mo₁₈O₅₂ as cathodes for Li cells, props. 2-93883
 NaCl, synthetic single cryst., thermal gradient migration of brine inclusions 2-56264
 Nb, diffusion of ¹⁸⁵W, via grain boundaries and defects 2-71718
 Nb, electromigration of Nb-95 and Ta-182 (French) 2-71729
 Nb, of H and D, n interstitials effect 2-104067
 Nb, of H and D, thermotransport 2-82029
 Nb, positive muon depolarisation, 5 to 365K 2-82766
 Nb, thermal diffusion of T, role in T permeation theory through fusion reactor first wall 2-85233
 Nb, vacancy and interstitial annealing and migration, PAC study 2-86663
 Nb/Al overlayer struct., surface oxidation, grain boundary diffusion, XPS study 2-67601

diffusion in solids continued

- Nb-Mo-Zr, carbide form. and embrittlement in technical Ar at 1100°C 2-72821
 Nb-Zr(Ti)(V)(Ta), dil. alloys, diffusion of O, appl. of McNabb-Foster trapping eqns. 2-76744
 NbH₂, twin boundary motion, sound attenuation study, microstruct. effects 2-81997
 Nb₂Sn, form. kinetics by diffusion method (*Russian*) 2-66301
 Nb₂Sn superconducting composite wires, fabrication by solid-liquid diffusion method 2-67237
 Ni alloy, heat-resisting, directional solidification, B influence on fine struct., diffusion and creep 2-67321
 Ni alloys, dil., diffusion of H, D, and T, mag. aftereffect meas. 2-82027
 Ni catalyst, dispersed, low-temp. transfer of H from surface to bulk 2-56252
 Ni, diffusion of He 2-104063
 Ni, diffusion parameters of W, dynamic computer model (*Russian*) 2-76740
 Ni film interaction with Si, bilayer silicide form. 2-86949
 Ni, grain boundary diffusion of H, electrochem. and ion microprobe obs. 2-92284
 Ni-D, ion-implanted, permeation and re-emission rate, rel. to irradi. damage 2-74937
 Ni-He, ion implanted, damage profiles, swelling due to Ni ion irradi. 2-103805
 Ni-Al system, interdiffusion coeffs. in Ni₂Al₃(γ) phase 2-104080
 γ - γ' -Ni-Al-(Ti) two phase bicrystal, morphological crystallographic features 2-87076
 Ni-Cr, aluminide coatings, form. kinetics and microstruct. 2-116620
 Ni-Cr-Mo-Co-Fe(Al), aluminide coated, compatibility in simulated HTGR 2-113664
 Ni-Pt interaction with Si 2-86953
 Ni-Si, interfacial cpd. form. and electronic struct., photoemission and AES study 2-82036
 Ni-Si couple, lateral diffusion and Ni₂Si growth, SEM study 2-115471
 Ni-Si interface, ion beam mixing, expt. study 2-66376
 NiO, of ⁵⁷Co along grain boundaries 2-76747
 NiO/Fe, solid-state displacement reaction at 1000°C 2-77805
 Ni-P, ion implanted, elec. resistivity and channelling studies 2-104337
 Ni₄₉Pd₅₁, H in amorphous alloys 2-81963
 NiPt/Si interface, NiSi formation at silicide/Si surface 2-104078
 NiZr₂, metallic glass, diffusion rates of Pb, Pt and Au, pretreatments effect 2-71726
 OsSi₃, formation, thin film reactions, diffusion 2-104077
 OsSi₃, formation, thin film reactions, diffusion 2-104077
 POCl₃ deposition, microdefects form. in IC masking oxide during unintentional P diffusion 2-71721
 Pb, grain boundary diffusion of Sn, radioactive tracer study 2-82022
 Pb-Sn, grain boundary diffusion 2-104074
 Pb-, Ge, Te thin film structures, growth by MBE 2-92393
 PbO film/B₂O₃-Na₂O glass interaction, UV spectra and cation conc. profile meas. 2-86945
 Pb-, Sn, Te LPE inhomogeneous layer, IR plasma reflection spectrum, vapour transport process 2-93314
 Pb-, Sn, Te-Cd, photoluminescence study 2-104958
 Pb-, Sn, Te-Cd(Bi), narrow band gap semiconductor, galvanomag. and optical props., Cd solubility and diffusion (*Russian*) 2-92666
 n-PbTe, thermal diffusion of impurity atoms 2-66293
 Pd and Pd-Ag alloy, preliminary H impregnation influence on mech. props. 2-99554
 α/β -Pd, H permeation, invest. by electrochem. method (*Japanese*) 2-82026
 Pd/Sn thin film diffusion couples, microstructural determ. of fast diffusion species 2-71741
 Pd-Ag two-layer polycryst. films, low temp. homogenization (*Russian*) 2-92289
 Pd-Fe(Co)(Mn)(Ni)(G), Pd based solid soln., diffusivity of H meas. 2-104058
 Pd-GaAs interface reactions, struct. characterisation by X-ray diffr. 2-110172
 Pd-Pb(Sn), thin film couple, single intermetallic cpd. form., X-ray diffr. obs. 2-92288
 Pd-Ti-H, H diffusion study 2-82024
 Pd-V-H, H diffusion study 2-82024
 Pd₇₇-Cu₂₃Si₁₆, H in amorphous alloys 2-81963
 predeposition process and profile simulation Si-B 2-98136
 Pt film interaction with Si, bilayer silicide form. 2-86949
 Pt, sputter deposition on ZrO₂ ceramic, interfacial reaction, Auger line shape and factor anal. 2-83429
 Pt surface (110), cross-channel diffusion mechanism anal. 2-61288
 Pt-O coating on glass microsphere, DT induced disruption 2-115594
 Pt-Si localized growth causing Ti/Pt/Au beam lead metallization instability, soft X-ray spectra 2-115608
 Pt-Si nucleation from RF sputtered Pt film on Si 2-92385
 Re, diffusion of Cr(Fe)(Mo), SIMS study 2-110041
 Re, diffusion of U, meas. using solid state nuclear track detector 2-66291
 Re-U, dopant diffusion, obs. in solid-state nuclear track detector 2-110039
 Rh film on n-Si, silicide form., AES study 2-86951
 Ru-Si contact, Schottky barrier height, effect of silicide form. 2-104466
 RuO₃, VPE growth on TiO₂, chemical interdiffusion, optical absorption and SEM study 2-92401
 Ru-Si₃, formation, thin film reactions, diffusion 2-104077
 Sb-Te, chemiepitaxial layer formation, during reactive diffusion 2-76849
 Si (111)(2 \times 1)-Au system, interface form., low energy EELS and AES study 2-104174
 Si, B diffusion by laser pulse irradi. (*Chinese*) 2-71717
 Si, back-surface damage regions, gettering of mobile O, defect stability, O diffusion 2-56256
 Si, diffused dopant conc. profiles, book contrib. 2-71492
 Si, diffusion of ^{69,71}Ga isotopes, SIMS studies 2-104070
 Si, diffusion of Al, oxidation effects 2-56257
 Si, diffusion of As and P enhanced by thermal oxidation 2-71720
 Si, diffusion of Au, kick-out mechanism, numerical soln. 2-66288
 Si, diffusion of B(P), enhancement by thermal oxidation 2-56258
 Si, diffusion of B(P), Si₃N₄ directly masked film effect 2-56260
 Si, diffusion of Ni, dissociative mechanism, expt. study 2-56259
 Si, diffusion of P, nonequilibrium vacancies influence 2-92252
 Si, diffusion of P from CVD phosphosilicate glass 2-66295
 Si, diffusion of Sb along dislocations 2-61207

diffusion in solids continued

- n-Si, diffusion profile of As(Sb), sheet conductance and tracer studies 2-71730
 Si doping by As diffusion, spin-on source for deep junction formation 2-76746
 Si, double diffusion processes, book contrib. 2-71731
 a-Si film, diffusion of H, ESR study 2-115469
 Si, impurity diffusion, concentration enhanced, review 2-71442
 Si, impurity diffusion coeffs., CW laser annealing and SIMS (*French*) 2-110040
 Si, ion implanted, arc annealing, regrowth and impurity diffusion calc. 2-55992
 Si, lateral effect of oxidation enhanced diffusion 2-66297
 Si, numerical simulation of two dimensional impurity diffusion, finite element technique 2-71732
 Si, oxidation, transport mechanism 2-57504
 Si oxidation enhanced dopant diffusion and growth or shrinkage of oxidation-induced stacking faults 2-66015
 Si, oxidation induced point defects, stacking faults and dopant diffusion, theory 2-91951
 Si, oxidation studies, oxidant diffusion meas. in SiO₂ films 2-88238
 Si, point defects, diffusion mechanisms and shrinkage and growth of extended defects, theoretical anal. 2-71443
 Si, polycrystalline, grain boundary passivation by H₂ 2-76459
 Si, Sb diffusion, anomalous conc. profiles due to local precipitation 2-76741
 Si solar cells, fabrication by laser induced diffusion from dopant gas 2-57697
 Si, stacking fault growth and shrinkage kinetics in oxidizing ambient containing a Cl cpd. 2-98117
 Si, thermal oxidation, enhanced dopant diffusion and defect form. 2-66296
 Si thin films, D passivation of grain boundary dangling bonds 2-76478
 Si, with C impurity, β -SiC particles segregation mechanism and kinetics 2-57354
 Si:As, polycrystalline film, impurity lateral diffusion lengths meas. technique 2-104062
 Si:As diffusion and impurity concentration profiles, Rutherford backscatt. study 2-82019
 Si:As, Au diffusion, expt. study 2-104061
 Si:As, Au diffusion and point defects, dark-field lattice phase imaging obs. technique 2-86527
 Si:B, B deposition from BBr₃ source, expt. and computer simulation 2-103794
 Si:B, ion implanted, B diffusion and segregation obs. in dry O₂ ambient 2-92281
 Si:B, proton irradi., impurity distrib. and diffusion 2-61203
 Si:B, submicrometer-lengthwise doping and relief definition by laser-controlled diffusion 2-98122
 Si:BF₃, single cryst., pulsed laser irradiated, ion implanted, F conc. profile 2-115263
 Si:Ga (In)(Sb), ion implanted, dopant redistrib. after flash lamp annealing, He⁺ backscatt. study 2-86936
 Si:Ge, Ge diffusion coeff., SIMS study 2-115465
 Si:H, amorphous, H₂ evolution 2-66280
 n-Si:H, amorphous film, interaction with metal electrodes, interdiffusion 2-87389
 n-Si:H, amorphous film, interaction with metal electrodes, interdiffusion 2-87390
 Si:H amorphous films, H₂ evolution 2-93950
 Si:O, diffusion and gettering studies by Cs/SIMS 2-104071
 Si:O, O diffusion and thermal donor formation, review 2-82021
 Si:P, As, Sb, ion implanted, multiphase electron beam annealed, impurity profiles 2-103803
 Si:P, dislocation clusters and P diffusion, TEM and X-ray topography study 2-91973
 Si:P, electrically inactive impurities, precipitation explanation, TEM study 2-67341
 Si:P, high conc. diffusion, vacancy percolation 2-82028
 Si:P, ion implanted, depth profiles, channelling and nuclear resonance studies 2-98142
 Si:P, polycryst., grain boundary diffusion of P 2-92283
 Si:P, polycrystalline film, impurity lateral diffusion lengths meas. technique 2-104062
 Si:P, redistribution of heavy metal impurities, by P diffusion, theory 2-109822
 Si:Sb, pipe diffusion and dislocation density 2-110043
 Si:Zn layers, ion implantation, damage annealing 2-103798
 Si/Pd-W(Pd-Si)(Pt-W)(Pt-Si), shallow silicide contact of high Schottky barrier formation, expt. study 2-66622
 Si/PtSi/Ti-W/Al system, compound form. and interdiffusion, SEM, X-ray, Auger and microprobe studies 2-71740
 Si-Au-Al, distrib. ratio of Al, zone refining with temp. gradient 2-71487
 Si-CdS(Zn,Cd-,S) heterojunction solar cell, elec. props. 2-115875
 Si-Co thin film reactions, Co-Si and CoSi growth kinetics and thermal stability obs. 2-92290
 Si-Cr interface morphology and electronic struct., photoemission and band struct., calcs. study 2-82460
 Si-Ni(Cr) interface, chem. bonding and density of states, UPS and LCAO calc. 2-110476
 Si-Pd interface, silicide reactions induced by millisecond laser pulses, Rutherford backscatt. study 2-76495
 Si-Pd(Ag) on Si (111)7 \times 7, struct. studies of Schottky barrier formation by surface EXAFS 2-110174
 Si-SiO₂ layers in MOS n-p junctions, electrochemical doping with As⁺, diffusion coeff., C-V plots 2-66287
 Si-Sn, phase relations and multiphase diffusion 2-99400
 Si-Ti (Ni) interface, laser and electron beam irradi., silicide form. 2-66377
 SiC, diffusion annealing in B vapour, surface distrib. of B 2-56305
 SiC/B fibre reinforced Ti alloys, heat-resistant, diffusion-affectected interaction 2-88029
 SiO₂ amorphous, of Ga, neutron activation anal. 2-66289
 SiO₂, fused, diffusion of water and H-bonding species 2-104072
 SiO₂ glass, OH ion distrib. profile, laser absorpt. meas. 2-61932
 SiO₂ layers, in water vapour, O¹⁸ study of cooperative diffusion and chem. reaction 2-76742
 SiO₂, vitreous, struct. in bulk and surface layers, gas probe anal. 2-91801
 SiO₂:B(Al)(Ga), variation of surface conc. with oxide content 2-82098
 SiO₂:Ge, Ge diffusion coeff., SIMS study 2-115465

diffusion in solids continued

- SiO₂-CaO-Na₂O glass surfaces, interdiffusion of H⁺ and alkali ions, elec. resist. study 2-110034
 Si(111), adsorption of Ti, secondary electron spectroscopy 2-87015
 Si(111)-Ag interface, chem. reaction, synchrotron radiation photoemission study 2-61212
 Sm:Ar film, ion implanted, impurity depth distrib. 2-110215
 Sn coatings on Fe, H absorption during electrodeposition and H charging 2-77993
 Sn, diffusion mobility of Fe(Co), radioactive tracer study (*Russian*) 2-92277
 Sn/Fe interface form., chem. interdiffusion, Mossbauer study 2-104171
 So₂, Si formation, radioactive ³¹Si marker study 2-115472
 Sr(NH₄)₆, NH₃ diffusion and H⁺ shift, PMR obs. 2-82735
 Ta, of H and D, N interstitials effect 2-104067
 Ta, of H and D, thermotransport 2-82029
 Ta, positive muon depolarisation, 5 to 365 K 2-82766
 Ta₂N, high temp. nitriding of Ta, kinetics 2-81700
 TaSi₂/Si composite struct., oxidation kinetics in dry O₂ 2-105349
 Th-Fe(Co)(Ni), fast diffusing solutes, thermal friction studies 2-98326
 ThO₂ powder, initial sintering stage study by emanation thermal anal. 2-88032
 ThO₂ powders, positron lifetime meas., particle size and positronium diffusion const. meas. 2-62010
 Ti, diffusion of O₂, high temp. interaction, diffusive kinetics under nonstationary heating (*Russian*) 2-98342
 Ti films on Si, processing using multicarried electron beam, TiSi₂ formation 2-104180
 Ti, hybridizing in H plasma, embrittlement, sorption, rel. to contamination 2-74935
 Ti, of hydrogen, temp. depend., high temp. synthesis of hydrides 2-111112
 Ti-Al alloy, Cl migration under electron bombardment, AES 2-86935
 TiB₂, thin film, plasma-ion sputtering, AES 2-82156
 TiO₂:H electrodes, SIMS and AES anal. 2-57655
 TiO₂·Pt ceramics, heat treated, elec. rectification obs. due to PETi₂ lamellar microstruct. 2-115748
 Ti₂O₃, crystallographic shear phase, oxidation, defects, electron microscope study 2-91985
 TiSi₂, formation, radioactive ³¹Si marker study 2-115472
 γ-U, chem. diffusion of Ta in samples fabricated for positron studies 2-110052
 UO₂, fission gas release, effect of irradiation-induced resolu. 2-107951
 UO₂ fuel, fission gas disposition, granular computer model 2-107957
 UO₂, irradiated, diffusion coeffs. of gaseous and volatile species 2-102042
 UO₂-(U,Pu)O₂ system, interdiffusion and chem. diffusion 2-85146
 UO₂·x, oxygen diffusion 2-80085
 V, of H and D, thermotransport 2-82029
 V, positive muon depolarisation, 5 to 365 K 2-82766
 W (110), diffusion and tunnelling of H and D 2-82030
 W, diffusion and stability of strengthening phases, review 2-104065
 W, diffusion of Re (*Russian*) 2-76739
 W, vacuum siliciding diffusion parameters, influence of NaCl activator 2-83273
 W-GaAs Schottky barrier, elec. props. and interface chem., XPS study 2-115853
 W-GaAs:Se⁺ Schottky barrier, high temp. elec. and interdiffusion stability meas. 2-87365
 W,C, bulk and grain boundary diffusion of ¹⁸C 2-82020
 WSi₂:B,P,As, dopant diffusion 2-92280
 Xe, solid, photo-induced diffusion of Cu (*Russian*) 2-98340
 Xe-Kr adsorbed bilayer on Pd, interlayer diffusion, photoemission and Auger study 2-104081
 α-Y, fast diffusion and electrotransport of Co, Fe and Ni 2-86933
 YIG:Ca(Ge)(Si) garnets, rapid diffusion processes 2-71719
 Zn single crystal, morphological stability of vapour grown crystals 2-115170
 Zn-Al, steady state creep near eutectoid transformation, microstructural anal. 2-77868
 Zn-Al (22 wt.%), eutectoid decomp. kinetics (*German*) 2-67287
 ZnO-Al₂O₃(SiO₂)(TiO₂), struct. and chem. comp. of transition region 2-76851
 ZnO:Al₂O₃, gahnite, behaviour of Cr³⁺ and Fe³⁺ ions 2-98296
 ZnS:Fe, CVD polycrystalline films, incorporation of Fe impurities 2-116379
 ZnTe, O diffusion during laser annealing, photolum. obs. 2-115463
 Zr, oxidation rate calc. 2-62266
 ZrC, diffusion of metal fission products 2-85153
 ZrH_{0.028} and ZrH_{0.91}, diffusion and electromigration of T_i 296 to 583 K 2-56251
 ZrSi₂, formation, radioactive ³¹Si marker study 2-115472

diffusion pumps

- cryopump and diffusion pump, comparison on MMA 29×45 ft vac. chamber 2-74435
 high vacuum pumps, turbomolecular or cryopumps, selection criteria (*German*) 2-95391
 molecular flow inside test dome connected to same diameter diffusion pump 2-109370
 oil diffusion pumps, pumping speed meas. methods 2-107335
 silicone diffusion pump fluids, quality using gas chromatography 2-74438
 theoretical model considering pump wall contour 2-84647
 vapour traps for use with vacuum diffusion pumps, design 2-107334

diffusivity see diffusion**diffusivity, thermal see thermal diffusivity****digital-analogue conversion**

- see also analogue-digital conversion
 12-bit DAC 1218 and 10-bit DAC 1020, apps. 2-67754

digital circuits

- see also adders; pulse circuits; switching circuits
 fast digital trigger for LBL time projection chamber 2-70047
 integrator, simple digital, and pulse counter 2-95384
 multi-hit drift time digitiser for drift chamber 2-64801
 multichannel analog recorders, digital AGC for seismic signals 2-73712
 readout device for scatt. chamber (*German*) 2-64794
 watch with computerised radiation dosimeter 2-70005

digital communication systems

- fibre optic communication systems, coherence and intersymbol interf. 2-81119
 optical transmission by glass fibres, survey (*German*) 2-75717

digital communication systems continued

- repeater spacing of 280 Mbit/s fibre optic transmission system using 1.55 μm laser diode source 2-55353
 Ge avalanche photodiode, detectors for digital optical fibre systems in 1.2 to 1.55 μm range 2-55352
- digital computers**
 for computer applications see under relevant applications e.g. administrative data processing; computerised control; natural sciences computing
 see also electronic calculators; microcomputers; minicomputers
 AD 10 digital computer for time-critical simulation 2-102022
 Hot Fuel Examination Facility, data acquisition and process control system 2-107968
 supercomputers, appl. to weather forecasting 2-73618
- digital control**
 see also direct digital control
 monochromators, digital control and display system 2-55311
 nuclear power plant control and instrumentation system reliability (*Japanese*) 2-74857
- digital discs see video and audio discs**
- digital filters**
 see also signal processing
 bio-signals, digital processing, basis, filter design (*Japanese*) 2-111805
 biological signal processing, digital low-pass differentiation 2-117109
 biomedical signal processing, filter design 2-117117
 convolute integers, 2-dimens., for anal. instrumentation 2-116731
 phonocardiography, digital filter design [phonocardiography application] (*German*) 2-111759
 short digital linear filters optimisation for increased accuracy; appl. to Earth resist. 2-105912
 speech signal fundamental freq. extraction using recursive digital filters 2-60314
 TV rate electron microscope images, noise reduction by digital filtering 2-113054
 visual evoked potentials, computer processing utilising digital filtering techniques 2-57916
 wideband active sound control, adaptive digital filtering algorithm 2-91153
 wideband active sound control system design algorithm 2-91152
- digital instrumentation**
 see also digital readout; digital voltmeters
 A/D conversion algorithmic approach 2-95301
 advanced digital metal impact monitor for PWR 2-85176
 air-humidity measurement cets. (*German*) 2-112163
 bipolar transistor characteristics meas., r_f and β_o (*Chinese*) 2-69156
 capacitance meter, using 555 dual timer, LED indicators 2-84610
 charge-coupled-device camera, appl. to high time resolution obs. of solar flare, (1980 December 17) 2-100868
 charge-rate digital ion gauge system to pressure measurement 2-74440
 circular polarisation meas. of luminescence 2-107422
 CROs, advantages over analogue instruments 2-101415
 CROs, improvements in precision and bandwidth 2-101416
 data reading recording from several counters on one indicator 2-69160
 ferromagnetic resonance spectrometer, digital recording system 2-69215
 Fluke 8060A portable digital multimeter 2-107348
 frequency measurement over digital range or short time intervals, counter cct., stability and accuracy (*Slovak*) 2-95404
 integrator, digital, for electron fluence meas. (*Japanese*) 2-80404
 intelligent digital multimeter, $5^{1/2}$ -digit, standard meas., logging facilities, computer interfaces 2-53782
 laser mean power and energy standards, digital meas. instruments characts. 2-114345
 LCR measurement instrumentation 2-89742
 Metrawatt MA-3D digital multimeter 2-101422
 nuclear reactor digital protection system 2-102195
 pressure transducers, capacitive, design and flight deck appl. 2-64017
 resonant systems Q-factor and internal friction meas. 2-58813
 simultaneous recording of the readings of two digital measuring instruments with the Shch68000K printing instrument 2-69159
 Space Telescope digicon, proton-induced noise 2-117590
 thermometer, improved digital design 2-79583
 thermometer based on dual op-amp and PRT-100 Pt resistance thermometer 2-89714
 Thurlby 1503 4 $^{1/2}$ -digit multimeter cct. details 2-79554
 uncored insulating layer thickness meas. by potentiometric micrometer 2-74469

digital instruments see digital instrumentation**digital readout**

- see also digital instrumentation
 fibre-optic accelerometer with segmented photodetector 2-74391
 frequency meters, 200 MHz, digital readout, use with divide-by-100 prescaler 2-84665
 intelligent, with built-in semiconductor circuits for physical quantities conversion into digital signals (*German*) 2-76045
 metallic substances hardness testing dynamic method using digital recording and measurement instrumentation (*Spanish*) 2-57563
 optimal update rate selection 2-94049
 portable barometer-thermometer (*French*) 2-79568
 readout device for scatt. chamber (*German*) 2-64794
 spectrophotometer conversion to solid-state electronics, Unicam (SP500) 2-58885
 thermometer, seven-segment LED display, indoor/outdoor use 2-79580
- digital signals**
 AN/UYS-1 advanced acoustic signal processor, architectural review 2-75786
 digital image processing 2-80906
 laser Doppler anemometer signals, digital processing accounting for non-uniform discretisation (*Russian*) 2-114936
 post-production dubbing by computer-assisted digital sound mixer 2-109134
 stereotactic neurosurgery, 3-D digital signal processing 2-62744

digital simulation

- 1:1 electrolytes, restricted primitive model, mol. dynamics simulation 2-97886
 accommodative oscillation, enhancement of average accommodative response, simulation study 2-116908
 AD 10 digital computer for time-critical simulation 2-102022
 aircraft noise contour prediction programs, comparison 2-57755
 alloy, dislocation motion during ageing, particle distrib. influence, computer simulation (*Russian*) 2-91963

digital simulation continued

alloys, Li_2 ordered, screw dislocation dissociation and core struct. in applied shear stress 2-76441
 alloys, Li_2 ordered, screw dislocations, dissociation and core struct., computer simulation 2-76440
 alloys, motive force of diffusion and change in the free energy on the phase separation (*Japanese*) 2-56242
 alloys, single-phase, numerical calcs. of diffusion 2-66276
 aromatic hydrocarbons, image interpretation by computer simulation 2-76260
 atomic helical structs., electron microdiffraction patterns, computer simulation (*French*) 2-71295
 bed load grain size grain size distribution model in FORTRAN IV 2-117366
 blood circulation system 2-100022
 brittle fracture, environmentally induced crack nucleation 2-105277
 BWR plant transients, calc. using RAMONA-3B computer code 2-102186
 BWR transients, computer model 2-102015
 cardiac arrhythmias, microprocessor based simulator 2-62813
 cells, CHO, Cd transport and distrib. model 2-73214
 cluster growth on square lattice, simulation using stochastic model 2-101345
 cluster production by slit-throat nozzle, computer simulation 2-85456
 colouring curves, computer simulation using heterogeneous nucl. model 2-91960
 complete electro-optical system, end-to-end computer simulation, image quality extension 2-55349
 computer code for designing wind and solar powered desalting plants 2-67832
 computer simulation of different designs of pseudo-random time-of-flight velocity analysers for molecular beam scattering experiments 2-84733
 condensed phase, molecular dynamics, Fokker-Planck approach 2-74328
 continents movements, computer graphics appl. 2-73717
 continuous discrete excited element nets, computer simulation (*Russian*) 2-99937
 continuous system simulation, multiprocessor computers appl. 2-102021
 correlation functions of particles hopping on a chain 2-82330
 crack propagation, steady state, mol. dynamics simulation 2-92098
 cratering experiment calcs. with bedded crack model, computer simulation 2-72790
 cross-correlation flowmeter, technique development using signal processing 2-114958
 Czochralski classical growth method and CACRT, free and forced convection simulation 2-76339
 Czochralski method, control problem numerical simulation for single crystal growth (*Ukrainian*) 2-103672
 damage accumulation in solids under load, computer modelling 2-92099
 decanoate bilayer, lipid membrane model, mol. dynamics simulation 2-67974
 deep level Fourier spectroscopy, computer simulation 2-66479
 deep state profiles calc. from transient capacitance data, computer simulation 2-87170
 dichloromethane, correl. times, computer simulation 2-97894
 diffusion convection problems, computer modelling 2-91454
 dilute two-phase system with viscous carrier phase, flow, numerical simulation 2-81387
 dipolar fluids, computer simulation, pair correl. function, permittivity calcs. 2-65832
 direct Fourier transform NMR tomography with modified Kumar-Welti-Ernst method 2-73310
 discharge in air, positive streamer between rod-plane electrodes calc. 2-103536
 discharge laser, externally sustained, elec. field computation in cavity 2-90948
 dislocation mean free path calc. by computer simulations 2-71448
 dynamical Onsager cavity model and dielec. friction 2-93131
 EEG signal analysis, appl. of model of N-pole with random processes 2-83542
 electron beam injection into vac. chamber in mag. field. numerical simulation 2-60005
 electrostatic withdrawal of nonwetting conducting liquid through holes in thin isolating films (*Russian*) 2-86981
 energy-conserving house simulation, monitoring and data analysis 2-57764
 ethane, liq., struct. functions, X-ray diffr. study and Monte Carlo simulation 2-103592
 ethanol, dilute aq. soln., Monte Carlo calcs. 2-60859
 evaporating droplet, vaporization and trajectory characteristic simulation 2-97619
 explosive, polymer bonded, impact on steel plate, radiographic study 2-78107
 films, defect growth, computer simulation 2-92417
 FIM, image simulation for arbitrary cryst. struct. and orientation 2-55817
 fission reactor core surveillance and operator training, simulation techniques (*Japanese*) 2-74859
 fluid, chemical potential, mol. dynamics simulation 2-103579
 fossil fuels, gas sorption systems for S compounds, NH_3 , computer simulation 2-73057
 galaxy evolution, particle-mesh simulation, on vector and array processors 2-101061
 GaP, depth oscill. asymmetry for (110) channelling 2-66094
 glass, phase separated and stretched, anisotropy of second phase distrib. 2-57413
 grid transparency influence in ion-mobility meas. 2-103271
 hard core molecular fluid, mol. dynamics simulation 2-91739
 hard disc packing with spherical boundary conditions, computer simulation 2-74314
 HCP crystal, $\{11\bar{2}\}$ twin boundaries struct., computer simulation 2-86682
 HCP lattice, dislocation motion across forest of flexible reacting dislocations, computer simulation (*Russian*) 2-60978
 heat and mass transfer processes numerical method for simulation 2-95277
 L-histidine, radiation damage, thermoluminescence study 2-61032
 hybrid electron synchrotron laser, expt. study and computer simulation 2-55172
 ideal fluid, steady flow of jets 2-81380
 impurity-vacancy dipoles in 2-D lattice, Monte Carlo simulation on aggregation 2-115278

digital simulation continued

interstitials and vacancies, recomb. cross section as function of vacancy conc. 2-65988
 ion backscattering spectra, temp. depend. and surface peaks 2-82976
 ion bombardment, near-surface composition changes, dynamic Monte Carlo simulation 2-109851
 ion-surface impact, trajectory focusing effects on total refl. coeff., and energy spectrum of refl. ions 2-93347
 Ising model, stochastic process for computer simulation at equilib. 2-104636
 isotropic heterogeneous system, conductivity, mathematical simulation 2-107265
 laser absorption rate in low density foam target, obs. and computer calc. 2-90960
 lattice gauge theories, four-dimens., Monte Carlo simulation fast algorithm 2-64214
 lattices, correlation functions, computer simulation 2-101337
 Limerick BWR-4 simulator 2-102185
 liquid desiccant system optimisation for low grade solar/geothermal dehumidification and cooling 2-88406
 liquid metal-vapour interface struct., pseudatom theory, computer simulation 2-115497
 liquid mixture, nonconformal, computer simulation of behaviour 2-60850
 LWR, accident dynamics, economic simulation 2-102249
 LWR accident analysis using RELAP5 computer code 2-102255
 LWR accident analysis using TRAC computer code, development assessment status 2-102256
 MBE binary and pseudobinary model systems, growth and struct., Monte Carlo simulation 2-110206
 medical emergency simulation by microcomputer and video disc 2-83696
 metal forming simulation 2-72758
 metal silicide formation, ^{31}Si radioactive marker studies, computer simulation 2-98334
 metallic semicontinuous films, elec. resist., growth and nucleation, computer simulation 2-92784
 metals with BCC lattices, precipitation of interstitial solns., initial stages, computer simulation (*Russian*) 2-77824
 metalworking processes, math. modelling 2-105258
 methyl fluoride, liquid, case representative of joint expt. and theoretical progress 2-76272
 molecular diffusion in anisotropic liqs., equilib. props., mol. dynamics simulation 2-86531
 molecular fluids, pair correl. functions, perturbation theory 2-65831
 molecular weight averages determ. by gel permeation chromatography, data analysis effect on accuracy and precision 2-116763
 molecules in anisotropic liq., rise and fall transients, mol. dynamics simulation 2-86532
 monocrystal, ion bombardment at grazing angles, fast dimer ejection 2-82994
 morphological changes in equiaxed grain structures studied by computer simulation (*Japanese*) 2-55875
 multiplicative noise, analytical and numerical studies 2-107244
 natural circulation in multiloop PWRs, simulator programming 2-102018
 nonstationary spatial viscous gas flow in nozzles, numerical simulation (*Russian*) 2-76010
 nuclear power plant accident analysis, using simulation language DSNP 2-102253
 nuclear power plant best-estimate models, verification 2-102250
 nuclear power plant dynamic modelling experiences 2-102020
 nuclear power plant operational training simulators, design in light of TMI 2-102247
 nuclear power plant operational training simulators, upgrading for accident simulation 2-102248
 nuclear power plant operator training simulator capability improvement in light of TMI-2 accident 2-102184
 nuclear power plant simulation as aid to licensing authorities during commissioning 2-102183
 nuclear power plant simulator, role expansion to include engineering design aid 2-102016
 nuclear power plant training simulator improvements in Japan for greater safety 2-102182
 nuclear power plant training simulators, lessons from recent accidents 2-102246
 nuclear power system simulation, general purpose software, role 2-102023
 nuclear power systems, conf., Arizona, USA, 1981, Jan. 2-101129
 nuclear pulse height anal., sliding scale averaging effects 2-64806
 nuclear reactor components, nondestructive testing (*French*) 2-64606
 nuclear reactor dynamic performance models, validation methods 2-102188
 nuclear reactor simulators, analytical modules 2-102019
 numerical integration using model partitioning, nuclear power system simulation appl. 2-102024
 numerical methods for complex reaction kinetics modelling 2-62375
 numerical modelling in diffusion convection, conference, Sunderland, England (May 1981) 2-89466
 ocean acoustic propagation modelling and source characterisation by spectral density matrix eigenvectors 2-60283
 optical fibre preform refractive index profile meas., focusing method, computer simulation, errors 2-91052
 optical pulse compression by enhanced freq. chirping, numerical simulation 2-91046
 oscillating kink-mobile point defect interaction and resulting internal friction, computer simulation (*Chinese*) 2-92106
 parabolic dish solar thermal power plants, receiver thermal buffering 2-88409
 partially coherent imagery in space and freq. domains, digital simulation and modal expansion 2-102726
 photoemission, Monte Carlo simulation, 0.1 to 3 MeV 2-62044
 physics simulation, universal computer appl. 2-95056
 physiological simulator:ECG; blood press., foetal press. and impedance respiration appl. 2-83671
 plane turbulent mixing layer, high-speed film, digital image anal. 2-91401
 point defect computer simulation, boundary conditions 2-55966
 polymerisation, in solid state, radiation induced, Monte Carlo simulation 2-105483
 power plant simulation, modular modelling system 2-102017
 primary composition of cosmic rays near 10^{17} eV 2-84050
 PWR, thermohydraulic transients prediction computer codes, capabilities and limitations 2-102254

digital simulation continued

- Pyrex borosilicate glass, time depend. erosion by glass beans, computer simulation 2-67552
 quartz, surface struct. changes on interaction with simple gases, RHEED study, computer simulation 2-92325
 radionuclide angiocardigraphic approaches to shunt assessment, simulation-based sensitivity study 2-73317
 rare earth doped alkaline earth fluorides, point defect modelling 2-103757
 relativistic electron beam absorpt. by thin films, computer simulation and expt. study 2-103385
 river valley topography model 2-73595
 self-powered flux detectors, Monte Carlo simulation 2-64765
 semiconductor superlattices, planar ion channelling, computer simulation 2-109873
 single photon emission computed tomography, image noise, resolution and lesion detectability 2-73330
 single-particle detectors for keV ions, development 2-90404
 small capacity solar-powered distillation plants in Australia 2-67828
 soft disk systems, melting, computer simulation 2-56152
 solar collectors, flat plate type, operation in variable service conditions (French) 2-62497
 solar system with two suns and one planet model, BASIC program 2-58275
 solidification of a liquid metal flowing through a circular pipe: a prediction of nozzle blockage 2-83104
 speech spectral patterns, weight function coefficient determ. 2-70784
 sphere-pac fuel pin loading, stochastic simulation program 2-80111
 steels, low-alloy, dual-phase, computer simulations of austenite/ferrite diffusional transformations 2-72692
 Stockmayer molecules, thermodynamic props., Monte Carlo simulation 2-81641
 superfluorescence transverse coherence and scaling in four-dimens. simulations 2-80921
 surface wake correl. of ion and ion pair 2-67169
 synchrotron radiation emission in plasma; two dimens. EM relativistic simulation code 2-103436
 tetrahedral mol's., reorientation in liquids, model tests by computer simulation 2-91738
 thin layers, magnetostrictive consts., calc. and meas. 2-82693
 tides in Gulf of Carpentaria, numerical simulation 2-83847
 time-of-flight positron emission tomography, real-time image reconstruction 2-73335
 toroidal reversed-field pinch, circuit anal., computer simulation 2-86471
 transient two-phase flow in nuclear reactors, various models, foundations and limitations 2-102251
 two-dimensional melting, Laplacian roughening models 2-103956
 urban waste water transportation system, modelling and simulation 2-73180
 US signals, broadband, transducer-couplant effects, computer simulation 2-72934
 variational principle for magnetostatic potential 2-98862
 viscous diffusion simulation for extension of surface vorticity method to boundary layer and separated flows 2-70911
 voids, faceted and spherical, TEM contrast, computer simulation 2-76255
 waterlike mol's., fluid system Monte Carlo simulations, thermodynamic props. 2-65830
 wave propagation and profile inversion in lossy inhomogeneous media 2-70483
 wind scatterometer sensor for vector meas. over ocean, computer performance simulation program 2-117509
 X-ray anomalous dispersion technique, partial struct. factors determ., computer simulation 2-81633
 X-ray powder patterns, simulation using microcomputer 2-65793
 YETI, hydrological model for snowmelt simulation 2-73609
 x-Zr, dislocation motion simulation in an internal stress in creep 2-81791
 Al, numerical analysis of Hopkinson bar experiments on dislocation dynamics 2-71446
 Ar, liq. mol. dynamics simulation, collision times and durations 2-71321
 Au film growth on amorphous C, Au clusters surface diffusion, computer simulation 2-92412
 Au, ion bombarded, damage profile, electron microscopy and computer simulation study 2-76531
 Au, polycrystalline, low energy ion scatt. and neutralisation 2-77664
 Br₂ in Ar, binary collision trajectories calc. using efficient computer algorithm 2-108686
 Br, polar fluid, extended RISM eqn. appl. 2-97896
 CS₂, liq. Lennard-Jones pot., struct. and dynamics, computer simulation 2-97901
 Co-Fe(Ni), ternary oxide scale form., diffusional growth, computer simulation 2-62271
 Co-Ni (0.45 wt.%), O₂ press. effect on elev. temp. oxidation (Japanese) 2-105375
 Cu, 2-105024
 Cu, binary collision simulations of high energy displacement cascades 2-103868
 Cu powder nuclear demagnetisation for cooling of liq. ³He and dil. ³He-⁴He solns., simulation 2-95386
 Cu, Au, Cu⁺ ion irradi., displacement cascade dimensions, TEM and computer simulation study 2-86759
 F⁻ aqueous ion, intermol. nuclear spin-spin coupling and scalar relax., quantum and statistical mech. calcs. 2-90641
 γ-Fe vacancy pore-point defect interaction, computer modelling 2-92024
 α-Fe:He, He precipitation at vacancies, computer simulation 2-86706
 Fe-C, ferrite, C cluster formation, critical cluster size, computer calc. 2-67340
 Fe(III) compounds, high spin, X-band EPR spectra in rhombic ligand fields, computer simulation 2-87582
 Fe₂Zn_{1-x}F_x, randomly diluted antiferromag., field induced 'exchange-flips' 2-66811
 HCl, liq., dielectric const. and relax., computer simulation 2-66972
 H₂PO₄, polarisation model appls. 2-60861
 H₂O₂, polarisation model appls. 2-60861
 InAs-GaSb superlattices, ion dechannelling mechanism 2-66082
 InSb layer oxidation study after ion implantation by backscattering and nuclear reaction 2-99567
 LiCl-KCl, liq. state, ion mobility mol. dynamic simulation 2-110022
 LiTaO₃, ferroelec. domain boundaries, computer simulation, X-ray and electron microscope study 2-87717
 Lu-Fe alloy, recoil mixing produced by atom beams, simulation using computer code 2-76518

digital simulation continued

- Mg, dislocation motion through flexible and reactionable dislocation forest, computer simulation 2-98090
 NH₃-H₂O absorption refrigeration cycles, solar operated, simulation, design and economics for building cooling 2-99835
 NO₂ summertime ground-level distrib. rel. to motor vehicle NO emissions 2-67902
 NaCl, dislocation motion through flexible and reactionable dislocation forest, computer simulation 2-98090
 Ni, diffusion parameters of W, dynamic computer model (Russian) 2-76740
 Ni, ion-surface scatt. for Ne⁺ ions, computer simulation 2-62037
 Ni, range distrib. of deuterons, target crystallinity effects 2-66092
 PbF₂, ionic disorder computer simulation 2-92259
 Si, laser annealing by nanosecond pulses, temp. rise and carrier conc., computer model 2-86723
 p-Si, minority carrier diffusion length meas., computer modelling of surface photovoltage method 2-72007
 Si, radiation damaged self-interstitial triplet, double alignment channelling study 2-76433
 Si solar cells, computer simulation 2-88461
 Si:B, B deposition from BBr₃ source, expt. and computer simulation 2-103794
 Si:B, bulk and SOS struct., ion implanted, doping profile, thermal distribution, computer simulation 2-66033
 SiO₂, amorphous, freq. spectrum, mol. dynamics simulation 2-61100
 V:MgF₂, cryst. struct. computer simulation 2-55924
 W, scattering of keV H and He ions 2-77668
 W surface, diatomic W cluster migration, computer simulation 2-86990
 WO₃, scattering of keV H and He ions 2-77668
 Xe_n⁺ microclusters, Coulomb explosions, computer simulation 2-90755

digital storage

- see also cryoelectronic stores; cryotrons; magnetic storage; optical storage; random-access storage; semiconductor storage
 holographic memories, random phase mask efficiency 2-85920
 microscopically inhomogeneous flows, seed-particle-track images, rapid digitised storage 2-97676
 oscillogram storage using video recording (German) 2-64012

digital voltmeters

- calibration, Datron 4000 instrument 2-89741
 capacitance meas., charge and discharge time meas. methods, use of DVM (German) 2-74461
 dynamic hysteresis loop meas. using computer-controlled digital voltmeters 2-69208
 millivoltmeter based on single VLSI chip, construction details 2-107315
 minicomputer coupling to V7-16 DVM 2-84611
 multimeter, Metertech model 3T, with built-in transistor tester 2-107316
 rapid true RMS digital wideband voltmeter (French) 2-79569
 simultaneous recording of the readings of two digital measuring instruments with the Shch6800K printing instrument 2-69159

digitisers see analogue-digital conversion**dilatometers** see extensometers**dilute alloys**

- see also impurity electron states; Kondo effect; magnetic properties of dilute systems
 anelastic relax. of self-interstitial-solute atom complex 2-56082
 BCC metals, impurity interstitials strain ordering and associated anelasticity, theory 2-98242
 BCC metals, random interstitials strain ordering and associated anelasticity, theory 2-98243
 d-band metals, pseudo Green's function theory for dil. alloys 2-71901
 dislocation pinning by impurity atmospheres, nucleation mechanism, theory (Russian) 2-86666
 FCC alloys, very dil., free enthalpy of impurity-vacancy binding 2-81814
 internal oxidation, precip. under diffusion saturation conditions, theory (Russian) 2-88084
 magnetic alloy, antiferromagnetic spin glass transitions 2-82616
 magnetic alloy, spin glass behaviour 2-92937
 metallic solutions, dilute, empirical estimation of Henrian constants 2-66255
 noble metal-rare earth alloys, dil., magnetotransport and EPR props. 2-104355
 oxidation, parabolic growth of nonuniformly doped oxides containing aliovalent impurities 2-72865
 rare earth alloys, dil. origin of random strains., rel. to ESR of La:Er 2-56925
 residual resistivity, size effect correction, partial wave calc. (Russian) 2-98615
 transitional and noble metal impurity systems, dil., electronic struct., pseudopot. study 2-98575
 Ag-Mn, dil., mag. impurity effects studied by tunnelling in supercond. proximity layers 2-61660
 Ag dilute alloys, electric field gradients, point defects, PAC meas. 2-93085
 Ag-based solid solns. with group I to VB solutes, at. size and lattice parameters 2-109748
 Ag-Mn, dil., spin glass, temp. depend. of order parameter 2-72214
 Ag(Tb(Dy)(Ho)(Tm), dilute alloys, magnetostriction, free energy calc., single ion Hamiltonian 2-92987
 AgIn dilute alloy, internal oxidation, TDPAC study 2-93080
 Al-Ag(Ge), dilute, Matthiessen's rule deviation at high temp. 2-115729
 Al-Co dil. alloys, damage rate and recovery meas. 2-76488
 Al-Fe, dil. alloy, electron irradi., frozen free split phenomena, mech. relax. study 2-56084
 Al-Mg, dilute, dislocation pinning by impurity atmospheres, nucleation mechanism, theory (Russian) 2-86666
 Al-Mg(Fe), dil., electron irradi., self-interstitial-impurity complexes, internal friction study 2-56007
 Al-Ti (0.26 wt.%), cold rolled, brittle-ductile transition after liq. Ga embrittlement, temp. and strain rate effect 2-88189
 Au dilute alloys, elec. field gradients, point defects, PAC meas. 2-93085
 Au-based solid solns. with group I to VB solutes, at. size and lattice parameters 2-109748
 Au-Cd(Sn)(Zn), dilute alloys, low-temp. specific heat calcs. 2-61165
 Au-Co(V), dil. alloy, impurity optical absorpt. meas. 2-99160
 Au-Fe, dil., electron irradiated, damage rates 2-66067
 Au-Fe, dil., mag. impurity effects studied by tunnelling in supercond. proximity layers 2-61660
 Au-Fe, dilute, thermoelectric power meas. technique at low temp. (French) 2-101419

dilute alloys continued

- AuTb dilute monocrys., magnetostriction, ion-lattice coupling parameters 2-92985
 AuYb dilute monocrys., magnetostriction, ion-lattice coupling parameters 2-92985
 Bi-Sn(Te), dilute alloys, anomalous magnetoresistivity in quantising mag. field 2-92664
 Cd-Au, liq., EMF and vapour press. values, equil. and second law of thermodynamics confirmation 2-81981
 CdMn, hexagonal, spin glass behaviour 2-66861
 Co-Cr dil. alloy, kinetics and mechanism of high temp. oxidation 2-88277
 Co-Fe, dilute alloy, elec. resist. meas., 4 to 300K 2-87223
 Cr La-Ta-O-C-N dil. alloy, fracture and plasticity, structural effects (*Russian*) 2-99481
 Cr-La (0.3 wt %), films, dislocations, struct. and composition 2-115600
 Cr-Rh-Zr dil. alloy, grain boundary relax., internal friction study (*Russian*) 2-93546
 Cr-V, dilute alloys, elastic consts., mag. transition 2-86774
 Cr-V(Mn), spin density wave states, tight-binding approx. 2-66751
 CrSi, dil. alloys, first order phase transition from paramag. to commensurate SDW state 2-116003
 Cu alloys, dil., single vacancies and clustered interstitials, spontaneous recomb., elec. resist. meas. 2-76435
 Cu alloys, elec. field gradient, valence and size effect contribs. 2-104325
 Cu dilute alloys, electric field gradients, point defects, PAC meas. 2-93085
 Cu, electric field gradient 2-115718
 Cu-3d transition metal dil. alloys, residual resist. calc. using exact soln. of linearised Boltzmann eqn. 2-98618
 Cu-Au(Al)(Ni), dilute, Matthiessen's rule deviation at high temp. 2-115729
 Cu-Au(Be)(Pd)(Sb) dil. alloys, electron irradiated, solutes as nuclei for self-interstitial complexes 2-66061
 Cu-based solid solns. with group I to VB solutes, at. size and lattice parameters 2-109748
 Cu-Cr, dil., mag. impurity effects studied by tunnelling in supercond. proximity layers 2-61660
 Cu-Cr(Fe), (-Mn), dilute alloys, ionic model, energy level splitting, NMR study 2-66932
 Cu-Fe dil. alloys, internally oxidised, elec. and mag. props. 2-98620
 Cu-In, dil., electron irradi., self-interstitial-impurity complexes, internal friction study 2-56007
 Cu-Ti, dil., D permeation meas., trapping impurities effect 2-56254
 CuFe dilute mag. alloys, g-factor, mag. field splitting of microcontact spectrum (*Russian*) 2-98527
 CuMn dilute mag. alloys, g-factor, mag. field splitting of microcontact spectrum (*Russian*) 2-98527
 Fe alloys, muon spin rot. studies of local mag. fields 2-72394
 Fe-Al(V)(Si), dilute alloy, electron irradi., impurity-interstitial trapping sites, mag. aftereffect spectra study 2-56895
 Fe-Pd, dil. alloys, model of mag. behaviour 2-72198
 Fe-Sb-Co(Mn)(V)(Ti), dil., impurity pair interactions, resist. and NMR meas. 2-82317
 Fe-Si (≤ 1 wt %), dil. alloy, oxidation in CO₂ 2-67617
 Fe-Si-Al, dil. alloy, mech. props., elec. cond. and mag. losses meas. 2-83217
 Fe-Ti, dil. alloy, vacancy-impurity interaction, positron annihilation study 2-98152
 Fe-Ti, dislocation relax. peaks and solid soln. softening 2-111224
 Fe-V, mag. moment distrib., diffuse neutron scatt. study 2-72151
 FeSi, dilute, mag. relax. on electron irradi. 2-61743
 Gd-As, dil., As hyperfine interaction, IPAC study 2-92544
 H, solubility, diffusivity and trapping 2-81964
 Hf-¹¹¹Cd, ¹¹¹Cd probe nuclei elec. field gradient temp. depend., TDPAC study 2-104326
 Hg-Cd(-Bi)(-Na)(-Pb) dilute liq. alloys, thermodynamic and elec. props., density and vol. of mixing 2-61171
 Hg-Sn, liq., EMF and vapour press. values, Duhem integration, second law of thermodynamics confirmation 2-81982
 In-Cr dilute superconducting alloy, tunnelling, localised excited states 2-72122
 In-Cu(Ag), liq. binary system, O diffusivity and thermodynamic props. 2-86907
 In-Mn alloys, dil., supercond., T_c depression produced by ion implantation 2-77221
 Ir-Fe dil. alloy, high field Mossbauer study 2-99001
 La-Sb-Dy, dilute alloys, magnetostriction, free energy calc., single ion Hamiltonian 2-92987
 Mg-Mn, dilute, cryst. field effect on magnetisation 2-82660
 MgMn, hexagonal, spin glass behaviour 2-66861
 Mo-B dilute alloys, nature of planar faults 2-81800
 Nb alloys, fusion-neutron irradi. damage rates 2-103828
 Nb-Zr, dil. alloy, low temp. sp. ht. meas. (*Russian*) 2-86897
 Ni-Ti, dil. alloy, internal oxidation and oxide particles (*Japanese*) 2-105374
 Pd alloys, dil., correlation between band struct. and hydride formation 2-98516
 Pb dilute molten alloys, O₂-Ag(Au)(Bi)(Cu)(In)(Ni)(Sb)(Sn)(Te) interactions 2-62099
 Pb-Ag (0.038 at %), kinetics of Ag precip. 2-111187
 Pb-In(Sn)(Te), liq., dil., activity coeff. of O, impurities effect 2-99700
 Pd-Dy, dil. alloy, sp. ht., cryst. elec. field effects 2-76700
 Pd-Er dil. alloy, sp. ht., cryst. elec. field effects 2-76700
 Pd-Fe (1.5 at %), spin waves, inelastic neutron scatt. study 2-72178
 (Pd_{0.996}Fe_{0.004})_{0.95}Mn_{0.05}, nonlinear mag. susceptibility and sp. ht. meas. 2-87480
 Pt alloys, dilute, neutron irradiated, influence of impurities and radiation doping on defect production 2-76511
 Pt alloys, thermal and fast neutron irradiated, interstitial-impurity reactions during stage 1 2-61041
 Rh-Cr dil. alloys, low temp. nucl. orientation meas. 2-92546
 Sn-Nd(Pr)(Ce), liquid, 4f spin dynamics, TDPAD study 2-56992
 V-Cr-Ti (1.0, 1 wt %), neutron irradi., preimplantation of He effect on microstruct. 2-85215
 Zn-Cr, dilute, cryst. field effect on magnetisation 2-82660
 Zn-Mn, dilute, cryst. field effect on magnetisation 2-82660
 ZnMn, hexagonal, spin glass behaviour 2-66861

dimensions

- dimensional analysis, logical structure 2-101372
 unit-dimension transmitting system, events probability computing 2-58767
dimers *see* **molecules**
dineutrons *see* **neutrons**
Dingle temperature
 Cu-Mn, dil., mag. impurity system, spin-resolved scatt., de Haas-van Alphen study 2-82563
diode lasers *see* **semiconductor junction lasers**
diode sputtering
 plasmatron sputtering, high rate, methods and appls. in microelectronics 2-116365
 AlN film, basal orientation, RF diode sputtering, low temp. growth 2-72623
 ZnO film, c-axis orientation, energetic atom bombardment influence 2-98476
diode tubes *see* **diodes**
diodes
see also **plasma diodes**; **rectifier tubes**; **semiconductor diodes**
 coaxial diode, scalable, for electron-beam pumped gas lasers 2-60091
 electron beam, high-current, low-energy nanosecond, production 2-113043
 electron beam diode, inductively-driven, repetitive operation, expt. study 2-79710
 electron beam with stabilized current, intense monoenergetic microsecond, production 2-113042
 foilless diode, magnetised, generation of cold intense relativistic electron beam 2-101493
 gas-filled diode, electron beam stability in space-charge limited current mode 2-108208
 negative ion production in mag. insulation diode 2-113044
 RAYITO accelerator, designed to investigate electron-beam control and uniform excitation of large volume lasers, characterisation 2-96335
 thermionic ionisation detectors, characteristics study 2-90403
 N₂-filled diode rel. between secondary ionisation coeff. and elec. breakdown 2-65782
dipole antennas
 vertical electric dipole over two-layer medium, time response, double deformation calc. 2-55041
 VLF receiving dipole in magnetoplasma, directivity pattern 2-63121
dipole moment, electric *see* **electric moments**
dipole moments, magnetic *see* **magnetic moments**
Dirac electron theory *see* **Dirac equation**; **electron theory**
Dirac equation
see also **electron theory**
 2n-dimensional spaces, Dirac-like eqns. 2-107530
 Adler-Weisberger sum rule saturation in quark shell model, general proof 2-69431
 bound-muon decay, expressions for electron spectra 2-69462
 Clifford algebras, Pauli-Dirac matrix generators 2-89530
 conference, New Orleans, LA (May 1981) 2-112646
 conformal spinor geometry, internal symmetry algebra 2-69362
 Coulomb scattering of fast electrons 2-107608
 covariant Schrödinger eqn. via path integrals 2-53576
 curved Riemann-Cartan background, quantised Dirac field, symmetry props., Green function 2-58991
 derivation from energy-momentum vector relationship 2-113112
 Dirac monopole, dynamic SO (3,1) symm. (*Russian*) 2-107565
 Dirac quantisation, gauge choice 2-95636
 electron-atom elastic scattering, relativistic eqn. for intermediate energies 2-90697
 EM field with Dirac's monopoles, canonical quantisation 2-79810
 extended Dirac particles and their spectra in curved phase space 2-79435
 Fermi systems, structure results for Segal quantisation 2-112731
 first-order Dirac eqn. with Coulomb pot., simplified soln. 2-95630
 gauge invariance 2-107518
 gauge theories, non-Abelian axial anomalies, nonperturbative proof 2-84808
 general relativistic hydrogen atom 2-107181
 generalisation to accelerating frames 2-53933
 generalised, spinor theory, vector struct. and Dirac operators 2-95659
 gravitational collapse, neutrino interactions effect, Dirac formalism 2-74010
 gravity, Dirac Hamiltonian formalism 2-95203
 harmonic quark bag model 2-84865
 K-electron capture shakeoff probabilities calc. using Dirac-Fock-Slater wave functions 2-85003
 Komar's solution to factor ordering problem of constraint algebra 2-101260
 magnetic charge quantisation, topological meaning 2-74597
 massive fermion field, chirally symmetric Dirac eqn. 2-113175
 massless Dirac particle, super phase space reduction 2-53935
 massless quark, Schrödinger vs. Dirac eqn. 2-64299
 nonpotential interactions and origin of masses of elementary particles 2-95799
 para-Lorentzian dynamics, conserved-vector and nonconserved-axial weak currents 2-95735
 pion decays, current-algebra sum rules saturation in quark shell model nonrelativistic expansion 2-69430
 point-source idealisation in chemical field theories, mech. energy losses from EM radiation reactions 2-84489
 positive energy theorem, Witten's proof 2-74271
 positive-energy wave eqn. with para-Bose internal variables 2-95621
 pretty mathematics role 2-107517
 pseudopotentials, relativistic norm-conserving, calc. for heavy atoms 2-76896
 quantum mechanics, book 2-84404
 relativistic sum rules and integral props. of Dirac eqn. 2-90436
 Schrödinger equation, repulsive nonlinear, with left-right boundary conditions, spectral transform 2-95097
 sine-Gordon eqn., four-vector generalisation 2-53931
 SL(2,C) invariant representation 2-95598
 spinor sources in cosmology 2-95156
 SU(N) magnetic monopoles, topological study 2-95625
 supersymmetric particles with internal symmetries and control charges 2-79770
 transformation props., derivation from EM principles 2-84832
 ultrarelativistic Dirac pot. scatt., partial wave representation 2-85011

Dirac equation continued

- vacuum, stability and decay in external gauge fields 2-84811
 Wu-Yang differential spaces, monopole scatt. (*Russian*) 2-107653
 Yang-Mills-Dirac equations, rel. to Cauchy-Riemann eqns. in twistor space (*Russian*) 2-95656
 zeromodes in Kaluza-Klein theories 2-113138
 (d,d), Dirac phenomenology 2-85061
 (\bar{p}, π^+), relativistic one nucleon model description for reaction mechanism 2-80009
 Ag, electronic struct., non-muffin-tin and relativistic interaction effects 2-61341
 Au, electronic struct., non-muffin-tin and relativistic interaction effects 2-61341
⁴⁰Ca(p,p), optical pot. energy depend., Dirac eqn. based anal. 2-59353
 Cu, electronic struct., non-muffin-tin and relativistic interaction effects 2-61341
 UO(VO₂), gaseous, relativistic mol. orbital calcs. 2-90448

direct coupled amplifiers *see d.c. amplifiers***direct current amplifiers** *see d.c. amplifiers***direct current generators** *see d.c. generators***direct current machines** *see d.c. machines***direct current motors** *see d.c. motors***direct digital control***see also control systems*

- micromanipulators with high frequency vibratory drive (*Russian*) 2-53744
 power plants, thermal and nuclear, industrial computer systems appl. (*Japanese*) 2-80151

direct energy conversion

see also bioenergy conversion; cells (electric); chemical energy conversion; magnetohydrodynamic conversion; photothermal conversion; plasma diodes; solar energy conversion; thermionic conversion; thermoelectric conversion

- Electrochemical Society, Incorporated, Spring Meeting, conf., Montreal, Canada (May 1982) 2-101133
 fission electric cells—some elements of the operation theory 2-116851
 modelling by means of hierarchical decomposition of large dynamic linear programming 2-73091
 plasma direct converters, measured and projected performance 2-69963
 power conversion of energy fluctuations 2-105548
 tandem mirror reactor, plasma direct converter 2-85309

direct nuclear reactions and scattering*see also pick-up reactions; stripping reactions*

- complete multi-fragment event calcs. in statistical model for nuclear disassembly 2-107839
 compound nucleus, from direct reaction, fission product ang. distrib. (*Russian*) 2-101876
 coupled discretised continuum channel method based on three-body model 2-101901
 cross section transformations in reactions with three outgoing fragments 2-107877
 distorted-wave calcs., Dirac wave functions calcs. 2-101867
 fast neutron prod., thermal moving source model breakdown 2-101902
 heavy ion high energy collisions, light fragment prod., kinetic theory calcs. 2-90148
 heavy ion projectile fragmentation, intermediate energies, Coulomb final state interaction, charge effect 2-90149
 heavy ion relativistic peripheral collision, momentum distrib., knocked out nucleon 2-96033
 heavy-ion collisions, chaotic fragmentation of nuclei 2-113531
 heavy-ion collisions at intermediate energy, light particle correl. 2-113535
 heavy-ion reactions, conf., Saclay, France (May 1982) 2-112650
 inclusive breakup reactions, formalism and surface approx. validity 2-101868
 low-energy direct nuclear reactions, resonating group method 2-54345
 multistep direct emission, statistical theory 2-79997
 phase particle integrations of the nuclear Vlasov equation 2-69629
 quasifree knockout of nucleons and nucleon clusters 2-107837
 (α , xn), fast neutron prod., thermal moving source model breakdown 2-101902
 (e, 2e), quasielastic electron knockout in atoms, molecules and solids, wave functions 2-102630
 (e,e'p), EM knockout process, nuclear momentum distrib. 2-107838
 (γ ,p), EM knockout process, nuclear momentum distrib. 2-107838
 (n, γ), thermal and resonance capture, direct capture, E2 transitions, strength functions 2-113505
 (p,t), direct processes, simultaneous transfer DWBA descript., unhappiness factors 2-79996
 (p,x), continuum spectra, multistep direct reaction anal. 2-107863
 (t,p), direct processes, simultaneous transfer DWBA descript., unhappiness factors 2-79996
 Ag(π^+ , π^+ p), 60 MeV, proton knockout mechanism (*Russian*) 2-59425
 Al(n, γ), direct capture mechanism 2-113514
¹⁰B(¹⁰N, X), 86-180 MeV, fusion, direct and total cross sections, Hauser-Feshbach anal. 2-69692
¹¹B(p, γ)¹²C, excited nuclear states, direct reaction model c. alc. 2-64405
¹¹B(p, γ), 8-60 MeV, ¹²C bound and unbound state transitions, cross sections, possible giant resonance 2-90110
²⁰⁹Bi(⁴⁰Ar, X), 255 MeV, fragment spin alignment and misalignment 2-90153
 Br(π^+ , π^+ p), 60 MeV, proton knockout mechanism (*Russian*) 2-59425
 (¹²C, X) on medium, heavy targets, 86 MeV/n, α -emitters prod., cross sections and dynamical props. 2-113540
¹²C(¹²C, ¹²C), E \leq 20 MeV/u, elastic and inelastic scatt., direct processes 2-113536
¹²C(γ ,n)¹¹C transition in direct reaction model 2-64405
¹²C(γ ,p)¹¹B transition in direct reaction model 2-64405
¹²C(p,p)¹⁰Be, factorisation corr. for DWIA matrix element 2-69663
¹³C(Li, t)¹⁰O, 24-26 MeV, direct and compound nuclear contrib. 2-54424
⁴⁰Ca(p,n), 149.5 MeV, p-n coincidences, neutron-hole states, spectroscopic factors 2-113474
⁴⁸Ca(p,n), 149.5 MeV, p-n coincidences, neutron-hole states, spectroscopic factors 2-113474
¹¹³Cd(p,n), 0-10 MeV, neutron spectra, nonstatistical component, multistep direct transitions (*Russian*) 2-101897
²⁴⁸Cm(⁴Ne,X), A=20,22, 115 and 116 MeV, heavy actinide prod. cross section 2-54433

direct nuclear reactions and scattering continued

- ²⁴⁸Cm(⁴O,X), A=16,18, 97 and 98 MeV, heavy actinides prod. cross section 2-54433
¹H(³H,p)d, 69 MeV, break-up reaction mechanism study 2-101906
²H(α , α p)n, 140 MeV, breakup, three-body model 2-107874
²H(π , π n)³H, breakup near (3,3) resonance, relativistic Faddeev calc. 2-54205
³He(α , γ)⁷Be, 165-1170 keV CM, cross-section and branching ratio meas. 2-85065
⁴He(π^+ ,n)³H, pion absorpt., knockout 2-59413
⁴He(π^+ ,p)³He, pion absorpt., knockout 2-59413
¹⁶O(²⁰Ne,X), 292 MeV, energy and ang. correl. between neutrons and heavy ions 2-85091
¹⁶O(n, α), 7-15 MeV, total cross section, γ -spectra, direct-semidirect mechanism 2-101889
¹¹⁷In(n,n'), 0-10 MeV, neutron spectra, nonstatistical component, multistep direct transitions (*Russian*) 2-101897
 (⁶Li,d), antisymmetrised ⁶Li wave function and direct interaction, cluster model 2-64387
^ANi(n,n), A=58,60,64, 6 and 7 MeV, differential cross-section, direct processes 2-64412
¹⁶O(p, X), binary fragmentation, cross sections, statistical model calc. 2-113468
¹⁶O(p, γ)¹⁷F, direct capture cross section 2-90075
²⁰⁸Pb(n, γ), 0.8-7.7 MeV, compound nucleus, direct-semidirect processes, giant resonance search 2-90106
³⁴S(n, γ), thermal, direct capture, partial capture cross sections, ³⁵S levels, transitions 2-113506
⁴⁵Sc(γ , p), 15.6-25 MeV, GDR direct cross-section, isospin, preequilibrium decay 2-107847
¹²⁴Sn(¹⁶F,X), 104 MeV, direct α -particle emission cross section and ang. distrib. meas. 2-96041
¹²⁴Sn(¹⁶O,X), 90, 105, 125 MeV, direct α -particle emission cross section and ang. distrib. meas. 2-96041
¹²⁴Sn(²⁰Ne,X), 112, 156 MeV, direct α -particle emission cross section and ang. distrib. meas. 2-96041
⁴⁸Ti(¹³C,X), 46 MeV, light medium systems formation and decay study 2-85083
²³⁸U(n, γ), 7-15 MeV, total cross section, γ -spectra, direct-semidirect mechanism 2-101889
- directional antennas** *see directive antennas*
- directional couplers**
- coaxial optical fibre directional coupler fabrication 2-97198
 fibre-optic couplers, directional and otherwise 2-60246
 integrated optics topography problems (*German*) 2-75724
 nonlinear directional coupler, tunable 2-91041
 optical electro-optical clock oscillator appl. 2-86125
 organic dye optical guided wave laser and directional coupling amplifier 2-85997
 photomask fabrication, integrated optics, step-and-repeat process 2-65420
 resonator, all-single-mode fibre 2-91068
 single-mode optical fibre directional couplers 2-86112
 six-port reflectometer realisation for millimeter wavelength meas. 2-112931
 star coupler, 1XN, single mode integrated optical 2-65414
 star coupler, integrated optical, 1XN single-mode 2-60258
 InP electro-optic directional coupler switch, homojunction struct. 2-65405
 InP electro-optic directional coupler switch 2-75683
 LiNbO₃ integrated optical 2-114429
 LiNbO₃/Ti waveguide to single-mode fibre coupling at 1.32 μ m 2-65360
- directional patterns** *see antenna radiation patterns*
- directive antennas**
- superconducting emitter, losses caused by radiotransparent cryostat 2-112926
 VLF receiving dipole in magnetoplasma, directivity pattern 2-63121
- dirty superconductors**
- Al₅ superconductors, atomic disorder rel. to superconductivity 2-56769
 Josephson current, in nonsymmetric proximity systems, theory (*German*) 2-61661
 order parameter anomalies and scatt. processes (*Russian*) 2-66703
 pair breaking and charge relaxation in superconductors 2-61649
 thin-walled superconducting cylinder, effect of impurities on mag. field penetration 2-110533
 two dimensional, localisation effects, transition temp., electron density of states 2-87442
 InGe, percolating supercond., upper crit. field 2-77243
 (Mo_{0.60}W_{0.40})_{100-x}B₂, metallic glasses, low temp. χ , 2-104019
 Nb-Ti, supercond. mixed state, thermal cond., upper critical field (*Russian*) 2-98799
 Zr-Si, non-equilib. superconductor, rapidly quenched from melt 2-110520
- discharge lamps**
- see also arc lamps; flash lamps; fluorescent lamps; metal vapour lamps*
 gas ionization bulb breakdown voltage calibration device 2-64063
 hollow cathode lamps, optogalvanic signals induced by at. emission sources 2-71269
 metal halide lamps for use in film projectors, service tests 2-113017
 Mo-cup/quartz seals for lamps and lasers 2-79596
- discharge lasers** *see gas lasers*
- discharge tubes** *see gas discharge tubes*
- discharges (electric)**
- see also arcs (electric); electric breakdown; exploding wires and foils; flashover; glow discharges; high-frequency discharges; lightning; partial discharges; positive column; sparks; surface discharges; Townsend discharge*
 q<1 discharges in Tokapole II noncircular Tokamak 2-109574
 AC electrodeless discharge current, earthing effects 2-65776
 AC silent discharge, RF oscil. study by spectrum analyser 2-81598
 aerosol discharge plasma, electron space charge ion heating 2-55756
 barrier discharge in large gap, struct., development dynamics 2-60821
 beam plasma discharge expts. at ionospheric conditions 2-73774
 beam-plasma discharge, electron and mol. kinetics 2-103491
 beam-plasma discharge instability at low press. in bounded systems, ambient plasma and background temp. effects 2-65718
 breakdown wave in self-consistent field of EM wave beam (*Russian*) 2-103378
 brush discharges, charge transfer meas. technique 2-115080
 bulk gas discharge, electron beam generation 2-79716
 cathaphoresis, transient, in discharge tube with end volumes 2-115083
 cathode spot, erosion mechanism 2-81608

discharges (electric) continued

- channel formation during constriction of pulsed spatial discharges, model 2-81612
- circuit for exciting a combined discharge in gaseous media 2-71278
- coaxial plasma guns for power multiplication at high energy 2-97802
- cold H atom beam source using microwave discharge 2-107449
- constant current discharge, isotope separation (*Russian*) 2-60811
- current modulation by striation freq. synchronisation 2-97816
- cyanodiacetylene formation, discharge chemistry and mm spectrum up to 210 GHz 2-85637
- dielectric liquids, gassing 2-99038
- discharge voltages of non-corona air gaps of different shape at high frequency (*Russian*) 2-97805
- discharge with solid dielectric, controlled elec. breakdown 2-71285
- duopigatron gas discharge ion source, ion current, mass and energy distrib. and current density meas. 2-79712
- electron beam excited discharge, volt-ampere characts., cathode layer effects 2-60805
- electron cyclotron reson. discharge, microwave heated, X-ray bremsstrahlung meas. 2-114983
- electron distrib. function of weakly ionised plasma in large elect. fields, energy balance determ. by collisions (*Russian*) 2-76068
- electron energy distribution in high-freq. stationary fields, calcs. 2-103488
- electron-beam-discharge lasers, pulsed beam divergence calc. 2-70596
- electronegative fluids discharges detection and characterisation, using trace gas analysis 2-103534
- externally maintained discharge growth, mag. field effects, paraxial model 2-60820
- externally-sustained discharge laser cavity, electric field computation 2-90948
- gas discharges and appls., conf., London, England (August/September 1982) 2-101134
- gas ionisation in toroidal discharge, Tokamak and stellarator conditions (*Russian*) 2-91704
- gaseous discharge, photographic observation under elect. and mag. field appl. 2-55799
- grid transparency influence in ion-mobility meas., numerical simulation 2-103271
- Hall current discharge, with closed electron drift and distributed elec. field, instability (*Russian*) 2-103327
- He plasma, electron beam excitation, population mixing rate const. determ. 2-114969
- high current high-freq. discharge, struct. features, stability (*Russian*) 2-103482
- high resolution spectroscopy, conf., Bristol, England (April 1981) 2-74147
- high-pressure gas lasers, preionisation discharge kinetics 2-96930
- high-temperature plasma forming high-current pinch discharges (*Russian*) 2-55778
- hollow cathode, self-alignment of Ne 5d₃-levels 2-54810
- hollow cathode discharge, in minimum area of crossed inhomogeneous mag. field (*French*) 2-115060
- hollow cathode discharges, excitation of charge states, spectroscopy study 2-96710
- hollow cathode discharges, VUV study 2-97823
- HV contaminated insulators physical surface processes (*German*) 2-86486
- ignition in crossed elec. and mag. fields (*Russian*) 2-60810
- ignition in transverse mag. field, time-depend. props. 2-81611
- impulsive sound sources using electric discharges 2-81202
- ion source discharge performance and stability 2-91700
- ionisation waves, crit. current meas. 2-91697
- JIPP T-II torus device, ECR discharge cleaning (*Japanese*) 2-115035
- Knudsen discharge, initiation, ionisation cross-section, electron energy depend. 2-103490
- laser electrode profiles, analytical design method 2-96966
- Li/MnO₂ primary cells discharge charact. at low temps. 2-116790
- long air gap discharges, schlieren techniques to study leader phase 2-103546
- low pressure discharges, ionisation, particle balance and energy balance 2-76215
- low pressure gas discharges, electron temp. determ. by reson. laser light scatt. 2-91676
- magnetic discharge manometric transducers, time characts. 2-69189
- magnetically insulated gap, linear waves and instabilities 2-76230
- metal surface layers, effect of spark discharge and electrolytic plasma (*Russian*) 2-62267
- metal vapour ion lasers with transverse RF discharge excitation 2-86002
- multichannel creeping, X-ray emission 2-91703
- negative ion detachment, effect on statistical time-lag in gases 2-103270
- noble gas MHD generator, discharges in inlet region 2-91681
- noise power spectra of optical and acoustic emission from ICP discharge 2-76231
- non-self-sustaining discharge, initiation by electron beam, power distrib., electric field intensity (*Russian*) 2-60813
- nonindependent volumetric elec. discharge, volt-ampere characts. calcs. 2-60819
- nonuniform ionization in a gas discharge gap by an electron beam 2-60829
- optically controlled diffuse discharge switch 2-97801
- optogalvanic effect applications to opening switches 2-97824
- Penning discharge, thermionic cathode, electron modulation of HF oscillations 2-81606
- piezoceramic rod discharge in shock loading 2-82787
- pinched discharge, surrounding neutral fluid effect, MHD instability 2-71238
- plasma, oscills., microwave spectra, electrostatic probe effects 2-81607
- plasma focus, extreme UV emission spectra, Al V to IX and Si VI to X ion lines 2-59735
- plasma focus, extreme UV emission spectra, Ar XI to Ar XV ion lines 2-59734
- plasma of discharge excited by electron-beam method, adhesion, recomb. 2-71073
- plasma science conf., Ottawa, Canada (May 1982) 2-107015
- point-to-plane discharges, comparison of air and SF₆ 2-65784
- polymer film surface treatment, temp. effects 2-105353
- positive impulsive discharge streamer formations charge measurement (*Russian*) 2-97803
- positive streamer between rod-plane electrodes calc., with aid of digital simulation 2-103536

discharges (electric) continued

- pulsed discharge in axially symmetric transverse mag. field, characts. 2-81609
- pulsed gas insulated discharge and hollow gas cylinder production 2-86497
- pulsed power education of Texas Tech University, in USA 2-94944
- pulsed Xe discharges in quartz tube, reflected radiation effect 2-108987
- relaxation kinetics in high press. inert gas plasmas (*Russian*) 2-76065
- reverse currents nature in high current discharges 2-60824
- RF capacitive discharge, plasma pot. 2-55804
- rhodamine 6G dye laser pumped by hypocyloidal pinch discharge 2-86005
- self-maintained discharge with closed electron drift, props., effect of directions of delivery of substance 2-71272
- self-quenching streamers in drift tubes 2-108250
- self-sustaining discharge stability in resistive electrode-discharge gap struct. 2-109621
- space homogeneity of a stationary semi-self-maintained discharge (*Russian*) 2-76220
- space-charge-limited bipolar current flow between concentric spherical electrodes, numerical solution 2-103484
- spatially uniform plasma column, max. transverse size, interelectrode distance depend. 2-81610
- sputtering DC discharge, current-voltage-meas. characteristics calc. 2-57285
- stationary wave in optical discharge, thermal stability 2-109619
- strong-current pinching discharge, local high temp. plasma form. (*Russian*) 2-97764
- surface ionisation Knudsen diode, oscillatory processes, electron stage 2-103474
- TFTR plasma discharge, position and current control, optimal control theory anal. 2-86459
- thermoelectric nonlinear fluctuation phenomena, theory 2-91582
- tholins production on elec. discharge in methane+NH₃ atm., mol. anal. 2-57603
- Tokamak, ohmically heated, energy balance, transport processes 2-81539
- Tokamak discharges, heating simulation, lower hybrid wave trajectory 2-76129
- Tokamak discharges, transitions in n=2 ground state configurations of Cu, Ni, Fe and Ge 2-86479
- toroidal discharge, simulation of runaway electrons dynamics 2-81613
- toroidal runaway discharges, cyclotron emission 2-71122
- ultra-fast discharge fine line flash light sources, for dye lasers pumping 2-86067
- uniform current sheet implosion in a low beta plasma 2-86489
- unipolar corona discharge in conductor-plane arrangement, electric field and volt/ampere characts. determ. using θ -method 2-60822
- Voliere gas discharge plasma props., discharge current effects (*Russian*) 2-103483
- volume electroionisation discharge, electron beam ionis. of gas, electron conc. determ. 2-115077
- volume resonator, intrinsic mag. field effect on secondary electron discharge 2-109617
- weakly ionised decaying plasma, control of longitudinal electric field intensity of electron temp. 2-60827
- Ar discharge, ionisation waves, crit. current meas. 2-91697
- Ar, pulsed discharge, channel form. at medium pressures, interferometric study 2-71273
- Ar thermionic cathode discharge, forward longitudinal waves, theory 2-97815
- Ar-ethane-ethyl alcohol mixture drift tubes, self-quenching streamers obs. 2-70038
- Ar-HgBr discharge, electron beam energy deposition in mag. guide field, HgBr fluorescence study 2-115059
- Ar-SF₆ mixtures, contraction of volume discharge initiated by UV radiation 2-86494
- CF₂ radicals in C₂F₆ and CF₄ discharge plasmas, laser induced fluorescence study 2-81575
- CO moderate-pressure electric-discharge laser 2-55204
- CO₂ CW multibeam high-power laser excited by AC discharge 2-85995
- CO₂ electron beam ionised discharge laser, closed cycle operation, discharge product meas. 2-97065
- CO₂ fast-flow laser discharge chamber processes, diagnostic procedure 2-65200
- CO₂ high-power gas-discharge technological lasers, systems and methods for pumping 2-96986
- CO₂ high-pressure electric-discharge laser with continuous freq. tuning and narrow emission line 2-96892
- CO₂ laser, electron beam preionised, discharge plasma characts. 2-80931
- CO₂ laser, fast-flow, pumped by steady-state RF capacitive discharge 2-114235
- CO₂ laser, high power, output pulse shaping with externally sustained discharge 2-114339
- CO₂ laser, high press., UV preionised, transversely excited, discharge parameters, meas. and theory 2-90929
- CO₂ laser excitation, high power, multiple electrode system 2-55182
- CO₂ pulsed TEA laser stabilised by double preliminary discharge, 1.1 kJ/litre input energy density 2-96890
- CO₂ TEA laser, stabilised, with double photopreionisation and low-ionisation-pot. additives 2-96891
- CO₂ TEA laser excited by preionised discharge through a dielectric 2-96993
- ¹²C¹⁶O₂ spectroscopic constants of Fermi dyad {10⁰v₂; 02⁰v₃} and laser sequence band transition wavenumbers 2-102479
- Cu vapour transverse-discharge laser, Cu vapour conc., degree of gas heating 2-60067
- H, Balmer-alpha line emission and atom energy in ion-source discharge 2-70190
- H, low density, potential step development, laser resonance scatt. study 2-91687
- H-H₂, electron beam discharge plasma, vibr. excited states 2-109457
- H₂ discharge, H₂ vibr. population distrib. and negative ion conc. calc. 2-90501
- H₂ discharge, laser action obs. at 3.767 μ m 2-55118
- H₂ plasma striations, laser induced phase locking 2-60754
- He, corona discharge, microscopic theory 2-60823
- He, synchronized diagnostics of wave breakdown in long pipes 2-60814
- He-Cd mixture hollow cathode discharge, population density meas. 2-71284
- He-Ne lasers, discharge noise investigation (*Chinese*) 2-65201
- Hg discharge, press. determ. from self-reversed spectral lines 2-91669

discharges (electric) continued

- Hg-Ar discharge, analytical model for low-pressure gas discharges 2-81596
 Hg-Ar-Ne discharge, electron energy distrib., electrokinetic charact. 2-65788
 Hg-Ne-Ar discharge, low pressure, electron energy distrib., plasma basic eqns. 2-65789
 I laser pumped by open discharge radiation, active mixture regeneration, chromatographic mass-spectroscopic anal. 2-114260
 IF laser, discharge pumped, upper state form. kinetics and line tunability 2-85943
 K discharges between plane parallel electrodes, secondary ionisation processes analysis 2-103535
 N₂, electron impact dissociation and ionization in elec. discharges 2-65096
 N₂, lasing and dynamics of nanosecond discharge 2-70548
 N₂, TEA laser performance, discharge parameter effects 2-55127
 N₂-O₂, 4:1 mixture, nonstationary discharge maintained by electron beam, theoretical model 2-71275
 Na-Ne, low press. discharge, electron density meas., two-photon spectra 2-60806
 Na-Ne discharge tube, optogalvanic spectroscopic expts. (*Chinese*) 2-65775
 Nd:glass laser for expts. an optical discharges 2-86480
 Nd:YAG laser using radiation from high-freq. electrodeless discharge, pumping system investigation and development 2-114319
 Ne excited atomic density in gas discharge by laser reson. fluoresc. (*Russian*) 2-76075
 Ne-Ar AC discharges, existence regions and discharge modes (*German*) 2-109614
 O discharge, plasma oxidation of Si, review 2-88353
 O plasma, electron and ion impact, rate coeffs. 2-81446
 SF₆, spectrometric anal. during an elec. discharge 2-91708
 SF₆/N₂ gas mixture compositions effects on discharger switching time in nanosecond range (*Russian*) 2-97804
 SeF₆ excimer laser discharge stabilization by low-current density electron beam 2-114257
 Si:H amorphous film, multipole DC discharge growth, ellipsometric study 2-92422
 SiH₄ plasma, elec. discharges IR absorpt. and emission obs. 2-71260
 SiO₂, dielectric breakdown and wearout phenomena 2-61832
 Ti, nitriding in RF discharge, effect of H addition to N on nitriding 2-88271
 XeCl discharge laser electrode profiles, analytical design method 2-96966
 XeCl laser, divergence and spectrum control 2-55133
 Zr, Lande g-factors, multimode saturation reson. in optogalvanic spectroscopy 2-85578

discharges (partial) see partial discharges**disclinations**

- amorphous structure, geometrical nature and elementary excitations, theory 2-115139
 cholesterol chloride-cholesterol myristate mixture, negative-positive monopole transitions (*Russian*) 2-81961
 4-cyano-4'-n-pentylbiphenyl nematic film, diffusion coeffs. meas. by dynamic approach 2-103596
 4-cyano-4-n-octyl-diphenyl, smectic A liq. cryst., light diff. on linear disclination 2-103622
 defect fluctuation theory, dislocations and disclinations under stress 2-109794
 glasses, defects, gauge invariance, homotopy theory 2-86577
 liquid crystal defects, review 2-76300
 nematic liquid cryst., elastically anisotropic, twist disclination 2-97917
 nematic liquid cryst. display, multiplexible bistable, homogeneous elec. field threshold switching 2-103597
 nematic thermotropic and lyotropic liq. cryst. mixtures, obs. of apparent high strength singularities 2-103612
 polymer, oriented, elastic anisotropy and kink band form., disclination-dislocation model analysis 2-71542
 rare earth sesquioxides, monoclinic, incoherent twin boundaries and isolated wedge microtwins, high resolution study 2-60999
 rectangular twist disclination loops, elastic props. 2-115235
 two-dimensional Lennard-Jones system, melting, Monte Carlo simulation 2-92166
 two-dimensional melting, Laplacian roughening models 2-103956
 wedge disclination anchoring by impurity atmosphere 2-76443
 Si:H, amorphous, order and disorder, curved space description 2-76311

discontinuous metallic thin films

- coupled capillary-plasma wave excitation at liquid metal surface in plasma (*Russian*) 2-86435
 dielectric regime, Hall effect 2-82381
 granular surfaces, extension of Maxwell-Garnett theory 2-57199
 ion beam technology applied to deposition process 2-57304
 superconducting transition, quantum fluctuations and topological transition 2-56767
 Ag discontinuous film, carrier mobility 2-82479
 Ag electroformed discontinuous film, pot. distrib. and switching phenomena 2-61619
 Ag film, Ga liquid layer dispersion on surface (*Russian*) 2-71778
 Ag film growth on Si (100), LEED and AES study 2-56397
 Ag island films, optical plasma reson. absorpt. half-width, size effect 2-67132
 Ag island films, surface-enhanced Raman scatt. excitation spectra 2-61898
 Ag small particles vapour deposited onto AgBr, NaCl substrates, height determ. 2-98483
 Al discontinuous film, carrier mobility 2-82479
 Al-Ag granules in complex film, plasma resonance absorpt. bands 2-116289
 Au discontinuous film, carrier mobility 2-82479
 Au discontinuous films, non-ohmic conductance meas. 2-82480
 Au discontinuous films on glass substrates, elec. cond. temp. depend. meas. 2-82481
 Au discontinuous thin film, I-V charact., adsorption effects 2-110499
 Au film, low loss surface imaging STEM studies 2-110181
 Au insular film, electron emission obs. in microwave elec. field 2-93386
 Au island films, discontinuous, morphology 2-71823
 Au island films, field emission and hot electron emission, energy distribution 2-77712
 Au on Pt (001) and (111), interface struct., misfit dislocations, TEM study 2-76843

discontinuous metallic thin films continued

- Au small particles vapour deposited onto AgBr, NaCl substrates, height determ. 2-98483
 Au, thin films, discontinuous, electrical cond. 2-72082
 Au-Ag composite granular films, optical transmittance 2-72570
 Cu discontinuous film, carrier mobility 2-82479
 Cu film, coupled fine particles, electron localization and transport props. 2-61618
 Fe film, evaporated at oblique incidence, columnar struct. 2-98493
 Fe overlayer growth on Ag(110), LEED and AES studies 2-98489
 In film, discontinuous, supercond. transition temp., resistive meas. 2-92810
 In, vacuum evaporated submicron particulate monolayer form. beneath heated polymer surface 2-77740
 Pd islands, interaction of CO and O₂ thermal desorpt. and AES studies 2-56361
 Pt film, ultrathin oriented, on Al₂O₃, catalysis of methylcyclopentane hydrogenolysis 2-88381
 Sb film, amorphous, vacuum deposited, estimation of density changes associated with growth 2-71838
 Se, vacuum evaporated submicron particulate monolayer form. beneath heated polymer surface 2-77740
 Sn film, graphoeptaxial electrodeposition, expt. study 2-87083
 Sn films, granular, optical props. from 0.22 to 1.0 μm 2-104976
 Sn, vacuum evaporated submicron particulate monolayer form. beneath heated polymer surface 2-77740
- discrete symmetries**
see also C invariance; CP invariance; CPT invariance; P invariance; parity; T invariance
 axial symmetry, SU(2) monopole rings, N=3 soln., Corrigan-Goddard conditions 2-74627
 composite quarks and Cabibbo mixing 2-59128
 integrable curves and surfaces, singular discrete symm. 2-54011
 nonAbelian mag. monopoles, color reflection symm. and internal struct. 2-101555
 weak interactions and symmetries 2-59098
 D⁺, D⁰ system, discrete symm. breakdown test 2-74626

discrete systems

- sound source position calc. using passive sensor systems 2-114577

discriminators

- dual parameter discriminator for gas scintillation proportional counters 2-64808
 laser Doppler meter using scanning optical frequency discriminator (*Russian*) 2-114946
 latched constant fraction discriminator and appl. in time resolution studies 2-108302
 neutron-gamma discrimination, dynamic range increase by gain switching 2-90412
 optical discriminator-counter for atm. O₂/N₂ mol. ratio meas. using photomultipliers 2-68510

disinclinations see disclinations**disintegration (radioactive) see radioactivity****disintegration energies see radioactivity****dislocation anchoring see dislocation pinning****dislocation arrays**

- brittle crack advance by double kink nucleation 2-57451
 FCC alloys, partial grain boundary dislocations, periodic arrays 2-91968
 metals, grain boundary struct. review 2-60997
 metals, HCP, dislocation struct. (*Chinese*) 2-109795
 nomenclature, for dislocation arrays 2-55971
 planar dechannelling at dislocations, density effects 2-109869
 prismatic dislocation arrays produced by slip on imperfect glide surface 2-76455
 steel, austenitic stainless, structure, effect of cold working and annealing 2-67370
 superplasticity, rate controlling deform. mechanisms, review 2-83183
 Al alloy 7075, dislocation transport of H, rel. to hydrogen embrittlement 2-83220
 CoSi-Si(111), MBE growth, Rutherford backscattering, TEM and LEED studies 2-66385
 α -Fe, C atmosphere near edge dislocation 2-115275
 MgAl₂O₄, work softening, plastic deformation, slip and dislocation climb 2-86678
 Ni-base eutectic superalloy, γ/γ' - α , interfacial struct. 2-82149
 Ni-Zr-Co-Cr-Al-Ti powders, rapidly solidified, shock wave consolidation 2-62089
 Si:P, dislocation clusters and P diffusion, TEM and X-ray topography study 2-91973

dislocation breakdown, pinned see dislocation damping**dislocation climb**

- alloy, thermomechanically treated, creep yield stress 2-99479
 alloys, complex, high temp. radiation damage 2-109843
 creep, dislocation network theory, climb glide, multiplication and pipe diffusion 2-76572
 creep, enhancement by irradiation 2-105221
 creep, irradiation, and thermal, by dislocation climb, theory 2-86709
 creep behaviour, Class II, modified constitutive eqn. 2-71550
 crystals, two dimensional, defect motion and stress relaxation, shear modulus 2-61208
 cubic crystals, grain boundary dislocations, step heights 2-55980
 fusion reactors, pulsed, irradiation creep by climb controlled glide mech. 2-76573
 Harper-Dorn creep, flow process 2-71540
 irradiation creep, cascade-induced point defect fluctuations 2-86708
 metals and alloys, creep, influence of stacking fault energy 2-66110
 orientation dependence of the creep stress for combined dislocation slip and climb 2-66105
 radiation point defect annihilation, effect on dislocation struct., theory (*Russian*) 2-98085
 sapphire, dislocation climb dissociation, dislocation dipoles 2-60989
 smectic A phases, lubrication theory using edge dislocation climb 2-81663
 steel, Cr-Mo-V, 12Kh1MF, dispersion hardening, creep rate (*Russian*) 2-77871
 steel, stainless, Nb stabilised 20/25, creep, primary and recoverable 2-116492
 Al, in-situ study of subboundary props. during creep, HVEM 2-71462
 Al-Al₂O₃, oxide dispersion strengthened, high temp. deform. 2-93554
 Al-Mg-MgO, oxide dispersion strengthened, high temp. deform. 2-93554

dislocation climb continued

- CdTe, defect annealing, dynamic obs. at lattice resolution 2-91978
 (Co₇₅Fe₂₅)₂V alloy, ordered, microstruct. 2-72719
 Cu-Al-Si-Co (2.8, 1.8, 0.4 wt.%), fine grained, creep 2-105219
 Cu-Fe, containing α -Fe particles, back stress hardening and static and dynamic hardening 2-67358
 H₂, solid, creep at unsteady stage, 1.8 to 12K (*Russian*) 2-56296
 InGaAsP-InP DH LED, aged, dark defects 2-91974
 LiF, plastic deformation under tension and compression, density changes, dislocation form. 2-61057
 Mg-Al solid soln., creep behaviour at elev. temp. 2-83164
 MgAl₂O₄, work softening, plastic deformation, slip and dislocation climb 2-86678
 MgO-Al₂O₃ spinels, climb disloc. in {113} planes 2-91976
 Mg₂SiO₄, forsterite, deformed at high temp., dislocation study (*French*) 2-60995
 Mn-Zn ferrite single crystal, plastic deform. (*Japanese*) 2-67435
 NaCl:Ni, precipitates, etch pit study of dislocation microstructure 2-91971
 Nb-Mo-Ti-Zr MN-1 alloy, nitriding effect on heat-resisting props. 2-11247
 Ni, irradi. creep, 17 MeV deuterons, stress depend. 2-86749
 Ni-Al(Si), irradi. creep enhancement, 21 MeV deuteron bombardment 2-86750
 Zn-Al, steady state creep near eutectoid transformation, microstructural anal. 2-77868

dislocation damping

- see also *Bordoni effect*
 alloy, ordered partially, internal friction and dynamical stability of superdislocations 2-71449
 internal friction and Young's modulus defects due to dislocation motion anharmonism 2-115353
 metals, FCC, internal friction, time evolution under irradi., peaking effect 2-98196
 Snoek-Koster peak concept 2-66122
 Snoek-Koster peak in BCC metals, model 2-66124
 Snoek-Koster peaks BCC metals, phys. models, review 2-66123
 Snoek-Koster relaxation, core diffusion and unpinning, models analysis 2-66126
 Snoek-Koster relaxation, kink-pair-form. theory 2-66125
 Al, numerical analysis of Hopkinson bar experiments on dislocation dynamics 2-71446
 Al-Mn solid soln., precip. and recrystn., internal friction obs., fine-grained struct. (*French*) 2-77842
 Be, diffusion of C, dislocation damping 2-56262
 Bi₂Te₃, dislocation-induced US absorpt. and elec. props. 2-92115
 Cd, elec. current effect on dislocation mobility 2-109808
 CdS, photoplastic, dislocation breakaway obs. 2-98110
 Cu, plastically deformed single crystals, dislocation anelasticity in kHz range (*German*) 2-86680
 Fe-Ti alloy, dil., dislocation relax. peaks and solid soln. softening 2-111224
 Ge, internal friction meas. in intrinsic and n-type crystals. 2-81890
 Mo, dislocation relax. peaks, internal friction study 2-60994
 Ni, microstrain damping loops meas. during stage II deformation 2-57389
 Pb, modulus defect and amplitude dependent damping, normal-supercond. transition effect 2-55978
 Si, internal friction meas. in intrinsic and n-type crystals. 2-81890
 V, low temp. internal friction peaks, effects of deform. temp., orientation and H 2-72752

dislocation density

- bulk diffusion, influence of dislocations 2-104075
 calcite cleavages, dynamic etching 2-66004
 corundum, Cr impurity rel. to dislocation struct. 2-98095
 creep, dislocation struct. and internal stress, stochastic model 2-92088
 creep behaviour, Class II, modified constitutive eqn. 2-71550
 crystalline particles, active sintering by spontaneous dislocation healing of incomplete crack 2-105099
 crystals, abrasive treatment, static model (*Russian*) 2-66120
 diamond, containing lonsdaleite, ESR spectra, structural defects 2-72344
 elasticity theory of coherent inclusions by means of non-metric geometry, extra-dislocation density 2-60971
 fracture instability, semibrittle, inclined yield strip, continuum dislocation model 2-86786
 fusion reactor first wall, irradi. creep characts. 2-85220
 irradiated material, point defect-edge dislocation rate const. and bias factors using lattice relax. and Monte Carlo simulations 2-86718
 martensite-type interphase boundaries, differential dislocation density calc. 2-60980
 moving dislocation elastodynamics, precursor decay anomaly 2-71447
 Nimonin PE16, ion bombarded, damage struct. 2-109855
 olivine, high-pressure recovery, creep mechanisms and activation volume 2-100375
 planar dechannelling at dislocations, density effects 2-109869
 plastically deformed sample, near-surface dislocation sources 2-98088
 polycrystal, grain size effect on work hardening 2-111200
 polydiacetylene crystals., dislocations and stacking faults, TEM study 2-71457
 powder compacts, sintering, one-component, dislocation-activated shrinkage rates (*German*) 2-93470
 quartz, synthetic, growth, seed influence on dislocation density (*French*) 2-76351
 rectilinear, equil. splitting theory, stacking fault energy (*Russian*) 2-65996
 semiconductors, thermally activated slip parameters, activation volume 2-91981
 steel, austenitic stainless, 316, degradation of props. during irradi., preirrad. microstruct. development 2-69865
 steel, austenitic stainless, irradi. in EBR-II and HFIR, swelling, microstruct. development and He effects 2-108109
 steel, austenitic stainless, irradiated in EBR-II and HFIR, swelling and microstruct./microchem. evolution 2-108110
 steel, austenitic stainless, microstruct., dual ion-irrad., influence of He injection rate 2-109853
 steel, austenitic stainless, strengthening and weakening of austenite during hot deformation 2-72734
 steel, austenitic stainless, stress corrosion cracks, TEM study 2-88266
 steel, austenitic stainless, surface hardening and microstruct. changes, influence of US vibr. 2-99538

dislocation density continued

- steel, austenitic stainless, void swelling, during HVEM irradi. 2-109835
 steel, austenitic stainless 316, radiation induced evolution, neutron spectra effects 2-109845
 steel, Cr-Mo, high strength, thermomech. strengthening 2-77855
 steel, Cr-Ni-Ti(Al), austenitic, rel. between struct., internal stress, and creep rate 2-83177
 steel, low alloy, high strength, cold metals, nature of acicular ferrite 2-67286
 steel, low C, decarburisation of subcrit. temps., resolidification of ferrite 2-72689
 steel, low C, strengthening and weakening of austenite during hot deformation 2-72734
 steel, low C austenitic, supercooled austenite, abnormal decomp. 2-72666
 steel, medium C low tempered, dislocation density determ. in pack martensite 2-60981
 steel, Ni, hot deform., substruct. effect on austenite strength 2-72735
 steel, Ni-Cr-Ti-Al, precip. and dislocation struct. in creep, 1023-1173K (*Czech*) 2-116507
 steel, pearlitic eutectoid, phase interfaces and dislocations positron trapping 2-99619
 steel, stainless, martensitic, microstruct. obs. of neutron irradi. ferritic alloys 2-109847
 steel, V, continuously cooled, strengthening contrib. at peak hardening from precip. 2-72710
 steel, X-ray line broadening, determ. using Fourier coeffs. 2-71288
 strain due to a continuous, isotropic distribution of screw dislocations 2-115244
 transient deformation, phenomenological model based on state variables 2-56088
 (Al,Ga)As DH lasers, reliability, substrate dislocation density and GaAs:Sb active layer effects 2-55193
 Al, Harper-Dorn creep, nature and origin 2-116491
 Al, high-temp. creep, dislocation density and internal stresses (*Russian*) 2-67447
 Al, pre-strained pure, low-cycle fatigue (*Japanese*) 2-62199
 Al, residual electrical resist. meas., correlation with dislocation density and cryst. growth from melt (*Russian*) 2-98614
 Al-Cu, θ' precipitates, coherency loss, dislocations, plastic deformation effects, internal friction study 2-71464
 Al-Cu-Mg-Zn, acoustic emission during static deform. 2-72777
 Al-Mg (5 wt.%) solid soln., Harper-Dorn creep, mech. and microstruct. characts. 2-72755
 Al-Mg/Al-Al-Mg composite, dislocation struct. and element diffusion rest. 2-82037
 Al-Mg(3 wt.%), high temp. creep, stress sensitivity parameter 2-77869
 Al,Ga_{1-x}As epitaxial layer, graded band gap, dopant impurity effects on carrier lifetime, dislocation density and internal stresses (*Russian*) 2-77215
 Bi₂Te₃, dislocation-induced US absorpt. and elec. props. 2-92115
 Bi₂Te₃-based alloy, deform. and recrystn., influence of second phase particles Al₂O₃ and ZrO₂ 2-83170
 CdS single crystals grown from vapour phase, impurities and hexagonal spiral pits 2-76342
 CdTe, single crystals, grown from vapour, X-ray topography study (*German*) 2-60993
 Cu, containing Al₂O₃ particles, yield point and strain hardening (*Russian*) 2-105226
 Cu, deformed, dislocation cell boundary widths and dislocation cell sizes 2-81789
 Cu, deformed single crystals, near surface and bulk dislocations, X-ray line broadening study 2-116490
 Cu, flow stress, strain and grain size depend. 2-57399
 Cu, plastically deformed single crystals, dislocation anelasticity in kHz range (*German*) 2-86680
 Cu, polycrystalline, low temp. fatigue, grain size effect (*Japanese*) 2-77920
 Cu, single crystals, plastically deformed, dislocation structures recovery 2-71451
 α -Cu-Al, DSC eval., energetics 2-83111
 Cu-Al (3 at.%), dislocation struct. effect on flow stress, X-diffr. and electron microscope study 2-91982
 Cu-C steel multilayer composite, dislocation density and diffusion processes study by thermo-EMF method 2-67381
 Cu-Zn Al, martensitic, rapid solidification effects 2-111175
 Fe alloy, friction glazing, surface melting interpret. of white etching areas 2-67550
 Fe, cast, austempered spheroidal graphite, strain hardening 2-93533
 Fe, magnetic domain walls, dislocation struct. effects, magnetomech. damping study 2-36885
 Fe, pure, splat-quenched, martensitic transform., microstruct. and kinetics 2-57348
 Fe, pure, trapped H, thermal anal. 2-66290
 α -Fe, rolled or hydroextruded, dislocation struct., brittleness and impact toughness meas. (*Russian*) 2-93560
 α -Fe, triple beam ion irradi., depth distrib. of displacement damage 2-86752
 Fe-Co powder, form, struct., and mag. props., electrolysis conditions effect 2-83063
 Fe-Ni (31.2 wt.%); direct and reverse martensitic transforms., impulse duration influence (*Russian*) 2-67335
 Fe-Si (6 at.%) single crystals, strain rate vs. stress depend. 2-105240
 Fe_{1-x}Co_x, 0 $\leq x \leq$ 0.05, selective etching on dislocations 2-86669
 GaAs, crystal growth-property relationships, Bridgman-type apparatus for study 2-86612
 GaAs dislocation-free crystal prod. by doping, necking procedure in LEC growth 2-76337
 GaAs, lateral epitaxial CVD, growth on Ge-Si substrates with low dislocation density 2-116371
 GaAs, liquid encapsulated Kyropoulos growth method, dislocation density decrease 2-99323
 GaAs semi-insulating wafer, dislocation density and sheet resistance variations 2-109801
 GaAs:O, deep electron traps, elec. and optical props. 2-98585
 GaAs:Si, Sn epitaxial films, double doping effect on defects 2-76867
 GaSb, Czochralski growth of low dislocation density crystals, X-ray study 2-93407
 Ge epitaxial layers, LPE growth in γ -radiation field, struct. and electro-physical parameters 2-115599
 Ge, paramagnetic susceptibility obs., dislocations effect 2-56823
 InGaAsP relationship between struct. and props. 2-71486

dislocation density continued

- InP LPE layers, dislocation density, intermittent growth procedures effects 2-116392
 InP relationship between struct. and props. 2-71486
 LiF, plastic deformation under tension and compression, density changes, dislocation form. 2-61057
 LiF:Mg, shocked and recovered, dislocations obs. 2-81790
 LiF:Mg:OH, radiation point defect condensation at dislocations (*Russian*) 2-71494
 Mg, dislocation motion through flexible and reactionable dislocation forest, computer simulation 2-98090
 Mg:Al₂O₃, work softening, plastic deformation, slip and dislocation climb 2-86678
 Mo film, electrolysis prep., growth rate anisotropy and struct. (*Russian*) 2-61304
 Mo polycrystals, cold-worked, mechanism of work softening at elevated temp. 2-67375
 NaCd(HCO₃)₂, cryst. growth and struct. characterisation, etching, X-ray diffr. and IR study 2-91920
 NaCl, dislocation density determ. from NMR quadrupolar linewidth meas. 2-98114
 NaCl, dislocation motion through flexible and reactionable dislocation forest, computer simulation 2-98090
 Nb-H alloys, low freq. internal friction study 2-116479
 Nb-Zr-N, strengthened by ZrN precip., ageing characts. 2-83132
 NbC_x, single cryst., prep., struct. and mech. props. 2-98108
 Ni, cold deformed, local cryst.-amorphous state phase change obs. 2-57374
 Ni electrodeposits, defect struct., TEM study 2-56387
 Ni, irradi. creep, pulsed, 15 MeV deuterons 2-86751
 Ni single crystal, laser irradiated, epitaxial regrowth and defects 2-61031
 Ni, single crystals, plastically deformed, dislocation structures recovery 2-71451
 Ni-base superalloy, powder consolidated, superplastic response, effect of heat treatment 2-93570
 Ni-Co galvanic coatings, struct., corrosion resist. and mech. props. 2-57540
 NiAl, irradiated, defect aggregation 2-103748
 Ni₃Al, irradiated, defect aggregation 2-103748
 Pb_{1-x}Sn_xTe, In epitaxial film, elec. and struct. props. 2-110506
 PbTe epilayers, LPE growth from supercooled solns., improved morphology 2-110192
 Pt sputtered thin film, microstruct. and dislocation density, X-ray diffr. study 2-104201
 Si, creep fractured, growth kinetics of plastically deformed regions at crack tips, X-ray synchrotron topography 2-86788
 Si, diffusion of Sb along dislocations 2-61207
 Si epitaxial layer on substrate with buried SiO₂ layer, ion implantation, crystallographic props. 2-92382
 Si, ion implanted, CW laser annealing, dislocation nucleation, growth and suppression 2-56021
 Si, paramagnetic susceptibility obs., dislocations effect 2-56823
 Si wafers, HCl etched {111}, deep etch pits and facet form. obs. 2-76447
 Si:As, laser beam annealed, defects and elec. props., TEM study 2-109799
 SiO crystal, Czochralski grown, deformed, dislocation configurations 2-76448
 Si:P, dislocation clusters and P diffusion, TEM and X-ray topography study 2-91973
 Si:Sb, pipe diffusion and dislocation density 2-110043
 SnTe films, vacuum deposited, microstruct., X-ray diffr. study 2-115598
 Ta-H alloys, low freq. internal friction study 2-116479
 TeO₂, dislocation density and hypersound attenuation 2-103771
 Ti-Al-V (6.4 wt.%), deform. modes of α -phase as function of O conc. and ageing 2-77889
 V-H alloys, low freq. internal friction study 2-116479
 YIG, FMR linewidth anisotropy origin, magnetostriiction 2-77380
 Zn, twin boundary mobility, basal forest dislocation density effect, theory (*Russian*) 2-61000
 ZnO thin films, RF sputtered, charact. by X-ray diffr. and SEM 2-115618
 ZnS films, struct. and dislocation density, X-ray diffr. study 2-104203

dislocation dipoles

- Bordoni relaxation, internal friction due and microdeform. due to intrinsic props. of dislocation 2-77862
 fatigue crack initiation, dislocation model 2-92100
 interaction with mobile dislocation avalanches, theory (*Russian*) 2-86665
 polymer, oriented, elastic anisotropy and kink band form., disclination-dislocation model analysis 2-71542
 sapphire, dislocation climb disloc., dislocation dipoles 2-60989
 steel, high strength, fatigue crack initiation at inclusions, theory 2-67523
 Co-Cr-Mo-C alloys, strengthening mechanisms, room temp. 2-67371
 Cu-Al (10 at.%), single crystals, slightly deformed, dislocation multipoles struct., TEM 2-55975
 Fe-Al (30.5 at.%), plastically deformed, ordered, antiphase domain boundary tubes, electron microscopy study 2-72784
 GaP, doped homoepitaxial layers, dislocations, TEM study 2-103773
 KCl, edge dislocation movement by large elec. fields 2-98105
 LiF crystals, deform., dislocations, parameters of paired distrib. 2-66002
 LiF, edge dislocation dipole contrib. to thermal resistivity 2-86961
 LiF, heavily deformed, sp. ht. and thermal cond., 0.08 to 4K 2-56210
 LiF, neutron irradi., excess sp. ht. and thermal cond. 2-61160
 LiF:Mg²⁺, internal friction and charged dislocations 2-81793
 Mg, dislocation dipole structures formed as result of basal slip (*Russian*) 2-115238
 NiO, single cryst. deformed at room temp., TEM obs. of dislocations, high work hardening rate origin 2-103767
 Si, dislocations and stacking faults HV high-resolution electron microscopy study 2-91970
 Si:As, ion damaged, undissociated dislocation dipoles and intermediate defects, TEM study 2-71459

dislocation drag

- moving dislocation elastodynamics, precursor decay anomaly 2-71447
 AgCl, photoplastic effect meas., latent image formation appl. 2-115340
 Al, polycrystalline, plastic deform., electric current pulse influence, 1.7 to 4.2K (*Russian*) 2-115332
 Cd, elec. current effect on dislocation mobility 2-109808
 Zn, electron drag and phonon drag on mobile dislocations, distinction using mag. field influence 2-109809

dislocation energy

- elastic strain energy accumulation during cyclic loading 2-103892
 smectic A liquid crystals, edge dislocation, core struct., Peierls-Nabarro model 2-91763
 Mg, dislocation dipole structures formed as result of basal slip (*Russian*) 2-115238
 NaCl:Ca²⁺, low temp. soln. hardening due to lattice distortion around impurity-vacancy pairs 2-98077
 Si, screw and 60° dislocations, core struct. and core energy, tight-binding calc. 2-81786

dislocation etching

- cadmium oxalate trihydrate, dislocation etching and dissolution mechanism 2-109797
 calcite cleavages, dynamic etching 2-66004
 diglycine sulphate, anhydrous, dislocation etch pits, morphology 2-86667
 KDP crystals, selective etching 2-98098
 non-metallic crystals, dislocation etch pit form. 2-109802
 quartz, synthetic, oblique dislocations in prism fracture faces 2-98101
 spiral growth, hollow dislocation core form., stress influence 2-98086
 Al-Mg (3 at.%), solid soln., correl. between creep and dislocation sub-struct. 2-105249
 Al-Mg/Al/Al-Mg composite, dislocation struct. and element diffusion resist. 2-82037
 Bi bicrystal dislocation struct., compressibility anisotropy influence 2-103768
 CaCO₃, calcite, etch pits, symmetrical and asymmetrical, eccentricity on cleavage 2-55974
 CaCO₃, calcite, etch pits orientation on cleavage faces 2-60992
 CaF₂ crystals, etch traces and dislocation motion 2-66003
 CdC₂O₄·3H₂O, gel-grown, kinetics of etching and dissol. 2-98099
 Cu crystals, dislocation etch pits on {111} surface, morphology change (*Japanese*) 2-55977
 Cu crystals, rapidly cooled, formation of etch beaks on {111} surface 2-71456
 Fe_{1-x}Co_xGe₂, 0 ≤ x ≤ 0.05, selective etching on dislocations 2-86669
 FeS₂, natural marcasite, orthorhombic, obs. of cryst. defects 2-76452
 GaAs:Cr, semi-insulating, inhomogeneities, scanning leakage current meas. 2-109800
 GaP, homoepitaxial layers, influence of microdefects on dislocation generation 2-92377
 GaP:Si LEC epitaxial layer, microdefects and dislocation generation, TEM study 2-115236
 GaSb, melt-grown single crystal, defect etchant for dislocations and growth striations 2-91972
 Gd₃Ga₅O₁₂, garnet single crystals, slip systems 2-66007
 InGaAsP/InP misfit dislocations, photoluminescence, TEM and etching study 2-98109
 InP and In_{0.5}Ga_{0.47}As, lattice defects detection using selective photoetching 2-103763
 InP LPE layers, dislocation density, intermittent growth procedures effects 2-116392
 InP, single crystals, dislocation free, cryst. growth by LEC technique 2-97965
 InP, use of HNO₃-HBr dislocation etchant 2-76445
 KCl, edge dislocation movement by large elec. fields 2-98105
 K₂Cr₂O₇, revelation of dislocations, rel. to cryst. growth 2-91969
 LiF crystals, deform., dislocations, parameters of paired distrib. 2-66002
 LiF, plastic deformation under tension and compression, density changes, dislocation form. 2-61057
 MgO, morphology of dislocation etch pits on cube faces in acids 2-103764
 MoSe₂, single crystal, etching and dissolution kinetics, PEC solar cell appl. 2-93642
 NaCl:Ni, plastic deform. around precipitates, dislocation microstruct. 2-103770
 NaCl:Ni, precipitates, etch pit study of dislocation microstructure 2-91971
 NaCl-KCl mixed cryst., thermal evaporation study 2-109965
 NiSO₄, soln. grown single crystals, dislocation trajectories, etching study 2-98100
 Sb bicrystal dislocation struct., compressibility anisotropy influence 2-103768
 Si, heat-treated, Czochralski grown, compression tests, dislocation study, TEM and etch pit obs. 2-60985
 Si, ion implanted, CW laser annealing, dislocation nucleation, growth and suppression 2-56021
 Si, single cryst., floating zone growth, defects study (*Chinese*) 2-109796
 Si wafers, HCl etched {111}, deep etch pits and facet form. obs. 2-76447
 Si:Sb, pipe diffusion and dislocation density 2-110043
 TeO₂, dislocation density and hypersound attenuation 2-103771
 WSe₂, nonbasal dislocations etching and kinetics of dissolution 2-65999
 Zn bicrystal dislocation struct., compressibility anisotropy influence 2-103768
 ZnS, revealing of defects by chem. etching 2-115239

dislocation glide *see* slip**dislocation interactions**

- see also impurity-dislocation interactions; vacancy-dislocation interactions*
 BCC alloys, Peierls-Nabarro plastic deformation, in the presence of solute clusters 2-111235
 binding force between Peierls-Nabarro edge dislocation and Fermi-Dirac atm. solute atmosphere 2-115274
 diffusion, biased, of radiation point defects to interactive sinks 2-110045
 diffusion processes in irradi. materials with point defects, transport eqns. (*Russian*) 2-92251
 dynamic theory, paradoxes 2-65997
 HCP lattice, dislocation motion across forest of flexible reacting dislocations, computer simulation (*Russian*) 2-60978
 insulator, thermal cond. in presence of dislocations, correction due to 3-phonon normal processes 2-98354
 irradiation creep, stress-induced preferential attraction due to anisotropic diffusion 2-103885
 melting, gauge theory 2-76645
 mobile dislocation avalanches, interaction with dislocation dipoles, theory (*Russian*) 2-86665
 point defect in strained crystal, theory 2-104050
 point defect interactions and amplitude independent US absorpt., theory (*Russian*) 2-115229
 point defect migration to dislocations, recomb. effect (*Russian*) 2-98346

dislocation interactions continued

- quantum motion of particle in dislocated crystal, Pömannian-geometrical interpretation 2-60979
 radiation point defect annihilation, effect on dislocation struct., theory (Russian) 2-98085
 strain ageing, dynamic and static, strain depend. 2-67384
 stress dependence, of activation volume (Czech) 2-65995
 void-dislocation interactions, strengthening effect of voids, theory 2-103759
 Al-Mg (5 at.%), high temp. deform. under combined high frequency stresses (Japanese) 2-105237
 Al₂O₃, shock loaded ceramic, glass transition 2-71647
 Cu, radiation hardness, influence of neutron irradiation on yields stress 2-103846
 Fe, positron trapping and detrapping 2-77616
 Fe-C, positron trapping and detrapping 2-77616
 Fe-Al (30.5 at.%), plastically deformed, ordered, antiphase domain boundary tubes, electron microscopy study 2-72784
 Fe-Si (1-4 wt.%), simultaneous creep and oxidation, 973-1073K 2-105214
 Ge, plastically deformed, phonon scatt. 2-92133
 KBr, photoplastic effects and their temp. depend. 2-71544
 KCl, photoplastic effects and their temp. depend. 2-71544
 KCl, small pore migration due to temp. gradient 2-56266
 KCl, synthetic single cryst., thermal gradient migration of brine inclusions 2-56264
 LiF, deformed, thermal cond. 0.05 to 5K, phonon-dislocation scatt. 2-56276
 LiF, highly deformed, phonon-dislocation interaction anisotropy, phonon imaging study 2-86818
 LiF:Mg,OH, radiation point defect condensation at dislocations (Russian) 2-71494
 Mg, dislocation motion through flexible and reactionable dislocation forest, computer simulation 2-98090
 MgO, shock loaded ceramic, glass transition 2-71647
 Mo-He, radiation damage during HVEM, He effects 2-103823
 NaCl, deformed, dislocation motion 2-60987
 NaCl, dislocation motion through flexible and reactionable dislocation forest, computer simulation 2-98090
 NaCl, synthetic single cryst., thermal gradient migration of brine inclusions 2-56264
 NaCl:Ca²⁺, low temp. soln. hardening due to lattice distortion around impurity-vacancy pairs 2-98077
 NaCl:Ca²⁺, MFP of dislocations, NMR study 2-109807
 NaF, thermal cond. in presence of dislocations, correction due to 3-phonon normal processes 2-98354
 Si, gamma and proton radiation defects formation, dislocation effects, elec. cond. and Hall coeff. study 2-86729
 Zn, electron irradiation, elastoplastic effect 2-115339
 Zn, twin boundary mobility, basal forest dislocation density effect, theory (Russian) 2-61000

dislocation jog motion *see* **dislocation jogs****dislocation jogs**

- Bordoni relaxation, internal friction due and microdeform. due to intrinsic props. of dislocation 2-77862
 brittle crack advance by double kink nucleation 2-57451
 Al, pure, static and cyclic creep behaviour, quenching effect 2-72779
 Cu, pure, static and cyclic creep behaviour, quenching effect 2-72779
 Fe-Al (30.5 at.%), plastically deformed, ordered, antiphase domain boundary tubes, electron microscopy study 2-72784
 KCl, press. effect on dislocation mobility 2-60986

dislocation locking*see also* **Cottrell atmospheres**

- Ag, Lomer-Cottrell locks by mech. straining, X-ray topography 2-109805
 Cu, pure, strain bursts under various forms of static and cyclic loading at ambient temp. 2-62206
 Si, heat-treated, Czochralski grown, compression tests, dislocation study, TEM and etch pit obs. 2-60985
 SiO crystals, indentation rosettes and dislocation locking by O 2-98111

dislocation loops*see also* **vacancy condensation loops**

- anisotropic body, non-linear dislocations, iteration scheme anal. 2-81788
 anisotropic media, dislocation loops, interaction energy 2-91967
 cadmium oxalate trihydrate, dislocation etching and dissolution mechanism 2-109797
 diamond:N₂, structural imperfection annealing, struct. 2-81766
 FCC metals, irradiated, dislocation loop production 2-55973
 glide loops, ensemble, elastic stress field calcs. 2-98113
 graphite, neutron irradiation, defect prod. and annealing behaviour 2-80189
 mean free path calc. by computer simulations 2-71448
 metal whiskers, yield strength size dependence, optical and electron microscopy study 2-115633
 metals, defect structs. below surface after neutron or ion irradiation, monoenergetic positron study 2-92052
 Mo, ion irradiation, by H⁺ and He⁺ damage struct., blistering process, TEM study 2-76520
 Nimonic PE16, anomalous contrast from stacking faults 2-76464
 nomenclature, for dislocation arrays 2-55971
 point defect migration to dislocations, recomb. effect (Russian) 2-98346
 polymer, glassy, deform. props. prediction using dislocation analogy 2-62183
 polymer with submicrocracks, deform. props. and macroscopic breakdown kinetics, dislocation model 2-62209
 prismatic dislocation loop sizes and interference error, connection with loop nature determ. methods 2-81787
 qualitative theory, dislocation dynamics, cooperative diffusion 2-81928
 radiation creep of materials containing dislocations and dislocation loops, theory 2-66008
 radiation point defect annihilation, effect on dislocation struct., theory (Russian) 2-98085
 sapphire, dislocation climb disloc., dislocation dipoles 2-60989
 smectic-A-nematic transition, dislocation loop model 2-103991
 steel, austenitic stainless 316, yield strength changes during fission or fusion irradiation, microstruct. origins 2-71507
 steel, stainless, type-348, neutron irradiated, microstruct. and rel. to creep and hardening 2-105231
 surface layer, deformed, X-ray residual stress meas. and d-sin²ψ diagrams (Japanese) 2-71780

dislocation loops continued

- two-phase transversely isotropic solid, elastic fields due to dislocation loops 2-75855
 vacancy loops and interstitial loops, intrinsic bias differential 2-91954
 vibration entropy 2-55970
 X-ray diffuse scatt. study, numerical anal. 2-66000
 Zircaloy, neutron irradiation, microstruct. and dimens. changes, irradiation growth theory 2-109848
 AgCl, plastic deformation, wavy slip band form. 2-115337
 Al, fusion neutron simulation study, comparison of electron and self-ion damage 2-85225
 Al, ion implanted, radiation damage and annealing studies 2-76532
 Al-Cu, θ' precipitates, coherency loss, dislocations, plastic deformation effects, internal friction study 2-71464
 Al₂O₃, ceramic neutron irradiation, damage 2-115301
 Bi, electron radiation damage, electron microscopic study 2-61036
 CdSb, γ-irradiation, X-ray scatt. near K-absorpt. edge (Russian) 2-62015
 CdTe, irradiation produced secondary defects, effect of cryst. polarity 2-115291
 Cu, reactor-irradiation, defects and transmutations 2-102265
 Cu-Al (10 at.%), single crystals, slightly deformed, dislocation multipoles struct., TEM 2-55975
 Cu-Fe, containing α-Fe particles, back stress hardening and static and dynamic hardening 2-67358
 Cu₃Au, electron irradiation, dislocation loops, electron microscope study 2-76449
 CuAl, electron irradiation, dislocation loops, electron microscope study 2-76449
 Fe, neutron irradiation, TEM study 2-103838
 α-Fe, neutron irradiation, damage, low dose, TEM study 2-102050
 Fe, Ni ion irradiation, simulation studies 2-109857
 Fe-Al (40 at.%), quenched or electron irradiation, nucleation of dislocation loops (French) 2-55968
 Fe(-Cr), triple beam ion irradiation, microstruct. 2-109856
 GaAs:Se⁺, ion implanted, high temp. annealed, damage, defects and elec. props. 2-98097
 GaAs:Si, defect struct., effect of annealing Zn and Cu diffusion 2-55976
 GaAs:Te, defect struct. after Cd diffusion 2-103762
 GaAs:Te, implanted, laser annealed, metastable Te donor conc., expt. study 2-56025
 GaP, doped homoepitaxial layers, dislocations, TEM study 2-103773
 GaP:S, homoepitaxial layers, influence of microdefects on dislocation generation 2-92377
 GaP:S LEC epitaxial layer, microdefects and dislocation generation, TEM study 2-115236
 GaP:Zn, density, plastic deformation, effects, defect struct. 2-71545
 GaS:Cr, impurity redistribution after implantation with Ga,As,O, SIMS and TEM study 2-115276
 Ge-As solid soln., disloc. total diffuse X-ray scatt. meas. 2-65927
 Hf, Bi ion irradiation, dislocation loops 2-86758
 InGaAsP/InP double heterostruct. lasers, aged, TEM obs. of dark defects 2-55143
 InP, electron irradiation, 200 to 300°C in HVEM, radiation damage 2-92040
 InP, electron irradiation, dislocation loops, electron microscopy study (French) 2-103769
 InP, inclusions 2-71433
 LiF, highly deformed, phonon-dislocation interaction anisotropy, phonon imaging study 2-86818
 MgAl₂O₄, ceramic, neutron irradiation, damage 2-115301
 MgAl₂O₄, fission neutron irradiation, structural props. study 2-80187
 MgO, ceramic, neutron irradiation, damage 2-115301
 MgO, fission neutron irradiation, structural props. study 2-80187
 MgO:Au dislocation loops, decoration obs. 2-71452
 Mo-Ti and alloy TZM, void swelling behaviour under heavy ion bombardment 2-86744
 NaCl single crystals, dislocation multiplication during dislocation half-loops expansion 2-66001
 NaCl:Ni, plastic deformation around precipitates, dislocation microstruct. 2-103770
 NaCl:Ni, precipitates, etch pit study of dislocation microstructure 2-91971
 NaCl:Ni, precipitation-induced dislocation loops and helices 2-98102
 Nb foil, He ion irradiation, supercond. props., pinning mechanisms (Russian) 2-66728
 Nb₃Sn, for fusion reactor magnets, displacement cascades, TEM obs. 2-109862
 Ni superalloy, γ'-strengthened, particle misfit effect on void form. under electron and neutron irradiation 2-109838
 Ni-Al alloy, deformation mechanism at high temp. 2-105230
 Ni-Be (1at.%), radiation induced homogeneous precip., HVEM obs. 2-83124
 Ni₃Al, irradiated, defect aggregation 2-103748
 Pb_{0.9}Sn_{0.1}Te film, struct. and elec. props., Ar⁺ bombardment and annealing effect 2-56731
 Si, creep fractured, growth kinetics of plastically deformed regions at crack tips, X-ray synchrotron topography 2-86788
 Si, Czochralski wafers, effects of crystal defects on deep levels, TEM and DLTS obs. 2-92507
 Si, dislocation EBIC contrast 2-60988
 Si film, polycryst., grain growth under CW electron beam annealing, modified SEM study (Japanese) 2-115597
 Si, heat-treated, Czochralski grown, compression tests, dislocation study, TEM and etch pit obs. 2-60985
 Si, ion implanted, CW laser annealing, dislocation nucleation, growth and suppression 2-56021
 Si, neutron irradiation, dislocation loops, X-ray diffuse scatt. study 2-71458
 Si p-n junction, ion implanted, CW laser annealed, elec. and struct. props. 2-115872
 Si, precipitation of O and intrinsic gettering 2-66239
 Si, self-interstitials, transform. under electronic and thermal stimulation 2-103752
 Si, single crystal, floating zone growth, defects study (Chinese) 2-109796
 Si, stacking fault annihilation, surface orientation depend. 2-55985
 Si, thermal oxidation, enhanced dopant diffusion and defect form. 2-66296
 Si wafers, HCl etched [111], deep etch pits and facet form. obs. 2-76447
 Si:As, laser beam annealed, defects and elec. props., TEM study 2-109799
 Si:H, FZ crystal, anomalous defect form. by H doping 2-71476
 Si:P(As), dechanneling by dislocations and stacking faults 2-81845

dislocation loops continued

- α -Ti, Bi ion irradi., dislocation loops 2-86758
- W, ion irradiation, by H^+ and He^+ damage struct., blistering process, TEM study 2-76520
- Zr, Bi ion irradi., dislocation loops 2-86758

dislocation motion

- for dislocation relaxation see dislocation damping
- see also dislocation climb; slip
- alkali-halide, CC dislocation oscillatory motion, electrostatic field effect 2-71463
- alkali-halides, dislocations attendant to HF vibr., electrostatic field effect on translational motion 2-76453
- alloy, dislocation motion during ageing, particle distrib. influence, computer simulation (Russian) 2-91963
- alloy, ordered partially, internal friction and dynamical stability of superdislocations 2-71449
- alloys, coherent particle precipitation hardening, anisotropic elasticity theory 2-116454
- Bordoni internal friction peak interpretation 2-81891
- crack tip, dislocation-free zone 2-56079
- diffusional traps in solids, rate of equilibration 2-115448
- doped cryst., dislocation movement, activation energy, impurity diffusion 2-76751
- dynamic nucleation 2-55972
- electrodynamics, precursor decay anomaly 2-71447
- gauge theory of dislocations, effective stress 2-91964
- Harper-Dorn creep, flow process 2-71540
- HCP lattice, dislocation motion across forest of flexible reacting dislocations, computer simulation (Russian) 2-60978
- interacting dislocations, dynamic theory, paradoxes 2-65997
- kink-pair formation, on dislocations, diffusion theory 2-98347
- mean free path calc. by computer simulations 2-71448
- metals, FCC, internal friction, time evolution under irradi., peaking effect 2-98196
- metals and alloys, fatigue crack growth, effect of vacuum, review 2-93600
- mobile fraction, phenomenological dislocation transformation model 2-98087
- plastic flow, low temp. instability, computer simulation 2-56068
- polystyrene, atactic, propag. of shear bands through obstacles 2-67427
- screw dislocation random motion, transient waves 2-65993
- semiconductors, dislocations, electronic and mech. props. 2-66488
- smectic A phases, lubrication theory using edge dislocation climb 2-81663
- superplasticity, rate controlling deform. mechanisms, review 2-83183
- surfacing of dislocations, acoustic emission pulse generation, registration conditions (Russian) 2-56320
- Young's modulus defects and internal friction due to dislocation motion anharmonism 2-115353
- x-Zr, dislocation motion simulation in an internal stress in creep 2-81791
- Al alloy 7075, dislocation transport of H, rel. to hydrogen embrittlement 2-83220
- Al, crack tip produced dislocations motion during cyclic loading, TEM obs. 2-93625
- Al, dislocation dynamics, NMR and TEM study 2-105215
- Al, in-situ study of subboundary props. during creep, HVEM 2-71462
- Al-Cu (1 at.%), dislocation dynamics, NMR and TEM study 2-105215
- Al-Mg, dislocation motion, impurity atmospheres and effective activation parameters, theory 2-115233
- Al-Mg (5 at.%), high temp. deform. under combined high frequency stresses (Japanese) 2-105237
- CaCO₃, calcite, acoustic emission pulse generation during surfacing of dislocations (Russian) 2-56320
- CaF₂ crystals, etch traces and dislocation motion 2-66003
- Cd, elec. current effect on dislocation mobility 2-109808
- Cu, recrystallisation, twin and grain boundary dislocation movement obs. 2-71474
- Cu, torsionally deformed, reverse mech. aftereffect, temp. depend. (Russian) 2-99470
- Cu-Al, amplitude dependent internal friction and microplasticity (Japanese) 2-77859
- Fe, high purity single crystals., effect of H on mech. props. (Japanese) 2-77878
- Fe-Mn-Si, shape memory effect in $\gamma \rightleftharpoons$ martensitic transform. 2-83114
- Fe-Si (6 at.%) single crystals, strain rate vs. stress depend. 2-105240
- InP/InGaAsP double heterogeneous epitaxial wafers, stress induced defect migration 2-92287
- KBr, photoplastic effects and their temp. depend. 2-71544
- KCl, edge dislocation movement by large elec. fields 2-98105
- KCl, photoplastic effects and their temp. depend. 2-71544
- KCl, press. effect on dislocation mobility 2-60986
- MgO crystal predeformed at high temp., high voltage electron microscopy straining expt. 2-65998
- NaCl, deformed, dislocation motion 2-60987
- NaCl single crystals., dislocation multiplication during dislocation half-loops expansion 2-66001
- NaCl:Ca²⁺, MFP of dislocations, NMR study 2-109807
- Ni, plastic deform. after US hardening (Russian) 2-77873
- Pb thin films, on substrate, low-temp. strain behaviour 2-110218
- Si, dislocation mechanisms, X-ray synchrotron topography study 2-97852
- TiBe₂ single crystals., defects 2-103766
- V, slip plane choice at deform. temps. $T \leq 0.15 T_m$ 2-86673
- W powder, activated sintering mechanism, defective struct. influence 2-67253
- W, screw dislocation dynamics, irradi. softening, HVEM obs. 2-98104
- ZrO₂, dislocation motion, impurity atmospheres and effective activation parameters, theory 2-115233

dislocation motion, nonconservative see dislocation climb**dislocation motion hindrance see dislocation drag****dislocation multiplication**

- creep, dislocation network theory, climb glide, multiplication and pipe diffusion 2-76572
- fatigue crack propagation, damage accumulation model 2-56081
- metals and alloys, creep, influence of stacking fault energy 2-66110
- metals and alloys, yield strength, review (Chinese) 2-62165
- powder compacts, densification during sintering 2-116399
- Al, Harper-Dorn creep, nature and origin 2-116491
- Cu, neutron irradi., yielding, surface effect 2-103842
- α -Fe, dislocation splitting, alloying additions influence (Russian) 2-115231

dislocation multiplication continued

- He BCC cryst., sound vel. and defects, temp. depend. 2-98380
- NaCl, γ -irrad., dislocation multiplication under static load (Russian) 2-91983
- NaCl single crystals., dislocation multiplication during dislocation half-loops expansion 2-66001
- W, screw dislocation dynamics, irradi. softening, HVEM obs. 2-98104

dislocation nucleation

- crystals, two dimensional, defect motion and stress relaxation, shear modulus 2-61208
- fracture, dislocation-free zone model, comparison with expts. 2-103889
- grain boundary embrittlement, decohesion theory 2-98194
- quartz, single crystal, plastic deform., by indentation, at room temp., TEM 2-56070
- Au film on Pd(001) expt. evidence for nucleation of partial dislocations 2-71455
- Fe-Al (40 at.%), quenched, nucleation of dislocation helices (French) 2-55969
- Fe-Al (40 at.%), quenched or electron irradi., nucleation of dislocation loops (French) 2-55968
- Fe-Ni(Ti)(Ga)(Al)(Co)(Pt), flow stress at low temp., influence substitutional elements 2-105213
- Fe-Ti alloy, dil., dislocation relax. peaks and solid soln. softening 2-111224
- GaAs, liquid encapsulated Czochralski growth, dislocation form. 2-81785
- Gc, dislocation nucleation, point defect condensation model 2-71450
- InP, inclusions 2-71433
- Si, creep fractured, growth kinetics of plastically deformed regions at crack tips, X-ray synchrotron topography 2-86788
- Si, dislocation nucleation, point defect condensation model 2-71450
- Si, fracture and crack propagation, dislocation generation, X-ray study 2-115346
- Si, heat-treated, Czochralski grown, compression tests, dislocation study, TEM and etch pit obs. 2-60985
- Si, ion implanted, CW laser annealing, dislocation nucleation, growth and suppression 2-56021
- Si:As, ion damaged, undissociated dislocation dipoles and intermediate defects, TEM study 2-71459

dislocation pile-ups

- fatigue crack initiation, dislocation model 2-92100
- ice, polycrystals., tensile strength as function of grain size 2-105272
- interaction with crack (Russian) 2-92023
- mobile, interaction with dislocation dipoles, theory (Russian) 2-86665
- steel, austenitic, fatigue, low-cycle, 800°C, dislocation configuration, TEM and SEM study (French) 2-88190
- superplasticity, rate controlling deform. mechanisms, review 2-83183
- surfacing of dislocations, acoustic emission pulse generation, registration conditions (Russian) 2-56320
- transient deformation, phenomenological model based on state variables 2-56088
- Zircaloy-4, recovery and deform. substruct. in high temp. plasticity, stationary and non stationary stress 2-83173
- CaCO₃, calcite, acoustic emission pulse generation during surfacing of dislocations (Russian) 2-56320
- Cu-Al (10 at.%), single crystals., slightly deformed, dislocation multipoles struct., TEM 2-55975
- Fe-Mn-Si (30, 1 wt.%), single crystals., hardening due to pre-existing ϵ -martensite 2-116493
- Ni-Al (14.4 at.%), containing coherent precipitates, cyclic hardening, TEM study 2-99447
- Ni-Cr alloys, short-range order, discontinuous creep 2-99496
- Si, ion implanted, CW laser annealing, dislocation nucleation, growth and suppression 2-56021
- Sn-Pb alloys, superplastic, superanelasticity 2-83147
- Ti-Al (8.6 wt.%), dislocation pile-ups and tensile fracture, influence of grain size and age-hardening 2-105320

dislocation pinning

- see also dislocation damping
- alloy, dislocation motion during ageing, particle distrib. influence, computer simulation (Russian) 2-91963
- impurity atmosphere pinning, nucleation mechanism, theory (Russian) 2-86666
- internal friction, nonsteady, dislocation induced, temp. depend. calc. 2-103900
- metals, FCC, internal friction, time evolution under irradi., peaking effect 2-98196
- Snoek-Koster relaxation, core diffusion and unpinning, models analysis 2-66126
- wedge disclination anchoring by impurity atmosphere 2-76443
- Al, deformed, elec. resistivity recovery during isochronous annealing, kinetics (Russian) 2-92563
- Al-Mg, dilute, dislocation pinning by impurity atmospheres, nucleation mechanism, theory (Russian) 2-86666
- Au, creep rate meas., cathodic polarisation effects 2-93563
- Be, diffusion of C, dislocation damping 2-56262
- Cu, neutron and electron irradiations, initial damage rates study of internal friction 2-92046
- Cu, single crystals., plastically deformed, dislocation anelasticity in kHz range (German) 2-83162
- α -Cu-Al, DSC eval., energetics 2-83111
- Fe-Ni-Mo, martensitic γ to α transform., purity depend. (Russian) 2-99426
- Mg, electron irradi., peaking effect, internal friction, irradi. temp. effects 2-92107
- Mo, yield point, neutron irradi. and impurities effects, thermal activation anal. (Russian) 2-115333
- Pb, modulus defect and amplitude dependent damping, normal-supercond. transition effect 2-55978
- Pb-In supercond. alloys, pinning effect by dislocations (Japanese) 2-71467
- V, low temp. internal friction peaks, effects of deform. temp., orientation and H 2-72752

dislocation relaxation see dislocation damping**dislocation scattering**

- used for carrier scattering by dislocations
- conduction electrons, interactions with dislocations and grain boundaries 2-87250
- III-V semiconductors, carrier piezoelec. scatt. by dislocations, anisotropy effects 2-77033
- III-V semiconductors, dislocated, elec. cond. 2-104364

dislocation scattering continued

- metals, dislocation-induced elec. resist. rel to antiferromag. ordering at dislocations (*Russian*) 2-104360
 metals, electron-electron scatt. resist., sample depend. 2-82337
 semiconductor, carrier mobility in presence of edge dislocation well 2-82786
 semiconductors, free carriers kinetics in dislocation wall field (*Russian*) 2-82340
 (TMTSF)₂PF₆, high elec. field transport at low temps. 2-56616
 AG, thermal cond., plastic deformation effects, dislocation scatt. 2-104349
 Al, polycrystalline, plastic deform., electric current pulse influence, 1.7 to 4.2K (*Russian*) 2-115332
 Cd, elec. current effect on dislocation mobility 2-109808
 Cu, thermal cond., plastic deformation effects, dislocation scatt. 2-104349
 InSb, dislocated, elec. cond. 2-104364
 Ti, electrical resist., plastic deform. and temp. influence (*Russian*) 2-61438

dislocation sources

see also Frank-Read sources

- fatigue threshold criterion (*Japanese*) 2-109898
 near-surface, plastically deformed samples 2-98088
 NaCl single crystals, dislocation multiplication during dislocation half-loops expansion 2-66001
 Si, heat-treated, Czochralski grown, compression tests, dislocation study, TEM and etch pit obs. 2-60985
 Si-Si₃N₄ interface, defect evolution, synchrotron X-ray topographic obs. 2-98471

dislocation structure

- alloys, Li₂ ordered, screw dislocation dissociation and core struct. in applied shear stress 2-76441
 alloys, Li₂ ordered, screw dislocations, dissociation and core struct., computer simulation 2-76440
 cadmium oxalate trihydrate, dislocation etching and dissolution mechanism 2-109797
 carbide directional γ/γ' eutectic, struct. defects after long-term strength tests (*Russian*) 2-98092
 corundum, Cr impurity rel. to dislocation struct. 2-98095
 creep, dislocation struct. and internal stress, stochastic model 2-92088
 creep, irradi. and thermal, by dislocation climb, theory 2-86709
 crystalline particles, active sintering by spontaneous dislocation healing of incomplete crack 2-105099
 FACSIMILE code for void swelling and creep calc. with vacancy loops 2-67468
 FCC metals, pure, fatigue, role of strain hardening 2-111257
 HCP cryst., core struct. of edge dislocations under shear stress, computer calc. 2-76454
 HCP crystals, triple spatial dislocation nodes, equilibrium configurations (*Russian*) 2-115230
 HCP lattice, dislocation motion across forest of flexible reacting dislocations, computer simulation (*Russian*) 2-60978
 hysteresis loop, statistical theory 2-98185
 K₂Cr₂O₇, growth morphology, by solvent evaporation method 2-91835
 metals, deformed, theory of dislocation cell sizes 2-103760
 metals, HCP, dislocation struct. (*Chinese*) 2-109795
 powder compacts, sintering, one-component, dislocation-activated shrinkage rates (*German*) 2-93470
 prime candidate alloys, path A, rapidly solidified, microstruct. 2-85210
 radiation point defect annihilation, effect on dislocation struct., theory (*Russian*) 2-98085
 sapphire, dynamics of flow of c-axis 2-99490
 Si, twin interface, X-ray topography exam. of struct. and defects (*Chinese*) 2-109810
 smectic A liquid crystals, edge dislocation, core struct., Peierls-Nabarro model 2-91763
 spiral growth, hollow dislocation core form., stress influence 2-98086
 steel, austenitic, rolling in anomalous-plasticity temp. range 2-99464
 steel, austenitic stainless, corrosion resistance, effect of high temp. low cycle fatigue 2-78018
 steel, austenitic stainless, cyclic strain hardening, during fatigue, elevated temps. 2-93530
 steel, austenitic stainless, intergranular corrosion, struct. influence 2-72876
 steel, austenitic stainless 316, rapidly solidified, high Ti stabilised, mech. props. and struct., irradi. effects 2-72765
 steel, barothermomechanical treatment effect on struct. and temper embrittlement susceptibility 2-57386
 steel, Cr-Mo-Nb-V, fast breeder reactor components, precip. study (*French*) 2-88089
 steel, low alloy, struct. after controlled rolling, effect of austenitising temp. 2-72744
 steel, medium C low tempered, dislocation density determ. in pack martensite 2-60981
 steel, mild, fatigue, deform. behaviour and dislocation struct. (*Japanese*) 2-72811
 steel, Ni-Cr-Ti-Al, precip. and dislocation struct. in creep, 1023-1173K (*Czech*) 2-116507
 steel, stainless, ferrite struct., rolling, plastic deform., metallography study 2-57422
 steel, stainless, martensitic, microstruct. obs. of neutron irradi. ferritic alloys 2-109847
 steel, stainless, type 304, dislocation substruct. rel. to power law breakdown 2-67454
 steel, strengthening by surface plastic deformation, dislocation aspects 2-116615
 surface layer, deformed, X-ray residual stress meas. and $d\sin^2\psi$ diagrams (*Japanese*) 2-71780
 TEM obs., Burgers vector characterisation when invisibility criterion invalid 2-60990
 X-ray analysis in deformed crystals, review 2-91718
 Zircaloy, neutron irradi., microstruct. and dimens. changes, irradi. growth theory 2-109848
 Ag-Sn (1.2 at.%), dislocation band struct. produced by bending stress, X-ray topography study 2-86679
 Al, creep, dislocation networks 2-57400
 Al, creep, dislocation substruct. rel. to power law breakdown 2-67454
 Al, deformed., cyclically and monotonically, stress-substruct. relationships in wavy slip mode metals 2-99498

dislocation structure continued

- Al-Ag-Al strip, pressure-welded, interdiffusion layer struct., ultramicrotomed thin section method 2-71738
 Al-Al₂O₃, dispersion strengthened, fatigue strength, effect of heat treatment temp. (*Japanese*) 2-93610
 Al-Ge (4 wt.%), superplastic deform. mechanism 2-83190
 Al-Mg, recrystn. after cold rolling, optical and electron microscopy study 2-88098
 Al-Mg (3 at.%), solid soln., correl. between creep and dislocation substruct. 2-105249
 Al-Mg (5 wt.%) solid soln., Harper-Dorn creep, mech. and microstruct. characts. 2-72755
 Al-Zr alloys, microstruct. and mech. props., effect of plastic strain (*Korean*) 2-62172
 Au, ruptured, final separation, role of glide and twinning 2-83200
 Ba(NO₃)₂, stacking faults and dislocations due to liquid inclusion presence 2-91989
 Bi bicrystal dislocation struct., compressibility anisotropy influence 2-103768
 CaCO₃, calcite, etch pits, symmetrical and asymmetrical, eccentricity on cleavage 2-55974
 CdS, luminescence study of cooperative defect behaviour (*Russian*) 2-87853
 CdTe, single crystals, grown from vapour, X-ray topography study (*German*) 2-60993
 Cr-La-Ta-O-C-N dil. alloy, fracture and plasticity, structural effects (*Russian*) 2-99481
 Cr-La (0.3 wt.%), films, dislocations, struct. and composition 2-115600
 Cu, deformed, dislocation cell boundary widths and dislocation cell sizes 2-81789
 Cu, single crystals, plastically deformed, dislocation structures recovery 2-71451
 Cu-Al (10 at.%), single crystals, slightly deformed, dislocation multipoles struct., TEM 2-55975
 Cu-Al (3 at.%), dislocation struct. effect on flow stress, X-diff. and electron microscope study 2-91982
 Cu-Ge (8.7 at.%), shock-loaded, deform. twinning, time depend. and assoc. strengthening 2-88138
 Cu-Ni-Sn (9, 6 wt.%), combined recrystn. and precip. 2-77840
 CuGa₂In₂Se₂, solid solns., phase diag., cryst. growth and dislocation struct. 2-86836
 Fe, fatigue crack growth, mechanism and kinetics 2-88191
 Fe, magnetic domain walls, dislocation struct. effects, magnetomech. damping study 2-56885
 α -Fe, rolled or hydroextruded, dislocation struct., brittleness and impact toughness meas. (*Russian*) 2-93560
 Fe-Mn alloy, microstruct. and phase transform. mechanism, lenticular struct. origin 2-99424
 Fe-Ni-Cr, Alloy 800, mechanical behaviour at 838K 2-77888
 Fe-Si-Al, Sendust, order-disorder transform. and dislocation configuration, TEM study 2-83108
 γ -Fe₂O₃, phase transition, influence of fine crystalline struct. 2-86852
 FeS₂, natural marcasite, orthorhombic, obs. of cryst. defects 2-76452
 GaAs:Te, defect struct. after Cd diffusion 2-103762
 GaSb, melt-grown single cryst., defect etchant for dislocations and growth striations 2-91972
 KD₂PO₄ crystal, plastic flow and optical stability threshold during laser irradiation (*Russian*) 2-71498
 KH₂PO₄ crystal, plastic flow and optical stability threshold during laser irradiation (*Russian*) 2-71498
 LiF, mechanical props. and dislocation struct. under creep conditions 2-81880
 MgO, cathodoluminescence at hardness indents, correlation with dislocation struct. 2-72563
 MgO crystal predeformed at high temp., high voltage electron microscopy straining expt. 2-65998
 MgO, plastic deform., cathodoluminescence and photoluminesc. of slip bands, SEM study 2-67125
 Mo, cold rolled and annealed, dislocation struct., electron microscopy study 2-76450
 Mo, cold-worked, deform. and slip behaviour, cryst. orientation effect 2-99502
 Mo wire, rolling and flattening to ribbon, electrostimulated deform. role 2-116465
 Mo-B dilute alloys, nature of planar faults 2-81800
 Mo-Ti (0.5 wt.%), struct. changes under action of high temps. and long loads in various media 2-67456
 NH₄H₂PO₄ crystal, plastic flow and optical stability threshold during laser irradiation (*Russian*) 2-71498
 NaBrO₃, synchrotron radiation damage and induced decomp., white radiation topography obs. 2-103815
 NaCl, mechanical props. and dislocation struct. under creep conditions 2-81880
 NaCl type crystals, effect of dislocation forest on work hardening (*Russian*) 2-88102
 NaCl:Ni, plastic deform. around precipitates, dislocation microstruct. 2-103770
 NaCl:Ni, precipitates, etch pit study of dislocation microstructure 2-91971
 NaCl:Ni, precipitation-induced dislocation loops and helices 2-98102
 Ni alloy, heat-resisting, directional solidification, B influence on fine structure, diffusion and creep 2-67321
 Ni, He⁺ ion irradi., microhardness, microstruct., and blistering 2-98168
 Ni, plastic deform. after US hardening (*Russian*) 2-77873
 Ni, polycrystalline, internal friction, plastic deformation and mag. field effects (*Russian*) 2-116489
 Ni single cryst., plastic deformation, dislocation struct., stress/strain curves 2-109798
 Ni, single crystals, plastically deformed, dislocation structures recovery 2-71451
 Ni-base superalloy, powder-formed, near-threshold crack growth, effects of grain size and microstruct. 2-93616
 Ni-Cr-Co, nimonic 90, He⁺ ion irradi., microhardness, microstruct., and blistering 2-98168
 Ni₃Ga, ordered alloy, dislocation struct. (*Russian*) 2-98094
 NiO, ion thinned, unusual dislocation struct. origin 2-109804
 Sb bicrystal dislocation struct., compressibility anisotropy influence 2-103768
 Si, dendritic web grown, dislocation struct., TEM and SEM study 2-91975

dislocation structure continued

- Si, screw and 60° dislocations, core struct. and core energy, tight-binding calc. 2-81786
 Si, sectioning technique for demountable samples 2-86670
 Si, wafer shape, double-crystal topographical investigation after oxidation 2-115243
 Si:O crystal, Czochralski grown, deformed, dislocation configurations 2-76448
 Si:P(As), dechannelling by dislocations and stacking faults 2-81845
 Ti alloys, hot deformation of high alloy VT22 alloy, dislocation struct. obs. (*Russian*) 2-116500
 Ti-Al-Sn, H-charged, room temp. creep 2-111241
 Ti-Al-V (6.4 wt.%), deform. modes of α -phase as function of O conc. and ageing 2-77889
 Ti₃Al, deformed 'C' component dislocations 2-60983
 Ti₃Al-Nb, as-annealed and creep deformed, superdislocation networks, APB energy role 2-98091
 TiBTe, single crystals, defects 2-103766
 W powder, activated sintering mechanism, defective struct. influence 2-67253
 WC-Co, deformed, defect struct. of WC 2-83166
 Zn bicrystal dislocation struct., compressibility anisotropy influence 2-103768
 Zn, electrodeposited, incoherent nucleation and dislocation struct. 2-109952
 Zn, plastic deform., supercond. transition effect (*Russian*) 2-116503
 Zn, two-layer dislocation block boundaries (*Russian*) 2-98093

dislocation translation *see slip***dislocations**

- For pipe diffusion, see diffusion in solids. See also dislocation see also Bordoni effect; Cottrell atmospheres; disclinations; edge dislocations; grain boundaries; prismatic dislocations; screw dislocations*
 anthracene, photoluminesc., vibronic peaks, effect of grinding 2-104940
 benzophenone, photoluminesc., vibronic peaks, effect of grinding 2-104940
 channels in crystals, optical microscopy, X-ray topography, and contrast calcs. (*French*) 2-98071
 columnar disclotic mesophases, elasticity, dislocations, instabilities 2-65851
 commensurate-incommensurate transition, dislocations in domain wall struct., two-dimens. model 2-92153
 continuous media with dislocations, commensurate-incommensurate transitions (*Russian*) 2-56154
 cores, Peierls reconstruction 2-65994
 crack screened by dislocations, mechanics 2-92090
 crack tip, dislocation-free zone 2-56079
 crystals, two dimensional, defect motion and stress relaxation, shear modulus 2-61208
 defect fluctuation theory, dislocations and disclinations under stress 2-109794
 disordered dislocation layers, stress fields 2-76444
 electron diffraction, dislocation contrast, kinematic theory of electrons (*French*) 2-97866
 electron irradiated, void swelling 2-61039
 electron microscopy, validity of two-beam kinematical theory appl. to study of dissociated dislocations (*French*) 2-109803
 excitonic superconductivity along dislocations 2-92813
 FCC/BCC interfaces, grain boundaries, atomic simulation, O-lattice theory 2-92372
 ferromagnet, domain wall dynamic drag by dislocations, magnon interactions (*Russian*) 2-82637
 ferromagnet, uniaxial with dislocations, magnetisation distribution, singular lines, domain formation (*Russian*) 2-82664
 ferromagnetic crystals, elastoviscoplasticity 2-72321
 ferromagnetic plate, domain wall dynamic retardation by dislocations 2-92979
 free surfaces, of anisotropic halfspace, elastic field and self-force of dislocations emerging 2-98089
 gauge theory of dislocations, effective stress 2-91964
 gauge theory of dislocations in solids and melting as a Meissner-Higgs effect 2-109793
 III-V compounds, dislocation deep levels, occupation statistics 2-104289
 imaging of lattice defects by double diffractometric transmission topography 2-71289
 indentation instrument, for individual dislocations prod. 2-93695
 inhomogeneously stressed cryst., dislocation and vacancy kinetics (*Russian*) 2-76439
 interface, surface dislocation description of 3-D distortions 2-92373
 interfaces, misfit dislocations, theory 2-110166
 interphase interface struct., theoretical study 2-71811
 ion channelling studies of defects 2-81840
 ion implanted, laser annealed, defect anal. 2-66053
 Ising ferromagnet, dipolar, phase transitions with spontaneous modulation 2-104646
 Kosterlitz-Thouless transition, review (*Japanese*) 2-81933
 layer superstructure, domain-boundary hardening theory (*Russian*) 2-93529
 martensites, α and ϵ phase nucleation, role of dislocations and stacking fault energies (*Russian*) 2-62126
 melting, two-dimensional, Kosterlitz-Thouless anal., dislocations mechanism 2-66187
 metal hydride systems, hysteresis, regular interstitial soln. approx. 2-56197
 metallic epitaxial monolayer, equilb. config. in Nishiyama-Wassermann orientation, misfit accommodation 2-115626
 misfit dislocation form. during twinning or martensitic transforms. (*Russian*) 2-76438
 naphthalene-Cu interface, viscosity and thickness of quasi-liquid layer during melting (*Russian*) 2-115396
 nomenclature, for dislocation arrays 2-55971
 olivine, O₂ partial press. effect on dislocation recovery, creep mechanism constraint 2-106117
 paraffins, melting, two dimens. dislocation theory 2-103959
 phenanthrene, photoluminesc., vibronic peaks, effect of grinding 2-104940
 phthalic acid, photoluminesc., vibronic peaks, effect of grinding 2-104940
 plastic body, shear strength, plastic deform. 2-81878
 poly(γ -methyl L-glutamate-co- γ -benzyl L-glutamate) film, irreg. layer lattice 2-86583

dislocations continued

- quartz, synthetic, defects, effect on vibr. characts. and resonator performance 2-99044
 real crystals, equilb. distrib. of impurity atoms 2-66035
 selected area electron channelling patterns, elastic strains effect 2-91733
 SEM EBIC, lock-in detection, contrast meas. from individual dislocations 2-65824
 semiconductor, dislocation electron energy spectrum, Hubbard correlations 2-104309
 sintering, electric-discharge, solid phase, dislocation mechanism 2-77768
 solitons properties in Frenkel-Kantorova model 2-76442
 stacking faults, oxidation induced, growth kinetics, interstitial capture by partial dislocations 2-98118
 steel, alloy, heat resistant, creep under different temp. and force conditions 2-67460
 steel, alloy, heat treatment into lower bainite, C distrib., alloying elements influence (*Russian*) 2-67389
 steel, austenitic, strain hardening, depend. on struct. parameters 2-77844
 steel, Cr-Mo, pressure vessel, autoradiography of H trapping rel. to hydrogen embrittlement (*French*) 2-62213
 steel, low C, C atom segregation, thermoelectric power and elec. cond. study (*Japanese*) 2-105155
 steel, stainless, neutron irradiat. at 55°C, effect on mech. props. 2-69866
 steel, stainless, Types 304 and 316, dual ion bombardment, He partitioning to extended defects 2-86755
 steels, austenitic stainless types 316, 347, high flux reactor irradiat., microstruct., TEM study 2-80118
 swelling characteristics for cryst. with diffusional anisotropy under irradiat. 2-61021
 TEM lattice image geometry of steps and dislocations 2-91734
 two-dimensional binary random array, order and dislocations 2-91783
 two-dimensional Leonard-Jones system, melting, Monte Carlo simulation 2-92166
 two-dimensional melting, Laplacian roughening models 2-103956
 two-dimensional nonequilibrium structures, melting 2-115392
 two-dimensional solid, relax. and fluctuation effects near melting transition, mol. dynamics simulation 2-103957
 two-dimensional system, dislocations and melting, crit. point behaviour 2-92167
 vector systems, melting in two dimens., Monte Carlo study 2-71620
 vibration entropy 2-55970
 X-ray photogrammetry using multi-parallel projections, least squares locating method 2-113020
 X-ray section topography, intermediary form. 2-97857
 X-ray topography, multibeam method, double-cryst. arrangement 2-91719
 Al alloys, vacancies generation study during oxidation, electron microscope method 2-72897
 Al foil, deformation twinning, TEM study 2-66013
 Al, irradiated with Al ions, pure and He doped 2-86747
 Al, microstructural evolution during 600 MeV proton irradiat., He prod. rate effects 2-86746
 Al-Cu-Mg (1.3, 1.3 at.%), high temp. ageing, coherence loss and misfit dislocations, electron microscopy study (*Russian*) 2-93540
 Au/Pt (001) and (111) interface struct., misfit dislocations, TEM study 2-76843
 CaO, deformation processes during creep 2-61058
 CdS, cryst. defects, high resolution TEM study 2-60991
 CdS, recrystallised, stacking faults 2-103784
 CdTe, defect imaging using TEM 2-71460
 CsCl(Br), X-ray irradiat., colloid form., optical props. 2-56030
 Cu and Cu-Ge, low dose fission neutron irradiat. damage 2-103829
 Cu, US attenuation, impurity and dislocation effects 2-56096
 Fe, low dose fission neutron irradiat. damage 2-103829
 Fe, magnetic domain wall motion, wall-defect interactions, mag. meas. 2-116028
 Fe polycrystalline wire, Ni coated, plastic deform. during diffusion homogenisation (*Russian*) 2-67445
 Fe whiskers, dislocations by stress appl., X-ray transmission topography 2-115634
 Fe-Al, dislocation disloc. and fault energies (*French*) 2-98106
 Fe-Si [110] tilt boundaries and grain boundary dislocations TEM study 2-76461
 Fe-Si-C, primary stage of bainite reaction, TEM obs. 2-83109
 Fe-V-C, cold rolled, containing carbides, recrystallisation 2-83137
 GaAs LPE layers, dislocations as growth step sources, rel. to interface struct. 2-115615
 GaAs, liquid encapsulated Czochralski growth, dislocation form. 2-81875
 GaAs, radiative recomb. and light absorpt., dislocations effect 2-104962
 GaAs:Cr, semi-insulating, inhomogeneities, scanning leakage current meas. 2-109800
 GaInAs epitaxial layer device type structures, defects 2-71461
 GaInAsP epitaxial layer device type structures, defects 2-71461
 GaP:N, Te VPE layer, minority carrier lifetime, dislocations influence 2-115920
 Ge film, laser-crystallised, crystallite morphology and defect struct; TEM and SEM study 2-66402
 Ge, high purity, detectors, correl. between DLTS meas. and performance 2-70060
 In_{0.77}Ga_{0.23}As, lattice-mismatched MBE growth on InP 2-57296
 InGaAsP/InP misfit dislocations, photoluminescence, TEM and etching study 2-98109
 InGaAsP-InP DH lasers, rapid degradation obs. due to (110) dark line defects 2-85985
 InP-InGaAsP-InGaAs struct., LPE grown, lattice defects study 2-71454
 InP-InGaAsP-InP DH wafer, LPE grown, misfit dislocations 2-98096
 InSb, residual impurities and inhomogeneities, galvanomagnetic meas. 2-110369
 InSb:Ga, lattice thermal cond., 0.35-3K 2-98353
 KCl crystals, γ - and X-irradiated, dislocation models of mechanoluminescence 2-77595
 KCl, EM emission stimulated by acoustic wave 2-116301
 Li-Al(Zn)(Cd)(Hg)(Sn)(Bi), impurity solubility, dislocation and deformation effects, ESR study (*Russian*) 2-103996
 LiF and ⁶LiF TLD polycryst., SEM obs. of neutron irradiat. damage, surface defects, TL and response and recovery 2-115298
 LiF crystal, dielec. losses under deform. by conc. load 2-66984
 LiF, EM emission, stimulated by acoustic wave 2-116301
 LiF:Mg, impurity-vacancy pair clustering, trimer form., dielec. losses and TSC meas. 2-115419

dislocations continued

- LiTaO₃, ferroelectric domains and chemical twinning, dislocations and stacking faults 2-93130
 MgO crystal, cathodolum., from dislocations, purity influence 2-77599
 MgO, extrinsic secondary grain boundary dislocations 2-91980
 Mo, low dose fission neutron irradiation, damage 2-103829
 Mo, self-ion implanted, in situ annealing 2-92011
 NaCl crystals, γ - and X-irradiated, dislocation models of mechanoluminescence 2-77595
 NaCl, dislocation slip orientation depend., NMR study 2-109806
 NaCl, EM emission stimulated by acoustic wave 2-116301
 NaCl, γ -irrad., aftereffect and photomemory, F-centres and dislocations 2-71547
 Na₂O.5Al₂O₃, electron irradiation damage mechanisms 2-66072
 Ni, He bubble growth at dislocations, kinetics and phys. mechanisms 2-109826
 Ni-He, ion implanted, damage profiles, swelling due to Ni ion irradiation 2-103805
 Ni-Cr based refractory eutectic alloy, electron microscopy study (Russian) 2-98298
 Ni-Cu misfit boundaries, grown-in dislocation generation during 3D nucleation and growth 2-103772
 Ni-Ti, martensitic phase, high resolution TEM study 2-60998
 Pb₃(PO₄)₂, ferroelastic domain wall interactions, structural transition 2-86681
 PbS/PbSe bicryst., planar dechannelling at misfit dislocations 2-109870
 Pt-C alloy, defect clustering induced by secondary collisions during HVEM irradiation 2-92042
 Si, deformed, dislocation defect states 2-66489
 Si, deformed, stacking faults, dislocations, X-ray moiré pattern study (Russian) 2-91990
 Si dislocation crystal, X-ray Laue diffraction, dynamical oscillations obs. 2-115241
 Si, dislocation generation by ion implantation during manufacture of p-n junctions for ICs (Russian) 2-66030
 Si, dislocation lines, elec. props. 2-92521
 Si, dislocation study by X-ray plane wave images 2-103774
 Si, dislocations, interpretation of EBIC contrast 2-71453
 Si, dislocations and interface characterisation, high resolution TEM study 2-66005
 Si, dislocations and stacking faults HV high-resolution electron microscopy study 2-91970
 Si, ion-implanted, dechannelling by dislocations 2-76545
 Si LPE layers, dislocations as growth step sources, rel. to interface structure 2-115615
 Si, p-n junction, dislocation energy levels, determ. using photoelectret and thermoelectret states 2-61580
 Si p-n junction, graded dislocation, capacitance-voltage meas. 2-104293
 n-Si, plastically deformed, elec. cond. meas., dislocation levels effect 2-82364
 Si ribbon, H passivated structure, defects, EBIC study 2-66006
 Si ribbons, defects, elec. charact., and crystallography, EBIC and HVEM study 2-66014
 Si:H, dislocation donor and acceptor states (Russian) 2-92525
 Si-NiSi₂ interface, lattice imaging and defects 2-66378
 Si-Pd₂Si epitaxial interface, defect structure 2-66381
 Si-Pd₂Si interface, lattice imaging and defects 2-66378
 SiC, polycryst., containing excess Si, neutron irradiated, microstruct. study 2-71514
 TaSe₂ (2H), discommensurations in commensurate CDW states 2-71426
 TaSe₂ (2H), microstruct. in incommensurate and commensurate CDW states, electron microscopy obs. 2-104009
 W, cold worked, grain boundary dislocations, topographic anal., field ion microscopy study 2-115242
 YAG, single crystal, Czochralski grown, dislocations and inclusions, birefringence study (Chinese) 2-109709
 Zn, impression creep and dislocation controlled plastic flow, high temp. study 2-88147

disordered systems, vibrational states *see vibrational states in disordered systems*

disperse systems

- see also aerosols; Brownian motion; colloids; dust; emulsions; foams; fog; gels; powders; smoke; sols; suspensions*
 aggregated systems, chem. rate coeffs. rel. to 2-particle correl. functions 2-93834
 benzene, diamagnetic shielding const. interaction with surface, NMR study 2-102501
 coarse particles, plug flow in horizontal pipe 2-97661
 dilute liquid-liquid dispersions, droplet breakup in turbulent shear flow 2-114886
 direct-flow analyzer of the disperse composition of dust 2-60679
 dispersed particles, precipitation in elec. field (Russian) 2-62127
 dusty gas, unsteady flow between parallel plates, one plate oscill. effects 2-114769
 gas bubble motion in vibr. cylindrical vessel containing two layer liq. 2-60630
 gas-liquid mixtures, acoustic nonlinearity of bubbles 2-60612
 hygroscopic particle mean diameters as functions of relative humidity and integration limits 2-116729
 kerosene-Fe₂O₃, mag. fluid, elec. cond. meas. 2-104363
 liquid crystalline dispersions, transitions, alcohol effects 2-93833
 liquid dispersion modelling, hydrodynamic instability factors (Ukrainian) 2-60506
 liquid rotating in vertical plane, disperse phase distrib. (Russian) 2-81345
 liquid-bubble dispersion, virtual mass effect 2-60615
 moist disperse mixtures, microwave permittivity 2-72404
 molecular vibr. energy relax. processes 2-59911
 optical transfer function of disperse systems 2-65178
 phase flow, axial change effects on mass transfer and dispersion coeffs. 2-71016
 polydisperse fluids, phase equilibria 2-98239
 polydisperse system of interacting spheres, dil., sedimentation 2-91519
 polystyrene, disperse system, interacting Brownian particles, diffusion, light scatt. 2-72512
 polystyrenes in isorefractive PMMA-toluene solvents, light scatt. obs., radii of gyration, virial coeffs., θ condition 2-116730
 pseudoturbulent bed of dispersed material, heat transfer 2-103165
 quartz, particles, anisotropic, spectral transmission 2-114192
 rheological props. at low shear stresses 2-91369

disperse systems continued

- rod bundles near grid spacers, heat transfer augmentation, single-phase and dispersed flow 2-91440
 semiconductor-metal phase transition, mixed state and transition hysteresis 2-71870
 shear flow, laterally confined, non-uniform discharge of contaminants 2-97653
 solid-liquid-gas, effects of surface tension and viscosity of liq. medium 2-66322
 statistical parameters determ., units assurance, meas. facilities realisation 2-58990
 Taylor dispersion phenomena, general theory 2-74327
 temperature fluctuations in a disperse medium 2-109174
 thermophoretic deposition efficiency, of particles in tube 2-60623
 turbulent non-equilibrium dispersed flow, boiling, heat transfer 2-55559
 turbulent pipe flow, dispersion of released H₂O droplets, mass transfer 2-65650
 two-phase flow, droplet size distrib. determ. method 2-71011
 two-phase flow, multispeed model, numerical anal. 2-81385
 two-phase medium, physical model and eqn. of motion, random particle or bubble motion 2-114887
 vapour filtration in dispersed media, heat and mass transfer eqns. 2-60640
 vibrating vessel with liquid containing compressible sphere, finely disperse inclusions motion 2-91520
 viscoelastic melt-solid particle system in melting chamber, rheological props. 2-109259
 viscous liquids, mixing and fluid dispersion 2-81406
 X-ray and neutron scatt., small-angle, proportionality of scatt. vector 2-115101
 Al₂O₃-SiO₂, mullite form. kinetics, grain comp. and component activity effects 2-77786
 Cu₂AlMn₂, solid soln. containing disperse ferromag. Cu₂MnAl inclusions, martensitic transition obs. (Russian) 2-98915
 D₂O, adsorption on montmorillonite, hydration vibr. IR obs. 2-62426
 Fe-polydimethylphenylsilsesquene, filled polymer, ferromag. adsorbents, mag. props. 2-66871
 Fe-phenol-formaldehyde resin, filled polymer, ferromag. adsorbents, mag. props. 2-66871
 LiAlO₂/molten carbonate structures, compressive strength anal. 2-61050
 Ni-based oxide dispersion strengthened alloys, crystallographic texture 2-99444
 SiO₂ dispersed in cyclohexane, dynamic behaviour, photon correl. spectroscopy 2-109395
 Ti particle dispersion regularity, in high temp. Ar jet, with combustion (Russian) 2-60599
 TiN, ultradisperse particles, struct., neutron diffraction 2-73017
 ZrO₂, highly dispersed powder, hydrothermal modification 2-99461
 ZrSiO₄ glaze, crystn. kinetics, particle disperseness depend. 2-103658

dispersion (wave)

- see also acoustic dispersion; optical dispersion*
 analytic singularities in dispersive wave phenomena based on topological singularities of dispersion relations 2-101176
 cylindrical waveguide filled with electron beam, energy per unit length and power flow 2-76140
 ferrite plate, magnetostatic wave interaction with elastic waves, dispersion laws, magnetostriction 2-72330
 ferromagnet, magnetostatic surface wave resonance interaction with plasma wave 2-72183
 inhomogeneous dispersive media, intensity calc., ray approx. 2-53537
 MHD waves in cometary plasma tails, effects of turbulent solar wind on dispersion charact. 2-106615
 plane EM wave intensity behind strongly-refracting chaotic phase screen, fluctuation correl. 2-85868
 seismic surface wave dispersion, appl. to delineation of North Central Italian upper mantle anomaly 2-62924
 surface magnetostatic wave dispersion in presence of travelling elastic deform. waves 2-98932
 thermoelastic waves in circular cylinder, dispersion and energy dissipation 2-102974
 weak-dispersive wave kinetics (Ukrainian) 2-112713
 YIG ferrimagnetic double layer, magnetostatic vol. wave prop., dispersion 2-82672

dispersion hardening

- see also precipitation hardening*
 Elinvar, Fe-Mn-V-C, dispersion hardened, nonmag., mech. charact. 2-62132
 glass, matrix composite with dispersed crystalline or glass particles, indentation hardness (Japanese) 2-67509
 glass matrix particulate composites, micromechanics approach to indentation hardness 2-57364
 glass-ceramics, matrix composite with dispersed crystalline or glass particles, indentation hardness (Japanese) 2-67509
 steel, austenitic stainless 316, rapidly solidified Al₂O₃ dispersion strengthened, microstruct., path A alloys 2-88094
 steel, Cr-Mo-V, 12Kh1MF, dispersion hardening, creep rate (Russian) 2-77871
 steel, low alloy, ductile fracture, microfractographic study (Russian) 2-77903
 steel, Mn-Nb-V, low pearlite, struct. and mech. props. after controlled rolling 2-57385
 steel, tool, high speed, S 6-5-2 and S 10-4-3-10, cooling during hardening process, effects on toughness (German) 2-57367
 Al alloys, dispersion hardened composites, fabrication and wear props. 2-57363
 Al-Al₂O₃, dispersion strengthened, fatigue strength, effect of heat treatment temp. (Japanese) 2-93610
 Al-Al₂O₃, oxide dispersion strengthened, high temp. deform. 2-93554
 Al-Al₂(Ti,Zr,...) alloy, lattice parameters of dispersed phase w.r.t. x 2-72713
 Al-C alloy, dispersion hardening, mech. alloying in attrition mill, struct. obs. 2-111113
 Al-Mg, dispersion hardening, X-ray matrix reflections, double maxima study (Russian) 2-93522
 Al-Mg-MgO, oxide dispersion strengthened, high temp. deform. 2-93554
 Al-Si-Mg-ZrO₂, dispersion hardening 2-57362
 Al-Zn-Mg-Cu alloy, near threshold fatigue crack growth rates, effect of purity and dispersoid type 2-72840
 (Al-4Cu)-Al₂O₃ composite, SAP type, precipitation hardening 2-77836

dispersion hardening continued

- Al₂O₃-Y₂O₃ dispersion strengthened alloys, convergent beam diffr. anal. of dispersoids 2-99436
 Cu, dispersion strengthened, prep. from internal oxidation of sputtered powders, struct. and props. (*Russian*) 2-67238
 Cu-Al, dispersion hardened, struct. stability and resist. to deform. (*Russian*) 2-77872
 Cu-Be, AE generated during tensile deform (*Japanese*) 2-105232
 Cu-Be-Co (13.1, 0.2 at.%), rapid solidification effect on ageing (*Japanese*) 2-105137
 Cu-Fe, containing α -Fe particles, back stress hardening and static and dynamic hardening 2-67358
 Fe-Cr-Al (20, 4.5 wt.%), oxide dispersion strengthened, long-term high velocity oxidation and hot corrosion testing 2-88274
 Fe-Cr-Al alloy, wrought, prep. and characts. 2-67249
 Fe-Cr-Ti-Mo-TiO₂, dispersion strengthened, void swelling in HVEM, influence of fabrication procedure 2-111189
 Fe-Ni-Y₂O₃, martensite morphology, affect of inert oxide particle dispersion 2-57352
 Fe-Triballoy 700 mixture, sintering temp. effect on microstruct. and mech. and tribological props. 2-77775
 In-Sn-Cu system, dispersion-hardening pastes, phase comp. 2-111143
 Nb-Mo-Ti-Zr MN-1 alloy, nitriding effect on heat-resisting props. 2-111247
 Ni alloy, heat-resisting, directional solidification, B influence on fine struct., diffusion and creep 2-67321
 Ni superalloy, particle strengthened, resisting stress model of creep, stacking fault energy role 2-88149
 Ni-Cr alloys MA 6000E, scaled-up thermomech. processing 2-77856
 Ni-Cr-Al (16, 4 wt.%), oxide dispersion strengthened, long-term high velocity oxidation and hot corrosion testing 2-88274
 Ni-Cr-Al-Y₂O₃, dispersion and precip. hardened superalloy, recrystn., influence of hot working 2-111196
 Ni-Cr-Al-Y₂O₃, oxide dispersion and precip. strengthened, creep and rupture 2-111299
 Ni-SiO₂ dispersion hardened alloy made by internal oxidation method, high temp. hardness (*Japanese*) 2-105303
 PbO-B₂O₃ phase separated glass, matrix composite with dispersed crystalline or glass particles, indentation hardness (*Japanese*) 2-67509
 W, diffusion and stability of strengthening phases, review 2-104065
 W fibre reinforced Ni superalloy, high temp. composite, microstruct. stabilisation with ZrO₂ short fibres (*German*) 2-77781

dispersion power, rotatory *see optical rotation***dispersion relations**

- see also dispersion (wave); Kramers-Kronig relations; Mandelstam representation; N/D method; phonon dispersion relations; phonons; plasma instability; plasma waves; S-matrix theory*
 3 π final state interactions, simplified parametrisation 2-95697
 analytic singularities in dispersive wave phenomena based on topological singularities of dispersion relations 2-101176
 antiferromagnetic thin films, guided polariton dispersion relations (*French*) 2-104263
 atmosphere circulation, linear dispersion relation for Charney baroclinic instability problem 2-100467
 biaxial crystals, surface polarisation waves 2-72400
 cylinder, rigid restrained, dispersion eqn. complex roots anal. (*Ukrainian*) 2-114705
 electromagnetic plasma instability (*Chinese*) 2-97742
 electromagneto-thermo-mechanical plane wave attenuation in magneto-thermo-viscoelastic media, mag. field effect 2-55047
 excitonic molecules, non-linear optical response and optical bistability, polariton dispersion, dielec. function calc. 2-55246
 ferromagnet, magnetostatic interface waves 2-56845
 gas, viscous, supersonic flow past a vibrator, linear problem 2-114842
 hydromagnetic stability of superposed fluids, general dispersion relation 2-106499
 hydromagnetics, dispersion relation for thermal convection instability of two component fluid layer 2-106501
 inhomogeneous conductor, surface excitation dispersion calc. method 2-76960
 ion-atom dispersion relations 2-85778
 Lagrangian field theory, perturbative, Feynman graphs, dispersion relations 2-58998
 liquid, evaporating, surface waves, dispersion eqn. 2-92311
 magneto-optical difference effects in Faraday config., dispersion relations, tensor and scalar form comparison (*German*) 2-77495
 magnetostatic surface waves, propag. across large amplitude gratings, theory 2-87483
 metal film, surface magnetoplasmons, quantum theory, RPA approx. 2-82259
 metal surface roughness effect on surface plasmon dispersion relation and photoemission 2-57035
 metallic system with nonspherical Fermi surface, elec. cond., single band model 2-82318
 metals, X-ray spectra, low energy double plasmon satellites 2-62020
 narrow gap semiconductors, plasmon assisted recombination in mag. field 2-92657
 nonlocal dielectric fluids, dispersion of surface waves 2-75978
 one-dimensional Bloch line arrays, collective excitations 2-98904
 optical glass, optical const., effects of external fields 2-72440
 parametric excitation of convective cells in drift waves 2-114997
 plasma microinstabilities, drift wave case, dispersion relations 2-71175
 polyacetylene, momentum depend. dielectric function 2-110275
 proton Compton scatt., model-independent dispersion approach 2-69472
 semiconductor superlattices, collective excitations study 2-104473
 semiconductor thin films with thin film optical waveguides, optical const. 2-82947
 shear horizontal acoustic waves, propag. on sinusoidally corrugated layered surfaces, theory 2-81148
 single-crystal ferrites, domain boundary inhomogeneous oscills. 2-104653
 Stokes' in WKB theory 2-95077
 surface plasmon dispersion relation on Au- and Ag-gratings 2-98708
 thermal neutron scatt. technique, neutron spectral modulation 2-103563
 thin films, nonlinear surface polariton dispersion at resonance with oscills. 2-61371
 two-component fluid, ripplon dispersion relations, hydrodynamic mean-field calc. 2-58699
 waveguides, dielectric, inhomogeneous slab and cylindrical, with discontinuous permittivities, propag. modes 2-70482

dispersion relations continued

- ve, weak interactions and dispersion relations in localised axiomatic field theory 2-89918
 pp (pn) forward scatt., amplitude anal. 2-59171
 π N phase shift determ. from isospin constraints and fixed t analyticity 2-95863
 AlSb(As)(P), surface (110), bound and resonant surface states 2-110429
 CuBr, Raman study of exciton-polariton dispersion relation 2-93180
 Fe_{1-x}V_x, disordered, spin wave dispersion relations 2-77279
 GaAs, hot-electron plasma, excitation of electrostatic oscillations, calc. 2-66580
 H, electron dispersion relations 2-59934
 H, electron scatt. amplitude, multiple pole coeffs. 2-90706
¹H(p,p), 796 MeV, elastic scatt. in Coulomb-nuclear interf. region 2-54390
 He electron scattering, complex optical pots., dispersion eqn. calcs. 2-80810
 Ho₂Co₂(Fe₁₇), magnetic excitations study 2-110573
 KCl:Pb²⁺(Cu⁺), Kerr const. dispersion 2-72453
 NiO mag. and lattice mechanical props. 2-92890
 Pb_{1-x}Sn_xTe, band struct. dispersion low and parameters (*Russian*) 2-61358
 W, surface (001) struct. transition, LEED fine struct. 2-110104
 (ZrO₂)_{0.88}(Y₂O₃)_{0.12}, d.c. and a.c. elec. props. 2-104376
- dispersions** *see disperse systems*
dispersoids *see disperse systems*
- displacement measurement**
 bone fracture site properties monitoring with external fixation, finite element and expt. analysis 2-62821
 composite material structural performance evaluation, moire methods appl. 2-105424
 confocal Fabry-Perot sensor, optical displacement sensor for acceleration and vibration meas. 2-58889
 curved surfaces, strain determ. using far field objective laser speckles 2-91361
 deformed state examination, interference optical methods, survey 2-114745
 diffuse object surface displacement vector field meas. by holographic interferometry (*Hungarian*) 2-55090
 electronic speckle pattern interferometry for static and dynamic surface displacement meas. 2-91357
 fibre interferometer for minute biological displacements meas. 2-73411
 grid method for strain meas. 2-103125
 holographic correlation method for testing microdeformations 2-58784
 holographic interferometry, in-plane and out-of-plane motion separation 2-55088
 holographic moire in real time 2-90838
 holographic moire method for displacements, strains, contours and slopes of surfaces determ. 2-86241
 image spectrogram interpretation in some metrological appls. 2-79685
 in-plane displacement extraction from sandwich holograms using speckle photography 2-108829
 interferometric strain/displacement gauge appls., review 2-86245
 laser mirror using acousto-optical device meas. and control system, displacement 2-97051
 laser radiation displacement influence on units transmission of relative distribution of power density 2-86023
 laser speckle strain gauge, simplified, surface displacement detect. 2-91360
 light-focusing optical fiber displacement-vibration probe 2-97218
 linear displacement transducer, with temperature compensation (*German*) 2-53751
 linear variable differential transducers, state of art 2-79566
 low-noise RF capacitance bridge transducer for studying displacement of a pendulum 2-95354
 moire interferometry developments, in-plane displacements determ. 2-84694
 moire photography, high resolution, for engineering structure deform. meas. 2-103124
 object point measurement in holographic-interferometric deform. anal., interferometric instead of geometric meas. 2-55094
 optical fibre coating concentricity, high speed meas. and control 2-86104
 optoelectronic displacement transducer for the neurophysiological lab. 2-105869
 piezoelectric displacement transducers, conversion function determ. 2-95351
 plate deformation meas., laser speckle photography as alternative to holographic interferometry 2-86244
 posturography, appl. of math. models 2-83674
 reflecting object displacement meas., comparison of double-beam and multiple-beam reflection interferometer methods 2-112965
 remote sensing with white light 2-89781
 scattered light speckle metrology development, strain, displacement and velocity meas. 2-91356
 sensors for force, pressure, displacement and flow, conf., Enschede, Netherlands (May 1982) 2-94913
 shearography, optical method for strain meas. and NDT 2-91355
 speckle interferograms, of displaced and deformed objects, interpretation 2-80919
 speckle method, white light, for strain analysis, theory and appls. 2-103122
 speckle metrology of surface displacement, digital imaging techniques in stress analysis 2-91359
 speckle metrology techniques, parametric exam. of observed fringes 2-89796
 speckle pattern interferometry appl. 2-79657
 speckle photography, error of lateral sinusoidal vibrs., simple analytical soln. 2-74488
 speckle shearing interferometry rel. to displacement derivatives, use of glass plate for correlation fringes 2-53826
 speckles, close range objective, used for displacement meas. 2-91358
 steel testing, large scale, specimen-grid moire techniques 2-105423
 stress intensity factor determ., objective white-light speckles appl. 2-97478
 superconducting, sensitivity threshold spectral depend. (*Russian*) 2-53735
 superconducting devices, precision metrology appl. 2-94937
 surface displacement determination using a holographic electrooptical processing method 2-85910
 transducer design, helicoid multivibrator type 2-58807

displacement measurement continued

- transducer with photoreceptor array 2-95475
- ultrasonic transducer for displacement and vibration measurement in three dimensions (*Russian*) 2-91188
- variable displacement resolution by laser interferometry 2-107298

displacive transformations

- see also martensitic transformations; polymorphic transformations; reverse martensitic transformations; soft modes*
- alkali cyanides, elastic softening and ferroelastic instabilities 2-56147
- alkali superoxides, elastic softening and ferroelastic instabilities 2-56147
- double-Gaussian model, crit. and crossover behaviour 2-112836
- elastic phase transitions, Landau theory appl. 2-98246
- ferroelectric, displacive transformations, US attenuation study 2-56095
- ferroelectric imperfect crystal, order parameter and refractive index, photo-induced changes 2-110798
- metals, quasi-one-dimensional, displacive transitions, Peierls transitions 2-81955
- one-dimensional interactive kink-phonon gas, statistical theory 2-76633
- order-disorder displacive crossover in a structural phase transition model 2-66166
- perovskite related crysts., phase transitions associated with rot. distortions, theoretical study 2-66211
- perovskite struct. ABCI, crysts., phase transition sequence, thermodynamic description 2-103983
- perovskites, oxydic, ferroelec. transitions, IR and Raman spectra and dielec. const. data anal. 2-67008
- phase transition, dynamics of 1-D model (*Russian*) 2-98236
- pTS, monomer diacetylene, incommensurate-commensurate phase transition, Raman study 2-71631
- quartz, displacive phase transformations, coexistence of structurally different regions 2-61121
- quasi-one-dimensional crysts., displacive phase transition temp., dynamic 'interchain coupling effect 2-61103
- rare earth trihydrides, RH₃, electronic phase transitions, excitonic insulator model 2-87151
- semiconductors, displacive transition, phonon instability in strong EM wave 2-103935
- BaTiO₃, ferroelec.-paraelec. transition, displacive-order-disorder crossover 2-104819
- BaVS₃, stoichiometric, phase transitions at 240K and 80K, X-ray diff. study 2-61125
- Bi₂WO₆, polymorphism, differential dilatometry and DTA study 2-60913
- Hg₂(Cl₂Br_{1-x})₂, phase transition temp., comp. depend. 2-86864
- K₂Co(CN)₆, struct. phase transition, Raman study 2-99116
- KNiCl₃, symmetry modes and distorted phase struct. 2-103685
- Li₂SiO₄, fusion blankets, displacive transform. 2-69859
- LiTaO₃, ferroelec.-paraelec. transition, displacive-order-disorder crossover 2-104819
- LiTaO₃(LiNbO₃), ferroelec. transition, soft modes, IR reflection spectra study 2-67009
- NaNO₂, incommensurate transitions, phenomenological theory 2-57025
- NaOH (NaOD), cryst. struct. and struct. transitions, X-ray and neutron diff. and sp. ht. study 2-97972
- Pb_{1-x}Ge_xTe, phonon and elec. resist. anomalies at displacive phase transition 2-98653
- Pb_{1-x}Sn_xTe, phonon and elec. resist. anomalies at displacive phase transition 2-98653
- SrTiO₃, IR refl. and antidistortive transition 2-67058
- Sr₂ZrO₆, high-temp. phase transition, electroconductometric analysis 2-98262
- TbVO₄, collective mode damping near struct. phase transition 2-109944

display devices

- see also gas-discharge displays; liquid crystal displays*
- electron microscopy image calc., display and comparison, integral and dedicated computer system 2-95562
- electrowetting effect, continuous, appl. to displays and other electro-optical devices 2-76777
- perceptibility of monochrome and colour displays calc., under various illumination conditions 2-78341
- semiconductor device physics, book 2-53437
- WO₃ film, reactively sputtered, prep., elec. and optical props. 2-93420
- ZnS:Mg AC thin film electroluminescent devices, luminescence-voltage characts. 2-104967

display equipment *see display instrumentation***display instrumentation**

- see also cathode-ray tube displays; display devices; screens (display)*
- body surface maps, signal anal. and display with a microcomputer mapping system 2-100145
- cardiovascular nuclear medicine, auxiliary moving image system, multi-phase dynamic colour display 2-94197
- computer displays, review of research on impact on human visual system 2-73227
- data reading recording from several counters on one indicator 2-69160
- design and evaluation of nuclear reactor control room display 2-96241
- digital display optimal update rate selection 2-94049
- digital imagery and display fundamentals, resolution and MTF problems 2-114209
- environmental monitoring and control hardware selection (*Russian*) 2-62541
- epicardial mapping by online display (*Japanese*) 2-57914
- harmonic distortion factor meter for characterization of nonlinearity of quasilinear systems (*Hungarian*) 2-74463
- high-resoln. electron microscope, Cambridge University, image pickup and display systems 2-64187
- information presentation in modern electric measuring instruments, visual and computerisation (*Bulgarian*) 2-95396
- Mbg display for an isotope calibrator 2-73351
- MiRO colour display system for ultrasonic pictures (*Italian*) 2-70793
- monochromators, digital control and display system 2-55311
- multichannel recorder/display system based on an Apple II microcomputer 2-84618
- nuclear power plant operation, advanced display-control concepts 2-85173
- phase shift, direct meas., electronic instrument (*Rumanian*) 2-112918
- power factor, direct meas., electronic instrument (*Rumanian*) 2-112918
- Salter Abbey electronic force gauge, hand-held 2-101395
- scanner display assessment for scanner performance quality control, wedge-shaped phantom evaluation 2-94191
- simultaneous recording of the readings of two digital measuring instruments with the Shch68000K printing instrument 2-69159

display instrumentation continued

- skin potential monitor and display system 2-68185
- STEM data acquisition and display system 2-107469
- toposcope for freq. and phase indication, EEG appl. 2-94223
- visual fatigue in display work, laser optometer expts. 2-88548
- 2-87055
- display instruments *see display instrumentation***
- display systems *see display instrumentation***
- disruptive voltage *see electric breakdown***
- dissipation (heat) *see cooling***
- dissociation**
- see also electrolytic dissociation; heat of dissociation; ionisation; molecular dissociation; molecular dissociation energies; photodissociation*
- alkali metals, F-centres, thermal dissociation energy, electrolytic coloration meas. 2-60977
- diethylsuccinate in dioxane-H₂O mixtures, kinetics of acid-catalysed hydrolysis 2-83382
- glass fibre reinforced polyester resins, water and H₂SO₄ influence, determ. by radioactive tracer technique (*German*) 2-67593
- polyester resins, isophthalic acid type, water and H₂SO₄ influence, determ. by radioactive tracer technique (*German*) 2-67593
- rare earth orthophosphate, high temp. behaviour, dissoc. 2-67740
- water, dissociative chemisorption on Si (100) and (111), EELS study 2-7051
- wavefront breakdown in ideal dissoc. gas, characteristics method calcs. 2-55613
- α -AlH₃, electron beam induced decomp., analytical diff. obs. 2-78070
- β'' -Al₂O₃-Na₂O(Na₂O-Li₂O)(Ag₂O), dehydration reactions, DTA and TGA study 2-78091
- CO, chemisorbed on Rh, dissociation mechanism 2-57638
- CO, liquid, shock compression 2-78103
- Co₂(CO)₈, thermal decomposition, prep. of conducting Co film on glass substrate 2-11085
- Cu(H₂PO₃)₂, elec. cond., temp. depend., effect of decomp. and NaHSO₄ additive 2-71967
- GaAs, laser beam erosion, role of thermochemical effect 2-61028
- Ge-As solid soln., dissoc. total diffuse X-ray scatt. meas. 2-65927
- KMnO₄, open thermodynamic system, thermolysis 2-110010
- KVO₃·H₂O, topotactic dehydration, competing struct. reaction mechanisms 2-62396
- MgO-Fe₂O₃, solid-phase interaction, ESR investig. 2-87579
- NaA zeolite, cond. during dehydration 2-71966
- Ni surfaces, dehydrogenation of cyclohexane, cyclohexene, and cyclohexadienes to benzene 2-83415
- Ni(100) surface, effects of Fe in reactivity 2-78135
- PbS, lattice period, influence of composition and γ -irradiation 2-76382
- Pt surfaces, dehydrogenation of cyclohexane, cyclohexene, and cyclohexadienes to benzene 2-83415
- TaH(PO₄)₂·2H₂O, layered struct., thermodecomposition 2-71420
- TiC₂O₃ and TiC₂O₃H_m, oxygen-rich, electric explosion, phase comp. of products 2-88358
- Tl₂Te-Zn(Cd)Te, phase equilibria, degree of dissociation 2-72678
- dissolution *see dissolving***
- dissolving**
- see also solubility; solutions; solvation*
- adsorption, kinetic models with bulk dissolution 2-110134
- cadmium oxalate trihydrate, dislocation etching and dissolution mechanism 2-109797
- calcium oxalate monohydrate, dissolution kinetics, const. comp. study 2-76681
- cellophane, fine struct., X-ray and electron diff. obs. 2-103666
- coated particles, failure detection in HTGR, by acid leaching 2-64475
- diffusion-controlled dissolution of solid in liq. and growth of new phase layer, kinetic law 2-98294
- glass, crack initiation, acid-enhanced 2-77911
- glass, dissolution of Na and Si, press. depend., nuclear waste disposal 2-104001
- glass, saline leaching, ion bombardment enhancement, radioactive waste appl. 2-74811
- glass matrix for radioactive waste disposal, surface effects on leaching 2-93649
- Hg_{0.7}Cd_{0.3}Te anodic oxidation 2-111344
- metal electropolishing rel. to other types of metal dissolution 2-57568
- metal filaments, decimiron, prep. and tensile testing 2-62314
- metallic particles, sintering, appl. of surface oxide model 2-88020
- nuclear waste ceramics, leaching, microstruct. and phase characterisation 2-98290
- particle stability, with recoil resoln. 2-67339
- polyethylene oxide-polyvinyl acetate blends, compatibility assessment using morphology, mech. and thermal props. 2-109694
- stearic acid cryst., polymorphic transformation, soln. mediated 2-66195
- steel, austenitic stainless, stress corrosion cracks, TEM study 2-88266
- steel, carbide particles, diffusion-controlled precip. and dissoln., computer simulations 2-105157
- steel, ferritic, anodic dissoln. in H₂SO₄ influence of Cr on mass transfer limitation 2-67612
- steel, mild, anodic behaviour in deaerated carboxylic acid solns. containing NO₂⁻, Cl⁻ and NO₃⁻ ions 2-67607
- steel, mild, cold worked, caustic SCC 2-99596
- steel, mild, electrodisso. and passivation in alkaline sulphide solns. 2-116588
- weld, grain growth diagrams 2-116422
- Ag alloys, corrosion, anodic dissoln. and O reduction in aq. media 2-111354
- Ag particles, dissolution in oxygenated aq. NH₃ soln., concentration effects 2-92209
- Ag-Sn, peritectic reactions and transforms, mechanisms 2-83087
- Ag₄RbI, solid electrolyte, I₂ dissolution meas. 2-110001
- Al alloys 2219 and 7075, precipitation and dissolution kinetics, calorimetric study 2-83127
- Al corrosion, energy transfer during Al dissolution, theory 2-77995
- Al, corrosion, initial dissolution step 2-57525
- Al-Mn, peritectic reactions and transforms, mechanisms 2-83087
- alkali metal oxide-CaO-Al₂O₃-SiO₂ glass, liq.-liq. phase separation, struct. interpretation, alkali aluminate complex form. 2-103973
- As, in Ga melt, calc. of diffusion coeff. 2-110020
- B₂O₃-Li₂O-(LiCl) glasses, chem. durability 2-93647
- Ca₁₀(PO₃)₆(OH)₂, dissoln. kinetics, acidity constant for HPO₄²⁻ surface complex 2-60896
- CdC₂O₄·3H₂O, gel-grown, kinetics of etching and dissoln. 2-98099
- n-CdS, photoanodic dissolution, rot. ring-disc electrode study 2-57500

dissolving continued

- Co-S system melts, thermodynamic activity of S 2-105126
 Cr dissolution in Al, kinetic parameters and diffusion coeffs. 700-900°C 2-99395
 CsI crystal, dissolution mechanism 2-66228
 Cu, containing P, anodic dissolution in bright Cu plating electrolytes, kinetics and mechanisms 2-67664
 Cu-Sn, peritectic reactions and transforms, mechanisms 2-83087
 Fe, electropolishing rel. to other types of metal dissolution 2-57568
 Fe, passive, pit form. in cathodic polarisation, stimulation by chelating agents 2-116592
 Fe, pitting and pitting inhibition, in Na₂SO₄ solns. 2-105360
 Fe, Pourbaix diagram, EMF-pH, presence of solid Fe(OH)₂ 2-116597
 Fe₂O₃, hematite, dissolution and devitrification in float glass, Mossbauer, X-ray diff. studies 2-109686
 In-Mn, ion beam induced precipitate dissolution, characterisation by supercond. transition temp. meas. 2-86740
 Li, surfaces (100) and (110), BCC, H atom-cluster interactions, ab initio CI calc. 2-116325
 Mg-Si O-N glass, dissolution kinetics of β -Si₃N₄ 2-88071
 MgO, neutron and γ -ray effects on dissolution and corrosion 2-76688
 MoSe₂, single crystal, etching and dissolution kinetics, PEC solar cell appl. 2-93642
 (Na,K)AlSi₃O₈, albite-orthose vitreous system, enthalpy of mixing (French) 2-61147
 Na, liq., dissoln. of Au and Ag wires, dynamic X-radiography 2-111398
 Na₂O-CaO-SiO₂ glass, leaching characts., surface roughness and surface area effects 2-93650
 Na₂O-FeO-SiO₂ simulated waste glass, chem. durability, press. effects and surface layer form. 2-93651
 Na₂O-ZnO-B₂O₃-SiO₂ glasses, chem. durability, effect of Zn²⁺ adsorption 2-93648
 Nb,Sn, form. kinetics by diffusion method (Russian) 2-66301
 Ni-Fe (25 at.%), ESCA studies, anodic dissolution, passivation effects 2-83296
 P, in Ga melt, calc. of diffusion coeff. 2-110020
 Pb-Sn, grain boundary diffusion 2-104074
 PbO-SiO₂ glasses, leaching mechanism in acid soln. 2-93646
 PuO₂, secondary dissolution method, for reactor fuel reprocessing 2-64550
 SiO₂-B₂O₃-K₂O-Na₂O glass, leaching characts., surface roughness and surface area effects 2-93650
 Ti, anodic soln. in nitrates and nitrate-chloride solns., NO₃-ions reduction (Russian) 2-62269
 Ti-Cr₂Cr₃ composite, struct. form. mechanism 2-67260
 WSe₂, nonbasal dislocations etching and kinetics of dissolution 2-65999

distance measurement

- B-type stars, H β distance scale for Orion association stars 2-106692
 Canon AF 35 M, automatic focusing distance meas. system (Italian) 2-101474
 OY Carinae, dwarf nova, K-magnitude of secondary star rel. to distance 2-112464
 contactless separation meas. using focused US radiation 2-70796
 galaxies distances determ. from 21 cm line width, depend. of Tully-Fisher relation on Hubble type 2-63615
 galaxy clusters, distance meas. from radio galaxy emission scatt. and polarisation (Russian) 2-106923
 glossometry, tongue-palate distance meas. during speech using LED/phototransistor combination 2-94264
 HR 7308, peculiar classical Cepheid, distance from UBVR photometry 2-106746
 Hyades cluster, distance determ. from obs. of eclipsing binary (HD 27130) 2-68811
 interpuillary distance meas. by chromostereopsis 2-88546
 Lalande 21185, red dwarf star, parallax meas. from 40-year Sproul plate series 2-79089
 light rangefinder meas., correction factors calc. 2-100556
 M101, distance modulus determ. from dia. of giant ringlike H II region 2-68900
 methane eyesafe Raman laser, Nd:YAG based, cloud height ranging appls. 2-97058
 NGC 3603, giant galactic H II region, distance 2-68864
 NGC 6664, open cluster, true distance modulus from intermediate-band photometry 2-106823
 NGC 6946, spiral galaxy, distance modulus rel. to absolute magnitude of Type II supernova SN 1980k 2-106760
 Nova Coronae Austrinae 1981, re-discussion of distance 2-79117
 optical fibre connectors, single and multimode, interferometric technique for small gap meas. 2-102926
 Pegasus dwarf irregular galaxy, distance estimate from photometry of resolved stars 2-63617
 PG 1550+191, AM Herculis star, limits on distance from spectrophotometry at red wavelengths 2-94755
 phototachymeter, type SG-3, noise immunity increase 2-70656
 planetary nebulae, radio distance scale determ. 2-106873
 rangefinder system simulations for lens-shutter cameras 2-91027
 self-calibrating meas. systems (German) 2-53726
 stars, external and systematic parallax errors 2-58331
 stellar open clusters, distances and ages from colour-magnitude diagrams 2-106557
 supernovae, distance determ. methods rel. to cosmic distance scale 2-63496
 underground ranging using elastic waves, primary expt. (Japanese) 2-68265
 US device appls., moving object and fixed receiver or vice-versa (Italian) 2-74385
 Virgo S cloud of galaxies, distance moduli and vel. struct. 2-58476
 visual binary stars, masses, mass ratios and parallaxes of seven objects from astrometric studies 2-106693
 CO₂ advanced laser rangefinders 2-109012

distillation

- see also isotope separation
 development of a marine osmotic solar still for sea water desalination 2-67834
 liquid collector efficiency in solar stills, effect on performance of surface area 2-78247
 multiple-effect solar distiller for fresh water supply, design features 2-67831
 small capacity solar-powered distillation plants in Australia 2-67828
 test results from a solar boiler for saline water distillation 2-67826

distillation continued

- CdCl₂-2.5H₂O, purification, by distillation and sublimation in vacuum 2-77720
 CrCl₃, purification, by distillation and sublimation in vacuum 2-77720
 H-T separation, cryogenic distillation column with feedback stream, simulation 2-90289
distortion, electric see electric distortion
distortion measurement, electric see electric distortion measurement
distortive transformations see solid-state phase transformations
distributed Bragg reflector lasers
 injection heterolaser, spatial, spectral and power characts. of radiation 2-108883
 thin-film lasers with two-dimens. periodic structs. 2-96988
 waveguide resonators with distributed Bragg reflectors 2-86101
 AlAs-GaAs heterojunction laser with distributed Bragg mirror, CW operation at 50°C 2-85996
 GaInAsP-InP 1.5 μ m DBR lasers with built-in optical waveguide, room temp. operation 2-75593
 GaInAsP-InP 1.55 μ m distributed Bragg reflector integrated laser directly coupled to external waveguide 2-60117
 GaInAsP-InP BH integrated laser with butt-jointed built-in DBR waveguide, 1.6 μ m CW operation 2-80987
 GaInAsP-InP integrated twin guide DBR laser emitting at 1.55 μ m, low threshold current 2-60119
distributed control
 dedicated EPROM-based computer for distributed instrumentation control 2-59671
 MFTF Supervisory and Control and Diagnostic system, debugging process 2-74967
 nuclear power plant control and instrumentation system reliability (Japanese) 2-74857
 Oldbury nuclear power station, computerised monitoring and control system 2-108053
 power plants, thermal and nuclear, industrial computer systems appl. (Japanese) 2-80151
distributed feedback lasers
 channelled electrons, stimulated emission possibility, optical and X-radiation generation 2-116208
 channelled electrons, X-ray stimulated emission, theory 2-85979
 cryptocyanine solutions, photobleaching and short-wavelength lasing 2-90883
 dye activated cholesteric liq. cryst. as tunable laser with DFB 2-114262
 dye lasers, distributed feedback, semiclassical theory (Chinese) 2-108868
 dye lasing in a smectic matrix, excitation conditions 2-114266
 phototropic valves, opening by standing light wave 2-75637
 transverse DFB cavity laser, stable two-dimensional oscillation 2-80949
 GaAlAs-GaAs transverse DFB cavity laser, room temp. operation 2-102817
 InGaAsP/InP DFB lasers, 1.5 μ m range 2-102794
distributed parameter networks
 nonuniform semi-infinite grounded grid, finite power soln. 2-77034
distributed parameter systems
 heat conduction problem, multivariable meas. and control strategies appl. 2-60355
 heat transfer system, identification using Galerkin method 2-70824
 nuclear reactor, optimal power factor control 2-113707
 stochastic systems, parameter estimation method 2-117505
distributed processing
 see also computer networks; multiprocessing systems
 Doublet III, distributed computer system, data management 2-80224
 Intense Pulsed Neutron Source distributed processing data acquisition system 2-59585
 MFTF control systems, tools and implementation methods 2-85367
 MFTF distributed database management system 2-85368
 MFTF Supervisory and Control and Diagnostic system, debugging process 2-74967
 satellite climatology, ICL distributed array processor appls. 2-100575
 seismic data deconvolution, algorithm for ICL DAP 2-100283
 underwater signal processing, high-speed programmable digital systems 2-63143
distributions, statistical see statistical analysis; statistics
district heating
 Cantonal Chemical Laboratory integrated heat supply system component items (German) 2-73136
 Cantonal Chemical Laboratory integrated heat supply system operation and performance (German) 2-73135
 combined heat and power, energy savings in FDR (German) 2-73050
 French range of nuclear reactors for heat production (German) 2-80167
 heat pump utilising industrial waste heat for district heating (German) 2-111582
 High Temperature Water for transport and distribution of heat 2-67871
 power station with supercharged fluidised bed combustion (German) 2-91527
 pressure losses reduction of turbulent pipeline flow by means of chemical additives 2-76022
 Swedish district heating reactor SECURE, design features (German) 2-80164
diversity reception
 see also fading
 14/11 GHz rain attenuation characteristics on the Earth-space paths (Japanese) 2-68435
 fading of meter waves in tropospheric propagation beyond the horizon (Polish) 2-100415
divertors
 see also surge protection
 EBT reactor, design considerations for nonmagnetic divertor 2-74905
 INTOR divertor collector plate, materials selection 2-74903
dividers, voltage see voltage dividers
dividing circuits
 digital divider system with successive approx. type ADC for position detecting system 2-90383
DLTS see deep level transient spectroscopy
DNA
 actinomycin-DNA, vibr. struct., Raman obs. 2-57781
 adrimycin-DNA, absorpt., fluoresc. and Raman obs. 2-57780
 B form structure, refinement on X-ray and energy criteria basis 2-105646
 B-DNA, interaction with Na⁺ and H₂O structural determ. 2-114141

DNA continued

- backbone motions, spin-lattice relax., NOE, chemical shift, ^{31}P and ^{13}C NMR 2-83543
 binding proteins, homology rel. to conserved super-secondary struct. 2-99887
 binding sequence d(GpC) and actinomycin, struct. of pseudo intercalated complex 2-73191
 C-DNA, molecular electrostatic pot. and steric accessibility 2-90648
 cells, mammalian, DNA repair deficient, MWPC identification, digital autoradiography 2-100187
 CHO cells, effect of hyperthermia on repair of radiation-induced DNA strand breaks 2-94111
 CHO DNA polymerases α and β , effect of hyperthermia 2-88521
 chromatin degradation in irradi. rat thymocytes, mechanism (*Russian*) 2-116988
 chromatin DNA, replicating, ^{137}Cs γ -ray induced thymine base damage 2-105801
 circular dichroism spectrum, similarity of old rat tissues DNA to γ -irrad. DNA 2-105785
 complex with Ag^+ ions, thermodynamic characts. 2-99873
 conformation, dynamics, and interactions in soln. 2-99889
 cross-linking with chromosomal proteins induced by X-rays, thermal enhancement 2-88621
 diploid fibroblasts, synchronous human, X-ray inhibition of DNA synthesis during S phase 2-88633
 double strand breaks in Ehrlich ascites tumour cells, centrifugation obs. 2-117153
 double strand breaks in Ehrlich ascites tumour cells, rel. to cell death 2-117006
 double-strand breaks generated by X-ray damage in Chinese hamster cells 2-94114
 double-strand molecule, direct imaging 2-73194
 drug-DNA interactions rel. to intercalation 2-116861
 E. Coli, UV-induced mutation hotspots rel. to DNA damage hotspots 2-94117
 E. coli K12 AB2480 DNA, broad spectrum near UV damage 2-78397
 EM, contrast variation method, discrimination of protein and nucleic acids 2-94262
 gamma irradiation, nature and repair of potentially lethal damages (*Russian*) 2-57854
 gamma-irradiated, radiolytic pathways: influence of chem. and conformational factors 2-88624
 gamma-irradiation damage repair in rat cerebellar neurons and 9L brain tumour cells 2-105794
 haemopoietic system, rabbit, changes in DNA pyrimidine clusters immediately after γ -irrad. (*Russian*) 2-105767
 hapatocytes, rat, repair of X-irrad.-induced DNA damage (*Russian*) 2-88593
 HeLa cell culture nucleic acids, low-intensity visible Cu laser radiation effects 2-100061
 helicity in complexes with RecA protein 2-105648
 inactivation of biologically active DNA by hydrates electrons 2-105789
 left-handed DNA induced by supercoiling 2-116875
 light-induced diffusion, theory and automated expt. (*Russian*) 2-88587
 liver DNA bases, injured, slow elimination in α -irrad. old mice 2-78387
 lymphocytes of rat and human peripheral blood, nuclear DNA supercoiled struct. changes after γ -irrad. 2-83610
 lymphoma cells, mouse, DNA repair and replication, γ -irrad. expts. 2-88611
 mammalian chromatin DNA, radioimmune assay of induction and removal of UV lesions 2-88630
 mammalian spermatogenesis, use of whole testis prep. as biological dosimeter 2-83603
 molecular dynamics investig. by dielec. relax. meas. 2-88497
 molecular modification, fast heavy ion induced desorpt. mass spectrometry 2-100170
 molecular motion, meas. by triplet anisotropy decay 2-93984
 NMR revelations of new struct. and dynamic aspects 2-116871
 operator DNA, wrapping in N-terminal arms of λ repressor 2-99885
 phase T2 DNA solns., hydrodynamic props., investigation using a rot. viscometer 2-67929
 photodynamic action, damage and repair (*Japanese*) 2-62684
 protein-DNA complexes in Ehrlich ascites carcinoma cells, radiation-induced dissociation 2-105788
 protein-DNA recognition, mol. basis inferred from cro repressor struct. 2-105641
 radiation damages in wheat seedlings, hybridisation method study (*Russian*) 2-57852
 radiobiology conference, Amsterdam, Netherlands (Feb. 1982) 2-101118
 radiosensitivity of mice rel. to intestinal death and DNA repair in intestinal epithelium cells, (*Russian*) 2-116991
 recognition, rel. to λ repressor operator-binding domain 2-99886
 rodlike segments, theory for intrinsic curvature in toroidal structs. 2-116870
 single-strand breaks formed by ps laser UV irrad. 2-116986
 single-strand-breaks in mice lymphocytes, repair γ -and UV-irrad. (*Russian*) 2-57860
 strand breakage, ionising radiation induced, sensitivity of active and inactive chromatin 2-68060
 strand breaks rejoining after γ -irrad., in cultured fish cells 2-68062
 supercoiled PM2, conformational changes studied using ^{111}In -histone as label for perturbed γ -ang. correl. technique 2-78287
 synthesis, semiconservative, in ICR frog cells exposed to monochromatic UV and photoreactivating light 2-105797
 synthetic, in water, relax. rates of imino H^+ , time-shared Redfield 214 pulse method 2-57940
 T7 bacteriophage, struct. study by small-angle neutron scatt. 2-105650
 thymocytes, mouse, damage and repair of superhelical DNA after γ -irrad. (*Russian*) 2-88595
 thymocytes, mouse, supercoiled DNA repair after ^{60}Co γ -irrad. in fractions differing in radiosensitivity 2-105790
 topological aspects and biophysical appl., theory, review 2-96785
 torsional rigidity from supercoiling data 2-99874
 tryptophan-DNA complex, effect of UV and γ -radiation (*Russian*) 2-57862
 tumour cells, HeLa, nucleic acid rate of synthesis, ultrashort UV laser pulse action 2-100064
 UV mutagenesis, specificity in lac promotor of M13lac hybrid phage DNA 2-88615
 UV spectroscopy of DNA, far- and vacuum-, prospects and difficulties 2-94259

DNA continued

- V-79 cells with normal and BrdUrd-substituted DNA, UV-induced sister chromatid exchanges 2-105799
 viral DNAs, evolutionary selection for perfect hairpin structs. 2-99888
 yeast cells, evidence for DNA double-strand breaks as critical lesions on ionising particle irradiation 2-68072
 H bond lifetime, nonradiative transition prob. study (*Russian*) 2-62552
document retrieval *see information retrieval*
documentation *see information science*
documentation, program and system *see program and system documentation*
Doherty amplifiers *see power amplifiers*
domain boundaries
 for boundaries between magnetic domains and electric domains *see magnetic domain walls and electric domain walls respectively*
 see also antiphase boundaries
 commensurate adsorb surface phases, domain walls and melting 2-110148
 commensurate-incommensurate transition, dislocations in domain wall struct., two-dimens. model 2-92153
 Ising triangular lattice, modulated struct., domain boundaries, free energy 2-98831
 layer superstructure, domain-boundary hardening theory (*Russian*) 2-93529
 three-dimensional uniaxial cpds., domain wall dynamics near commensurate-incommensurate transition 2-76636
 two-dimensional nonequilibrium structures, melting 2-115392
 CdS, luminescence study of cooperative defect behaviour (*Russian*) 2-87853
 $\text{KH}_2(\text{SeO}_4)_2$, ferroelastic, internal friction and shear modulus 2-103899
 Mg_2SiO_4 , forsterite, defect struct., graphical representation 2-81780
 Ni-Mo alloy, disordering process investig., domain dissolution (*Russian*) 2-67327
 $\text{Pb}_3(\text{PO}_4)_2$, ferroelastic domain wall interactions, structural transition 2-86681
 $\text{Pb}_3(\text{PO}_4)_2$, ferroelastic phase transition, domain walls (*French*) 2-86866
 YFeO_3 , NMR imaging in domain walls, spin-echo method, low temp. anomalies 2-87626
domains
 see also antiphase domains; crystal microstructure; domain boundaries; electric domains; magnetic domains
 amorphous structure, geometrical nature and elementary excitations, theory 2-115139
 binary mixtures, solid and fluid, periodic spinoidal decomp. 2-61149
 Dirichlet, in symmorphic cubic space groups (*German*) 2-60909
 graphite intercalated with alkali metals, discommensuration struct. of mass density waves, thermodynamic theory 2-98017
 graphite-SbCl₃ intercalation cpd., stage-2, commensurate-to-glass phase transition, electron microscopy study 2-110004
 incommensurate-commensurate transition, domain walls and fluctuations, in two and three dimensions 2-66164
 particle size and strain determ. from Fourier X-ray line shape anal. of single reflection 2-97846
 rare earth sesquioxides, monoclinic hexagonal cooperative transform., enumeration and rel. position of equiv. domains (*French*) 2-76654
 BiVO_4 , ferroelastic phase transition, Brillouin scatt. study 2-116200
 CdS crystals, effect of using variable rise-time optical pulses on acoustic domains, freq. spectra 2-82823
 CdS crystals, optical transmission modulation mechanisms caused by acoustic domains 2-82824
 CuAu, ordered alloy, mechanical props. meas. (*Russian*) 2-88091
 Ga₂Se₃, ordered and disordered phases, struct., electron diff. and microscopy obs. 2-60957
 n-InSb, acoustoelectric stationary domains, elec. field distrib., meas. and second mode model 2-77127
 $\text{K}_2\text{H}(\text{SeO}_4)_2$, ferroelastic transition and twin structs., X-ray and optical study 2-68854
 Mn-Ni alloy, FCC packing of transformed and untransformed material domains, martensitic transform. 2-105144
 Pd-Si interfaces, X-ray study of domain struct. and stress in Pd/Si films 2-115614
 TaSe₂ (2H), microstruct. in incommensurate and commensurate CDW states, electron microscopy obs. 2-104009
 TaSe₂(2H), incommensurate CDW phases 2-103722
 α -U, superconducting transition temp., martensitic transformations, domain form. 2-98791
 $\text{ZrO}_2\text{-Gd}_2\text{O}_3(\text{Eu}_2\text{O}_3)$ single crystals of tetragonal struct., Raman scatt., domain struct. existence 2-93191
domestic appliances
 see also refrigerators
 solar water heaters, test results 2-78186
doping, semiconductors *see semiconductor doping*
doping profiles
 CVD homepitaxial layer doping, book contrib. 2-72632
 edge-defined film-fed growth, heat transfer effect on interface shape and solute segregation 2-97955
 GaAs:Cr wafers, EPR charact., etch-pit-density and X-ray double diffraction meas. (*Japanese*) 2-66907
 glass, doped polarisable ion diffusion behaviour during ion-exchange process 2-76738
 gradient optical fibres, optimum doping profile exponents, dispersion calc. (*German*) 2-97207
 measurement using external photoeffect during Bragg diffraction for semiconductor crystals with a thin disruptive layer 2-105051
 metals and oxides, ionic implantation for SIMS quantification, corrosion study 2-99744
 microanalysis using charged particle accelerators, conf., Namur, Belgium (Sept. 1981) 2-94883
 MOS ion-implanted structs., dopant density from maximum-minimum capacitance ratio 2-77195
 MOS structure with buried layers, props. from nonequib. C-V meas. 2-87396
 polyacetylene:I₂, conducting polymer, doping mech. 2-66028
 polyacetylene, Br doped, XPS and elec. cond. study 2-93368
 polyacetylene films, doping inhomogeneity, Casteing microprobe anal. 2-81810
 semi-infinite media, radiation damage from identical particle scatt. 2-103810
 semiconductor, solid electrochemical cell used as doping source 2-115261

doping profiles continued

- semiconductor crystal growth, doping profiles homogeneity, crystal chem. anal. 2-55872
- semiconductors, implanted, laser annealing, review 2-115282
- semiconductors, thin layers on conducting boundary, spreading resistance profiles 2-86703
- Ag-Si layer struct., B implantation depth profiles 2-103804
- Al:D, defect trapping of implanted D 2-92020
- Al_{0.48}In_{0.52}As, MBE grown, Si doping and elec. props. meas. 2-92005
- As₂S₃/Ag system, photodoping mechanisms, ESCA studies 2-115147
- As₂Se₃/Ag, diffusion and photodoping, optical edge tracing study 2-71722
- Ba(Nb,Ti_{0.84}Sn_{0.16})₂O₃, semicond. ceramics, space-charge-limited currents and dopant cond. influence, firing procedure effect (*Russian*) 2-56607
- CdS:In(Sb) film, vacuum evaporated, elec. and optical props. 2-61631
- CdSe:Cr thin film transistor, SIMS depth profiling, high spatial resolution 2-104207
- Fe:F, concentration depth profiling using nuclear reson. reactions 2-98139
- Fe₂O₃ semiconductor electrodes with deep impurity level (*Japanese*) 2-115690
- GaAs, ion implanted, laser annealed, defect anal. 2-66053
- GaAs, deep impurity profile, persistent photocurrent meas. technique 2-115267
- GaAs, donor defect, H passivation 2-87173
- GaAs, ion implanted, pulsed ruby laser annealing, SIMS and elec. obs. 2-56023
- GaAs, ion implanted, pulsed laser annealing, dopant profile redistrib. and surface melting duration 2-56024
- GaAs, ion implanted, range statistical parameter calcs. (*Chinese*) 2-109818
- GaAs, ion implanted, Zn diffusion profiles meas. 2-92285
- GaAs, ion implanted and annealed, defect conc. distrib. study 2-71923
- GaAs, proton irradiated, profiles interpretation obtained by C(V) technique 2-98663
- GaAs VPE, transition region width between active and buffer layers (*Chinese*) 2-67222
- GaAs:B(Se), depth profiling using spectroscopic ellipsometry 2-79647
- GaAs:Be(Mg)(Zn)(Cd), ion channelling, electronic stopping power, SIMS study 2-103867
- GaAs:Cr, O, ion implanted, Cr redistribution and Cr-defect-O interactions, SIMS and TEM study 2-98149
- GaAs:Cr, Se, hot implanted, effects of damage-impurity interaction on elec. props. 2-71990
- GaAs:Cr, Si, ion implanted, Hall effect, depth profiles (*Slovak*) 2-98669
- GaAs:Fe, Cr, LEC grown, impurity densities and Fe(Cr) redistrib. 2-98146
- GaAs:Ge crystal, doping profiles, atomic absorpt. spectra meas. 2-109823
- GaAs:S, ion implanted, elec. carrier and atomic profiles correlation 2-72000
- GaAs:S, ion implanted, elec. props. and impurity distrib. 2-98141
- GaAs:Si, ion implantation, elec. props., for dual gate MESFET (*Chinese*) 2-109817
- GaAs:Te, implanted, laser annealed, metastable Te donor conc., expt. study 2-56025
- GaAs:Zn, ion implanted, depth distrib., annealing, SIMS and Rutherford backscattering obs. 2-56000
- Ga_{0.47}In_{0.53}As, MBE grown, Si doping and elec. props. meas. 2-92005
- Ga_{1-x}In_xAs:Ge LPE layers, doping profiles, atomic absorpt. spectra meas. 2-109823
- p-GaP-Au, ion beam contacting by Be implantation 2-115889
- Gd₂Ga₂O₇:Nd crystals grown by Czochralski method, Nd effective distrib. coeff. 2-76481
- H, three-dimensional conc. profiles in solids, quantitative meas. 2-115266
- Hg_{1-x}Cd_xTe:B, ion implantation, elec. cond., annealing effects, SIMS study 2-66026
- In_{0.53}Ga_{0.47}As:Be, Si, ion implanted, n⁺ layers, sheet resist., electron mobility and conc. 2-66022
- In_{0.49}Ga_{0.51}As, concentrated, laser recrystn., solute redistribution, AES study 2-56014
- In_{0.49}Ga_{0.51}P LPE layer, N conc. and In content, correlation 2-71819
- InP, impact ionization coeffs. for electrons and holes, photomultiplication meas. 2-61472
- InP, ion implantation profiles, theoretical and empirical distrib. 2-81811
- InP:Be, ion implanted, migration during annealing, SIMS study 2-98143
- InP:Be, Zn, Cr, Se, doping profiles, SIMS anal. 2-103806
- InP:Cd, diffusion profiles, p-n homojunction form. 2-110038
- InP:Cd, VPE growth and photolum. characterisation 2-88002
- InP:Mg VPE layers, implanted and unimplanted, near-edge emission 2-57157
- InP:Mg(Si), implanted, impurity redistrib. during annealing, SIMS study 2-98144
- Li₃N:D, H, Czochralski growth and doping method 2-111061
- Mo, detraping of implanted He and N 2-81808
- Ni:He, ion implanted, damage profiles, swelling due to Ni ion irradi. 2-103805
- Pb(Zr,Ti)O₃, impurity doping effects 2-86689
- predeposition process and profile simulation Si:B 2-98136
- Si beveled substrate, relationship between carrier distrib. and dopant atomic distrib. 2-66034
- Si, diffused dopant conc. profiles, book contrib. 2-71492
- n-Si, diffusion profile of As(Sb), sheet conductance and tracer studies 2-71730
- Si, epitaxial layer, gas phase autodoping profile 2-115268
- Si, heavily implantation with BF₃⁺ (BCl₂⁺) and carrier density meas. 2-81803
- Si, implanted ion impurity profile, book contrib. 2-71493
- Si, impurity doping processes, book 2-68985
- Si, ion implanted, arc annealing, regrowth and impurity diffusion calc. 2-55992
- Si, ion implanted wafers, high dose rate, laser annealing effects, TEM, backscatt. and channelling obs. 2-56019
- Si, melting and laser annealing using pulsed lasers 2-66052
- Si p-n junction, ion implanted, CW laser annealed, elec. and struct. props. 2-115872
- Si p-n junction devices, impurity distrib. profiles of diffused layers determ. 2-115272
- Si, thermal oxidation, enhanced dopant diffusion and defect form. 2-66296
- Si thin films, D passivation of grain boundary dangling bonds 2-76478

doping profiles continued

- Si:As, doping during Pd₂Si form. at low temp. 2-86698
- Si:As, ion implantation profiles, 10 keV to 2.56 MeV, Rutherford backscatt. study 2-115269
- Si:As, ion implanted, laser annealing mechanism 2-61023
- Si:As, ion implanted, pulsed X-ray annealing 2-115286
- Si:As, range distrib. and thermal annealing props. of low-energy implants 2-115258
- Si:As, thin layers on conducting boundary, spreading resistance profiles 2-86703
- Si:As(W), ion implanted, defect features 2-103796
- Si:B, B deposition from BBF₃ source, expt. and computer simulation 2-103794
- Si:B, diffusion doped, CW CO₂ laser irradi., sheet resistance depend. on power density and scanning vel. (*Chinese*) 2-109827
- Si:B, measurement of sheet resistivity of shallow diffused layers for profiling by four-point probe technique 2-98650
- Si:B, SIMS depth profiling, physico-chemical state 2-99286
- Si:BF₃⁺ single cryst., pulsed laser irradiated, ion implanted, F conc. profile 2-115263
- Si:B(P) quantitative impurity anal. by photolum. technique 2-57180
- Si:Be, atom and carrier depth distrib. 2-92018
- Si:Cu(Ag)(Au), gettering by Al at low temp., Rutherford backscatt. study 2-115264
- Si:Ga (In)(Sb), ion implanted, dopant redistrib. after flash lamp annealing, He⁺ backscatt. study 2-86936
- Si:Ge, atomic mixing effects on high fluence 40 keV Ge⁺ implantation 2-76466
- Si:Ge, Ne ion beam induced atomic distrib. of implanted range profiles 2-56002
- Si:H, three-dimensional H conc. profiles 2-115266
- Si:In, range distrib. and thermal annealing props. of low-energy implants 2-115258
- Si:In amorphous layers, thermal redistrib. of In 2-56003
- Si:In(Sb), laser annealed, all formation and interfacial instability, expt. study and perturbation theory 2-56012
- Si:N, ion implanted, oxidation inhibition 2-115271
- Si:N, low energy N implantation, room temp. formation of Si-nitride films 2-86693
- Si:P, As, Sb, ion implanted, multiphase electron beam annealed, impurity profiles 2-103803
- Si:P, CVD epitaxial growth, P doping process obs. 2-93439
- Si:P, ion implanted, depth profiles, channelling and nuclear resonance studies 2-98142
- Si:P, ion implanted, distrib. profiles, elec. props. 2-103797
- Si:P, measurement of sheet resistivity of shallow diffused layers for profiling by four-point probe technique 2-98650
- Si:Zn layers, ion implantation, damage annealing 2-103798
- SiO₂, fused, implanted D/H ions trapping and release 2-76467
- SiO₂:As, ion implantation profiles, 10 keV to 2.56 MeV, Rutherford backscatt. study 2-115269
- SiO₂/Si thermal, F ion implantation and distrib. (*Chinese*) 2-109821
- p-WSe₂ film, polycryst. semiconductor electrode, photoelectrochem. 2-72987
- WSi₂:B,P,As, dopant diffusion 2-92280

Doppler broadening see Doppler effect

Doppler effect

- see also atomic spectra; red shift; spectral line breadth
- aortic regurgitation, assessment by pulsed Doppler US 2-68091
- arterial stenosis, on-line classification of severity by Doppler US signals anal. 2-117022
- atomic relativistic beams kinematics 2-70447
- automated laser Doppler anemometer, aerodynamic expts. (*Russian*) 2-114937
- biomedical Doppler demodulator, freq. shift max. freq. follower, amplitude correction 2-68081
- biomedical US Doppler devices, evaluation using a moving string test target 2-88636
- biomedical US Doppler gain calibration, proposed standard target 2-100073
- blood flow velocity quantitative meas., double beam Doppler US method 2-100078
- carotid arterial disease, computerised pattern recognition using pulsed Doppler US 2-94138
- cerebrovascular assessment using a Doppler carotid scanner and real-time freq. anal. 2-62704
- de Broglie relationship, derivation from Doppler effect 2-53467
- directional US Doppler system (*Chinese*) 2-97327
- Doppler anemometry, influence of axial modes of CW lasers (*German*) 2-71052
- electron impact dissoci., atomic radiation, simulation of Doppler profiles, mag. sublevels population effect 2-108726
- excited particles, velocity distrib. meas. using Doppler broadening of spectral lines 2-107312
- Fermi surface, anisotropic Doppler shifted cyclotron reson. 2-87132
- fibre optic laser Doppler meter, optically opaque fluid meas. (*Russian*) 2-114351
- fluid flow measurement, laser Doppler velocimetry, review 2-91566
- foetus, human, Doppler US meas. of blood flow 2-83612
- high-speed flow process investig. using laser Doppler and stroboscopic anemometers (*Russian*) 2-114934
- hypersonic aerodynamic tube, laser Doppler vel. meas. beam shifts due to turbulence (*Russian*) 2-114840
- impact testing of polymers based on velocity and acceleration meas. 2-105427
- intense neutral beams, optical diagnostics, Doppler-shift emission tomography 2-65759
- ionospheric effects on the SARSAT system 2-94550
- ionospheric waveguide channel, RF signals Doppler freq. shift 2-89070
- laser anemometer appl. to hydrodynamics investig. in chromatographic columns (*Russian*) 2-114941
- laser Doppler anemometer, computer-controlled real-time meas. of intracellular protoplasm flow (*Russian*) 2-117140
- laser Doppler anemometer, flow investig. in vortex chamber (*Russian*) 2-114938
- laser Doppler anemometer, for plasma stream diagnostics in industrial MHD systems (*Russian*) 2-115040
- laser Doppler anemometer, investig. of flow vel. distrib. in packed beds. (*Russian*) 2-114940

Doppler effect continued

- laser Doppler anemometer, passive impurity transport velocity meas. (*Russian*) 2-114945
- laser Doppler anemometer, two-colour, for nozzle flow meas. 2-65673
- laser Doppler anemometer, velocity pulsations correlation function determ. (*Russian*) 2-114947
- laser Doppler anemometer investig. of laminar boundary layer stability (*Russian*) 2-114943
- laser Doppler anemometer signals, digital processing accounting for non-uniform discretisation (*Russian*) 2-114936
- laser Doppler anemometer with Gaussian beams optical system metrological characts. (*Russian*) 2-114932
- laser Doppler anemometry, influence of CW-lasers axial modes (*German*) 2-65671
- laser Doppler anemometry, simultaneous meas. of particle velocity, size and concentration (*German*) 2-64211
- laser Doppler anemometry, systematic error elimination (*Russian*) 2-114930
- laser Doppler anemometry, two-phase flow, meas. appl. (*German*) 2-65675
- laser Doppler anemometry system, two-phase flow meas. 2-65674
- laser Doppler anemometry with selection of optical signal coherent component (*Russian*) 2-114931
- laser Doppler meter, investig. of transition to turbulence in hydrodynamic flows (*Russian*) 2-114929
- laser Doppler meter using scanning optical frequency discriminator (*Russian*) 2-114946
- laser Doppler system with transient recorder for study of particles in flowing fluid 2-74582
- laser Doppler vel. meter with low freq. modulation, meas. in photon counting regime 2-64005
- laser Doppler velocimeters performance and appl. 2-81408
- laser radiation, Doppler method of meas. time coherence 2-86030
- laser-Doppler anemometry, real-time velocity measurement (*German*) 2-97680
- mass energy, Einstein's derivation using photons and Doppler shift 2-84425
- medical US, Doppler techniques, review of current status, book contrib. 2-111761
- multichannel laser anemometer investig. of laminar-turbulent flow transition (*Russian*) 2-114939
- optical phase conjugation by Doppler dynamic holograms, theory 2-85922
- radar, quantification of random body movements 2-117048
- radio Doppler shifts caused by moving ionosphere (*Chinese*) 2-106389
- radio signals transmitted between orbiting satellites, Doppler shift 2-89061
- relativistic acoustic Doppler effect 2-107063
- relativistic charged channelled particles, spontaneous and stimulated γ radiation 2-72521
- relativistic gas, line absorpt. profile, Doppler broadening 2-75218
- short radiowaves scattering on artificial magnetically oriented inhomogeneities excited in ionosphere 2-94558
- sound frequency spectrum of the Doppler effect 2-75742
- turbulence, US measurement by pulsed Doppler method employing freq. tracking, arterial disease appl. 2-100079
- two-channel optical Doppler anemometer turbulent flow spatial correl. meas. (*Russian*) 2-114944
- two-component laser Doppler anemometer system using acousto-optical splitters (*Russian*) 2-114935
- two-level system in gases, Doppler-recoil shift corrections 2-70196
- ultrasonic imaging system using Doppler-modulated wave fronts 2-109142
- US, principal component factor anal. in carotid artery disease detect. 2-68086
- US arterial signals, appl. of CCD transversal filters for real-time spectral anal. 2-68093
- US blood vel. signals in normal subjects, comparison of methods of recording and anal. 2-117035
- US blood vel. waveform, estimation method 2-117036
- US Doppler studies of the breast 2-94135
- US flow velocimeter, differential type using correl. method (*Japanese*) 2-114954
- US human foetal heart rate records, improvement by signal correl. 2-68087
- US in medicine and biology, conf., Brighton, England (Jul. 82) 2-101123
- US pulsed Doppler blood flow meas., accuracy calcs. 2-111758
- US waveforms, online identification and quantification 2-68085
- velocimetry, sediment erosion meas. appl. 2-68539
- Al, thermal quenching, positron annihilation study 2-104994
- Al-Mn (1.5×10^{-2} at.%), thermal quenching, positron annihilation study 2-104994
- Al-Zn (49 at.%), positron lifetime and γ -line Doppler broadening studies 2-87896
- H, atomic beam, Doppler shifted emission spectra, appl. to plasma diagnostics 2-80520
- H neutral beam, high power, characterisation by Doppler spectroscopy 2-74573
- H, photodissociation of HI, Lyman- α line by fluoresc. Doppler obs. 2-54800
- H-Ar⁺ plasma, H broadened Lyman- β line, radiation motion effects 2-70188
- HCN, dipole moment and excited vibr. state, sub-Doppler IR mol. beam spectroscopy 2-75256
- HF, dipole moment and excited vibr. state, sub-Doppler IR mol. beam spectroscopy 2-75256
- NH₃, adiabatic rapid passage within Doppler-broadened line, level lifetime meas., Stark effect 2-70311
- Na, Doppler-shift laser spectroscopy, fluoresc. spectra interpretation 2-96502
- ²³Ne two photon absorpt., Doppler broadening by light shifts, compensation 2-85607
- ¹⁶O, first excited level lifetime from Doppler-broadened lineshape anal. 2-54311
- ¹⁰⁵Pt, force const. and Debye temp. in Mossbauer studies, temp. depend. calc. 2-66955
- SF₆, Doppler limited spectrum and anal. of $2\nu_1 + \nu_3$ band, rot. consts. 2-85631
- ²⁸Si, level lifetime meas. and neutron to proton transition amplitudes ratio 2-79980
- U, positron annihilation photons Doppler broadening 2-67141

Doppler effect continued

- ²³⁸U resonances, Doppler chem. binding effect rel. to activation rate 2-107963
- ¹⁰²W, force const. and Debye temp. in Mossbauer studies, temp. depend. calc. 2-66955
- Xe II, Stark widths and broadening of homologous rare-gas ions 2-70181
- Doppler shift** *see* **Doppler effect**
- dopplerons**
- Fermi surface, anisotropic Doppler shifted cyclotron reson. 2-87132
- metals, electron mirror reflection coeff., determ. impedance (*Russian*) 2-72587
- W, electron mirror reflection coeff., determ. impedance (*Russian*) 2-72587
- dosimeters**
- see also dosimetry; thermoluminescent dosimeters*
- A150 plastic-equivalent gas, appl. to ionisation chambers for ⁶⁰Co γ -rays and 14.8 MeV neutrons 2-83657
- collimation conditions effect obs., ⁶⁰Co gamma radiation detection using ionisation chamber 2-59560
- computerised radiation dosimeter development 2-70005
- CR-39 plastic, neutron dosimetry based on chem. etching 2-70012
- CR-39 polymer track detector for Rem-equivalent personnel neutron dosimeters 2-70009
- Diamantor transmission ionisation chamber, evaluation for exposure-area product indication in radiological exam. 2-83660
- DRG3-01 servo, certification for X-ray pulse studies 2-59567
- dye film dosimeter use for dose distrib. mapping in intense γ -ray fields of irradi. medical products 2-117091
- electrets, X- and γ -dose meas. appl. 2-75055
- etch plastics for personnel neutron dosimetry, monoenergetic neutron response 2-59549
- exposure dose rate meters, metrological characts. checking, using Si-Li detectors 2-85404
- FBX dosimetric system, modified, tissue-equivalent, characts. 2-78451
- film dosimeter, personal, improved version 2-75065
- film dosimeter reader, semiautomatic 2-59554
- fission foils and oxide discs, thin metal encapsulation by resist. welding 2-108139
- Fricke dosimeter, appl. to high dose rates meas. 2-90315
- gel-type agar colour dosimeter (*Japanese*) 2-102274
- magnetic field dosimeter with data acquisition capabilities 2-53798
- mammalian spermatogenesis, use of whole testis prep. as biological dosimeter 2-83603
- medical dosimeter calibration in absorbed dose units using thermoluminescent dosimeters (*Russian*) 2-62769
- neutron dosimeter using an organic solid state track detector 2-59551
- neutron source for dosimeters testing and calibration, NBS/NRC development 2-70025
- personnel albedo neutron dosimeter using track etch detectors, design and performance 2-70015
- personnel criticality dosimeter calibration 2-70101
- phosphate glass dosimeter reader, computerised, for estimating dose, radiation quality and direction of radiation 2-59547
- pocket neutron REM meter 2-64692
- solar, miniature personal, accumulated radiation meas. in UV or other region 2-62775
- solar cell dosimeters (*Chinese*) 2-59608
- tissue equivalent ionisation chamber for fast neutrons, cavity size rel. to sensitivity 2-100128
- track etch detector device for low-level environmental Rn dosimetry 2-62536
- universal equidosimeter based on a tissue-equivalent proportional counter 2-59561
- volumetric organ dosimeters fabrication, moulding technique 2-73367
- CaS:Eu,Sm, phosphor, luminesc., nanosecond IR laser stimulation, dosimeter appl. 2-57140
- Mn-activation detector calibration for intense pulsed energetic neutron sources 2-102355
- ²³⁹Np dosimeter worn on the body, neutron response 2-64688
- Rn gas passive dosimeters using electrochemically etched tracks in CR-39 2-67918
- Rn personal dosimeter using mica track microfilters 2-64830
- SrS:Eu,Sm, phosphor, luminesc., nanosecond IR laser stimulation, dosimeter appl. 2-57140
- T 2-113757
- dosimetry**
- see also dosimeters; radiation detection and measurement; radiation monitoring*
- absolute radio-frequency measurements of the exposure dose rate of pulses of photon radiation 2-113759
- absorbed radiation dose due to synchrotron radiation in PETRA storage ring 2-113751
- accuracy of dosimeter assessments by approved laboratories 2-54667
- ACDOS2: A code for neutron-induced activities and dose rates 2-85120
- agricultural products, radionuclides dose, transfer factors review 2-88667
- airborne effluents, collective doses 2-78456
- ALARA exposures, dose calibrator activity evaluations 2-62774
- albumin microspheres, radioisotope labelled, dose absorpt. in organism and certain organs (*Russian*) 2-62766
- applied thermoluminescence dosimetry, ISPR lectures, book 2-53406
- atomic bomb survivors dosimetry, conf., Minneapolis, USA (May 81) 2-63740
- auricular keloid irradiation dosimetry 2-105841
- beta dosimetry intercomparison programme, conf., Grenoble, France (Oct. 1980) 2-89458
- beta-ray backscatter and transmission factors meas. using TLDs 2-64686
- bone models for use in radiotherapy dosimetry 2-68148
- Burlin's general cavity theory for photons, proposed modification 2-80351
- calibration of dosimeters and doserate meters, radiation sources standards 2-59550
- cardiac pacemaker, ²³⁸Pu fueled nuclear battery, exposure rates from leakage radiation (*Japanese*) 2-68168
- cavity theory for electrons, expt. exam. 2-59563
- cell survival-dose curves, statistical anal. and extrapolation number modification factor (*Russian*) 2-105769
- cellophane film, blue, γ -radiation response under controlled humidity conditions 2-78450
- cellulose nitrate track detectors, neutron dose distrib. meas. in water filled phantom 2-70014

dosimetry continued

charged particle tracks in matter, dosimetric quantities 2-59659
 chromosome aberration analysis in radiological protection dosimetry 2-62772
 chromosome dosimetry, proliferation of irradiated and unirradiated human lymphocytes, culture media effects 2-62690
 clinical pion beam, range modulation technique 2-100111
 computerised tomography, dose descriptor, equiv. rectangular width 2-68166
 computers in radiation therapy, conf., Kawasaki and Tokyo, Japan (Sept. 1980) 2-100123
 conference, Paris, France (Oct. 80) 2-79280
 conference on fractionation and dose-time relations in radiobiology and radiotherapy, Leiden, Netherlands (Oct. 81) 2-63737
 conference on radiation protection quantities for external exposure, Braunschweig, Germany (Oct. 1980) 2-89449
 conference on radiation research, Salt Lake City, USA (Apr. 82) 2-112652
 containment vessels, neutron spectra meas., at power stations 2-108150
 conversion factors for determ. of dose equiv. quantities from absorbed dose in air for photons 2-73362
 CR-39 carbonate plastic track detector for neutron and α -particle dosimetry 2-64696
 CR-39 plastics, neutron dosimetry studies 2-70011
 CR-39 polycarbonate foils for biological systems dosimetry appl. 2-59562
 CR-39 polymer detectors for reactor and dosimetry appl., neutron response characats. 2-70095
 CR-39 solid state track recorders for fast neutron dosimetry 2-96383
 CR-39 with ^6LiF radiation, personnel neutron dosimetry study 2-70013
 criticality accidents, use of compiled spectra for neutron dose determ. 2-62771
 depth doses in a slab phantom for low energy monoenergetic photons 2-73363
 diagnostic radiology patients, doses received, effect of patient size 2-73366
 dye film dosimeter inserted in solid, depth-dose distrib., electron behaviour influence 2-113752
 echography, static and real time, US exposure 2-100130
 effective dose equivalents, comparison for 3 major internal dose compilations, radioisotope inhalation and ingestion 2-62770
 electron beam applicator for intraoperative therapy, dosimetric props. 2-68164
 electron beam scattering, calc. method in treatment planning 2-68159
 electron dosimetry with general cavities, theoretical anal. 2-70000
 electron linear accelerator, energy spectrum of inhibitory radiation (*Russian*) 2-88649
 electron-beam treatment planning, the problem of obliquely incident beams 2-68165
 EM dosimetry in a sitting rhesus model at 225 MHz, thermal meas. 2-111798
 Enewetak Atoll, β - and γ -comparative dose estimates in nuclear weapons testing 2-73365
 environmental γ -ray doses in Sicily, TLD obs. 2-111800
 environmental contamination with radionuclides: levels and population exposures in the UK in 1980 2-78262
 environmental gamma ray dose monitoring using TLDs (*Czech*) 2-62538
 eye, laser radiation permissible exposure normalisation 2-83661
 FBS dosimetric system, modified, tissue-equivalent, characts. 2-78451
 fission track dating, current status and problems 2-73719
 fluoroscopy, dose received by staff due to scatt. radiation 2-68147
 fusion material irradiation facilities, neutron source characterisation 2-85228
 gamma dose rates to body organs from immersion in a semi-infinite radioactive cloud 2-94207
 glass radiophotoluminescence dosimeter, absorbed dose comparison calc. by EGS code and kerma 2-96318
 graphite calorimeter as ^{60}Co γ -radiation absorbed dose standard 2-70006
 grid elimination during intensified fluoroscopy and photofluoro spot imaging 2-105830
 gustatory tissue response during photon and neutron radiotherapy, quantitative dose-response relationships 2-117014
 hemibody and total body irradiators, fixed, single source: review of dosimetry 2-83655
 human exposure to EM fields, standards (*Japanese*) 2-116987
 IAEA in Vienna, dosimetry programme 2-73360
 IBR-30 reactor, neutron beam spectrum and radiation dose, meas. means 2-54673
 ICRP dose limitation system rel. to internal emitters 2-68155
 ICRP Task Group Lung Model for radioisotope pollution dosimetry, modifications rel. to age-dependence 2-117088
 inhomogeneity corrections, reconsideration of the power-law (Batho) eqn. 2-94209
 interactions from several agents, dose-effect relationships and isoeffect curves 2-117015
 internal dosimetry, conf., Lake Tahoe, USA (March 1981) 2-63735
 ionising radiation, metrological assurance, standards and instrumentation (*Rumanian*) 2-75133
 Japanese bomb dosimetry, review 2-78447
 kerma factors for neutrons of 14 MeV to 60 MeV in elemental H, C, N and O 2-73364
 linear accelerator photon beam, 15 MV, contamination by electrons and scattered photons 2-105829
 liquid effluents, collective dose commitment to UK population 2-105839
 lung, basal cell dose distrib. from inhaled natural radioisotopes and lung cancer risk 2-111799
 lung dose commitments from radioisotope inhalation, age effects 2-62776
 LWR pressure vessels, neutron fluence determ., data reduction and anal. 2-69794
 lymphocytes, human, microdosimetry of α -particle irradiation 2-88612
 lymphoscintigraphy using $^{99\text{m}}\text{TcSb}_2\text{S}_3$ colloid 2-117092
 Magnox fuel, irradiated, radiation exposure of the public from normal transport 2-105838
 mammals, ionising radiation chronic exposure: equivalent doses, dose rates and exposure times (*Russian*) 2-105780
 mammary radiography in Finland, equipment quality control: dose and image quality 2-83631
 mammographic recording materials, X-ray sensitometry (*German*) 2-68120
 mammography, somatic radiation risks of various techniques, permissible doses (*German*) 2-78420

dosimetry continued

mammography, X-ray generator performance and unnecessary dose 2-105828
 mammography using film-foil combinations, absorbed dose study (*German*) 2-68138
 mantle field treatment of lymphomas with ^{60}Co 4- and 10-MV photon beams, neck dose meas. 2-105840
 mantle fields, dose distrib. meas. 2-78453
 mantle-field radiotherapy of malignant lymphoma, choice of beam energy 2-62760
 material equivalence calc. method, rel. to photoelec. interactions 2-102356
 mean stochastic dose, rel. to risks from diagnostic radiology and nuclear medicine 2-88666
 medical products, irradiation, dose distrib. mapping in intense γ -ray fields using dye film dosimetry 2-117091
 microdosimetric characteristics of monoenergetic neutron sources (*Russian*) 2-105835
 microdosimetric parameters for photons rel. to depth in water using wall-less and walled counters 2-68167
 microdosimetry, role in radiobiology, review 2-105802
 monotone dose-response probabilities after long-term toxicant exposure, anal. method 2-68057
 neutron, In foil activation method, Cd correction factors, in H_2O and D_2O 2-69996
 neutron, using $^{93}\text{Nb}^{\text{m}}$, internal conversion ratios and probabilities of 30.75 keV transition 2-95972
 neutron and gamma-ray doses at Hiroshima and Nagasaki 2-100127
 neutron beam dosimetry using ionisation chambers (*Czech*) 2-59559
 neutron beam shaping, use of nonhydrogenous wedges 2-68160
 neutron capture therapy, ^{10}B dosage in cell nucleus, analytical calc. 2-105803
 neutron cross-section and kerma values for C, N, O, Mg, Al, P, S, Ar and Ca, 20 to 50 MeV 2-96008
 neutron dose depth distrib. and depth dose equivalent 2-108138
 neutron dosimetry, in Browns Ferry 3, in- and ex-vessel meas. 2-108097
 neutron dosimetry and radiation protection, conf., Neuherberg, Germany (June 1981) 2-53421
 neutron dosimetry with spherical ionisation chambers, basic physical data 2-96321
 neutron dosimetry with spherical ionisation chambers, dose conversion factors theory 2-90314
 neutron dosimetry with spherical ionisation chambers, tissue-equiv. chamber calcs. 2-117094
 Neutron fluence to dose conversion factors for the Health Physics Research Reactor 2-59553
 neutron flux density meas. and REM counter calibration for the FMRB 24.5 keV filtered beam 2-113841
 neutron irradiation, cancer risk at reduced irradiation levels 2-94102
 neutron irradiation, d+T, energy spectrum and absorbed dose in water 2-94211
 neutron personnel dosimeter and remmeter testing and calibration, analytical expressions 2-108160
 neutron radiation absorbed energy meas., maximum error evaluation 2-59657
 neutron therapy beam, effect of missing backscatt. on dose distrib. 2-94210
 neutron TLD-albedo ratio, Health Phys. Research Reactor obs. 2-113756
 neutrons, biological and microdosimetric intercomparison of 14 MeV d-T neutrons and 6 MeV cyclotron neutrons 2-111724
 nuclear emulsion activation and fast neutron dosimetry 2-70010
 nuclear power field, interaction between basic science and engineering 2-70007
 nuclear track detectors appl. in biology and medicine 2-68217
 organ dose estimation in rats exposed to X-rays, TLD implantation method 2-73368
 organ dose from inhaled radionuclides taking lull period into account 2-68150
 organ doses due to external γ -irrad. arising from a finite plume in the atm. 2-68153
 organic scintillator neutron spectrometer suitable for in-phantom studies, dosimetry appl. 2-68228
 paediatric radiography (*German*) 2-78455
 pelvic irradiation, accuracy of delivered dose 2-68156
 personnel internal doses assessment, some practical problems 2-62773
 phantom, elliptical, irradiated, with reactor neutrons, spectrum and dose distrib. (*Hungarian*) 2-111801
 phantom material for radiotherapy X-ray and γ -ray beam calibrations 2-83658
 photon beams, equiv. circles, squares and rectangles 2-68163
 photon dosimetry and radiation protection, SI units 2-85402
 photon dosimetry with general cavities, theoretical anal. 2-70000
 photon-fluence scaling theorem for Compton-scatt. radiation 2-68158
 physicochemical model of active radiation dose of different radiation types 2-113761
 pion-induced β -activity in extended foils, 2D meas., cancer treatment dosimetry appl. 2-73369
 pions', energy deposition spectra calc. from pion nucleus interaction data 2-116984
 plesiotherapy applicators, curved, using ^{222}Rn , discrepancies in depth doses 2-111796
 POKER-CAMP, program for calc. of detector responses and phantom organ doses in γ -fields 2-59670
 polymer solid state nuclear track detectors in neutron dosimetry 2-59548
 polystyrene phantom, penetration of backscatt. electrons for energies between 1 and 25 MeV 2-73370
 postirradiation cell recovery models and effective dose diminution principle (*Russian*) 2-105775
 preirradiation for patient dose reduction in diagnostic radiology 2-100126
 proton beam dose field optimisation for cervical cancer (*Russian*) 2-62736
 pulsed X-rays dosimetry with ionisation chambers 2-96314
 quartz glass, absorption characteristics for γ -ray dosimetry 2-96322
 radiation effects, small populations at risk and the linear hypothesis 2-94110
 radiation protection, conf., Vancouver, BC, Canada (May 1982) 2-112659
 radiography, dose reduction limits 2-73371
 radiography, soft tissue masses within adipose tissue, optimal photon energies rel. to absorbed dose for visualisation 2-94175
 radioisotope production reactions, dose rates calc. 2-75059

dosimetry continued

- radioisotope transport in the human intestine, math. model, dosimetric considerations (*Russian*) 2-88490
 radionuclide studies, radiation dose to patient, review 2-94213
 radiopharmaceuticals, estimation of age-dependent internal dose 2-83659
 radiophotoluminescent glasses, use in dosimetry of ^{252}Cf neutrons and γ -rays (*Russian*) 2-88668
 radiotherapy, Batho's correction factor combined with scatter summation 2-83656
 radiotherapy, computerised review system for cooperative group research 2-68161
 radiotherapy, inhibitory and electron beams for Hodgkin's disease and oral cavity tumours (*Russian*) 2-62768
 radiotherapy, nasopharynx carcinoma, max. likelihood estimation of dose-response parameters for therapeutic operating charact. anal. 2-117058
 radiotherapy planning, computerised tomography scanner 2-68130
 radiotherapy planning, limitations of 2D programs 2-94181
 radiotherapy planning, role of CT, computer dose calcs. 2-105836
 rare-earth intensifying screens, significance for dose reduction in X-ray diagnosis 2-78448
 reactor neutron dosimetry, status and problems using radioactivation (*Japanese*) 2-96320
 RIKEN SSC, neutron shielding, dose rate (*Japanese*) 2-64722
 roentgenotomometric results in intracavity irradiation of cervical cancer patients, dose estimation (*Russian*) 2-62737
 rotation therapy, soln. of an integral equation 2-117093
 Scandinavian radiation therapy centres, dosimetric intercomparison 2-111797
 scanned film radiography system with computer assisted exposure 2-111787
 secondary electron current, variance meas., lineal energy determ. 2-90312
 semiautomatic γ -dosimeter standard line (*Bulgarian*) 2-85403
 shallow and deep dose equivalents, conversion factors, US personnel dosimetry performance testing programme 2-73361
 SHEBA, neutron and γ -ray dose meas. 2-96328
 shielding at proton accelerator, absorbed dose meas., comparison with Monte Carlo calc. 2-96317
 solid state nuclear track detector appl. in neutron dosimetry 2-70008
 solid state nuclear track detector for dose meas. 2-59636
 solid-state nuclear track detectors, conf., Bristol, England, Sept. 1981 2-58532
 testis, mouse, radiation dose and biological effects from $\text{Na}_2\text{H}^{32}\text{PO}_4$ 2-73302
 thin-film dosimetry for neutrons and alpha particles 2-64697
 Three Mile Island, environmental radiation doses using TLDs (*Spanish*) 2-70001
 thyroid cancer therapy patients, 2-orthogonal-view method for quantification of rad dose 2-94208
 tissue equivalent spherical counter 2-113844
 tissue-to-air ratios for open-cut U mine employees, simulation using circular plane sources 2-117095
 TLD and its appls. 2-59555
 total dose accumulation in TLDs 2-102357
 traceability for ionising radiation measurements, conf., Gaithersburg, MD, USA (May 1980) 2-84384
 Tradescantia stamen hairs, effects of dose fractionation after high and intermediate doses of X-rays 2-105800
 UKAEA criticality dosimeter, slow neutron sensitivity 2-70021
 US hyperthermia in malignant brain tumours treatment, tissue damage threshold and thermal dosimetry 2-62679
 variable temperature effects on environmental thermoluminescent dosimeters 2-57762
 whole body doses from ionising radiation for occupationally exposed personnel in Switzerland, review 2-68151
 X-ray diagnosis, patient exposure, possibilities of dose reduction, conf., Neuberberg, Germany (Apr. 81) 2-53426
 X-ray mass attenuation coeffs. meas. for mixtures 2-113758
 Ag activation in nucl. emulsion for fast neutron dosimetry 2-113750
 Ag colloids, chem. neutron dosimetry appl. 2-80352
 ^{241}Am -Be(α, n) source, neutron energy spectrum and resulting mean fluence to dose equiv. conversion factors 2-64728
 $\text{CaF}_2:\text{Tm}$, thermoluminesc. response characts. to X- and γ -rays, 2-hit traps 2-67127
 $\text{CaSO}_4:\text{Dy}$, sensitised phosphor, and phosphor embedded teflon TLD discs, response to X- and γ -rays 2-67128
 ^{60}Co irradiation unit, dose distrib., calc. and meas. comparison 2-78449
 5-F-fluorouracil, dosimetry and preliminary human studies 2-78452
 HTO exposure, estimation of effective dose equiv. using T concs. in urine 2-117089
 ^{125}I volume implants, dose table describing peripheral vol. fractions 2-94212
 ^{131}I therapy of thyroid cancer, effective focal doses and radiation loads (*Russian*) 2-62767
 ^{192}Ir , insoluble, committed dose equivs. from accidental inhalation 2-68154
 ^{192}Ir seed implants, effect of geometric errors in reconstruction 2-68126
 $\text{Li}_2\text{B}_4\text{O}_7:\text{Cu}$, thermoluminesc. phosphor, radiation dosimetry characts. expts. 2-113755
 $\text{Li}_2\text{B}_4\text{O}_7:\text{Cu}$ thermoluminescent phosphor, dosimetry characts. 2-59556
 $\text{Li}_2\text{B}_4\text{O}_7:\text{Mn}$, Cu, suitability of different props. for medical dosimetry 2-100129
 LiF, energy absorpt. coeffs. and photon kerma 2-85405
 MgB_2O_7 , thermoluminesc. props., sensitivity and fading characts. 2-61985
 Nb dosimetry, meas. of neutron fluence above 0.1 MeV 2-90313
 RaA atoms, attached and unattached, deposition in human respiratory tract (*Japanese*) 2-68157
 ^{226}Ra injected into mice, method to determ. dose delivered to bone and marrow sites 2-105784
 Rn dosimetry, α -particles in plastic detector, track density distrib. 2-64695
 Rn passive dosimeter using polycarbonate track etch detector 2-67919
 Rn subsurface distrib. meas. with LR-115, CR-39 and thermolum. detectors 2-67913
 ^ARn , A=220, 222, and decay products in German dwellings: activity concs., dose calcs. and risk estimates 2-117097
 ^{222}Rn daughter alpha dose factors, environmental, in 5-lobed human lung 2-94205
 ^{75}Se labelled conjugated bile salt, absorbed dose to man 2-78454

dosimetry continued

- ^{102}Ta , specific γ -ray constant and exposure rate constant 2-68162
 $^{90\text{m}}\text{Tc}$, external radiation exposure of medical personnel 2-105837
 $^{90\text{m}}\text{Tc}$ -MDP dose and distrib. in various bones and tissues 2-94214
 ^{133}Xe radiation exposure dosimetry for workers in nuclear medicine laboratories 2-94206
double heterostructure lasers *see semiconductor junction lasers*
double layers (electric) *see electrochemistry; liquid theory*
double nuclear magnetic resonance
see also ENDOR
 carboxylic acids, ^{17}O NQR using double reson. with coupled multiplets technique 2-56977
 double NQR-NMR spectrometer, program device 2-89765
 double resonance with coupled multiplets 2-56976
 hexamethylenetetramine, 2-freq. NQR-NMR double reson. obs. 2-108593
 paripartite uncoupled exchanging A-B system, lineshape parameters 2-80660
 quinidine cpds. with acids, 2-freq. NQR-NMR double reson. obs. 2-108593
 radicals in solution studied by ENDOR and triple resonance spectroscopy, review 2-116091
 spin systems, nuclear mag. double reson. with double modulated RF field 2-77423
 CO chemisorbed on highly dispersed Pt, double NMR study 2-104747
 H_3BNH_3 , ^{11}B , ^{10}B and ^{14}N nucl. quadrupole double reson. 2-80669
 N-containing compounds, 2-freq. NQR-NMR double reson. obs. 2-108593
double refraction *see birefringence*
double refraction, electric *see electro-optical effects*
double refraction, magnetic *see magneto-optical effects*
double resonance, electron nuclear *see ENDOR*
doublet antennas *see dipole antennas*
DP industry
 voice recognition computer terminal options and trends 2-91165
DPPH, diphenylpicrylhydrazyl *see organic compounds*
drag reduction
 flow model for the effect of a slanted base on drag 2-86311
 fluids, heat transfer and friction, diameter effect prediction 2-109404
 fully developed turbulent pipe flow, drag reduction and random surface renewal 2-86333
 helicoidal laminar flow, drag reducing polymer study 2-60560
 hydraulic drag due to division of a stream of fluid into two parallel channels with an arbitrary ratio of flow rates 2-109411
 idealised ground-vehicle bodies, aerodynamic effects of shape, camber, pitch and ground proximity 2-60571
 incompressible flow over inlets, 2D theory 2-103137
 Newtonian and drag reducing fluids simplified theory of near wall turbulent layer 2-91405
 PAA polymeric additives, effect on viscosity, mol. wt. depend. (*German*) 2-98324
 polymer solution, drag reducing, boundary layer of a body of revolution 2-81365
 polymer solutions, weak, drag of plate in uniform flow 2-109372
 seawater, drag and heat transfer in thermal desalination 2-75958
 Stokes flow drag on flat annular ring 2-91489
 sugar cane, aerodynamics of pneumatic drag, mathematical model for more efficient sorting methods (*Spanish*) 2-55609
 torus, axisymmetric motion at low Reynolds number, drag meas. 2-109334
 turbulent flow, soluble polymer addition method (*German*) 2-70998
 turbulent flow classification scheme 2-103194
 wing-fuselage combination in supersonic gas stream, wave resistance decrease 2-70984
drawability *see ductility*
drawing (mechanical)
 drawn, crystal stability and mech. props., statistical-mech. approach 2-86586
 E-glass fibres, struct. sensitive meas. rel. to prep. conditions 2-93484
 glass fibre reinforced epoxy, E and S type fibres manufactured by drawing in different environments, loss of load transfer, direct comparison 2-88131
 Inconel 600, SCC in NaOH, composition and heat treatment effects 2-77983
 metallic glass, cold drawing and intrinsic ductility 2-111201
 metals, sheet, FCC and BCC, planar anisotropy rel. to texture (*Korean*) 2-116505
 nylon 6 and 6,6, NH_3 plasticisation effect on cryst. state deform., NH_3 absorpt. extent and morphology 2-116506
 nylon 6/inorganic salt fiber, struct. and dynamic mech. behaviour, drawing effect 2-109695
 optical fibres, long high-strength with low loss, modified CVD fabrication 2-91096
 plate, annular, buckling rel. to deep-drawing process 2-91284
 st-PMMA, struct. changes on drawing, absorpt. and desorpt., solvent-induced crystallisation, IR spectra 2-109698
 polyethylene, crosslinked low-density, drawing depend. of mech. and transport props. 2-93549
 polyethylene, highly drawn linear, gauche defects, accordion-type laser Raman scatt. obs. 2-67041
 polyethylene, low-density, drawn, shrinkage and retractive forces during annealing 2-111194
 polyethylene, ultrahigh-modulus, nitric acid etching and gel permeation chromatography, struct. obs. and influences 2-109693
 polyethylene terephthalate, deformation process instabilities in cold drawing 2-67372
 polyethylene terephthalate, semi-cryst., extrusion-drawn, multiple internal refl. IR obs. 2-67042
 polyimide fibre, paramag. centres occurring during thermal extension, influence on thermal stability (*Russian*) 2-77798
 polymer, glassy, craze micromech., entanglement network role 2-111346
 polymers, deformation process instabilities in cold drawing 2-67372
 polymers, microtension test, new scale of specimen 2-78035
 polypropylene, drawn films and extruded rods, photoelastic and elastic consts., Brillouin scatt. study 2-83148
 polystyrene, atactic, multistage ultradrawing by solid-state coextrusion 2-72725
 sheet metal, notched tensile elongation and anisotropic ductility 2-62175
 sheet metal forming, plastic instability 2-105223

drawing (mechanical) continued

- steel, austenitic stainless, strengthening by low temp. deform. 2-105182
 steel, cold formability (*French*) 2-67383
 steel cold-drawn boron treated, rapid heat treatment effect on microstruct. and tensile props. 2-116466
 steel wire rod, unalloyed, 0.8% C, behaviour in cold drawing (*German*) 2-72717
 texture development at low-strain and significance 2-67380
 wire drawing, plastic flow and stress/strain distrib., calc., computer program 2-99480
 Al, pure, wire drawing 2-67364
 Al rod fibre texture changes during drawing of initial {112}{111} and Goss orientations 2-57369
 Al-alloy wire drawing, optimal die angle calc. 2-62185
 Fe-Cu wire reinforced Cu-Fe alloy, age hardening (*German*) 2-111192
 Fe-Mn-Al-C, nonequilibrium ordered austenite wire fabrication by in-rotating-water spinning method, mech. props. 2-93532
 Fe-P-C amorphous wires, prod. by in-rotating-water spinning, mech. props. 2-57317
 Fe-Si-B amorphous wires, produced by in-rotating-water spinning method, mech. props. 2-111233
 Li₂O-P₂O₅ glass fibres, mech. props. and struct. aspects rel. to drawing process 2-93608
 UO₂, Al clad fuel cores, compacted and extruded, failure mechanisms 2-85164

drop model (nuclear) see nuclear liquid drop model**droplets** see drops**drops**

- air-water two phase flow, surface effect on droplet deposition 2-55647
 air/water turbulent mist flow, droplet deposition on flat plate 2-97514
 backscattering, Mie and model predictions, refr. index conditions, glory rays 2-75525
 butane droplet, evaporative instability at the superheat limit 2-56167
 close interaction between drops, calc. taking into account internal circulation and the slip effect 2-114857
 cloud particles shapes and dimensions determ. method 2-100589
 clouds, liquid water evaporation rel. to cloud-top entrainment instability observed during AMTEX 2-100475
 clouds, rain water effect on thermodynamic eqn. for deep convection 2-100422
 coherent anti-Stokes Raman scatt. from Mie size range droplets 2-75629
 coupled capillary-plasma wave excitation at liquid metal surface in plasma (*Russian*) 2-86435
 deformation and breakup of slender drop in extensional flow, inertial effects 2-55619
 density profile and surface tension 2-115494
 deposition from turbulent stream 2-114858
 dilute liquid-droplet dispersions, droplet breakup in turbulent shear flow 2-114886
 drag force on a drop in a viscous non-homogeneous non-stationary flow (*Russian*) 2-103203
 droplet formation, light-induced, in capillary films of solns. 2-115503
 emulsions, conc. fine disperse, coalescence during turbulent stirring 2-60626
 ethanol-H₂O liq. droplets interaction 2-81384
 evaporating cloud drop, scavenging, effect of thermophoresis, diffusio-phoresis and Brownian diffusion 2-106246
 evaporating cloud drops and particle capture 2-106247
 evaporating droplet, vaporization and trajectory characteristic simulation 2-97619
 ferrofluid droplets, in mag. field, deform. study 2-56303
 fluid sphere in non-Newtonian fluids, surfactant effect on terminal vel. and mass transfer 2-103190
 fog droplet distribution functions for lidar 2-73610
 fog drops, effect of aerosol on concentration and size distrib. 2-117391
 Freon 113, flow boiling system, dryout heat flux and entrained drop size 2-91512
 heat rejection in space using liquid drop radiators 2-86204
 immiscible liquid systems, small amplitude drop oscillations 2-55620
 impulsive collapse, spectral study 2-76004
 internal flow fields of drop-shape oscils. 2-114824
 large droplets, light scatt. device for sizing and velocimetry using ring-shaped laser beam 2-95316
 liquid droplet growth rate on flat surface in dropwise condensation of vap. from vap. gas mix. 2-91517
 liquid drops, creeping motion through a circular tube 2-55650
 magnetic liquids, drops, oscils., mag. field effects 2-103181
 neutron detection by superheated drop nucleation 2-54726
 oil droplet, coal partic. motion, eqns. of motion 2-112848
 outer heterogeneous flow of gas containing droplets or particles plast blunt objects 2-65638
 particle motion in a droplet, eqns. of motion 2-112848
 particle movement in a vertically oscillating liquid 2-114872
 profiles, power series solns. 2-97640
 rain, coalescence efficiencies and fragment size distrib. in breakup 2-112042
 rain, fragment size distrib. parameterization 2-112043
 raindrop spectra variations from stratiform clouds (*French*) 2-100487
 spherical, evaporation at arbitrary Knudsen numbers 2-56169
 spheroidal droplets, Ledenfrost temp. and time for vaporisation calc. 2-75834
 spreading by capillary action 2-109409
 surface tension, statistical mech. theory 2-56304
 thermocapillary and buoyant flow in space laboratory 2-76779
 thin film flow in gas jet, droplet detachment 2-60566
 translating drop in elec. field, heat and mass transfer 2-91428
 turbulent pipe flow, dispersion of released H₂O droplets, mass transfer 2-65650
 two-phase flow, droplet size distrib. determ. method 2-71011
 vapour generating tubes, heat transfer under transcritical conditions 2-91418
 vapour-liquid flow, heated, droplet spectrum and entrainment 2-76016
 viscoelastic liq. threads, surface tension driven jet breakup, stability anal. 2-97599
 water, partial-wave resonances for electric light scattering 2-75528
 water drop, internal optical field induced by laser action at 0.69 μ m, vapour bubble growth 2-97046
 water droplet drag in accel. and decel. flow 2-65666
 water droplets, light scatt. device for sizing and velocimetry using ring-shaped laser beam 2-95316

drops continued

- water droplets with insoluble absorbing cores, IR absorpt., heat prod. 2-112128
 water drops containing salt in high pressure steam environment 2-65472
 water-droplet aerosol, illumination by laser probe, refractive props. of transparent region 2-55074
 wet steam condensation on horizontal tube with additional droplet deposition 2-97363
 Cs droplets removed from Ar-Cs flowing mixt. in a closed-loop MHD generator 2-91518
 H₂O supercooled droplets, reorientation during freezing on ice substrates 2-92162
 HPO₃, hydrated microdrop, normal-super liq. transform., SEM study 2-98258
drying
 acoustic drying, drying factors and appls. of macrosionics range 2-91185
 binary gas mixture, combined diffusion and forced flow through porous medium, evaporation, drying 2-114874
 combination solar unit for drying fruit and grapes 2-116785
 greenhouse/dryer, double-block, for year-round operation 2-116784
 laser optical components, ultrasonic cleaning and solvent drying 2-75730
 radioactive waste, drying by microwave heating, feasibility study 2-85157
 sample dryer for thermal ionization mass spectrometer, TTL, programmable 2-95520
 viruses, enveloped, freeze fracture, freeze etching, critical point drying, review 2-57942
 CdCl₂.2.5H₂O, purification, by distillation and sublimation in vacuum 2-77720
 CeO₂ gels for protective coatings, TEM exam. technique 2-105400
 CrCl₃, purification, by distillation and sublimation in vacuum 2-77720
 Pb-acid battery electrodes, dry-charged, positive, influence of drying on thermo-passivation and its causes 2-105377
 SiO₂ monolithic dried gels 2-76310

dual resonance model see duality and dual models**duality (mathematics)**

- Baxter-Wu model, random, duality relations and replica method 2-61728
 Baxter-Wu model, Z(N) generalisation 2-104563
 Heisenberg ferromagnet, O(4) symmetric two-dimens., anal. using rot. invariant auxiliary variables 2-104564
 magnetostatics, complementary and dual energy finite element principles 2-55006
 QED, three-dimensional lattice, string tension, upper and lower bounds calc. 2-101629

duality and dual models

see also Veneziano model

- Abelian lattice models, duality transforms., algebraic formulation 2-107484
 antisymmetric tensor gauge field representation 2-84802
 baryon propagator, multicolour QCD, mesonic amplitudes 2-113230
 BRS identities and renormalisation 2-84782
 chiral field theory duality, Abelian and non-Abelian gauge potentials 2-113172
 discrete Gaussian chain with 1/r² interactions 2-112831
 dyon spin and statistics, use of Dirac string roots. 2-84879
 gauge field equations, non-self-dual solutions, linearisation 2-113134
 gauge field theory solutions, self-dual monopoles 2-107514
 gauge theories, self-duality, resulting hidden charges 2-74612
 gauge theory, spontaneously broken, duality transform. 2-69349
 hadron-hadron interactions, charge distrib. in parton model 2-101679
 hadron-nucleus interactions, space-time description based on DTU-parton model 2-95784
 hadronic mass-relations from topological expansion and string model 2-54126
 heavy quark systems, leptonic widths, duality and gluonic radiative corrections 2-95818
 inclusive resonance spectra, constituent quark distributions and dual topological pomeron 2-54119
 light cone gauge supersymmetrical string theory 2-59058
 Liouville field theory, conformally invariant quantisation 2-69334
 local QCD sum rules and quarkonia 2-69422
 Migdal recursion formula, potential-moving derivation, differential renormalisation, duality 2-79749
 modified lattice gauge theory, order parameters 2-95626
 multiparticle prod. in dual fragmentation models 2-107637
 N=4 Yang-Mills and N=8 supergravity as limits of string theories 2-89953
 n-point Green's function for closed string 2-84878
 Nambu-Goto string model, nonlocal conservation laws, conserved currents 2-113258
 non-Abelian fields, charges and strings 2-107529
 non-Abelian gauge field to string transformation 2-54066
 order disorder variables, complete integrability, 1/N implications 2-54120
 perturbative QCD coupling, large N behaviour 2-113218
 pion EM form factor using extended VDM 2-95838
 Polyakov's bosonic string theory, regular classical solutions 2-101692
 Polyakov's quantised string theory, bosonic boundary terms 2-101693
 Polyakov's quantized string with boundary terms 2-79853
 Polyakov quantisation, dual string spectrum 2-89948
 Polyakov quantised string, saddle point approx., dual models 2-59121
 Polyakov string theory, pomeron singularities, saddle point anal. 2-101694
 QCD, dual string field theory (*Russian*) 2-54078
 QCD and dual topological unitarisation, gluons in hadronic S-matrix 2-101666
 quark-colour switching, smooth topological representation 2-79830
 real self-dual Yang-Mills theory, infinite parameter symmetry group 2-95615
 relativistic string model, exotic mesons and glueballs 2-54109
 relativistic strings path integral 2-84877
 rotation on Dirac wave equation 2-113112
 self-dual gauge fields, Atiyah-Drinfeld-Hitchin-Manin construction 2-113096
 self-dual magnetic monopoles 2-69437
 self-dual SU(2) Yang-Mills system, t' Hooft's ansatz, local conservation laws 2-113109
 SO(10) grand unified theory, string appearance on spontaneous symmetry breaking 2-84822
 SO(1,1)×SO(2) gauge model, exactly solvable sector, classical relativistic string descript. 2-113135

duality and dual models continued

- soft parton model, high density events, dual fragmentation extension, multiple Pomeron exchange, 2-84868
- spin-1 particles, vector field, duality invariant theory 2-113145
- static axially symmetric self-dual gauge field eqns., soln. generation techniques 2-84795
- static axially symmetric self-dual gauge fields, algebraic construction 2-84796
- static Euclidean anti-self-dual SU(2) Yang-Mills eqns. perturbation 2-79772
- string, relativistic, quantisation methods 2-95803
- string mechanics based on 2-forms 2-53513
- string theory, relationship with gauge-invariant QCD 2-107614
- strings, effective Hamiltonian, spatial symm. 2-64295
- supersymmetric dual string theory, loops and renormalisation 2-89952
- supersymmetric dual string theory, vertices and trees 2-84876
- SVZ duality in two-dimensional QCD, charmonium and bottomium predictions 2-113214
- two-body inelastic scatt., cross-section, dual statistical bootstrap model 2-74669
- unified gauge theory, walls bounded by strings 2-95722
- e⁺e⁻ annihilation, duality and energy averaging in pot. models 2-69478
- e⁺e⁻ annihilation, testing QCD with momentum sum rules 2-69421
- e⁺e⁻ → hadrons, qq bound states, relativistic duality, relativistic and EM corrections 2-74698
- H meson and deviations from ideal mixing 2-95805
- ν N → X, charmed baryon weakly inelastic prod., dual model (Russian) 2-95816
- pp, forward-backward correl. in dual model 2-113297
- pp, pp, multiplicity distrib. up to $\sqrt{s}=540$ GeV, dual parton model 2-101780
- pp(pp), hadronic toponium prod. 2-79921
- pp(pp), up to 540 GeV, rapidity spectra in dual parton model 2-107643

ductile-brittle transition

- see also embrittlement*
- continuous damage theory, statistical aspects 2-81288
- fusion reactor materials, pot. for using rapid solidification for improved irradi. performance 2-108107
- grain boundary embrittlement, decohesion theory 2-98194
- ice, columnar-grained, compressive strength, const. strain- and stress-rate 2-66106
- kinetic criterion, rel. to fracture kinetics (Russian) 2-76575
- metals, brittleness transition temperature determination in impact strength testing, deform. criterion 2-116632
- nitrile rubber/phenolic filled polymeric system, Charpy impact testing, ductile-brittle transition temp. meas. 2-83326
- polycarbonate, ductile-brittle transition model 2-57452
- polymer, ductile-brittle transition model 2-57452
- steel, alloy, ageing effects 2-67405
- steel, alloy, fracture toughness and fatigue crack growth rate 2-105308
- steel, alloy, high strength, crack arrest toughness 2-77931
- steel, alloy, HY80 and HY130, fracture toughness transition temp., effect of loading rate 2-62227
- steel, alloy, types HY-130, HY-80 and A517-F, fracture toughness data, correlation of standard and precracked Charpy specimens 2-77925
- steel, alloy Charpy-V type specimens, fracture appearance, effect of notch root radius and austenitising temp. 2-99534
- steel, C, spheroidised, tensile fracture, 710-735°C (Japanese) 2-72812
- steel, constructional, cold brittleness eval. using fracture mech. criteria 2-99555
- steel, constructional, thermal embrittlement and fracture features, P influence 2-105323
- steel, critical brittleness temperatures, methods for determ. 2-105403
- steel, low alloy, grain boundary segregation and embrittling effect of P 2-62187
- steel, low C, brittleness transition temps. from different methods, comparison 2-116526
- steel, low C, ductile to brittle transition temp., microstruct. and US attenuation 2-88167
- steel, low C, impact strength anisotropy, specimen width and notch tip radii influence 2-93592
- steel, low-alloy, brittleness transition temps. from different methods, comparison 2-116526
- steel, low-alloy, low-pearlite, V addition effect on struct., phase comp., and mech. props. 2-72818
- steel, low-alloy, quenched and tempered, transcryst. cleavage microcracks initiation and propag. 2-111320
- steel, low-alloy, with different Ti concs., phase comp., microstruct., and mech. props. 2-72827
- steel, low-C, contact with liq. metal medium, deform. rate influence on ductility, adsorption induced embrittlement 2-99550
- steel, Mn-Mo-Nb, pipeline, yielding behaviour 2-105256
- steel, structural, crack resist., 77-293K 2-111316
- steel, structural, ductile-brittle transition temp. determ. 2-116631
- steel, structural, durability eval. taking account of defects 2-111431
- steel, structural ductility diagrams plotting 2-93710
- steel, type SA-516-70, ductile-brittle transition curve determ. by Charpy impact testing 2-67492
- steels, C, pressure vessel, ASTM A533-B, microhardness, temp. depend. 2-80121
- steels, with different Cu contents, ductile-to-brittle transition temp. depend. on radiation temp. (German) 2-67505
- Al-Ti (0.26 wt.%) alloy, dil., cold rolled, brittle-ductile transition after liq. Ga embrittlement, temp. and strain rate effect 2-88189
- Cd,Hg_{1-x}Te, brittle to plastic transition, microhardness and optical transmission meas. 2-86783
- CdTe, brittle to plastic transition, microhardness and optical transmission meas. 2-86783
- Cr-MgO, sintered, struct. and mech. props. 2-67544
- Cu₃Sb, recrystn. and brittleness threshold temp. 2-99546
- Cu₃Si and Cu₂Si, recrystn. and brittleness threshold temp. 2-99546
- Fe alloys, grain boundary segregation and embrittling effect of P 2-62187
- Fe-P alloys, fracture mode and toughness, C effects 2-57484
- HgTe, brittle to plastic transition, microhardness and optical transmission meas. 2-86783
- Mo alloys, mechanical properties and nature of fracture, in ductile-brittle transition temp. range 2-72820
- Mo and alloy TZM, ductile-brittle transition, low cycle fatigue effects 2-72807

ductile-brittle transition continued

- Mo-Zr, gaseous impurity effects on mech. props., interstitials role 2-57538
 - Nb-Zr, gaseous impurity effects on mech. props., interstitials role 2-57538
 - NiAl, recrystn. and brittleness threshold temp. 2-99546
 - Ta-W (10 wt.%) single crystals, hydrogen embrittlement, 77K-290K temp. range (Japanese) 2-67549
 - Ti-Mo (30 wt.%), fatigue thresholds and ductile brittle transition temp. 2-57442
- ductile fracture**
- see also ductile-brittle transition; notch ductility*
 - alloys, fracture and flow in fusion reactor environment 2-85223
 - brass, 70/30, mechanism of ductile fracture tensile test (Japanese) 2-111282
 - cavity nucleation between larger voids, ductile fracture mechanism 2-115348
 - constitutive relations, three dimens., and ductile fracture, symposium, Dordan, France (June 1980) 2-53427
 - crack energy density concept as fundamental fracture mechanics parameter 2-75899
 - crack-tip fracture stress under general yielding of ligament (Chinese) 2-62189
 - elongation measurement of thin sheets, regression formula (German) 2-95300
 - fracture toughness, estimate from fracture surface geometry (German) 2-77949
 - local criterion of ductile crack growth (Japanese) 2-109897
 - material failure by void coalescence in localised shear bands 2-97439
 - microstructural features, computational models 2-76694
 - polycarbonate, crazing and fracture, SEM obs. 2-116517
 - polymers, in rubberlike state, stress influence on activation energies of relax. processes and rupture (Russian) 2-57401
 - polystyrene, compressive fracture 2-99530
 - polystyrene, craze layer, crack nucleation and propag. 2-67500
 - 2-D quadratic isoparametric element, in plane strain plasticity, reduced integration effect 2-97453
 - reactor fuel behaviour, fracture mech. props. influence 2-85145
 - sheet metal forming, physical behaviour 2-105222
 - steel, austenitic stainless, 316, cold worked, Ti modified, tensile props., irradi. in high flux isotope reactor 2-72764
 - steel, ductile crack initiation and notched bend specimens 2-111314
 - steel, ductile plate, plastic strain conc. at crack, optical meas. 2-105268
 - steel, high strength, notched, criterion for plastic failure 2-62228
 - steel, low alloy, ductile fracture, microfractographic study (Russian) 2-77903
 - steel, low alloy, high strength, fracture, effect of thin film form. 2-67470
 - steel, low-C low-alloy, Si and Ni additions effect on mech. props. 2-105333
 - steel, martensitic stainless HT-9, hydrogen compatibility, effect on fracture and ductility 2-72766
 - steel, Nb-microalloyed, roles of sulphides, oxides and pearlite in ductile fracture 2-67515
 - two-dimensional ductile flow and fracture anal. 2-70865
 - upsetting of circular cylinder, assessment of free surface strains and stresses 2-93733
 - Al alloy, instability and failure of internally pressurized ductile metal cylinders 2-99526
 - Al-Cu-Mg, 2024 alloy, ageing effects and plane strain constraint on ductility 2-67441
 - Al-Zn-Mg-Cu (6.2, 2.5, 1.7 wt.%), fatigue crack growth, micromechanisms 2-105273
 - Au, evaporated film, tensile fracture (Japanese) 2-82182
 - Cr-La-Ta-O-C-N dil. alloy, fracture and plasticity, structural effects (Russian) 2-99481
 - Cu, powder compacted specimens, ductile fracture, influence of porosity 2-77948
 - Cu, pure, instability and failure of internally pressurized ductile metal cylinders 2-99526
 - Cu, spallation by ductile void growth 2-72786
 - Fe-P-C amorphous wires, prod. by in-rotating-water spinning, mech. props. 2-57317
 - Nb-Zr (1 wt.%) alloy, fatigue failure in various struct. states 2-99547
 - Ni alloy, heat-resisting, EP-741P, fracture behaviour investig. by thermal microscopy, P/M alloys 2-67545
 - Ni-Cu, Monel 400, liq. metal and H embrittlement, influence of grain boundary P conc. 2-77930
 - Ti-Al-V-Sn (6.6, 2 wt.%), internal H-induced crack growth effect of stress state 2-99535
 - α - β Ti-Mn alloy, fatigue crack propag., plastic zone sizes and strain partitioning 2-72835
- ductility**
- see also ductile fracture; notch ductility*
 - creep-fatigue, mechanistic approach to creep-dominated failure 2-88183
 - elastic-plastic strain hardening material, ductile tearing instability anal., piecewise power law hardening 2-60468
 - Einvar, Fe-Mn-V-C, dispersion hardened, nonmag., mech. characts. 2-62132
 - failure of ductile materials deformed in torsion 2-56074
 - fusion material, irradi., miniaturised disc bend test development 2-88316
 - fusion material, small scale ductility tests, bulge test applicability 2-88314
 - glass fibre reinforced plastics, interface strength, temp. depepd. (Japanese) 2-57419
 - hot-work tool steels, performance 2-67473
 - lenticular bubble growth, rel. to blistering and flaking 2-74926
 - material failure by void coalescence in localised shear bands 2-97439
 - metal fasteners, ductility monitoring during production 2-62370
 - metallic glass, cold drawing and intrinsic ductility 2-111201
 - metals, ductile, abrasive wear (German) 2-83242
 - metals, ductile, shadow moire contouring of impact craters 2-101384
 - miniature discs, bending, ductility equipment, in fast neutron environment 2-74830
 - Nimonic PE16, solution treated, grain boundary segregation during neutron irradi. 2-109844
 - polypropylene, rolled, mech. props. rel. to struct. 2-67377
 - rings, thin, ductile failure, inertia effects 2-103063
 - sheet metal, notched tensile elongation and anisotropic ductility 2-62175
 - spherically voided material, localisation 2-72799
 - steel, alloy, roll, heat treatment influence on struct. and props. 2-67393

ductility continued

- steel, alloys, fractographic features and fatigue failure mechanism, 20 GL and 20 GFL 2-72825
- steel, anti-tuifride coated, tensile strength and deformability effect of tuifriding time (Japanese) 2-93568
- steel, austenitic ferritic, with low interstitial level, mech. and corrosion props. (Italian) 2-99563
- steel, austenitic stainless, 316, cold worked, Ti modified, tensile props., irradi. in high flux isotope reactor 2-72764
- steel, austenitic stainless, creep-fatigue behaviour, Type 316 2-57440
- steel, austenitic stainless, DIN 1.4970, He embrittlement, high temp. in-beam simulation 2-71519
- steel, austenitic stainless, powder, hot ductility effect of Pb and Bi 2-88129
- steel, austenitic stainless, strengthened by phase strain hardening and ageing 2-72741
- steel, austenitic stainless, weldable, hot ductility characts. and solidification behaviour (Japanese) 2-77815
- steel, austenitic stainless 316, He embrittlement, microstruct. aspects 2-71518
- steel, austenitic stainless 316, rapidly solidified, high Ti stabilised, mech. props. and struct., irradi. effects 2-72765
- steel, boriding, with high-freq. current heating 2-67644
- steel, C, Cd plated, ductility, surface layers H content influence 2-67538
- steel, C-Mn, hot ductility, effect of non-metallic inclusions 2-83196
- steel, cold forgeability, effect of microstruct. 2-99456
- steel, Cr, martensitic-ferritic, struct. and props., sintering technology, influence 2-83193
- steel, Cr-Mn-Si, deform. under high pressure, effect on temper brittleness 2-67391
- steel, Cr-Mo-V, high temp. ductility, compositional effects 2-111238
- steel, Cr-Mo-V type, pearlitic, stresses influence during ageing on loss of strength 2-99549
- steel, Cr-Ni-Mu (1.9, 0.85, 0.76 wt.%) original struct. and heating rate influence on props. after hardening from intercrit. range 2-72736
- steel, dual-phase, deform. characts., effect of martensite vol. fraction 2-67443
- steel, dual-phase, struct.-prop. relationships 2-105253
- steel, heat resistant, die, struct. and mech. props., alloying effect 2-111243
- steel, low alloy ESR, grain boundary sulphide precip. effect on hot ductility 2-67350
- steel, low alloyed powders and compacts, hot ductility, correl. with other props. 2-88148
- steel, low C, cold forming, bendability, tensile props. and particle struct. 2-88128
- steel, low-alloy, mech. props., rare earth elements effect 2-72773
- steel, low-C, contact with liq. metal medium, deform. rate influence on ductility, adsorption induced embrittlement 2-99550
- steel, low-C, plastic deform. features at elevated temps. 2-99503
- steel, low-pearlite, rolling regime influence on strength and toughness props. 2-99545
- steel, martensitic, ferritic, Cr-Mo-V-W, low temp. irradi. with (n, α)He prod., effect on tensile props. 2-71508
- steel, martensitic stainless HT-9, hydrogen compatibility, effect on fracture and ductility 2-72766
- steel, mild, ductile target, oblique impact of hardened steel sphere 2-55472
- steel, Mn-Nb-V, low-pearlite, struct. and mech. props. after controlled rolling 2-73385
- steel, Ni, hot deform., substruct. effect on austenite strength 2-72735
- steel, Ni, Mn and Ni-Mn based, maraging, economically alloyed, heat treatment influence on struct. and props. 2-67394
- steel, Ni-Co-Mo-(W)-Ti, maraging, props. after high-temp. treatment 2-67395
- steel, Ni-Mo, austenitic, strengthened by phase strain hardening and hydroextrusion, mech. props. 2-72715
- steel, Si-P, dual-phase, development of high strength sheets 2-105251
- steel, stainless, austenitic Cr-Ni, combined shock loading and high-speed deform. effects 2-99560
- steel, stainless, creep rupture, correl. with environmentally controlled microstruct. 2-83222
- steel, stainless, maraging, tempering and struct. influence on temp. depend. of mech. props. 2-67396
- steel, stainless, neutron irradi. at 55°C, effect on mech. props. 2-69866
- steel, stainless, Ni-Cr-Mo-Nb-Al, precip.-hardening, struct. and props. after heat treatment 2-72728
- steel, stainless, powder metallurgical, mech. props., sintering environment influence 2-72782
- steel, V, mech. props. rel. to $\gamma \rightarrow \alpha$ transform. kinetics 2-83112
- steel, stainless, dense powder metallurgical, prod. methods and mech. props. 2-99371
- superplastic forming processes, influence of material parameters and microstruct. 2-83184
- threshold stress process effect on ductility 2-88133
- transition metals and alloys, omega phase formation, effect on mech. props. 2-77806
- Zircaloy cladding, ductility loss by inner surface oxidation 2-59461
- Al alloys, dispersion hardened composites, fabrication and wear props. 2-57363
- Al-Al₃Pt₃, unidirectionally solidified eutectic, microstruct. and mech. props. 2-116434
- Al-Cu-Mg, 2024 alloy, ageing effects and plane strain constraint on ductility 2-67441
- Al-Cu-Mg (4.5, 1.5 wt.%), alloy 2124, H embrittlement 2-57468
- Al-Li alloys, cyclic and monotonic ductility, effect of slip distrib. 2-67419
- C fibre reinforced Al-Si, TiC barrier coating effect on reaction between components 2-99373
- Co-Si-B with and without group IV-VIII transition metals, amorphous wire prod. by melt spinning into rotating water, mech. props. 2-105104
- Cr-MgO, sintered, struct. and mech. props. 2-67544
- Cr-MgO-B, struct. and mech. props. 2-72783
- Cu and alloy, low ductility failure and cavitation during grain boundary migration (Japanese) 2-105301
- Cu, strength controlling processes, temp. and strain rate effects 2-77891
- Cu-Al (9.8-11 wt.%), dual-phase, struct.-prop. relationship, individual phases 2-77833
- Cu-Al (9.8-11 wt.%), dual-phase struct.-prop. relationship, alloy behaviour 2-77834

ductility continued

- Cu-Al-Zn, damping capacity, quenching and Zn addition effects 2-116441
- Cu-Ni-Fe, superplasticity and form. of microduplex struct. (Japanese) 2-72769
- Cu-Ni-Sn spinodal alloy, tensile props. improvements by two-phase heat treatment 2-116478
- Cu-Su-Cr, struct. and mech. props., Cr effect 2-111244
- Cu-Ti, strength and ductility, 4 to 70K (Japanese) 2-105234
- (Fe,Ni)₂V long range ordered alloy, resistance to neutron and ion irradi. 2-85217
- (Fe,Ni)₂V, long-range ordered alloys, fusion reactor appl., mech. props. 2-85218
- Fe, fatigue crack growth, mechanism and kinetics 2-88191
- Fe, fracture mode and ductility on testing at cathodic potentials, P and S segregation effects 2-93679
- Fe, intergranular fracture, cathodic pots., effect of S and Sb 2-57469
- Fe-Cr-Al alloy, wrought, prep. and characts. 2-67249
- Fe-Cr-Ni, austenite-ferrite struct., tensile props. and fracture (Japanese) 2-105239
- Fe-Mn-Al-C, nonequilibrium, ordered austenite wire fabrication by in-rotating-water spinning method, mech. props. 2-93532
- Fe-P-C amorphous wires, prod. by in-rotating-water spinning, mech. props. 2-57317
- Fe-P-Ni(Mo), powder premixes, sintered props., effect of Cu 2-88026
- Fe-Si-B amorphous wires, produced by in-rotating-water spinning method, mech. props. 2-111233
- Ir-W-Th, DOP-26, Th-doped, weld metal grain struct. and mech. props. 2-99499
- Mo, strength and ductility in complex stress state, 293-173K 2-111251
- Mo-Ti (0.5 wt.%), struct. changes under action of high temps. and long loads in various media 2-67456
- Mo-Zr, gaseous impurity effects on mech. props., interstitials role 2-57538
- Nb alloys, cast, heat treatment effect on struct. and props. 2-72733
- Nb, mech. props. and struct., influence of long high-temp. holds 2-88114
- Nb-Hf-Ti (10, 1 wt.%), hot isostatically pressed powder compact, creep 2-116504
- Nb-W, mech. props. and struct., influence of long high-temp. holds 2-88114
- Nb-W-Mo-Zr-Re, deform. and fracture, alloying and heat treatment influence 2-111252
- Nb-Zr, gaseous impurity effects on mech. props., interstitials role 2-57538
- Ni, electroless deposits, heat treatment effects on physical props. 2-57384
- Ni, high-temp. ductility, Sb, Sn, As and P addition effect, intergranular embrittlement 2-72839
- Ni-Al-Co(Cr)(Fe)(Mn)(Si) L₁₂ cpds., 'melt quenching', 'improved mech. props. 2-116472
- Ni-Al-Cr (W)(Ti), Ni₃Al based structural alloy, props. 2-72874
- Ni-Cr-Al-Y₂O₃, oxide dispersion and precip. strengthened, creep and rupture 2-111299
- Ni-Cr-Co, Mar M002, superalloy, fracture processes during creep in conventionally cast and directionally solidified material 2-88185
- Ni-Cu, Monel 400, liq. metal and H embrittlement, influence of grain boundary P conc. 2-77930
- Pd and Pd-Ag alloy, preliminary H impregnation influence on mech. props. 2-99554
- Si Czochralski wafers, heat treated, brittle and ductile, fracture and yield stresses meas. 2-92091
- Ta-W (10 wt.%) single crystals, hydrogen embrittlement, 77K-290K temp. range (Japanese) 2-67549
- Ti alloys, tensile props. after neutron irradi. 2-72767
- Ti-Al-Mo and Ti-Al-V-Sn-Zr, static strength, gas absorpt. influence 2-88152
- Ti-Al-V (6.4 wt.%), deform. modes of α -phase as function of O conc. and ageing 2-77889
- Ti-Mo (14-20 wt.%), β phase single crystals, stress-induced products and ductility due to lattice instability 2-105212
- β Ti-Mo-Zr(Al), metastable, deform. and fracture 2-57433
- V-Ti (20 wt.%), He injected and neutron irradi., tensile props. and microstruct. 2-71509

duplicating see reproduction (copying)

dusk see twilight

dust

- see also cosmic dust
- adhesion of dust and powder, book 2-94933
- atmosphere, dry deposition, to lake and ocean surfaces 2-106171
- atmosphere, explosion produced dust clouds effect on IR battlefield remote sensing 2-117445
- atmosphere, road traffic produced particulates in Texas 2-100442
- atmosphere aerosol rel. to wind speed 2-63058
- atmospheric dust conc. in Chandigarh, India 2-93962
- atmospheric dust movement in point-grid corona discharge, laser anemometry study (French) 2-94454
- contamination in air, elimination in film, and TV tape handling rooms 2-89836
- direct-flow analyzer of the disperse composition of dust 2-60679
- duststorm monitoring system combining satellite and surface data 2-63130
- electrostatic dust protection for optical elements in Earth-mounted and satellite orbital systems 2-55289
- explosion temperature meas., IR optical pyrometers design 2-53772
- haze in central United States, effect on solar irradiation 2-89002
- holographic image subtraction of high-vel. dust using a Pockels cell 2-96863
- India, visibility assoc. with Andhi, effect of gravity dust settling 2-112130
- interstellar dust, scattering of UV background from neutrino decays 2-117810
- mesosphere, sunlight extinction and scattering by dust at 60 km 2-112131
- Prairie Provinces, dust levels during severe droughts 2-94423
- Sahara dust transported eastward by wind 2-68408
- storms in Asia and aerosol characts. at Mauna Loa, Hawaii 2-63039
- volcanic ashfall effect on snow melt rate at Mt. Rainier, Washington 2-63006
- windblown dust effect on IR and optical visibility 2-117444

dust storms *see* storms

dwarf stars

- see also white dwarfs*
 accretion onto degenerate dwarf, viscous boundary layer and hard X-rays in dwarf novae 2-79103
 AE Aquarii, red dwarf+white dwarf eclipsing binary, flicker spectrum 2-63526
 OY Carinae, dwarf nova, K-magnitude of secondary star rel. to distance 2-112464
 Case 1, red+white dwarf, period and mass, visible obs. 2-68810
 cataclysmic binary stars, effect of gravit. wave radiation on mass exchange and evolution (*Russian*) 2-106751
 VW Cephei, W Ursae Majoris star, light min. times and light curves from photoelectric obs. 2-63519
 CU Cancri (G9-8), flare star, confirmation by flare activity of photoelectric UBVR photometry 2-73990
 density functions for giant and dwarf stars in Milky Way field HD 95540, results from RGU photometry 2-58328
 dM and dMe stars, chromosphere and coronal heating and UV emission line spectra 2-117666
 RW Doradus, W Ursae Majoris star, spectral type 2-68821
 BY Draconis, flare star, photoelectric obs. (1979 July 11 to 31) 2-106731
 BY Draconis, flare star, photoelectric UVB obs. ion 1980 and (1982) 2-112460
 BY Draconis, slow light variations, obs. 2-58358
 BY Draconis stars, spots effect on radii and luminosity 2-73953
 BY Draconis stars, starspots heat flow in convective zone 2-73954
 BY Draconis stars, X-ray luminosity, age and activity, rot. effects, obs. 2-79148
 dwarf nova outbursts and convective accretion disks 2-117679
 flare stars, book 2-68984
 flare stars, electron-cyclotron masers as source of radio bursts 2-112312
 flare stars, gyro-synchrotron radiation from mildly relativistic, nonthermal and thermal electrons 2-106494
 flare stars, origin of Balmer decrement 2-84247
 flare stars in γ Cygni region, new discoveries from photographic U-band photometry 2-73862
 flare stars in Orion and Pleiades, colour indices, UBVR obs. 2-58357
 flare stars in Orion Nebula, photographic U-band obs. 2-73863
 flare stars in Praesepe region, results of U-band photographic obs. (1972 to 1974) 2-78983
 U Geminorum, dwarf nova, IR light curve anal., system nature, JHK obs. 2-100931
 YY Geminorum, spectroscopic eclipsing binary, H β line var. and active regions sectorial struct. var. 2-94790
 Giese 867B, flare star, photoelectric flare obs. (1981 October 1) 2-79120
 halo dwarf stars, C/Fe and N/Fe abundance ratios 2-112446
 HD 111980 and 149414, halo cool subdwarf binaries, spectroscopic orbits and comp., obs. 2-100922
 HD 115968, spectroscopic binary, radial vel. determ. and spectral type 2-74021
 HD 25329, subdwarf star, thirteen-colour photometry rel. to N abundance and Rayleigh scatt. 2-73975
 HD 27130, eclipsing binary in Hyades, obs. rel. to mass-luminosity relation and cluster distance 2-68811
 HD 44594, solar analogue, energy distrib. 2-79093
 AM Herculis, VRI photometry and circular polarisation during low state, (1982 March 6 to April 19) 2-74025
 EX Hydrae, U Geminorum star, orbit from visible spectra/photometry obs. 2-100932
 EV Lacertae, flare star, photoelectric obs. in 1981 2-84244
 EV Lacertae, flare star, photoelectric obs. in (1976) 2-106735
 EV Lacertae, flare star, superflare occurrence, U-obs. (*Russian*) 2-68793
 EV Lacertae, flare star, UBVR photoelectric obs. in 1981 2-84243
 Lalande 21185, red dwarf star, study of intensive 40-yr Sproul plate series 2-79089
 late type, coronal X-ray emission var. with rot., stellar dynamo interpretation 2-68756
 late type, outer atmospheres nature and spectral features, UV obs. 2-84227
 late type dwarfs, spectral characts. and radial vel., visible obs. 2-58335
 late-type dwarfs and subdwarfs, near UV spectra and line identification 2-58344
 late-type main-sequence stars, rot. vels. rel. to Ca II H and K emission and mag. struct. 2-68764
 MV Lyrae, IUE and optical obs. at intermediate and low states 2-106744
 MV Lyrae, red+white dwarf model, UV spectra anal. 2-94726
 M-type, BV photometry of faint red stars at S Galactic Pole 2-106709
 M-type, photoelectric photometry of faint stars near SGP 2-106710
 M-type dwarf stars, discoveries on southern red-sensitive objective-prism plates 2-100761
 M-type dwarfs, single component homogeneous model chromospheres 2-94713
 BT Moncerotis (Nova 1939), eclipsing nova, mass, radius and luminosity of late-type star 2-68776
 CN Orionis, Z Cam star, light curve anal. 2-106738
 EQ Pegasi, red dwarf binary flare star, detect. of microwave emission from both components 2-68775
 PG 1550+191, AM Herculis star, discovery of M-type dwarf component from spectrophotometry at red wavelengths 2-94755
 Pleiades flare stars, UBVR obs. 2-63544
 RC 0050-2722, very low luminosity dwarf star, optical and near IR spectrophotometry 2-79097
 red dwarf-neutron star binaries as gamma-ray burst sources, rel. to IR scans of source regions 2-68932
 red dwarfs, chromosphere gas dynamics and flare optical continuum 2-58340
 red dwarfs, X-ray emission and heating of quiescent chromosphere 2-68757
 red dwarfs near Sun, (annual proper motion $>0.7''$), photometric parallax and colour luminosity relation 2-63376
 RZ Sagittae, new SU UMa-type dwarf nova, 1981 Oct. supermax. 2-117678
 V471 Tauri, RS CVn-like binary star, photoelectric light and colour vars. 2-84273
 UBVR photometry of late-type stars 2-79090

dwarf stars continued

- Be Ursae Majoris, eclipsing red dwarf and hot subdwarf, model constraints from photometry 2-94791
 AN Ursae Majoris, polar, BV photometry during low state (1982 March 20 and April 20) 2-74025
 variable stars in Pleiades, periods and light curves 2-63448
 TW Virginis, dwarf nova during outburst, winds and mass transfer, UV obs. 2-117674
 Wolf 630, multiple star red dwarf X-ray source, X-ray emission anal. 2-106790
 Li abundance in Galaxy at time of form. from extreme population II dwarfs obs. 2-89382

dye lasers

- acriflavine-urarine-coumarin 1 energy transfer laser operation 2-96945
 air pollutants, simultaneous concentration monitoring using dye laser visible and UV freqs., SO₂, NO, NO₂ 2-62540
 7-amino coumarins, substituted, types C311, C47, C102, C152, C481, spectral and lasing behaviour (*Chinese*) 2-65211
 2-amino-7-nitrofluorene solutions, stimulated emission characts., statistical intermol. process effect 2-60074
 3- amino-N-methylphthalimide solutions, stimulated emission characts., statistical intermol. process effect 2-60074
 anisotropic resonator laser with condensed active medium, absorpt. cell influence in longit. mag. field 2-70588
 automatic tunable organic lasers 2-70557
 bifluorophoric laser dyes, intramol. TT-energy transfer 2-80943
 binary donor-acceptor mixtures, optimum conditions for laser emission 2-102789
 bleachable dye Q switch with improved control 2-81002
 broadband tunable source based on lasing at sum, difference freqs., Nd³⁺:YAG and dye laser mixing 2-75627
 cavity-dumped passive and synchronous hybrid mode locking for IR subpicosecond pulses 2-97020
 cholesteric liquid crystal, dye activated, as tunable laser with DFB 2-114262
 coaxial flashlamp pumped dye lasers using caffeine as a liq. filter 2-96983
 continuous single mode dye laser scanning up to 150 GHz (*French*) 2-55241
 coumarin 152 pumped by the 3547 Å third harmonic of Nd:YAG laser (*Chinese*) 2-97103
 coumarin 153 green dye laser, passively mode-locked, picosecond pulse generation 2-108917
 coumarin 1-acriflavine-urarine energy transfer laser operation 2-96945
 coumarin 6 dye vapour lasing, 527 nm, wide-band optical pumping 2-70560
 coumarin dyes, substituted, laser gain characts. 2-108869
 coumarin laser, SHG in NH₄H₂PO₄ cryst. 2-114372
 coumarin vapour phase dye lasers in visible range 2-75565
 cryptocyanine solutions, photobleaching and short-wavelength lasing 2-90883
 CW dye laser, freq. shift, reson. bleaching 2-75566
 CW dye laser, high power emission near 888 nm 2-75567
 DCM, two-photon absorpt. cross-section meas. at 1.06 μ m 2-54908
 DFB dye lasing in a smectic matrix, excitation conditions 2-114266
 4-dicyanomethylene-2-methyl-6-p-dimethylaminostyryl-4H-pyran laser dye, tunable props. (*Chinese*) 2-65210
 7-diethylamino-4-methyl coumarin dye laser, spectral and gain characts., solvent effects 2-108870
 7-diethylamino-4-methylcoumarin dye laser, N₂ laser pumping, nearly transform-limited pulse generation 2-60113
 distributed feedback, semiclassical theory (*Chinese*) 2-108868
 DODCI, two-photon absorpt. cross-section meas. at 1.06 μ m 2-54908
 evanescent wave-coupled dye laser emission in optical fibres 2-102786
 excimer pumping, low power, high pulse rate 2-85984
 flash lamp pumping performance improvement, for dye laser excitation with intense pulse preionisation (*Chinese*) 2-55176
 flashlamp-pumped dye laser, high-efficiency high-energy 2-102810
 flashlamp-pumped dye laser, narrow linewidth operation 2-108899
 flashlamp-pumped tunable dye laser, 5 J 1.8 μ s pulse 10 pps, for combustion appls. 2-75587
 flashlamp-pumped tunable dye laser radar system, for atmospheric Na layer obs. 2-94511
 Hansch-type, simple linewidth-reducing modification 2-55180
 hexamethine cyanine IR dyes, lifetime, photostability and chem. struct. 2-102884
 high-power pulsed dye lasers, Cassegrain and other beam expander comparison 2-102838
 imitrin vapour phase dye lasers in visible range 2-75565
 imitrine class dye solns. and vapours, laser action in 500 nm band 2-55142
 laser dyes, fluoresc. quantum yield determ. by computer evaluation 2-65048
 liquid crystal dye laser in region of thermodynamic phase transition (*Russian*) 2-80944
 longitudinal pumping for image intensification (*Russian*) 2-85953
 magnetic stirrer for circulation of dye solutions 2-53745
 4-methyl-7-oxy-coumarin, H bonded complexes, luminesc. and laser radiation 2-108871
 mode locked, stability and astigmatic analysis of six-mirror ring cavity 2-60120
 mode locked dye laser dual system, triple synchronisation with picosecond semicond. laser 2-75080
 mode-locked CW, travelling-wave and standing-wave operations comparison 2-114328
 multimode, parasitic selection in intracavity laser detection spectroscopy 2-55217
 multimode generation spectrum, depend. on gain and loss spatial localisation 2-55216
 near IR dyes, lasing props. for N₂ laser pumped tunable dye laser with amplifier 2-85955
 near UV CW coherent generation using SHG and sum freq. mixing, overview 2-60158
 organic dye optical guided wave laser and directional coupling amplifier 2-85997
 organic vapour active media, relax., processes 2-70558
 oscillator, forced, pulsed, tuning (*Chinese*) 2-65271
 oxazine 725, two-photon absorpt. cross-section meas. at 1.06 μ m 2-54908
 oxazine 750 CW dye laser, broadly tunable near IR, using propylene carbonate solv ent 2-55140

dye lasers continued

- oxazine-17, electronic energy transfer from excited rhodamine mol., lasing efficiency 2-114263
 passive cavity for pulsed dye lasers, freq. characts. and linewidth (*Chinese*) 2-60121
 passively mode-locked CW laser, transient absorber gratings for pulse shortening 2-108918
 photon statistics of dye laser 2-85956
 picosecond amplifier chain, expt. and theoretical anal. 2-114312
 picosecond amplifier chain, Nd:YAG pumped, gain saturation 2-55197
 picosecond dye laser amplifier chain, analysis and performance 2-114308
 picosecond lasers and appls., conf., Los Angeles, CA, USA (Jan. 1982) 2-112642
 POPOP vapour laser, ether mixture use for efficiency higher than 22% 2-55141
 POPOP vapour phase dye lasers in visible range 2-75565
 powerful dye laser description (*German*) 2-80986
 PPO-POPOP scintillator multicomponent soln., tuning range enlargement (*Chinese*) 2-54902
 pulsed, intracavity absorpt. and self freq.-locking 2-70559
 pulsed, tuning using compound cavity 2-75601
 rhodamine 110 and disodium fluorescein active dyes, hybridly mode locked laser, tunable subpicosecond pulse generation 2-85954
 rhodamine 560(590, 610, 640), two-photon absorpt. cross-section meas. at $1.06 \mu\text{m}$ 2-54908
 rhodamine 590 dye lasers, Cu laser pumped, prism-expander and grazing-incidence grating cavities 2-102823
 rhodamine 6G, double-mode-locked, highly synchronous mode-locked picosec. pulses 2-75615
 rhodamine 6G, pumped by hypocyrcloidal pinch discharge 2-86005
 rhodamine 6G CW laser, cavity length detuning effects, simultaneous autocorrel. and synchroscan streak camera meas. 2-97045
 rhodamine 6G CW laser design for intracavity spectroscopy 2-114316
 rhodamine 6G CW laser pumped by sinusoidally modulated radiation, pulse operation and appls. 2-96946
 rhodamine 6G high power tunable dual freq. laser system, DIAL appls. 2-102819
 rhodamine 6G infinitesimal thin-film ring laser 2-108913
 rhodamine 6G jet laser pumped by ultrashort pulse trains from continuously pumped Nd³⁺:YAG laser 2-60075
 rhodamine 6G jet laser with pulsed pumping, mode-locked, saturable absorber operating regime 2-96944
 rhodamine 6G jet stream CW laser, operation at 200 W pump power 2-102812
 rhodamine 6G laser, fan-shaped superradiance investigation (*Chinese*) 2-96939
 rhodamine 6G laser, lamp-pumped, using an interf. polarisation filter 2-96943
 rhodamine 6G laser excitation with intense pulse preionisation, flashlamp pumping performance improvement 2-102787
 rhodamine 6G laser spectrum, gain determ. using the interf. struct. 2-114264
 rhodamine 6G picosecond gain spectroscopy during mode-locked laser action 2-89827
 rhodamine 6G pulsed dye laser polarisation 2-97064
 rhodamine 6G pumped frequency-doubled continuously tunable UV laser (*Chinese*) 2-90882
 rhodamine 6G ring laser, powerful single-freq., spanning visible spectrum 2-90916
 rhodamine 6G single-mode grazing-incidence tunable high-efficiency laser 2-96941
 rhodamine 6G soln., laser based on amplification by reflection from inverted medium 2-70562
 rhodamine 6G solution laser for demonstrations 2-94967
 rhodamine 6G subpicosecond double mode-locked widely tunable laser 2-96984
 rhodamine 6G sync-pumped CW laser, subpicosec. pulse generation, stabilisation and amplification 2-96973
 rhodamine 6G tunable dye laser pumped by pulsed Xe ion laser (*Chinese*) 2-90922
 rhodamine 6G-cresyl violet mixed solns., electronic excitation transfer and lasing with spectral broadening 2-70561
 rhodamine 6G-DQOC1 synchronously-pumped CW laser, pulse generation shorter than 70 fs 2-55139
 rhodamine B monomer and dimer, population and rot. kinetics using picosecond transient spectrometry 2-102521
 rhodamine-6G solutions, stimulated emission, light quenching of fluoresc. effect 2-60073
 ring dye laser, frequency-stabilized, design and performance 2-114265
 ring dye laser, synchronously mode-locked travelling-wave, subpicosecond pulse prod. 2-114327
 ring laser, optical bistability effects 2-102826
 single mode, intensity correl. functions 2-102788
 single mode, piezoelectrically tuned, picosecond short-cavity dye laser 2-65243
 single-mode wedge, continuous-scanning system 2-75617
 solid and liquid, linearly and circularly polarised pumping, expt. study (*Russian*) 2-114267
 spectral properties, time behaviour 2-108926
 styryl-11 laser dye, CW operation, 770 to 850 nm 2-96942
 styryl-9 laser dye, CW operation, 780 to 900 nm 2-96942
 sub-pico second dye laser, transparent media characterisation 2-108873
 synchronously mode-locked CW, recent advances and appls. 2-114326
 synchronously mode-locked laser pulses, generation process in linear cavity config. 2-55228
 synchronously pumped mode locked, active mode stabilisation 2-70591
 threshold region, quantum description 2-65212
 total internal reflection theories from amplifying media, possible critical expts. 2-96865
 tunable, N₂ laser pumped, using dielectric multilayer tuning filter 2-60115
 tunable laser, charact. of optically pumped organic cpds. 2-108872
 tunable parametric light source based on four-wave interaction, feasibility 2-65213
 tuning mechanism, simple, accurate, novel geometry 2-114340
 tuning using birefringent filters (*Chinese*) 2-97026
 two-wavelength picosecond laser, time-resolved refl. obs. of semiconductor 2-57119
 ultra-fast discharge fine line flash light sources, for dye lasers pumping 2-86067
 ultrashort cavity laser, optimum operational parameters calc. 2-97002

dye lasers continued

- uranine-coumarin 1-acriflavine energy transfer laser operation 2-96945
 7-diethylamino-3(2'-benzoxazpyl)-coumarin vapour phase dye lasers in visible range 2-75565
 N₂ laser-pumped dye laser system and data analysis techniques for absorbing and non-absorbing excited transients 2-84717
 YAG pumped, tunable, characts. and appls., review 2-96940
- dyeing**
 fabrics, colour characts. rel. to fibre characts., struct. factors and type of dye, spectrophotometric obs. 2-107381
- dynamic nuclear polarisation**
see also CIDNP; Overhauser effect; solid effect
 ammonium acetate, dynamic nuclear polarisation by the cooling of tunnelling methyl groups 2-93064
 bistability and phase transitions of nuclear spin systems 2-104719
 cyclobutadiene, singlet-triplet inversion, dynamic spin polarisation effect 2-108590
 ethylene, singlet-triplet inversion, dynamic spin polarisation effect 2-108590
 fluorene: phenanthrene, guest mol. triplet state interaction, H⁺ spins, dynamic nucl. polarisation study 2-87628
 fluorobenzenes, containing free radicals, NMR relax. 2-54870
 Freon-113-tri-*t*-butyl phenoxy radical system, ¹⁹F DNP investig. 2-108591
 4-methyl-2,6-ditertiarybutylphenol, dynamic nuclear polarisation by the cooling of tunnelling methyl groups 2-93064
 nitroxide spin labels, solvent nuclei polarisation at low mag. fields 2-80692
 nuclear magnetism, order and disorder, book 2-63759
 organic crystals, level anticrossing phenomena in phosphoresc. and optical nuclear polarisation 2-104746
 polyacetylene, Br substituted, synthesis and EPR, dynamic nucl. polarisation and Raman study 2-76474
 polyethylene, cryst. order, ¹³C NMR cross polarisation/magic-angle spinning T₁ obs. 2-116080
 zinc acetate, dynamic nuclear polarisation by the cooling of tunnelling methyl groups 2-93064
 Rb+N₂, quenching, depolarisation, electronic and nuclear spin polarisation 2-90660
- dynamic programming**
 energy, conversion systems, modelling by means of hierarchical decomposition of large dynamic linear programming problems 2-73091
 energy supply system and environmental impact model 2-99852
 fusion devices, sequential control optimisation 2-74970
 phase and frequency tracking by forward dynamic programming 2-60311
 speaker independent connected word recognition using a syntax-directed dynamic programming procedure 2-97309
- dynamic response**
 accommodative oscillation, enhancement of average accommodative response, simulation study 2-116908
- dynamic stability** *see stability*
- dynamic testing**
see also fatigue testing
 alloy, dissipative properties under cyclic tension-compression, static tension effect 2-99631
 BWR primary system piping, stress corrosion cracking resistance, full-scale testing 2-80125
 instrumented impact test machine 2-78029
 low-cycle strength under programmed isothermal load 2-116650
 metals, cyclic straining, stress and strain relaxation (*Czech*) 2-115352
 microcomputer-based system for instrumented impact testing 2-78038
 miniature discs, bending, ductility equipment, in fast neutron environment 2-74830
 pressure cell bodies, anal. of dynamic stresses and motion in alluvium 2-95392
 product design cycle, integration of dynamic testing 2-101398
 rheology measurement using Ferranti-Shirley cone and plate viscometer 2-81412
 steels, austenitic stainless, type AISI 304 and AISI 316, dynamic testing, for large reactor structs. 2-74825
 structures amplitude-frequency characteristics, determ. using explosive loading 2-114634
 surfaces, thin films and interfaces, mechanical props., mech. marginal oscillator meas. method 2-56317
 symmetric rod impact technique for dynamic yield determination 2-69165
 tensile testing machine 2-72904
 unidirectional fibre reinforced composites, fully and partially loaded, rate sensitive tensile impact props., test system 2-67684
 Al, symmetric rod impact technique for dynamic yield determination 2-69165
- dynamical symmetry**
 $\Lambda\phi^4$ theory, dynamical symmetry breaking induced by nonconformal coupling in $R^4 \times S^3$ 2-53939
 σ models, nonlinear supersymm., quantum nonlocal conserved charges 2-95579
 Bose-Fermi symmetries in nuclei 2-69587
 boundary conditions, symmetry breakdown and Feynman path integral 2-95586
 classical mechanics, dynamical Noether symmetry 2-101159
 cosmology, dynamical symmetry breaking by EM corrections 2-79262
 Dirac monopole, dynamic SO(3,1) symm. (*Russian*) 2-107565
 generalised coherent states and uncertainty principle 2-95105
 grand unified model with Bogolubov's symmetry breaking mechanism 2-79801
 N=8 supergravity with dynamical SU(8) gauge theory, spin-3/2 fields role 2-95209
 non-abelian gauge symmetry, two-dimensional model 2-84788
 nonlinear relativistic theory, internal symmetries from field theories in higher dimensions 2-95701
 O(N) σ model, dynamical supersymmetry breaking 2-95618
 preon models with dynamical symmetry breaking 2-101689
 QCD, dynamical chiral symm. breaking, pseudoscalar meson spectra (*Russian*) 2-95771
 SU(2)_c × SU(2)_a × U(1), dynamical symm. breaking 2-107581
 SU(2) ⊗ U(1) model, dynamical symmetry breaking and radiative correction to weak-isospin relation 2-95714
 supersymmetry in nuclear and particle physics 2-59053
 symmetries and first integrals of dynamical systems 2-59054

dynamical symmetry continued

three-dimensional anisotropic oscillator with dynamical SU(3) symm. 2-101217
U(6/4) supersymmetry in complex nuclear spectra (*Chinese*) 2-107783
Au, odd isotopes, dynamical supersymmetries and positive parity states 2-69530
 $\text{Ir}(t, \alpha)$, A=191,193, spectroscopic strengths, dynamical supersymmetries test 2-69667
 $\text{Ir}(t, p)$, A=191,193, spectroscopic strengths, dynamical supersymmetries test 2-69667

dynamics

see also ballistics; fluid dynamics; force; friction; haemodynamics; impact (mechanical); kinematics; resonance; rotating bodies; rotation; vibrating bodies; vibrations
bowl dynamics, simulation 2-112690
circumplanetary dust particle dynamics with radiation pressure 2-100828
classical singular dynamical systems, Dirac theory of constraints 2-101158
classical system, dynamical Noether symmetry 2-101159
container-liquid system dynamics, capillarity effect 2-91228
dissipative dynamical systems, statistics of turbulent transients 2-101325
flow-invariant sets for autonomous second order differential equations and applications in mechanics 2-84438
galaxy clustering, velocity evolution 2-58473
galaxy clusters, dynamical evolution of non-point body clusters (*Russian*) 2-63688
galaxy clusters, mass segregation, relaxation and Coulomb logarithm in N-body systems 2-58475
galaxy clusters dynamics, form. of single massive object by galaxy mergers 2-63685
Hamilton's principle in approximate dynamics 2-94994
heavy rigid body with elastically connected point mass, motion, bifurcational set (*Russian*) 2-79352
Lagrangian dynamics, inverse problem, Helmholtz conditions approach 2-69008
Magellanic Stream, dynamics rel. to three interacting galaxies model 2-68904
Markaryan 744, Seyfert galaxy, disc dynamics rel. to internal vel. field 2-101041
methylene dichloride, liq., mol. dynamics simulation 2-76271
multivariable t, theory 2-101323
NGC 6334 interstellar complex, struct. and dynamics of 3.5 pc diameter filamentary shell 2-112535
nonlinear structural dynamics, extrapolated force correction method stability anal. 2-101161
nuclear matter, quasispin systems irreversible dynamics 2-69592
parametrically excited dynamic systems, stability anal., generalised Hill's method 2-101162
point random motion steering, bang-bang strategies using interrupted obs. 2-53494
rigid bodies in incompressible viscous fluid 2-81219
rigid ions dynamic simulation in liq. and solids using Ewald sum, MDIONS program 2-65827
stellar dynamics, stability of periodic orbits in triaxial galactic models 2-79210
stellar dynamics, transitions between epicyclic stellar orbits induced by massive gas clouds 2-68837
stellar dynamics, two-component model of spherical stellar system 2-106820
system with fast and slow motions, technical stability 2-112698
systems with one degree of freedom, adiabatic invariants 2-74201
two-state model, stochastic resonances 2-79348
Virgo S cloud of galaxies, distance moduli and vel. struct. 2-58476

dynamometers

see also force measurement
mobile hydraulic resistance installation 2-53753

dynamos *see d.c. generators*

dysprosium

see also nuclei with
adsorption of N_2 , NH_3 , N_2O and NO on Dy, XPS and Auger electron spectra 2-62429
anomalous AC susceptibility near ferromagnetic to spiral transition 2-98856
atom, laser isotope separation by two-step selective photoionisation method 2-64940
critical field anomalies and anisotropy 2-98878
deformation modes of HCP single crystals (*French*) 2-67417
electrical resist. anomaly near Neel point, critical indices 2-104350
EXAFS and chem. shifts meas. 2-99224
first order phase transition study 2-77262
low temp. phase transition, theoretical study 2-103978
magneto-optical reson. and complex refractive index, polarimetric study 2-72466
Neel temp. investigation 2-87500
paramagnetic, deviations from Curie-Weiss law 2-56825
photoelectric cross-section at K edges 2-56639
tribophysical pulverisation (*German*) 2-93634
 $\text{BaFe}_2\text{O}_{15}$:Dy, dopant effects on mag. props. 2-92968
 $\text{Bi}_2\text{--}\text{La}_2\text{WO}_6$:Dy, luminesc. props. 2-82900
 CaS:Dy , phosphors, electroluminescence study 2-61978
 CaSO_4 :Dy, sensitised phosphor, and phosphor embedded teflon TLD discs, response to X- and γ -rays 2-67128
 CaSO_4 :Dy crystal TLD development 2-113753
 CaSO_4 :Dy embedded in teflon, reliability for routine personnel monitoring 2-68149
 CaSO_4 :Dy teflon discs, dose re-estimation by repeated read-outs, efficiency 2-59552
 CaSO_4 :Dy teflon thermoluminesc. discs, light induced fading 2-64690
 CaSO_4 :Dy 14 , cathodoluminescence spectrum meas. 2-87875
Dy 14 in different host matrices, luminesc. characts. 2-99173
 $\text{Dy} + \text{H}^+$, L-subshell ionisation, cross sections, X-ray spectra 2-54941
 $\text{Dy} + \text{He}^+$, M to L shell X-ray yields ratio 2-59592
 LaF_3 :Dy $^{3+}$, Pr $^{3+}$, fluoresc. obs., decay time meas. 2-110914
MgB $_2$:O:Dy, thermoluminescent props., dosimetric props. study 2-78457
 YAlO_4 :Dy $^{3+}$, luminescence and cryst. field splitting 2-116239
 Y_2O_3 :Dy $^{3+}$, energy levels, cryst. field anal., fluoresc. and IR study 2-72534

dysprosium alloys

C DyCo $_2$, Fe_2H_2 , lattice parameters and mag. characts. 2-56891

dysprosium alloys continued

Ag-Dy, dilute alloys, magnetostriction, free energy calc., single ion Hamiltonian 2-92987
Dy-Al thin films, crystallographic phases following electron beam annealing 2-55888
Dy-Cu amorphous films, crystallisation, TEM and electron diffr. study 2-92415
Dy-Fe, hyperfine fields, Mossbauer spectra obs. 2-99005
Dy-Fe intermetallic cpds., mag. and cryst. props., X-ray and Mossbauer study 2-92877
Dy-Ni phase diagrams, X-ray and DTA study (*Chinese*) 2-93488
Dy-Sc, spin glass and antiferromag. transitions, bulk magnetisation study 2-72222
Dy-Sm, mag. and elec. props. 2-72201
DyAg, cryst. and amorphous, electronic relax. and hyperfine fields, Mossbauer study 2-116098
DyAl, mag. moments and anisotropy, neutron diffr. and cryst. field calc. 2-115976
DyAl $_3$, paramagnetic, hyperfine interactions 2-98974
DyAl $_3$, quadrupole interaction at ^{111}Cd probe 2-116100
DyAlGa, mag. props. study 2-72141
DyCO $_3$, H $_2$ multiplet absorption isotherms, chem. pot. 2-92348
DyCO $_3$, anomalous hyperfine field and orbital moment 2-56973
DyCO $_3$, vol. depend. of first order mag. transition temp. 2-98881
Dy $_2$ Co, elec. resist. accompanying metamag. phase transitions (*Russian*) 2-66820
Dy $_{0.52}\text{Cu}_{0.48}$, amorphous, random anisotropy props., magnetisation meas. 2-72271
Dy $_2\text{Fe}_{23}$, cryst. and mag. props. 2-86626
DyFe $_2$ Al $_8$, Mossbauer study 2-87636
Dy(Fe $_{1-x}$ Al $_x$) $_2$, Laves phases, mag. and cryst. props., X-ray and Mossbauer study 2-92899
Dy $_2$ (Fe $_{1-x}$ Co $_x$) $_{17}$, spontaneous magnetostriction 2-77356
Dy(Fe $_{1-x}$ Ga $_x$) $_2$, mag. props. and Mossbauer spectra, 4.2 to 293K (*Russian*) 2-104657
DyMn $_2$, mag. dipole, elec. quadrupole hyperfine parameters determ., NMR spectra 2-116087
DyNi $_5$, ^{181}Ta TOPAC meas. of non-axial quadrupole interaction 2-93089
DyPd $_1\text{--}\text{Pt}_1$ (Ni $_1$), phase relationships and struct., 2-109744
Dy $_{2-x}$ YFe $_7$, mag. props. 2-115984
La-Sb-Dy, dilute alloys, magnetostriction, free energy calc., single ion Hamiltonian 2-92987
Pd-Dy, dil. alloy, sp. ht., cryst. elec. field effects 2-76700
SmDy $_1\text{--}\text{Fe}_2$, magnetostriction, temp. depend. meas. 2-77351
Tb $_1\text{--}\text{Dy}_1$ Co $_2$, spin orientation, ^{59}Co NMR study 2-66950
Tb $_{0.27}\text{Dy}_{0.73}\text{Fe}_2$, magnetostrictive materials, US induced irreversible changes in magnetisation 2-82640
Yb $_1\text{--}\text{Dy}_1$ Al $_2$ exchange and electron spin-lattice relax., ESR study 2-82712

dysprosium compounds

see also dysprosium alloys
ethylsulphate, crossover to mean-field behavior at marginal dimensionality 2-77316
EXAFS and chem. shifts meas. 2-99224
Bi $_2$ Dy $_{1-x}$ FeO $_3$ orthoferrite monocrys., magneto optic props. meas. 2-82828
CsDy(MoO $_4$) $_2$, thermal expansion coeffs., X-ray studies (*Russian*) 2-61178
Dy $_3$ Al $_2$ O $_{12}$, mag. struct., neutron diffr. study 2-92869
Dy $_{1-x}$ B $_x$ CoO $_3$, B=Ca,Sr, Mossbauer emission study of defect 2-87631
DyC $_2$, atomisation energy, electrothermal AAS meas. 2-109967
DyC $_2$, first order phase transition study 2-77262
DyCl $_3$ 6H $_2$ O:Gd $^{3+}$, cryst. field parameters, spin Hamiltonians, polarisability tensors 2-87206
DyCl $_3$ 6H $_2$ O:Gd $^{3+}$, spin-Hamiltonian parameter superposition model anal. 2-98600
Dy $_2$ Cu $_2$ O $_8$, cryst. struct. data 2-81757
DyF $_3$ -BaF $_2$ -MnF $_2$, glass form., quenching, IR study (*French*) 2-91808
DyFe $_3$, hyperfine fields, Mossbauer spectra obs. 2-99005
DyFe $_{1-x}$ Co $_x$ O $_3$, magnetoelasticity near mag. transitions (*Russian*) 2-98925
DyFeO $_3$, magnetoelasticity near mag. transitions (*Russian*) 2-98925
DyFeO $_3$, Raman scatt. from mag. excitations 2-77528
DyFeO $_3$, garnet, amorphous, struct. props., Mossbauer study 2-103625
DyGa $_3$, mag. props., struct., anal. 2-66763
DyMo $_2$ (Se $_4$), dipole antiferromagnetism, collinear struct. and spin wave vector (*Russian*) 2-98847
Dy $_2$ NiSi $_2$, cryst. struct., Gd,NiSi $_2$ type, X-ray diffr. study 2-65961
DyO $_3$ -CaO, elec. cond., electrolytic region 2-86924
DyO $_3$, cubic, lattice and binding energies 2-60916
DyO $_3$, spectral and heat capacity Schottky contribs. 2-81975
DyRhSi, cryst. struct. and mag. props. 2-55946
DyS, bulk and surface valence states 2-104247
Dy $_2$ SiO $_5$, Czochralski growth two crystalline struct. modifications 2-87968
DyTaO $_4$, cryst. struct. study 2-98038
DyVO $_4$, mag. relax. study 2-98989
GdDy(MoO $_4$) $_3$, ferroelectric-ferroelastic transition, X-ray topographic study 2-61840
Ho $_{0.5}$ Dy $_{0.5}$ FeO $_3$, magnetoelasticity near mag. transitions (*Russian*) 2-98925
Sm $_{1-x}$ Dy $_x$ B $_6$, solid solns., valence states, X-ray absorption spectra study 2-87202
TiSe-DySe, phase diagram, reaction in the system 2-88068
ZnF $_2$ -BaF $_2$ -DyF $_3$, spin glasses, AC susceptibility, local anisotropy 2-92876

E-layer *see E-region*

E-region

see also sporadic-E layer
auroral E-region, STARE obs. of long discrete echoes 2-112217
daytime ion and NO densities, steady-state model 2-78910
electrodynamical interaction with E-region, cond. and plasma density 2-73751
electron collision frequency in D and E-regions, estimation from LF wave propag. expt. 2-112216
field aligned irregularities over Ilioka, Japan, characts. 2-84008
field aligned irregularities over Ilioka, Japan, characts. and interpretation 2-84009
high latitude turbulent E-region, plasma wave amplitudes and turbulence 2-106402

E-region continued

- ion recombination coefficient and short wave solar flux 2-73750
- ionosphere characterization using optical remote-sensing techniques 2-94549
- irregularities and nighttime scintillations at magnetic equator 2-78906
- longitudinal electrostatic field effects on ionospheric struct. 2-112207
- mid latitudes, electron density redistribution under effect of stationary homogeneous wind system 2-73749
- nocturnal intermediate layer occurrence, solar and geomag. influences 2-106411
- nonlinearity of relation between q and n_e^2 2-112202
- plasma interaction with auroral electron fluxes to account for aurora double layered struct. 2-106381
- radio aurora during irregular micropulsation burst 2-68554
- skywave field strength estimation, HF, in tropical region, AIR method appl., E-mode propagation 2-106413
- vertical HF sounding in presence of acoustic wave, appl. to neutral temp. and electron density meas. in lower E-region 2-100636

ear

- see also hearing*
- auditory perception of radio-frequency electromagnetic fields 2-88553
- basilar membrane, two-tone suppression response of nonlinear model 2-57830
- basilar membrane frequency-response functions, relationship to causality, linearity, time-translation invariance and minimum-phase behaviour 2-83575
- basilar membrane motion meas. in guinea pig using Mossbauer technique 2-100009
- basilar membrane vibration phases 2-83576
- bushcricket, Hemisaga (Sagenae), ear acoustics 2-100003
- canal volume, evaluation of tympanometric estimates 2-88640
- cochlea, acoustically evoked activity of single efferent neurons in guinea pig 2-111700
- cochlea, cat, basilar membrane tuning 2-78351
- cochlea, density of myelinated nerve fibres in chinchilla 2-100007
- cochlea, dynamical motion, mathematical hydroelastic model 2-68022
- cochlea, mathematical modelling of hearing process, conf., Troy, NY, USA (July 1980) 2-89456
- cochlea mechanics, correspondence principles 2-94065
- electrocochleography, use of miniaturized needle electrode 2-117126
- evoked acoustic emissions from the human ear, equipment and response parameters 2-94075
- hair cell-primary auditory fibre complex model 2-73253
- hair-cell innervation by spiral ganglion cells 2-111708
- hearing protector, improved artificial hear for meas. 2-86169
- hearing protectors, performance 2-94216
- inner, peripheral organs of specific sensitivities, dye injection expts. on American bullfrogs 2-83577
- inner ear of bullfrog, SEM study 2-57829
- inner hair cell-tectorial membrane impact, relation to sensitization and masking of HF tone burst by LF tone 2-83574
- input impedance of the cochlea in cat 2-100008
- intracochlear acoustic pressure: comparison between direct measurements and models (French) 2-97322
- ipsilateral acoustic reflex, detection technique 2-111821
- low frequency biasing effects on auditory nerve activity in gerbils 2-100010
- middle ear effusion diagnosis, comparison of otoscopy and tympanometry 2-117124
- outer hair cell, hydrodynamic model 2-73267
- pseudo-resonance, asymptotic theory 2-116933
- semicircular canals, mathematical modelling of hearing process, conf., Troy, NY, USA (July 1980) 2-89456
- short-duration signals, effect on human ear (German) 2-94108
- thermal enhancement of radiation damage in mice, differential effect of prior heat treatment 2-105664
- tympanic membrane of human auditory system, transfer characts., elec. modelling 2-100001
- vestibulo-ocular reflex, effect of convergence, implications for perceived movement 2-62612

ear microphones *see* microphones**earphones**

see also hearing aids

No entries

Earth

- see also Earth composition; Earth orbit; Earth rotation; Earth structure; earthquakes; geochemistry; geochronology; geodesy; geomagnetic variations; geomagnetism; terrestrial atmosphere; terrestrial electricity; terrestrial heat*
- accretion history and chemistry relative to Moon 2-63282
- crater formation simulation expts. using 10-tons of explosives in sediments 2-73559
- Earth-Moon system, motion around equilateral libration points, crit. stability case 2-117571
- evolution and origin, appl. of rapidly escaping H-thermosphere dynamics model 2-58276
- evolution of Earth-Moon system orbits 2-84121
- expanding Earth due to variable gravitational constant 2-88830
- free oscillations (book) 2-63764
- geoid, precise definition and implementation and related problems 2-68239
- gravitational potential harmonic coeffs. 2-73416
- growth from solar nebula 2-73865
- meteorite crater at Brent, Ontario, Canada 2-62956
- meteorite crater formation, factors affecting crater dimensions 2-73879
- Moon-Earth system, orbit evolution and tides 2-89172
- Moon-Earth System, orbital evolution 2-78986
- nutation and precession due to changes due to Mars, Venus, Jupiter 2-73415
- oblateness, cause of lunar orbital perturbations, errors in ephemerides 2-73871
- oblateness, effect on lunar orbital motion, ELP 2000 soln. 2-73869
- oblateness, perturbations to subsatellite three-dimensional motion 2-78940
- radial oscillations, eqns. 2-73477
- surface loading response, analytical study with appl. to Lake Bonneville 2-106070
- terrestrial catastrophism, role of galactic spiral arms and comets 2-79039

earth (electric) *see* earthing**earth (soil) *see* soil****Earth age *see* geochronology****Earth atmosphere *see* terrestrial atmosphere****Earth composition**

see also Earth structure

- E Africa, igneous rocks comps., rel. to lithospheric thinning assoc. with continental rifting 2-106078
- Aleutian arc, tholeiitic and calc-alkaline magmatism patterns 2-100331
- Appalachian region hydrocarbon deposits 2-100337
- Archaean mantle chem. composition 2-73497
- N Atlantic mid-ocean ridge, He isotope variations and mantle heterogeneity 2-62914
- N Atlantic ocean basin and continental margin, geology, geophysics, geochemistry and resources 2-58035
- NW Australia, crustal comp. and metamorphic grade of Precambrian terrains from seismic ref. data 2-117255
- NW Australia, lower crust and upper mantle comp. in Precambrian terrains from regional gravity studies 2-117256
- Brazil, ^{235}U abundance, correl. with Gabon Oklo reactor and continental drift implications 2-117280
- Columbia River flood basalts, USA, chem. and isotope composition 2-62919
- continental crust, chemical evolution rel. to xenoliths mag. props. and long wavelength mag. anomalies sources 2-100370
- core and lower mantle chemical composition 2-68318
- Cretaceous-Tertiary boundary clay, Ir content rel. to cosmic catastrophe (Russian) 2-83820
- diamond, garnet inclusions and state of Earth's upper mantle 2-62929
- equation of state model of Earth interior 2-100327
- geochemical model (Russian) 2-68319
- granite, U, Th, Li and B contents rel. to natural prod. of ^3H in permeable rocks 2-100381
- gravitational differentiation of mantle, convection, effect of solar activity rel. to Earth diurnal rot. vars. 2-111834
- Grenville Province, Central Metasedimentary Belt, Pb isotopes 2-83777
- ground element abundances from airborne gamma ray spectral data inversion 2-73494
- Hadar Formation (Ethiopia), 1.2 Myr record of ^{18}O and ^{13}C changes in late Pliocene Rift Lake 2-68338
- interior chemical comp., production of thermoelectromotive force and effect on mag. field 2-73436
- knorringite, stability at upper mantle conditions 2-58023
- Lappajarvi meteorite crater, Finland, geochemistry of impact melt and basement rocks 2-106119
- magma chambers, layered convection and crystal layers in multicomponent systems 2-106116
- major element heterogeneity of mantle, evidence from submarine basalts 2-62915
- mantle below Hawaii, study of Honolulu Volcanics 2-106011
- mantle composition from mid ocean ridge basalt rocks anal. 2-78648
- mantle ferromagnesian silicate composition, model 2-78603
- Mississippian felsic metavolcanic rocks in Pelly Mountains, SE Yukon Territory, geochemistry rel. to tectonic significance 2-78649
- MORB composition and origin, laboratory rock melt study 2-117267
- tholeiitic basalts from Gulf of California, Mexico, chemical analys. and mag. props. 2-106098
- Transbaikalian Jurassic extrusive/subvolcanic rock, rare element distrib., geochemical significance 2-83785
- Troodos Complex, Cyprus, Pb isotopic composition of ophiolitic volcanogenic sulphide deposits 2-62925
- N Vietnam, Sn ore deposits 2-78613
- volcanic ash from Mount St. Helens, COS and CS_2 contents 2-78623
- volcanic ash from Mount St. Helens 1980 May 18 eruption, laser Raman spectroscopic anal. 2-100343
- West Siberian Plate, pre Jurassic rocks of different tectonic zones, density variation with comp. 2-83810
- Au, Pd, Ir, abundances in therzolites and mantle precious metal implications 2-62918
- ^{10}Be deposition rate in oceans, evidence for constancy from Mn crusts 2-111920
- Fe-Ni-S system, compressibility and elec. cond. at core conditions 2-58022
- FeO high-pressure polymorphism at Earth core conditions 2-88821
- $^3\text{He}/^4\text{He}$ in igneous rocks on oceanic islands used for mantle age determ. 2-78605
- Nd isotope characts. of granite batholiths of S.E. Australia 2-62917
- Nd/Sr/Pb isotopic systematics in three-component mantle model 2-100334
- $^{20}\text{Ne}/^{22}\text{Ne}$ ratio in Earth interior, rel. to rare gas retention by accreting Earth in solar nebula 2-112353
- Rn activity meas. of geophysical significance 2-68293
- Rn anomaly in hot springs in India, search for correl. with local seismicity 2-111886
- S isotopes in E Siberian iron ore deposits 2-78614
- Sn ore deposits of N Vietnam 2-78613
- Ti isotope ratios of lunar, terrestrial and meteorite samples 2-84113
- U content of rocks and minerals 2-68523
- U deposits in United States, aerial radiometric survey obs. 2-73503

Earth core

- chemical composition of core and lower mantle 2-68318
- conference at London, England (January, 1982) 2-101120
- convection in outer core responsible for secular geomag. variation 2-100243
- coupling with heat flow rel. to geomagnetic reversals 2-78604
- dynamo-produced electric field in mantle 2-105926
- electrically conducting core radius magnetic determ. using Magsat data 2-100223
- equation of state model of Earth interior 2-100327
- equation of state of metals for core conditions 2-117300
- free oscillations and core modes of rotating elliptical Earth 2-73465
- geomagnetic dynamo, analytical extension of main geomag. field and secular vars. to core surface 2-111850
- geomagnetic dynamo, role of flux ejection dynamo effect in convective core 2-100722
- geomagnetic dynamo driven by gravity 2-58021
- magnetic field, dynamo effect, mechanism (Czech) 2-62883
- magnetic field, spherical harmonic representation problem 2-100225
- magnetic field model 2-105927
- magnetic flux across core-mantle boundary, Gauss coeffs., upper limits 2-100224

Earth core continued

- mantle interface topographic coupling, mag. field effects, Earth rot. var. 2-68235
 radius of core and mantle-core transition from seismic data 2-117264
 Fe-Ni-S system, compressibility and elec. cond. at core conditions 2-58022
 FeO high-press. polymorphism at Earth core conditions 2-88821

Earth crust

see also *geology*; *oceanic crust*

- Aegean plate deformation, finite element study 2-94353
 E Africa, focal mechanism of major earthquakes in Western Rift Valley 2-117224
 E Africa, focal mechanisms of volcanic and tectonic earthquakes in Western Rift Valley 2-111906
 Africa, mag. anomalies and tectonic features correl. 2-100234
 E Africa, salt diapirs of continental margin of N Kenya and S Somalia rel. to Madagascar-Africa separation 2-78653
 E Africa, thermal model of lithospheric thinning assoc. with continental rifting 2-106078
 African continental margin and Davie Ridge, P-wave travel time study (*French*) 2-73491
 W African craton (Senegal) (*French*) 2-111844
 African ore deposit location rel. to subcrustal stress field 2-73505
 African-Sicilian Rise, geothermal conditions 2-73498
 S Alaska, Denali fault motion and accretionary development 2-94344
 E Central Alaska, terranes and suture zones 2-94321
 central Alaska Range, tectonic significance of accretionary terranes 2-94343
 Southern Alps, Italy, deep seismic sounding profiles 2-105940
 Central America, crust struct. from seismic data 2-100275
 South America, gravity and mag. anomalies rel. to tectonic struct. 2-100237
 N America, later Proterozoic polar wander path from ^{40}Ar - ^{39}Ar studies on Tudor Gabbro, Ontario 2-106022
 northeastern S America, mag. anomalies of aulacogens 2-100238
 Central America volcanic front, lava petrogenesis model 2-62932
 N American Cordillera, fault motion during Jurassic 2-88853
 anatexis and accompanying metamorphism in folded belts, numerical model 2-73517
 Andes, intra-crustal melting indicated by isotope geochem. study 2-68313
 Appalachian crust struct. and tectonic history 2-83774
 S Appalachian Piedmont, crust struct. and tectonic history 2-73523
 Appalachian region hydrocarbon deposits 2-100337
 Arabian Sea shales near India, geochem. and thermoluminesc. studies 2-73504
 Archaean crust thickness of S India, greenstone granite belt 2-88833
 Archaean gneisses at Hebron, Labrador, Rb-Sr isotope study 2-117262
 Arctic Ocean basin and continental margins (book) 2-53440
 Ascension Island, S. Atlantic, volcanic rock isotope composition 2-106019
 central Asia, estimation of seismic Q as function of freq. and depth using coda of local earthquakes 2-88750
 E Asia, evolution of major strike-slip faults (*French*) 2-111909
 Asia, mag. anomalies, rel. to tectonic struct. 2-100233
 E Australia, 'hot-spot' like trace due to intraplate extension 2-73527
 NW Australia, crustal struct. of Precambrian terrains from seismic refr. data 2-117255
 Australia, differences between lithosphere Phanerozoic and Precambrian, seismic and elec. cond. meas. 2-78621
 NW Australia, isostasy and struct. of lower crust and upper mantle in Precambrian terrains from gravity studies 2-117256
 Australia, passive continental margin origin 2-58029
 W Australia, petroleum deposits in Babbagoola Beds, Officer Basin 2-58009
 Australia, seismic study of crust thickness and isostasy 2-106080
 SE Australia, struct. geol. of Palaeozoic subduction complex 2-106031
 Baikal-Patom highlands, USSR, local gravity anomalies 2-105898
 Barbados, Lesser Antilles accretionary prism and tectonic evolution 2-94320
 Barbados Ridge complex, bathymetric and seismic survey rel. to interpretation of accretionary wedge 2-94355
 Basin and Range Province, USA, seismic study of Earth struct. 2-100274
 Beni Bousera, Rif, Morocco, geology of peridotite antiform 2-73514
 Blue Ridge of Virginia, USA, tectonic origin and geology 2-73492
 Bocono fault (W.Venezuela), Holocene and Quaternary displacements 2-88865
 Bout Nant, alpine deformations in fault zone between Mont-Blanc and Belledonne (*French*) 2-117273
 Brittany, Hercynian regional deformation 2-73536
 British Columbia coast, Late Quaternary sea levels and crustal movement 2-88854
 S Brittany, France, U-Pb geochronology of crust origin 2-106018
 Brittany and Limousin, seismic vel. struct. and Hercynian tectonics 2-88779
 Buckingham area of Quebec, Canada, Cambro-Proterozoic volcanism 2-88816
 Burenskiy Massif, upper crust, geological-geophysical models 2-106041
 Byelorussia, deep crust struct. (*Russian*) 2-106027
 Byelorussian crystalline massif, MTS obs. of deep struct. 2-117198
 calc-alkaline andesite of upper mantle origin, Iitome-gata, Japan 2-68303
 calc-alkaline magma systems, mixing, volatiles effect 2-88832
 Caledonian calc-alkaline volcanic arc (Scotland), Nd and Sr isotopes 2-62916
 California Sierra Nevada, origin of ophiolite belt 2-73502
 Campi Flegrei geothermal area, Italy, crust struct. study 2-73493
 Caraquez dike system, New Brunswick, Canada, palaeomag. study 2-88728
 W Carpathians, struct., paleogeographic and tectonic framework (*French*) 2-100347
 N Cascade range, Washington, USA, palaeomag. study of tectonics 2-100219
 Caucasus Mountains, palaeomag. investigations of Palaeozoic rocks rel. to tectonic history 2-117195
 Cedros Island, Mexico, tectonic setting of blueschists and melanges 2-88819
 Central Sakhalin Fault, USSR, crust near-surface area deform. from geodetic obs. 2-111912

Earth crust continued

- Cerro Prieto geothermal field, Mexico, conf., Oct. 1979, Mexicali, Mexico 2-62456
 SW China, Cinozoic crustal deformation (*Chinese*) 2-68323
 N China, focal mechanisms and crustal stress field (*Chinese*) 2-73451
 China, regional crust struct. from seismic data (*Chinese*) 2-58007
 SE China, seismic surface wave dispersion and Earth struct. 2-68285
 E China volcanic rocks, element and Sr isotope distrib. 2-83778
 coal mine overburden in New Mexico, USA, sonic logging study 2-78891
 Coast Plutonic Complex, BC, Canada, geologic and tectonic history 2-94325
 Colorado Plateau, USA, heat flow obs. 2-88827
 Colorado Plateau crustal hydration constraints from crust xenoliths Vp meas. 2-78596
 Columbia River flood basalts, USA, chem. and isotope composition 2-62919
 conducting layer depth in Pannonian basin 2-106037
 conference, April 1982, Cardiff, Wales 2-63736
 continental crust, struct. probing by seismic refl. profiling and drilling 2-100336
 lower continental crust, xenoliths mag. props. rel. to long wavelength mag. anomalies sources 2-100370
 continental crust stress limits rel. to shallow earthquakes depth freq. distrib. 2-94291
 continental margin sedimentary rock layer accumulation process 2-117268
 cordierite, high-press. phase transition 2-106104
 Cortlandt complex, New York, USA, geochem. study of petrogenesis 2-83779
 crust-mantle boundary, heat flow obs. restricting composition transition (*Russian*) 2-106028
 Damara orogenic belt, SW Africa, crust elec. cond. struct. 2-88733
 Davie Ridge, P-wave travel-time anomalies (*French*) 2-83771
 Deccan syncline, India, seismic vel. and crust struct. (*Russian*) 2-57988
 Deccan Trap flood basalt origin, isotope geochem. study 2-106017
 deformation associated with seismic activity, strain from geodetic geometric results 2-78859
 deformation measurement, comparison of tiltmeters 2-112166
 S Denison Trough, Queensland, results of seismic survey (1978 to 1979) 2-117302
 development stages of continental crust 2-106042
 Diamant-Burgos volcanic system in SW Martinique, magma mixing, quartz bearing basalts (*French*) 2-111905
 diamond formation (*Russian*) 2-83813
 diapir formation model based on plate tectonics 2-106083
 Dnieper-Donets palaeorift, crust. struct. and tectonics (*Russian*) 2-106026
 Earth tides, relation to degassing of Earth (*Russian*) 2-83737
 earthquake initiation, rigid inclusion model 2-117236
 earthquakes on plate margins, slow fracture propag. on fault surface with embedded viscous layer 2-117219
 East African Rift system, deep struct. model from simultaneous inversion of teleseismic data 2-78619
 electrical conductivity anomalies beneath India magnetic observatories 2-88743
 electrical conductivity in lower crust, review 2-78601
 central England, deep seismic refl. profile over Caledonian granite 2-88805
 Eurasia-India suture zone, gravity profile along Middle Indus valley, N. Pakistan 2-117180
 E European platform, crust struct. and Palaeozoic faulting (*French*) 2-100349
 evolution of Earth crust 2-106043
 fault tectonics regions, distortion of magnetotelluric sounding curves 2-117197
 faults in Lake Baikal-Nyukzha River area, classification and tectonics 2-58042
 Fife Hills, Enderby Land, Antarctica, crust age and form. from granulite facies rocks dating 2-106034
 flexure and tectonic subsidence and sea level global changes 2-88861
 folded belt metamorphism and anatexis, fluid-magmatic model 2-83789
 fracture zone model, reflected-diffracted waves 2-83750
 France, seismotectonic map (*French*) 2-100285
 France, tectonic map (*French*) 2-100353
 French Alps, strain analysis of cover thrust zone 2-106092
 French external Alps, tectonic history 2-106091
 Friuli area, Italy, nappe detachment zone rel. to space-time evolution of 1971-1980 seismicity 2-117222
 Gamitagama greenstone belt, southern Superior Province, precise U-Pb zircon ages 2-94316
 Gander Zone, Newfoundland, crust. struct. from gravity and geomag. anomalies 2-111895
 Garm region, USSR, seismic jointing, erosion patterns and Earth crust stress-strain state 2-73474
 Gazli district, USSR, tectonic struct. rel. to seismotectonic conditions of earthquake occurrence 2-117233
 Gazli earthquake, Uzbekistan, 1976 May 17, magnitude, ground motions and focal mechanism 2-73473
 geoelectric analogue laboratory model used to study elec. sounding problems 2-78857
 geomagnetic field distortion determination, method for effects due to oceans and continents 2-73700
 geomagnetic sounding, determ. of parameters of magnetised objects in complex field 2-58184
 Georgia Piedmont, USA, magnetisation of Austell gneiss 2-88740
 geothermal sounding, comparison of methods of estimating static formation temperature from well logs 2-100326
 global free air gravity anomalies rel. to continents and ocean floor struct. 2-57956
 Golconda allochthon, Nevada, USA, geology and tectonic origin 2-94323
 gravity anomalies due to horizontal slab like bodies with lateral density var., Fourier spectrum interpretation 2-111841
 gravity anomalies effect on satellite geomag. data and orbit 2-73437
 gravity sounding, anal. of gravimetric inversion problem 2-68230
 Great Barrier Reef, seismology showing old erosional surfaces 2-58043
 Great Glen Fault, Scotland, Mesozoic tectonics 2-106069
 Greece, geology of mid-Triassic volcanic rocks 2-88844
 Greece, in situ meas. of tectonic stresses in mainland Greece by overcoring 2-94348
 Greece, recent crustal block movements from Holocene shorelines in Crete and Antikythira 2-94349

Earth crust continued

- SE Greenland, palaeomag. of Tertiary dykes (and tectonic implications) 2-73432
- Grenville Province, Canada, elec. cond. struct. 2-100215
- Grenville Province, Central Metasedimentary Belt, Pb isotopes 2-83777
- growth of crust since Archean, geochemical constraints 2-106030
- Guinea coastal marginal plateau, geology and bathymetry (*Russian*) 2-88829
- Hardeman County, Texas, USA, seismic study of crust struct. 2-57986
- Hawaiian volcanic structure, geodynamic form. models 2-111901
- Heilm thrust sheet, N.W.Scotland 2-106090
- Hellenic arc and Sea of Crete, synthesis of tectonic development 2-94352
- Hellenic arc and trench, international symposium, Athens, Greece, (1981 April 8 to 10) 2-89443
- Hellenic sedimentary arc, palaeomag. results from Mio-Pliocene series rel. to tectonic rot. 2-94278
- Hellenic trench tectonics, synthesis of Sea-Beam and submersible obs. 2-94350
- Henaux Basse Normandie duplex in N France 2-106046
- NW Himalaya, Mid-Palaeozoic to Cainozoic geology and tectonic evolution 2-73515
- Himalaya region crustal movement, seismic and tectonic anal. (*Chinese*) 2-62913
- Hindukush region, seismotectonics and earthquakes 2-68328
- Hinnoy, Norway, geology of Caledonian deformation 2-78617
- Honshu, Japan, seismic sounding of crust struct. 2-62908
- Great Hungarian Plain, geoelectric crust struct. (*Hungarian*) 2-68253
- Iceland hotspot, tectonic evolution 2-62942
- Idaho, USA, magnetotelluric study of possible geothermal energy site 2-88738
- imbricate folding in Idaho-Wyoming foreland thrust belt 2-88843
- Imperial Valley, California, local seismic vel. vars. 2-68309
- NW India, elec. cond. struct. and geomag. induction in crust 2-73433
- India, geomag. anomalies and regional geology along 18°N parallel 2-111864
- Indian shield, Moho temp. 2-83788
- Indian shield, Moho temp. calc. 2-73516
- induction, meas. techniques and instruments for land and sea obs. 2-78869
- Iranian Plateau, meas. of seismic waves phase and group vels. and Q using Wiener filtering 2-88748
- Isle of Ischia, Gulf of Naples, <33000 yr K-Ar dating of volcano-tectonic horst 2-111903
- Italy, gravity field and crust model 2-88716
- S. Italy, seismotectonics of Calabrian arc 2-88864
- Italy region, Rayleigh wave dispersion and tectonic evolution 2-62928
- Italy region, seismic velocity lateral heterogeneity 2-73457
- Ivrea Zone, Italy, mag. anomaly due to deep rock magnetisation 2-100241
- Izu Peninsula, Japan, upper crust struct., explosion seismic obs. in Mishima-Shimoda profile (*Japanese*) 2-83776
- Japan, anal. of stress field in semi-infinite elastic medium due to internal stress sources 2-100332
- NE Japan, crust and upper mantle struct. from seismic vel. and azimuth anomalies at Kitakami array 2-111892
- Japan, stress meas. by hydrofracturing, plate motions (*Japanese*) 2-94359
- NE Japan arc, crustal stress and movements rel. to structure (*Japanese*) 2-94331
- Japan Trench-Honshu area, crust and upper mantle struct. 2-83782
- Josephine ophiolite, California, evidence for struct. of oceanic crust 2-73512
- Kamchatka (USSR), crust struct. from geoelectric obs. 2-78548
- Kamchatka Trench area, crust struct. of continental margin 2-78611
- Kanto district, Japan, regional variation of struct., P_n residuals study 2-57983
- Kashmir intermontane basin development chronology 2-100362
- W Kentucky, New Madrid seismic zone, vertical fault displacement 2-68324
- Kentucky-Tennessee, USA, model of anomalous crust struct. 2-83780
- Kerch-Taman trough, USSR, EM sounding of crust struct. 2-117483
- kimberlite pipe occurrence rel. to geomag. anomalies at Panna, India 2-62884
- NE Kinki district, Japan, Moho depth rel. to occurrence of normal faulting microearthquakes 2-100315
- Kishorn Nappe recumbent fold palaeostrains (Scotland) 2-106045
- S Kitakami region (Japan), tectonic origin of allochthonous blocks 2-94341
- Klamath Mts., California, ophiolite accretion history 2-94347
- Klamath Mts., California, USA, accretionary subduction complex 2-94324
- Kuznetsk area, Volga Heights, USSR, age of granitic complexes 2-78610
- Ladakh Himalaya, evidence against Shyok palaeo-suture 2-83793
- Ladakh Himalayas, geology and tectonics 2-117259
- Lake Baikal region, heat flux distrib. and nature of local anomalies 2-73500
- lithosphere, effect of mantle heat convection 2-78616
- lithosphere containing density heterogeneities, tectonics and topography 2-94318
- lithosphere decoupling, evidence from seismic three-dimens. inhomogeneities 2-105991
- Lithosphere program (*Russian*) 2-83948
- lithosphere scattering model for seismic Q obs. in 1-30 Hz range 2-62898
- lithospheric plates motion, thermoelastic stress strain anal. 2-73525
- Livermore Valley, California, seismic velocity model 2-100267
- Livermore Valley region, California, struct. from seismic data 2-117210
- Long Valley caldera, California, magma reservoir reinflation rel. to Mammoth Lakes earthquakes 2-106064
- magma chambers, layered convection and crystal layers in multicomponent systems 2-106116
- magnetotelluric observatory observations, at Nagycenk, Hungary 2-78536
- Mahandi graben (Central India), gravity anomaly study 2-105895
- marginal seas, size and configuration rel. to warm saline bottom water in ancient ocean 2-68374
- Massif Central, France, spatial remote sensing and mining research of structural features (*French*) 2-68310
- W Mediterranean Basin, evidence for early history from Oligo-Miocene rift of Sardinia 2-106079
- Mesozoides of NE USSR, magmatism zoning and evolution 2-106044
- Messina Straits, Italy, crust struct. from seismic and elec. dipole soundings 2-100323
- Earth crust continued
- Messina Straits crustal model from seismic obs. 2-100322
- meteorite crater at Brent, Ontario, Canada 2-62956
- S. Mexico, direct evidence of subducted oceanic plate 2-62923
- Middle America Trench as example of subduction zone, study of bathymetry and tectonics 2-94351
- mineral paragenesis temp. determin. by explosion seismology method 2-62927
- mineralogy and petrology, conf., July 1980, Paris 2-58524
- Mino terrane (central Japan), geology and palaeomag. study 2-88745
- Mohorovicic discontinuity depth in Beijing (Peking) area, from seismic data (*Chinese*) 2-58008
- Mongolia, crustal and tectonic struct. 2-88862
- Mongolia, geoelectric inhomogeneities of crust 2-111854
- Inner Moray Firth basin development tectonics 2-106069
- N Morocco-Spain region, tectonic implications of elec. cond. struct. (*French*) 2-111910
- Mt. Hood region, Oregon, USA, seismicity and crust struct. 2-88797
- Mt. Hood region, Oregon, USA, volcanicity and crust struct. 2-88846
- Mt. Hood Volcano, Oregon, USA, aeromagnetic survey 2-88739
- Mt. Hood volcano, Oregon, USA, elec. resist. struct. obs. 2-88848
- Nevada northern Great Basin, seismic shear wave struct. 2-88794
- Newfoundland, Botwood-Mt. Peyton region palaeomag. and geochronology 2-88817
- Newfoundland, seismic vel. struct. of Bay of Islands ophiolite 2-68314
- normal fault development due to stress amplification 2-78635
- Norman Wells area of N. Canada, crust stress from borehole breakout obs. 2-111894
- North Sea basin development tectonics 2-106069
- North Sea Viking Graben, discovery of granite batholith 2-68316
- Norway, 3-D lithosphere model at Norwegian seismic array 2-117226
- Nova Scotia continental margin, evolution rel. to rifted margins models 2-106071
- Okhotsk region, temporal props. of Rayleigh waves in horizontally inhomogeneous lithosphere 2-73475
- Olympic Mts., Washington, USA, palaeomag. and accretionary origin 2-94274
- ophiolite emplacement by plate collision 2-94326
- Oregon and Idaho Volcanic Plateau, seismic shear wave struct. 2-88794
- Ozernoe ore node, W Transbaikai, gravity field morphology and structural-metallogenic features 2-57955
- Pahang, Malaysia, mag. survey of one deposits 2-100217
- Palmdale, California, structure from borehole-determ. ray parameters 2-68306
- Pamir-Hindu Kush vel. structure rel. to subducted crust 2-58013
- Pan African crustal accretion, evidence from Arabian Shield Nd and Sr isotopic evidence 2-106014
- Pannonian Basin crustal thinning and geothermics (*Hungarian*) 2-106032
- Papua New Guinea, crustal motion from geodetic meas. 2-100351
- passive continental margin evolution 2-83792
- Pelusium megashear system across Africa and associated lineament swarms 2-58016
- peninsular ranges, California, reversed refraction profile, crust vel. and thickness 2-117208
- Peru, electrical conductivity anomaly at dip equator 2-88741
- Peter I Ridge, Garm region, USSR, detailed investigation of seismic-tectonic deform. 2-73499
- post-Precambrian tectonism of Delhi-Aravalli belt 2-88863
- Proterozoic supercontinent configuration from palaeomag. data 2-88730
- Quetico Fault, redefinition near Atikokan, Ontario 2-78650
- Rangely, Colorado, crust stress from borehole breakout obs. 2-111894
- Red Sea crust, geology and topology (*Russian*) 2-83783
- Red Sea crust and continental margins at 20°N 2-94328
- reflection seismology, dip-movement and reflector point dispersal 2-100296
- resistivity modification by materials stress field time var. 2-78539
- resistivity sounding, bipole-dipole field difference technique 2-100580
- Rhine Graben, magnetotelluric and geomag. sounding of struct. 2-68245
- Riffian external zones, Morocco, metamorphic units (*French*) 2-117272
- rifted continental margins evolution, comparison of models and obs. for Nova Scotian margin 2-106071
- rock stress measurement in Sweden, glaciation as cause of high rock stresses 2-106035
- Roosevelt Hot Springs area, Utah, USA, faulting history 2-94357
- Salado Basin, Argentina, gravity anomalies and tectonic evolution 2-73414
- Santa Clara Valley, crust seismic vel. struct. 2-100273
- Santa Cruz Mountains, crust seismic vel. struct. 2-100273
- Sardinia, geology of Oligo-Miocene rift rel. to early history of W Mediterranean Basin 2-106079
- E Savant Lake-Crow Lake metavolcanic-metasedimentary belt, -NW Ontario, U-Pb zircon ages 2-94317
- S Scotland, crust and upper mantle electrical conductivity structure 2-78537
- Scottish Caledonides, seismic study of crustal struct. 2-117246
- Sea of Crete and Hellenic arc, synthesis of tectonic development 2-94352
- seismic reflection sounding, appl. to determ. of anisotropy parameters of rocks elastic props. 2-106114
- seismic sounding, time-to-depth migration using wavefront curvature 2-100293
- Setouchi volcanic belt, Japan 2-117261
- Setouchi volcanic belt, SW Japan, andesite origin 2-117260
- shallow underground structure, effect on seismic motions of ground surface 2-105954
- Shandong Province earthquakes, crustal structures, faults and tectonics (*Chinese*) 2-62897
- Sharnburg, Kentucky, earthquake, 1980 July 27, isoseismal maps, focal mechanism and faults plane soln. 2-88755
- Shillong region, NE India, evidence for dilatancy stage precursory to large earthquake 2-94301
- W Siberia, prospects for natural gas hydrates in cooled zones of crust 2-58041
- NW Siberia oil and gas stratigraphic traps, seismic refl. prospecting 2-78586
- W Siberian Plate, refl. seismic sounding of crust struct. 2-105997
- Siberian Platform, seismic refl. sounding method for oil deposits 2-88809
- Sierra Nevada, California, seismic profile of crust 2-100272
- Sierra Nevada, California, tectonic rotation history 2-94346
- Snake River Plain, Idaho, USA, crust struct. by seismic refl. study 2-88790
- Snake River Plain, Idaho, USA, new category of volcanism 2-88825
- E Snake River Plain, Idaho, USA, seismic study of crust struct. 2-88791

Earth crust continued

- E Snake River Plain, Idaho, USA, seismic vel. struct. 2-88793
 E Snake River Plain, Idaho, USA, seismic velocity struct. 2-88788
 Snake River Plain, Idaho, USA, seismic vel. and crust struct. 2-88795
 E Snake River Plain, Idaho, USA, shear wave velocity struct. 2-88792
 NE Sonora, Mexico, geology and seismicity in epicentral area of 1887 earthquake 2-88815
 Southern Cape Conductive Belt (S.Africa), geology and tectonic significance 2-78634
 strain measurements in South Africa, obs. of coseismic and other short-term strain changes 2-105957
 stress measurement by borehole wall fracture obs. technique 2-111894
 striations on pre-existing faults, calc. of responsible tectonic processes 2-73534
 structure from seismic phases in a three layer crustal model (*Chinese*) 2-100324
 Sudbury area of Canada, uplift deduced from remanent mag. 2-62937
 Sudbury basin offsets, Ontario, Canada, palaeomag. of eruptive rocks 2-88744
 surface loading response, analytical study with appl. to Lake Bonneville 2-106070
 surface quasi-static strains and tilts due to faulting in layered half-space, theory 2-100205
 Swiss Alps, internal, kilometric scale shear folds (*French*) 2-88852
 Sydney Basin, S.E. Australia, magnetostratigraphy of Permian/Triassic 2-68254
 Syros, Greece, ductile thrust zone deformation 2-106093
 Tadzhikistan, USSR, crustal deform. as long-term forerunner of series of strong earthquakes 2-117234
 Tangshan, China, anomalous land uplift and aseismic creep before 1976 earthquake 2-94307
 Tangshan earthquake, 1976 July 28, physico-rheological model 2-94308
 Tarim Basin, Rayleigh wave study of layered crustal structure (*Chinese*) 2-106009
 Taupo Volcanic Zone, New Zealand, geophys. study 2-100342
 tectonic processes, possible time vars. of elements of Earth gravity field 2-117183
 tectonic stress amplification in upper crust due to creep in lower crust 2-100355
 tectonic stress regime in N China Plain, implications of finite-element anal. of seismicity 2-94305
 Tennant Creek Block, Northern Territory, Australia, reconnaissance of upper crustal seismic vels. 2-117223
 tensile fracture lineaments, tension due to tectonic uplift 2-83775
 Tethyan blocks and evolution of Asian fold belts 2-73535
 E Texas Basin, crust stress from borehole breakout obs. 2-111894
 The Geysers-Clear Lake geothermal field, California, seismic wave vel. investigations 2-88778
 thermal convection above crustal large shallow magma bodies 2-78620
 thermal diffusivity of rocks in crust and upper mantle 2-106107
 Tibet Plateau, Q struct. from seismic attenuation data 2-105987
 Timor region, crustal reactions to mid-Pliocene to Recent continent-island arc collision 2-117276
 Tras os Montes, Spain, seismic vel. struct. and Hercynian tectonics 2-88779
 Troodos Complex, Cyprus, Pb isotopic composition of ophiolitic volcanogenic sulphide deposits 2-62925
 Turkey, melange unit origin and tectonic setting 2-94327
 Ukraine, seismic study of deep crust struct. (*Russian*) 2-105963
 Ukrainian Shield, crustal thickness rel. to one content (*Russian*) 2-106024
 Ukrainian Shield, magnetotelluric sounding of crust struct. (*Russian*) 2-57969
 ultramafic xenoliths, petrologic and geochem. evidence for crust origin 2-73507
 United States, fault zone models and heat flow rel. to depth distrib. of earthquakes in continental crust 2-88751
 Ural Mountains, deep seismic sounding data rel. to horizontal movements of Earth crust 2-117278
 SE USA, regional crustal vel. model 2-68308
 USSR, mineral resource exploration programme (*Russian*) 2-73509
 Vancouver Island region, elec. cond. struct. of subduction region 2-57975
 Variscan brittle tectonics of S Rhone valley, Gard faults dynamics, tertiary stress fields (*French*) 2-88851
 Variscan fold belt of S.W.England 2-106088
 Variscan geology of S Brittany, significance of E-W lineation (*French*) 2-100348
 N Vietnam, Sn ore deposits 2-78613
 Vindhyan basin (Central India), gravity anomaly study 2-105895
 volcanic landforms of Earth and Moon, comparison 2-100778
 Voronezh crystalline massif area, rock Poisson ratios 2-106106
 Voznesenskii ore region, Primor'e, crust approx. by mass of material points 2-100338
 Vrancea region, Rumania, seismo-tectonic deform. of lithosphere 2-117235
 W/Greenland, metamorphism of 3800 M yr. supracrustal rocks 2-88820
 White Hills Peridotite, Newfoundland, tectonic structs. related to thrusting of ophiolitic complex 2-94365
 White Mountains, New Hampshire, USA, seismic vel. anisotropy 2-88801
 Wind River range, Wyoming, USA, crust struct. from seismic refl. data 2-57987
 WWSSN stations in India and S Asia, crust struct. from seismic wave characts. 2-117274
 Yanshan region fault structures, movement and seismicity (*Chinese*) 2-62934
 Yellowstone, Wyoming, USA, crust struct. by seismic profiling 2-88787
 Yellowstone Caldera, USA, anomalous seismic vel. struct. 2-88796
 Yellowstone caldera area, USA, seismic vel. struct. 2-88826
 Yellowstone Park, USA, vertical crustal motion since 1923 AD 2-88856
 Yellowstone Park area, USA, crust seismic rel. struct. 2-88824
 Yenisei Range, USSR, crust struct. and tectonic origin 2-78612
 E Yorkshire, England, magnetotelluric study of crust cond. 2-100213
 Nd isotope characts. of granite batholiths of S.E. Australia 2-62917
 S isotopes in E Siberian iron ore deposits 2-78614

Earth electricity *see terrestrial electricity*

Earth heat *see terrestrial heat*

Earth interior

see also Earth core; Earth crust; Earth mantle; tectonics; volcanology
 adiabatic temperature gradient in the mantle 2-106040

Earth interior continued

- atmosphere and ocean degassing model based on geochem. evidence 2-100562
 chlorides (NaCl, CsCl, AgCl), compressibility and Moelwyn-Hughes parameters at high-press. 2-58040
 cordierite, high-press. phase transition 2-106104
 density models, gravity/pot. parameters in geodetic reference system and stratified heterogeneous spheroid 2-105894
 density of primaeval Earth (*German*) 2-100199
 electrical impedance estimation in horizontally homogeneous media, probable model 2-111848
 EM induction, surface polarisation fields for two-dimensional bodies of infinite conductivity 2-117194
 equation of state model of Earth interior 2-100327
 equation of state of metals for core conditions 2-117300
 expanding Earth due to variable gravitational constant 2-88830
 faulting in layered half-space with viscoelastic layer, surface quasi-static strains and tilts 2-100205
 free oscillation parameter estimation, effect of data window 2-73468
 free oscillations, freq. and damping, effect of young oceanic regions 2-105977
 free oscillations and core modes of rotating elliptical Earth 2-73465
 free oscillations of Earth, ray theory of spheroidal oscills. 2-57982
 Gruncisen parameter accuracy 2-106100
 hydrostatic theory of second order, implications 2-106039
 magnetite, ferri-paramagnetic transition at high-press. at Curie point 2-106108
 mass distributions in Earth interior, rel. to soln. of direct problem of gravimetry 2-117184
 normal modes of viscoelastic Earth 2-73466
 olivine, O₂ partial press. effect on dislocation recovery, creep mechanism constraint 2-106117
 phase boundary motion due to surface press. and temp. excitations 2-100339
 Poisson ratio of rocks at high-press. and -temp. 2-106106
 primitive Earth thermal evolution 2-88842
 properties of minerals at planetary interior conditions, conf., July 1981, London, Ontario, Canada 2-101121
 Q-factor, theory of elastic radiation from source in medium with almost freq.-independent Q 2-100314
 Rayleigh wave transmission through vertical contact, calc. via improved version of Alsop's method 2-117237
 seismic free oscillations in a regionalised Earth model 2-68232
 seismic head waves propag. at curvilinear refracting boundary, inverse kinematic problem 2-105992
 seismic Q values from antipodal Rayleigh wave obs. 2-88799
 seismic wave propagation, method of Richardson extrapolation in ray problem 2-73476
 seismic wave propagation, refl.-refr. of general P- and SV-waves in elastic and inelastic solids 2-105955
 seismology, external boundary problem in elastic oscills. theory for spherical cavity in halfspace 2-73479
 stress field in semi-infinite elastic medium due to internal stress sources, rel. to tectonics of Japan 2-100332
 stress sources, effects on Earth surface vertical displacement and gravity field 2-73419
 structure and evolution (book) 2-84402
 tectonic processes, possible time vars. of elements of Earth gravity field 2-117183
 temperature profiles of terrestrial planets, theory 2-106577
 tides in solid Earth, influence of lateral mantle inhomogeneities 2-57951
 tides in solid Earth 2-78524
 torsional Earth oscillations 2-105973
 Fe-Ni-S system, compressibility and elec. cond. at core conditions 2-58022
 FeO high-press. polymorphism at Earth core conditions 2-88821
²⁰Ne/²²Ne ratio in Earth interior, rel. to rare gas retention by accreting Earth in solar nebula 2-112353

Earth lower mantle *see Earth mantle*

Earth magnetic field *see geomagnetism*

Earth magnetic field variations *see geomagnetic variations*

Earth mantle

- 650 km depth discontinuity and S to P conversion of seismic waves 2-68289
 adiabatic temperature gradient in the mantle 2-106040
 E Africa, thermal model of lithospheric thinning assoc. with continental rifting 2-106078
 African-Sicilian Rise, geothermal conditions of upper mantle from heat flow meas. 2-73498
 Southern Alps, Italy, deep seismic sounding profiles 2-105940
 Archaean mantle structure, evidence from komatiites 2-106021
 Archaean mantle chem. composition 2-73497
 central Asia, estimation of seismic Q as function of freq. and depth using coda of local earthquakes 2-88750
 asthenosphere depth in Pannonian basin 2-106037
 asthenosphere flow, evidence from seismic three-dimens. inhomogeneities 2-105991
 N Atlantic basaltic magma, hydromagmaphile elements and mantle implications 2-117265
 N Atlantic mid-ocean ridge, He isotope variations and mantle heterogeneity 2-62914
 NW Australia, isostasy and struct. of lower crust and upper mantle in Pecambrian terrains from gravity studies 2-117256
 NW Australia, seismic discontinuity 200 km below continental margin 2-88781
 basalt genesis and mantle structure studied through Th-isotopic geochemistry 2-111902
 Basin and Range Province, USA, seismic study of Earth struct. 2-100274
 southern California, lateral seismic velocity variations 2-73485
 Chandler wobble theory 2-100198
 chemical composition of core and lower mantle 2-68318
 chemico-convection hydrodynamics model 2-106029
 SE China, inefficient teleseismic S_u propagation below crust 2-117230
 SE China, seismic surface wave dispersion and Earth struct. 2-68285
 N China Plain, mantle seismic struct. beneath earthquake region (*Chinese*) 2-68263
 N China Plain, upper mantle upwelling rel. to seismicity, finite element anal. 2-94305
 circulation model, multiple scale convection 2-78609

Earth mantle continued

- Columbia River flood basalts, USA, chem. and isotope composition 2-62919
 composition from mid ocean ridge basalt rocks anal. 2-78648
 convection, convection, effect of solar activity rel. to Earth diurnal rot. vars. 2-111834
 convection, evolution with phase transitions 2-83772
 convection, numerical model of non-Newtonian flow 2-117283
 convection, theory for two immiscible liquids 2-100358
 convection currents in Earth's mantle, models 2-117279
 convection model including phase transition phenomena 2-100360
 convection pattern and tectonic source mechanism in China 2-106038
 convection with nonlinear rheology, influence of lithosphere 2-62939
 core interface topographic coupling, mag. field effects, Earth rot. var. 2-68235
 core-mantle transition zone struct. 2-117264
 coupling with outer core, heat flow rel. to geomagnetic reversals 2-78604
 creep properties (*Chinese*) 2-106008
 deep focus earthquakes of Fiji-Tonga region, seismic moments 2-73478
 diamond, garnet inclusions and state of Earth's upper mantle 2-62929
 diamond formation (*Russian*) 2-83813
 elec. cond. of lower mantle and influence on geomag. step variations 2-73442
 electric field produced by core dynamo 2-105926
 electrical conductivity, rel. to analytical estimation of main geomag. field and secular vars. to core surface 2-111850
 electrical conductivity profile, determ. from EM induction by long period geomag. vars. in Indian sub-continent 2-111865
 equation of state model of Earth interior 2-100327
 evolution rel. to oceanic basalt Sr and Nd geochemistry 2-73551
 ferromagnesian silicate composition, model 2-78603
 fragments in high velocity eruptions, metasomatic introduction of volatile bearing minerals before melting 2-73506
 free oscillation of Earth indicating anisotropy of upper mantle 2-73495
 Friuli, Italy, upper mantle lower surface depth from earthquake P_n wave obs. 2-100250
 geochemistry of permeability controlled partial melting 2-68317
 Gorrington Bank, oceanic crust + mantle, active in situ disaggregation, analogy with ophiolitic massifs 2-88831
 heat convection in upper mantle, effect on lithosphere 2-78616
 heat flow effect on lithosphere thinning, appl. to Hawaiian Emperor chain evolution 2-68321
 Honolulu Volcanics, geochem., petrology and mantle composition 2-106011
 Iceland hotspot, tectonic evolution 2-62942
 India, seismic struct. of upper-mantle regions 2-111904
 Indian shield, Moho temp. 2-83788
 isotopic heterogeneity evolution in a convecting mantle 2-117257
 Italy, seismic delineation of North Central Italian upper mantle anomaly 2-62924
 Italy area, lateral variation of 400 km discontinuity 2-88771
 Italy region, Rayleigh wave dispersion and tectonic evolution 2-62928
 Italy region, seismic velocity lateral heterogeneity 2-73457
 Japan, anal. of stress field in semi-infinite elastic medium due to internal stress sources 2-100332
 NE Japan, crust and upper mantle struct. from seismic vel. and azimuth anomalies at Kitakami array 2-111892
 NE Japan area, seismic study of regional mantle struct. 2-62905
 Japan Trench-Honshu area, crust and upper mantle struct. 2-83782
 Kanto district, Japan, regional variation of struct., P_n residuals study 2-57983
 NE Kinki district, Japan, obs. of normal faulting microearthquakes near Mohorovicic discontinuity 2-100315
 korringtonite, stability at upper mantle conditions 2-58023
 orogenic lherzolite massif geochem. and upper mantle history 2-106036
 magnesiowüstite, eqn. of state at Earth mantle press. 2-78645
 magnetic flux across core-mantle boundary, Gauss coeffs., upper limits 2-100224
 major element heterogeneity evidence from submarine basalts 2-62915
 Mariana Trough, seismic vel. struct. 2-100330
 S. Mexico, direct evidence of subducted oceanic plate 2-62923
 mineral paragenesis temp. determin. by explosion seismology method 2-62927
 minerals, elec. cond. meas. in laboratory 2-78651
 Mohorovicic discontinuity depth in Beijing (Peking) area, from seismic data (*Chinese*) 2-58008
 Mt. Hood region, Oregon, USA, seismicity and crust struct. 2-88797
 Norway, 3-D lithosphere model at Norwegian seismic array 2-117226
 oceanic islands, $^3\text{He}/^4\text{He}$ in igneous rocks used for mantle age determ. 2-78605
 Okhotsk region, temporal props. of Rayleigh waves in horizontally inhomogeneous lithosphere 2-73475
 olivine, 'spinel to β -phase' transition mechanism 2-73547
 olivine-spinel phase transformation in Earth upper mantle, martensitic transform, hypothesis 2-100373
 olivine-spinel phase transition at Earth mantle conditions 2-106105
 NW Pacific, geothermal heat flow distrib. 2-88840
 SW Pacific mantle attenuation of short-period waves 2-100310
 phase transition density jump regions and assoc. gravity anomalies/sea level var. 2-111899
 plasticity of upper mantle, laboratory expts. on forsterite 2-106082
 precious metal abundances deduced from lherzolite Au, Pd, Ir obs. 2-62918
 properties from oceanic expansion domain hygromagmaphile elements anal. by neutron activation 2-117266
 Q value freq. depend. by absorpt. band model 2-100309
 Q value of mantle in Australian region 2-58000
 Rayleigh waves group velocity, worldwide distrib. from spherical harmonic anal. 2-117207
 rheology use of deformation maps in grain-size-stress space 2-106081
 S-wave anisotropy of Pacific upper mantle 2-78577
 S Scotland, crust and upper mantle electrical conductivity structure 2-78537
 seismic attenuation properties on worldwide scale 2-117251
 seismic characts. of eclogite at 20 kbars 2-117243
 seismic properties of mantle rocks 2-105985
 seismic Q values from antipodal Rayleigh wave obs. 2-88799
 seismic vel. anisotropy of oceanic areas on global scale 2-83781
 seismic velocity discontinuity 200 km below continental margin 2-88781
 seismic wave attenuation and dispersion global struct. 2-100297

Earth mantle continued

- Siberian Platform asthenosphere struct. from magnetotelluric obs. 2-78550
 E Snake River Plain, Idaho, USA, seismic study of crust struct. 2-88791
 E Snake River Plain, Idaho, USA, seismic vel. struct. 2-88793
 spatite role in mantle enrichment processes 2-111900
 structure from free oscill. data 2-106033
 structure of lower mantle from earthquake analysis in 40-70° distance range 2-105980
 surface loading response, analytical study with appl. to Lake Bonneville 2-106070
 teleseismic SH body-wave train modelling 2-117252
 teleseismic travel times of upper mantle 2-105967
 thermal diffusivity of rocks in crust and upper mantle 2-106107
 Tibet Plateau, Q struct. from seismic attenuation data 2-105987
 tides in solid Earth, influence of lateral mantle inhomogeneities 2-57951
 United States, seismic attenuation struct. of mantle 2-68286
 USSR, upper mantle seismic velocity struct. 2-88807
 Vancouver Island region, elec. cond. struct. of subduction region 2-57975
 viscosity deduced from glaciation caused Earth rot. changes 2-88720
 viscosity of lower mantle deduced from Earth rot. changes 2-105884
 Voronezh crystalline massif area, rock Poisson ratios 2-106106
 Walvis Ridge basalts, isotope geochemistry rel. to mantle source 2-106015
 Nd/Sr/ P_b isotopic systematics in three-component mantle model 2-100334
 Sr isotopic evidence for upper mantle long lived heterogeneities 2-100333

Earth orbit

- anomalous motions of Earth-Moon system, rel. to equivalence principle 2-68603
 equation of time, approx. function and correction terms 2-78929
 equinox motion, rel. to FK4 orientation determ. from Washington obs. of Sun and planets (*Russian*) 2-106480
 FK4 reference frame rot. from lunar occultations of stars timings 2-58229
 inertial frame determ. using minor planets, simulation of HIPPARCOS obs. 2-89115
 meteorite falls on Earth's surface, depend. of relative rates on season 2-89209
 palaeoclimatology, appl. of marine-astronomical correls. to dating of Brunhes-Matuyama mag. reversal 2-94277
 solar observations in Washington, 1911 to 1970, comparison with Newcomb's theory (*Russian*) 2-100709

Earth rotation

- see also time and latitude
 angular vel. vars. effect on pulsar period determ. (*Chinese*) 2-62881
 atmosphere angular momentum interannual variability causing rot. variations 2-58101
 CERG astrolobe, latit. and longit. vars. rel. to positional obs. of Sun in (1980) (*French*) 2-100855
 Chandler wobble, ellipticity parameters (*Ukrainian*) 2-83735
 Chandler wobble analysis theory 2-78525
 Chandler wobble calc. from Earth free oscill. models 2-73465
 Chandler wobble theory 2-100198
 day length changes rel. to zonal luni-solar tidal potentials 2-78527
 deceleration from old solar tables 2-88717
 Earth tides, effects on rot. and degassing of Earth (*Russian*) 2-83737
 glacial ice sheet rot. changes, effect of mantle viscosity 2-88720
 Greenwich Obs. Time and Latitude Service, Time Report (April to June 1981) 2-78931
 Greenwich Obs. Time and Latitude Service, Time Report (July to September 1981) 2-100707
 Greenwich time report, Royal Greenwich Observatory Time and Latitude Service, (January to March 1981) 2-68599
 ice age model with cryographic forcing and Earth rot. dynamics 2-63008
 irregular changes in gravity and Earth's rotation, 1966 to 1981, correlated trends (*Russian*) 2-105896
 kinetic energy and tides 2-111932
 length of day, long-period vars. rel. to Wolf sunspot numbers 2-105881
 light velocity changes, used for Earth rotation measurement with optical fibre gyro (*German*) 2-69149
 Love number, determ. from rot., astron. obs. 2-94269
 lunar laser ranging from McDonald Observatory (*Chinese*) 2-111832
 mantle-core interface effect on rot. through topographic coupling 2-68235
 Merate Observatory time and latitude results, Danjon astrolabe obs. (1981) 2-105882
 meteorite falls on Earth's surface, depend. of relative rates on time of day 2-89209
 meteorological excitation of annual polar motion 2-88719
 non-uniform rotation and polar movement (*Russian*) 2-83738
 nutation, 1980 IAU theory, Working Group Final Report 2-88718
 nutation and precession due to changes due to Mars, Venus, Jupiter 2-73415
 nutation calc. axis determ. from astronomical obs. 2-117188
 nutation constant corrections from ILS data (*Chinese*) 2-83731
 nutation terms derived from BIH data 2-68233
 obliquity, earliest known accurate obs. (135 BC) 2-101154
 ocean surface temp. variations in Guinea Gulf due to rot. variations (*Russian*) 2-88900
 ocean tidal dissipation, effect of Earth rot. axis changes 2-68342
 oceans tidal dissipation, secular effects 2-111843
 on-line astrometrist system for Earth rotation parameters determ. 2-58261
 parameters' solution from time and latitude classical obs. (*Chinese*) 2-78520
 polar motion effect on earthquakes displacement field excitation (*Chinese*) 2-78552
 polar motion in AD 1899 to 1979 period, and geophys. implications 2-88713
 polar wander paths from Carboniferous to Cenozoic 2-105889
 pole motion determination method in FK4 system 2-106546
 primeval day length rel. to gravit. const. invariability. (*German*) 2-100199
 RATAN-600 exact time and frequency service 2-94611
 rate vars. and leap second (*Japanese*) 2-78519
 secular instability of rotational pole due to ice ages 2-105884
 slowing due to polar cap melting due to atm. temp. increase 2-78693
 solar activity effect on Earth diurnal rotation rate, mechanism 2-111834
 solar wind velocity variations and correl. to Earth rot. changes 2-117523

Earth rotation continued

tidal deceleration of Earth rotation, anal. of tidal deformation of viscoelastic body 2-105887
time and latitude, Danjon astrolabe obs. at Rio de Janeiro, May 1977 to December 1979 2-100706
timekeeping, rel. to atomic clocks 2-69126
Tokyo Astronomical Obs., Time and Latitude Bulletins (January-March 1982) 2-106481
Tokyo Astronomical Obs., Time and Latitude Bulletins (July to September 1981) 2-68600
Tokyo Astronomical Observatory, Time and Latitude Bulletins (October to December 1981) 2-84065
Tokyo PZT star catalogue, positions improvements, effect of nutation 2-63272
very long baseline interferometry appl. (*Japanese*) 2-89166
wobble excitation by atmos. and oceans 2-100197

Earth satellites see artificial satellites; Moon

Earth structure

see also *Earth composition; Earth interior*
Alpine-type peridotites in Morocco, polyphase tectonics 2-83801
Andean ophiolitic megastructures on Buga-Buena Ventura transverse 2-83787
Columbia, W Cordillera, Andean ophiolitic megastructures 2-83787
Galapagos Rift, volcanism, structure and hydrothermal activity 2-58026
gravity anomalies interpretation, appl. of equivalent mass redistribs. in inverse gravity problem 2-117182
isostatic compensation rel. to gravit. potential and topography, degree variances 2-105883
NE Japan arc, crustal stress and movements rel. to structure (*Japanese*) 2-94331
Lewis Hills Massif seismic vel. structure rel. to oceanic fracture zones 2-58014
lower mantle, earthquake analysis in 40-70° distance range 2-105980
mid-oceanic ridges in tropical zone of Atlantic, Indian and Pacific Oceans, crustal struct. 2-117263
oceanic crust, mag. model for middle Atlantic Ocean 2-73438
Palmale, California, crustal structure from borehole-determ. ray parameters 2-68306
Pamir-Hindu Kush vel. structure rel. to subducted crust 2-58013
S. Scotland, crust and upper mantle electrical conductivity structure 2-78537
S. Scotland, geoelectric structure, tectonic implications 2-78538
shallow underground structure, effect on seismic motions of ground surface 2-105954
Tarim Basin, Rayleigh wave study of layered crustal structure (*Chinese*) 2-106009
Ural Mountains, seismic struct. rel. to horizontal movements of Earth crust 2-117278

earth surface processes see geomorphology

Earth third layer see Earth mantle

Earth upper layer see Earth mantle

earthing

AC electrodeless discharge current, earthing effects 2-65776
TFTR diagnostics grounding 2-80296
TFTR grounding system 2-80312
transmission line, thermal grounding, in dilution refrigerator 2-89722

earthquake recorders see seismometers

earthquakes

see also *seismology*
3-D model of fault initial motion (*Chinese*) 2-73453
Acapulco-San Marcos region of Mexican subduction zone, seismic potential 2-111881
E. Africa, focal mechanism of major earthquakes in Western Rift Valley 2-117224
aftershock activity separable into two stages (*Chinese*) 2-73450
aftershock sequence in Pyrenees, modelling of interactions between Earth tides and earthquakes 2-88752
Alaska, 20 May 1979, fault plane soln. 2-100262
in alluvial valley, interface depth effect on strong ground motion 2-88768
Alpide Belt shocks, peak ground horizontal acceleration 2-68277
Ancona, Italy, 1972 swarm, peak ground horizontal acceleration 2-68277
animal behaviour prior to quakes due to acoustic emission (*Chinese*) 2-57981
Ba Bao Shan fault, near Beijing, China, tectonic movement and earthquake occurrence (*Chinese*) 2-57980
Baffin Bay, seismicity obs. (during 1978 AD) 2-111869
Baikal region, earthquake focal depths determ. 2-83769
Bear Valley, California, shocks focal mechanism, use of computer program 2-78561
Beijing area, China, Curie temp. isothermal surface rel. to earthquakes (*Chinese*) 2-100258
Beijing-Tianjin district, quality factor and average stress drop (*Chinese*) 2-105938
Bermuda rise, intraplate earthquake focal mechanisms 2-100312
Borrego Mountain, 1968 April 9, P-wave complexity and fault asperities 2-88761
Borrego Mountain, California, 9 April 1968 fault plane soln. 2-100262
Bungo channel, earthquake focal distrib. and seismicity 2-68302
Burma-Szechwan region, premonitory swarms to large quakes 2-88812
E. Canada, 1925-1944, near field effects, reappraisal 2-78597
Canada, strong ground motion, attenuation relations 2-68274
NE Caribbean, microearthquakes spectra, effect of attenuation and site response 2-117217
NE Caribbean plate, focal mechanisms of microearthquakes 2-100301
catalogue of damage and injuries (2000 BC to 1979 AD) 2-100270
Chiba, Japan, 1980 September 25, SWAN example (*Japanese*) 2-78875
Chile, May 1960, radiowave precursory emissions 2-88800
N. China, focal mechanisms and crustal stress field (*Chinese*) 2-73451
N. China, occurrence of major earthquakes in groups 2-94304
China earthquakes, b-values spatial distribution before quakes (*Chinese*) 2-83754
N. China Plain, exptl. studies and finite element anal. of seismicity 2-94305
climatic change effect on earthquakes 2-88804
clustering property of earthquakes, statistical analysis method 2-88798
composite focal mechanism solns., P-wave first motion data sorting method 2-89014
conference, Oct. 1980, Atlanta, USA 2-94893

earthquakes continued

conference on earthquake quantification at Canberra, Australia (December 1979) 2-74158
Coyote Lake, California, 6 Aug. 1979 fault plane soln. 2-100262
Coyote Lake, California, USA, mechanism of Aug. 1979 event 2-100263
crack effects on elastic moduli of rocks, thermal shock role, correl. with earthquake magnitude 2-73548
Dead-Sea rift, 1500 year cycle of earthquakes occurrence 2-105942
determination of energy of nearby quakes, influence of station soil conditions 2-105999
discrimination from explosions at Tonto Forest Observatory from seismic anal. 2-117472
discrimination from explosions using Pn and Pg propag. at regional distances 2-88763
dislocation models of tectonic earthquake 2-83749
displacement field excitation by polar motion (*Chinese*) 2-78552
displacement fields of earthquakes, theory (*Chinese*) 2-57978
Dongchuan (China), mechanism of 1966 earthquake (*Chinese*) 2-57978
dynamic faulting, finite difference method study 2-88758
Ecuador-Colombia coast subduction zone, variable rupture mode from earthquake anal. 2-117275
eigen vibrations from ground motion time series anal. 2-68294
El Asnam, Algeria, 1980 October 10, multiple source mechanism and moment 2-117204
elastic radiation from source in medium with almost freq.-independent Q, appl. to source parameters determ. 2-100314
EM field transfer functions var. with time as precursors 2-78541
energy release 2-88759
epicentre distrib. and migration in Crimea (*Russian*) 2-105961
Eureka, California, 1980 November 8, long-period mechanism 2-88762
event detection using microprocessor controlled time-deoder and printer 2-58157
fault bifurcation, fracture mechanics study 2-78633
fault dynamics, rectangular fault finite difference model 2-100261
fault generated seismic waves, invariant formulae 2-100298
fault model parameters rel. to tsunami energy (*Japanese*) 2-83755
fault movements causing changes in gravity field (*Chinese*) 2-57950
fault structure and Rn emission, correlation 2-68293
Fenton Hill, NM, HDR geothermal site, hydraulic fracturing microearthquakes 2-100304
Fiji-Tonga region, seismic moments of foci of deep-focus earthquakes 2-73478
focal depths, assoc. oceanic plate bending at trenches 2-100320
focal mechanism computation from local SV and P wave data 2-68500
focal mechanism determ. using P-wave first motion, computer program 2-78561
focal mechanisms, meas. of US radiation from crack in strained rock specimen 2-117295
France, seismotectonic map (*French*) 2-100285
Friuli, 1976, peak ground horizontal acceleration 2-68277
Friuli, 1976 May 6, P_n waves time-distance curves 2-100250
Friuli, Italy, 1977 September 16, aftershock sequence time evolution 2-117221
Friuli, Italy, mechanism and aftershocks of Sept. 1977 event 2-105941
Friuli area, Italy, space-time evolution of 1977-1980 seismicity and seismotectonic implications 2-117222
Friuli earthquakes tectonic discrimination from seismic activity anal. 2-78558
Friuli region, strong motion accelerograms, attenuation 2-68276
Fukui, 1948 June 28, earthquake hazard rel. to Fukui Plain Bouguer anomaly 2-68300
Garm region, USSR, focal mechanism change with time 2-62901
Gauribidanur array analysis of events in 40-70° distance range 2-105980
Gazli, USSR, April and May 1976, seismotectonic conditions of earthquake occurrence 2-117233
Gazli, Uzbekistan, 1976 May 17, magnitude, ground motions and focal mechanism 2-73473
generalised exponential distrib. of intensity and magnitude 2-100278
Genroku 16 (1703 Dec. 31) origin of tsunami, damage 2-68301
S. Ghana, intensity attenuation from major earthquake anal. 2-111891
N. Greece, premonitory pattern of earthquakes (May to June 1978) 2-62910
Greece, seismic events rel. to Holocene movements of crustal blocks in Crete and Antikythera 2-94349
ground acceleration, high freq. strong motions 2-68280
ground motion, peak horizontal acceleration estimation 2-88770
ground motions, accelerogram modelling 2-88769
ground motions, effects on cliffs (*Japanese*) 2-94288
ground surface seismic motions, effect of underground struct. 2-105954
Haicheng, China, earthquake and earthquake swarm, use of foreshock sequence in prediction 2-94306
Haicheng, China, precursory groundwater changes to 1975 event (*Chinese*) 2-73454
Haskell fault model, displacement field determ. method 2-117201
Hawaii, April 1973 double event below Mauna Kea 2-68290
Hellenic Arc, seismicity and earthquake magnitudes 2-105943
Hellenic trench-arc system, long-term earthquake prediction 2-94309
Hindu Kush, Afghanistan, appl. of seismic coda to estimation of Q as function of freq. and depth 2-88750
Hindukush region, seismotectonics and earthquakes 2-68328
Hong Kong, some influencing geological factors 2-68292
Imperial Valley, 1979 October 15, strong-motion modelling 2-88767
Imperial Valley, California, 15 Oct. 1979 event and deformation 2-100203
Imperial Valley, California, 1979, peak horizontal accel. and vel. 2-68278
Imperial Valley, California, 1979 October 15, anal. of data from El Centro differential array 2-88756
Imperial Valley, California, hypocentre details of Oct. 1979 quake 2-111879
NE India region, probabilistic earthquake expectancy 2-100280
influence on F-layer electron conc. 2-73777
intensity attenuation pattern for United States 2-88780
intraplate stress buildup and intraplate seismicity 2-73531
Iraq, seismic risk anal. 2-100289
Italy, 1980 November 23, design basis for satellite emergency communication 2-117199
Iyonada Channel, earthquake focal distrib. and seismicity 2-68302
Izu Peninsula, Japan, 1980 earthquake swarm, focal mechanisms (*Japanese*) 2-94311

earthquakes continued

- Izu Peninsula, Japan, 1980 June 29, obs. and traces and damage (*Japanese*) 2-94280
 Izu-hanto-toho-oki, 1980 June 29 area, ocean bottom high freq. waves (*Japanese*) 2-94286
 NE Japan, crust and upper mantle struct. from seismic vel. and azimuth anomalies at Kitakami array 2-111892
 Japan, epicentres automatic regionalisation (*Japanese*) 2-94281
 Japan, large earthquakes occurrence rate, seasonal variation, regional differences 2-106005
 Japan, multiple earthquake events in 1926 to 1979 period 2-83765
 Jie Xin, Shansi Province, China, mechanism of June 1979 event (*Chinese*) 2-73448
 Jijeli, Algeria, 1856 August 22, implications for seismicity of N.Africa 2-117220
 Kakioka, Japan, transfer functions time changes rel. to earthquake occurrence 2-100305
 Kanto district, Japan, hypocentre relocation using better crust struct. data 2-57983
 Kashmir-Sinkiang earthquake of Feb. 1980, mechanism 2-88813
 kinematic source parameters, moment tensor description 2-68291
 NE Kinki district, Japan, obs. of normal faulting microearthquakes near Mohorovicic discontinuity 2-100315
 Kodiak continental shelf, Alaska, earthquake activity determ. by land and ocean bottom seismograph networks 2-88754
 Koyna, India, seismic energy release in 13 years following 1967 'quake 2-78594
 Kremasta reservoir earthquake sequence induced by filling (N.Greece) 2-88774
 north Kurile earthquake of Feb. 28 1973, focal mechanism and seismic waves 2-57991
 Kurile Islands, 1963 October 13, Rayleigh long-period waves, attenuation and phase vel. (*Japanese*) 2-94285
 Kurile Islands earthquakes, temporal props. of Rayleigh waves in horizontally inhomogeneous Okhotsk region 2-73475
 Lake Jocassee Reservoir, 1979 August 26, regional crustal vel. model 2-68308
 Li Yian, Jiangsu Province, China, mechanism of July 1979 event (*Chinese*) 2-73448
 Livermore Valley, California, AD 1980 microearthquake parameters 2-100267
 Livermore Valley region, California, P-vel. models and earthquake locations 2-117210
 Liyang, Jiangsu, China precursory seismic velocity changes to July 1979 event (*Chinese*) 2-73446
 local magnitude determination from near-field accelerograms (*Japanese*) 2-94542
 magnetic field anomalies associated with volcanoes, earthquakes and similar tectonically active regions 2-78540
 magnetometer high-pres. cell for obs. of rocks subject to large stresses 2-68518
 magnitude determination using P-F duration times (*Japanese*) 2-94279
 magnitude scales for application to eastern USA 2-58001
 magnitude studies and magnitude determination, review 2-62895
 magnitude-seismic moment relationship for microearthquakes 2-100304
 magnitudes, M_L to m_b relation 2-88760
 Mammoth Lakes, California, May 1980, earthquakes rel. to magmatic resurgence in Long Valley caldera 2-106064
 Mammoth Lakes May 1980 earthquake sequence, source mechanisms and seismic moments 2-117203
 Markansu earthquake, Aug. 1974, focal mechanisms 2-117244
 Massachusetts Mountain, 1971 August 5, Rayleigh wave anal. 2-117215
 Matushiro earthquake swarm, statistical model for prediction of quasi-realistic strong ground motion 2-100316
 Mediterranean region, regularity patterns and seismic potential zones for future large earthquakes 2-94300
 Mediterranean Sea, earthquakes hypocentres anal. (*Italian*) 2-100254
 Meloy earthquake sequence, N.Norway, 1978-79, source parameters and scaling relations 2-88753
 Memphis area of Tennessee, USA, microzonation of seismic hazard 2-100281
 microearthquake networks, book 2-84400
 microearthquake networks data anal., appl. of Automated Seismic Processor (ASP) 2-89013
 microearthquakes, free-fall ocean bottom seismograph in-situ deep water observation 2-78880
 microearthquakes at The Geysers-Clear Lake geothermal field, California, seismic wave vel. investigation 2-88778
 microtremors, phase vel. estimation (*Japanese*) 2-94314
 Middle America Trench, seismic strain release 2-83791
 Mississippi, major earthquake zone 2-88806
 Mixtec Highlands, S. Mexico, direct evidence from refr. seismic wave of subducted oceanic plate 2-62923
 model for large earthquakes involving crack fusion dynamics 2-111882
 Moodus, Connecticut, 1981 microearthquake swarm 2-100303
 Mt. Mihara on Oshima Volcano, resist. var. before Izu-Hanto-Toho-Oki earthquake (1980) (*Japanese*) 2-83759
 Nankaido, 1946 December 21, fault model from tsunami data 2-105983
 near field ground motions, use of accelerograms recursive filter method 2-68537
 near-source estimates of local magnitude 2-100276
 New Zealand, relations between local earthquakes and long-term changes in teleseismic p-wave residuals 2-94302
 nuclear reactor vibration characts. meas., w.r.t. safety in earthquakes (*German*) 2-64599
 Nurek Reservoir, Tadzhik, USSR, weak earthquake focal mechanism 2-57990
 pattern recognition techniques for earthquake and nuclear detonation discrimination 2-63145
 peak ground acceleration scaling studies 2-100277
 peak horizontal acceleration, near-source attenuation 2-68279
 Peter I Ridge, Garm region, USSR, earthquakes focal mechanisms rel. to seismo-tectonic deform. 2-73499
 Petropavlovsk, USSR, 1971 November 24, rigid inclusion model for earthquake initiation 2-117236
 Philippine Sea plate near Taiwan, earthquakes caused by plate horizontal bending 2-111890
 plate margin earthquakes, slow fracture propag. on fault surface with embedded viscous layer 2-117219
 pre-earthquake asymmetric loading and seismicity 2-73484

earthquakes continued

- precursory anomalous seismicity before large and medium quakes (*Chinese*) 2-73449
 precursory behaviour of earthquake fault regions 2-117239
 precursory changes in EM response functions 2-78539
 precursory crustal level change obs. method for earthquake prediction 2-88802
 precursory fault behaviour prior to dynamic rupture 2-100260
 precursory pressure depend. of seismic vel. in fractured rock 2-57992
 precursory seismic gaps for intra-plate events 2-62909
 precursory source processes, mechanical model 2-100302
 precursory travel-time vars. assoc. with strike-slip events 2-68272
 prediction, application of time sequence pattern parameter, appl. to prediction 2-106006
 prediction, current research, book 2-94919
 prediction, investigations of long-term forerunners of series of strong earthquakes 2-117234
 prediction, search for correl. between seismicity and R_n anomaly in hot springs 2-111886
 prediction, use of abnormal strain response to rainfall 2-68296
 prediction, use of rock fracture scaling rules 2-78580
 prediction, workshop, Canberra, Australia (1979 December 13 to 14) 2-89442
 prediction and sensors (*Japanese*) 2-94298
 prediction in Americas use of animal behaviour 2-73471
 prediction of quakes using obs. of unreliable precursors 2-100271
 prediction of strong quakes in Garm area of USSR 2-57989
 prediction statistics, urn model, Bayesian model equiv. 2-68273
 prediction using seismomagnetic effect, numerical fault model 2-100319
 premonitory gravity obs. problems 2-78555
 premonitory sequence dislocation processes, elastic/plastic response 2-78554
 Priamur'e and Primor'e regions of far Eastern USSR, seismic zones and earthquake magnitudes 2-58002
 Pyrenees earthquake of 29 Feb. 1980, complex faulting process 2-88814
 random occurrence of major global earthquakes 2-73488
 Rawalpindi area event of Feb. 14, 1977, focal mechanism 2-78593
 rectangular fault vertical displacements, calc. for elastic-gravitational media 2-62904
 recurrence rate relation for earthquakes 2-117238
 rock, ultrasonic vibration leading to fissured traces, method for R_n emanation (*Chinese*) 2-62954
 Rocky Mountain House earthquake swarm, shallow events source parameters 2-100284
 rupture surface and propagation velocities from 'Doppler' seismic records (*Chinese*) 2-73447
 San Andreas fault system, model of a strike-slip fault 2-73462
 San Fernando, USA, source parameters of 1971 quake 2-68283
 Sanglien Highlands, USSR, earthquake foci mechanisms and pleistoseist region struct. 2-111887
 Santa Barbara, 1978 August 13 event, broadband study 2-68267
 Santa Barbara, California, 20 May 1979 fault plane soln. 2-100262
 satellite-borne research using Popsat geodetic satellite 2-117482
 scalar seismic moment, optimal estimation technique 2-105958
 scaling laws for large earthquakes, consequences for physical models 2-88746
 seismic sources, Cagniard de-Hoop method for Haskell type vertical fault 2-105956
 seismic sources identification, earthquake or underground explosion, conference, Oslo, Norway (1980 September 8 to 18) 2-89460
 seismic wave characts. depend on focal mechanism 2-105968
 seismic waves and sources, book 2-101148
 seismicity patterns, worldwide, test rel. to long-term earthquake prediction 2-94303
 shallow earthquakes depth-freq. distrib. rel. continental crust stress limits 2-94291
 Shandong Province, crustal structures, faults and tectonics (*Chinese*) 2-62897
 Sharpsburg, Kentucky, 1980 July 27, characts. 2-117209
 Sharpsburg, Kentucky, 1980 July 27, ground motion 2-117212
 Sharpsburg, Kentucky, 1980 July 27, main shock parameters and isoseismal maps 2-88755
 Sharpsburg, Kentucky, 27 July 1980 fault plane soln. 2-100262
 shear fault elastic displacements, laboratory expts. on plexiglas model 2-117245
 Shikotan, Kuril Islands, 1978 December 7, anal. of earthquake precursors 2-73480
 Shillong region, NE India, evidence for dilatancy stage precursory to large earthquake 2-94301
 single seismic station determination of fault plane solns. 2-100262
 Sirch, Iran, building destruction due to July 1981 quake 2-100268
 Songpan-Pingwu, 1976 August, tectonic stress field and seismicity (*Chinese*) 2-62896
 NE Sonora (Mexico), 1887 May 3, seismicity in epicentral area 2-88815
 source and scattering effects on spectra of small local events 2-68266
 source mechanisms, implications of seismic struct. of Indian upper mantle regions 2-111904
 source mechanisms, spatiotemporal characts. of strong earthquakes with different types of movements 2-117232
 source model with ripple generating core 2-83766
 source parameters, seismic moment, stress drop, source dims. and displacement 2-78556
 South Africa, coseismic and other short-term strain changes obs. with Sacks-Everton strainmeters 2-105957
 Stanovoi Range, Siberi, seismotectonic study 2-105996
 stress field in NE China (*Chinese*) 2-105937
 stress relaxation in the Earth and seismic activity 2-105990
 strike-slip fault in elastic plate subject to basal shear 2-73462
 strike-slip fault zone, strain softening as precursor for earthquakes 2-111919
 strong earthquake prediction and seismic lull regions evolutionary dynamics 2-111883
 strong ground motions, statistical characterisation using power spectral density function 2-88757
 strong motion signal processing 2-89016
 strong shaking in hypocentral areas, calc. of peak accelerations 2-73455
 subduction zone earthquake cycle, model 2-78626
 Svalbard, conc. earthquake zones 2-83770
 Swabian Jura, Germany, Sept. 3, 1978 earthquake series 2-78595
 swarm activity, stochastic model of freq. of occurrence 2-88784

earthquakes continued

- Taiwan, strong motions recorded by large near source array of digital seismographs 2-100288
 Tangshan, China, 1976 July 28, anomalous land uplift and aseismic creep 2-94307
 Tangshan, China, 1976 July 28, physico-rheological model 2-94308
 Tangshan, China, 1976 July 28, residual tilt field and tilt steps spatial distrib. (*Chinese*) 2-100256
 Tangshan, China, aftershock parameters and crust props. (*Chinese*) 2-73452
 Tanzania region, seismicity map 2-73456
 Thessaloniki, Greece, 20 June 1978 fault plane soln. 2-100262
 Thessaloniki, Greece, source parameters of 1978 quake 2-68283
 time sequence pattern parameter, appl. to prediction 2-106006
 Tonankai, 1944 damage at Asazaba-Cho, elastic wave propag. theory (*Japanese*) 2-94289
 Tonga trench-Louisville ridge, Oct. 1977 earthquake mechanism 2-105986
 Totomi-Okii, Japan, 1855 November 7, damage, magnitude and epicentre 2-106004
 tsunami generation mechanism in New Zealand coastal waters 2-88811
 Turkey, large strike slip earthquakes rupture complexity 2-68295
 Turkey, recurrence of particular types of earthquakes 2-105988
 unified source model involving quasistatic crack extension 2-83763
 NE United States, fault plane solns. from 8 earthquakes 2-68270
 United States, fault zone models and heat flow rel. to depth distrib. of earthquakes in continental crust 2-88751
 central United States, peak ground motion scaling 2-68275
 NE United States M_L meas. 2-117216
 Utah, seismic moment rates 2-88765
 Virgin Islands, 1980 February 14, precursory seismic activity 2-117211
 volcanic earthquakes at Nyiragongo and Nyamuragira in Western Rift Valley, E Africa, obs. 2-111906
 Vrancea, Rumania, 1977 March 4, focal model and moment determ. 2-100317
 Vrancea, Rumania, 1977 March 4, mechanism from Rayleigh wave anal. 2-78560
 Vrancea, Rumania, 1977 March 4, multipolar anal. 2-78559
 Vrancea, Rumania, microearthquakes waves Fourier anal. (*Rumanian*) 2-117254
 Vrancea region, Rumania, seismo-tectonic deform. of lithosphere 2-117235
 Watsonville, 1963 August/September, hypocentre relocation 2-117213
 wave field of very strong earthquakes, focus dynamics and energy balance 2-105974
 waves onset identification, seismograph and Gaussian noise effects (*Russian*) 2-105962
 Xinfengjiang reservoir, China, parameters of 1966 earthquake (*Chinese*) 2-57979
 Xinfengjiang Reservoir area, China, 23 September 1964 earthquake focal parameters modelling 2-117202
 Zingtai (China), mechanism of 1966 earthquake (*Chinese*) 2-57978
 H_2 emanation as precursor, emission rel. to fault movement 2-106094
 Rn transport in Earth, U exploration and earthquake prediction 2-73725

EAS see cosmic ray showers and bursts

Eberhard effect see photographic materials

ebullition see boiling

e.c.g. see electrocardiography

echelles see diffraction gratings

echelons see diffraction gratings

echo

- see also anechoic chambers; architectural acoustics; clutter; reverberation; sonar
 auroral radar echoes, STARE obs. of long discrete echoes 2-112217
 ferroelectric, polarisation echoes, domain theory 2-57030
 fibre-reinforced plastics, nondestructive US testing technique using echo signals 2-67674
 multihall in Mannheim, acoustics problem (*German*) 2-91158
 solar radio bursts, obs. of radio echo and sporadic radiation scatt. in corona 2-94698
 sonar radial target length estimation from echo duration 2-60282
 US echoes, surface characterisation by deconvolution using extended bandwidth 2-91184
 He, liquid, acoustic echo on bubblons (*Russian*) 2-66319

eclipses

see also solar eclipses

- Algol-like binary stars, eclipse light curves distortions obs. 2-112483
 Algol-type binaries, short period, primary eclipse spectra rel. to circumstellar gaseous discs 2-106813
 BX Andromedae, light minimum time from photoelectric photometry 2-58399
 R Aquarii, eclipsing symbiotic star, light curve, 1933 to 1981 and eclipse characts. 2-100942
 DO Cassiopeiae, light minimum times from photoelectric photometry 2-58399
 VV Cephei, obs. during 1976-78 eclipse rel. to $H\alpha$ emission envelope around early-type component 2-68827
 VW Cephei, W Ursae majoris star, 2.2 μ m light curve and epoch of primary minimum 2-106797
 VW Cephei, W Ursae Majoris star, light min. times and light curves from photoelectric obs. 2-63519
 VW Cephei, W Ursae Majoris star, photoelectric eclipse light curves and times of minimum 2-89307
 U Coronae Borealis, eclipsing binary, times of minima rel. to presence of third component 2-100981
 ZZ Cygni, eclipsing binary star, primary minimum time and mean light curve 2-68819
 CI Cygni, symbiotic star, UV obs. of 1980 eclipse 2-63437
 eclipsing binary stars, photoelectric minima during 1980 and 1981 from BV obs. 2-112498
 eclipsing binary stars, photoelectric times of minima for eight objects 2-89310
 eclipsing binary stars in southern hemisphere, times of minima 2-112495
 UX Eridani, photoelectric minimum light times obs. 2-68820
 frequency of total and annular eclipses for given place 2-84063
 Galilean satellites, 1979 mutual eclipses and occultations, visible obs. (*French*) 2-100807
 Galilean satellites, anal. of early eclipse obs. 2-79011

eclipses continued

- HD 189178, spectroscopic binary, orbital elements rel. to possibility of eclipses 2-106811
 HD 219634, new massive eclipsing binary star, photometric obs. of eclipses rel. to masses and spectral types 2-79159
 TX Herculis, detached close binary system, light minimum times rel. to period behaviour 2-74018
 Jupiter, simultaneous disappearance of four major satellites in occultation, transit or eclipse 2-106603
 lunar eclipses used to study luminescence and transient phenomena 2-73875
 RW Monocerotis, Algol-type binary star, primary eclipse characts. from five-colour photometry 2-94782
 V566 Ophiuchi, W Ursae Majoris star, times of photoelectric minima and new light curve 2-89308
 RZ Ophiuchi (BD+7°3832), supergiant eclipsing binary, VBLUW photometry rel. to eclipse of accretion disc 2-106788
 DI Pegasi, photoelectric minimum light times obs. 2-68820
 β Persei (Algol), obs. of variable He I 10830 Å line during primary eclipses 2-112484
 Pluto-Charon system, eclipses obs. from UVB photometric study near perihelion (*Russian*) 2-63313
 Pluto-Charon system, speckle interferometric obs. rel. to predicted eclipse season onset 2-106612
 WY Sagittae (Nova 1783), eclipsing binary star, orbital period and ephemeris from five eclipse timings 2-89278
 EG Sagittarii, eclipsing binary, depths of eclipses rel. to orbital period 2-100986
 SV Tauri, Algol-type binary, light min. time and eclipse depths and duration from photoelectric UVB photometry 2-94781
 W Ursae Majoris, light minimum times and (O-C) residuals 2-58398
 W Ursae Majoris, new photoelectric times of minima (1976 to 1982) 2-89309
 AH Virginis, photoelectric minimum light times obs. 2-68820

eclipsing binary stars

- 0921-63, eclipsing halo X-ray binary, orbit, model and photometric/spectral obs. 2-84266
 VW Cephei, W Ursae majoris star, 2.2 μ m light curve and epoch of primary minimum 2-106797
 BH Virginis, variable light curve, relation to RS CVn stars, B-obs. 2-63512
 2A 1822-371, compact X-ray binary star, phase resolved optical spectroscopy 2-112502
 2A 1822-371, degenerate star shell emission, component masses and orbital period, visible obs. 2-79145
 2A 1822-371, optical, UV and X-ray modulation due to accretion disk bulge 2-79146
 Ae/Be short period binaries, possible mass transfer and relation to Algol binaries 2-74031
 age-zero contact binaries, stability and evaluation 2-84280
 algol systems mass loss effects on evolution 2-68833
 Algol-like binaries, hot and cool components optical fluxes, visible obs. 2-89296
 Algol-like binary stars, transient photometric disturbances obs. 2-112483
 RX Andromedae, eclipsing dwarf nova, orbit, spectral obs. 2-73995
 BX Andromedae, light minimum time from photoelectric photometry 2-58399
 AB Andromedae, search for orbital period var. from photometric obs. 2-79162
 V1343 Aquilae (SS 433), review of models 2-63472
 ST Aquarii, binary star with luminous cool primary and hot companion, BVRI obs. 2-100985
 R Aquarii, eclipsing symbiotic star, light curve, 1933 to 1981 and orbital period 2-100942
 EE Aquarii, revised photometric elements 2-63508
 R Aquarii, symbiotic star, discovery and photometry of elongated extension of stellar image 2-117685
 AE Aquarii, white dwarf+red dwarf, flicker spectrum 2-63526
 R Aquarii and jet, supercritical accretion and nova outburst 2-100956
 V1343 Aquilae, (SS 433), non-stability of precession period from spectroscopic obs. (*Russian*) 2-112468
 N603 Aquilae, accretion disc surrounding white dwarf, UV spectral obs. 2-68797
 V603 Aquilae (Nova Aquilae 1918) circumstellar shell and accretion disc nature, UV/visible obs. 2-117677
 V1343 Aquilae (SS 433), 164 day period secular change 2-58354
 V1343 Aquilae (SS 433), conf., Rome, Italy (October 1980) 2-58339
 V1343 Aquilae (SS 433), law of variation of precession period, (1978 to 1981) (*Russian*) 2-112469
 V1343 Aquilae (SS 433), model and evolutionary status 2-63471
 V1343 Aquilae (SS 433), obs. of simultaneous radio and X-ray activity 2-112453
 V1343 Aquilae (SS 433), photometric behaviour in 1979 and (1980) 2-68782
 e Aurigae, 1982-84 eclipse and models 2-100994
 IM Aurigae, BV photoelectric obs. 2-58400
 i=44 Bootis, BV photometry of W UMa-type system 2-84269
 TZ Bootis, W UMa star, light var. in bv 2-100976
 44=i Bootis, W UMa star, photometry with microcomputer based system (*Italian*) 2-106535
 44=i Bootis, W Ursae Majoris star, single night light curve, (1982 April 7 to 8) 2-112497
 AO Camelopardalis, UVB light curves of W UMa system 2-84285
 AC Cancri, cataclysmic eclipsing binary, colour indices, magnitude, spectral obs. 2-63531
 RS Canum Venaticorum stars, $H\alpha$ profile, surface phenomena 2-106777
 ST Carinae, β Lyrae type eclipsing binary, UVB photometric study 2-106812
 OY Carinae, dwarf nova, near IR light curves 2-112464
 QX Carinae, uvby lightcurves and orbit 2-106796
 AB Cassiopeiae, δ Scuti pulsational groups. of hot component from BV photometry 2-106733
 PV Cassiopeiae, apsidal motion meas. from photoelectric times of minima 2-106776
 SX Cassiopeiae, Be+giant stars, eclipsing, spectral classification and continuum radiation origin, obs. 2-84263
 DO Cassiopeiae, light minimum times from photoelectric photometry 2-58399
 TV Cassiopeiae, photoelectric timings of primary minima using folding method 2-74022

eclipsing binary stars continued

- SV Centauri, early-type contact binary, evolution model 2-84268
 SV Centauri, early-type contact binary, ionisation and vel. struct. of expanding envelope 2-63370
 SV Centauri, interacting early-type contact binary, orbit elements and dimensions 2-100979
 V436 Centauri, SU Ursae Majoris star, radial rel. curve and orbital period 2-68777
 V757 Centauri, W Ursae Majoris star, orbit, spectral obs. 2-63534
 V757 Centauri, W Ursae Majoris system, spectral types, UVB obs. 2-63533
 GW Cephei, BV light curves of W UMa type system 2-84271
 NN Cephei, BV obs. 2-58401
 VV Cephei, H α line profiles rel. to struct. of H α emission envelope around early-type component 2-68827
 HI Cephei, magnitudes and times of minima from photographic obs. 2-94738
 VW Cephei, W UMa system, photoelectric obs. and light curve vars. 2-79150
 VW Cephei, W Ursae Majoris star, light min. times and light curves from photoelectric obs. 2-63519
 VW Cephei, W Ursae Majoris star, visible and IR photometry and polarisation and spectroscopic obs. 2-94751
 UZ and VW Cygni, β Persei stars, VB light curve anal. 2-58389
 V478 Cygni, BV obs. 2-58402
 V836 Cygni, photoelectric obs. 2-74023
 CI Cygni, eclipsing symbiotic star; visual and photographic light curves, (1967 to 1981) 2-100949
 32 Cygni, excitation through radiative pumping of Fe UV multiplet 191 during eclipse 2-68815
 V380 Cygni, He abundance in atmosphere of primary rel. to evolutionary status 2-100977
 ZZ Cygni, photometric obs. and unsuccessful search for δ Scuti-type pulsations 2-68819
 V463 Cygni, revised photometric elements 2-106801
 V453 Cygni, secular variability due to comparison star HD 227586 companions effects 2-63535
 CI Cygni, symbiotic star, H vars. and near IR spectrum 2-68789
 CI Cygni, symbiotic star, IR excess, UBVRJHKLMN obs. 2-106753
 CI Cygni, symbiotic star, UV obs. of 1980 eclipse 2-63437
 CG Cygni, UBVR photometry during (1981) 2-79160
 V444 Cygni, Wolf-Rayet eclipsing binary, approximation of narrow-band light curve via special polynomials (Russian) 2-94779
 RW Doradus, W Ursae Majoris star, spectral type 2-68821
 BS Draconis, elements from light curve anal. 2-106785
 BV and BW Draconis, light curve, orbit and astrometry, obs. 2-58397
 DE Draconis, spectroscopic orbit, model and rotation effects, spectral obs. 2-58387
 BV Draconis, W Ursae Majoris star, BV lightcurve anal. 2-58390
 BW Draconis, W Ursae Majoris star, times of photoelectric minima from BV photometry 2-84282
 E 1405-451, AM Herculis star, obs. of eclipse-like feature in light curve 2-63378
 elements in frequency domain 2-58384
 epoch of minimum, sliding integrations method (Italian) 2-106549
 RU Eridani, BV light curve anal. and model 2-58385
 YY Eridani, search for orbital period var. from photometric obs. 2-79162
 UX Eridani, photoelectric minimum light times obs. 2-68820
 YY Eridani, W UMa star, orbital parameters from lightcurve anal. 2-100983
 EF Eridani (2A 0311-227), mag. white dwarf binary, complex emission-line struct. 2-58381
 U Geminorum, 1970-1979 observations anal. 2-84251
 U Geminorum, dwarf nova, IR light curve anal., system nature, JHK obs. 2-100931
 YY Geminorum, spectroscopic eclipsing binary, H β line var. and active regions sectorial struct. var. 2-94790
 V Gruis, new orbital period and light curve from photometric obs. 2-112495
 H 0139-68, AM Herculis star, high speed photometric obs. 2-63517
 HD 134518, main sequence detached eclipsing binary orbit from photometric anal. 2-89301
 HD 153919 (4U 1700-37), optical eclipses and precession effects in X-ray binary 2-117710
 HD 189178, spectroscopic binary, orbital elements rel. to possibility of eclipses 2-106811
 HD 191765, eclipsing binary Wolf-Rayet star with low-mass companion, photometric and spectroscopic vars. (Russian) 2-100957
 HD 197406 (WN7), possible candidate for runaway Wolf-Rayet star 2-63478
 HD 219634, new massive eclipsing binary star, photometric obs. of eclipses rel. to masses and spectral types 2-79159
 HD 224113, Algol-type binary star, uvby photometry (1981 October 9 to 18) 2-94783
 HD 27130, in Hyades, obs. rel. to mass-luminosity relation and cluster distance 2-68811
 HD 5980 in SMC, eclipsing WR star, nature, orbit and masses, visible spectra obs. 2-89265
 HD 77581, X-ray binary, eclipsing gaseous streams, effect of supergiant rot. axis forced precession (Russian) 2-68828
 DI Herculi, B-type eclipsing binary, mass, radius and orbit, obs. 2-63500

eclipsing binary stars continued

- HZ Herculis, circulation currents in irradiated stellar atmosphere rel. to light curve 2-112433
 TX Herculis, detached close binary star, anisotropic mass ejection rel. to period changes 2-74017
 TX Herculis, detached close binary system, orbital period behaviour 2-74018
 AM Herculis, multiwavelength obs. during low state 2-89299
 TT Herculis, period variability anal. from UVB obs. 2-100984
 AM Herculis, radio emission detect., origin in white dwarf magnetosphere, model and SHF obs. 2-74020
 HZ Herculis, spectral line profiles, taking mass transfer into account 2-94786
 AM Herculis, visual mag. estimates (1982 May) 2-79167
 AM Herculis, visual magnitude estimates, (1982 June 23 to July 8) 2-106804
 AM Herculis, VRI photometry and circular polarisation during low state, (1982 March 6 to April 19) 2-74025
 HZ Herculis, X-ray binary precessing tilted accretion disc periodic mass transfer models 2-84264
 AM Herculis (3U 1809+50), new optical decline, visual magnitude estimates (1982 March 29 and April 19) 2-68823
 AM Herculis (3U 1809+50), visual magnitude estimate, (1982 April 16) 2-68824
 AM Herculis-type magnetic binary (1114+18), photometric, polarisation and spectrum vars. and ephemerides 2-58408
 HR 4975, possible early-type contact system with unequal components, photometric obs. 2-79153
 EX Hydrae, U Geminorum star, orbit from visible spectra/photometry obs. 2-100932
 RY Indi, β Lyrae type eclipsing binary, UVB photometric study 2-106812
 AR Lacertae, RS Canum Venaticorum type binary star, photoelectric photometry (1976 to 1977) 2-106810
 CM Lacertae, search for orbital period var. from photometric obs. 2-79162
 SW Lacertae, W Ursae Majoris star, new minimum times, 1980 and 1981, rel. to orbital period vars. 2-79161
 Lanning 10, eclipsing cataclysmic variable, photometric and spectroscopic obs. 2-58321
 LB 3459, O-type subdwarf eclipsing binary, primary non LTE anal. 2-63504
 LD23, new eclipsing binary in Cygnus, approximate position, finding chart, and BV magnitudes 2-84109
 AM Leonis, W Ursae Majoris star, BV and narrow-band obs., (1977 to 1981) 2-84274
 XY Leonis, W Ursae Majoris star, new times of minima and orbital period vars. 2-106800
 light curves of six eclipsing binaries reanalysis and photometric elements determ. 2-100982
 light loss curves, approximation via special polynomials (Russian) 2-94779
 UV Lyncis, UVB light curves and ephemeris improvement 2-106807
 β Lyrae, H α profile, image isocoon obs. (1974-5) 2-106806
 β Lyrae, magnetic field intensity from 100 spectrograms (Russian) 2-74032
 AU Monocerotis, Algol system, light curve anal., luminosity and radii 2-63527
 AU Monocerotis, Algol type binary, importance of UVB obs. during January to February (1983) 2-94780
 RW Monocerotis, Algol type binary star, photoelectric obs. of primary eclipse in five colours 2-94782
 BM Monocerotis, Algol-type binary, evidence for orbital eccentricity and apsidal motion 2-100988
 AV Monocerotis, UV spectra anal. 2-74029
 BT Monocerotis (Nova Monocerotis 1939), eclipsing nova, photometric obs. 2-68776
 new eclipsing binary in γ Cygni region, discovery, approximate position and light min. times 2-84281
 NGC 2346, planetary nebula, central star, identification as eclipsing binary from UVB photometry 2-68870
 OB-type eclipsing binaries, optical spectra 2-63515
 UU Ophiuchi, Algol-type binary, light minimum time obs. and new ephemeris 2-100987
 VI022 Ophiuchi, W UMa-type binary, period from BV photometry 2-84272
 V566 Ophiuchi, W Ursae Majoris star, times of photoelectric minima and new light curve 2-89308
 RZ Ophiuchi (BD+7°3832), supergiant eclipsing binary, VBLUV photometry rel. to eclipse of accretion disc 2-106788
 VV Orionis, multiple eclipsing binary, stars nature from UVB uvby obs. 2-112494
 AR Pavonis, secondary giant and system nature, UVB photometry during 1980 eclipse 2-100991
 AR Pavonis, symbiotic eclipsing binary, UV spectrum during eclipse egress, obs. 2-73996
 DI Pegasi, evolutionary status and UVB photometry obs. 2-58386
 DI Pegasi, photoelectric minimum light times obs. 2-68820
 BB Pegasi, W Ursae Majoris star, light curve synthesis 2-79157
 AQ Pegasi β Persei stars, VB light curve anal. 2-58389
 periodic ephemerides for 49 eclipsing binary star systems, anal. of orbital period vars. 2-106809
 DM Persei, Algol type eclipsing binary, BV obs. 2-63518
 β Persei, precise optical poss. of radio source (French) 2-58410
 γ Persei, spectroscopic possible eclipsing binary, orbit, mass, luminosity, speckle interferometry, obs. 2-79149
 β Persei (Algol), photoelectric minimum timings rel. to new period and ephemeris 2-74024
 β Persei (Algol), variable He I 10830 Å line obs. 2-112484
 AE Phoenicis in 1978, W Ursae Majoris stars, light curve, rot. effects 2-84279
 photoelectric minima of eclipsing binaries during 1980 and 1981, results from BV photometry 2-112498
 photometric elements in freq. domain generalisation to close systems 2-58263
 RR Pictoris, cataclysmic binary, light/colour curves interpretation, visible photometric/polarisation obs. 2-89271
 RR Pictoris (Nova 1825), UV spectral obs. 2-79110
 SZ Piscium, eclipsing RS CVn star, light curve and components, model implications 2-74013
 polarimetric vars. rel. to inclinations 2-73992

eclipsing binary stars continued

- VV Puppis, AM Herculis, time-resolved spectroscopy 2-112449
 VV Puppis, AM Herculis star, cyclotron spectrum and polarisation props., model 2-58409
 KQ Puppis, UV spectrum, IUE obs. 2-106795
 2 S 0921-630, optical counterpart eclipsing binary, light curve anal. 2-106789
 U Sagittae, Algol system mass transfer and subgiant radius var., uvbyl obs. 2-74027
 WY Sagittae (Nova 1783), eclipsing binary star, orbital period and ephemeris from five eclipse timings 2-89278
 V356 Sagittarii, 1979 October mid-point of primary eclipse 2-79151
 EG Sagittarii, orbital period 2-100986
 V861 Scorpii, wind parameters and evolutionary status, spectra/photometry anal. 2-68834
 V884 Scorpii (=HD 153919=4U 1700-37), absence of optical pulses from photometric obs. 2-106799
 δ Scuti stars in eclipsing binary systems, absolute magnitudes, rot. vels. and pulsation consts. 2-106733
 W Serpentis, binary star with luminous cool primary and hot companion, BVRI obs. 2-100985
 CV Serpentis, UBVR photometry and WC8 star characts. (Russian) 2-74033
 short-period Algol systems, spectroscopic survey for gaseous discs during primary eclipse 2-106813
 southern hemisphere eclipsing binaries, times of minima 2-112495
 RW Tauri, accretion disc, visible spectral obs. 2-94769
 SV Tauri, Algol-type binary system, photoelectric UBVR photometry 2-94781
 V471 Tauri, radial vel. curve and orbital elements from spectroscopic obs. 2-63516
 V471 Tauri, RS CVn-like binary star, photoelectric light and colour vars. 2-84273
 times of minima for eight eclipsing binaries, photoelectric obs. 2-89310
 4U 1822-37, eclipsing X-ray binary, X-ray spectrum simulation 2-89313
 4U 2129+47, X-ray eclipse and model 2-94771
 Be Ursae Majoris, eclipsing red dwarf and hot subdwarf, model constraints from photometry 2-94791
 W Ursae Majoris, light curve, BV obs. 2-58403
 W Ursae Majoris, light minimum times and (O-C) residuals 2-58398
 W Ursae Majoris, new photoelectric times of minima (1976 to 1982) 2-89309
 AN Ursae Majoris, polar, BV photometry during low state (1982 March 20 and April 20) 2-74025
 XY Ursae Majoris, RS Canum Venaticorum star, UBVR photometric obs. during (1982) 2-94785
 AW Ursae Majoris, W Ursae Majoris star, light curve anal. 2-117707
 W Ursae Majoris (BD+56°1400), photoelectric obs. 2-89306
 W Ursae Majoris stars, detached systems evolving to contact systems by ang. momentum loss 2-84277
 W Ursae Majoris stars, evolution and stability 2-84278
 W Ursae Majoris stars survey in uvby system 2-106784
 W Ursae Majoris systems, determ. of parameters from photoelectric light curves 2-58393
 Vela X-1, X-ray binary, neutron star component interaction with accretion disc 2-63712
 AH Virginis, photoelectric minimum light times obs. 2-68820
 AZ Virginis, W Ursae Majoris star, photometric elements 2-112492
 ER Vulpeculae, UBVR photometric obs. during (1981) 2-58404
 VW /Cephei, close binary, period var. and lightcurve fluctuations 2-63523
 X-ray binary stars, accretion disc coronae around eclipsing systems, spectra 2-89298
 H 0139-68, AM Herculis star, optical and near-IR polarisation obs. 2-106803

ecology

- global bifurcation diagram in ecological interacting and diffusion systems 2-95284
 Marchtrenk power station on the River Traun—geology, ground water, ecology (German) 2-105606
 methodological problems in assessing environmental impacts (German) 2-67896
 stationary community ecosystem, number of species rel. to temp. 2-67957

econometrics *see economic cybernetics***economic and sociologic effects***see also personnel*

- drought forecasting, Yakima Valley 1977 case 2-74193
 energy resources, consumption statistics, present state and future trends, Netherlands (Dutch) 2-67798
 geothermal field, management model for elec. power extraction 2-116778
 international atmospheric and oceanic programmes, scientific and political aspects 2-112136
 mechanical energy storage schemes, safety, socio-economic legal and environmental aspects 2-73152
 physicists and the doctoral dissertation 2-107082
 science and society test on energy and environment 2-107081
 science and technology, regularities in development (Russian) 2-89518
 science classroom activities, survey, usefulness rel. to developing countries 2-112677
 science in Liverpool in the early 19th century 2-89517
 solar power interface with electric utility systems, citizen pressure groups' attitudes in the USA 2-73082
 space technology, social benefits for developing countries 2-107084

economic cybernetics

- energy system modelling in Serbia, experience 2-78173
 global modelling, conf., Dubrovnik, Yugoslavia, (Sept. 1980) 2-78172
 regional interactions model considering energy deficits 2-78175

economics

- acetylene producing using solar furnace 2-99760
 alternative energy sources, economic impact on electric power systems, analysis method 2-105535
 assessment of the market potential for small solar powered desalination plants 2-67824
 Austrian national economy, significance of unconventional energy sources (German) 2-73045
 buildings, energy conservation, EEC model code feasibility 2-73090
 charge regimes for nickel-cadmium and lead-acid stationary batteries 2-99778
 combined heat and power, energy savings in FDR (German) 2-73050

economics continued

- comparison of solar RO and solar thermal desalination systems 2-67829
 conventional and nonconventional energies future availability and economics prospects review (French) 2-57673
 Czochralski silicon solar cell modules: present cost and future prospects 2-83498
 daily storage system, technical, energy and economic optimisation (French) 2-62496
 domestic crude oil resource appraisal 2-93858
 EBT commercial fusion reactor, optimisation study 2-85312
 EBT fusion power plant, cost, blanket and shield materials effect 2-69861
 Economic European Community energy strategy (German) 2-78169
 economic systems, dynamic, nonlinear, technological forecasting and resource policy anal. using bond-graph method 2-111531
 electric power backup for solar heating systems, marginal costs to electric utilities 2-73077
 electric power storage in metal hydride system, investment and operating costs (German) 2-62508
 electroplating alternatives for Au in electronics and decorative industries 2-67665
 electroplating with Au and Ag, future trends, substitute materials and cost reduction 2-67667
 emerging energy sources, commercialisation potential 2-62451
 energy efficiency in computer centre, heat recovery scheme 2-83506
 energy rationing policy and economic interrelatedness anal. using allocative methods 2-67796
 energy storage two-level system using heat pumps (French) 2-62504
 energy-political aspects of the use of electric heat-pumps in Austria (German) 2-111580
 enhanced oil recovery, solar technology appl. 2-57680
 fast reactor construction programme, logistical and economic obstacles 2-74889
 fission reactor decommissioning, economic planning 2-108162
 fission reactor fuel, pellet diameter reduction, cost, neutronics, safety 2-74829
 fuel supply organization, economic region (Russian) 2-83445
 GCFR, design, fuel, safety and economics 2-64456
 geothermal energy developments in Pacific Coast Region of USA 2-105534
 geothermal energy policy and market share in western United States calc. 2-67820
 geothermal power stations, overview of various types, economics 2-105533
 heat pump installation operating and investment cost minimisation mathematical model (German) 2-67877
 heat pumps, solar-assisted systems for space and domestic water heating in Canada, comparative study 2-67882
 hydrogen economy assessment for long-term energy systems in Japan 2-73159
 Indian photovoltaic programme state-of-art and applications, future possibilities 2-111559
 industrialised nations, electricity demand, rel. to gross domestic product 2-111532
 investment in solar sector (Italian) 2-62461
 KILNGAS coal gasification process for combined cycle power generation, evaluation 2-62452
 laser materials processing appl., economic viability 2-55240
 liquid fuels from gas and coal, assessment of comparative economics 2-99747
 methanol, co-production, in gasification combined cycle power plant 2-67801
 Mg production process economics projection and impacts on cost of magnesium hydrides 2-73158
 natural-circulation solar-energy stimulated systems for heating water 2-111583
 Nova capacitor banks, performance and cost analysis using Weibull statistics 2-96400
 nuclear fuel component cost calc. 2-90249
 nuclear fuels, quality control, technical and economic aspects 2-85132
 nuclear power, projected growth, rel. to gross national product 2-111542
 nuclear power and production process installations, economics, coefficient of thermodynamic efficiency 2-67845
 nuclear power stations, construction, delay, cancellation and lack of orders, financial aspects 2-108163
 nuclear waste related to elec. prod. unit, management cost 2-107979
 optical fibre cabling processes, optimisation procedure 2-102924
 optical fibres, component performance and price forecast to year 2000 2-65368
 optimal transition from oil to alternative fuels 2-73047
 optimum thermal isolation for houses with heat-pump-systems—considered under economic aspects (German) 2-93940
 organic Rankine cycle heat engines, production cost estimates 2-67879
 parabolic trough concentrator for solar industrial process heat appl., technical and economic performance 2-111541
 photoelectronic-digital vs. film-based system for radiology, cost anal. 2-105823
 photovoltaic concentrator technology and status, economic motivation for improvements 2-93914
 photovoltaic generation of electricity—state of the art and prospects (German) 2-88428
 photovoltaic system considerations and applications 2-111565
 photovoltaic systems with concentrators optimum cost computation 2-99806
 photovoltaic technology transfer from terrestrial to space, governing factors 2-83495
 power generation apps. 2-67893
 pressure retarded osmosis at electric power source, principles and economic analysis (Dutch) 2-105599
 radioactive waste disposal, economic factors, calc. program, RWCOST 2-64508
 renewable energy resources, recycling of municipal, agricultural and industrial wastes 2-67847
 river Severn tidal power schemes, energy accounting 2-111537
 Saudi Arabia future energy demand fulfilment with energy resources other than oil 2-67797
 second-generation parabolic trough solar energy systems optimization analysis 2-93944
 single family house heating methods intermediate study results (Finnish) 2-93936
 solar cell generated power applications and feasibility (Italian) 2-93922

economics continued

- solar cells, Mexican research and development, current status and applications 2-11562
- solar photovoltaic technology: World Bank's attitude and activities 2-111556
- solar photovoltaics in the Arab world, technical and economic feasibility 2-111558
- solar power commercialisation, utility regulation in USA 2-73079
- solar power commercialisation in USA, three policy issues 2-73076
- solar power generation development, financial inducements for electric utilities in USA 2-73078
- solar thermal power stations, commercialisation progress 2-78245
- Soviet energy programme for 1980s, review 2-78170
- standardised reactor, capital cost, rel. to inflation and escalation 2-108161
- technical and economic aspects of electricity generation by solar cell systems (*German*) 2-88429
- technical and economic prospects for Ocean Thermal Energy Conversion (OTEC) 2-73138
- thermonuclear reactor injector power supply systems design 2-64646
- trans-Tisza region electrical/thermal energy economy (*Hungarian*) 2-93857
- U, procurement in USA, foreign/domestic supplies 2-64529
- U reserves exploitation economics 2-105537
- US energy prospects forecast 2-62449
- USA schists and tar sands resources and exploitation economics (*French*) 2-73053
- water heating system multivariate optimisation using Simplex method 2-111586
- wind energy conversion plant interface with electric utility systems 2-73060
- wind energy conversion systems performance assessment and cost effectiveness 2-93866
- wind energy for the Federal Republic of Germany technical and economic potential 2-88402
- wind power utilisation as energy sources, various aspects (*German*) 2-93862
- world's energy needs for year 2050, supply from renewable resources, what is required 2-73048
- H₂ production by water electrolysis using off-peak nuclear power, economics (*French*) 2-105603
- H₂ production from coal, storage facilities and techniques (*French*) 2-105605
- H₂ utilisation as fuel, technico-economic potentialities for steel production 2-83444
- H₂PO₄ fuel cell power plants, effects on performance and economics of alternative fuels 2-62473
- NH₃-H₂O absorption refrigeration cycles, solar operated, simulation, design and economics for building cooling 2-99835
- U fuel in nuclear power plants, choice and economical characts. (*Croatian*) 2-69708
- U supply analysis, price rel. to demand 2-64530

eddy current losses

- conducting ferromagnetic sheet lamina, nonlinearity in harmonic quasistationary regime, EM field (*French*) 2-114151
- domain wall bowing and eddy current losses in infinite sheet of bar-like domains 2-82684
- laminations, monocryst., eddy-current limited domain wall motion 2-82633
- metallic glasses, ferromagnetic, anomalous eddy currents, magnetoelastic effects 2-116047
- steel, high Si, ribbons, roller quenched, mag. props., pot. core material of elec. machines and power transformers 2-87522
- thin circular and rectangular plates, eddy current losses 2-65127
- Mn-Zn ferroferrites, loss relationships, response to mag. disturbance 2-82627
- MnZn ferrite, temp. and time stability 2-82694
- SiFe laminations, skew domain wall bowing and shearing, asymmetric roll orientation 2-82680
- SiFe, stacked HI-B sheets, domain interactions, eddy current losses 2-82679

eddy currents

see also induction heating

- Barkhausen regions in conducting sheets with bar domains, eddy current distrib., theory 2-77324
- computation using computer code EDDYNET 2-55030
- conducting surfaces, network mesh method to calc. eddy currents 2-55031
- controlled nuclear fusion expts., finite element network method for three-dimensional eddy current calc. (*German*) 2-108104
- crack detection technique, accuracy considerations, computational aspects 2-67723
- crack detection technique, expl. practicalities 2-67721
- cylindrical wire, eddy currents study, undergraduate laboratory expt. 2-79313
- electrically conductive single layer coatings, thickness inspection optimisation with laid-on eddy current transducers 2-89692
- electrodynamical forces at thin nonmag. tapes above ferromagnetic plates 2-85862
- EM eddy currents, modeling 2-93749
- flaw detectors for W and Mo wire fracture recording 2-116667
- longitudinal eddy current transducer design for inspection of small bearing components 2-83336
- metal, coating thickness meas., eddy current and magnetic methods 2-107296
- metal, multiparameter eddy-current inspection, nonlinear theory fundamentals 2-62359
- metallic disc, axial force and eddy currents due to suddenly applied mag. field 2-85859
- metallic objects, multiparameters inspection by eddy currents, numerical anal. of system of eqn. in nonlinear theory 2-67704
- multiparameter eddy current inspection, algorithms rel. to nonlinear theory 2-62360
- NDT, algebraic analysis for cylindrical geometries 2-67724
- NDT, EM aspects, conf., London, England (March 1982) 2-63754
- NDT, EM aspects, review 2-67720
- NDT, field performed heat exchanger tubing exam., accuracy and repeatability 2-72932
- NDT, multiple props. determ. with multiple eddy current meas., polynomials fitting 2-72938

eddy currents continued

- NDT, underwater, EM methods use for offshore structures 2-67722
- NDT limitations 2-99638
- numerical computation, conf., Chicago, USA (Sept. 1981) 2-53411
- parallel conducting bars with a.c. 2-85861
- Proba type electromagnetic inspection instruments 2-62361
- probe optimal design for nondestructive testing (*German*) 2-79564
- probe response to open and closed surface flaws 2-62296
- pulsed eddy current test system with computer added registration and eval. of meas. signal (*German*) 2-116659
- radiation effect treatment 2-55042
- signal processing circuits for eddy current transducers 2-67705
- skin effect in conductors, integral eqns. method of anal. 2-55038
- steel, austenitic stainless, volumetric inspection of moderately thick specimens by multifrequency eddy currents 2-62297
- straight through eddy current transducer signals from cracks, cross-section shape effects 2-62362
- surface defect probe, new design 2-84597
- thin conducting plates, eddy current calcs. using finite element-stream function code 2-55034
- thin conductors, computation of 3D eddy currents 2-55035
- thin plates, cracks, eddy current flows, nondestructive testing 2-105434
- thin plates, eddy current flow around cracks, boundary integral method 2-55037
- three dimensional eddy current computations, methods 2-55039
- three dimensional eddy current problem, calc. using finite element method 2-55032
- three-dimensional eddy current problems, mixed FEM-BIEM calc. method 2-55033
- transducer, thermal instability 2-58811
- transient, two dimens., finite element anal., PE2D package 2-55029
- transient EM fields due to circular current loop over conducting half-space 2-85860
- two-dimensional eddy current problem, hybrid finite element-boundary integral formulation 2-55036
- Fe-Si (3 wt.%), domain struct. dynamics and EM losses, relationship to cryst. lattice (*Russian*) 2-87524

edge-defined film fed growth see crystal growth from melt

edge dislocations

- anisotropic body, non-linear dislocations, iteration scheme anal. 2-81788
- axial, calc. of X-ray distortion distribution 2-115090
- α -brass, single cryst. 2-116495
- brittle crack advance by double kink nucleation 2-57451
- CCl₄/MoS₂(Se₂), photocorrosion, anisotropic, cleavage steps, line and screw dislocations role 2-99575
- combined longitudinal and shear plastic waves anal. by continuum theory of dislocation 2-65500
- elastic field determination in semi-infinite orthotropic medium 2-103044
- Harper-Dorn creep, flow process 2-71540
- HCP cryst., core struct. of edge dislocations under shear stress, computer calc. 2-76454
- interacting dislocations, dynamic theory, paradoxes 2-65997
- irradiated material, point defect-edge dislocation rate consts. and bias factors using lattice relax. and Monte Carlo simulations 2-86718
- martensitic transformations, dynamic effects, plate impingement at an obstacle (*Czech*) 2-116440
- metals, amorphous, dil. and deformed, solubility, diffusivity and trapping of H 2-81964
- metals, dislocation-induced elec. resist. rel. to antiferromag. ordering at dislocations (*Russian*) 2-104360
- plane, elastic, anisotropic, infinite, single force and edge dislocation influence functions (*German*) 2-55418
- point defect migration to dislocations, recomb. effect (*Russian*) 2-98346
- polydiacetylene crystals, dislocations and stacking faults, TEM study 2-71457
- polymer, oriented, elastic anisotropy and kink band form., disclination-dislocation model analysis 2-71542
- radiation point defect annihilation, effect on dislocation struct., theory (*Russian*) 2-98085
- rectilinear dislocation interaction with low angle dislocation boundary 2-81816
- second-order elastic effects in infinite anisotropic elastic medium 2-115234
- semiconductor, carrier mobility in presence of edge dislocation well 2-87286
- semiconductors, free carriers kinetics in dislocation wall field (*Russian*) 2-82340
- sink strengths, rate theory of irradiation damage 2-86716
- specific A phases, lubrication theory using edge dislocation climb 2-81663
- TEM obs., Burgers vector characterisation when invisibility criterion invalid 2-60990
- vacancy loops and interstitial loops, intrinsic bias differential 2-91954
- Ag, Lomer-Cottrell locks by mech. straining, X-ray topography 2-109805
- Al, crack tip produced dislocations motion during cyclic loading, TEM obs. 2-93625
- Bi₂Te₃, dislocation-induced US absorpt. and elec. props. 2-92115
- Fe, C atmosphere near edge dislocation 2-115275
- FeS₂, pyrite, deformed, defect struct., TEM study 2-98107
- GaSe, struct. phase transition, excitation refl. and photoluminesc. spectra 2-103985
- KCl, edge dislocation movement by large elec. fields 2-98105
- LiF crystals, deformed, dislocations, parameters of paired distrib. 2-66002
- LiF, edge dislocation dipole contrib. to thermal resistivity 2-86961
- LiF, mechanical props. and dislocation struct. under creep conditions 2-81880
- LiTaO₃, large cryst., Czochralski grown, low angle tilt boundaries, edge dislocations and cracking 2-91843
- MgAl₂O₄, work softening, plastic deformation, slip and dislocation climb 2-86678
- MgO, intrinsic secondary grain boundary screw dislocations, TEM study 2-91979
- MgO.Na₂O₃ spinels, mech. props., comp. influence origin 2-92080
- Mg₂SiO₄, forsterite, deformed at high temp., dislocation study (*French*) 2-60995
- NaCl, mechanical props. and dislocation struct. under creep conditions 2-81880
- Nb alloy NV7, solid solution reinforced, creep 2-116514
- Nb, plastic deformation, low temp., slip, surface orientation and oxide effects 2-86677

edge dislocations continued

- NiO, single cryst. deformed at room temp., TEM obs. of dislocations, high work hardening rate origin 2-103767
 PbO₂, defect struct., X-ray diffr. and TEM 2-76446
 Si, deformed (100) oriented single crystals, single slip deform. and nature 2-92086
 Si, dislocation EBIC contrast 2-60988
 Si, stress relaxation deform. at edge dislocation 2-76580
 α -Ti, dislocations, contrast calc. in TEM 2-60984
 n-WSe₂, photocorrosion, anisotropic, cleavage steps, line and screw dislocations role 2-99575
 Zn, two-layer dislocation block boundaries (*Russian*) 2-98093
 ZnS, form of Cu₂S and Zn secondary phases, dislocation and stacking fault decoration 2-115240
 ZnS, revealing of defects by chem. etching 2-115239

education

- see also computer science education; educational aids; educational courses; teaching; training
 3rd IEEE International Pulsed Power Conference, Albuquerque, NM, USA (June 1981) 2-89461
 basics in physics, secondary school teaching 2-68990
 biology films, photomicrography device with TV finder system (*Russian*) 2-58948
 biomedical engineering, undergraduate education rel. to 'real' engineers prod. 2-74184
 engineering sciences, education, training and research 2-68992
 engineering staff, education, cost loss increased efficiency 2-53451
 honours students conceptual difficulties in physics courses 2-84407
 interactive exhibits in college physics teaching 2-79301
 nuclear and radiochemistry, education and manpower survey 2-53450
 physical science for engineers, book 2-101151
 science classroom activities, survey, usefulness rel. to developing countries 2-112677
 science teaching and conceptual change 2-112675

educational aids

- see also student laboratory apparatus
 audio-visual materials production and photography, training courses 2-53863
 audio-visual materials utilisation in higher education, British Universities Film Council 2-53469
 CYCLOPS distance tutorial system for Open Univ. using TV and telephone network 2-79335
 hologram potential for improved communication in education and training 2-63788
 learning and visual communication, book 2-63760
 microcomputers, applications in experimental physics 2-94966
 pitch of complex tones, acoustical anal. 2-107070
 Profi-5 single printed wiring board instructional microcomputer features, facilities and operating program (*German*) 2-74186
 Rubik's cube, conservation rules and symmetry, teaching appls. 2-89512
 telematics, teleconferencing and education 2-53473
 videotaped problem solutions for introductory physics 2-53466

educational courses

- American Vacuum Society short courses for Scientists, engineers and technologies 2-84408
 electromagnetism, teaching, problem-solving course 2-107044
 electronics course, CAI methods 2-107037
 pulse power systems, graduate course curriculum 2-94942
 pulsed power education of Texas Tech University, in USA 2-94944
 pulsed power technology lecture series for USAF at Texas Tech University, modular instructional 2-94943
 United States Air Force physics course in mastery mode 2-94941
 He-Ne frequency-stabilised laser design and construction project for students 2-94968

e.g. see electroencephalography**effective mass (band structure)**

- anisotropic supercond., upper critical field, effective mass model 2-72127
 direct-gap crystals, two-photon absorption coeffs. from Basov formula 2-65294
 electron self-trapping by surface modes 2-104461
 epitaxial film, elec. cond. and Hall effect 2-115922
 graphite, Hall effect, trigonal warping, energy bands 2-87305
 heterojunction between 2 semiconductors with different effective mass, wave function connection rules 2-110463
 heterostructures, effective-mass theory for electrons 2-110231
 insulators, magnetic interaction between local mag. moments 2-115996
 optical mass and electron vel., nearly-free-electron model 2-104233
 (perylene)₂(AsF₆)₁ × 0.7 dichloroethene, one-dimensional conductor, spectral reflectance 2-57045
 (perylene)₂(PF₆)₁ × 0.8 dichloroethene, one-dimensional conductor, spectral reflectance 2-57045
 rough surface, effect of spatial dispersion on classical field enhancement factors 2-104462
 semiconductor, bielectron in an external magnetic field 2-76952
 semiconductor thin film, size quantisation of holes and carriers, energy spectrum and effective mass (*Russian*) 2-82499
 semiconductors, anisotropic, exciton-ionised donor complex energy, var. with anisotropy parameter and effective mass ratio 2-110261
 semiconductors, deep levels, book 2-89491
 semiconductors, magnetic interaction between local mag. moments 2-115996
 specific heat and mass renormalisation 2-66828
 TTT₁₃, reflection spectra (*Russian*) 2-57047
 two-dimensional metals, effects of mag. field on dielec. const. and cond. 2-56451
 uniaxial crystals, exciton coupling energy and anisotropic effective electron and hole masses 2-66456
 Bi_{1-x}Sb_x, semicond., valence band struct., elec. and thermal cond. study 2-87143
 Bi₂Te₃-Sb₂Te₃, energy spectrum of solid solutions 2-110239
 Cd₃As₂, band struct. parameters, determ. from effective mass carrier density depend meas. 2-61356
 n-Cd₃As₂, ultrathin films, effective mass, effect of size quantisation 2-98526
 CdGa₂S₄, band struct., linear optical characts., effective carrier masses, pseudopotential calc. 2-61355
 Cd₃Hg_{1-x}Se mixed cryst., Γ point band struct. parameter, elec. and thermomagnetic studies 2-76923
 (Cd_{1-x}Mn_x)₂As₂, Landau levels, cyclotron effective mass and effective g-factor 2-110269

effective mass (band structure) continued

- CdS-ZnS, electroabsorption spectra, effective masses 2-77491
 CdTe:Cl, electroabsorption spectra, effective masses 2-77491
 GaAs-Ga_{1-x}Al_xAs, quantum well struct., energy spectrum of donors, effective mass theory 2-56664
 GaAs-Ga_{1-x}Al_xAs quantum well struct., donor states, effective mass approx. 2-110459
 GaAs_{1-x}P_x-GaP strain-layer superlattice, band struct., effective mass and tight-binding calcs. 2-98729
 GaAs_{1-x}P_x-GaP strained-layer superlattice, electronic struct., tight-binding and effective mass models 2-110454
 Ga_{0.4}In_{0.6}As-InP heterojunction, 2D electron gas, quantum oscills., magnetoresistance study 2-110466
 Ge (111), n-inversion layers, subband energy struct., effective mass approx. 2-110489
 p-Ge, distrib. function and negative differential cond. calcs. at heavy hole cyclotron reson. 2-115797
 Ge, energy and stress depend. hole masses 2-66426
 n-Ge, magnetophonon reson. obs. and effective masses calc. 2-98672
 α -(γ -)GeTe, hole effective mass, plasma reflectivity study 2-56428
³He, liq., single particle spectrum and specific heat 2-66315
 Hg_{1-x}AsF₆(SbF₆)_x, Fermi surface, de Haas-van Alphen freqs. 2-76900
 HgCdTe epitaxial layers, Shubnikov-de Haas effect (*French*) 2-61486
 Hg_{1-x}Cd_xTe, n-channel, 2D-subband 2-92465
 Hg_{1-x}Te, red, cyclotron reson. of electrons and holes, anisotropy of effective masses 2-82719
 n-HgSe-Al_{0.3}O_{2.7}-Pb junction, tunnelling spectroscopy study 2-92777
 InAs-GaSb multiheterojunction, double cyclotron resonance and interband transitions 2-61574
 InAs-GaSb superlattice, highly doped, effective mass, carrier density, helicon wave propag. determ. 2-56688
 InAs-GaSb superlattice, band structure, envelope-function approx. 2-104472
 In_{1-x-y}Ga_xAl_yAs lattice matched to InP, band-gap energy and electron effective mass, comp. depend. 2-115650
 n-InSb, free carrier Faraday effect at subMM freq., static elec. field influence 2-99094
 InSb, n-channel, 2D-subband 2-92465
 KC₈, intercalation compound., cryst. and band struct., Fermi surface, de Haas-van Alphen effect 2-82227
 KC₈ (x=4,5,8), intercalation compound, Shubnikov-de Haas oscill. freqs., expt. meas. methods 2-82210
 P, black, electronic struct., self-consistent pseudopot. calc. 2-66437
 Pb_{1-x}Ge_xTe, band struct., cyclotron reson. study 2-56439
 n-PbSe_{1-x}Te_x, Shubnikov-de Haas effect meas., 1,2 to 4.2K 2-76902
 Pb_{1-x}Sn_xTe, band struct. dispersion low and parameters (*Russian*) 2-61358
 n-Pb_{1-x}Sn_xTe, Fermi surface and cond. band, Shubnikov-de Haas study 2-115644
 PbTe epitaxial layer, optical four-wave mixing 2-93315
 SiPb₃, narrow-gap semiconductor, elec. props. in DC and microwave fields 2-87313
 RbC_x (x=2,3,5,8), intercalation compound, Shubnikov-de Haas oscill. freqs., expt. meas. methods 2-82210
 Si, effective mass of electrons and holes, and intrinsic conc., temp. depend. 2-98528
 Si, energy and stress depend. hole masses 2-66426
 Si inversion layers, cyclotron effective mass and electron relax. time 2-56454
 Si MOS structures, Fowler-Nordheim tunnelling data anal. 2-98749
 Si:As(P), implanted and laser annealed, electronic states, IR optical props. 2-57112
 Tb₂Si₄, magnetic, thermal, and elec. props. 2-72177
 Xe crystal, self-trapping of excitons and holes (*Russian*) 2-98552

effusion

No entries

EFG see crystal growth from melt**EHD see electrohydrodynamics****EHT calculations**

- acetylene chemisorpt. on Ni, Rh and Pt (111) surfaces, extended-Huckel calcs. 2-66358
 amphiboles, calcic, Fe²⁺ identification in M4 site, extended Huckel method 2-91899
 benzal-p-nitroaniline, XPS, EHT calcs., electronic struct. 2-54895
 4,4'-di(p-nitrobenzyl)-phenylenediamine, XPS, EHT calcs., electronic struct. 2-54895
 diamond:N, A₁-T₂ splitting, Jahn-Teller distortions, EHT calc. 2-82277
 threo- and erythro-1,2-diphenyl-1-propanol, EHT MO anal. 2-96462
 5-fluorouracil-adenine (guanine), pairing arrangement, mutagenic effect, iterative EHT calcs. 2-64883
 Freon-113-tri-t-butyl phenoxy radical system, ¹⁹F DNP investig. 2-108591
 hydrocarbons, conjugated, ionisation pots., EHT calc. 2-108391
 lactate dehydrogenase, active centre, CNDO/2, INDO and EHT calcs. 2-80854
 lithium formate monodeuterate, lattice energy, electrostatic term, determ. from electron density 2-115173
 p-nitrobenzaldehyde, XPS, EHT calcs., electronic struct. 2-54895
 organic compounds, chemical shifts ¹³C, EHT and GIAO calcs. 2-85557
 tetraphal-bis-p-nitroaniline, XPS, EHT calcs., electronic struct. 2-54895
 4-thiouracil triplet state, zero field splitting, EHT MO calc. 2-108390
 Al chemisorption of GaAs (110), extended Huckel mol. orbital calc. 2-66345
 Cl chemisorption on Si (111) and Ge (111), charge density self-consistent-extended Huckel calc. 2-66344
 GaAs (110), chemisorption of Al (*Chinese*) 2-104139
 HNb₆I₁₁, H bonding, interstitial, calcs. 2-80472
 LiC₆, electron states, cluster model (*Chinese*) 2-66415
 Nb₆I₁₁, H bonding, interstitial, calcs. 2-80472
 Ni complex, bis(O-phenylenediamido)nickel electronic struct., EHT and MS Xalpha calcs. 2-75189
 Si-Ni(Cr) interface, chem. bonding and density of states, UPS and LCAO calc. 2-110476
 Si(111), chemisorption of Al (*Chinese*) 2-104139
 VS₂ (V₂Si₂), band struct., LCAO EHT calc. 2-82219

eigenfunctions see eigenvalues and eigenfunctions**eigenvalues and eigenfunctions**

- anharmonic oscillator, complex energy eigenvalues, semiclassical calcs. 2-84466
 anharmonic oscillator eigenvalues 2-74250

eigenvalues and eigenfunctions continued

anharmonic oscillators, two-coupled, Schrodinger operators 2-58654
 anharmonic quadrupole oscillator bound states, eigenenergies and eigenfunctions 2-54281
 arc static voltage gradient as nonlinear one-dimensional Elenbaas-Heller eqn. eigenvalue (*German*) 2-60830
 asymptotic methods in the theory of linear kinetic equations 2-101361
 atmosphere general circulation, eigenfreq. calc. of stability of Walker circulation 2-100468
 birefringent optically active crystal, coupled-mode analysis of light propag., linearly polarised eigenmodes 2-55062
 Birman-Schwinger principle, appl. 2-107144
 bistable potential, barrier diffusion, Smoluchowski eqn. eigen anal. 2-79504
 Bohm's quantum mechanical potential, relationship to modified potential 2-112744
 boson condensation into infinite number of low-lying levels 2-95229
 bound states, Schrodinger eqn. closed form soln. 2-101230
 boundary-layer flows, Orr-Sommerfeld problem, asymptotic anal. 2-70905
 cantilever, unsymmetric cross section, combined torsional and flexural buckling under normal loads 2-114689
 charmonium spectroscopy, Schrodinger eqn. solns. for superposed pot. 2-74656
 chemistry appls., matrix-diagonalization with a programmable calculator, using HP-41C/CV 2-64855
 core neutronics, iterative calc. acceleration, dominant error vector eigenvalue 2-54477
 cylinder end problem, elasticity diagonally dominant soln. 2-91251
 degenerate states, dynamic hyperpolarisabilities and nonlinear susceptibilities (*Russian*) 2-53588
 diatomic molecules, electronic pot., eigenvalue function 2-54914
 double well Hamiltonians, twisting trick 2-107139
 double well potential, level splitting, eigensolns. 2-74264
 eigenfunction decay in N-body quantum systems 2-95124
 energy eigenvalue calc. for a local pot. 2-54911
 energy eigenvalues for Yukawa potentials 2-107172
 energy spectrum calculation of quantum mechanical system 2-84473
 equations of motion method, theory (*Russian*) 2-53593
 evolution equations, Lie group analysis 2-107564
 Feynman path integration, associated eigenvalue problem 2-74257
 finite-difference methods for eigenvalues 2-58587
 finned heat exchanger tubes, natural frequency correction for stiffening 2-91297
 Fock space, universal wave and energy operators 2-107146
 Fokker-Planck eqn., eigenvalue and definite evolution operator soln. 2-89641
 fractional Brownian motions and eigenfunction expansion 2-79475
 free circular plate under nonconservative edge loading, vibration and stability 2-91300
 general lower bounds for reson. in one dimension 2-112722
 graded-index fibres, vectorial wave analysis 2-65391
 grand unified theories, fermions and Higgs fields 2-95720
 graph theory inferences for the eigenvalue problem 2-63851
 half space, anisotropic, with elliptic inclusion, antiplane eigenstrain problem 2-101171
 Hamiltonian systems, isospectral eigenvalue problems use obtaining hereditary symmetries 2-95080
 harmonic oscillator, polynomial-type eigenfunctions 2-95069
 Heisenberg eqns. of motion in Caldirola-Montaldi procedure 2-58646
 hingeless circular arches, critical centrally-directed pressure values 2-74216
 Hopf bifurcation with fluctuating control parameter, Fokker-Planck eqn. soln. 2-84541
 Hubbard model, symmetry props. 2-87124
 Hulthen potential, non-zero ang. momentum states, analytic approx. 2-95099
 Hylleraas-Undheim theorem, proof 2-69046
 ideal and resistive modes, in plasmas 2-86409
 image recognition, optical transformation for feature extraction (*Russian*) 2-85897
 infinite dimensional Jacobi matrix, upper bound on number of eigenvalues 2-95072
 inscattering operator, finite dims., eigenvalues and eigenfunctions 2-107270
 intermittency, exact solns. to Feigenbaum renormalisation group eqns. 2-84538
 Ising model, 3-D, partition function, integration by collective variables and linear renormalisation (*Russian*) 2-92852
 Laplace operator, spectral problem, eigenvalues, asymptotic determ. (*Russian*) 2-69032
 linear manifolds intersection, projector operator 2-79387
 membranes and plates, vibrations of cross-shaped, I-shaped and L-shaped bodies 2-109106
 metallic conductors, 2-dimens., size effects and low-temp. cond. anomalies 2-87249
 meteorological anomaly patterns in Taiwan, eigenvector anal. 2-100423
 minimum-uncertainty coherent states for time depend. systems 2-95106
 multipole photon states classification, shift operator techniques, P_1^n eigenstate and eigenvalues determ. 2-95947
 N/D method, D-matrix eigenvalue, multichannel T-matrix enhancements 2-107566
 neutron energy spectra, eigenvalue depend., definitions, anal. and appl. 2-96063
 non-Stieltjes renormalised series by hyperviral approach 2-107148
 nonlinear diffusion eqn. $n_i = (n_i^{-1})_{,i}$, asymptotic behaviour 2-95278
 nonlinear molecule nucl. spins interactions with vibr. and rot. motions 2-113961
 nonpolynomial pot., Borel summability 2-95047
 nonpotential interactions and origin of masses of elementary particles 2-95799
 ocean acoustic propagation modelling and source characterisation by spectral density matrix eigenvectors 2-60283
 ocean seiches at Haifa Bay, E.Mediterranean Sea, anal. of eigenfreqs. of resonating water body 2-117307
 optical bistability, absorptive, fluctuations and transitions 2-97091
 optical transfer functions, radially symm., upper and lower bounds 2-108810
 optical waveguides, anisotropic, approximate scalar finite-element anal. 2-81075

eigenvalues and eigenfunctions continued

ordinary differential equations and the symmetric eigenvalue problem 2-95133
 particle and radiation leakage importance, definition, anal. and interpretation 2-96064
 periodic table, rel. to broken supersymmetry 2-59675
 permutation group representation theory 2-95074
 perturbation at large order, conf. proceedings of international workshop (March 1981) 2-53412
 plane frames, linearly elastic, exact dynamic stiffness matrix, transcendental eigenvalue problem 2-109189
 plasma Alfvén wave heating in general toroidal geometry 2-55755
 plasma nonlinear wave equation, large-amplitude solutions 2-109487
 plate, elastic, rectangular, with elastically attached reinforcing rib, eigenfreq. bounds 2-55475
 plate assemblies, prismatic, elastic and elasto-plastic, local instability numerical anal. 2-109193
 plates, composite, laminated, edge effects 2-103028
 plates, polygonal, elastic, thermal stresses due to localised heating 2-103035
 plates, stiffened, free vibr. anal. by including inplane inertia effect 2-103079
 polyatomic vibr. excited mol., coupled Morse oscill., energy spacings and wave functions 2-80508
 post buckling behaviour, instability of dual eigenvalue fourth-order systems 2-114699
 projection variation method for self adjoint operation on a Hilbert space 2-69050
 pseudo-eigenvalue equations, perturbative soln. (*Spanish*) 2-84463
 pseudo-eigenvalue equations, perturbative soln. for open shell RHF problem (*Spanish*) 2-84464
 quantum mechanical time averages, analytic approach 2-101233
 quantum noise and quantum nondemolition meas. 2-95102
 quark mass matrix eigenvalues, review 2-113243
 quartic oscillator, bounded anal. approximate expression for eigenvalues 2-53573
 quasiperiodic potentials, spectral behaviour 2-84467
 quasistationary quasi-energy states and convergence of perturbation series in a monochromatic field 2-95114
 radial Schrodinger eqn., eigenvalue calcs. 2-63854
 random spin systems, susceptibility matrix eigenvalue spectrum 2-110599
 rectangular plates clamped at opposite edges, natural frequencies 2-91302
 Reggeon field theory, Hamiltonian props. 2-95620
 resistive hose instability, multicomponent model 2-103353
 resonances, complex coordinates theory 2-79392
 resonant scatt. theory, generalised completeness relations 2-74249
 rotating flexible rod vibr., uniform real-variable asymptotic approx. 2-89528
 rotating harmonic oscillators, continued fraction theory 2-95093
 rotating machinery vibration anal. using finite elements 2-69012
 rotating-harmonic-oscillator equation, comments on Flessas' paper 2-107168
 scalars coupled to fermions in 0+1 dimensions 2-101571
 Schrodinger eqn., numerical determ. of eigenvalues 2-63785
 Schrodinger equation, exact solutions for potential $x^2 + \lambda x^2/(1+gx^2)$ 2-63844
 Schrodinger equation, total interaction as perturbation 2-58652
 Schrodinger equations, operator method of approx. soln. 2-58650
 Schrodinger operator, first order relativistic corrections, spectral concentration in the nonrelativistic limit 2-112737
 Schrodinger wave functions, perturbation expansion coeffs., recurrence relations 2-53565
 semiclassical quantisation of integrable systems using periodic classical orbits 2-95063
 shell, cylindrical, nonlinear problems, choice of main soln. (*Ukrainian*) 2-81221
 sigma hypernuclei, microscopic model 2-95953
 sloshing eigenvalues of two-dimensional regions with holes 2-58623
 sloshing frequencies, upper and lower bounds by intermediate problems 2-58624
 slow plane flow over slot, matched eigenfunction expansions 2-81366
 spherical top mol., vibr.-rot. bands matrix element anal. 2-70213
 spheroidal wave eqn., collective and global props. 2-107120
 spin adapted many-electron wavefunctions (*Russian*) 2-53592
 stability of Schrodinger eigenvalue problems 2-53554
 stellar pulsation problem, effect of turbulent viscosity on pulsating eigenfunctions 2-89240
 stellar pulsational stability, calc. of lowest eigenvalue via Schwartz iteration method 2-106671
 Stokes' in WKB theory 2-95077
 Sturm-Liouville problems with discontinuous coeffs., eigenvalue bounds 2-58759
 Sturm-sequence check for eigenproblems resulting from variational principles with subsidiary conditions 2-53491
 time-dependent quantal oscillators, linear invariants 2-95095
 toroidal plasma relaxation, Taylor theory, anal. 2-103411
 torus, full, eight-coil, superconducting, magnetoelastic buckling, finite element anal. 2-103047
 two-dimensional quantum field theory, pathology in indefinite metric inner product space 2-101512
 two-electron atoms and ions, effective lower bound to eigenvalues 2-54748
 vectorizable eigenvalue solver for sparse matrices 2-53481
 α elastic scatt. and α -decay widths, two-body energy eigenvalue theory 2-59377
 $F+HD(H_2)(D_2)$, collinear reactive scatt. resons. 2-111469
 H atom ground state eigenvalue, spline method numerical treatment 2-85522
 H_2^+ , B state, Morse pot., eigenvalue determ. 2-54914
 He, ground state, struct., exact 1-electron model 2-80445
 He, isoelectronic series, S state, eigenvalues of two-dimensional Schrodinger eqn. 2-54749
 ICl_3 , electronic struct., relativistic calc. 2-102401
 Si, complex band struct., surface states, Green's function, eigenvalue method 2-82206

eigenvectors see *eigenvalues and eigenfunctions*

eightfold way see *SU₃ theory*

Einstein-de Haas effect

see also *gyromagnetic ratio*
No entries

einsteinium

see also *nuclei with*

²⁵⁴Es, production using hard neutron spectrum 2-113805

einsteinium compounds

No entries

elastic aftereffect

Cu, torsionally deformed, reverse mech. aftereffect, temp. depend. (*Russian*) 2-99470

Mo, diffusion of interstitial atoms, elastic aftereffect meas. (*German*) 2-71734

elastic constants

see also *elastic moduli*

alkali halides, third-order elastic consts. from model pots. 2-98180

alkali metals, lattice dynamics, compression effect 2-92120

alkaline earth oxides, elastic consts., 3rd and 4th order 2-76563

anisotropic solid, fluctuations, and thermodynamic props. 2-115435

benzil, annealed and unannealed, critical behaviour, simultaneous Brillouin

correl. light scatt. 2-110878

binary alloys and pure metals 2-115215

cancellous bone from proximal tibial epiphysis, props. and anisotropic

model 2-88577

cholesteric materials elastic const. meas. 2-103874

composite material triple-layer cylindrical shells, stability under combined

axial compression and lateral pressure 2-114701

coupled external and internal strains, elastic response and consts.

2-92076

cubic crystals, fourth-order elastic const. C_{1111} calc. 2-109882

cylinder, hollow, transversely isotropic, stresses and deform. under ring

and radial loads 2-91241

diamond structure elements, internal strain, survey of theoretical

approaches 2-61087

dibenzyl, cryst. struct. and elastic props. at 293K and 110K 2-60967

dimethyl ammonium in tetrachloride, layered cpd., elastic and thermal

props. 2-81873

discotic mesophase, Freedericksz transition, phys. parameters meas.

2-76286

dynamic compliance meas., crack nucleation and propagation study

2-91352

elliptic inclusion in anisotropic solid of cubic symmetry 2-97382

ester ethers, liq. cryst., mol. dimensions. rel. to pitch and elastic coeff.

2-115137

fiberglass reinforced plastic, elastic and fracture props., design and testing

2-88195

fluorite struct. crystals, third and second order elastic consts. and press.

derivatives calc. 2-76561

glass fibre reinforced plastics, in-plane stiffness and strength props.

2-67409

graphite intercalation compound with K, Rb, Cs, phonon branches, neut-

ron spectra study 2-76618

hexagonal crystals, Debye temp. calcs. 2-61102

hexagonal crystals, Gruneisen numbers 2-86164

hexatriacontane, elastic props. and phase transitions 2-92078

incommensurate phases, acoustic anomalies 2-66162

inert gas solids, lattice dynamics and thermodynamic props., zero point

motion and three body effects 2-109941

Keyes' correlation anal. for cubic and hexagonal crystals. 2-92073

laminated, brittle strength calc., computer algorithm, stress conc. role

2-60474

Landau theory appl. to elastic phase transitions 2-98246

liquid crystal, nematic-columnar phase transition, statics and dynamics

2-81959

liquid crystal twist cells, electro-optical performance, phys. props., correl.

with mol. struct. 2-65856

liquid crystals, nematic, microscopic theory for thermodynamics and elas-

tic consts. 2-81668

liquid crystals with disc-like mols., elastic consts. and order parameters

calc. 2-103613

lithium ammonium thallium tartrate monohydrate mixed cryst., dielec.

and elastic props., antiferroelec. obs. 2-116134

melting, molecular dynamics study for two dimensions 2-81938

metal-matrix composite wire appl. of torsional wave vel. meas. technique

2-92113

metals, pseudopotential elastic const. calcs. (*Chinese*) 2-109880

metals, self-diffusion entropies and activation volumes 2-71701

methane-d₀(-d₄) single crystals, elastic and photoelastic consts., Brillouin

scatt. obs. 2-66103

molecular crystals, elastic consts., noncentral force contrib., lattice dynam-

ics 2-61084

nematic liq. cryst. elasticity coeff. 2-55834

nematic liquid cryst., biaxial, elastic coeff. 2-115324

nematic liquid cryst., elastic constants, band and splay, in cylindrical

geometry, interferometric anal. 2-71347

nematic liquid crystals, elastic constants determ. from noise meas. of scat-

tered laser light 2-76559

nematic liquid crystals, Frank elastic consts., statistical theory 2-86561

nematic liquid crystals, stiffness consts. based on distributed harmonic

forces between molecules 2-81870

nematics, elastic consts., molecular model 2-81871

notch tips, elastic constants influence on stresses 2-60408

16-OCB binary mixtures, smectic A-nematic transition, elastic constant

temp. depend. 2-56191

orthorhombic crystals, Debye temps. 2-98234

particulate composite material, overall elastic constants 2-86215

pentacosan, elastic props. and phase transitions 2-92078

poly(hydroxyethyl glutamine), crosslinked, piezoelec., elastic and dielect.

consts., hydration effect 2-110774

polyethylene, highly oriented sheets, lateral compliances and Poisson ratio

2-83149

polymers, elastic and fracture props., design and testing 2-88195

polyoxymethylene single cryst., phonon dispersion curves and elastic props.

2-92136

polypeptide solutions, lyotropic cholesteric phase, statistical theory

2-81661

polypropylene, drawn films and extruded rods, photoelastic and elastic

consts., Brillouin scatt. study 2-83148

elastic constants continued

precipitates, elastic interaction, integral eqn. approach 2-98293

quartz, mechanical properties, effect of α - β transition 2-99046

quartz, piezoceramic, synthetic, elastic and elec. characts. at 4.2K, acous-

tic device applic. (*Ukrainian*) 2-82784

rare gas crystals, binding energy, zero isotherms, and elastic consts. from

model attractive pot. (*Russian*) 2-55879

rare gas physisorbed monolayer on graphite, orientational epitaxy of wall

near commensurate-incommensurate phase transition 2-66355

s(d)-f model, intermediate valency, phase diag. and transitions, strain

effects 2-98596

salicylideneanilines, liq. cryst., mol. dimensions. rel. to pitch and elastic

coeff. 2-115137

smectic B liq. cryst., AC shear elastic const. meas. 2-103875

smectic liquid crystals, gauge transformations, anharmonic effects

2-81672

smectic-A-nematic transition, dislocation loop model 2-103991

solid with cold worked surface layer, Rayleigh wave propag. 2-62299

steel, 30HGV and S145, expt. X-ray elastic constants 2-11225

steel, high speed, unidirectionally deformed layers, ψ splitting and micro-

scopic residual shear stress in X-ray stress meas. (*Japanese*) 2-78011

strain fluctuation effects 2-62155

strain wave velocity in single crystals and polycrystalline media, relation to

thermal properties 2-61062

submonolayer film on elastic substrate, incommensurate struct., phase

diag., Debye-Waller factor (*Russian*) 2-82178

tanane, ferroelec. and ferroelastic phase transition, soft acoustic mode

2-93122

tetracyanoethylene, Brillouin scatt. study of elastic and photoelastic consts.

2-99141

tetragonal crystals, hemihedral group, Debye temp. calc. 2-109939

thiourea, phases I to V, US props. 2-109911

torus, full, eight-coil, superconducting, magnetoelastic buckling, finite element

anal. 2-103047

transition metals, phonon spectra in Frohlich approach, elastic consts.

derived 2-92132

tris-sarcosine calcium chloride, ferroelastic phase transition, US study

2-66194

two-dimensional Lennard-Jones system, melting, Monte Carlo simulation

2-92166

two-sublattice model, piezoelec. and elastic props. 2-87675

Ag₃AsS₃, proustite, phase transition, Raman and Brillouin scatt. study

2-103986

AgCl-AgBr mixed cryst., interionic pot. and cryst. props. 2-65916

AgCl(Br), elastic consts., 3rd and 4th order 2-76563

Al, cryst., tensile stress-strain relations, constitutive relations calcs.

2-67407

Ar crystal, interatomic forces, cohesive energy and elastic constants.

2-55882

BaO-SrO-Na₂O-Nb₂O₅ system, cryst. growth and electromech. characts.

2-87693

Bi-Sb alloy single crystals 2-71539

BiVO₄, ferroelastic phase transition, Brillouin scatt. study 2-116200

C fibre reinforced filament wound cylinder under internal press., probabi-

listic burst strength 2-62170

CS₂, solid, intermol. modes, neutron and Raman scatt. studies 2-98211

CdGeAs₂, chalcopyrite, elastic behaviour, US wave vel. study 2-61052

Cd₃Hg₁₂Se, US attenuation and vel. meas. near zero-gap state 2-92118

Cd_{1-x}Zn_x, elastic consts., temp. depend., compressibility, Debye temp., US

meas. 2-99468

CoO, first-order Raman spectrum linewidth, temp. depend. 2-110861

Cr, longitudinal acoustic phonon vel. in spin density wave state, temp.

depend. 2-98219

Cr-V, dilute alloys, elastic consts., mag. transition 2-86774

Cs-K solid solns., elastic-stiffness constants under pressure 2-98182

Cs-Rb solid solns., elastic-stiffness constants under pressure 2-98182

CsCdF₃, fluoroperoxskites, 3rd and 4th order elastic consts. 2-98181

Cu₂AsS₃, elastic and mag. props., temp. depend., phase transform.

2-116009

Dy, Neel temp. investigation 2-87500

Er, magnetoelastic props. near Neel temp., elastic consts. 2-104679

Fe, unidirectionally deformed layers, ψ splitting and microscopic residual

shear stress in X-ray stress meas. (*Japanese*) 2-78011

GaS, elastic props. under high pressure, by Brillouin scattering 2-72517

GaS, layered compound, elastic consts. and compressibility 2-86773

Gd-Y alloys, mag. phases, temp. depend. of elastic props. 2-82564

Gd₆₅Y_{34.6}, mag. phase transitions, elec. resist., elastic const. and US

attenuation study 2-116006

Ge_{1-x}Si_x solid solns., mode Gruneisen parameter for long wave phonons,

elastic consts. 2-109942

In-Bi alloys, US vel. and internal friction investigation 2-71585

In-rich alloys, phenomenological considerations of phase transformations

2-88076

InGaAsP-InP heterostructure, luminescence method of determ. elastic stresses

2-104957

K₂Ba(NO₃)₄, ferroelastic phase transition, US study 2-66194

(KBr)_{1-x}(KCN)_x, orientational freezing freq. depend. 2-71382

KCN,Br_{1-x}(Cl_x)₃, acoustic soft modes, US vel. meas. 2-81926

K₂Cd₂(SO₄)₃, elastic and piezoelec. props. 2-66993

KCl₂Br₂, phonon dispersion, inelastic neutron scatt. study 2-115372

KH₂(SeO₄)₂, ferroelastic phase transition, US study 2-66194

K₂(Rb₂Cl₂)₂, phonon dispersion, inelastic neutron scatt. study 2-115372

K₂SeO₄, ferroelec. incommensurate transition, Brillouin scatt. study

2-66997

Kr crystal, interatomic forces, cohesive energy and elastic constants.

2-55882

LiCsSO₄, ferroelastic transition, elastic consts., acoustic softening

2-98188

LiCsSO₄, ferroelec., elastic consts. near phase transition, US vel. study

2-56066

LiKSO₄ crystals, anomalous changes in piezoelec. and elastic props.

2-99054

Li₂SO₄ solid electrolyte, Brillouin spectra, 899-1120K, elastic constants

2-104897

Li₂SiO₃(GeO₃)₂, Czochralski growth, pyroelec., dielec., elastic props.

2-110775

LiTaO₃, paraelec. and ferroelec., elastic props. 2-115326

LiYF₄ and LiY_{0.5}Tb_{0.5}F₄, elastic consts., hydrostatic press. derivatives

2-66104

MX₂O₄ cpds., SnPb₂O₄, NiSb₂O₄, ZnSb₂O₄ and Pb₂O₄, struct. evolution,

dilatation, vibr. rigidity (*French*) 2-91911

elastic constants continued

- (Mg₂, Fe_{1-x})₂O₃, magnesiowustite, polycryst., elastic props., press. and temp. depend. 2-58038
 Mg₂Pb, third-order elastic const. and low temp. limit of Grüneisen parameter, Axe shell model 2-76631
 MnO, mag. susceptibility and elastic const., distance depend. exchange interaction effects 2-115995
 (NH₄)₂BeF₄, Debye temp. and sound vel. calc. from elastic const. 2-81919
 (NH₄)₂BeF₄, ferroelec., US study under hydrostatic high press. 2-115362
 (NH₄)₂SnBr₆, US study of phase transition 2-66201
 NaCl-type alkali halides, phenomenological pots., elastic and dielec. data anal. 2-81706
 Na₂GeO₃, Czochralski growth, pyroelec., dielec., elastic props. 2-110775
 NaNO₃, elastic const., compressibility, ultrasonic pulse echo superposition technique 2-61055
 Na₂O-Li₂O-SiO₂, glass, energetics, from acoustic meas. 2-71590
 Na₂O-SiO₂, glass, energetics, from acoustic meas. 2-71590
 NbO₃, elastic const., ultrasonic study 2-109883
 Ne crystal, interatomic forces, cohesive energy and elastic constants. 2-55882
 NiO mag. and lattice mechanical props. 2-92890
 α-NiSO₄·6H₂O, elastic const., temp. depend., ultrasonic meas. 2-98179
 Pb, linear potential calcs. of phonon props. 2-66146
 PbS(Se)(Te), elastic const., 3rd and 4th order 2-76563
 PbTiO₃ ceramics, piezoelectric, elastic and dielectric props. 2-87685
 Pb(Zn_{1/3}Nb_{2/3})O₃-PbTiO₃, ferroelec. transitions, dielec., elastic and piezoelec. study 2-116124
 Rb-K solid solns., elastic-stiffness constants under pressure 2-98182
 RbAg₄I₃ crystal, superionic conductor, cubic-trigonal phase transition, order-disorder theory 2-55876
 RbCdF₃, fluoroperoxides, 3rd and 4th order elastic const. 2-98181
 RbCeF₃, fluoroperoxides, 3rd and 4th order elastic const. 2-98181
 RbHSO₄ cryst., near ferroelec. phase transition point, elastic and nonlinear dielec. props. 2-57007
 Rb_{0.68}WO₃, acoustic study of elastic behaviour, temp. and mag. field effects 2-56065
 Rb₂ZnCl₄, elastic behaviour, temp. depend., commensurate-incommensurate transition, Brillouin spectra study 2-61053
 Rb₂ZnCl₄, incommensurate state, elastic stiffness const. temp. depend., Brillouin scatt. 2-115360
 Si-Ge solid solns. elastic const., compression effects 2-76562
 Si₃N₄, hot pressed, acoustic charact. of mech. props. (Japanese) 2-67511
 SmS, pressure-induced elastic softening, elastic const. meas. 2-92075
 SnTe, elastic const., 3rd and 4th order 2-76563
 SrTiO₃, antiferrodistortive phase transition, impurity effect 2-82793
 (Ti_{1-x}V_x)₂O₃, semimetallic, elastic moduli, press. depend., slow shear mod. softening near x=0.04 2-81874
 TiCdF₃, fluoroperoxides, 3rd and 4th order elastic const. 2-98181
 Tm₂Se and TmSe_{1-y}Te, intermediate valent, phonon and elastic anomalies 2-56116
 Tm₂Se, intermediate valent, phonon and elastic anomalies, Raman effect 2-56110
 TmSe_{1-y}Te, intermediate valent, phonon and elastic anomalies, Raman effect 2-56110
 UAl₂, acoustic study of elastic behaviour, temp. and mag. field effects 2-56065
 US(Te)(As), rock-salt struct., mag. excitations and lattice vibr., neutron diffr. study 2-72153
 V-Cr alloys, elastic const. C₄₄, temp. variation 2-92079
 Xe crystal, interatomic forces, cohesive energy and elastic constants. 2-55882
 Zn, cryst., tensile stress-strain relations, constitutive relations calcs. 2-67407
 Zr(Fe_{0.32}Co_{0.68})₂, acoustic study of elastic behaviour, temp. and mag. field effects 2-56065

elastic deformation

see also bending; elasticity; electrostriction; stress/strain relations; torsion

- aerodynamic force singularities of aeroelastically unstable two-dimensional panels 2-91301
 alkali cyanides, elastic softening and ferroelastic instabilities 2-56147
 alkali superoxides, elastic softening and ferroelastic instabilities 2-56147
 amorphous alloys, mag. domain struct. under elastic stresses 2-82634
 bar, straight cantilever, nonlinear bending, Cauchy-type problem 2-114650
 beam, space-curved, finite deformation 2-60412
 cellulose nitrate, creep behaviour in unloading process under superimposed tensile and hydrostatic loading 2-67430
 composite shells under impulsive loads, elastic-plastic deform. 2-65493
 contact lens deformation, effects on tear film pressures induced during blinking 2-88535
 contact problem for rigid inclusion pressed between two dissimilar elastic half-planes 2-91343
 continua, 2D and 3D stress analysis using UNCLE finite element scheme 2-97388
 crystal plate with step-like impurity atom distrib., surface relaxation 2-66337
 cylinder, hollow, transversely isotropic, stresses and deform. under ring and radial loads 2-9124
 cylinder, incompressible, elliptic; under finite deforms., stability 2-55466
 cylinder, rotating hollow, finite elastic-plastic deform. 2-55459
 cylinders, rough, compressed between smooth flat surfaces of hard blocks, deform. 2-109210
 definition and its computational significance 2-91258
 diamond, lattice const., and internal X-ray diffractometer with uniaxial stress apparatus study 2-65797
 elastic-plastic deformation kinematics, defn. and comput. significance 2-91277
 elastic-plastic memory type materials with general work-hardening, math. theory 2-109206
 fibre reinforced composites, laminar, multidirectional, deform. and breakdown mechanism 2-114724
 fibre reinforced composites, unidirectional, specimen length rel. to struct. and anisotropy 2-83156
 fracture toughness expressions, instability conditions 2-56075
 geometrically nonlinear solids, effective const. 2-65480
 glass fibre reinforced epoxide cylindrical shells, deform. and fracture under internal pulse load 2-83225
 hard alloys, elastic deform. during compression, math. modelling 2-77863

elastic deformation continued

- hyperelastic compressible isotropic solid, finite plane deformation 2-97373
 hyperelastic material, isotropic incompressible, finite plane strain 2-65484
 incompressible elastic body, new theories on Ericksen's problem 2-109183
 laminar plane, elastic, weakened by doubly periodic system of slits, deform. 2-55441
 locking solids analysis, dual math. models 2-114653
 membrane, cylindrical, nonlinear elastic axisymmetric deformation with torsion 2-103033
 metals, sheet, residual stresses determ. 2-72902
 mirror, annular, surface deform. due to effect of axisymmetric load 2-91021
 nonlinear elastic media deformation, stability under finite disturbances (Ukrainian) 2-114697
 organic crystals, dynamic compaction under shock 2-72648
 perfectly elastic materials, reduced equilib. eqns. 2-91236
 plate, circular, geometrically nonlinear, axisymm. deforms., deform. map investigation 2-97375
 plate, large inextensional deform., eqns. of motion 2-89537
 plate, rigid-plastic polygonal, large deform. analysis 2-75862
 poly(γ-methyl glutamate) films, mech. props. and aggregated states of α-helical chains 2-111217
 polymers, coke filled, strength and deform. props. 2-83188
 polymers, hard, failure processes sequence 2-57483
 polypropylene, stretched film, time resolved IR study 2-116180
 prestressed highly elastic materials, crack theory 2-55512
 ring, nonlinear-elastic, bulging, action of radial load (Russian) 2-91244
 ring, thin elastic deformation in a frictional channel 2-91252
 ring fibre interferometer phase nonreciprocity due to acoustic emission 2-79662
 rods, thin, skew-curved, large elastic deformations 2-55419
 rubber, natural and polydimethylsiloxane, for artificial heart valves, props. in biaxial stretching 2-83155
 shell, elastic conical, large axisymmetric deformations (German) 2-114665
 shell, elastic-plastic instability under compression 2-55465
 shell, rolled cylindrical, loaded by internal pressure, elastic deform. and layers slippage 2-91340
 shell, saddle-shaped hyper, acting like arch, buckling 2-75870
 shell structures with cuts, stress-strain state at large and small strains, pneumatic meas. 2-91274
 shells, cylindrical, locally-loaded, stresses, displacements (Russian) 2-60392
 shells, elastic flexible shallow, variational principles of theory 2-114660
 shells, shallow, special cases of inextensional deform. 2-75851
 shells, shallow saddle-shaped hyper supported by shear diaphragms under uniform load, stability (German) 2-75869
 skin, deform. pots. spread 2-83559
 space with two thin elastic inclusions, axisymm. deform. 2-86214
 steel, austenitic stainless, thin-walled tubes, state variable anal. of elastic deform. 2-57398
 steel, medium C, mech. props. in dynamic deform., struct. and ultrasonic vibr. influence 2-72772
 steel, sheet, residual stresses determ. 2-72902
 superhard materials, plasticity and strength investigations by microindentation method 2-116668
 thermoelastoplastic deformation of solids, analytical description 2-114685
 viscoelastic-media, dynamic models, deform. processes 2-10170
 work of plastic and elastic deformation during indenter indentation 2-81877
 Ag-Au, oxidized, plastic deform. effect on alloy-oxide layer, TEM study 2-110219
 Al, cryst., tensile stress-strain relations, constitutive relations calcs. 2-67407
 Al-Mg-Sc alloy, elastic strain caused by ScAl₃ precipitates, electron microscopy study (Russian) 2-105207
 Bi₂Sb₃-Si, uniaxial deform., influence on elec. cond. and dielectric const. 2-109886
 Fe, cast, graphite size and spacing effect on elastic const. 2-116481
 Fe-Al, pseudoelasticity and slip reversibility, optical and electron microscopy obs. 2-111221
 Fe-Ni-Co-Ti, martensite and austenite, disperse γ' particles elastic deform. and γ↔α transitions (Russian) 2-88078
 GaAs:Si, ion implanted rad. damage, X-ray rocking curve study 2-66075
 Ge:Si, ion implanted, rad. damage, X-ray rocking curve study 2-66075
 In_{0.1}Ga_{0.9}As_{0.1}P_{0.9}-InP LPE layers, strain anal. and optical props. meas. 2-66392
 MoC_x, metastable semicoherent precipitate struct. anal. by diffr. contrast image matching 2-76685
 Ni, deformed, small-angle cold neutron scatt. study 2-71548
 PbTe epitaxial layers on BaF₂, misfit and thermal strains, magneto-optical and X-ray study 2-82175
 Si, bent crystal, contrast effects in synchrotron X-ray topographs 2-60837
 Si, ion implanted, rad. damage, crystalline props., X-ray rocking curve study 2-66075
 Si, lattice const., and internal X-ray diffractometer with uniaxial stress apparatus study 2-65797
 W fibre reinforced Cu composites, tensile yield behavior, effect of thermal history (Japanese) 2-105238
 WC-Co, elastic deform. during compression, math. modelling 2-77863
 WC-Co cemented carbide, bend deform. up to 1273K 2-57432
 Y(Fe_{1-x}Co_x)₂, crystal struct. deform., elastic props. (Russian) 2-92074
 Zn, cryst., tensile stress-strain relations, constitutive relations calcs. 2-67407

elastic hysteresis

- energy under repeated loading (Slovak) 2-116483
 ferromagnetic magnetostrictive polycryst. material vibr., hysteresis damping, phenomenological theory 2-66883
 Pb, modulus defect and amplitude dependent damping, normal-supercond. transition effect 2-55978

elastic limit

- cylinders, reinforced plastics, buckling anal. 2-97412
 metals, dynamic elastic limit determination 2-116628
 steel, dynamic fracture parameter determ. 2-105291
 steel, mild, aged, plastic behaviour 2-93559
 steel, structural, rolled, microhardness, influence of appl. tensile stress (Japanese) 2-105307

elastic limit continued

- struts, steel, subjected to impulsive loading with linear attenuation, dynamic anal. (*Chinese*) 2-103073
 Al, Hugoniot elastic limit of 2024 specimen, impact expt. 2-93565
 Cu winding conductors, mechanical props. (*Czech*) 2-111230
 Cu-Ti, strength and ductility, 4 to 70K (*Japanese*) 2-105234
 Fe-Si (3 wt.%), plastic deform. in micro-and macro-stress regions, 293 to 773K (*Russian*) 2-99484
 Mo single crystals, cyclic strength at room temp. 2-111319
 Si, shock loaded, struct. transition, dynamic yielding and shear strength reduction obs. 2-86792
 ZnS(Se), shock induced phase transition stresses 2-98200

elastic moduli

- see also Poisson ratio; shear modulus; Young's modulus
 alkali halide crystal compressibility 2-98178
 alkali halides, Grueneisen parameter vol. dependence and bulk modulus press. dependence calc. 2-109940
 alkali halides, mixed crystals, cohesive energies and bulk moduli calc. 2-60920
 alkali halides, third-order elastic consts. from model pots. 2-98180
 alkaline earth oxides, elastic moduli and covalency correlations 2-86772
 apatites, elastic props. 2-83150
 bimodulus composite materials, laminated plates, behaviour 2-97385
 brittle materials, fracture and defects (*French*) 2-86780
 cellular materials, three-dimens., elasticity, collapse strength 2-91248
 ceramic-like body, process design, prod. from recycled waste glass, phys. props. 2-111126
 ceramics, fibrous, low-density, mech. props., micromech. model 2-77909
 ceramics, heat resistance, rel. to strainability, strength and thermal expansion 2-115441
 colloidal liquids and solids, dynamics 2-109945
 composite, directionally reinforced, stress distrib. in components 2-62158
 composite, modules difference phenomena 2-62157
 composite material cylindrical shells, polymeric, stability under axial compression 2-114702
 composites, granular, effective characts. optimisation 2-81235
 composites, two-component, bounds on elastic and transport props. 2-99473
 composition-modulated alloys, elastic consts., effect of screening singularities 2-103877
 constantan film, evaporated polycryst., hypersound attenuation and phase vel., 1-24 GHz 2-109907
 diallyl phthalate polymer below gel point, rheology 2-65553
 dicalcium barium acrylate, ferroelastic phase transition, lattice const. and birefringence 2-92187
 drawn, crystal stability and mech. props., statistical-mech. approach 2-86586
 electron fluid, 2-D, compressibility and bulk modulus 2-66466
 Elinvar, Fe-Mn-V-C, dispersion hardened, nonmag., mech. characts. 2-62132
 epoxy mixture, Al₂O₃ filled, shock-loading response 2-71570
 epoxy resins, mol. weight, crosslink densities, elastic moduli 2-116482
 ethylene-propylene-diene rubber blend with polypropylene, sulphonated and unsulphonated, struct., physical and rheological props. 2-116486
 femur, human, material props. and strength behaviour of compact bone tissue (*German*) 2-105710
 ferrite plate, magnetostatic wave interaction with elastic waves, dispersion laws, magnetostriction 2-72330
 fibre reinforced composites, plasticity anal., elastic moduli, yield conditions, hardening rules and stress conc. factor derived 2-99510
 fibre testing, strand test for routine strength and modulus evaluation 2-67677
 fibrous composite medium, shear problem 2-55457
 gel elastodynamics 2-103041
 glass fibre reinforced epoxy, short fibres, matrix effect on fracture toughness 2-62205
 glass fibre reinforced plastics, in-plane stiffness and strength props. 2-67409
 glass fibre reinforced plastics, mech. props. at low temps. 2-77864
 glass fibre unidirectionally reinforced terephthalate-polyester filled resin, laminate, filament wound tubes, resin flexibility effects on props. 2-116497
 glass matrix particulate composites, micromechanics approach to indentation hardness 2-57364
 graphite, dynamic response of fusion reactor components with temperature-dependent properties 2-69838
 graphite fibre reinforced Al, elasticity, ultrasonic meas. 2-93552
 HCP crystals, elastic moduli and linear expansion coeffs. of axial textures (*Russian*) 2-76560
 isotropic elastic solid, point defects elastic interaction, defect-matrix modulus influence 2-56006
 isotropic materials, nonlinear elastic model for materials with different behaviour in tension and compression 2-103878
 Jahn-Teller nonferroelastic crystals, elastic and dielec. props. 2-115331
 liquid-vapour interface, surface tension, elastic moduli 2-56301
 lung, inflation-deflation manoeuvres, bulk modulus rel. to relative vol. 2-105748
 metal, elastic moduli and sound velocity, quantum oscillations in mag. field, theory (*Russian*) 2-116042
 metaphosphate glasses, fracture toughness 2-88176
 metals, interionic interactions model, elastic consts. and phonon spectra calc. 2-81711
 metals and alloys, textured, HCP struct., elastic props. anisotropy (*Russian*) 2-77858
 molecular crystals, elastic consts., noncentral force contrib., lattice dynamics 2-61084
 non-metallic media, fracture resulting from spherical and plane waves 2-66112
 nylon-12, oriented, mech. anisotropy, H bonding effects 2-105209
 particulate composite material, overall elastic constants 2-86215
 PMMA, dynamic bulk and shear moduli and relax. 2-93548
 PMMA, thin walled glass microsphere filled, effective elastic moduli, US meas. 2-88118
 poly(phenylene oxide), tensile props. and density, effect of residual stresses 2-67401
 polyacrylamide gel, neutron and quasielastic light scatt., screening length rel. to elastic modulus 2-93820
 polybutylene terephthalate, elastic modulus of cryst. regions, conform. relation 2-93550

elastic moduli continued

- polycarbonate, notched, fracture difference between atmospheric and hydrostatic press. 2-57448
 polycarbonate-copolyester miscible blends, mech. props. 2-72775
 polyepoxides, crosslinked, additive moduli, US meas., rel. to mol. struct. 2-109881
 polyethylene, crosslinked low-density, drawing depend. of mech. and transport props. 2-93549
 polyethylene, extruded, microstruct. study by electron microscopy 2-91826
 polyethylene fibre, ultrahigh strength, prep. by zone annealing method, mech. props. (*Japanese*) 2-88051
 polymer solutions, elastic moduli relationships (*French*) 2-86247
 polymeric powders, cold compaction, SEM study 2-111134
 polypropylene films, uni- and biaxially oriented, struct. and props. 2-86593
 polypropylene reinforced with glycerol-treated mica, rheology, tensile props. 2-111216
 polystyrene, toughened, stress-strain behaviour model 2-67428
 rare gas solids, lattice dynamic props., self-consistent average-phonon eqn. of state 2-81922
 rod, inhomogeneous, energy anal. 2-112704
 rods, component heterogeneous, longit. vibrs., elastic modulus determ. 2-114717
 Se-Sn-As system, chalcogenide glasses, glass transition temp., mech. and elastic props. 2-109687
 semiconductors, pseudopotential theory, total energies, phonon freq., bulk modulus 2-87130
 shell, circular cylindrical, multilayered, transversely isotropic, elasticity soln. 2-103046
 silicate glasses, ultimate strength rel. to other mech. and thermal characts. 2-88177
 sintered metallic materials, elastic modulus, model 2-105208
 sodium octylbenzene sulphonate-pentanol-decane-water, microemulsion struct., mag. and elec. birefr. meas. 2-73018
 steel, austenitic stainless 316, dynamic response of fusion reactor components with temperature-dependent properties 2-69838
 steel, C, plastic flow, elevated temps., effect of C content 2-67524
 Steel, Low C, weld zone crack resistivity (*Korean*) 2-57461
 structural phase transitions in perfect crystals 2-76637
 two-component materials, elastic moduli, bounds 2-61054
 viscoelastic beam, complex elastic modulus meas. by driving point impedance method, impedance head transmission function effect 2-75860
 waste disposal glass, fracture surface energy, temp. effect 2-54495
 Zircaloy, dynamic response of fusion reactor components with temperature-dependent properties 2-69838
 Ag film, evaporated polycryst., hypersound attenuation and phase vel., 1-24 GHz 2-109907
 Al, cryst., tensile stress-strain relations, constitutive relations calcs. 2-67407
 Al, interatomic pots. and electronic props., ab initio calc. 2-56460
 Al, quasi-elastic high press. waves 2-71557
 Al-Cu alloys, polycrystalline, second-order elastic moduli, US vel. study 2-72748
 Al-Cu alloys, precip. hardening, sound wave vel. and US attenuation 2-88318
 Al-Mg alloys, polycrystalline, second-order elastic moduli, US vel. study 2-72748
 Al-Si, as-cast and age-hardening, wear, friction and surface topography in dry sliding 2-83237
 Al₂O₃ fibre reinforced Al-Mg, fabrication method 2-67259
 B-As₂S₃, thermal expansion, compressibility, X-ray diff. study 2-115438
 Au/Al thin film diffusion couple, elastic props., SAW vel. study 2-82183
 B fibre (aluminised) reinforced plastic, orthogonally reinforced, fracture anisotropy under low-cycle loading 2-116539
 B fibre reinforced Al, dynamic elastic modulus with solid-state chem. interaction 2-83158
 B fibre reinforced Al-epoxyphthalate matrix composite, mech. props. 2-116488
 Be, high press. α - β transition at T=0 2-71628
 C, cohesion, polymorphic transition, elastic and dielec. props. 2-60919
 C materials, neutron irradiated, restoration of struct. and props. during thermal annealing 2-86733
 Cd, phonon spectra and cryst. struct. 2-115370
 CsNiF₃, acoustic phonon vel., elastic coeff., refractive index, Brillouin scatt. study 2-86812
 Cu composite, porous and filled, internal friction and effective elastic moduli 2-99476
 Cu film, evaporated polycryst., hypersound attenuation and phase vel., 1-24 GHz 2-109907
 Cu, quasi-elastic high press. waves 2-71557
 Cu, wrought, engng. fatigue props. review 2-88161
 Cu-Pb, microstruct., mech., elec., and mag. props., depend on synthesis conditions 2-56748
 Cu₆₃Zr₃₇, amorphous, elastic moduli, hardness and density 2-99472
 Fe, cast, ductile and gray, elastic moduli 2-57396
 Fe, cast, graphite size and spacing effect on elastic const. 2-116481
 Fe-Al(Cr), elastic modulus and internal friction, mag. field effect 2-116050
 Fe-B, amorphous, elastic moduli, hardness and density 2-99472
 Fe-Rh, mag. transitions press. depend. and bulk modulus, s-d exchange model (*Russian*) 2-92902
 FeF₂, elastic constants between 1.5 and 298K 2-115327
 Fe₄₀Ni₃₈Mo₄B₁₈, amorphous, elastic moduli, hardness and density 2-99472
 Ge, cohesion, polymorphic transition, elastic and dielec. props. 2-60919
 Ge, lattice consts. and bulk moduli, self-consistent pseudopot. calc. 2-109741
 Mg₂SiO₄, forsterite, single cryst., Brillouin scatt. meas. up to 40 kbar 2-57115
 γ -Mn₈₇Cu₁₃, thermal-excitation phonon spectra near FCC \rightleftharpoons FCT transform. 2-56126
 γ -Mn₈₇Fe₁₀Cu₃, thermal-excitation phonon spectra near FCC \rightleftharpoons FCT transform. 2-56126
 Mo composite, porous and filled, internal friction and effective elastic moduli 2-99476
 Na, thermodynamic props. from lattice and mol. dynamics, pseudopot. calc. 2-104028
 NaCl, cohesive props., ab initio pseudopot. calc. 2-109738
 NaCl, equation of state, lattice const. and bulk modulus, SCF calc. 2-71604

elastic moduli continued

- Ni composite, porous and filled, internal friction and effective elastic moduli 2-99476
 Ni ferrites, dynamic elasticity moduli, mag. polarisation depend. 2-77348
 Ni, strain fluctuations and elastic constants 2-62155
 Ni-based oxide dispersion strengthened alloys, crystallographic texture 2-99444
 Pb, modulus defect and amplitude dependent damping, normal-supercond. transition effect 2-55978
 PbTiO_3 , PbZrO_3 , $\text{PbNb}_{1/2}\text{Zn}_{1/2}\text{O}_3$, $\text{PbNb}_{1/2}\text{Mn}_{1/3}\text{O}_3$, $\text{PbSb}_{2/3}\text{Mn}_{1/3}\text{O}_3$, stability of electrophysical props. 2-99059
 Si, cohesion, polymorphic transition, elastic and dielec. props. 2-60919
 Si, lattice constns. and bulk moduli, self-consistent pseudopot. calc. 2-109741
 Si-Y-Al-O-N glasses, microhardness and elastic moduli 2-11278
 SiC fibre reinforced Al, elasticity, ultrasonic meas. 2-93552
 SiC fibre reinforced Al, tensile props., thermal degradation effects 2-116485
 SiC fibre reinforced glass, flexural strength and elastic modulus 2-83151
 SiC whisker reinforced Al-Li alloys, mech. props. and microstruct., effect of Li 2-11240
 Si_3N_4 ceramic, prep., props. and appls., book contrib. 2-116420
 SiO_2 thin films, effects of humidity on stress 2-92427
 α -Sn, cohesion, polymorphic transition, elastic and dielec. props. 2-60919
 α -Sn, lattice constns. and bulk moduli, self-consistent pseudopot. calc. 2-109741
 Ti-Al-V (6.4 wt.%), high temp. phase transformations and thermal and mechanical props. meas. 2-71625
 TiNi, phys. props. temp. depend., martensitic transform. rel. to phase diagram 2-11176
 $(\text{Ti}_x\text{V}_{1-x})\text{O}_3$, semimetallic, elastic moduli, press. depend., slow shear mode softening near $x=0.04$ 2-81874
 YbAl₃ mixed valence cpd., elastic props. 2-56067
 Zn, cryst., tensile stress-strain relations, constitutive relations calcs. 2-67407
 Zn, phonon spectra and cryst. struct. 2-115370

elastic moduli measurement

- alloy, fireproof, two layer strips, elastic moduli of second kind, determ. using nondestructive method (*Russian*) 2-62307
 bilayer lipid membranes, cylindrical 2-68201
 bones, long, cross-sections, elastic modulus calibration and resultant loads 2-62853
 flexible plates, method of investigating dynamic modulus (*Russian*) 2-81297
 graphite fibre reinforced resin, tensile testing at 316°C, gripping system appls. 2-105399
 isotropic bodies of cubic crystals, Young's modulus and Poisson's ratio determ. from X-ray meas. (*German*) 2-83320
 metals, internal friction, and elastic characts. determ., installation for 4.2 to 1200K 2-67701
 minerals, Young's modulus determ. by X-ray method 2-99616
 polymer, glassy, dynamic bulk and shear moduli and relax., meas. techniques 2-93548
 rubber and rubberlike materials, elastic and loss moduli meas. 2-83314
 rubber mixes and elastic products, mech. props. determ. using penetrometer (*German*) 2-67691
 strain gauge expt. method for determ. of whole long bone sectional props. 2-105864
 textured foils, primary elastic constns. meas. method 2-81301
 vibration elastoviscosimeter based on a micro-controller (*Russian*) 2-114955

elastic scattering of atoms and molecules

- atoms, elastic cross-section, empirical expression 2-114070
 effective cross section inequalities for elastic and inelastic processes 2-114078
 electronic and atomic collisions, conf., Gatlinburg, TN, USA (July 1981) 2-90640
 halogen anion+inert gas atom, elastic scatt. and electron detachment differential cross sections 2-90650
 quantum mechanical and semi-classical scatt. amplitudes for elastic collision kernels calc. 2-96679
 quasi-elastic collisions of atoms, long range contribution 2-80773
 H^+ +H, elastic scatt. at 15 to 200 keV 2-108672
 K^+ +Ar(Kr)(Xe), interaction pot. determ. 2-102567
 Li^+ +Ar(Kr)(Xe), interaction pot. determ. 2-102567
 Li^+ + H_2 , diffusion cross sections, close coupling calcs. 2-75374
 Mg (0001) surface, interatomic pot. considerations in low energy Ar^+ scatt. 2-77666
 Ne^+ + $\text{Ne}(\text{C}_2\text{D}_2)$, differential elastic scatt. cross-sections meas. 2-90651
 Ne_2^+ potentials for dissoc., rel. to Ne^+ +Ne collisions 2-67743

elastic scattering of electrons by atoms and molecules

- see also gas phase electron diffraction
 alkali atoms, elastic scatt. of intermediate energy positrons and electrons 2-75427
 atom+diatomic molecule, electronically elastic collision, energy loss 2-65073
 atom scattering, relativistic eqn. for intermediate energies 2-90697
 atom-electron elastic and inelastic scatt., correl. and polarisation 2-96731
 atoms, electron and positron elastic scatt., low-energy phaseshift formula 2-54961
 atoms, electron and positron scatt. cross section calcs., Z^3 corrections 2-90711
 calculations, vector processing appls. 2-96728
 chiral molecule, mirror asymmetric effect calc. in electron scatt. 2-70417
 complex atoms, electron elastic scatt. at intermediate energies 45 to 750 eV, modified Born approx. 2-102622
 cross section data compilation 2-54964
 developments, 1950 to present day, review 2-84430
 diatomic molecule, electron scatt., spin interference phenomena (*Russian*) 2-54962
 diatomic molecules, vibr. excited fast electron scatt., appl. to electron diff. 2-108711
 eikonal exchange amplitude 2-102620
 electronic and atomic collisions, conf., Gatlinburg, TN, USA (July 1981) 2-90640
 energy depend. of scatt. operator 2-114104
 gas, low energy electron beam relax. 2-65090
 gaseous positronics—past, present, and future 2-75419
 glory energy range total cross-sections, semiclassical calcs. 2-80774
 intermediate energy electron scatt. problems 2-59933

elastic scattering of electrons by atoms and molecules continued

- large atoms, positron interactions, theory 2-75423
 large molecules, positron interactions, theory 2-75423
 light-induced gas drift under pulse-periodic excitation (*Russian*) 2-60719
 local exchange and correlation potentials for electron scattering at solid surfaces 2-105019
 localized second-order optical potential for electron scattering in terms of imaginary-frequency susceptibilities 2-90709
 model atom, free-free electron scatt., photon absorpt., soft-photon approx. 2-75438
 momentum space approach, ab initio calcs. 2-108704
 non-iterative method for solving PDEs arising in electron scattering 2-54960
 optically active molecules, electron scatt. 2-80772
 polyatomic mols., electron scatt., shape resons. and electron transmission spectrosc. 2-80828
 positron-gas cross-section measurements 2-75420
 resonance laser radiation field, elastic and inelastic electron-atom scatt., ground state-doublet reson. (*Russian*) 2-54963
 scattering cross section in strong mag. field (*Russian*) 2-96736
 small atoms, positron and positronium interactions 2-75421
 AR, electron scatt., inelastic and elastic cross section meas. 2-102628
 Ar, electron impact excitation near-threshold 2-96738
 Ar, electron scatt. angular distrib. 2-70420
 Ar, positrons and electrons elastic scatt. 2-80812
 Ar, scattering cross sections from electron transport parameters 2-71063
 C, electron elastic scatt. at intermediate energies 45 to 750 eV, modified Born approx. 2-102622
 CO, elastic scatt. of intermediate and high energy electrons by two-pot. coherent approach 2-85807
 CO, positron scatt., total cross section, retarding pot. time of flight method 2-108706
 CO₂, elastic electron scatt. at static exchange level 2-75437
 CO₂, electron (positron) impact, total cross-sections meas. 2-59937
 CO₂, electron scatt. cross-sections, near threshold behaviour 2-59938
 CO₂, low energy electron scatt., exchange interaction 2-65091
 Cd atom, elastic electron scatt. cross section, resonances obs. 2-108710
 Cs, electron elastic scatt. angular distrib. 2-102621
 H beam, electron elastic scatt., spin-exchange effects meas. 2-85809
 H, elastic electron scatt., Faddeev integral eqns. treatment 2-75428
 H, electron and positron elastic scatt., first order correction to Glauber approx. 2-75436
 H, electron and positron forward elastic scatt. 2-70418
 H, electron dispersion relations 2-59934
 H, electron elastic scatt., intermediate energies, optical pot. calcs. 2-75430
 H, electron elastic scatt. and impact excitation cross sections calcs. 2-90710
 H, electron elastic scatt. by metastable 2s state 2-102629
 H, electron elastic scatt. studied using modified Glauber approx. 2-108708
 H, electron impact, laser modification of exchange scatt. 2-102626
 H, electron scatt., momentum space approach, ab initio calcs. 2-108704
 H, electron scatt. amplitude, multiple pot. coeffs. 2-90706
 H, electron scattering calcs. at energies between 13.6 and 60 eV including $n=3$ levels 2-96732
 H, positron scatt., Fock-Tani representation 2-90712
 H, positron scatt., quadratic variational methods for calc. S-wave phase shifts 2-75425
 H, positron scattering, field theory, in Fock-Tani representation 2-85808
 H, positrons elastic scatt. studied using second order pot. model 2-65089
 H-like ions, electron elastic scatt., s-, p- and d-wave phase shifts 2-108709
 H₂, electron (positron) impact, total cross-sections meas. 2-59937
 H₂, electron elastic scatt., polarisation effects, cross sections, Glauber approx. 2-70419
 H₂, electron scatt., low energy, ab initio optical pot. appl., correl. and polarisation effects 2-75429
 H₂, electron scatt. at low energies, model pot. approach 2-70376
 H₂, electron scattering, energy unresolved differential cross-section calcs. 2-102623
 H₂, positron scatt., low energy 2-75426
 HCl, electron scatt., nuclear excited Feshbach reson. 2-90708
 He, electron and positron forward elastic scatt. 2-70418
 He, electron scatt., free-free absorpt. coeff. of negative ion 2-59935
 He, electron scatt. at 30-400 eV, polarisation and absorpt. effect 2-90707
 He, electron scattering, complex optical pots., dispersion eqn. calcs. 2-80810
 He, positrons elastic scatt. studied using second order pot. model 2-65089
 Hg atom, elastic electron scatt. cross section, resonances obs. 2-108710
 Kr, electron and positron scatt., total cross section meas. 2-114114
 Kr, electron scatt. angular distrib. 2-70420
 Kr, positron diffusion, elastic cross sections 2-76057
 Li₂, electron scatt., total cross-sections, 0.5 to 10 eV 2-65092
 Mg, resonance phenomena and post-collision effects (*Russian*) 2-108724
 N₂, elastic scatt. of intermediate and high energy electrons by two-pot. coherent approach 2-85807
 N₂, electron (positron) impact, total cross-sections meas. 2-59937
 N₂, positron elastic scatt. and annihilation 2-80813
 N₂, positron scatt., total cross section, retarding pot. time of flight method 2-108706
 Na vapour, laser excited, hot electron spectra obs. 2-54818
 Ne, electron elastic scatt. at intermediate energies 45 to 750 eV, modified Born approx. 2-102622
 Ne, electron scatt., 10-100 eV, model pot. calcs. 2-96746
 Ne, electron scatt., cross sections, matrix effective pot. formalism 2-85810
 Ne, electron scatt., negative ion resonances, eigenchannel anal. 2-59941
 O, electron elastic scatt. at intermediate energies 45 to 750 eV, modified Born approx. 2-102622
 O₂, differential cross sections of low energy electrons meas. 2-108707
 O₂, elastic electron scatt., cross section, ang. distrib. meas. 2-114108
 Xe, 'perfect' electron elastic scatt. 2-96735
 Xe, atomic beams, elastic electron scatt., spin polarisation 2-102627
 Xe atoms, low energy electron elastic scatt., Xalpha calc. 2-59936
 Xe, electron and positron scatt., total cross section meas. 2-114114
 Xe, electron elastic scatt. angular distrib. 2-102621
 Xe, positron diffusion, elastic cross sections 2-76057
 Zn atom, elastic electron scatt. cross section, resonances obs. 2-108710

- elastic waves**
 see also *acoustic waves; Love waves; magnetoelastic waves; Rayleigh waves; seismic waves; vibrations*
 acoustic wave scattering from fluid/solid periodic rough surface 2-86146
 acoustic wave scattering from surface breaking cylindrical cracks 2-86147
 acoustoelastic effect of thickness oscillations 2-91363
 backward elastic waves in isotropic plates 2-81888
 bar, infinite, of arbitrary cross section, stress wave propag. 2-103077
 boundary between disoriented anisotropic media, elastic longitudinal wave propag. 2-103897
 bulk strain wave conversion at a frequency boundary in piezoelectric crystals 2-115524
 composite, particulate, random, wave propag., particle reson. influence 2-97420
 composite periodically laminated medium harmonic wave propag. 2-60447
 composite shell of revolution, linear axisymmetric response 2-60454
 composites, isotropic, plane wave dispersion and attenuation, variational estimates 2-97414
 composites, random, plane wave dispersion and attenuation, variational estimates, general theory 2-97413
 composites with initial strains, corrected consts., plane harmonic wave propag. 2-97377
 computer simulators of elastic waves in a solid 2-81159
 continua, unbounded, homogeneous, finite element formulation 2-103029
 crack-tips, stress wave diffr., photoelastic study 2-55505
 creeping waves in glass using photoelastic technique 2-55484
 crystal under bias, eqns. of motion 2-86791
 cylinder, circular, hollow, with laminated periodic struct., free torsional vibrs. 2-60446
 cylinder, clamped/free, hollow, circular, dynamic response to travelling torsion impact loads 2-65510
 cylinder, elastic, infinitely long, elastic wave interaction with penny-shaped crack 2-91303
 cylinder, rigid restrained, dispersion eqn. complex roots anal. (*Ukrainian*) 2-114705
 cylinders, elastic, rot., at finite deform., wave speeds 2-70842
 diffraction, boundary method, seismic SH wave scattering appl. 2-88764
 discs, membrane-like, anisotropic, spinning, non-linear wave propag. and stability 2-75847
 dynamic photoelasticity of stress waves, multiple ruby laser system for high speed photography 2-103131
 dynamics of systems with two interfaces 2-115523
 edge cracks, diffraction of long wavelength horizontally polarised shear waves, NDT 2-83304
 elastic layer with kinematical constraints, wave propagation 2-114721
 elastic medium, scatt. of SH waves by cavities and cracks 2-91316
 elastic plane, dynamic stress conc. around cavity, complex function method anal. 2-91259
 elastic scattering problems, boundary method appl. 2-74223
 elastic solid, stress, surface wave study 2-65499
 elastic-plastic wave propag. in half space 2-109221
 ferrite plate, magnetostatic wave interaction with elastic waves, dispersion laws, magnetostriction 2-72330
 frictional interface, elastic wave refl., refr. and absorpt., P and SV motion 2-97425
 gel, soft, with fixed rectangular boundaries, shear waves 2-103895
 gels, cylindrical, shear waves and internal viscosity, theory and light scatt. study 2-103135
 Griffith crack, in infinitely long strip, elastic wave interaction 2-55513
 half-space, layered, SH wave generation from stress discontinuity motion 2-103095
 half-space of arbitrary elastic anisotropy, head wave envelope 2-109226
 heat-conducting elastic body, surface waves 2-81278
 hereditary-elastic body, waves, propag. of discontinuities 2-60456
 holographic interferometry applied to stress wave and crack propag. problems 2-86242
 homogeneous space, elastic piecewise, with spherical symm., non-steady-state radial vibrs. 2-55481
 hyperelastic multilayer media, nonlinear waves stability 2-114709
 ice, mech. props. 2-115349
 infinite transversely isotropic medium, elastic wave interaction by Griffith crack 2-91321
 inverse elastic wave scattering analysis 2-70725
 inverse problems for nonabsorbing media with discontinuous material properties 2-53521
 junction of three bars, stress waves 2-97424
 Lamb wave analysis through light polarization discrimination techniques 2-75875
 laminated plates, dynamic contact problems, numerical simulation 2-114739
 membranes, hyperelastic, nonlinear wave propag., wave front anal. 2-109224
 metal rods, elastic wave propag., elec. signal generation 2-61833
 microstructural features, computational models 2-76694
 multiple scattering at low freq., Biot's theory for elastic media 2-78574
 multiply-connected hexagonal anisotropic layer, elastic waves diffraction (*Ukrainian*) 2-114706
 nonlinear media, wave propag., differential eqns. charact. forms 2-89548
 orthotropic fiber-reinforced elastic composites, harmonic wave propag. and dispersive props. 2-93519
 periodic system response to moving load, free-wave propag. eqns. 2-55491
 piezoelectric crystal plate, anisotropic, spatial elastic vibrs. and normal waves (*Ukrainian*) 2-81274
 plane, diffraction by wedge, three-dimensional problem 2-55483
 plate, double-layer, harmonic wave problem, generalised shear model 2-55488
 plate, elastic pulses propag., epicentral responses, acoustic emission mechanism 2-91310
 plate, elastic pulses propag., general responses, acoustic emission mechanism 2-91311
 plate, elastic pulses propag., point source models w.r.t. acoustic emission mechanism 2-91309
 PMMA, rigidity modulus near a running crack tip, US method 2-77928
 PMMA tubes, liq. filled, fluid effects and response in transverse impact 2-114707
 quartz, piezoceramic, synthetic, elastic and elec. characts. at 4.2K, acoustic device applic. (*Ukrainian*) 2-82784
 received waves, frequency shift 2-103075
- elastic waves continued**
 reflection at free surface of initially stressed sandy medium 2-109097
 ring, rotating, nonlinear harmonic oscills. of gyroscopic structural systems 2-55492
 rod, non-linear, inelastic, complete exceptionality, constitutive laws and symmetric form 2-75884
 rods, component heterogeneous, longit. vibrs., elastic modulus determ. 2-114717
 scattering theory of elastic waves by 2D flaws, Born approx. 2-92103
 screw dislocation random motion, transient waves 2-65993
 seismic waves, external-boundary, problem for spherical cavity in half space 2-73479
 shear horizontal waves, nondestructive evaluation of planar defects in plates, theory and expt. 2-93721
 shear wave scattering from cracks in plates, extended variational soln. 2-93722
 shells, cylindrical, longitudinally reinforced, travelling waves 2-55486
 shock loading, metallurgical effects, review 2-76585
 solids with initial gap between, contact transmission of wave motion 2-109219
 Solithane 113 elastomer, shear wave propagation and compression 2-71565
 spherical body, elastic, and acoustic medium, nonstationary interaction 2-55485
 spurious reflection of elastic waves in nonuniform meshes of constant and linear strain finite elements 2-114704
 steel, dynamic fracture parameter determ. 2-105291
 Stoneley wave velocity, initial stress influence 2-60441
 strain wave velocity in single crystals and polycrystalline media, relation to thermal properties 2-61062
 stratified medium, normal elastic wave propagation, Green's function calc. 2-65501
 stress wave interaction with running cracks, photoelastic study 2-55500
 struts, steel, subjected to impulsive loading with linear attenuation, dynamic anal. (*Chinese*) 2-103073
 subfluids, elastic waves, constitutive eqns. 2-109258
 T-matrix approach to scatt. of acoustic, EM and elastic waves 2-89551
 thermo-viscoelastic rods, acceleration and shock wave propag. and decay 2-81268
 thermoviscoplastic medium, coupling accel. waves, symmetry and hyperbolicity conditions 2-74224
 thin elastic rods, non-homogeneous, subjected to time depend. stress impact, wave propag. 2-55477
 time-independent elastic wave eqn., parabolic approximation 2-65503
 torsion waves, in hollow cylinder (*Russian*) 2-91292
 torsional dispersion relations of waves in an infinitely long clad cylindrical rod 2-86143
 travelling elastic deform. waves, effects on surface magnetostatic wave propag. 2-98932
 tube, viscoelastic, fluid filled, wave propag. 2-81269
 underground ranging using elastic waves, primary expt. (*Japanese*) 2-68265
 velocities calculation method in gas saturated periodic microstructures 2-100604
 viscoplastic material, spherical cavity collapse 2-60430
 waveguide, rectangular, propag. of HF longit. waves (*Ukrainian*) 2-81275
 Al elastic exponential and conical shells, steel sphere impact, pulse transmission 2-55473
 Al tubes, liq. filled, fluid effects and response in transverse impact 2-114707
 Bi₂GeO₂₀(SiO₂₀), nonlinear piezoelectricity 2-87680
 CdS, piezoelectric interaction of elastic waves with carriers 2-115827
 KCl, EM emission stimulated by acoustic wave 2-116301
 KTaO₃, piezoelectric excitation of elastic waves 2-103896
 LiF, EM emission stimulated by acoustic wave 2-116301
 NaCl, EM emission stimulated by acoustic wave 2-116301
 SiO₂, vitreous, large block, elastic props., nonuniform distribution. 2-103898
 SrTiO₃ resonant dielec. electroacoustic transducer 2-86199
 TiN-Al₂O₃ composites, hot pressed, props. rel. to TiN conc. 2-72753
- elasticity**
 for crack problems in elasticity see *crack-edge stress field analysis*
 see also *elastic constants; elastic moduli; elasticity of liquids; elastoplasticity; photoelasticity; rheology; thermoelasticity*
 acceleration waves in isotropic elastic membranes, propag. 2-53519
 acoustic loading effects on oscillating rod bundles 2-60411
 acoustic microscopy appls. to density and elasticity obs. 2-70794
 acoustical birefringence in stressed and slightly anisotropic materials, experimental study 2-70862
 acoustoelastic effect of thickness oscillations 2-91363
 anisotropic bodies, optimisation problems 2-74213
 anisotropic elastic continua, densities and currents, rel. to Umklapp process 2-61083
 anisotropic elastic solid, initially stressed, disturbance propag. due to normal press. over boundary 2-114659
 annular double-plate systems, internally damped, axisymmetrical steady-state response 2-103085
 annular membrane under axial load 2-91257
 Applied Mathematics and Mechanics Society Meeting, Wurzburg, Germany (April 1981) 2-84377
 arcs, elastic, free out-of-plane vibr. 2-103086
 arterial compliance in man, in vivo obs. 2-116944
 bars and plates, optimal design problems 2-95011
 bars and plates, optimal design problems regularisation 2-95010
 beam, planar curved, loaded by co-planar conc. forces, nonlinear elastic analysis 2-60407
 beam, thin-walled T, forced flexural vibrs. 2-81284
 beams, elastic fixed end moment coefficients (*Chinese*) 2-103038
 beams, transverse vibrs., exact vs. approx. solns. 2-91314
 beams and rods, non-linear theory, finite element representation 2-109194
 bodies close to cylindrical form, Saint Venant problem, approximate soln. method 2-58618
 bone, compact, micropolar and couple stress elasticity in bending 2-100029
 boundary value problems, two-dimens., in theory of elasticity (*Polish*) 2-79365
 cable net, pretensional saddle-shaped, modal stiffnesses 2-114631
 cartilage elastometer for orthopaedic operations 2-100139
 cellular materials, two-dimens., mechanics 2-91247

elasticity continued

- cholesteric liquid cryst., elastooptic behaviour of continuous compressional deform. 2-71348
- column, strength anal. using finite rigid body element model 2-103043
- combination parametric resonances in elastic systems 2-114713
- composite cylinders and spheres, elastic vibr. determ. 2-86220
- composite material shell structure, rational parameter values calc. and selection 2-60409
- composite media, boundary-value problems in two dimens., interior, exterior solns. 2-103042
- composite plane containing thin elastic inclusion, elastic equilb. 2-55429
- composites, elastic, layered orthotropic, harmonic waves with arbitrary propag. direction 2-70863
- composites with initial strains, corrected consts. 2-97377
- conformal mappings, correspondence of solns. in elasticity theory (*Russian*) 2-79371
- constrained problems in elasticity, finite element methods 2-79362
- contact problems, reduced integration penalty methods, smoothing technique 2-60489
- contact problems, singular integro-differential eqns., approx. soln. 2-70877
- contact problems for the elastic beam 2-114671
- contact problems of elasticity theory, deform. conjointness zone disturbance, numerical determ. (*Ukrainian*) 2-103110
- contact problems with nonlinear friction, asymptotic methods appl. 2-91341
- continuous medium, Poisson set of cracks 2-60462
- coplanar, interacting, upper bound for stress intensity factors along boundaries in three-dimensional elasticity 2-109239
- crack problems, Macgregor-Westergaard complex potential numerical evaluation using natural quadrature formal 2-109230
- crack theory for elastic bodies with initial stresses 2-65538
- critical state of structures 2-97407
- crystal elasticity, multi-valued strain energy functions 2-115325
- CT specimen, with straight and curved crack, 3D elastic anal. 2-97451
- cylinder, circular, of finite size, dynamic and static contact problems of elasticity theory 2-55514
- cylinder, elastic, supersonic rolling with friction on plane, closed form soln. 2-109253
- cylinder, hollow, transversely isotropic, stresses and deform. under ring and radial loads 2-91241
- cylinder, quasi-static elastic crack propag., energy release rate 2-60479
- cylinder end problem, elasticity diagonally dominant soln. 2-91251
- cylinder of finite dimensions, dynamic problem of elasticity theory 2-81282
- cylinders, multilayer, with nonconanical interfaces, three-dimens. elasticity theory problems 2-65478
- cylindrical bodies with surface layer of increased pliability, internal compression 2-86237
- cylindrically anisotropic wedge, stress singularities at vertex 2-109184
- deformation by moving interfaces 2-77830
- dielectric half space, Boussinesq problem, similarity soln. 2-74214
- difference methods for elliptic partial differential equations with nonunique solutions 2-95012
- disc and needle, rigid, ellipsoidal, in anisotropic elastic medium 2-81225
- dislocation layers, disordered, stress fields 2-76444
- dislocations, gauge theory, effective stress 2-91964
- Earth, elastic viscoelastic response to surface loading rel. to Lake Bonneville 2-106070
- Earth interior, ref.-refr. of general P- and SV-waves in elastic and inelastic solids 2-105955
- Earth interior, stress field in semi-infinite elastic medium due to internal stress sources 2-100332
- elastic bodies contact, dual finite element analysis 2-60485
- elastic polarisable fluids, nonconducting, elec. field interaction 2-97334
- elastically embedded rigid inhomogeneity interaction with lateral force 2-97384
- elastohydrodynamic analysis of head to flexible disk interface phenomena 2-91312
- elastostatic problems, 2-dimens., boundary-element investig. 2-115330
- 2-D elastostatics, symmetric direct boundary integral equation method 2-81241
- elastostatics with multiply connected region, rel. to mode III fracture mechanics 2-114645
- element stiffness matrices, derivation by assumed strain distribns. 2-109186
- elliptic ring sector, pure bending 2-103066
- engineering theory of elastic stability 2-60414
- external crack problems in 2-dimens. elastostatics 2-70868
- fabric reinforced woven hybrid composites, elastic props. 2-83152
- fibre reinforced composite, infinite elastic body, stress field due to cylindrical inclusion with constant axial eigenstrain 2-93580
- fibre reinforced laminates, edge effect, stress distrib. singularity 2-83153
- fibre reinforced single- and two-ply rectangular plates, laminates, bimodular material, transient response 2-88119
- finite element analysis, computation, conference, Paris, France (Aug. 1981) 2-107009
- fission reactor primary structures, thermo-mech. loading, limit design anal. 2-74872
- floating elastic plate, optimisation of wave-damping props. (*Ukrainian*) 2-103015
- fluid interfaces, surface compositional elasticity and sorption parameters 2-76812
- folding of elastica-similarity solutions 2-97381
- foundations, nonlinear boundary conditions 2-60418
- frames, rigidly jointed, non-linear elastic limit state anal. 2-70858
- geom elastodynamics 2-103041
- geometrically nonlinear elastostatics, boundary element formulation 2-91240
- glasses, metaphosphate, retarded elasticity 2-62162
- grade consistent micropolar theory, soln. existence and uniqueness, reciprocity, variational theorems 2-58620
- graphite, dynamic response of fission reactor components with temperature-dependent properties 2-69838
- half-plane containing a hole, equal-strength contour determ. 2-114657
- half-space, elastic, transversely isotropic, interaction between internal loading and surface indentation 2-103034
- half-space of arbitrary elastic anisotropy, head wave envelope 2-109226
- half-space perforated by twin circular holes and under gravit. loading, stress anal. 2-65476

elasticity continued

- heated elastic plate, approximate finite deflection anal. by boundary element method 2-81226
- hereditary-elastic body, waves, propag. of discontinuities 2-60456
- homogeneous space, elastic piecewise, with spherical symm., non-steady-state radial vibrs. 2-55481
- hybrid elements, recent developments 2-79372
- hyperelastic compressible isotropic solid, finite plane deformation 2-97373
- hyperelastic material, plane deformations using principal stretches 2-60413
- hyperelastic multilayer media, nonlinear waves stability 2-114709
- hyperelastic solid with rigid elliptical inclusion under uniform stress at infinity 2-114652
- ice pressure sensor embedded type, elastostatic anal. 2-63142
- ideal elastomeric body with liquid-like response 2-55433
- inclusion, coherent, elasticity theory by means of non-metric geometry 2-60971
- inclusions, expanding, sharp corner local stress states 2-103048
- incompressible elastic body, finite deform., existence and characterization of hydrostatic press. 2-58616
- incompressible elastic material under finite plane strain, crack tip equilb. field 2-91329
- incompressible media, soln. of fundamental problems of elasticity theory 2-53517
- inextensible fibre in stretched elastic medium, stress anal. 2-86211
- infinite plane with curved notch, contact problem of elasticity theory 2-65539
- inhomogeneity, two-dimens., elastic moduli, analytic soln. in complex form 2-112705
- inhomogeneous elastic media, move scatt. 2-101188
- interface, circular, between dissimilar media, arc crack plane problem 2-109247
- internal unconventional cracks, straight crack symmetric vars. 2-103101
- irregular surface in two or three dimens. space, elastic potential (*French*) 2-107097
- isotropic body, flat toroidal crack, stress intensity factors 2-75904
- isotropic elastic medium, mechanical interaction of points defects and volume defects near curved surfaces 2-56005
- isotropic elastic membranes, general and area-preserving, universal solns. 2-53518
- isotropic elastic solid, point defects elastic interaction, defect-matrix modulus influence 2-56006
- isotropic elastic solid containing penny-shaped crack, stress distrib. 2-75898
- isotropic hyperelastic and hypoelastic constitutive eqns., bifurcation problems (*German*) 2-97387
- laminar massif interaction with discrete system of supports, elastic equilb. (*Ukrainian*) 2-75845
- layers of elastic potentials, physical interpretation 2-91245
- linear elastic systems with structural damping, mathematical model 2-74218
- linear elasticity theory, Galerkin, Papkovitch-Neuber and Naghdi-Hsu soln. inter-relationships 2-53522
- linear theory, three-dimens., complete Tonti-type scheme (*German*) 2-107094
- linear theory three-dimens., boundary functionals, dual variational problems 2-63821
- linearized theory, variational principles, stress functions 2-112703
- load transfer from elasticity rib to semi-infinite anisotropic shell 2-114658
- lung, human, elasticity model 2-78360
- membranes, hyperelastic, nonlinear wave propag., wave front anal. 2-109224
- micropolar elastostatics, linearized theory, field eqns., boundary conditions, force/couple stresses 2-74212
- micropolar helical body, Saint-Venant's principle 2-81223
- mixture theory application, phys. consts. determ. 2-114641
- Navier's equation solution in rotational curvilinear coordinates 2-53515
- nematic liq. cryst. elasticity coeff. 2-55834
- nonhomogeneous medium, stress conc. in neighbourhood of holes, elastic and elasto-plastic problems (*Polish*) 2-81234
- nonlinear elastic continuum, screw dislocation problem 2-115232
- nonlinear elastic materials, phase transitions of the first kind 2-112852
- nonlinear elasticity theory, general dynamic eqns., initial value problem 2-114664
- nonlinear incompressible elasticity convergence of approximate solns. (*French*) 2-89534
- nonlinear mixed problems, appl. of existence and approx. results to incompressible finite elasticity 2-69021
- nonlinear theory, shell model (*French*) 2-69016
- nonlinear vibration of elastic system, amplitude incremental var. principle 2-91315
- nonuniform elasticity theory with variable Poisson ratio, axisymm. problem (*Ukrainian*) 2-103039
- notch stress anal. and crack fracture mechanics relationships 2-109251
- numerical solution of geometrically nonlinear contact problems 2-81294
- orthotropic body, elastic symm. plane optimal positioning 2-79360
- orthotropic medium, two-phase, in-plane line force elastic field anal. 2-103044
- parallelepiped, equilb. problems, efficient numerical method of soln. 2-53523
- perfectly elastic materials, reduced equilb. eqns. 2-91236
- phase contact problems in presence of adhesion, method of fictitious absorpt. 2-114735
- piecewise smooth surfaces, elastic potentials 2-89536
- plane, elastic, anisotropic, infinite, single force and edge dislocation influence functions (*German*) 2-55418
- plane, stress conc. next to thin-walled inclusions 2-114662
- plane anisotropic elastostatic boundary-value problems, singular integral eqns. soln. 2-114644
- plane dynamic problem complex potentials for elastic noncompressible bodies with initial stresses (*Ukrainian*) 2-53520
- plane elasticity, path-independent integral concept 2-109244
- plane elasticity crack problems, Bueckner singular integral eqn., numerical soln. methods 2-109229
- plane elasticity problem integral eqn. soln. by successive approx. 2-114656
- plane elasticity stress calcs. improvement by use of spline functions 2-91255

elasticity continued

- plane elastostatic problems with discontinuously prescribed boundary values, integral eqn. soln. 2-107095
 plane frames, linearly elastic, exact dynamic stiffness matrix, transcendental eigenvalue problem 2-109189
 plane stress problems in elasticity, finite element method appl. (*Chinese*) 2-103037
 plate, anisotropic, with elliptical hole, elasticity theory, second boundary-value problem 2-97369
 plate, circular, geometrically nonlinear, axisymm. deforms., deform. map investigation 2-97375
 plate, circular, of variable modulus of elasticity, vibr. numerical calc. 2-109218
 plate, elastic, buckling under lateral compression, asymptotic theory 2-55460
 plate, elastic, thick, stability under thrust 2-91235
 plate, elastic anisotropic, reinforced by stiffener, contact problem 2-60491
 plate, elastic circular, on elastic half space, vibr., direct soln. method 2-97426
 plate, elastic freely supported, bending stiffness optimal distrib. 2-60410
 plate, extended, unlimited, elastic equilb. stability loss in vicinity of sloping crack (*Ukrainian*) 2-60464
 plate, hole outline reinforcement by momentless elastic rod 2-55430
 plate, nonhomogeneous magnetostriuctive thin circular, with central hole, dynamic vibr. and stresses 2-109217
 plate, thin elastic, flexural motions, nonlinear theory, boundary layer solns. 2-103051
 plate, with variable elastic modulus, variable density, central hole, extensional vibrs. 2-60444
 plate bending, hybrid displacement method, numerical stability (*German*) 2-55469
 plate deflection theory, numerical integration methods 2-91242
 plate on rigid substrate, bifurcation 2-60423
 plate pressed onto rigid base, elastic contact, stress anal. 2-75907
 plate structures, hole shapes optimisation 2-91254
 plate weakened by two elliptical holes with parallel axes, stress state 2-91250
 plates, elastic, distributed control 2-97367
 plates, elastic, partially loaded, general anal. 2-91233
 plates, free circular, with elastic constraints and added mass along edge segments, vibrs. 2-97428
 plates, infinite, elastic plate vibrs. by boundary integral eqns. 2-81271
 plates, laminated, statics and dynamics, expt. investigation 2-55489
 plates, orthotropic rectangular, new soln. method 2-114646
 plates, rectangular, simply supported, elastic stability under locally distributed edge forces 2-103068
 plates, rectangular composite, forced motions 2-103050
 plates, thick multiply connected, elasticity and thermoelasticity mixed problems, homogeneous solns. (*Ukrainian*) 2-55435
 point defects, elastic dipole interaction in sphere of elastically anisotropic cubic material 2-91961
 polymers, linear flexible chain, uniaxial extension in extremely broad range of stresses and strain rates 2-55525
 polyvinylidene fluoride film, thermal expansion 2-92426
 porous media, macroscopic props. of disordered media, conf., New York, USA (June '81) 2-94915
 post buckling behaviour, instability of dual eigenvalue fourth-order systems 2-114699
 prestressed highly elastic materials, crack theory 2-55512
 pseudo-elasticity, temp. and force criteria (*Russian*) 2-92081
 pseudoelasticity, review 2-88141
 punch, sectionally smooth-ended, stress on elastic half-space, axisymm. contact problem 2-60490
 quartz resonator, third overtone, eqns. of motion of elastic plates 2-109220
 quasi-momenta, ang. momenta and spin, in elastic media 2-58615
 rate dependent materials, elastic/viscoplastic problems using boundary elements 2-114673
 rectangular cantilever crystal plates, stresses under transverse loading 2-97430
 reinforced plastic, short beam bending, plane problem of hereditary elasticity 2-55443
 resolvent finite element method relations construction 2-109188
 resonance density, parametric 2-58614
 revolving plate, thermopiezoelectric material, enclosing γ -ray source, stress and elec. induction 2-65483
 rigid cavity, fluid filled, action of internal acoustic shock waves emitted by variable boundary surface 2-91305
 ring, nonlinear-elastic, bulging, action of radial load (*Russian*) 2-91244
 rocks elastic properties, anisotropy parameters determ. according to materials from nonlongitudinal obs. 2-106114
 rod, inhomogeneous, energy anal. 2-112704
 rod with variable section, elasticity after stability loss, nonlinear differential eqn. (*Ukrainian*) 2-55434
 rods, elastic, flexural instabilities 2-91271
 rods and beams, non-linear theory, finite element representation 2-109194
 rubber, elasticity at very large elongation 2-88126
 Saint-Venant pointwise decay estimates 2-107096
 scattering frequencies of elastic body interacting with air (*French*) 2-69017
 semi-infinite rectangular cutout, singular problem of elasticity theory 2-55431
 shaft, elastic axisymm. hollow, optimisation of torsional rigidity 2-114648
 sheets, finitely deformed, reinforced with inextensible fibres, crack extension and energy release rates 2-97441
 shell, circular cylindrical, multilayered, transversely isotropic, elasticity soln. 2-103046
 shell, cylindrical, nonlinear problems, choice of main soln. (*Ukrainian*) 2-81221
 shell, cylindrical, unilaterally interacting with elastic base, stability 2-91288
 shell, cylindrical three-layered anisotropic, elastic stability problem (*Ukrainian*) 2-81260
 shell, developing under combined loading, stability, numerical analysis (*Ukrainian*) 2-103067
 shell, elastic, buckling under multiple critical load, initial imperfection influence 2-55461
 shell, elastic, cylindrical, subjected to lateral dynamic press. anal. using Vlasov eqns. 2-114636

elasticity continued

- shell, elastic conical, large axisymmetric deformations (*German*) 2-114665
 shell, elastic cylindrical, effect of nonstationary internal wave 2-81283
 shell, long circular sandwich cylindrical, under axisymm. load, elasticity soln. 2-81227
 shell, shallow spherical, states of uniform twisting and shearing, circular hole effects 2-55445
 shell, spherical, effect of weak shock waves 2-114714
 shell, thin convex elastic, local buckling (*Russian*) 2-109214
 shell container, elastic, partially filled with inviscid incompressible liq., hydroelasticity, spectral problem 2-55476
 shell cylindrical, in contact with elastic medium, free oscils., asymptotic analysis 2-60455
 shells, cylindrical, coaxial, hydroelastic stability 2-65487
 shells, cylindrical, locally-loaded, stresses, displacements (*Russian*) 2-60392
 shells, parabolic, existence and uniqueness criteria of membrane state 2-114635
 shells, shallow, hyperbolic paraboloidal, dynamic anal. by finite Fourier transform method 2-103025
 shock waves, I-D, in elastic media of finite electrical cond. 2-75877
 Signorini's problem for half-space, contact boundary extremal props. 2-79367
 slightly orthotropic material, acoustoelastic determ. of stress 2-65545
 solid-fluid mixture vibration problem soln., existence and uniqueness (*French*) 2-84442
 Somigliana identity on piecewise smooth surfaces 2-58617
 sphere, elastic with annular, edge, or penny shaped crack, singular stresses 2-109249
 static problem of elasticity theory with stresses, existence and uniqueness of solns. (*Russian*) 2-79370
 steel, austenitic stainless 316, dynamic response of fusion reactor components with temperature-dependent properties 2-69838
 strip, elastic, equilb. problem, generalised formulation 2-58613
 strip, elastic, moving across rigid step, numerical soln. 2-109252
 strip, infinite, containing a periodic row of line cracks, elastostatic problem soln. 2-91319
 strip on rigid foundation, elastic stability 2-60438
 thin elastic rods, non-homogeneous, subjected to time depend. stress impact, wave propag. 2-55477
 thin elastic shell, functional construction 2-79366
 topological rubber elasticity theory 2-95008
 topological rubber elasticity theory in simple cubic lattice networks 2-95009
 torsion of cylindrical bars 2-55446
 traction problem in non-linear elasticity with sufficiently small strains, strain energy integral bound 2-69018
 transient elastic stresses in ICF reactor first wall structural systems 2-69831
 tube, cylindrical, thick-walled, under press. non-homogeneity effect on yield stress 2-70844
 two-phase transversely isotropic solid, elastic fields due to dislocation loops 2-75855
 urinary bladder, pig, series-elastic props. of smooth muscle strips 2-116964
 ventricular contraction, models based on time-varying elastance, review 2-94093
 vibration damping in elastic elements of systems with many degrees of freedom 2-75849
 vibration of circular crack in elastic layer under three-dimens. loading 2-55494
 vibration-isolation elements, influence of elastic dissipation parameters, load characteristics, and degree of lateral constraint or damping properties 2-114543
 viscoelastic-elastic composite, general theory 2-109202
 work-hardening beams and plates, elastic springback after elastic-plastic pure bending 2-55436
 work-hardening rectangular plate, springback after biaxial pure bending 2-55437
 Zircaloy, dynamic response of fusion reactor components with temperature-dependent properties 2-69838
 Al alloys, residual stress determ., nondestructive evaluation using acoustoelasticity meas. 2-93744
 Al, texture induced acoustic anisotropy due to compressive deformations, strain rate and temp. effect (*Japanese*) 2-77839
 Cu, texture induced acoustic anisotropy due to compressive deformations, strain rate and temp. effect (*Japanese*) 2-77839
 Fe-Mn, shape memory and plasticity transform., superelasticity (*Russian*) 2-67332
 Mo, strength and ductility in complex stress state, 293-173K 2-111251
 Ni-Zn ferrite fillers for elastic magnetic materials 2-72658
 Pb alloys, ternary, US crystallisation (*Russian*) 2-67201
 SiO₂, vitreous, large block, elastic props., nonuniform distrib. 2-103898
 Ti-Al-Zr-V-Mo-B sheet, elastic props. anisotropy and texture hardening (*Russian*) 2-116502
 V₂O₃ crystals, US vel., anomalous temp. depend. 2-66135

elasticity of liquids

see also compressibility of liquids

- butylbenzene, liq., equation of state, elastic and thermal props., density, US vel. study (*Russian*) 2-92144
 cholesteric materials elastic const. meas. 2-103874
 columnar discotic mesophases, elasticity, dislocations, instabilities 2-65851
 computer modelling of flows of elastic liquids through complex vessels and with forced convection 2-60587
 die swell calc., mesh effects 2-60696
 hexylbenzene, liq., equation of state, elastic and thermal props., density, US vel. study (*Russian*) 2-92144
 nematic liq. cryst., curvature elasticity, van der Waals theory 2-97914
 nematic liquid cryst., biaxial, elastic coeff. 2-115324
 newtonian and non-newtonian flow near a re-entrant corner 2-60657
 PMMA, oriented, Brillouin spectroscopy 2-72516
 polyacrylamide gel, neutron and quasielastic light scatt., screening length rel. to elastic modulus 2-93820
 polymeric fluids, transient shear flow behaviour according to Leonov model, viscoelasticity 2-55526
 polymers, linear flexible chain, uniaxial extension in extremely broad range of stresses and strain rates 2-55525

elasticity of liquids continued

- polypropylene melt, supercooled condition, viscous and viscoelastic char-
acts., 140-230°C (*Russian*) 2-91364
polystyrenes, high impact, melt rheology at high shear stresses 2-109261
smectic B liq. cryst., AC shear elastic const. meas. 2-103875
smectic liquid crystals, nonlinear elastic theory 2-103876

elasto-optical effects *see photoelasticity; piezo-optical effects***elastomers***see also rubber*

- crystallising, λ -relax. processes and crystallisability (*Russian*) 2-65885
filled elastomer, effect of large strains on ageing 2-105191
filler effect on viscosity 2-57390
ideal elastomeric body with liquid-like response 2-55433
methyl styrene elastomer, power law of stress relax. (*Russian*) 2-72754
non-crystallising, λ -relax. processes and crystallisability (*Russian*)
2-65885
polybutadiene, filled elastomer, fracture, electron and positive ion emission
time correlations meas. 2-116345
1,2-polybutadiene viscofluid, strength characterisation in uniaxial extension
2-72829
polyether-MDI-butanediol based urethanes, structure-property behaviour,
composition ratio behaviour 2-91827
Solithane 113 elastomer, shear wave propagation and compression
2-71565
strength and useful life, network degree influence (*German*) 2-67532
thermoplastic elastomer, SBS type, γ -irrad. in air and vacuum, stress
relaxation, oxygen effects 2-65877
transparent, degree of crystallinity under stretching (*Russian*) 2-67465
unistructure elastomer insulator for fusion plasma shutter 2-90304
vacuum seal materials and dielectric breaks for fusion reactor appl.
2-80190
waterproofing of sonar hydrophones using elastomeric membranes
2-60280

elastoplasticity

- alloys, equiaxed two-phase fracture in alloys with isolated elastic particles
2-77936
analysis problem 2-81244
axisymmetric bodies anal., boundary element formulation 2-91261
bar, cylindrical elasto-plastic torsion, numerical anal. 2-81251
bar, variable section, torsion, theory of small elastico, plastic deform.
(*Russian*) 2-91268
bars, layered, stability under irregular heating (*Russian*) 2-75859
beam, prismatic, plastic analysis of torsion 2-86216
bodies obeying Hencky's constituent law, finite element analysis 2-84443
boundary-value problems, finite element soln. for capturing failure states
2-91278
casing, plasto-elastic rotation, interaction with elastic filler, numerical
model (*Russian*) 2-81296
celluloid, softened, deform. under complex loading, mirror transform.
(*Japanese*) 2-93566
circular hole in anisotropic sheet, elasto-plastic stress conc. 2-97389
cold-formed member behaviour under normal stresses, elastoplastic 2D
model (*French*) 2-111193
composite, spatially reinforced, elastoplastic props. determ. by averaging
method 2-62182
composites, elastoplastic strain, calc. under complex load 2-114677
concrete, plastic-fracture model 2-55503
constitutive equations of elastoplastic materials with elastic-plastic transi-
tion 2-97403
continuous medium mechanics problems, method of moving coordinates
2-112702
crack extension criterion and energy change 2-103098
crystalline solids, finite deformation elastoplasticity, review 2-115334
cylinder, rotating hollow, finite elastic-plastic deform. 2-55459
deformation kinematics, defn. and comput. significance 2-91277
disc, circular, residual stresses creation by heating, optimum control
2-91275
ductile fracture, in plane strain, reduced integration effect on 2D isopar-
ametric element 2-97453
ductile materials, modelling of low rel. erosion by spherical particles
2-86790
ductile single crystal, nonuniform and localised deform. anal. 2-81875
elastic-plastic fracture problems, energy-release rate 2-91337
elastic-plastic tubes, internal pressure, strain, bifurcation 2-60420
equilibrium problem analysis using finite element methods 2-91267
fatigue, elastic-plastic, damage accumulation model (*Japanese*) 2-103890
fatigue crack growth, cumulative model 2-92092
fatigue crack growth kinetics, method for investigating cyclic elastoplastic
deform. using J-integral 2-70881
fatigue life predictions, smooth and notched specimens, based on fracture
mechanics 2-62367
ferromagnets, deformation measurement, with electromech. strain gauge
2-93705
finite bar, elastoplastic waves propagated in temp. gradient, computer
simulation (*Japanese*) 2-70853
finite element method, elastoplastic problem soln. 2-75868
finite element solution of elastic-plastic problems 2-81259
finite thickness rectangular plate containing through thickness central
crack, elasto-plastic anal. 2-65528
fracture instability, semibrittle, inclined yield strip, continuum dislocation
model 2-86786
fracture mechanics parameter, elastic-plastic, preloaded specimens
(*Japanese*) 2-91331
fracture toughness specimens, elastic-plastic stress state, effect of side
grooves, finite element anal. 2-111394
half-plane, periodic elastoplastic contact problem 2-65540
inclusion problem of elastoplasticity, integral eqn. approach 2-97405
laminate structure modelling with mixed finite element 2-91260
mechanical behaviour under uniaxial tension, dia. imperfection effects
(*Japanese*) 2-86217
memory type elastic-plastic materials with general work-hardening, math.
theory 2-109206
metal forming simulation 2-72758
metals, deform., rate-dependent, elevated temps., constitutive eqns.
2-105265
Mises elastic-plastic boundary as core region in fracture criteria 2-86228
modelling of material behaviour, rel. to nuclear reactor safety 2-62186
modified secant Newton method for non-linear problems 2-109191
non-elastic body with damaged zone (*French*) 2-103058

elastoplasticity continued

- nonhomogeneous medium, stress conc. in neighbourhood of holes, elastic
and elasto-plastic problems (*Polish*) 2-81234
nonlinear dynamic structural response, implicit time integration, numerical
stability 2-109204
notch, stress distrib., elasto-plastic finite element anal., geometry effects
2-109240
path-independent integrals, body forces, inertia and arbitrary crack-face
conditions 2-86223
plate, local and integral strain behaviour, elastic plastic anal. 2-65535
plate, relaxed by cut, tension state, small elastico-plastic deform. (*Russian*)
2-91269
plate assemblies, prismatic, elastic and elasto-plastic, local instability
numerical anal. 2-109193
plates, thin, elasto-viscoplastic and elasto-plastic large deform. anal.
2-70851
polyether-MDI-butanediol based urethanes, structure-property behaviour,
composition ratio behaviour 2-91827
rolling, rheological properties of material effect on stress and strain states
2-99450
shell, cylindrical, elastoplastic, supporting power WRT pure bending (*Rus-
sian*) 2-65489
shell of revolution, open, under nonaxisymm. mech. and thermal loads,
thermoelastoplastic stress state 2-109208
shells, thin, elasto-viscoplastic and elasto-plastic large deform. anal.
2-70851
steady vibration response variance analysis 2-60443
steel, alloy, crack initiation, effect of H source 2-57474
steel, ductile plate, plastic strain conc. at crack, optical meas. 2-105268
steel, high strength, notched, criterion for plastic failure 2-62228
steel, low C, fatigue crack growth under elastic, elastic-plastic and general
yield conditions (*Japanese*) 2-105306
steel, reactor pressure vessel, radiation damage, evaluation by elastic-
plastic fracture mechanics 2-57486
steel plates loaded by uniaxial in-plane compression, evaluation of elas-
tic-plastic analyses 2-91265
strain hardening material, ductile tearing instability anal., piecewise power
law hardening 2-60468
stress meas., appl. to J integral eval. in elastic-plastic deform. 2-78027
stress-strain state of elastoplastic bodies in high-power pulsed laser heating
2-114718
structural systems minimum weight design 2-114670
struts, steel, subjected to impulsive loading with linear attenuation,
dynamic anal. (*Chinese*) 2-103073
substructuring techniques in material nonlinear analysis 2-60417
thermally-loaded structures, cracks, elastic-plastic anal. 2-86226
thermoelastoplastic deformation of solids, analytical description 2-114685
tube, elastic-plastic, thin-walled, finite strain tension torsion test 2-55447
tubes, thick-walled, elastic perfectly plastic materials, rel. between diamet-
ral expansion and internal pressure 2-103062
wave propag. in half space 2-109221
Al, quasi-elastic high press. waves 2-71557
Al, shock release in 10 GPa range 2-71558
Cu, quasi-elastic high press. waves 2-71557

elastoresistance

No entries

ELDOR

- magnetic resonance spectra, simulation using stochastic Liouville eqn. with
Pade approximants 2-85692
li-o-dimethylbenzene radical complexes, soln., KEPR, ELDOR and
ENDOR 2-59832
Na-o-dimethylbenzene radical complexes, soln., KEPR, ELDOR and
ENDOR 2-59832

electrets

- see also dielectric devices; electrostatics; photoelectrets; thermoelectrets*
CN-85 solid-state nuclear track detector, electret props. studies 2-59615
dosimetry application, X- and γ -dose meas. 2-75055
ferroelectrets, exoemission visualisation of defects 2-67200
induced polarisation paramagnetism in electret state 2-110749
microphones for tape recorders 2-102995
monochrome electret headphone, characteristics calculation 2-114590
naphthalene, magnetoelectret, dielec. behaviour 2-104789
PMMA electrets, TSC meas. with needle-plate electrode geometry
2-57010
polar materials, relax. currents and electret effect 2-110748
polychlorotrifluoroethylene film (Aclar), electret props., TSC study
2-77445
polyethylene naphthalate photoelectret, carrier traps 2-98661
polymer electret, charge distrib. meas. by new press. pulse method
2-66976
polymer electrets, piezoelectricity 2-57019
polypropylene electret, vapour induced depolarisation currents 2-87658
polyvinylidene fluoride, thin film magnetoelectret, thermally stimulated
discharge current obs. 2-99025
prosthetic implant material appl. 2-62839
PTFE, organic electret for condenser microphones, electret lifetime,
annealing, thermally stimulated depolarisation meas. 2-72407
soda-glass detector, mag. field effects on fission track recording characts.
2-70087
Pb₂Ge₂O₇, ferroelectric, electret props. 2-116111
Pb₂Ge₂O₇:Fe³⁺(Gd³⁺) ferroelectric, electret props. 2-116111
PbMg_{1/3}Nb_{2/3}O₃, cubic ferroelec., with diffuse phase transitions, photore-
fraction mech. 2-110797

electric admittance

- biomembrane, elec. excitable, variance of conductance fluctuations
2-78315
metal-semiconductor-metal structure, LF admittance behaviour (*Russian*)
2-66658
protoplasm drop membrane of Chara cells, pot. depend. EMF and conduc-
tance 2-78316
Ag, monocryst., adsorpt. of diethyl ether, admittance and reflectance
meas. (*French*) 2-76810
AgF-LaF₃ reversible interface, Auger depth profiling and impedance study
2-71807
Au, monocryst., adsorpt. of diethyl ether, admittance and reflectance
meas. (*French*) 2-76810
Hg_{1-x}Cd_xTl_{1-x}Te-native oxide MIS struct., elec. props. meas. 2-87399
Si:Al(Pt), deep levels obs., anal. of admittance spectroscopy method
2-115701
Si-MOS structures, interface-state density investigation 2-66653

electric admittance measurement

- blood conductivity at time of coagulation, recording with a biactive clamp, temp. effects (*French*) 2-116900
- bridge sampling methods for 250 kHz to 5 GHz range 2-101427

electric amplifiers *see amplifiers***electric arc furnaces** *see arc furnaces***electric arc welding** *see arc welding***electric arcs** *see arcs (electric)***electric breakdown**

- see also electric breakdown of gases; electric breakdown of liquids; electric breakdown of solids*

3rd IEEE International Pulsed Power Conference, Albuquerque, NM, USA (June 1981) 2-89461

energy dissipation on ion accelerator grids during high voltage breakdown 2-80378

point-to-plane discharges, comparison of air and SF₆ 2-65784

pulsed power bibliography 2-94940

vacuum breakdown, conf., London, England (March 1981) 2-89444

vacuum gap, uniform field, charge carriers in prebreakdown current, mass spectra anal. 2-91699

electric breakdown of gases

- see also electron avalanches*

10 kA arc in air, quickly switched off, free burning, breakdown phenomena (*German*) 2-115066

60 kV, 5 cm spark gap, effects on electrodes, insulators, and gas types of number of discharges 2-91714

air, analysis of Paschen curves using Townsend breakdown eqn. 2-109450

air, DC electric breakdown of positive point plane gaps, NO_x, CO₂ and H₂O conc. effects 2-91698

air, dry, prebreakdown currents and breakdown potentials in longitudinal magnetic fields 2-71280

air, electric breakdown, low threshold, laser spark initiation, plasma waves 2-91702

air, filamentary stages of point to plane discharges 2-103550

air, laser-induced breakdown, pulse-width and focal-volume depend. 2-66055

air, long spark channel, ionisation electric field intensity 2-103549

air, radio beams intersection point, pulsed breakdown 2-112023

air, slow optical discharge initiated by optical-breakdown plasma 2-109623

air at metal surface, optical breakdown plasma, interferometry study (*Russian*) 2-81550

air breakdown by CO₂ laser radiation, initiated by explosion of metallic microparticles 2-109622

air gap, oscillating lightning impulse voltage, breakdown behaviour of nonuniform electrode arrangements 2-97821

air gaps, discharge phenomena at positive switching-impulse voltage 2-76214

air impulse ratios of gaps in compressed gases 2-97820

air in long spark-gaps, long switching spark between electrode and ground (*Polish*) 2-76211

air near conducting target, optical breakdown, elec. current prod. 2-55766

barrier effect in air and SF₆-insulated nonuniform electrode configurations 2-103265

breakdown voltage, vacuum gap volume and config. effect 2-60825

breakdown wave in self-consistent field of EM wave beam (*Russian*) 2-103378

compressed gas, spatial and temporal predischarged development 2-103531

compressed gases, spatial and temporal resolved predischarged development, CAA 2-103278

corona cloud motion in spark discharges, features 2-103547

DC corona breakdown, narrow-jet model 2-103507

discharge voltages of non-corona air gaps of different shape at high frequency (*Russian*) 2-97805

electric field meter based on gas breakdown 2-107347

electron beam formation through explosive electron emission 2-55805

electron waves in elec. discharge channels, theoretical study 2-91691

flowing gas spark gaps, statistical breakdown times 2-91711

gas discharge ion source, plasma diagnosis with a mass spectrometer 2-103467

gas-laser tubes, breakdown voltage lowering theoretical analysis 2-60098

gaseous spark gaps, nanosecond pulsed discharges, current waveforms 2-91713

gasfilled spark gap overvoltage breakdown statistics 2-97827

Geiger counter region of positive corona, initial electrons detection 2-103516

high-pressure spark gap overvoltage breakdown probability 2-97828

insulating, electronegative, sparking pot. 2-103485

intense impulse discharge, spectral brightness meas. 2-103469

inverse Raman scatt. efficiency, laser mode effects, for breakdown-limited intensity (*German*) 2-60132

ionization wave sustained by intense monochromatic radiation (*Russian*) 2-109452

Knudsen discharge, initiation, ionisation cross-section, electron energy depend. 2-103490

laser corona, Langmuir collapse (*Russian*) 2-60809

laser-controlled gas-phase switches, optical processes 2-97806

laser-guided electric discharges in the atmosphere, review 2-103276

leader velocity characteristics in spark discharges 2-103548

long air gap discharges, schlieren techniques to study leader phase 2-103546

long sliding spark, research project (*Polish*) 2-55797

low pressure spark gap Blumlein switch, testing 2-91715

microwave breakdown, low press. 2-91583

multiphoton ionisation for breakdown triggering or control Xe 2-96529

partial discharges across metal-dielectric gap in compressed SF₆/N₂ 2-115065

point-to-plane gaps with positive pulseless corona, calc. of electric field 2-109615

relativistic electron beam transport through the atmosphere in reduced-density, current-carrying channels 2-80890

RF breakdown in transverse mag. field, expt. study 2-76223

RF discharge, low-pressure, plasma diagnostics 2-103468

rod-plane gap, accurate field soln. using optimised charge simulation 2-109449

SF₆ insulation, impulse corona effects on subsequent breakdown 2-65790

spark decomposition studies of dielectric gas mixtures 2-103533

electric breakdown of gases continued

spark gap breakdown characteristics, effect of electron-beam-induced space charge 2-97829

strongly electronegative gases, meas. of figure of merit, effect of electrode surface roughness 2-103528

T-7 Tokamak, gas breakdown (*Russian*) 2-76169

time lags in E*B fields 2-103277

transient voltage measurement of gaseous ionisation, sensitivity and error anal. 2-97822

transition regime from quasiuniform to nonuniform field breakdown obs. 2-103508

voltage recovery time for small spark gaps 2-91712

Ar breakdown by CO₂ laser radiation near metal surfaces 2-97699

Ar, dielectric recovery time of small pressurized spark gaps 2-103544

Ar, laser induced breakdown at 0.35 μ m 2-103489

Ar, luminous layers in prebreakdown region at low press., Monte Carlo simulation 2-97702

CO impulse ratios of gaps in compressed gases 2-97820

CO₂ impulse ratios of gaps in compressed gases 2-97820

CO₂ TEA laser, preionizing spark arrays, comparison of transverse and linear geometries 2-55111

H₂, dielectric recovery time of small pressurized spark gaps 2-103544

H₂ RF-ion source beam, ion species 2-103466

He breakdown by CO₂ laser radiation near metal surfaces 2-97699

He, corona discharge, microscopic theory 2-60823

He impulse ratios of gaps in compressed gases 2-97820

He, luminous layers in prebreakdown region at low press., Monte Carlo simulation 2-97702

He, synchronized diagnostics of wave breakdown in long pipes 2-60814

Hg vapour discharge, appl. of orbital limited theory to electrostatic probe meas. 2-103465

Kr, luminous layers in prebreakdown region at low press., Monte Carlo simulation 2-97702

N-CCl₂F₂ mixtures, lightning and switching impulse breakdown in nonuniform elec. field 2-103551

N₂, analysis of Paschen curves using Townsend breakdown eqn. 2-109450

N₂, dielectric recovery time of small pressurized spark gaps 2-103544

N₂, electric breakdown meas., focused laser irr. induced at 1.064 μ m 2-55800

N₂, electrical breakdown, time delay distrib. meas. 2-76226

N₂, electrical breakdown induced by metastable states, expt. study 2-97813

N₂, electron shock struct. obs. 2-115074

N₂, filamentary stages of point to plane discharges 2-103550

N₂ gas filled gapped surge arresters, effect of microsurface of coaxial electrodes on time delay of step voltage breakdown 2-103529

N₂ impulse ratios of gaps in compressed gases 2-97820

N₂ post-arc column, high-voltage breakdown simulation 2-97810

N₂-filled diode rel. between secondary ionisation coeff. and elec. breakdown 2-65782

N₂-O₂ mixture, breakdown by CO₂ laser radiation near a metal surface 2-97700

Ne, luminous layers in prebreakdown region at low press., Monte Carlo simulation 2-97702

O₂, electric breakdown meas., focused laser irr. induced at 1.064 μ m 2-55800

SF₆, analysis of Paschen curves using Townsend breakdown eqn. 2-109450

SF₆ and N₂, formative time lag meas. (*German*) 2-76219

SF₆ axially blown arc, dielec. recovery after current zero, expt. 2-115067

SF₆ axially blown arc, dielect. recovery after current zero, theoretical 2-115068

SF₆ axially blown arc, dielect. recovery after current zero, expt. and theoretical comparison 2-115069

SF₆ breakdown obs. using dielectric coated electrodes, partial discharges influence 2-103264

SF₆, compressed, electrode surface roughness modelling and prediction of breakdown 2-103527

SF₆, compressed, optimisation of pressure and surface roughness parameters 2-103526

SF₆ corona, effects of H₂O 2-103525

SF₆ corona stabilisation and critical pressure 2-103260

SF₆, development of predischarged currents in sphere to sphere arrangement for lightning impulse voltages 2-103262

SF₆, dielectric behaviour in nonuniform fields near critical pressure 2-103257

SF₆, effect of coatings on impulse breakdown for electrodes with different surface roughness 2-103530

SF₆, elec. insulation, plasma breakdown, engineering problems (*German*) 2-76213

SF₆, filamentary stages of point to plane discharges 2-103550

SF₆, flashover voltage dependence on tangential field strength of contaminated insulator surfaces 2-103532

SF₆ gap, oscillating lightning impulse voltage, breakdown behaviour of nonuniform electrode arrangements 2-97821

SF₆ gas filled gapped surge arresters, effect of microsurface of coaxial electrodes on time delay of step voltage breakdown 2-103529

SF₆ impulse ratios of gaps in compressed gases 2-97820

SF₆ mixtures having small amount of electronegative gas in nonuniform field gaps, breakdown strengths 2-103259

SF₆ mixtures with enhanced corona stabilisation 2-103520

SF₆, positive and negative mean ion mobilities in corona discharges 2-103524

SF₆, positive glow pulses and sparks in 1 cm point-to-point gaps 2-103521

SF₆ prebreakdown discharges in highly nonuniform fields in rel. to gas-insulated system 2-81602

SF₆, spectrometric anal. during an elec. discharge 2-91708

SF₆, threshold field for DC positive corona discharge 2-103522

SF₆, time lags, local detachment rate of negative ions 2-103261

SF₆-air mixtures, impulse corona in negative rod-plane gaps 2-103523

SF₆-air mixtures, prebreakdown phenomena in long nonuniform field gaps 2-103258

SF₆-CO₂ mixtures, impulse corona in negative rod-plane gaps 2-103523

SF₆-insulated systems, volt-time performance 2-103263

SF₆-N₂ gas mixtures, meas. of impulse positive point predischarged growth 2-103519

SF₆-N₂ mixtures, optimisation of pressure and surface roughness parameters 2-103526

electric breakdown of gases continued

- SF₆-N₂ mixtures, positive and negative mean ion mobilities in corona discharges 2-103524
 SF₆-N₂ mixtures, prebreakdown phenomena in long nonuniform field gaps 2-103258
 Xe breakdown by CO₂ laser radiation near metal surfaces 2-97699
 Xe, ionisation coeff. and breakdown potentials obs. 2-103266
 Xe, luminous layers in prebreakdown region at low press., Monte Carlo simulation 2-97702

electric breakdown of liquids

- dielectric liquids, gassing 2-99038
 dielectrics, electrode area effect on breakdown strength 2-93109
 diffusion-pump oil, Dow Corning type 704, vacuum flashover 2-91706
 high viscosity dielectric liquids, prebreakdown phenomena 2-87669
 hydrocarbons, dynamics 2-87668
 laser-induced breakdown, self-focusing and spot-size depend. 2-65320
 polydimethylsiloxane pre- and post-breakdown events obs., viscosity and rate of voltage effects 2-99035
 water electric breakdown props. in 1 kHz repetitively pulsed burst conditions 2-99042
 Ar, liquid, elec. breakdown at cryogenic temp., press. depend. 2-93111
 He breakdown strength obs. and statistical evaluation, using IEC and cylindrical electrodes 2-99037
 He, electrode conditioning effects calc. and obs. 2-99036
 N₂, liquid, elec. breakdown at cryogenic temp., press. depend. 2-93111
 N₂, liquid, flowing, elec. breakdown, statistical investigation 2-116119

electric breakdown of solids

- see also impact ionisation; partial discharges; Zener effect*
 alkali halides, laser induced irreversible absorpt. changes, laser calorimetry study 2-57037
 contact breakdown in air and vacuum arcs 2-103493
 dielectric in vacuum, surface flashover 2-91689
 discharger with solid dielectric, controlled elec. breakdown 2-71285
 electrodes in floating potential, corona inception 2-103554
 embedding effect on electrode in dielectric med. 2-103553
 glass, optical bulk breakdown, statistical props. 2-104813
 insulating films, filamentary electric breakdown model 2-82782
 insulating materials, compatibility between thermal and electrical stresses 2-110767
 insulators in vacuum, surface elec. strength, influence of electrode area (Polish) 2-76212
 MOS structures, gas ionization bulb breakdown voltage calibration device 2-64063
 p⁺-n⁺-n⁺ diode struct., breakdown characts. improvement using field-limiting ring 2-77171
 p-n junction, diffused, breakdown voltage, conc. and junction depth relation 2-104471
 plastic insulator flashover, mag. inhibition, expt. study 2-91695
 PMMA, immersed in transformer oil, anomalous breakdown characts. under direct and impulse stresses 2-110766
 PMMA, space-charged, elec. discharge propag. 2-93112
 PMMA electrets, TSC meas. with needle-plate electrode geometry 2-57010
 PMMA in vacuum, effect of surface deterioration 2-91707
 polyethersulfone film, dielectric breakdown under DC voltage conds. 2-110764
 polyethylene, crosslinked, steam cured, voltage and freq. dependence of bow-tie trees 2-110765
 polyethylene, low density films, prestressed, impulse breakdown strength 2-87670
 polyethylene films, elec. breakdown, surface roughness and space charge form. 2-110761
 polyethylene in vacuum, effect of surface deterioration 2-91707
 polyethylene subjected to switching surges superimposed upon AC voltage, tree mechanisms obs. 2-99041
 polyethylene treeing phenomena obs., effect of absorbed O₂ 2-99040
 polymeric insulating material degraded under specified conditions, radiation induced conductivity 2-110397
 polymeric materials, acoustic emission associated with tree growth 2-110762
 polymers, tree initiation mechanism obs. 2-99039
 polypropylene evaporated films between Cu electrodes, I-V characts. and breakdown strength 2-110512
 polypropylene film, electric breakdown under electron irradiation 2-110763
 polystyrene film, plasma polymerised, elec. breakdown, theoretical anal. 2-66989
 polystyrene film, plasma polymerised, elec. breakdown meas. 2-66988
 positive streamer, charge density distrib. on dielectric surface 2-103555
 prebreakdown conduction measurements in vacuum gaps with Al₂O₃ insulators 2-91705
 PTFE in vacuum, effect of surface deterioration 2-91707
 semiconductors, compensated, generation-recombination noise during injection breakdown 2-82414
 Al, electrical breakdown during anodisation in borate soln., TEM and SEM study 2-110771
 GaAs, anodic oxide film, struct. inhomogeneity 2-87096
 In₂O₃ thin films, electron beam evaporated, elec. props. 2-98776
 InSb-NiSb, low-freq. voltage instability (Russian) 2-56606
 KCl, surface, laser irradi., emission of EM radiation (flashes) study 2-66048
 MgO crystal, elec. breakdown at high temp. 2-77450
 MgO films, AC elec. breakdown meas. 2-72421
 NaCl, laser-induced breakdown, pulse-width and focal-volume depend. 2-66055
 NaCl, laser-induced primary defect form. role in optical breakdown 2-66057
 NaCl, surface, laser irradi., emission of EM radiation (flashes) study 2-66048
 NaCl, tightly focused intense laser beam deform., multiphoton-polaron and avalanche breakdown models 2-66056
 Nd₂O₃ films, electron beam evaporated, dielec. props. meas. 2-72422
 P₂N₅ gate insulating film, CVD prep., dielec. props. and InP-P₂N₅ MIS device props. 2-99346
 PbO-SiO₂ glass, electron and gamma irradiated, charge trapping and release 2-57013
 Si p-n junction, diffused, secondary breakdown region, artificial movement (Russian) 2-98735
 SiO MBE films on GaAs, deposition conditions, Auger anal., and elec. characts. 2-87116

electric breakdown of solids continued

- SiO₂, breakdown statistics and defect densities, theoretical and expt. study 2-110770
 SiO₂, dielectric breakdown and wearout phenomena 2-61832
 SiO₂, elec. breakdown rates and defect densities meas. 2-82781
 SiO₂ films on Si, dielec. breakdown, effect of plasma cleaning 2-61831
 SiO₂, fused, laser-induced breakdown, pulse-width and focal-volume depend. 2-66055
 V₂O₅-P₂O₅-MoO₃, glass, threshold switching in bulk specimens 2-98703

electric cables *see* cables (electric)**electric capacity *see* capacitance****electric cells *see* cells (electric)****electric charge**

- see also space charge*
 analysis of some nonstationary distributions of electric charges along moving production-process bands (Russian) 2-102681
 black hole charging, limit and pair production effects 2-89294
 charge collection scanning electron microscopy, review 2-86526
 dust grains in interstellar medium, temp. and elec. charge 2-89345
 field evaporated ions, post-ionization, multiply charged states 2-87955
 gravitational field of charged black hole effect on proper energy of charged particles (Russian) 2-58251
 point charge between conducting plates, method of images 2-94948
 semiconductor, high resistivity layers, expt. determ. of defects and charge relaxation 2-62352
 superconductor, charge imbalance, voltage, taking approx. charge neutrality into account 2-56770
 Si:As, dopant clustering, generalized model 2-115417
 Si-SiO₂ MOS struct. etched in chloroform RF discharge, charge props. (Russian) 2-61592

electric coils *see* coils**electric condensers *see* capacitors****electric conductance *see* electric admittance****electric conductance measurement *see* electric admittance measurement****electric conduction processes *see* electrical conductivity****electric conductors *see* conductors (electric)****electric connectors**

- see also cable jointing*
 5 kV vacuum feedthrough connector with low capacitance and microphony 2-75122
 cryogenic current leads theoretical and engineering design problems, mathematical models and calculation methods (Slovak) 2-69182
 electroplating alternatives for Au in electronics and decorative industries 2-67665
 electroplating with Au and Ag, future trends, substitute materials and cost reduction 2-67667
 wiring connections for resistance temp. detectors 2-95379

electric current

- see also arcs (electric); corona; critical currents; current density; current distribution; current fluctuations; eddy currents; electrojets; fault currents; leakage currents; short-circuit currents; sparks*
 bow shock, anal. of surface elec. currents 2-100652
 charged particle current, rel. to displacement current 2-107047
 magnetic dipoles system, equilibrium states in transverse EM field, circular currents (Russian) 2-96816
 pulsar magnetospheres, randomly fluctuating elec. current rel. to spectrum of coherent radio emission 2-79132
 solar coronal loop transients, internally driven elec. current rel. to MHD theory 2-100874

electric current control

- TFTR plasma discharge, position and current control, optimal control theory anal. 2-86459

electric current measurement

- see also ammeters; galvanometers*
 ampere definition based on combined Josephson and quantised Hall expt. 2-101376
 ampere realisation, discrepancy between direct and indirect methods 2-101374
 biomedical measurement, extremely low current, in completely magnetically shielded room (German) 2-68098
 critical current, of superconductor, elec. field and resistivity criteria, temp. and strain effects 2-92847
 defibrillation episodes, transthoracic impedance, delivered energy and peak current determ. 2-73393
 electron beam, steady, propag. in air, current density meas. 2-60007
 electronic multimeter for AC/DC current and voltage meas. 2-84666
 fibre optic sensors, applications 2-75705
 fibre-optic detector for difficult environments (French) 2-91054
 high frequency Rogowski coil response characteristics 2-71265
 lightning current meas. at CN Tower, Toronto, Canada, 1980 obs. 2-68474
 magnetoresistive transducer, with superconducting control lines, design and response 2-64011
 metal deposition during electrolysis, quality prediction using current response graphs 2-99686
 microcomputer controlled data acquisition system for lightning strike current recording 2-68538
 particle beam measurement by obs. of deformation of metal foil 2-69310
 photocurrent relaxation time constant meter 2-107341
 semiconductor field emission under nonequilibrium conditions, pulse generator apparatus, emission current meas. 2-74464
 sinusoidal, comparison of induced EMF against displayed function (Rumanian) 2-112919
 solar cell I/V characts. automatic meas. 2-99789
 surface current distribution determ. by IR imaging 2-112979
 transformers, current, error calculation for electronic compensation implementation (Rumanian) 2-89739

electric discharge machining *see* spark machining**electric discharges *see* discharges (electric)****electric distortion**

- see also fading*
 diode lasers, harmonic distortion 2-108875
 tropospheric scatter radio links, propag. delay distortions 2-73621

electric distortion measurement

- harmonic distortion factor meter for characterization of nonlinearity of quasilinear systems (Hungarian) 2-74463

electric domain walls

- ferroelectric, charged impurity centre ionisation by polarisation reversal, luminescence 2-76986
 ferroelectric, thermoactivated motion of 180° -domain walls, variational calc. 2-110790
 Rochelle salt, ferroelectric, acoustic emission, threshold elec. field 2-92701
 TGS, ferroelec. domain boundaries, X-ray topographic image contrast 2-77462
 $\text{Ca}_3(\text{VO}_4)_2$, ferroelec., elastic props., Bragg scatt. laser radiation on HF sound 2-115364
 $\text{KH}_2\text{D}_{2(1-x)}\text{PO}_4$, X-ray and gamma irradi., domain struct. freezing 2-82802
 LiTaO_3 , ferroelec. domain boundaries, computer simulation, X-ray and electron microscope study 2-87717
 LiTaO_3 , ferroelec. domains and chemical twinning, dislocations and stacking faults 2-93130
 $\text{Pb}_2\text{Ge}_2\text{O}_{11}$, ferroelec., acoustic emission from domain wall motion 2-99077
 $\text{Pb}_3(\text{PO}_4)_2$, ferroelastic domain walls, interaction with struct. transition, TEM obs. 2-76655
 PbTiO_3 , 180° polarisation switching and dielec. props. associated with point defects 2-82803

electric domains

- see also *electric domain walls; ferroelectric materials*
 crystals, flexoelectric effect and cryst. struct. 2-87699
 ferroelectric, balanced config. of domain struct. in cryst. with varied pt. group symmetry in external fields (*Russian*) 2-57032
 ferroelectric, polarisation echoes, domain theory 2-57030
 ferroelectric domain walls, charge fractionalisation conditions 2-113244
 origin and role in ferroelectrics 2-61732
 piezoceramic, explosively compacted, elec. domain struct. (*Russian*) 2-66990
 piezoceramics, phase coexistence, domain boundary interactions 2-87703
 PLZT ceramic, domain switching, space charge field effects 2-99074
 squaric acid, antiferroelectric, phase transition fronts 2-93124
 superconducting film, localised resistive domains, model (*Russian*) 2-56806
 TGS:alanine pyroelect. cryst., domain struct. meas. by laser probe techniques 2-61847
 TGS, ferroelectric, low freq. dielec. losses meas. near phase transition of second kind 2-57017
 TGS crystal, ferroelec. domains, SEM obs. 2-116133
 $\text{Ba}_2\text{NaNb}_2\text{O}_{15}$ crystals, ferroelec. domains and laser freq. doubling 2-114367
 $\text{Ba}_2\text{NaNb}_2\text{O}_{15}$, rotational striations and diffusion 2-115157
 BaTiO_3 , deformed, light emission during pulsed repolarisation 2-72555
 BaTiO_3 , dielec. props. near ferroelec. transition, domain struct., mag. field effects 2-104825
 BaTiO_3 , ferroelec., domains and grain boundaries, SEM EBIC imaging technique 2-116132
 BaTiO_3 ferroelec. ceramic surface 2-109526
 Cu, electric field domains at low temp. (*Russian*) 2-110321
 Ga ring, temp.-induced elec. field domain in neg. differential cond. regime (*Russian*) 2-99076
 In film, localised resistive domains, model verification (*Russian*) 2-56806
 In ring, temp.-induced elec. field domain in neg. differential cond. regime (*Russian*) 2-99076
 KD_2PO_4 , domain structure study using neutron time-of-flight diffractometer 2-65808
 $\text{KH}_2\text{D}_{2(1-x)}\text{PO}_4$, X-ray and gamma irradi., domain struct. freezing 2-82802
 LiNH_4SO_4 , ferroelectric phase transitions, elec. props., IR spectra 2-67000
 LiNbO_3 , Czochralski-grown single crystals, growth striations and ferroelectric domain struct. 2-93129
 LiNbO_3 , ferroelectric domain struct. and growth striations (*Chinese*) 2-110793
 LiNbO_3 , in Cs vapour, thermionic emission 2-72595
 LiNbO_3 -PbTe system, ferroelec. polarisation effect on elec. cond. of semi-cond. layer 2-110503
 $(\text{NH}_4)_2\text{BeF}_6$ crystal, ferroelec. domains, SEM obs. 2-116133
 PLZT 7/65/35, ceramic, domain switching, one-dimens. polar responses 2-67010
 $(\text{Pb}, \text{Nd})(\text{Ti}, \text{Mn}, \text{In})\text{O}_3$ piezoelectric ceramic SAW reflector, poled/unpoled domain array 2-91196
 $\text{Pb}_3\text{KNb}_2\text{O}_{15}$, ferroelectric-ferroelastic domain struct., electron diffr. and microscopy study 2-67011
 $\text{Pb}(\text{Zr}, \text{Ti})\text{O}_3$, ferroelec. ceramic, domain switching, butterfly loops 2-67001
 $\text{Pb}(\text{Zr}, \text{Ti})\text{O}_3$, impurity doping effects 2-86689
 PbZrO_3 , antiferroelec. domain struct., electron microscopy and diffr. study 2-57031
 RbHSeO_4 , deuterated, ferroelec. transitions, isotope effects, DTA and dielec. study 2-87707
 $\text{RbH}_2(\text{SeO}_4) \cdot \text{Cr}^{3+}$, ferroelec.-ferroelastic, domain struct., EPR study 2-116135
 $\text{Tb}_2(\text{MoO}_4)_3$, spontaneous shear strain meas. and free energy expression 2-72433

electric double layers see *electrochemistry; liquid theory*

electric double refraction see *electro-optical effects*

electric drives

- see also *electric propulsion*
 linear step motor drive for auxiliary blood circulation equipment and partially implantable artificial heart 2-78500
 micromanipulators with high frequency vibratory drive (*Russian*) 2-53744
 motion picture equipment discrete electric drives structure and characts. (*Russian*) 2-89842
 Transrapid 06 maglev system propulsion by iron-cored long-stator synchronous motor (*German*) 2-70477
 VVER nuclear reactor, electromechanical control and protective equipment electric drives testing (*Czech*) 2-85169

electric field effects

- see also *acoustoelectric effects; discharges (electric); electric conductivity; electro-optical effects; electrochemistry; electrodynamics; electrokinetic effects; electroluminescence; electromechanical effects; electromigration; electron field emission; electrophoresis; field emission ion microscopy; field evaporation; field ion emission; field ionisation; high field effects; magnetoelectric effects; particle optics*

electric field effects continued

- alkali-halides, dislocations attendant to HF vibr., electrostatic field effect on translational motion 2-76453
 atoms in elec. field, continuum eigenfunction expansions and resonances: a simple model 2-84416
 bacteria, killing with elec. pulses of high field strength 2-68044
 binary liquid mixtures, quadrupolar and dipolar elec. field effects 2-66922
 boiling, in vertical slotted channels, effect of elec. field in heat exchange (*Russian*) 2-60531
 cells, mouse, in monolayer culture, elec. pulse-induced fusion 2-94103
 conference on biological effects and medical uses of elec. and mag. fields, London, England (May 1982) 2-79285
 CR-39 detectors electrochemical etching, parameter optimisation for neutron-induced samples processing 2-70070
 crystal, particle-in-box model, electric field effect, hypervirial perturbation treatment 2-79419
 9,10-diphenylanthracene liquid dye solution electroluminesc. in waveguide cell 2-82924
 dispersed particles, precipitation in elec. field (*Russian*) 2-62127
 elastic polarisable fluids, nonconducting, elec. field interaction 2-97334
 ferroliquids, in mag. and elec. fields, dielec. permeability (*Russian*) 2-61731
 gravitational outflow mechanism of free-flowing materials in electric field (*Russian*) 2-96791
 immune system, effects of 60 Hz elec. fields on specific humoral and cellular components 2-111722
 inert gases, secondary light emission by migrating electrons in weak elec. field 2-109453
 ionic crystal, contact melting, external electrostatic field effect (*Russian*) 2-66182
 liquid metastability limit, elec. field effects 2-71608
 liquids, evaporation from capillaries, corona discharge field effect 2-114626
 model atom, ionisation by strong electric field, perturbation theory 2-54784
 molecular gas, heat conduction, electric and mag. field effects 2-86365
 molecular gases, in nonuniform electrostatic fields, dielec. theory 2-81442
 molecules, mol. geometry model 2-59723
 monolayers at air-water interface, elec. field effects 2-115538
 nonpolar liquids, permittivity, elec. field effects 2-82768
 pentacene films, elec. field modulated spectra 2-67078
 phase formation kinetics in diffusion zone under mutual diffusion conditions in elec. field (*Russian*) 2-92149
 photosynthesis 2-62485
 polar crystals, in elec. field, long-wave tail by optical absorpt. (*Russian*) 2-104912
 POPPOP liquid dye solution electroluminesc. in waveguide cell 2-82924
 power transmission plant, nature of exposure to LF elec. fields 2-83597
 protein systems, elec. field effects on kinetics 2-111723
 pyranthrone/dodecane (HMPA) interface, elec. field assisted photostimulated charge transfer 2-104420
 rubber, acoustic props., anomalous elec. field effects 2-103906
 semiconductors, with superlattice, electron heating influence in EM wave reflection and attenuation coeffs. 2-99080
 steel, lightly doped, pulsed elec. field action near voids and nonmetallic inclusions (*Russian*) 2-67572
 tetracene films, elec. field modulated spectra 2-67078
 translating drop in elec. field, heat and mass transfer 2-91428
 Ag_3SbS_3 , pyrragrite, cryst., ferroelec. phase transition, elec. field effects on NQR 2-110695
 Cu whiskers, growth by chemical reduction, elec. field effect 2-87121
 D-T filled ICF target, positioning and freezing using cold mol. beam and quadrupole elec. field 2-85245
 GaAs layers, elec. field effect on growth, in GaAs-AsCl₃-H₂ system 2-57302
 GaAs, struct. changes in high elec. field, X-ray diffr. study 2-98043
 H⁺ neutralised beam prop., undeflectedly across a mag. field, polarisation elec. field obs. 2-80891
 α -LiIO₃, elec. field related extinction reduction in diffraction expts. 2-97861
 $\text{Pb}_2\text{Ge}_2\text{O}_{11}:\text{Gd}^{3+}$, elec. field effect and model of triclinic paramag. centres 2-66912
 PbTe thin films, flash deposited, relax. processes 2-87113

electric field measurement

- see also *field plotting*
 aural electrical field of the isolated frog nerve 2-57795
 corona discharge, electric field meas. using Pockels device 2-115071
 fibre optic interferometer as elec. field sensor utilising piezoelec. PVF₂ film 2-81096
 light-probe measurement of electric field strength in dielectrics charged by electron bombardment 2-112920
 lightning environmental parameters meas. related to interaction with electronic systems 2-79543
 lightning Sferics, measured spectral amplitude in HF, VHF and UHF bands 2-117398
 measurement method in space charge by Pockels device 2-79544
 meter based on gas breakdown 2-107347
 meter for measurement of dielectric surface charge density 2-74466
 nonuniform fields, meas. using Kerr effect 2-89750
 piezoelectric polymer coated fibre, electric field sensitive 2-75696
 pinch discharge plasmas, local elec. field meas., optically-coupled floating double probe 2-60801
 probe for electric field meas. (*Polish*) 2-89748
 quasi-static electric field meas. on Dynamics Explorer-A 2-58183
 solid dielectrics, electric field meas. using laser-generated acoustic pulses 2-79614
 standardisation, international intercomparison of electric field strength at 100 MHz 2-112877
 transducers classification, for electric field intensity meas. in conducting medium 2-58810
 vector electric field meas., Dynamics Explorer-B instrumentation 2-58182
 Bi₁₂SiO₂₀, optical fibre sensor, electric field intensity and voltage meas. 2-65369

electric field strength measurement see *electric field measurement*

electric fields

- see also *electric field effects; electric field measurement; electromagnetic fields; electromagnetic waves; field plotting*
 charged liquid dielectrics, fluid flow effects on electric field distribution 2-96803

electric fields continued

- conductive media, elec. fields calc., RF hyperthermia appl. 2-94145
 curved fictitious edges, charge simulation method (*German*) 2-75492
 cylindrically symmetrical, static and steady-state, determ. using variation method (*Hungarian*) 2-85858
 dielectric-coated electrode, in contact with conducting sphere, electro-static field 2-80866
 discharge laser, externally sustained, elec. field computation in cavity 2-90948
 discharge voltages of non-corona air gaps of different shape at high frequency (*Russian*) 2-97805
 dyadic Green's function, singularities in source region 2-90761
 Earth mantle, field produced by core dynamo 2-105926
 electrostatic fields digital determ. using finite element anal. (*Rumanian*) 2-108765
 equivalent charge calc. method using regularising function 2-90763
 fluids in electric and magnetic fields: pressure variation and stability 2-75490
 generation by arbitrarily moving electrolyte 2-70471
 homogeneous crossed electric fields, prod. using electrode system 2-96798
 ionosphere, elec. field model predictions of mag. perturbations observed by Magsat 2-100631
 ionosphere electric field variations over land, correl. with elec. field var. over oceans 2-78905
 magnetosphere, broadband electrostatic noise rel. to MHD stability of turbulent geomag. tail 2-100664
 magnetosphere, field distrib. on large and small scales 2-89083
 magnetosphere, GEOS and ISEE obs. of quasistatic fields 2-89082
 plasma transport in a stochastic magnetic field ambipolar electric field and ambipolar diffusion 2-97709
 point-to-plane gaps with positive pulseless corona, calc. of electric field 2-109615
 rod-plane gap, accurate field soln. using optimised charge simulation 2-109449
 solar white light flare, 1981 February 26, turbulent elec. fields rel. to flare pink colour 2-100869
 solar wind, turbulent elec. fields rel. to interaction with cometary plasma tails 2-106615
 solenoids, induced electric fields due to time-varying magnetic field 2-96802
 stationary electric field anal. by mapping method (*Russian*) 2-96790
 unipolar corona discharge in conductor-plane arrangement, electric field and volt/ampere characts. determ. using θ -method 2-60822
 Venus ionosphere, electron density depletion regions due to parallel elec. fields 2-73883
 NaCl crystals, influence of electrostatic field on photothermal decolouring (*Russian*) 2-74559

electric filters *see filters***electric furnaces**

- see also arc furnaces*
 application in hardness measuring apparatus, for alloys and steel during nitriding 2-72912
 arc mode molten seed electrodes for MHD power generation 2-93931
 glass sheet annealing, device for temp. meas. in elec. furnaces 2-53769
 refractory materials plasma-arc spraying onto preformed cores used as furnace heating elements (*French*) 2-62078
 sintering furnace, operating at high press. and temp. C+N₂ interaction 2-105097

electric generators

- see also a.c. generators; d.c. generators; magnetohydrodynamic converters; turbogenerators; Van de Graaff generators*
 electrosurgical equipment development and problems 2-78480

electric glow *see corona***electric heaters** *see electric heating***electric heating**

- see also dielectric heating; domestic appliances; drying; electric furnaces; heating elements; induction heating; radiofrequency heating; space heating*
 high-frequency, appl. in boriding steel 2-67644
 semiconductor thermoelectric modules for heating and cooling appls. in instruments (*German*) 2-107318

electric heating elements *see heating elements***electric ignition**

No entries

electric impedance

- see also electric reactance; electric resistance*
 conducting rods electromagnetic fields calc. using variation method (*Hungarian*) 2-55024
 magnetoresistive transducer, with superconducting control lines, design and response 2-64011
 metal, adiabatic effects in surface electron scatt., boundary condition (*Russian*) 2-61549
 polarisation impedance of ideally polarisable plane electrode 2-83389
 semiconductor, compensated, impedance and photoresponse characts. under carrier heating conditions 2-77117
 semiconductor-electrolyte interface, electrochemical transfer via surface states 2-87384
 semiconductor/electrolyte/counterelectrode cells, impedance response, equivalent circuit anal. 2-78231
 solar cell maximum power point and fill factor determining analytical expressions 2-83501
 superconducting film, vortex phase dielec. const., AC impedance meas. 2-72116
 superconducting tunnel junction, nonequilib., with inhomogeneous order parameter, impedance (*Russian*) 2-82533
 transmission line, thermal grounding, in dilution refrigerator 2-89722
 AgF-LaF₃ reversible interface, Auger depth profiling and impedance study 2-71807
 CO₂-N₂ laser, plasma tube impedance, radiation fluctuations effects, theory 2-90863
 CdS, electro-acoustically active, AC and DC cond. 2-77128
 GaAs:Cr structures, semi-insulating, mag. field influence of the small signal impedance (*Slovak*) 2-61485
 Ni-Cd cells, impedance and mass transport kinetics 2-78199
 Ni-Zn traction battery, operational characts. during traction applications (*Russian*) 2-116799
 SiO₂-Li₂O(Na₂O)(K₂O)(Rb₂O) glasses, conc. fluctuations and ionic cond. props. 2-92261

electric impedance measurement

- see also electric reactance measurement; electric resistance measurement*
 bioimpedance of heart, tissue, brain, limb and lung, conf., Tokyo, Japan (Aug. 1981) 2-63741
 biomedical impedance plethysmograph, simple design 2-83677
 biomembrane impedance measurement by intracellular single-electrode bridge amplifiers, capacitance problems solns. 2-100176
 cellular impedance measurement by transient technique 2-62880
 coaxial waveguide terminations, 16/4.58 mm, characteristic impedance meas., high-precision verification system 2-53743
 coaxial waveguides, working standards 2-53742
 corrosion cells, impedance meas. by Laplace transform. of microprocessor data 2-116626
 defibrillation episodes, transthoracic impedance, delivered energy and peak current determ. 2-73393
 dental enamel membranes, impedance as a predictor of permeability, meas. method 2-117168
 discharge indicators for commercial batteries, evaluation and new approach based on dynamic impedance meas. 2-111547
 ECG contact impedance monitoring circuit 2-78465
 haematocrit, determ. by impedance meas. (*German*) 2-117142
 MM-wave complex impedance bridge, 94 GHz 2-74467
 n-Si/methanol interface photoelectrochemical cells characterisation using capacitance-voltage and cyclic-voltammetric measurements 2-105577
 unknown impedance meas. in automatic tester 2-64062
 VLF impedance-meter, cutaneous impedance appl. (*French*) 2-68213

electric load *see load [electric]***electric machine analysis computing**

- single-sided linear induction motor with solid iron secondaries, reaction forces prediction using computer model 2-80872

electric machine testing *see machine testing***electric machine theory** *see machine theory***electric machines**

- see also a.c. machines; d.c. machines; electric generators; machine bearings; machine insulation; machine testing; machine theory; machine windings; rotors; stators; superconducting machines*
 air-cooling flow-visualization technique (*Japanese*) 2-55684
 EM field equations solution by two parameter iteration method, design appl. 2-90769
 macroscopic theory of surface-distributed electrokinetic fields (*French*) 2-114148
 rotating machinery vibration anal. using finite elements 2-69012

electric moments

- see also atomic electric moment; molecular moments; nuclear electric moment*
 alamethicin, dipole moment rel. to voltage-dependent conductance of lipid bilayers 2-73203
 binding to electron in mag. field, quantum calc. 2-101236
 crystals, elec. dipoles, mol. field distrib. function calc. 2-93132
 dimethylsulphoxide, solution, dielectric study of mol. interactions 2-99016
 elementary particles elec. dipole moments, review 2-69468
 ferroelectric, EPR line broadening, elec. dipole-dipole interaction, spin-spin relax. 2-77360
 ionic thermal currents under uniaxial stress, determ. of elec. and elastic dipole props. 2-110751
 neutron electric and gravitational dipole moments detection from neutron interference expts. 2-84814
 neutron electric dipole moment value in Kobayashi-Maskawa model 2-59152
 neutron moment in standard SU(2)×U(1) model, quark elec. dipole moment contrib. 2-101717
 poly(4-chlorostyrene), undiluted, temp. coeff. of the dipole moment 2-80855
 quarks, dipole moments in standard SU(2)×U(1) model 2-101717
 random impurity electric dipole system, low temp. collective props., Ising model (*Russian*) 2-116136
 supersymmetric SU(2) gauge theories, elec. dipole moment for monopoles 2-107663
 vertical electric dipole over two-layer medium, time response, double deformation calc. 2-55041
 Λ -n γ , CP violation induced by penguin diagrams, n electric dipole moment 2-54158
 Ω^- electric quadrupole moment from nonrelativistic quark models 2-84896
 Ag particles, dye coated, absorption and luminescence, extinction cross section, particle size effects 2-77580
 Ar adsorbed on Al(111), photoemission studies 2-62048
 Au particles, dye coated, absorption and luminescence, extinction cross section, particle size effects 2-77580
 KCl:OH⁻, elec. dipoles, mol. field distrib. function calc. 2-93132
 K₁-Li₂TaO₅, ferroelectric, dipole-dipole interactions, EPR line-width study (*Russian*) 2-82805
 Kr adsorbed on Al(111), photoemission studies 2-62048
 RbF:Ag⁺, ionic thermal currents under uniaxial stress, determ. of elec. and elastic dipole props. 2-110751
 Xe adsorbed on Al(111), photoemission studies 2-62048

electric networks *see networks [circuits]***electric noise measurement**

- 10 Hz-10KHz, in electrical contacts, MIS structure, thick films and thin films (*Japanese*) 2-58840
 calibration of noise sources using RF-switched radiometer with IF attenuation 2-112990
 electron detection systems, noise meas. using scintillator-photomultiplier combination 2-53901
 geophysical apparatus with induction transducer, remote control and calibration of receive-amplifying channel (*Russian*) 2-100595
 mercury discharge lamp noise power absolute meas., above 100 GHz, using untuned cavity 2-75644
 MM-wave noise meas. utilizing cross-correl. receiver, pitfalls 2-84661
 thermal noise meas. using Josephson junction thermometer, effect of additive noise and bandpass filter 2-112902
 thermal noise-power standard, precision HF termination, function, special features (*German*) 2-107345
 waveguide cryogenic microwave noise standard 2-74471

electric potential

- see also contact potential; overvoltage; surface potential; voltage control; voltage measurement*
 alkaline earth metaphosphate, thermodynamic stability investig. using EMF method with CaF₂-type electrolyte 2-81983

electric potential continued

- charged hard sphere distrib. near charged hard wall, mean spherical approx. 2-65828
 charged particle moving in condensed matter, oscillatory wake 2-56059
 EMF units reproduction accuracy increase 2-89652
 fracture toughness testing of irrad. ferritic steel using electropot. technique 2-88310
 homogeneous resistive materials, pot. fluctuation meas., Green's function anal. of induced EMF between electrodes 2-58851
 nonuniform charge distrib. three-dimens., electric pot. determ. 2-90762
 potential distribution measurement, rapid method, appl. to corrosion studies (*Japanese*) 2-74392
 semiconductor heterojunction, equilibrium electrostatic potential and energy band diagram calc. model 2-92739
 semiconductors, electrostatic potential, planar problem (*Russian*) 2-56570
 p-Si/methanol interface photoelectrochemical cell characterisation using capacitance-voltage measurements and cyclic-voltammetric measurements 2-105578
 subband physics with real interfaces, review 2-61610
 thermocouples, Chromel-Alumel, deterioration of EMF in reducing atm. at high temps. 2-67641
 Ag electroformed discontinuous film, pot. distrib. and switching phenomena 2-61619
 Al-Ge-Sn, liq. alloy, thermodynamic props., EMF meas. 2-104031
 Cd-Au alloy, dil. liq., EMF and vapour press. values, equil. and second law of thermodynamics confirmation 2-81981
 F-containing conductors, use for detection of certain gases (*French*) 2-89702
 Ge-H, positive test charge, pot. map 2-56479
 Hg-Sn alloy, dil. liq., EMF and vapour press. values, Duhem integration, second law of thermodynamics confirmation 2-81982
 KH_2PO_4 , protonic transference number, EMF meas. 2-92264
 Na-Ga(Cd), liquid, conc. fluctuations, press. effect, EMF meas. 2-91758
 Na-Hg, liquid, thermodynamic and struct. props., EMF meas. 2-81986

electric power generation

- see also direct energy conversion; ocean thermal energy conversion; power stations; wave power generation*
 biomass alternatives, power generation apps. 2-67893
 coal gasification technology 2-83447
 coal-using technologies, effects on future markets 2-57674
 energy planning, stochastic simulation model 2-83449
 energy production and pollution in Netherlands up to 2000 AD (*Dutch*) 2-88481
 generators for wind power 2-93863
 geothermal field elec. power extraction management model 2-116778
 Harwell thermomechanical generator, small power source for offshore apps. 2-67872
 ocean wave swell energy conversion to electric energy process technicalities (*French*) 2-73061
 power development and planning in India 2-88399
 pressure retarded osmosis at electric power source, principles and economic analysis (*Dutch*) 2-105599
 shale oil, production, technology, effects on power industry 2-67800
 solar energy as a source for production of power and desalinated water 2-93874
 Spain's solar chimney, electricity generation from hot air 2-67836
 supply output power characteristic extremal points existence conditions determ. (*Russian*) 2-57719
 technical and economic aspects of electricity generation by solar cell systems (*German*) 2-88429
 unconventional energy sources 2-83446
 world coal trade and the fuel supply to power stations in Europe (*German*) 2-78178

electric propulsion

- see also electric drives; electric vehicles; traction*
 EM gun, impact fusion applic. 2-54651
 EM gun, TRAIL, Tokamak limiter for fusion reactors 2-54652
 Li-Al/FeS cells optimisation for electric vehicle propulsion applications 2-93887

electric reactance

- see also capacitance; inductance*
 No entries

electric reactance measurement

- see also capacitance measurement; inductance measurement*
 No entries

electric relays *see relays***electric resistance**

- quartz resonators, high temp. resonance loss and IR characterisation 2-99137
 semiconductor homogeneous slab on high-resist. substrate, spreading resistance, mixed boundary value solns. 2-115743
 MgO insulated nuclear instrument cable, gamma radiation and temp. effects 2-69765
 Ni/Cd cells, plastic bonded high rate Ni electrodes, internal resistance 2-116798
 SiO₂ insulated nuclear instrument cable, gamma radiation and temp. effects 2-69765
 TiO₂/SnO₂ ceramic moisture sensor, elec. resistance stability, SEM, powder X-ray diff. exam. 2-74398

electric resistance measurement

- see also ohmmeters*
 cardiac muscle, 4-electrode resistivity technique appl. 2-88704
 circuit elements having low Q-factor inductance, capacitance and resistance meas., impedance meter (*Rumanian*) 2-89738
 diamond-anvil cell, appln. to electrical resistance meas. at high pressures and low temps. 2-58847
 dielectric volumetric resistance measurement under impulsive gamma-neutron radiation (*Russian*) 2-95395
 digital LCR measurement instrumentation 2-89742
 metals and alloys, review of elec. resist. of materials at cryogenic temps. 2-104353
 ohmic contacts, specific contact resistance determ. from transmission line model meas. 2-92750
 primary and fuel cells internal resistance measurement technique 2-105550
 semiconductor junctions, method for meas. of capacitance, series and shunt resistance 2-84668
 semiconductor junctions, spreading-resistance meas., effect of insulating edge near junctions (*Chinese*) 2-92732
 SI ohm redeterm. at NPL 2-101378

electric resistance measurement continued

- skin resistivity measurement using an annular tetrapolar electrode 2-83723
 superconducting composites, multifilamentary, direct meas. of transverse resistivity 2-74460
 temperature dependence, simultaneous meas. of thermal and electrical props. by modulation method 2-95371
 units realisation, progress at NPL (India) 2-101375
 Si junction solar cells, graphical method for evaluation of series resist. 2-93901

electric resistors *see resistors***electric sensing devices**

- see also instruments; measurement*
 acousto-optic US sensor using single-mode fibre 2-81098
 biomedical piezoelectric sensor for the measurement of pressure and cardiac output (*Spanish*) 2-68179
 broadband magnetic field sensors, design considerations 2-112942
 capacitive sensor, for two-phase pipe flow meas. (*German*) 2-81424
 city gas detector using thick film hybrid IC sensors and single-chip micro-computer 2-95356
 concentric capacitive sensor for cryogen level 2-74401
 crack microgauge based on AC field meas. 2-78052
 current-conducting sensor for recording failure of structures 2-99636
 design of sensors with metal foil strain strips (*German*) 2-84615
 development trends, biological vs. technical sensors (*German*) 2-112884
 development trends survey 2-95357
 earthquake prediction and sensors (*Japanese*) 2-94298
 eddy current probe circuits for nondestructive testing, optimal design (*German*) 2-79564
 electrochemical oxygen sensors, membrane type, metrological properties (*Polish*) 2-93850
 electrochemical sensors for air pollution (*German*) 2-88485
 electronic flow sensor for energy monitoring with external sensing elements 2-81419
 electronic sensors and analysers, book 2-84396
 fibre interferometric sensor, synthetic-heterodyne demodulation technique 2-81101
 fibre optic hybrid sensors using liq. cryst. light modulators and piezoceramic transducers 2-102930
 fibre optic instrument for temp. meas. 2-81097
 fibre optic interferometer as elec. field sensor utilising piezoelec. PVF₂ film 2-81096
 fibre-optic transducers types, development and applications 2-95342
 force, pressure, displacement and flow sensors, conf., Enschede, Netherlands (May 1982) 2-94913
 force and weight measurement, review 2-107303
 heat flux sensor with thermocouples, furnace transient temp. field meas. appl. (*German*) 2-64041
 hot wire probe, for high-speed and high-temp. gas dynamics 2-65672
 humidity measurement using an integrated circuit, Aquamax II (*German*) 2-53776
 integrated Si magnetotransistor micro-transducer, rotation and angle detection appl. 2-95325
 interferometric acoustic sensors, fibre coating optimisation 2-81099
 magnetic sensor, high sensitivity, using inunction transistor 2-64070
 magnetoresistive comparator, magnetic field micro-sensor appl. 2-64079
 magnetoresistive element position detector using ferrite closure, electrical capacitance meas. basis 2-112885
 mass flow measurement sensors development 2-97681
 micro-probe, pipe flow of suspension meas. (*German*) 2-81425
 microwave sensor for measuring small movement of biological subject 2-88710
 muscular action measurement, use of strain gauge meas. method (*German*) 2-88709
 optical fibre array, for image velocity sensing 2-70676
 optical fibre sensor for tracking line-focus trough-type concentrating solar collectors 2-102931
 optical fibre sensor technology, state of the art 2-81094
 permittivity detector for liquid chromatography, microprocessor-based system 2-116769
 photoelectric positioning sensor for Sun orientated measurements (*German*) 2-79669
 piezoelectric polymer coated fibre, electric field sensitive 2-75696
 piezoelectric pressure sensor calibration, for high pressures (*German*) 2-79556
 polar MOS, new magnetosensitive element, magnetoelastic characts. 2-64072
 pressure pulses, meas. using dielec. sensor 2-58778
 pyroelectric sensors using NaNO₂ layers, for EM radiation 2-95472
 quartz resonator thermometry developments 2-53761
 resonant diaphragm pressure gauge, using piezoelectric transducer 2-95359
 self-heated thermistors for flow rates and energy measurement (*German*) 2-86361
 semiconductor, surface electronic props., modification in gaseous media (*French*) 2-92718
 semiconductor sensor for meas. low temp. in bridge cct. (*Polish*) 2-95376
 technological developments, 'Valvo' range (*German*) 2-53747
 temperature sensing using base emitter voltage transistor characteristics 2-101414
 temperature sensor using thin-films Pt resistors, design and appl. (*German*) 2-79584
 thermistor types and appl. 2-95380
 thermo-EMF measuring instrument using probe method 2-69168
 thin film sensors, strain strips of metallic and semiconductor materials (*German*) 2-84616
 transducer apps., review of transducer types, use, characts. and evolution of sensors (*French*) 2-53749
 transducer technology and temp. meas., conf., Essen, Germany (Jan. 1982) 2-63752
 US sensor for simultaneous meas. of level, temp. and density 2-65435
 weather station as example for microcomputer sensorics (*German*) 2-100440
 F-containing conductors, use for detection of certain gases (*French*) 2-89702
 n-Ga_{1-x}Al_xAs for high sensitivity pressure sensors, resist. variation with press. 2-95338
 Ge, carrier conc. effect based devices, sensitivity increase 2-87430
 H_2O , PO_4 , $4\text{H}_2\text{O}$, hydrogen gas sensor using electrochemical concentration cell 2-112888

electric sensing devices continued

- InSb, carrier conc. effect based devices, sensitivity increase 2-87430
 O₂ concentration measurement using Clark cells (*Dutch*) 2-83427
 Pb(Zr, Ti)O₃ disc sensors, thermal response improvement 2-69158
 Pd MOS capacitor, H₂ detection props. in H₂-O₂ mixture 2-112882
 Pd SAW delay line for H₂ detection 2-95335
 Pd/n-Si Schottky diodes, H₂ gas induced DLTS signal, gas detector appl. 2-77178
 Pd-InP Schottky diode H₂ sensors, sensitivity transient response and detection mechanism 2-89700
 Pd-MOS structures, hydrogen sensitivity and long term behaviour 2-64008
 Pt MOS capacitor, H₂ detection props. in H₂-O₂ mixture 2-112882
 Si as mechanical material, review 2-92072
 Si temperature sensor elements developments (*German*) 2-64039
 Si temperature sensor type KTY 84 by Philips (*German*) 2-64108
 Si temperature sensors (*German*) 2-84627
 Si:B thin film, polycrystalline, elec. props., use as sensor (*German*) 2-87427
 SiC thin-film thermistor, use as temp. sensor from 30 to 300°C 2-69174
 SnO₂ solid state gas sensors, humidity effects on H₂S detection 2-64010
 SnO₂ thin-film gas sensors, improved performance due to Au diffusion 2-64009
 SnO₂-P thin film gas sensor, sensing characteristics meas. 2-79559
 Ta-Ni thin film sensor system, temp. and strain meas. appl. (*German*) 2-64018
 TiO₂/SnO₂ ceramic moisture sensor, elec. resistance stability, SEM, powder X-ray diff. exam. 2-74398

electric shielding, nuclear *see nuclear screening***electric shocks**

- see also electrical faults; protection; safety*
 scientific and clinical aspects, human body physiology (*German*) 2-94012

electric spark machining *see spark machining***electric sparks** *see sparks***electric strain gauges** *see strain gauges***electric strength**

- see also electric breakdown*
 dielectric volumetric resistance measurement under impulsive gamma-neutron radiation (*Russian*) 2-95395
 insulating film deposition technology, secondary passivation 2-62075
 insulators in vacuum, surface elec. strength, influence of electrode area (*Polish*) 2-76212
 liquid dielectrics, electrode area effect on breakdown strength 2-93109
 MHD generator interelectrode insulating insert, elec. strength increase by blowing air (*Ukrainian*) 2-83504
 polyethylene films, elec. breakdown, surface roughness and space charge form. 2-110761
 polypropylene evaporated films between Cu electrodes, I-V characts. and breakdown strength 2-110512
 polystyrene film, plasma polymerised, elec. breakdown, theoretical anal. 2-66989
 polystyrene film, plasma polymerised, elec. breakdown meas. 2-66988
 solid insulator surface strength study in vac., high voltage He flow cryostat 2-64049
 spark decomposition studies of dielectric gas mixtures 2-103533
 BaTiO₃, low-temp. phase transition in strong elec. field 2-116129
 C₂F₆ dielectric strength, ionisation and attachment cross sections meas. 2-103269
 CF₃SF₆ dielectric strength, ionisation and attachment cross sections meas. 2-103269
 GaAs, galvanostatic anodisation in methanolic KOH 2-88239
 He breakdown strength obs. and statistical evaluation, using IEC and cylindrical electrodes 2-99037
 MgO films, AC elec. breakdown meas. 2-72421
 N-CCl₄-F₂ mixtures, lightning and switching impulse breakdown in nonuniform elec. field 2-103551
 SF₆ transport parameters calc. for non-equilibrium medium 2-103274
 SiO₂ MBE films on GaAs, deposition conditions, Auger anal., and elec. characts. 2-87116
 Si₃N₄ layers, synthesized by ion implantation, IR and elec. props. 2-99136

electric susceptance *see electric admittance***electric susceptibility** *see optical susceptibility***electric switchgear** *see switchgear***electric transformers** *see transformers***electric utilities** *see electricity supply industry***electric variables measurement**

- see also attenuation measurement; capacitance measurement; charge measurement; dielectric measurement; electric admittance measurement; electric current measurement; electric distortion measurement; electric field measurement; electric impedance measurement; electric noise measurement; electric reactance measurement; electric resistance measurement; electrical conductivity measurement; frequency measurement; gain measurement; high-frequency transmission line measurement; inductance measurement; phase measurement; power factor measurement; power measurement; Q-factor measurement; voltage measurement*
 calibration of instruments, intervals between checks 2-95309
 comparator circuits using thermocouple converter, inertia meas. 2-58818
 electrical measurements and standards, progress in instrumentation (*Rumanian*) 2-74382
 EM magnitudes, metrological assurance developments (*Rumanian*) 2-74393
 filament lamps parameters determ., IES approved method for electrical and photometric meas. 2-69234
 fluorescent lamps parameters determ., IES approved method electrical and photometric meas. 2-69233
 Hall effect meas. by van der Pauw technique, geometrical limitations 2-101412
 Hall effect measurement method (*Japanese*) 2-101425
 information presentation in modern electric measuring instruments, visual and computerisation (*Bulgarian*) 2-95396
 NDT, EM aspects, review 2-67720
 precision EM meas., conf., Boulder, CO, USA (June-July 1982) 2-101128
 semiconductor, ambipolar mobility determ. by flying light spot expt., theory 2-89745
 semiconductor material props. meas., tester prototype design (*Polish*) 2-99608
 semiconductor materials, carrier diffusion length meas. 2-101409

electric variables measurement continued

- SI electromagnetic units, importance in electrodynamics and chromodynamics 2-58768
 SI units, DC and LF meas. 1982 state and trends 2-101373
 terrestrial solar cells, meas., international standards establishment 2-73114
electric vehicles
see also electric drives; electric propulsion
 Beta cell batteries development and appl., with 80% storage efficiency 2-57689
 heteropolar linear synchronous motor (LSM) theoretical design, construction and testing for combined propulsion and levitation 2-70479
 low-temperature direct methanol fuel cell efficiency and application comparison with Otto and Diesel heat engines 2-105587
 solid state batteries for commercial production, Anglo-Danish cooperative research programme, report 2-99782
 TRANSPRAPID 06—concept of the vehicle (*German*) 2-70476
 Transrapid 06 maglev system propulsion by iron-cored long-stator synchronous motor (*German*) 2-70477
 Li-Al/FeS cells optimisation for electric vehicle propulsion applications 2-93887
 Ni-Fe electric vehicle batteries, technology, characts. (*Japanese*) 2-73104
 Ni-Zn traction battery, operational characts. during traction applications (*Russian*) 2-116799
 Pb-acid batteries for electric vehicles, power and energy characts. and test results 2-78204

electric welding

- see also arc welding; electron beam welding; resistance welding; welding electrodes*
 optical fibre spark discharge welding for optical data transmission (*Czech*) 2-55365
 powder coatings produced by elec.-pulse sintering and weld facing for engine valve units, wear resist. 2-67659

electrical conduction in condensed matter

- see also carrier density; carrier lifetime; carrier mean free path; carrier mobility; carrier relaxation time; dislocation scattering; electrical conductivity of liquids; electrical conductivity of solids; electrical conductivity transitions; electron density (metals); electron mean free path (metals); electron mobility (metals); electron-phonon interactions; electron relaxation time (metals); high field effects; hopping conduction; impurity scattering; Lorenz number; minimum metallic conductivity; minority carriers; mixed conductivity; negative resistance effects; one-dimensional conductivity; photoconductivity; point defect scattering; size effect; skin effect; small polaron conduction; space-charge-limited conduction; spin disorder resistivity; surface conductivity; surface scattering; thermally stimulated currents; tunnelling*
 anisotropic conductors, influence of defects on transport 2-66519
 degenerate electron system, electrical transport 2-92556
 disordered materials, incoherent field, current balance, density of states test, and mobility 2-56540
 disordered system, transport, localisation in coherent site approx. 2-110317
 disordered systems, 1D and 2D, electronic excited state transport and trapping 2-110316
 disordered systems, Anderson-localised, transport, scaling theory 2-61425
 electron conductivity in random potential, supersymmetry in localisation theory (*Russian*) 2-58758
 heterogeneous materials, bounds for effective cond. by finite element method 2-98606
 one-dimensional disordered model, localisation and elec. props. 2-71925
 one-dimensional disordered systems, theories of electrons, reviews 2-76878
 random media, effective cond., percolation problem, effective medium theory improvement 2-107274
 random resistor networks, threshold behaviour 2-77006
 random resistor networks with anomalous distrib. of conductances, non-universal threshold behaviour 2-77007
 scaling functions for the conductance 2-98605
 statistical mixtures, circuit-theoretic approach for deriving elec. props. 2-92553
 strongly disordered system, cond., defect induced tunnelling 2-66513
 thin wires, Thouless maximum metallic resistance 2-66512
 two-dimensional electron system, disordered, thermoelec. power 2-61433
 two-dimensional gauge-invariant disordered system, Anderson localisation, numerical treatment 2-71926
 two-dimensional system, disordered, mutual interactions in weakly localised regime, spin-orbit scatt. 2-66511

electrical conductivity

- see also electrical conduction in condensed matter; electrical conductivity of gases; electron mobility; ion mobility; space-charge-limited conduction*
 finite-size percolation networks, elec. cond. 2-101356
 intracollisional field effect, gauge treatment 2-58752
 one-body response formulas and generalised Boltzmann equations 2-53659
 one-dimensional system of interacting fermions, in random pot., cond. 2-66514
 surface resistivity, nondestructive testing 2-90760

electrical conductivity measurement

- contactless conductivity and rotational hysteresis measurements using a gas turbine 2-84667
 contactless resistivity measurements on small platelets 2-64065
 electrostatically precipitated deposits, resistivity, conducting potential probe technique 2-64064
 films, elec. characterisation by contactless microwave cavity technique (*French*) 2-101418
 low temp. technique, in high mag. fields, apparatus 2-60368
 metallic films, elec. cond., inductive contactless meas. technique 2-79617
 metals, purity examination, by residual elec. resistivity method, review 2-116638
 multiparameter eddy current inspection, algorithms rel. to nonlinear theory 2-62360
 plasma arc boundary, RF-method for elec. cond. meas. 2-103471
 plasma expansion in flash tubes and influence of arc structure on elec. cond. meas. 2-103545
 polar conductivities of air recording, instrument for 0.01-1.0 Hz geomagnetic pulsations 2-117493
 powders for powder coating plant optimisation 2-111069
 resistivity, non-destructive meas. using microwaves (*Chinese*) 2-89737
 semiconductor, surface 2D plasma conductivity tensor components, direct meas. method 2-115850

electrical conductivity measurement continued

- semiconductor thin films deposited onto metal plates, resistivity measurement, microwave reflection coefficient dependence on film thickness 2-95406
- semiconductors, local resistivity meas. over small regions, capacitively-coupled time-domain reflectometry 2-53783
- semiconductors, low resistance, automated equipment for meas. galvanomagnetic characts. in high electric fields 2-95397
- semiconductors, method of measuring thermoelectric characteristics, 300-1300K 2-69200
- steel, sized, Bauschinger effect in alternating plastic deform., elec. contact method and hardness meas. 2-57427
- steel, stainless, fatigue life measurement, electromag. method 2-67693
- stream-varying mass vel. and elec. cond., EM method meas. 2-58842
- superconducting composites, multifilamentary, direct meas. of transverse resistivity 2-74460
- temperature dependence measuring apparatus 2-112922
- temper diffusion theory, verification by elec. cond. meas. 2-115445
- triethylamine-1, charge transfer complexes and ion pairs, stoichiometry, permittivity effects 2-114063
- Pb-acid batteries, active material electronic conductivity, capacity limiting role during discharge 2-105553
- PbS polycrystalline film, cond. and permittivity meas. at microwave freqs. (*Russian*) 2-95403
- PbTe polycrystalline film, cond. and permittivity meas. at microwave freqs. (*Russian*) 2-95403

electrical conductivity of amorphous metals and alloys

- see also dislocation scattering; electron density (metals); electron mean free path (metals); electron mobility (metals); electron relaxation time (metals); electronic conduction in metallic thin films; impurity scattering; point defect scattering; surface scattering
- disordered metals, electrical cond., linear response functions, expansion appl. 2-82310
- films, mol. beam condensed, elec. and supercond. props., review (*Russian*) 2-56726
- metallic glasses, commutative model of tunnelling states 2-115646
- metallic glasses, electrical resistance low temp., evidence for correlation effects 2-77017
- rare earth alloys, amorphous, resistivity and magnetoresist., crystal field and exchange interactions 2-92560
- resistivity minimum of amorphous alloys, review (*Japanese*) 2-115725
- resonant electron scatt. 2-61437
- transition metal alloys, amorphous, thermoelec. powers and resistivities 2-98611
- Al-Cu films, amorphous, crystallisation, temp. depend. of resist. 2-71837
- C evaporated films, electron transport, semicond. and hole metal behaviour 2-61461
- Ca_{1-x}Al_x metallic glass, elec. cond. 2-98612
- Ce₇₅Co_{24.5} amorphous, temp. depend. of mag., thermal and transport props. 2-115967
- Co-P alloys, amorphous, elec. resist. 2-77014
- Co-Sn, metallic glass, struct., forming ability and elec. cond. 2-103653
- CoP, ion implanted, elec. resistivity and channelling studies 2-104337
- Co₉₀Zr₁₀ and Co₉₄Fe₆ amorphous, sp. ht., susceptibility, resist. 2-72224
- Cu-Co(Fe)(Mn) alloys, spin glass state form. invest. (*Russian*) 2-56875
- β -Cu-Zn, quenched, elec. resist. and hardness recovery on annealing 2-92568
- Cu-Zr, amorphous, press. depend. of elec. resist. meas. 2-77016
- Cu₄₀Zr₆₀ metallic glass, elec. resist. as function of press. and temp. 2-56547
- Cu₂MnIn(Al)(Sn) films, struct., mag. and transport props. 2-60889
- Cu₂Zr_{1-x} (25 $\leq x \leq 70$) metallic glasses, crystn. characts. 2-79728
- Fe-B, amorphous and crystall., electron irradi., vacancies, elec. cond. study 2-92038
- Fe-B-Si(Cr) metallic glass ribbon, elec. resist. free volume depend. 2-110322
- Fe-Ni-Mo-B amorphous alloys, struct. relax., permeability aftereffect and elec. resist. meas. 2-87550
- Fe-P alloys, amorphous, elec. resist. 2-77014
- Fe-Sn metallic glass, struct., forming ability and elec. cond. 2-103653
- Fe₇₄Zr₂₆ amorphous, mag., Mossbauer, and resist. study 2-72384
- Fe₈₀B₂₀ amorphous, crystn., annealing, elec. resist. meas. 2-55853
- Fe₈₀B₂₀ amorphous, irradiated, structural relax. 2-55864
- Fe₈₀B₂₀ metallic glasses, response to irradiation with 800 MeV protons 2-80188
- Fe₂B_{1-x} amorphous, magnetization and magnetoresist. in high mag. fields 2-61740
- Fe₈₄B_{16-x}C_x glassy, crystallisation, magnetisation 2-55862
- Fe₇₈B₂₀Mo₂ amorphous, crystn., annealing, elec. resist. meas. 2-55853
- Fe₈₁Hf₁₉ amorphous, mag., Mossbauer, and resist. study 2-72384
- Fe₄₀Ni₃₈Mo₄B₁₈ metallic glass ribbon, elec. resist. free volume depend. 2-110322
- Fe₁₁Ni₆₉P₁₄B₆ amorphous, elec. resist. near ferromag. transition 2-87218
- Fe₄₀Ni₄₀P₁₄B₆ metallic glasses, response to irradiation with 800 MeV protons 2-80188
- Fe₁₅Ni₈₀P₁₀B₅Al₃ amorphous, elec. resist. near ferromag. transition 2-87218
- Fe₉₀Zr₁₀ amorphous, sp. ht., susceptibility, resist. 2-72224
- Mg-Zn, amorphous, electron transport props., comp. depend. 2-104339
- Mg-Zn-Gd, amorphous, elec. resist., mag. interference effect 2-82312
- Ni-Ag co-evaporated amorphous thin films, thermal evolution 2-71835
- Ni-Cr, quenched, short range order form. and vacancy annihilation on annealing, elec. cond. study 2-115723
- Ni-P alloys, amorphous, elec. resist. 2-77014
- Ni-P amorphous alloys, resist. meas. rel. to prep. 2-92561
- Ni-Sn, metallic glass, struct., forming ability and elec. cond. 2-103653
- NiP, ion implanted, elec. resistivity and channelling studies 2-104337
- Ni_{1-x}P_x amorphous, ion implantation prod., elec. resist., temp. depend. 2-104341
- Pd_{77.5-x}Cu₂Si_{10.5}Fe₁₂ amorphous, elec. and mag. props. 2-72169
- Pd₃₀Zr₇₀ metallic glass, elec. resist. as function of press. and temp. 2-56547
- Rh_{92-x}B₈Si_{0.08} glasses, struct., mech. and elec. props. 2-103650
- Si-Ge-B amorphous film, glow discharge deposited, elec. cond., optical absorpt. and EPR study 2-71965
- TbFe₂ amorphous film, mag. and elec. props. (*Chinese*) 2-104750
- Ti-Fe films, elec. cond., composition depend. 2-56727
- Zr₁Cu_{1-x} amorphous, supercond., thermal props. 2-98803

electrical conductivity of amorphous semiconductors and insulators

- see also carrier density; carrier lifetime; carrier mean free path; carrier mobility; carrier relaxation time; dislocation scattering; electrical conductivity transitions; electronic conduction in insulating thin films; high field effects; hopping conduction; impurity scattering; minority carriers; negative resistance effects; photoconductivity; point defect scattering; small polaron conduction; surface scattering
- amorphous chalcogenides, AC conduction due to polarons (*Japanese*) 2-104384
- aniline black, amorphous organic semicond., elec. cond., thermoelec. and Gunn effects 2-71974
- chalcogenide glasses, AC conduction, temp. depend. 2-98649
- disordered systems, hopping cond., current relax., effective medium method 2-82344
- disordered systems, low freq., cond. due to variable range hopping, expt. vs. theory 2-66557
- glasses, oxide Fe-containing, elec. cond. 2-110406
- glassy semiconductors, book 2-68974
- hopping conduction, strong-field, directed percolation theory 2-77073
- Kapton polyimide film, elec. cond. at high elec. fields 2-71707
- nylon 12 film, doubly oriented, elec. cond., anisotropy 2-82500
- poly(2,5-thiophenediyl):AsF₆ prep., struct. and elec. cond., IR spectra study 2-76325
- poly(4,4'-biphenylene) film, elec. cond., IR absorption and reflection study 2-77218
- poly(acetylene), mol. struct. and elec. cond. 2-98609
- poly(N-vinylcarbazole), appl. of TSC transport peak appl. 2-66571
- poly(p-phenylene sulphide):AsF₆, elec. cond., effects of polymer struct., morphology and doping 2-77044
- polyacetylene:1₂, stability and stabilisation, phys. and elec. props. 2-56593
- polyacetylene:1₂, elec. cond., three-dimens. disordered semicond. islands model 2-56589
- polyacetylene:MoCl₅(WCl₆) films, phys. props., dopant effects 2-104880
- polyacetylene, solitons, optical conductivity 2-56573
- polyacrylonitrile film, pyrolyzed, elec. cond., IR spectra study 2-77219
- polyethylene, C black filled crosslinked, elec. props. 2-66560
- polyethylene, elec. cond. activation energy, elec. field and low press. effects 2-115754
- polyethylene, elec. cond. and space charge phenomena at high elec. fields (*German*) 2-87292
- polyethylene terephthalate, elec. cond., low-energy electron effects (*Russian*) 2-66562
- polymers, polar, radiation-induced elec. cond. (*Russian*) 2-110355
- polyphenylacetylene:AsF₆(I₂), thin films, Schottky barriers, elec. props., doping reactions 2-77212
- polyphenylacetylene:1₂, stability and stabilisation, phys. and elec. props. 2-56593
- polyphenylene oxide, cond. and conformational anal., dopant intercalation model 2-77045
- polyphenylene sulphide, cond. and conformational anal., dopant intercalation model 2-77045
- polyphenylenes, doped conducting complexes, elec. cond. and optical props. 2-77043
- polyphenylenesulphides, doped conduction complexes, elec. cond. and optical props. 2-77043
- polypyrrole film, elec. cond., IR absorption and reflection study 2-77218
- polypyrrole films, electrochemical and cond. props., chem. modification, SEM and voltammetric study 2-77217
- polystyrene films, soln. grown, DC elec. conduction 2-66564
- polytrifluoromethylacetylene, synthesis and characterisation 2-116694
- polyvinyl ketones reacted with POCl₃, elec. cond. 2-56596
- PVC:1₂, photoconductivity, doping effect 2-61629
- PVC-BaCl₂, DC elec. cond. and glass transition temp. meas. 2-98639
- Pyralin, pyrolyzed, elec. conduction 2-61470
- pyropolymer, semiconducting, heterogeneous system, elec. cond. 2-115745
- quartz, fused, shock compressed, elec. resist. and emission spectra meas. 2-71964
- semiconductor, AC conductivity, freq. depend. loss, review 2-115747
- stability and stabilisation, phys. and elec. props. 2-56593
- Teflon based conducting polymer, elec. cond. meas. 2-87255
- transition metal alloys, electrical resistance, pressure dependence meas. 2-77020
- window glass, elec. cond. relaxation, rel. to viscosity in glass-transition interval 2-71988
- Ag-Te (Se)(S)(I) diffusion couples, struct. and elec. cond. meas. 2-82033
- Al(OH)₃ layers in Al electrolytic capacitors, dielectric props. and elec. cond. meas. 2-104809
- As-S-Te, semiconductor glass, elec. props. (*Russian*) 2-77039
- As₂Se-Ge-Sn-Se, glass, Sn valence states, Mossbauer, optical and electron spectroscopy study 2-71935
- As₂Se₃Au(Pt), vitreous, impurity cond. meas. 2-76320
- As₂Se₃-As₂Te₃, As₂Se-As₂Te, As₂Se₃-S, glass point, activation energy of elec. cond. calc. 2-76312
- (As₂Se₃)_{100-x}Ge_x glass, elec. cond. and thermoelectric power, adiabatic pot. 2-92610
- B₂O₃-BaO-Sb₂O₃ and B₂O₃-PbO-As₂O₃(Sb₂O₃), AC elec. resist. meas. 2-87273
- a-Bi:H films, elec. and supercond. props. (*Russian*) 2-82506
- C amorphous, thin layers, 2D-, 3D hopping conduction (*French*) 2-92604
- C evaporated films, electron transport, semicond. and hole metal behaviour 2-61461
- C film, hopping conduction, graphical data interpretation 2-82497
- 2CaO.K₂O.xFe₂O₃(5-x)P₂O₅ glass, elec. cond., temp. depend. anomaly 2-56580
- CdGa₂Te₄(Ag) film, polycryst. and amorphous, elec. cond. and Hall effect meas. 2-82490
- CdS:Sb film, vacuum evaporated, elec. and optical props. 2-61631
- Cu_{2-x}Se, electrophysical props., effects of uniaxial deform. at different temps. (*Russian*) 2-82353
- Fe₂(As₁Te₁Si₂Sb₂)_{1-x} film, sputtered, phys. props. 2-92421
- FeO-V₂O₅-P₂O₅ glasses, internal friction and elec. cond., interpret. w.r.t. valency state of V ions 2-92606
- Fe₂O₃-TeO₂ glass, Mossbauer effect and elec. cond. meas. 2-87639
- GaAs film, amorphous, plasma deposition and characterisation 2-111094
- Ge amorphous film, elec. cond., hopping model, electron-phonon coupling 2-77054
- Ge:Cl, amorphous, ion implanted, gap-states, elec. cond. study 2-76987
- Ge:H amorphous film, AC losses and elec. cond., polarons 2-77055
- Ge-Si:H, amorphous sputtered alloys, elec., optical and struct. props. 2-98644

electrical conductivity of amorphous semiconductors and insulators continued

- GeO₂, vitreous, dielec. relax. and losses, elec. cond. 2-99032
 GeSe amorphous thin layers electronic characts. modification by junction metal azomes incorporation (*German*) 2-92631
 GeSe₂-As₂Se₃, glass point, activation energy of elec. cond. calc. 2-76312
 In₂Se_{3-x}, polycryst. and amorphous, elec. cond., switching phenomena and struct. changes obs. 2-87349
 LaCoO₃, magnetic and electronic props. (*French*) 2-82574
 La₂CoO₄, magnetic and electronic props. (*French*) 2-82574
 La₂CoO₁₀, magnetic and electronic props. (*French*) 2-82574
 Na₂O-K₂O-Al₂O₃-SiO₂ glasses, functional form of Arrhenius eqn. for elec. cond. 2-110350
 PbS-GeS-GeS₂ chalcogenide glass, struct. and photoelectric props., DTA and SEM study 2-92681
 Pb_{0.8}Sn_{0.2}Te, amorphous-cryst. films, optical and elec. props. 2-104373
 Se_{0.99}Bi_{0.01}, amorphous, crystn., elec. cond. meas. 2-55860
 Si, amorphous, density of localised states and carrier mobility, elec. cond. study 2-115640
 Si, amorphous, ion irradi., hopping cond., prep. condition effects 2-92605
 Si, amorphous films, RF-bias sputtered, elec. cond. photoconductivity, ESR spin density, annealing effects 2-56391
 Si, CVD, amorphous, post-hydrogenated, doping effects, cond. and EPR meas. 2-66679
 Si film, glow discharge deposited, optical and elec. props. 2-93307
 a-Si, photoelectric effects, surface and bulk contribs. 2-98687
 Si:B, ion implanted, radiation damage production 2-61009
 a-Si:C and a-Si:C, B(P) films, cathodic deposition, charact. 2-88011
 Si:F, H amorphous films, photoelec., and optical props. Schottky barrier solar cell form. 2-83480
 Si:F amorphous films, solar cell form., film elec. and optical props. 2-83481
 a-Si:F and a-Si:F, B(P) films, cathodic deposition, charact. 2-88011
 Si:H, amorphous, elec. cond., effects of H₂O and NH₃ adsorbates, oxidation and light exposure 2-71984
 Si:H, amorphous, field effect conductance, annealing and light induced changes meas. 2-98750
 Si:H, amorphous, sputtered, time-of-flight and photoinduced mid-gap absorpt., dispersion 2-87432
 Si:H, amorphous film, glow discharge deposited at 1 Torr, elec. and struct. props. meas. 2-87277
 Si:H, amorphous film, optical and elec. props. 2-82940
 Si:H, amorphous film, tetraode RF sputtering and optical and elec. props. meas. 2-111072
 Si:H, amorphous film, vacuum evaporated, substitutional doping by ion implantation, elec. cond. and EPR study 2-55850
 Si:H, N, amorphous film, elec. and photocond. variation with N doping 2-110339
 a-Si:H, N films, optical and elec. props., solid-state image pickup device appl. 2-82935
 Si:H, N(Ga), amorphous film, ion implanted, photocond. and energy spectrum 2-92698
 a-Si:H, RF sputtered, elec. and EPR meas. 2-115791
 Si₃N₄, amorphous, prep. from SiH₄-N₂-H₂ mixture and elec. resist. and IR absorpt. meas. 2-93444
 Si₃N₄, amorphous glow discharge thin films, elec. props., heat treatment and P ion implantation effects 2-61467
 Si:H amorphous film, glow discharge deposited, heterogeneities and surface effects 2-92420
 Si:H amorphous film prep., evaporation method 2-62069
 Si:H amorphous solar cell, photovoltaic performance, film props., plasma deposition optimisation 2-83486
 Si:H amorphous sputtered thin film, carrier propagation, trapping and mobility 2-87283
 Si:H amorphous thin film Schottky barrier diodes, diode characts., film props. 2-82430
 a-Si:H RF sputtered films, elec. props. rel. to threshold and memory switching appls. 2-87347
 α-Si:Mn⁺, doping by ion implantation, dark cond. meas. 2-98128
 Si₃N₄, amorphous CVD film, elec. cond., field effect and gap state density meas. 2-87193
 Si₃O(N) films, amorphous, effect of O₂ and N₂ introduction on dark conductivity/photoconductivity (*Chinese*) 2-92788
 a-SiC:H films, elec. cond., 130 to 350K, hydrogenation effect 2-71986
 Si_{1-x}Ge_x, amorphous, optical props. and photoconductivity 2-104920
 Si₃N₄:H CVD film, chem. bonding changes and elec. effects 2-115930
 TiO₂, elec. resist. for 0.80 < x < 1.23, positive and negative temp. coeffs., theoretical model 2-77056
 Ti-Se-Te, vitrification, physicochemical props. 2-76313
 V₂O₅ layers deposited from gels, threshold switching obs. 2-87350
 V₂O₅-B₂O₃-P₂O₅ glasses, electronic cond. and dielec. relax. rel. to struct. 2-61471
 V₂O₅-based glasses, elec. props. 2-82352
 V₂O₅-P₂O₅-MoO₃, glass, threshold switching in bulk specimens 2-98703
 WO₃, amorphous film, elec. cond., humidity depend. and meas. (*Russian*) 2-112914
 WO₃ amorphous thin films, coloration mech. study 2-99206
 ZnS:Mn, Cu, Cl DC electrolum. films, field enhanced changes in comp. and struct. 2-116263

electrical conductivity of crystalline metals and alloys

- see also dislocation scattering; electron density (metals); electron mean free path (metals); electron mobility (metals); electron relaxation time (metals); electronic conduction in metallic thin films; impurity scattering; point defect scattering; surface scattering
 alkali metals, electron transport props., electron-phonon and electron-electron scatt. contribs. 2-115727
 alloys, clustering and transport props., influence of short-range ordering 2-116558
 binary alloys, residual resistivity, size effect correction, partial wave calc. (*Russian*) 2-98615
 brass, atomised powder prod. and characters. 2-67251
 cryst. struct., mag., elec. and ESR props. 2-92564
 dislocation-induced elec. resist. rel. to antiferromag. ordering at dislocations (*Russian*) 2-104360
 disordered cryst. alloys, elec. resist., temp. depend. calc. 2-66521
 electron-electron scatt. resist., sample depend. 2-82337
 electron-phonon elec. resist. at low temp., theory 2-77031
 Heusler alloys, elec. resist. rel. to scatt. mech. 2-98616
 Kondo lattice, resist. 2-66544
 local phonon modes effect on elec. resist. 2-82336
 magnetoresistance of mixed valent Tm impurities 2-87229

electrical conductivity of crystalline metals and alloys continued

- metals, electron mirror reflection coeff., determ. impedance (*Russian*) 2-72587
 Mooji criterion and weak localization 2-87216
 negative temp. coeff. of elec. resist. in highly resistive metallic alloys at low temps. (*Chinese*) 2-110323
 nonferromagnetic metals, elec. resist., temp. depend., 70 to 300K (*Russian*) 2-82315
 nonspherical Fermi surface metallic system, elec. cond., single band model 2-82318
 phonon limited elec. resist. calc. 2-92600
 plate, thin, low-temp. cond., surface scatt., temp. and thickness depend., size effects (*Russian*) 2-66616
 purity examination, by residual elec. resistivity method, review 2-116638
 review of elec. resist. of materials at cryogenic temps. 2-104353
 sintered metallic materials, elastic modulus, model 2-105208
 solution, elec. resist., quenching effect (*Russian*) 2-115726
 steel, austenitic stainless, standard ref. material SRM-735, anomalous behaviour in thermal and elec. cond. 2-104343
 steel, austenitic stainless, structure, effect of cold working and annealing 2-67370
 steel, high speed R6M3 and R6M5, mag. and elec. props. after heat treatment, NDT appl. 2-67404
 steel, lightly doped, pulsed elec. field action near voids and nonmetallic inclusions (*Russian*) 2-67572
 steel, low C, C atom segregation, thermoelectric power and elec. cond. study (*Japanese*) 2-105155
 superconducting magnet materials, low temp. irradiation effect 2-80182
 surface scatt. effects on resist. 2-104361
 thin wires, resistivity, surface scatt., Matthiessen's rule, roughness effects 2-82338
 thin wires, Thouless maximum metallic resistance 2-66512
 Ti_{0.67}V_{0.33}, thermal and elec. cond. meas., glassy behaviour 2-87225
 transient, Nernst-Ettingshausen effect of hot electrons (*Russian*) 2-115732
 transition metal alloys, electrical resistance, pressure dependence meas. 2-77020
 transition metals, hopping integral influence on elec. props. 2-104347
 transition metals and alloys, magnetic and structural transformations, H influence 2-67329
 TTT complex, TTT₁₂, metal-dielectric phase transition temp., dopant effects 2-76927
 V₃Si, thermal and elec. cond. 2-56548
 Volcoley, antiferromagnetic Invar type alloy in Mn-Ge system (*Japanese*) 2-77291
 weak anti-localisation in presence of spin-orbit coupling 2-92601
 wire, localization DC skin effect and linear magnetoresistance 2-87228
 Ag based alloys, elec. resist. below 9K 2-66526
 Ag, elec. resist. below 9K 2-66526
 Ag-Cu eutectic alloys, elec. contact performance, effects of microstruct. (*Korean*) 2-62239
 Ag-Pd alloy, equiatomic, metallurgical instabilities, SRO and elec. resist. anomalies 2-93490
 Ag-Sn (16.5 wt %) alloy, rapidly quenched, residual resist. increase, vacancy form. energy 2-88231
 AgGa, Coulomb pseudopotential from normal-state resistivity and T_c 2-98790
 Ag₄₈Zn₅₂Au₂(Cu₂), order-disorder transform., metallographic, resistivity, microanal. and X-ray obs. 2-111171
 Al, defect structure, after low-temp. plastic deform. (*Russian*) 2-67444
 Al, deformed, elec. resistivity recovery during isochronous annealing, kinetics (*Russian*) 2-92563
 Al, fusion-neutron irradi. damage rates 2-103828
 Al, magnetic field influence on defect struct. during plastic deform. (*Russian*) 2-103882
 Al, polycrystalline, plastic deform., electric current pulse influence, 1.7 to 4.2K (*Russian*) 2-115332
 Al, residual electrical resist. meas., correlation with dislocation density and cryst. growth from melt (*Russian*) 2-98614
 Al, resistivity damage rate under neutron irradi. at 4.6K, 2-103827
 Al, thin narrow film, localisation and superconducting effects (*Russian*) 2-72106
 Al-Ag (15 at %), residual elec. resist. and struct., isochronous annealing effects (*Russian*) 2-98613
 Al-Ag(Ge), dilute, Matthiessen's rule deviation at high temp. 2-115729
 Al-Co dil. alloys, damage rate and recovery meas. 2-76488
 Al-Cu (4 wt %), resistivity maximum during Guinier-Preston zone formation 2-82319
 Al-Cu-Mg, ageing, elec. cond. study using eddy current meas. 2-88230
 Al-Fe, secondary quenching defects features 2-62153
 Al-Si (Mg)(Zu), thermal cycling influence on alloying elements soln. 2-72738
 Al-Zn (4 wt %), GP zones, ageing and reversion, elec. resist. meas. (*Japanese*) 2-83143
 Al-Zn (9.5 at %), high temp. creep mechanism and dissolution process, expt. study 2-88146
 Al-Zn-Mg, decomp. kinetics, effect of small Mg additions 2-99388
 (Al-4Cu)-Al₂O₃ composite, SAP type, precipitation hardening 2-77836
 Au foil, elec. cond., 4.2 to 20K, Cl₂ annealing effect 2-104344
 AuAl, Z 2-98790
 AuAl₃, optical props., elec. cond. 2-61861
 AuPd ultrathin wires, low temp. resist. rise, interaction effects 2-92566
 Au₉₀Pd₁₀ thin wires, Ag coated, elec. resist., length depend. 2-110325
 Ba, pressure induced superconductivity 2-56764
 Ba_{1-x}Fe_xS₄, Mossbauer spectra, mag. and elec. props. 2-66962
 Be, electrical resist. meas. in basal plane (*Russian*) 2-87222
 Bi, deformed, electron-electron interaction effect in temp. depend. of elec. cond. (*Russian*) 2-104352
 Ca(NH₄), solution, elec. resist., quenching effect (*Russian*) 2-115726
 Cd, electrical resist. anisotropy meas. 2-98617
 CeAl₃, volume mismatch substitution, γ-α transition 2-66197
 CeBi, p-f valence mixing, anomalous mag. and transport props. 2-56514
 CeCu₂Si₂, mixed valence state, elec. resist., mag. field and press. effects 2-110329
 CeCu₂Si₂, superconductivity 2-66691
 Ce_{1-x}Al_xBe₃, mixed valence and Kondo behaviour, lattice const. elec. resist. susceptibility 2-56515
 Ce_{0.9}-La_{0.1}Th_{0.1}, mixed valent ground-state, elec. resist., localisation transition 2-56551
 CePd₃, volume mismatch substitution, γ-α transition 2-66197

electrical conductivity of crystalline metals and alloys continued

- Ce(Pd_{1-x}Rh_x), specific heat, susceptibility and resistivity across the entire mixed valence range 2-56212
 CeSb, p-f valence mixing, anomalous mag. and transport props. 2-56514
 Ce_{1-x}Sc_xAl₃, electronic struct. of Ce 2-71933
 Ce_{1-x}Sc_xAl₃, volume collapse and spin fluctuation behaviour 2-55892
 Ce_{1-x}Y_xAl₃, electronic struct. of Ce 2-71933
 Ce_{1-x}Y_xPd₃, electronic struct. of Ce 2-71933
 Co, AC conduction, and DC conduction 2-66527
 Co, resistivity damage rate under neutron irradi. at 4.6K, 2-103827
 Co-Fe, dilute alloy, elec. resist. meas., 4 to 300K 2-87223
 Co-V FCC alloy, quenched from 1200°C, elec. resist. 2-104345
 Co_{1-x}Ni_xZr₂, supercond., anisotropy of normal state props. 2-110324
 Cr, electrical resistivity due to antiferromag. spin waves 2-61457
 Cr-Ga, effect of press. on Neel temp. 2-72202
 Cu, AC conduction, and DC conduction 2-66527
 Cu alloys, dil., single vacancies and clustered interstitials, spontaneous recomb., elec. resist. meas. 2-76435
 Cu, deformed, isothermal elec. resist. changes rel. to stage III recovery 2-67366
 Cu, electron-phonon effects, elec. and thermal resistivities, Hall effect 2-115728
 Cu, fusion-neutron irradi. damage rates 2-103828
 Cu, internally oxidised, elec. and mag. props. 2-98620
 Cu, reactor-irrad., defects and transmutations 2-102265
 Cu, single vacancies and clustered interstitials, spontaneous recomb., elec. resist. meas. 2-76435
 Cu ultrathin wires, low temp. resist. rise, interaction effects 2-92566
 Cu-3d transition metal dil. alloys, residual resist. calc. using exact soln. of linearised Boltzmann eqn. 2-98618
 Cu-Al, elec. resist., 4.2 to 300K, over entire phase diagram 2-82321
 Cu-Au(Al)(Ni), dilute, Matthiessen's rule deviation at high temp. 2-115729
 Cu-Au(Be)(Pd)(Sb) dil. alloys, electron irradiated, solutes as nuclei for self-interstitial complexes 2-66061
 Cu-Au(Ni), deviation from Matthiessen's rule 2-110327
 Cu-Fe dil. alloys, internally oxidised, elec. and mag. props. 2-98620
 Cu-Fe(Mn) spin glass alloys, elec. resist., Hall effect, mag. susceptibility, and EPR meas. (Russian) 2-82602
 Cu-Mn, manganin, elec. resist. meas. to 100 kbar, press. gauge appl. 2-89735
 Cu-Ni alloys, elec. and mag. props. at 4K 2-77018
 Cu-Ni-Mn-Fe (45.19, 0.95, 1.40 wt.%) constantan wire, elec. resist., press. effect (Japanese) 2-98623
 Cu-Ni(Cu-Ni-Fe), micromagnetic aged alloy, mag. susceptibility and elec. resist. meas. (Russian) 2-98885
 Cu-Pb, microstruct., mech., elec., and mag. props., depend on synthesis conditions 2-56748
 Cu-Pd, ordering process during continuous process (Japanese) 2-77820
 Cu-Sn, martensitic transform., influence of β -phase holding (Russian) 2-67333
 Cu-Sn alloys, elec. and mag. props. at 4K 2-77018
 β -Cu-Zn, quenched, elec. resist. and hardness recovery on annealing 2-92568
 CuAu, fast neutron irradiated, defect production, resist. meas. (French) 2-76510
 Cu₃Au, elec. cond. and long range order (Chinese) 2-104342
 Cu₃Au, fast neutron irradiated, defect production, resist. meas. (French) 2-76510
 Cu₃MnAl, Heusler alloy, elec. and mag. props. 2-110326
 CuMnSb, elec. cond. meas. 2-104348
 Cu₃NiSn, Heusler alloy, elec. and mag. props. 2-110326
 Dy, elec. resist. anomaly near Neel point, critical indices 2-104350
 Dy-Sm, mag. and elec. props. 2-72201
 Fe, resistivity damage rate under neutron irradi. at 4.6K, 2-103827
 Fe-B, amorphous and cryst., electron irradi., vacancies, elec. cond. study 2-92038
 Fe-Cr-Al alloys, rapidly quenched, microstruct., mech. props., elec. cond. 2-111332
 Fe-Cr(Mo), Neel temp. and elec. resist., mag. moment-spin density wave coupling 2-82573
 Fe-Mn ferromagnetic solid soln., electron density perturbation, residual resistivity 2-77019
 Fe-Ni-Ti, phys. props., reverse martensitic transform. effect (Russian) 2-67334
 Fe-Sb-Co(Mn)(V)(Ti), dil., impurity pair interactions, resist. and NMR meas. 2-82317
 Fe-Si alloys, polycrystalline ribbon form, rapid quenching technique (Japanese) 2-116475
 Fe-Si-Al, dil. alloy, mech. props., elec. cond. and mag. losses meas. 2-83217
 γ -Fe_{82-x}Ni_{18-x}Cr₁₈, transport and galvanomag. props. near crit. comp., 4.2 to 300K (Russian) 2-61444
 Fe₂Si_{1-x}Al_x, elec. resist. and band struct., density of states at Fermi level 2-61440
 Gd-La alloys, band struct., elec. resistivity and mag. moment 2-76912
 GdAl, transport and thermal props., critical behaviour near Curie point 2-116005
 GdCu_{1-x}Ga_x, mag. order 2-98845
 GdMn₂-GdNi₂ intermetallic cpds., struct., mag. and elec. props. 2-92878
 Gd_{0.4}Y_{0.6}, mag. phase transitions, elec. resist., elastic const. and US attenuation study 2-116006
 Gd₂Y_{1-x}Fe_x, indirect exchange param. 2-71942
 HfNi₂Si₂, magnetic susceptibility and electrophys. props. (Russian) 2-104575
 HoCu₂, magnetisation, elec. cond., thermopower, paramagnetic-antiferromag. transition 2-77327
 In-Cr dilute superconducting alloy, tunnelling, localised excited states 2-72122
 n-InSb, metallic, resistivity below 100 mK 2-87224
 K, anomalous resist. below 0.35K 2-61441
 K, CDW state and residual resist. anisotropy 2-82316
 K, elec. resist. below 1K, high precision meas. 2-87220
 K, non-simple metal behaviour, elec. resist., temp. depend. 2-87219
 (La_{0.8}Ca_{0.2})MnO_{2-x}, elec. resist. and thermoelec. power 2-66551
 Li, electrical resistivity at high temps. 2-98619
 Li isotopes, electrical resistance study (Russian) 2-61443
 LiAl, Hall mobility of positive carrier 2-110330
 β -LiAl, positive carrier conc. rel. to Li vacancies, Hall effect and lattice parameters study 2-56552
 Lu_{1-x}(Y_{1-x})Gd₂Al₃, cryst. struct., mag., elec. and ESR props. 2-92564

electrical conductivity of crystalline metals and alloys continued

- Mg, electrical resist. anisotropy meas. 2-98617
 Mo dil. alloys, fusion-neutron irradi. damage rates 2-103828
 Mo, electrical resistivity meas., 1500 to 2650K, SRM 781 specimens 2-71946
 Mo, neutron irradi., recovery behaviour, impurity effects, elec. resist. study 2-77843
 Mo, phonon limited elec. resist. calc. 2-92600
 Na, anharmonic crystal, thermodynamic and transport props., effect of temp. and press. 2-76706
 Na, vol. depend. of elec. resist. calc. 2-66525
 Nb and dil. alloys, fusion-neutron irradi. damage rates 2-103828
 Nb, ideal transport, rigid muffin-tin approx. calcs. 2-87221
 Nb-Ti anelastic relax., elec. resist. and density determ., internal friction spectra 2-111222
 Nb₃Al_{0.8}Ge_{0.2}, electrical resistivity, temp. depend. 2-61442
 Nb₃Au, electrical resistivity, temp. depend. 2-61442
 Nb₃Ga, electrical resistivity, temp. depend. 2-61442
 Nb₃Ge, electrical resistivity, temp. depend. 2-61442
 Nb₃Pt(Al), neutron irradi., normal-state resistivity anal. 2-56550
 NbSe₃, CDW motion, AC-DC coupling 2-56560
 NdCo₃, thermal expansion and resist., anomalies obs. at spin-reorientation transition 2-76715
 Nd₂Ge₃, mag. transition temp., mag. ordering effects on elec. and thermal props. 2-87507
 Ni, cold rolled, recovery and recrystallisation in magnetic fields 2-62142
 Ni, electrical resistivity, temp. depend. in ferro- and paramag. region, behaviour in phase transition region 2-71944
 Ni, resistivity damage rate under neutron irradi. at 4.6K, 2-103827
 Ni, sp. ht. and resist. meas. crit. parameters, explanation for rounding 2-92929
 Ni ultrathin wires, low temp. resist. rise, interaction effects 2-92566
 Ni-Cr-TiO₂, oxidation, high temp. influence of TiO₂ content 2-111384
 Ni-Fe(Cu), electron irradi., Frenkel defects, elec. cond. (German) 2-98080
 Ni-Pt-P, amorphous, NMR, Knight shift and linewidth 2-93031
 Ni-Ti sintered specimens pressed from powder mixture, phase comp., mech. and elec. props. 2-67248
 Ni₃Al, elec. resist. and thermo-EMF at high temp. (Russian) 2-66531
 Ni₃Cr, laser damages, comparison with tensile deform. and neutron irradiation effects 2-66047
 Pb, sput. cooled excess vacancy conc., lattice parameter and elec. resist. meas. 2-71440
 Pb-Ag (0.038 at.%), kinetics of Ag precip. 2-111187
 p-Pb_{1-x}Sn_xTe, valence band struct., elec. props. (Russian) 2-87144
 Pd, ideal transport, rigid muffin-tin approx. calcs. 2-87221
 Pd, phonon limited elec. resist. calc. 2-92600
 Pd-H, mechanical and elec. props. recovery after phase transitions (Russian) 2-116460
 Pd-Au-V solid soln., elec. props. (Russian) 2-92562
 Pd-B alloys, phase relations, X-ray diff., DTA and resist. meas. (German) 2-83098
 Pd-Co(Fe)(Ni), anomalous Hall effect, cond. tensor (Russian) 2-77021
 Pd-Fe-Au(Cr) solid soln., elec. props. (Russian) 2-92562
 Pd-Mn, ferromagnetic-spin glass transition, elec. resist. study (Russian) 2-82601
 Pd-Ti, Matthiessen's rule deviations 2-82320
 PdAuCr alloys, spin fluctuation effects, elec. resist. meas. 2-71958
 PdD₃, ion implanted, phonon resistivity 2-110328
 Pd₂MnIn(Sn), Heusler alloy, elec. and mag. props. 2-110326
 Pd₂MnSn, elec. and mag. props. 2-66522
 PrB₁₂, Van Vleck paramag., cryst. field effects, magnetisation, resist. and NMR 2-72140
 PrNi₃, elec. and thermal cond., 0.5 to 20K, cryst. field effects 2-56549
 Pt-P, NMR, Knight shift and linewidth 2-93031
 Rb, anharmonic crystal, thermodynamic and transport props., effect of temp. and press. 2-76706
 Si-Al(Ga), refinement of boundaries of regions of homogeneity 2-111168
 Sn, temp.-elec. instability and I-V characs., low temp. (Russian) 2-82322
 Sr, pressure induced superconductivity 2-56764
 Sr, thermoelectric power, elec. resistivity, press. depend. 2-66532
 Ta-W alloys, elec. resist. meas. 2-98621
 Ti, electrical resist., plastic deform. and temp. influence (Russian) 2-61438
 Ti-Al-Zr-Mo-W system, equil. diagram, struct. and props., influence of Zr, Mo and W 2-57331
 Ti₃Al, elec. resist. and thermo-EMF at high temp. (Russian) 2-66531
 TiBe₂, low-temp. specific heat, elec. cond., susceptibility 2-92934
 TiBe₂, weak itinerant antiferromag., SDW pairing soln. 2-92854
 TiNi, phys. props. temp. depend., martensitic transform. rel. to phase diagram 2-111176
 TiO₂, metallic elec. and thermal cond., magnetoresistance, O conc. and temp. depend. 2-61439
 Ti, polymorphic transition kinetics, point defect relax. processes, elec. resist. study (Russian) 2-92174
 (U_{0.06}Th_{0.94})S, spin fluctuation temp., press. depend., elec. resist. meas. 2-56827
 U_{1-x}Th_xSb, Kondo behaviour, ferromag. and antiferromag. behaviour, transport and mag. meas. 2-77032
 V dil. alloys, fusion-neutron irradi. damage rates 2-103828
 V₂Si, neutron irradi., normal-state resistivity anal. 2-56550
 V₂Si₃, thermal and elec. cond. 2-56548
 W, electrical resistivity-temperature scale, vacancy parameters 2-98622
 W, electron mirror reflection coeff., determ. impedance (Russian) 2-72587
 W, fusion-neutron irradi. damage rates 2-103828
 W, neutron irradi., recovery behaviour, impurity effects, elec. resist. study 2-77843
 W-Cu(Ag), powder metallurgy factors affecting elec. contact props. 2-116408
 Y-Hf(D) system, solid solutions, resistivity meas., isotope effects 2-66524
 Y₂Co₃, elec. resist., mag. susceptibility, and magnetisation, press. depend. 2-104590
 Y₂Co₃, mag. supercond., hybrid state, resist., magnetoresistance and AC susceptibility study 2-82571
 Y(Co_{1-x}Fe_x), Y(Fe_{1-x}Co_x), and Hf(Co_{1-x}Fe_x), mag. ordering 2-98845
 Yb_{1-x}Eu_x, mag. interactions, Mossbauer, magnetisation and resist. meas. 2-72382
 Zn, electrical resist. anisotropy meas. 2-98617
 ZrCo₂Si₂, magnetic susceptibility and electrophys. props. (Russian) 2-104575

electrical conductivity of crystalline metals and alloys continued

- Zr, $\text{Hf}_{1-x}\text{V}_x$, struct. nonstable supercond. Laves phase, electron spectrum peculiarities (*Russian*) 2-66433
 ZrNi₂Si₂, magnetic susceptibility and electrophys. props. (*Russian*) 2-104575

electrical conductivity of crystalline semiconductors and insulators

- see also carrier density; carrier lifetime; carrier mean free path; carrier mobility; carrier relaxation time; dislocation scattering; electronic conduction in crystalline semiconductor thin films; electronic conduction in insulating thin films; high field effects; hopping conduction; impurity scattering; minority carriers; negative resistance effects; photoconductivity; point defect scattering; small polaron conduction; surface scattering
 A₂-B₃ semiconducting cpds., nonstoichiometric, physicochem. props. 2-104005
 alkali halides, activated, photoconductivity, thermoluminescence and TSC 2-82404
 carrier conc. and mobility at low temps. 2-110351
 ceramic, electronic, in high temp. environment 2-77953
 charge collection scanning electron microscopy, appl. to semiconductor characterization, review 2-86526
 cobalt salicylate complex, mag. susceptibility, cond., thermal and chemical anal. 2-86639
 conference, Linz, Austria (Sept. 1981) 2-89445
 DBTTF₈(MCl₆)₃ (M=Sn, Pt, Re, Te), quasi-1D electroconductive compounds, mag. and elec. props. 2-71975
 defects, two-dimensional, appl. of Van der Pauw's method 2-115787
 diamond:Sb(N), ion implanted, defects, elec. cond., EPR study 2-66027
 diamond, synthetic, magnetoresistance 2-77097
 dielectrics, shock-compressed, high elec. cond. meas. 2-61464
 doped semiconductors, diagonal and off-diagonal disorder 2-98521
 electrode sets for MHD generator, physicochem. principles 2-73129
 electron bombardment induced conductivity and its appl., book 2-63758
 ferroelectric, elec. cond. temp. depend., carrier interaction with soft ferroelec. mode 2-110342
 ferromagnetic semiconductor, elec. cond. in quantising mag. field (*Russian*) 2-104385
 graphite, artificial, thermal and elec. props. in temp. range 500-2800K 2-66304
 graphite, artificial single crystal, magnetoresistor, higher waiting temp. 2-98671
 graphite, electronic phase transition, resistance magnetoresistance study 2-87306
 hemiporphrazine complexes, organic semicond., dark cond., o-chloranile doping effects 2-71977
 hot electrons, lowest Landau level, distrib. functions, I-V characts. and neg. differential conductance 2-61476
 II-IV-V₂ semiconductor applications in optoelectronics (*German*) 2-116219
 II-VI semiconductors, bulk and epitaxial growth, impurity role, bipolar cond. 2-116347
 III-V semiconductors, carrier piezoelec. scatt. by dislocations, anisotropy effects 2-77033
 III-V semiconductors, dislocated, elec. cond. 2-104364
 inhomogeneous semicond., direct current, effective medium theory 2-82360
 insulators, carrier mobility determ. using transient injection currents 2-82365
 Kondo lattice, resist. 2-66544
 lead phthalocyanides, AC conduction, and DC conduction 2-66527
 local resistivity meas. over small regions, capacitively-coupled time-domain reflectometry 2-53783
 many-valley semiconductor, conductivity, phonon inequib. effect in an EM heating field 2-82342
 2D-metallic systems, elec. cond. (*Russian*) 2-104351
 mixed valence semiconductors, elec. resist. 2-56574
 Mooji criterion and weak localization 2-87216
 nitride interstitial phases, thermal and elec. cond. characts. rel. to electron energy spectrum 2-71987
 PbS, superconducting, cond. under high press. 2-66702
 perylene-chloranil complex, dielec. props., hopping cond. 2-72417
 phthalocyanine complexes, organic semicond., dark cond., o-chloranile doping effects 2-71977
 piezoelectric semiconductors, electro-acoustic effect theory 2-72032
 plastics, electrically conducting, theory and appls. 2-77046
 poly(p-phenylene sulfide) hexafluoroarsenate, novel conducting polymer 2-87275
 polyacetylene:Br, amorphous film, elec. and optical props. 2-110511
 polyacetylene:Ir(H₂IrCl₆·6H₂O), dopant size effect on elec. cond. 2-87285
 polyacrylonitrile, electropolymerised film, photoemission and meta-emission spectrosc. 2-93380
 polycrystalline p-hydroxybenzaldehyde, dielectric absorption in low-ultraviolet frequency region, protons dynamical behaviour along chain of H bond (*Japanese*) 2-116108
 α-polyvinylidene fluoride, X-ray induced current transients, carrier traps 2-110338
 quartz resonators, radiation induced cond. and high temp. Q changes meas. 2-98335
 rare earth cpds., R₂-xSr_{2-x}Cu₂O_{8-x/2} (R=Sm, Eu, Gd), cryst. struct. and elec. props., O vacancies (*French*) 2-91917
 rare earth orthochromites, electrical transport 2-92616
 (rare-earth)B₂C₃, elec. plops. 2-87266
 refractory oxides, plasma deposited, elec. cond. under reactor irradi. 2-110344
 Schottky barrier diode, interfacial layer thermionic diffusion theory 2-115859
 semiconductor, charge packet drift vel., transport eqn., space charge effects 2-87254
 semiconductor, nonuniform current fluctuations in crossed elec. and quantising mag. fields (*Russian*) 2-92603
 semiconductor crystal properties, measuring apparatus (*Russian*) 2-98693
 semiconductor homogeneous slab on high-resist. substrate, spreading resistance, mixed boundary value solns. 2-115743
 semiconductor ion-implanted layer, SEM with secondary-electron collector 2-86998
 semiconductor multilayer structure, high freq. props. with quasiballistic electron motion 2-115803
 semiconductor superlattice, narrow gap, cond. in strong. mag. field 2-77098

electrical conductivity of crystalline semiconductors and insulators continued

- semiconductor with superlattice, elec. cond., electron-phonon scatt. (*Russian*) 2-72070
 semiconductors, AC conductivity, small-signal, and rel. overshoot 2-104388
 semiconductors, inhomogeneous anisotropic, current-voltage characts. 2-92629
 solid electrolyte failure, electronic cond. increase, impurity effects 2-115837
 SOS films, struct.-props. rels. associated with haze 2-91907
 TCNQ charge transfer complexes, tetramethyl benzenide-TCNQ and tetramethyl p-phenylene diamine TCNQ, elec. cond. under high press. 2-71970
 TCNQ salt, 1-methyl-3'-ethyl-2,2'-quinoxalenylium-TCNQ, mag. susceptibility, spin dynamics, elec. cond. and EPR study 2-66759
 TCNQ salt, (DEPE)(TCNQ)₂·(H₂O)₂, subtle struct. changes, explanation of elec. cond. variations 2-55962
 TCNQ salt, TTF-TCNQ, conductivity and dielec. const., phonon drag theory 2-87282
 TCNQ salts of bis(4-dimethylaminophenylimino)sulphur and struct. analogues, elec. cond. 2-61454
 TCNQ salts with N-methyl derivatives of pyridine, phys. props. 2-87308
 p-terphenyl/TCNE MIM structs., elec. cond., Poole-Frenkel coeff. 2-72073
 M-tetraphenylporphine complexes, organic semicond., dark cond., o-chloranile doping effects 2-71977
 tetraselenotetracene charge transfer salts, TSeT(PF₆), TSeT(AsF₆), struct. and semicond. elec. cond. 2-65981
 TGS, nonequilib. ferroelec. cryst., relax. currents 2-110341
 TMTSF-ReO₄, metal-insulator transition 2-71867
 (TMTSF)₂PF₆, dynamical response of SDW mode 2-61456
 TMTTF₂(MCl₄)₂ (M=Pt, Hg, Cu), quasi-1D electroconductive compounds, mag. and elec. props. 2-71975
 transition-metal cation-TCNQ-cyclam complexes, synthesis and elec. resist. 2-93466
 (3,3')TTF-Phan-TCNQ, electronic props., cond. and ESR meas. 2-92621
 β-zinc phthalocyanine, bulk trapping states, ohmic and SCL currents meas. 2-98662
 ZnSe:Li, p-type cond. 2-115925
 AgCl, non-stoichiometry and chem. diffusion coeff., electronic cond. meas. 2-56594
 AgI:Cu, electronic cond., carrier mobility, DC polarisation and charge transfer methods 2-115753
 AgTIS(Se)(Te), prep. and semicond. growth, cryst. struct., elec. props. (*French*) 2-87971
 AgTlSe₂ liq. semicond., elec. props. 2-82384
 AgTlSe₂ semicond., liq. and solid, elec. cond. thermoelec. power and thermal cond. 2-92625
 AgTlSe₂, semicond., solid and liq. states, dielec. relax. and AC cond. 2-110754
 Al-AlN-Al, ion plated thin film capacitor, dielec. and AC cond. props., annealing effects 2-61825
 Al₂O₃:Al, variable range hopping conductivity 2-66546
 α-Al₂O₃:Y, isoelec. donor 2-98642
 Ar, liquid and solid, electron dynamics meas. (*Russian*) 2-71993
 BN, electrical cond. meas., 700 to 1400°C 2-92618
 BaAs₂, elec. cond. and mag. props. 2-92907
 Ba_{1-x}Fe_xS₂, Mossbauer spectra, mag. and elec. props. 2-66962
 BaPb_{1-x}Bi_xO₃, supercond. ceramics, thermodynamic props. 2-92820
 BaPbO₃-BaBiO₃ system, Hall EMF, elec. cond., and supercond., 2.5 to 300K 2-61645
 BaTiO₃ semiconductive ceramics, positive temp. coeff. of resist. under reduced atm. 2-87270
 BaTiO₃:Al, acceptor doped, nonstoichiometry 2-77042
 BaTiO₃:U, ceramic, room temp. elec. resist. and permittivity meas. 2-57003
 BaTiO₃:Y₂O₃ (Nb₂O₅), elec. props., phase composition, valence state of cations 2-110347
 Ba_{1-x}U_xTiO₃ ceramic, U doping and sintering atmos. effects on elec. and dielec. props. 2-116107
 Bi, elec. resist., charge carrier scatt. under high hydrostatic press. 2-56588
 Bi, electrical resistivity, thermal cond. and thermopower meas., 1.5 to 50K 2-92607
 Bi thin wires, size effects, resist., magnetoresist., and thermoelec. power meas. 2-92632
 Bi whiskers, I-V curves at 4.2K (*Russian*) 2-56576
 Bi₂Sb_{0.1}, many-valley semicond., elec. cond. anisotropy under tension, HF magnetoplasma study 2-87287
 Bi_{1-x}Sb_x, resonance shock ionisation in mag. field (*Russian*) 2-56618
 Bi_{1-x}Sb_x semicond., valence band struct., elec. and thermal cond. study 2-87143
 Bi₂Sb_{1-x}Si_x, uniaxial deform., influence on elec. cond. and dielectric const. 2-109886
 Bi₂Se₃(Cd), transport props. and plasma resonance 2-98646
 Bi₂Se₃(Te₂)₃Sn, doping effect on transport and optical props. 2-92015
 Bi₂Te₃, dislocation-induced US absorpt. and elec. props. 2-92115
 Bi₂Te₃, thermoelec. props., elec. resist. and phase transitions meas. up to 9 GPa hydrostatic press. 2-87309
 Bi₂Te₃-Sb₂Te₃-GeTe-PbTe system analogs, thermo-EMF, elec. and thermal cond., thermoelec. efficiency 2-56626
 Bi₄Te₃Si₁₀ thin cryst., two-dimens. cond. and magnetocond. 2-71985
 Bi₂Te₃-Se, heat treatment influence on props. 2-72721
 Bi₂XO₂₀ (X=Ge, Si) energy levels in forbidden zone (*Russian*) 2-61930
 Cs₂Sn₃, semiconductor, electrophys. props. 2-110346
 CaAs₂, elec. cond. and mag. props. 2-92907
 CaTiO₃, acceptor doped, defect struct. at elev. temps. 2-92019
 CaTiO₃, defect struct., elec. cond. study 2-103750
 CaTiO₃, elec. cond., 800 to 1100°C, defect struct. 2-66554
 CaTiO₃ with excess CaO, elec. cond. meas. and struct. model 2-104372
 CaV₂O₆:H, Fermi glass, ESR, elec. and mag. meas. 2-72352
 CdCr₂Se₄In, Ag defect single cryst. growth, elec. and mag. characts., dopant influence 2-91842
 CdF₂:Eu, localised impurity excited states degenerate with cond. band, absorpt. cond., thermoluminesc., and ESR study 2-56473
 Cd₂Fe₂-O₄, cubic spinel system, Mossbauer spectrum, electronic props. 2-104775
 Cd₂Hg_{1-x}Se mixed cryst., Γ point band struct. parameter, elec. and thermomagnetic studies 2-76923
 Cd₂Hg_{1-x}Te crystal, size effect, Hall coeff. temp. depend. 2-115802

electrical conductivity of crystalline semiconductors and insulators continued

- p-Cd,Hg_{1-x}Te, hole conc. routine characterisation, Hall coeff. and bulk cond. meas. 2-82351
 CdO, compacts, annihilation of defects, study by elec. resist. meas. 2-116418
 CdS, chlorinated, press. quenched, AC conductance and phase angle anomalies 2-82359
 CdS, kinetic behaviour of O₂ radicals ESR and elec. meas. 2-87589
 CdS/Cu, electron irradi. prod. defects interaction with impurities, elec. and optical props. study 2-56035
 CdS(Se), elliptical polarization of acoustic shear waves 2-109912
 p-CdSiAs₃ crystals, H⁺ irradiated, elec. props. study 2-76527
 CdSiP₂, Hall study of electrically active centres (*Russian*) 2-56623
 p-CdSnAs₃/Ga, transport coeffs., temp., field, and press. depend. 2-77061
 CdTe, modified solvent evaporation cryst. growth and characterisation 2-111050
 CdTe, relaxation-case, photoconductivity 2-66589
 CdTe:Cu(Ag), acceptor levels, elec. and photoluminescence study 2-110296
 CeB₆, mixed valence cpd., anomalous props. 2-56511
 Ce_{0.75}La_{0.25}B₆, Kondo state, transport and mag. props. 2-56832
 Ce_{1-x}Mo_xS₈, mag. susceptibility and elec. cond. under high press. 2-66789
 CeSb_{1-x}Te_x, elec. and mag. props. 2-66523
 Co₀-Cu_{0.3}Cr_{0.7}Se₂, ferrimag. semicond., elec. cond. and thermoelec. coeff. meas. 2-115763
 Co₂Fe_{1-x}S, electrical resistance, time depend., α -phase transition (*German*) 2-92626
 Co_{1-x}Fe_xSi and Co_{1-x}Ni_xSi, elec. props. and thermal cond. 2-82366
 CoO, charge transport, lattice defects 2-104401
 Co₂O₄, elec. cond., crit. behavior near antiferromag. phase transition 2-98648
 CoSi, elec. props. and thermal cond. 2-82366
 CoSi-based material, figure of merit determ. 2-98679
 Cr₂O₃, adsorption of CO₂, electroconductivity kinetics 2-77036
 Cr₂WO₆, elec. transport props., Seebeck coeff. 2-71978
 CsI, elec. cond. behind shock wave front, semicond. props., liq. and solid phases 2-77065
 Cu₂As₂S₆, elastic and mag. props., temp. depend., phase transform. 2-116009
 Cu_{2-x}B^{VI}, preparation by solid-phase mass transport, elec. props. 2-111066
 CuBr-CuI system, physicochem. props. 2-111512
 Cu₂Co_{1-x}O₄, props. of spinel prep. at low temps. and normal press. 2-55945
 CuCr₂Se_{4-x}Br_x spinel, elec. cond., NMR study 2-56954
 CuFe₂O₄ ferrite, elec. cond. mechanism, phase transformation, heat treatment effects 2-71981
 Cu₂Fe_{1-x}O₄ cubic spinel system, Mossbauer spectrum, electronic props. 2-104775
 Cu₂GeSe₆, thermal cond., thermal diffusivity and elec. cond. 2-104090
 Cu(H₂PO₃)₂, elec. cond., temp. depend., effect of decomp. and NaHSO₄ additive 2-71967
 CuInSe₂ grown onto CdS by molecular beam epitaxy, resistivity control using ion gauge beam flux monitor 2-99344
 CuInSe₂, impurity states, after annealing, elec. cond. study 2-66475
 CuInTe₂, neutron irradi., elec. props. and defect levels 2-71982
 CuInTe₂:Zn(Cd), elec. props., hole mobility and conc., annealing effects 2-87279
 Cu_{1-x}Mo_xS_{8-x}Se_x, Chevrel phase cpd., elec. resist. and supercond. 2-92799
 Cu_{1-x}Mo_xS_{8-x}Te_x, Chevrel phase cpd., elec. resist. and supercond. 2-92799
 Cu₂O crystal, dark current-voltage characts. rel. to struct. defects 2-77052
 CuSe, superlattice struct. polymorphism and elec. props. (*French*) 2-66556
 Cu₂Se, mixed cond., influence of cation disordering on elec. cond. 2-104439
 Cu₂Zn_{1-x}Fe_xO₄ system, elec. resistivity and Curie transition 2-87256
 ErRh₂B₆, single cryst., ferromag. and supercond., coexistence 2-56834
 EuAs₂(P₃), elec. cond. and mag. props. 2-92907
 EuGa₂S₄, semicond., injection and thermoactivation currents, trapping 2-87278
 Eu₂Mo₂S₆, superconductivity, thermoelectric power, Fermi surface 2-82510
 EuO (Eu_{1-x}Gd_xO) (Eu_{1-x}), mag. semicond., s-d exchange interaction, current carriers effect, expt. study 2-92895
 α -FeGa₂S₄ (IT), mag., elec. and Mossbauer props. (*French*) 2-72389
 Fe₂(MoO₄)₃, ferroelastic transition, Mossbauer and elec. cond. study 2-116101
 Fe₂Mo₂O₈, cryst. growth, morphology, elec. and mag. props. 2-87960
 γ -Fe₂O₃, DC elec. cond., effect of adsorbed O₂ and water 2-115752
 Fe₂O₃, mixed valence, elec. cond. below Verwey temp. 2-71968
 Fe_{0.5}V_{0.5}O₃, cryst. growth, elec. resist., Mossbauer spectra, and mag. susceptibility 2-83014
 Fe₂V₂O₄, solid solution, IR spectra, elec. cond. and DTA study 2-87751
 Fe₂WO₆, prep. and characterisation, struct., mag., elec. and photoelectric props. 2-76390
 FeWO₄, prep., elec., mag. and structural props. 2-92682
 Ga alumina, ionic and electronic cond. meas. 2-71703
 n-Ga_{1-x}Al_xAs for high sensitivity pressure sensors, resist. variation with press. 2-95338
 n-GaAs, impurity scatt. in quantising mag. fields 2-115792
 GaAs n⁺-n⁺-n⁺ and n⁺-p⁺-n⁺ structs., near ballistic transport, intervalley scatt. and nonparabolic conduction band effects 2-92733
 GaAs, semi-insulating behaviour and thermal stability, stoichiometry effect 2-110348
 GaAs semi-insulating wafer, dislocation density and sheet resistance variations 2-109801
 GaAs whiskers, elec. cond., hydrostatic press. influence 2-77064
 GaAs:Cr, horizontal Bridgman-grown for ion implantation, elec. characts. 2-115756
 GaAs:Cr, impurity levels, elec. cond., IR spectra and photocond. study 2-56485
 GaAs:Cr, with grain boundaries, elec. props. (*Russian*) 2-71989
 GaAs:Cr structures, semi-insulating, mag. field influence of the small signal impedance (*Slovak*) 2-61485
 GaAs:Ge(Se), neutron transmutation doped, elec. props., metal-nonmetal transition 2-87284

electrical conductivity of crystalline semiconductors and insulators continued

- GaAs:In, elec. cond., Hall effect and deep levels 2-115760
 GaAs:O, deep electron traps, elec. and optical props. 2-98585
 GaAs:O, impurity levels and photocond., temp. depend. 2-115817
 GaAs:S, ion implanted, elec. props. and impurity distrib. 2-98141
 GaAs:Se, ion implanted, carrier props. and photolum. meas. (*Korean*) 2-56585
 GaAs:Se⁺, ion implanted, transient annealing using graphite strip heater, elec. cond. study 2-82348
 GaAs:Si, LEC grown semi-insulating, charact. for integrated circuit appl. 2-98654
 GaAs:Si(Be) artificial doping superlattices, MBE growth, elec. and optical props. 2-92735
 GaAs-II-III-V-VI semiconductor homogeneous solid solutions, physicochemical props., transfer effects 2-87260
 GaAsSb_{1-x}, LPE growth on InAs substrates 2-88010
 Ga_{1-x}Ca_xMnO₃, electronic cond. (*German*) 2-110356
 Ga_{1-x}Mn_xSb solid solns., carrier scatt. mechanisms 2-56571
 GaP, grain boundaries, elec. and EBIC studies 2-115252
 GaP, proton irradi., elec. cond. and electron conc. meas. 2-77053
 GaSb, reverse-biased tunnel diode, temp. coeff. of tensor sensitivity 2-87374
 GaSb:Te, Kondo effect obs. under high press. 2-61459
 GaSe, elec. props., effect of gamma irradiation (*Russian*) 2-76498
 GaSe, intercalated with Na⁺ and Ca²⁺, prep. and elec. props. 2-66549
 p-GaSe:Sn, dark current, anomalous temp. depend. 2-77063
 Ga_{1-x}Sn_xSe, solid solns., elec. cond., thermo-EMF and Hall coeff. meas. 2-87259
 GaTe:Sn, strongly compensated, localised state cond., 77 to 289K 2-77079
 Gd complex, bis(phthalocyaninato)Gd, compressed discs, elec. cond. props. 2-61463
 GdCl₃, electrical resistivity and reflectivity meas. 2-92630
 Gd₂Ru₂O₇, IR spectra and elec. cond. 2-110835
 Ge, charge carrier drag study (*Russian*) 2-71983
 p-Ge, distrib. function and negative differential cond. calcs. at heavy hole cyclotron reson. 2-115797
 Ge, exciton and electron-hole liq. luminescence, elec. cond. 2-77578
 p-Ge, impurity band conduction, static and modulated uniaxial constraint effects 2-56575
 n-Ge, impurity scatt. in quantising mag. fields 2-115792
 n-Ge, S-type current-voltage charact. in crossed heating elec. and quantising mag. fields 2-115795
 Ge:Al, hopping cond. after γ -ray neutron, and electron irradi. 2-115758
 Ge:In(Sb), laser induced enhanced solubility, elec. and Rutherford backscatt. study 2-115416
 Ge:P, ion implanted, elec. props. 2-77089
 GeSb, Au, cleaved in He, surface Frenkel defects, elec. cond. study 2-115224
 n-Ge:Sb, compensated by fast neutron irradi., activated elec. cond. 2-115762
 Ge:Sb, low-temp. cond., evidence for localisation effects 2-77057
 Ge:Sb, temp.-depend. cond. 2-110353
 GeTe solid solutions, polymorphic phase transitions kinetics, elec. cond. and Hall coeff. study 2-86851
 H₂W₁₂PO₄₀ and H₂Mo₁₂PO₄₀, elec. cond. of hydrated cpds., and mixed crystals 2-56584
 HgCdTe, physics and chemistry, workshop, Minneapolis, MN, USA (Oct. 1981) 2-89437
 HgCdTe, transport props. rel. to acceptor levels 2-92633
 Hg_{1-x}Cd_xTe, conductivity-type conversion, annealing effects 2-87272
 Hg_{1-x}Cd_xTe, elec. cond., magnetoresist. and Hall effect, temp. depend. meas. 2-77049
 p-Hg_{1-x}Cd_xTe, narrow gap low carrier conc., elec. props. 2-77047
 Hg_{1-x}Cd_xTe, zero-gap semiconductor, cond. study 2-104380
 Hg_{1-x}Cd_xTe, zero-gap semicond., cond. and Hall coeff., anomalous temp. depend. 2-115757
 Hg_{1-x}Cd_xTe:B, ion implantation, elec. cond., annealing effects, SIMS study 2-66026
 HgCr₂Se₄, mag. semicond., elec. optical and mag. studies 2-87288
 Hg_{1-x}Mn_xTe (0<x<0.075), anomalous temp. depend. of resistivity and Hall coeff. at low temps. (*Russian*) 2-98637
 HgTe, high acceptor conc., cond. processes, multiple scatt. 2-98636
 HgTe, press. induced semicond.-metal transitions, energy band struct. 2-82234
 Ho₂O₃, isothermal elec. cond. anomaly 2-92624
 In alumina, ionic and electronic cond. meas. 2-71703
 InAs:Cd,Te, donor-acceptor pair form., annealing, elec. cond. and Hall coeff. study 2-61404
 InAs-II-III-V-VI semiconductor homogeneous solid solutions, physicochemical props., transfer effects 2-87260
 In_{0.53}Ga_{0.47}As:Be, Si, ion implanted, n⁺ layers, sheet resist., electron mobility and conc. 2-66022
 In₂Ga_{1-x}As system, alloy scatt., elec. cond. and Hall coeff. meas. 2-92627
 In₂NbM₂(M=Se,Te), elec. props. 2-87289
 InO_{3-x}, disordered conductor, transition to microscopic diffusion regime and dimensional crossover 2-77211
 InP, LEC grown semi-insulating, effect of Fe content on thermal stability 2-97966
 InP:Co, deep levels, elec. and optical meas. 2-76971
 InP:Fe, semiisolating, photocond. mechanism peculiarities (*Russian*) 2-104435
 In₂/PSe₃, radiative transitions, hole diffusion length, photoelectrochemical study 2-92647
 InSb, avalanche breakdown and elec. cond. 2-92638
 InSb, dislocated, elec. cond. 2-104364
 n-InSb, metallic, resistivity below 100 mK 2-87224
 InSb, thermal acceptors influence on electrophys. props. during annealing 2-56577
 n-InSb, undoped, elec. props. nonuniformity, vol. distrib. 2-104366
 InSb:Ge(Sn)(Co), gamma-ray, electron and proton beam irradi., defect annealing, elec. props. (*Russian*) 2-103817
 InSe, intercalated with Na⁺ and Ca²⁺, prep. and elec. props. 2-66549
 InSe-anthracene intercalate, elec. props. (*Russian*) 2-77067
 In₂Se_{3-x}, polycryst. and amorphous, elec. cond., switching phenomena and struct. changes obs. 2-87349
 In₂TaM₂(M=Se,Te), elec. props. 2-87289
 KCl, X-ray irradi. dielectric props. study 2-66973
 KH₂PO₄, doped, non-ohmic behaviour 2-104386
 KNbO₃, polycryst., prep. using glass-ceramic methods 2-67279

electrical conductivity of crystalline semiconductors and insulators continued

- K₂Sn₃, semiconductor, electrophys. props. 2-110346
 La_{2-x}R_xCuO₄ (R=Pr, Nd), struct. transitions, elec. props., semicond.-metal transition 2-81949
 LaB₆, point contact spectroscopy of dynamic resistance 2-56591
 (La_{0.8}Ca_{0.2})MnO_{3-y}, elec. resist. and thermoelec. power 2-66551
 La₂Cu_{1-x}Ni_xO₄, struct. transitions, elec. props., semicond.-metal transition 2-81949
 LaFeO₃, electronic cond., Seebeck coeff. and defect struct. 2-110349
 LaIr₂O₁₁, semicond., elec. and paramag. props., Mossbauer resonance (French) 2-92614
 LaMnO₃, conductivity, magnetisation and neutron diff. in mag. transitions range 2-56850
 LaS₂, elec. cond. study 2-82363
 LaS₂, point contact spectroscopy of dynamic resistance 2-56591
 La_{1-x}Sr_xCoO₃, X=0.2 to 1.0, elec. cond., influence of prep. and comp. 2-82757
 La_{0.96}Si_{0.04}CrO₃ ceramic, sintering and dielectric props. 2-62094
 La_{1-x}Sr_xFeO₃, elec. cond., effect of CO adsorption, appl. to gas sensors 2-71979
 La₂Ti₂O₇, non-stoichiometric disorder, high temp. elec. cond. study 2-98075
 La_{0.84}Si_{0.16}MnO₃, cryst. struct. and elec. cond. 2-81748
 Li-Fe-S system, elec. cond. and electronic struct., XPS study 2-104371
 Li₂Cu₂(MoO₄)₃, electrical cond., ionic and electronic 2-72034
 LiNH₄SO₄, phase transition, dielectric const., elec. cond. 2-72435
 Li₂NaPO₄, synthesis and props. 2-111012
 LiNbO₃(Ni), γ- and X-ray irradiated, ESR, optical absorpt. and elec. cond. 2-98951
 LiNbO₃:Fe, ferroelectric, anomalous current due to electron drag, photo-voltaic effects 2-72027
 Lu₂Ru₂O₇, IR spectra and elec. cond. 2-110835
 Mg_{1-x}Mn_xFe₂O₄ ferrites, elect. resistivity and cation distrib. 2-110343
 MgO crystal, elec. breakdown at high temp. 2-77450
 MgO:Ti(Gd), single cryst., dielec. props. 2-110741
 MnAs, mag. phase transition, magnetisation, elec. resistivity, mag. field effects 2-72207
 MnAs_{1-x}P_x crystals, high spin-low spin mixture, charge carrier scatt. 2-115835
 p-Mn_{1-x}Cd_xTe crystal, elec. cond., Hall effect and photocond. meas. 2-87263
 MnNi₂O₄, struct., elec. cond. and X-ray spectra 2-65954
 MnSb, thermal and elec. props. 2-104087
 MnWO₄, elec. cond. and thermoelec. power, 300 to 1200K 2-87268
 MnZn ferrites, humidity and resistivity 2-87276
 MoS₂ samples, transport phenomena, solid-gas interaction evidence 2-56590
 Mo₂S₃, electronic props., phase transitions 2-110354
 (NH₄)P(Mo₂O₁₀)₄, elec. resist. temp. depend. meas. 2-61468
 (NH₄)SbF₆ type crystals, superior phase transition (Russian) 2-103987
 NaA zeolite, cond. during dehydration 2-71966
 Na₂Ag₂S₃, temp. depend. of elec. cond. and self-diffusion of Ag⁺ 2-76728
 NaCl, X-ray irradi. dielectric props. study 2-66973
 Na₂Mo₂O₇·2H₂O, deaquation process, dielectric const., elec. cond. meas. 2-87648
 NbC₂O₇, elec. resist., conc. and temp. depend., 25-1000°C 2-56579
 α-Nb₂O₅, nonstoichiometric anal. at elevated temp. 2-87267
 Nb₂O₅:Al(Cr), CC acceptor doped, defect struct., elec. cond. study 2-92613
 NbS₃, cryst. struct., semicond. elec. props. 2-60954
 NbS₃, nonlinear conductivity and charge density wave transitions 2-98631
 Nb₂S₃(Se₄)(Te₄), Fermi surface, band struct. and elec. cond., LCAO calc. 2-115658
 NbSe₃, cryst. struct., semicond. elec. props., X-ray diff. study 2-60954
 Nd complex, bis(phthalocyaninato)Nd, compressed discs, elec. cond. props. 2-61463
 Nd₂NiO₄-NiO, elec. props. 2-66548
 Nd₂Ru₂O₇, IR spectra and elec. cond. 2-110835
 Ni-Zn ferrite, extraordinary Hall effect and carrier scatt 2-82383
 Ni₂B₂O₃Br_{1-x}Cl_x, elec. and thermal props. near ferroelectric transition 2-66555
 NiMn₂O₄, elec. cond., cation valencies, thermoelectric power and thermal expansion 2-66559
 NiO, spin dependent charge carrier transport, 150 to 400°C 2-87269
 NiO, sulphurisation by H₂S, elec. cond. and TEM study 2-110200
 NiO-Mn₂O₃, CuO doped, NTC thermistor material, CuO impurity influence on elec. props. 2-66545
 Np₂S₃, elec. resist. four point direct voltage meas. 2-115755
 Np₂Se₃, elec. resist. four point direct voltage meas. 2-115755
 Np₂Se₄, semimetallic elec. cond., four point direct voltage meas. 2-115755
 P, black, high press. and temp. cryst. growth and elec. resist. meas. 2-92619
 PLZT ceramic, reduced, dark cond. and optical absorpt. 2-104374
 PLZT ceramic, transparent ferroelectric, dielec., optical and semicond. props., reduction effect (Russian) 2-99668
 Pb_{1-x}Ge_xSe, optical and elec. props. (Russian) 2-57048
 Pb_{1-x}Ge_xTe p-n junction diode, capacitance, press. induced phase transition 2-72055
 p-Pb_{1-x}Ge_xTe, velocity of sound quantum oscils. 2-92114
 Pb_{1-x}In_xNbO₆, elec. props., band gap energy 2-110395
 PbMO₃, (M=Ti, Zr, Hf), elec. props., band gap energy 2-110395
 Pb_{1-x}Mn_xTe, influence of In and Ga on kinetic props. 2-87261
 PbMoS₄, supercond. and electronic props. (Russian) 2-98638
 PbS, high field resistivity meas., phonon scatt. 2-104387
 PbSeNbO₆, elec. props., band gap energy 2-110395
 Pb_{0.8}Sn_{0.2}Te, amorphous-cryst. films, optical and elec. props. 2-104373
 Pb_{1-x}Sn_xTe (x=0.59 to 1), valence bonds energy separation, Hall coeff. meas. 2-72010
 Pb_{1-x}Sn_xTe, struct. instabilities, composition and carrier depend. 2-98652
 n-Pb_{1-x}Sn_xTe:Cd, elec. cond., photocond., and elec. cond. transitions 2-115759
 Pb_{1-x}Sn_xTe:Cd(Bi), narrow band gap semicond., galvanomag. and optical props., Cd solubility and diffusion (Russian) 2-92666
 Pb_{1-x}Sn_xTe:In, band struct. at high In conc., elec. cond. press. depend. study 2-82230
 Pb_{1-x}Sn_xTe:In, dielec. phase, switching effects and I-V characts. under IR illumination 2-92688

electrical conductivity of crystalline semiconductors and insulators continued

- PbTe and PbTe-SnTe solid solns., Ga doping effect on electrophys. props., doping mechanism 2-56578
 PbTe, bulk crystal, synthesis by iodide method, elec. and struct. characterisation 2-67210
 PbTe, frozen cond. study (Russian) 2-56739
 PbTe, H⁺(Ag⁺)(Sn⁺) ion-implanted, elec. props. 2-104377
 PbTe:In, thermal cond., elec. cond., Hall and Seebeck coeffs. 2-115479
 PbTe:Sn(Ge), donor and acceptor props., elec. and thermal cond. meas. 2-66480
 PbTe:Ti, doping effect on superconductivity (Russian) 2-110525
 PbWO₄ crystals, flux growth and elec. props. 2-77721
 Pb(Zr,Ti)O₃, composition piezoelectric ceramic preparation and props. 2-88030
 Pd linear chain halogen bridged cpds., synthesis, optical props., and cond. 2-93190
 Pt linear chain halogen bridged cpds., synthesis, optical props., and cond. 2-93190
 PtSb₃, narrow-gap semiconductor, elec. props. in DC and microwave fields 2-87313
 RbHSeO₄, deuterated, ferroelec. transitions, isotope effects, DTA and dielec. study 2-87707
 (Rh_{1-x}Cr_x)₂Te₄, paramag. susceptibility, elec. resist. and lattice const. meas. 2-72136
 Sb-As, solid solutions, anisotropy of resistivity (Russian) 2-77090
 Sb-GaSe struct., γ-irrad. effect on photoelectric props. 2-61516
 Sb₄₂Bi_{0.575}Te_{2.85}Se_{0.15}, solid soln., thermoelectric props., effects of Ge and Cu impurities 2-92385
 Sb₂Te₃, anisotropy in optical and elec. props. 2-56587
 Se-Te liq. and cryst. semicond., elec. transport and struct. props. 2-115746
 Si (100) inversion layer, temp. depend. cond. 2-110483
 p-Si, cond. and Hall mobility calc. for dopant densities of 10¹⁴ to 10¹⁸ cm⁻³ 2-98678
 p-Si, cond. due to direct interband transitions, temp. depend. 2-92609
 n-Si, diffusion profile of As(Sb), sheet conductance and tracer studies 2-71730
 Si, electron gas inertia, radioelectric effect 2-104415
 Si, gamma and proton radiation defects formation, dislocation effects, elec. cond. and Hall coeff. study 2-86729
 p-Si, hole-acoustic phonon transition rate angular depend. 2-110237
 Si inversion layer, conductance, logarithmic corrections, localisation and interaction effects 2-61598
 Si, inversion layers, logarithmic and power law corrections 2-72064
 Si, neutron irradi., radiation defects due to Si transmutation into P, elec. cond. study 2-115308
 Si, neutron transmutation doped, floating zone grown in H₂ and Ar, annealing behaviour (Chinese) 2-109820
 n-Si, plastically deformed, elec. cond. meas., dislocation levels effect 2-82364
 Si, polycrystalline, conduction mechanism, diffusion theory and extended state mobility model 2-92608
 Si, proton irradi., defect centre form., electrophys. props. 2-76534
 Si ribbon, H passivated struct. defects, EBIC study 2-66006
 Si ribbons, defects, elec. characts. and crystallography, EBIC and HVEM study 2-66014
 Si single crystal, pedestal grown, resistivity radial distrib. 2-104365
 Si, slip line free, large-area multiple scan annealing with line focussed electron beam, elec. study 2-71505
 Si:As, doping during Pd₂Si form. at low temp. 2-86698
 Si:As, laser beam annealed, defects and elec. props., TEM study 2-109799
 Si:B, diffusion doped, CW CO₂ laser irradi., sheet resistance depend. on power density and scanning vel. (Chinese) 2-109827
 Si:B, electron irradi., B interstitial, capacitance bridge meas. 2-56034
 Si:B, measurement of sheet resistivity of shallow diffused layers for profiling by four-point probe technique 2-98650
 Si:B, polycrystalline, on SiO₂, elec. resist., CW laser and furnace annealing effects 2-61025
 Si:B thin film, polycrystalline, elec. props., use as sensor (German) 2-87427
 Si:C, polycrystn., C influence in resistivity and grain size 2-66547
 Si:C₀, Czochralski grown, donor form. by annealing at 700°C 2-110283
 Si:Fe:B, Fe donor activity on heat treatment, elec., DLTS and EPR meas. 2-71911
 Si:H, ion implanted, metastable cond. and shallow donor conc. meas. 2-115764
 Si:In, elec. resist. and mobility, hole scatt. by impurities 2-115750
 Si:Li, neutron transmutation doped, heat treatment effects 2-115304
 Si:Ni, γ-irrad., elec. cond., photocond. and galvanomag. props. 2-115761
 Si:O, C, Czochralski grown, O related donors, 700 to 800°C, expt. study 2-56469
 Si:O, ion implanted, conductivity mode conversion, dielec. isolation technique appl. 2-61003
 Si:P, As, Sb, ion implanted, multiphase electron beam annealed, impurity profiles 2-103803
 Si:P, ion implanted, distrib. profiles, elec. props. 2-103797
 Si:P, measurement of sheet resistivity of shallow diffused layers for profiling by four-point probe technique 2-98650
 Si:P, multivalued Sasaki effect, I-V characts., current saturation 2-56605
 Si:P, radiation doped, recombinational props. and elec. cond., thermal treatment effect (Russian) 2-71995
 Si:P, shallow radiation induced defect levels, annealing, AC conductance study 2-76970
 Si:Zn,Co, epitaxial layers, doping laws and electrophysical props. 2-66025
 Si-B compounds, high elec. field effect 2-92639
 Si-CdS(Zn,Cd_{1-x}S_x) heterojunction solar cell, elec. props. 2-115875
 p-Si-CdSe junction, sputter deposited, elec. props. 2-98736
 (Si_{1-x}Fe_x²⁺)(Fe_{3-x}²⁺Fe₃³⁺)O₃(OH)₄, cronstedtite, thermally-activated charge transfer, electron hopping, Mossbauer spectra 2-66561
 SmB₆, mixed valence cpd., small energy gap, electron tunnelling and IR spectrum 2-56442
 SmB₆, mixed valence cpd., anomalous props. 2-56511
 SmB₆, point contact spectroscopy of dynamic resistance 2-56591
 Sm_{1-x}La_x(Yb_{1-x}Bi_x), valence instabilities and elec. props. 2-56595
 SmS collapsed phase, Hall effect and elec. resist., press. and temp. depend. 2-56625
 SmS, mixed valence cpd., quasi-insulating to Fermi liq. regime change under press. 2-56518

electrical conductivity of crystalline semiconductors and insulators continued
 α -Sn, n-type, electron irradi., acceptor point defects, elec. resist., thermoelec. power and Hall effect study 2-61394
 $\text{Sn}_{1-x}\text{Cr}_x\text{Te}$ degenerate mag. semiconductor, struct. transform.-induced mag. ordering 2-56852
 $\text{Sn}_2\text{Eu}_{1-2x}\text{Mo}_2\text{S}_8$, mag. field induced superconductivity 2-72100
 $\text{Sn}_2\text{Eu}_{1-2x}\text{Mo}_2\text{S}_8$, mag. field induced superconductivity 2-77224
 $\text{Sn}_2\text{Eu}_x\text{Mo}_2\text{S}_8$, lattice instability, elec. study, supercond. props. 2-103979
 SnO_2 conductance, effect of sorbed O_2 2-77037
 SnO_2 , substitutional impurities elec. activity 2-110345
 SnO_2/Sb thick films, spray deposited, elec. cond., Hall mobility and optical gap meas. 2-82415
 SrAs_3 , elec. cond. and mag. props. 2-92907
 $(\text{Sr}_{0.825}\text{La}_{0.175})_2(\text{Zr}_{0.75}\text{Fe}_{0.25-x}\text{U}_{0.25-x})\text{O}_{3-4}$ mixed perovskite oxide, elec. cond. and thermal stability meas. 2-82354
 $\text{Sr}(\text{Sr}_{1/3}\text{Nb}_{2/3})\text{O}_3$, band gap, electron mobility, Schottky disorder, elec. cond. meas. 2-61530
 SrTeO_3 , ferroelec., elec. cond., freq. and temp. depend. meas. (Russian) 2-77066
 SrTiO_3 , with excess SrO , defect struct. 2-104370
 SrTiO_3/La , elec. cond., 850 to 1050°C 2-87264
 SrTiO_3/La , quenched, highly reduced, electronic cond. 2-56583
 $\text{Sr}_{1-x}\text{TiO}_3$, elec. cond., 850 to 1050°C, comp. depend. 2-87274
 $\text{Sr}_2\text{Zr}_2\text{O}_7$, high-temp. phase transition, electroconductometric analysis 2-98262
 Ta_2O_5 , elec. cond. 2-56582
 $\text{Ta}_2\text{O}_5/\text{Al}(\text{Cr})$, acceptor doped, elec. cond., majority defect model 2-92615
 TaS_3 , cryst. struct., semicond. elec. props. 2-60954
 TaS_3 , thermoelectric power meas. 2-104400
 Tb_2Cl_3 , electrical resistivity and reflectivity meas. 2-92630
 Tb_2Si_4 , magnetic, thermal, and elec. props. 2-72177
 Te cluster superlattice in NaX zeolite, I-V characs., current peak periodicity 2-77062
 $\text{TiBe}_{0.94}\text{O}_{0.05}$, low-temp. specific heat, elec. cond., susceptibility 2-92934
 TiFe_2O_4 , cubic spinel system, Mossbauer spectrum, electronic props. 2-104775
 TiO_2 , Pt ceramics, heat treated, elec. rectification obs. due to PETi , lamellar microstruct. 2-115748
 TiO_2 , elec. resist. for $0.80 < x < 1.23$, positive and negative temp. coeffs., theoretical model 2-77056
 TiO_2 , metallic elec. and thermal cond., magnetoresistance, O conc. and temp. depend. 2-61439
 Ti_3O_5 , mixed valence, elec. cond. below Verwey temp. 2-71968
 Ti_4O_7 , mixed valence, elec. cond. below Verwey temp. 2-71968
 $\text{TiS}_{1.7}$, structural and electronic characteristics 2-115749
 TiS_2 , elec. resist., T^2 temp. depend. 2-66550
 TiS_2 , semicond., Hall coeff., elec. cond., electron-phonon scatt. 2-77041
 TiSe_2 , semimetal, elec. cond., high pressure phase transformation, Hall coeff. 2-77041
 TiTaO_7 , defect struct. at elev. temp. 2-87271
 Ti_6BiTe_6 , thermoelec. props. and cryst. struct. 2-110374
 $\text{TiInTe}_2/\text{TiEuTe}_2$, reactions, microhardness and elec. cond. 2-111167
 TiPbI_3 , TiPbI_5 , TiPbBr_5 , crystal growth, elec. and optical props. 2-87967
 $\text{TiPrSe}_2/\text{TiInSe}_2$, phase diagram, elec. props. 2-77808
 TiSbSe_2 , layer cryst., electrophys. parameters, growth conditions depend. 2-104375
 $\text{TiSbSe}_2/\text{PbSe}$, phase diagram and physicochemical and electrophysical props. determ. 2-88067
 TiSe , single crystal, photoelectrical props., influence of laser beam irradiation (Russian) 2-92680
 $\text{TiSnI}_3/\text{TiSnI}_3$, crystal growth, elec. and optical props. 2-87967
 $\text{Tm}_{1-x}\text{Eu}_x\text{Se}$, narrow gap mag. semicond., magnetization and elec. cond. 2-92969
 TmSe , point contact spectroscopy of dynamic resistance 2-56591
 TmSe , stoichiometry, press. effects, lattice parameter, resistivity 2-56203
 $\text{TmSe}_{0.89}\text{Te}_{0.11}$, mixed valence cpd., mag. and elec. props. 2-56444
 UC , density, lattice parameters and elec. resist. up to 100 kbar 2-76387
 UN , fission-damaged, phys. and mech. props. 2-113620
 $\beta\text{-U}_2\text{N}_3$, elec. and mag. props. mag. transition temp. 2-87281
 UO_2 , effects of doping with Cr_2O_3 , Ga_2O_3 , TiO_2 , La_2O_3 and Nb_2O_5 2-87262
 U_2O_9 , nonstoichiometric, heat capacity and elec. cond., 300 to 1200K 2-110006
 VC_xO_y , elec. resist., conc. and temp. depend., 25-1000°C 2-56579
 $(\text{V}_{0.99}\text{Cr}_{0.01})_2\text{O}_3$, metal-insulator transition, domain effects 2-76928
 VO_2/Nb , elec. and Seebeck effect meas. 2-66553
 V_2O_3 based alloys, transition metal double doping effects on elec. resist. and phase diagrams 2-92565
 V_2O_3 , single cryst., physical, elec. and mag. props. 2-66251
 WO_3/S , doping imperfect struct. and electron and ion transfer phenomena meas. 2-86691
 Xe , liquid and solid, electron dynamics meas. (Russian) 2-71993
 YCrO_3 , use as anodes in high-temp. O_2 conc. cell 2-77038
 $\text{Y}_2\text{Ir}_2\text{O}_7$, IR spectra and elec. cond. 2-110835
 $\text{Y}_2\text{O}_3/\text{Nd}$ laser oscillation props., point defect conc. effects 2-96954
 $\text{Y}_2\text{Ru}_2\text{O}_7$, IR spectra and elec. cond. 2-110835
 YbAlB_4 , mixed valence cpd., elec. resist., mag. susceptibility, sp. ht. 2-56517
 $(\text{ZnFe}_2\text{O}_4)_x(\text{YFe}_2\text{O}_3)_{1-x}$, hematite precipitation, kinetic study by elec. cond. (French) 2-92201
 ZnInS_4 , electron trap distrib., elec. cond. meas. 2-92520
 ZnO thin films, bias sputtered, electrical and optical props. 2-104395
 ZnO varistor, influence of SiO_2 inclusions 2-66241
 ZnO/Co nonstoichiometric single cryst., growth and elec. props. 2-77051
 ZnO/CoO , enhancement of elec. cond. by doping 2-98643
 Zn_3P_2 , AC photocond., spectral response 2-77109
 ZnS/Ag , photolum. and elec. props. study of Ag doping 2-110944
 $\text{ZnS}/\text{Mn}/\text{Cu}/\text{Cl}$, amorphous and cryst. electrolum. film, elec. cond. props. meas. 2-87429
 ZnS/Se , elec. and optical props., compositional disorder effects, photoluminescence and excitonic spectra 2-57171
 ZnSe , bulk and epitaxial growth, impurity role, bipolar cond. 2-116347
 ZnSe , carrier mobility, temp. depend., polaron effects, carrier scatt. mechanisms 2-66558
 ZnSe , mag. and elec. props., effect of disorder 2-82356
 ZnSe/Ga diffused single cryst., elec. props. and impurity profile 2-61014
 ZnSe/Ti , p-type layer, elec. cond., photocurrent decay 2-115926
 p-ZnSiAs , crystals, H^+ irradiated, elec. props. study 2-76527

electrical conductivity of crystalline semiconductors and insulators continued
 $\text{ZrC}_x\text{N}_{1-x}$, band struct., elec. cond., Fermi energy, carrier density and mobility, two-band model 2-66438
 $\text{ZrO}_2/\text{Y}_2\text{O}_3/\text{Bi}_2\text{O}_3$, Bi_2O_3 effect on elec. and mech. props. 2-67265
 $\text{ZrO}_2/\text{Y}_2\text{O}_3/\text{Nd}_2\text{O}_3$, ceramic, thermal aging rel. to struct. and electrophysical props. 2-111208
 $(\text{ZrO}_2)_{0.88}(\text{Y}_2\text{O}_3)_{0.12}$, d.c. and a.c. elec. props. 2-104376
 ZrS_3/Se_3 , elec. resistivity and thermopower 2-71980
 ZrSe_2 , elec. resist., T^2 temp. depend. 2-66550
 ZrTe_5 , electronic struct., elec. props., absence of phase transition 2-87142
electrical conductivity of electrolytic liquids
see also electrochemical analysis; electrolytic ion mobility; Wien effect
alkali metal ions conductance in compressed water at 25°C 2-81998
anthracene, and anion, soln., DMF, transfer diffusion theory, verification by elec. cond. meas. 2-115445
aqueous solution, magnetic field effects on photon transfer in hydrogen-bond systems (Ukrainian) 2-104037
aqueous solutions, conc., elec. cond. and struct. characs. 2-92245
chloride salts in methylic alcohol and in water, dil. electrolytic solns., Hall effect (French) 2-56232
fluoride melts of U, Th, Be, Li mixtures specific elect. cond. meas. 2-56235
inter-electrode gap region, electrophys. props. of liqs. determ. and influencing factors (Russian) 2-67753
iodide salts in methylic alcohol and in water, dil. electrolytic solns., Hall effect (French) 2-56232
ion mobility, in polar solvent, dielec. saturation and friction 2-71680
ionic solutions, cond. and thermodynamic props., miscibility 2-56215
lithium formate solutions, refr. index, density and elec. cond. meas. near saturation temp. 2-76719
local viscosity investig. by electrolytic conductivity 2-71692
melts, flow props. and 5-parameter eqn. calcs. 2-71682
metals, electrical resistivity, pseudopot., model 2-87217
microemulsion viscosity and elec. cond. meas. rel. to petroleum recovery 2-93828
oil-in-water microemulsions, high emulsifier content 2-93835
physico-chemical magnitudes, metrological assurance (Rumanian) 2-74381
re-entrant nematogens pre-transitional effects in elec. cond. 2-71339
solution in porous space of electrochemically active diaphragms, electroconductivity changes (Russian) 2-86916
trifluoromethanesulphonate ions, adsorpt. on platinised Pt, soln. cond. meas. 2-110158
trifluoromethanesulphonate ions, adsorpt. on platinised Pt 2-110158
water, magnetic field effects on photon transfer in hydrogen-bond systems (Ukrainian) 2-104037
 CaO-SiO_2 - CaO melt, viscosity and elec. cond. (Japanese) 2-76720
 CaO-SiO_2 - ZnO melt, viscosity and elec. cond. (Japanese) 2-76721
K halides in molten K, dil. solns., struct. and elec. resist. 2-56233
 LiNO_3 - AgNO_3 molten mixture, diffusion, elec. cond. and phenomenological coeffs. 2-66265
 $\text{LiNO}_3/\text{NH}_4\text{NO}_3$, binary melts, Chemla effect, internal mobility meas. 2-66271
 $\text{Na}_2\text{O-SiO}_2$ - CoO melt, viscosity and elec. cond. (Japanese) 2-76720
 $\text{Na}_2\text{O-SiO}_2$ - ZnO melt, viscosity and elec. cond. (Japanese) 2-76721
electrical conductivity of gases
see also space-charge-limited conduction
air, evaporation-humidified, ion context, elec. cond. meas. 2-86377
diffusion coeff., Monte Carlo calc. 2-81441
drift velocities, electrons and ions, field depend. 2-86380
Ar gas, electron transport, temp. depend. calc. near Ramsauer-Townsend min. 2-103254
 SF_6/N_2 mixture, arc discharge, thermal and elec. conductivity coeffs., theory and expt. 2-103501
Xe, electron drift vel. meas. 2-86378
electrical conductivity of liquids
see also electrical conductivity of electrolytic liquids
abietic acid, supercooled, dielec. relax., viscosity and DC cond. meas. 2-57016
alkali metals, liquid, electrical resistivity and thermoelectric power 2-61436
4-alkylphenyl 4-alkoxybenzoate mixtures, anisotropic props. rel. to mol. length 2-76282
brombenzene solution in dimethyl formamide, elec. cond. and vol. charge (Russian) 2-61534
cholesteric binary compensates mixture and elec. cond. with added pleochroic dye, dynamic scattering 2-86544
disclotic mesophase, Fredericksz transition, phys. parameters meas. 2-76286
glass melts, elec. resistivity calc. 2-56229
hydrocarbons, liquid, elec. cond. meas. in low elec. field 2-92243
isobutyric acid- H_2O binary mixtures, elect. conductivity fluctuations near crit. point, flow effect 2-110408
kerosene- Fe_2O_4 , mag. fluid, elec. cond. meas. 2-104363
liquid crystal, smectic C-phase, elec. cond. and electro-optical effects 2-56234
liquid metals, kinetic theory, generalised density expansion, resistivity 2-76277
liquid-metal- NH_3 solns., current-voltage drop charact., nonlinearity origin 2-115767
lubricant boundary layers, elec. props. 2-56653
2,6-lutidine- H_2O binary mixtures, elect. conductivity fluctuations near crit. point, flow effect 2-110408
metal, effective medium approx. 2-104338
metal, vertex corrections in effective medium approx. 2-77015
metals, liq., electrical conductivity, CPA study (Chinese) 2-110315
noble metals, electronic props., one parameter model pot. 2-61331
p-n-nonhydroxybenzoic acid, smectic C-phase, elec. cond. and electro-optical effects 2-56234
propylene carbonate, high field conduction, electrostatic generator appl. 2-98320
water, equation of state and elec. cond. in 100 GPa shock press. range 2-92143
water distilled, change in elec. cond. under influence of elec. explosion (Russian) 2-61424
 $\text{Ag}_2\text{Te-In}_2\text{Te}_3$ system, molten, elec. cond. and mag. susceptibility, temp. and comp. depend. 2-61465
 AgTiSe_2 , liq. semicond., elec. props. study 2-66576

electrical conductivity of liquids continued

- AgTlSe, semicond., liq. and solid, elec. cond. thermoelec. power and thermal cond. 2-92625
 AgTlSe₂, semicond., solid and liq. states, dielec. relax. and AC cond. 2-110754
 AgTlTe₂-Ti, liq., elec. cond., diamag. susceptibility and thermopower 2-56586
 Al, interatomic pots. and electronic props., ab initio calc. 2-56460
 Ar, liquid, electron trapping 2-110410
 Ar liquid, geminate recombination study 2-77138
 Ar, liquid and solid, electron dynamics meas. (*Russian*) 2-71993
 Ba-Sr, elec. resist. and thermopower 2-82311
 CS₂, liquid, shock loaded, elec. resist. and UV reflectivity meas. 2-71963
 CaO FeO FeS-Cu₂S melts for electrothermal metallography elec. cond. mechanism, 1000-1210>>C 2-104378
 Cd, liquid, nearly-free-electron-phonon interaction and elec. resist. temp. depend. 2-98610
 Cd-Sb, liq. alloys, elec. resist. in cpd. forming conc. range 2-115724
 Co-Ge liq. alloys, liq. struct. and elec. cond. (*Russian*) 2-91761
 CsI, elec. cond. behind shock wave front, semicond. props., liq. and solid phases 2-77065
 Ga-In, interference functions, radial atomic distrib. and elec. resist. 2-103595
 Hg thermodynamic props., density and elec. cond. in metal-nonmetal transition range 2-61170
 Hg-Cd-(Bi)-(Na)-(Pb) dilute liq. alloys, thermodynamic and elec. props., density and vol. of mixing 2-61171
 Hg-Cs(Tl), liq., anomalous electronic props., higher order correl. effects 2-104340
 Hg-Na liq., elec. and thermodynamic props., mag. susceptibility, compound form. effect 2-82314
 In, interference functions, radial atomic distrib. and elec. resist. 2-103595
 In-Se, melt, elec. cond. and thermo-EMF, temp. depend. 2-87307
 In-Te, liquid, electrical cond. meas. 2-92612
 In₂Te₃, liquid, Knight shift studies of cond. and struct. inhomogeneity 2-72362
 Kr, liquid, electron trapping 2-110410
 NH₃, equation of state and elec. cond. in 100 GPa shock press. range 2-92143
 Na-In, liq., elec. resist., and thermodynamic props., simultaneous meas. 2-82313
 Na-Sn, liq., elec. resist., and thermodynamic props., simultaneous meas. 2-82313
 Ni-Te liquid semiconductor, resistivity, thermoelectric power and band struct. 2-98641
 Rb, liquid, transport props. meas. using automated equipment 2-115722
 Sb-Cs(Na)(K), elec. and mag. props., transition to semicond. characs. 2-92709
 Sb-Tc, liquid, electrical cond. meas. 2-92612
 Se, liquid, steady-state photocond., (*French*) 2-77115
 Se-Te liq. and cryst. semicond., elec. transport and struct. props. 2-115746
 Sn-Tl-Hg, liq. alloys, viscosity and elec. resist. 2-71694
 Te, liq., elec. cond., at temps. up to 1200°C and pr. ess. up to 3 kbar 2-77048
 Tl-AgTlS₂, molten system, electronic and mag. props. 2-98647
 Tl-Se, melt, elec. cond. and thermo-EMF, temp. depend. 2-87307
 Xe, liquid, electron trapping 2-110410
 Xe, liquid and solid, electron dynamics meas. (*Russian*) 2-71993
 Zn-Sb, liq. alloys, elec. resist. in cpd. forming conc. range 2-115724

electrical conductivity of one-dimensional systems *see one-dimensional conductivity*

electrical conductivity of plasmas *see plasma transport processes*

electrical conductivity of solids

- see also electrical conductivity of amorphous metals and alloys; electrical conductivity of amorphous semiconductors and insulators; electrical conductivity of crystalline metals and alloys; electrical conductivity of crystalline semiconductors and insulators; electronic conduction in crystalline semiconductor thin films; electronic conduction in insulating thin films; electronic conduction in metallic thin films; ionic conduction in solids; recovery; superconductivity*
 activation energies from conductivity-temperature measurements 2-56581
 amorphous solids, electrical conductivity, CPA study (*Chinese*) 2-110315
 Anderson lattice, electrical cond., freq. depend. 2-56629
 Anderson localisation, percolation and 1 to 3D crossover, metal insulator transition 2-92470
 Anderson localisation, scaling eqns. from self-consistent theory 2-56538
 Anderson model, asymmetric, specific heat, elec. cond., thermopower, perturbation calc. 2-76963
 anisotropic inhomogeneous media, cond. (*Russian*) 2-92558
 bicrystals, current-voltage characteristics, saturation region, bicrystal parameters determ. 2-61562
 Bloch electrons behaviour, boundary conditions effect 2-107069
 carrier diffusion and trap controlled drift, non-equilibrium transport regime 2-61427
 CDW systems, fractional charges and freq. depend. currents 2-56557
 composites, two-component, bounds on elastic and transport props. 2-99473
 conductivity of two-dimensional inhomogeneous media with a random concentration of inclusions (*Russian*) 2-104336
 current-conducting pastes based on polymer binders and fine Ag and graphite powders, prep. and electrophys. props. 2-99384
 cytochrome c₁ anhydrous film, percolative elec. cond. obs. 2-99875
 dielectric slab with taps, non-uniform illumination conditions, volt-amp characs. (*Dutch*) 2-61506
 diffusion processes in semiinfinite electrically conducting media, contact phenomena influence 2-86921
 disordered 1-D system, finite ensemble averages of zero-temp. resist. and conductance 2-77011
 disordered 2-D system, Anderson transition, elec. conductivity, power-law localisation effect 2-61359
 disordered materials with traps, drift and diffusion, quasi-equilib. transport regime 2-61426
 disordered system, two-component, topology below and above percolation threshold 2-66517
 disordered system, two-dimens., nonmetallic current, AC field effect 2-82305
 disordered systems, localisation, transport phenomena 2-115710

electrical conductivity of solids continued

- disordered systems, two-dimens., nonlinear and nonequilibrium props., conductivity 2-77008
 drift and diffusion in materials with traps, transient current and transient time characs. anal. 2-61428
 electron-phonon system, resolvent method of evaluations of dynamic cond. 2-87214
 films, conf., Herzlia-on-Sea, Israel (Sept. 1981) 2-79279
 films, inhomogeneous, electrical conductivity, theory 2-82474
 glass-ceramic, 14 MeV neutron irradiation effects 2-85208
 granular materials, resistivity at zero temp. coeff. 2-66400
 graphite fibre reinforced epoxy ply of finite thickness, random lattice elec. cond. calc. 2-82358
 graphite intercalation compounds, acceptor-type, pressure effect on electronic props. 2-56425
 graphite intercalation compounds, C₁₂ M (M=K, Rb, C), charge distrib. among graphite layers 2-56421
 graphite intercalation compounds, electronic props., review 2-98518
 graphite-NO₂⁺X⁻ (X = PF₆⁻, SbF₆⁻) salts, transport and optical props. 2-98645
 high pressure effects on solids, symposium, Bad Honnef, Germany (Aug. 1981) 2-74162
 Hubbard model, electrical resistivity of narrow band, electron-electron scatt. contrib. 2-92554
 inhomogeneous thin films, thermoelec. props., effective medium method 2-115915
 interband disturbance relax., Boltzmann DC transport 2-92555
 intercalated with Li, elec. props. 2-66529
 intercalation compounds, conf., Trieste, Italy (July 1981) 2-74165
 intermediate valence systems, elec. resist., phonon contrib. 2-56541
 low freq. elec. cond. at low temp., umklapp scatt. 2-82308
 many-particle physics in solid state theory, book 2-68981
 metallic conductors, 2-dimens., size effects and low-temp. cond. anomalies 2-87249
 metallic disordered systems, cond., temp., mag. field, and freq. depend. 2-98608
 mixed valence cpds., electrical resistivity, impurity contribs. 2-56544
 mixed valence cpds., electrical resistivity, periodic Anderson model with off-site hybridisation 2-56545
 mixed valence cpds., electrical resistivity, valence fluctuation scatt. 2-56543
 multilayer structure morphology, surface enhanced Raman scatt. 2-110178
 naphthyl polyenes, electrical cond. process compensation effect 2-61469
 nitrides, electronic structs. rel. to electrophys. props. 2-76894
 nonlinear response of dirty conductors in an alternating electric field (*Russian*) 2-82306
 one-dimensional disordered solid, localisation and resist., symm. group appl. 2-110299
 one-dimensional lattice, localisation in presence of incommensurate pots. 2-66494
 periodic Anderson model, elec. cond., temp. depend. calc. 2-110319
 plastics, conductive, appls. as current and heat conductors 2-56546
 poly(acetylene), mol. struct. and elec. cond. 2-98609
 poly(p-phenylene), conjugated polymer, elec. cond. and optical absorpt., theory 2-71954
 poly(p-phenylene sulphide), conjugated polymer, elec. cond. and optical absorpt., theory 2-71954
 trans-polyacetylene, I, film, elect. cond. and IR absorpt. 2-71969
 polyacetylene, I, non-ohmic metallic conductivity, tunnelling 2-110335
 polyacetylene, I₂ doped, elec. cond. and mag. susceptibility props., review 2-71955
 polyacetylene, I doped, three-dimens. variable range hopping obs. 2-92620
 polyethylene, high density, carrier mobility meas. 2-71971
 polymer, C particle filled, elec. cond. as a function of C content 2-92617
 polymeric insulating material degraded under specified conditions, radiation induced conductivity 2-110397
 polymers, elec. cond., bond gaps, valence effective Hamiltonian study 2-76890
 polyvinylcarbazole, photocurrent long relax. time and carrier mobility meas. 2-72018
 PVC, C black filled, polarised IR transmittance and elec. resist. study 2-99102
 PVC electrical characs. deterioration when irradiated by Co⁶⁰ γ-rays (*Japanese*) 2-56031
 random elastic scatt., long-range correlation and localisation 2-66518
 random mean spherical model, elec. resistivity, smeared phase transition, spin-electron interactions 2-77005
 random resistor-diode networks, elec. cond. and supercond. 2-82307
 random systems, one- and two-dimens., electron localisation and elec. cond. 2-110305
 randomly disordered systems, elec. cond., CPA study for various percolation models 2-56539
 semiconductor, disordered, transport props. theory 2-115742
 sine-Gordon system, kinks, Brownian motion and diffusion const. 2-84530
 sintered material, contiguity coeff. and elec. cond. importance 2-111106
 small polaron Green's function, eqns. of motion method 2-71961
 two-dimensional Anderson localisation in presence of paramag. impurities and spin-orbit scatt. 2-66490
 two-dimensional dense electron gas, dynamic form factor, polarisability and intrinsic cond. at zero temp. 2-56537
 two-dimensional electron conductivity, Hall effect, random potentials 2-92557
 two-dimensional electron localization and Coulomb interactions 2-61387
 weakly disordered two-dimens. system., localisation and interaction effects 2-87213
 Wigner cryst., 2-D quantum, cyclotron resonance, optical conductivity, memory function technique 2-56940
 C fibres, elec. props. study 2-92559
 C film, ion implanted, resist. changes, plasma energetic particle probe appl. 2-115041
 C, neutron irradiated material, thermal and elec. cond. restoration during annealing (*Russian*) 2-66303
 C-polymer composites, elec. cond. props. 2-61462
 Cr-Cr₂O₃, black, selective solar film, DC resist. and optical const. meas., percolation obs. 2-116845
 CrB₂, based thick composite films, elec. cond. mechanism 2-72041
 Fe_{0.34}TiSe₂, cryst. struct., elec., mag., and optical props. 2-81746
 HfSe₂ intercalated with Li, elec. props. 2-66529

electrical conductivity of solids continued

- Hg-Xe system, metal-insulator transition 2-66451
 I, solid, metallic press. induced phase, elec. cond., thermoelectric power 2-92570
 $\text{Li}_2\text{Fe}_2\text{O}_4$, for ferrimagnetic pastes, prep. and props., effect of additions of glass and Bi_2O_3 2-88034
 $\text{Nb-Al}_2\text{O}_3$ cermet film, elec. cond. calc. 2-82475
 NbTi filamentary Cu superconductor, direct meas. of transverse resistivity 2-74460
 Ni-C spectrally selective films produced by reactive sputtering, structural and electrical props. 2-98490
 RuO_2 layers, resistivity and temp. coeff. of resistivity, morphology effects 2-66659
 Sn-Xe frozen mixtures, normal state cond. and supercond. props. 2-92798
 TaS₂, intercalated with Li, elec. props. 2-66529
 TiB₂, based thick composite films, elec. cond. mechanism 2-72041
 TiS₂, intercalated with Li, elec. props. 2-66529
 TiSe₂, intercalated with hydrazine, transport props. 2-98626
 UO_2 , high temp. data on Seebeck coeff., elec. cond., thermal cond., specific heat 2-115796
 VSe_2 , intercalated with Li, elec. props. 2-66529

electrical conductivity transitions

- see also metal-insulator transition
 bis(ethylenedithio)l-TTF, metal-semiconductor transition suppression, two dimensionality 2-87150
 disordered electronic system, freq. depend. cond. near Anderson transition 2-77135
 II-IV-V₂ semiconductor applications in optoelectronics (German) 2-116219
 Kondo lattice, elec. cond. study 2-66543
 lead phthalocyanine, thin film, one-dimensional elec. cond. and dynamic switching obs. 2-72086
 mixed conductors, semicond.-metal transition, superionic transition, phenomenological model 2-61529
 organocupper thin-film structures exhibiting threshold switching with short term memory 2-56725
 polyacetylene, semicond. and metallic, electronic props. 2-82327
 polyacetylene derivatives, thermoelec. power studies 2-98681
 polyacetylene films, doping inhomogeneity, Castaing microprobe anal. 2-81810
 semiconductor model, current layers and filaments, impact ionisation induced instability 2-115766
 semiconductor recombination model, bistability and nonequilib. phase transitions, with impact ionisation of donors 2-61528
 TCNQ salt, $(\text{DEPE}(\text{TCNQ})_2)_2(\text{H}_2\text{O})_2$, subtle struct. changes, explanation of elec. cond. variations 2-55962
 TCNQ salt, (MTPP)₂(MTPA)₂(TCNQ)₂, evidence for strong electron-electron correlations, thermoelec. power meas. 2-87238
 TCNQ salt, Cu TCNQ, Raman study of electrical switching 2-87791
 TCNQ salt, Cu-TCNQ semicond. films, AES, XPS, and IR refl. study 2-93302
 TCNQ salt, TSeF-TCNQ, phase transitions and acceptor-stack doping 2-77134
 TCNQ salts, Ag-TCNQF₄ and Cu-TCNQF₄, current-controlled electrically switched memory state 2-66599
 TTF-TCNQ thin film, one-dimensional elec. cond. and dynamic switching obs. 2-72086
 Ag electroformed discontinuous film, pot. distrib. and switching phenomena 2-61619
 Ag-organic radical-ion salts, reversible field induced phase transition 2-66597
 Ag-Se-Se-Au(Cr)(Ag)(Ag₂Se) thin film sandwich, polarised memory switching obs. 2-104468
 Al-Al₂O₃-graphite composite system, threshold switching characts. correl. with fracture path 2-105331
 Al-Te contacts, needle struct., current-voltage characts. after different types of aging (French) 2-61566
 AlSb-GaSb-InAs, multiheterostructs., two dimens. quantum states and semimetal-semicond. transition, theoretical study 2-61575
 Au-SrTiO₃-SiO₂-Si struct., electron beam deposited, nonvolatile memory props. 2-72068
 Bi_{1-x}Sb_x films, semimetal-semicond. transition, thickness depend., resist. and magnetoresist. meas. (Russian) 2-82411
 C-CdS-metal, switching struct., with potential barrier, elec. characts. 2-87407
 Cd-Sb amorphous film, memory switching obs. 2-66596
 Cd₂Hg_{1-x}Se, US attenuation and vel. meas. near zero-gap state 2-92118
 CdIn₂S₄, semicond., neg. resist., resistive state transitions 2-92637
 CdSe_{0.9}Se_{0.1}, multikilovolt picosecond optoelectronic switching 2-56651
 Cu-TCNQ films, reversible field induced phase transition 2-66597
 Fe₂V₂O₄, semicond.-metal transition, IR spectra, elec. cond. and DTA study 2-87751
 HfTe₂, thermoelec. power and elec. resist., 7 to 380K 2-92571
 Hg, expanded fluid, thermoelec. power, transition from liq. semicond. to plasma state 2-82387
 Hg-Bi(Cd), dil., expanded fluid, thermoelec. power, transition from liq. semicond. to plasma state 2-82387
 Hg-Xe system, metal-insulator transition 2-66451
 $\text{Hg}_{0.83}\text{Cd}_{0.16}\text{Te}$, Hall coeff. phase transition under hydrostatic press. 2-92674
 HgTe(Se), elec. props. at very high press. 2-82412
 InAs-GaSb heterojunction, self-consistent calcs. 2-110461
 In₂Se₃, polycryst. and amorphous, elec. cond., switching phenomena and struct. changes obs. 2-87349
 $(\text{La}_{0.8}\text{Ca}_{0.2})\text{MnO}_{3-x}$, elec. resist. and thermoelec. power 2-66551
 LiAl, Hall mobility of positive carrier 2-110330
 MnAs_{1-x}P_x crystals, high spin-low spin mixture, charge carrier scatt. 2-115833
 Nb-Cu layered system, conductivity transition 2-110253
 NbO₂ films, RF sputtered, crystallisation, DTA and elec. cond., semicond.-metal transition 2-104441
 NbSe₃, CDW cond. onset, switching and hysteresis 2-110407
 $(\text{Ni}_{0.4}\text{Zn}_{0.6})\text{Fe}_2\text{O}_4$ ferrite, switching and surface line emission spectrum obs. under pulse voltage 2-115831
 n-Pb_{1-x}Sn_xTe:In, elec. cond., photocond., and elec. cond. transitions 2-115759
 Pb_{1-x}Sn_xTe:In, dielec. phase, switching effects and I-V characts. under IR illumination 2-92688

electrical conductivity transitions continued

- Pb_{1-x}Sn_xTe:In, semicond.-metal transitions, IR illumination induced dynamics 2-72036
 Sb-Cs(Na)(K), elec. and mag. props., transition to semicond. characts. 2-92709
 Si CVD film, polycryst., threshold and memory switching 2-115830
 a-Si:H RF sputtered films, elec. props. rel. to threshold and memory switching appls. 2-87347
 Si:P, metal-insulator transition stress tuning at mK temperatures 2-71868
 SmS(Se), intermediate valence materials, press. expts. 2-56502
 SrVO₃-EuVO₃, perovskite struct., prep. and props. of solid solns. 2-72646
 VO₂ thick films, screen printing prep. and elec. cond. thermal switching props. 2-111104
 V₂O₅ layers deposited from gels, threshold switching obs. 2-87350
 V₂O₅-P₂O₅ glass alloys, forming in electrochemical cells, threshold switching 2-67276
 ZnO films, reactive magnetron sputtering prep., transition from insulating to highly cond. state 2-83022
 ZrTe₂, thermoelec. power and elec. resist., 7 to 380K 2-92571
- ## electrical contacts
- see also contact potential; contact resistance; ohmic contacts; point contacts
 alkali halide colour centre lasers, electrical pumping 2-102801
 breaking arc waveforms anal. for contacts in air 2-86488
 III-V semicond. epitaxial growth, appl. to compound semiconductor device technology 2-77741
 metal-metal interface interactions, similarity to metal-semiconductor interfaces 2-115578
 noise meas., 10 Hz-10 kHz (Japanese) 2-58840
 polyisobutylene film, sputter yield measurements on simulated adventitious carbonaceous contamination 2-77678
 power device struct., chemical Ni plating, nondestructive control (Russian) 2-83049
 semiconductor, high resistivity, injection props. of semicond.-semicond. contacts 2-61578
 Ag-Zn, internally oxidised, containing various alloying additions, elec. contact charact. 2-83248
 Al/Cu bolted joints electrical performance 2-99590
 Al-Al interface, contact resistance meas. 2-115867
 Al-Cu layer, evaporated, interface elec. resist. and Auger profiling 2-77160
 Al-Si, reaction retardation by Ti intermediate layer 2-71737
 Al-Te contacts, needle struct., current-voltage characts. after different types of aging (French) 2-61566
 AuGeNi-InP contact, electron microscopy investig. 2-66379
 Au(Ni) electrolytic contacts for $\text{pAl}_0.7\text{Ga}_{0.3}\text{As-pGaAs-nGaAs}$ concentrator solar cell 2-93893
 Ni contact coating on Si power device struct., burn-in process control by electroinductive method (Russian) 2-83050
 NiSi, Al contact using thin W barrier 2-87393
 Si solar cells with screen-printed Ag contacts, environmental testing 2-116815
 Si/Pt-Si, contact reaction, Auger electron spectroscopy study 2-72058
 V₂O₅-P₂O₅/Au(Al) (graphite) struct., contact limited conduction, work function effects 2-72056
- ## electrical double layers
- see electrochemistry; liquid theory
- ## electrical engineering
- see also high-voltage engineering
 controlled thermonuclear fusion electrical engineering problems 2-64638
- ## electrical engineering applications of computing
- see electrical engineering computing
- ## electrical engineering computing
- see also computerised control; computerised instrumentation; electric machine analysis computing; power system CAD
 compressed gases, spatial and temporal resolved predischage development, CAA 2-103278
 eddy current computation using computer code EDDYNET 2-55030
 eddy currents in parallel conducting bars with a.c. 2-85861
 electronic tube development for streak camera system 2-74535
 electrostatic modelling of electron-beam-generator/vacuum-diode interface 2-95389
 lead frame bond failure mode in film integrated circuits, discriminants anal. of AE data 2-99621
 magnetostatic problems, saturable media iterative algorithms 2-55016
 magnetostatics, anisotropic nonlinear 3D problems, two scalar pot. finite element anal. 2-55009
 particle beams, space charge forces, finite element anal., PE2D and TOSCA computer programs 2-55055
 STANSOL program for solenoid mechanical and struct. props. anal. 2-59525
- ## electrical fault location
- see fault location
- ## electrical faults
- see also accidents; discharges (electric); electric distortion; fault currents; fault location; flashover; insulation; losses; overvoltage; protection; testing; transients
 SF₆ insulated substations enclosure burn through probability estimation 2-97807
- ## electrical forming
- see electroforming
- ## electrical insulation
- see insulation
- ## electrical noise
- see noise
- ## electrical power systems
- see power systems
- ## electrical properties of substances
- see also dielectric properties of substances; discharges (electric); electrical conductivity; flexoelectricity; thermoelectricity
 oxides, physical and chemical props. handbook 2-94927
- ## electrical resistance measurement
- see electric resistance measurement
- ## electrical transport processes
- see electrical conductivity
- ## electricity
- see also atmospheric electricity; electric charge; electric current; electrical properties of substances; electromagnetism; terrestrial electricity
 nuclear power, long term strategy, alternatives to solar power satellites 2-107949
 shell, three-layer spherical, stability (Ukrainian) 2-114695
- ## electricity supply industry
- 11 MW fuel cell power plant for electric utility dispersed generation appls. 2-73108
 biomass for electric utility applications 2-73134

electricity supply industry continued

- coal liquefaction processes, research and development by EPRI, progress report 2-93859
- electric power backup for solar heating systems, marginal costs to electric utilities 2-73077
- financial incentives in USA for energy production stimulation, historical perspective 2-73075
- generators for wind power 2-93863
- geothermal power future potential and state-of-the-art 2-78183
- industrialised nations, electricity demand, rel. to gross domestic product 2-111532
- interface with solar power systems, citizen pressure groups' attitudes in the USA 2-73082
- interface with solar power systems, comparison with solar power/natural gas systems 2-73073
- interface with solar power systems, legal issues in the USA 2-73081
- interface with solar power systems, technical issues 2-73072
- interface with solar power systems, technical issues 2-73074
- interface with wind energy conversion systems 2-73060
- residential solar power-systems, adoption in USA incentives offered by electricity supply industry 2-73080
- solar cells for electricity generation, need for improved efficiency 2-78206
- solar energy conversion through biomass schemes, present day feasibility 2-78185
- solar heating and cooling in USA, ten years' experience and future prospects for reducing utility costs and consumer bills 2-78244
- solar power commercialisation, regulation in USA 2-73079
- solar power commercialisation in USA, three policy issues 2-73076
- solar power generation development, financial inducements for electric utilities in USA 2-73078
- solar space heating options impact on electric power systems demand and supply capabilities 2-99767
- superconducting energy storage appl. 2-67895
- trans-Tisza region electrical/thermal energy economy (Hungarian) 2-93857
- US energy policy plan, highlights 2-99746
- H₂PO₄ fuel cell power plants, effects on performance and economics of alternative fuels 2-62473

electro-optical devices

- see also electrochromic devices; liquid crystal devices; optical modulation*
- A/D, convertor, electrooptic guided wave design, 4-bit 828 megasample/sec. 2-60260
- A/D convertor, 4-bit 275-MS/s 2-60231
- Bragg diffraction switches, electrooptic, in low cross-talk integrated-optics switching matrix 2-91093
- CdTe light pipe modulator, for broadband space communications at 10 μ m 2-81069
- conference, lasers and electro-optics, Washington, DC, USA (June 1981) 2-58529
- double-cavity electrooptic Fabry-Perot tunable filter 2-109016
- electrically controlled chechelet grating for CO₂ laser wavelength selection and modulation 2-65268
- electrowetting effect, continuous, appl. to displays and other electro-optical devices 2-76777
- ellipsometry, retardation, modulation, high-speed, using electrooptic modulator 2-112955
- EM radiation parameters of dielectrics, instrum. for meas. (Polish) 2-107409
- fast dispersive beam deflectors and modulators, electrooptic tuning 2-86083
- fog chamber characts., used for electrooptical device performance meas. 2-96834
- granulometer for measurements of flowing particles 2-91564
- guided-wave electrooptic modulator, design and fabrication 2-109031
- holographic electrooptical processing method for surface displacement determ. 2-85910
- HP HEDS-5000 electro-optical tachometer for microprocessor systems (German) 2-69155
- integrated and guided-wave optics, conf., Pacific Grove, CA, USA (Jan. 1982) 2-58550
- integrated optics modulators, optimal electrode design 2-55319
- integrated optics spectrum analyzer, weighted discrete Fourier transform 2-55356
- integrated-optical single-sideband modulator and phase shifter 2-70707
- laser research, electrooptic materials appl. 2-60227
- lensless integrated optics spectrum analyzer 2-55357
- light-pipe electrooptic gigahertz modulator for CO₂ laser wavelength 2-81066
- Mach-Zehnder waveguide interferometer, picosecond sampling 2-60238
- modulator, cryst., laser mode-locking appls. (Chinese) 2-91040
- modulators, electrostatic field calc. 2-86091
- multiplex communication via electro-optic phase modulation of white light 2-86128
- picosecond electro-optic sampling system 2-95407
- Pockels cell shutters used for pulse slicing 2-55312
- Pockels device, appl. to elec. field meas. in corona discharge 2-115071
- PRIZ image converter and its use in optical data processing systems 2-60230
- resource evaluation, electro-optical instrumentation conf. (Washington, DC, April 1981) 2-89435
- serrodyne optical frequency translator performance, phase modulator driven by sawtooth waveform 2-60232
- space-time modulator of light, electron-beam, with equilb.-type recording 2-81068
- spatial filtering, real-time, utilising the piezoelectric-elasto-optic effect 2-86090
- spatial light modulator, linear, total internal refl., optical information processing appls. 2-75669
- spectral filters, electro-optically tuned, review 2-55309
- switch, 2x2 transverse-type, appls. as wavelength meter and demultiplexer 2-55351
- thin film semiconductor waveguides, electrooptic modulation by stationary phase gratings 2-109045
- tunable electro-optic waveguide TE(-)TM converter/wavelength filter 2-75722
- tunable filter 2-55308
- tunable filters for IR wavelengths 2-102910
- two-dimensional electro-optical X-ray detectors survey 2-85474

electro-optical devices continued

- two-path electrooptical modulator with a total-internal-refl. prism 2-114417
 - waveguide electrooptic modulators, review 2-109032
 - Al_{0.5}Ga_{0.5}As multi-electrode rib waveguides, electrooptic polarisation modulation 2-65345
 - Al_{0.5}Ga_{0.5}As multi-electrode rib waveguides, electrooptic polarisation modulation 2-81065
 - Bi₁₂SiO₂₀, optical fibre sensor, electric field intensity and voltage meas. 2-65369
 - CO₂ TEA laser, variable short pulses 2-80996
 - InP electro-optic directional coupler switch, homojunction struct. 2-65405
 - InP electro-optic directional coupler switch 2-75683
 - K(D,H_{1-x})PO₄ CC crystals, solution growth, for electrooptic devices 2-110411
 - KD₂PO₄ fast-response deflectors for laser pulse time parameter control in 10⁻¹¹-10⁻⁸ sec. range 2-97164
 - KH₂PO₄ fast-response deflectors for laser pulse time parameter control in 10⁻¹¹-10⁻⁸ sec. range 2-97164
 - KH₂PO₄ longitudinal electrooptic modulation, intensity spectrum of modulated light 2-86092
 - LiNbO₃ deflector, low-voltage 2-60223
 - LiNbO₃, electro-optic modulator, optical bistability of hybrid dispersive optical system 2-60228
 - LiNbO₃ fast-response deflectors for laser pulse time parameter control in 10⁻¹¹-10⁻⁸ sec. range 2-97164
 - LiNbO₃, interference modulator based on multimode channel waveguide 2-70667
 - LiNbO₃ oblique-cut microchannel spatial light modulator 2-97166
 - LiNbO₃ planar electro-optic beam splitter with a sawtooth electrode 2-114409
 - LiNbO₃ waveguide modulator, out-diffused, prism-coupled, fabrication and performance for long-term use at 632.8 nm 2-75670
 - LiNbO₃ waveguide modulators, space-charge effects 2-75684
 - LiNbO₃:Ti, strip waveguides fabricated by combined metal diffusion and ion implantation 2-75731
 - LiNbO₃:Ti coupled channel waveguide electro-optic modulator 2-86093
 - LiNbO₃:Ti diffused waveguide integrated optical electrooptic modulator electrode anal. 2-55318
 - LiNbO₃:Ti thin-film Bragg electrooptic modulator 2-65344
 - LiNbO₃:Ti variable-period thin-film Bragg modulator 2-97168
 - NH₄H₂PO₄ X-cut electrooptic modulator, low operating voltage (Korean) 2-55321
 - Nd³⁺:YAG CW laser radiation, polarisation switching using electrooptic phase modulator 2-114338
 - PLZT ceramic electroluminesc. material, image storage tube appls. (Czech) 2-82826
 - PLZT electrooptic ceramic one-dimens. controlled transparency utilizing transverse effect, crosstalk 2-55323
 - PLZT ferroelec. ceramic, laser beam amplification by dynamic holography 2-108835
 - PLZT slim loop and linear ceramics, devices based on longitudinal electro-optic effects 2-55302
 - PLZT, transparent ferroelec. ceramic, surface effects for information storage (Russian) 2-104846
 - Pb(Zr, Ti)O₃ disc sensors, thermal response improvement 2-69158
 - ZnS:Mn electroluminesc. material, image storage tube appls. (Czech) 2-82826
- electro-optical effects**
- see also electroabsorption; electrochromism; electroluminescence; electroreflectance; Kerr electro-optical effect; photorefractive effect; Pockels effect; Stark effect*
 - alkynes, interpretation and prediction of IR intensities using model based on electrooptical parameters 2-80613
 - azo dyes for guest-host. liq. cryst. cell. dichroic ratio meas. 2-61868
 - cholesteric binary compensate mixture with added pleochroic dye, dynamic scattering 2-86544
 - cholesteryl chloride-laurate compensated mixture, guest-host interaction 2-86543
 - cholesteryl palargonate, homeotropic-planar transition, electrooptical characts. 2-103993
 - crystal electro-optic coefficient meas. method, interference signal detect. between transmitted and refl. beams 2-84690
 - cubic crystals, optical anisotropy induced by spatial dispersion 2-77485
 - dichroism, natural and circular symmetry restrictions for all point groups 2-110809
 - diffusive nonlinearity, optical bistability in optical phase conjugation, theory 2-86057
 - L-DOBACPC series, ferroelec. smectic liq. cryst., appl., elec. and optical props. 2-77455
 - D-DOBAMBC series, ferroelec. smectic liq. cryst., appl., elec. and optical props. 2-77455
 - ethanol(-d₃), IR intensities, electrooptical parameters 2-59795
 - ferroelec., electro-optic and strain-optic effects 2-93159
 - ferroelectric crystals, electrooptic activity of crystals with H bonds, macroscopic theory (Russian) 2-61876
 - ferroelectric liq. crystals, electrooptical props. 2-57061
 - ferroelectric materials and appls., conference, Kyoto, Japan (May 1981) 2-79273
 - ferroelectrics, photoinduced refractive index variations, theory (Russian) 2-61865
 - film waveguide sandwiched by electrooptic and magneto-optic media, non-reciprocal phenomena 2-55359
 - flexible molecules, DC elec. field induced SHG 2-110816
 - laser research, electrooptical materials appl. 2-60227
 - laser-II, conf. proceedings held at Kanpur, India, March 1979 2-58530
 - light deflection phenomenon 2-82825
 - light propagation in electro-optic crystals, coupled-mode analysis 2-55062
 - liquid cryst., mol. phys. rel. to device appls. 2-76302
 - liquid crystal, smectic C-phase, elec. cond. and electro-optical effects 2-56234
 - liquid crystal twist cells, electro-optical performance, phys. props., correl. with mol. struct. 2-65856
 - MBBA, optical props. of Williams domain 2-86542
 - methanol(-d₃), IR intensities, electrooptical parameters 2-59795
 - metrology with Bi₁₂SiO₂₀ crystals, real-time 2-85914
 - nematic liq. cryst., wall defects and dynamic light scatt. relax., expt. study 2-115138
 - nematic liquid crystal compositions, optico-physical props., temp.-freq. depend. of dielec. anisotropy 2-109669

electro-optical effects continued

- nematic liquid crystal films, acousto-electro-optical effects, thickness dependence meas. 2-116148
nematic liquid crystals, twisted cell displays, viscous props., temp. depend. electro-optical performance 2-65857
m-nitroaniline crystal, polarised IR and Raman spectroscopic study, lattice vibrs. 2-87775
p-n-nonylhydroxybenzoic acid, smectic C-phase, elec. cond. and electro-optical effects 2-56234
perovskite ferroelectrics, γ -ray effects on dielectric and electro-optical props. (Russian) 2-61809
photorefractive materials, phase conjugation, real time optical processing and dynamic holography appl. 2-65312
PLZT ceramic, domain switching, space charge field effects 2-99074
poly(α -L-glutamic acid) in N,N-dimethylformamide, electrooptical props. and conformation, electric birefringence study 2-80856
poly(γ -benzyl-L-glutamate), orientation behaviour in electric field 2-71335
polydisperse equivalent spheres, elec. birefr. evaluation of particle size distrib. 2-70507
polyion diffusion in low ionic strength buffers, electrolyte polarisation effects obs. 2-66264
polymer liquid crystal, thermotropic, elec. field induced cooperative struct. transition, electro-optical behaviour 2-76677
polymers DC elec. field induced SHG 2-110816
quartz, mechanical properties, effect of α - β transition, nonlinear optical effects 2-99046
semiconductor, EM wave amplification in quantising elec. field 2-77489
smectic C liq. cryst., ferroelec., fast electro-optic switching, stroboscopic microscopy obs. 2-93154
smectic liquid cryst. imaging device based on photochem. reaction 2-99692
smectic liquid crystals, chiral, ferroelec. props. and appls. 2-82789
sodium octylbenzene sulphonate-pentanol-decane-water, microemulsion struct., mag. and elec. birefr. meas. 2-73018
AgGaS₂, piezooptical, electrooptical and birefringence const., meas. in visible region (Russian) 2-77490
BaO-SrO-Na₂O-Nb₂O₅ system, cryst. growth and electromech. characts. 2-87693
Ba(Sr)(Ca)(Zn_{1/3}Nb_{2/3})O₃-PbTiO₃-PbZrO₃ elec. and optical props. 2-82795
Ba(Sr)(M_{1/3}Nb_{2/3})O₃-PbZrO₃-PbTiO₃ (M = Pb, Ca, Sr) elec. and optical props. 2-82794
Ba₂(Sr_{1-x}Nb_{1+x})O₃-PbZrO₃-PbTiO₃ elec. and optical props. 2-82796
BaTiO₃, electro-optic cryst., photorefractive effect, holographic study (German) 2-57057
BaTiO₃, optical props. in vibronic model 2-110815
Bi₂GeO₁₀, elec. field distrib., space charge density, tranverse electrooptic effect 2-104852
Bi₂SiO₅ crystals, optical data anisotropic recording processes 2-85908
Bi₂SiO₅, elliptical birefringence obs. and interpretation 2-67018
CdSe, optical absorpt. saturation near fundamental edge 2-114387
CdSe thin film, electrooptical modulation parameters (Russian) 2-61874
Ge, oxidation at high press. 2-116569
HF, elastic field effect, IR multiple photon absorpt. 2-85759
In-Sb, free carrier Faraday effect at subMM freq., static elec. field influence 2-99094
KD₂H₂(1-x)PO₄ crystal half-wave voltage determ. nomogram 2-57062
K(D_{1-x}H_{1+x})PO₄ CC crystals, solution growth, for electrooptic devices 2-111041
KI:OH⁻, electrochromism and paraelectric alignment 2-104848
KTa_{1-x}Nb_xO₃, electro-optic cryst., photorefractive effect, holographic study (German) 2-57057
 α -LiIO₃, quasi-elastic light scatt. induced by ionic transportation, expt. study (Chinese) 2-93155
LiNbO₃ bulk crystals, phase shifting at 94 GHz 2-99090
LiNbO₃, photorefractive and photogalvanic effect under high intensities 2-110796
LiNbO₃:Fe, electro-optic cryst., photorefractive effect, holographic study (German) 2-57057
LiNbO₃:Fe electrooptic crystal refractive-index grating, investig. by optical microscopy 2-102916
LiTaO₃ bulk crystals, phase shifting at 94 GHz 2-99090
LiTaO₃ crystals with linear electrooptical effect, intensified refl. of reversed wavefront waves 2-108967
LiTaO₃, electro-optic cryst., photorefractive effect, holographic study (German) 2-57057
LiTaO₃:Fe electrooptic crystal refractive-index grating, investig. by optical microscopy 2-102916
Na₂B₄O₇(OH)₂·3H₂O, tincalconite, electrostrictive and electrooptical effects, Michelson interferometer meas. (German) 2-93117
NaBi(MoO₄)₂, electrography studies 2-67026
PLZT 7/65/35, ceramic, domain switching, one-dimens. polar responses 2-67010
PLZT ceramic, holographic grating form by electro-optic effect 2-108826
PLZT, transparent ferroelec. ceramic, surface effects for information storage (Russian) 2-104846
PbMg_{0.33}Nb_{0.66}O₃, ferroelec., electro-optic and strain-optic effects 2-93159
PbMg_{1/3}Nb_{2/3}O₃, reflectivity, dielectric const., electrooptic effect., vacuum UV reflection spectra obs. 2-61924
PbMoO₄, electrography studies 2-67026
PbTiO₃, reflectivity, dielectric const., electrooptic effect., vacuum UV reflection spectra obs. 2-61924
Sr(Ca_{1/3}Nb_{2/3})O₃-PbZrO₃-PbTiO₃ elec. and optical props. 2-82794
Sr_{1-x}Nb_{1+x}O₃-PbZrO₃-PbTiO₃ elec. and optical props. 2-82796
Te, optical activity, current-induced, temp. depend. 2-77483
TiO₂, thermal-gradient induced electro-optical deflection obs. 2-99089
ZnS, photoluminesc. quenching by DC elec. field 2-110818

electroabsorption

- amorphous, electroabsorption spectra, effective masses 2-77491
diacetylene, polymerised Langmuir film, electroabsorption spectra, effective masses 2-77491
film, elec. field induced texture and phase transformation, light absorpt. study 2-55833
semiconductor, nonlinear interband absorpt. prob. calc. 2-82827
CdGa₂S₄, electroabsorption, luminescence studies 2-61875
CdS-ZnS, electroabsorption spectra, effective masses 2-77491
CdTe:Cl, electroabsorption spectra, effective masses 2-77491

electroabsorption continued

- GaAs CCD 2-114416
GaP, exciton electroabsorption spectrum, Schrodinger eqn. calc. 2-116154
GaSe, amorphous film, electroabsorpt. meas. 2-72456
GaSe_{1-x}Te_xSn single cryst., exciton and impurity electroabsorpt. 2-87741
n-Ge, free-carrier electroabsorpt. in intervalley scatt. 2-116153
Si amorphous solar cell, built-in pot., electroabsorption determination 2-111549
- electroacoustic effects** see *acoustoelectric effects*
electroacoustic generators see *acoustic generators*
electrocaloric effects see *pyroelectricity*
electrocardiogram see *electrocardiography*
- electrocardiography**
see also *bioelectric potentials; biomagnetism; cardiology*
12-lead signals, anal. 2-83687
ambulatory ECG, long-term anal. of PVD coupling interval variation 2-100143
ambulatory ECG Holter monitoring instruments, ECG distortions 2-57912
ambulatory ECG processing by general-purpose minicomputer 2-117101
ambulatory ECG systems, freq. response and ST segment reproducibility evaluation methods 2-83688
ambulatory ECG tape analysis, Concordia high speed system, design for noise immunity 2-94231
ambulatory monitoring, algorithm to analyse ST segment changes 2-88677
ambulatory patients, microprocessor based portable equipment for ECG on line recording and analysis 2-88675
ambulatory recordings, data reduction 2-88674
apnea monitor, neonatal, multi-microcomputer based 2-62820
arrhythmia, verification of semiautomated detector performance in ambulatory ECG tape anal., display technique 2-100146
arrhythmia monitor, high performance microprocessor based 2-94240
arrhythmia monitoring using Hewlett-Packard 78520A computer (German) 2-88670
artifacts in EEG recording, elimination by balanced non-cephalic reference electrode method 2-111803
assembly for patient monitoring 2-105847
body surface isopotential maps, extraction of diagnostic information by spatial filtering (Japanese) 2-57918
body surface maps, signal anal. and display with a microcomputer mapping system 2-100145
body surface potentials, cardiac electromap semi-automatic processing rel. to LV time intervals 2-88682
cardiotachometer, data processing and storing, field-portable, microprocessor-controlled 2-111816
component analysis using a computer 2-117143
computer applications, conf., Florence, Italy (Sep. 81) 2-79282
computer assisted evaluation, results and perspective 2-83681
computer processing in real-time of multiple-lead exercise ECGs 2-94246
computer system for electrophysiologic studies of cardiac rhythm in humans 2-88680
computerised ECG, diagnostic interpretation and arrhythmia monitoring 2-68189
computerised ECG analysis, digital filtering and regression algorithm for pre-processing 2-94238
computerised processing of electrocardiosignals (Russian) 2-62808
computerised tomographic imaging, ECG triggered, with the Somatom 2-100096
contact impedance monitoring circuit 2-78465
contourgraphy for on-line signal monitoring, CRT display, ECG ambulatory monitoring 2-68188
coronary care unit ECG monitoring 2-78485
cybernetics rel. to ECG problems (Russian) 2-62807
data acquisition reduction and analysis, microcomputer based 2-117100
diagnosis using digital differentiation 2-111810
digital processing of bio-signals, basis, filter design (Japanese) 2-111805
echocardiograms, ECG synchronised 2D, on-line digital storage and image treatment 2-94141
electrocardiographimeter as a basic instrument for developing effective personal computing in cardiology 2-100151
electrodes, importance in cardiac exams. 2-83684
epicardial breakthrough, recognition by body surface isopot. maps (Japanese) 2-62804
epicardial mapping by online display (Japanese) 2-57914
epicardial potentials inversely computed from body surface maps of humans, numerical procedure 2-88533
equipment produced by Medico works 2-83682
foetal ECG enhancement by time-sequenced adaptive filtering 2-78467
functional diagnostic instruments, state of the art and future trends 2-62824
gated heart scanning, use of 4th generation CT scanners 2-111794
heartbeat period, 1/f fluctuation 2-78321
high frequency ECG, notching during anaesthesia 2-62818
His bundle activity with cross-correlative waveform alignment 2-94217
His bundle ECG recording with an M-42 electromyograph 2-83685
Holter recordings computer anal. system, performance evaluation 2-100150
ill-posed electrocardiographic inverse problem, regularisation technique 2-99941
late potential portable averager device using microprocessor 2-94239
lead, virtual and personalised, P-wave enhancements 2-94241
lead systems, electrode no. necessary for body surface mapping 2-88676
magnetic fields, rapid rise-time, effect in rats 2-116980
microprocessor-based data acquisition, reduction and anal. system, design, implementation 2-94242
microprocessor-based portable anaesthesiology ST-segment analyzer 2-62823
modelling of time and amplitude characteristics of electric field (Russian) 2-62588
multichannel ECG devices, QRS detection scheme 2-94237
multipoles, usefulness for representation and estimation of pots., review 2-94014
non-invasive methods in cardiac exam. 2-83695
noninvasive cardiac measurements and their evaluation: new possibilities 2-83683
nuclear cardiology, ECG gated, image enhancements by Karhunen-Loeve transformation 2-68145

electrocardiography continued

- oesophageal probe for heart and temp. monitoring during anaesthesia 2-68183
 optimal signal detection of premature ventricular contractions 2-62811
 P-wave recognition with adaptive correlating filter, effects of data compression (*Japanese*) 2-117111
 pacemaker patients, ECG recording analysis, computer technique 2-94254
 phase-plane representation of ECG signal 2-94224
 physiological simulator: ECG, blood press., foetal press. and impedance respiration appl. 2-8671
 PR interval variations determ., on-line method 2-88679
 prearrhythmic state of hypothermic and ischemic myocardium, 2D spectral anal. appl. 2-73387
 pulmonary circulation, realtime ECG-gated simultaneous beat-to-beat evaluation of haemodynamic parameters 2-88580
 QRS, adaptive detect. based on max. a posteriori estimation 2-78464
 QRS classification algorithm, freq. domain based 2-94233
 QRS complex detector, sampled analogue delay based 2-62822
 QRS delineation algorithm with low sensitivity to noise and morphology changes 2-94232
 QRS-axis unique definition, evaluation by coupled computer system with large ECG database 2-94236
 QRS-complexes, new approach to detect. and typification 2-100144
 R-R interval predictors evaluation using annotated ECG database 2-94235
 rate variability spectra, meas. using personal computer 2-88671
 rhythm analysis using Lorenz plot and microcomputer (*Japanese*) 2-73383
 rhythm of long-term ECG, anal. in two-dimensional graphic representation 2-62810
 RR interval, Lorentz plot anal. of ECG rhythm (*Japanese*) 2-57915
 signal associated with noise, detect. 2-88681
 signal data compression using high-speed computer processor 2-57913
 signal model with physically significant parameters 2-94020
 signal representation and learning in ECG analysis 2-94234
 simulator, portable 2-117114
 simulator, programmable, for instrument testing and evaluation 2-62812
 simulator of cardiac arrhythmias, microprocessor based 2-62813
 single moving dipole representation of cardiac elec. activity, simulation study 2-116901
 singular value decomposition, use in ECG 2-83678
 spectral analysis for arrhythmias detect. in isolated guinea pig hearts 2-117163
 ST-segment analyser, compact, microprocessor-based, for the operating room 2-100138
 T-wave time series anal., appl. to ventricular vulnerability to fibrillation estimation 2-88534
 telephone ECG monitoring in real time by means of a microcomputer based terminal 2-83690
 three-dimensional inverse problem soln. using finite element method 2-94230
 VCG, serial comparison using modern communication and control theory techniques 2-100147
 VCG system with temporal dimension, directional reference and display of component loops 2-94226
 vectorcardiogram: planarity, predilection planes and spatial gradient 2-100152
 vectorcardiograms for rhythm analysis, Fourier shape descriptors 2-62816
 vectorcardiographic lead systems, McFee and Frank, evaluation using a numerical inhomogeneous torso model 2-78463
 ventricular ectopic depolarisation in long term ECG recording, vectorial/statistical detect. 2-62817
 ventricular gradient and recovery waveforms, theoretical analyses and computer simulation 2-78279

electrocataphoresis *see* **electrophoresis****electrochemical analysis**

- see also electrochemistry; polarography; voltammetry (chemical analysis)*
 acids, measurement and control of concentration (*Dutch*) 2-88384
 charge-measurement, controlled potential, balanced integration in precision coulometry with monitored potentials 2-95331
 coulometric titration, potassium biphthalate certification 2-62446
 electrolysis photographic fixing solutions (*Russian*) 2-69281
 fluoride in rainwater, ion-selective electrode measurement methodology 2-62534
 ion selective electrodes, double known addition method, error propag., Monte Carlo simulation 2-116732
 liquid chromatography coupled with electrochemistry, biomedical appl. 2-73398
 microcomputer-controlled photodiode array spectrophotometric titrator 2-78149
 microprocessor-based electrochemical instrumentation 2-116768
 oxygen sensors, membrane type, metrological properties (*Polish*) 2-93850
 semiconductor-electrolyte contacts, impurity profile determ. in semiconductor, electrochem. C-V method (*Chinese*) 2-92745
 steel, austenitic stainless, heat treated weldments, quantitative anal. of δ -ferrites, σ - and $M_{23}C_6$ carbide phases 2-88307
 AgNO₃-NaNO₃, molten, current-induced comp. gradients 2-57654
 H₂O, PO₄, 4H₂O, hydrogen gas sensor using electrochemical concentration cell 2-112888
 Hg_{0.8}Cd_{0.2}Te, anodic oxidation, electrochemical and XPS study 2-77964
 O₂, concentration measurement using Clark cells (*Dutch*) 2-83427
 ThO₂·Y₂O₃ electrochem. probes, for O₂ anal., in liquid Na reactor coolant 2-90265

electrochemical batteries *see* **cells (electric)****electrochemical electrodes**

- see also electrochemistry*
 alkaline battery electrodes, temp. limitations 2-88423
 automotive battery electrodes, potential distrib., math. model and expt. study 2-93884
 bipolar cell for advanced alkaline water electrolysis 2-99849
 erosion, during electrospray alloying (*Russian*) 2-62232
 fuel cell reactions, electrode kinetic investigations, cell design 2-57696
 gas bubble behaviour and ohmic potential drop during water electrolysis 2-72989
 glass, with ionic and ionic-electronic conducting layers 2-105491
 graphite intercalation compounds in electrode materials in batteries 2-57692

electrochemical electrodes continued

- H₂ production by alkaline electrolysis of water, research progress from 1976-1980 (*French*) 2-105604
 ion selective electrodes, double known addition method, error propag., Monte Carlo simulation 2-116732
 packed-bed, in galvanic cells 2-62467
 photoelectrochemical spectroscopy, stress modulated 2-84707
 phthalocyanine cathodes for secondary Li cells, charge and discharge characts. 2-57690
 polarisation impedance of ideally polarisable plane electrode 2-83389
 porous insertion electrodes with liq. electrolyte, math. model 2-116794
 rare earth chromites, elec. cond., use as anodes in high-temp. O₂ conc. cell 2-77038
 sinusoidal electrodes, deposition and dissolution 2-76852
 Ag, adsorpt. of benzene, surface-enhanced Raman spectra 2-61276
 Ag electrode, adsorpt. of Ru(CN)₆⁴⁻, surface enhanced Raman spectrosc. obs. 2-61889
 Ag, monocryst., adsorpt. of diethyl ether, admittance and reflectance meas. (*French*) 2-76810
 Au electrode, interface with electrolyte, effect of adsorbed water, work function and pot. of zero charge meas. 2-61557
 Au, monocryst., adsorpt. of diethyl ether, admittance and reflectance meas. (*French*) 2-76810
 C air electrodes, charact. structure and hydrophobic properties effects 2-116703
 C based bifunctional air electrode, pot. distrib. meas. 2-93885
 Cd electrodes, plastic-bonded with active C catalyst O₂ recombination rate 2-116795
 CdS anodes, polycrystalline, photoetching by cysteine 2-99814
 n-CdS, photoanodic dissolution, rot. ring-disc electrode study 2-57500
 n-CdS, Se_{1-x} electrodes in photoelectrochem. cells, photoluminesc. and electrochem. props. meas. 2-93925
 n-CdSe, etched and anodised electrochem. electrode, capacitance-voltage studies 2-66633
 Cu electrode, adsorpt. of Ru(CN)₆⁴⁻, surface enhanced Raman spectrosc. obs. 2-61889
 CuWO₄ anodes, for photoelectrolysis of water, bandgaps 2-61348
 Cu₂WO₆ anodes, for photoelectrolysis of water, bandgaps 2-61348
 Fe electrodes, initial stages of high-temp. oxidation 2-78001
 Fe-Ni cell, sintered Fe electrode struct. obs. 2-93886
 Fe₂O₃/Ge electrodes, photoassisted electrolysis of water 2-61146
 FeS₂ electrodes in Li-Al cells, phase relationships 2-88422
 p-GaAs electrochemical electrode, cathodic photocurrent meas., surface recombination and trapping effects 2-92746
 n-GaP photoelectrochemical electrode, stabilisation and surface recombination, expt. study 2-77176
 p-GaP, photoelectrode, photocurrent onset pot. and flatband pot., expt. study 2-62480
 H₂ production by H₂O electrolysis in alkaline media at intermediate temp. 2-99848
 H₂O photolysis, effect of surface recombination on efficiency 2-99811
 β -Li-Al electrode pot. and Li diffusivity meas. at ambient temp. 2-116793
 Li-Al/FeS cells optimisation for electric vehicle propulsion applications 2-93887
 Li-B anode for molten salt thermal cell, discharge characteristics meas. 2-93882
 Li-Ge alloys, thermodynamic studies, appl. to negative electrodes for molten salt batteries 2-76709
 Li-V₂S₆, electrochemical insertion of Li, Thompson method, EMF study 2-116707
 Li₂CrO₄ cathodes in Li/organic electrolyte batteries, props. 2-93889
 Li₂MoO₄ cathodes in Li/organic electrolyte batteries, props. 2-93889
 Li₂NbS₆, organic electrolyte rechargeable cell, electrochemical study 2-99781
 MoO₃ thin film, electrochemical Li incorporation, for electrochromic display appl. 2-72454
 MoSe₂ single crystal, etching and dissolution kinetics, PEC solar cell appl. 2-93642
 Na-S-Al chloride cells, performance 2-93888
 Ni electrodes, initial stages of high-temp. oxidation 2-78001
 Ni electrodes, plastic-bonded, microstructure 2-116704
 Ni, positive electrode components for Li-Al/FeS cell, corrosion resist. meas. 2-78201
 Ni/Cd cells, active material for positive electrodes, optimisation 2-116796
 Ni/Cd cells, plastic bonded high rate Ni electrodes, internal resistance 2-116798
 Pb-acid battery, Al₂O₃ Fibre FP reinforced pure Pb composite electrodes 2-115544
 Pb-acid battery electrodes, dry-charged, positive; influence of drying on thermo-passivation and its causes 2-105377
 PbO₂-Ti anodes breakdown 2-78113
 Pt, under pot.-pH control, small and large amplitude cyclic voltammetric studies 2-62409
 ThO₂·Y₂O₃ electrochem. probes, for O₂ anal., in liquid Na reactor coolant 2-90265
 TiO₂ electrode, relaxation effects of surface and interface states 2-61583
 TiO₂ electrode behaviour anal., photoelectron cell apps. 2-73126
 TiO₂-Be electrodes physical props. anal. during photoassisted oxidation of water 2-73127
 WO₃ electrochemical electrode, struct. changes in Li-organic electrolyte cells 2-115204
 WO₃ thin film, electrochemical Li incorporation, for electrochromic display appl. 2-72454
 WO₃ thin films in LiClO₄-propylene carbonate-water electrolyte, electrochromism 2-72455
 n-WS₂ photoelectrochem. cell with aqueous and nonaqueous electrolyte solns. 2-116836
 p-WS₂ film, polycryst. semiconductor electrode, photoelectrochem. 2-72987
 WS₂ photoelectrodes, polycryst., photoelectrochem. cell apps. 2-57716
 YCrO₃, elec. cond., use as anodes in high-temp. O₂ conc. cell 2-77038
 Zn vibrating electrodes in Ni/Zn batteries 2-88421
 ZnSe-CdSe thin film electrodes, photoelectrochem. performance meas. in aq. polysulphide electrolyte 2-78230

electrochemical polishing *see electrolytic polishing*

electrochemistry

see also Debye-Huckel theory; electrical conductivity of electrolytic liquids; electrochemical analysis; electrochemical electrodes; electrolysis; electrolytic devices; electrophoresis

alkaline battery electrodes, temp. limitations 2-88423

alkaline earth metaphosphate, thermodynamic stability investig. using EMF method with CaF_2 -type electrolyte 2-81983

artificial heart, elec. to mech. energy electrochemical converter 2-78499

4,4'-biselenopyranylidene based charge transfer complexes and radical ion salts with TCNQ and DDQ 2-92577

charged spherical particle in ionic soln., double layer approx. 2-105490

chlorophyll-protein complexes, electrochem. regulation of excitation energy transfer 2-11620

corrosion rates determ., by electrochem. AC and DC methods, discontinuous steady state polarisation systems 2-105488

double layers, repulsive interaction calc. for dissimilar layers 2-98720

electrical double layer near charged boundaries 2-116701

electrical double layers, Gouy-Chapman theory limitations 2-116702

Electrochemical Society, Incorporated, Spring Meeting, conf., Montreal, Canada (May 1982) 2-101133

Faraday constant accuracy improvement, Ag atomic weight determ., NBS research 2-58776

fuel cell reactions, electrode kinetic investigations, cell design 2-57696

graphite intercalation compounds, electrochemical appl. 2-57688

$\text{H}_2\text{O}/\text{Cd}_{10}\text{Te}$ anodic oxidation 2-111344

industrial effluents electrochemical treatment (*French*) 2-88486

light-energy conversion efficiency in photogalvanic cells and H_2O cleavage systems 2-111569

liquid crystal, electrochemically induced coloration 2-71334

LWRs, high temp., corrosion producing salts, chemistry 2-99688

mass transfer, coefficients in packed beds at very low Reynolds numbers 2-91531

metal filaments, decimicron, prep. and tensile testing 2-62314

metals, corrosion cracking, physicochem. aspects 2-88284

molten CO_2 , electrochem. cell for CO_2 concentration for manned spacecraft 2-83469

paraquat dimer mols., electrochem. behaviour, bielectronic mediation appls. 2-85802

partial pressure of oxygen meas. and regulation, electrochemical system adaptation to symmetrical thermogravimetric anal. system using Cahn 1000 electrobalance 2-99687

photoelectrochemical spectroscopy, stress modulated 2-84707

phthalocyanins, micellar solns., photoelectrochem. hydrogen prod. 2-73128

plating by combined pulsating current and inverse polarity methods, advantages 2-99683

trans-polyacetylene:Li film, visible spectra 2-116206

trans-polyacetylene, electrochem. voltage spectroscopy 2-110227

polyethylene oxide- LiClO_4 filled polymer electrolytes, electrochem. and mechanical props. 2-115458

polyethylene oxide- LiClO_4 filled polymer electrolytes, electrochem. and physical props., prep. condition effects 2-115459

polymer-electrode interface, penetration of metal into polymer based on electrochem. reaction 2-62404

polypyrrole film, conductive, electrosynthesis and behaviour 2-57615

PtFE, low-temp. reduction, radial electron density distrib. meas. of C product 2-76308

scrap Pb recovery from batteries, electrolytic method 2-62406

semiconductor electrochemistry, electron energy levels, review 2-110468

semiconductor electrodes, photoelectrochemical processes 2-88366

semiconductor-electrolyte interface, electrochemical transfer via surface states 2-87384

semiconductor-electrolyte junctions, use as economical solar energy converters 2-78235

small metal atom clusters, electrochem. props., rel. to surface enhanced Raman scatt. 2-116173

solar cells, electrochem., using small band gap semiconductors, photovoltage, kinetic model 2-83474

solar photoelectrochemical cells, generation of H and electricity, interfacial oxide layer mechanisms 2-105576

solid state batteries for commercial production, Anglo-Danish cooperative research programme, report 2-99782

solid-liquid interface, photoemission and photoexcitations as probes 2-83431

steel, austenitic stainless, abrasive wear, electrochem. polarisation influence 2-88198

steel, austenitic stainless, stress corrosion cracking, intergranular, in Na_2SO_4 soln., affect of dissolved O 2-88258

steel, crack electrochemistry for active state, diffusion and ion migration mass transport model 2-116606

steel, stainless, microcrystalline, corrosion resistance meas. 2-116605

tampon plating, plant, material, solutions (*German*) 2-105489

thin electroconducting oxide layers on glass, electrochemical etching (*Polish*) 2-88248

transition metal, refractory, surface carbidisation by elec.-spark alloying 2-67658

transition metal layered chalcogenophosphates, effect of bond ionicity on Li electrochemical intercalation 2-71392

TTFX, (X=halide, NO_3) highly conductive thia adducts, electrocrystn. 2-93402

turbulent pipe flow, relation between mass transfer and corrosion 2-76024

Ag/zeolite 4A-I, solid state cell, electrochemical performance 2-73101

Ag-Pd alloys, potentiodynamic polarisation anal. in Cl soln. 2-57535

$\beta\text{-Al}_2\text{O}_3\text{:Ag}^+$ (Cu^+), solid ceramic electrolyte, cells for thermodynamic studies 2-99378

Cd electrodes, plastic-bonded with active C catalyst O_2 recombination rate 2-116795

Cd-Au alloy, dil. liq., EMF and vapour press. values, equil. and second law of thermodynamics confirmation 2-81981

CdBr $_2$ ·4H $_2$ O, solid, elec. and electrochemical props., dehydration effects 2-71708

Co complexes, Co(III)/Co(II) complexes with o-phenanthroline and related ligands, redox couples for electrochem. energy storage 2-57620

Cu, semiconducting oxide films, photoelectrochem. invest. 2-105363

Cu-Ni-Cr protective coatings, corrosion resistance evaluation by electrochemical porosity test (*German*) 2-105365

p-CuO:Li, conduction and valence band edge positions, photoelectrochem. determ. 2-56440

electrochemistry continued

FeTa_2O_6 , free energy of form. at 1470-1750K 2-111507

Hg-Sn alloy, dil. liq., EMF and vapour press. values, Duhem integration, second law of thermodynamics confirmation 2-81982

HgTe, anodic oxidation and electrochem. surface treatment obs. 2-93641

Li cells, Mo_2O_3 and Mo_3O_3 as cathodes props. 2-93883

Li intercalation cpds., form., in situ X-ray diff. effects 2-65944

Li/MnO $_2$, discharge charact. at low temp. 2-116790

Li-V $_2$ S $_5$, electrochemical insertion of Li, Thompson method, EMF study 2-116707

MnO $_2$, struct.-activity relationships rel. to cell performance 2-109753

Nb $_2$ O $_5$, photoelectrochem. and solid-state props. 2-72016

Ni corrosion resistance, effect of plastic deformation (*German*) 2-88290

Ni electrodes, plastic-bonded, microstructure 2-116704

Ni/Cd cells, active material for positive electrodes, optimisation 2-116796

Ni/Cd cells, plastic bonded high rate Ni electrodes, internal resistance 2-116798

Ni-Fe (25 at.%), ESCA studies, anodic dissolution, passivation effects 2-83296

Pb-acid batteries, discharge charact. 2-116797

α -Pd, H permeation, invest. by electrochem. method (*Japanese*) 2-82026

Pd/H $_2$ -H $_2$ O system, H isotope distrib. equilb., Pd use in isotope separation 2-111509

SO $_2$ electroreduction in nonaqueous media, electrochem. and ESR obs. 2-114017

p-Si electrodes, siloxane-coated, ion selective photoelectrochemistry and stabilisation 2-83502

SnO $_2$ films, prep. from organic resinate soln. and photoelectrochem. props. meas. 2-116837

SrMO $_4$ -Eu $_2$ (MO $_4$) $_3$ (M=Mo, W), defect formation, electrochemical props. 2-109783

Ti alloys, corrosion fatigue crack growth, electrode potential kinetics in 3% NaCl soln. 2-88281

TiO $_2$ electrophys. and photoelectrochem. props., uncontrolled impurities effects (*Russian*) 2-93799

UO $_2$ ·HPO $_4$ ·3H $_2$ O, solid, protonic cond. 2-92272

W fibre reinforced depleted U-Ti matrix, corrosion rates and electrochem. behaviour obs. 2-116566

p-WeSe $_2$ film, polycryst. semiconductor electrode, photoelectrochem. 2-72987

electrochromic devices

displays, using transition metal oxides with anodic coloration, review 2-77487

Al $_2$ O $_3$ -WO $_3$ layer system, electrochromic props. 2-104847

WO $_3$ electrochromic cells using LiClO $_4$ -dioxolane-water electrolytes 2-93305

WO $_3$ film, reactively sputtered, prep., elec. and optical props. 2-93420

electrochromism

cation insertion reactions 2-105526

films, small signal AC response theory using equivalent circuit 2-110817

liquid crystal and electrochromic materials (*Japanese*) 2-91775

transition metal oxides with anodic coloration, electrochromic materials and displays review 2-77487

Al $_2$ O $_3$ -WO $_3$ layer system, electrochromic props. 2-104847

In $_2$ -Sn $_2$ O $_3$ -WO $_3$ -LiAlF $_4$ -LiIn thin film overlayer, electrochromism 2-72569

IrO $_2$ film, amorphous nonmetal-crystalline metal transition 2-109980

IrO $_2$ film, ellipsometric study of electrochromism 2-77488

MoO $_3$ thin film, electrochemical Li incorporation, for electrochromic display appl. 2-72454

SF $_6$, electrochromism data, dielectric virial coeffs. for excited states estimated from dipole moment changes 2-96771

V $_2$ O $_5$, electrochromic colouring, optical absorpt. and IR transmission spectra meas. 2-116156

V $_2$ O $_5$, evaporated thin film, effects of heat treatment (*Japanese*) 2-62000

WO $_3$ anodic film, electrochromic props., ellipsometric study 2-93158

WO $_3$ film, RF reactively sputtered, electrochromism meas. 2-93157

WO $_3$ film, reactively sputtered, prep., elec. and optical props. 2-93420

WO $_3$ thin film, electrochemical Li incorporation, for electrochromic display appl. 2-72454

WO $_3$ thin films, electrochromic colouring and bleaching, SIMS and ESCA studies 2-57055

WO $_3$ thin films in LiClO $_4$ -propylene carbonate-water electrolyte, electrochromism 2-72455

WO $_3$ ·H $_2$ O film, cation insertion reactions 2-105526

electrodeposited coatings *see electrodeposits*

electrodeposited films *see electrodeposits*

electrodeposited layers *see electrodeposits*

electrodeposition

see also electrodeposits; electroplating

Co, electrocrystallisation during deposition of mag. thin films (*Russian*) 2-77761

liquid films on steel strip electrostatic deposition, process improvement 2-99360

macro- and micro-scattering capabilities determ. with current-density-potential curves using mathematical model (*German*) 2-78112

metals, pulsating current electrodeposition fundamentals, max. practical deposition rate 2-67230

polypyrrole film, electropolymerisation prep. in presence of BF $_4^-$ 2-111099

sinusoidal electrodes, deposition and dissolution 2-76852

solvated atoms and cations, stability anal., rel. to electrogeneration 2-108660

steel, tool and constructional, wear resistance improvement by electrospray alloying (*Russian*) 2-67551

vertical electrodes, diffusion layer growth, mag. field effect, interferometric study 2-93455

Ag dendrites and single crystals., electrolytic growth in gel media, surface morphology, SEM study 2-87962

Ag, oriented growth of single crystals. on as-grown crystals. 2-104179

Ag, underpotential deposition on Au using rotating ring disc electrode, potentiostatic transient behaviour 2-93454

Au+Ni, electrolytic contacts for p-Al $_2$ O $_3$ /Ga $_2$ O $_3$ /As-pGaAs-nGaAs, concentrator solar cell 2-93893

Cd coatings on Fe, H absorption during electrodeposition and H charging 2-77993

Cd-Ni powders, predetermined comp., electrodeposition 2-72653

Co, coating on WC particles 2-83261

electrodeposition continued

- Cr-Al₂O₃ electrodeposited composite coatings 2-116579
 Cu powder electrodeposition at gas-evolving electrodes, mass transfer role 2-62090
 Cu-Cd, electrocryst. on (111) plane of Cu single cryst. 2-62085
 Cu-Pb, microstruct., mech., elec., and mag. props., depend on synthesis conditions 2-56748
 Fe alloy, electrolytic, wear resist. optimisation, math. model (*Russian*) 2-67628
 Fe and Fe-Ni alloy, galvanic, microindentation hardness, deposition parameters influence (*Russian*) 2-67626
 Fe foil, electroforming at high current density 2-99359
 Fe-Co powder, form., struct., and mag. props., electrolysis conditions effect 2-83063
 Fe-Zn alloy, pulse current charact., influence on comp. (*Russian*) 2-67228
 GaP layer, liq. phase electroepitaxy from limited and unlimited sources, growth kinetics 2-56380
 Li, solvated, far IR spectrum, INDO calcs. 2-108413
 Mo-MoO₃ black solar selective films, XPS, optical and structural props. 2-72640
 Ni, electrodeposition, multifaceted helicoidal struct. around [210] axis (*French*) 2-83051
 Ni-Co galvanic coatings, struct., corrosion resist. and mech. props. 2-57540
 Ni-Fe patterns for thin film heads, selective microelectrodeposition 2-83046
 Ni-WC cermet, electrodeposition and mech. props. 2-93462
 Si electrodeposition from molten salt and organic solutions for solar cells 2-72638
 Si, metallisation, Ni electroless deposition 2-62080
 a-Si:C and a-Si:C-B(P) films, cathodic deposition, charact. 2-88011
 a-Si:F and a-Si:F-B(P) films, cathodic deposition, charact. 2-88011
 SiC epitaxial layers, electrodeposition from Li₂CO₃/SiO₂ melts 2-93460
 Sn coatings on Fe, H absorption during electrodeposition and H charging 2-77993
 Sn-Pb, high speed electrodeposition from HBF₄ soln. 2-93453
 Ti/Pt/Au thin film circuits, conductive via processing utilising RF sputtering and electrodeposition 2-99338
 Zn, electrodeposited, incoherent nucleation and dislocation struct. 2-109952

electrodeposits

- see also *electroplated coatings*
 foils, ESCA signal intensity dependence on surface area (roughness) 2-110098
 inclusions, direct obs. by TEM 2-92389
 metal, electrodeposited on surface with modified dispersed phase substrate, microdistrib. of electrodeposit (*Russian*) 2-67627
 metal, surface roughness and max. deposition rate, periodic reverse current effect 2-116705
 metal deposition during electrolysis, quality prediction using current response graphs 2-99686
 metal film, electrodeposited, sputtering yield 2-77676
 metal oxide film, electrodeposited, sputtering yield 2-77676
 Si electrodeposited on graphite and silver, characterisation for fabrication into solar cells 2-105095
 surfactant phthalocyanine, electrodeposited, photovoltaic cells, charact. and behaviour 2-93906
 Ag electrodeposited films, inclusions, direct obs. by TEM 2-92389
 Ag, oriented growth of single crystals on as-grown crystals 2-104179
 Cd electrodeposit on Cu wire, surface roughness and max. deposition rate, periodic reverse current effect 2-116705
 n-CdSe, electrodeposited, Fermi level pinning, low-field electrolyte electrorefl. spectra 2-57059
 Cr-Cr₂O₃, black chrome solar selective films, surface comp., SIMS study 2-57724
 Cu electrodeposited films, inclusions, direct obs. by TEM 2-92389
 Cu foil, electrodeposited, AES and ESCA, effects of surface roughness 2-78155
 Cu, twin boundary struct., high resolution electron microscopy study 2-71471
 Cu-Cd, struct. of alloy obtained on Fe single crystals by electrolysis (*Polish*) 2-67283
 Fe alloy, electrolytic, wear resist. optimisation, math. model (*Russian*) 2-67628
 Fe and Fe-Ni alloy, galvanic, microindentation hardness, deposition parameters influence (*Russian*) 2-67626
 Mo film, electrolysis prep., growth rate anisotropy and struct. (*Russian*) 2-61304
 Ni, defect struct., TEM study 2-56387
 Ni, electrodeposited, cryst. struct., positron annihilation, Mossbauer and X-ray study 2-104178
 Ni electrodeposited films, inclusions, direct obs. by TEM 2-92389
 Ni, hydride phase form. and decomp. 2-116616
 Ni-Co galvanic coatings, struct., corrosion resist. and mech. props. 2-57540
 Ni-Cu misfit boundaries, grown-in dislocation generation during 3D nucleation and growth 2-103772
 Ni-P amorphous alloys, resist. meas. rel. to prep. 2-92561
 Sn film, graphoeptitaxial electrodeposition, expt. study 2-87083
 Sn on Fe substrate, interface form., chem. interdiffusion, Mossbauer study 2-104171
 TiB₂ coatings, sliding wear props. 2-62236

electrodes

- see also *anodes; cathodes; electrochemical electrodes; microelectrodes; welding electrodes*
 60 kV, 5 cm spark gap, effects on electrodes, insulators, and gas types of number of discharges 2-91714
 adsorption of H₂O, D₂O and HDO on Ag electrodes, surface enhanced Raman spectra 2-90554
 arc metallisation, electrode heating efficiency and coeff. of material use (*Russian*) 2-67582
 biomedical, circular dispersive, anal. and control of current distrib., electrosurgery appl. 2-78466
 biomedical electrode with Si₃N₄ film (*Japanese*) 2-62805
 cardiac examinations, importance of electrodes 2-83684
 corona inception on electrodes in floating potential 2-103554
 corona pulse intervals distribution, physical mechanisms 2-103517
 cortical neurons, rhesus monkey, elec. stimulation by capacitor electrodes 2-62857

electrodes continued

- DC discharges on moist surface, model for voltage drops 2-103552
 dielectric-coated electrode, in contact with conducting sphere, electrostatic field 2-80866
 discharge laser electrode profiles, analytical design method 2-96966
 ECG leads, no. necessary for body surface mapping 2-88676
 electrical heart stimulation, low resistance endocardial electrodes study 2-78492
 electrosurgical circular dispersive electrodes, distrib. equiv.-circuit models 2-78482
 electrosurgical equipment development and problems 2-78480
 embedding effect on electrode in dielectric med. 2-103553
 glow discharge electrode design allowing for polarisation and space charge effects 2-91709
 high frequency bipolar discharges, electrodes in air, electrical macroparameters and energy balance 2-72988
 homogeneous crossed electric fields, prod. using electrode system 2-96798
 integrated optics modulators, optimal electrode design 2-55319
 ionization gauges, secondary standard, sensitivity, electrode displacement influence (*Japanese*) 2-112915
 metal electrode in plasma focus, evaporation, MHD mechanism (*Russian*) 2-103384
 metal layer dynamics in plasma layers near a wall 2-115016
 MHD conversion, oxide elec. degradation, thermal emission of electrons meas. 2-88465
 MHD generator, electrode sets fabrication, physicochem. principles 2-73129
 needle electrode, miniaturized, use in electrocochleography 2-117126
 neural prosthetics of skeletal muscle, recruitment order impact on electrode design 2-62831
 phase electrodes, current density distrib. in point-to-plane configuration 2-103518
 plasma electrode drift sheath struct., numerical model 2-115017
 point-to-plane gaps with positive pulseless corona, calc. of electric field 2-109615
 polyethylene film, numerical anal. of SCL cond. with consideration of diffusion and elec. field at electrode 2-110358
 protrusion influence on cylindrical spacer surface flashover voltage in SF₆-N₂ gas mixtures 2-91710
 rod-plane gap, accurate field soln. using optimised charge simulation 2-109449
 semiconductor surfaces and electrodes, macroscopic dynamic models of partial charge transfer processes (*German*) 2-61586
 streak image tube, subpicosecond, Photochron IV 2-89813
 strongly electronegative gases, meas. of figure of merit, effect of electrode surface roughness 2-103528
 wire electrode erosion quality determ. through vibration behaviour anal. (*German*) 2-78111
 Ag, adsorp. of crystal violet, surface enhanced Raman scatt. 2-99104
 Ag, chemisorption of thiourea complexes, surface enhanced Raman spectroscopy 2-93811
 Ag, electrodes, adsorbed pyridine, thiourea, H₂O, photochemical activation effect on surface enhanced Raman scatt. 2-110828
 C electrodes, high-surface area, in-situ Mossbauer spectroscopy of adsorbed species 2-93070
 C fibre as an electrode material, biological research appl. 2-78504
 CO₂ CW sealed high-pressure laser, high efficiency 2-55110
 Cu, chemisorption of thiourea complexes, surface enhanced Raman spectroscopy 2-93811
 HgBr lasers, electrode and laser tube materials for long life operation 2-86004
 La_{1-x}CaCrO₃ electrode material for MHD converters, sintering (*Chinese*) 2-83503
 LiNbO₃:Ti diffused waveguide integrated optic electrooptic modulator electrode anal. 2-55318
 N₂ gas filled gapped surge arresters, effect of microsurface of coaxial electrodes on time delay of step voltage breakdown 2-103529
 Pb-Bi film, Josephson junction counterelectrode, strain distrib., X-ray study 2-82179
 Pt, polarisation, linear and nonlinear systems anal. 2-58852
 SF₆, compressed, electrode surface roughness modelling and prediction of breakdown 2-103527
 SF₆, effect of coatings on impulse breakdown for electrodes with different surface roughness 2-103530
 SF₆, gas filled gapped surge arresters, effect of microsurface of coaxial electrodes on time delay of step voltage breakdown 2-103529
 SF₆, threshold field for DC positive corona discharge 2-103522
 TiO₂/H electrodes, SIMS and AES anal. 2-57655
 XeCl discharge laser electrode profiles, analytical design method 2-96966
 ZrO₂/MgO (CaO)(Y₂O₃) ceramics, rare earth oxide stabilised, elec. conducting, for MHD generator electrodes 2-88043

electrodynamics

- see also *electron beams; electron optics; electron tubes; ion beams; ion optics; ion sources; quantum electrodynamics*
 anisotropic matter, classical electrodynamics 2-60001
 auroral ionosphere 2-106388
 Born-Infeld electrodynamics, U₁-bundle formalism (*Chinese*) 2-75500
 charged particle bunching in self-radiation fields, theory (*Russian*) 2-114174
 charged particle ellipsoid cloud, motion with and without external mag. field (*Russian*) 2-80886
 charged particle motion in planar mag. binary system, symplectic charact. 2-80883
 charged particle moving incoherent matter, oscillatory wake 2-56059
 charged particle quasi-classical motion in EM field (*Russian*) 2-85878
 charged particle radiation in mag. systems 2-80884
 charged particle trajectories near long straight current-carrying wire 2-89508
 charged particles in centrally symm. electric and mag. fields (*Russian*) 2-108772
 charged soliton stability in scalar electrodynamics 2-58629
 classical charged particle with spin, motion in EM wave external field 2-114173
 classical particle with spin in EM field, relativistic dynamics 2-55054
 covariant perturbation theory in classical electrodynamics 2-101191
 de Broglie wave, rel. to EM and gravit., stochastic electrodynamics calc. 2-89590
 de Broglie wave, stochastic electrodynamics interpretation 2-107125
 dense cluster of electrons, motion in nonuniform struct., numerical model (*Russian*) 2-101193

electrodynamics continued

- drift theory of charged particle motion in strong elec. field, relativistic approx. 2-102705
- electrically conducting body with semi-infinite cut, magnetothermoelastic field 2-55022
- electrodynamic forces at thin nonmag. tapes above ferromagnetic plates 2-85862
- electron beam cyclotron interaction with coparallel luminous waves 2-80887
- electron motion due to superposed EM waves, free-electron laser appls. 2-80885
- electron spin, stochastic electrodynamics calc. 2-79471
- electron transport in EM fields, ESN, one dimens. S_0 transport module 2-108771
- free electron laser, storage ring operation 2-75585
- free electron laser amplifier, elliptically polarised, electron motion 2-60090
- Fresnel formulas for EM fields at interface for jellium model within random phase approx. 2-59993
- gauge theory, topological excitations, renormalisation group anal., compact electrodynamics appl. 2-64215
- induction and radiation fields of accelerated particle, sources 2-55053
- ion motion in Kingdon trap, classical and quantum theory 2-90789
- ionosphere, E-region interaction with F-region 2-73751
- Kepler potentials, time-depend., constants of motion, symm., orbit eqns. 2-63816
- kinetics in strong field, functional integrals 2-101192
- lecture course for undergraduates 2-94950
- magnetoelastic waves propagation, nonlinear, from cylindrical cavity (*Ukrainian*) 2-116041
- Maxwell eqn., symmetry generation by Lie algebra 2-69029
- metal surface electrodynamics, elec. field generation by oscill. dipole polarisation of surface 2-56655
- multipole potential variational calc. from arbitrary localised charge distrib. 2-95033
- n-massive charged particles in general relativity, equations of motion 2-53602
- neutral polarisable particles in inhomogeneous elec. field, trajectories calc. 2-102707
- non-relativistic charged particles in MHD shock wave, adiabatic invariant 2-102704
- nonlinear field theory 2-59000
- nonrelativistic para-Maxwellian electrodynamics with preferred reference frame in the Universe 2-107126
- open resonator, charged particle motion in proximity, diffr. radiation 2-85876
- particles, thermal spectrum in elec. field., analogy with electrodynamics of a constant field 2-58763
- Penning trap, field imperfection induced freq. shifts calc. and obs. 2-90787
- Poincaré gauge 2-107038
- point charge between conducting plates, method of images 2-94948
- quartic anharmonic oscillator in stochastic electrodynamics 2-95036
- relativistic charged particle dynamics in plane EM wave field and Redmond field 2-70489
- relativistic electron radiation spectrum in spatially periodic transverse mag. field (*Chinese*) 2-55051
- relativistic electrons moving along arc of circle, radiation emission (*Russian*) 2-85879
- rotating linear media, relativistic electrodynamics, appl. to guided wave propag. (*French*) 2-70480
- semiclassical theory, evolution operator 2-113196
- SI electromagnetic units, importance in electrodynamics and chromodynamics 2-58768
- solar active region, photosphere magnetic features hydrodynamics and electrodynamic interactions 2-73932
- spatially dispersive medium, EM wave scatt. from spherical inclusions 2-75497
- Stormer's problem, variational eqns. (*French*) 2-75501
- suspension of dipolar Brownian particles in electric field, transport and relaxation 2-79505
- tensor particle motion in plane EM wave field 2-96817
- threshold singularities in radiation of charge sources contained in periodic structures 2-75503
- H atom problem in stochastic electrodynamics, stochastic process nonrecurrence 2-74236

electrodynamometers *see dynamometers***electroencephalograms** *see electroencephalography***electroencephalography**

- see also bioelectric potentials; biomagnetism; brain*
- alpha range, efficient parameters calc. using peak centred power spectra 2-62801
- alpha wave detector, using 741 op amps for monitoring brain activity (*Spanish*) 2-100142
- analysis techniques, multivariate comparison between FFT and period anal. 2-94222
- auditory evoked responses to tone, click and white noise stimuli 2-111694
- balanced non-cephalic reference electrode method, EKG artifact elimination 2-111803
- computer analysis in patients with migraine 2-94221
- delta activity during and after extended sleep, computer-detected patterns 2-78325
- digital spectral anal. of EEG (*Chinese*) 2-62798
- epileptic seizure prediction method 2-68177
- epileptic seizures, EEG recording, removal of EMG artefact by digital filtering 2-94220
- evoked cortical responses, classification using features from single EEG records 2-78506
- eye movement artifact nulling by multichannel on-line EOG subtraction 2-62799
- formation, anal. on basis of EEG quantum 2-57767
- functional diagnostic instruments, state of the art and future trends 2-62824
- hippocampal electrophysiological correlates of an avoidance behaviour in the cat 2-67987
- hippocampal theta rhythm of protein deprived developing rats, spectral anal. 2-62592
- identification and labelling of short epochs, autoregressive spectral estimates 2-100135
- lambda responses and visual signal detect. 2-94029

electroencephalography continued

- mental chronometry rel. to brain event onset and offset, EEG waveform anal. 2-78327
- petit mal epilepsy seizure, microcomputer based detection and quantification 2-100134
- photosensitive epilepsy, interhemispheric differences, intermittent photic stimulation 2-62605
- photosensitive epilepsy, interhemispheric differences, pattern sensitivity thresholds 2-62604
- recorder programme tester 2-117104
- REM sleep, recognition in standard EEG 2-62800
- rotatory evoked cortical potential meas. in man (*German*) 2-62641
- signal analysis, appl. of model of N-pole with random processes 2-83542
- spectral analysis of EEG in hepatic encephalopathy treated with levodopa 2-94219
- spectral resonances, computer graphic display 2-94243
- statistical data analysis, computer managed 2-117144
- toposcope for freq. and phase indication 2-94223
- visual evoked potentials, computer processing utilising digital filtering techniques 2-57916

electroendosmosis *see electrophoresis***electroerosive machining** *see spark machining***electrofluidynamics** *see electrohydrodynamics***electrofluorescence** *see electroluminescence***electroforming**

- MIM electroformed struct., forming process and memory states obs. 2-104503
- Ag electroformed discontinuous film, pot. distrib. and switching phenomena 2-61619
- Cu alloy, large diameter target fabrication for RTNS-II using electroforming 2-85446
- Fe foil, electroforming at high current density 2-99359
- SiO₂-GeO₂ film, electroformed MIM struct., elec. cond., temp. effects obs. 2-72074

electrogasdynamics *see electrohydrodynamics***electrohydrodynamics**

- dielectric fluid, force effects in EM field, microscopic derivation 2-65654
- dielectric liquid, instability due to unipolar ion injection, chaotic regime 2-109420
- electroviscous effect, EHD origin, study under unipolar DC injection 2-82004
- general relativity analysis of electrically conducting fluid, differential rotation 2-112766
- horizontal boundary surface, between immiscible liquids, stability in electric field 2-86350
- infiltration of porous medium under influence of electric current 2-65642
- liquid crystal cells, dynamic light scatt., threshold voltages and currents 2-71345
- MBBA:cetyl iodide, liq. cryst. phase existence, dielec. props., electrohydrodynamic instabilities (*Russian*) 2-91777
- MBBA, homeotropic, mag. field-stimulated anisotropy of DSM2-front propagation 2-97910
- MBBA, nematic liq. cryst., squirt in electrohydrodynamic flow 2-97919
- nematic liq. crystals, second-order domains behaviour, in elec. fields above threshold 2-55844
- nematic liquid crystals, effect of temp. on EHD instability 2-109666
- nematic phase under oblique boundary conditions, EHD instabilities 2-97913
- phase space, Hamiltonian struct. 2-114917
- Riemann waves anal. 2-114922
- smeetic liquid cryst. imaging device based on photochem. reaction 2-99692
- sphere set in motion by EM forces, hydrodynamic drag change 2-114919
- spherical particle motion in liquid, drag coeffs. in EM and gravitational fields 2-103220
- suspensions, electromagnetic field effects 2-103202
- thin films electrically cond. liq., flow stability 2-109286
- transition to turbulence, current fluctuations (*French*) 2-86354
- viscous fluid, flow between porous plates, heat transfer, MHD, Hall current effect 2-103216

electrojets*see also ionosphere*

- auroral electrojet, Magsat obs. of assoc. polar magnetic perturbations 2-100634
- auroral electrojet conductivity ratio in substorms 2-100649
- auroral electrojet total current estimation 2-112218
- auroral electrojets rel. to field-aligned currents, review 2-58202
- electrodynamics of auroral ionosphere 2-106388
- equatorial electrojet and counter-electrojet latitudinal excursions 2-73764
- equatorial electrojet electrostatic wave obs. 2-106395
- equatorial electrojet long wavelength irregularities, radar obs. 2-106394
- IMF changes and response of magnetosphere 2-89075
- Magsat data for Birkeland and electrojet currents 2-100633
- radar aurora, E-W asymmetry due to electrojets individual current struct. eastward altitude inclination 2-106381
- ring current particle lifetimes during mag. storms 2-112258
- Sq(H) phase variability on normal quiet days in equatorial electrojet region 2-117516
- VHF auroral radar system at Siple Station, Antarctica 2-89066

electrokinetic effects*see also electrodynamics; electrophoresis*

- polarisation impedance of ideally polarisable plane electrode 2-83389

electroluminescence*see also phosphors*

- alkali halide colour centre lasers, electrical pumping 2-102801
- anthracene, electrolum. spatial distribution, elec. contacts influence 2-72556
- anthracene vacuum deposited films, elec. cond. and blue electrolum. 2-116270
- 9,10-diphenylanthracene liquid dye solution electroluminesc. in waveguide cell 2-82924
- direct gap semiconductors, edge luminesc. 2-57185
- electrochemiluminescence, DC thin film cell characteristics meas. 2-93284
- electrochemiluminescence recomb. yield in double step driven system, theoretical anal. 2-116284
- electrolyte-free solution, used in electrochemiluminescence cell for liquid crystal displays 2-99199

electroluminescence continued

- ferroelectric, charged impurity centre ionisation by polarisation reversal, luminescence 2-76986
- inert gases, secondary light emission by migrating electrons in weak elec. field 2-109453
- mechanisms in crystals, comparison 2-82923
- polyethylene terephthalate, electroluminescence and space charge layers 2-93282
- POPOP liquid dye solution electroluminesc. in waveguide cell 2-82924
- semiconductors, defect characterisation by junction spectroscopy, review 2-71920
- tunnel structures, photon emission, expt. study 2-82471
- Al, anodic oxide film, electrolum., interference effect 2-61983
- Al-Al₂O₃-Au(Cu)(Ag) tunnel junctions, electron energy loss function image in light emission 2-116267
- AlGaAs lasers, high injection region luminesc. decay and injected carrier lifetime 2-85962
- AlGa_{1-x}As p-n junction, double injection, electroluminescence 2-61981
- Al₂O₃ anodic oxide film thickness determ. by electrolum. method 2-110961
- BaS:Cu,Er, phosphors, electroluminesc., spectral characteristics 2-67122
- CaO:Cu electroluminesc., anal. of traps 2-82925
- CaS:Dy, phosphors, electroluminescence study 2-61978
- CdS, green electrolum. and photolum. study 2-72558
- n-CdS,Se_{1-x} electrodes in photoelectrochem. cells, photoluminesc. and electroluminesc. props. meas. 2-93925
- Cu₂S-ZnS:Mn p-n heterojunction DC electroluminesc. structs., degradation theory based on donor diffusion 2-57186
- Ga_{1-x}Al_xAs heterostructure diodes, laser irradi., electroluminescence emission 2-82926
- GaAs, p-n homojunction LEDs, emission spectra calc., ghost peak form. 2-61980
- GaAs-AlGa_{1-x}As heterostructure, cyclotron and plasmon emission from two-dimens. electrons 2-61770
- GaAs-AlAs p-n structs., electroluminescence, nonradiative recombination current meas. 2-82450
- GaAs-AlAs p-n structs., voltage relax. and electrolum. intensity 2-92741
- GaAs-ZnSe heterostructure, photosensitivity spectra and luminesc. 2-92691
- GaP LED, deep level, luminesc. study 2-110949
- GaP p⁺-n junctions, highly doped, injection symmetry 2-115868
- GaP:N LED, yellow sideband radiation increases during ageing 2-116261
- InGaAsP/InP double heterostruct. lasers, aged, TEM obs. of dark defects 2-55143
- InGaAsP-InP DH LED, aged, dark defects 2-91974
- In_{1-x}Ga_xP:Te(Se)(Cd)(Zn)(Si)(O), epitaxial film, photo-, electro- and cathodoluminescence involving deep levels 2-116258
- n-In_{2-x}Sn_{2x-3}O_{3-y}InP photo and electroluminesc. diode 2-61571
- KBr:Ti recomb. and intracentre processes, strong electric field effect 2-72557
- KCl:Eu²⁺, X-irradi., luminesc. and cond. props., elec. field effects (French) 2-116262
- Mn complex, Mn[bromotriphenylphosphoric oxide], photo-, mechano- and electroluminescence 2-93294
- NaCl:Ag(Cu), recomb. and intracentre processes, strong electric field effect 2-72557
- (Ni_{0.4}Zn_{0.6})Fe₂O₄ ferrite, switching and surface line emission spectrum obs. under pulse voltage 2-115831
- Si, amorphous p-i-n junction, electroluminescence 2-82927
- Si, amorphous p-i-n junction, photoenhanced electroluminescence 2-82928
- Si amorphous solar cells, electroluminescence, quantum efficiency 2-111550
- Si-SiO₂-electrolyte, SiO₂ thin films, conduct. and electroluminescence study (Russian) 2-87872
- SiC:Al polytypes, p-n structs., electrolum. characts. 2-93285
- SiO₂/In₂O₃-Si structure with tunnel-transparent insulating layer, elec., photoelec. and luminesc. props. 2-77159
- SnO₂-ZnS(A)-Cu₂S-ZnS(A)-Al, A=Ag,Mn,Sm, thin film struct., electrolum., cathodolum. and photolum. meas. 2-87871
- SrS:Cu,Er, phosphors, electroluminesc., spectral characteristics 2-67122
- SrSe:Cu,Er, phosphors, electroluminesc., spectral characteristics 2-67122
- WO₃, photo- and electroluminescence, microscopic emission mechanisms 2-116269
- ZnO:Cu,Yb(Tm) phosphors, photo- and electro-luminesc. studies 2-110909
- ZnS ceramic phosphor., electroluminescence, temp. depend. meas. 2-116268
- ZnS:Cu, Al, phonon-assisted tunnelling in the electroluminescence exciting process 2-110950
- ZnS:Cu, Br phosphor, electroluminesc. and lattice const. meas. 2-93283
- ZnS:Cu, Eu, Cl, electron multiplication process, luminesc. kinetics study 2-67121
- ZnS:Cu, Sm(Eu)(Tm), electrolum. and photolum., quantum yield meas. 2-110943
- ZnS:Mg AC thin film electroluminescent devices, luminescence-voltage characts. 2-104967
- ZnS:Mn, Cu, Cl DC electrolum. films, field enhanced changes in comp. and struct. 2-116263
- ZnS:Mn, RF sputtered thin film, electroluminescence (Japanese) 2-61979
- ZnS:Mn,Cu,Cl, amorphous and cryst. electrolum. film, elec. cond. props. meas. 2-87429
- ZnS:Mn AC electrolum. thin film device, Mn²⁺ emission saturation 2-116265
- ZnS:Mn AC thin film electrolum. devices, UV irradi., current and light generation 2-116266
- ZnS:Mn electrolum. films grown by at. layer epitaxy, ageing process 2-116264
- ZnS:Mn thin films, physical and elec. characts. 2-61622
- ZnS:Mn²⁺ and ZnCdS:Mn²⁺ electrolum. and photolum. props. 2-57184
- ZnS:TbF₃ thin films, electroluminescence quenching obs. 2-99194
- ZnS,O_{1-x}Cu_xSn, phosphor, electrolum. 2-57182
- ZnS(Se):Mn, epitaxial layers grown organometallic CVD 2-116378
- ZnSe LEDs, effect of residual impurities 2-57183
- ZnSe MIS structures, blue electroluminescence and I-V characts 2-61982
- ZnSe,S_{1-x} MIS diodes, blue and violet electroluminescence emission 2-72067

electrolysis

- see also anodisation; electrical conductivity of electrolytic liquids; electrodeposition; electroforming; electrolytic dissociation; electrolytic ion mobility; electrolytic polishing
- bipolar cell for advanced alkaline water electrolysis 2-99849
- DMTMTTF based ionic radical salts, electrolytic cryst. growth, cond. and struct. data 2-93403
- gas bubble behaviour and ohmic potential drop during water electrolysis 2-72989
- gas bubble behaviour during water electrolysis 2-99685
- H₂ production by alkaline electrolysis of water, research progress from 1976-1980 (French) 2-105604
- high temperature electrolysis demonstration unit 2-88363
- hydrogen by water electrolysis as basis for small scale ammonia production—a comparison with hydrocarbon based technologies 2-57741
- metal deposition during electrolysis, quality, prediction using current response graphs 2-99686
- photographic fixing solutions, electrochemical study (Russian) 2-69281
- scrap Pb recovery from batteries, electrolytic method 2-62406
- SOPHOCLE photovoltaic concentrator generator producing energy for water electrolysis cell 2-99795
- steam electrolysis cell, high temp., using proton conductive solid electrolytes 2-105554
- steel, work function, electrolytic hydrogenation effect (Russian) 2-66623
- water, alkaline, electrolysis, growth rate, departure radius and population of O₂ bubbles 2-99684
- water, electrolysis using solid polymer electrolyte 2-71715
- water, solar generator performance with load matching 2-99792
- water electrolysis, electrocatalysts and separators for use in KOH and LiOH solutions 2-62407
- water electrolysis cell, alkaline, development and parametric testing 2-73169
- Ag precipitation from waste fixing solutions, photographic processing appl. (Russian) 2-64150
- Al industry process control using X-ray anal. system 2-116706
- Cu, work function, electrolytic hydrogenation effect (Russian) 2-66623
- Cu₂WO₄ anodes, for photoelectrolysis of water, bandgaps 2-61348
- Cu₂WO₄ anodes, for photoelectrolysis of water, bandgaps 2-61348
- H₂ production by H₂O electrolysis in alkaline media at intermediate temp. 2-99848
- H₂ production by thermochemical decomposition of water using bench scale plant employing Mark-13 process 2-83521
- H₂ production by water electrolysis using off-peak nuclear power, economics (French) 2-105603
- H₂ production using solid polymer electrolyte water electrolysis 2-73157
- Hg-Cd amalgam, metastability breakdown detection (French) 2-88362
- Ni, grain boundary diffusion of H, electrochem. and ion microprobe obs. 2-92284
- Ni, work function, electrolytic hydrogenation effect (Russian) 2-66623
- SO₂ depolarised electrolysis for H₂ production, development status 2-99846
- TiO₂:H electrodes, SIMS and AES anal. 2-57655
- TiO₂-Be electrodes physical props. anal. during photoassisted oxidation of water 2-73127
- UO₂ electrolysis in chloride melts, cathodic processes 2-54531
- W-Fe powders, predetermined comp., electrochem. prod. 2-83064
- electrolytes**
- for solid electrolytes see superionic conducting materials
- see also electrolysis; superionic conducting materials
- 1:1 electrolytes, restricted primitive model, mol. dynamics simulation 2-97886
- anomalous electrolytes, pair distrib. and osmotic coeff. up to 1 mol.⁻¹ 2-61183
- aqueous electrolyte soln., ionic contrib. to partial molal vol. 2-66101
- aqueous ionic solutions, static permittivities 2-82769
- aqueous solution surface tension, self-consistent theory 2-98385
- aqueous solutions, conc., elec. cond. and struct. characts. 2-92245
- cellulose ether-water-electrolyte systems, electrolyte systems, electrolyte distrib. and phase equil. (Russian) 2-76642
- charged hard sphere-dipolar hard sphere mixture near charged wall, interfacial struct. 2-115498
- citrate bath, for Ni-Co-Cu electrodeposition 2-116396
- conference on high temp. and press. solns., chemistry, Karlskoga, Sweden (Sept. 1979) 2-58523
- Coulomb condensate of nonlinear Poisson-Boltzmann eqn., unified theory 2-58747
- Coulomb systems of high density, generalised hypernetted chain approx. 2-103576
- diffusion theory 2-81994
- dilute electrolyte solutions, concs., molar vols. and viscosities (German) 2-56236
- electric field generation by arbitrarily moving electrolyte 2-70471
- electrical double layer, modified Gouy-Chapman eqn. for different ion sizes 2-81640
- electrical double layers, image effects, Monte Carlo and hypernetted chain eqn. calcs. 2-81639
- fuel cell, current status and future developments (Czech) 2-57695
- ice crystals in low temp. electrolyte solns., controlled nucleation and quasi-ordered growth 2-60903
- ionic system, thermodynamic props. and crit. points, charged hard sphere model (Russian) 2-61107
- Liesegang rings, nucleation and growth in concentration gradients 2-105518
- metal-electrolyte interface, double layer, nonlocal electrostatic model 2-87369
- metal-electrolyte interface, elec. double layer, layered lattice gas model 2-72051
- molten carbonate fuel cells, electrolyte distrib. thermodynamics 2-88425
- mononucleosomes, polyion diffusion, doppler shift spectrosc. investig. 2-66263
- Na₂SO₄ aq. solns., densities and apparent molar vols. 2-98176
- nonprimitive, Ornstein-Zernike eqn. soln. with generalised closure 2-81645
- pattern formation, instability theory, rel. to Liesegang rings 2-105519
- photoemission into electrolytes from metals, as solid state and interfacial physics technique, review 2-62041
- polyelectrolyte, persistence length, electrostatic contrib. 2-90747
- polyelectrolyte soln., diffusion of small molecules 2-66269
- polyelectrolyte solution, counterion distrib. around cylindrical polyion 2-109644

electrolytes continued

- polyelectrolyte solution containing mixture of same charge counterions, thermodynamic props., cell model 2-116721
 polyelectrolyte solutions, counterion binding, FT NMR self-diffusion invest. 2-82729
 polyelectrolyte solutions, osmotic coeff., Monte Carlo method 2-57635
 polyelectrolyte systems, cell model, statistical mech., Monte Carlo and Poisson-Boltzmann calcs. 2-81642
 polyelectrolyte-electrolyte solns., mean activity coeff. calc. 2-104024
 polyelectrolytes solution, counterion self-diffusion coeff. 2-104036
 polyanion diffusion in low ionic strength buffers, electrolyte dissipation effects 2-66263
 polyanion diffusion in low ionic strength buffers, electrolyte polarisation effects obs. 2-66264
 potential distribution measurement, rapid method, appl. to corrosion studies (*Japanese*) 2-74392
 sodium carboxymethyl cellulose, aq. solns., permittivity, transmission dielectric time domain spectra 2-110742
 sodium polystyrene sulphonate, mixtures, activity coeffs. calcs., ^{23}Na NMR study 2-104023
 solution surface, slow decay of ion correl. 2-97888
 solutions, bimorphic lattice theory 2-103574
 solutions, excess Gibbs mixing free energy 2-84578
 solutions, single ionic drift velocities, NMR meas. 2-71679
 solutions, surface struct., thermodynamic props., RPA calcs. 2-76262
 tampon plating, plant, material, solutions (*German*) 2-105489
 water electrolysis, electrocatalysts and separators for use in KOH and LiOH solutions 2-62407
 (Ag, Ti, K)NO₃-H₂O electrolyte solns., water activities, vapour press. meas. 2-105498
 Ag-electrolyte interface, surface states, electroreflectance study 2-92754
 AgNO₃-NaNO₃, molten, current-induced comp. gradients 2-57654
 AlCl₃ based molten salt mixtures, for Al staining Fe and steel 2-62285
 Au-electrolyte interface, surface states, electroreflectance study 2-92754
 CoCl₂-6H₂O and H₃BO₃, electrolyte for Co coating WC particles 2-83261
 CoSO₄-7H₂O and H₃BO₃, electrolyte for Co coating WC particles 2-83261
 Cu-Cd film on Cu (111), struct., electrolyte effect 2-61312
 CuSO₄, aq. solns., permittivity, transmission dielectric time domain spectra 2-110742
 H₂ production by H₂O electrolysis in alkaline media at intermediate temp. 2-99848
 H₃PO₄ electrolyte, for electropolishing single-phase Cu-Al 2-116617
 LiAlO₂/molten carbonate structs., compressive strength anal. 2-61050
 MgCl₂, aq. solns., densities and apparent molar vols. 2-98176
 MgSO₄, aq. solns., densities and apparent molar vols. 2-98176
 NaCl aq. solns., densities and apparent molar vols. 2-98176
 Ni film-electrolyte system, transient processes initiation by IR laser pulse 2-82046
 SrTiO₃, matrix material for molten carbonate fuel cell electrolyte structs. 2-88426
 ZnCl₂, battery electrolytes, transference numbers of Zn ion species 2-88418
 ZnCl₂ solutions in D₂O, local order and dynamics, small angle neutron scatt. study 2-55828

electrolytes, solid *see superionic conducting materials***electrolytic capacitors**

- Al, anodic oxide layer obs. using TEM and SEM 2-99580
 Al, dielectric meas. on Al(OH)₃ anodised layers 2-104809
 Al, proton magnetic relaxation study of anodic oxide layer 2-104733

electrolytic conductivity of liquids *see electrical conductivity of electrolytic liquids***electrolytic deposition** *see electrodeposition***electrolytic devices**

- photographic emulsion grain-size analyser 2-112868

electrolytic dissociation*see also electrolytic ions*

- fusion reactor, HYFIRE, high temp. water electrolysis appl. 2-88417

electrolytic ion mobility*see also electrophoresis*

- electrolyte solns., single ionic drift velocities, NMR meas. 2-71679
 LiCl-KCl, liq. state, ion mobility mol. dynamic simulation 2-110022
 LiNO₃-NH₄NO₃, binary melts, Chemia effect, internal mobility meas. 2-66271
 Ni/Zn batteries, vibrating Zn electrodes, mass transfer enhancement 2-88421

electrolytic ions

- see also electrical conductivity of electrolytic liquids; electrolytic dissociation; electrolytic ion mobility*
 No entries

electrolytic polishing

- anodic leveling under secondary and tertiary current distribution conditions 2-88270
 chemical polishing initiation, effect of oxide layer 2-111383
 electromechanical polishing apparatus 2-116666
 metal electropolishing rel. to other types of metal dissolution 2-57568
 radioactive decontamination appl. 2-102282
 Co, electrolytic polishing, with appl. of alternating to DC current (*Russian*) 2-62268
 Cu, anodic dissolution in nitrate electrolyte 2-88270
 Cu-Al, single-phase, electropolishing in H₃PO₄ 2-116617
 Fe, electropolishing rel. to other types of metal dissolution 2-57568
 Fe-Ni based austenitic alloys, electropolishing effect on struct. state 2-78014
 Mo and alloy VM-1, anodic buffing and polishing, polarisation charact. 2-83292
 Nb superconducting resonator, Q-factor, electrolytic oxidation effect 2-116618
 Ni-Fe (25 at.%), ESCA studies, surface prep. treatments, oxidation effects 2-83295
 Sn, formation of SnO₂/SnO, electron loss study 2-78003

electromagnetic absorption *see electromagnetic wave absorption***electromagnetic compatibility***see also frequency allocation*

- hybrid particle pushing/fluid approach to modelling X-ray deposition region 2-86375
 pulse produced by nuclear explosion, simulation aid by electron pulse direct injection into air 2-96357

electromagnetic corrections

"electromagnetic corrections" is distinguished in use from "radiative corrections" by application to elementary particle and nuclear interactions

see also radiative corrections

- cosmology, dynamical symmetry breaking by EM corrections 2-79262
 flux confinement in leading logarithmic model 2-95751
 gauge theory, globally supersymmetric, spontaneously broken, cancellation of quadratically divergent mass corrections 2-89895
 heavy quark mass, one-loop radiative correction in U(1)×SU(2)×SU(3) model 2-101725
 heavy quark systems, leptonic widths, duality and gluonic radiative corrections 2-95818
 hyperon semileptonic decays, polarised neutral and charged, EM corrections 2-69457
 N=1 supersymmetric Yang-Mills theories, renormalisation, radiative corrections 2-59018
 neutrino propagator, EM corrections in Weinberg theory, deflection in external field 2-59070
 quarkonium decay, radiative corrections, scheme depend. in perturbative QCD 2-101710
 semileptonic processes mediated by W, O(α) corrections, large m_w, m_b behaviour 2-59114
 spin 1/2 fermion scatt., lowest order electroweak corrections, one loop amplitudes, decays, masses 2-59076
 SU(2)_c×U(1) spontaneously broken gauge theory structure 2-64249
 SU(2)×U(1) Weinberg-Salam model, strongly interacting Higgs sector effects 2-64246
 SU(2)⊗U(1) model, dynamical symmetry breaking and radiative correction to weak-isospin relation 2-95714
 SU(3)×SU(2)×U(1) model, supersymmetric extension 2-79803
 SU(8)_c×SU(8)_R grand unified model, symmetry hierarchy and radiative corrections (*Russian*) 2-54034
 supersymmetric theories, indices, triality and UV divergences 2-89920
 c, mass operator behaviour in superstrong mag. field 2-89930
 e⁺e⁻ annihilation, dominant EM correction to energy-energy correl. 2-69471
 e⁺e⁻ annihilation, polarised beams, radiative corrections in standard electroweak model 2-113279
 e⁺e⁻ annihilation in TRISTAN energy region, 1⁺ toponium prod., initial-state radiative corrections 2-107672
 e⁺e⁻→e⁺e⁻, Bhabha scatt. around Z₀ pole 2-95811
 e⁺e⁻→hadrons, qq bound states, relativistic duality, relativistic and EM corrections 2-74698
 e⁺e⁻→μ⁺μ⁻, 34.6 GeV CM, charge asymmetry meas. 2-89954
 e⁺e⁻→μ⁺μ⁻, radiative corrections in Z0 region 2-107654
 J/ψ→BB, B-baryon, isospin-violating EM contrib. 2-69456
 Λ→pπ, Cabibbo theory comparison, form factors, radiative corrections 2-113269
 M₁₂→lν̄, l=electron, muon, pseudoscalar mesons leptonic decay constant expt. determ. 2-69451
 μ→eν̄ν̄_e(γ), energy and angle cut depend., hard bremsstrahlung effects 2-95846
 μ→eν̄ν̄_e(e⁺ν̄ν̄_eγ), radiative correction to decays with massive Dirac neutrinos 2-69461
 ν_ee→ν_eν̄_e(γ), energy and angle cut depend., hard bremsstrahlung effects 2-95846
 ν_ee→ν_eν̄_e(γ), energy and angle cut depend., hard bremsstrahlung effects 2-95846
 pp→μ⁺μ⁻X, dimuon prod. at large transverse momentum, EM effects 2-101776
 π⁺p→μ⁺μ⁻X, dimuon prod. at large transverse momentum, EM effects 2-101776
 Σ⁺→neν, Cabibbo theory comparison, form factors, radiative corrections 2-113269
 T and related mesons, EM corrections 2-64331

electromagnetic decays

- baryons, radiative weak decay, single-and two-quark transition amplitudes 2-95844
 charmed baryons, weak EM decays, quark model 2-74685
 charmonium, EM decay, light plane theory appl. 2-59046
 charmonium, magnetic dipole transitions, relativistic corrections 2-95843
 hyperons, weak EM decays, quark model 2-74685
 M1 transitions from SU(3) subsectors of SU(N) 2-54123
 pseudoscalar boson, two-photon decay obs. 2-107664
 pseudoscalar glueball two-proton decay 2-54227
 pseudoscalar meson decay, P→1⁺1⁺+γ, bound state quark model calculations 2-101667
 quarkonium, relativistic correction to dipole decay amplitudes 2-95842
 scalar meson decay, triangular quark diagrams, rel. to vector dominance model (*Russian*) 2-95825
 spectroscopy of hadrons containing one heavy quark, D and F weak decay 2-84882
 vector meson radiative decay, EM current operator, SU(3) scalar term 2-95841
 A₂, radiative width determ. from two-photon exchange prod. 2-107665
 B neutral mesons induced decay and mixing, top quark mass 2-69434
 B⁺→B_s, strange baryons, dimension-five effective operators calc. 2-74691
 B⁺→B_s, upper limits on B meson mass 2-101724
 cē(bē) systems, effective power law pot., predicted mass, decay widths, fine-hyperfine splittings 2-101677
 χ₁⁺(3507), χ₂⁺(3553) radiative decays to J/ψ 2-95878
 Δ⁺(1232)→pγ, radiative width from Coulomb excitation (*Russian*) 2-64324
 η→γγ in SU(5) classification scheme 2-84899
 η→γγ(π⁺π⁻γ)(π⁺γγ)(3π), coloured quark field theory, PCAC approx. 2-89967
 η→π⁺γγ, decay width, δ(980) quark struct., quark diagram anomalies (*Russian*) 2-113278
 η-η'-glueball mixing in MIT Bag Model, radiative decay widths 2-101671
 η_c→2γ, gluon condensate effects 2-95765
 η_c→2γ, three point functions contributions, relativistic corrections 2-79886
 η', radiative width determ. from two-photon exchange prod. 2-107665
 η'-γγ, radiative width meas. 2-79901
 γp→π⁺n, 0.96-1.1 GeV, polarised target asymmetry, nucleon resonance radiative decay 2-64347
 J/ψ→γK⁺K⁻π⁰ radiative decay 1440 MeV pseudoscalar state identification 2-95820
 J/ψ→γ+axion, branching ratio, upper limit 2-54166

electromagnetic decays continued

- $J/\psi \rightarrow \gamma a$, $a = \text{axion}$, unambiguous test for axion 2-69470
 $J/\psi \rightarrow \gamma \eta$, evidence for θ reson. in radiative decays 2-54165
 $J/\psi \rightarrow \gamma f(1270)$, decay branching ratio and polarisation meas. 2-95822
 $K^+ \rightarrow \pi^+ \gamma (\pi^+ \gamma \gamma) (\pi^+ \gamma \gamma \gamma)$, expt. limits for decays 2-79885
 $\Delta \rightarrow n \gamma$, CP violation induced by penguin diagrams, n electric dipole moment 2-54158
 $\mu \rightarrow e \gamma$, decay rate in Zee model 2-113186
 $\mu \rightarrow e \gamma$, lepton-like Cabibbo angles, neutrino mixing angles and mass ratios (Chinese) 2-95835
 $\mu \rightarrow e \gamma$, radiative decays in arbitrary order 2-74688
 $\mu \rightarrow e \gamma \gamma (e \gamma)$, radiative decays and lower bounds on mass scale in composite lepton model 2-64326
 $\mu \rightarrow e \nu \bar{\nu} \gamma$, energy and angle cut depend., hard bremsstrahlung effects 2-95846
 $\mu^+ \rightarrow e^+ \nu \bar{\nu} \gamma$, radiative correction to decays with massive Dirac neutrinos 2-69461
 ν , radiative decay, astrophysical tests and fund. physics implications 2-89130
 $\nu \rightarrow \gamma$, photoionisation source in galactic haloes 2-74066
 $\nu \rightarrow \gamma \gamma$, detection prospects for primordial neutrinos 2-117837
 $\nu_\mu \rightarrow \nu_i \gamma$, massive neutrinos radiative decays in $SU(2) \times U(1)$ model 2-54153
 $\Omega \rightarrow AK^+$, dimension-five effective operators calc. 2-74691
 $\Omega \rightarrow \Sigma^+ \gamma$, parity violating mode, penguin contribs. to QCD hamiltonian, Wilson coeffs. 2-79869
 $p \rightarrow e^+ \gamma$, radiative proton decay in $SU(5)$ GUT, 3q annihilation 2-79795
 $\pi \rightarrow e e \gamma$, radiative decay, axial form factor, QCD nonperturbative contrib. 2-84895
 $\pi^0 \rightarrow \gamma \gamma$ high energy spectrum from relativistic plasma 2-73832
 $\pi \rightarrow \nu \bar{\nu} \gamma$, branching ratio, Weinberg model calc. 2-59141
 ψ decays, configuration mixing effects, QCD calc., rel. to confining pot. 2-54140
 $\psi \rightarrow (\eta \pi) \gamma$, pseudoscalar mesons mixing in $SU(3)_c$ quark-gluon model 2-54145
 $\psi \rightarrow \eta \gamma (\eta' \gamma)$, $SU(3)$ breaking effects enhancement, Ward identities appl. 2-59136
 $\psi \rightarrow G \gamma$, glueball obs. 2-79862
 $\psi \rightarrow \gamma + \text{glueball}$, vertex const. in QCD 2-79863
 $\psi \rightarrow \gamma \eta (\eta')$, decay rates and anomalous Ward identities 2-113266
 $\psi \rightarrow \gamma f(1440) \rightarrow \gamma K^+ K^- \pi^0$, $L(1440)$ state study in Crystal Ball detector 2-79883
 $\psi \rightarrow \gamma \theta(1640) \rightarrow \gamma \eta$, glueball and exotic meson candidates study 2-79884
 $\psi \rightarrow \gamma \theta(1640) \rightarrow \gamma \eta$, $\theta(1640)$ state study in Crystal Ball detector 2-79883
 $\psi \rightarrow \gamma u(1440) \rightarrow K K \pi$, glueball and exotic meson candidates study 2-79884
 Ψ radiative decays, coherence, mixing and interference phenomena 2-69469
 $\psi' \rightarrow \gamma \eta c$, 3592 MeV state study in Crystal Ball detector 2-79883
 $\psi' \rightarrow \gamma \gamma \psi$, branching ratio, multipole struct., χ spin 2-74690
 $\rho \rightarrow \pi \pi \gamma$, tests for ρ meson as gauge particle 2-54164
 $S^+ \rightarrow p \gamma$, radiative decay, quark diagram anal., formulation 2-95845
 τ , neutrinoless decay modes, expt. upper decays on branching fractions 2-95833
 $\tau \rightarrow \mu \gamma (e \gamma)$, radiative decays in arbitrary order 2-74688
 $T \rightarrow \gamma X$, axion production upper limit 2-101723
 $T \rightarrow \gamma a$, $a = \text{axion}$, unambiguous test for axion 2-69470
 $T \rightarrow \gamma \pi \pi$, exclusive decay, perturbative QCD calcs. 2-59154
 $T^*(T) \rightarrow \pi^+ \pi^- \gamma$, scalar meson dominance model 2-101713
 $V \rightarrow P \gamma$, radiative decays, meson mass effects on transition moments 2-101722
 $V \rightarrow P \gamma$, spin interaction affected interquark distances, effect on radiative decay 2-64330
 $W^+ \rightarrow P^+ \gamma$, $P = \text{pseudoscalar meson}$, strong interaction effects 2-59155
 $\Xi^- \rightarrow \Sigma^- \gamma$, parity violating mode, penguin contribs. to QCD hamiltonian, Wilson coeffs. 2-79869
 $Z^0 \rightarrow P^0 \gamma$, $P = \text{pseudoscalar meson}$, strong interaction effects 2-59155
 $\{ \rightarrow H^0 \gamma$, toponium decay, Higgs prod. mechanism 2-107572

electromagnetic energy *see* **electromagnetic waves****electromagnetic field theory***see also* **electromagnetic waves**; **electromagnetism**

- Abraham-Minkowski controversy, EM momentum in static fields 2-58675
 anisotropic media, EM wave propagation, coordinate-free approach 2-96807
 bilateral equivalent boundary conditions for EM field on rough surface (Ukrainian) 2-55023
 chemical electrodynamics, Hertz formulation 2-84835
 classical electron model and EM field momentum definition 2-95037
 classical electron model and EM field momentum definition 2-95038
 classification, algebraic, Penrose-type diagrams 2-74237
 common plane-wave model verification by band-limiting the far field of localised source 2-102695
 conductor with eccentric external return, self-impedance limits 2-80869
 conductors, rectangular, surrounded by ferromag. material, current displacement anal., integral eqn. method (Polish) 2-75491
 Dirichlet problem solution via Fredholm integral eqns. 2-96793
 dyadic Green functions theory for transient EM field 2-95034
 Einstein-Maxwell theories, unification scheme 2-89591
 electric dipole, vertical, over two-layer medium, time response, double deformation calc. 2-55041
 electron beam energy spread in EM wave field in a medium (Russian) 2-90788
 EM concepts and appls., book 2-107028
 equilibrium radiation theory, Gaussian measures (Russian) 2-53544
 equivalent circuits in Fourier space for the study of electromagnetic fields 2-102694
 fluctuation theory, first and second fluctuation-dissipation theorem 2-75496
 Fresnel formulas for EM fields at interface for jellium model within random phase approx. 2-59993
 generation of an electromagnetic field in connection with collective transitional radiation 2-84462
 instantaneous charge deceleration, EM wave field 2-114163
 integral equations for transient EM fields, scattering appl. 2-96814
 Kerr space-time, point charge, self-interaction 2-79445
 Lewis-Tolman-like nonrelativistic paradox 2-89510
 localised wave structs., nonlinear dynamics, geometrical props. 2-80879
 Maxwell's equations and the multipolar Hamiltonian 2-11271
 Maxwell's equations in the multipolar representation 2-112719
 Maxwell's equations in the multipolar representation 2-112720

electromagnetic field theory continued

- Maxwell action, duality invariance 2-53542
 moving surfaces of discontinuity, Poynting vector (French) 2-58630
 multipole propag. in homogeneous conducting wholospace 2-74235
 photon, wave-particle duality, conceptual problems 2-112747
 pulsed power education of Texas Tech University, in USA 2-94944
 radiation fields in scatt. vols. and at boundaries, partial invariant determ. 2-55046
 reaction field concept for EM fields in dispersive media, adjoint function relations 2-108766
 reciprocity and equivalence in reciprocal and non-reciprocal media through current distrib. rel. transforms. 2-96797
 self-dual Kerr-Schild metrics and null Maxwell fields 2-95157
 single integral eqn. for wave scatt. 2-95035
 sourceless EM field in gyrotropic media, representation in terms of scalar Hertz pot. 2-114157
 spherically gyrotropic media, Debye pots. 2-74234
 stationary fields in nonlinear media existence and stability theorems 2-75493
 time-dependent EM field problems, variational formulation 2-53541
 Volterra analysis to weakly nonlinear EM field problems, appl. to whistler propag. 2-102685

electromagnetic fields

- atomic interaction, comparison of spectral-line profiles 2-107167
 Bergeron's method adaptation to med. with resonance absorption 2-96801
 computation of EM field in system of conductors, appl. of finite element method 2-55040
 conducting cylinder surrounded by loop with excitation current of various wave forms, electromagnetic field, NDT appl. 2-65131
 conducting ferromagnetic sheet lamina, nonlinearity in harmonic quasistationary regime, EM field (French) 2-114151
 conducting rods electromagnetic fields calc. using variation method (Hungarian) 2-55024
 conductors, accelerated, EM induction 2-90768
 curvilinear screens, cyclically symmetric, EM field diffraction (Russian) 2-96811
 cylinder, finite thickness, long slots of different width, scattered EM field (Russian) 2-96809
 cylindrical conductors, anal. of EM fields set up by linear radiation (Russian) 2-96810
 dielectric slab, lossy, transient EM field anal. 2-102684
 distribution in solid metallic structures near current-carrying finite-length bar conductors, three-dimensional analysis 2-80875
 Earth, EM fields variations induced by synoptic scale oceanic movements 2-112133
 Earth EM sounding, finite-difference simulations and appl. to telluric fields in two dimensions 2-88732
 Earth mantle heating by variable EM field, convection, effect of solar activity rel. to Earth diurnal rot. vars. 2-111834
 effect on evolution of homogeneous cosmological models near singularity 2-89422
 elastic, dielectric continuum theory, basic eqns. and general constitutive relations (German) 2-96796
 electrically conducting body with semi-infinite cut, magnetothermoelastic field 2-55022
 electromagnetic systems for tokamak reactors, engineering problems 2-64639
 equations solution by two parameter iteration method, electric machines design appl. 2-90769
 Ernst eqns., with EM fields, similarity solns. 2-95159
 finite element calculation, inclusion of hysteresis processes 2-55026
 gas, microwave breakdown, low press. 2-91583
 gas mixture turbulent flow in external EM field 2-97686
 geophysical prospecting, modelling of EM systems, local inhomogeneities detection at sea (Russian) 2-100594
 idealised model of electromagnetic pump for molten metal (French) 2-69771
 insulated conductor near interface of two media, field analysis (Russian) 2-96799
 marine EM sounding, EM wave field for three-layer geoelectric section 2-111847
 momentum density 2-79307
 plate, conducting, with finite length cut, EM and thermoelastic field conc. 2-114152
 power supply systems for tokamak thermonuclear installations 2-64640
 pulse produced by nuclear explosion, simulation aid by electron pulse direct injection into air 2-96357
 SAW, transverse, parametric excitation by microwave elec. field 2-87345
 single-sided linear induction motor with solid iron secondaries, reaction forces prediction using computer model 2-80872
 spinning test particles in curved space-time with torsion, Lagrangian formulation 2-95166
 three-dimensional field computation 2-55028
 twisted coordinate system 2-70472
 two-dimensional, determ. using finite element method (Rumanian) 2-108764
 two-dimensional steady-state skin effect, integrodifferential finite element formulation 2-55027
 Volterra analysis to weakly nonlinear EM field problems, appl. to whistler propag. 2-102685

electromagnetic induction*see also* **inductance**

- coil moving periodically in air gap, induced current time depend. (German) 2-96795
 conducting sphere in steady mag. field and perpendicular oscillatory mag. field, mag. fields induced calc. 2-80873
 conductors, accelerated, EM induction 2-90768
 Earth, EM fields variations induced by synoptic scale oceanic movements 2-112133
 Earth, EM induction by long period geomag. vars. in Indian sub-continent 2-111865
 Earth, surface polarisation fields calc. for two-dimensional bodies of infinite conductivity 2-117194
 Earth EM sounding, finite-difference simulations and appl. to telluric fields in two dimensions 2-88732
 eddy currents treated as a radiation effect 2-55042
 electromagnet, Fe-free, proximity effect, current distrib. calcs. 2-65130
 ferromagnetic prolate spheroidal bodies and current bands, mag. induction calc. 2-90767

electromagnetic induction continued

- ferromagnetic spherical bodies and current bands, mag. induction calc. 2-90766
 field distribution in solid metallic structures near current-carrying finite-length bar conductors, three-dimensional analysis 2-80875
 flow meas. in open channels, using rotating EM field (*German*) 2-81417
 heteropolar linear synchronous motor (LSM) theoretical design, construction and testing for combined propulsion and levitation 2-70479
 induction machines in heave mode, dynamic behaviour anal. using finite element and Fourier anal. 2-80871
 insulated wire buried in ground, current induced by incident EM wave 2-96794
 liquid, EM stirrer for slab mould (*French*) 2-77766
 magnetic field, vector potential and their derivatives due to currents in closed polygons of wire 2-65128
 Magsat altitudes, model simulations, induction effects 2-100635
 measurement unit, Soviet primary standard 2-69125
 n-layer media, surface magnetotelluric field (*Croatian*) 2-83747
 self-exciting dynamo, generalised Cowling theorem 2-76034
 single-sided linear induction motor with solid iron secondaries, reaction forces prediction using computer model 2-80872
 solenoids, induced electric fields due to time-varying magnetic field 2-96802
 solid cylinders, rotation in transverse mag. field 2-65129
 steel, electrical, nondestructive testing of mag. props., tensile stresses influence on accuracy 2-58858
 thin circular and rectangular plates, eddy current losses 2-65127
 Fe-Si, electrical steel, mag. induction meas. in weak mag. fields 2-89753
 Fe-Si, electrotechnical steel type 2011, mag. induction anisotropy determ. 2-92898
 Fe-Si-B, mag. induction, effect of Sb and Sn during secondary recrystn. 2-83244
 Nb-Co, residual induction of individual particles, powders and massive specimens 2-72288
 Sm,(Er,Gd)-,Co, mag. props. and mag. induction temp. depend. meas. (*Russian*) 2-98914

electromagnetic interference

- see also radiofrequency interference; television interference*
 airborne warning systems for natural and aircraft-initiated lightning 2-83894
 atmospherics, 1-4 kHz noise obs. made in Italy and Norway 2-58110
 direct effects of lightning on aircraft, protection procedures 2-83895
 lightning, aircraft susceptibility assessment and development of protection criteria 2-83899
 lightning, electromagnetic interaction with aircraft 2-83896
 lightning environmental parameters meas. related to interaction with electronic systems 2-79543
 lightning simulation and testing for assessing effects on aircraft and avionics 2-83898
 magnetic fields, AC, LF, system for reducing, in vicinity of scanning electron microscope 2-74575
 metalloplastics—high conductivity materials 2-56563
 natural lightning, EM interaction with aircraft, exptl. data and modelling review 2-83892
 piezoelectric pressure gauge for operation in presence of strong electrical noise and X-rays 2-64013
 plastics, conductive, appls. as current and heat conductors 2-56546
 polymer, conductive, fibre filled, elec. and phys. props. 2-56562
 pulse produced by nuclear explosion, simulation aid by electron pulse direct injection into air 2-96357
 static charging and its effects on avionics systems 2-83897
 TFR diagnostics grounding 2-80296
 triggered lightning, effect on aircraft 2-83893

electromagnetic lenses *see magnetic lenses***electromagnetic oscillations**

- see also cavity resonators; lasers; masers; ring lasers*
 No entries

electromagnetic radiation *see electromagnetic waves***electromagnetic theory of light**

- photon, wave-particle duality, conceptual problems 2-112747

electromagnetic wave absorption

- see also electromagnetic wave propagation in plasma; gamma-ray absorption; light absorption; spectra; X-ray absorption*
 13 GHz line-of-sight link rainfall and attenuation statistics 2-117426
 anechoic chamber with EM waves, phenomena anal. (*Chinese*) 2-108767
 centrosymmetric crystals, EM wave nonlinear absorpt. due to excitation of sound 2-93152
 Circinus X-1, X-ray obs. in low state rel. to X-ray absorpt. by primary star stellar wind 2-112504
 circular cylinder, near-field absorpt. from elec. and mag. line sources, biological heating appl. 2-100053
 condensed medium, oscillatory evaporation by EM radiation 2-92312
 conducting plasma layer, refl. transmission and absorption coeffs., kinetic theory 2-76138
 D-region radio wave absorption, influence of water vapour concs. 2-112201
 electromagneto-thermo-mechanical plane wave attenuation in magneto-thermo-viscoelastic media, mag. field effect 2-55047
 glasses, nonresonant EM and US absorpt., quantum theory 2-98205
 ionosphere, eclipse time absorption of radio waves, gravity wave effects 2-78893
 ionosphere, lunar tidal var. in A1-absorption at low latit. during solar min. 2-106387
 ionosphere, reson. absorpt. of radio waves, at freqs. close to electron gyrofrequency 2-112199
 lattice weak EM wave absorpt. in presence of reson. laser radiation (*Russian*) 2-93134
 low-temp. absorpt., of strong EM wave by electrons in surface-adjacent inversion layer (*Russian*) 2-96806
 M87, evidence for free-free absorpt. at long radio wavelengths 2-112562
 man and animals, postresonance absorpt. 2-111726
 prolate spheroidal models exposed to near fields of elec. small apertures, absorpt. characts. 2-100042
 rain attenuation statistics for slant path at 11.6 GHz using Italian Sirio satellite expts. 2-78749
 resonant absorption by water polymers in the atmosphere 2-73651
 resonant transmittance model for mm-wave propagation, IR modelling techniques appl. 2-112035
 rough metal surfaces, EM wave absorptivity and emissivity meas. 2-77471

electromagnetic wave absorption continued

- semiconductor, hot carrier wave excitation by inhomogeneous EM wave, linear approx. (*Russian*) 2-61478
 semiconductor, strong EM wave absorption, intraband carrier motion, density matrix approach 2-61853
 semiconductor film, EM wave absorpt. by two-dimens. plasmons 2-115685
 semiconductors, with superlattice, electron heating influence in EM wave reflection and attenuation coeffs. 2-99080
 snow, Atmospheric Sciences Laboratory-MMTRN model for near millimetre wave extinction 2-117393
 snow, falling, attenuation coefficients of near-millimetre waves 2-117396
 surface electron scatt., adiabatic effects, boundary condition (*Russian*) 2-61549
 TMTSF₂AsF₆ antiferromagnetic resonance obs. 2-93015
 troposphere, millimetre wave propag. through natural and artificial obscuration 2-117392
 Venus middle atmosphere, UHF/SHF absorpt. by SO₂ and SO₃ in CO₂ atm. 2-58279
 CaWO₄:Ho³⁺, NMR study of EM and sound energy absorpt. (*Russian*) 2-61778
 He film, surface electron localisation, UHF EM absorpt. study (*Russian*) 2-56294

electromagnetic wave attenuation *see electromagnetic wave absorption; electromagnetic wave scattering***electromagnetic wave diffraction**

- see also electromagnetic wave propagation in plasma; gamma-ray diffraction; light diffraction; X-ray diffraction*
 absolutely conducting spheroid 2-59997
 anisotropic media, EM radiation diffraction (*Russian*) 2-90786
 arbitrarily shaped surfaces, finite element approx. of EM diffraction 2-96804
 comb grating with finite no. of bars, H-polarised wave diffraction (*Ukrainian*) 2-80876
 conducting halfplane, currents induced by plane wave at arbitrary incidence 2-102689
 curvilinear screens, cyclically symmetric, EM field diffraction (*Russian*) 2-96811
 cylindrical conductors, anal. of EM fields set up by linear radiation (*Russian*) 2-96810
 diffraction by edge of waves diffracted by previous edge 2-65136
 dipole field diffraction by perfectly conducting wedge 2-85863
 finite grating wave diffraction (*Ukrainian*) 2-102688
 focal shift dependence on Fresnel number and f number, boundary-diffraction theory 2-85866
 Gaussian beam, three-dimens., incident on Kirchhoff half-screen, boundary-diffraction wave asymptotic representation 2-59994
 Gaussian beam diffraction by dielectric spheres 2-85873
 gratings, EM wave diffraction, numerical anal. by mode-matching method with smoothing procedure 2-90780
 infinite perfectly-conducting screen with small opening in presence of ferrite spheres, anal. 2-75499
 ionosphere, effect of large-scale inhomogeneities on reflected wave field struct. 2-112197
 long-range tropospheric propagation, effect of Earth's surface 2-63071
 metal grating in semicond. wafer, short wavelength EM wave diffraction calc. 2-90784
 multicoated gratings, differential formalism applicable in entire optical region 2-90779
 plane e.m. wave, high frequency diffraction by perfectly conducting circular with narrow slit (*Japanese*) 2-90773
 plane EM wave diffraction on anisotropic sphere, Maxwell eqns. (*Russian*) 2-80877
 plane wave by body of revolution partially coated with insulation layer 2-65138
 plane wave diffraction at grating, exact soln. of oblique incidence problem 2-79382
 plane wave diffraction by an infinite set of hard and soft parallel half-planes 2-55044
 plane waves, diffraction by parallel half-planes, Riemann approach 2-102687
 plasma waves, microwave Fraunhofer diffraction diagnostic technique 2-86474
 polarised plane EM wave diffraction, by vector holograms 2-108834
 polarised plane EM wave diffraction by phase holograms in coupled-wave approx. 2-108833
 polarised plane wave by conducting rectangular cylinder on plane conductor 2-102699
 polygon image formation by refr. optics, EM diffraction theory 2-55082
 Ritz method use in theory of general charact. oscills. 2-114161
 slot in ground screen covered by dielectric slab 2-90775
 spectral theory of EM wave diffraction (*French*) 2-90781
 Ag film, volume EM, surface EM and SAWs, three-wave mixing 2-82936

electromagnetic wave diffusion *see electromagnetic wave scattering***electromagnetic wave interference**

- see also atmospherics; electromagnetic wave interferometers; electromagnetic wave interferometry; electromagnetic wave propagation in plasma; light interference; Moire fringes*
 electron density meas., by submillimetre interferometer using split wave front 2-103455
 interference microscope, thickness conversion const. calibration using white light (*Chinese*) 2-58900
 spatially polarised filtration of EM waves 2-75495
 spherical wave reflection at plane interface where rel. index refraction is near unity 2-96805
 X-ray diffractometer, flat specimens holder 2-113090

electromagnetic wave interferometers

- see also electromagnetic wave interferometry; light interferometers*
 Fabry-Perot interferometer for sub-millimetre waves (*Chinese*) 2-69241
 microwave interferometer design for plasma density meas. 2-69312
 microwave sensor for measuring small movement of biological subject 2-88710
 plasma diagnostics, low temp., UHF interferometer 2-71259
 radio telescopes, appl. of specialised complex using three very long baseline interferometers (*Russian*) 2-100737
 submillimetre waveguide laser interferometer for plasma diagnostics 2-71258
 TFR, multichannel far-IR interferometer, electrical design 2-80279
 TFR, multichannel far-IR interferometer, optical and mechanical arrangement 2-80280
 Tiddinbilla two-element interferometer 2-112321

electromagnetic wave interferometers continued

- TMX, microwave interferometer for plasma density meas. 2-74983
- VLBI radiotelescopes (*German*) 2-89421
- VLBI systems, methods and operation (*German*) 2-89165
- X-ray, parallel beam (*Russian*) 2-89880
- X-ray interference by wavefront division 2-58972

electromagnetic wave interferometry

- see also *light interferometry; Moire fringes*
- airborne radio beacons, interferometric aircraft tracking system 2-100570
- global phase-stable radiointerferometric systems, review 2-117600
- microprocessor-controlled phase analysis for a 2-mm microwave interferometer on the TCA Tokamak 2-81588
- MM and sub-MM wavelength interferometry, use of two-oscillator operating modes 2-76199
- NGC 1275, multifreq. VLBI obs. of galactic nucleus 2-74080
- radio astronomy by VLBI 2-100745
- radioastronomical interferometry, math. principles (*Spanish*) 2-68631
- solar gradual rise and fall bursts, source struct. at 17 GHz from interferometer obs. 2-100871
- Sun, obs. of rising motion of behind limb flare at 35 GHz 2-94695
- very long baseline, time accuracy requirements, radio astronomy appl. 2-89167
- very long baseline interferometry (*Japanese*) 2-89166
- VLBI, appl. of specialised three-interferometer complex (*Russian*) 2-100737
- VLBI, broadband synthesis 2-68632
- VLBI 10⁶ km ground to space construction principles and props. 2-100739
- VLBI experiments, software for CS-type computers 2-68634
- VLBI techniques for observation of Jupiter's decametric emissions (*Japanese*) 2-117599
- water vapour, microwave excess path length estimation by max. likelihood method, multialgorithm program 2-106290
- weak stress waves in solid materials, interferometric detect. 2-65551
- X-ray interferometry, precision goniometer for fine adjustment in nanoradian range 2-89862

electromagnetic wave propagation

- see also *atmospheric electromagnetic wave propagation; atmospheric light propagation; backscatter; electromagnetic wave absorption; electromagnetic wave diffraction; electromagnetic wave interference; electromagnetic wave propagation in plasma; electromagnetic wave reflection; electromagnetic wave refraction; electromagnetic wave scattering; guided electromagnetic wave propagation; light propagation; radiowave propagation*
- aerosols, magnetoelectric, disperse content determ. using spectral-transparency method 2-68487
- anisotropic media, EM wave propagation, coordinate-free approach 2-96807
- antennas, cylindrical source, pattern space factor and quality factor 2-114158
- bruce, J.W., Giblin, P.J., Gibson, C.G. (Dept. of Pure Math. Univ. of Liverpool, Liverpool) 2-79379
- composites, two-component, effective dielec. function, bounds on allowed values at finite freqs. 2-82260
- corrugated interface between two media, surface EM wave propag. 2-58572
- depolarisation of EM waves scatt. from slightly rough random surfaces, extinction theorem 2-75494
- dielectric borehole logging, appl. of EM wave propag. in fluid saturated porous rock 2-78656
- dielectric shell, spherical, EM wave transmission analysis 2-90774
- discontinuity propag. in coaxial cable, narrow gap case 2-59992
- discrete random media, bulk propag. characts. 2-65141
- electron beam in spiral decelerating structure, slow cyclotron wave resonant instability 2-90340
- energy localisation carried by an EM wave to the surface of a circular section conductor (*French*) 2-90771
- ether, an assessment 2-114169
- ferrimagnet, microwave propagation, book 2-58575
- inhomogeneous slab scattering, integral eqn. approach, fast algorithm 2-114155
- inverse problems for nonabsorbing media with discontinuous material properties 2-53521
- isotropic medium with optical activity, EM wave existence and excitation study 2-65133
- lateral EM wave propag. along flat boundaries between dielec. media, penumbra caustics 2-85871
- lateral wave propag. at lithosphere-ocean interface, model expts. 2-90778
- leaky waves supported by a square wire mesh with bonded junctions above a reactive surface, modal eqn. 2-55049
- lossy inhomogeneous medium, wave propagation and profile inversion 2-70483
- Maxwell-Hertz's theory, modification 2-114153
- mixed media, macroscopic props. of disordered media, conf., New York, USA (June '81) 2-94915
- one-dimensional randomly inhomogeneous medium, EM wave intensity fluctuations radiative transfer 2-85869
- one-way speed of light, expt. determ. 2-58604
- parametric amplification in periodically heterogeneous medium, theory (*Russian*) 2-75630
- pulse propag. in uniform conducting medium (*Russian*) 2-102701
- random medium, two-dimens., plane wave propag., multiple foci in intensity fluctuation range depend. 2-59996
- randomly inhomogeneous dielectrics, EM wave propag., multiple scatt. 2-65139
- relativistic electron in undulator in strong-field mode, radiation spectrum calc. 2-102706
- semiconductor films with negative differential cond., EM wave propag. 2-98686
- semiconductors, with superlattice, electron heating influence in EM wave reflection and attenuation coeffs. 2-99080
- slow wave calc. in helical line with elliptical transverse cross section 2-59999
- solar corona, obs. of radio echo and sporadic radiation scatt. 2-94698
- solar corona, radio waves focusing in large-scale coronal geometries rel. to Sun radar cross sections 2-100875
- splines for electromagnetic approximations 2-102690
- superconducting film, thick, EM wave penetration, anomalous transparency 2-61657

electromagnetic wave propagation continued

- surface plasmon propag. parallel to grooves of large amplitude grating 2-60000
 - TE focus wave mode pulse formulations, homogeneous Maxwell eqns. 2-102702
 - underwater coil receiver system for studying EM propagation 2-68511
 - wave packets in smoothly nonuniform dispersive media 2-114160
 - waveguide filled with moving dispersive medium, EM wave energy 2-79381
- electromagnetic wave propagation in plasma**
- see also *ionospheric electromagnetic wave propagation; light propagation in plasma; magnetospheric electromagnetic wave propagation*
 - acoustic or EM wave interaction with moving plasma pulse 2-103379
 - afterglow plasma column, microwave injection, upper-hybrid soliton, density cavity 2-60755
 - bounded plasma, bremsstrahlung radiation emission, fluctuation theory 2-55716
 - bounded plasma, EM fields and energy, in mag. field 2-97741
 - breakdown wave in self-consistent field of EM wave beam (*Russian*) 2-103378
 - bremsstrahlung, collective effects (*Chinese*) 2-76134
 - coherent radiation sources, in astrophysics, lasers 2-63246
 - column, sustained by surface wave, characts. and energy balance 2-55746
 - Compton scattering, time-dependent X-ray spectra of Compton-cooled plasmas 2-78948
 - conducting plasma layer, refl. transmission and absorption coeffs., kinetic theory 2-76138
 - conference, Swansea, Wales (July 1981) 2-94899
 - continuous radiation polarisation from weakly ionised gas (*Russian*) 2-86385
 - depolarization in nonlinear transillumination 2-91619
 - discharge propagation, 2-dimens. problem, numerical simulation (*Russian*) 2-76190
 - driven currents by HF EM waves, power dissipation (*Chinese*) 2-103377
 - electric breakdown due to pulsed intersecting radio beams 2-112023
 - electron cyclotron emission diagnostics, antenna design and performance 2-103458
 - electron cyclotron heating by extraordinary EM waves, propagation 2-71214
 - electron cyclotron heating in stellarator plasma by microwave injection 2-81508
 - electron cyclotron resonance heating for Tokamak plasma, preionisation of EM wave 2-71213
 - electron heating, collisionless inverse bremsstrahlung 2-109543
 - electron heating in plasmas by high freq. EM waves, quantum kinetic theory 2-71201
 - electron plasma, powerful laser nonlinear interaction 2-91625
 - EM wave excitation during scattering of charge density waves in electron beams by ion-acoustic oscillations in plasma waveguides 2-91632
 - excitation of an ion-acoustic wave by two whistlers 2-91608
 - excitation of media with spatial dispersion of waveguide type 2-115015
 - guided TM waves in slab of uniaxially anisotropic plasma, ray optics description 2-86437
 - half-space, filled with nonlinear medium, one-dimens. problem of wave self-action, reflectance (*Russian*) 2-55250
 - high density plasma, electron density determ., microwave method 2-86476
 - hypothetical cold plasma containing both electric and mag. charges, EM wave propag. 2-107068
 - induced scattering, nonlinear phase detuning effect (*Russian*) 2-76089
 - inhomogeneous media 2-103381
 - instability criterion of plasma (*Chinese*) 2-97742
 - ion-acoustic instability, EM wave absorpt. and scatt. (*Russian*) 2-109519
 - ions accel. by ponderomotive force in laser plasma, energy spectrum 2-109523
 - isolated EM wave beam state in decelerating systems 2-71188
 - laser beam-plasma interactions, nonlinear scatt. from electron Bernstein modes 2-115014
 - laser compressed plasmas, simulation of X-ray line emission spectra 2-65700
 - laser light absorption, theoretical model 2-91626
 - laser plasma, homogeneous and inhomogeneous, stimulated scatt. and harmonic radiation (*Chinese*) 2-76086
 - laser pulse dynamic collisionless absorpt. in homogeneous plasma by nonlinear forces 2-91627
 - laser radiation interaction, electron distrib., plasma heating, spectra (*Russian*) 2-60775
 - laser-plasma interaction, energy deposition by hot electrons, K α emission study 2-76136
 - laser-plasma interaction, stimulated ion-Compton laser modulation 2-103309
 - laser-plasma interactions, nonlinear ion waves, stimulated Brillouin scatt. 2-76123
 - laser-solid interaction, plasma prod., Brillouin scatt. 2-76164
 - laser-target interaction, plasma prod., effect of target material on absorpt. meas. 2-60776
 - light absorpt., magnetic field generation, collisional ponderomotive effects, particle simulation 2-76069
 - light absorption at a shock wave front, numerical study (*Russian*) 2-76088
 - lossy magnetoplasma, transmitted impulse response by convolution method 2-91623
 - magnetic field measurements in fusion plasmas using the motional Stark effect 2-86478
 - magnetic plasma, EM wave effects on electrons 2-103399
 - magnetised plasma, electron distrib., quantum mech. collisionless Boltzmann eqn. 2-97746
 - magneto-active collisional plasma, attenuation and refr. coeffs. 2-109520
 - magnetoplasma, EM beam interaction with electron and ion waves, stimulated Raman and Brillouin scatt. 2-86401
 - MHD instability, RF stabilization 2-76091
 - microwave coherent scatt. for lower hybrid heating wave detect in Wega torus 2-97789
 - microwave radiation modulation, plasma magnetic field and density pulsations determ. (*Russian*) 2-60753
 - microwave third harmonic generation in a plasma-filled cylindrical waveguide 2-97747
 - nonequilibrium magnetoactive plasma, amplitude modulated EM waves (*Russian*) 2-60756

electromagnetic wave propagation in plasma continued

- nonlinear interaction of EM wave, stimulated Raman and Brillouin scatt. 2-55739
 nonlinear wave propagation, numerical method, appl. to laser-plasma interaction 2-97745
 nonmonochromatic waves scattering 2-90782
 ohmic heating by microwave beam, appl. to ionosphere plasma and solar power Satellite 2-71186
 ordinary mode instability in counterstreaming and counterrotating plasmas 2-84079
 plane stratified cold plasma, EM wave propag., plasma transport and electron cyclotron heating 2-71215
 plasma slab, EM energy anomalous transmission 2-81485
 precessional rotation, intensity induced, calc. 2-55745
 pulsar plasma waves, self-consistent solns. 2-112476
 radiation transfer in strongly magnetised plasma, Fokker-Planck eqn. 2-78945
 radiative transfer in stellar interiors effects of plasmon-electron interaction 2-89238
 reflection by multistream plasma slab, multilayer approx. method 2-115012
 reflection from moving plasma, caviton dynamics 2-91603
 reflection of radio waves from a meteor trail containing two kinds of ions 2-117634
 relativistic Maxwellian magnetised plasma, electron cyclotron absorpt. 2-86395
 RF amplitude modulated field in nonuniform plasma, ponderomotive forces meas. 2-97743
 RF field distrib. in magnetised bounded plasmas, anomalous skin effect 2-55747
 RF wave heating, nucl. fusion appls. (*Japanese*) 2-97757
 RF wave induced flow and averaged force in dispersive nonuniform plasma 2-60738
 second harmonic generation at reson. absorpt., calc. 2-55744
 stimulated Brillouin scatt. and enhanced ion wave damping in Z pinch plasma 2-65729
 stimulated Brillouin scatt. reduction by ion acoustic harmonic generation 2-60737
 stimulated Raman scatt. effect on penetration of EM field in magnetoactive plasma 2-109524
 stimulated Raman scattering in large plasmas 2-103380
 superheterodyne amplification effect of EM wave propagation in plasma-beam system 2-76137
 suprathermal electron drive and symmetry effects in intermediate density laser fusion targets 2-86383
 surface wave propag. meas. in inhomogeneous plasma 2-81484
 thermal self-focusing of EM waves in completely ionised plasma 2-109521
 Thomson scatt., appl. to noisy radiative plasma 2-109472
 Tokamak plasmas poloidal fields Faraday rotation (*Spanish*) 2-86436
 Tokamaks, current maintenance by synchrotron radiation 2-91596
 transient plane wave reflection obliquely incident on compressible plasma half-space 2-65730
 transmission through plasma, far forward scatt. and rel. refractive index phenomena 2-109522
 transverse electromagnetic waves with $\vec{E} \parallel \vec{B}$ 2-65135
 transversely magnetised compressible plasma 2-97744
 Trivelpiece-Gould mode, excitation in 2-dimens. nonuniform plasma waveguide 2-103359
 tunnelling of EM waves through evanescent resonance layer parallel to mag. field 2-115013
 two component nonuniform plasma, EM wave excitation and propagation, coupling of antennas 2-81488
 VLF receiving dipole in magnetoplasma, directivity pattern 2-63121
 wave beam limiting state in plasma medium 2-71187
 whistler wave propagation, Schrödinger eqn. 2-91624
 whistler wave self-focusing in plasma duct (*Russian*) 2-97737
 Ar low temperature plasma, microwave interactions, nonlinear phenomena (*Russian*) 2-76135
 H glow discharge, TEA CO₂ laser interactions, spectroscopic aspects 2-97812
 N plasma, absorption coeff. at 2820 Å, determ. 2-97792

electromagnetic wave reflection

- see also electromagnetic wave propagation in plasma; light reflection; X-ray reflection*
 anechoic chamber with EM waves, phenomena anal. (*Chinese*) 2-108767
 boundary and interface problems in regions with very rough boundaries 2-63829
 conducting plasma layer, refl. transmission and absorption coeffs., kinetic theory 2-76138
 corner reflector excited by E₀ mode scattered wave of dielec. circular cylinder 2-102700
 fading of meter waves in tropospheric propagation beyond the horizon (*Polish*) 2-100415
 Goos-Hanchen shifts from absorbing media 2-70486
 inhomogeneous media 2-103381
 ionosphere, effect of large-scale inhomogeneities on reflected wave field struct. 2-112197
 ionosphere, reflected signal arrival angles rel. to volumetric characts. of ionospheric inhomogeneities 2-112196
 ionosphere radio wave reflection, space correl. of polarisation characts. of partly scattered vector field 2-112200
 minimum reflection coefficient by inhomogeneous media, homogeneous multilayer approx. 2-114167
 multistream plasma slab, multilayer approx. method 2-115012
 periodically stratified dielectrical medium, TV signal interference caused by tall buildings 2-70488
 plasma layer with magnetic field, radiative transfer by reflection 2-117586
 polarisation change of refl. from dielectric media 2-65134
 semiconductors, with superlattice, electron heating influence in EM wave reflection and attenuation coeffs. 2-99080
 solar corona, radar refl. cross sections from non-spherically symmetric corona 2-100875
 spherical wave reflection at plane interface where rel. index refraction is near unity 2-96805
 Venus, global surface radar reflectivity meas. 2-117621

electromagnetic wave refraction

- see also electromagnetic wave propagation in plasma; light refraction*
 atmosphere, ducting conditions at Poona, diurnal and seasonal variations up to 33.5 m height 2-68434
 plane EM wave intensity behind strongly-refracting chaotic phase screen, fluctuation correl. 2-85868
 planetary atmospheres, radiowave propagation, inverse refraction problem soln. 2-78815
 random nonuniform media, diurnal var., statistic of refraction angles 2-75498
 X-ray diffractometer, flat specimens holder 2-113090
- electromagnetic wave scattering**
see also backscatter; electromagnetic wave propagation in plasma; gamma-ray scattering; light scattering; X-ray scattering
 1-D scattering data inversion using Prony's method 2-55048
 arbitrarily shaped objects, numerical procedure using electric field integral eqn. 2-90776
 bodies of revolution with attached wires 2-90777
 book, EM scattering and its applications 2-89492
 boundary and interface problems in regions with very rough boundaries 2-63829
 bubbles, light scatt., Mie theory, physical optics approx. 2-60619
 coherent wave attenuation in discrete random media, effects on pair correlation function 2-102692
 collimated beam scattered by an ideally conducting rough surface, intensity fluctuation calcs. 2-102698
 conducting cylinder near conducting plane, Gaussian beam wave scattering 2-55043
 conducting sphere, impulse response based on singularity expansion method 2-70484
 continuous differentiable surfaces, backscatt., anal. methods comparison 2-107124
 cylinder, finite thickness, long slots of different width, scattered EM field (*Russian*) 2-96809
 cylindrical or spherical body, scattering coeffs. 2-55050
 depolarisation of EM waves scatt. from slightly rough random surfaces, extinction theorem 2-75494
 dielectric cylinders, finite element anal. of scattering fields 2-96813
 dielectric sphere, lossy, long-wavelength limit 2-102693
 dielectric spheroids, comparison theoretical, exp. results 2-108769
 discrete random media, bulk propag. characts. 2-65141
 EISCAT radar system for studying ionosphere at high latitudes 2-58188
 equivalent radius of a narrow conducting strip 2-108768
 fading of meter waves in tropospheric propagation beyond the horizon (*Polish*) 2-100415
 forward scattering in random media, moment eqn. theory 2-65137
 galactic centre, radiowave scatt. by ionised gas clouds rel. to apparent variability of 'point' radio source (*Russian*) 2-101074
 Gaussian beam by inhomogeneous dielec. cylinder 2-114168
 geocorona, resonant scatt. of sunlight rel. to near-Earth UV environment 2-117513
 Green's function in integral eqns. for scattering, singularity 2-80880
 induced Compton scattering in radiative transfer, appl. to astronomical sources 2-112319
 inhomogeneous lossy dielectric slab, direct and inverse scattering, time domain and freq. domain anal. 2-65143
 inhomogeneous slab scattering, integral eqn. approach, fast algorithm 2-114155
 integral equations for transient EM fields, scattering appl. 2-96814
 ionosphere, effect of large-scale inhomogeneities on reflected wave field struct. 2-112197
 ionosphere, radio wave scatt. rel. to volumetric characts. of ionospheric inhomogeneities 2-112196
 ionosphere radio wave reflection, space correl. of polarisation characts. of partly scattered vector field 2-112200
 ionospheric measurements, incoherent scattering method, coded signals, spectral and correl. processing (*Russian*) 2-63137
 ionospheric plasma, induced temperature scattering 2-68559
 ionospheric radiowave polar scatt., diagram with anisomeric inhomogeneities, param. freq. depend. 2-84011
 low frequency inverse scattering solution 2-102691
 metal plate in rectangular waveguide 2-59998
 metal surfaces rough, EM wave scatt. 2-114154
 mid-latitude lower ionosphere, anisotropic scatt. of short radio waves, 25 MHz 2-89069
 Mie scattering into solid angles 2-114156
 multiple scattering and waves in random media, conf., Blacksburg, VA, USA (March 1980) 2-63745
 multiple scattering of waves, diagnostic appls. 2-63830
 multistatic far-field data, scatterer reconstruction 2-65132
 nonmonochromatic waves scattering 2-90782
 perfect conductor, EM scattering calc. method 2-80878
 planar stratified randomly nonhomogeneous medium, multiple scatt. of EM wave beams 2-85870
 plane EM wave scattering by conducting rectangular cylinder, approximate far-field expression 2-80881
 radar backscatter obs. of equatorial mesosphere, tides 2-63045
 radar imaging of ocean surface waves, model and expt. verification 2-68514
 radiogalaxies in clusters, scatt. and polarisation of radio emission by intergalactic gas (*Russian*) 2-106923
 radiowave scattering in envelopes of compact astronomical sources 2-74119
 rain-scatrer coupling between space-earth radio paths, measured bounds 2-94436
 random magnetic objects, vector variational expressions for EM wave scatt. 2-65140
 random media, functional methods for waves 2-63827
 random rough surfaces that produce a Lambertian distrib. of radiant intensity 2-59995
 randomly inhomogeneous dielectrics, EM wave propag., multiple scatt. 2-65139
 randomly inhomogeneous media, EM wave scatt. with multiple scatt. included 2-96808
 randomly nonhomogeneous media, backscatt., statistical theory 2-102697
 relativistic intense electron beam, EM wave scatt., expt. study 2-114166
 rough surface, coherent multiple scatt. 2-63828
 rough surface interface, bilateral boundary conditions for mean EM field 2-114159
 rough surfaces, scatt. indicatrices and albedos 2-70487

electromagnetic wave scattering continued

- route diversity systems at freqs. above 10 GHz, performance analysis 2-83886
- Saturn rings, radio waves scatt. by ring particles from VLA obs. at 1.3, 2 and 6 cm 2-106607
- scattering theory and the trace of the wave group 2-70481
- sea foam, electrodynamic description of densely packed dispersed systems, thermal radioemission 2-73019
- semiconductor, SHF wave scatt., mathematical model (*Russian*) 2-82959
- SHF scattering at sea surface at small grazing angles, charact. 2-73653
- short radiowaves scattering on artificial magnetically oriented inhomogeneities excited in ionosphere 2-94558
- single integral eqn. for wave scatt. 2-95035
- small metal sphere, EM response, general nonlocal theory 2-104830
- smooth dielectric profiles, numeric reconstruction 2-70485
- solar corona, obs. of radio echo and sporadic radiation scatt. 2-94698
- sparsely populated media, coherent wave propag., Foldy-Tversky integral eqn. 2-65142
- spatially dispersive medium, EM wave scatt. from spherical inclusions 2-75497
- spherical particle in fringe pattern, light scatt., Mie calc., appl. to particle sizing 2-60016
- spheroids, prolate, multiple EM wave scatt. (*French*) 2-102696
- statistically inhomogeneous and anisotropic absorptive medium, two-freq. radiative transfer eqn. 2-63946
- stellar interiors, effects of plasmon-electron interaction on electron scatt. opacity 2-89238
- surface field scattering by two-dimens. electron flux moving above an infinite flat grating 2-96812
- T-matrix approach to scatt. of acoustic, EM and elastic waves 2-89551
- threshold singularities in radiation of charge sources contained in periodic structures 2-75503
- transmission loss prediction in troposcatter communication systems 2-100532
- trial functions in variational approximations to long-wavelength scattering 2-55045
- two cylinders of different radii, multiple scatt. of Gaussian beam 2-80882
- ultrashort waves on artificial inhomogeneities in ionosphere, angular meas. 2-68560
- waveguides, dielectric, inhomogeneous slab and cylindrical, with discontinuous permittivities, propag. modes 2-70482

electromagnetic wave transmission

- see also *light transmission*
- atmosphere, model for resonant transmittance in millimetre wave region 2-117394
- conducting plasma layer, refl. transmission and absorption coeffs., kinetic theory 2-76138
- skywave field strength estimation, HF, in tropical region, AIR method appl., E-mode propagation 2-106413
- superconducting plate, resonant transmission of EM wave (*Russian*) 2-98804
- Ni, exchange splitting of phonon assisted microwave transmission at 9.5 GHz 2-66885

electromagnetic waves

- see also *bremsstrahlung; channelling radiation; Cherenkov radiation; electromagnetic field theory; electromagnetism; gamma-rays; heat radiation; light; microwaves; solar radiofrequency radiation; sunlight; synchrotron radiation; transition radiation; undulator radiation; whistlers; X-rays*
- axially symmetrical, vectorial wave beams 2-114162
- coherent RF production, by electron storage ring 2-54697
- direct conversion into hard radiation on free electrons at cyclotron autoreson. 2-113781
- dynamic deformation of different materials, EM phenomena 2-114180
- EM concepts and appls., book 2-107028
- gravitational field effects on a phase of EM wave 2-63886
- Hawking radiation in four dimensional static Riemann spacetime (*Chinese*) 2-79138
- induction and radiation fields of accelerated particle, sources 2-55053
- instantaneous charge deceleration, EM wave field 2-114163
- Laue four-wave diffraction in single cryst., emission of photons by electrons (*Russian*) 2-56039
- localised wave structures, nonlinear dynamics, geometrical props. 2-80879
- marine EM soundings, EM wave field for three-layer geoelectric section 2-111847
- open resonator, charged particle motion in proximity, diffr. radiation 2-85876
- phase, automatic plotting, especially wavefront (*Japanese*) 2-90772
- photon, wave-particle duality, conceptual problems 2-112747
- radiation laws in the vicinity of metallic boundaries 2-59991
- shock electromagnetic waves in magnetized vacuum (*Russian*) 2-85874
- surface waves, excitation by sub-surface sources 2-97576
- Zenneck wave localisation on conducting liq. surface 2-114164
- Zenneck waves conversion at inhomogeneity of waveguide surface 2-114165

electromagnetism

- see also *electric fields; electrodynamics; electromagnetic field theory; electromagnetic induction; electromagnetic oscillations; electromagnetic waves; magnetic fields; magnetism*
- Abraham-Lorentz equation and runaway solns. 2-85875
- Abraham-Minkowski controversy, EM momentum in static fields 2-58675
- Bianchi type EM cosmology, Type I Hamiltonian 2-68937
- Bianchi type V_0 cosmological models with matter and EM field, exact solns. 2-106972
- Biot-Savart and mag. force laws, simple Ampere demonstrations 2-79306
- classical, book 2-79299
- conservation of momentum, space charge problem soln. 2-94954
- Coulomb's law, note on expt. determ. 2-79319
- diffraction coefficient of a semi-infinite thick conducting plate for a plane E-wave (*Japanese*) 2-90785
- eddy currents, modeling 2-93749
- EM energy tensors and Lorentz eqn. of motion of fields 2-53612
- force-free mag. field eqns, invariant solns. (*Ukrainian*) 2-102679
- four-dimensional formulations, metric depend. 2-95180
- Hamiltonian, modification from mag. vector pot., vel. depend. 2-89552
- harmonic mixing in a cosine potential for large damping and arbitrary field strengths 2-96821

electromagnetism continued

- hybrid particle pushing/fluid approach to modelling X-ray deposition region 2-86375
- Jordan theory, stationary spherically symm. solns., black holes 2-84497
- Lagrange-Maxwell equations (*Russian*) 2-80865
- macroscopic theory of surface-distributed electrokinetic fields (*French*) 2-114148
- magnetic field, saturable, EMF, torque and stiffness, finite element anal., stationary method 2-80874
- magneto-electric polarisation force mech. 2-96789
- Maxwell's 'Treatise on electricity and magnetism' 2-112683
- Maxwell's eqns. behaviour under real superluminal Lorentz transformations 2-79384
- Maxwell's eqns. behaviour under real superluminal Lorentz transformations 2-79385
- Maxwell eqn., symmetry generation by Lie algebra 2-69029
- Maxwell equations in homogeneous cosmologies 2-84354
- Maxwell-Hertz's theory, modification 2-114153
- microphysical particle structure probing by period integrals 2-95689
- multidimensional signals in electromagnetic multiparameter NDT 2-62358
- oscillations theory, integral eqn. methods of boundary-value problems (*German*) 2-101189
- particle in mag. field, classically equivalent Hamiltonians and ambiguities of quantisation 2-96818
- steel, self tempering, selective electromagnetic inspection, physical fundamentals and operating principles 2-83334
- steel, self-tempering, selective electromagnetic inspection, equipment design, selection, testing 2-83335
- SU(2) vector potential, quantisation, for EM field 2-79735
- teaching, problem-solving course 2-107044
- tilted EM Bianchi type III cosmology, exact soln. 2-106970
- tilted EM Bianchi type V_0 cosmological model, Einstein-Maxwell eqns. integration 2-106971
- top, relativistic, EM interaction, classical theory 2-79350
- Victorian electromagnetic theory, discussion 2-96788
- volume integral method in magnetostatics, iterative algorithm 2-102680

electromagnets

- see also *coils; superconducting magnets*
- beam extraction system for circular accelerator 2-113771
- Bitter plate TF magnet for ZEPHYR Ignition Test Reactor, structural behaviour 2-59530
- Bitter-type magnet, TF coil support development 2-59527
- Bitter-type magnet plate design with compound conductor of ultrahigh mechanical strength 2-59526
- electromagnetic systems for tokamak reactors, engineering problems 2-64639
- fast matched pulsing magnet 2-64075
- fusion reactors, engineering feasibility challenges for the magnet community 2-69969
- gap permeance determ. using Monte-Carlo method (*Russian*) 2-56888
- proximity effect, current distrib. calcs. 2-65130
- pulsed magnetic fields, generation, magnetometry and appl., review 2-112934
- radiation resistant magnets, review 2-96356
- TOKIWA large-aperture spectrometer magnet, computer-controlled field measuring system 2-96362
- Fe-concrete cores for bending magnets at CERN (*French*) 2-113785

electromechanical effects

- electroelastic effect, correction procedure for meas. in transverse fields 2-77452
- electron emission during elastoplastic deform. (*Russian*) 2-57276
- ferroelectric crystals, with charged domain walls, electromech. props. 2-99048
- gravitational wave antenna with electrically reson. transducer 2-89605
- materials, electromechanical, and their appls., review 2-77453
- phase-relief recording, optical charact. for Newtonian and viscoelastic layers 2-114208
- polymers, oriented, electromechanical relaxations calc. 2-87689
- skin, deform. pots. spread 2-83559
- trissarcosine calcium chloride, deuterated, dielec. props., temp. and press. depend. meas. 2-99071
- trissarcosine calcium chloride, ferroelec., dielec. loss tangent, hydrostatic press. effects meas. 2-116115
- Ba(Sr)($M_{1/3}$ Nb $_{2/3}$)O $_3$ -PbZrO $_3$ -PbTiO $_3$ (M=Pb, Ca, Sr) elec. and optical props. 2-82794
- Ba $_2$ (Sr) $_x$ Nb $_{(1-x)/3}$ O $_3$ -PbZrO $_3$ -PbTiO $_3$ elec. and optical props. 2-82796
- BiGeO $_2$ resonators, influence of polarising field 2-87681
- Bi $_2$ GeO $_5$ (SiO $_2$) $_n$, nonlinear piezoelectricity 2-87680
- KCl, edge dislocation movement by large elec. fields 2-98105
- LiNbO $_3$ resonators, influence of polarising field 2-87681
- LiNbO $_3$, shock loaded, microwave dielec. const. meas. 2-72398
- PLZT-Pb(Zn $_{1/3}$ Nb $_{2/3}$)O $_3$ piezoelec. ceramics, electromech. props. 2-87696
- (Pb, Ca) ((Co $_{1/2}$ W $_{1/2}$), Ti)O $_3$ piezoelectric ceramics and their applications 2-87697
- PbZr $_{1-x}$ Ti $_x$ O $_3$, ferroelec. ceramic, mechanoelec. energy conversion under shock loading 2-72423
- Zn, creep rate, pulse current freq. and external mech. stresses effects (*Russian*) 2-77875
- Zn-Cd, creep rate, pulse current freq. and external mech. stresses effects (*Russian*) 2-77875

electrometers

- see also *charge measurement*
- portable precision DC voltage-current transfer standard for electrometer calibration 2-107290
- preamplifier, with high-stability and low-noise 2-84663
- single-phase induction electrometers, service reliability, Bulgarian standard BDS-2279-74 (*Bulgarian*) 2-79609

electrometry see electrometers**electromigration**

- liquid phase electroepitaxy, binary systems, anal. of growth kinetics 2-67227
- liquid phase electroepitaxy, interface stability enhancement, theoretical anal. 2-72636
- measuring device, appl. to CeO $_2$ -x 2-79613
- metal film on semiconductor, interactions, book contrib. 2-61213
- metal film on semiconductor, interface chem. reaction and diffusion 2-86954
- metallic thin films, electromigration failure, simple estimate 2-56268

electromigration continued

- metals, finite cluster description of electromigration 2-86956
- noble metals, electromigration, theory 2-82039
- transition metals, electromigration, theory 2-82039
- Ag, single crystal, electrocrystallisation, conc. non-homogeneity 2-91834
- Al-Cu thin film with polyimide passivation, electromigration 2-98503
- C-CdS-metal, switching struct., with potential barrier, elec. characts. 2-87407
- CeO_{2-x}, electromigration meas. 2-79613
- GaP layer, liq. phase electroepitaxy from limited and unlimited sources, growth kinetics 2-56380
- LiNO₃-NH₄NO₃, binary melts, Chemla effect, internal mobility meas. 2-66271
- Mo, surface diffusional electrotransport of ⁶³Ni (*Russian*) 2-104083
- Nb:Fe(Co)(Cr), electromigration and self diffusion, effective valence, radioactive tracer method (*French*) 2-76756
- Ta, electromigration of H isotopes, quantum characts. (*Russian*) 2-92293
- W, surface diffusional electrotransport of ⁶³Ni (*Russian*) 2-104083
- α -Y, fast diffusion and electrotransport of Co, Fe and Ni 2-86933
- ZrH_{0.8} and ZrH_{0.91}, diffusion and electromigration of T, 296 to 583K 2-56251

electromotive force *see electric potential*

electron absorption

- see also beta-ray absorption*
- No entries

electron accelerators

- see also betatrons; electron ring accelerators; microtrons*
- acceleration characteristics for 15 MeV electron linac 2-70027
- ACO storage ring, beam line design and performance with toroidal grating monochromator 2-86080
- ACO storage ring beam line, toroidal grazing incidence monochromator design and performance 2-86081
- BESSY experimental facility, status report 2-85415
- CHESS, Cornell High Energy Synchrotron Source, current status 2-85414
- cyclic inductive accelerator with const. guiding field, limiting beam intensity determ. 2-108169
- drift orbit cyclotron, electron acceleration, theory and expt. study 2-90328
- electron storage ring at 10 to 100 MJ, theory 2-90329
- gyro-resonant accelerator design 2-85426
- HASYLAB, synchrotron radiation facility at DORIS storage ring, survey 2-85416
- high energy linacs, appl. to storage ring RF systems and linear colliders 2-113763
- high power steady-state electron beams generation, control and applications 2-59572
- high-current nanosecond accelerator for rapid processes study 2-108166
- high-energy facilities in Europe 2-80356
- IGUR-1, electron accelerator using inductive energy storage and exploding wires 2-85409
- intense ultrarelativistic electron beams in vacuum, image-field focusing 2-85453
- Klein ERNA, table-top synchrotron radiation source 2-113780
- laser-driven accelerators, interactions between EM fields and electrons 2-113764
- laser-driven electron acceleration, by means of 2-wave interactions 2-64702
- LEP, transverse head-tail effect, finite synchrotron oscill. freq. influence 2-64725
- LEP machine, implementation and techniques used for installed plant (*French*) 2-90330
- linac, fast nonintercepting electron beam position and current monitor 2-96343
- Medium-Energy Accelerator for electrons up to 500 MeV 2-59571
- multiple relativistic electron beams, injection and propagation into pre-formed plasma channels 2-96334
- National Synchrotron Light Source in IR region 2-85420
- photoneutron attenuation function meas. from electron accelerator-defectoscope 2-67709
- pulsed electron accelerator using solid dielectric energy storage 2-90325
- RAYITO accelerator, designed to investigate electron-beam control and uniform excitation of large volume lasers, characterisation 2-96335
- relativistic electron beam generation 2-64705
- SLAC linear collider, machine, physics and future 2-80354
- SPEAR, undulator in spectral range 200-1000 eV 2-85439
- SRS at Daresbury, IR beam port 2-85437
- storage ring, coherent RF radiation prod. by bunched electrons 2-54697
- storage ring, electron self-polarisation effect, Compton scatt. test (*Russian*) 2-90343
- storage ring, particle losses at short times after injection 2-113782
- storage ring, synchrotron radiation source, modified Wadsworth monochromator theory 2-86078
- storage rings, electron beam polarisation meas. using synchrotron radiation 2-80360
- storage rings, electrons polarisation using free electron laser 2-64711
- storage rings, synchrotron radiation and electron beam dynamics 2-113770
- stored electron beam polarisation 2-113776
- SURF II, toroidal grating monochromator design 2-86077
- SURF II facility at NBS, status report 2-85412
- SURF-II storage ring, beam line for X-ray lithography 2-85436
- synchrotron radiation beam intensification effects from electron synchrotron 2-85425
- Synchrotron Radiation Source status 2-85418
- target size eval. of electron accelerator for photoneutron inspection 2-62355
- Van de Graaff, remote controlled pulse-shaping device for subnanosecond voltage pulses 2-64068
- VUV storage ring, diamond turned mirrors for synchrotron radiation 2-86070
- X-ray storage ring, grating/crystal monochromator for spectral range 5 eV to 5 keV 2-84760
- e⁺e⁻ storage ring design 2-113779
- e⁺e⁻ colliding-beam storage rings, luminosity optimisation 2-113774

electron affinity

- alkali trimer anions and cations, electronic struct., vibr. freq. calc., electron affinity 2-70121
- atomic and molecular systems, ionisation pot., electron affinities, MBPT, resolvent operator approach 2-54741

electron affinity continued

- Bethe-Salpeter eqn. higher-order irreducible vertex parts, mol. appls. 2-80437
 - dichlorodifluoromethane, temporary anions, electrons transmission spectroscopy, σ^* orbitals obs. 2-108702
 - dichlorofluoromethane, temporary anions, electrons transmission spectroscopy, σ^* orbitals obs. 2-108702
 - dye films, adsorbed, electron affinity, statistical energy levels 2-58937
 - ionization energies and electron affinities of atoms up to neon 2-53453
 - isoelectronic atoms, total electronic energy, Z expansions, \bar{V}_{en} and \bar{V}_{ec} determ., electron affinities, ionisation pot. 2-96419
 - MHD oxide electrodes, elec. degradation, thermal emission of electrons meas. 2-88465
 - monatomic negative ions, ground state, electron affinities calcs. 2-59694
 - organic compounds, electron donors and acceptors (*Russian*) 2-59969
 - polyphenylacetylene:AsF₅(I₂), thin films, Schottky barriers, elec. props., doping reactions 2-77212
 - semiconducting MBE films, interface microstruct. props. 2-87082
 - SIMS, molecular ion sputtering from surfaces 2-111002
 - C ions, electron affinity calc. using MCSCF wave function, CI calcs. 2-96759
 - CdS-Cu₂S thin film solar cells, electron affinity difference 2-67858
 - F, electron affinity, electron correl. SCF, GTO, CI calcs. 2-113895
 - F ions, electron affinity calc. using MCSCF wave function, CI calcs. 2-96759
 - n-GaAs, surface photovoltage meas. and Fermi level pinning, electron tunnelling through dipole layers 2-87392
 - HF, Bethe-Salpeter eqn., mol. appls. 2-80437
 - NH⁺, excited state, Feshbach resonances, QDMBPT 2-85540
 - O⁻ ions, electron affinity calc. using MCSCF wave function, CI calcs. 2-96759
 - OH⁻, excited state, Feshbach resonances, QDMBPT 2-85540
 - SF₆⁻, electron affinity, negative ion chemistry, flowing afterglow study 2-99677
 - Si, amorphous film, gap state density, high freq. capacitance-voltage determ. 2-56429
 - SnO₂-Si solar cell, barrier height, temp. and voltage depend. 2-78219
- electron annihilation** *see electron-positron interactions*
- electron attachment**
- air, two- and three-body electron attachment 2-85782
 - chlorotrifluoromethane, dissociative electron attachment, electron affinities, mass anal. 2-85822
 - dichlorodifluoromethane, dissociative electron attachment, electron affinities, mass anal. 2-85822
 - dichlorodifluoromethane-N₂(air) mixture of electronegative and buffer gas, electron attachment coeff. meas. 2-97698
 - dissociative electron attachment, thermomechanical parameters, time of flight mass anal. 2-85821
 - fluoroethylene anions, ²II, dissoc., dissociative electron attachment spectrosc. obs. 2-59932
 - optically controlled diffuse discharge switch 2-97801
 - polyatomic mols., electron scatt., shape resons. and electron transmission spectrosc. 2-80828
 - tetrachloromethane, dissociative electron attachment, electron affinities, mass anal. 2-85822
 - transition metal carbonyls, dissociative electron attachment reactions, influence on thermalisation of electrons by CO₂ 2-72967
 - trichlorofluoromethane, attachment rates for thermal electrons 2-102574
 - trichlorofluoromethane, dissociative electron attachment, electron affinities, mass anal. 2-85822
 - Ar-Xe-NF₃ mixtures, electron attachment const. determ. 2-80809
 - CO₂-N₂(air) mixture of electronegative and buffer gas, electron attachment coeff. meas. 2-97698
 - Cl₂, dissociative electron attachment reaction, Cl₂⁻ resonant states, symmetry 2-114120
 - Cl₂, ground state dissociative electron attachment rate meas. 2-65097
 - H₂ discharge, H₂ vibr. population distrib. and negative ion conc. calc. 2-90501
 - HBr, dissociative electron attachment, H⁻ form., nonadiabatic transitions 2-85781
 - HCl, ground state dissociative electron attachment rate meas. 2-65097
 - N₂-O₂, air-like mixture, three-body attachment coeff., Boltzmann eqn. calc. 2-90693
 - N₂-O₂(CO₂)(O₂-CO₂)(CCl₂F₂)(O₂-CCl₂F₂) mixtures, ionisation and attachment obs. 2-103275
 - O₂, electron attachment, 3- and 4-body, models 2-65087
 - SF₆⁻, attachment rates for thermal electrons 2-102574
 - SF₆⁻, electron scatt., total cross section meas., ToF obs. 2-54971
 - SF₆⁻, transport and elec. props. calc. 2-114964
 - SF₆-N₂ mixture of electronegative and buffer gas, electron attachment coeff. meas. 2-97698
- electron avalanches**
- cathode strips read-out MWPC, avalanche localisation along wire, systematic errors evaluation 2-90397
 - electric breakdown in crossed elec. and mag. field, avalanche theory 2-103494
 - fast current measurements for avalanche studies 2-65779
 - gas counter, avalanche growth around anode wire 2-90353
 - ionisation growth in strong uniform elec. fields, theory 2-115076
 - microscopic theory 2-103268
 - multistep avalanche chamber, min. ionising particle electrostatic imaging 2-96376
 - positive point to plane gaps, corona discharge calc. 2-103504
- electron beam absorption** *see electron absorption*
- electron beam applications**
- see also electron beam deposition; electron beam lithography; electron beam machining; electron beam welding; radiation therapy*
 - albedo electron densitometry methods, two-channel methods 2-112873
 - amplification of frequency upshifted radiation by cold relativistic guided electron beams, theory 2-90860
 - carrier lifetime meas. in semicond. by electron beam technique 2-66570
 - concentrator solar cells, high performance, use of ion implantation processing 2-93919
 - Electrochemical Society, Incorporated, Spring Meeting, conf., Montreal, Canada (May 1982) 2-101133
 - electron interferometer, mixed-type, theory 2-89873
 - excimer laser pumping possibility with ionisation by an external low-power source 2-60139
 - excimer laser system, electron beam pumped, using HV pulsed power supply 2-90939

electron beam applications continued

- high-intensity, for laser pumping, operating modes 2-114295
 holographic obs. of mag. fields microscopic distribution 2-101428
 interferometry, amplitude division, appl. to obs. ferromagnetic domain walls 2-89874
 lasers, electron-beam-discharge, pulsed, beam divergence calc. 2-70596
 low-density high velocity flow meas., electron beam fluoresc. (*Japanese*) 2-81416
 piezoelectric pressure gauge for operation in presence of strong electrical noise and X-rays 2-64013
 polyethyleneterephthalate thin films, charge distrib., electron beam meas. method 2-93113
 porous material, albedo electron densitometry, single channel method 2-89694
 pulsed electron beam pumping system development, for 250 J KrF laser 2-90938
 pumping of high power lasers, annular electron beam scheme 2-85986
 semiconductor materials and structs. prod. by high intensity laser and electron beams 2-77729
 spectrometric electron defectoscopy, defective layer detection in two layer product sample 2-116674
 supersonic gas flow meas. (*German*) 2-81423
 transformation hardening by electron beam (*Japanese*) 2-105351
 Al-Ce(Gd)(Dy)(Tm) thin films, crystallographic phases following electron beam annealing 2-55888
 As₂S₃-SiO₂-Si graded-index fresnel lenses for integrated optics, electron-beam direct writing technique 2-86130
 CO₂ atmospheric pressure laser, electron-beam-controlled, specific pump power influence on operating efficiency 2-114234
 CO₂ CW electron-beam-controlled lasers for technological appls., Ar use in working mixtures 2-55116
 CO₂ CW electron-beam-controlled technological laser, upper active level relax. rate determ. 2-90865
 CO₂ CW high power atm. laser radar power amplifier 2-96991
 CO₂ dual electron-beam controlled laser (*Chinese*) 2-90923
 CO₂ electron-beam-controlled closed-cycle laser, gas mixture catalytic regeneration 2-70584
 CO₂ laser, double electron beam controlled, freq. selection (*Chinese*) 2-65246
 CO₂ laser with plasma mirror, electron-beam-controlled 2-70582
 CO₂ TEA lasers, electron-beam controlled discharge, electron beam intensity distribution 2-114233
 Cd II, CW laser oscillations in electron beam created plasma 2-102783
 He-Se ion laser, electron beam pumped, CW laser action on 15 Se II transitions 2-90874
 I⁺ CW laser excited by electron beam 2-55126
 KrF laser, coaxial diode for electron beam pumping 2-60091
 KrF laser pumping using 36 kJ electron beam system 2-90935
 N₂ free jets, rot. levels population kinetics, electron beam meas. 2-109382
 SF₆-H₂ laser pumped by axially injected electron beam, characts. 2-114258
 SeF₆ excimer laser discharge stabilization by low-current density electron beam 2-114257
 poly-Si beam recrystallisation for IC fabrication 2-111065
 Si, electron beam annealing using pulsed generator 2-84739
 Si ribbon growth, using electron bombardment 2-66387
 Si ribbon growth under electron bombardment, thermal gradients and stresses induced, application in solar cells 2-83016
 Si:B(P)(As)(Sb)(Ga), ion implanted, electron beam annealing by multiple-scan method 2-92036
 Si:Bi(As), scanning electron-beam annealing 2-103818
 Ti films on Si, processing using multiscanned electron beam, TiSi₂ formation 2-104180
 XeBr excimer laser, short-electron-beam-excited 2-96925
 XeBr laser, electron-beam pumping and control 2-96926
 XeCl electron beam excited laser generation, special features 2-96917
 XeCl excimer laser, discharge stabilised electron-beam excitation 2-96927
 XeCl excimer laser, short-electron-beam-excited 2-96925
 XeCl laser, 0.5 GW, electron-beam excited 2-60066
 XeCl laser pumped by high-intensity electron beam 2-80936
 XeF electron beam pumped lasers, chem. degradation products 2-102780
 XeF excimer laser, discharge stabilised electron-beam excitation 2-96927
 XeF excimer laser, short-electron-beam-excited 2-96925

electron beam deposition

- Al₂O₃ compounds, prep. by electron beam evaporation, superconductivity and phys. props. (*Russian*) 2-66688
 focusing adjustment for electron bombardment system (*Chinese*) 2-62067
 Al-Al₂O₃-GaAs MOD diode, electron beam evaporation prep. 2-62068
 Al₂O₃ film, electron beam evaporation prep., appl. to GaAs MOS diodes 2-62068
 Al₂O₃, tunnel barrier appls. 2-115912
 Au-SiTiO₂-SiO₂-Si struct., electron beam deposited, nonvolatile memory props. 2-72068
 Cd_{1-x}Zn_xS films, electron bombardment evaporation, visible absorpt. spectra meas. 2-72572
 Cd_{1-x}Zn_xS films evaporated by electron bombardment, struct. study 2-71834
 Co-Zr amorphous film, covevaporated, magnetisation and ferromag. reson. studies 2-72264
 Er₂S₃ vacuum condensates, struct. 2-71822
 Ge, graphite crucible for spitting-free high rate e-gun 2-93426
 In₂-Sn₂O₃-y film, reactively electron beam evaporated, optical, IR and elec. cond. props. 2-57198
 In₂-Sn₂O₃-y film, reactive electron beam evaporation prep. and elec. and optical props. 2-105078
 MgO, electron beam evaporated film, optical absorpt., RHEED and cathodoluminesc. study 2-93306
 MgO films, electron beam evaporated, RHEED, optical absorpt. and cathodoluminesc. 2-110209
 Nb-Si, Al₂O₃ phase, growth by epitaxy and composition grading 2-71827
 Nb-Si, supercond., electron beam evaporated, growth morphology, O₂ effects and substrate temp. 2-110207
 Nd₂O₃ films, electron beam evaporated, dielec. props. meas. 2-72422
 NiSi₂ covevaporated film, lattice structure 2-98484
 Si, polycrystalline, growth on Mo(Ta)(W) and disilicide formation 2-71817
 Si solar cell, (cryst. p)-(amorphous i-n) struct. 2-116801
 SiO₂, stress-strain curves and internal stresses, bulge and tensile tests 2-82190

electron beam deposition continued

- TiC coatings deposited onto graphite and Mo by electron beam evaporation, charact. 2-71825
 TiC-Mo, coating by reactive sputtering and electron beam technique 2-74915
 Y₂O₃-SiO₂ UV laser mirror deposition and optical characteristics (*Hungarian*) 2-55213
 ZnS film, electron beam evaporated, growth and struct., expt. study 2-111076
- electron beam effects**
 see also beta-ray effects; cathodochromism; cathodoluminescence; electron impact; plasma-beam interactions
 accelerated electrons, intense beam, device for cooling thin samples irradiated by beam 2-112880
 adsorption of CO, decomposition and oxidation of surface carbide 2-62432
 air activation by an electron synchrotron 2-109448
 alloy, binary, FCC and BCC, electron irradi., rad. induced segregation at internal sinks 2-86731
 aluminosilicate glass, electron irradi., composition changes, XPS and nucl. anal. 2-92319
 amorphous alloys, positron annihilation expts., review 2-104986
 amorphous thin films, pulsed energy beam crystn., struct. features 2-60888
 beam-sensitive materials, radiation damage 2-66070
 biotite mica, electron and α -particle damage, implications for track formation mechanisms 2-59660
 carbon tetrachloride, liq., electron pulse irradi., transient absorpt. 2-80647
 CC, InP, electron irradi., elec. props., positron annihilation radiation defects 2-115292
 cellophane, fine struct., X-ray and electron diffr. obs. 2-103666
 channelling radiation, exptl. results and appl. possibilities 2-61046
 charge collection scanning electron microscopy, review 2-86526
 charge-coupled device-based detector systems, for use in electron microscopy, dose effect 2-64189
 chemisorption bond making and breaking 2-98431
 chest walls, post-mastectomy, late skin changes following twice-weekly electron beam radiation 2-68067
 copper phthalocyanine thin layers, electron irradi., transient currents 2-110508
 cryoelectron microscopy, review 2-113079
 cryomicroscopy and radiation damage, conf., Schloss Ringberg am Tegernsee, Germany (Nov. 1981) 2-112655
 diamond, electron irradi., coherent bremsstrahlung and channeling radiation meas. 2-77614
 diamond, electron-irradiated, annealed, 1450 cm⁻¹ IR absorption 2-110847
 diamond, semiconducting, electron irradiated, photocond. meas. 2-98692
 DNA, biologically active, inactivation by hydrated electrons 2-105789
 electrical conductivity, electron bombardment induced, and its appl., book 2-63758
 electron microscopy, energy transfer to the specimen 2-113083
 electron microscopy, radiation damage in beam-sensitive materials 2-66070
 ESD, angular resolved, for surface struct. determ. 2-110107
 explosive, Grueneisen parameter meas. 2-76629
 fly ash particulates, insulating, micron size, electron beam effects in AES studies 2-92034
 gas, fast electron energy deposition in mag. field, diffuse beam approx. 2-114176
 glass, Auger signal decay due to Na desorpt. and diffusion, theory 2-77634
 glass-ceramic, 14 MeV neutron irradiation effects 2-85208
 hydrodynamic stability, electron and ion beam study 2-74894
 ionosphere, relaxation of monoenergetic electron stream 2-112195
 luciferase, inactivation by pulsed ionising radiation, real-time kinetic study 2-105798
 metal, electron beam evaporation, plasma form. (*Russian*) 2-71504
 metal/Si systems, electron beam induced reactions 2-86955
 metallic glass, positron annihilation, electron irradi. and heat treatment effects 2-104992
 methanol monolayers, H⁺ in electron stimulated desorpt. 2-87020
 microstructure evolution for pulsed beam irradiation 2-76505
 optical fibres, transient absorpt., electron beam radiation induced 2-114436
 optical materials, radiation colouring under electron bombard. 2-56038
 organic films, evaporated, electron beam damage by laser microprobe mass analysis 2-71506
 organic materials, cryoprotection, electron microscopy with cold stages 2-113080
 organic molecular crystal, quantitative characterisation, radiation damage imposed limits 2-66071
 organic solids, electron interactions, phys. mechanisms 2-115296
 organic specimens, radiation damage in high voltage electron microscopy 2-115115
 n-paraffin, aliphatic hydrocarbon, and its adducts, crystn. and lattice resoln. 2-65820
 paraffins, electron irradiated, radiation induced, phase transition 2-115290
 parotid salivary function in cancer patients after electron beam treatment 2-68065
 penetration depth meas. in materials 2-92060
 photoelectrochemical cells, electrical power and H₂ generating, carrier recomb. at grain boundaries and liq. interfaces, chem. control 2-111573
 poly(1-vinyl naphthalene) solid, time-resolved spectra following electron beam pulse radiolysis 2-72995
 polyethylene, electron irradi., micro-Brownian motion of segments, electron diffr. study 2-86580
 polyethylene, irradi., struct. orientation in deform., in air and CCl₄ 2-67457
 polyethylene, lattice destruction due to electron irradiation 2-92035
 polyethylene terephthalate, elec. cond., low-energy electron effects (*Russian*) 2-66562
 polymer blends, electron microscopy 2-65818
 polymers, polar, radiation-induced elec. cond. (*Russian*) 2-110355
 polypropylene film, electric breakdown under electron irradiation 2-110763
 pre-knock-on concept in electron microscopy 2-115297
 protein crystals, electron radiation sensitivity 2-117018
 proteins, dark field TEM, sources of image instabilities 2-117173

electron beam effects continued

quartz, anisotropic phonon propag., SEM study 2-115369
 quartz, defects created by γ -ray, electron, and neutron irradi., thermal phonon transport study 2-56273
 radiation sensitive materials, lattice imaging 2-65819
 radiation-sensitive specimens, electron microscopy obs., resolution limits 2-115114
 rare earth oxides, electron beam induced reduction, high resolution electron microscopy study 2-78086
 relativistic electrons in a spatially periodic transverse mag. field 2-102703
 ruby cryst., additional absorpt. spectra irradi. with fast electrons and γ -rays (Russian) 2-82880
 sapphire, anisotropic phonon propag., SEM study 2-115369
 SEM EBIC, lock-in detection, contrast meas. from individual dislocations 2-65824
 SEM EBIC analysis of defects using controlled low temps. 2-65823
 semiconductor, implant activation using multiple-scan electron beam annealing 2-56040
 semiconductor alloys, with multiple epitaxial layers, X-ray composition anal., electron beam excited, with high spatial resolution 2-66401
 semiconductor counters, radiation damage, review 2-80390
 semiconductor crystals, gamma and electron irradi., struct. ordering, Frenkel pair annihilation model 2-76500
 semiconductors, impurity doping, isolation processing, high-energy electron bombardment (Japanese) 2-66029
 semiconductors, pulse laser and electron beam annealing, electron microscope characterisation 2-66051
 Si:Sn, metastable alloy form., by electron beam annealing 2-56041
 solar-array radiation damage, spacecraft power plant design 2-67856
 solid solutions, metastable, formation by rapid melt quenching during pulsed laser and electron beam treatment 2-76496
 solid-vapour transformation under action of laser or electron beam, spin sublimation regime (Russian) 2-81942
 solids irradiated by powerful pulsed electron beams, fracture theory 2-61035
 spark gap breakdown characteristics, effect of electron-beam-induced space charge 2-97829
 stainless steel, electron irradiated, void swelling 2-61039
 steel, 65G, high-energy electron irradiation influence on struct. (Russian) 2-61037
 steel, austenitic stainless, electron irradi., swelling behaviour, influence of He 2-109836
 steel, austenitic stainless, void nucleation, during HVEM irradi., effect of implanted He 2-109834
 steel, austenitic stainless, void swelling, during HVEM irradi. 2-109835
 steel, FV548, irradiated with 1 MeV electrons, void nucleation and growth 2-103819
 synaptosomes, irradi. by high energy electrons, Ca accumulation and retention 2-68076
 TTF-TCNQ, electron irradi. effects 2-103821
 TTF-TCNQ, vol. of electron irradiation defect 2-67758
 two-layer structure, scanning electron or laser beam irradi., temp. distrib. calc. 2-92027
 volume electroionisation discharge, electron beam ionis. of gas, electron conc. determ. 2-115077
 water, liquid, low-energy electrons stopping power, theory 2-86765
 water, liquid, stopping power, density effect calc. 2-86766
 yeast cells, evidence for DNA double-strand breaks as critical lesions on ionising particle irradiation 2-68072
 Al, electron irradi., frozen free split phenomena, mech. relax. study 2-56084
 Al, electron irradi., vacancy cluster form. and radiation-induced refining, HVEM obs. 2-81829
 Al film, evaporated, oxidation studied by AES, EELS and electron stimulated desorpt. 2-76855
 Al, fusion neutron simulation study, comparison of electron and self-ion damage 2-85225
 Al-Co-Fe, electron irradi., ^{57}Fe diffusion, Mossbauer study 2-92254
 Al-Fe, dil. alloy, electron irradi., frozen free split phenomena, mech. relax. study 2-56084
 Al-Mg(Fe), dil., electron irradi., self-interstitial-impurity complexes, internal friction study 2-56007
 Al-SiO₂-Si, MOS capacitor, electron irradi., interface state spectrum, gate bias effect, DLTS study 2-66640
 Al-Sn(Ni), metastable alloy form., by electron beam annealing 2-56041
 α -AlH₃, electron beam induced decomp., analytical diff. obs. 2-78070
 α -Al₂O₃ cryst., additional absorpt. spectra irradi. with fast electrons and γ -rays (Russian) 2-82880
 β -Al₂O₃-Na₂O, segregation to surface, electron induced, AES and XPS 2-115422
 Ar, liq., hot-electron thermalisation, density depend. 2-103807
 Ar, solid and liquid, hot electron thermalisation following subnanosec. pulse irradi. 2-72015
 Ar-HgBr discharge, electron beam energy deposition in mag. guide field, HgBr fluorescence study 2-115059
 Au, electron irradiated, damage rates 2-66067
 Au-Fe, dil., electron irradiated, damage rates 2-66067
 Bi, electron radiation damage, electron microscopic study 2-61036
 C, film, electron irradiation obs. in vicinity of ice 2-92044
 C+H reactivity electron beam enhancement, in pyrolytic graphite 2-74938
 CaO:Mg, neutron or electron irradi., circular polarised luminesc. from F- and F₂-centres 2-110915
 CdS, electron irradi., exciton reflection spectra and photo EME, elec. field effects 2-82877
 CdS:Cu, electron irradi. prod. defects interaction with impurities, elec. and optical props. study 2-56035
 CdSe, excitonic luminesc. spectra, surface elec. field effect 2-82919
 CdTe, irradiation produced secondary defects, effect of cryst. polarity 2-115291
 Cr, electron irradi., internal friction 2-56085
 Cu, electron irradi., vacancy cluster form. and radiation-induced refining, HVEM obs. 2-81829
 Cu foil, electron irradiated, effect of vacuum environment on void nucleation 2-76506
 Cu, neutron and electron irradiations, initial damage rates study of internal friction 2-92046
 Cu, stacking fault tetrahedra induced by electron irradi., dynamic study 2-76462

electron beam effects continued

Cu-Au(Be)(Pd)(Sb) dil. alloys, electron irradiated, solutes as nuclei for self-interstitial complexes 2-66061
 Cu-In, dil., electron irradi., self-interstitial-impurity complexes, internal friction study 2-56007
 Cu-Ti alloy, thin foil, microstruct. changes 2-71826
 Cu₂Au, electron irradi., dislocation loops, electron microscope study 2-76449
 CuAuI, electron irradi., dislocation loops, electron microscope study 2-76449
 CuInS₂, electron-beam induced effects, Auger spectroscopy study 2-103824
 D₂ film, erosion by 2 keV electrons 2-99237
 Eu, electron irradi. damage, displacement threshold energy 2-81827
 Fe, vacancy migration at 220K, HVEM obs. 2-81828
 α -Fe:C, electron irradi., vacancies and impurities, positron lifetime study 2-66065
 Fe-Al (40 at.%), ordered, recovery after 20K neutron or electron irradi. 2-56043
 Fe-Al (40 at.%), quenched or electron irradi., nucleation of dislocation loops (French) 2-55968
 Fe-Al(V)(Si), dilute alloy, electron irradi., impurity-interstitial trapping sites, mag. aftereffect spectra study 2-56895
 Fe-B, amorphous and cryst., electron irradi., vacancies, elec. cond. study 2-92038
 Fe-Cr-Ni alloys, electron irradi., swelling and Ni segregation 2-111182
 Fe-Cr-Ni alloys, neutron irradi., swelling under electron irradi., reactor conditioning effect 2-109837
 Fe-Cr-Ni-based alloys, commercial, electron irradi., void swelling 2-103820
 Fe-Cr-Ti-Mo-TiO₂, dispersion strengthened, void swelling in HVEM, influence of fabrication procedure 2-111189
 Fe-Cu, precipitation during annealing, after low temp. electron irradi. (Russian) 2-116445
 Fe-Si, electron irradi., defect cluster nucleation at coherent twin boundaries, electron microscopy study 2-66036
 Fe₃B₂₀, amorphous, irradiated, structural relax. 2-55864
 FeSi, dilute, mag. relax. on electron irradi. 2-61743
 Ga_{1-x}Al_xAs:Sn layers, electron and γ -ray irradi., elec. cond., press. effects (Russian) 2-104512
 GaAs, electron irradi., elec. props. and defect annealing 2-104379
 GaAs, electron irradi., luminescence of deep radiative centres obs. 2-57187
 GaAs, electron-bombarded, IR absorpt. spectra, 'shallow' levels 2-72507
 GaAs, heavily doped, electron pulsed annealed, elec. quality meas. 2-98161
 GaAs IC, pulse annealing techniques optimisation 2-56693
 GaAs, ion implanted, transient and furnace annealing behaviour 2-56022
 GaAs, minority carrier lifetime and diffusion length, EBIC method in SEM 2-98667
 GaAs:B, electron irradiated, IR study of annealing 2-56033
 GaAs:Cu, electron irradi., photoluminescence 2-61967
 p-GaAs:Cu, electron irradi., photoluminescence 2-87851
 GaAs:Fe(O), ion implanted and electron irradi., deep levels and electron traps, annealing 2-98584
 p-GaAs:Ge LPE layer, electron diffusion length determ. by EBIC method 2-56736
 GaAs:Se, ion implanted, pulse diffused n⁺ layers form. using As₂Se₃ diffusion source 2-55998
 GaAs-Pd Schottky barrier diodes, electron irradi., piezoelec. phenomena, deep level effects 2-115893
 GaAs_{1-x}P_x epilayer, minority carrier lifetime and diffusion length, EBIC method in SEM 2-98667
 GaN, heteroepitaxial layers, characterisation by Kossel effect technique 2-92380
 GaP, thin film struct., electron beam irradi., current characteristics meas. 2-56738
 GaP:B, electron irradi., interstitials, IR study 2-103747
 GaP:Fe crystal, electron irradiated, IR absorpt. 2-61908
 Ge, defect annealing, electron induced, stimulated by 'additional lighting' (Russian) 2-103825
 n-Ge, electron and γ -ray bombarded, defect accumulation kinetics, intensity dependence meas. 2-115295
 Ge, electron bombarded, point defect generation, nonequilib. carrier lifetime study 2-56036
 Ge, electron irradi., displaced atom profiles, positron annihilation study 2-110972
 n-Ge, electron pulsed bombardment, defect formation obs. 2-115294
 Ge film, amorphous, electron beam annealing in TEM 2-71503
 Ge, radiation defects, light sensitivity and space orientation, IR spectra study 2-87826
 n-Ge:As(Sb), 1.5 MeV electron irradi., defect levels, DLTS study 2-92508
 Ge:Au, hopping cond. after γ -ray neutron, and electron irradi. 2-115758
 n-Ge:Sb, defect cluster form. and shaping after high-energy particle irradi. 2-76535
 Ge-Si alloys, electron pulse processing, solid soln. synthesis 2-66063
 Ge₂Se_{0.75} amorphous inorganic resist film, ion and electron beam induced struct. changes, TEM study 2-115588
 Ge_{1-x}Si_x, carrier heating by elec. field, effect of electron irradi. 2-77076
 HPO₃, hydrated microdrop, normal-super liq. transform., SEM study 2-98258
 p-Hg_{1-x}Cd_xTe, electron irradi., carrier lifetime, annealing effects 2-56610
 Hg_{1-x}Cd_xTe, recrystallised skin junctions, electron beam induced currents study 2-86895
 IF laser, discharge pumped, upper state form. kinetics and line tunability 2-85943
 InAs, electron irradi., vacancies and defect states, positron annihilation study 2-116295
 n-InP, electron bombarded, defect states, DLTS study 2-87171
 InP, electron irradi., defect form. and annealing 2-98159
 InP, electron irradi., dislocation loops, electron microscopy study (French) 2-103769
 InP, electron stimulated interaction with water vapour, Auger and EELS study 2-76786
 InP, irradi., 200 to 300°C in HVEM, radiation damage 2-92040
 InP:Fe, electron irradiated, EPR study 2-104690
 p-InSb, radiation damage and recovery effects 2-66066
 InSb:Ge(Sn)(Co), gamma-ray, electron and proton beam irradi., defect annealing, elec. props. (Russian) 2-103817

electron beam effects continued

- $\text{In}_2\text{--Sn}_2\text{O}_3\text{--Y}$ coating on Kapton substrate, electron beam damage, Auger and secondary emission study 2-81826
- $\text{In}_2\text{--Sn}_2\text{O}_3\text{--Y-GaAs}$: Be heterojunction solar cell, AES and EBIC evaluation 2-78214
- KCl, electron stimulated desorption of excited alkali atoms 2-87026
- KCl:Ru(I)(CN) $_6^{4-}$, EPR superhyperfine interactions 2-104699
- Kr, liq., hot-electron thermalisation, density depend. 2-103807
- Kr, solid and liquid, hot electron thermalisation following subnanosec. pulse irradi. 2-72015
- LiF, $\text{F}_2(\text{F}_2^+)(\text{F}_2^-)$ centres, formation and pumping by electron beam bombardment 2-90901
- Mg, electron irradi., peaking effect, internal friction, irradi. temp. effects 2-92107
- Mg, electron irradi., surface defect peak in EELS, V^- centres 2-92715
- Mg, electron irradiated, Frenkel defects study by diffuse X-ray scatt. 2-65989
- Mo, diffusion of interstitial atoms, elastic aftereffect meas. (German) 2-71734
- Mo, electron irradi., self-interstitials, anelastic relax. at 4.7K 2-56083
- Mo, electron irradi., vacancy cluster form. and radiation-induced refining, HVEM obs. 2-81829
- Mo:He, radiation damage during HVEM, He effects 2-103823
- Mo-CuInSe $_2$ interface, capacitance-voltage and EBK study 2-87385
- NaCl, electron stimulated desorption of excited alkali atoms 2-87026
- $\text{Na}_2\text{O-CaO-SiO}_2$ glass, electron bombardment, Na atom prod. absence XPS study 2-98160
- $\text{Na}_2\text{O.5Al}_2\text{O}_3$, electron irradiation damage mechanisms 2-66072
- Nb, photoemission studies of clean and oxidised surfaces 2-77695
- Nb $_2$ Sn, photoemission studies of clean and oxidised surfaces 2-77695
- Ni, electron irradi., Frenkel defects, elec. cond. (German) 2-98080
- Ni, electron irradi., vacancy cluster form. and radiation-induced refining, HVEM obs. 2-81829
- Ni, electron irradiated, stage III activation energy 2-66069
- Ni, preliminary electron irradi. influence on low-temp. creep, pt. defect control of activated dislocation glide (Russian) 2-67448
- Ni superalloy, γ' -strengthened, particle misfit effect on void form. under electron and neutron irradi. 2-109838
- Ni, surface (111), O predosed, NH_3 interaction 2-110156
- Ni-Be (1at.%), radiation induced homogeneous precip., HVEM obs. 2-83124
- Ni-Fe(Cu), electron irradi., Frenkel defects, elec. cond. (German) 2-98080
- Ni-Ti alloys, electron beam induced amorphisation, electron microscope study 2-109832
- Ni_3Al , irradiated, defect aggregation 2-103748
- Ni_3Si , ion and electron irradi., near-surface segregation, TEM and electron diff. study 2-86883
- NiTi shape memory alloy, electron irradi. induced cryst.-amorphous transitions 2-92041
- PbO-SiO_2 glass, electron and gamma irradiated, charge trapping and release 2-57013
- $\text{Pd}_2\text{Si-Si}$, Schottky barrier height measurement by electron-beam induced voltage 2-92721
- $\text{Pd}(100)$ surface, exposed to H^+ , electron stimulated desorption 2-76820
- Pt-C alloy, defect clustering induced by secondary collisions during HVEM irradi. 2-92042
- PtSi-Si , Schottky barrier height measurement by electron-beam induced voltage 2-92721
- Re(0001) adsorbed water layer, stability under electron impact (French) 2-76808
- Rh-Pt (10 wt.%), (111) surfaces, stability of C islands 2-87089
- Sb film, crystal structure, electron irradiation effect (Russian) 2-66394
- Sb, thin films, crystn., time-resolved TEM study 2-53898
- Si (111)7 \times 7, CO electron stimulated adsorp. (Russian) 2-115573
- Si diode structure, EBIC as function of angle of incidence of electron beams in SEM 2-97874
- Si, electron and γ -irrad., defect prod. and lifetime control 2-109833
- Si, electron beam irradi., radiation efficiency, photocond. and carrier lifetime study 2-115293
- n-Si, electron irradi., A-centre introduction rate, rate eqn. calc. 2-56037
- n-Si, electron irradi., low-lying electron trap, transient capacitance studies 2-71921
- p-Si, electron irradiated, elec. level of vacancy 2-115696
- Si, electron irradiated, uniaxial stress anal. of 0.79 eV vibronic band 2-67019
- Si, epitaxial stacking faults, elec. props., crystallographic struct., interaction with point defects 2-92379
- Si film, on SiN layer, stripe shaped cryst. growth by scanning electron beam annealing 2-87092
- Si film, polycryst., grain growth under CW electron beam annealing, modified SEM study (Japanese) 2-115597
- Si, minority carrier diffusion length, electron beam induced current meas., cryst. imperfections effect 2-71998
- Si, neutron and electron irradi., divacancy charge, IR study 2-76431
- Si, p-n junction, local parameter determ. by SEM EBIV mode 2-92737
- Si, plasma chemical etching, electron stimulated 2-116580
- Si, point defects dark-field lattice phase imaging obs. technique 2-86527
- Si, polycrystalline, grain boundary recombination rate determ. by scanned spot excitation methods 2-115774
- Si, radiation damage, defect study 2-66068
- Si, radiation defect laser annealing 2-103814
- Si, radiation-induced defects, room temp., in HVEM studies 2-92043
- Si, slip line free, large-area multiple scan annealing with line focussed electron beam, elec. study 2-71505
- Si:As, amorphous, line-source electron beam annealing 2-66060
- Si:As $^+$, implanted, pulsed electron beam annealing apparatus and utilisation (Chinese) 2-66059
- Si:B, electron irradi., B interstitial, capacitance bridge meas. 2-56034
- Si:B(C), electron irradi. defect accumulation kinetics and point defect annihilation 2-98153
- Si:Fe, electron beam irradi., EPR spectra 2-56920
- Si:Ga, electron irradi., luminesc. of traps 2-61969
- Si:Gd, crystal microstruct., Gd accumulations, electron radiation-induced defects 2-86891
- Si:O, electron irradi., carrier removal and recombination by interstitial complexes 2-115781
- Si:P, As, Sb, ion implanted, multiphase electron beam annealed, impurity profiles 2-103803
- Si:P, electron irradi., electron trap study by transient capacitance 2-110282
- Si:P, electron irradi. damage, capacitance and dielec. loss meas. 2-92037

electron beam effects continued

- Si:P, O, electron and neutron irradi., point defects and colour centres, DLTS study 2-103754
- Si:P $^+$ (As $^-$) layers, ion implanted, electron beam annealing, elec. props. 2-92039
- Si-As surface alloy, supersaturated, formation by ion implantation and pulsed electron beam annealing 2-81801
- Si-SiO $_2$, electron irradi., carrier fluctuations and trapping, capacitance study 2-115898
- Si-Ti (Ni) interface, laser and electron beam irradi., silicide form. 2-66377
- SiC (6H), graphitisation by electron beam irradi., electron diff. study 2-76503
- SiC, electron irradi., band gap changes 2-92460
- SiC:Al,N(Ti), luminescence, cross relax. optical detection 2-99180
- Si $_3$ N $_4$ MIM struct., electron beam induced leakage currents meas. 2-56744
- SiO $_2$, neutron irradiation effects 2-85209
- SiO $_2$, plasma chemical etching, electron stimulated 2-116580
- SiO $_2$:Ar $^+$, ion implanted electron irradi., anti-nealing effect 2-66062
- SiO $_2$ -based glass ceramics, neutron irradiation effects 2-85209
- α -Sn, n-type, electron irradi., acceptor point defects, elec. resist., thermoelec. power and Hall effect study 2-61394
- Su:B(P), heavily doped, defect formation under electron irradi. 2-103822
- Ta $_2$ S $_3$ (1T), electron irradi., Mott to Anderson localisation, electronic transport 2-92594
- Ta $_2$ S $_3$, irradiation induced defect pinning of CDW, electron diff. study 2-66064
- Ta $_2$ S $_3$ (1T), irradiation induced defect pinning of CDW, electron diff. study 2-66064
- Ti-Al alloy, Cl migration under electron bombardment, AES 2-86935
- TiB $_2$ +H reactivity electron beam enhancement 2-74938
- TiC coated graphite, performance in electron beam tests 2-69843
- TiC+H reactivity electron beam enhancement 2-74938
- TiSi $_2$ -Si, Schottky barrier height measurement by electron-beam induced voltage 2-92721
- W, adsorbed methane and CO, interactions, ESD and flash desorp. study 2-110163
- W, screw dislocation dynamics, irradi. softening, HVEM obs. 2-98104
- WO $_3$ films, electron beam excited, exoelectron emission obs. 2-77715
- Xe, liq., hot-electron thermalisation, density depend. 2-103807
- Xe, solid and liquid, hot electron thermalisation following subnanosec. pulse irradi. 2-72015
- Zn crystals, irradiated, electron-plastic effect (Russian) 2-61038
- Zn, electron irradi., electroplastic effect 2-115339
- ZnS, vacancy optically detected mag. resonance 2-77425
- electron beam impact** *see electron impact*
- electron beam lithography**
see also electron resists
- electrostatic deflectors, field computation, electron beam lithography systems, numerical anal. 2-50557
- focusing and dual-channel deflection systems with combined mag. and electrostatic fields, optical props. 2-65146
- IC fabrication, electron beam lithography 2-74183
- pattern registration meas. with irregular and offset lines 2-69247
- projection-gun resolution limit, electron-electron-interaction influence (German) 2-90793
- STEM, projection electron lithography, uses of contamination 2-64171
- system performance computerised optimisation using damped least squares method 2-75506
- Nb-Pb Josephson junction, submicron, electron beam lithographic fabrication and crit. current density meas. 2-56796
- Nb $_2$ Ge microbridges, fabrication and I-V characteristics meas. 2-61663
- VO $_x$ /V $_2$ Si/Si, semiconductor-superconductor-semiconductor, Josephson junction fabrication (Japanese) 2-82537
- electron beam machining**
No entries
- electron beam welding**
- elliptical cylinder moving through plate, heat transfer, appl. to electron beam welding 2-70823
- high power steady-state electron beams generation, control and applications 2-59572
- Fe-Ni-Cr, A286 superalloy, electron beam welded, fatigue crack growth 2-111300
- Mo, sintered sheet, electron beam welded, bend props. 2-116509
- electron beams**
see also electron impact; electron optics; Schwarz-Hora effect
- 3rd IEEE International Pulsed Power Conference, Albuquerque, NM, USA (June 1981) 2-89461
- acceleration in radial line system, excited by external pulse generator 2-70023
- broad area electron beam technology for pulsed high power gas lasers 2-96965
- bunching by uniform mag. fields 2-80367
- Cerenkov interaction, stimulated, experimental system for study 2-90402
- clusters, small, scattered electron counting system for nozzle beam studies 2-90405
- cyclotron interaction of electron beam with coparallel luminous waves 2-80887
- dicotiron instability of hollow electron beam in neutral gas 2-80889
- EM waves direct conversion into hard radiation on free electrons at cyclotron autoreson. 2-113781
- EMP produced by nuclear explosion, simulation aid by electron pulse direct injection into air 2-96357
- energy spread in EM wave field in a medium (Russian) 2-90788
- foil heating by focused electron beams using VUV radiation (Russian) 2-76194
- formation through explosive electron emission 2-55805
- free electron laser, amplification in magnetic fields 2-70577
- free-electron relativistic parametric devices, charge density harmonics generation 2-60003
- free electron laser experiment on the ACO storage ring (Orsay) 2-65238
- gases, neutral, pulsed relativistic electron beam transport 2-114965
- generation from bulk gas discharge 2-79716
- helical beam prod. in cyclotron reson. maser by three-electrode electron gun 2-70534
- high current, nonrelativistic, injection into neutral gas, ion accel. 2-80888
- high-current, low-energy nanosecond electron beam production 2-113043
- high-current electron beam prop. through metal channel 2-64842

electron beams continued

- high-resolution vibrational electron energy-loss spectroscopy of solid surfaces, apparatus 2-89869
 inhomogeneous electron flux, nonlinear oscill. 2-60004
 injection into vac. chamber in mag. field, numerical simulation 2-60005
 intense electron beam vacuum transmission through cusp mag. field using dielectric drift tubes 2-55774
 intense monoenergetic microsecond electron beam with stabilized current, production 2-113042
 LF oscillations in strip and hollow electron beams 2-60008
 low energy, integral range in massive gas absorbers 2-60706
 low energy electrons, interactions with massive gaseous absorbers, simulation 2-60714
 magnetically focused beam, rippled and partially neutralised, nonlinear equilib. and stability anal. 2-86406
 magnetised, parametric amplification in periodically heterogeneous medium, theory (*Russian*) 2-75630
 momentum modulation by stimulated Cherenkov interaction, theory 2-102708
 monoenergetic electron source, simple and efficient 2-89857
 multiple relativistic electron beams, injection and propagation into pre-formed plasma channels 2-96334
 neutralised rippled magnetically focused electron beam, electrostatic stability anal. 2-85881
 neutralized, unstable oscillatory Pierce modes 2-75505
 partially compensated, transverse oscills. 2-60006
 pinch effect for intense magnetised non-neutral electron beams on foil impact theory 2-114177
 plasma focus discharge, electron and ion beam energies and currents meas. 2-70024
 power multiplication and pulse forming using dynamic electron storage 2-97777
 projection-gun resolution limit, electron-electron-interaction influence (*German*) 2-90793
 propagation in neutral gas, self mag. field effect 2-109546
 pulsed electron beams generation in gas at intermediate pressure 2-85462
 RAYITO accelerator, designed to investigate electron-beam control and uniform excitation of large volume lasers, characterisation 2-96335
 relativistic, in metallic drift tube, numerical simulation 2-108773
 relativistic, passing through mag. field, stimulated emission 2-75502
 relativistic electron beam, cold, intense, generation using magnetised foil-less diode 2-101493
 relativistic electron beam, helically distorted, equilibria calc., free electron laser appl. 2-80975
 relativistic electron beam, high power, autocorrelation expt. 2-113038
 relativistic electron beam equilibria with non-circular cross section 2-113797
 relativistic electron beam in undulator, coherent radiation prod. 2-65144
 relativistic electron beam in vacuum, radial profile, angular distrib. 2-85450
 relativistic electron beam ring formation in conducting cavity 2-113808
 relativistic electron beam rings in conducting cavity 2-109554
 relativistic electron beam transport through the atmosphere in reduced-density, current-carrying channels 2-80890
 relativistic electron beams, helical, theory of generation 2-107452
 relativistic intense electron beam, EM wave scatt., expt. study 2-114166
 repetitively pulsed, generation by inductively-driven electron beam diode, expt. study 2-79710
 reversal biased p-n junction with semicond. target for electron beam investigation 2-102304
 slow cyclotron wave resonant instability of an electron beam in a spiral decelerating structure 2-90340
 solar type III radio bursts, numerical simulation of metre and hectometre-wave emission 2-94696
 solar type III radio bursts, stratification of assoc. electron beams (*Russian*) 2-112416
 space charge effect, computer study 2-114178
 spontaneous short-wave emission by an intense electron beam 2-85877
 stability in gas-filled diode in space-charge limited current mode 2-108208
 steady, propag. in air, current density meas. 2-60007
 storage in annular dielec. channels, theory 2-85430
 surface waves excitation by relativistic electron beam in irised waveguide 2-64736
 Tesla-transformer type relativistic electron beam generators, design charts 2-79715
 trapped beam electrons in travelling wave tube, static electric field effect 2-103390
 e^-e^- pair coherent accel. at nonlinear cyclotron autoreson. 2-113795
 LaB₆ cathode, thermionic emission characteristics, (100) and (110) orientations 2-53894
 W-Re cesiated foil targets heated by laser pulse as electron source for high quality electron beams 2-96358

electron bombarded semiconductor devices

- C-CD detectors, electron bombarded, for VUV 2-114470

electron capture

- see also charge exchange; electron attachment*
 alkaline earth ions + H^+ , electron capture, metal pot. calcs. 2-75414
 aqueous solutions, thermal electron transfer correl., photoelectron emission 2-70408
 atom-ion collisions, asymmetric electron capture theory 2-96714
 charge capture, two-state non-Hermitian eqns. of motion soln. 2-80807
 CIDNP formation in electron transfer reactions, electron exchange effect 2-70279
 continuum capture in the three-body problem 2-70413
 cooling electrons capture by cool protons 2-85455
 ferromagnetic materials, surface magnetic order investig. by electron capture spectroscopy 2-110616
 halogen anion + inert gas atom, elastic scatt. and electron detachment differential cross sections 2-90650
 ion-solid interaction, electron capture process into wake pot. 2-76538
 ionised projectiles traversing inert gases, polycrystalline solids and axial channels in Au, electron capture and loss 2-90661
 K-vector selection for electron capture at metal surfaces 2-77645
 plasma impurities, radiative processes, book contrib. 2-71120
 quasi-one-electron collision systems, state-selective electron capture state selective electron capture 2-90689
 second Born amplitudes for 1s-1s capture 2-102614
 cis-stilbene radical cation, electron transfer reaction, CIDNP formation, electron exchange effect 2-70279

electron capture continued

- transition metal carbonyls, dissociative electron attachment reactions, influence on thermalisation of electrons by CO₂ 2-72967
 triethylamine radical cation, electron transfer reaction, CIDNP formation, electron exchange effect 2-70279
 $Ar^+ + Be^{4+}(B^{4+})(C^{4+})$, electron capture, cross section meas. 2-102619
 $Ar^{2+} + Ar(Kr)(Xe)$, single electron capture products, energy loss spectra meas. 2-102607
 $Ar^{2+} + Na$ one electron capture by ground and metastable Ar^+ 2-80808
 Br ions bombarding thin C targets, L-shell vacancies and radiative electron capture 2-75412
 $C^{6+} + H(1s)$, electron capture cross section, Landau-Zener formula 2-114101
 $C^{6+} + H(1s) \rightarrow C^{5+}(n,l) + H^+$, electron capture cross-section, perturbed stationary states calcs. 2-59930
 Cl⁻ + inert gas atom, electrons detachment energy distrib. 2-90684
 $Co(NH_3)_6^{2+} - Co(NH_3)_6^{2+}$ electron transfer reactions, quantum effects 2-75411
 $^{57}CoCl_3$, frozen aq. soln., electron capture, Auger cascades, Mossbauer study 2-87644
 $^{57}CoCl_3$, frozen aq. soln., electron capture after-effects, Mossbauer study 2-104768
 $^{51}Cr \beta^-$ -decay rate, electron capture, chemical valency effect 2-96713
 D isotope effects on outer-sphere electron-transfer reactions 2-78083
 D⁻ production by double electron capture, Cs supersonic jet 2-54702
 D⁺ + He(Ne)(Ar), electron capture probabilities 2-102609
 Fe^{15+} plasma, dielectronic recombination via autoionisation states 2-103283
 Fe^{13+} , dielectronic recombination, forbidden 2s-3d transition, plasma 2-103284
 $Fe^{2+} + Fe^{3+}$ electron exchange in H₂O, theory 2-54954
 $Fe^{6+} + H_2$, one-electron capture, cross section meas. 2-102618
 H-like ion + bare ion, electron capture cross section calcs. 2-90686
 $H + C^{3+}$ charge transfer, cross section calcs. 2-70412
 $H + He^{2+}(Li^{3+})(Be^{4+})(B^{5+})$, electron capture investigated at impact velocities 0.3 and 1.4 au 2-114074
 H + highly stripped ions, electron capture theories 2-54959
 $H + Li^+$ electron capture, mol. treatment, impact parameter approx. 2-85797
 $H^+ + C$ (methane), K shell ionisation, electron capture, cross section meas. 2-54940
 $H^+ + Cs(Rb)(K)(Na)$, single electron capture, attenuation cross sections meas. 2-114077
 $H^+ + H$, electron capture at high energies, continuum distorted wave and second Brinkman-Kramers approx. 2-96718
 $H^+ + H$, electron capture differential cross section 2-65085
 $H^+ + H(1s)$, charge exchange, three-centre atomic expansion method 2-85803
 $H^+ + He$, electron capture cross sections, second Born approx. 2-114103
 $H^+ + He(Ne)(Ar)$, electron capture probabilities 2-102609
 $H^+ + hydrocarbons$, electron capture, cross-section additivity failure 2-102612
 $H^+ + Ne$, K shell ionisation, electron capture, cross section meas. 2-54940
 $H_2 + Be^{4+}(B^{4+})(C^{4+})$, electron capture, cross section meas. 2-102619
 H_2 + ion collisions, electron-capture and -loss cross section data compilation 2-79294
 H_2^+ + metal atoms, electron capture transitions 2-102603
 He ions + He(N)(Ne)(Ar), charge exchange cross sections, oscillations, average equilib. charge 2-85800
 $He + B^{4+}(C^{4+})(N^{4+})(O^{4+})(F^{4+})(Ne^{4+})(H\text{-like})(Li\text{-like})$ ions, one-electron capture cross sections 2-96723
 $He + F^{8+}(F^{9+})$, radiative electron capture processes, X-ray prod. cross sections 2-96725
 I₂, state-to-state dissociative electron capture rate, optogalvanic demonstration 2-59949
 $Kr^+ + inert$ gas atoms, charge transfer cross section meas. 2-102601
 Li atom + ion collisions, state-selective electron capture 2-90689
 $Li + H^+(He^{2+})$, electron capture and ionisation cross sections calcs. 2-54956
 $Li + He^{2+}$ collisions, absolute cross sections for one electron capture into excited projectile states 2-59929
 $Li^{3+} + H$, charge exchange calcs. 2-102610
 $Na + H^+$, polarised proton and N^+ source, target optical orientation (*Russian*) 2-102311
 $Na + H^+$, electron capture collisions 2-102615
 $Ne + F^{8+}$, excited states, electron excitation and capture, X-ray spectra 2-75418
 $Ne^{2+} + Xe$, excited ions lifetime meas. long-lived ions preparation, selective electron capture appl. 2-102616
 $Ne^{2+} + Xe$, electron capture excitation from metastable ion at 40 keV 2-96719
 $Ne^{8+} + He(Ne)(Ar)(methane)(Xe)$, K α X-ray lines, electron capture rate coeff. determ. 2-65072
 $Ne^{2+} + He(Ne)(Ar)$, excited projectile states prod., photon emission cross sections 2-75413
 $Xe + Ne^{2+}$, initial to final state-selective 1-electron capture cross-sections meas. 2-90690

electron capture, nuclear *see nuclear electron capture***electron density**

- see also carrier density; current density; electron density (metals); plasma density*
 Abel 1763, X-ray galaxy cluster, thermal electron density and cluster mass from X-ray meas. 2-68909
 atoms, molecules and solids, direct calcs. 2-70131
 atoms in hot compressed matter, quasi-static electron density fluctuations 2-71086
 auroral ionosphere, electron density irregularities from STARE obs. of long discrete echoes 2-112217
 α -bungarotoxin structure by averaging electron density of noncrystallographically related moles. 2-60964
 compromised X-ray source model for burst spectra 2-89410
 DA 240, giant radio galaxy, thermal electron density in hotspot from polarisation obs. 2-94836
 lower E-region, neutral temp. and electron density meas. via vertical HF sounding in presence of acoustic wave 2-100636
 F₂-layer, equinoctial anomaly in peak density during high solar activity 2-89068
 F₂-layer electron density variations due to geomag. disturbances 2-63158

electron density continued

- F-region, mid-latitude, photoelectrons spectrum rel. to plasma stability 2-106384
 F-region, nightglow meas. rel. to contrib. of atmospheric movements to maintenance of electron conc. 2-73748
 first-row atoms, average electron densities, piecewise exponential decay 2-80435
 fixed-shell statistical atomic models with piecewise exponentially decaying electron densities 2-90424
 high-latitude ionosphere, inhomogeneity spectrum of polar electron density along geomag. field 2-58199
 incident EHF microwave in transient narrow gap arc, electron density meas. 2-103472
 ionosphere, effect of large-scale inhomogeneities on reflected wave field struct. 2-112197
 ionosphere, electron content at mag. equator 2-106385
 ionosphere, electron density inhomogeneities rel. to radio waves electron gyrofrequency absorpt. 2-112199
 ionosphere, electron density reduction and HF phase path fluctuation during solar eclipses (1980 February 16) 2-106386
 ionosphere, equatorial anomaly in Indian sector, post-sunset behaviour 2-78908
 ionosphere, polar, rocket obs. of electron density profiles (*Japanese*) 2-73779
 ionosphere, topside, origin of electron density vars. at middle latitudes 2-112194
 ionosphere electron density inhomogeneities, model determ. of volumetric characts. 2-112196
 ionosphere F-layer, earthquake influence on electron conc. 2-73777
 Langmuir probe characteristics in a plasma containing electrons with drift velocities 2-55786
 magnetically insulated electron flow, two-dimensional time-dependent theory 2-96819
 Markaryan 314 (NGC 7468), remarkable irregular galaxy, electron density in emission-line regions 2-101042
 mesosphere sounding rocket determ. of electron and ion densities 2-63122
 orbitron device, electron density distrib. and ionisation efficiency, Boltzmann eqn. calc. 2-84644
 organic cpds., electron distrib., pulsed ^{14}N NQR investig. 2-108592
 plasma column, sustained by surface wave, characts. and energy balance 2-55746
 plasma measurement, vibr. compensated far-IR laser interferometer 2-91667
 plasmopause-plasmasphere, electron density struct. and dynamics, (1977 July 6 and 14) (*French*) 2-106382
 plasmasphere, refilling of geomag. force tubes with thermal plasma after mag. disturbance 2-106383
 polar molecules, in interstellar clouds, spectral intensity, electron impact effects 2-112533
 solar corona, brightness and electron density distrib. struct. near maximum of (cycle 21) 2-106643
 solar corona, electron density from O VII X-ray lines obs. 2-106640
 solar flare, 1973 July 29, revised temp. and electron density values for post-flare loops 2-100873
 solar flares, O V diagnostic line ratios 2-89215
 VLF diagnostics of electron density variations within the magnetosphere 2-94567
 BH electron density, pseudoatom expansion 2-60931
 Ba, Rydberg states, electron densities, isotope shifts 2-75213
 CH electron density, pseudoatom expansion 2-60931
 CO₂ laser active medium, preionisation electron density determ. 2-90864
 FH electron density, pseudoatom expansion 2-60931
 H II regions, effect of electron density on photoelectric heating 2-63566
 H₂, density in interstellar mol. cloud, spectrosc. obs. 2-112534
 Hg, vapour, glow discharge, laser scattering diagnostics 2-97784
 NH electron density, pseudoatom expansion 2-60931
 NaF, electron density by γ -ray diffractometry 2-76998
 OH electron density, pseudoatom expansion 2-60931

electron density (crystallography) *see crystallography***electron density (metals)**

- surface, electron density, analytic formula 2-77013
 Ag-Cu films, plasmon excitation by fast electrons 2-92785
 Al cluster, CO adsorpt. 2-87057
 Al film, reduced electron density, elec. cond. study 2-82477
 Al thin film, size depend. cond., electron density and mean free path 2-110498
 Au film, reduced electron density, elec. cond. study 2-82477
 Au thin film, size depend. cond., electron density and mean free path 2-110498
 Cu film, reduced electron density, elec. cond. study 2-82477
 Cu thin film, size depend. cond., electron density and mean free path 2-110498
 Cu vacuum evaporated films, defect density and elec. props. from annealing study of elec. resistance 2-110495
 Fe-Mn ferromagnetic solid soln., electron density perturbation, residual resistivity 2-77019
 NiFe₃B 3d electron density charge on atomic ordering, Mossbauer study 2-61804
 Sn and intermetallic cpds. with Fe, Co and Ni, electron struct., X-ray and X-ray electron spectr. obs. (*Russian*) 2-67153
 Zr,Hf_{1-x}V₂, struct. nonstable supercond. Laves phase, electron spectrum peculiarities (*Russian*) 2-66433

electron density of states *see electronic density of states***electron density of states (condensed matter)** *see electronic density of states***electron detachment**

- molecular anions, photodetachment, strong electron-dipole coupling 2-96649
 negative ions, photodetachment 2-90635
 Cl⁻ + H₂(D₂)(HD), reactive scatt. 2-88345
 F⁻ + H₂(D₂)(HD), reactive scatt. 2-88345
 H⁻, two-electron photodetachment, H⁺ threshold yield 2-75443
 H + Cl⁻(F⁻), associative detachment reaction 2-114075
 H + He, electron detachment, cross section plane wave form approx. 2-114094
 OD⁻, threshold photodetachment cross-sections meas. 2-102548
 OH⁻, threshold photodetachment cross-sections meas. 2-102548
 Rb⁻, photodetachment, cross section meas., multichannel quantum defect anal. 2-54821

electron detection and measurement

- biotite mica, electron and α -particle damage, implications for track formation mechanisms 2-59660
 cascade shower development in Pb 2-108307
 cavity theory for electrons, expt. exam. 2-59563
 Ceratron, continuous dynode electron multiplier, detection efficiency for positrons 2-85480
 Cherenkov 90-channel mass spectrometer 2-64771
 conversion electron Mossbauer spectrometer equipped with ceramic electron multiplier detector 2-102323
 dE/dx meas. in Ne, Ar, Kr, Xe and pure hydrocarbons 2-108312
 dosimetry with general cavities, theoretical anal. 2-70000
 dye film dosimeter inserted in solid, depth-dose distrib., electron behaviour influence 2-113752
 electron-positron pair angular distribution meas. in bremsstrahlung beam 2-85504
 energy and ang. distrib. of electrons emitted from spectrometer sources, Monte Carlo calcs. 2-102321
 fine-grain marble calorimeter, response and resolution for hadronic and EM showers 2-108239
 gas sampling EM calorimeter in saturated avalanche mode 2-108229
 HELICON, heavy liq. total absorpt. counter for electrons or photons 2-96372
 inductive transducer for electron flux meas. 2-80406
 integrator, digital, for electron fluence meas. (*Japanese*) 2-80404
 ionisation calorimeters, electron-proton discrimination capabilities study 2-113836
 lead glass shower detector at SLAC hybrid facility 2-90394
 multidetector system for electron spectrometers 2-113812
 NE213 scintillator response to electrons and protons, size depend. 2-108234
 nuclear emulsions, γ cascade shower treatment 2-102354
 nuclear lifetime meas. using electron spectrometer 2-108314
 pair production, atomic screening effect study 2-108315
 position-sensitive detector system for electrons using CCD 2-85477
 positron polarimetry, method, appls. 2-108325
 proportional tube EM calorimeter with conductive plastic tube 2-75114
 proportional wire calorimeter 2-102328
 reversal biased p-n junction with semicond. target for electron beam investigation 2-102304
 scintillator glass shower detector performance for low energy electrons 2-96373
 STEM, electron detectors, detective quantum efficiency meas. 2-89872
 total-absorption counters for high energies, choice of photomultiplier size 2-85495
 Bi₄Ge₃O₁₂ crystal response to 150-700 MeV electrons 2-96381
 Bi₄Ge₃O₁₂ scintillation detector, energy resolution meas. from 1 to 50 MeV 2-64764
 Fe-scintillator modular electron/hadron calorimeter, response to electrons 2-108231
 ^{16}O background-free target for electron scatt. meas. with high beam currents 2-102298
 Pb-scintillator sampling shower counter characts. for electron and photon detection 2-75099
 Pb-scintillator sandwich shower detectors for electron, photon detection 2-64746
 Pb-solid Ne sandwich detector, EM calorimeter development 2-90393
 Si detectors for X-ray, ion and electron spectrometers, low temp. characts. 2-75108
 Si multichannel semicond. detectors for high energy X-ray and electron beams 2-96371
 Si surface barrier detector, response to 100-600 keV monoenergetic electrons 2-108252
 Si(Li) detector parameters, electron and X-ray large doses effect, expt. study 2-85496
 Si(Li) plus mag. lens electron spectrometer, centroid-shift time meas. 2-108216

electron device noise

- 5 kV vacuum feedthrough connector with low capacitance and microphony 2-75122
 Burgess' variance theorem, extension to autocorrelation functions and spectra 2-61532
 diode laser, feedback noise rel. to carrier-induced index change 2-55162
 diode lasers, mode partition noise meas. 2-85967
 IR photoconductive detector, charged-particle-induced noise suppression 2-107404
 Josephson junction, subharmonic freqs. and chaos, theory, parametric amplifier appl. 2-92833
 laser diode, directly modulated, quantum intensity noise 2-75578
 laser transmission system, mode partition noise analysis 2-75719
 magneto-optical measurement using polarisation modulation method, S/N ratio calc. 2-112956
 maser noise, Callen-Welton thermal noise theory 2-80923
 microbolometer for far IR detection 2-112974
 microwave coaxial structure for packaged MESFET operation at top noise and gain performance at 24 GHz 2-100734
 MNOS structures in region of punchthrough current, conductance and noise 2-104498
 p-i-n photodiode receivers for optoelectronic systems, noise sources, dynamic props. (*Czech*) 2-70705
 semiconductor diodes, fundamental noise sources, theory 2-104442
 semiconductor field emission cathodes, flicker noise 2-93385
 semiconductor laser noise and distortion characts. in optical fibre communication systems 2-65226
 semiconductor lasers, optical phase noise reduction 2-65225
 SQUID low freq. noise and parameter fluctuations 2-92824
 superconducting modulation-amplification-demodulation amplifier for weak sonic and infrasonic radio signals 2-89052
 thermionic ionisation detectors, characteristics study 2-90403
 AlGaAs laser amplifier, Fabry-Perot cavity type, noise characts. 2-80958
 AlGaAs narrow stripe proton isolated DH lasers for optical communication, HF intensity noise behaviour during accel. life testing 2-65223
 Bi-Sb self-heated thermocouple for far IR detection 2-112974
 GaAs hot-electron diffusion const., Monte Carlo calc. 2-98656
 GaAs MESFETs, deep level impurities, effects on small signal and LF noise props. 2-98586
 GaAs photoconductive detectors, thin film, ultrafast operation 2-101463
 GaP p-n junction, LED, thermally stimulated noise 2-104444
 Ge avalanche photodiodes for long wavelength optical fibre systems, review 2-81117

electron device noise continued

- HgCdTe photoconductors, effect of diffusion and drift on generation-recombination noise 2-87324
 InGaAs-InP avalanche photodiodes for long wavelength optical fibre systems, review 2-81117
 InGaAsP-InP laser, intensity noise under influence of reflection and modulation 2-80950
 InP, hot-electron diffusion const., Monte Carlo calc. 2-98656
 InP-InGaAsP planar heterostructure avalanche photodiodes, multiplication noise 2-56675
 Nb superconducting resonators, characterisation using 10 GHz ultrastable oscillator 2-112923
 Si, 1/f noise correlation expts., absence of temp. fluctuations 2-72039
 p-Si, generation-recombination noise spectra meas. 2-87300

electron diffraction

- see also **electron diffraction crystallography**; **electron diffraction examination of materials**; **gas phase electron diffraction**; **high energy electron diffraction**; **low energy electron diffraction**
 Laue four-wave diffraction in single cryst., emission of photons by electrons (Russian) 2-56039

electron diffraction crystallography

- see also **crystal atomic structure**; **Debye-Waller factors**; **electron diffraction examination of materials**
 anomalous absorption, orientation depend. in electron diffraction 2-76243
 atomic helical structs., electron microdiffraction patterns, computer simulation (French) 2-71295
 backscattered electron channelling patterns, critical voltage effects 2-76557
 coherent convergent-beam electron microdiffraction technique 2-65812
 crystal defects, electron scatt. theory; periodic continuation methods 2-109638
 crystal surfaces, electron microdiff. studies of potential field 2-71296
 crystals, known, stereo analysis of electron diffraction 2-71297
 cubic crystals, ideal ECP maps and rapid indexing method (Chinese) 2-60844
 digitisation of micrographs, performance evaluation of scanning microdensitometer 2-112950
 dislocation contrast, kinematic theory of electrons (French) 2-97866
 dynamical theory, in small angle scattering approx., unified description 2-76244
 elastic scattering, diffraction symmetries 2-76242
 exchange potential for medium energy electron diffraction calc. 2-103565
 forbidden reflection intensity and influence on struct. image, theory 2-91729
 glass structure, diffraction methods anal. 2-55859
 goniometer axes position determination, Kikuchi lines appl. 2-91731
 HEED, convergent beam, struct. factor information from higher-order Laue zone intensities 2-76253
 high resolution imaging methods 2-97877
 Kikuchi patterns in transmission electron diffraction, weight factors 2-76245
 lattice images, digital processing 2-115107
 Laue spots, high order, indexing by difference vector method (Chinese) 2-76241
 microscopic equipment, methods, appls. and related topics, list of publications 2-53449
 microscopy, direct phasing technique for improvement of image quality 2-97870
 microscopy, high energy approx. in dynamical theory of electron diffraction 2-60842
 multi-slice calculations using an array processor, for electron diffraction crystallography 2-71294
 non-crystalline substances, diffraction studies, book 2-58566
 picosecond photoelectron pulse technique 2-91730
 specimen current image of single cryst., diffraction patterns 2-65813
 stacking faults 2-76464
 stereo analysis, of selected area diffraction patterns 2-71297
 symmetric Laue diffraction, contrast calc. errors using dynamical theory, expt. study 2-115108
 TEM, $2\lambda/\lambda_D$ technique, appls. 2-71304
 three-dimensional structures, combined data methods 2-76256
 tilted crystal, electron diffraction pattern automatic index (Chinese) 2-109637
 transmission electron diffraction, weak beam optical pot. and Fourier coeffs. 2-76246
 SnO_2 , upper Laue zones influence an electron diffraction patterns and electron images 2-97867

electron diffraction examination of materials

- see also **gas phase electron diffraction**; **high energy electron diffraction**; **low energy electron diffraction**; **reflection high energy electron diffraction**
 bromanil, organic semicond., epitaxial growth mechanism on KCl 2-92391
 catalyst particles, STEM, bright and dark field imaging methods 2-97884
 clay minerals, structural investigation, principal results 2-86523
 cytosine, electron diffraction data, crystal bending effect 2-60965
 diamond, natural, type Ia, platelet formation, mechanism and structure 2-81712
 diamond particles, vapour deposition from methane- H_2 mixture 2-77744
 diamonds, electron diffraction patterns, 'spike' diffuse reflections 2-81634
 diamonds, platelet-containing, spike electron diffraction patterns 2-76247
 EELS, crystallographic information, fine struct. channelling, diffraction patterns 2-67167
 graphite-SbCl₃ intercalation cpd., stage-2, commensurate-to-glass phase transition, electron microscopy study 2-110004
 haemoglobin, rat, hydrated monocrystals, reproducibility of electron diffraction intensity data 2-116884
 Hastelloy C-276, heterogeneous precipitates, electron microscopic anal. 2-99432
 Invar, ferromagnetic, thermomag. anal. using electron diffraction 2-110584
 iodanil, organic semicond., epitaxial growth mechanism on KCl 2-92391
 metallic films, chemically deposited, struct., precipitation etching (German, English) 2-116663
 Nimonic PE16, anomalous contrast from stacking faults 2-76464
 nylon 12, soln. crystn., morphology, crystal form and thermal behaviour 2-91818
 orientation relationships, calc. with programmable pocket calculator 2-60911
 oxide structures, structural investigation, principal results 2-86523

electron diffraction examination of materials continued

- polyacetylene, cis, trans, and I_2 doped, cryst. struct., electron diffraction study 2-91820
 polyethylene, electron irradiation, micro-Brownian motion of segments, electron diffraction study 2-86580
 polyethylene, epitaxial crystallisation on organic substrates, nucleating agent mode of action 2-87106
 polyethylene, high-density, cryst., wear, morphological study 2-83240
 ribosomal RNA, struct., X-ray neutron scatt. and electron microscopy study 2-67944
 semiconductors, structural investigation, principal results 2-86523
 solid solution, inhomogeneous, scatt. of X-rays, thermal neutrons and electrons (Russian) 2-91716
 steel, austenitic stainless, Cr-Mn, low-Ni, intergranular Li penetration 2-113371
 steel, Cr-Ni-Mo-Mn, Mo distrib. during long-term holding between 554 and 654°C (French) 2-72700
 steel, low-alloy, strengthening mechanism of NiAl precipitate (Korean) 2-116453
 steel, strengthening by surface plastic deformation, dislocation aspects 2-116615
 STEM appl. in solid state chemistry, cathodoluminescence, EELS, XES techniques 2-65821
 TCNQ salt, trimethylammonium iodide-TCNQ, struct. transitions, HV electron diffraction (French) 2-92173
 TCNQ salt, trimethylammonium-iodide (TCNQ), structural transitions study by high voltage electron diffraction 2-71632
 tetracene films, vapour-deposited, struct., electron diffraction 2-81674
 tetramethyltin intercalated graphite, low-temp. structural study by electron microscopy 2-76424
 Ag film, growth on Pd, AES and electron microscopy study (French) 2-71839
 Ag-Ge, amorphous film, struct., elec. and optical props. 2-82483
 AgSbSe₂ film, growth and cryst. 2-115620
 Ag-TaS₂ intercalation cpd., electron diffraction, invest. of superlattices, struct. and CDW 2-103720
 Ag-TaS₂ superlattices, electron diffraction study 2-91931
 Al film, picosecond electron diffraction study 2-91730
 Al film thickness meas., Grigson microdiffraction in STEM, systematic errors 2-63980
 Al, single cryst., specimen current image 2-65813
 Al-Al₂O₃ oxide dispersion strengthened, high temp. deform. 2-93554
 Al-Ce(Al₃Dy)(Tm) thin films, crystallographic phases following electron beam annealing 2-55888
 Al-Cu films, amorphous, crystallisation 2-71837
 Al-Cu thin films, large grain growth during recrystn. annealing, elec. resist. and TEM study 2-111203
 Al-Fe-Si alloys, commercial purity, DC casting, form. of intermetallic cpds. 2-88060
 Al-Mg-MgO, oxide dispersion strengthened, high temp. deform. 2-93554
 Al-Ru (10-15 wt.%), rapidly quenched, phase transform 2-77823
 Al-Zn-Cu, electron diffraction, determ. of soft directions in cryst. lattice at premartensite stage 2-60925
 $\alpha\text{-AlH}_3$, electron beam induced decomp., analytical diffraction obs. 2-78070
 AlN, multilayer polytypes and packing defects 2-55878
 AlN, multilayer polytypes form. during sintering 2-76404
 Al₂O₃-Y₂O₃ dispersion strengthened alloys, convergent beam diffraction anal. of dispersoids 2-99436
 Au bicrystals, grain boundary struct. width, var. with misorientation angle and boundary plane 2-76460
 Au, epitaxially evap. film, texture anal. and pole figure determ. using TEM (German) 2-111448
 Au film, condensed, lattice dynamics and substructure (Russian) 2-92425
 Au film, epitaxial growth on pure and doped NaCl and KCl substrates 2-115621
 Au particles vacuum deposited onto AgBr films, habit 2-110194
 Au-Mn, structure, high resolution electron microscope and electron diffraction study of Au₂Mn phase 2-86627
 Au-Mn system, periodic antiphase boundary structs. derived from DO_{22} struct. 2-81716
 Au-Zn, incommensurate two-dimens. antiphase struct., HVEM study 2-97995
 Au₂Mg(Zn)(Cd), high resolution images by high-voltage electron microscopy 2-81636
 Au₂Mn, micro-texture study 2-61265
 Au₃Mn₁₃, superstructure, diffraction studies 2-86628
 BaCa(CO₃)F, huanghoite, lattice parameters and stacking faults, electron diffraction study (Chinese) 2-91903
 BaGeAl₃(Ga₂)O₁₂, cryst. struct., X-ray and electron diffraction study 2-81760
 BaTiAl₃(Ga₂)O₁₂, cryst. struct., X-ray and electron diffraction study 2-81760
 Bi₂Se₃, amorphous film, atomic distrib. study 2-91751
 C, amorphous, short range atomic struct., comparison of diffraction analyses 2-71354
 C, amorphous thin film, struct., scanning electron diffraction study 2-86567
 C fibre, microtexture and structure, TEM and electron diffraction obs. (French) 2-78058
 C, thin films, plasma deposition, electron diffraction anal. 2-104198
 Ca₂Al₂P₂Si₂O₁₅, crystal struct. and chem. formula confirmation 2-91902
 CdHo₂S₄, spinel to rocksalt type struct. transition, electron microscopy and diffraction study 2-76651
 CdSe, heteroepitaxial films, struct. charact. 2-92381
 CdSe_{1-x}S_x films, soln. grown, struct. and optical props. 2-56388
 CdTe, Se_{1-x} films, semiconducting cmpds., laser induced formation 2-115593
 Co textured films, NMR and mag. meas. (Russian) 2-98994
 Co-Al₂O₃ mag. emulsion, electron diffraction study (German) 2-82667
 Co-Cr-W, processed by liq. phase sintering, microstruct. invest. 2-67310
 Co-Sn, metallic glass, struct., forming ability and elec. cond. 2-103653
 (Co₇₈Fe₂₂)₂V alloy, ordered, microstruct. 2-72719
 Cr film on (001) Cu substrate, misfit twin crystals (Japanese) 2-104194
 CrPo₂-Se₂, synthesis and cryst. struct., X-ray and electron diffraction study 2-109770
 Cu-Ag, amorphous films with high stability 2-104196
 Cu-Al, dispersion hardened, struct. stability and resist. to deform. (Russian) 2-77872
 Cu-Sb, chemiepitaxial layer formation, during reactive diffusion 2-76849
 $\beta\text{-Cu-Zn-Al}$, ordered, martensitic phases, premartensitic states and struct. (Russian) 2-62123
 Cu-Zn-Al alloy, martensite structures for various quenching conditions 2-93510
 Cu-Zn-Al quenched alloys, martensitic structs., electron diffraction study 2-62124

electron diffraction examination of materials continued

- Cu-Zr metallic glass, sputtering prep. and props. 2-82948
 CuAu vacuum deposited films, mech. twinning 2-98492
 Cu-Au-I(II), vacuum deposited ordered thin films, mech. twinning obs. 2-82173
 Cu₂Au, antiphase domain boundaries, electron diff. study 2-115245
 Dy-Cu amorphous films, crystallisation, TEM and electron diff. study 2-92415
 Fe, pure, splat-quenched, martensitic transform., microstruct. and kinetics 2-57348
 Fe-B-Cr(Co)(Ni), metallic glasses, crystn. behaviour 2-71368
 Fe-Sn metallic glass, struct., forming ability and elec. cond. 2-103653
 Fe₂(As₁₅Te₃Si₂Sb₂)₁₋₃ film, sputtered, phys. props. 2-92421
 Fe₃C, cementite, forbidden reflection intensity and influence on struct. image, theory 2-91729
 GaAs epitaxial films, activated, photoemission, surface purity and perfection effect 2-72608
 GaAs film, amorphous, plasma deposition and characterisation 2-111094
 GaAs, MBE grown (100) autoepitaxial films and substrates, struct. and comp. and surfaces 2-56383
 GaAs, oxide removal from chemically etched surfaces, electron and X-ray diff. 2-116561
 GaAs surface, electron state density, low energy electron reflection study (Russian) 2-87362
 GaAs(Mg(Ca)), MBE, doping behaviour, reflection electron diff. and AES study 2-92386
 GaP, Kossel line broadening near scratch 2-103566
 GaP, oxide removal from chemically etched surfaces, electron and X-ray diff. 2-116561
 Ga₂Se₃, ordered and disordered phases, struct., electron diff. and microscopy obs. 2-60957
 Gd, electron diff. pattern of Fm3m phase, Ge₂O₃ effects, theory 2-91868
 Gd-Co, amorphous alloy films, changes in struct., mag. anisotropy and mag. domains (Chinese) 2-62238
 In-Cd(Ti), shape memory behaviour and FCC to FCT transform. 2-93502
 InAs, surface, electron state density, low energy electron reflection study (Russian) 2-87362
 InP, inclusions 2-71433
 InPO₄ film on InP, IR and electron diff. data 2-72855
 In₂S₃, crystal growth from amorphous phase, electron-diffraction study (Russian) 2-92384
 InSb, LPE regrowth by CW laser annealing, expt. study 2-56029
 InSb, surface, electron state density, low energy electron reflection study (Russian) 2-87362
 InSb-InBi solid solns., grown by MBE, charact. 2-104190
 InSe large single crystals grown from stoichiometric, non-stoichiometric melts 2-93411
 KCu₃M₂O₂₁ (M=Nb, Ta), intergrowth of hexagonal and perovskite-like structs. 2-65962
 Li-B film, electron diff. study 2-110182
 LiFeSnO₄ phase, cryst. struct. charact. 2-65942
 Li₂O-Al₂O₃-SiO₂ glass ceramics, microstruct., electron microscopy and electron diff. 2-115140
 Li₂O-Al₂O₃-SiO₂-TiO₂ glass ceramics, cryst. props., grain growth, electron and X-ray study 2-66244
 LiTaO₃, ferroelec. domains and chemical twinning, dislocations and stacking faults 2-93130
 MgO smoke crystal surfaces, electron microdiff. studies of potential field 2-71296
 (Mn,Fe)₂Si₂O₁₅(OH,Cl)₁₀, McGillite, one-layer monoclinic struct., electron microscopy and electron diff. 2-115181
 Mn-Bi amorphous films, crystn. 2-98480
 MnSi₂₅ quenched alloy, cryst. struct., cyclic fouling method, electron diff. and TEM study 2-91880
 MoC_x, metastable semicoherent precipitate struct. anal. by diff. contrast image matching 2-76685
 Mo₉Ru₃₃B₁₇, metallic glass, inertial confinement fusion target material -appl., charact. 2-87104
 MoS₂, 2H polytype, electron diff. study of twist boundaries 2-76248
 MoSe₂, 2H polytype, electron diff. study of twist boundaries 2-76248
 N₂, liquid, intermol. electron density distrib., diff. anal. 2-91750
 Na₂TiO₉, structure determ. by convergent-beam electron diff. and 1 MeV struct. imaging 2-60930
 Nb-Ge films, supercond. and struct. props. rel. to sputtering conditions (Russian) 2-104522
 Nb-H system, hydride phase transition, low temp. 2-57344
 (NdO₂)CO₃, type Ia and II, optical absorption spectra and electron diff. patterns 2-116204
 Ni superalloys, precipitate struct., convergent beam electron diff. study 2-72709
 Ni-Ag co-evaporated amorphous thin films, thermal evolution 2-71835
 Ni-base superalloy, space group of μ -phase, electron diff. study (Chinese) 2-60924
 Ni-Cr alloy film, amorphous, struct. and crystn. 2-55863
 Ni-Fe films, domain wall struct., low-angle electron deflection study 2-87562
 Ni-Mo, irradi.-induced Mo₂C precip. 2-57356
 Ni-Sn, metallic glass, struct., forming ability and elec. cond. 2-103653
 Ni₂Si, ion and electron irradi., near-surface segregation, TEM and electron diff. study 2-86883
 γ -Ni₃P precipitates, habit plane 2-65923
 Pb₂KNb₂O₁₅, ferroelectric-ferroelastic domain struct., electron diff. and microscopy study 2-76011
 PbS-Bi₂S₃ system, synthetic PbS-rich homologues, microscopic study 2-115253
 PbZrO₃, antiferroelec. domain struct., electron microscopy and diff. study 2-57031
 PbZrO₃, antiferroelec. phase, space group and O atom coordinates, electron diff. study 2-109759
 Pr-Tb-O film, thermally evaporated, struct., optical and elec. props. 2-110189
 Pt film, ultrathin oriented, on Al₂O₃, catalysis of methylcyclopentane hydrogenolysis 2-88381
 Sb₂, crystal struct. below 94K, electron diff. study 2-98001
 Sb-Te, chemiepitaxial layer formation, during reactive diffusion 2-76849
 Si, electron symmetric Laue diffraction, contrast calc. errors using dynamical theory, expt. study 2-115108
 Si surface damage caused by reactive sputter etching (Japanese) 2-77965

electron diffraction examination of materials continued

- SiC (6H), graphitisation by electron beam irradi., electron diff. study 2-76503
 SiO₂-Na₂O-CaO-MgO-R₂O₃ (R=rare earth) glass struct., diff. methods anal. 2-55859
 Sm₂Ni₁₀ polytypes, cryst. struct., electron diff. and microscopy study 2-91877
 SmO₂, upper Laue zones influence an electron diff. patterns and electron images 2-97867
 Sn-O amorphous system, bonding struct. and lattice dynamics, Mossbauer study 2-104770
 SnO₂ bent cryst., high resolution electron microscope and electron diff. images 2-76402
 SnRh₂Sn₁₂ R. (R=rare earth), supercond./mag. cmpds., struct. distortion in primitive cubic phase 2-76403
 Sr,Nd_{1-x}FeO_{3-x} solid soln., superstructure, microdomains, electron diff. and microscopy study 2-91925
 TaS₂, 2H polytype, electron diff. study of twist boundaries 2-76248
 TaS₂ (1T), electron irradi., Mott to Anderson localisation, electronic transport 2-92594
 TaS₂, irradiation induced defect pinning of CDW, electron diff. study 2-66064
 TaS₂(1T), irradiation induced defect pinning of CDW, electron diff. study 2-66064
 TaSe₂, 2H polytype, low temp. phase change 2-76249
 Tb, electron diff. pattern of Fm3m phase, Te₂O₃ effects, theory 2-91868
 Tb₂Co₃ amorphous alloy, transition to spin glass state, magnetisation, mag. susceptibility meas. 2-61720
 TbO₂, struct. of intermediate phases, TEM and electron diff. obs. 2-60940
 Te, VPE growth with partially ionised vapour, expt. study 2-116368
 α -Te₂MoO₇ and β -Te₂MoO₇, industrial oxidation catalysts, X-ray diff. and electron microscopy study 2-61157
 ThNb₂O₁₂, slow-cooled sample, Th-vacancy ordering 2-60928
 Ti, adsorption on Si(111), secondary electron spectroscopy 2-87015
 Ti alloys, hot deformation of high alloy VT22 alloy, dislocation struct. obs. (Russian) 2-116500
 Ti alloys, interface phase, identification from diff. effects 2-76364
 Ti-Al-Zr-Mo-Si (6, 5, 0.5, 0.25 wt.%), silicide precip. 2-83128
 Ti-Fe film, composite cathode sputtered, struct. and comp., expt. study 2-56390
 β -Ti-Mn(V)(Mo-V), magnetic susceptibility variation with ageing rel. to microstruct. changes 2-83247
 TiN film, Cu diffusion 2-98502
 γ -VDO_{0.75}, incommensurate density modulations, electron diff. and TEM study 2-91878
 V₂N₄ and V₃₂N₁₆, N ordering, neutron and electron diff. obs. 2-91879
 V₂Zr(Hf), lattice stability in premartensitic temp. range (Russian) 2-97981
 V₂Zr(Hf)(Ta) superconducting Laves phase, cryst. struct. (Russian) 2-91871
 ZnO-merocyanine-dye thin film photovoltaic cells, prep. and spectral response, electron diff. study 2-83478
 ZnS epitaxial growth on Wall and Cu, substrate ion planing effects 2-83048
 ZnSnAs₂, LPE growth on ZnSe substrate from Sn soln. 2-77756
 ZnTe, heteroepitaxial films, struct. charact. 2-92381
 Zr-Mo (2 at.%), pressurised, diffuse streaking accompanying $\alpha \rightarrow \omega$ transform. 2-67324
 ZrO₂ on Zr (0001) crystallographic relationship, transmission electron diff. study 2-109727
- electron-electron double resonance** *see* ELDOR
- electron-electron interactions**
see also electron-electron scattering
 ee-coupling, ex. bremsstrahlung, energy loss rate due to neutrino pair prod. 2-95810
 Bi, deformed, electron-electron interaction effect in temp. depend. of elec. cond. (Russian) 2-104352
- electron-electron scattering**
see also electron-electron interactions
 1D charge-transfer conductor, interchain electron-electron scattering 2-71957
 jellium, elastic electron-electron scatt.-amplitude, approxs, comparison 2-101306
 e⁺e⁻ \rightarrow e⁺e⁻, polarised Moller scatt. electroweak model tests 2-64311
- electron emission**
see also cathodes; electron field emission; exoelectron emission; photoemission; secondary electron emission; spin polarised electron emission; thermionic electron emission; work function
 atomic collisions in solids, conf., Lyon, France (July 1981) 2-68949
 beam formation through explosive electron emission 2-55805
 cathodes, explosive-emission, in freq. mode with long pulse duration, electron source 2-62405
 intermetallic compounds, work function of emitted electrons, chem. comp. effect (Russian) 2-104465
 metals, electron emission during elastoplastic deform. (Russian) 2-57276
 polybutadiene, filled elastomer, fracture, electron and positive ion emission time correlations meas. 2-116345
 Li alloys, work function of emitted electrons, chem. comp. effect (Russian) 2-104465
- electron energy bands** *see* band structure
- electron energy loss spectra**
 acetylene, chemisorption on Pd(111), surface vibr., LEED and EELS study 2-71787
 adsorbed atoms and mols. on metal surface, IR and EELS vibr. spectroscopy study 2-116162
 adsorbed molecules, energy loss intensities, role of electrodynamic interactions 2-62029
 adsorbed molecules, overtones and multiphonon processes in EELS, vibration spectra 2-99238
 adsorbed species, vibr. spectra overtones 2-87005
 chemical analysis in high voltage TEM 2-71298
 chemisorption of CO on Pt(III) in presence of K, thermal desorpt. and electron energy loss spectra 2-83410
 combination with high-resolution electron microscopy, application to chem. problems 2-97878
 crystallographic information, fine struct. channelling, diffraction patterns 2-67167
 cyclopropane adsorbed on Ru (001), orientation and symmetry, EELS and photoelectron spectroscopy 2-78130

electron energy loss spectra continued

- diamond, type Ia, N_2 detection at {100} platelets with EELS 2-103786
 diamond (111), adsorbed H H termination, EELS study 2-110145
 diamond surface (110), electronic struct. transformation, EELS study 2-56658
 EELS, in multi spectrum acquisition system, computer control and instrumentation 2-64191
 electron microscope appl., review 2-64193
 electron spectrometer for STEM free of second- and third-order aberrations, EELS technique 2-64195
 ellipsometry, LEED, and EELS study 2-61295
 EM, analytical, high-resolution, local composition of specimen area 2-95563
 energy-loss spectrometry, with large collection angle 2-69307
 EXAFS spectroscopy, conference, Boston, MA, USA (Nov. 1979) 2-74160
 fibroblast, critical-point-dried cultured, partial specific thickness meas. by energy anal. 2-73409
 foil, electron scattering physics 2-72586
 formaldehyde, adsorbed on Ag(110), oxidation, EELS study 2-116728
 glass, multiphase microstruct., STEM and EELS anal. 2-91798
 graphite, electron momentum densities, Compton scattering in electron microscope study, EELS technique 2-67166
 graphite, electronic and struct. props., EELS and secondary electron emission study 2-110999
 graphite, orientation-dependent extended fine structure in electron-energy-loss spectra 2-77641
 graphite acceptor intercalate, stage 1 model, electronic struct., optical and energy loss props., LCAO calc. 2-61346
 high-resolution electron energy loss spectrometers, high-stability low-noise power supply design and construction 2-89868
 high-resolution vibrational electron energy-loss spectroscopy of solid surfaces, apparatus 2-89869
 II-VI semiconductors, electronic surface states, review 2-110411
 image potential barrier for large angle inelastic surface electron' scatt. 2-87368
 impact scattering contrib., calc. program 2-93338
 influence of elastic and inelastic scatt. 2-82968
 ionised projectiles traversing inert gases, polycrystalline solids and axial channels in Au, electron capture and loss 2-90661
 magnetic field spectrometer for EELS, STEM appl. 2-64194
 metals, simple, electron energy loss, review 2-57222
 methanol, chemisorpt. and condensation on Pd (100), spectrosc. obs. 2-93812
 microanalysis in STEM (French) 2-71299
 microbeam analysis, conf., Vail, CO, USA (July 1981) 2-68961
 molecules, fast electrons scatt. intensity with change in vibr. states 2-75446
 muscle studies, use of EELS using parallel collections 2-83728
 organic solids, electron interactions, phys. mechanisms 2-115296
 polyacetylene:AsF₆(I₂), pure and doped, electronic struct. as meas. by EELS 2-67161
 polyacetylene, momentum depend. dielectric function 2-110275
 polymer blends, electron microscopy 2-65818
 semiconductors, electron energy loss, review 2-57222
 spectrosc. obs. 2-92344
 STEM appl. in solid state chemistry, cathodoluminescence, EELS, XES techniques 2-65821
 STEM post specimen. lenses of EELS 2-64196
 STEM system, computer control, EELS acquisition 2-107466
 structure determ., comparison of electron and X-ray techniques 2-54989
 surface physics, conference, Varna, Bulgaria (Sept.-Oct. 1980) 2-89468
 surface polariton interaction, electron transmission expt. appl. 2-87354
 surface science, conference, Liverpool, England (April 1981) 2-58538
 surface structure, extended absorption fine struct. anal., review 2-110097
 surface vibrational spectroscopy 2-112669
 TEM and STEM, computer control for X-ray and energy loss line profiles and images 2-107472
 trans-polyacetylene, density of states, elec. cond., optical absorpt. and EELS calc. 2-77026
 transition metal oxides, 3d, L₂₃ edge, EELS 2-108636
 transition metal oxides, electron energy loss study of K near-edge fine struct. of O 2-104248
 transition metals, group III, electron energy absorption spectrometry (German) 2-113084
 Ag, adsorbed pyridine, surface enhanced Raman scatt., chemisorpt. and charge transfer role 2-110872
 Ag film, adsorbed mol. charge transfer excitation, EELS obs. 2-62027
 Ag surface (110), NH₃ adsorption, thermal desorption spectroscopy and EELS study 2-66372
 Ag surface (110), O precovered, chemisorbed ethylene, EELS cross-section, energy depend. 2-56364
 Ag surface (110), O predosed, adsorbed CO₂ and CO₃, EELS study 2-78924
 Ag-Cu films, plasmon excitation by fast electrons 2-92785
 Ag(110) with adsorbed H₂O, adsorption and reaction studies 2-87034
 Ag(111), adsorbed pyridine, benzene and pyrazine, electron energy loss studies 2-87032
 Al, (111), blue coloured surface obs. during high temp. oxidation 2-88280
 Al, electron and plasmon characteristic energy loss spectra 2-116309
 Al film, evaporated, oxidation studied by AES, EELS and electron stimulated desorp. 2-76855
 Al, plasmon dispersion at $k \leq k_F$ using EELS 2-76954
 Al single crystal, CO exposed, EELS study 2-98457
 Al₂O₃, amorphous and polycrystalline, dielec. function, lineshape anal., EELS study 2-76955
 Al₂O₃, optical consts. of amorphous, polycryst., α , γ phases, EELS study 2-57224
 Al(100), electron spectroscopic study of CO adsorption 2-76819
 Al(111), oxidation, EELS study 2-88279
 Ar, elec. dipole forbidden inner-shell transitions, electron energy loss obs. 2-75424
 Ar²⁺+Ar(Kr)(Xe), single electron capture products, energy loss spectra meas. 2-102607
 Au, convoy electron production by 1.8-5 MeV/u highly ionised ions traversing polycryst. solids and axial channels 2-57227
 Au single crystal film, electronic energy loss of H, D, He at 600 eV-15 keV 2-66087
 B, polycrystalline, oxidation, AES and EELS studies 2-77963
 BN, cryst. and band struct., EELS obs. 2-109874

electron energy loss spectra continued

- C, electron momentum densities, Compton scattering in electron microscope study, EELS technique 2-67166
 CdS, EELS with new position-sensitive multidetector spectrometer in 6 to 10.9 eV energy region 2-85824
 CO, free and adsorbed mol.s., electron energy loss spectra, scatt. process 2-70414
 Cd, EELS study, surface states 2-110998
 CaSO₄, electron energy loss spectra, collective excitations 2-110997
 CdS-CuInSe₂, solar cells, annealing and interface effects, EELS, AES, SIMS and XPS study 2-83491
 CdS-CuInSe₂, solar cell, interface formation, comp. and stability, XPS, EELS and AES study 2-111554
 CdTe (110) vacuum cleaved surfaces, photoenhanced oxidation (Japanese) 2-116577
 Co₃(CO)₉(μ_3 -CH), CH fragment orientation calc., implications for metal surfaces 2-108373
 Cr (110), chemisorption of CO, EELS and AES study 2-57225
 Cr, electron energy loss spectra for clean and oxidized surfaces 2-56663
 Cr, surface (110), chemisorpt. of O and initial oxidation 2-115567
 Cs overlayer on Si(100) 2x1, plasmon excitation obs., AES, EELS, LEED and UPS 2-115542
 Cu (100), adsorbed CO, CH₃O and S layers, electron scatt. from surface vibr. modes 2-98424
 Cu (100), CO adsorption, ordered structs., LEED, EELS and IR data correlation 2-98456
 Cu (100) and (110), O₂ chemisorption, UPS, EELS, LEED and work function study 2-87071
 Cu (111), O₂ chemisorption, UPS, EELS, LEED, AES and work function meas. 2-87072
 Cu, adsorption of NO on (100) and (110) surfaces, EELS, LEED and TSD studies 2-110128
 Cu, radial distrib. functions, refl. EELS study 2-105020
 Cu surface, (100) and (111), NO adsorption, EELS study 2-77640
 Cu, surface (111), O₂ chemisorpt. 2-110155
 Fe, chemisorption of H₂, EELS vibrational spectrum 2-61286
 Fe, ferromagnetic, single particle and collective excitations, EELS study oxidation effects 2-76915
 Fe surface, P covered, segregation, XPS, AES and EELS study 2-92221
 Fe surface (110), adsorbed NH₃, vibrational EELS spectra 2-98459
 Fe-C, O, min. detectable atomic fractions, STEM study, EELS technique 2-67165
 Fe-V-C ferritic steel, carbide precipitate size, EELS and energy dispersive anal. 2-67362
 Fe₃₀B₇₀, amorphous, electronic props., struct. related effects, EELS study 2-67163
 Fe(100) with adsorbed H₂O, bonding and electron energy loss spectra 2-87030
 Fz, valence shell dipole excitation, electron energy-loss meas., RPA exchange calcs. 2-65088
 Ga⁺, electron impact excitation to 4P level, absolute emission cross sections 2-90720
 GaAs (110), formic acid adsorption EELS study 2-98454
 GaAs with chemisorbed H, surface optical phonon obs. 2-115550
 GaP with chemisorbed H, surface optical phonon obs. 2-115550
 Ge (100) alkali metal adsorption, surface cond. and interface states, EELS study 2-92716
 Ge (111) surface covered with Na, K or Cs in submonolayer range, EELS obs. 2-72585
 Ge-GaAs (110) heterostructures, electronic props. and chem. comp., low-energy EELS study 2-93339
 1 MeVHe ions, equilib. mean charge calc. 2-96720
 InP (110), ion bombardment and etching effects, EELS and AES study 2-110099
 InP, electron stimulated interaction with water vapour, Auger and EELS study 2-76786
 InP with chemisorbed H, surface optical phonon obs. 2-115550
 KC_x(x=8, 24) intercalation compounds valence and core-electronic excitations, EELS study 2-87167
 Mg, electron irradi., surface defect peak in EELS, V⁺-centres 2-92715
 MgAl₂O₄ natural spinel, charact. energy losses from channelled 100 keV electrons 2-81838
 MgO, localisation effects in electron energy loss signals, characteristic loss rocking curves 2-72589
 MgO, single crystal, electron energy loss spectroscopy, direction depend. meas. 2-93340
 MgO, small crystal, surface energy and struct., STEM study 2-56327
 MgO smoke cryst. surfaces, energy losses of fast electrons 2-62028
 MgO smoke particles, surface plasmons, low electron energy loss imaging 2-67168
 MgO surface, image force for fast electrons 2-111000
 Mo surface (100), adsorp. of CO, high resolution EELS study 2-71794
 N₂, chemisorbed on Ni (110) and physisorbed on Pd (111), angle resolved UPS and EELS study 2-92359
 N₂, elec. dipole forbidden inner-shell transitions, electron energy loss obs. 2-75424
 N₂, multilayer films, intramol. vibr. excitation accompanied by multiphonon transitions studied by electron impact 2-72583
 Na₂WO₄, high resolution electron energy loss spectroscopy, surface plasmons 2-82967
 Nb, EELS of electronic excitations, expt. study 2-82969
 NbO, solid soln., EELS of electronic excitations, expt. study 2-82969
 Ni (100), CO adsorption, ordered structs., LEED, EELS and IR data correlation 2-98456
 Ni (100), H₂ and CO coadsorp., electron spectroscopy study 2-76827
 Ni (110), adsorbed H, vibr. modes, EELS study 2-76797
 Ni (110), N₂⁺ implantation, AES, LEED, EELS and secondary electron spectra study 2-92014
 Ni (111), adsorbed CO, energy loss intensities, role of electrodynamic interactions 2-62029
 Ni, EELS, 3p threshold, dependence on momentum transfer, expt. study 2-110996
 Ni, radial distrib. functions, refl. EELS study 2-105020
 Ni surface, (100), adsorbed O(S), ordered struct., EELS spectrum, theoretical anal. 2-67162
 Ni surface, (110), adsorbed O, atomic structure, LEED, AES, EELS and work function study 2-66329
 NiO, small crystal, surface energy and struct., STEM study 2-56327
 Ni(100), with adsorbed O, electron energy loss spectroscopy 2-87029
 Ni(110) with chemisorbed CO, vibr. spectra, EELS study 2-82133

electron energy loss spectra continued

- PbO-SiO₂, reduced surface layers, slow-electron spectroscopic study 2-105017
 Pd (100), CO adsorption, ordered structs., LEED, EELS and IR data correlation 2-98456
 Pd surface (100), initial oxidation, LEED, EELS and AES studies 2-56314
 Pt (100), CO adsorption, ordered structs., LEED, EELS and IR data correlation 2-98456
 Pt (111), adsorption and surface reactions of O₂, CO, and ethylene, EELS and thermal desorption study (*German*) 2-98469
 Pt (111), adsorption and surface reactions of ethylene and O 2-105511
 Pt surface (111), adsorbed CO, vibrational spectroscopy, EELS and IR 2-110125
 Pt surface (321), kinked, adsorpt. of CO 2-61292
 Pt(111), clean and O₂ covered, formic acid adsorption, EELS study 2-115531
 Pt(111) with adsorbed carboxylates, struct. and reactivity 2-87035
 Rh, surface (111), oxidation, impurity effects, EELS and AES studies 2-111353
 SO₂ triplet state, EELS study 2-99235
 Sb films, on W(112) and (110) faces, characteristic electron energy losses 2-67164
 Si (100) and (111), dissociative chemisorption of water, EELS study 2-87051
 Si (111)(2X1)-Au system, interface form., low energy EELS and AES study 2-104174
 Si, elastic and inelastic backscattering of slow electrons 2-105018
 Si oxidation EELS and AES of ultrathin oxide films 2-83252
 Si surface, (001), adsorbed H, 2X1 and 1X1 structs., inelastic LEED study 2-92710
 Si surface (001), plasmon excitation enhancement by LEED due to surface resonance 2-77139
 Si₃N₄/H, amorphous plasma deposited film, AES and EELS study 2-71816
 SiO₂ film, reaction with Al, AES and EELS study 2-98474
 SiO₂, surface electronic struct. tight binding calc., UV photoelectron spectroscopy, and EELS study 2-82226
 SiO₂ ultra thin film growth kinetics in MOS structs., Auger and EELS study 2-87112
 Si(111), laser induced oxidation 2-99568
 Sn compounds, normal and mixed-valent, core level EELS and XPS spectra 2-72588
 Sn surface divalency from electron energy loss spectra 2-66610
 SnO₂/SnO, formed on Sn by electropolishing, electron loss study 2-78003
 SrTiO₃ (100), adsorption of H₂O and D₂O EELS and UPS study 2-115537
 Ti, adsorption on Si(111), secondary electron spectroscopy 2-87015
 Ti₂O₃, surface electron struct., defect, chemisorption effects 2-82421
 Ti epitaxial growth on Cu(100), LEED, AES, UPS and EELS studies 2-56398
 transition metals, 3d, L₂₃ edge, EELS 2-108636
 W (110), adsorbed H, angle resolved UPS and EELS study 2-92360
 ZnO single cryst., Ar ion bombarded, electron energy loss spectroscopy 2-116310
 ZnO, surface, two-dimens. plasmon spectra, low energy EELS study 2-61544
 ZnSe(Te), surface electronic state spectroscopy resonances 2-115842

electron energy states (condensed matter)

- see also band structure; band theory models and calculation methods; deep levels; defect electron energy states; dopplers; electron energy states of amorphous solids; electron energy states of liquid metals; electron energy states of liquid semiconductors; electron gap; electron traps; electronic density of states; exchange interactions (electron); excitons; Fermi level; Fermi surface; field interactions (condensed matter); heli-cons; hole traps; impurity electron states; Landau levels; localised electron states; magnetic breakdown; magnons; metal-insulator transition; metal theory; plasmons; polar semiconductors; polarons; positron states; ripplons; spin-orbit interactions; spin-phonon interactions; surface electron states; triplet state
 adiabatic approx., appl. to systems of identical particles (*Russian*) 2-76884
 amphiboles, calcic, Fe²⁺ identification in M4 site, extended Huckel method 2-91899
 disordered semiconductor, smooth random field inception 2-77004
 disordered systems, systematic approx. method 2-98509
 ground state, spatial and energetic struct. (*Russian*) 2-56284
 high pressure effects on solids, symposium, Bad Honnef, Germany (Aug. 1981) 2-74162
 metallic particles, small, level spacing distrib., two level correlation function 2-110273
 one-dimensional disordered systems, theories of electrons, reviews 2-76878
 one-electron theory of crystalline solids in homogeneous elec. field 2-66508
 Peierls models, exactly soluble, for electrons on deformable discrete chain 2-104217
 random medium, electron wave decay 2-87126
 semiconductors with cubic symmetry, influence of dynamic Jahn-Teller effect on phonon-scattering mechanism at acceptors 2-98599
 solid state physics conf., Copenhagen, Denmark (Aug. '81) 2-89440
 two-dimensional disordered potential, quantised Hall conductance and current carrying extended edge states in mag. field 2-77201
 SiC_n clusters (n≤7), electronic struct. and relative stabilities, mass spectrometry (*French*) 2-110111

electron energy states of amorphous solids

- see also Anderson model
 alloys, disordered, electronic struct., self-consistent cluster CPA incorporating off-diagonal disorder and short range order 2-61336
 binary alloys, multiple-scatt. theory in single-site approx. 2-76895
 correlated diagonal and off-diagonal disorder 2-104235
 glass, covalent, self-localisation of electron pairs in mobility gap, thermodynamic anal. 2-110306
 ice, amorphous and cryst. state, electronic struct., X-ray emission study 2-87907
 metallic glasses, commutative model of tunnelling states 2-115646
 metals and alloys, elec. struct., symposium, Gaussig, Germany (Apr. '81) 2-68968
 one-electron states in materials with structural disorder 2-61410

electron energy states of amorphous solids continued

- poly(p-phenylene), IR spectra and electronic struct. 2-104886
 polycetylene, electronic struct., lattice distortion unrestricted HF transfer matrix method 2-76907
 polymer chains, coupled, appl. of cluster CPA calc. for infinite and half-infinite ch ains 2-80852
 polymers, electron delocalisation, diamag. anisotropy study 2-98838
 polyphenylenes, doped conducting complexes, elec. cond. and optical props. 2-77043
 polyphenylenesulphides, doped conduction complexes, elec. cond. and optical props. 2-77043
 random alloys, electronic states, SCF-KKR-CPA method 2-76904
 semiconductor, amorphous, surface double layer model, bulk localised states in gap 2-92726
 semiconductor, amorphous film, gap states, xerographic spectroscopy 2-77213
 semiconductor, intrinsic, photoconductivity dependence on photogeneration rate 2-72028
 semiconductors, crystalline and amorphous, evidence for common origin of Urbach tails 2-71862
 semiconductors, electronic gap state density, calc. from field effect and C-V data 2-76886
 Si:H, amorphous oxidised films, valence band spectra 2-104300
 As₂S₃, amorphous, photodarkening, configuration-coordinate model 2-57033
 As₂Te₃, amorphous film, energy gap, composition depend. 2-61337
 Ca, Al_{1-x}, metallic glasses, electronic struct., photoemission and soft X-ray spectra 2-104234
 Co, Zr_{1-x}, metallic glass, electronic struct. calc. 2-98529
 Cu-As-Se glassy films, photoconductivity and optical absorpt. (*Russian*) 2-104516
 CuInSe₂, amorphous and crystalline, optical props. 2-87889
 CuZr₂, electronic density of states for cryst. and amorphous phases 2-76909
 Cu₄₀Zr₆₀ glass, electronic struct. 2-104236
 Cu, Zr_{1-x}, metallic glass, electronic struct. calc. 2-98529
 Fe, amorphous, electronic struct. 2-66427
 Fe₂(As₂Te₂Si₂Sb₂)_{1-x} film, sputtered, phys. props. 2-92421
 Fe_{1-x}B_x, amorphous, electronic struct. 2-66427
 Fe₉₀B₁₀, amorphous, electronic props., struct. related effects, EELS study 2-67163
 Fe₇Cr₉₃P₁₀C₉Si₃, amorphous, appearance pot. spectroscopy, electronic struct. effects 2-105005
 Fe₄₀Ni₄₀P₁₀B₁₀, amorphous, electron state of Fe (*Russian*) 2-76905
 Fe, P_{1-x}, metallic glass, electronic struct. 2-66427
 Fe, Si_{1-x}, ferromag. alloys, amorphous and crystalline, even magneto-optic spectroscopy 2-104857
 Fe, Zr_{1-x}, metallic glass, electronic struct. calc. 2-98529
 Ge:Cl, amorphous, ion implanted, gap-states, elec. cond. study 2-76987
 Ge-chalcogenide films, optical consts. and photo-optical changes, absorption edge 2-93301
 Ge-Se, amorphous, valence and inner shells, XPS study 2-116332
 GeSe amorphous thin layers electronic characts. modification by junction metal azomes incorporation (*German*) 2-92631
 Mg₆₇Sn₃₃ metallic glass, nearly free electron energy bands, pseudopot. formalism 2-71855
 Na₂O-CaO-SiO₂ glass, bonding props., XPS study 2-93367
 Nb₂Rh₂₅(Nb₂₅Ir₄₅), metallic glass, electronic struct., UPS and XPS study 2-76908
 Ni, Zr_{1-x}, metallic glass, electronic struct. calc. 2-98529
 Pd-Ge, glassy and cryst., electronic struct., AES and XPS study 2-82213
 Pd, Zr_{1-x}, metallic glass, electronic struct. calc. 2-98529
 Sb, Se_{1-x}, amorphous film, energy gap, composition depend. 2-61337
 Si, amorphous, density of localised states and carrier mobility, elec. cond. study 2-115640
 Si, amorphous CVD layer, localized state density meas. by field effect method 2-56737
 Si, amorphous film, gap state density, high freq. capacitance-voltage determ. 2-56429
 Si, amorphous films, localised state investigation using field effect technique 2-104509
 Si:F, H, amorphous, density of localised states, DLTS study 2-98591
 Si:H, amorphous, DLTS response due to localized states 2-56492
 Si:H, amorphous, electronic states and total energies 2-66429
 Si:H, amorphous, electronic struct. by soft X-ray spectroscopy 2-104301
 Si:H, amorphous, electronic states (*Japanese*) 2-115645
 Si:H, amorphous, gap states distrib., modulated photocurrent phase-shift anal. 2-92534
 Si:H, amorphous, Schottky diode spectral response, gap states effect 2-87753
 Si:H, amorphous, sputtered, time-of-flight and photoinduced mid-gap absorpt., dispersion 2-87432
 Si:H, amorphous film, density of states, field effect determ. technique, annealing and illumination effects 2-61593
 a-Si:H, electronic props., CPA calc. 2-56430
 Si:H, N(Ga), amorphous film, ion implanted, photocond. and energy spectrum 2-92698
 α-Si:H films, optical absorption and density of states in band gap 2-72571
 Si:N, amorphous CVD film, elec. cond., field effect and gap state density meas. 2-87193
 Si_{1-x}Ge_x, amorphous, optical props. and photoconductivity 2-104920
 Si₂Ge_{1-x}, amorphous film, energy gap, composition depend. 2-61337
 SiO₂, electronic states, theoretical model of disorder 2-71857
 SiO₂, vitreous and crystalline, UV reflectance spectrum 2-93224
 Ta₃Rh₄₅(Ta₃₅Ir₄₅), metallic glass, electronic struct., UPS and XPS study 2-76908
 Te, amorphous thin film, crystallisation, electronic structure, UV photoemission study 2-71355
 Zr-Cu metallic glass, density of states and comp. short range order, NMR and mag. study 2-104726
 Zr₇₅Rh₂₅ system, supercond. props. variation on amorphisation (*Russian*) 2-56781

electron energy states of glassy solids see *electron energy states of amorphous solids***electron energy states of liquid metals**

- electronic density of states, two-dimens. model, computer expt. 2-92446
 electronic density of states calc. 2-61325
 Al, liquid, 3p electron density of states 2-82199

electron energy states of liquid metals continued

- Bi, liquid, electronic density of states, Green's function and perturbative calcs. 2-71854
 Ga, liquid, electronic density of states, Green's function and perturbative calcs. 2-71854
 Hg, liquid, electronic density of states, Green's function and perturbative calcs. 2-71854
 La, liquid, electronic struct. 2-87133
 Na, liquid, electronic density of states, Green's function and perturbative calcs. 2-71854
 Pb, liquid, electronic density of states, Green's function and perturbative calcs. 2-71854
 Se, liquid, steady-state photocond., forbidden gap, temp. variation (*French*) 2-77115
 Sn, liquid, electronic density of states, Green's function and perturbative calcs. 2-71854

electron energy states of liquid semiconductors

- AgTiSe₂, liq. semicond., elec. props. study 2-66576
 Ni-Te liquid semiconductor, resistivity, thermoelectric power and band struct. 2-98641
 Tl-AgTlS₂, molten system, electronic and mag. props. 2-98647

electron field emission

- borosilicate glass, field stimulated exoelectron emission 2-77714
 broad-area electrodes, review 2-77707
 directionally solidified eutectics as field emission cathodes 2-57274
 electron spectrometer, high resolution, study of field emission sites on planar cathodes 2-101503
 inelastic ion-surface collisions, conf., Feldkirchen-Westerham, Fed. Rep. of Germany, (Sept. 1980) 2-74161
 nonequilibrium emission of excited electrons from a field emitter 2-116342
 photostimulated, image rounded barrier model 2-57273
 RF cavities, electron emission reduction by electron, photon or He impact 2-116306
 secondary-electron field in material irradiated by γ quanta 2-99303
 semiconductor, electrostatic charge energy, effects of dielec. function spatial dispersion, field emission current 2-77711
 semiconductor field emission cathodes, flicker noise 2-93385
 semiconductor field emission under nonequilibrium conditions, pulse generator apparatus, emission current meas. 2-74464
 thermofield electron emission in arc discharges 2-109613
 Al/SiO₂-B₂O₃/Au thin film struct., elec. cond. and field electron emission, theoretical model (*French*) 2-72076
 Al₂O₃/Cu porous anodic film, elec. props. meas. 2-82501
 Ar, liquid and solid, hot electron emission (*Russian*) 2-87957
 Au insular film, electron emission obs. in microwave elec. field 2-93386
 Au island films, field emission and hot electron emission, energy distribution 2-77712
 C fibres, commercial, field emission cathodes 2-99305
 p-InSb, field electron emission, current-voltage characts. 2-83011
 Ir (100) and (110), H₂ thermal desorption, field emission thermal desorption study 2-92352
 Ir, chemisorption of N₂ and H₂ on densely packed cryst. planes 2-115559
 Mo, chemisorption of N₂ and H₂ on densely packed cryst. planes 2-115559
 Re, chemisorption of N₂ and H₂ on densely packed cryst. planes 2-115559
 n-Si, field-emission energy distrib., multiple peaks 2-67199
 Si, photosensitive field-emission cathodes with atomically clean surface, I-V characts. 2-77702
 Sn, work function, temp. depend. field emission current meas. 2-115856
 W, chemisorption of N₂ and H₂ on densely packed cryst. planes 2-115559
 W, field emission, photoinduced, linear intensity depend. 2-87956
 W, field emission statistics meas. for various cryst. faces 2-93387
 Xe, liquid and solid, hot electron emission (*Russian*) 2-87957

electron gas

- see also cathode ray tubes; electron optics
 acoustic plasma modes 2-110071
 alkali metal compounds, molecular crystals, electron gas model 2-104272
 alkaline earth compounds, molecular crystals, electron gas model 2-104272
 asymptotic freedom, cusp theorem 2-82255
 atomic collisions, pair-potential calcs. 2-65069
 BCC metals, noncentral force 2-98216
 charged impurity, hypernetted chain theory 2-98567
 coherent states and swift ion-condensed matter interactions 2-89509
 correlation energy, Ferrell's validity criterion, exchange and correl. contribs. 2-82262
 covariant description of dispersion in a relativistic thermal electron gas 2-71077
 crossover behaviour and quasisplasmon oscill. 2-110270
 degenerate band charge carrier gas, nonlinear optical props. in mag. field 2-76947
 degenerate electron system, electrical transport 2-92556
 disordered Landau level system, two dimensional, interaction effects 2-115678
 disordered two-dimensional, freq.-depend. cond. 2-82427
 distribution function for an electron gas in a magnetic field 2-87163
 dynamic correlations, RPA and kinetic eqn. approach 2-61381
 dynamic structure factor 2-82263
 dynamic structure factor 2-82264
 eigenvalue problem, associated with Feynman path integration 2-74257
 elastic electron-electron scatt.-amplitude, approx. comparison 2-101306
 2D-electron gas, paramag. susceptibility 2-61689
 electron liquid in collective description, homogeneous electron gas, static props. 2-71889
 electronic liquid in a strong magnetic field 2-71890
 first row atoms, electronic struct. in electronic host systems 2-102358
 free electron gas, self-Coulomb interaction, self-consistent theory 2-63891
 free energy of condensed media, Van der Waals forces. contrib. (*Russian*) 2-56222
 GaAs-Al_{0.1}Ga_{0.9}As heterojunctions, low temp. quantised Hall effect 2-87381
 homogeneous, exp. S approx., electron liquid in collective description 2-71888
 homogeneous interacting electron gas theory 2-71892
 interacting non-uniform electron gas, struct. factor, small and large wave vector behaviour 2-58700

electron gas continued

- IR high power picosecond radiation generation, by ultrafast optical switching 2-86063
 jellium, effective interactions including exchange 2-71894
 jellium sphere, virial theorem generalisation, appl. to semi-infinite electron gas 2-110272
 jellium surface, charge response through ripples 2-87164
 liquid and solid, eqn. of state and struct., mol. dynamics study using model pseudopot. 2-71606
 magnetic semicond. in MIS system, 2-D electron gas, subband struct. and magnetisation 2-104497
 many-particle physics in solid state theory, book 2-68981
 metal, dynamic electron-electron Coulomb correlations, direct evidence 2-56452
 metal, elastic moduli and sound velocity, quantum oscillations in mag. field, theory (*Russian*) 2-116042
 metal, electron-hole pair excitation, localized dynamics perturbations, boson approx. 2-76948
 metal, surface Bernstein modes 2-82420
 metal film, surface magnetoplasmons, quantum theory, RPA approx. 2-82259
 metal films, electron liquid, quantum waves, resonance approx. (*Russian*) 2-87414
 metal-electrolyte interface, elec. double layer, layered lattice gas model 2-72051
 metals, acoustic plasmon formation conditions 2-76953
 metals, incommensurate charge density wave phase-amplitude instabilities 2-115683
 metals, momentum depend. positron annihilation rate 2-99214
 metals, nonlocal and local exchange, work function and surface energies 2-87370
 MIS system, ellipticity and Faraday rotation due to 2-D electron gas 2-110822
 MOS junction, condensation of electron pancakes 2-87404
 non-local corrections to total, ionisation, and single particle energies, local spin density approx. 2-66469
 nonuniform electron gas, exchange and correlation energy, small and large wavelength contribution 2-82265
 one-dimensional, Hartree-Fock approx. 2-66463
 one-dimensional system, plasmon spectra and exchange contributions, tight binding model 2-76957
 pairing and general spin orbitals, restricted Hartree-Fock scheme 2-82258
 pairing and general spin orbitals for the electron gas 2-82253
 plasma column, sustained by surface wave, characts. and energy balance 2-55746
 point charge penetrating free electron gas, energy loss straggling 2-58701
 pseudopotential approach to total energy calcs. 2-92500
 quantised Hall conductance in 2D periodic pot. 2-104328
 relativistic electrons, in quantising mag. field, electron gas transverse transport 2-95733
 semi-infinite electron gases, interface plasmons at boundary 2-104456
 semiconductor, space charge layer, collective modes, perturbation theory 2-61383
 semiconductor, space-charge capacitance, quantum effects 2-77080
 semiconductors, galvanomagnetic and thermomagnetic phenomena in strong mag. field, hot electron-phonon mutual drag effects (*Russian*) 2-77101
 semiconductors, transverse galvanomagnetic phenomena (*Russian*) 2-61497
 spin system, spin-charge coupling, spin Hamiltonians, phenomenological model 2-82555
 spinless fermion model Wigner crystallised ground state, stability anal. 2-92490
 strongly disordered system, cond., defect induced tunnelling 2-66513
 system kinetics in strong alternating fields, semiconductor electron gas, electron Cooper pairs 2-56773
 test particle distrib., interaction with electron gas, Fokker-Planck, coeff. calc. 2-84087
 two dimensional, cyclotron resonance lineshape, memory function theory 2-56943
 two dimensional, cyclotron resonance linewidth, impurity and phonon scatt. density matrix formulation 2-56942
 two dimensional, magnetoconductance impurity scatt., Born approx. 2-87215
 two-dimensional, disordered interacting, magnetoresist. and Hall effect 2-61434
 two-dimensional, in strong mag. field 2-56454
 two-dimensional, mag. susceptibility in quantum strong mag. field limit 2-61701
 two-dimensional dense electron gas, dynamic form factor, polarisability and intrinsic cond. at zero temp. 2-56537
 two-dimensional disordered electron gas, magnetoresist. and Hall resist. calc. 2-77092
 two-dimensional electron fluid, compressibility and bulk modulus 2-66466
 two-dimensional electron gas, dynamic correlations, first order perturbation theory 2-76958
 two-dimensional electron gas, Hall resist. meas., fine struct. const. determ. 2-58777
 two-dimensional electron gas, Hall resistance quantisation 2-104330
 two-dimensional electron localization and Coulomb interactions 2-61387
 two-dimensional electron systems, zero-resistance state and quantised Hall effect 2-61491
 two-dimensional metals, effects of mag. field on dielec. const. and cond. 2-56451
 two-dimensional plasma waves, instabilities and amplification, theoretical anal. 2-61501
 van Vleck ions coupled to electron gas, induced mag., calc. in narrow-band limit 2-61681
 e⁺-e⁻ gas, symm. props. of polarisation gas in mag. field 2-113201
 (Al,Ga)As/GaAs heterostruct., modulation doped, two-dimens. electron gas, electron mobility meas. 2-56676
 (Al,Ga)As/GaAs heterostruct., two-dimens. electron gas, electron mobility meas., AlAs mole fraction influence 2-56677
 n-GaAlAs-GaAs heterojunction interface, MBE grown, 2-D electron gas, tangential magnetoresist. study 2-77162
 GaAs-(Al,Ga)As heterojunction, modulation doped, intersubband scatt. 2-61573
 GaAs-(Al,Ga)As heterostructures, plasma dispersion in a layered electron gas 2-104276

electron gas continued

- GaAs-Al_{1-x}Ga_xAs heterojunction, modulation doped, two-dimens. electron gas, intersubband scatt. obs. 2-110457
 GaAs-Al_{1-x}Ga_xAs modulation doped heterostruct., 2D electron gas transport props. meas. 2-98739
 GaAs-Al_{1-x}Ga_xAs heterojunction FET, 2-D electron gas, quantum galvanomagnetic props. 2-56686
 GaAs-AlGaAs heterojunctions, 20-electron gas, f-factor enhancement, Shubnikov-de Haas oscils., 2-56685
 GaAs-AlGaAs heterojunction, 2-D electron gas, cyclotron resonance of photoconductivity 2-66920
 GaAs-AlGaAs heterostruct., mobility calc. of two-dimensional electron gas at 4.2 K 2-66628
 Ga_{0.47}In_{0.53}As-InP heterojunction, 2D electron gas, quantum oscils., magnetoresistance study 2-110466
 H, metallic, interatomic pot. appl., density functional theory 2-76946
 H moving in electron gas, charge states 2-86920
 He ions moving in electron gas, charge states 2-86920
³He-⁴He phase separation boundary, charged particle systems, collective aspects, theoretical anal. 2-61230
⁴He, surface, charged particle systems, collective aspects, theoretical anal. 2-61230
 In_{0.53}Ga_{0.47}As-In_{0.48}Al_{0.52}As interface, MBE grown, two-dimens. electron gas 2-98730
 In_{0.53}Ga_{0.47}As-InP heterojunction, two-dimensional electron gas study 2-77161
 Ne, impurity in electron gas, temp. depend. screening, pair pot. calcs. 2-103281
 Si, electron gas inertia, radioelectric effect 2-104415
 n-Si, heavily doped, electron light scatt., theory 2-110880
 Si inversion layer, two-dimens. electron gas, localisation and interaction effects 2-72071
 Si inversion layers, valley occupancy transition 2-87356
 Si MOSFET, magnetoresistance study 2-115900

electron guns

- Auger electron spectroscopy system control, 0-2 kV/200 μ A linearly variable supply 2-111524
 broad area electron beam technology for pulsed high power gas lasers 2-96965
 gas discharge electron gun emitting a beam into a medium pressure gas 2-107450
 high-perveance electron gun with beam power to 0.5 kW 2-107456
 high-voltage electron source with plasma emitter for forming beams with a large cross section 2-107448
 ion microprobe mass analyser using positive primary ions and electron gun, insulator anal. 2-95565
 projection-gun resolution limit, electron-electron-interaction influence (*German*) 2-90793
 SEM, Wehnelt modulation beam blanking 2-64170
 three-electrode electron gun prod. helical electron beam in cyclotron reson. masers with tuned generation freq. 2-70534
 CO₂ laser, double electron beam controlled, freq. selection (*Chinese*) 2-65246

electron-hole avalanches *see impact ionisation***electron-hole drops**

- exciton Bose condensation, electron-hole gas ground state, spin states, screening, and band struct. effects 2-92476
 magnetoabsorption, multichannel time resolution (*Japanese*) 2-104858
 semiconductor, electron-hole binary mixtures, phase diagrams 2-87157
 semiconductor, exciton Bose condensation, electron-hole gas ground state, mean field description 2-92475
 semiconductors, coherent light propag. theory 2-97099
 semiconductors, electron-hole liquid, exchange-correlation energy behaviour 2-92478
 semimetal, two-dimensional, electronic phase transitions in strong mag. field, correlation effects (*Russian*) 2-71897
 two dimensions, theory 2-71878
 two-component fluid, ripplon dispersion relations, hydrodynamic mean-field calc. 2-58699
 GaSe, region of existence of excitonic molecules (*Russian*) 2-76941
 Ge, (111)-stressed, binary electron-hole liq., phase separation, surface struct. role 2-71882
 Ge, (111)-stressed, surface struct. and surface tension, rel. to bulk props. 2-66455
 Ge, electron-hole drop evaporation by laser heating (*Russian*) 2-104256
 Ge, electron-hole drop kinetics and decay in microwave field, hot carriers 2-92480
 Ge, electron-hole liq., phase separation into two components 2-56447
 Ge, electron-hole liquid phonon spectroscopy 2-115667
 Ge, energy and stress depend. hole masses 2-66426
 Ge, exciton thermodynamics 2-71881
 Ge, luminescence of electron-hole drops, hysteresis, exciton gas-liquid transition 2-82895
 Ge, n 2-82249
 Ge, strain confined electron-hole liquid, density variations and compressibility 2-110262
 Ge, uniaxially compressed, low-density electron-hole liquid (*Russian*) 2-61370
 Ge, uniaxially stressed, electron-hole liquid props. 2-104259
 Ge, uniaxially stressed, plasma reson. of electron-hole drops, IR study 2-104861
 Si, electron-hole drops, stress depend. kinetics, luminesc. study 2-76936
 Si, electron-hole liq., phase separation into two components 2-56447
 Si, energy and stress depend. hole masses 2-66426
 Si, exciton thermodynamics 2-71881
 Si, impurity scatt. within electron-hole liq., far IR and millimetre wave studies 2-99110
 Si, uniaxially stressed, electron-hole liquid props. 2-104259
 Si, with varying uniaxial stress, electron-hole liq. condensation 2-71883
 ZnS, radiative recombination of electron-hole drops and nonequilib. electron-hole plasma obs. 2-66459
 ZnSe, edge emission, collective phenomena, radiative recombination 2-77579
 ZnSe, radiative processes in electron-hole drops and exciton-exciton interaction 2-104961
 ZnT, edge emission, collective phenomena, radiative recombination 2-77579
 ZnTe(Se)(S), electron-hole drops, luminesc. and optical gain' meas. 2-87847

electron-hole plasma *see solid-state plasma***electron-hole recombination**

- see also carrier mobility*
 amorphous semiconductors, transient photoconductivity and photo-induced optical absorption 2-92684
 chalcogenide glass film, photoinduced structural changes (*Russian*) 2-61301
 degenerate semiconductor, p-type, Auger recomb. process, four-band Kane model 2-115782
 direct gap semiconductors, edge luminesc. 2-57185
 donor to acceptor energy transfer, arbitrary spatial distrib., high acceptor conc. (*Russian*) 2-82341
 efficiency reduction by bulk defects across back-surface field junction 2-78209
 glasses, recombination luminescence, luminescence centres 2-87831
 hydrocarbons, saturated, liq. and solid, charge carrier form. by radiation (*Russian*) 2-61480
 impurity-induced and exciton recomb., local centre participation 2-71907
 insulating crystals, defects, conf., Riga, USSR (May 1981) 2-68967
 metals, free electron, X-ray emission satellite band shapes, electron-hole recombination 2-77626
 narrow gap semiconductor, internal photoeffects, quantum efficiency, model 2-104418
 narrow gap semiconductors, plasmon assisted recombination in mag. field 2-92657
 narrow-gap semiconductors, in mag. field, plasmon-assisted recombination 2-87297
 organic crystal, carrier separation, Coulomb attraction and external elec. field effects, expt. study 2-72003
 p⁺-n junctions, highly doped, injection symmetry 2-115868
 photoelectrochemical cells, electrical power and H₂ generating, carrier recomb. at grain boundaries and liq. interfaces, chem. control 2-111573
 photoelectrochemical Schottky barrier cell, I-V characteristics, recombination effects, theory 2-93926
 poly-N-vinylcarbazole, photoconductor, photoelectric sensitivity increase by doping 2-72022
 quantum well heterostructure laser, carrier collection dynamics, Monte Carlo simulation and photoluminesc. study 2-114282
 semiconductor, ambipolar mobility determ. by flying light spot expt., theory 2-89745
 semiconductor, current flow, generalised stream function representation 2-115770
 semiconductor, highly doped, energy gap narrowing determ., minority carrier recomb. as function of doping conc. 2-92645
 semiconductor, minority carrier diffusion length meas. using microscopic electron probe 2-71996
 semiconductor, two bands model for nonradiative multiphonon recomb. at deep level defects 2-116233
 semiconductor model, current layers and filaments, impact ionisation induced instability 2-115766
 semiconductor planar diode struct., negative S-type resistance due to a change in the surface recombination velocity 2-77077
 semiconductor recombination model, bistability and nonequilib. phase transitions, with impact ionisation of donors 2-61528
 semiconductor surface barrier devices, I-V characts. including recomb. effects 2-82459
 semiconductor surfaces, general recomb. statistics, effect of extra carriers 2-110438
 semiconductor thin films, optical processes, review 2-93310
 semiconductors, Auger recombination, minority carrier lifetime, impurity and phonon scatt. effects 2-87299
 semiconductors, band-to-band Auger recombination, Green's function formalism 2-115778
 semiconductors, generation and recombination lifetimes concept 2-110363
 semiconductors, light induced transient grating decay obs. 2-57043
 semiconductors, photogalvanic effect at high illum. intensities 2-115823
 spin dependent, Kaplan-Solomon-Mott model 2-61483
 transition metals, recombination-emission spectra fine struct. 2-61963
 As₂Se₃, cryst. and amorphous, exciton and pair recomb., ODMR study 2-93067
 CaS:Bi excitation mech. of Bi³⁺ luminesc. centres, luminesc., TSC and photocond. meas. 2-67103
 Ca₂Y₂Ge₂O₁₂Tb³⁺ garnet, luminescence studies 2-61952
 n-Cd,Hg_{1-x}Te, photoconductivity relax. study 2-104426
 CdS, resonant radiation spectra of electron-hole plasma 2-116255
 CdS thin films, radiative and nonradiative recomb. times 2-92789
 Ga_{1-x}Al_xAs heterostructure diodes, laser irradi., electroluminescence emission 2-82926
 GaAs, carrier drift and recombination instabilities due to nonlinear interactions, expt. study (*Russian*) 2-115784
 p-GaAs electrochemical electrode, cathodic photocurrent meas., surface recombination and trapping effects 2-92746
 n-GaAs, epitaxial, far IR photocond. saturation 2-87319
 GaAs, gamma-irradiated, near-intrinsic emission intensity, nontrivial annealing induced increase 2-93260
 GaAs, ion-plasma treatment influence on structural and recomb. characts. (*Russian*) 2-66079
 GaAs n-i-p-i superlattices, electron-hole recomb. across tunable effective gap, photoluminesc. study 2-99182
 GaAs, probability of cond. band-acceptor optical transitions 2-116254
 GaAs Schottky barrier solar cells, grain boundary recombination anal. 2-93907
 GaAs-AlAs p-n structures, recombination current meas. at fivefold charge centres in space charge layer 2-82450
 GaAs-Ga_{1-x}In_xP DH, interface recomb. and carrier confinement study 2-77605
 GaP p-n junction, LED, thermally stimulated noise 2-104444
 GaP:Mg, LPE growth, minority carrier lifetime, photoluminescence study 2-82488
 GaP:N, Te VPE layer, minority carrier lifetime, dislocations influence 2-115920
 GaP:N,Te, epitaxial layers, photoluminescence study 2-61968
 GaP:O, recombination radiation of exciton bound to Zn-O complex 2-104959
 GaP:Zn, O, photoinduced Zn, O dissociation, photoluminescence 2-87859
 Ge, diffraction grating, high-density laser-induced transient plasma, picosecond dynamics 2-77628
 Ge, galvanomagnetocombinational elements, fluctuation processes 2-87351
 Ge, photogalvanic piezomagnetic effect (*Russian*) 2-82401

electron-hole recombination continued

- Ge, recombination mechanisms, photoconductivity and IR absorption 2-115780
 Ge:He⁺(Ar⁺), ion implantation, surface recombination kinetics meas. 2-66031
 H₂O photolysis, effect of surface recombination on efficiency 2-99811
 n-(Hg,Cd)Te, degenerate, two-band Auger recombination lifetime 2-93336
 Hg_{0.7}Cd_{0.3}Te, carrier lifetime meas. by population modulation spectroscopy 2-92658
 Hg_{0.8}Cd_{0.2}Te, photoconductivity lifetime, recombination below 20K 2-92683
 Hg_{1-x}Cd_xTe, bandgap spin-orbit splitting resonance, impact ionisation and recomb. processes 2-115719
 Hg_{1-x}Cd_xTe, deep level defect traps, DLTS study 2-87175
 Hg_{1-x}Cd_xTe, differentiation of low temp. recomb. processes, photocond. lifetimes meas. 2-115813
 Hg_{1-x}Cd_xTe, impurity-to-band tunnelling 2-87179
 Hg_{1-x}Cd_xTe, recrystallised, carrier generation and recombination centres, electron beam induced currents study 2-86895
 Hg_{1-x}Cd_xTe, some props. of high-density electron-hole plasma 2-87296
 p-InGaAsP diode lasers, radiative and Auger recomb. rates meas. 2-102792
 InGaAsP lasers, Auger recomb. rate 2-114276
 InGaAsP/InP DH, nature of electron leakage 2-87377
 InGaAsP-InP DH LED, aged, dark defects 2-91974
 InP:Fe, semisolating, photocond. mechanism peculiarities (Russian) 2-104435
 InSb, Auger recombination rate during intense laser pulse, carrier density depend., reflectivity study 2-67158
 InSb, nonlinear magneto-optics, CW CO laser pumped, interband magneto-absorption 2-93164
 InSe, stimulated photoluminescence 2-67113
 n-In₂Sn₂O₃-InP photo and electroluminesc. diode 2-61571
 Mg-SiO₂-n-Si negative barrier back contact, minority carrier reflection props., solar cell appls. 2-92768
 Pb-Sn-Te diode laser, recombination mechanisms and lasing threshold 2-90896
 PbS_{1-x}Se_x laser threshold and recombination 2-90897
 Pb_{1-x}Sn_xTe epitaxial film, surface recombination, photoconductivity study 2-104393
 Pb_{1-x}Sn_xTe laser threshold and recombination 2-90897
 Se, amorphous, photogeneration, geminate recombination model, expt. and theoretical study 2-87315
 Si, CC amorphous p-i-n junction struct., photovoltaic effects, photo-carrier generation and recombination 2-82442
 Si, dislocations, interpretation of EBIC contrast 2-71453
 Si electrochemical solar cells, review 2-111574
 Si, excess minority carrier transient decay, surface recomb. effects, laser pulse sample heating 2-77086
 p-Si, generation-recombination noise spectra meas. 2-87300
 Si, heavily doped, recombination mechanisms 2-98666
 Si, interband Auger recomb. rate, carrier density depend. 2-77088
 Si p⁺-i-n⁺ solar cells, high injection phenomena, theoretical model 2-93911
 p-Si polycrystal, grain boundary photocurrent, diffusion length, recomb. speed 2-61482
 Si, polycrystalline, grain boundary passivation by H₂ 2-76459
 Si, polycrystalline, grain boundary recomb. vel. determ. laser spot technique for photoconductance meas. 2-77087
 Si, polycrystalline under optical illum., phenomenological model of grain boundary trapping states 2-92653
 Si surface, recombination channels 2-72002
 Si:Au-SiO₂, MOS struct., Au related, interface states, quasi-static capacitance study 2-72069
 Si:H, amorphous, photogeneration, geminate recombination model, expt. and theoretical study 2-87315
 Si:H, amorphous, sputtered, time-resolved photolum. spectra 2-77581
 Si:H amorphous glow discharge films, elec. and optical props., elec. and mag. field effects 2-82407
 a-Si:H film, annealing effects on ESR, elec. and optical props. 2-66588
 SiO₂, electron irradi., carrier removal and recombination by interstitial complexes 2-115781
 SiO₂, induced recombination centres, struct. and formation kinetics, expt. study 2-86707
 Si:P, radiation doped, recombination props. and elec. cond., thermal treatment effect (Russian) 2-71995
 Si-metal Schottky barriers, photovoltaic props. implications for grating solar cells 2-116828
 Si-SiO₂, interface recombination velocity 2-56713
 Si-SiO₂, photoelectrochemical solar cell performance, surface film effect 2-111568
 SiH₄, amorphous solar cells, output volt., band tail recombination limit 2-67851
 SiO₂-Ge, recombinative luminescence (Russian) 2-61962
 p-WSe₂, recomb. sites and minority carrier diffusion length, charge collection microscopy 2-87294
 ZnS phosphors, cryst., radiative recomb. centres, cathodolum. meas. 2-110955
 ZnS:Cu, donor-acceptor recombination, ODMR study 2-99185

electron impact

- see also atomic electron impact excitation; atomic electron impact ionisation; molecular electron impact dissociation; molecular electron impact excitation; molecular electron impact ionisation; secondary electron emission
 aliphatic and alicyclic hydrocarbon films, electron transmission spectra and their second energy derivatives 2-72584
 alkali halides, sputtering, electron and photon induced 2-99232
 backscattering, analytic model 10 to 100 keV 2-116313
 backscattering from low Z absorbers 2-82966
 calculations, vector processing appls. 2-96728
 Compton scattering expts., impulse approx. corrections 2-77637
 continuum process calc. program, using model pots., Breit-Pauli Hamiltonian, R-matrix 2-90431
 elastic scattering at planar channelling, transverse motion levels width, quantum theory 2-76549
 electron interaction with matter, undergraduate laboratory expt. 2-63779
 energy distribution meas. of secondary, Auger and reflected electrons with cylindrical mirror analyser (German) 2-101499
 foil, electron scattering physics 2-72586

electron impact continued

- foil, thickness determ. by electron probe microanal. (French) 2-110995
 lower ionosphere, electron flux attenuation 2-112220
 ionosphere, estimation of electron collision frequency in D and E-regions from LF wave propag. 2-112216
 low's theory for electron scattering and photoelectron production of atoms, molecules and solids 2-108703
 metallic thin plate, Sondheimer effect in multichannel electron reflection by surface 2-104508
 metals, electron mirror reflection coeff., determ. impedance (Russian) 2-72587
 molecules adsorbed on small metal sphere, slow electron inelastic scatt. 2-116312
 organic solids, electron interactions, phys. mechanisms 2-115296
 quasielastic electron knockout in atoms, molecules and solids, wave functions 2-102630
 R-matrix angular integrals, calc. on CRAY-1 computer 2-96729
 relativistic particle reflection, reson. effect 2-105021
 solids, electron scatt., empirical mean free path curves 2-57223
 surface analysis by electron and ion beam methods, conf., Newcastle, NSW, Australia (Feb. 1981) 2-106995
 surface disorder, secondary electron emission and elastic electron reflection study 2-110994
 surface polariton interaction, electron transmission expt. appl. 2-87354
 thin films, (e,2e) collision expts. 2-110993
 transition metal surfaces, mech. of near threshold stimulated desorption of protons 2-87045
 Ag, film, electron transmission and backscattering, Boltzmann eqn. model (French) 2-77643
 Ag-Cu films, plasmon excitation by fast electrons 2-92785
 Al, film, electron transmission and backscattering, Boltzmann eqn. model (French) 2-77643
 BaF₂, solid, inelastic electron scatt., 4d shell excitation 2-85819
 Cu, film, electron transmission and backscattering, Boltzmann eqn. model (French) 2-77643
 D₂ solid, electron emission by bombardment with 1-3 keV electrons 2-105014
 H₂ solid, electron emission by bombardment with 1-3 keV electrons 2-105014
 KCl, electron-induced sputtering 2-99236
 LiF, channeling radiation from relativistic positrons 2-103870
 MgMn ferrite magnetization, electron beam interaction 2-66868
 Mo, electron-stimulated desorption of O⁻ 2-61294
 NaCl, electron-induced sputtering 2-99236
 Na₂O-CaO-SiO₂ glass, electron bombardment, Na atom prod. absence XPS study 2-98160
 Nb (110) and O-contaminated Nb (100), electron stimulated desorption of H⁺ 2-110153
 Sb solid, inelastic electron scatt., 4d shell excitation 2-85819
 Si surface (001), plasmon excitation enhancement by LEED due to surface resonance 2-77139
 Ta (110), O-contaminated, electron stimulated desorption of H⁺ 2-110153
 Te, solid, inelastic electron scatt., 4d shell excitation 2-85819
 W (110), adsorbed CO, neutral particle electron stimulated desorpt., reson. contributions meas. 2-56331
 W, electron mirror reflection coeff., determ. impedance (Russian) 2-72587
 W, electron-stimulated desorption of O⁻ 2-61294
 ZrS₂-IT, low energy electron reflection, energy depend. 2-87925
electron interactions see elastic scattering of electrons by atoms and molecules; electron attachment; electron beam effects; electron beams; electron-electron interactions; electron-electron scattering; electron impact; electron-nucleon interactions; electron-nucleon scattering; electron-nucleus reactions; electron-nucleus scattering; electron-positron interactions; electron-positron scattering; electron spectra; hadron electroproduction; neutrino-electron interactions; neutrino-electron scattering; secondary emission
electron ionisation see electron impact
electron lenses
 see also aberrations; electron microscopes; electron optics; electrostatic lenses; magnetic lenses
 CIELAS, Cambridge interactive electron lens anal. system, appls. computer-aided analysis electron lenses electron optics electron microscopes CAD 2-65149
 einzel lens, electron energy anal. appl. 2-70029
 HVEM, 1000 kV, resol. improvement using asymmetrical lens 2-64181
 lithographic system performance, computerised optimisation using damped least squares method 2-75506
 magnetic spectrometer, aberrations correction by electric multipole lenses 2-113063
 microscope, imaging process, electron-optical parameters of high resolution instruments 2-53897
 objective lenses, saturated asymmetrical, calc. of field distrib. and optical props. 2-65152
 optical props., of electron lenses, improved programs 2-65150
 post specimen lenses for use in STEM, EELS technique 2-64196
 spherical aberration correction, in electron probe microscopes 2-113068
 superconducting lens design [for electron microscopes] 2-113081
 superconducting lens system for electron microscope, high resolution imaging at low magnification (German) 2-53899
 superconducting shielding lens, asymmetric, for TEM and STEM 2-64180
 wide-angle projector systems, for TEM 2-64182
electron lifetime (metals) see electron relaxation time (metals)
electron lithography see electron beam lithography
electron mean free path (metals)
 film, monocrystalline, electronic mean free path and Fermi surface area, energy depend. 2-115919
 Mooij criterion and weak localization 2-87216
 spin dependence, atomic approx. 2-66535
 Ag-Cu films, plasmon excitation by fast electrons 2-92785
 Al thin film, size depend. cond., electron density and mean free path 2-110498
 Au thin film, size depend. cond., electron density and mean free path 2-110498
 Bi film, elec. resist., size effects, TCR meas. 2-66678
 Ca film, polycrystalline, elec. cond. meas. 2-82478
 Cd, liquid, nearly-free-electron-phonon interaction and elec. resist. temp. depend. 2-98610
 Cr-Cu, polycrystalline films, elec. resist. study 2-61614

electron mean free path (metals) continued

- Cu, point contact spectroscopy, temp. depend., nonequilib. phonon temp. (Russian) 2-61565
- Cu, thin film, inelastic mean free paths of Auger electrons 2-93335
- Cu thin film, size depend. cond., electron density and mean free path 2-110498
- Cu vacuum evaporated films, defect density and elec. props. from annealing study of elec. resistance 2-110495
- Mn overlayer on Cu(100), LEED, AES and UPS study 2-87111
- Nb₂Ge film, supercond. fraction determ. using SAW 2-104541
- Nb₂Ge films, critical mag. field temp. depend. (Russian) 2-61673
- Ni, thin film, inelastic mean free paths of Auger electrons 2-93335
- Sn film, struct. rel. to elec. and optical props. 2-115623

electron micrographs see electron microscope examination of materials; electron microscopy**electron microprobe analysers** see electron probe analysis**electron microprobes** see electron probes**electron microscope applications**

- see also electron microscope examination of materials; scanning electron microscope applications
- biological appls. 2-84748
- fatigue crack opening stress measurements, electron microscopy technique 2-93719
- microchips and solid state devices manufacture, fault location (French) 2-53904
- steel, stainless, foil, thickness determination using transmission electron microscope 2-58786
- Si surface cleanliness control by TEM (Russian) 2-99573

electron microscope examination of materials

- see also electron microscope applications; electron microscopy; scanning electron microscope examination of materials; scanning-transmission electron microscope examination of materials; transmission electron microscope examination of materials
- actin filaments, SI-decorated, struct. calc. from X-ray diffr. data, phases from electron micrographs 2-116879
- alloy, binary, FCC and BCC, electron irradi., rad. induced segregation at internal sinks 2-86731
- aromatic hydrocarbons, image interpretation by computer simulation 2-76260
- bacteriorhodopsin, linking regions between helices 2-62554
- biomolecules, 3D struct. determ. from 2D crystals 2-100178
- bromanil, organic semicond., epitaxial growth mechanism on KCl 2-92391
- C, film, electron irradiation obs. in vicinity of ice 2-92044
- catalysts, image resolution 2-94973
- cellophane, fine struct., X-ray and electron diffr. obs. 2-103666
- cellulose triacetate, heavy ion tracks, electron microscopy obs. (French) 2-108273
- chromatin fibres, electron micrographs, Fourier analysis and optical diffr. 2-111826
- conference on electron microscopy and cell biology, Canberra, Australia (Feb. 1982) 2-107008
- copper phthalocyanine, chlorinated, molecular crystal, quantitative characterisation, radia. damage imposed limits 2-66071
- copper phthalocyanine crystals, lattice imaging 2-65819
- diamond, containing lonsdaleite, ESR spectra, structural defects 2-72344
- diamond, platelet defects, {100}, struct. 2-71477
- ferrous materials, plasma-nitriding in N₂-H₂-CH₄ gas mixtures (German) 2-88292
- fibre, amorphous hollow, contrast in electron microscopy 2-71306
- fibre fracture parameters and testing (French) 2-70694
- fibrinogen, α -chain extensions obs. by electron microscopy specimen preparation technique 2-73195
- glass microstructure, electron microscopy studies 2-91797
- graphite, Cr₂C₃ diffusion layer form. 2-83289
- graphite, electron momentum densities, Compton scattering in electron microscope study, EELS technique 2-67166
- graphite intercalation compound with FeCl₃, electron microscope imaging of various stages 2-71358
- graphite-SbCl₃ intercalation cpd., stage-2, commensurate-to-glass phase transition, electron microscopy study 2-110004
- ice crystals formed by artificial nucleation, crystal habit at early growth stages from electron microscopy 2-100484
- iodanil, organic semicond., epitaxial growth mechanism on KCl 2-92391
- luciferase of luminous bacteria, electron microscopic investig. of mol. struct. 2-105645
- metal whiskers, yield strength size dependence, optical and electron microscopy study 2-115633
- metallic components under high stress, surface thermal treatment by laser radiation (Rumanian) 2-99600
- metals, austenitic region shape deformation under martensitic transformation, electron microscopic determ. 2-116629
- metals and alloys, solidification in-situ electron microscopy (French) 2-62116
- muscle, smooth, freeze-substitution and isothermal freeze-fixation studies to elucidate ice formation pattern 2-83717
- Nimonic PE16, solution treated, grain boundary segregation during neutron irradi. 2-109844
- nucleoprotein assemblies, discrimination of protein and nucleic acids 2-94262
- organic materials, cryoprotection, electron microscopy with cold stages 2-113080
- organic specimens, radiation damage in high voltage electron microscopy 2-115115
- n-paraffin, aliphatic hydrocarbon, and its adducts, crystn. and lattice resoln. 2-65820
- phthalocyanine thin films, cryst. defect orientations and growth mechanism 2-82151
- piezoceramic, explosively compacted, elec. domain struct. (Russian) 2-66990
- polyethylene, epitaxial crystallisation on organic substrates, nucleating agent mode of action 2-87106
- polyethylene, extruded, microstruct. study by electron microscopy 2-91826
- polyethylene, high-density, cryst., wear, morphological study 2-83240
- polyethylene, linear, amorphous, annealing effects in films 2-72726
- polyethylene, linear fraction, crystallised at different temps., quantitative electron microscopic obs. 2-65875
- polymers, inner potential of cracked material, electron microscopy meas. technique 2-93746

electron microscope examination of materials continued

- polystyrene, inner potential of cracked material, electron microscopy meas. technique 2-93746
- polyvinylcarbazole film, impurities and struct. effect on photolum. (Russian) 2-67092
- proteins, functional site mapping 2-99892
- proteins, three-dimensional structure 2-100184
- PVC, plasticized, microdomain struct., electron microscope obs. 2-81691
- PVC cpds., fusion, processing variables effect, rheological obs. 2-81306
- quaterylene, thin film growth, grain boundary struct., electron microscopy 2-81775
- radiation-sensitive specimens, electron microscopy obs., resolution limits 2-115114
- rare earth oxides, complex, high-resolution electron microscopy 2-97880
- rare earth oxides, electron beam induced reduction, high resolution electron microscopy study 2-78086
- rare earth sesquioxides, monoclinic, incoherent twin boundaries and isolated wedge microtwins, high resolution study 2-60999
- rare earth-Si-Fe alloys, self-powdering, X-ray diffr. and electron microscopy invest. (Chinese) 2-62249
- ribosomes, distrib. of RNA and protein 2-94262
- selection guide w.r.t. resolution and cost 2-76254
- semiconductors, pulse laser and electron beam annealing, electron microscope characterisation 2-66051
- solid gases, review 2-115121
- steel, alloy, HY80 and HY130, fracture toughness transition temp., effect of loading rate 2-62227
- steel, austenitic stainless, cyclic strain hardening, during fatigue, elevated temps. 2-93530
- steel, austenitic stainless, irradiated in EBR-II and HFIR, swelling and microstruct./microchem. evolution 2-108110
- steel, austenitic stainless, microstruct., in situ obs. of heavy-ion damage 2-86754
- steel, C, cementite spheroidization 2-111212
- steel, C, Cr₂C₃ diffusion layer form. 2-83289
- steel, C, Nb addition effect on tempering of undeformed lath martensite (Japanese) 2-57381
- steel, constructional, thermal embrittlement and fracture features, P influence 2-105323
- steel, Cr-Mo-Nb-V, fast breeder reactor components, precip. study (French) 2-88089
- steel, Cr-Ni-Mo, fracture, nonmetallic inclusions shape influence 2-72819
- steel, HSLA, tempered Nb-bearing, fatigue crack initiation and propag. 2-111292
- steel, maraging, 00Kh11N10M2T, struct. changes and mech. props. caused by reverse α to γ transition (Russian) 2-77819
- steel, medium C low tempered, dislocation density determ. in pack martensite 2-60981
- steel, medium-C, track traces on surface of fatigue cracks, nature 2-99548
- steel, mild, diffusion bonding, in situ obs. using photoemission electron microscope 2-110177
- steel, mild, Fe²⁺ reducing bacterium effect on passivity loss, anodic depolarisation mechanism 2-62257
- steel, Mo and V, tempered, struct. changes and carbide formation, electron microscopy study (Russian) 2-99459
- steel, Ni-Co-Mo-(W)-Ti, maraging, props. after high-temp. treatment 2-67395
- steel, Si, bainitic transformation (Czech) 2-67326
- steel, stainless, austenitic, ageing with γ' precipitation, intermittent reaction (Russian) 2-67346
- steel, stainless, Cr-Ni-Al, sheet, fractographic investigation of failure 2-72823
- steel, stainless, ferrite struct., rolling, plastic deform., metallography study 2-57422
- steel, stainless, Nb stabilised 20/25, creep, primary and recoverable 2-116492
- steel, strengthening by surface plastic deformation, dislocation aspects 2-116615
- steel, V, mech. props. rel. to γ - α transform. kinetics 2-83112
- steels, ferritic stainless, fast neutron irradi., microstruct. obs. 2-108108
- T4 bacteriophages, visualisation of protein and DNA components 2-94262
- tetramethyltin intercalated graphite, low-temp. structural study by electron microscopy 2-76424
- thermistase, negative staining to reveal struct. 2-73408
- validity of two-beam kinematical theory (French) 2-109803
- WC-Co, sintered, surface struct. and strength after various forms of working 2-67458
- Ag film, growth on Pd, AES and electron microscopy study (French) 2-71839
- Ag surface profiles, autocovariance functions, electron microscope and microdensitometer study 2-76792
- Ag-Ge, amorphous film, struct., elec. and optical props. 2-82483
- AgBr evaporated layers, Na₂S₂O₃ breakdown, electron microscopy obs. 2-88367
- AgCl, plastic deformation, wavy slip band form. 2-115337
- Ag₂Se, polymorphic transition and cryst. struct., electron microscopy study 2-86610
- Al alloys, vacancies generation study during oxidation, electron microscopy method 2-72897
- Al, electron irradi., vacancy cluster form. and radiation-induced refining, HVEM obs. 2-81829
- Al, fractographic inspection in air and vacuum (Japanese) 2-62319
- Al-Cu, Mn, Ti, Cd and Zr impurities effect on ageing, electron microscopy study (Russian) 2-93539
- Al-Cu (3 wt.%), pre-precipitates, microstruct. obs. using lattice imaging technique 2-111186
- Al-Cu (4 wt.%), Guinier-Preston zones, high resolution image calc. 2-71434
- Al-Cu (4 wt.%), θ' precipitates, lattice image obs. 2-76363
- Al-Cu-Mg (1.3, 1.3 at.%), high temp. ageing, coherence loss, electron microscopy study (Russian) 2-93540
- Al-Cu-Mg (1.3, 1.3 at.%), high temp. ageing, coherent precipitation obs. (Russian) 2-99429
- Al-Fe, solid solns., secondary quenching defects features 2-62153
- Al-Mg, recrystn. after cold rolling, optical and electron microscopy study 2-88098
- Al-Mg-Sc alloy, elastic strain caused by ScAl₃ precipitates, electron microscopy study (Russian) 2-105207
- Al-Mn, unhomogenized, recrystn. 2-83138

electron microscope examination of materials continued

- Al-Ru (10-15 wt.%), rapidly quenched, phase transform 2-77823
 Al-Zn alloys, precip. sequence, X-ray scatt. and electron microscopy study (*French*) 2-116442
 Al-Zn-Mg, aged at 20, 80 and 120°C, decomp., quench conditions influence (*French*) 2-72743
 Al₂O₃, amorphous struct., high resolution electron microscopy studies 2-71357
 α-Al₂O₃, sintering, voids and boundary migration, electron microscope study 2-113046
 2Al₂O₃·CO₂·15H₂O, structural characteristics, X-ray, IR spectra, DTA and electron microscopy study (*Bulgarian*) 2-76385
 Au (011) crystal in deviated Bragg condition, electron microscopy, petal and horseshoe shaped contrasts 2-71394
 Au epitaxial clusters, struct. and shape 2-110183
 Au film, (111), vapour deposited, surface and inclined planar defect electron-microscope images 2-71844
 Au film, condensed, lattice dynamics and substruct. (*Russian*) 2-92425
 Au films, high-angle tilt boundary faceting, electron microscopy study (*Russian*) 2-87093
 Au, ion bombarded, damage profile, electron microscopy and computer simulation study 2-76531
 Au surface profiles, autocovariance functions, electron microscope and microdensitometer study 2-76792
 Au-Ag, oxide formation during corrosion in HNO₃, electron microscopy study 2-72890
 Au-Cu alloy particles produced by Au and Cu smoke particles coalescence, electron microscopy study 2-93476
 Au-Cu long period ordered alloys, incommensurate statistical struct., high resolution electron microscopy 2-71397
 Au-Mn, structure, high resolution electron microscope and electron diffraction study of Au₃Mn phase 2-86627
 Au-Mn system, two-dimensional antiphase struct., high voltage-high resolution electron microscopy 2-81970
 Au-Zn, incommensurate two-dimens. antiphase struct., HVEM study 2-97995
 Au₃Mg(Zn)(Cd), high resolution images by high-voltage electron microscopy 2-81636
 Au₂Mn, micro-texture study 2-61265
 Au₂Mn₆, antiphase struct., one-dimensional, high-voltage high-resolution electron microscopy study 2-60923
 Au₃Mn₁₃, superstructure, diffraction studies 2-86628
 Au₃Zn, H phase, out of step period 2-71658
 Bi, electron radiation damage, electron microscopic study 2-61036
 Bi-SiO₂ cermet films, elec. and optical props., H addition effects 2-82505
 Bi₂₄-La₂WO₆, cryst. struct., electron microscopy lattice imaging method 2-60943
 Bi₂O₃-BaO system, rhombohedral phase, cryst. struct., superlattice existence, electron microscope study 2-60947
 C, electron momentum densities, Compton scattering in electron microscopy study, EELS technique 2-67166
 CO, magnetisation direction, temp. depend., 1 MV Lorentz electron microscopy study 2-77286
 CaSO₄·1/2H₂O, crystal size determ., electron microscopy 2-98013
 Cd,Hg_{1-x}Te (0≤x≤1) thin films, laser epitaxy and annealing (*Russian*) 2-105070
 CdHoS₄, spinel to rocksalt type struct. transition, electron microscopy and diffraction study 2-76651
 CdS, defects lattice imaging by electron microscopy 2-65983
 CdSe, Te_{1-x} (0≤x≤1) thin films, laser epitaxy and annealing (*Russian*) 2-105070
 CdTe, irradiation produced secondary defects, effect of cryst. polarity 2-115291
 Co textured films, NMR and mag. meas. (*Russian*) 2-98994
 Co-Cr-Al-Y (22, 11, 0.5 wt.%) coating, oxide form. at 700°C 2-116621
 Co₃O₄-CoO, spray pyrolysed Co black, high temp. selective absorber 2-67891
 Cs₈Ti₂O₄, non-stoichiometric, sheet struct., electron microscopy study (*French*) 2-86645
 Cu complex, N,N'-bis-solicyloyl-hydrazine, steric struct. determ. using supercond. electron microscopy 2-115214
 Cu, Cu-Mn(Al)(Ni), neutron irradi., 14 MeV, damage development and hardening 2-109841
 Cu, electron irradi., vacancy cluster form. and radiation-induced refining, HVEM obs. 2-81829
 Cu, internal pot. determ. by interf. electron microscopy (*Russian*) 2-60845
 Cu maculose films, nature and distrib. function of cluster dimensions 2-56400
 Cu, single crystals, plastically deformed, dislocation structures recovery 2-71451
 Cu, stacking fault tetrahedra induced by electron irradi., dynamic study 2-76462
 Cu surface profiles, autocovariance functions, electron microscope and microdensitometer study 2-76792
 Cu, twin boundary struct., high resolution electron microscopy study 2-71471
 Cu-Ag, amorphous films with high stability 2-104196
 Cu-Al, dispersion hardened, struct. stability and resist. to deform. (*Russian*) 2-77872
 Cu-Al, short-range order and coherent precipitation in α-phase (*French*) 2-57358
 Cu-Al (3 at.%), dislocation struct. effect on flow stress, X-diffraction and electron microscopy study 2-91982
 Cu-Be (2 wt.%), quenched and aged, struct. and props. after deform. to large strains 2-93569
 Cu-Be-Co (13.1, 0.2 at.%), rapid solidification effect on ageing (*Japanese*) 2-105137
 Cu-Co alloys, precipitated particles, coarsening process (*Japanese*) 2-83125
 Cu-Cr multilayer composites, yield point, struct. influence (*Russian*) 2-67446
 Cu-Ni-Fe, superplasticity and form. of microduplex struct. (*Japanese*) 2-72769
 Cu-Ni-Mn, grain boundary reaction after ageing (*Japanese*) 2-77848
 Cu-Ni-Sn (10.8 wt.%), grain boundary reaction after ageing (*Japanese*) 2-77849
 Cu-Pd long period ordered alloys, incommensurate statistical struct., high resolution electron microscopy 2-71397

electron microscope examination of materials continued

- Cu₂-x-CdS photoconverters, electron microprobe analysis and degradation 2-73113
 CuAu vacuum deposited films, mech. twinning 2-98492
 CuAu-I(II), vacuum deposited ordered thin films, mech. twinning obs. 2-82173
 Cu₃Au, electron irradi., dislocation loops, electron microscope study 2-76449
 CuAuI, electron irradi., dislocation loops, electron microscope study 2-76449
 CuIn₃Te₆, cryst. struct. and microstruct., electron microscopy study 2-115198
 CuZnAl, martensitic, high resolution electron microscopy of boundaries 2-71473
 Fe, cast, white and grey, Cr, Cr₂, diffusion layer form. 2-83289
 Fe, corrosion in water at room temp., electron microscope obs. 2-67622
 Fe, passive oxide films in aq. soln., high resolution electron microscopy study 2-72891
 α-Fe, polycryst., stress-strain behaviour, improved dislocation model 2-105247
 Fe, vacancy migration at 220K, HVEM obs. 2-81828
 Fe-Al (30.5 at.%), plastically deformed, ordered, antiphase domain boundary tubes, electron microscopy study 2-72784
 Fe-B alloy, amorphous, heat treatment conditions influence on crystn. and struct. (*Russian*) 2-65868
 Fe-base superalloy A-286, effect of composition and high energy rate forging on precipitation 2-111183
 Fe-Cr, packet martensite, struct. changes during annealing, electron microscopy study (*Russian*) 2-99425
 Fe-Cr-C (3.1.5 wt.%) martensite cryst., midribs (*Russian*) 2-115249
 Fe-Cu-Ni (2.2 at.%), ε-Cu precip. on interphase boundaries, orientation relationships, electron microscopy study 2-72707
 Fe-FeSi, hypereutectic films, solidification, lamella to dendritic struct. transition 2-57341
 Fe-Mn-Si (30, 1 wt.%), single crystals, hardening due to pre-existing ε-martensite 2-116493
 Fe-Ni, ferrite-austenite orientational relationships during γ→α transformation (*Russian*) 2-93505
 Fe-Ni, packet martensite, struct. changes during annealing, electron microscopy study (*Russian*) 2-99425
 Fe-Ni films, periodic domain walls interactions, electron microscopy study (*Russian*) 2-87560
 Fe-Ni-Co-Ti, martensite and austenite, disperse γ' particles elastic deform. and γ↔α transitions (*Russian*) 2-88078
 Fe-Ni-Co-Ti (23, 10, 10, wt.%), martensitic transformation 2-83118
 Fe-Ni-Si (18.3 at.%), martensite aging, precipitated intermetallic phase struct., electron microscopy study (*Russian*) 2-93514
 Fe₂O₃·H₂O gel, pure, prep., struct. and mag. props. 2-67769
 Fe₂O₃·xH₂O gel, pure, prep., struct. and mag. props. 2-67770
 FeSiO₃-MnSiO₃, metasilicate glass, crystn. 2-97936
 FeTiO₃ spinel, natural, oxidation-reduction reactions, electron microscopy 2-72986
 GaAs LPE layers, dislocations as growth step sources, rel. to interface struct. 2-115615
 GaAsC layers, elec. props., and electron microscopy 2-61628
 GaAsP, composition modulated, electron microscopy intensity distrib., moiré fringe images 2-97873
 GaAsSe, struct. images in high resolution electron microscopy study 2-65965
 GaP, doped homoepitaxial layers, dislocations, TEM study 2-103773
 Ga₂Se₃, ordered and disordered phases, struct., electron diffraction and microscopy obs. 2-60957
 Gd-Co, amorphous alloy films, changes in struct., mag. anisotropy and mag. domains (*Chinese*) 2-62238
 GdCo film, bias-sputtered, perpendicular anisotropy rel. to microstruct. 2-72297
 Gd₂SiO₅, struct. and defects, high resolution electron microscopy study 2-63952
 Ge, HCl gas phase etching, surface form. processes, AES, RHEED and electron microscopy obs. 2-99570
 HfO₂-MgO system, eutectoid decomp. process influence on physico-chem. props. 2-99404
 HfO₂-PrO₃ system, eutectoid decomp. process influence on physico-chem. props. 2-99404
 InP, electron irradi., dislocation loops, electron microscopy study (*French*) 2-103769
 InP, inclusions 2-71433
 InP, irradi., 200 to 300°C in HVEM, radiation damage 2-92040
 InSe large single crystals grown from stoichiometric, non-stoichiometric melts 2-93411
 KCl, large gas filled pore migration due to temp. gradient 2-56265
 KCl, small pore migration due to temp. gradient 2-56266
 La-Ni-O system, phase struct., electron microscopy and X-ray diffraction study 2-91919
 LiF crystals, deform., dislocations, parameters of paired distrib. 2-66002
 Li₂O-Al₂O₃-SiO₂ glass ceramics, microstruct., electron microscopy and electron diffraction 2-115140
 LiTaO₃, ferroelec. domain boundaries, computer simulation, X-ray and electron microscope study 2-87717
 LiTaO₃, ferroelec. domains and chemical twinning, dislocations and stacking faults 2-93130
 Mg, dislocation dipole structures formed as result of basal slip (*Russian*) 2-115238
 Mg film formation by direct ion beam deposition 2-116387
 MgO crystal predeformed at high temp., high voltage electron microscopy straining expt. 2-65998
 MgSiO₃-MnSiO₃, metasilicate glass, crystn. 2-97936
 (Mn,Fe)₂Si₂O₇(OH,Cl)₁₀, mcGillite, one-layer monoclinic struct., electron microscopy and electron diffraction 2-115181
 (Mn,Fe)₂Si₂O₇(OH,Cl)₁₀, mcGillite, polytypism and disorder, electron microscopy study 2-115182
 Mn-Bi amorphous films, crystn. 2-98480
 Mo alloy weld, B impurity distrib. (*Russian*) 2-92017
 Mo, cold rolled and annealed, dislocation struct., electron microscopy study 2-76450
 Mo, cold-worked, deform. and slip behaviour, cryst. orientation effect 2-99502
 Mo, deformed, single cryst. foils, anomalous slip induced by surface effect, HVEM study 2-86671
 Mo, delayed recrystn. during annealing, O effects, electron microscopy study (*Russian*) 2-88099

electron microscope examination of materials continued

- Mo, electron irradi., vacancy cluster form. and radiation-induced refining, HVEM obs. 2-81829
- Mo:He, radiation damage during HVEM, He effects 2-103823
- Mo-Re, re effect on void swelling, in-situ obs. in HVEM 2-86743
- MoO₃, reduced from Mo₂O₃ and CS oxides 2-92177
- MoO₃-V₂O₅ system, phase equilibria, electron microscopy and X-ray diffr. study 2-115391
- Na₂Ti₂O₇ structure determ. by convergent-beam electron diffr. and 1 MeV struct. imaging 2-60930
- Na₂O.5Al₂O₃, electron irradiation damage mechanisms 2-66072
- Nb-Zr-N, strengthened by ZrN precip., ageing characts. 2-83132
- Nb₂O₅, metastable struct. modification, disintegration and reduction products, electron microscopy study (*German*) 2-65956
- Ni alloy, heat-resisting, EP-741P, fracture behaviour investig. by thermal microscopy, P/M alloys 2-67545
- Ni, cold deformed, local cryst.-amorphous state phase change obs. 2-57374
- Ni, electron irradi., vacancy cluster form. and radiation-induced refining, HVEM obs. 2-81829
- Ni, fatigue induced cavities, small-angle neutron scattering 2-105274
- Ni, on SiO₂, heterogeneous catalyst, characterisation by EM 2-98299
- Ni, passive oxide films, electrochem. and surface analytical techniques 2-88260
- Ni, single crystals., plastically deformed, dislocation structures recovery 2-71451
- Ni-Be (1at.%), radiation induced homogeneous precip., HVEM obs. 2-83124
- Ni-Cr based refractory eutectic alloy, electron microscopy study (*Russian*) 2-98298
- Ni-Cr-Al-Ti, ageing and γ' phase precipitation after strong deform., recrystn. processes (*Russian*) 2-99443
- Ni-Mo, irradi.-induced Mo₂C precip. 2-57356
- Ni-Mo steel, phase transitions during heating and strengthening (*Russian*) 2-116438
- Ni-P-B coatings, heated in air, struct. and props. (*Russian*) 2-57382
- Ni-Ti, dil. alloy, internal oxidation and oxide particles (*Japanese*) 2-105374
- Ni-Ti alloys, electron beam induced amorphisation, electron microscopy study 2-109832
- Ni-W, directionally crystallised eutectic, crystallographic struct., electron microscopy study (*Russian*) 2-91870
- Ni-W, eutectic alloy, directionally solidified, precip. of Ni₄W around W fibres mosaic struct. form. 2-105146
- NiTi shape memory alloy, electron irradi. induced cryst.-amorphous transitions 2-92041
- Pb film formation by direct ion beam deposition 2-116387
- Pb₂KNb₂O₁₅, ferroelectric-ferroelastic domain struct., electron diffr. and microscopy study 2-67011
- Pb₂(PO₄)₂, ferroelastic phase transition, domain walls (*French*) 2-86866
- PbS-Bi₂Si₃ system, synthetic PbS-rich homologues, microscopic study 2-115253
- PbZrO₃, antiferroelec. domain struct., electron microscopy and diffr. study 2-57031
- Pd-Ag two-layer polycryst. films, low temp. homogenization (*Russian*) 2-92289
- Pd₂Ge, metallic glass, crystn. kinetics 2-81682
- Pd₃Mn ordered alloy, coincidence patterns, high resolution electron microscopy study 2-86528
- Pd₂Si-Si interface anal. of high resolution electron microscope images 2-115611
- Pt, adsorption of ethylene and acetylene, field emission study 2-82119
- Pt, on graphite, Pt alloys on SiO₂, heterogeneous catalysts, characterisation by EM 2-98299
- Pt-C alloy, defect clustering induced by secondary collisions during HVEM irradi. 2-92042
- Sb-Zn, amorphous, form. and crystn. 2-76322
- Sb₂S₃-PbS glass, prep. and props. 2-71367
- Si, atomic images in electron microscopy 2-71393
- Si, crystn., picosecond laser pulse irradiation 2-66043
- Si, dislocations, and stacking faults, HV high-resolution electron microscopy study 2-91970
- Si, ion and neutron irradi., radiation damage, thermal and laser annealing, electron microscopy study 2-71512
- Si, ion implanted, secondary defects annealing, electron microscopy study 2-71485
- Si LPE layers, dislocations as growth step sources, rel. to interface struct. 2-115615
- Si, radiation-induced defects, room temp., in HVEM studies 2-92043
- Si ribbon, H passivated struct. defects, EBIC study 2-66006
- Si ribbons, defects, elec. characts. and crystallography, EBIC and HVEM study 2-66014
- Si, stacking faults, {113}, atomic model and electron microscopy study 2-71478
- Si, thermal oxidation, enhanced dopant diffusion and defect form. 2-66296
- Si:In, ion implanted, laser annealed, convection and constitutional supercooling cells 2-66054
- Si-metal bilayer, laser writing for optical storage, TEM and electron diffr. study 2-91011
- Si-SiO₂, MOSFETs, fabrication in laterally seeded epitaxial Si on SiO₂ 2-92756
- Sm(Co, Cu, Fe, Zr)_{7.4} permanent magnet, precip. hardened, microstruct. 2-71657
- Sm₂Co₉, intergrowth and stacking faults, electron microscope obs. 2-115255
- Sm₂Ni₃, polytypes, cryst. struct., electron diffr. and microscopy study 2-91877
- SmO₂, upper Laue zones influence an electron diffr. patterns and electron images 2-97867
- Sn, electro-plated coatings, grain size effect on whisker growth 2-115635
- Sn, epitaxial layer, semicond.-metal phase change, electron microscopy study 2-66666
- Sn-O amorphous system, bonding struct. and lattice dynamics, Mossbauer study 2-104770
- Sn-Pb, electro-plated coatings, grain size effect on whisker growth 2-115635
- SnO₂, bent cryst., high resolution electron microscope and electron diffr. images 2-76402
- Sr₂Nd_{1-x}FeO_{3-y} solid soln., superstructure, microdomains, electron diffr. and microscopy study 2-91925

electron microscope examination of materials continued

- TaSe₂ (2H), microstruct. in incommensurate and commensurate CDW states, electron microscopy obs. 2-104009
- Te, VPE growth with partially ionised vapour, expt. study 2-116368
- α -Te₂MoO₇ and β -Te₂MoO₇, industrial oxidation catalysts, X-ray diffr. and electron microscopy study 2-61157
- ThNb₂O₁₂, slow-cooled sample, Th-vacancy ordering 2-60928
- Ti alloys, pseudo- α , optimum heat treatment selection 2-105200
- Ti-Al, mech. props. and thermal stability, comp. depend. (*Russian*) 2-77874
- α -Ti-Al-Mn, optimum heat treatment selection 2-105200
- Ti-Al-Mo, α'' phase form. and decomp. (*Russian*) 2-99385
- Ti-Mo (10 at.%), struct. after low temp. ageing, X-ray and electron microscopy study (*Russian*) 2-93538
- Ti-V-Cr-Mo, VT3-1, α'' phase form. and decomp. (*Russian*) 2-99385
- α -Ti-Zr-Mo-V, optimum heat treatment selection 2-105200
- TiC, fused single-cryst., struct. and props., melting conditions influence 2-81779
- Ti₂O₃, crystallographic shear phase, oxidation, defects, electron microscope study 2-91985
- V₂Zr(Hf)(Ta) superconducting Laves phase, cryst. struct. (*Russian*) 2-91871
- W, adsorption of N₂/O₂ mixture at low temp., FEM study 2-76804
- W, screw dislocation dynamics, irradi. softening, HVEM obs. 2-98104
- W-O system, phase struct., X-ray diffr. and electron microscopy study 2-60952
- Zn, two-layer dislocation block boundaries (*Russian*) 2-98093
- ZnS polytype, stacking fault sequences, high resolution electron microscopy study (*Chinese*) 2-91987
- ZnSe, polarity and inversion twins, high-resolution electron microscopy 2-109813
- Zr-Mo-Al, β solid soln., decomposition, precipitation kinetics and struct. mechanism 2-77829
- Zr-Nb-Mo-V, β solid soln., decomposition, precipitation kinetics and struct. mechanism 2-77829

electron microscopes

- see also *electron microscopy; field emission electron microscopes; scanning electron microscopes; scanning-transmission electron microscopes; transmission electron microscopes*
- charge-coupled device-based detector systems, for use in electron microscopy, dose effect 2-64189
- CIELAS, Cambridge interactive electron lens anal. system, appls. computer-aided analysis electron lenses electron optics electron microscopes CAD 2-65149
- cold stage design and operation 2-113082
- computer-electron microscope interactions 2-107460
- computer-electron microscope interactions and atomic resolution and spectroscopy, conf., Atlanta, GA, USA (Aug. 1981) 2-107013
- conference, Kyoto, Japan (May 1981) 2-68953
- detection quantum efficiency of electronic image recording systems 2-113053
- high-resoln. electron microscope, Cambridge University, image pickup and display systems 2-64187
- high-resolution, analytical, local composition of specimen area 2-95563
- HVEM, 1000 kV, resoln. improvement using asymmetrical lens 2-64181
- image intensifier, for high-voltage electron microscopes 2-64188
- imaging process, electron-optical parameters of high resolution instruments 2-53897
- interactive image processing with an off-line minicomputer: organization, performance and applications 2-113058
- lens development, improved programs for calc. optical props. 2-65150
- liquid He cooled specimen holder for electron microscopy 2-64164
- magnetic spectrometer, aberrations correction by electric multiple lenses 2-113063
- micromanipulators with high frequency vibratory drive (*Russian*) 2-53744
- objective lenses, saturated asymmetrical, calc. of field distrib. and optical props. 2-65152
- Philips EM300, attainment of substrate temp. of 25K 2-79589
- space charge limited electron beams, anal. 2-65151
- spherical aberration correction method 2-113068
- superconducting lens design [for electron microscopes] 2-113081
- superconducting lens system, high resolution imaging at low magnification (*German*) 2-53899
- tungsten hair-pin cathode development, directly heated 2-101498
- TV rate electron microscope images, noise reduction by digital filtering 2-113054
- ultra-high vacuum, analytical electron microscope 2-64183
- very-high temp. heating stage for electron microscope 2-113046
- Si photodiode arrays, 1D and 2D self-scanning, imaging devices in electron microscopy 2-64190

electron microscopy

- see also *electron microscope applications; electron microscope examination of materials; electron microscopes; field emission electron microscopy; metallography; scanning electron microscopy; scanning-transmission electron microscopy; specimen preparation; transmission electron microscopy*
- 1980's state of art review 2-69305
- analytical, high-resolution, local composition of specimen area 2-95563
- aromatic hydrocarbons, image interpretation by computer simulation 2-76260
- backscattered electron channelling contrast, optimum detection 2-76556
- backscattered electron channelling patterns, critical voltage effects 2-76557
- bibliography of equipment, methods, appls. and related topics 2-84406
- bibliography of microscopic equipment, methods, appls. and related topics 2-107034
- biological, surface activation of C film supports 2-117172
- biological applications, review 2-117177
- biological macromolecules, dynamic behaviour multivariate statistical anal. 2-116869
- biological macromolecules, functional site mapping 2-99892
- biological material, simple procedures for evaluating cryofixation 2-83713
- biological molecules in solution, freeze fracture electron microscopic anal. 2-83548
- biological specimen microscopy and microanalysis 2-83729
- biological specimens, EM image averaging, limits imposed by imperfect crystallinity 2-78518

electron microscopy continued

biomolecular electron microscopy, towards higher resolution, review 2-117175
catalyst particles, bright and dark field imaging 2-98299
computer applications 2-107473
computer-aided reconstruction of image contrast 2-55816
computer-electron microscope interactions and atomic resolution and spectroscopy, conf., Atlanta, GA, USA (Aug. 1981) 2-107013
conference, Durban, South Africa (Dec. 1981) 2-84382
conference, Kyoto, Japan (May 1981) 2-68953
conference on electron microscopy and cell biology, Canberra, Australia (Feb. 1982) 2-107008
contrast variation method, discrimination of protein and nucleic acids 2-94262
cryoelectron microscopy, review 2-113079
cryomicroscopy and radiation damage, conf., Schloss Ringberg am Tegernsee, Germany (Nov. 1981) 2-112655
cryosectioning process for tissue prep. 2-83716
crystallography, direct phasing technique for improvement of image quality 2-97870
detection systems, noise meas. using scintillator-photomultiplier combination 2-53901
digital morphometry system 2-107461
dilational contrast images 2-60848
electron energy loss spectroscopy, electron microscope appl., review 2-64193
energy transfer to the specimen 2-113083
energy-dispersive electron microprobe techniques, for rare-earth element determ. 2-67794
fibre, amorphous hollow, contrast in electron microscopy 2-71306
fibroblast, critical-point-dried cultured, partial specific thickness meas. by energy anal. 2-73409
freezing damage with freeze substitution using moth antennae as test objects 2-83718
frozen hydrated specimens, thermal and radiation damage 2-83720
goniometer for fine adjustment in nanoradian range 2-89862
high energy approx. in dynamical theory of electron diff. 2-60842
high resolution, crystal atomic images, internal fine struct. obs. 2-65817
high resolution, misalignment effects 2-71305
high resolution imaging methods 2-97877
high resolution microscopy, appl. to microanalysis 2-101497
high voltage, atomic resolution, review 2-71308
high-resolution, application to chem. problems 2-97878
high-resolution, applied to chem. problems conf., New York, USA, (Aug. 1981) 2-94904
high-resolution, role in development in solid state chem. 2-97880
high-temperature specimen holders, for in-situ experimentation 2-64169
high-voltage electron microscopy, conf., 4th National symposium, Grenoble, Nov. 1981 2-94896
high-voltage electron microscopy, of beam-sensitive materials, image intensifier 2-64188
holography, photographic process nonlinearity effects (*German*) 2-95555
image, calc., display and comparison, integral and dedicated computer system 2-95562
image displays, using 1D-2D self-scanned Si photodiode arrays 2-64190
image information compression, for electron images 2-71303
image processing, 1978-1980 2-53895
image processing, array processor appl. 2-113059
image processing, recursive methods with a transfer function 2-76259
image quality, influence of photographic emulsion used 2-113025
image reconstruction, EM computer program system 2-113076
images, enhancement of two-dimensional projections, using spatial correlations 2-113064
IMAGIC, interactive image anal. software system for electron micrographs 2-71301
instrumentation, today and tomorrow 2-64168
kallikrein-like activity demonstration, microscopical method 2-73407
Kikuchi line indexing from UHVEM (*Chinese*) 2-109641
lattice defect obs. with electron interference microscopy (*Russian*) 2-86529
light-optical diffractograms of electron microscope images, phase of complex atomic scatt. amplitudes determ. 2-113077
low-dose technique, for crystn. and lattice resoln. of aliphatic hydrocarbon 2-65820
metals, internal pot. determ. by interf. electron microscopy (*Russian*) 2-60845
micrograph analysis computer system 2-107462
micrograph Fourier transform data, interpolation in tilted-view 3-D reconstruction 2-71302
micrograph image processing minicomputer system 2-107463
mirror electron microscopy, mag. contrast form. 2-64166
muscle structure investigation, cryo-methods and image anal. 2-83719
negative staining, of protein cryst. struct. 2-73408
negatively stained specimen, electron radiation-induced changes in images 2-89871
on-line digital computer techniques, in electron microscopy 2-64184
on-line image analysis, and processing for high resoln. electron microscopy 2-64186
online digital computer techniques 2-113052
online image capture and anal., microprocessor system appl. 2-113055
organic molecular crystal, quantitative characterisation, radiation damage imposed limits 2-66071
organic specimens, electron microscope irradi. at 4K, props. 2-115120
phase retrieval from intensity data, algorithms comparison 2-102725
phase tomography in the corrected electron microscope 2-115116
photoelectron microscopy, depth of information 2-113067
polycrystalline materials, grain misorientation determ. by electron microscopy 2-116630
polymer blends, electron microscopy 2-65818
pre-knock-on concept in electron microscopy 2-115297
prismatic dislocation loop sizes and interference error, connection with loop nature determ. methods 2-81787
publications concerning microscopic equipment, methods, applications, and related topics 2-53449
quantitative analysis, of metals and minerals 2-97882
quantum-noise-limited images, detection of objects 2-113065
radiation damage, in beam-sensitive materials 2-66070
radiation sensitive materials, lattice imaging 2-65819
real-time digital image processing 2-64185
retinal cells, Nissl staining, electron microscopy technique 2-62858
selection guide w.r.t. resolution and cost 2-76254

electron microscopy continued

solar energy conversion technologies, interface microstruct. and microchem., research needs 2-87078
specimen prep. by ultramicrotomy 2-64007
stereology, quadrats and test system, magnification corrections 2-69304
support films and the visibility of atoms, statistical analysis 2-84745
surface physics, conference, Varna, Bulgaria (Sept.-Oct. 1980) 2-89468
surface relief investigation using defocused images 2-112865
surface studies, photoelectron spectroscopy and microscopy 2-69301
surfaces, image resolution 2-94973
three-dimensional structures, combined data methods 2-76256
tilt series in 3D electron microscopy, common origin in micrographs 2-115119
two-dimensional digital filter design 2-58971
weak phase-amplitude objects, low-dose reconstruction from two defocused images, statistical analysis 2-101500
wrapping phenomenon in air-dried and negatively stained preparations 2-113078
H evolution obs., in metals using nuclear emulsions 2-57572

electron mobility

see also *carrier mobility; electron mobility (metals)*
dense gases, electron transport theory 2-103256
dense gases, multiple scatt. process influence 2-103255
gas layers, high energy electron trajectories, Monte Carlo simulation, 1 to 3 MeV (*French*) 2-55696
gases, neutral, pulsed relativistic electron beam transport 2-114965
positron lifetime spectra in rare gas, calc. program 2-90715
positron scattering and annihilation in gases 2-76059
Ar gas, electron transport, temp. depend. calc. near Ramsauer-Townsend min. 2-103254
Ar, scattering cross sections from electron transport parameters 2-71063
He films on solid Ne, two dimens. electrons, electron mobility meas. 2-61246
⁴He, superfluid, ripplon scatt. from 2D Wigner lattice, electron lattice mobility meas. 2-61231
Kr, positron diffusion, elastic cross sections 2-76057
NH₃, electron mobility meas. as function of density reduced electric field 2-60712
NH₃, supercritical vapour, excess electron mobility meas. 2-86376
SF₆, transport and elec. props. calc. 2-114964
Xe, electron drift vel. meas. 2-86378
Xe, positron diffusion, elastic cross sections 2-76057

electron mobility (metals)

No entries

electron multipliers

Ceratron, continuous dynode electron multiplier, detection efficiency for positrons 2-85480
continuous channel Mullard units, selection criteria for space appls. 2-84098
conversion electron Mossbauer spectrometer equipped with ceramic electron multiplier detector 2-102323
microchannel plate multipliers optimisation for tracking minimum ionising particles 2-70044
microchannel plates, soft X-ray quantum detection efficiency 2-75105
pulse current meas. of electron multipliers counting efficiency (*Japanese*) 2-89866
time-zero detector for heavy ions mass identification 2-64156
Cu/Be multipliers, rejuvenation 2-69294

electron nuclear double resonance

see *ENDOR*

electron-nucleon interactions

see also *electron-nucleon scattering; electron-proton interactions*
deep inelastic electroproduction, twist-4 contrib., QCD anal. 2-54168
deep-inelastic lepton scatt., charge retention sum rules 2-64332
deep-inelastic scatt., large-x and higher order corrections 2-54167
operator-product expansion, integral representation 2-107719
polarised deep-inelastic scatt., total gluon helicity 2-54160
SU(2)_c × SU(2)_L × U(1)_B electroweak symmetry and parity violations in electron-nucleon scatt. 2-113185
eN deep inelastic scatt., nucleon small bag model, R ratio 2-59124
eN → eX, X includes ψ, T or other heavy resonance, differential cross section 2-113282
eN → πX, enhancement due to pion condensation (*Russian*) 2-59343
e⁺N deep inelastic scatt., gluon and quark jets, theory 2-101732
ep → eX, deep inelastic scatt., structure functions 2-89965

electron-nucleon scattering

see also *electron-nucleon interactions; electron-proton scattering*
gluon corrections for nucleon scattering of longitudinally polarized electrons (*Russian*) 2-59158
lepton-nucleon scatt. and neutrino puzzle 2-54129
quasi-elastic electron scatt. by nuclei, nuclear scaling function 2-59157

electron-nucleus reactions

for inelastic electron-nucleus scattering, see "electron-nucleus scattering"
see also *electron-nucleon interactions; nuclear electron capture*
baryonic excitation and meson exchange currents in nuclei, review 2-59252
deep inelastic scattering, R = σ_L/σ_T ratio, small bag model 2-107617
electron bremsstrahlung polarisation effect on nucleus in const. external field 2-69643
EM interactions on light nuclei, review 2-54359
EM interactions with nuclei at high momentum transfer 2-54353
high energy physics and nuclear structure, conf., Versailles, France (July 1981) 2-53416
snowball model for light fragment prod. 2-59319
(e, 2e), quasielastic electron knockout in atoms, molecules and solids, wave functions 2-102630
(e,e'p), knockout reactions, orthogonality and Pery factor 2-74756
(e,e'X), drifting hot spots in inclusive reactions, pre-equilibrium evolution 2-101869
(e,e'p), EM knockout process, nuclear momentum distribts. 2-107838
(e,π), enhancement due to pion condensation (*Russian*) 2-59343
²⁴¹Am(e, f), 100-1000 MeV, electrofission cross sections, electron/photon yield ratio 2-96059
¹⁰Be(e,X), 105 MeV, electrosallation, α-emission mechanisms 2-90092
¹²C, photodisintegration and electrodisintegration, astrophysical appl. 2-64392
¹²C(e,X), model for nuclear response function 2-59231
¹²C(e,e'π[±]), 200 MeV, π⁺/π⁻ ratio ang. distribts., PCAC and optical analogs. 2-69645
⁵⁶Fe(e,X), 20 GeV, heavy fragment prod. through electropion excitation 2-69647

electron-nucleus reactions continued

- $^1\text{H}(\text{e},\pi^+)n$, virtual photons in pion electroproduction 2-74758
 ^1H , electronuclear sum rules at constant momentum transfer 2-95991
 $^2\text{H}(\text{e},X)$, backward electrodisintegration, quark model of two-baryon currents 2-84863
 $^2\text{H}(\text{e},p)$, nucleon momentum distrib. in ^2H , meson exchange currents, isobars 2-107850
 $^2\text{H}(\text{e},p)n$, six-quark model of two nucleon current appl. 2-79987
 $^3\text{He}(\text{e},\pi^+)$, electropod. at low energy 2-113462
 $^3\text{He}(\text{e},p)$, 643, 806 MeV, nuclear struct., NN interaction (*Russian*) 2-59342
 $^3\text{He}(\text{e},\pi^+)^3\text{H}$, virtual photons in pion electroproduction 2-74758
 $^{27}\text{Al}(\text{e},f)$, 10-34 MeV, giant resonances, comments 2-90170
 $^{27}\text{Al}(\text{e},f)$, 10-34 MeV, giant resonances, reply to comments 2-90171
 $^{237}\text{Np}(\text{e},f)$, 100-1000 MeV, electrofission cross sections, electron/photon yield ratio 2-96059
 $^{16}\text{O}(\text{e},X)$ reaction, cross-section determ. (*Russian*) 2-69649
 $^{16}\text{O}(\text{e},p)$, quasifree scatt., structure functions, bound state, distorting optical pot. 2-113464
 $^{238}\text{Pu}(\text{e},f)$, 100-1000 MeV, electrofission cross sections, electron/photon yield ratio 2-96059
 $^{238}\text{Th}(\text{e},f)$, 5.5-7 MeV, ang. distrib., E2 strength concentration near fission barrier 2-64446
 $^{238}\text{U}(\text{e},f)$, 5-11.7 MeV, cross-section, E2 resonance strength 2-90178
 $^{238}\text{U}(\text{e},f)$, 100-1000 MeV, electrofission cross sections, electron/photon yield ratio 2-96059
 $^{238}\text{U}(\text{e},f)$, 10-35 MeV, absolute cross sections, DWBA virtual photon spectra test 2-59428

electron-nucleus scattering

- see also *electron-nucleon scattering*
 advances in nuclear physics, book 2-58571
 baryonic excitation and meson exchange currents in nuclei, review 2-59252
 baryonic excitations in nuclei 2-59254
 EM interactions with nuclei at high momentum transfer 2-54353
 inelastic electron scatt. form for 2^+ states excitation in ^{17}O nuclei 2-54361
 neutral weak currents, and processes relations (*Ukrainian*) 2-113463
 nuclear density distrib., review 2-59230
 quasi-elastic electron scatt. by nuclei, nuclear scaling function 2-59157
 response functions, electron probes of nucleon charge and magnetisation in nuclear matter 2-113384
 surprisal analysis of inclusive reactions 2-69644
 target charge distrib., form factors 2-59338
 (e,e), scattering from: complex nuclei, review 2-54358
 (e,e) on ^{49}Ti , ^{51}V , ^{59}Co , ^{87}Sr , ^{91}Zr , ^{208}Pb , mag. electron scatt. and valence nucleon radial wave functions 2-85033
 (e,e'), inelastic scatt. at low energy, mag. transitions and mag. polarisability of nuclei 2-54360
 (e,e'), quasi-free scatt. in interaction time approx. (*Russian*) 2-90093
 (e,e'), pionic and $\Delta(1232)$ degrees of freedom in nuclei, review 2-59339
 (ee), heavy nuclei, parity violating asymmetry, partial wave anal. 2-107749
 $^{13}\text{C}(\text{e},e)$, 80-338 MeV, M1 form factor, rel. to shell model 2-107852
 $^{27}\text{Al}(\text{e},e)$, elastic scatt., shell model interpretation 2-95990
 $^{40}\text{Ar}(\text{e},e)$, elastic scatt. cross section and RMS charge radius meas. 2-74757
 $^{12}\text{C}(\text{e},e')$, quasielastic scatt., response functions, finite nucleus calc. impulse approx. 2-107851
 $^{12}\text{C}(\text{e},e)$, RMS radius, charge distribution, from factors 2-113357
 $^{12}\text{C}(\text{e},e')^{13}\text{C}$, DWIA anal. using Cohen-Kurath wave function 2-101880
 $^{40}\text{Ca}(\text{e},e')$, 31-65 MeV, form factors meas. for 10.32 MeV transition 2-85034
 $^{40}\text{Ca}(\text{e},e')$, spin-isospin mode excitation 2-95993
 $^{64}\text{Cu}(\text{e},e)$, A=63, 65, cross sections for elastic mag. scatt. 2-113465
 $^{56}\text{Fe}(\text{e},e)$, quasielastic scatt., response functions, finite nucleus calc. impulse approx. 2-107851
 $^2\text{H}(\text{e},e')$, inelastic scatt., cross section and polarisation of recoil electron 2-69648
 $^2\text{H}(\text{e},e)$, EM form factor meas. procedure 2-113276
 $^2\text{H}(\text{e},e)$, 77-147 MeV, charge form factor and charge radius 2-69522
 $^3\text{H}(\text{e},e)$, EM struct. at large Q^2 2-95912
 $^3\text{He}(\text{e},e)$, quark spin correlations from parton model 2-107842
 $^3\text{He}(\text{e},e)$, sum rules with realistic wave function 2-59335
 $^4\text{He}(\text{e},e)$, A=3, 4, EM struct. at large Q^2 2-95912
 $^6\text{Li}(\text{e},e')$, 80-300 MeV, magnetic form factor, cluster model anal., exchange currents 2-69523
 $^6\text{Li}(\text{e},e)$, bremsstrahlung cross-section, sum rule, nucleon symm. effect 2-64396
 $^{27}\text{Mg}(\text{e},e)$, elastic scatt., shell model interpretation 2-95990
 $^{23}\text{Na}(\text{e},e)$, elastic scatt., shell model interpretation 2-95990
 $^{51}\text{Ni}(\text{e},e)$, 1^+ and 2^+ states excitation, inelastic scatt. cross section calc. 2-85030
 $^{16}\text{O}(\text{e},e')$, spin-isospin mode excitation 2-95993
 $^{17}\text{O}(\text{e},e)$, magnetic elastic form factor and $1d_{5/2}$ orbit radius 2-59341
 $^{17}\text{O}(\text{e},e)$, magnetic form factor, three-body effects 2-59234
 $^{18}\text{O}(\text{e},e')$, inelastic scatt. from low-lying even-parity states 2-64397
 $^{208}\text{Pb}(\text{e},e)$, 40.5, 50.4, 60.3, 75.2 MeV, transverse electric form factors, M1 transition strength levels 2-113358
 $^{208}\text{Pb}(\text{e},e')$, inelastic scatt., low-lying natural parity levels excitation 2-85032
 $^{32}\text{S}(\text{e},e')$, spin-isospin mode excitation 2-95993
 $^{58}\text{Sm}(\text{e},e)$, A=148, 152, 150-215 MeV, giant multipole reson. electroexcitation 2-85031
 $^{87}\text{Sr}(\text{e},e)$, 1^+ state form factor quenching, $\Delta(1232)$ isobar influence 2-84950
 $^{89}\text{Y}(\text{e},e)$, E5 single particle transition densities 2-79975
 $^{90}\text{Zr}(\text{e},e')$, inelastic scatt. spectra, level densities, missing mag. quadrupole strength, statistical anal. 2-95992
 $^{90}\text{Zr}(\text{e},e)$, E5 single particle transition densities 2-79975

electron optics

- see also *beta-ray spectrometers; electron beams; electrostatic lenses; ion optics; magnetic lenses; particle optics*
 beam injection into vac. chamber in mag. field, numerical simulation 2-60005
 CIELAS, Cambridge interactive electron lens anal. system, appls. computer-aided analysis electron lenses electron optics electron microscopes CAD 2-65149
 combined electron focusing and deflection systems, fundamental rays and aberrations (*German*) 2-90794

electron optics continued

- cylindrical mirror energy analyser, improved aberration corrector 2-65148
 diffraction cameras, multiple specimen holder 2-74395
 dynamic astigmatism during high-velocity deflection of an electron beam 2-70490
 electron probe microscopes, spherical aberration correction method 2-113068
 electron spectrometer, high resolution, study of field emission sites on planar cathodes 2-101503
 electrostatic box lens with four planes of symmetry, electron-optical props. 2-85882
 electrostatic prism, internal refl., paraxial props., aberrations 2-65147
 field emission probe, operation 2-64172
 focusing-deflection system with multi-stage deflectors, relativistic aberration theory 2-75507
 focusing-deflection system with multi-stage deflectors, relativistic aberration theory (*Chinese*) 2-90792
 free electron lasers, steady oscills., onset calcs. 2-102809
 holographic obs. of mag. fields microscopic distribution 2-101428
 holography, Aharonov-Bohm effect test 2-74262
 HVEM, 1000 kV, resol. improvement using asymmetrical lens 2-64181
 image reconstruction for unknown smooth defocusing, theory 2-108822
 images, enhancement of two-dimensional projections, using spatial correlations 2-113064
 imaging simulation experiments using on-axis complex computer generated holograms 2-75540
 integrated analog multiplexer for array transducers used in ultrasound diagnosis (*German*) 2-94133
 intense ultrarelativistic electron beams in vacuum, image-field focusing 2-85453
 interferometer, mixed-type, theory 2-89873
 interferometry, amplitude division, appl. to obs. ferromagnetic domain walls 2-89874
 lens development, improved programs for calc. optical props. 2-65150
 LF oscillations in strip and hollow electron beams 2-60008
 lithographic system performance, computerised optimisation using damped least squares method 2-75506
 magnetic spectrometer, aberrations correction by electric multipole lenses 2-113063
 microscope, imaging process, electron-optical parameters of high resolution instruments 2-53897
 microscopy, high resolution, misalignment effects 2-71305
 objective lenses, saturated asymmetrical, calc. of field distrib. and optical props. 2-65152
 orbitron device, electron density distrib. and ionisation efficiency, Boltzmann eqn. calc. 2-84644
 quantum-noise-limited images, detection of objects 2-113065
 SEM, surface, bulk samples, resolution 2-97883
 space charge limited electron beams, anal. 2-65151
 straight axis electron optical system, phase density distrib. 2-108774
 streak image tube, subpicosecond, Photochron IV 2-89813
 superconducting shielding lens, asymmetric, for TEM and STEM 2-64180

electron pair annihilation see *electron-positron interactions***electron pair production**

- atomic cross-section parametrisation 2-70385
 atomic screening effects 2-108315
 black holes, constraints on gamma-ray production by spherical accretion with e^+e^- pair prod. 2-68808
 cosmic ray interactions, 100-2000 GeV/nucleon; e^+e^- direct pair prod. (*Russian*) 2-59204
 equilibrium with annihilation in astrophysical relativistic plasma 2-94587
 heavy ion reactions, e^+e^- pair production, Bethe-Maximov-Davis theory (*Russian*) 2-64440
 pair production by accelerated charges ρ -meson prod., pulsars 2-64264
 particle production in varying electric fields, spectral density (*Russian*) 2-113203
 photon in Coulomb field, pair prod. cross-section (*Russian*) 2-89931
 production rate at strong coupling in weak external fields 2-64265
 quantised scalar field, initial behaviour rel. to pair creation in isotropic closed and open universes 2-101109
 Schwinger analysis, space-time description 2-107606
 vacuum rearrangement in strong electric and grav. fields, e^+e^- creation at stars (*Russian*) 2-107609
 $Z=26$, 29, 50, 82, 92, low energy absolute pair prod. cross-sections meas. 2-95987
 $Z=26$, 29, 50, 82 and 92, photon impact, 1.119 MeV, pair prod. cross-sections 2-95986
 e^+e^- in black hole spherically symmetric accretion 2-100720
 $\gamma\gamma \rightarrow e^+e^- (\mu^+\mu^-) (h^+h^-)$, two body final states invariant mass >2 GeV 2-107717
 $\gamma N \rightarrow e^+e^- X$, deep-inelastic photoproduction, broken colour symmetry effects 2-107668
 pN , 13 GeV, in Be, electron pair prod., mass distrib. (*Japanese*) 2-107707
 $\pi^0 \rightarrow e^+e^-$, mass spectrum, branching ratio 2-69449
 $\pi^0 n \rightarrow e^+e^- p$, nucleon and pion form factors, dispersion model anal. (*Russian*) 2-64341
 $\pi^+ p \rightarrow e^+e^- X$, 16 GeV, direct pair prod. 2-113302
 $\pi^- p \rightarrow e^+e^- n$, nucleon and pion form factors, dispersion model anal. (*Russian*) 2-64341
 ^{241}Am α -decay, pair prod. mechanism 2-90061
 ^{12}C , 15.1 MeV level e^+e^- pair decay 2-59300
 $^7\text{Li}(\pi^+\pi^-e^+e^-)$, 380 MeV, inverse pion electroprod., diff. cross section (*Russian*) 2-107914

electron pairs

- see also *electron pair production; positronium*
 extracule densities in atoms and mols. 2-80446

electron paramagnetic resonance see *paramagnetic resonance***electron-phonon interactions**

- see also *phonon drag; strong-coupling superconductors; tunnelling spectra; tunnelling spectroscopy; Umklapp process*
 adsorbed molecules, overtones and multiphonon processes in EELS, vibration spectra 2-99238
 alkali metals, electron transport props., electron-phonon and electron-electron scatt. contribs. 2-115727
 antishielding of ions in solids, Sternheimer factor and lattice dynamic effects 2-77001
 bipolaron in one- and two-dimens. system 2-104270

electron-phonon interactions continued

- cis-polyacetylene, resonant Raman scatt., theoretical anal. 2-77524
 crystal with impurity Γ_8 term, Jahn-Teller states 2-71940
 degenerate band charge carrier gas, nonlinear optical props. in mag. field 2-76947
 disordered cryst. alloys, elec. resist., temp. depend. calc. 2-66521
 dye molecules in amorphous solids, phonon-induced fluoresc. changes 2-54893
 elec. cond., low freq. and temp., umklapp scatt. 2-82308
 electron gas, 2-D, cyclotron resonance linewidth, impurity and phonon scatt. density matrix formulation 2-56942
 energy transfer between local centres (*Russian*) 2-61386
 ferroelectric soft modes, microscopic polarisability model 2-56149
 ferromagnet, itinerant electron, Curie-Weiss law spin susceptibility, electron-phonon interaction mechanism 2-61687
 ferromagnetic semiconductor, elec. cond. in quantising mag. field (*Russian*) 2-104385
 Frohlich polaron, mobile-localised state transition 2-98562
 Heusler alloys, elec. resist. rel. to scatt. mech. 2-98616
 Hooke's α for 1/f noise, physical background 2-104445
 hopping, phonon assisted, generalised master eqn. approach 2-92602
 III-V semiconductors, microwave irradiat., hot carrier mobility, phonon accumulation effects 2-66566
 III-VI layered semiconductors, band struct. and electron-phonon interaction (*Japanese*) 2-82231
 impure metals, phonon spectrum calcs. (*Russian*) 2-92130
 insulating crystals, defects, conf., Riga, USSR (May 1981) 2-68967
 intermediate valence compounds, electron-phonon coupling 2-56133
 intermediate valence compounds Kondo problem in nonlocal state (*Russian*) 2-61696
 intermediate valence systems, elec. resist., phonon contrib. 2-56541
 itinerant-electron ferromagnet, electron-phonon interaction effects 2-92855
 IV-VI narrow band gap ferroelec. semicond., phase transitions, microscopic theory 2-110788
 Jahn-Teller interaction, renormalisation by force constants and impurity mass changes 2-92542
 Jahn-Teller nonferroelastic crystals, elastic and dielec. props. 2-115331
 local boson mode interactions with local electronic system with finite Fermi level 2-98556
 localised electron states, energy transfer, vibr. relax. transition 2-92501
 many-particle physics in solid state theory, book 2-68981
 many-valley semiconductor, conductivity, phonon inequilibrium effect in an EM heating field 2-82342
 McMillan-Hopfield constant, transferability, rigid-muffin-tin approx. 2-61096
 metal, electron relax. time under acoustic phonon scatt. in quantising mag. field (*Russian*) 2-66533
 metal, hot electron inelastic scatt. by opt. phonons, Fermi surface shape, theoretical anal. (*Russian*) 2-61477
 metal hydrides, Advanced Study Institute, Rhodes, Greece (June 1980) 2-74142
 metal-metal point contacts, resist. and kinetic inductance, electron-phonon effects (*Russian*) 2-98727
 metallic film, local phonon density of states and its influence on supercond. props. 2-56321
 metallic hydrides, electron-phonon coupling parameter rel. to occurrence of supercond. 2-66462
 metallic materials, amorphous, supercond. props. (*Russian*) 2-66695
 metallic system with nonspherical Fermi surface, elec. cond., single band model 2-82318
 metallic thin films, elec. cond. with low-angle electron-phonon scatt., theory (*Russian*) 2-115918
 metals, electron-phonon elec. resist. at low temp., theory 2-77031
 metals, impurity configurational fluctuations, scaling approach 2-56507
 metals, optical relax. time, freq. depend. calc. 2-66534
 metals, phonon heat capacity enhancement at low temp. 2-115433
 metals, phonon limited elec. resist. calc. 2-92600
 metals, phonon spectra in Frohlich approach, appl. to transition metals 2-92132
 metals, phonons, use of stationarity props. within finite temp. density functional approach 2-56128
 metals, point contact spectroscopy of g-values 2-66425
 metals, screening electron-phonon interaction by vortex fields, magnetoacoustic resonance (*Russian*) 2-82409
 4-methoxybenzylidene-4'-perfluorobutylaniline, smectic liq. cryst., Urbach rule 2-65854
 MIS inversion layers, resonance electron-phonon interaction, light absorption 2-82468
 mixed-valence system, phonon-induced instabilities, phase transitions, f-d model 2-87198
 molecular chain, unidimensional, electron-phonon interaction, electrosoliton effective mass (*Ukrainian*) 2-104265
 molecular crystals, radiative prop. calcs., polaritons and exciton decay 2-104262
 multiphonon transition rates, static and adiabatic coupling schemes 2-72539
 narrow gap semiconductor, internal photoeffects, quantum efficiency, model 2-104418
 non-Markovian theory of nonlinear optical phenomena 2-55249
 non-piezoelectric systems, electron-acoustic phonon system, non-perturbative treatment 2-110268
 non-radiative multiphonon transitions, non-Condon approx. and static approach 2-57169
 noncentrosymmetric media, spin polarised electron scatt. asymm. and photogalvanic effect mechanisms 2-104335
 nonlinear impurity electron-phonon oscils. excitation, Raman scatt. 2-77536
 nonradiative multiphonon capture of free carriers, adiabatic wave functions, perturbation theory 2-57170
 normal metal point contacts, non-Ohm's law behaviour 2-87375
 one dimensional many electron system, SDW and CDW regions, mean field theory 2-98564
 one-body response formulas and generalised Boltzmann equations 2-53659
 one-dimensional acoustic polaron via deform. pot. under influence of Coulombic impurity 2-98555
 one-dimensional electron-phonon system, CDW dielec. response in precryst. region 2-110251
 one-dimensional electrons, cond. in anisotropic 3D medium 2-92574

electron-phonon interactions continued

- one-dimensional interacting electron system, phase Hamiltonian and solitons in dimerized and trimerized systems 2-61095
 one-dimensional semiconductors, electron mobility, hot electron effects, and polarons 2-92611
 one-dimensional solids, structurally unstable, Peierls and spin Peierls transitions 2-98632
 one-dimensional systems, perturbation theoretical approach 2-76624
 optical absorption band shape due to localised $\Gamma_3^+ \rightarrow \Gamma_4^-$ transition 2-61852
 Peierls instability, quantum fluctuation effects, Monte Carlo study 2-104253
 Peierls system, 1-dimens., functional integral method, diagrammatical approach 2-115676
 Peierls system, nearly half-filled, effects of electron-electron interactions on soliton lattices 2-58719
 Peierls system, phonon dynamics calc. 2-104266
 periodic Anderson model, elec. cond., temp. depend. calc. 2-110319
 perylene molecules in cadmium arachidate Langmuir film, amorphous, phonon-induced fluoresc. changes 2-54893
 phosphate glass: Nd^{3+} , radiative and nonradiative props. 2-61951
 photoelectron spectra, lineshapes, phonon distortion, Gaussian limit 2-62049
 photogalvanic effect, free carrier absorpt., one band model 2-56640
 polar crystals, polaron IR optical absorpt. 2-104862
 polar semicond., electron-phonon coupling with donor-acceptor pair recomb. 2-103925
 polar semiconductor, donor states, electron lattice coupling effect 2-71915
 polaron statistical parameters in mag. field 2-104267
 polarons, statistical props. in mag. field, thermodynamics 2-104268
 polyacetylene, bond lengths, bond strengths and electron-lattice coupling calc. 2-76625
 polyacetylene ring, quantum ground state 2-86823
 polyiodide chains, resonant Raman scatt., theoretical anal. 2-77524
 proximity-electron-tunnelling spectroscopy, locality of information, impurity disorder effect on phonospectra 2-66720
 quasi-one-dimensional systems, influence of electron-electron and electron-phonon interactions on electron charge orderings 2-56131
 quasi-one-dimensional, first order calc. of phonon propagators 2-110267
 quasi-one-dimensional crystals, displacive phase transition temp., dynamic interchain coupling effect 2-61103
 rare earth cpds, mixed valence in a periodic Anderson lattice 2-82296
 renormalised thermal distrib. function, thermodynamics 2-81914
 resolvent method of evaluation of the dynamic conductivity for a strongly interacting electron-phonon system 2-87214
 Rochelle salt, dielectric const. var. in strong mag. field 2-110743
 semiconductor, amplification of optical phonons by radiation field under strong mag. field 2-56130
 semiconductor, bounded, galvanomag. and thermomag. effects under mutual electron-phonon drag conditions 2-77094
 semiconductor, degenerate, hot electron inelastic scatt. by opt. phonons, Fermi surface shape, theoretical anal. (*Russian*) 2-61477
 semiconductor, high freq. conductivity, free carrier absorption and electron-phonon interactions 2-115804
 semiconductor, hot electrons, lowest Landau level, distrib. functions, I-V characts. and neg. differential conductance 2-61476
 semiconductor, intra-collisional field effect, analytic results 2-110360
 semiconductor, intraband and transverse relaxation times 2-115672
 semiconductor, light absorpt. by free carriers in presence of light wave 2-77479
 semiconductor, magnetoresistance, size effect under conditions of mutual drag of heated electrons and phonons 2-61493
 semiconductor, wide-band, optic phonon flux amplification by strong elec. field 2-61097
 semiconductor runaway electrons, heating and cooling, effect of inelastic scatt. on mobility (*Russian*) 2-82346
 semiconductor superlattices, phonon-limited near equilib. transport 2-56680
 semiconductor with superlattice, elec. cond., electron-phonon scatt. (*Russian*) 2-72070
 semiconductors, Auger recombination, minority carrier lifetime, impurity and phonon scatt. effects 2-87299
 semiconductors, displacive transition, phonon instability in strong EM wave 2-103935
 semiconductors, indirect-gap, electron-phonon interaction, phonon cond. 2-66152
 semiconductors, multiphonon release of trapped electrons, theory 2-92650
 semiconductors, nondegenerate, quantum limit cyclotron resonance linewidth 2-104705
 semiconductors, optical phonon amplification in multiphoton absorpt. 2-87722
 semiconductors, polar, hot carrier energy loss, electron-hole plasma screening 2-110357
 semiconductors, quantum processes, book 2-68982
 semimetals, variational method 2-110337
 silicate glass: Nd^{3+} , radiative and nonradiative props. 2-61951
 simple metals, electron-phonon interaction theory 2-86817
 superconducting film, nonequilibrium electron and phonon kinetics in intense UHF fields 2-98807
 superconducting films, metastable, vapour deposited, review 2-98792
 superconducting order parameter anomalies and scatt. processes (*Russian*) 2-66703
 superconducting tunnel junction, nonequilibrium, with inhomogeneous order parameter, impedance (*Russian*) 2-82533
 superconductive tunnelling characteristics inversion in superconductors with spin fluctuations 2-61668
 superconductor-normal metal struct., proximity effect tunneling, review 2-115954
 superconductor-semimetal contact, influence of electron-phonon coupling 2-56799
 superconductors, Coulomb interaction and weak electron-phonon coupling 2-115945
 surface polaron, ground-state energy, phase diagram 2-56657
 surface-adspecies system, laser/phonon stimulated processes, synergistic effects, master eqn. approach 2-66371
 system kinetics in strong alternating fields, semiconductor electron gas, electron Cooper pairs 2-56773
 TCNQ salts, $\text{C}_3(\text{TCNQ})_2$, TTT(TCNQ)₂ and TEA(TCNQ)₂, specular refl. spectra, 4.2 to 300K 2-99128
 TCNQ salts, IR spectra 2-99103

electron-phonon interactions continued

- ternary semicond., carrier scatt. mechanisms, Boltzmann eqn. calc. 2-115744
thermodynamic formulation of supercond. and normal state props. 2-103924
(TMTSF)₂PF₆, high elec. field transport at low temps. 2-56616
TMTSF salt, (TMTSF)₂PF₆, sound vel. meas. 2-61075
transition metal alloys, amorphous, thermoelec. powers and resistivities 2-98611
transition metals, ground state props. calc. method 2-115643
transition metals, nuclear acoustic reson. study of electron-lattice interaction 2-56950
transition metals, phonon spectra in Frohlich approach, elastic consts. derived 2-92132
transition metals and intermetallic cpds., electron-phonon coupling parameter, theoretical determs. 2-104269
two dimensional system, electronic specific heat anomalies, electron-phonon interaction 2-104015
two dimensional system, magnetotransport, electron-impurity, electron-phonon and electron-electron interactions, quantum the ory 2-56542
two-level system, nonradiative multiphonon transitions, static versus adiabatic coupling scheme 2-98228
Wigner cryst., electron-phonon interactions, phonon damping and freq. shift, renormalisation (*Russian*) 2-81916
Ag chalcogenides, mixed conductors, electronic relax. time, phonon modes 2-115836
Ag point contacts, low freq. elec. fluctuations 2-110449
AgGa, Coulomb pseudopotential from normal-state resistivity and T_c 2-98790
Al point contact spectra, electron-phonon interaction anisotropy (*Russian*) 2-56673
Al superconducting film, critical mag. field 2-56800
Al-Ag(Ge), dilute, Matthiessen's rule deviation at high temp. 2-115729
 α -Al₂O₃:Ni²⁺, US self-focusing 2-66134
AlSb, electron-phonon interaction, phonon cond. 2-66152
Ar, solid and liquid, hot electron thermalisation following subnanosec. pulse irradi. 2-72015
(As₂Se₃)_{100-x}Ge_x, glass, elec. cond. and thermoelectric power, adiabatic pot. 2-92610
Au, cyclotron masses anisotropy 2-98964
Au point contacts, low freq. elec. fluctuations 2-110449
Au thin film, nonlinear volt-ampere characts. (*Russian*) 2-104506
AuAl₂, 2-98790
BaPb_{1-x}Bi_xO₃, superconductivity, electronic and cryst. struct. effects 2-115938
Bi, charge carrier drift in external fields, sound amplification, I-V non-linearity, review (*Russian*) 2-115826
Bi, elec. resist., charge carrier scatt. under high hydrostatic press. 2-56588
CaF₂:Sm²⁺, acoustic phonon-impurity interaction, luminesc. study 2-93269
Cd, electrical resist. anisotropy meas. 2-98617
Cd, electron-phonon coupling, inelastic neutron scatt. 2-56129
Cd, liquid, nearly-free-electron-phonon interaction and elec. resist. temp. depend. 2-98610
Cd_{1-x}Mn_xTe, Zeeman effect of mag. excitations, Raman scatt. study 2-67048
CdS_{1-x}Se_xTe, isoelectronic impurity-exciton interactions, visible spectra study 2-61395
CdTe_{1-x}Te_xAu, Hall coeff., thermo-EMF, cond. type, temp. depend., doping effects 2-56615
CeSb_{1-x}Te_x, elec. and mag. props. 2-66523
CrSe₂-IT, lattice instability and electron-lattice interaction, Jahn-Teller mechanism 2-98210
Cs₂NaBi₃Y_{1-x}Cl₆, optical centre conc. effects on electron lattice coupling, optical props. study 2-57151
Cu, electron-phonon effects, electron scatt. rate, mass enhancement 2-115376
Cu, electron-phonon effects, elec. and thermal resistivities, Hall effect 2-115728
Cu, point contact spectroscopy, temp. depend., nonequilib. phonon temp. (*Russian*) 2-61565
Cu point contacts, low freq. elec. fluctuations 2-110449
Cu, US attenuation, impurity and dislocation effects 2-56096
Cu-Au(Al)(Ni), dilute, Matthiessen's rule deviation at high temp. 2-115729
Fe-Rh, mag. transitions press. depend. and bulk modulus, s-d exchange model (*Russian*) 2-92902
Fe_{1-x}Co_xCl₂, Raman study of excitations 2-72483
Ga_{1-x}Al_xAs, Hall electron mobility, scatt. parameters 2-115790
GaAs, bulk, main electron trap, effect of elec. field and current injection 2-72009
GaAs, electron-bombarded, IR absorpt. spectra, 'shallow' levels, electron-phonon interaction effect 2-72507
GaAs, epitaxial, electron mobility, temp. depend., impurity and phonon scatt. (*Russian*) 2-104513
n-GaAs, epitaxial, far IR photocond. saturation 2-87319
GaAs, high field transport and impact ionization, band struct. depend. 2-77070
GaAs, high purity, electron-phonon coupling associated with BA and DA transitions (*Chinese*) 2-93239
GaAs, hot photogenerated carriers, slow picosecond kinetics 2-61517
GaAs, impact ionization and high field transport, band struct. depend. 2-77069
GaAs, low-field mobility temp. depend. with optic phonon scatt., Monte Carlo calc. 2-104383
GaAs-Al_{0.1}Ga_{0.9}As multilayer struct., electron-LO phonon modes, Raman scatt., theory 2-110825
GaAs-AlGaAs heterojunctions and multiple quantum well heterostruc., doped, reson. inelastic light scatt. 2-61919
Ga_{1-x}In_xAs, P_{1-x}As, effects of two longitudinal optical phonon modes on electron distrib. 2-82349
Ga_{1-x}Mn_xSb solid solns., carrier scatt. mechanisms 2-56571
GaP, absorption coefficient, electron-phonon and hole-phonon interactions 2-67016
GaP, Cu related 2.177 eV band exciton, photoluminesc. study 2-110917
GaP, piezo-optical study of phonons 2-67023
Ge amorphous film, elec. cond., hopping model, electron-phonon coupling 2-77054
Ge, deep impurity photoionisation, electron-phonon interactions, photoconductivity study 2-61520

electron-phonon interactions continued

- Ge, electron-hole liquid phonon spectroscopy 2-115667
Ge, electron-phonon scatt. matrix and absorption coeff. 2-103923
p-Ge, energy relax. mechanisms under nonlinear absorpt. of light 2-114357
n-Ge, free-carrier electroabsorpt. in intervalley scatt. 2-116153
Ge, hot plasma generation by intense 2.7 μ m laser pulse interaction 2-66582
Ge, laser pulse interaction, 2.7 μ m 2-77627
n-Ge, magnetophonon reson. obs. 2-98672
n-Ge, many-valley semicond., hot electrons in quantising mag. field 2-56622
n-Ge, S-type current-voltage charact. in crossed heating elec. and quantising mag. fields 2-115795
Ge-Se(S)(-As) amorphous films, obliquely deposited, Urbach tail, photoinduced changes 2-93309
Ge_{1-x}Se_x glasses, photocond. and recomb. processes 2-77112
Hg₃₋₄AsF₆, resistivity at high temp. and sp. ht. at low temp. 2-92585
Hg₃₋₄AsF₆, resistivity, temp. depend. 2-115735
InAs, low-field mobility temp. depend. with optic phonon scatt., Monte Carlo calc. 2-104383
InAs MOS interfaces, reson. inelastic light scatt. 2-61919
In_{1-x}Ga_xAs_{1-y}P_{1-y}, low field mobility and thermoelectric power, scatt. mechanisms 2-82362
InP, conduction band deform. pot. const. estimation from temp. var. of drift mobility, comment 2-77058
InP, conduction band deform. pot. const., estimation from temp. var. of drift mobility, reply to comment 2-77059
InSb, electron mobility, Monte Carlo calc. 2-92628
InSb, hypercronic wave propag. in appl. mag. fields, suppression of non-linear effects 2-115829
p-InSb inversion layer, electron-phonon interaction, cyclotron resonance study 2-56939
K, electron-phonon interaction, microcontact function calc., pseudopot. method (*Russian*) 2-98229
K, non-simple metal behaviour, elec. resist., temp. depend. 2-87219
K, point contact spectra, pseudopot. calc. 2-76626
K₂Pt(CN)₄Br_{0.3}·3H₂O, electron-phonon coupling in one dimension 2-76624
Kr, solid and liquid, hot electron thermalisation following subnanosec. pulse irradi. 2-72015
LaB₆, supercond., electronic struct., phonon modes, Eliashberg function, muffin tin approx. 2-66698
La₂Er³⁺, 0.2 THz phonon stimulated emission, luminescence study 2-81906
LaS₂, heat capacity in superconducting and normal states 2-82521
Li, electrical resistivity at high temps. 2-98619
LiH, crystal with self-trapping excitons, exciton luminesc. and multiphonon Raman spectrum 2-82922
LiLaSm-phosphate glass:Sm³⁺, luminesc. selective laser excitation study 2-67109
LiYF₄:Er³⁺, spin-lattice relax. anisotropy, ESR study 2-72343
Mg, electrical resist. anisotropy meas. 2-98617
Mg, electron-phonon interaction, proximity electron tunnelling spectra determ. 2-103922
Mg₂Si(Ge), electron-phonon interaction, phonon cond. 2-66152
Mo, phonon limited elec. resist. calc. 2-92600
Na, electron-phonon interaction, microcontact function calc., pseudopot. method (*Russian*) 2-98229
Na, point contact spectra, pseudopot. calc. 2-76626
Na, vol. depend. of elec. resist. calc. 2-66525
NaI crystal with self-trapping excitons, exciton luminesc. and multiphonon Raman spectrum 2-82922
NaI, resonance Raman scatt. induced by F-centres, electron-phonon coupling 2-87788
Nb, electronic sp. ht., electron-phonon interactions effect; expt. study 2-71663
Nb, ideal transport, rigid muffin-tin approx. calcs. 2-87221
Nb, lattice sp. ht. 10 to 300K (*Russian*) 2-104011
Nb, superconductivity, paramagnon suppression, tunnelling estimates 2-61667
Nb₃Al(Ge)(Sn), supercond. props. study by electron tunnelling 2-110545
NbH₂, electronic struct., electron-phonon coupling 2-66444
NbH₂, Jahn-Teller resonance states, electron-phonon interaction, HF calc. 2-82302
Nb₃Mo₃, supercond. alloys, nuclear acoustic reson. study of electron-lattice interaction 2-56950
Nb₃SnH₂, heat capacity, supercond. transition temp. electron phonon interaction, H content effects, expt. study 2-56206
Ni-Ti, electron-phonon interaction contrib. to phonon dispersion curve, pre-martensitic phenomena 2-81915
Ni-Zn ferrite, extraordinary Hall effect and carrier scatt. 2-82383
Pb_{1-x}Ge_xTe, phonon and elec. resist. anomalies at displacive phase transition 2-98653
PbMo₆S₆, supercond. and electronic props. (*Russian*) 2-98638
PbS, high field resistivity meas., phonon scatt. 2-104387
Pb_{1-x}Sn_xTe, phonon and elec. resist. anomalies at displacive phase transition 2-98653
Pb_{1-x}Sn_xTe, struct. instabilities, composition and carrier depend. 2-98652
Pd, ideal transport, rigid muffin-tin approx. calcs. 2-87221
Pd, phonon limited elec. resist. calc. 2-92600
Pd₂, ion implanted, phonon resistivity 2-110328
PtSi₃, narrow-gap semiconductor, elec. props. in DC and microwave fields 2-87313
Re, single cryst., electron-phonon interaction, point-contact spectroscopy 2-56132
SbSi₁, ferroelec. phase transition, Raman scatt. in strong mag. field 2-57027
SeTe₂, density of states and supercond., low temp. sp. hts. 2-61640
Si, 1/f noise, temp. depend. 2-110409
Si, absorption coefficient, electron-phonon and hole-phonon interactions 2-67016
Si, deep impurity photoionisation, electron-phonon interactions, photoconductivity study 2-61520
Si, electron-hole plasma instability 2-87161
Si, heavily doped, recombination mechanisms 2-98666
Si, intervalley Γ - Δ scattering, electron-phonon and hole-phonon matrix elements 2-71598
Si inversion layer, intervalley and intersubband scatt., phonon electron interactions 2-87401

electron-phonon interactions continued

- Si surface (111), electron-phonon interaction and metal-insulator transition 2-87358
 n-Si, uniaxially stressed, free carrier absorpt. 2-87736
 a-Si:H, photoluminesc. emission broadening 2-110920
 Si-SiO₂, MOS inversion layer, stress induced supercond., electron-phonon coupling 2-56702
 Si-SiO₂, MOSFET inversion layer, energy loss of warm electrons, Shubnikov-de Haas study 2-56703
 SiC (6H), vacancy deep levels traps, EPR, optical absorpt. and Hall effect study 2-56483
 SiC, electron-phonon interaction, phonon cond. 2-66152
 SiCl₃Sn, electron-phonon interaction of impurity centres, photolum. and Jahn-Teller effect (*Russian*) 2-57179
 SiO₂, electron mobility, hot electrons electronic breakdown, Monte Carlo study 2-61474
 SiO₂, photoinjection current, electron-phonon scatt. effect 2-56646
 (SnTe)_{1-x}(PbSe)_x system, ¹¹⁹Sn Mossbauer study (*Russian*) 2-104781
 SrTiO₃, transient photocurrents and DC photocond. study 2-110390
 TaH₃, Jahn-Teller resonance states, electron-phonon interaction, HF calc. 2-82302
 Te, photogalvanic effect due to free carrier absorption 2-56640
 TiS₂, semicond., Hall coeff., elec. cond., electron-phonon scatt. 2-77041
 TiS₂-IT, lattice instability and electron-lattice interaction, Jahn-Teller mechanism 2-98210
 V, band struct., XPS, NMR and sp. ht. studies 2-104243
 V, superconductivity, paramagnon suppression, tunnelling estimates 2-61667
 V-Ta, superconducting T_c, specific heat calcs. 2-115935
 V₂Ge(Al), electronic struct., X-ray study (*Russian*) 2-110235
 VH₃, Jahn-Teller resonance states, electron-phonon interaction, HF calc. 2-82302
 V₂Pt, band struct., XPS, NMR and sp. ht. studies 2-104243
 VSe₂-IT, lattice instability and electron-lattice interaction, Jahn-Teller mechanism 2-98210
 V₂Si, electron phonon spectral function, supercond. thermodynamic props. 2-104540
 Xe, solid and liquid, hot electron thermalisation following subnanosec. pulse irradi. 2-72015
 YAG:Nd, absorpt. and stimulated emission cross sections, nonreciprocity due to vibronic interactions 2-82879
 YB₆, supercond., electronic struct., phonon modes, Eliashberg function, muffin tin approx. 2-66698
 Zn, electrical resist. anisotropy meas. 2-98617
 ZnS, radiative recombination of electron-hole drops and nonequilib. electron-hole plasma obs. 2-66459
 ZnS:Cu, Al, phonon-assisted tunnelling in the electroluminescence exciting process 2-110950
 ZnSe, carrier mobility, temp. depend., polaron effects, carrier scatt. mechanisms 2-66558
 ZrCu_{1-x}, amorphous, supercond., thermal props. 2-98803
 ZrH₂, electronic struct., electron-phonon coupling 2-66444
 Zr₂Rh₃ system, supercond. props. variation on amorphisation (*Russian*) 2-56781

electron-positron inclusive interactions

- 0.511 MeV annihilation line in astrophysical gamma-ray sources, possible effects of positronium negative ion 2-106500
 annihilation, 29 GeV, D*⁺ prod. 2-101741
 annihilation, π , K, ρ and \bar{p} prod., quark combinatorics calc. (*Russian*) 2-95858
 annihilation, axion production, possible expt. test (*Chinese*) 2-54192
 annihilation, hadron multiplicities, quark combinatorial anal. (*Russian*) 2-64300
 annihilation, multijet final states, normicity measure 2-59167
 annihilation, sum rules, in electro-weak gauge theories 2-54195
 annihilation equilibrium with production in astrophysical relativistic plasma 2-94587
 annihilation in relativistic astrophysical plasma 2-94586
 baryon prod. in quark jets, recombination mechanism 2-101745
 charged Higgs boson search methods using jet identification 2-101739
 cluster model for multiplicity distrib., KNO scaling 2-89982
 gluino search in e^+e^- annihilation, quarkonium decays 2-79897
 hadron plateau study (*Russian*) 2-79845
 hadronic multiplicities universality evidence and meaning 2-101660
 hadronisation by colour bremsstrahlung 2-54097
 Higgs boson creation, cross section calc. 2-107676
 hydrodynamic theory for high energies (*Russian*) 2-79912
 jet production, expt. results 2-107648
 jet production, quark-based model (*Chinese*) 2-54193
 jets and QCD tests in e^+e^- expts. 2-59112
 multiple baryon-antibaryon creation (*Russian*) 2-79902
 multiple hadron prod., quark combinatorial anal., comparison with expt. data (*Russian*) 2-74662
 neutron star magnetospheres, particle annihilation rel. to gamma-ray bursts 2-112609
 perturbative QCD, conf., Tallahassee, FL, USA (March 81) 2-53409
 QCD, experimental evidence, review, book contrib. 2-54082
 QCD and dual topological unitarisation, gluons in hadronic S-matrix 2-101666
 QCD hard jets, average multiplicity, multiplicity fluctuations (*Russian*) 2-95772
 QCD jets, leading log approx. 2-54088
 Salam-Weinberg theory expt. verification 2-69396
 upilon physics at CESR 2-59166
 virtual photon structure to non-leading order in QCD 2-89966
 $e^+e^- \rightarrow q\bar{q}g$, ang. asymmetries and final state polarisation effects 2-69480
 $e^+e^- \rightarrow 14, 22, 34$ GeV CM energy, charged pion prod. cross section meas. 2-84904
 $e^+e^- \rightarrow 22, 34$ GeV, hadronic annihilations, energy weighted ang. correl. anal. 2-101751
 e^+e^- , heavy particles detection and study through jet identification 2-54185
 e^+e^- , T prod. and decay study at CESR 2-79893
 $e^+e^- \rightarrow 2$ jets, AA pair prod., possible 5 GeV pseudoscalar meson weak decay 2-113283
 $e^+e^- \rightarrow 4$ jets, 33 GeV, acoplanarity and tripodity distrib., QCD effects 2-107674
 $e^+e^- \rightarrow ABX$, A,B=hadrons, back-to-back jets in QCD, comparison with expt. 2-54186

electron-positron inclusive interactions continued

- $e^+e^- \rightarrow A+B+X$ where A and B are back to back jets, Fourier transform from b to k_T 2-64333
 $e^+e^- \rightarrow a+b+X$, cross section, QCD soft gluon emission resummation 2-79899
 e^+e^- annihilation, 1-10 GeV/c, inclusive baryon prod. at PEP 2-79896
 e^+e^- annihilation, charged and neutral energy flow anal., QCD coupling constant determ. 2-95853
 e^+e^- annihilation, dominant EM correction to energy-energy correl. 2-69471
 e^+e^- annihilation, duality and energy averaging in pot. models 2-69478
 e^+e^- annihilation, event shapes in perturbative QCD 2-79816
 e^+e^- annihilation, exclusive heavy meson prod. in QCD perturbation theory 2-64334
 e^+e^- annihilation, expt. evidence of quarks and gluons, book contrib. 2-113233
 e^+e^- annihilation, general algorithm for jet event reconstruction, report 2-59168
 e^+e^- annihilation, gluino pair prod. 2-113284
 e^+e^- annihilation, hadronic multiplicity distrib. derivation from pp data 2-113285
 e^+e^- annihilation, hadronic events, inclusive γ and π^0 spectral meas. 2-113288
 e^+e^- annihilation, heavy quarks electroweak prod. 2-69477
 e^+e^- annihilation, high-transverse-momentum leptons from B mesons 2-54189
 e^+e^- annihilation, higher twist contrib. 2-64292
 e^+e^- annihilation, inclusive two-particle prod., nonleading Sudakov effects in QCD 2-54180
 e^+e^- annihilation, inclusive p, \bar{p} , Λ and $\bar{\Lambda}$ prod. at PETRA 2-79895
 e^+e^- annihilation, jet distrib., QCD effective coupling constant 2-54188
 e^+e^- annihilation, jet-initiating parton identification 2-79844
 e^+e^- annihilation, multijet events perturbative calc. 2-54183
 e^+e^- annihilation, multiple prod., hadron distrib. calc. and comparison with pp collisions 2-95874
 e^+e^- annihilation, neutral conjugate heavy mesons, dilepton charge asymmetry, CP violation 2-95856
 e^+e^- annihilation, partons and hadrons prod., quark and gluon jet models 2-54184
 e^+e^- annihilation, polarised beams, radiative corrections in standard electroweak model 2-113279
 e^+e^- annihilation, QCD expt. tests from gluon bremsstrahlung and T (9.46) decay 2-54093
 e^+e^- annihilation, QFT in momentum space of const. curvature 2-101567
 e^+e^- annihilation, role in studying weak neutral currents 2-89957
 e^+e^- annihilation, search for charged scalar particles pair 2-101747
 e^+e^- annihilation, single particle inclusive leptoproduction in QCD 2-101658
 e^+e^- annihilation, testing QCD with moment sum rules 2-69421
 e^+e^- annihilation, three-jet cross section, higher order corrections 2-54182
 e^+e^- annihilation, thrust distrib. and ψ bound states decay 2-101748
 e^+e^- annihilation in TRISTAN energy region, 1⁺ toponium prod., initial-state radiative corrections 2-107672
 e^+e^- annihilation producing hadrons, hydrodynamic model 2-101752
 $e^+e^- \rightarrow$ baryons, model survey 2-64335
 $e^+e^- \rightarrow$ baryons, quark fragmentation, Monte Carlo model 2-54196
 e^+e^- collisions, polarised and unpolarised, 30-150 GeV, polarised baryon prod. 2-69479
 $e^+e^- \rightarrow D^*X$, 10.4 GeV, inclusive charged prod. 2-101744
 $e^+e^- \rightarrow ggg$, differential and total cross section 2-54190
 $e^+e^- \rightarrow \gamma\gamma$, direct photons, QCD predictions, W_3^1 , W_2^2 structure functions 2-95855
 $e^+e^- \rightarrow \gamma$ + neutrals, radiative signal for light neutral supersymmetric particle prod. 2-89955
 $e^+e^- \rightarrow hX$, charm baryon prod. and decay, P-odd effects (*Russian*) 2-64325
 $e^+e^- \rightarrow hX$, cut vertex formalism and higher-order QCD predictions 2-54181
 $e^+e^- \rightarrow hX$, hadron cluster production (*Russian*) 2-95857
 $e^+e^- \rightarrow hX$, higher order QCD corrections 2-54197
 $e^+e^- \rightarrow hX$, P violation, QCD calc., cut vertex method 2-79898
 $e^+e^- \rightarrow$ hadrons, 12-36.7 GeV CM, total cross section meas. 2-95854
 $e^+e^- \rightarrow$ hadrons, 22, 34 GeV, annihilation event topology, coupling constant, QCD anal. 2-69475
 $e^+e^- \rightarrow$ hadrons, 2.6-7.8 GeV, jet struct., related inclusive distrib. 2-113287
 $e^+e^- \rightarrow$ hadrons, 2.6-7.8 GeV, total cross sections, multiplicities, inclusive momentum distrib. 2-113286
 $e^+e^- \rightarrow$ hadrons, baryon-antibaryon production in quark and gluon jets 2-59122
 $e^+e^- \rightarrow$ hadrons, energy correl. meas. 2-101743
 $e^+e^- \rightarrow$ hadrons, evidence for QCD gluon emission 2-79894
 $e^+e^- \rightarrow$ hadrons, heavy quarks and perturbative QCD calcs. 2-54072
 $e^+e^- \rightarrow$ hadrons, QCD beyond leading order 2-64289
 $e^+e^- \rightarrow$ hadrons, $q\bar{q}$ bound states, relativistic duality, relativistic and EM corrections 2-74698
 $e^+e^- \rightarrow$ hadrons, SU(3)_c ⊗ U(1) unified model 2-54033
 $e^+e^- \rightarrow$ hadrons, struct. investig. 2-54187
 $e^+e^- \rightarrow$ hadrons, tripodity D₁ for finding four-jet events 2-101750
 $e^+e^- \rightarrow$ jets, k_T-7.31-6 GeV, jet measures, energy depend. 2-84905
 $e^+e^- \rightarrow KX$ at $\Psi(4s)$ resonance, Ψ -BB and B-charged and neutral K 2-69453
 $e^+e^- \rightarrow \Lambda_c \Lambda_c X$, direct electrons obs., Λ_c semileptonic decays 2-79872
 $e^+e^- \rightarrow \mu X$, beauty lifetime, weak mixing angles, standard model anal. 2-89973
 $e^+e^- \rightarrow \mu X$ search for charged Higgs, scalar τ , technicolor test 2-107675
 e^+e^- physics at PETRA, review 2-79856
 $e^+e^- \rightarrow \pi^0(K^0)(\bar{K}^0)(\Lambda)(\bar{\Lambda})X$, TASSO results 2-95860
 $e^+e^- \rightarrow \pi X$, higher twist contrib. from direct pion coupling, QCD interpretation 2-95859
 $e^+e^- \rightarrow QQQQ$, inclusive production of heavy quarkonia 2-101753
 $e^+e^- \rightarrow q\bar{q}g$ jets study in perturbative QCD 2-54146
 $e^+e^- \rightarrow q\bar{q}g$, three-jet events T distrib. for heavy quarks (*Russian*) 2-54194
 $e^+e^- \rightarrow q\bar{q}g(g\bar{g})$, differential and total cross section 2-54190
 $e^+e^- \rightarrow q\bar{q}g(q\bar{q}g)$, four-jet prod. cross section 2-101746
 $e^+e^- \rightarrow q\bar{q}\tau$ process, P-odd effects (*Russian*) 2-59139
 e^+e^- single arm expts., QCD predictions for energy moments 2-113225
 $e^+e^- \rightarrow$ three jets, integer-charged quark model 2-101740

electron-positron inclusive interactions continued

- e^+e^- —three-jets, large perturbative corrections in soft-gluon limit 2-69423
- e^+e^- —three-jets, QCD $O(\alpha_s^2)$ corrections 2-54217
- e^+e^- —VX, vector mesons structure functions in QCD framework using relativistic quark model (*Russian*) 2-74699
- e^+e^- —X₁, 12-36.7 GeV, inclusive charged particle prod., scale breaking 2-89972
- e^+e^- —annihilation, hadron multiplicity in jets (*Russian*) 2-54191
- Z —Higgs boson, Higgs trigger in e^+e^- collisions 2-69502
- e^+e^- —annihilations, 29 GeV, pointlike charged spin-0 particles, limits on prod. 2-101742

electron-positron interactions

- see also *electron-positron inclusive interactions; electron-positron scattering; positron annihilation in liquids and solids*
- annihilation line in gamma-ray bursts, theory 2-84348
- bremsstrahlung processes, geometric beam factors (*Russian*) 2-95814
- e^+e^- — $e^+e^- \mu^+\mu^-$, cross section meas., higher-order QED at small distances, expt. tests 2-59096
- lifetime spectra in rare gas, calc. program 2-90715
- organic sulphide cpds., d orbital participation in bonding, positron lifetime meas. 2-85834
- organic sulphonic cpds., d orbital participation in bonding, positron lifetime meas. 2-85834
- PLUTO detector expts., review 2-79903
- SU(2)_c × (SU(3)_c × U(1)_Y), electroweak model, low-energy phenomenology and neutral-weak-boson masses 2-69391
- e^+e^- —Z⁰ —hadrons, energy-energy correlations, structure functions 2-101749
- e^+e^- — $3\pi^+3\pi^-$, 2^+ glueball effects 2-113237
- e^+e^- — $4\pi^+$ cross section near $\rho(1600)$ current algebra calc. using $\tau \rightarrow \pi \nu$ 2-74629
- e^+e^- —annihilation, search for exclusive free-quark prod. 2-84902
- e^+e^- — $e^+e^- \eta$, 17.15 GeV, cross section meas. 2-79901
- e^+e^- — $e^+e^- \eta(e^+e^- A_2)$, η and A_2 radiative widths determ. 2-107665
- e^+e^- — $e^+e^- \gamma$, 0.64-1.40 GeV, heavy electron prod. cross-section (*Russian*) 2-89956
- e^+e^- —exclusive hadronic channels, weak neutral current and axial resonance signals 2-59165
- e^+e^- — $\gamma\gamma$, influence of macroscopic factors on bremsstrahlung 2-113261
- e^+e^- — γZ , neutral gauge boson self-couplings tests 2-59138
- e^+e^- —H⁰, neutral Higgs mesons production, theoretical anal. (*Russian*) 2-74677
- e^+e^- — $K_S^0 K^+ K^-$, 1.4-2.2 GeV, ϕ' obs. 2-74697
- e^+e^- — $\mu^+\mu^-$, 34.6 GeV CM, charge asymmetry meas. 2-89954
- e^+e^- — $\mu^+\mu^-$, charge asymm., weak interaction effects 2-54130
- e^+e^- — $\mu^+\mu^-$, cross section, Majorana neutrino test 2-113260
- e^+e^- — $\mu^+\mu^-$, ϕ decay probability (*Russian*) 2-54147
- e^+e^- — $\mu^+\mu^-$, radiative corrections in Z⁰ region 2-107654
- e^+e^- — $\mu^+\mu^- X$, QCD effects 2-107673
- e^+e^- — $\nu\bar{\nu}\gamma$, cross section calc. 2-74676
- e^+e^- —physics at PETRA, review 2-79856
- e^+e^- — $\pi^+\pi^-$, pion form factor meas. near threshold using localised discharge spark counter 2-90356
- e^+e^- — $\pi^+\pi^- K^0$, ϕ decay probability meas. (*Russian*) 2-54147
- e^+e^- — $\pi^+\pi^- K^+K^-$, 1.4-2.18 GeV, cross sections, isospin interference, $K^*K\pi$ dynamics 2-69476
- e^+e^- —q \bar{q} , broken colour gauge symm. test 2-79900
- e^+e^- — ρ , tests for ρ meson as gauge particle 2-54164
- e^+e^- — $\rho\rho(\pi\rho)(\phi\rho)$, 1.4-2.18 GeV, cross section meas. 2-84903
- e^+e^- — $s\bar{s}$, 33-36.72 GeV CM, scalar lepton search with CELLO detector at PETRA 2-101699
- e^+e^- — $\tau^+\tau^-$, 34.2 GeV CM, cross section and τ lepton decay props. meas. 2-101698
- e^+e^- — $\tau^+\tau^-$, charge asymm., weak interaction effects 2-54130
- e^+e^- — $\tau^+\tau^-$, zero charge asymmetry in SU(3)_{HC} × SU(6)_L × SU(6)_R theory 2-84873
- e^+e^- — $\chi\mu + \gamma\gamma$, excited and stable heavy lepton prod. limits 2-64310
- e^+e^- —Z⁰ —W[±], Higgs sector struct. (*Russian*) 2-59088
- N₂, positron elastic scatt. and annihilation 2-80813

electron-positron scattering

- see also *electron-positron interactions*
- Bhabha polarised scatt., multiboson electroweak gauge models 2-54132
- polarised Bhabha and Moller scatt. in left-right symmetric theories 2-95813
- e^+e^- — e^+e^- , Bhabha scatt., around Z⁰ pole 2-95811
- e^+e^- — $e^+e^- \gamma$, large impact parameter cut-off 2-95812
- e^+e^- —physics at PETRA, review 2-79856

electron probe analysers see electron probe analysis**electron probe analysis**

- alloy, binary, FCC and BCC, electron irradi., rad. induced segregation at internal sinks 2-86731
- amphiboles, calcic, Fe²⁺ identification, in M4 site, optical spectrum 2-93172
- brass, diffusion-induced grain boundary migration 2-103783
- ceramics, ancient, electron probe microanalysis appls. in technological and provenance investigations 2-116737
- correction procedure update for quantitative electron-probe microanalysis 2-53900
- cryoultramicrotomy, evidence against melting and use of low temp. cement for specimen orientation 2-83715
- electron backscattering coeff. meas. (*German*) 2-116759
- electron spectroscopy techniques 2-73041
- energy-dispersive electron microprobe techniques, for rare-earth element determ. 2-67794
- ferrous materials, plasma-nitriding in N₂-H₂-CH₄ gas mixtures (*German*) 2-88292
- foil, thickness determ. by electron probe microanal. (*French*) 2-110995
- foil, X-ray analysis, single-scattering model, spatial resolution 2-116766
- glass microstructure, electron microscopy studies 2-91797
- high resolution imaging methods 2-97877
- metal-C films, graded index, solar absorbing, prod. by dual cathode sputtering 2-99335
- microbeam analysis, conf., Vail, CO. USA (July 1981) 2-68961
- minerals, elemental mapping using electron microprobe 2-97865
- polyacetylene films, doping inhomogeneity, Castaing microprobe anal. 2-81810
- radioactive sample anal., appls. (*French*) 2-73033
- scanning microprobe anal. and microscopy, conference, Karlsruhe, Germany (June 1981) 2-68955

electron probe analysis continued

- semiconductor, minority carrier diffusion length meas. using microscopic electron probe 2-71996
- spherical aberration correction method 2-113068
- steel, Cr-Mo, low C, tempering behaviour, effect of C content 2-77853
- steel, Cr-Mo-Ni-W-V, carbide obs. (*Chinese*) 2-62145
- steel, Cr-Ni-Mo-Mn, Mo distrib. during long-term holding between 554 and 654°C (*French*) 2-72700
- steel, Si-Al bearing electrical, internal oxidation and mag. props., annealing conditions influence 2-72724
- steel 20, electron-autoradiographic investig. of α - γ transform. 2-67337
- X-ray microanalysis, electron beam geometry influence, Monte Carlo method study (*French*) 2-73031
- X-ray microanalysis, transmission stage for Cambridge Stereoscan 600 2-57943
- Ag film, sputter deposition, angular factors, SEM and EPMA study 2-87936
- Ag-Cu-Ti(Al)(Mg)(Ni), dendritic segregation, effect of alloying additions (*Polish*) 2-67338
- Al coating on steel, porosity determ. using electron probe microanalysis 2-99624
- Al-Ag-Al strip, pressure-welded, interdiffusion layer struct., ultramicrotomed thin section method 2-71738
- Al-Fe(4wt.%), STEM-EDS X-ray microanal. of rod-shaped precipitate 2-67795
- Al-Ti-Be, grain refinement, Be-enhanced 2-83086
- α -AlH₃, electron beam induced decomp., analytical diffr. obs. 2-78070
- Ar, determ. in sputtered films using wavelength-dispersive electron probe microanal. 2-73039
- B fibre reinforced Al and Al-Cu-Mg-Mn, hot pressing, reaction between fibres and matrix 2-83068
- Bi_{1-x}Sb_x, ZAF correction for electron probe microanalysis 2-93851
- C fibres, surface structure effect on strength, in appl. of carbide coating in metal melt 2-83067
- Ca₃Al₂P₂Si₂O₁₅, crystal struct. and chem. formula confirmation 2-91902
- Co₂Ge₂ for protective coatings, TEM exam. technique 2-105400
- Co-base wear-resistant alloys, carbide transform. during ageing 2-77310
- Co-Cr-W, processed by liq. phase sintering, microstruct. invest. 2-67310
- Cu-Fe-Se system, phase equilibria and stability field, X-ray, electron microprobe and DTA study 2-116429
- Fe-Mo-Cr, σ phase, range of stability 2-62100
- Fe-Ni-V, σ phase, range of stability 2-62100
- Fe-Si/Zn, diffusion couples, periodic form. of FeSi bands 2-76755
- FeTiO₃ spinel, natural, oxidation-reduction reactions, electron microscopy 2-72986
- GaP, Kossel line broadening near scratch 2-103566
- GeAs₂, I₂ chem. vapour transport, thermodynamics and kinetics 2-97949
- HPO₃, hydrated microprod., normal-super liq. transform., SEM study 2-98258
- HF₂O-MgO system, eutectoid decomp. process influence on physico-chem. props. 2-99404
- HF₂O-PrO₃ system, eutectoid decomp. process influence on physico-chem. props. 2-99404
- Hg_{1-x}Cd_xTe wafers, metallographic obs. of compositional inhomogeneities 2-111411
- HgS, sputter-deposited films, comp. determ. (*Japanese*) 2-92399
- In₂O₃-Sn film, transparent conductive, prep. by pyrolysis method 2-110191
- LaB₆-Co(Ni) systems, wetting and contact reactions 2-77780
- Li_{1-x}Fe_xO₄, for ferrimagnetic pastes, prep. and props., effect of additions of glass and Bi₂O₃ 2-88034
- (Mg_{0.58}Fe_{0.08})²⁺Fe₂³⁺Al_{0.14}(Si_{3.66}Al_{0.34})O₁₀(OH)₂, lizardite, cryst. struct., polymorphism 2-98008
- Ni alloy, heat-resisting, directional solidification, B influence on fine struct., diffusion and creep 2-67321
- Ni surface, (111) and (211), initial oxidation kinetics, RHEED and X-ray emission study 2-57542
- Ni/Cr thin-film structures, sputter depth profiles obtained from emission of Auger electrons and X-rays 2-77682
- Ni-Co-V(Cr), σ phase, range of stability 2-62100
- Ni-Cr, aluminide coatings, form. kinetics and microstruct. 2-116620
- Ni-Cr-Mo-Co-Fe(Al), aluminide coated, compatibility in simulated HTGR 2-113664
- NiCrAl-Zr alloys, oxidation features, AES study 2-88273
- Pb-Ca-Sn, phase diagram, Pb rich corner 2-105123
- Si, Sb diffusion, anomalous conc. profiles due to local precipitation 2-76741
- a-Si-C and a-Si-C, B(P) films, cathodic deposition, charact. 2-88011
- a-Si-F and a-Si-F, B(P) films, cathodic deposition, charact. 2-88011
- p-Si:Mn⁺Al⁺(B⁺), DTA and electron beam anal., doping effects (*German*) 2-92010
- SiO₂ film, sputter deposition, angular factors, SEM and EPMA study 2-87936
- Tb-Fe amorphous films, mag. props., sputtering induced recrystn. effect 2-72300
- α -Te₂MoO₇ and β -Te₂MoO₇, industrial oxidation catalysts, X-ray diffr. and electron microscop. study 2-61157
- Ti-Fe film, composite cathode sputtered, struct. and comp., expt. study 2-56390
- W-Ni, solubility of Ni, activated recrystallisation, liq. phase sintering 2-103997
- ZnSnAs, LPE growth on ZnSe substrate from Sn soln. 2-77756
- Zr(Ca, Mn)₂(Fe, Al)₂Ti₂O₁₆, cubic cryst. cpd. found in Radwaste ceramic, characteris. 2-103705

electron probe microanalysis see electron probe analysis**electron probe microscopy see electron probe analysis****electron probes**

- see also *electron probe analysis*
- microscopes, directly heated tungsten hair pin cathode development 2-101498
- weak super HF signal meas. by electron probe 2-69306

electron-proton interactions

- see also *electron-proton scattering*
- deep inelastic polarised electroproduction model 2-54170
- small mutual separation, generalised electrodynamic spinor approach 2-107585
- ep, deep inelastic structure functions, diquark model 2-101719
- ep, diffractive photoproduction cross section, QCD planar ladder diagram anal. 2-69426
- ep, elastic photon-gluon scatt. obs. possibility 2-79890

electron-proton interactions continued

- ep, ρ^0 mesons electroproduction cross section 2-54178
 ep- $\pi^+\pi^-$, π^+ mesons electroproduction in $D_{13}(1520)$ and $F_{13}(1688)$ reson. region 2-77891
 ep- π^+e^-n , virtual photons in pion electroproduction 2-74758
 ep- π^+X , inclusive single soft pion prod., moment sum rules 2-113281

electron-proton scattering

see also electron-proton interactions

No entries

electron radiation

- Cherenkov interaction, stimulated, experimental system for study 2-90402
 channeling radiation and coherent bremsstrahlung, theory 2-104984
 channelled electrons, X-ray stimulated emission, theory 2-85979
 charged particle moving in condensed matter, oscillatory wake 2-56059
 cyclotron interaction of electron beam with coparallel luminous waves 2-80887
 cyclotron maser oscillator, quasi-optical 2-80927
 diamond, electron irradi., coherent bremsstrahlung and channeling radiation meas. 2-77614
 diamond monocrystal, high-energy electrons radiation spectra (Russian) 2-57204
 Laue four-wave diffraction in single cryst., emission of photons by electrons (Russian) 2-56039
 plasma, relativistic electron-electron Bremsstrahlung, QED calc. 2-76090
 plasma linear device with field-gradient along axis, cyclotron radiation spectroscopic diagnosis 2-86473
 relativistic electron beam, passing through mag. field, stimulated emission 2-75502
 relativistic electron in undulator in strong-field mode, radiation spectrum calc. 2-102706
 relativistic electron radiation spectrum in spatially periodic transverse mag. field (Chinese) 2-55051
 relativistic electrons moving along arc of circle, radiation emission (Russian) 2-85879
 spontaneous radiation of relativistic electrons under planar channeling and band structure of transverse energy 2-56056
 spontaneous short-wave emission by an intense electron beam 2-85877
 stimulated Cherenkov interaction and appls., electron beam momentum modulation by laser field 2-55052
 synchrotron radiation, coherent, from electron beam rotating in plasma, polarisation obs. 2-97750

electron relaxation time (metals)

- electron-electron scatt. resist., sample depend. 2-82337
 ferromagnetic disordered alloy with s-f exchange, conduction electron lifetime, composition depend. (Russian) 2-92572
 film, supported, TCR from effective Cottey model 2-104504
 films, current fluctuations in dissipative steady states, theory 2-104507
 metallic glass, non-commutative model, systematic perturbation calc. 2-115733
 2D- metallic systems, elec. cond. (Russian) 2-104351
 optical relax. time, freq. depend. calc. 2-66534
 quantising magnetic field, relax. time under acoustic phonon scatt. (Russian) 2-66533
 Ag film, cond. electrons inelastic lifetime, magneto-conductance meas. 2-110494
 Au film, cond. electrons inelastic lifetime, magneto-conductance meas. 2-110494
 Cu film, cond. electrons inelastic lifetime, magneto-conductance meas. 2-110494
 K, CDW state and residual resist. anisotropy 2-82316

electron resists

- polyglycidyl methacrylate (PGMA), negative electron resist., γ -irrad., ESR study and INDO UHF MO calc. 2-93010
 polymer films, plasma etch characts. rel. to struct. comp., electron resist appls. 2-62244
 polymers, radiation sensitivity meas., resists. and nuclear particle track recording appl. 2-93802
 polystyrene, negative electron resist., γ -irrad., ESR study and INDO UHF MO calc. 2-93010
 polystyrene high resolution electron beam negative resist with very narrow molecular weight distributions for semiconductor IC technology 2-70461
 trilayer high resolution resist, film form. and directional etching 2-116574
 Ge₂₅Se₇₅ amorphous inorganic resist film, ion and electron beam induced struct. changes, TEM study 2-115588

electron ring accelerators

- collective field accelerators, review 2-113765

electron scattering see elastic scattering of electrons by atoms and molecules; electron beam effects; electron beams; electron-electron interactions; electron-electron scattering; electron impact; electron-nucleon interactions; electron-nucleon scattering; electron-nucleus reactions; electron-nucleus scattering; electron-positron interactions; electron-positron scattering; electron spectra; hadron electroproduction; neutrino-electron interactions; neutrino-electron scattering; secondary emission

electron solvation see solvation

electron spectra

- see also Auger effect; conversion electron spectra; electron energy loss spectra; electron impact; electron spectroscopy; photoelectron spectra
 aliphatic and alicyclic hydrocarbon films, electron transmission spectra and their second energy derivatives 2-72584
 anilines, substituted, Penning ionisation, methyl group steric shielding effect 2-85805
 atmosphere electron precipitation, attenuation and energy distrib. in lower ionosphere 2-112220
 bound-muon decay, expressions for electron spectra 2-69462
 butadiene, valence excited states, electron impact spectra 2-85734
 chloromethane, valence orbitals, momentum distrib. and separation energies 2-108371
 chloromethanes, electron spectra, electron correl. and mol. effects 2-108700
 1,3-cyclohexadiene, valence excited states, electron impact spectra 2-85734
 dichlorodifluoromethane, temporary anions, electrons transmission spectroscopy, σ^* orbitals obs. 2-108702
 1,1-dichloroethylene, Σ and Π electron shape reson., multiple scatt. Xalpha calcs. 2-80471
 dichlorofluoromethane, temporary anions, electrons transmission spectroscopy, σ^* orbitals obs. 2-108702

electron spectra continued

- 2,3-dimethyl-1,3-butadiene, valence excited states, electron impact spectra 2-85734
 ferromagnetic materials, surface magnetic order investig. by electron capture spectroscopy 2-110616
 fluoroethylene, Σ and Π electron shape reson., multiple scatt. Xalpha calcs. 2-80471
 fluoroethylene anions, $^2\Pi$, dissoci., dissociative electron attachment spectrosc. obs. 2-59932
 geonium electron and positron spectra, invariant freq. ratios 2-70448
 heavy ion collisions, high energy electron emission cross section 2-54950
 molecules, electron correl. and mol. effects 2-108700
 molecules, electronic momentum distrib. and mol. struct., binary (e,2e) spectrosc. obs. 2-108699
 cis-1,3-pentadiene, valence excited states, electron impact spectra 2-85734
 quasimolecular potential curve reconstruction from emitted electron spectra (Russian) 2-54915
 resonant states, high energy electron spectrosc. 2-108701
 tetrachloroethylene, Σ and Π electron shape reson., multiple scatt. Xalpha calcs. 2-80471
 tetrafluoromethane, ionisation, electron coincidence spectra, Green's function study 2-108622
 trifluoromethane, ionisation, electron coincidence spectra, Green's function study 2-108622
 z-pinch plasma, dense, IR emission 2-60725
 Al-Te, vitreous and crystalline materials, short range order, Mossbauer and electron spectra 2-103657
 As₂Se-GeSe-SnSe, glass, Sn valence states, Mossbauer, optical and electron spectroscopy study 2-71935
 CO₂, binary (e, 2e) spectroscopy and momentum space chem. 2-102649
 Ga-Te, vitreous and crystalline materials, short range order, Mossbauer and electron spectra 2-103657
 HBr, valence orbitals, electron momentum distrib. and binding energies 2-102533
 HI, valence orbitals, electron momentum distrib. and binding energies 2-102533
 K, 4s electron momentum distrib., electron coincidence spectroscopy 2-102641
 Li⁺ + He, excited quasimolecular state form., autoionisation, electron spectra 2-59894
 N₂O, valence electron separation energies and momentum distrib. 2-96751
 Na, 4s electron momentum distrib., electron coincidence spectroscopy 2-102641
 Ni-Fe (25 at.%), ESCA studies, surface prep. treatments, oxidation effects 2-83295
 Ni-Fe (25 at.%), ESCA studies, anodic dissolution, passivation effects 2-83296
³²S(μ^+ , e⁻), muon-electron and muon-positron neutrinoless conversion study 2-59340
 Si (111) surface, struct. of density of states studied by total current electron spectroscopy 2-87361
 Si surface, (100), O₂ adsorption, Auger and ionisation electron spectra study 2-92365
- electron spectrometers**
 see also beta-ray spectrometers
 calibration, ang. distrib. parameters of Ar, Kr, Xe 2-85468
 conversion electron Mossbauer spectrometer equipped with ceramic electron multiplier detector 2-102323
 conversion-electron spectrometer, nuclear lifetime meas. 2-108314
 einzel lens, electron energy anal. appl. 2-70029
 electrostatic, with logarithmic spiral shaped electrodes, props. (French) 2-74576
 electrostatic electron spectrometer for Mossbauer conversion electron spectroscopy 2-96367
 ferromagnet, spin polarised photoemission 2-101501
 field emission sites on planar cathodes 2-101503
 high resolution electron energy loss spectrometer with improved transmission 2-85470
 high-resolution electron energy loss spectrometers, high-stability low-noise power supply design and construction 2-89868
 high-resolution vibrational electron energy-loss spectroscopy of solid surfaces, apparatus 2-89869
 inclined-plane spectrometer, focusing props. study with intrinsic Ge detector 2-64739
 instrumentation considerations in electron and ion spectroscopies using synchrotron radiation 2-84740
 ion-t atom collisions, USSR-Hungary joint study programme (Russian) 2-85792
 magnetic field spectrometer for EELS, STEM appl. 2-64194
 magnetized plasma electron energy analyzer 2-97795
 multidetector system using microchannel electron multiplier and CCD imaging device 2-113812
 position detecting system with single wire proportional counter for electron spectroscopy 2-90383
 position-sensitive detector system for electrons using CCD 2-85477
 retarding field electron spectrometers use in ion-atom collision expts. 2-69300
 satellite-borne apparatus for Earth's magnetosphere meas. 2-73715
 scanning X-ray radiography in electron spectrometer 2-74581
 standards for efficiency calibration, γ -rays intensity meas. from ¹⁹⁷Au(n, γ)¹⁹⁸Au 2-75129
 STEM appl., EELS technique, design 2-64195
 sum-coincidence spectrometer with two Ge(Li) detectors (French) 2-108219
 synchrotron radiation instrumentation, conf., Ithaca, NY, USA (July 1981) 2-84369
 ultra-high vacuum double axis goniometer for electron spectrometer 2-85467
 VUV monochromators and electron spectrometers transmission meas. using photoemission spectroscopy 2-86082
 XPS, sample isolation, chem. modification and introduction system for electron spectrometer 2-79718
 CO, EELS with new position-sensitive multidetector spectrometer in 6 to 10.9 eV energy region 2-85824
 Si detectors for X-ray, ion and electron spectrometers, low temp. characts. 2-75108
 Si(Li) plus mag. lens electron spectrometer, centroid-shift time meas. 2-108216

electron spectroscopy

- see also *electron spectra; photoelectron spectroscopy*
 AES, microcomputerised data collection 2-84741
 angle-resolved electron spectroscopy, cylindrical mirror analyser modification 2-89867
 atomic standard for calibration of differentiation of AES 2-107474
 Auger spectroscopy, spectrum data processing system 2-89698
 charged particle in Penning trap, precision spectroscopy 2-74578
 cylindrical mirror analyser for energy distrib. meas. of secondary, Auger and reflected electrons (*German*) 2-101499
 development for atoms, mols. and condensed matter 2-95559
 development of electron spectroscopy techniques since late 1940s 2-107073
 differential energy distrib. calc. using amplitude analyzer and inverse function generator 2-84742
 energy and ang. distrib. of electrons emitted from spectrometer sources, Monte Carlo calcs. 2-102321
 energy reference, binding energy of C_{1s} electrons 2-92328
 high energy, of reson. states 2-108701
 inelastic electron tunnelling spectroscopy, surface anal. appls. 2-64163
 microanalysis of surface and bulk media, expt. techniques 2-73041
 polyatomic molecules, electronic struct., (e,2e) spectrosc. obs. 2-108698
 refractory metals radioactive sources prep. and characterisation for X-ray and electron spectrometry 2-59582
 scattered-electron rejection in electron transmission spectroscopy 2-58966
 SIMS equipment Riber MIQ 156, improvements and appls. 2-95529
 solids (e,2e) spectroscopy 2-107454
 steel, unprotected, corrosion in inert-gas atmos. containing water vapour, O_2 , SO_2 , N_2 and CO_2 2-67616
 surface spectroscopies review, for semiconductor characterisation 2-78158
 transition metals, group III, electron energy absorption spectrometry (*German*) 2-113084
 vibrational spectroscopy methods, appl. to structure anal. of chemisorbed species on metal surfaces 2-79692
 Au, Auger electron spectroscopy, relative intensity meas. 2-62441
 Cu, Auger electron spectroscopy, relative intensity meas. 2-62441
 Cu foil, electrodeposited, AES and ESCA, effects of surface roughness 2-78155
 Fe, polycryst., sulphidation in H_2S , ESCA obs. 2-111027

electron spin

- stochastic electrodynamics calc. 2-79471

electron spin-lattice relaxation

- chemically induced electron spin polarisation, triplet mechanism, density matrix equations of motion 2-102510
 diamond, containing lonsdalite, ESR spectra, structural defects 2-72344
 EPR, relaxation, kinetic theory for zero frequency shift 2-82698
 ferredoxin, from B. stearothermophilus, electron spin-lattice relax. 2-70299
 ferroelectrics, hydrogen bonded, electron spin-lattice relax., impurity dynamics 2-87577
 fluoranthenyl radical cation salts, ESR linewidths, longitudinal and transverse relax., temp. depend. 2-89861
 impurity ion, relax. to cond. electron bath, method of moments 2-110618
 insulating material-impurity system spin-lattice relax., two phonon Raman processes 2-77361
 lanthanum ethyl sulphate: Gd^{3+} , spin lattice relax., Gd^{3+} splitting under press., ESR study 2-82713
 nonequidistant electron spin spectrum, correlation function, calc. of direct nuclear relax. 2-87578
 paramagnetic ions doped in paramag. hosts, EPR studies, review 2-116060
 phase-modulation ESR spectroscopy, relaxation characts. 2-110620
 poly-2-methyl-5-ethynylpyridine, pyrolysed, electron spin-lattice relax. (*Russian*) 2-66896
 polyacetylene, pristine and $I(AsF_6)$ doped, EPR saturation characteristics meas. 2-92991
 protein conformation, determ. from electron spin relax. data 2-93986
 pyrene-d-10 in fluorene single cryst., EPR lines and spin-lattice relax. 2-77357
 radical cation salts, CESR and spin-lattice relaxation time 2-93007
 Raman spin lattice relax. applied to S-electron ions, Kramers doublets with hyperfine interaction 2-61751
 ruby: Cr^{3+} , generation, detect. and reson. trapping of very high freq. acoustic phonons 2-93277
 S/R method, relax. obs. in pulsed high mag. field (*Japanese*) 2-92994
 semiconductors, cubic, paramagnetic centre relax. with exciton interactions 2-61760
 zinc porphyrin in n-alkane host crystals, phosphorescent 3E_g state, EPR and spin-lattice relax. 2-85705
 a-BiH, ESR study, annealing effects on signal intensity and linewidth 2-87591
 $Be_2Al_2Si_2O_{10}:Cr$, emerald cryst., MM wave quantum amplification 2-93329
 $CaCO_3:Pb^{2+}$, EPR spectrum, Raman spin lattice relax., hyperfine interaction effect 2-61761
 CdTe:Mn, deep impurity centre spin relax., exciton interactions 2-61760
 $CeF_3:Gd^{3+}$ single crystals, temp. variation anal. of EPR linewidths 2-98957
 Cu Tutton salts, nuclear and electron spin-lattice relax. times meas. 2-82741
 EuO ($Eu_{1-x}Gd_xO$) (Eu_{1-x}), mag. semicond., s-d exchange interaction, current carriers effect, expt. study 2-92895
 GaAs:Zn, Cd, hot photoluminescence spectrum and polarisation 2-82894
 p-GaSb, conduction electron spin relax., 4.2 to 77K 2-93008
 $Gd,Ce_{1-x}Be_{13}$, cond. electron lattice relax. due to Ce ion 2-72350
 $Gd,R_{1-x}Ce_xBe_{13}$ ($R=La,Y,Lu$), cond. electron lattice relax. due to Ce ion 2-72350
 KBr, F-centers, relaxed excited state, spin-lattice relax., luminescence study 2-87572
 $KCr_{1-x}Al_x(SO_4)_2 \cdot 12H_2O$, nonlinear adiabatic effects in parallel static and harmonic mag. fields 2-104574
 $LaF_3:Er^{3+}$, mag. field depend. optical depasing 2-104856
 $\beta-Li_2V_2O_6$, quasi-one-dimens. cond., EPR 2-92997
 $LiYF_4:Er^{3+}$, spin-lattice relax. anisotropy, ESR study 2-72343
 $\beta-Na_2V_2O_6$, quasi-one-dimens. cond., EPR 2-92997
 Ni Tutton salts, nuclear and electron spin-lattice relax. times meas. 2-82741
 Rb,CuBr $_2 \cdot 2H_2O$, spin dynamics study 2-66860
 Si:H, amorphous, spin-depend. recombination at dangling bonds 2-77424
 SiC:N (6H), exchange-coupled vacancy pairs, ESR study 2-116062
- electron spin-lattice relaxation continued**
 $SiO_2-Na_2O-CoO-V_2O_5$ glass, Co^{2+} spin-lattice relax. by V^{4+} EPR study 2-72335
 $Yb_{1-x}Al_x$, ($R=Nd, Eu, Gd, Dy, Er$) exchange and electron spin-lattice relax., ESR study 2-82712
- electron spin polarisation**
 see also *CIDEPE; spin polarised electron emission*
 benzophenone, $n\pi^*$ triplet state in glassy matrices, time-resolved ESR detect. 2-59826
 K-vector selection for electron capture at metal surfaces 2-77645
 layer cryst., open Fermi surface, electron hopping, nonmonotonic polarisation near Lifshitz transition 2-82343
 measurement of the three components of the electron-spin polarization vector 2-58969
 metal surface, O_2 adsorpt. and oxide form., photoemission studies, review 2-116331
 metals, surface magnetism, polarised electrons 2-66890
 molecules, oriented optically active, circular dichroism in continuous absorpt. region 2-59836
 noncentrosymmetric media, spin polarised electron scatt. asymm. and photogalvanic effect mechanisms 2-104335
 optically active molecule, Coulomb ionisation, spin polarisation (*Russian*) 2-59901
 quantum systems, internal energy, lower-bound formula and quantum theory of corresponding states 2-71768
 transition metals, chemisorption energy polarisation effect, quasimolecule projection method 2-82141
 Ar, electron scatt. angular distrib. 2-70420
 Au(110), transversal polaris. vector in LEED 2-91732
 D, spin aligned, ground-state energy, Monte Carlo calc. 2-86972
 D, spin polarised, quantum gas props. 2-110088
 Fe (001) film, surface states, surface magnetisation, electron spin polarisation 2-61540
 $GdNi_3$, spin polarised energy band struct. calcs. 2-92449
 H, atomic, spin polarised, decay kinetics, dipole-dipole interaction, Bose condensation region attainment 2-59887
 H, atomic, spin polarised, ballistic heat pulses to 200 mK 2-82078
 H, atomic, stabilisation 2-56298
 H atoms, spin polarised, recombination calorimetry at liq. He temps. 2-92307
 H film, spin polarised, fluctuation correl. and superfluidity (*Russian*) 2-82065
 H, nucl. relax. anisotropy, two-dimens. model 2-71767
 H, spin polarised, hydrodynamic modes 2-82076
 H, spin polarised, in solid H_2 matrix, Overhauser effect 2-54878
 H, spin polarised, on 4He superfluid film, third sound 2-82077
 H, spin polarised, quantum gas props. 2-110088
 H, spin polarised, state-dependent recomb. and suppressed nucl. relax. 2-92306
 H, spin polarised, surface mag. relax. rates 2-82079
 H spin polarised atomic, adsorbed on 4He film, spin relax. 2-82067
 H, spin-polarised, confinement in azimuthal field, total and superfluid density profiles 2-66320
 H, spin-polarised, confinement, prod. and props. 2-71770
 H, stabilised, atomic, adsorbed on superfluid He, surface spin relax. 2-104116
 H-like atoms, spin electron polarization in absence of external mag. field (*Russian*) 2-96485
 3He , nucl. relax. in weak inhomogeneous mag. field (*French*) 2-70170
 3He , He solutions, spin polarised, transport phenomena and sound propag. 2-76767
 $HoAl_2$, conduction electron polarisation temp. depend., neutron diff. study 2-72146
 Kr, electron scatt. angular distrib. 2-70420
 $LaNi_3$, spin polarised energy band struct. calcs. 2-92449
 $Ni_{1-x}Fe_x$ (100), spin polarised photoemission probing of magnetism 2-67184
 $Rb+N_2$, quenching, depolarisation, electronic and nuclear spin polarisation 2-90660
 Si(111), electronic and atomic struct., spin polarisation effects, theory 2-110417
 T, spin polarised, ground state props. 2-98382
 W surface (100), adsorbed H and temp. induced reconstruction, polarised LEED study 2-56308
 Xe, atomic beams, elastic electron scatt., spin polarisation 2-102627
- electron spin relaxation** see *electron spin-lattice relaxation*
electron spin resonance see *paramagnetic resonance*
electron states, impurity see *impurity electron states*
electron states, surface see *surface electron states*
electron streams see *electron beams*
electron structure of solids (crystallography) see *crystallography*
electron structure of solids and liquids (energy structure) see *electron energy states (condensed matter)*
electron theory
 see also *Dirac equation; quantum electrodynamics*
 classical electron model and EM field momentum definition 2-95037
 classical electron model and EM field momentum definition 2-95038
 nonrelativistic para-Maxwellian electrodynamics with preferred reference frame in the Universe, electron theory 2-107126
 radius and energy radiation 2-54156
 relativistic electron theory, axiomatisation (*Rumanian*) 2-113094
- electron theory of metals** see *metal theory*
electron traps
 see also *colour centres; hole traps; impurity electron states*
 amorphous semiconductors, transient photoconductivity and photo-induced optical absorption 2-92684
 band struct., density of states curve 2-87189
 carrier diffusion and trap controlled drift, non-equilibrium transport regime 2-61427
 chalcogenide photoreceptors, residual voltage, electron traps effects, theory 2-115809
 dielectric layer, pulse photo-response to monopolar injection (*Russian*) 2-61505
 dielectric slab with taps, non-uniform illumination conditions, volt-amp characts. (*Dutch*) 2-61506
 disordered materials with traps, drift and diffusion, quasi-equilib. transport regime 2-61426
 disordered solids, self-trapping of carrier pairs, negative effective correlation energy (*Russian*) 2-82374

electron traps continued

- DLTS, electron capture coeffs. for deep levels with continuous energy spectrum, isothermal relax. study 2-61405
 drift and diffusion in materials with traps, transient current and transient time characs. anal. 2-61428
 EBIC, lock-in detection, contrast meas. from individual dislocations 2-65824
 n-InP, DLTS study 2-76967
 insulators, carrier traps characterisation using transient injection currents 2-82365
 insulators, elec. breakdown by one-carrier impact ionisation 2-110768
 many-valley semiconductors, compensated, Auger processes involving bound carriers, theory (*Russian*) 2-115785
 MBE growth using Pb flux and elec. characterisation 2-87987
 metal- Al_2O_3 - SiO_2 -Si struct., charge profile, photoionisation study 2-66648
 MNOS capacitors, flatband voltage shifts interpretation in terms of charge distrib. 2-115902
 molecular cryst., off-diagonal trapping from deep traps 2-72004
 MOS device, oxide and interface charge generation by electron injection 2-56718
 MOS structures, radiation damage by X-ray irradiation (*Chinese*) 2-66645
 naphthalene:anthracene crystals, delayed fluorescence, triplet exciton traps effect (*French*) 2-77576
 pentacene, polycrystalline layer, dispersive transport of charge carriers (*Russian*) 2-61626
 3,4,9,10-perylenetetracarboxylic dianhydride, Elovich photovoltage decay kinetics 2-98696
 photoemission into electrolytes from metals, as solid state and interfacial physics technique, review 2-62041
 photographic materials, static pressure effects, influence of exposure time, ripening and development 2-74541
 phthalocyanine, β -metal free single cryst., TSC 2-77085
 phthalocyanines, EPR study of paramagnetism 2-82697
 poly-1-vinyl-1,2,4-triazole, trapping centres, TSC, thermally stimulated discharge and SCL cond. meas. 2-87298
 polyethylene:anthracene, γ -irradiated, trap depth 2-61479
 polyethylene naphthalate photoelectret, carrier traps 2-98661
 polypropylene films, positively corona-charged, TSC meas. 2-98659
 polystyrene films, soln. grown, DC electrical props., free and trapped carrier conc., density of states 2-56742
 α -polyvinylidene fluoride, X-ray induced current transients, carrier traps 2-110338
 SCL conduction in semiconductors and insulators, interpretation in terms of traps 2-77071
 self-trapping of an electron by the surface modes 2-104461
 semiconductor, carrier density fluctuations due to trap distrib. 2-98660
 semiconductor, high resistivity, injection props. of semicond.-semicond. contacts 2-61578
 semiconductor diode, single-injection current, traps lying above Fermi level, elec. cond. at high fields 2-56601
 semiconductors, multiphonon release of trapped electrons, theory 2-92650
 semiconductors, thermal filling effects in capacitance expts. on deep levels 2-66481
 surfactant phthalocyanine, electrodeposited, photovoltaic cells, characts. and behaviour 2-93906
 thermally stimulated capacitance, differential meas. technique 2-115773
 thermoluminescence isothermal decay, trapping parameters 2-61989
 β -zinc phthalocyanine, bulk trapping states, ohmic and SCL currents meas. 2-98662
 AgI:Cu, electronic cond., carrier mobility, DC polarisation and charge transfer methods 2-115753
 Al-Si₃N₄-SiO₂-Si MNOS struct., charge trapping, oxide thickness effects, capacitance and internal photoelec. effect study 2-98751
 Al-SiO₂-Si structures, resonant tunnel switching 2-98757
 Al_{0.3}Ga_{0.45}As-GaAs heterostruct., modulation doped, photocond. effects 2-56679
 Al_{0.1}Ga_{0.9}As:Si MBE layers, deep electron traps, annealing characts. DLTS study 2-98589
 Al₂O₃ anodic films, elec. breakdown characts., 4.2 to 354K 2-110769
 Bi₁₂GeO₂₀, sillenite-type non linear crystals, deep localised centres 2-110362
 Bi₁₂SiO₂₀, sillenite-type non linear crystals, deep localised centres 2-110362
 Bi₁₂TiO₂₀, sillenite-type non linear crystals, deep localised centres 2-110362
 CaO:Cu electroluminesc., anal. of traps 2-82925
 CaS:Sm, phosphors, phosphorescence decay, trapping parameters 2-61941
 n-CdS, deep level transient spectroscopy of electron traps 2-115693
 CdS, dye-desensitised, photoconductive process, trap depths 2-87332
 CdS, electro-acoustic current fluctuations 2-98702
 CdS epitaxially grown layers, deep level transient spectroscopy of carrier traps 2-115692
 CdS, high resistivity, semi-insulating, thermoelectric props., influence of deep traps, TSC study 2-66577
 CdS, hot wall epitaxial growth, elec. props. 2-93430
 CdS-Au Schottky diode, $C^{-2}=f(V)$ charact., deep electron trap and interface states effect 2-115860
 CdS-Cu₂S heterojunction, electron and hole traps, deep level transient spectroscopy 2-115873
 CdSe polycrystalline thin film transistor, conductivity behaviour 2-56735
 p-CdTe, annealed in various atmospheres, carrier traps, TSC study 2-66478
 CdTe, bipolar photo-Hall effect and photocond. meas., defect model 2-115812
 CdTe, DLTS study of deep electron traps 2-92516
 n-CdTe, deep level transient spectroscopy of electron traps 2-115693
 CdTe detectors, α -particle polarisation effects obs. 2-85497
 CdTe epitaxially grown layers, deep level transient spectroscopy of carrier traps 2-115692
 CdTe, hot wall epitaxial growth, elec. props. 2-93430
 p-CdTe, imperfection anal. by photoHall effect and bipolar photocond. meas. 2-77114
 EuGa₂S₄, semicond., injection and thermoactivation currents, trapping 2-87278
 GaAlAs, metalorganic CVD, electronic defect levels study 2-71922
 Ga, Al_{1-x}As, MBE grown, persistent photocond. centres, capacitance spectroscopy meas. 2-98688

electron traps continued

- GaAs, bulk, main electron trap, effect of elec. field and current injection 2-72009
 p-GaAs electrochemical electrode, cathodic photocurrent meas., surface recombination and trapping effects 2-92746
 GaAs, electron traps and deep levels 2-98583
 n-GaAs epitaxial layer on semi-insulating GaAs:Cr, IR irradiation, current ionisation due to deep level photoionisation 2-66626
 GaAs, ion implanted and annealed, defect conc. distrib. study 2-71923
 GaAs LEC semi-insulating crystals, appearance of negative peak in photo-induced transient spectroscopy 2-104312
 GaAs, proton irradiated, profiles interpretation obtained by C(V) technique 2-98663
 GaAs, semi-insulating LEC, deep level nonuniformity distrib., photolum. spectroscopy 2-76964
 GaAs, VPE and Czochralski grown, pulsed Nd:YAG laser annealing of defects, implanted sample obs. 2-56026
 GaAs:Cr, charge transfer induced by press. 2-66484
 GaAs:Cr, Fe liquid encapsulated Czochralski cryst., SIMS 2-115270
 GaAs:Cr, Si implanted, thermally annealed, semi-insulating, deep levels 2-76966
 GaAs:Fe(O), ion implanted and electron irradiation, deep levels and electron traps, annealing 2-98584
 GaAs:O, deep electron traps, elec. and optical props. 2-98585
 n-GaAs-Sn(Ag)(Al)(Au) MIS Schottky barriers, electron trapping in oxide layer 2-77196
 GaAs:(Ge), MBE grown, deep levels and photoluminesc., MBE As₂/As₄ flux ratio effects 2-99341
 GaAsP, deep level studies on traps showing nonexponential kinetics 2-115689
 GaAs_{0.35}P_{0.65}N VPE LEDs, deep centre studies by photocapacitance method 2-56637
 GaAs_{0.5}P_{0.4}Te, electron trap spectrum obs. by DLTS and transient capacitance meas. 2-87302
 GaP, deep level studies on traps showing nonexponential kinetics 2-115689
 GaP, donor-Ga vacancy complex form., electron trap behaviour 2-115688
 GaP, ODMR study of P_{Ga} antisite defect 2-98573
 GaP, thin film struct., electron beam irradiation, current characteristics meas. 2-56738
 GaSe-Sn layer-barrier-structures, elec. props. (*Russian*) 2-77181
 Ge, gamma irradiation, defect levels, DLTS study 2-76980
 Ge, gamma-ray induced defects, thermal and electrical stability 2-92033
 Ge-GeO₂, charge carrier transport in dielectric, photo-injection method obs. 2-104493
 Hg_{0.1}Cd_{0.9}Te-anodic oxide interface, photoelec. and field effect props. 2-87398
 Hg_{0.1}Cd_{0.9}Te, deep level defect traps, DLTS study 2-87175
 Hg_{0.1}Cd_{0.9}Te, plasma anodised, interface study 2-104489
 InP:Fe(Cr), semi-insulating, photoinduced current transient spectroscopy 2-92646
 InSb MIS struts., tunnel charging of traps in oxide layer 2-115909
 InSe-Au Schottky barrier diode, elec. and optical props. 2-77157
 n⁺-In₂-xSn₂O₃-y-InP solar cell, electron trap characterisation by DLTS 2-92513
 KN₃ EPR meas. of time depend. of colour centres 2-72347
 KTaO₃:Ni(Fe), electron trap levels, ESR and TSC meas. 2-82703
 MgAl₂O₄, spinel, γ - and X-irrad., defect trap levels TSC and thermoluminesc. study 2-56608
 MgO, thermochemically reduced, phosphoresc., role of H⁻ ions 2-72546
 PbO-SiO₂ glass, electron and gamma irradiated, charge trapping and release 2-57013
 Se:Cl(K)(Rb), amorphous, carrier generation and EPR studies, dopant effects 2-77083
 Si, doping by neutron transmutation, electron traps anal. by DLTS (*Chinese*) 2-92643
 n-Si, electron irradiation, low-lying electron trap, transient capacitance studies 2-71921
 Si, neutron irradiation, deep defect levels with continuous energy spectrum, electron capture coeffs., isothermal capacitance relax. study 2-61405
 Si, polycrystalline under optical illum., phenomenological model of grain boundary trapping states 2-92653
 Si, zone-melting-recrystallised films on SiO₂-coated Si substrate, subgrain boundaries effect on carrier transport 2-77207
 Si:Au, acceptor level electron cross-section, DLTS study 2-115772
 Si:Au, minority carrier capture cross section meas. 2-66569
 Si:Au, n-type Czochralski, capture cross section of donor and acceptor states 2-98665
 Si:Au, props. of Au related acceptor level 2-71910
 Si:B, point defects, negative-U props., expt. study 2-71918
 Si:B, Fe, quenched-in trap level at E_i+0.45 eV 2-104291
 n-Si:H, amorphous, deep levels, electron capture cross section 2-76979
 a-Si:H, density of states determ., field effect method (*Korean*) 2-56419
 a-Si:H, n-type, energy depend. of capture cross section at trap levels, determ. by isothermal capacitance transient spectroscopy 2-82273
 Si:H amorphous sputtered thin film, carrier propagation, trapping and mobility 2-87283
 Si:n, deep levels meas. 2-92511
 Si:P, electron irradiation, electron trap study by transient capacitance 2-110282
 Si:Pt, minority carrier capture cross section meas. 2-66569
 Si:Zn, Cr(Fe)(Mn)(V), donor-acceptor complexes, DLTS and TSC meas. (*German*) 2-98579
 Si-SiO₂, electron irradiation, carrier fluctuations and trapping, capacitance study 2-115898
 Si-SiO₂, interface, electron irradiation, trapped charge sites, XPS study 2-77140
 Si-SiO₂, interfaces, electron trapping, injection mode dependent phenomena 2-66655
 Si-SiO₂, MOS interface states, optical excitation by IR light 2-56714
 n-Si-SiO₂, MOS structure, interface minority carrier traps, optical DLTS study 2-77186
 Si-SiO₂, structures, traps in transition region, TSC study 2-98754
 Si-SiO₂, system, photoinjection, carrier trapping 2-77198
 SiC (6H), vacancy deep levels traps, EPR, optical absorption and Hall effect study 2-56483
 Si₃N₄:H CVD film, chem. bonding changes and elec. effects 2-115930
 SiO₂, MOS struct., current induced trap generation 2-56694
 SiO₂, MOS struts., electron trapping, injection mode depend. phenomena 2-56695
 SiO₂, thermally grown thin films, electron trapping 2-66683

electron traps continued

- SiO₂, trapping characters, avalanche injection 2-56611
 SiO₂ ultra-thin films, high-field generation of electron traps and charge trapping 2-66682
 SiO₂-Si interface, H ion elec. behaviour 2-61634
 SiO₂-Si interface effects in avalanche injection of electrons 2-56719
 SrTiO₃, transient photocurrents and DC photocond. study 2-110390
 TbAl₃B₂O₇, luminesc. and energy transfer 2-61950
 TiO₂, ESR studies of defect centres 2-87594
 V₂O₅-P₂O₅/Au(AI) (graphite) struct., contact limited conduction, work function effects 2-72056
 ZnIn₂S₄, electron trap distrib., elec. cond. meas. 2-92520
 ZnS:Mn electrolum. films grown by at. layer epitaxy, ageing process 2-116264
 ZnS:Mn thin films, physical and elec. characts. 2-61622
 n-ZnSe, deep level transient spectroscopy of electron traps 2-115693
 ZnSe, heteroepitaxial, deep defects 2-92512
 ZnSe, LPE grown, deep electron traps, TSC, photocapacitance and DLTS study 2-56466
 ZnSe, Zn-annealed, deep levels and associated carrier recomb. processes 2-110289
 α-Zr(P₂O₇)₂M₂ (M=Li⁺, Na⁺, K⁺, Cs⁺) Mg Kα ESCA spectra, shake up struct. enhancement by sputtering 2-57252

electron tube diodes *see diodes***electron tube rectifiers** *see rectifier tubes***electron tubes**

- see also cold-cathode tubes; diodes; electron emission; microwave tubes; relativistic electron beam tubes; tetrodes; thermionic tubes; triodes; ultra-high frequency tubes; vacuum tubes; X-ray tubes*
 gyrotron, parameter effect on performance for fusion reactor ECRH 2-85385
 gyrotron development for fusion reactor ECRH 2-85384
 gyrotron development for fusion reactor heating 2-85386
 Space Telescope digicon, proton-induced noise 2-117590

electron tunnelling *see tunnelling***electron valves** *see electron tubes***electron-wave tubes**

- see also klystrons; magnetrons; travelling-wave-tubes*
 gyrotron oscillators, pulsed and CW, plasma heating 2-76149

electronegativity

- alloys, metastable, prod. by ion implantation, solubility, characterisation 2-76687
 bis(trifluoromethyl)disulphide mol. struct. by gas electron diff. 2-70416
 carbenes, singlet, equilb. struct. and force const. calc. using MNDO approx., electronegativity 2-59702
 chalcopryite compounds, ternary, energy band features rel. to electronegativity scale 2-61347
 copper acetate, Cu negative ion emission by mol. sputtering 2-57229
 diamond, (111) surface relax. and reconstruction, CNDO/2 calcs. 2-82097
 diatomic mols., mol. force consts., bond lengths, pot. energy functions, electronegativity anal. 2-75463
 fluoracetones gas-phase basicities, additivity of F substituent effects 2-78082
 gases, insulating, electronegative, sparking pot. 2-103485
 metal-metal interface interactions, similarity to metal-semiconductor interfaces 2-115578
 metal-semiconductor interface interactions, similarity to metal-metal interfaces 2-115578
 positive ions electronegativity in density functional theory 2-70166
 semiconductor-electrolyte interface, flat band pot., correlation with electronegativity scales (French) 2-115888
 semiconductors and metals, metastable alloy form. by ion implantation, impurity lattice location 2-115260
 silver acetate, Ag negative ion emission by mol. sputtering 2-57229
 transition metal fragments, MO electronegativities calc. using transition operator method 2-59968
 Al-Si compounds, XPS study of silicates, Auger parameter rel. to refractive index 2-99740
 Ba(ClO₄)₂·3H₂O, EPR and optical absorpt. of ClO₂ 2-93012
 BeCl₂, electronic ground states, dissociation energies 2-70375
 GaH, electronic ground states, dissociation energies 2-70375
 LiH, electronic ground states, dissociation energies 2-70375
 RhMnO₆, cryst. struct. distrib. of metallic elements (French) 2-55947
 RhMnSi, cryst. struct. distrib. of metallic elements (French) 2-55947
 Si, (111) surface relax. and reconstruction, CNDO/2 calcs. 2-82097
 Si, Auger line chemical shifts, KL₂₃L₂₃ transition 2-90491
 Si-polypyrrole photovoltaic devices, photoelectrochemical and Schottky cells 2-78217

electronic calculators

- for calculator applications see under relevant applications e.g. engineering computing; natural sciences computing*
 HP 41 CV, use in optical multilayer system performance analysis 2-109005
 TI-59, program for laser pumping cavities radiation transfer efficiency 2-97008

electronic conduction in crystalline semiconductor thin films

- for electronic conduction in amorphous thin films, see "electrical conductivity of amorphous semiconductors and insulators"*
see also electrical conductivity of amorphous semiconductors and insulators; electrical conductivity of crystalline semiconductors and insulators; electrical conductivity transitions
 anthracene vacuum deposited films, elec. cond. and blue electrolum. 2-116270
 CdS, thin evaporated films, optical and elec. props. 2-61624
 copper phthalocyanine thin layers, electron irradi., transient currents 2-110508
 deposited onto metal plates, resistivity measurement, microwave reflection coefficient dependence on film thickness 2-95406
 electroconducting oxide layers on glass, electrochemical etching (Polish) 2-88248
 epitaxial film, elec. cond. and Hall effect 2-115922
 lead phthalocyanine, thin film, one-dimensional elec. cond. and dynamic switching obs. 2-72086
 LPCVD A-Si post-hydrogenation and ion-implantation doping 2-71960
 optical processes, review 2-93310
 oxide films, transparent, preparation, elec. and optical props., review 2-87428

electronic conduction in crystalline semiconductor thin films continued

- 3,4,9,10-perylenetetracarboxylic dianhydride, Elovich photovoltage decay kinetics 2-98696
 phthalocyanine polycrystalline film, photoelectrochem. solar energy conversion 2-99815
 polycrystalline, Hall mobility interpretation 2-61630
 relaxation and lifetime behaviour, macroscopic aspects, theory 2-82492
 semiconductor field effect measurement, apparatus used 2-66563
 TTF-TCNQ thin film, one-dimensional elec. cond. and dynamic switching obs. 2-72086
 YIG layer, reduction in high freq. H₂ plasma (Russian) 2-67738
 ZnTe-CdS thin film photovoltaic cells, optical and elec. props. meas. 2-116824
 Ag-Te (Se)(S)(I) diffusion couples, struct. and elec. cond. meas. 2-82033
 AlSb_{1-x}As_x vacuum deposition, optical and transport props., impurity states 2-82498
 As-Te, homogeneous film, elec. props., optical forbidden band-width 2-110504
 Bi film, elec. cond., grain boundaries effect 2-82491
 Bi film, evaporated, elec. resistivity, temp. depend. 2-92792
 Bi thin film, classical size effect, rel. to surface roughness and struct. (French) 2-110507
 Bi thin film, resistivity and energy gap variation with film thickness 2-92791
 Bi₂S₃ thin film, semicond. liq. junction solar cell and thickgenide props. 2-78212
 Bi_{1-x}Sb_x films, semimetal-semicond. transition, thickness depend., resist. and magnetoresist. meas. (Russian) 2-82411
 Bi₉₀Sb₁₀ thin film, band gap and intergrain barrier activation energies 2-72085
 C film, hopping conduction, graphical data interpretation 2-82497
 CdGa₂Te₄(Ag) film, polycryst. and amorphous, elec. cond. and Hall effect meas. 2-82490
 Cd₂Hg_{1-x}Te high quality epitaxial films, growth by sputter deposition, Hall coeff. meas. 2-116362
 Cd₂Hg_{1-x}Te sputtered epitaxial layers, structural and elec. props. 2-92424
 Cd₂Pb_{1-x}S_x film, growth kinetics, chem. deposition from aq. soln. 2-110190
 CdS films, chemical bath deposited, elec. resist. increase obs. by laser annealing 2-98766
 CdS films, RF sputtered, struct. and elec. resist., deposition dependence meas. 2-105073
 CdS thin film, single source evaporation, characterisation 2-83042
 CdS thin films, elec. props., In doping and Ag contact effects 2-66672
 CdS-In film, heavily doped, elec. transport props. 2-72090
 CdS-In film, low resist., prep. by spray pyrolysis 2-71842
 CdS-In film, vacuum evaporated, elec. and optical props. 2-61631
 CdS:Te film, vacuum deposited, dark cond. and photocond. meas., doping effects 2-61623
 CdSe polycrystalline thin film transistor, conductivity behaviour 2-56735
 CdSe thin film, resist. modification during O₂ or CO thermal desorption (French) 2-98773
 CdTe films, DC elec. props. Poole-Frenkel eqn. 2-110510
 p-CdTe-Te film, mol. beam deposited, props. 2-104192
 CdTe, Se_{1-x}, semiconducting cmpds., laser induced formation 2-115593
 Ga_{1-x}Al_xAs, MOCVD grown, elec. props. of Se and Zn 2-98774
 Ga_{1-x}Al_xAs:Si, Ge, LPE growth and doping, elec. and photolum. props. 2-116393
 Ga_{1-x}Al_xAs:Sn layers, electron and γ-ray irradi., elec. cond., press. effects (Russian) 2-104512
 Ga_{1-x}Al_xAs:Zn, metalorganic CVD film, elec. cond. 2-56733
 Ga₂Al_{1-x}As, MBE grown, persistent photocond. centres, capacitance spectroscopy meas. 2-98688
 n-GaAs, epitaxial film, magnetoresistance, electric field effect 2-77100
 n-GaAs epitaxial layer on semi-insulating GaAs:Cr, current limitation due to IR radiation obs. 2-66626
 GaAs film, elec. cond., relaxation and lifetime behaviour, macroscopic aspects, theory 2-82492
 GaAs:Be, p-type doping in metalorganic VPE, hole conc. and cond. 2-105089
 GaAs:C layers, elec. props., and electron microscopy 2-61628
 GaAs:Si LPE layer, photolum. and carrier conc. (Russian) 2-99174
 Ga₂In_{1-x}As films, vapour growth from In/Ga alloy source, characterisation 2-99351
 Ga₂In_{1-x}Sb, voltage-current curves, scatt. effects, Monte Carlo calc. 2-104382
 GaP:N, Te VPE layer, minority carrier lifetime, dislocations influence 2-115920
 GaP:N LED degradation, surface corrosion 2-116559
 Ge, deposition by DC and RF double cathode sputtering (Japanese) 2-62065
 Hg_{1-x}Cd_xTe, isothermal epitaxial growth, elec. props. optimisation 2-93452
 p-In_{0.53}Ga_{0.47}As epitaxial layers, minority carrier high field transport meas. 2-82493
 InGaAs:Te, VPE growth for photodetectors 2-111086
 p-In_{0.53}Ga_{0.47}As film, high field transport characts. of minority electrons 2-98699
 In_{0.53}Ga_{0.47}As:Si, n-layer formation by Si implantation 2-92001
 InGaPAs_{0.10}Zn(Te)(Se) LPE layer on GaAs, doping effect on physical, elec. and optical props. 2-110501
 In_{0.53}Gd_{0.47}As:Te degenerate LPE layers, electron mobility 2-61620
 In₂O₃ (SnO₂) films, preparation, elec. and optical props., review 2-87428
 In₂O₃ film, weak localization, anomalous transport props. 2-61627
 In₂O₃ films, magnetoconductive effects, Anderson localisation 2-56740
 In₂O₃Sn film, transparent conductive, prep. by pyrolysis method 2-111091
 In₂O₃Sn films, annealed, elec. resist. and defect model 2-66671
 In₂O_{3-x}, disordered conductor, transition to microscopic diffusion regime and dimensional crossover 2-77211
 In₂O_{3-x} films, reactive evaporation prep. and elec. resist. meas. 2-105088
 InP:Te, VPE growth for photodetectors 2-111086
 In_{2-x}Sn_{2x-3}O_{3-x} film, reactively electron beam evaporated, optical, IR and elec. cond. props. 2-57198
 In_{2-x}Sn_{2x-3}O_{3-x} film, reactive electron beam evaporation prep. and elec. and optical props. 2-105078
 In₂Te, thin films, growth and props. 2-71840
 LiNbO₃-CdSe film, alternating field acoustoelectronic effect, CdSe cond. effects 2-72033

electronic conduction in crystalline semiconductor thin films continued

- Nb-Cu(Ti), superlattice, sputtered, struct., elec. cond. and supercond. props. 2-61311
- PbI₂ film surface layer, band gap illumination effects 2-92368
- PbS, natural galena, electron beam evaporated film, optical and electronic props. meas. 2-61621
- PbS polycrystalline film, cond. and permittivity meas. at microwave freqs. (*Russian*) 2-95403
- PbSe_{0.98}Te_{0.02} 2-92796
- Pb_{1-x}Sn_xSe epitaxial layers, equilb. compositions and cond. type 2-66398
- Pb_{1-x}Sn_xSe, grown by 'hot wall' method 2-72627
- Pb_{0.5}Sn_{0.5}Te film, struct. and elec. props., Ar⁺ bombard. and annealing effect 2-56731
- Pb_{0.5}Sn_{0.5}Te epitaxial films produced by vacuum evaporation, high mobility produced by annealing 2-82486
- Pb_{1-x}Sn_xTe LPE layer, Hall and resistivity meas., impurity doping influence 2-92796
- Pb_{1-x}Sn_xTe:In films, impurity electron-state, elec. cond. study 2-115705
- PbTe film, charge carrier conc. and mobility variations after deposition 2-66680
- PbTe films, electron mobility, temp. depend. meas. 2-110505
- PbTe polycrystalline film, cond. and permittivity meas. at microwave freqs. (*Russian*) 2-95403
- PbTe:H epitaxial film, elec. transport props., p-type to n-type conversion 2-66676
- PbTe:LiNbO₃ system, ferroelec. polarisation effect on elec. cond. of semi-cond. layer 2-110503
- Sb thin film, classical size effect, rel. to surface roughness and struct. (*French*) 2-110507
- Sb₂S₃ film, photosensitive, prep. by dip-dry technique, struct. and props. 2-111070
- Si film, plasma hydrogenation effects on elec. props. and ESR 2-104511
- Si film on SiO₂, zone recrystallized, elec. props. of line defects 2-66668
- Si, microcrystalline, plasma deposited, charact. 2-92405
- Si, polycrystalline, thin film, CW laser recrystallized material 2-56409
- Si, zone-melting-recrystallized films on SiO₂-coated Si substrate, subgrain boundaries effect on carrier transport 2-77207
- Si:As films, heavily doped, thermally and laser annealed, elec. props. 2-115924
- Si:As(P), CVD film, elec. characts., grain size, effects of impurity conc. and heat treatment 2-82487
- Si:H, amorphous film, optically induced pot. fluctuations, elec. cond. and thermopower study 2-77050
- Si:O, prep. and props. 2-72629
- Si:P films, heavily doped, thermally and laser annealed, elec. props. 2-115924
- Si:P polycryst. film, in situ doped, CW laser annealing, grain size and elec. cond. meas. 2-98771
- Si-Si₃Ge₄ epitaxial multilayer films, electron mobility enhancement 2-115921
- SiC films, formation by ion implantation of Si cryst. and elec., photovoltaic and struct. props. (*French*) 2-72089
- SnO₂ film, vapour deposition and elec. props. 2-71812
- SnO₂ film deposited by oxidation of SnCl₂, transparency and resistivity 2-111092
- SnO₂ films, preparation, elec. and optical props., review 2-87428
- SnO₂ solid state gas sensors, humidity effects on H₂S detection 2-64010
- SnO₂ ultrafine particle film, Hall effect meas. and elec. cond. model 2-87425
- SnO₂:F,Sb film, spray coated, dopant effects on elec. cond. and optical absorpt. props. 2-72088
- SnO₂:F films, spray prep. and elec. and optical props. 2-105069
- SnO₂:F(Sb,F) film, elec. resist. and optical absorpt. and reflection spectra meas. 2-66675
- SnO₂:Sb films, deposition by oxidation of tetramethyltin and trimethylantimony, elec. and optical props. 2-87997
- SnTe:H epitaxial film, elec. cond. and Hall effect on H₂ desorption 2-115923
- p-SnTe:In epitaxial thin film, elec. transport props., In effect 2-104514
- TiN films from N₂⁺-implantation of Ti coated Si, elec. and optical props. 2-116286
- WO₃ films, reactively sputtered, electrical and optical props. 2-66673
- WO₃ film, adsorbed layers, excess current noise, Auger study 2-82496
- p-WSe₂ film, polycryst. semiconductor electrode, photoelectrochem. 2-72987
- Yb-O film, vacuum deposited, DC elec. props. 2-92793
- ZnO film, electronic props., defects, morphology and adsorp. depend. 2-104515
- ZnO films, reactive magnetron sputtering prep., transition from insulating to highly cond. state 2-83022
- ZnO, RF, sputtered film, heat treatment effects on elec. and optical props. 2-72087
- ZnS,Se_{1-x} thin film, high elec. cond. props. meas. and CVD prep. 2-98768
- ZnSe Film, DC cond. mechanism and dielectric props. 2-104510
- ZnSe film on GaAs, elec. props. and impurity profile 2-61014
- ZnSe:Ga, MBE growth and elec. cond. and photoluminesc. props. meas., blue LED appl. 2-87986
- ZnSnAs₂ LPE growth on ZnSe substrate from Sn soln. 2-77756

electronic conduction in insulating thin films

- see also electrical conductivity of amorphous semiconductors and insulators; electrical conductivity of crystalline semiconductors and insulators
- contact-limited currents, theory 2-82504
- dielectric, stationary distrib. of mobile ions with regard to elastic interactions with medium 2-82015
- dielectric film in MOS capacitor, localized conduction 2-61633
- dipalmitoyl phosphatidyl ethanolamine, Langmuir-Blodgett film, elec. props. meas. 2-116891
- electron bombardment induced conductivity and its appl., book 2-63758
- phospholipids, synthetic Langmuir films, elec. props. meas. 2-72092
- poly-(n-vinylcarbazole) film, photocarrier drift mobility meas., film struct. effects 2-72019
- polyacetylene film, nonuniform doping effect on resistivity, metal-insulator transition 2-104518
- polyacetylene films, dielectric props. 2-87646
- polyacrylonitrile:1 thin film, I-V characts., induced percolation 2-110513
- polyacrylonitrile layer, metastable de-excitation spectroscopy and UPS study 2-110516

electronic conduction in insulating thin films continued

- polyimide film, Pd-containing, electrical conductivity 2-61632
- polypropylene evaporated films between Cu electrodes, I-V characts. and breakdown strength 2-110512
- polystyrene films, soln. grown, DC electrical props., free and trapped carrier conc., density of states 2-56742
- review of cond. mechanisms in MIM struct. (*Spanish*) 2-72091
- AlN epitaxial films on Si, electronic conduction in MIS struct. 2-87434
- Al₂O₃ thin film, cond. props., tunnelling 2-110514
- Al₂O₃:Cu porous anodic film, elec. props. meas. 2-82501
- Bi₂SiO₅ cermet films, elec. and optical props., H addition effects 2-82505
- C, diamond-like hard films, deposition and characteris. 2-57307
- CuO_x sputtered thin films, struct. and elec. props., O₂ pressure effects, X-ray study 2-72093
- FeF₃ film, elec. cond. meas., charge transfer between localised states mechanism 2-82503
- FeF₃ granular films, dielec. polarisation, AC cond. and TSC study 2-82774
- FeO_x, berthollide type, reactive sputtering prep., struct. and props. 2-82158
- In₂O₃ thin films, electron beam evaporated, elec. props. 2-98776
- In₂O₃:As₂O₃ film on InAs, characterisation 2-111348
- NbSi₂ film, phys. and elec. props. 2-104193
- NiF₂ film, elec. cond. meas., charge transfer between localised states mechanism 2-82503
- NiF₂ film, granular, elec. cond. and dielec. polarisation meas. 2-72094
- P₃N₅ gate insulating film, CVD prep., dielec. props. and InP-P₃N₅ MIS device props. 2-99346
- PbI film, prep. by iodination of PbS film, X-ray characterisation 2-67215
- Pr-Tb-O film, thermally evaporated, struct., optical and elec. props. 2-110189
- Rb₂Cu₂Cl₂ thin film preparation and electrical conductivity 2-77216
- Si-SiO₂ electrolyte, SiO₂ thin films, conduct. and electroluminescence study (*Russian*) 2-87872
- SiN film, plasma enhanced CVD coating, phys. and elec. props. 2-115629
- Si₃N₄ CVD layers in MNOS struct., depth inhomogeneity, pot. distrib., effective resist. and etch rate exam. 2-92769
- Si₃N₄ film, CVD deposition and AC dielec. props. meas. 2-82783
- Si₃N₄ film in MNS struct., carrier conduction, thickness effects 2-66681
- Si₃N₄ film produced by low energy N implantation in Si, elec. characts. 2-86694
- Si₃N₄ films, N-rich, composition and elec. cond., MNOS device appls. 2-56743
- Si₃N₄ MIM struct., electron beam induced leakage currents meas. 2-56744
- Si₃N₄ thin films, elec. cond. and breakdown props. 2-87435
- SiO MBE films on GaAs, deposition conditions, Auger anal., and elec. characts. 2-87116
- SiO-GeO₂ film, electroformed MIM struct., elec. cond., temp. effects obs. 2-72074
- SiO₂ thermally grown thin films, electron trapping 2-66683
- SiO₂ ultra-thin films, high-field generation of electron traps and charge trapping 2-66682
- SiO₂ ultrathin layers on Si, grown by DC plasma anodization, elec. props. 2-56745
- Si₃O₂N₄ layers, synthesized by ion implantation, IR and elec. props. 2-99136
- TiN films deposited on Si, characterisation 2-110212
- WO₃ film, reactively sputtered, prep., elec. and optical props. 2-93420
- Yb₂O₃ thin films, elec. cond. and permittivity in MIM struct. 2-98775

electronic conduction in metallic thin films

- see also discontinuous metallic thin films; electrical conductivity of amorphous metals and alloys; electrical conductivity of crystalline metals and alloys
- Cottey size effect model, limiting values of specularly refl. coeff. 2-92782
- disordered, resistance, weak localisation and dimensional crossover 2-110497
- electron-phonon low-angle scatt. effects, theory (*Russian*) 2-115918
- fluctuations in dissipative steady states, theory 2-104507
- grain shape effects, non-cubic, three-dimensional statistical model (*French*) 2-92786
- Hall coefficient, general expression 2-92781
- measurement using inductive contact lens technique 2-79617
- metal film, ion plating on plastic substrate 2-116386
- molecular-beam condensed films, elec. and supercond. props., review (*Russian*) 2-56726
- monocrystalline film, electronic mean free path and Fermi surface area, energy depend. 2-115919
- plate, thin, low-temp. cond., surface scatt., temp. and thickness depend., size effects (*Russian*) 2-66616
- polycrystalline, optical refl. and elec. resist., effect of grain boundary scatt. 2-99205
- semicontinuous films, elec. resist., growth and nucleation, computer simulation 2-92784
- Sondheimer effect in multichannel electron reflection by surface 2-104508
- supported film, Fuchs-Sondheimer expressions for strain gauge coeffs. 2-115917
- surface roughness effects with unlike surfaces, theory 2-98765
- TCR of films and wires, effects of thermal expansion, differential thermal stress and size effect 2-115916
- TCR of supported films from effective Cottey model 2-104504
- transient hot strip method for resist. and temp. coeff. of resist. meas. 2-110500
- transition metal silicides, thin films, resistivities 2-77203
- ultrathin, localization, resistivity and magnetoresistance 2-61617
- Af films, elec. cond., inductive contactless meas. technique 2-79617
- Ag electroformed discontinuous film, pot. distrib. and switching phenomena 2-61619
- Ag film, cond. electrons inelastic lifetime, magneto-conductance meas. 2-110494
- Ag thin film, resistance, magnetoresistance, weak localisation (*Russian*) 2-87417
- Ag-Cu films, plasmon excitation by fast electrons 2-92785
- Ag-Ge, amorphous film, struct., elec. and optical props. 2-82483
- Al film, reduced electron density, elec. cond. study 2-82477

electronic conduction in metallic thin films continued

- Al, size depend. cond., electron density and mean free path 2-110498
 Al thin films, polycryst., correl. between struct. and elec. props. (*Russian*) 2-66663
 Al-Cu layer, evaporated, interface elec. resist. and Auger profiling 2-77160
 Al-Te contacts, needle struct., current-voltage characts. after different types of aging (*French*) 2-61566
 Au discontinuous films, non-ohmic conductance meas. 2-82480
 Au discontinuous films on glass substrates, elec. cond. temp. depend. meas. 2-82481
 Au discontinuous thin film, I-V characts., adsorption effects 2-110499
 Au epitaxial film, elec. resistivity meas. 2-87416
 Au epitaxial film, short support free, residual resist. determ. from current-voltage curves (*German*) 2-72080
 Au film, cond. electrons inelastic lifetime, magneto-conductance meas. 2-110494
 Au film, magnetoresist., positive, and elec. resist. at low temp. 2-66661
 Au film, reduced electron density, elec. cond. study 2-82477
 Au film electrodeless, on CdTe cryst., characterization 2-87081
 Au, size depend. cond., electron density and mean free path 2-110498
 Au thin film, nonlinear volt-ampere characts. (*Russian*) 2-104506
 Au, thin films, discontinuous, electrical cond. 2-72082
 Au/Co(SiO₂) thin film condensate, electrophys. props., heat treatment influence 2-104505
 Au-AG two-layer film, grain boundary diffusion investig. by elec. resist. method 2-76874
 AuIn₂ film, O₂ and Ar plasma interaction, sheet resist. 2-77204
 B, first wall coatings by plasma CVD 2-74910
 Bi film, elec. resist., size effects, TCR meas. 2-66678
 Bi, thin film, as grown, lattice distortion energy spectra, thickness depend. 2-87415
 BiC, first wall coatings by plasma CVD 2-74910
 Ca, elec. cond. and defect density, annealing study 2-77206
 Ca film, polycrystalline, elec. cond. meas. 2-82478
 Co/Si(SiO₂) thin film condensate, electrophys. props., heat treatment influence 2-104505
 CoSi₃, epitaxial films, Ar-ion implanted, elec. and struct. props. 2-87413
 Cr films, vacuum deposited, interaction with various gases, internal stress and resist. study 2-82186
 Cr-Cu, polycrystalline films, elec. resist. study 2-61614
 Cr-Cu films, elec. cond., annealing characts. and lattice distortion energy spectra 2-92783
 Cu film, cond. electrons inelastic lifetime, magneto-conductance meas. 2-110494
 Cu film, coupled fine particles, electron localization and transport props. 2-61618
 Cu film, reduced electron density, elec. cond. study 2-82477
 Cu films, elec. cond. localisation effects and negative magnetoresist. obs. 2-82476
 Cu, size depend. cond., electron density and mean free path 2-110498
 Cu vacuum evaporated films, defect density and elec. props. from annealing study of elec. resistance 2-110495
 Cu-Ag, amorphous films with high stability 2-104196
 Cu-SiO₂ granular films, elec. props., electron localisation in metallic regime 2-72081
 Er-H, phase boundaries at 295K, film resist. study 2-86880
 Fe film, O adsorpt., excess current noise obs. 2-77137
 Fe-Zr amorphous sputtered films, elec. and mag. props. 2-71948
 Gd films obtained in discharge with oscillating electrons, struct. and props. 2-66665
 In film, discontinuous, supercond. transition temp., resistive meas. 2-92810
 In, thin film resist. thermometer appls. 2-112896
 IrO₂ film, amorphous nonmetal-crystalline metal transition 2-109980
 Li cylindrical film, Aaron-Bohm effect (*Russian*) 2-87418
 Mn film, elec. resist., DC elec. field effect 2-87421
 Nb₃Ge films, critical mag. field temp. depend. (*Russian*) 2-61673
 Ni film, CO adsorption, IR luminesc. under ultrahigh vacuum 2-93281
 Ni film, elec. cond., temp. and mag. field depend. meas. 2-66660
 Ni film, ion implanted, influence of disorder on resistivity 2-61616
 Ni-Fe, ultrahigh vacuum deposition, magnetisation, resistivity and stress 2-82482
 NiCr thin films, sequential heat treatment effect on resist. and TCR 2-110496
 NiSi₃, epitaxial films, Ar-ion implanted, elec. and struct. props. 2-87413
 NiSi₂(NiSi)(Ni₂Si), ion bombardment damage and annealing, sheet resist. study 2-56044
 Pb superconducting film, behaviour in states far from equilibrium 2-72125
 Pb-In-Au:O film for Josephson tunnel junction base electrode 2-98499
 Pd film, elec. resist., DC elec. field effect 2-87421
 Pd thin films, elec. resist., annealing and thickness effects 2-98764
 Pd₂Si (PdSi) 2-56044
 Pd₂Si epitaxial films, Ar-ion implanted, elec. and struct. props. 2-87413
 Pd₂Si films, formation temp. dependence of resistivity 2-82484
 Pt thin film, non-ohmic cond. and magnetoresistance 2-87419
 Pt₂Si(PtSi), ion bombardment damage and annealing, sheet resist. study 2-56044
 Re film, elec. and supercond. props. 2-115941
 RuO₂, sputtered film, struct. and metallic cond. props. meas. 2-110493
 Sc-H, phase boundaries at 295K, film resist. study 2-86880
 Si-Al, amorphous thin film, thermopower, elec. cond. and optical absorption 2-72079
 Sm, thin film, elec. props., effects of pressure, ageing and in situ annealing 2-87422
 Sn film, struct. rel. to elec. and optical props. 2-115623
 SnSb thin films, obliquely vacuum-deposited, elec. cond., defect density and struct. 2-66662
 Ta, film growth of evaporated layers, struct. changes, elec. resist. study 2-92414
 TaSi₃ evaporated and sputtered films, resist., stress and etching behaviour under various residual gas conditions 2-87094
 Ti film, adsorption of water vapour, elec. cond. and work function 2-66354
 Ti-Fe films, elec. cond., composition depend. 2-56727
 W film, plasma-enhanced CVD, elec. resist. and film stress 2-93434
 Yb-H, phase boundaries at 295K, film resist. study 2-86880

electronic density of states

- A15 superconducting cpds., varying electronic density of states 2-61328

electronic density of states continued

- A15 superconductors, atomic disorder rel. to superconductivity 2-56769
 A15 superconductors, effect of impurities on thermodynamics 2-98802
 A15 superconductors, tunnelling, McMillan inversion of Eliashberg's equations 2-56792
 alloys, BCC, disordered, electronic density of states, self-consistent cluster CPA calc. 2-115639
 alloys, binary, ordering and segregation, density of states, electronic theory 2-76888
 Anderson mobility edge, crit. props., field theoretic formulation 2-71927
 Anderson model, 3-D simple cubic, density of states 2-98511
 Anderson model, asymmetric, density of states 2-66406
 Anderson model, one-dimensional anomaly in band centre 2-82196
 Anderson model, periodic, specific heat calc. 2-61162
 anisotropic superconductors with variable density of states, normal impurities effect, generalised BCS theory 2-98795
 band gaps and asymptotic behaviour of continued fraction coefficients 2-71846
 binary alloys, short-range order, cluster model, coherent pot. approx. calcs. 2-115378
 Bloch electrons behaviour, boundary conditions effect 2-107069
 classical impurity band, density of states 2-110288
 composition modulated alloys, electronic struct., CPA calc. 2-104224
 continuity of the density of states in a magnetic field 2-110225
 cubic, electronic struct., nonorthogonal tight binding calc. 2-76913
 cylindric conductors, quantum energy levels, cond. electron density of states (*Russian*) 2-82208
 d-band metals, pseudo Green's function theory for dil. alloys 2-71901
 deep electron trap, band struct., density of states curve 2-87189
 density functional theory 2-56413
 dilute systems, bond and site CPAS comparison 2-92434
 dirty supercond., 2-D, localisation effects, transition temp., electron density of states 2-87442
 disordered alloys, electronic density of states calc. 2-61325
 disordered electronic systems, mobility edge, electron-electron interactions effect 2-71876
 disordered materials, incoherent field, current balance, density of states test, and mobility 2-56540
 disordered s-scatterers, cluster approach, density of tail states determ. 2-110304
 disordered system, 1-D, quasiparticle scatt. from impurities, density of states perturbation theory (*Russian*) 2-82200
 disordered systems, density of states, recursion method 2-115638
 disordered systems, electron localisation models 2-71931
 disordered systems, localisation, transport phenomena 2-115710
 disordered two-dimens. systems, density of states, mag. field effect 2-82198
 dye, adsorbed, photoemission yield spectroscopy 2-87953
 electric field effect on the density of localized electron states 2-98568
 electron-phonon interactions, McMillan-Hopfield constant, transferability, rigid-muffin-tin approx. 2-61096
 electronic struct. and magnetism 2-104241
 poly-N-epoxypropylcarbazole, sensitized with 2,4,7-trinitrofluorenone, electrophotographic layer, device discharge 2-87338
 expansion coeff. of state densities, spectral point schemes, orthogonal functions 2-98513
 expansion technique calc. 2-56420
 ferromagnetic disordered alloy with s-f exchange, conduction electron lifetime, composition depend. (*Russian*) 2-92572
 ferromagnetic semiconductor, broad band, density of states in vicinity of Curie point, Dyson eqn. soln. 2-66412
 film, electron concentration and density of states, modelless calc. 2-92780
 force computation method in tight-binding model 2-110222
 generated two-zone model 2-71849
 graded interface region, electronic struct., giant replicate cell approach 2-110447
 graphite, band struct., Fermi surface, KKR calc. 2-82228
 graphite, unoccupied electronic states 2-115655
 graphite acceptor intercalate, stage 1 model, electronic struct., optical and energy loss props., LCAO calc. 2-61346
 graphite intercalation cpd. with alkali metals, C KVV Auger line shape and X-ray emission 2-87920
 heavily doped semiconductors, impurity-band density of states, numerical results 2-71913
 hopping Hall mobility; percolation theory 2-104333
 III-V semiconductors, Schottky barrier form. and MOS interface states, unified model 2-87372
 layered ultra-thin coherent struct., electronic states (*Chinese*) 2-98519
 linear chain of δ -scatterers, local density of states, disorder effect 2-61409
 liquid metal, two-dimens. model, computer expt. 2-92446
 localisation in incommensurate pot., one-dimens. tight-binding model 2-110277
 localised electron states, electron glass, Coulomb gap in density of states 2-110276
 matrix tridiagonalisation, rel. to recursion method 2-110224
 metals, zone integration method for joint densities of states 2-110230
 metals and alloys, elect. struct., symposium, Gausig, Germany (Apr. '81) 2-68968
 MIS amorphous solar cells, theory of Schottky barrier heights 2-116827
 mixed valence compounds, local density of states, real space renormalisation of Anderson chain, alloy approx. 2-66414
 mixed valence cpds., electrical resistivity, impurity contribs. 2-56544
 mixed valence semiconductors, elec. resist. 2-56574
 MNOS structure, surface state density evaluation 2-61602
 MNOS thin oxide structs., discharging process calcs. by multiple tunnelling 2-110479
 molecular crystals, two-particle vibr. excitations 2-109919
 MOS capacitor struct., interface state density deduced from DLTS and Terman meas. 2-98748
 narrow band system, Hubbard sub-band struct., cohesive energy 2-66419
 narrow-gap semiconductors, in mag. field, plasmon-assisted recombination 2-87297
 nitride interstitial phases, thermal and elec. cond. characts. rel. to electron energy spectrum 2-71987
 normal metal-superconductor bilayer, heat capacity and density of states 2-82542
 off-diagonal disorder on square and cubic lattices 2-110223
 one-dimensional conductor, Peierls transition and electron localisation by random pot. 2-56554

electronic density of states continued

- one-dimensional disordered systems, theories of electrons, reviews 2-76878
- one-dimensional lattice, localisation in presence of incommensurate pots. 2-66494
- optical props., 0.5 to 9.5 eV, electronic struct. 2-57125
- ordered-disordered interface, electronic props. 2-115841
- perovskites, cubic d-band, electronic density-of-states and partial-density-of-states functions 2-76889
- poly(p-phenylene), band struct., density of states, valence effective Hamiltonian study 2-98515
- poly(p-phenylene sulphide), band struct., density of states, valence effective Hamiltonian study 2-98515
- polyacetylene:Br, amorphous film, elec. and optical props. 2-110511
- polyacetylene, electronic struct. and photoemission spectra, CNDO/S3 calc. 2-75483
- polymers, electronic struct. and photoemission spectra, CNDO/S3 calc. 2-75483
- polystyrene films, soln. grown, DC electrical props., free and trapped carrier conc., density of states 2-56742
- quartz, γ -ray irradi., smoky, low energy density of states gap, tunnelling model, US attenuation meas. 2-61324
- α -quartz, electronic struct., cyclic cluster calc. 2-61393
- random superstructures, controlled disorder 2-87127
- semiconductor, amorphous, surface double layer model, bulk localised states in gap 2-92726
- semiconductor, heavily doped, band tailing, deep fluctuation levels 2-76972
- semiconductor, intraband and transverse relaxation times 2-115672
- semiconductor, nonequilibrium current carrier spectrum, relationship to carrier temp. after pulse photoexcitation 2-66590
- semiconductor, polycryst., Seebeck effect, intergrain electron states 2-110375
- semiconductor, surface electron states, barrier height determination (French) 2-110436
- semiconductor Schottky barriers, space charge region, dynamic response, gap states 2-87182
- semiconductors, density of localised states, evaluation from field effect data, theory 2-76887
- semiconductors, doped, impurity states, conc.-fluctuation model 2-110293
- semiconductors, temperature depend. cyclotron resonance linewidth, influence of Landau level broadening 2-77378
- solar cell, liquid-junction, illuminated semiconductor-electrolyte interface, steady-state model 2-116802
- spectral functions of solids, Pade approximants, tight binding calc. 2-61321
- superconducting-normal multilayer struct., electron states calc. (Chinese) 2-92825
- tight-binding bonds, electronic struct., cryst. struct. depend. 2-56417
- total and component, CPA and average t-matrix approx. 2-61326
- trans-polyacetylene, density of states, elec. cond., optical absorpt. and EELS calc. 2-77026
- transition metal surface kink electronic structure 2-56666
- transition metals, electronic states of impurities of non-transition elements, Fano effect (Japanese) 2-71916
- transition metals, electronic struct. and soft X-ray emission spectra 2-76911
- transition metals, vacancy clusters, electronic struct., binding energy, atomic relax. 2-87174
- transition metals and intermetallic cpds., electron-phonon coupling parameter, theoretical determs. 2-104269
- two-dimensional random system, single particle density of states, mag. field effect 2-61327
- two-dimensional system, Anderson localization and supercond. transition temp. 2-61644
- variable-band semicond. model, local density of states 2-61329
- weak coupling superconductor, critical temp., specific heat 2-104521
- zero-gap semiconductor, carrier statistics 2-92623
- AgCl, band struct. and density of states, APW-LCAO calc. 2-115663
- Ag₂Te-In₂Te₃ system, molten, elec. cond. and mag. susceptibility, temp. and comp. depend. 2-61465
- Al, liquid, 3p electron density of states 2-82199
- Al-SiO₂-Si, MOS structure, surface state density determ. based on Hill-Coleman technique 2-77192
- α -Al₂O₃, electronic struct., extended tight-binding calc. 2-110241
- As, amorphous, density of states, Matthews-Davis-Elliott even membered ring model 2-61345
- As, amorphous, thermal relax., specific heat 2-76702
- As, electronic band struct., density of state peaks, UPS study 2-98534
- As₂S₃, amorphous, thermal relax., specific heat 2-76702
- As₂Se₃, amorphous, localised density of states meas. 2-82293
- Au-Co(V), dil. alloy, impurity optical absorpt. meas. 2-99160
- Au-Si, electronic props. 2-98512
- Be, X-ray spectrum near Raman band, electronic struct. calc. 2-72577
- Bi film, electron concentration and density of states, modelless calc. 2-92780
- Bi, liquid, electronic density of states, Green's function and perturbative calcs. 2-71854
- Bi_{1-x}Sb_x, semicond., valence band struct., elec. and thermal cond. study 2-87143
- Bi₂Te₃-Sb₂Te₃, energy spectrum of solid solutions 2-110239
- C amorphous, thin layers, 2D-, 3D hopping conduction (French) 2-92604
- CaWO₄, IR spectra, vibr. excitation density of state functions 2-99106
- CdP, CdP₂, Cd₃P₂, electronic struct., X-ray spectral investig. 2-82221
- CdSb, symm. density of states peaks, photomodulated absorpt. (Russian) 2-71851
- CeAl₃, electronic struct. and mag. props. 2-66752
- CeH₃, valence band and 4f and 3d levels, XPS study 2-77704
- CeSn₃, mixed valent props. 2-56506
- CoAl, electronic struct. and charge transfer, APW band calc. 2-66430
- Co₉₀Zr₁₀ and Co₃₆Zr₆₄, amorphous, sp. ht., susceptibility, resist. 2-72224
- Cu (100):K, surfaces, metastable de-excitation spectra 2-82197
- Cu density of unoccupied electronic states, soft X-ray appearance, pot. spectrosc. obs. 2-111028
- Cu Zr metallic glasses, electronic density of states, cluster calc. 2-71848
- Cu-Ga(Ge)(Ni), Fermi surface, density of electron states, positron annihilation study (German) 2-104231
- Cu₃Ni₁₋₃₃, surface segregation, electronic theory, local density of states 2-61152
- CuZr₂, electronic density of states for cryst. and amorphous phases 2-76909

electronic density of states continued

- Cu₉₀Zr₁₀ glass, electronic struct. 2-104236
- Cu₂Zr_{1-x} (25 $\leq x \leq 70$) metallic glasses, crystn. characts. 2-97928
- Eu chalcogenides, undoped ferromag., real spin 7/2, density of states and band edge shift 2-76885
- Fe, amorphous, electronic struct. 2-66427
- Fe overlayer on Pd(111), mag. behaviour, photoemission, LEED and Auger study 2-110611
- Fe-Co-Ni system, mag. moment, CPA calc. (Russian) 2-115981
- Fe_{1-x}B_x, amorphous, electronic struct. 2-66427
- Fe₂P_{1-x}, amorphous, electronic struct. 2-66427
- FeRh, electronic band struct., and mag. order, antiferromag.-ferromagnetic transition 2-82595
- FeRh, paramag., ferromagnetic and antiferromag., band struct., muffin-tin calc. 2-82216
- Fe₂Si_{1-x}, ferromag. alloys, amorphous and crystalline, even magneto-optic spectroscopy 2-104857
- Fe₂Si_{1-x}Al_x, elec. resist. and band struct., density of states at Fermi level 2-61440
- β -FeTiH, electronic props., band struct., APW calc. 2-66416
- Ga, liquid, electronic density of states, Green's function and perturbative calcs. 2-71854
- GaAs, density of states of photoemitting bands, Kindig-Spicer method 2-56416
- GaAs, electronic density of states, cluster-Bethe-lattice approach 2-66413
- n-GaAs, heavily doped, Fermi energy and screening length 2-66410
- GaAs surface, electron state density, low energy electron reflection study (Russian) 2-87362
- GaAs surface (110), O₂ adsorption, density of valence states, photoemission study 2-82142
- GaAs, surface states, intrinsic unoccupied, bremsstrahlung isochromat spectroscopy study 2-98713
- GaAs:Ge, N superlattice alloy, impurity sheet doped, band struct. 2-110242
- GaAs-Ga interface formation, electronic props., photoemission LEED and Auger study 2-98744
- GaAs(110), vacancies and adsorbed H, electronic struct. calc. 2-110422
- GaN-GaAs MIS capacitors, interface states characts., G-V, C-V and transient capacitance anal. 2-92776
- GaSe single crystals, surface photo-EMF at high excitation levels 2-61522
- GdNi₅, spin polarised energy band struct. calcs. 2-92449
- p-Ge, negative magnetoresistance obs. (Russian) 2-56617
- Ge, self-consistent pseudopotential calc. for electronic struct. 2-71859
- Ge-Se(Te), amorphous and cryst., electronic struct., density of states, pseudopotential methods 2-61345
- GeTe, cubic and rhombohedral, band struct. 2-92468
- (Hg,Cd)Te, photochemical oxidation 2-111345
- Hg, liquid, electronic density of states, Green's function and perturbative calcs. 2-71854
- Hg_{1-x}Cd_xTe, disordered, band struct., CPA calc. 2-87138
- Hg_{1-x}Cd_xTe, resonant states, influence on optical props., three-band Koster-Slater model 2-56468
- n-HgTe, zero-gap semiconductor, carrier statistics 2-92623
- InAs, surface, electron state density, low energy electron reflection study (Russian) 2-87362
- InAs, thermal oxidation, oxide film characterisation 2-111348
- InAs-GaAs, heterojunction band discontinuities, MBE growth, XPS study 2-77166
- InO, films, density of states anomalies, tunnelling study 2-110478
- InP/Al₂O₃ MOSFETS, CVD of Al₂O₃ dielec. layer 2-111090
- InSb, surface, electron state density, low energy electron reflection study (Russian) 2-87362
- InSe single crystals, surface photo-EMF at high excitation levels 2-61522
- IrO₂, optical props., 0.5 to 9.5 eV, electronic struct. 2-57125
- KC₈, intercalation compound, cryst. and band struct., Fermi surface, de Haas-van Alphen effect 2-82227
- KMgF₃, electronic energy band struct. 2-82225
- LaB₆, supercond., electronic struct., phonon modes, Eliashberg function, muffin tin approx. 2-66698
- LaNi₅, spin polarised energy band struct. calcs. 2-92449
- La₂NiO₄, coexistence of localised and itinerant 3 d electrons, lattice const. meas. 2-66755
- Li, K absorption spectrum, band struct. and density of states, initial state approx. 2-87901
- LiC₆, intercalate, absolute spin susceptibility, paramagnetism 2-77259
- LiCl, energy band calcs., self interaction correction, density of states 2-66445
- N₂, solid, valence-band photoemission, partial cross sections and density of states effects 2-93363
- Na, liquid, electronic density of states, Green's function and perturbative calcs. 2-71854
- Nb, photoemission studies of clean and oxidised surfaces 2-77695
- Nb-Cu superlattice, supercond. transition temp., proximity theory, density of states 2-66701
- NbH₃, band struct., Fermi surface, and optical absorpt. spectra 2-104246
- NbH₃, electronic struct., electron-phonon coupling 2-66444
- NbSe₂ (2H), ⁹³Nb NQR and spin-lattice relax., 7 to 77K (Russian) 2-66946
- Nb₂Sn, cubic, electronic struct., nonorthogonal tight binding calc. 2-76913
- Nb₂Sn, photoemission studies of clean and oxidised surfaces 2-77695
- Nb₂Sn, tetragonal, electronic struct., nonorthogonal tight binding and APW calcs. 2-76914
- Nb₂SnH₃, heat capacity, supercond. transition temp. electron phonon interaction, H content effects, exp. study 2-56206
- Ni (100):K surfaces, metastable de-excitation spectra 2-82197
- Ni silicides, electronic struct., photoemission study 2-110247
- Ni surface, adsorption of Ar, Kr, Xe, CO, O₂, N₂, electronic binding energies of valence levels, UPS study 2-82437
- Ni-Cu, L_{III}, L_{II} X-ray absorpt. spectra and density of states, KKR CPA calc. 2-99223
- Ni-Cu, ordered alloys, magnetisation and electronic struct. calc. 2-82576
- Ni_{1-x}Fe_x (100), spin-dependent density of states, spin-polarised photoemission meas. 2-83004
- Ni_{0.86}Mn_{0.14}, optical cond. meas. 1 to 4.9 eV, rel. to electron struct. (Russian) 2-99147
- Ni₂Si, self-consistent energy bands and bonding 2-66436
- Pb, liquid, electronic density of states, Green's function and perturbative calcs. 2-71854

electronic density of states continued

- PbMo₃S₈, supercond. and electronic props. (*Russian*) 2-98638
 Pb_{1-x}Sn_xTe, band struct. dispersion low and parameters (*Russian*) 2-61358
 PbTe:Ti(Na), density of states in valence band, sp. ht. and Hall coeff. meas. 2-82515
 Pd-Ge; glassy and cryst., electronic struct., AES and XPS study 2-82213
 Pd₂Fe and Pd₂FeH₃, electronic struct. and mag. props. in ordered and disordered phases 2-76917
 PdH_x, electronic and cohesive props., localised theory 2-82291
 Pt, inverse photoemission, density of states, fluorescence 2-77698
 PtBi, band struct. and optical props. 2-76916
 PtWO₃, hypothetical electrode material band struct. and electronic density of states 2-66447
 RP(RS), band struct., calc. and X-ray emission and absorpt. spectra study 2-110246
 Rh (100), surface electronic struct., density of states, self consistent local orbital calc. 2-61339
 Rh, electronic energy bands and optical props. KKR calc. 2-66432
 Sb₂Te₃, Bi₂Ge₃, solid solns., energy spectrum 2-76920
 ScH₃, electronic energy bands and optical props. 2-82224
 ScRe₃, density of states and supercond., low temp. sp. hts. 2-61640
 ScTe₃, density of states and supercond., low temp. sp. hts. 2-61640
 Se, amorphous, electronic density of states, cluster model, CPA calc. (*Russian*) 2-104220
 Si (111) surface, struct. of density of states studied by total current electron spectroscopy 2-87361
 Si, amorphous, density of localised states and carrier mobility, elec. cond. study 2-115640
 Si, amorphous, tetrahedrally bonded, simple model of hydrogenation 2-56418
 Si, amorphous CVD layer, localized state density meas. by field effect method 2-56737
 Si, glow discharge microcryst., thermoelec. power, Hall effect and density of states meas. 2-98674
 Si, screening effects on Auger lineshapes 2-87918
 Si:H, amorphous, DLTS response due to localized states 2-56492
 Si:H, amorphous, electronic states and total energies 2-66429
 Si:H, amorphous, obs. of photoinduced changes in gap states bulk density 2-66472
 Si:H, amorphous, sputtered, time-of-flight and photoinduced mid-gap absorpt., dispersion 2-87432
 Si:H, amorphous, sputtering and glow discharge prep., photoluminescence and midgap state density 2-87855
 Si:H, amorphous film, interfacial electronic struct. and density of states 2-66601
 Si:H, amorphous films, field effect density of states, annealing and light exposure effects 2-71850
 Si:H, amorphous solar cells, I-V characts., density of states, and depletion width 2-83483
 a-Si:H, electronic props., CPA calc. 2-56430
 Si:H, N(Ga), amorphous film, ion implanted, photocond. and energy spectrum 2-92698
 Si:H amorphous MIS struct., Langmuir-Blodgett film 2-87410
 Si:H amorphous thin film Schottky barrier diodes, diode characts., film props. 2-82430
 α-Si:H films, optical absorption and density of states in band gap 2-72571
 Si:H(PH₃), amorphous film, density of gap states, space charge spectroscopy study 2-87181
 Si:Ne, Ar, amorphous, ion implanted, localised defect states and impurity distrib., photocond. spectra study 2-61414
 Si-Cr interface morphology and electronic struct., photoemission and band struct., calcs. study 2-82460
 Si-SiO₂ interface, elec. props., negative bias-temp. test influence 2-77190
 Si-SiO₂ interface, Si ion implantation, defects, deep levels, annealing, C-V characts. study 2-61403
 Si-SiO₂ interface state density determ., single HF approx. 2-115906
 SiO₂ interface degradation and minority carrier lifetime effects of laser beam processing 2-61609
 SiO₂, plasma deposition, indirect 2-116383
 SmB₆, mixed valence cpd., small energy gap, electron tunnelling and IR spectrum 2-56442
 Sm_{1-x}Y_xS, surface core-level shift calcs. 2-104457
 α-Sn, fluctuation slot in valence band (*Russian*) 2-61357
 Sn, liquid, electronic density of states, Green's function and perturbative calcs. 2-71854
 SnO₂ (110), surface electronic struct., tight-binding calc. 2-110250
 TaS₂ (2H), intercalation cpds., mag. susceptibility and band struct. 2-104251
 Te, optical absorption, permittivity, Hartree-Fock-Slater calc. 2-87733
 Ti, bremsstrahlung isochromat spectra, density of unfilled electronic states 2-104982
 Ti, X-ray absorption spectra, electron relax. effects, core-hole potential 2-87903
 TiC, bremsstrahlung isochromat spectra, density of unfilled electronic states 2-104982
 TiC, X-ray absorption spectra, electron relax. effects, core-hole potential 2-87903
 TiH₂, electronic struct., APW method and LCAO interpolation 2-61353
 TiN, bremsstrahlung isochromat spectra, density of unfilled electronic states 2-104982
 TiN, X-ray absorption spectra, electron relax. effects, core-hole potential 2-87903
 TiO, bremsstrahlung isochromat spectra, density of unfilled electronic states 2-104982
 UNi_{2-x}Cu_x, band struct., photoemission study 2-104240
 V, band struct., XPS, NMR and sp. ht. studies 2-104243
 V₂Ge(Al), electronic struct., X-ray study (*Russian*) 2-110235
 VH₂, band struct., Fermi surface, and optical absorpt. spectra 2-104246
 V₉₀M₁₀ (M=Cr, Mn, Nb, Mo, Pd, Ta, W, Re, Pt, Au), supercond. crit. temp. and crit. field meas. 2-92805
 VO₂Nb, elec. and Seebeck effect meas. 2-66553
 V₂O₃, based alloys, transition metal double doping effects on elec. resist. and phase diagrams 2-92565
 VPT system, bandstruct. study 2-104242
 V₃Pt, band struct., XPS, NMR and sp. ht. studies 2-104243
 VSi₃ (V₃Si), band struct., LCAO EHT calc. 2-82219
 VSi₃ neutron irradi., NMR and mag. susceptibility, annealing effects (*Russian*) 2-93021
- electronic density of states continued**
 W (001) surface electronic struct., APW and warped muffin-tin calc. 2-61343
 W polycrystalline surface, Auger neutralization of multiply charged rare gas ions 2-99265
 WC, hexagonal, band struct. and partial charges, APW calc. 2-76924
 YB₃, supercond., electronic struct., phonon modes, Eliashberg function, muffin tin approx. 2-66698
 YCo₅, density of states and mag. moments, appl. of CPA and continued fraction method 2-66411
 ZnP₂, tetragonal, valence band, X-ray emission spectra and pseudopot. study 2-57218
 ZnP₂, Zn₃P₂, electronic struct., X-ray spectral investig. 2-82221
 Zr-Nb, soft X-ray absorpt. spectra and density of states calcs. 2-104999
 ZrH₂, electronic struct., electron-phonon coupling 2-66444
 Zr₇₅Rh₂₅, system, supercond. props. variation on amorphisation (*Russian*) 2-56781
 ZrTe₃, electronic struct., elec. props., absence of phase transition 2-87142
- electronic density of states of amorphous solids** *see electron energy states of amorphous solids*
electronic density of states of liquid semiconductors *see electron energy states of liquid semiconductors*
electronic desk calculators *see electronic calculators*
electronic engineering computing
see also circuit analysis computing; computerised instrumentation
 semiconductor film growth and doping, computer simulation 2-66390
electronic equipment manufacture
 electroplating alternatives for Au in electronics and decorative industries 2-67665
 electroplating with Au and Ag, future trends, substitute materials and cost reduction 2-67667
 small batteries output trends and future prospect 2-83464
electronic equipment testing
 biopotential mes. devices testing, Soviet development 2-62809
 capacitor microphone calibration, sensitivity variation with level obs. 2-55389
 heat and radiation resistant cable for LMFBR appl. 2-69763
 module control test specifications laid down by Commission of European Communities 2-62479
 seismic prospecting, system for automatic testing of PROGRESS digital stations (*Russian*) 2-94535
 Simtrac angiography high-pressure injector, functional evaluation 2-78413
electronic music
see also musical acoustics; musical instruments
 digital synthesis of musical sound (*Japanese*) 2-81171
 digital techniques for sound synthesis (*French*) 2-70785
 Lyrebird electronic piano, assembly and alignment 2-75795
 organs, automatic accompaniments facility (*Spanish*) 2-70787
 synthesis by spectral amplitude and brightness matching of analysed musical instrument tones 2-86181
electronic structure, atomic *see atomic structure*
electronic structure, molecular *see molecular electronic states*
electronics applications of computing *see electronic engineering computing*
electrons
see also beta-rays; cosmic ray electrons; positrons
 anomalous g-factor correlation, resonant cavity model 2-69465
 binding to electric dipole in mag. field, quantum calc. 2-101236
 Casimir electrostriction and magnetostriction forces calc. for $\epsilon_{\mu l}$ 2-101631
 composite particles with highly relativistic components, potential models 2-64303
 electric dipole moment, review 2-69468
 form factor, infrared QED 2-107598
 g-2, sixth-order contrbs., Feynman graphs 2-69467
 magnetic moment at high temp., one-loop QED correction 2-107662
 mass and anomalous mag. moment, finite temperature effects 2-59093
 mass operator behaviour in superstrong mag. field 2-89930
 mass-radius symmetry rel. to proton 2-107651
 QED, review 2-69401
 radius and energy radiation 2-54156
 relativistic electron adiabatic deceleration in galactic wind, steady-state case 2-63638
 solar flares, energetic electrons transport in fully ionised H⁺ plasmas 2-106493
 spin kinetic energy, intrinsic mass 2-95808
 $e^+e^- \rightarrow \mu^+\mu^-$, excited and stable heavy lepton prod. limits 2-64310
 pp \rightarrow eX, 53.63 GeV, single electron prod. 2-79919
 $\Sigma^- \rightarrow n e^- \bar{\nu}$, pol. Σ^- , beta decay electron asymmetry 2-64321
 $^{235}\text{U}(n,f)$, thermal, electron and antineutrino spectrum cal., $\bar{\nu}$ oscillations 2-80041
- electrooptics** *see electro-optical effects*
electroosmosis *see osmosis*
electrophoresis
see also electrophoretic coating techniques
 blood cell electrophoresis meas. using microcomputer, cancer early detection appl. 2-117127
 cataphoresis, transient, in discharge tube with end volumes 2-115083
 charged colloids, motion in electric fields, mean field approx. 2-88382
 dye vapors, cataphoresis and dissociation in DC glow discharge positive column 2-91692
 polyanion diffusion in low ionic strength buffers, electrolyte polarisation effects obs. 2-66264
 proteins, electrophoretic mobility, holographic interferometric obs. 2-78512
 scanning, 12-bit DAC 1218 and 10-bit DAC 1020, apps. 2-67754
 Ra traces in aqs. soln. containing chlorides, sulphates and carbonates, isotope separation 2-78120
electrophoretic coating techniques
 polymer coating 2-77759
electrophoretic coatings
 No entries
electrophotography
 binder-type photo-migration imaging film, image form. process (*Japanese*) 2-53865
 colour slide prep. using electrophotographic camera-processor (*Japanese*) 2-101477
 conference, Washington, DC, USA (Nov. 1981) 2-58540

electrophotography continued

- conference, Washington, DC, USA (Nov. 1981) 2-107011
electrostatic recording characts. in high temp. and humidity atmospheres 2-95514
poly-N-epoxypropylcarbazole, sensitized with 2,4,7-trinitrofluorenone, electrophotographic layer, device discharge 2-87338
film, gap states, xerographic spectroscopy 2-77213
grey scale compression in reprography 2-58942
high-resistance magnetic toners for electrophotographic development, theory and expt. (*Japanese*) 2-53864
image convertor, electrophotographic light-scanned, thin-film device, image readout dynamics 2-107438
image quality, conf., San Diego, CA, USA (Aug. 1981) 2-107000
laser scanning system, optimum operating parameters for xerography 2-97072
laser xerography, laser-scanning parameters and latitudes 2-75619
lasers applications 2-74536
magnetic blow-off method for toner charge measurement 2-53866
Michlers ketone-CdS mixture binder layers, electrophotographic characts. 2-107433
organic electrophotographic layers, effect of barrier layer of polyvinyl butyral on photographic properties (*Russian*) 2-53878
photosensitive semiconductor materials, solar photovoltaic conversion and xerography appl., review 2-65326
plate, residual voltage, carrier trapping and release parameters 2-110280
poly-N-vinyl carbazole-diazonium salt system, organic photoreceptor with charge-acceptance memory 2-58941
polymer films, ferrocene doped, overcoating materials for xerographic photoreceptors 2-107434
polyvinylcarbazole film, impurities and struct. effect on photolum. (*Russian*) 2-67092
squarylum particulate, photoconductor, fatigue reduction by electron transport material doping 2-110398
toner particle size measurement 2-69131
toner photoconductor adhesion in electrophotographic system, charge, size and shape effects 2-107437
xeroradiography, medical diagnostic appls. (*Japanese*) 2-105817
CdS_{1-x}Se_x mixed crystal photoconductive films for electrophotographic recording (*German*) 2-87342
Cd_{1-x}Zn_xS mixed crystal photoconductive films (*German*) 2-87342
Se-binder generation layer, trigonal, carrier photoinjection into organic carrier transport layers 2-87334
Se-binder photoconductive layer, trigonal, formed by in situ reduction and crystallisation, photocond. behaviour 2-87333
Si₃H₈N₄ amorphous, prep. from SiH₄-N₂-H₂ mixture, electrophotography photoreceptor appl. 2-93444
Si₃H₈ amorphous films for electrophotography, photosensitivity, glow discharge deposition and doping 2-107435
Si₃H₈ amorphous photoreceptor drum, RF glow discharge deposition, electrophotographic props. 2-107436
ZnO-PVK photoreceptor, dye sensitisation for electrophotography 2-84729
ZnO-polymer, photoreceptors, photosensitivity, photocurrent kinetics 2-61509

electrophotoluminescence see *electroluminescence; photoluminescence***electrophysiology** see *bioelectric phenomena***electroplated coatings**

- selective absorber coatings for flat-plate solar collectors 2-57722
Ag plating, future trends, substitute materials and cost reduction 2-67667
Al electroplating Fe and steel in AlCl₃ based molten salt mixtures 2-62285
Au plating, future trends, substitute materials and cost reduction 2-67667
Au plating alternatives in electronics and decorative industries 2-67665
Cd plated C steel, ductility, surface layers H content influence 2-67538
Cd-Ti electroplated coatings on high speed steels, endurance and corrosion resistance 2-57537
CdSe(CdSe_{1-x}Te_x) electroplated layers, growth and photoelectrochem. solar cell appl. 2-105580
Cr black plating, present status and appls. 2-62286
Cr-Cr₂O₃ solar black chrome film, microstruct., comp., plating process variables, thermal ageing effects, performance 2-93943
Cu electroplated Fe, passivity and its breakdown 2-77972
Ni contact coating on Si power device struct., burn-in process control by electroinductive method (*Russian*) 2-83050
Sn, electro-plated coatings, grain size effect on whisker growth 2-115635
Sn-Pb, electro-plated coatings, grain size effect on whisker growth 2-115635
Th target prep. and thickness meas. from radioactivity 2-108187

electroplating

- amorphous CoP alloys, apparatus for columnar growth control 2-69311
combined pulsating current and inverse polarity methods, advantages 2-99683
laser-enhanced plating and etching, mechanisms and appls. 2-77758
Permalloy, pulse plating system for high-resolution deposits 2-62079
power device struct., chemical Ni plating, nondestructive control (*Russian*) 2-83049
pulse electroplating process, deposit quality factors 2-77762
steel, electroplating with Al in AlCl₃ based molten salt mixtures 2-62285
tampon plating, plant, material, solutions (*German*) 2-105489
waste water in-stream neutralisation, meas. and control aspects (*German*) 2-105610
wire plating by cathode sputtering 2-72621
Ag plating, future trends, substitute materials and cost reduction 2-67667
Al with Ni or Cr using electrolytic brushing combined with cathodic activation 2-99599
Au plating, future trends, substitute materials and cost reduction 2-67667
Au plating alternatives in electronics and decorative industries 2-67665
Cr-Cr₂O₃ black chrome selective surfaces, deposit growth mechanisms and optical props. 2-72639
Cr-Cr₂O₃ solar black chrome film, microstruct., comp., plating process variables, thermal ageing effects, performance 2-93943
Cu, electroless plating kinetics meas., ligand adsorpt. inhibition effects 2-93451
Cu electroplating for LINAC accelerating structures for heavy ion fusion 2-85291
Fe, electroplating with Al in AlCl₃ based molten salt mixtures 2-62285

electroplating continued

- Fe powder, electrolytic Ni influence units distrib. on particle surfaces and powder particle size 2-116409
Ni-Co-Cu, electrodeposition from citrate bath 2-116396
Pd electroplating process in dendrite growth, gelatin additive in bath 2-71845
electropolishing see *electrolytic polishing*
electroreflectance
MIM structures, electroreflectance meas. 2-93160
Schottky-barrier electroreflectance, pseudo-exciton effect 2-99091
semiconductor-nematic liq. cryst. system electroreflection, dielec. polarisation 2-104854
Ag-electrolyte interface, surface states, electroreflectance study 2-92754
AlSb, interband transition energies, spin-orbit effects, electroreflectance study 2-104849
Au-electrolyte interface, surface states, electroreflectance study 2-92754
CaGa₂Cr₂ surface carrier conc., use of transverse electroreflectance 2-57058
n-CdSe, electrodeposited, Fermi level pinning, low-field electrolyte electrorefl. spectra 2-57059
GeS, electroreflectance spectra meas., 1.6 to 3 eV 2-87742
GeS, electroreflection spectra, changes under ion bombardment 2-82876
Ge_{1-x}Si_x, spin-orbit splitting, electrorefl. study 2-116155
Mn_{1-x}Zn_xFe₂O₄ spinel ferrite, charge transfer transitions in Dember photoEMF 2-110401
MoSe₂ (2H), electrolyte electroreflectance and reflectance studies 2-57060
Ni_{1-x}Zn_xFe₂O₄ spinel ferrite, charge transfer transitions in Dember photoEMF 2-110401
Si, charged impurity conc., carrier mobility, electroreflection study 2-115273
Si:P, ion implanted, electrolyte electroreflectance spectra study (*Chinese*) 2-93156
Si-SiO₂ interface, elec. props., negative bias-temp. test influence 2-77190
SiC, polytypes, band structure, electroreflection meas. 2-104851
electrospark machining see *spark machining*
electrostatic accelerators
see also *Van de Graaff accelerators*
DTA-2 accelerator, high-voltage (2 MV) accelerating tube model anal. (*Bulgarian*) 2-85406
high-current nanosecond accelerator for rapid processes study 2-108166
HV modular interconnecting and operating systems for Particle Beam Fusion Accelerator (PBFA-I) 2-90326
MP Tandem accelerator operation, computer aid 2-85410
multiple relativistic electron beams, injection and propagation into pre-formed plasma channels 2-96334
neutron HG-200U neutron generator 2-64730
Particle Beam Fusion Accelerator design, implementation and effective operation 2-90323
proton microprobe for Rossendorf tandem generator (*German*) 2-89864
tandem accelerators, polarised H ion source design and performance 2-90333
voltage conditioning 2-96331
electrostatic coating techniques
applications of electrostatics (*Italian*) 2-96792
aqueous powder suspension, new paint prep., applic. and props. 2-67599
optimising powder coating plant 2-111069
electrostatic coatings
aqueous powder suspension, new paint prep., applic. and props. 2-67599
charge meas. in electrostatic powder coating 2-58849
electrostatic devices
see also *capacitors; dielectric devices; electrostatic accelerators; electrostatic generators; electrostatic lenses; electrostatic precipitators*
angle resolved charged particle detection with toroidal electrostatic analyser 2-80386
beam extraction system for circular accelerator 2-113771
deflectors, field computation, electron beam lithography systems, numerical anal. 2-55057
dust protection for optical elements, electrostatic technology 2-55289
electronic tube development for streak camera system 2-74535
prism, internal refl., paraxial props., aberrations 2-65147
electrostatic fields see *electric fields*
electrostatic generators
see also *Van de Graaff generators*
applications of electrostatics (*Italian*) 2-96792
liquid, propylene carbonate dielectrics appl. 2-98320
electrostatic lenses
see also *aberrations; focusing; particle beams*
3rd order aperture aberration correcting lens 2-69204
Auger electron spectra of fast ion beams, reduction of Doppler broadening, refocusing props. of parallel-plate electrostatic analysers 2-64165
cone-edge focusing by single round electrostatic lenses 2-55056
electron focusing and dual-channel deflection systems with combined mag. and electrostatic fields, optical props. 2-65146
electron optical props. of electrostatic box lens with four planes of symmetry 2-85882
multipole lens, third-order ion optics, appl. mass spectrometers 2-79705
three-cylinder electrostatic mirrors and lenses design, mass spectrometer appl. 2-89847
two-cylinder, boundary value problem variational soln. 2-114149
electrostatic microphones see *microphones*
electrostatic precipitation see *electrostatic precipitators; precipitation (physical chemistry)*
electrostatic precipitators
efficiency, turbulent diffusion effect investig. 2-109308
pulsed corona discharge in cylindrical and wire-plate geometries, theory 2-115079
electrostatics
see also *electrets; electric charge; electric fields; electrostatic devices; static electrification; triboelectricity*
charged spherical particle in ionic soln., double layer approx. 2-105490
cylindrical mirror energy analyser, improved aberration corrector 2-65148
dielectric constant expansion, two-particle cluster integral 2-112802
dipole interaction energy near plane metal surface 2-107051
dipoles, mutually repelling, in rectangular region, struct. form. (*Russian*) 2-80867
elastic polarisable fluids, nonconducting, elec. field interaction 2-97334
ellipsoidal inclusion in anisotropic conductive medium 2-80868

electrostatics continued

- EM concepts and appls., book 2—107028
 fields in dielectric medium, superposition principle appl. 2—102683
 fractional charges on oil drops, reanalysis of Millikans expt. on charge quantisation 2—79302
 ICP emission, signal instability due to electrostatic effects in nebuliser spray chamber 2—115057
 ideal polarisable gas, interion electrostatic interaction 2—97687
 light modulators, electrostatic field calc. 2—86091
 macroscopic bodies, attraction, correction term (*Russian*) 2—55021
 magnetosphere, broadband electrostatic noise rel. to MHD stability of turbulent geomag. tail 2—100664
 metallic body in aerosol stream, charging 2—97638
 Meteorat-2 discharge expts. 2—68594
 nonuniform charge distrib. three-dimens., electric pot. determ. 2—90762
 point charge forced normal to elastic dielectric half-space, axisymm. boundary value problem 2—55020
 polyelectrolyte, persistence length, electrostatic contrib. 2—90747
 polyelectrolyte mols., flexibility, electrostatic contrib. to persistence length 2—90748
 sapphire cylinders, torsional vibrs., electrostatic method investig. 2—103076
 small particle systems, spontaneous elec. dipole moments 2—59990
 spherical cap, electrostatic pot. problem, closed form soln. 2—114150
 surface resistivity, nondestructive testing 2—90760
 thin spherical conductor with equatorial cut, electrostatic problem 2—102682
 two-dimensional boundary-value problems, variational method 2—114149

electrostriction

- see also piezoelectric materials; piezoelectricity*
 carbon tetrachloride, nonpolar symmetric molecules, electrostriction and Kerr effect 2—57020
 Casimir electrostriction and magnetostriction forces calc. for μ l 2—101631
 centrosymmetric crystals, EM wave nonlinear absorpt. due to excitation of sound 2—93152
 dilatometer, AC interferometric, electromechanical deformation meas. appl. 2—69128
 elastic dielectrics, electro-elastic and elasto-optic phenomena (*German*) 2—110772
 elastoelectric effects in noncentrosymmetric crystals 2—87679
 electromechanical materials and their appls. review 2—77453
 ferroelectric crystals, with charged domain walls, electromech. props. 2—99048
 fluids in electric and magnetic fields: pressure variation and stability 2—75490
 glass exposed to laser radiation, refr. index electrostrictive and thermal change kinetics 2—56018
 piezoelectric resonators in DC elec. field 2—87678
 polar fluid, electrostriction, dielectric saturation, statistical mech. study 2—99060
 polyvinylidene fluoride film, thermal expansion 2—92426
 TGS, electrostriction calcs., ferroelectric transition 2—99061
 two-sublattice model, piezoelec. and elastic props. 2—87675
 ^3He - ^4He dilution refrigerators, possibility of operation aboard spacecraft 2—64048
 ^4He , liquid and superfluid, electrostriction theory 2—71752
 $\text{Na}_2\text{B}_2\text{O}_5(\text{OH})_4 \cdot 3\text{H}_2\text{O}$, tinalconite, electrostrictive and electrooptical effects, Michelson interferometer meas. (*German*) 2—93117
 $\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$ electrostrictor for bistable optical device used in optical stabiliser 2—102846
 $\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$ type materials, electrostrictive effect 2—87683
 $\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$ - $\text{Pb}(\text{Mg}_{1/2}\text{W}_{1/2})\text{O}_3$ (PbTiO_3) ceramics, electrostriction rel. to phase transition diffuseness 2—87694
 $\text{Pb}_2\text{MgNb}_2\text{O}_{10}$ crystals, electromech. props. 2—99047
 $\text{PbZr}_{1-x}\text{Ti}_x\text{O}_3$, solid soln., ferroelec.-paraelec. transition, tricritical point 2—93126
 Se (layers), piezoelec., props. 2—99058
 $\text{Sr}_{0.75}\text{Ba}_{0.25}\text{Nb}_2\text{O}_6$ crystals, electromech. props. 2—99047

electrosynchronisation *see synchronisation***electroviscous effect**

- see also colloids; viscosity*
 EHD origin, study under unipolar DC injection 2—82004

element origin

- see also cosmic ray origin; cosmology*
 Big Bang and element creation, conf. (London, March 1982) 2—112651
 Big Bang nucleosynthesis, open and closed model anisotropies 2—117826
 galaxies chemical evolution, constraints imposed by $\Delta Y/\Delta Z$ ratio 2—74107
 heavy element formation in galaxy/star formation scenario 2—117774
 heavy element origin in primordial galaxies, Population III stars 2—117711
 heavy elements, primordial, prod. by pregalactic Population III stars 2—106818
 nucleosynthesis in primordial stars and supernovae, rel. to origin and abundances of elements (*German*) 2—94877
 solar flares, synthesis of elements as source of flare gamma-ray emission 2—68719
 ^9Be production by neutrinos generated in gravit. collapse of stars, rel. to Galaxy ^9Be abundance (*Russian*) 2—106686
 He abundance in pregalactic era from obs. of Sc galaxy M101 2—68889
 He, primordial, prod. by pregalactic Population III stars 2—106818
 ^6Li primordial synthesis, reaction rate for $^4\text{He}(d,\gamma)^6\text{Li}$ 2—112626

element relative abundance

- see also isotope relative abundance*
 14 MeV neutron activation anal. in geological materials (*Chinese*) 2—63108
 aerosol composition determ., evaluation of four types of samplers 2—105631
 aerosol over Beijing in winter, elemental concs. (*Chinese*) 2—88989
 Ap stars, spectroscopic detect. of surface chemical inhomogeneities in absence of spectrum variability (*Russian*) 2—100958
 asteroids, compositional struct. of asteroid belt 2—106598
 κ Cancri, Hg-Mn star, search for medium-Z elements in UV spectrum 2—106723
 Cassiopeia A, N/H ratio rel. to progenitor star mass and supergiant stars mass loss 2—63417
 Chainpur chondrite, evidence for primitive nebular components in chondrites 2—100849
 cosmological abundances 2—117827

element relative abundance continued

- Crab Nebula, exploding $10 M_\odot$ star model rel. to ejecta heavy elements enrichment 2—89285
 Cretaceous-Tertiary boundary Ir abundance anomaly in New Mexico, USA 2—62930
 V460 Cygni, C star, determ. of $^{12}\text{C}/^{13}\text{C}$ and C/O ratios 2—63421
 Cygnus Loop, UV spectra rel. to depletion of heavy elements 2—106848
 early Universe, effect of heavy elements abundance on primordial gas heating by background radiation 2—101046
 El'gygytyn meteorite, probable composition (*Russian*) 2—63327
 fallout radionuclides in Saguenay Fjord, Quebec, sediment-depth profiles rel. to transport mechanism 2—99856
 fast neutron analysis of geologic materials 2—57668
 galaxies, two-component, model of chemical evolution allowing for gas inflow 2—106897
 galaxies chemical evolution, constraints imposed by $\Delta Y/\Delta Z$ ratio 2—74107
 granite, U, Th, Li and B contents rel. to natural prod. of ^3H in permeable rocks 2—100381
 ground element abundances from airborne gamma ray spectral data inversion 2—73494
 He 2—131, very low excitation planetary nebula, C abundance determ. from UV spectrum 2—94817
 heavy element abundance gradient towards galactic centre and plane 2—112570
 heavy elements, primordial, prod. by pregalactic Population III stars 2—106818
 interstellar element depletions, effects of interstellar shocks 2—106849
 interstellar gas, element depletions determ. from stellar UV spectra 2—106871
 local interstellar medium, element depletions from UV spectra of nearby white dwarfs 2—106690
 interstellar medium, Fe, Ti and H_2 abundances rel. to interstellar 4430 Å band strength 2—106847
 local interstellar medium, implications of trace elements abundances 2—63554
 irregular galaxies, chemical evolution 2—89363
 irregular galaxies, global O/H and N^+/S^+ abundance ratios 2—101054
 lakes within Mount St. Helens blast zone, chemical changes resulting from eruption 2—88929
 Lough Neagh, Northern Ireland, anthropogenic changes in sedimentary flux of Mg, Cr, Ni, Cu, Zn, Hg, Pb, and P 2—105609
 M101 H II regions, element abundances and electron temps. from visible obs. 2—68889
 in M31, element abundance gradients from supernova remnants and H II regions 2—63618
 Madiun (Indonesia) meteorite, classification, petrography and chemistry 2—89208
 Markaryan 314 (NGC 7468), remarkable irregular galaxy, metal abundances in three bright regions 2—101042
 metals in waters of Baffin Bay and Canadian Arctic Archipelago 2—83850
 meteorites, discovery of fine Ni-poor Fe-Ni grains in olivine of unequilibrated ordinary chondrites 2—100848
 Mono Lake, California, chemistry of elevated concs. of actinides 2—94408
 Mono Lake, California, radionuclides concs. 2—94407
 Moon, deficiency of siderophile elements rel. to H.C. Urey's theories of lunar origin 2—112678
 neutron activation analysis on meteorite, lunar and terrestrial samples, appl. 2—57667
 NGC 5408, irregular galaxy, metal abundance rel. to X-ray emission from star formation burst 2—106911
 NGC 6720 (Ring Nebula), C/O ratio, UV spectral obs. 2—63590
 NGC 6752, globular cluster, origin of C and N vars. 2—68839
 NGC 6853, planetary nebulae, C, N, O, Ne abundances from UV spectra anal. 2—89330
 NGC 7814 edge-on spiral galaxy, surface photometry rel. to heavy element abundance gradient 2—89365
 Nilpena urellite, unusual polymict breccia, mineralogy and comp. rel. to origin 2—100847
 noble gases abundances in meteorites, effects of sorption by Fe_3O_4 (magnetite)+C 2—100844
 noble gases abundances in meteorites, role of sorption by $(\text{Fe,Cr})_3\text{O}_4$ (chromite)+C 2—100845
 noble gases abundances in planetary gases, implications of sorption by sulphides and spinels 2—100846
 noble gases in meteorites, abundances rel. to origin and age (*Japanese*) 2—117635
 nucleosynthesis theory, slow neutron capture process 2—100914
 Pal 13, halo globular cluster, metal abundance from RR Lyrae stars spectra 2—106822
 TX Piscium, C star, determ. of $^{12}\text{C}/^{13}\text{C}$ and C/O ratios 2—63421
 planetary nebulae, chemical comp. rel. to theoretical models of objects of intermediate-to-high excitation 2—84295
 planetary nebulae, comps. rel. to evolution, review 2—68878
 planetary nebulae, element abundances from integrated fluxes for UV emission lines 2—106846
 prompt gamma activation of environmental and terrestrial samples 2—57669
 QSO elemental relative abundance and galaxy evolution 2—106953
 rare earth elements in seawater, depth distrib. rel. to marine geochemical cycle and water mass tracing 2—63003
 red giant stars, C/O ratios rel. to model atmospheres 2—112426
 red giant stars, metal deficient, C and N abundances 2—84233
 Saturn atmosphere, struct. and comp. from VLA obs. at 1.3, 2 and 6 cm 2—106607
 stellar nucleosynthesis, rel. to origin and relative abundances of chemical elements (*German*) 2—94877
 supernova remnants, effects of metal-rich ejecta on X-ray luminosities 2—112527
 Tiboburra meteorite, new carbonaceous chondrite of high petrologic grade, mineralogy and comp. 2—89207
 trace metals in sediments from Ligurian coast, Italy 2—83527
 transuranic activity measurements in environmental samples with a $\text{Si}(\text{Li})\text{-NaI}(\text{Ti})$ photon spectrometer 2—57670
 47 Tucanae, globular cluster, anticorrelation of C and N on horizontal branch 2—63541
 47 Tucanae, origin of C and N vars. 2—68839
 Venus, atmosphere-surface interactions rel. to volatile element distrib. in atmosphere and crust 2—112364

element relative abundance continued

- volatile elements abundances in planetary atmospheres, rel. to atmospheres origin and evolution 2-112357
 Z=109, existence in nature, invest. (*Chinese*) 2-59442
 Z=110, existence in nature, invest. (*Chinese*) 2-59442
 B in interstellar medium towards zeta Ophiuchi, UV obs. 2-79182
 Ba in R Coronae Borealis stars 2-63434
 Be in interstellar medium towards zeta Ophiuchi, UV obs. 2-79182
 C abundance in H II regions, IUE obs. of Magellanic Clouds 2-58444
 C and N abundances in globular clusters, influence on evolution of low mass main sequence stars 2-106679
 C/Fe abundance ratio in halo dwarf stars 2-112446
 C/H ratio from Voyager IR spectra of Jupiter 2-89186
 Eu, solar photospheric abundance 2-59747
 Fe depletion in interstellar medium, results of search for FeO 2-74045
 He abundance in pregalactic era from obs. of Sc galaxy M101 2-68889
 He in eclipsing cataclysmic binary stars 2-89269
 He, primordial, prod. by pregalactic Population III stars 2-106818
 He primordial abundance, dwarf galaxy optical emission spectra 2-117828
 Hg-Mn stars, Be abundances from near UV spectra 2-112448
 Ir anomaly, Eocene extinction implications 2-94664
 Li abundance in Galaxy at time of form. from extreme population II dwarfs obs. 2-89382
 Li in R Coronae Borealis stars 2-63434
 N anomalies in O-type stars 2-79091
 N, interstellar abundance, enrichment by planetary nebulae 2-112542
 N/Fe abundance ratio in halo dwarf stars 2-112446
 Nb in solar photosphere from Nb I lifetime meas. 2-112406
 ONS abundances in clumpy irregular galaxies 2-58446
²¹⁰Po, assay using background rejecting extractive liq. scintillation 2-54678
 Rh in solar photosphere from Rh I lifetime meas. 2-112406
 Rn anomaly in hot springs in India, search for correl. with local seismicity 2-111886
 S, atmospheric input into ocean 2-94400
 Sm/Nd ratio determination in geophys. or astrophys. samples using standard solutions 2-63253
 Th content in mineral ore by fission track technique 2-83976
 Th/U in geological samples, fission radiography 2-112154
 W/La in Moon, constraints on origin 2-78988
 Zn in interstellar medium, abundance from IUE obs. 2-63555

elemental semiconductors

- accelerated electrons, intense beam, device for cooling thin samples irradiated by beam 2-112880
 amorphous, electroabsorption spectra, effective masses 2-77491
 CC, Ge, positron lifetimes, systematic study 2-57207
 Czochralski silicon solar cell modules: present cost and future prospects 2-83498
 diamond: Sn, cordency and compression effects on isomer shift of impurities 2-56989
 diamond: N, A₁-T₂ splitting, Jahn-Teller distortions, EHT calc. 2-82277
 diamond, (111)-(2×1) surface, dimerised chain model reconstruction 2-77153
 diamond, band structure, first principles calc. using localised basis set 2-110236
 diamond, GR1 centre, vibronic model, rel. to MCD spectrum 2-67087
 diamond, impurity screening many-body effects 2-110295
 diamond, lattice consts., and internal X-ray diffractometer with uniaxial stress apparatus study 2-65797
 diamond, nonlinear screening of negative point charges 2-82261
 diamond, positron lifetimes, systematic study 2-57207
 diamond, semiconducting, as ultrafast room temp. IR detector, time-resolved photocond. response 2-79675
 diamond, semiconducting, electron irradiated, photocond. meas. 2-98692
 diamond, uniaxial stress splitting of photoluminescence transitions at optical centres 2-72537
 diamond, yellow-luminescing brown, optical meas. 2-72538
 diamond (111), (1×1) struct., strongly correlated surface state band model 2-110418
 diamond (111), adsorbed H, photoemission and photon-stimulated ion desorpt. study 2-110144
 diamond (111), adsorbed H H termination, EELS study 2-110145
 diamond (111) reconstructed surface, electronic states, angle-resolved photoemission study 2-57257
 electron band calcs., dynamical aspects of correlation corrections 2-71895
 fast neutron irradi., gradual damage 2-115303
 n-Ge: Au, photoconductivity at photon energy less than impurity ionization energy 2-77121
 graphite, artificial single crystal, magnetoresistor, higher waiting temp. 2-98671
 interferometer, Fabry-Perot, heated by laser radiation, thermal hysteresis 2-53829
 LPCVD A-Si post-hydrogenation and ion-implantation doping 2-71960
 material properties relevant to modern semiconductor elements (*German*) 2-98533
 photoconvertors, HV, under high intensity solar radiation temp. dependence investigation 2-73111
 planar channelling temp. characts. 2-92063
 polypyrrole-Si (a-Si:H) contacts, Schottky barrier formation 2-92727
 proton irradi., rearrangement of intrinsic defects during annealing, Hall coeff. meas. 2-109863
 sharp line donor-acceptor pair recombination luminesc. 2-104928
 Si:H, amorphous oxidised films, valence band spectra 2-104300
 Si, amorphous, solar cells as power source of future 2-105558
 Si, twin interface, X-ray topography exam. of struct. and defects (*Chinese*) 2-109810
 p-Si(Li) parameter meas. during drift compensation 2-74465
 Si nonradiative processes and defects, obs. by acoustic spectroscopy 2-53446
 n-Si/acetoneitrile interface, Fermi level pinning and surface states investig. 2-61584
 silicide-Si interface electronic states and microstruct. 2-87412
 solar batteries with radiative cooling concentrating systems optimal parameters determ. 2-99785
 solar grade silicon as a potential candidate material for low-cost terrestrial solar cells 2-67860
 SOS: Si films, characterisation of defect reduction and Al redistrib. 2-91947

elemental semiconductors continued

- SOS, laser annealed, electron Hall mobility and residual stresses, heat treatment effects, Raman study 2-98745
 SOS, two-layer structure, scanning electron or laser beam irradi., temp. distrib. calc. 2-92027
 SOS device structures, Raman meas. of stress 2-77499
 SOS epitaxial film, fault-free Si at Si-Al₂O₃ interface 2-115575
 SOS epitaxial films, defects and strain after CW laser annealing, Rutherford backscatt./channelling and TEM study 2-81799
 SOS films, and interfaces, chem. aspects 2-91847
 SOS films, effect of high-temp. H₂ annealing 2-93543
 SOS films, model for X-ray rocking curve half-widths interpretation 2-91977
 SOS films, near-surface crystallinity meas. by UV reflectance 2-93218
 SOS films, optical characterisation of Si and sapphire surfaces rel. to discrete device performance 2-93219
 SOS films, sapphire substrate orientation influence on crystn. quality and SOS/MOS mobility 2-91948
 SOS films, struct.-props. rels. associated with haze 2-91907
 SOS structures, CVD growth, surface defect and strain reduction by ion implantation and solid phase epitaxy 2-66384
 surfaces, struct. and surface states, review 2-98395
 thin film thermometers, for use at low temps., characts. 2-74412
 tribolayers, formed by frictional contact in liq. He 2-62234
 Ag-Si layer struct., B implantation depth profiles 2-103804
 Ag₂Se-Se-Au(Cr)(Ag)(Ag₂Se) thin film sandwich, polarised memory switching obs. 2-104468
 Al/amorphous Se/Al struct., capacitance and photocapacitance, time depend. meas. 2-56724
 Al-amorphous Si-Ni(Au) struct., tunnelling characteristics meas. 2-66657
 Al-Si Schottky diode with surface layer, current-voltage characts. (*Rumanian*) 2-66621
 Al-Si-Ti structure, use of Ti thin layers to retard reaction of Al with Si 2-71737
 Al-SiO₂-Si, B-ion implanted MOS structure, radiation defect spectra study by TSC method 2-66646
 Al-SiO₂-Si, MOS structure, surface state density determ. based on Hill-Coleman technique 2-77192
 Al-SiO₂-Si capacitors, avalanche injected, positive charge effects on flat-band voltage shift meas. 2-87394
 Al-SiO₂-Si MIS capacitor, DLTS study 2-115896
 Al-SiO₂-Si structure, prep. under UHV conditions 2-56716
 Al-SiO₂-Si system, hydrogenation of defects at the Si-SiO₂ interface 2-56373
 Al-SiO₂-Si tunnel diode, metal deposition and oxide growth technology effect on electronic props. 2-56717
 As, amorphous, temp. depend. of EXAFS 2-105002
 As, core effective potentials, ab initio calcs. 2-70140
 Au/n-Si Schottky diode, elec. props., effect of regular surface relief 2-77158
 Au-SrTiO₃-SiO₂-Si struct., electron beam deposited, nonvolatile memory props. 2-72068
 a-B:H, ESR study, annealing effects on signal intensity and linewidth 2-87591
 p-Bi:Sn, transverse magnetoresistance and Hall effect 2-77093
 C, cohesion, polymorphic transition, elastic and dielec. props. 2-60919
 C evaporated films, electron transport, semicond. and hole metal behaviour 2-61461
 C film, hopping conduction, graphical data interpretation 2-82497
 C:H, amorphous glow discharge film, photoluminescence and ESR spin density 2-93244
 CdS-Ge interface, X-ray photoemission spectra of band discontinuities 2-82447
 CdSe-p⁺-n-Si tunnel junction solar cell photoanode props. meas. 2-88427
 Co-Si contact, barrier height 2-92752
 Ga, core effective potentials, ab initio calcs. 2-70140
 GaAs:Si, ion implantation, elec. props., for dual gate MESFET (*Chinese*) 2-109817
 Ge (100) alkali metal adsorption, surface cond. and interface states, EELS study 2-92716
 Ge (111), clean and adsorbed H, electron states, angular resolved UPS study 2-110414
 Ge (111), n-inversion layers, subband energy struct., effective mass approx. 2-110489
 Ge (111) surface, electronic struct., photoemission meas. 2-66609
 Ge (111) surface covered with Na, K or Cs in submonolayer range, EELS obs. 2-72585
 Ge, (111)-stressed, binary electron-hole liq., phase separation, surface struct. role 2-71882
 Ge, (111)-stressed, electron-hole liq., surface struct. and surface tension, rel. to bulk props. 2-66455
 Ge, ambipolar diffusion of high density electrons and holes 2-110367
 Ge, amorphous, effective charges 2-86568
 Ge, amorphous, evaporated, struct. study by neutron diffr. 2-86566
 Ge, amorphous, far-IR vibr. spectra using double-beam Fourier transform spectrometer 2-113003
 Ge, amorphous, laser irradiated, struct. change features 2-76493
 Ge, amorphous, Mossbauer study 2-99004
 Ge, amorphous, phonon spectra 2-56138
 Ge, amorphous, random network struct., neutron amorphography 2-91791
 Ge amorphous film, crystallisation boundary dynamics in CW laser irradi. 2-81680
 Ge amorphous film, elec. cond., hopping model, electron-phonon coupling 2-77054
 Ge amorphous film, explosive crystallisation, temp. and thickness effects 2-65860
 Ge amorphous film, low-energy excitations, sp. ht. meas. 0.08 to 2.5K 2-71662
 Ge amorphous films, time-resolved TEM of pulsed crystn. 2-82167
 Ge, amorphous solar selective absorber, medium temp. 2-93945
 Ge, atomic step height on clean vicinal faces 2-86997
 Ge avalanche photodiode, detectors for digital optical fibre systems in 1.2 to 1.55 μ m range 2-5532
 Ge avalanche photodiodes for long wavelength optical fibre systems, review 2-81117
 Ge, band struct., nonlocal pseudopot. calc. 2-110245
 Ge, band structure, tight binding calc. 2-66443
 Ge bicrystal, tilt type, symmetrical deform., exptl. confirm. of model 2-71469

elemental semiconductors continued

- Ge, carrier conc. effect based devices, sensitivity increase 2-87430
 Ge, charge carrier drag study (*Russian*) 2-71983
 Ge, chemisorption on GaAs (110), UPS and work function studies 2-110412
 Ge, cleaved surface, charge carrier minimal motion (*Russian*) 2-72046
 Ge, cohesion, polymorphic transition, elastic and dielec. props. 2-60919
 Ge, Corbino surface shape, magnetocond. 2-115794
 Ge, core effective potentials, ab initio calcs. 2-70140
 Ge crystal, axially channelled 250 GeV/c positive particles ang. distrib. 2-66093
 Ge, Debye-Waller factors 2-98235
 Ge, deep impurity photoionisation, electron-phonon interactions, photoconductivity study 2-61520
 Ge, deep metal-related centres obs. by DLTS 2-87186
 Ge, deep metal-related centres obs. by capacitance spectroscopy 2-92523
 Ge, defect annealing, electron induced, stimulated by 'additional lighting' (*Russian*) 2-103825
 Ge, detector materials, radiation effects 2-80392
 Ge detector telescopes, appls., radiation damage, annealing 2-80391
 Ge, detectors, status and problems 2-90365
 Ge, dielectric matrix, exchange-correlation functional, local density formalism 2-76956
 n-Ge, dielectric relaxation time effect on measured energy relax. time 2-87667
 Ge, diffraction grating, high-density laser-induced transient plasma, picosecond dynamics 2-77628
 Ge, dislocation mobility, gliding direction inversion effects (*Russian*) 2-82032
 Ge, dislocation nucleation, point defect condensation model 2-71450
 Ge, dispersive and refr. index meas. using diode lasers 2-112958
 p-Ge, distrib. function and negative differential cond. calcs. at heavy hole cyclotron reson. 2-115797
 Ge, donor-bound excitons, fine struct. splittings 2-82246
 Ge, donor-bound multiexciton complexes, density-functional method 2-82245
 Ge, dumbbell shaped struct., current oscills., neg. resist., elec. double layer 2-92635
 n-Ge, electron and γ -ray bombarded, defect accumulation kinetics, intensity dependence meas. 2-115295
 Ge, electron bombarded, point defect generation, nonequilib. carrier lifetime study 2-56036
 Ge, electron heating time in HF field, effect on diffusion 2-87291
 Ge, electron irradi., displaced atom profiles, positron annihilation study 2-110972
 Ge, electron mobility, Markovian soln. 2-110366
 Ge, electron photoemission during X-ray diff. 2-105050
 n-Ge, electron pulsed bombardment, defect formation obs. 2-115294
 Ge, electron-hole drop evaporation by laser heating (*Russian*) 2-104256
 Ge, electron-hole drop kinetics and decay in microwave field, hot carriers 2-92480
 Ge, electron-hole liq., phase separation into two components 2-56447
 Ge, electron-hole liquid phonon spectroscopy 2-115667
 Ge, electron-phonon scatt. matrix and absorption coeff. 2-103923
 Ge, electronic bands, critical points in first Brillouin zone 2-56435
 Ge, energy and stress depend. hole masses 2-66426
 n-Ge, energy loss process for nonequilib. hot carriers 2-92641
 p-Ge, energy relax. mechanisms under nonlinear absorpt. of light 2-114357
 Ge epitaxial film on Si(100), RF sputter deposition, struct. and elec. meas. 2-66386
 Ge, epitaxial growth from Ge-In solution, radiation effects (*Russian*) 2-76869
 Ge, epitaxial growth on Ag (111) film on mica substrate, RHEED study 2-93429
 Ge epitaxial layers, LPE growth in γ -radiation field, struct. and electro-physical parameters 2-115599
 Ge, exciton and electron-hole liq. luminescence, elec. cond. 2-77578
 Ge, exciton thermodynamics 2-71881
 Ge extrinsic plasma, oscillator freq., uniaxial deformation effects 2-115799
 n-Ge, far IR obs. of D⁻ band 2-67035
 Ge, Faraday rot., nonreson. interband transitions, expt. and Kramers-Kronig anal. 2-57065
 Ge field emission cathodes, flicker noise 2-93385
 Ge film, amorphous, electron beam annealing in TEM 2-71503
 Ge, film, deposition by DC and RF double cathode sputtering (*Japanese*) 2-62065
 Ge film, laser-crystallised, crystallite morphology and defect struct.; TEM and SEM study 2-66402
 Ge, focusing of high-frequency dispersive phonons 2-61093
 n-Ge, free-carrier electroabsorpt. in intervalley scatt. 2-116153
 Ge, galvanomagnetic/combinational elements, fluctuation processes 2-87351
 Ge, gamma irradiated, use of thermal annealing for radiation hardening 2-56032
 Ge, gamma-ray induced defects, thermal and electrical stability 2-92033
 Ge, graphite crucible for spitting-free high rate e-gun 2-93426
 Ge, HCl gas phase etched, surface topography 2-98400
 Ge, HCl gas phase etching, surface form. processes 2-99570
 Ge, high pressure struct. phase transition, X-ray diff. study using synchrotron radiation 2-103975
 Ge, high purity, detectors, correl. between DLTS meas. and performance 2-70060
 Ge high-purity coaxial detectors, pulse shape and risetime distrib. calc. 2-70055
 Ge high-purity crystals, H conc. and distrib. 2-70051
 Ge, high-purity single crystals, C content and distrib. 2-70052
 Ge, hole capture by charged acceptors 2-115779
 Ge, hot hole cyclotron resonance (*Russian*) 2-82720
 Ge, hot plasma generation by intense 2.7 μ m laser pulse interaction 2-66582
 p-Ge, IR obs. of light hole accumulation (*Russian*) 2-57098
 Ge, IR study of indirect exciton Zeman effect 2-67053
 Ge, IR study of laser generated carriers 2-110859
 Ge, implant activation using multiple-scan electron beam annealing 2-56040
 p-Ge, impurity band conduction, static and modulated uniaxial constraint effects 2-56575
 n-Ge, impurity scatt. in quantising mag. fields 2-115792
 Ge, interband Faraday and Kerr effects 2-72463

elemental semiconductors continued

- Ge, internal friction meas. in intrinsic and n-type crystals. 2-81890
 Ge, internal friction of dislocationless and growth-dislocation containing crystals, amplitude depend. meas. 2-92109
 Ge, internal strain in diamond struct. elements, survey of theoretical approaches 2-61087
 Ge, internal strain tensor, bond-bending parameter, X-ray study 2-91864
 Ge ion beam deposition, epitaxial growth 2-116388
 Ge, laser pulse interaction, 2.7 μ m 2-77627
 Ge, laser-induced periodic surface damage and radiation remnants 2-98154
 Ge, lattice consts. and bulk moduli, self-consistent pseudopot. calc. 2-109741
 Ge, lattice dynamics, Grüneisen coeffs., pseudopot. calc. 2-98226
 p-Ge, light induced changes in hole distrib. functions and nonlinear photon drag current 2-61515
 Ge, long wavelength IR radiation generation by hot holes (*Russian*) 2-82857
 Ge, low freq. cond. due to variable range hopping, expt. vs. theory 2-66557
 Ge, low levels of O meas. by Li precipitation technique 2-61012
 Ge low temperature bolometers for spectroscopy, sensitive in 1 to 50 μ m region 2-101462
 Ge, luminescence of electron-hole drops, hysteresis, exciton gas-liquid transition 2-82895
 Ge, MBE growth on GaAs (100), interface morphology, RHEED study 2-56386
 Ge, magnetic Γ_8 subbands, Luttinger method perturbation theory calc. 2-56436
 n-Ge, magnetophonon reson. obs. 2-98672
 Ge, magnetoresistance influence on high mag. field Van der Pauw expts. 2-104396
 n-Ge, many-valley semicond., hot electrons in quantising mag. field 2-56622
 Ge, melting point, press. depend., Lindeman law calc. 2-56165
 Ge, melting point, press. derivatives 2-61117
 Ge, melting temp., vol. depend., Debye model 2-86825
 Ge, Mossbauer study of implanted ^{57}Co below full amorphisation limit 2-77441
 Ge, muonium and positronium impurities, spatial dispersion influence, variational calc. 2-115257
 Ge, n- 2-82249
 p-Ge, negative differential mobility of holes, Monte Carlo study 2-77078
 p-Ge, negative magnetoresistance obs. (*Russian*) 2-56617
 Ge, neutron irradi., deep level transient spectroscopy 2-115695
 Ge, nonlinear screening of negative point charges 2-82261
 Ge, nonuniform Lorentz force effect on electron-hole plasma density 2-87314
 Ge, optical absorpt., photoacoustic spectra study, window material appl. 2-61855
 Ge, optical surface and bulk absorption at 10.6 μ m 2-70631
 p-Ge, optical transitions between light- and heavy-hole bands and drag effect 2-116138
 Ge, oxidation at high press. 2-116569
 Ge, p-n junction diode, minority carrier lifetime variation with injection level 2-66627
 Ge, p-n junction diode, use as cryogenic temp. sensors 2-58821
 Ge, paramagnetic susceptibility obs., dislocations effect 2-56823
 Ge, phonon focusing of dispersive phonons 2-115371
 Ge, photoacoustic IR spectroscopy 2-99108
 Ge photodetector for linearly polarised radiation direct analysis 2-107387
 Ge, photoelectric effect associated with excited acceptor states 2-104431
 Ge, photoelectron spin depolarisation during photoemission due to paramag. Gd atoms 2-111029
 Ge, photogalvanic piezomagnetic effect (*Russian*) 2-82401
 Ge, photovoltaic effect due to EM wave heating, expt. study (*Russian*) 2-77123
 Ge, picosec. pulse transmission at various thicknesses 2-77104
 Ge, plastically deformed, phonon scatt. 2-92133
 Ge plates, surface treatment effect on X-ray diffraction, struct. 2-86514
 Ge, polarisation-dependent photocond. and surface photocurrent 2-115821
 Ge, proton dechanneling, lattice thermal vibrs. effect 2-109872
 Ge, pulsed-laser-annealed, stimulated surface polariton wave scatt. and grating formation, time resolved meas. 2-114359
 Ge, quenched, presence of shallow acceptors from far IR photocond. spectra 2-104302
 Ge, radiation defects, light sensitivity and space orientation, IR spectra study 2-87826
 Ge radiation detector, low-energy background formation, role of edge dead zones 2-108272
 Ge, Raman phonon press. depend. 2-67054
 Ge, ranges of 0.3-2 MeV H⁺ and 0.7-2 MeV H₂⁺ ions 2-76547
 Ge, recombination mechanisms, photoconductivity and IR absorption 2-115780
 n-Ge, S-type current-voltage charact. in crossed heating elec. and quantising mag. fields 2-115795
 Ge samples, refr. index meas. 8 to 14 μ m 2-57036
 Ge, self-consistent pseudopotential calc. for electronic struct. 2-71859
 Ge, shallow acceptor energy levels, j-j-type coupling theory 2-104311
 Ge, shock loaded, phase transitions obs. 2-56186
 Ge single crystals, optical erosion caused by CO₂ laser pulses 2-87303
 Ge, solubility in liq. In, γ -ray effects, expt. study 2-115423
 Ge, strain confined electron-hole liquid, density variations and compressibility 2-110262
 Ge, streaming, gauss-ampere charact., of dissipative current 2-115769
 p-Ge, streaming motion and population inversion of hot carriers, crossed elec. and mag. fields 2-98668
 p-Ge, strongly doped, anomalous magnetoresistance (*Russian*) 2-82377
 Ge, surface, (100), atomic struct., CNDO calc. 2-61270
 Ge surface, (111), Cl chemisorpt., charge density self-consistent-extended Huckel calc. 2-66344
 Ge, surface, electron capture, Thomas-Fermi approx. 2-61547
 Ge surface, high index, struct., order-disorder transitions, LEED study 2-71786
 Ge surface, (111), cleaved in superhigh vacuum, low temp. LEED surface struct. study 2-98406
 Ge, surface damage effect on IR optical performance, 8-12 μ m spectral region 2-105347

elemental semiconductors continued

- Ge, surface layer struct., external photoeffect under X-ray diffr. conditions 2-98402
 Ge, surface oxidation, modification by Al adatoms UPS study 2-67576
 Ge, surface oxide thin film, carrier photoinjection 2-92699
 Ge, surface prep. by selective chem. etching 2-83254
 Ge, surface states and the analytic properties of Bloch waves in the tight-binding approximation 2-56636
 Ge, surface topography, self-ion bombardment effects, 30 to 500 keV 2-71516
 Ge, surface unit cell cleaved at 4K, (1×1) struct., LEED study 2-110118
 Ge, textured optical storage medium, microstructure, reflective spots 2-65321
 Ge, textured surface, optical storage medium, reflectance changes 2-81038
 Ge, thermal cond., phonon scatt. processes at low temps. 2-56275
 n-Ge, thermal cond. meas. under strong uniaxial elastic deformation 2-61222
 Ge, thermal conductivity at low temp. 2-76759
 Ge, thin film growth by laser induced CVD 2-77752
 Ge, three-phonon processes, resonance effects in thermal cond. 2-81913
 Ge transport by Ge_4 , Ge_2 , CVD numerical model 2-97956
 Ge, uniaxially compressed, low-density electron-hole liquid (Russian) 2-61370
 Ge, uniaxially stressed, electron-hole liquid props. 2-104259
 Ge, uniaxially stressed, free carrier absorpt. spectra (Russian) 2-87818
 Ge, uniaxially stressed, plasma reson. of electron-hole drops, IR study 2-104861
 Ge, X-ray diffr., multiwave Pendellosung fringes of (200) forbidden reflection (Russian) 2-60839
 Ge, X-ray forbidden refls., spectral depend. 2-60838
 Ge, X-ray photoemission and refl. near K absorpt. edge 2-72607
 Ge^{119}Sn , impurity atom vibrs., adiabatic band-charge model 2-81917
 Ge:Al, vol. diffusion of Al, SIMS invest. (German) 2-66274
 Ge:As, bound-exciton luminesc. polarisation in longit. mag. field 2-87864
 Ge:As, donor ground state, diamag. and Zeeman shifts, four-wave mixing spectroscopy 2-99096
 Ge:As/Ga, heavily doped by neutron doping, fundamental optical absorpt. edge profile 2-93145
 Ge:As(P), luminescence study of nonequilibrium charge carriers (Russian) 2-104945
 n-Ge:As(Sb), 1.5 MeV electron irradi., defect levels, DLTS study 2-92508
 n-Ge:As(Sb), heavily doped, press. effects on magnetoconductivity (Russian) 2-56619
 Ge:Au, hopping cond. after γ -ray neutron, and electron irradi. 2-115758
 Ge:Au, Sb, compensated and illum., low temp. Hall mobility of electrons 2-77096
 Ge:B, Al, Ga, residual acceptor impurity distrib., photothermal ionisation spectroscopy study 2-81807
 Ge:B, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
 p-Ge:B(Al)(Ga), impurity states, oscillator strengths, quadrupole moments 2-104303
 Ge:Cl, amorphous, ion implanted, gap-states, elec. cond. study 2-76987
 Ge:Cu, γ -ray irradi., Cu atom activation and concentration 2-115704
 Ge:Cu, in-diffusion and annealing 2-98337
 Ge:Cu, quenched, Cu related shallow acceptor, hole density temp. depend. study 2-92509
 Ge:Cu p-n junction, reversed biased, Cu^{2+} centres mobility, DLTS study 2-98336
 Ge:Fe, ion implantation study by conversion electron Mossbauer spectroscopy 2-77427
 Ge:H, (111) surface, electronic struct., photoemission meas. 2-66609
 Ge:H, amorphous, photoinduced midgap absorpt. 2-72528
 Ge:H, interaction of H with point defects, under ^{60}Co gamma-irradi. 2-115279
 Ge:H, positive test charge, pot. map 2-56479
 Ge:H, vacancy vibrational behaviour, renormalisation group method 2-81918
 Ge:H amorphous film, AC losses and elec. cond., polarons 2-77055
 Ge:He $^+$ (Ar $^+$), ion implantation, surface recombination kinetics meas. 2-66031
 Ge:In, impurity diffusion, SIMS invest. (German) 2-82031
 Ge:In(Sb), laser induced enhanced solubility, elec. and Rutherford backscatt. study 2-115416
 Ge:Nd(Gd)(Tb)(Ho)(Tm)(Er), deep level impurity states, DLTS study 2-56477
 Ge:Ni(Au), photoelectromotive force, carrier density 2-87339
 Ge:P, ion implanted, elec. props. 2-77089
 Ge:P, phonon drag thermoelectric power and thermal cond., boundary scatt. effects 2-82388
 Ge:Pb, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
 Ge:S, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
 Ge:Sb, Au, cleaved in He, surface Frenkel defects, elec. cond. study 2-115224
 n-Ge:Sb, Au, compensated, Sb ionization energy 2-76985
 n-Ge:Sb, compensated by fast neutron irradi., activated elec. cond. 2-115762
 Ge:Sb, D $^-$ states, electronic struct. and binding energies 2-82280
 n-Ge:Sb, defect cluster form. and shaping after high-energy particle irradi. 2-76535
 Ge:Sb, low-temp. cond., evidence for localisation effects 2-77057
 Ge:Sb, photo-excited acoustic phonons 2-98225
 Ge:Sb, temp.-depend. cond. 2-110353
 Ge:Sb, US attenuation by shallow donors in mag. field 2-56649
 Ge:Sb, uniaxially compressed, biexciton-impurity complexes (Russian) 2-82242
 Ge:Si, ion implanted, rad. damage, X-ray rocking curve study 2-66075
 Ge:Si, solid solubility, diffusion, decomposition, X-ray diffr. study 2-66232
 Ge:Sn, cordency and compression effects on isomer shift of impurities 2-56989
 Ge:Zn, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
 Ge-He interface, transient heat transfer and onset of film boiling 2-115482
 Ge-Ag, interface electron struct., XPS study 2-82422

elemental semiconductors continued

- Ge-Au interface cpd. formation, valence band and cone level UPS study 2-110175
 Ge-GaAs, (110) and (111), MBE grown, interface morphology, RHEED study 2-98470
 Ge-GaAs (100) heterojunction, MBE growth, surface processes, LEED and photoemission study 2-110203
 Ge-GaAs (110) heterostructures, electronic props. and chem. comp., low-energy EELS study 2-93339
 Ge-GaAs (110) interface, amorphous and cryst. films, electronic struct., XPS study 2-110456
 Ge-GaAs (110) interface electron states, polarisation dependent UPS study 2-110455
 Ge-GaAs heterojunction, work function, interface state effect (French) 2-61559
 Ge-GaAs interface, two-dimens. electron states, light scatt. study 2-110885
 Ge-GeS interface struct., LEED, HEED and Auger spectra study 2-71809
 Ge-Si (111) epitaxial system, interface struct., high energy ion scatt. study 2-76840
 Ge-type, electric-dipole transitions in intervalley multiplets 2-115708
 Ge-ZnS multilayer narrow-band filter. filters 2-70663
 Ge, crystal, κ and ρ channelling, ang. distrib., 0-250 GeV/c 2-109871
 Ge(111), adsorbed Cl(I)(Te) for cryst. and amorphous Ge, surface EXAFS study 2-110977
 Ge(111)-Ag interface, chem. reaction, synchrotron radiation photoemission study 2-61212
 Ge[111], atomic struct. and reactions with deposited Al 2-86991
 Ge[111]2×8 reconstructed semicond., Te and I adsorbate struct. 2-66360
 InP-Ge interface, X-ray photoemission spectra of band discontinuities 2-82447
 Ni-Si atomic mixing, Xe $^+$ induced, depth depend., backscatt. spectra 2-103865
 Ni-Si couple, lateral diffusion and Ni $_2$ Si growth, SEM study 2-115471
 P, black, electronic struct., self-consistent pseudopot. calc. 2-66437
 P, black, high press. and temp. crist. growth and elec. resist. meas. 2-92619
 Pb $_1$ - $_2$ Sn $_2$ Ge-Si, heterojunction, open-circuit EMF meas. 2-87378
 PbTe-Si, heterojunction, open-circuit EMF meas. 2-87378
 Pd-SiO $_2$ -Si struct., isothermal H $_2$ desorp. 2-110135
 predeposition process and profile simulation Si:B 2-98136
 Pt-Si (100), PES study of interface states 2-77152
 Pt-Si atomic mixing, Xe $^+$ induced, depth depend., backscatt. spectra 2-103865
 Se (layers), piezoelec., props. 2-99058
 Se, amorphous, crystallisation, scanning calorimetry and X-ray diffr. study 2-91780
 Se, amorphous, defect vibrs., Green function-CPA calc. 2-98233
 Se, amorphous, electronic density of states, cluster model, CPA calc. (Russian) 2-104220
 Se, amorphous, liq. and solid, struct. and phys. props., uniaxial compression effects 2-71352
 Se, amorphous, nonlinear acoustical effects near glass forming temp. 2-66132
 Se, amorphous, photogeneration, geminate recombination model, expt. and theoretical study 2-87315
 Se, amorphous, second-order Raman scatt. 2-61904
 Se, amorphous, struct. factor and collective excitations, neutron scatt. study 2-98232
 Se, amorphous film, photo-induced stress relax. obs. 2-66044
 Se, amorphous film, photocond. stabilisation and evolution, thermal history effects (French) 2-72030
 Se amorphous film, residual voltage, carrier trapping and release parameters 2-110280
 Se amorphous film, stress effects on crystallisation 2-86569
 Se amorphous film, surface relief form. by laser bombardment 2-86728
 Se, amorphous thin film, photoconduction spectral response, annealing near glass transition temp. 2-87330
 Se amorphous thin film on LiNbO $_3$, US attenuation and Rayleigh surface waves 2-71588
 Se amorphous vacuum condensates, cryst. 2-104181
 Se corrugated surface, surface flattening kinetics under heating, light scatt. study 2-82089
 Se, diffusion kinetics and correl. factors, random-walk method 2-61196
 Se, glass formation, defects, viscosimetry study in elec. and mag. fields 2-91782
 Se, glassy, bonding coord. defect, positive-U system 2-110303
 Se, magnetic susceptibility constants meas. for amorphous, cryst. and powders 2-87474
 Se, monoclinic, anisotropy in reflectivity and band struct. 2-61925
 Se thin film, low absorbing, 2-D thickness distrib. determ. using new laser interferometry 2-112961
 Se thin film, prep. by photodissociation of organometallic gases 2-83036
 Se, trigonal, monoclinic and amorphous, Compton profiles and autocorrelation functions, HF and OPW calc. 2-87892
 Se:Cl(K)(Rb), amorphous, carrier generation and EPR studies, dopant effects 2-77083
 Se/polystyrene-hexylmethacrylate copolymer interface, charge transfer 2-56722
 Se-Al junction rectifier, current creep phenomena, temp. depend. meas. 2-98740
 Se-binder generation layer, trigonal, carrier photoinjection into organic carrier transport layers 2-87334
 Se-binder photoconductive layer, trigonal, formed by in situ reduction and crystallisation, photocond. behaviour 2-87333
 Si, 1/f noise, temp. depend. 2-110409
 Si, 1/f noise correlation expts., absence of temp. fluctuations 2-72039
 Si, 20 MeV proton bombard., radiation defect parameters 2-92056
 Si 3 inch solar cells, fabricated in fluidised-bed reactor, charact. 2-88438
 Si (100), interaction with AH $_2$ UPS study 2-77144
 Si (100), inversion layers, freq.-depend. cond. 2-82427
 Si (100) and (111), dissociative chemisorption of water, EELS study 2-87051
 Si (100) electron inversion layers, magnetoplasmon interaction with cyclotron reson. harmonics 2-110482
 Si (100) ideal surface, electron state investig. by transfer matrix Green function method (Chinese) 2-110415
 Si (100) inversion layer, temp. depend. cond. 2-110483

elemental semiconductors continued

- Si (100) inversion layers, subband splitting, uniaxial stress and substrate bias effects 2-56701
 Si (100) MOSFET, photoresponse of electron inversion layer, mag. field depend. 2-61518
 n-Si (100) MOSFET inversion layers, zeros of transverse magneto-resist. 2-66650
 Si (100) n-channel MOSFET, quantized Hall steps meas. at ppm level 2-61488
 Si (100) reconstructed surfaces, LEED studies 2-92324
 Si (110), high depth to width ratio profiles produced by anisotropic photoetching 2-62245
 Si (111), adsorbed Ag, struct. anal. by LEED/const. momentum transfer averaging technique 2-56347
 Si (111), adsorbed Br, surface registration, X-ray standing waves determ. 2-104151
 Si (111), chemisorption of NH_3 and NO , UPS study 2-87949
 Si (111), cryst. axes identification by Kikuchi patterns in RHEED 2-98398
 Si (111), electron bombard., yield of electrons with fixed energy losses 2-116308
 Si (111), surface segregation of H by photon stimulated desorption at Si K edge 2-110154
 Si (111), tunneling spectroscopy of electron space charge layers in M/S struct. 2-87403
 Si (111) 2×1 , highly dispersive dangling bond band, angle-resolved photoemission study 2-66607
 Si (111) 7×7 surface, chemisorption of Cl and H, electronic struct., DV-X α cluster calc. 2-66613
 Si (111) and (100), adsorption of H, UPS study 2-116338
 Si (111) chemisorbed H, Cl, Ag, vacancy and chemisorptive bond elec. struct. 2-82417
 Si (111) inversion layers, valley degeneracy and intersubband spectroscopy 2-61542
 Si (111) laser annealed and impurity induced metastable surfaces, UPS and LEED study 2-76789
 Si (111) surface, H adsorption, departure from stable SiH_3 phase 2-76838
 Si (111) surface, struct. of density of states studied by total current electron spectroscopy 2-87361
 Si (111) surface inversion layers, subband separations, effects of exchange-correl. and surface strain 2-61543
 Si (111) surface relax. and reconstruction, CNDO/2 calcs. 2-82097
 Si (111) surface transitions, unified description 2-82106
 Si (111) wafers, micro-distortion in figure during epitaxial growth (Chinese) 2-110188
 Si (111)-Pd (V), Schottky barrier formation, soft XPS study 2-110445
 Si (111) 2×7 surface, electron state investig. by transfer matrix Green function method (Chinese) 2-110415
 Si (111) 7×7 , SEXAFS studies of I adsorpt. 2-83417
 Si (111)(2×1)-Au system, interface form., low energy EELS and AES study 2-104174
 Si [111] 7×7 reconstructed semicond., Te and I adsorbate struct. 2-66360
 Si, ab initio calcs. of phonon dispersion relations 2-76620
 Si abrupt epitaxial junctions 2-115877
 Si, absorption coefficient, electron-phonon and hole-phonon interactions 2-67016
 Si adsorption of F_2 , SIMS and quartz cryst. microbalance obs. 2-82125
 Si, adsorption of O_2 , pulsed laser atom-probe study 2-110129
 Si, adsorption of O_2 and H_2 , influence on surface cond. (Russian) 2-72047
 Si, ambipolar diffusion of high density electrons and holes 2-110367
 Si, amorphous, anneal stable, Raman scatt. study 2-57084
 Si, amorphous, density of localised states and carrier mobility, elec. cond. study 2-115640
 Si, amorphous, effective charges 2-86568
 Si, amorphous, far-IR vibr. spectra using double-beam Fourier transform spectrometer 2-113003
 Si, amorphous, hopping cond., ion implantation 2-56592
 Si, amorphous, ion implanted, ultrarapid cryst. growth and impurity segregation during laser annealing 2-86722
 Si, amorphous, ion irradi., hopping cond., prep. condition effects 2-92605
 Si, amorphous, low temp. high energy heavy ion beam annealing 2-81831
 Si, amorphous, MIS solar cell fabrication by RF reactive sputtering and RF glow discharges (Japanese) 2-88455
 Si, amorphous, Mossbauer study, time resolved optical refl. meas. 2-56163
 Si, amorphous, Mossbauer study 2-99004
 Si, amorphous, p-i-n solar cell, energy conversion calc. 2-57704
 Si, amorphous, phonon spectra 2-56138
 Si, amorphous, photovoltaic detectors for guided-wave optics 2-64105
 Si, amorphous, RF sputtered, optical props., by spectroscopic ellipsometry (Chinese) 2-67012
 Si, amorphous, Schottky barriers, theory of capacitance-voltage meas. 2-61554
 Si, amorphous, Schottky solar cell fabrication by RF reactive sputtering and RF glow discharges (Japanese) 2-88455
 Si, amorphous, tetrahedrally bonded, simple model of hydrogenation 2-56418
 Si, amorphous and cryst., melting point, laser and electron beam annealing 2-109829
 Si, amorphous and crystalline, low energy range distrib. of ^{10}B and ^{11}B 2-66090
 Si amorphous CVD film, prep., solar photovoltaic appls. 2-105081
 Si, amorphous CVD layer, localized state density meas. by field effect method 2-56737
 Si amorphous film, CC sputter and plasma deposited, photoconductive decay, carrier lifetime 2-82398
 Si, amorphous film, gap state density, high freq. capacitance-voltage determ. 2-56429
 Si, amorphous film, laser beam induced crystn., optical recording appl. 2-65325
 Si, amorphous film, laser crystallisation, rel. to density 2-56407
 Si, amorphous film, laser induced controlled nucleation and growth process 2-56408
 Si, amorphous film, melting threshold energy in laser annealing 2-92026
 Si, amorphous film, plasma enhanced CVD 2-72631
 Si, amorphous film, solid phase epitaxy, laser-induced 2-56405
 Si amorphous films, glow discharge and sputter deposited, optical band-gap, absorption coeff. meas. 2-71856

elemental semiconductors continued

- Si, amorphous films, localised state investigation using field effect technique 2-104509
 Si amorphous films, luminesc. study, interf. effects 2-104968
 Si, amorphous films, RF-bias sputtered, elec. cond. photoconductivity, ESR spin density, annealing effects 2-56391
 Si amorphous films, time-resolved TEM of pulsed crystn. 2-82167
 Si, amorphous glow discharge film, prep. by consecutive separated reaction chamber method and photocond. props. 2-67225
 Si, amorphous glow-discharge film, reflectivity, spatially inhomogeneous carrier conc. dependence 2-67015
 Si amorphous layer, low-temp. recrystallisation by high-energy ion beam annealing 2-65861
 Si amorphous layers, deposition and etching by means of beam plasma discharge with tube like electron beam 2-116372
 Si, amorphous p-i-n junction, electroluminescence 2-82927
 Si, amorphous p-i-n junction, photoenhanced electroluminescence 2-82928
 Si amorphous photovoltaic cells, glow discharge prep., substrate condition effect on cell performance 2-83482
 Si, amorphous progress in research and photovoltaic appl. in USA 2-88435
 Si amorphous solar cell, built-in pot., electroabsorption determination 2-111549
 Si, amorphous solar cell, integrated struct., conversion efficiency 2-83485
 Si amorphous solar cells, electroluminescence, quantum efficiency 2-111550
 Si amorphous thin film, microwave plasma CVD fabrication 2-111093
 Si, amorphous UHV deposited film on Si(111), epitaxial regrowth 2-104197
 Si, anisotropic size effect with plasma injected in mag. field 2-92677
 Si, anodic oxidation, SIMS investigation of surface layers 2-105352
 Si, anomalous magnetoresistance in two-dimensional hole gas (Russian) 2-72012
 Si, Ar^+ laser induced CVD from SiH_4 2-83030
 Si as mechanical material, review 2-92072
 Si as-grown Czochralski crystal, nucleation temperature of large oxide precipitates 2-91841
 Si, atomic images in electron microscopy 2-71393
 Si, atomic step height on clean vicinal faces 2-86997
 Si, average neutron displacement kerma factor at 1 MeV 2-86732
 Si, axial channelling radiation from MeV electrons 2-81846
 Si, back-surface damage regions, gettering of mobile O, defect stability, annealing and water vapour effect 2-56255
 Si, back-surface damage regions, gettering of mobile O, defect stability, O diffusion 2-56256
 Si, band structure, tight binding calc. 2-66443
 poly-Si beam recrystallisation for IC fabrication 2-111065
 Si, bent, strain conc. factors around holes and inclusions, X-ray topography study 2-98189
 Si, bent cryst., dynamic diff. focusing of X-rays 2-60836
 Si, bent crystal, contrast effects in synchrotron X-ray topographs 2-60837
 Si, brittle fracture crit. stress, ion implantation and surface treatments effect 2-81882
 Si, CC amorphous p-i-n junction struct., photovoltaic effects, photo-carrier generation and recombination 2-82442
 Si, CVD, amorphous, post-hydrogenated, doping effects, cond. and EPR meas. 2-66679
 Si, CVD epitaxial layer, growth rate temp. profile 2-115883
 Si CVD film, polycryst., threshold and memory switching 2-115830
 a-Si CVD films, anneal-stable, struct. order, Raman scatt. study 2-81679
 Si, CVD growth, decomposition prob., expt. determ. 2-105087
 Si, CVD growth from SiH_4 atm., temp. depend. meas. 2-99345
 Si CVD homoeptaxial layer doping, book contrib. 2-72632
 Si, carrier and lattice temps. induced by picosecond laser pulses 2-67155
 Si, channelling radiation from 5.55 GeV e^+ (e^-) 2-56057
 Si, channelling radiation Monte Carlo calcs. and comparison with expt. 2-81848
 Si, channelling radiation of 10 GeV positrons 2-56055
 Si, charged impurity conc., carrier mobility, electroreflection study 2-115273
 Si circular-diaphragm pressure sensor, design considerations 2-95336
 Si, cohesion, polymorphic transition, elastic and dielec. props. 2-60919
 Si concentrator solar cell, etched multiple vertical junction 2-93920
 p-Si, cond. and Hall mobility calc. for dopant densities of 10^{14} to 10^{18} cm^{-3} 2-98678
 p-Si, cond. due to direct interband transitions, temp. depend. 2-92609
 Si, contact reaction with Ir-V film 2-86950
 Si, contact resistance to Pt-Al films 2-87388
 Si, creep fractured, growth kinetics of plastically deformed regions at crack tips, X-ray synchrotron topography 2-86788
 Si, cryst., laser quenching induced transition to defective cryst. and amorphous state 2-92030
 Si, cryst. growth from melt., temp. field control by IR television technique 2-111052
 Si cryst. growth on insulator, poly Si, graphoeptitaxy and bridging epitaxy methods (Japanese) 2-103813
 Si crystal growth by Czochralski method, SiO conc. control by US vibration of immersed plate 2-111059
 Si crystal surface picosec.-laser-induced phase transform. 2-75616
 Si crystals growth for use in solar cells, methods and economics (Italian) 2-93409
 Si, crystn., picosecond laser pulse irradiation 2-66043
 Si, crystn. by zone melting, contamination with C 2-87972
 Si cylinder, mag. flux cumulation by shock-compressed conductive region propag. 2-92984
 Si, Czochralski and CACRT crystal growth numerical simulation of convective flow in melt 2-105064
 Si, Czochralski crystal growth through axial mag. field fluid flow damping, apparatus 2-72613
 Si, Czochralski crystal growth furnace, quality considerations 2-99324
 Si, Czochralski crystals, intrinsic gettering study 2-76430
 Si, Czochralski grown, thermally induced microdefects, nucleation and growth obs. 2-57379
 Si, Czochralski grown, yield stress, O precip. and dissolution effects 2-57365
 Si Czochralski grown crystals, microdefects and their appl. as gettering sites 2-91992
 Si, Czochralski growth, dynamic O equilib. in melts 2-60895

elemental semiconductors continued

- Si, Czochralski growth system, melt temp. effects on crystallisation rate 2-87964
- Si, Czochralski growth system, mech. instability effects on crystallisation rate 2-87965
- Si, Czochralski wafers, effects of crystal defects on deep levels, TEM and DLTS obs. 2-92507
- Si Czochralski wafers, heat treated, brittle and ductile, fracture and yield stresses meas. 2-92091
- Si Czochralski wafers, photoluminesc. method to characterise in-depth profile of thermally induced defects 2-93243
- Si, Czochralski-grown, effect of oxide precipitates as minority-carrier lifetime 2-66568
- a-Si, dangling bond centres energy level, ODMR study 2-110732
- Si, Debye-Waller factors 2-98235
- Si, deep impurity photoionisation, electron-phonon interactions, photoconductivity study 2-61520
- p-Si, deep level determ., deep level Fourier spectroscopy method 2-66479
- Si, deformation caused by absorpt. at fundamental band max. 2-77465
- Si, deformed, dislocation defect states 2-66489
- Si, deformed, stacking faults, dislocations, X-ray moire pattern study (*Russian*) 2-91990
- Si, deformed (100) oriented single crystals, single slip deform. and nature 2-92086
- Si, dendritic web grown, dislocation struct., TEM and SEM study 2-91975
- Si, depth profiling in near surface region by low energy PIXE 2-99716
- Si detector, plasma effects influence on energy spectra 2-90372
- Si, detector materials, radiation effects 2-80392
- Si detectors, passivated and ion implanted, performance and appl. 2-70050
- Si detectors, status and problems 2-90365
- Si detectors for X-ray, ion and electron spectrometers, low temp. characts. 2-75108
- n-Si, dielectric enhancement near metal-nonmetal transition 2-61361
- Si, diffused dopant conc. profiles, book contrib. 2-71492
- Si diffused junction X-ray detectors 2-70054
- Si diffused p-n junction X-ray and γ -ray detector, design, fabrication and characts. 2-59596
- Si, diffusion of $^{69-71}\text{Ga}$ isotopes, SIMS studies 2-104070
- Si, diffusion of Al, oxidation effects 2-56257
- Si, diffusion of As and P enhanced by thermal oxidation 2-71720
- Si, diffusion of Au, kick-out mechanism, numerical soln. 2-66288
- Si, diffusion of B(P), enhancement by thermal oxidation 2-56258
- Si, diffusion of B(P), Si_3N_4 directly masked film effect 2-56260
- Si, diffusion of Ni, dissociative mechanism, expt. study 2-56259
- Si, diffusion of P, nonequilibrium vacancies influence 2-92252
- Si, diffusion of P from CVD phosphosilicate glass 2-66295
- Si, diffusion of Sb along dislocations 2-61207
- n-Si, diffusion profile of As(Sb), sheet conductance and tracer studies 2-71730
- Si diode, neutron transmission doped, avalanche breakdown 2-115887
- Si diode linearity measuring instrumentation 2-85440
- Si diode structure, EBIC as function of angle of incidence of electron beams in SEM 2-97874
- Si dislocation crystal, X-ray Laue diffr., dynamical oscillations obs. 2-115241
- Si, dislocation EBIC contrast 2-60988
- Si, dislocation free, formation of self-order agglomerates during cryst. growth 2-81782
- Si, dislocation free (*Russian*) 2-92045
- Si, dislocation generation by ion implantation during manuf. of p-n junctions for ICs (*Russian*) 2-66030
- Si, dislocation lines, elec. props. 2-92521
- Si, dislocation mechanisms, X-ray synchrotron topography study 2-97852
- Si, dislocation nucleation, point defect condensation model 2-71450
- Si, dislocation study by X-ray plane wave images 2-103774
- Si, dislocations, and stacking faults, HV high-resolution electron microscopy study 2-91970
- Si, dislocations, interpretation of EBIC contrast 2-71453
- Si, dislocations and interface characterisation, high resolution TEM study 2-66005
- Si, disorder production during ion implantation 2-81806
- a-Si, distortion energy distrib. in random network model 2-109678
- Si, donor-bound excitons, fine struct. splittings 2-82246
- Si, donor-bound multiexciton complexes, density-functional method 2-82245
- Si doping by As diffusion, spin-on source for deep junction formation 2-76746
- Si, doping by neutron transmutation, electron traps anal. by DLTS (*Chinese*) 2-92643
- Si, double diffusion processes, book contrib. 2-71731
- Si dry etching, chemical and physical sputtering yields by fluorocarbon ions 2-93638
- Si, edge-defined film-fed growth, heat transfer effect on interface shape and solute segregation 2-97955
- Si, effective mass of electrons and holes, and intrinsic conc., temp. depend. 2-98528
- Si, elastic and inelastic backscattering of slow electrons 2-105018
- Si electrochemical solar cells, review 2-111574
- Si electrodeposition from molten salt and organic solutions for solar cells 2-72638
- p-Si electrodes, siloxane-coated, ion selective photoelectrochemistry and stabilisation 2-83502
- Si, electron and γ -irrad., defect prod. and lifetime control 2-109833
- Si, electron backscattering, Monte Carlo calcs. 2-82966
- Si, electron backscattering, secondary channelling and double-focusing effect 2-87926
- Si, electron beam annealing using pulsed generator 2-84739
- Si, electron beam irradi., radiation efficiency, photocond. and carrier lifetime study 2-115293
- Si, electron channelling radiation, temp. and crystal defect effects 2-81849
- Si, electron gas inertia, radioelectric effect 2-104415
- Si, electron heating time in HF field, effect on diffusion 2-87291
- Si, electron inelastic mean free path, $200\text{ eV} \leq E \leq 10\text{ keV}$ 2-92656
- n-Si, electron irradi., A-centre introduction rate, rate eqn. calc. 2-56037
- n-Si, electron irradi., low-lying electron trap, transient capacitance studies 2-71921
- p-Si, electron irradiated, elec. level of vacancy 2-115696

elemental semiconductors continued

- Si, electron irradiated, uniaxial stress anal. of 0.79 eV vibronic band 2-67019
- Si, electron mobility, Markovian soln. 2-110366
- Si, electron-hole drops, stress depend. kinetics, luminesc. study 2-76936
- Si, electron-hole liq., phase separation into two components 2-56447
- Si, electron-hole plasma instability 2-87161
- Si, electronic bands, critical points in first Brillouin zone 2-56435
- Si, electronic dilation during pulsed laser annealing, lattice constants 2-56224
- Si, electronically excited, phonon spectrum, rel. to laser induced recrystn. 2-115373
- Si, energy and stress depend. hole masses 2-66426
- Si, energy depend. of electron angular distrib. during channelling (*Russian*) 2-71530
- Si, energy struct. changes after As ion bombard. 2-92057
- Si, epitaxial, neutron irradi., A and E centre study 2-103756
- Si epitaxial and recrystallised films, carrier lifetimes, MOS capacitance study 2-92787
- Si, epitaxial growth, ion channelling studies, review 2-71537
- Si, epitaxial growth on Ag (111) film on mica substrate, RHEED study 2-93429
- Si epitaxial growth using SiH_2Cl_2 , hillocks and stacking faults obs. 2-93437
- Si, epitaxial integrated E-dE position sensitive detectors 2-70057
- Si, epitaxial layer, boundary segregation of impurities, under action of γ -radiation, or quenching 2-87095
- Si, epitaxial layer, gas phase autodoping profile 2-115268
- Si epitaxial layer, photoluminesc. anal. for characterisation of shallow impurities 2-93242
- Si epitaxial layer characterisation using a reson. frustrated-total-refl. technique 2-89792
- Si epitaxial layer on SOC, contaminant reduction during CVD growth, SIMS study 2-77750
- Si epitaxial layer on substrate with buried SiO_2 layer, ion implantation, crystallographic props. 2-92382
- Si epitaxial layers, defects anal., ion backscatt. and channelling techniques appls. (*Chinese*) 2-92376
- Si, epitaxial stacking faults, elec. props., crystallographic struct., interaction with point defects 2-92379
- Si etch rate thin film monitor for in-situ meas. using light interferometry 2-79654
- Si, etching, influence of surface films on pits development 2-60982
- Si etching by F and F_2 , chemiluminescent reaction 2-88361
- Si, excess minority carrier transient decay, surface recomb. effects, laser pulse sample heating 2-77086
- Si, exciton thermodynamics 2-71881
- Si, excitonic system, equilib. const., recombination luminescence 2-87860
- Si, Faraday rot., nonreson. interband transitions, expt. and Kramers-Kronig anal. 2-57065
- Si field emission cathodes, flicker noise 2-93385
- n-Si, field-emission energy distrib., multiple peaks 2-67199
- Si film, amorphous, annealing behaviour of spin density and optical gap, effect of O contamination 2-87735
- Si film, CVD in capillary layers, mol. decomp. probability determ. method 2-111088
- Si film, CW laser melting, threshold behaviour 2-56411
- Si film, deposited in $\text{SiCl}_4\text{-H}_2$ RF discharge, struct. and optical props. 2-61313
- a-Si film, diffusion of H, ESR study 2-115469
- Si film, glow discharge deposited, optical and elec. props. 2-93307
- Si film, large grain polycryst., crystallographic orientation, grid-of-etch-pits technique 2-115591
- Si film, on SiN layer, stripe shaped cryst. growth by scanning electron beam annealing 2-87092
- Si film, patterned and CW laser crystallised on amorphous substrate 2-61315
- Si film, plasma hydrogenation effects on elec. props. and ESR 2-104511
- Si film, polycryst., amorphized by Si ion implantation, solid phase epitaxial recrystn. 2-115581
- Si film, polycryst., formation of thin oxide, ellipsometry study 2-105348
- Si film, polycryst., grain growth under CW electron beam annealing, modified SEM study (*Japanese*) 2-115597
- Si film, polycryst., low temp. mol. beam deposition 2-57295
- Si film, produced by field emission deposition, props. 2-71836
- Si film, recrystn. on amorphous substrate by doughnut shaped CW laser beam 2-56377
- Si film, sputter deposition 2-62066
- Si film for high-damage threshold IR Smartt interferometer 2-101452
- Si film on $\text{Si}_3\text{N}_4/\text{SiO}_2$ double insulating layer, CW laser recrystallisation, bipolar transistor fabrication 2-82154
- Si film on SiO_2 , zone recrystallized, elec. props. of line defects 2-66668
- Si film production by laser dissociation of SiH_4 (*Chinese*) 2-62074
- Si films, 3 in. diameter, zone-melting recryst. on SiO_2 -coated Si substrate 2-99330
- a-Si films, localised states investigation using field effect technique (*Chinese*) 2-66670
- Si films, microscopy during laser melting 2-66403
- Si films, on glass, laser crystn. 2-66382
- Si films over SiO_2 , patterns, laser-induced lateral vertically-seeded epitaxial regrowth 2-87091
- Si, formation of buried SiO_2 layers, optimisation of implantation conditions 2-61004
- Si, Fourier transform IR spectra obs. of temp. depend. of O impurity 2-116215
- Si, fracture and crack propagation, dislocation generation, X-ray study 2-115346
- Si, free-carrier gratings, diffr. efficiency and decay times meas. 2-86087
- Si, gamma and proton radiation defects formation, dislocation effects, elec. cond. and Hall coeff. study 2-86729
- Si, gamma-ray irradi., metastable Frenkel pair form., elec. props. 2-115289
- Si, generation kinetics oxide charges and surface states during oxidation 2-66611
- p-Si, generation-recombination noise spectra meas. 2-87300
- Si, gettering of stacking faults and heavy metal impurities, appl. to semiconductor device and IC manuf. (*Russian*) 2-66019
- Si, glow discharge microcryst., thermoelec. power, Hall effect and density of states meas. 2-98674
- Si, grain boundary density of states, photocapitance meas. 2-87187

elemental semiconductors continued

- Si, heat pulse propag. study by supercond. bolometer 2-92298
 n-Si, heat treated, γ -irradiated, photoelec. props. 2-77120
 Si, heat treated wafers, metal decorated haze microdefects, TEM and energy dispersive X-ray anal. 2-91946
 Si, heat treatment centres, g-values 2-66918
 Si, heat-treated, Czochralski grown, compression tests, dislocation study, TEM and etch pit obs. 2-60985
 Si, heavily doped, band gap narrowing calc. 2-115649
 n-Si, heavily doped, electronic struct. and photoluminesc. spectra 2-104290
 n-Si, heavily doped, electron light scatt., theory 2-110880
 Si, heavily doped, recombination mechanisms 2-98666
 p-Si, heavily doped 2-56609
 Si, heavily implantation with BF_3^+ (BCl_2^+) and carrier density meas. 2-81803
 Si, high purity single crystal, nitridation 2-72661
 Si, high resolution electron microscopy obs. of $\Sigma=27$ boundary 2-71468
 Si, hole capture by charged acceptors 2-115779
 p-Si, hole-acoustic phonon transition rate angular depend. 2-110237
 n-Si, hot electron $1/f$ noise 2-72040
 Si, hot hole diffusion and mobility, thermal noise and cond. meas. 2-56604
 Si IC pressure transducers using piezoresistor bridge 2-74400
 Si IR detector arrays, line spread function, crosstalk, and modulation transfer function 2-89809
 Si imaging detectors, coronene, lumogen and acrylic UV sensitive phosphors 2-116224
 Si, implant activation using multiple-scan electron beam annealing 2-56040
 Si, implantation annealing by thermal imaging of incoherent light sources 2-66037
 Si, implanted ion impurity profile, book contrib. 2-71493
 Si, implanted wafers, annealing using incoherent light and Si cryst. growth on SiO_2 2-103791
 Si, impurity defect struct. form. by ion implantation, amorphous and cryst. comparison 2-103790
 Si, impurity diffusion coeffs., CW laser annealing and SIMS (French) 2-110040
 Si, impurity doping processes, book 2-68985
 Si, impurity scatt. within electron-hole liq., far IR and millimetre wave studies 2-99110
 Si, impurity screening many-body effects 2-110295
 Si in Pd/n-Si Schottky diodes, H_2 gas induced DLTS signal 2-77178
 Si, indirect gap absorpt., invariants method appl. 2-77474
 Si, intense pulsed H^+ , B^+ , Ba^+ beam irradiation effects 2-76513
 Si, interaction with Ni-Pt 2-86953
 Si interaction with thin Cr, Ni and Pt films, bilayer silicide form. 2-86949
 Si, interband Auger recomb. rate, carrier density depend. 2-77088
 p-Si, interband electronic Raman scatt. calcs. 2-104883
 Si, interfacial reaction with Mo film, ion beam induced, TEM obs. 2-110050
 Si, internal friction meas. in intrinsic and n-type crystals 2-81890
 Si, internal strain in diamond struct. elements, survey of theoretical approaches 2-61087
 Si, internal strain study 2-92084
 Si, internal strain tensor, energy dispersive X-ray study using 006 forbidden reflection 2-66102
 Si, intervalley Γ - Δ scattering, electron-phonon and hole-phonon matrix elements 2-71598
 Si, inversion channels on high-index surfaces, energy spectrum, lower minigap obs. 2-115910
 Si inversion layer, conductance, logarithmic corrections, localisation and interaction effects 2-61598
 Si inversion layer, inelastic electron-electron scatt. time 2-61599
 Si inversion layer, intervalley and intersubband scatt., phonon electron interactions 2-87401
 Si inversion layer, two-dimens. electron gas, localisation and interaction effects 2-72071
 Si, inversion layers, logarithmic and power law corrections 2-72064
 Si inversion layers, minigaps, effects of one-dimens. periodic staircases 2-56700
 p-Si, inversion layers, two-dimens. plasmon anisotropy, expt. study 2-61545
 Si inversion layers, valley splitting and degeneracy, Shubnikov-de Haas oscills. 2-56706
 Si inversion layers, valley occupancy transition 2-87356
 Si inversion layers, Wigner glass and cond. oscills. 2-98753
 Si ion beam deposition, epitaxial growth 2-116388
 Si, ion beam epitaxial growth on Ge and Si at 400K 2-99339
 Si, ion beam gettering, review 2-115310
 Si, ion bombardment and annealing, UPS and RBS investig. 2-103857
 Si, ion bombardment with F^+ and CF_n^+ , chem. sputtering yields meas. 2-87928
 Si, ion implant. amorphisation optical and EPR studies 2-103789
 Si, ion implantation, amorphous phase and point defect generation, generalised overlap-damage model 2-115315
 Si, ion implantation, source feed materials in ion beam technology, book contrib. 2-71483
 Si, ion implantation disorder, ion channelling studies, review 2-71537
 Si, ion implantation processes, book contrib. 2-71482
 Si, ion implanted, arc annealing, regrowth and impurity diffusion calc. 2-55992
 Si, ion implanted, CW laser annealing, dislocation nucleation, growth and suppression 2-56021
 Si, ion implanted, hyperfine interaction study after thermal and laser annealing 2-99008
 Si, ion implanted, isothermal annealing, IR refl., refr. index, regrowth rates, and carrier profiles 2-110836
 Si, ion implanted, photoacoustic determ. of thermal cond. 2-86959
 Si, ion implanted, pulse laser annealed, defect-induced photolum. 2-57181
 Si, ion implanted, pulsed laser annealing dynamics, plasma annealing model 2-56013
 Si, ion implanted, pulsed laser annealing, threshold energy density, backscatt. and channelling meas. 2-92029
 Si, ion implanted, pulsed laser annealing, melting model and Raman scatt. 2-98155
 Si, ion implanted, rad. damage, crystalline props., X-ray rocking curve study 2-66075

elemental semiconductors continued

- Si, ion implanted, residual defects after pulsed laser annealing 2-71502
 Si, ion implanted, secondary defects annealing, electron microscopy study 2-71485
 Si, ion implanted or sputter etched, damage depth profile, ellipsometric study 2-56045
 Si, ion implanted wafers, high dose rate, laser annealing effects, TEM, backscatt. and channelling obs. 2-56019
 Si, ion irradi., radiation damage, thermal and laser annealing, electron microscopy study 2-71512
 Si, ion irradi. by intense pulse, defect production, proton backscatt. study 2-109865
 Si, ion-implanted, dechannelling by dislocations 2-76545
 Si, ionic implantation for SIMS quantification, corrosion study 2-99744
 Si junction solar cells, graphical method for evaluation of series resist. 2-93901
 Si, LPE, low-temp. 2-62083
 Si, LPE, minority carrier lifetime 2-72637
 Si LPE layers, dislocations as growth step sources, rel. to interface struct. 2-115615
 Si, large grain growth on SiO_2 by selective laser annealing 2-116358
 Si, laser annealed, quenched-in defect levels, DLTS study 2-61389
 Si, laser annealed, surface topography study 2-104129
 Si, laser annealing, review 2-98157
 Si, laser annealing by nanosecond pulses, temp. rise and carrier conc., computer model 2-86723
 Si, laser excited, electronic struct. dynamic response, photoemission study 2-72606
 n-Si, laser irradi., shock wave defects, photocond. and annealing study 2-56017
 Si, laser pulse processing, heterogeneous nucleation of spatially coherent damage struct. 2-56020
 Si, laser scanned, temp. profile calc. 2-92028
 Si laser-enhanced chemical etching of solid surfaces 2-77958
 Si, laser-induced acceptor defects, H_2 passivation, DLTS study 2-115697
 Si, laser-irradiated, reflectivity, transmission and electron-hole plasma, ps time-resolved meas. 2-115281
 Si, lateral effect of oxidation enhanced diffusion 2-66297
 Si, lattice const., and internal X-ray diffractometer with uniaxial stress apparatus study 2-65797
 Si, lattice const. and bulk moduli, self-consistent pseudopot. calc. 2-109741
 Si lattice deformation meas. using X-ray multiple refraction 2-60835
 Si, lattice response near vacancy, Green's function calc. 2-81905
 Si layers implanted, pulsed microwave power annealing 2-71495
 Si, light induced transient grating decay obs. 2-57043
 Si, low energy BF_3^+ ion doping during MBE 2-92003
 Si low pressure epitaxy for bipolar VLSI 2-87993
 Si, MBE apparatus, high rate deposition on standard format wafers 2-57299
 Si, MBE growth, etching of SiO_2 films 2-67218
 Si, MBE growth kinetics 2-82153
 Si, MBE of doped layers, book contrib. 2-72628
 Si, MIS structure, Faraday rotation for inversion layer electrons, Appel-Overhauser model 2-87746
 Si MOS inversion layer, Anderson localization, neg. magnetoresist. 2-61597
 Si MOS inversion layers, Hall effect in strong mag. fields 2-61489
 Si MOS inversion layers as two-dimensional conductor (Japanese) 2-82469
 Si MOS struct., charge motion, TSC meas. 2-115911
 Si MOS struct., fast surface states, photovoltage spectra study 2-56697
 Si MOS structures, Fowler-Nordheim tunnelling data anal. 2-98749
 Si MOSFET, impact ionization at very low voltages 2-56602
 Si MOSFET, magnetoresistance study 2-115900
 Si MOSFET, tilted inversion layer, tunnelling 2-77193
 n-Si, magnetoelectric effect, spin dependent electrical polarisabilities 2-82375
 Si, many valley semicond., non-equilibrium electrons, natural oscills. and current, elec. field depend. 2-61475
 Si, many-valley semicond., single-donor impurities and core excitons, real-space eqn. 2-82281
 Si, many-valley semicond., single donor impurities, core excitons shallow-deep instability 2-82282
 Si, melting and cryst. growth, X-ray topographic obs. 2-65900
 Si, melting and laser annealing using pulsed lasers 2-66052
 Si, melting point, press. depend., Lindeman law calc. 2-56165
 Si, melting point, press. derivatives 2-61117
 Si, melting temp., vol. depend., Debye model 2-86825
 Si metal p-n Schottky barrier solar cell, barrier height calc. 2-116830
 Si, metallisation, Ni electrodeless deposition 2-62080
 Si, micro-zone melted, cellular growth 2-93414
 Si, microcrack and work damage detect. using ultrasonic sonoprobe 2-57589
 Si, microcrystalline, plasma deposited, charact. 2-92405
 Si, microstrength meas. 2-93743
 Si microstrip detectors for fast high resolution beam microscope 2-70042
 Si, microwave cond., velocity autocovariance and hot carrier noise calcs. 2-104404
 Si, minority carrier diffusion length, electron beam induced current meas., cryst. imperfections effect 2-71998
 p-Si, minority carrier diffusion length meas., computer modelling of surface photovoltage method 2-72007
 Si, modulation of refr. index during excitation on absorpt. edge 2-116142
 Si, monolithic hot electron structures, current transport meas. 2-82371
 Si, Mossbauer study of implanted ^{57}Co below full amorphisation limit 2-77441
 Si, multi-exciton complexes 2-110264
 Si, multicryst., directionally solidified, fracture 2-81884
 Si, muonium and positronium impurities, spatial dispersion influence, variational calc. 2-115257
 Si, n- and p-type, Schottky barrier of nonuniform contacts 2-92723
 Si, n^+/ρ , solar cells formed by partially ionised MBE, I-V characts. 2-116834
 Si n^+ -p junction leakage behaviour, O precip. effects 2-61568
 Si n^+ -p solar cell, minority carrier lifetime and diffusion length determ. by self-biased capacitance meas. 2-116818
 Si n^+ -p solar cell, physical behaviour in concentrated sunlight 2-93910
 Si n^+ -p diodes, Be-doped, isothermal capacitance transient spectroscopy 2-84660
 Si, neutral divacancy, EPR spectrum, extended Huckel calc. 2-91957

elemental semiconductors continued

- Si, neutron and electron irradi., divacancy charge, IR study 2-76431
 Si, neutron bombardment doping, reactor design, theory 2-86697
 Si, neutron diff., asymmetric dynamic, Laue to Bragg transition 2-91728
 Si, neutron doping in channel U-graphite reactor 2-86739
 Si, neutron irradi., EPR obs., review 2-110638
 Si, neutron irradi., deep defect levels with continuous energy spectrum, electron capture coeffs., isothermal capacitance relax. study 2-61405
 Si, neutron irradi., deep level transient spectroscopy 2-115695
 Si, neutron irradi., diffuse X-ray scatt. obs. of defects 2-109849
 Si, neutron irradi., dislocation loops, X-ray diffuse scatt. study 2-71458
 Si, neutron irradi., electronic and vibr. spectra of defects 2-115299
 n-Si, neutron irradi., photoexcitation props. of IR active defects 2-115694
 Si, neutron irradi., radiation damage, thermal and laser annealing, electron microscope study 2-71512
 Si, neutron irradi., radiation defects due to Si transmutation into P, elec. cond. study 2-115308
 Si, neutron irradi., vacancies, mag. susceptibility study 2-115309
 Si, neutron transmutation doped detectors with improved carrier lifetime 2-59597
 Si, neutron transmutation doping, book contrib. 2-71484
 Si, neutron transmutation doping, conf., Copenhagen, Denmark (Aug. 1980) 2-74166
 Si, neutron transmutation doped, floating zone grown in H₂ and Ar, annealing behaviour (*Chinese*) 2-109820
 Si, nondegenerate, physical model for depend. of carrier lifetime on doping density 2-92654
 Si, nonlinear screening of negative point charges 2-82261
 Si, numerical simulation of two dimensional impurity diffusion, finite element technique 2-71732
 Si on sapphire, electrical transport props., thermoelectric power appl. (*French*) 2-61594
 Si, optical absorpt. coeff., 1.6 to 4.7 eV, meas. at high temp. 2-99146
 Si, optical absorpt. const. meas. at 1.152 μm at high temp. 2-116141
 Si, optical constants, reflectivity, ellipsometry study 2-82811
 Si, oxidation, laser enhanced, wavelength depend. 2-111343
 Si, oxidation, transport mechanism 2-57504
 Si, oxidation EELS and AES of ultrathin oxide films 2-83252
 Si, oxidation enhanced dopant diffusion and growth or shrinkage of oxidation-induced stacking faults 2-66015
 Si, oxidation induced point defects, stacking faults and dopant diffusion, theory 2-91951
 Si, oxidation kinetics in dry O₂, thermal prehistory influence 2-57499
 Si, oxidation stacking faults stacking faults and oxidation enhanced diffusion 2-66020
 Si, oxidation studies, oxidant diffusion meas. in SiO₂ films 2-88238
 Si, oxidation-induced positive charges effect on oxidation kinetics 2-93654
 Si, oxide film growth, plasma anodization as dry low temp. technique 2-116581
 Si p⁺ implanted damaged layers, ellipsometric study (*Chinese*) 2-66024
 Si p⁺-i-n⁺ solar cells, high injection phenomena, theoretical model 2-93911
 Si p⁺-n-n⁺ high efficiency concentrator solar cells, fabrication and performance 2-93917
 Si p⁺-p-n⁺ multilayer structure, multilayer carriers conc. meas. in base region 2-115886
 Si p⁺-n and n⁺-p junctions, multiplication functions in avalanche (*Rumanian*) 2-66630
 Si p-n junction, diffused, secondary breakdown region, artificial movement (*Russian*) 2-98735
 Si, p-n junction, dislocation energy levels, determ. using photoelectret and thermoelectret states 2-61580
 Si p-n junction, graded dislocation, capacitance-voltage meas. 2-104293
 Si p-n junction, ion implanted, CW laser annealed, junction quality, SIMS study 2-104480
 Si p-n junction, ion implanted, CW laser annealed, elec. and struct. props. 2-115872
 Si, p-n junction, local parameter determ. by SEM EBIV mode 2-92737
 Si p-n junction, nonequilib. lattice defects, effect on current-voltage characts. 2-115879
 Si p-n junction devices, impurity distrib. profiles of diffused layers determ. 2-115272
 Si, p-n junction diode, minority carrier lifetime variation with injection level 2-66627
 Si, p-n junction diode, use as cryogenic temp. sensors 2-58821
 Si p-n photovoltaic junction formation by pulse implantation doping 2-115259
 Si p-n diodes, current controlled negative resist obs. 2-56681
 Si, paramagnetic susceptibility obs., dislocations effect 2-56823
 Si pattern laser annealing using pulsed laser 2-81823
 Si, phase stability, ab initio pseudopot. and linear-muffin-tin-orbitals calcs. 2-55883
 Si, phonon freq. calcs., lattice const. 2-76619
 Si, phonon population, time-reversal invariance and Raman meas. 2-103920
 Si, phonon-phonon scattering cross-sections from crossed phonon beams 2-76623
 Si, photoacoustic effect in laser annealing 2-81824
 Si, photoacoustic IR spectroscopy 2-99108
 Si photodetector for linearly polarised radiation direct analysis 2-107387
 Si photodetector for photometry, metrological characts. 2-112953
 Si photodiode absolute spectral response self-calibration using filtered W source 2-89804
 Si photodiode radiometers, use of diffusers 2-58901
 n-Si photoelectrochem. cell, electrode stabilisation in aq. soln. using PtSi layer 2-105574
 n-Si photoelectrochemical cells with Pt-polypyrrole protected electrodes 2-111572
 a-Si, photoelectronic effects, surface and bulk contribs. 2-98687
 Si, photosensitive field-emission cathodes with atomically clean surface, I-V characts. 2-77702
 Si, photovoltaic effect due to EM wave heating, expt. study (*Russian*) 2-77123
 Si planar photodiode, photon-flux meas., quantum efficiency model 2-101461
 Si, plasma chemical etching, electron stimulated 2-116580
 Si, plasma deposition from SiCl₄ in inductive RF low. press. plasma 2-105091
 Si, plasma etching, etch rate rel. to optical emission intensity 2-99569
 Si, plasma etching with HF mixtures 2-116567

elemental semiconductors continued

- n-Si, plastically deformed, elec. cond. meas., dislocation levels effect 2-82364
 Si, plastically deformed, photoluminescence polarisation, stress effects 2-110907
 Si, point defects, diffusion mechanisms and shrinkage and growth of extended defects, theoretical anal. 2-71443
 Si, point defects, negative-U props., expt. study 2-71918
 Si, point defects dark-field lattice phase imaging obs. technique 2-86527
 Si, polarisation-dependent photocond. and surface photocurrent 2-115821
 Si, polycrystalline, quasi-grain-boundary-free solar cell struct., elec. perform. 2-93904
 Si, polycryst. and amorphous, deposition from silane in low-pressure hot-wall system 2-77746
 n-Si polycrystal, grain boundary photocurrent, diffusion length, recomb. speed 2-61482
 Si, polycrystalline, back surface field solar cells investig. using scanning spectral response technique 2-111551
 Si, polycrystalline, conduction mechanism, diffusion theory and extended state mobility model 2-92608
 Si, polycrystalline, etch selectivity and profile control in CCl₄-O₂ plasma 2-83253
 Si, polycrystalline, grain boundaries, chem., compositional and elec. props. 2-76458
 Si, polycrystalline, grain boundary passivation by H₂ 2-76459
 Si, polycrystalline, grain boundary recomb. vel. determ., laser spot technique for photoconductance meas. 2-77087
 Si, polycrystalline, grain growth mechanisms 2-115424
 Si, polycrystalline, grain boundary recombination rate determ. by scanned spot excitation methods 2-115774
 Si, polycrystalline, growth on Mo(Ta)(W) and disilicide formation 2-71817
 Si, polycrystalline, photoconductivity, temperature dependence 2-98697
 Si, polycrystalline, plasma spray, charge carrier mobility 2-72083
 Si, polycrystalline, thin film, CW laser recrystallised material 2-56409
 Si polycrystalline films, thickness meas. by ellipsometry 2-99202
 Si, polycrystalline for solar cell appl., photolum. charact. 2-87843
 Si polycrystalline layer growth kinetics at reduced press. (*Bulgarian*) 2-83032
 n-Si polycrystalline semiconductor layers, 1/f noise (*Polish*) 2-82489
 Si, polycrystalline under optical illum., phenomenological model of grain boundary trapping states 2-92653
 Si, positron interaction, annihilation photon angular correlation spectra 2-77617
 Si, positron lifetimes, systematic study 2-57207
 Si power device struct., chemical Ni plating, nondestructive control (*Russian*) 2-83049
 Si power device struct., Ni contact coatings, burn-in process control by electroinductive method (*Russian*) 2-83050
 Si, precipitation of O, effect of C impurities 2-66240
 Si, precipitation of O and intrinsic gettering 2-66239
 Si production by SiH₄ heterogeneous decomposition in fixed bed reactor 2-116376
 Si, profile control with DC bias in plasma etching 2-88235
 Si, proton and γ -irrad., defect clusters, Hall effect study 2-115225
 Si, proton irradi., defect centre form., electrophys. props. 2-76534
 n-Si, proton-irradiated, radiation defect clusters, struct. and props. 2-81833
 Si, pulsed laser annealing, energy absorption, melting 2-81820
 Si, radiation damage, defect study 2-66068
 Si, radiation damaged self-interstitial struct., double alignment channelling study 2-76433
 Si, radiation defect laser annealing 2-103814
 Si, radiation detector, epitaxial crystal growth appl. 2-90367
 Si, radiation detectors prod. using neutron transmutation doping 2-90369
 Si, radiation from 10 GeV positron channelling 2-81850
 Si, radiation from axially channelled electrons at low energies 2-81851
 Si, radiation-induced defects, room temp., in HVEM studies 2-92043
 Si, Raman and time-resolved transmission meas. 2-57073
 Si, ranges of 0.3-2 MeV H⁺ and 0.7-2 MeV He²⁺ ions 2-76547
 Si, reactive DC sputtering and cosputtering of elemental targets 2-111074
 Si, reactive ion beam etching, using a 26-cm electron-cyclotron-resonance ion source 2-74572
 poly-Si, reactive ion beam etching using hexafluoroethane, SiF₄ and BF₃ gases 2-88233
 Si, reactive ion etching, contamination of blanket etched surfaces, MOS VLSI apps. 2-116568
 Si, recrystallised CVD film; laser irradi., surface topography characts. 2-82086
 Si ribbon, edge-defined film-fed growth, ambient-meniscus melt interactions associated with impurity transport 2-97950
 Si ribbon, H passivated struct. defects, EBIC study 2-66006
 Si ribbon growth, using electron bombardment 2-66387
 Si ribbons, defects, elec. characts. and crystallography, EBIC and HVEM study 2-66014
 Si, SEM EBIC, lock-in detection, contrast meas. from individual dislocations 2-65824
 Si SOS structures, Hall mobility and capacitance meas., internal stresses and pot. fluctuations influence 2-82470
 Si, Sb diffusion, anomalous conc. profiles due to local precipitation 2-76741
 Si, screening effects on Auger lineshapes 2-87918
 Si, screw and 60° dislocations, core struct. and core energy, tight-binding calc. 2-81786
 Si seed crystal fabrication for use with Czochralski method 2-99325
 Si, self ion implanted, residual lattice disorder after pulsed laser irradi. 2-76494
 Si, self-interstitials, review 2-71442
 Si, self-interstitials, transform. under electronic and thermal stimulation 2-103752
 Si, semiconductor materials and devices, processing by neutron irradi. 2-115305
 Si, shock loaded, phase transitions obs. 2-56186
 Si, shock loaded, struct. transition, dynamic yielding and shear strength reduction obs. 2-86792
 Si, single cryst., floating zone growth, defects study (*Chinese*) 2-109796
 Si, single cryst., highly pure lattice parameter 2-109740
 Si single crystal, pedestal grown, resistivity radial distrib. 2-104365
 Si, single crystal, treatment by ion flows (*Russian*) 2-66077
 Si single crystal, X-ray interference by wavefront division 2-58972

elemental semiconductors continued

- Si single crystals, floating zone growth in double-ellipsoid mirror furnace 2-62062
- Si, sinterable ceramic powder prod. from laser driven reactions, process description and modeling 2-11128
- Si, sinterable ceramic powder prod. from laser driven reactions, powder charact. and process variables 2-11129
- Si solar cell, (cryst. p)-(amorphous i-n) struct. 2-116801
- Si solar cell, effect of thickness on efficiency 2-93900
- Si solar cell, flat-spot power loss phenomenon at low temp. and low intensity 2-116819
- Si solar cell, high efficiency, laser processing 2-57702
- Si, solar cell, polycrystalline vacuum deposited, on foreign substrate 2-105571
- Si solar cell fabrication using high speed junction processor 2-83473
- Si solar cell I_{sc} - V_{oc} charact., correction of temp. effect, thermal resistance determ. 2-93912
- Si solar cell optimisation for operation under medium range solar concentration (French) 2-67864
- Si solar cell with novel low-resist. emitter struct. 2-116803
- Si solar cells, computer simulation 2-88461
- Si solar cells, current status, efficiency improvement prospects 2-116804
- Si solar cells, degradation due to formation of Schottky barrier contact 2-93923
- Si solar cells, effect of back-surface B implantation 2-88433
- Si solar cells, fabrication by laser induced diffusion from dopant gas 2-57697
- Si solar cells, fabrication and props. using squarely shaped crystals 2-88439
- Si solar cells, grain boundaries, SEM charge-collection images 2-66012
- Si solar cells, high-low emitter back surface field, anal. of efficiency limitations 2-116808
- Si solar cells, laser annealed, function and bulk region characts. 2-88441
- Si solar cells, MIS and SIS technologies, fabrication technology (Slovak) 2-67859
- Si solar cells, p-n junction, temperature dependence of characts. 2-73120
- Si solar cells, p-n⁺ junction, n-type heavily doped emitter region effective drift current densities 2-83500
- Si, solar cells, production of large area polycryst. sheets from melt 2-99783
- Si solar cells, Schottky barrier, intermediate layer effect on characts. 2-116806
- Si solar cells, single cryst., offer energy for future 2-105559
- a-Si solar cells, use of amorphous SiC:H as window material 2-67861
- Si solar cells fabricated by ion implantation 2-88440
- Si, solid phase lateral epitaxial growth onto adjacent SiO₂ film from ion implanted amorphous Si 2-77730
- Si spherical solar cells, development 2-88462
- Si, stacking fault annihilation, surface orientation depend. 2-55985
- Si, stacking fault growth and shrinkage kinetics in oxidizing ambient containing a Cl cpd. 2-98117
- Si, stacking fault morphology, annealing temp. effect 2-66021
- Si, stacking faults, {113}, atomic model and electron microscopy study 2-71478
- Si, stacking faults for specimen surface crystal orientation deviation from (111) plane (Chinese) 2-91988
- Si, stress relaxation deform. at edge dislocation 2-76580
- Si strip detector with 12 μ m resolution 2-90370
- Si structures with dielectric insulation, single cryst. layers thickness determ. 2-112867
- Si substrate, process for simultaneously making thin and thick epitaxial layers 2-98478
- n-Si substrate for Ir and Rh films, silicide form., AES study 2-86951
- Si substrate for ZnO₂ film, thickness determ. by Monte Carlo method (Chinese) 2-110179
- Si surface, (001), adsorbed H, 2X1 and 1X1 structs., inelastic LEED study 2-92710
- Si surface, (100), O₂ adsorption, Auger and ionisation electron spectra study 2-92365
- Si surface, (100) and (111), Ag film growth, LEED, AES and angle-resolved UPS study 2-92413
- Si surface, (111), Cl chemisorpt., charge density self-consistent-extended Huckel calc. 2-66344
- Si surface, (111), In adatoms desorpt. and film growth, RHEED study 2-92367
- Si surface, (111), thermal epitaxial growth during ion bombardment, LEED study 2-87088
- Si surface, crystallographic orientation determ., micro-probe RHEED technique 2-60843
- Si surface, high dose N⁺ ion implanted layer (Chinese) 2-91997
- Si surface, laser annealed, residual strain, surface treatment effects, Raman spectra study 2-81821
- Si surface, recombination channels 2-72002
- Si surface, tetrahedrally textured, charact. of ion implanted n⁺ layers 2-76475
- Si surface (001), plasmon excitation enhancement by LEED due to surface resonance 2-77139
- Si surface (100), Ag film growth, LEED and AES study 2-56397
- Si surface (111), Ag adsorption, struct. and electronic props., LEED and AES study 2-82092
- Si surface (111), buried oxide layers by O₂ implantation for use in dielectrically isolated ICs 2-61011
- Si surface (111), electron-photon interaction and metal-insulator transition 2-87358
- Si surface (111), epitaxy, high resolution LEED study 2-98487
- Si surface (111), field evaporation in presence of H₂, chemisorption, field ion microscopy study 2-71799
- Si surface (111), Mott insulator model 2-115839
- Si surface (111), RHEED, geometrical surface wave resonance 2-76783
- Si surface (111), reconstructed, electronic struct. in vacancy model 2-87360
- Si surface (111)-(7X7), D adsorption, nuclear microanal., LEED and ion scatt. study 2-76821
- Si surface (112), clean and H and Ga covered, surface struct., LEED study 2-71784
- Si surface (211), polar-on-nonpolar MBE of GaP, nucleation and growth, sublatite ordering 2-110204
- Si surface barrier detector, pulse height defect 2-90371
- Si surface barrier detectors, plasma decay times for fission fragments and α -particles 2-102338
- Si surface barrier detector, plasma delay expt. investigation 2-102339

elemental semiconductors continued

- Si, surface cleaning, deionised water rinse impact 2-88240
- Si surface cleanliness control by TEM (Russian) 2-99573
- Si, surface composition changes due to pulsed laser irradi., appl. to surface cleaning 2-76787
- Si surface damage caused by reactive sputter etching (Japanese) 2-77965
- Si surface electronic struct. of 1X1 and 7X7 reconstructions, UPS study 2-98715
- Si surface layer struct., action of directed flow of ionised halogen containing gas (Russian) 2-71515
- Si, surface layer struct., external photoeffect under X-ray diffr. conditions 2-98402
- Si, surface oxide thin film, carrier photoinjection 2-92699
- Si, surface prep. by selective chem. etching 2-83254
- Si, surface reconstruction, buckling, ionicity and π -bonded chains 2-92337
- Si, surface ripples under picosecond laser illumination 2-81822
- Si, surface state bands of 2X1 reconstruction, angle-resolved photoemission study 2-98714
- Si surfaces, relaxation, reconstruction and oxidation, ion beam study 2-77662
- Si, surfaces (111) and (100), ionization and desorpt. kinetics, atomic beam interaction study 2-115566
- Si, swirl defect form. during melt growth 2-65984
- Si, temperature fields, calc. using heat flow potential 2-65896
- Si, temperature rise induced by continuous Xe arc lamp radiation 2-56009
- Si temperature sensor elements developments (German) 2-64039
- Si temperature sensor type KTY 84 by Philips (German) 2-64108
- Si temperature sensors (German) 2-84627
- Si, textured surface, optical storage medium, reflectance changes 2-81038
- n-Si, thermal cond. meas. under strong uniaxial elastic deformation 2-61222
- Si, thermal oxidation, enhanced dopant diffusion and defect form. 2-66296
- Si, thermal oxidation, X-ray spectra 2-77960
- Si, thermal oxidation in Cl₂ atm., microstruct. develop. 2-93645
- Si, thermoelectric effects, X-ray interferometry study 2-98682
- Si, thin film growth by laser induced CVD 2-77752
- Si thin films, D passivation of grain boundary dangling bonds 2-76478
- Si thin polycryst. rod growth by pulling from melt on pedestal, impurity distrib. 2-76347
- Si, tipped inversion layers, tunnelling, Shubnikov-de Haas data 2-56705
- Si, total energy calcs. 2-66470
- Si, transition metal interstitials, impurity states, many electron effects, SCF X α cluster calc. 2-82283
- Si, transition metal interstitials, impurity levels, many electron effects, SCF X α cluster calc. 2-82284
- Si, transverse photo-emf (Russian) 2-77126
- n-Si, transverse photovoltaic effect, intervalley relax. time 2-115819
- Si, UHV-deposited thin films, laser cleaning of (100), (110) and (111) surfaces 2-83250
- Si, ultra-high purity p-type crystals, totally depleted surface barrier detectors 2-70056
- Si, ultra-high purity p-type surface barrier detectors fabrication and study 2-90368
- Si, uniaxially stressed, electron-hole liquid props. 2-104259
- n-Si, uniaxially stressed, free carrier absorpt. 2-87736
- Si, uniaxially stressed, free carrier absorpt. spectra (Russian) 2-87818
- Si, vacancy and chemisorptive bond elec. struct. 2-82417
- Si, velocity/field characteristic meas. using HF modulated solid-state laser diode 2-82350
- Si wafer, microscopic defects, positron annihilation study 2-82951
- Si, wafer shape, double-crystal topographical investigation after oxidation 2-115243
- Si wafers, C content determ. by IR absorpt. spectrometry 2-93840
- Si wafers, HCl etched {111}, deep etch pits and facet form. obs. 2-76447
- Si wafers, surface deform. meas. using interferometric techniques 2-84691
- Si wafers, thermally-induced defects characterisation by room-temp. photoluminesc. 2-87837
- Si, with C impurity, β -SiC particles segregation mechanism and kinetics 2-57354
- Si, with chemisorbed Br, X-ray standing wave anal. 2-82128
- Si, with varying uniaxial stress, electron-hole liq. condensation 2-71883
- Si, X-ray forbidden refls., spectral depend. 2-60838
- Si, X-ray K α and L α , emission bands 2-57217
- Si, X-ray mode selection and intensity enhancement in crystals, appl. to X-ray sources 2-81622
- Si, zone-melting-recrystallised films on SiO₂-coated Si substrate, subgrain boundaries effect on carrier transport 2-77207
- Si: P and compensated Si:P,B, ion implanted, epitaxial regrowth obs. 2-92388
- Si:¹⁰⁹Sn, impurity atom vibr., adiabatic bond-charge model 2-81917
- Si:Al, neutron irradi., IR absorption by radiation defects 2-116217
- Si:As, amorphous, line-source electron beam annealing 2-66060
- Si:As, amorphous film, laser induced solid phase epitaxy kinetics, time resolved reflectivity study 2-56384
- Si:As, D⁻, centres, far IR photocond., uniaxial stress and mag. field effects meas. 2-98691
- Si:As, dopant clustering, generalized model 2-115417
- Si:As, doping during Pd:Si form. at low temp. 2-86698
- Si:As, ion damaged, undissociated dislocation dipoles and intermediate defects, TEM study 2-71459
- Si:As, ion implantation profiles, 10 keV to 2.56 MeV, Rutherford backscatt. study 2-115269
- Si:As, ion implanted, blink furnace annealing 2-62140
- Si:As, ion implanted, laser annealing mechanism 2-61023
- Si:As, ion implanted, laser annealed, bonding defects, Roman scatt. study 2-67066
- Si:As, ion implanted, pulsed X-ray annealing 2-115286
- Si:As, ion implanted, solid state phase annealing with CW Nd:YAG laser (German) 2-105183
- Si:As, ion irradiated, point defect chains, high resolution TEM study 2-71470
- Si:As, ion-implanted, laser and thermal annealing comparison, ion backscatt. and elec. meas. 2-55991
- Si:As, laser beam annealed, defects and elec. props., TEM study 2-109799

elemental semiconductors continued

- Si:As, polycrystalline film, impurity lateral diffusion lengths meas. technique 2-104062
 Si:As, range distrib. and thermal annealing props. of low-energy implants 2-115258
 Si:As, substitutional impurity clustering, ion channelling study, review 2-71536
 Si:As, surface layer struct., influence of non-uniformity of laser beam intensity 2-92314
 Si:As, thin layers on conducting boundary, spreading resistance profiles 2-86703
 Si:As diffusion and impurity concentration profiles, Rutherford backscatt. study 2-82019
 Si:As films, heavily doped, thermally and laser annealed, elec. props. 2-115924
 Si:As implanted 4 in wafers, fast annealing using imaging furnace with 6.5 kW Xe arc lamp 2-98123
 Si:As⁺, implanted, pulsed electron beam annealing apparatus and utilisation (*Chinese*) 2-66059
 Si:As⁺ layer, ion implanted, Q switched Nd:YAG laser annealing 2-56015
 Si:As⁺(P⁺), ion implanted, cryst. damage, spectroscopic ellipsometry study 2-92049
 Si:As(B), ion implantation damage, optical constants anal., ellipsometry expt. and refractive index model study 2-77469
 Si:As(P), CVD film, elec. characts., grain size, effects of impurity conc. and heat treatment 2-82487
 Si:As(P), implanted and laser annealed, electronic states, IR optical props. 2-57112
 Si:As(W), ion implanted, defect features 2-103796
 Si:Au, acceptor level electron cross-section, DLTS study 2-115772
 Si:Au, Au diffusion, expt. study 2-104061
 Si:Au, B, counterdoped, anal. of transient photocond. 2-66584
 Si:Au, cluster centres, EPR study 2-56923
 Si:Au, deep Au impurity centre, donor and acceptor levels 2-104306
 Si:Au, depth distrib. determ. using elastic backscatt. 2-77671
 Si:Au, mid-gap level investigation by DLTS and transient capacitance meas. 2-104286
 Si:Au, mid-gap levels investigation by DLTS and transient capacitance meas. (*Chinese*) 2-66473
 Si:Au, minority carrier capture cross section meas. 2-66569
 Si:Au, n-type Czochralski, capture cross section of donor and acceptor states 2-98665
 Si:Au, props. of Au related acceptor level 2-71910
 Si:Au, thermal capture of acceptor deep level, Huang-Rhys factor 2-82276
 Si:Au n⁺-p junction, deep level and shallow impurity profile simultaneous meas. with C-V method (*Chinese*) 2-92505
 Si:Au p⁺-n diode, DLTS and C²-DLTS, analysis 2-56470
 Si:Au-SiO₂, MOS struct., Au related, interface states, quasi-static capacitance study 2-72069
 Si:Au(Pt), deep levels obs., anal. of admittance spectroscopy method 2-115701
 Si:B, B deposition from BBr₃ source, expt. and computer simulation 2-103794
 Si:B, bulk and SOS struct., ion implanted, doping profile, thermal distribution, computer simulation 2-66033
 Si:B, codeposition from Si and B, influence of traces of water vapour 2-111080
 Si:B, defect-impurity complexes, ion channelling study 2-71534
 Si:B, diffusion doped, CW CO₂ laser irradi., sheet resistance depend. on power density and scanning vel. (*Chinese*) 2-109827
 Si:B, electron irradi., B interstitial, capacitance bridge meas. 2-56034
 Si:B, IR absorption spectrum 2-77503
 Si:B, interstitial B negative-U props., EPR 2-71908
 Si:B, ion implanted, B diffusion and segregation obs. in dry O₂ ambient 2-92281
 Si:B, ion implanted, radiation damage production 2-61009
 Si:B, laser beam annealing, recrystn. 2-103812
 Si:B, measurement of sheet resistivity of shallow diffused layers for profiling by four-point probe technique 2-98650
 Si:B, polycrystalline, B⁺ ion implantation, heat treatment effects 2-103795
 Si:B, polycrystalline, on SiO₂, elec. resist., CW laser and furnace annealing effects 2-61025
 Si:B, polycrystalline, quantitative doping using ion implantation process 2-92002
 Si:B, proton irradi., impurity distrib. and diffusion 2-61203
 Si:B, SIMS anal., matrix ion species indexed sensitivity factors for calibration 2-95531
 Si:B, SIMS depth profiling, physico-chemical state 2-99286
 Si:B, strain-split two-level acceptor ground state, US relax. study 2-71592
 Si:B, submicrometer-linewidth doping and relief definition by laser-controlled diffusion 2-98122
 Si:B, thermally evaporated, near-surface layer impurity distrib., photoluminesc. study 2-110902
 Si:B, trap levels, DLTS study 2-56472
 Si:B, US investigation of acceptor ground state, distrib. of splittings 2-98577
 Si:B,Fe, quenched-in trap level at E_v+0.45 eV 2-104291
 Si:B epitaxial layer, lattice parameter determ. by means of asymm. Bragg refls. 2-97851
 Si:B films, plasma deposition using laser microreaction 2-56375
 Si:B p-n junction, BN non-cond. layer, photovoltaic obs. 2-77164
 Si:B radial position sensitive detectors fabrication and characts. 2-70058
 Si:B thin film, polycrystalline, elec. props., use as sensor (*German*) 2-7427
 Si:B⁺, inhomogeneous implanted surface layers studied by X-ray rocking curves meas. 2-92315
 Si:BF₃⁺, ion implanted, wafer bending and stress, thermal annealing effect, X-ray topography 2-115311
 Si:BF₃⁺ single cryst., pulsed laser irradiated, ion implanted, F conc. profile 2-115263
 Si:B(As), high-dose implanted, CO₂ laser annealing characts. 2-57219
 Si:B(As)(P), elemental distrib. anal., SIMS and neutron activation anal. 2-98151
 Si:B(C), electron irradi. defect accumulation kinetics and point defect annihilation 2-98153
 Si:B(P) quantitative impurity anal. by photolum. technique 2-57180

elemental semiconductors continued

- Si:B(P)(As), supersaturated, ion implanted and laser annealed, heat treatment effects 2-92000
 Si:B(P)(As)(Sb)(Ga), ion implanted, electron beam annealing by multiple-scan method 2-92036
 Si:Be, atom and carrier depth distrib. 2-92018
 Si:BF₃⁺, recrystallisation by light-flash annealing 2-98130
 Si:Bi, ion implanted, impurity redistrib. after Nd laser pulse irradi. 2-115265
 Si:Bi, range profile, Rutherford backscattering and SIMS meas. 2-98138
 Si:Bi(As), scanning electron-beam annealing 2-103818
 Si:C, effect of C on elec. props. of devices, impurity-defect interaction investig. 2-91994
 Si:C, ion implanted, defect states, DLTS study 2-56471
 Si:C, O, reactor neutron irradi. effect on C impurities 2-109839
 Si:C, polycrystn., C influence in resistivity and grain size 2-66547
 Si:C,O, Czochralski grown, donor form. by annealing at 700°C 2-110283
 a-Si:C and a-Si:C, B(P) films, cathodic deposition, charact. 2-88011
 Si:Co, impurity lattice location, Mossbauer study 2-103785
 n-Si:Cr, donor levels, photocapacitance and photocond. spectra 2-115707
 Si:Cu, deep centre long lifetime photoluminescence 2-110938
 Si:Cu, luminescence, excitons and impurity states 2-104946
 Si:Cu(Ag)(Au), gettering by Al at low temp., Rutherford backscatt. study 2-115264
 Si:F, H, amorphous, density of localised states, DLTS study 2-98591
 Si:F, H amorphous films, photoelec., and optical props. Schottky barrier solar cell form. 2-83480
 Si:F,H,P films, critical vol. fraction of crystallinity for conductivity percolation 2-56379
 Si:F,H amorphous films, solar cell form., film elec. and optical props. 2-83481
 a-Si:F and a-Si:F, B(P) films, cathodic deposition, charact. 2-88011
 a-Si:F and a-Si:F, H films, motional narrowing effects of NMR spectra 2-77395
 Si:Fe, electron beam irradi., EPR spectra 2-56920
 Si:Fe, heat treated, interstitial impurity, EPR study 2-71439
 p-Si:Fe, interstitial Fe and Fe-acceptor pairs, DLTS and Hall effect study 2-66476
 Si:Fe, ion implantation study by conversion electron Mossbauer spectroscopy 2-77427
 Si:Fe, local electronic struct., molecular cluster method based on HF approx. 2-92533
 Si:Fe, Ti (In), photoluminescence lines, Fe-Ti complexes 2-104948
 Si:Fe,B, Fe donor activity on heat treatment, elec., DLTS and EPR meas. 2-71911
 Si:Fe(V)(Ti)(Mn), deep levels under hydrostatic press., isothermal capacitance study 2-66477
 Si:Ga, doping during MBE, AES and isothermal desorpt. spectra study 2-109819
 Si:Ga, electron irradi., luminesc. of traps 2-61969
 Si:Ga, float zone cryst., neutron irradi., X-centre formation, expt. study 2-98162
 Si:Ga, heavily doped, free electron zero-phonon transition, luminescence 2-61954
 Si:Ga (In)(Sb), ion implanted, dopant redistrib. after flash lamp annealing, He⁺ backscatt. study 2-86936
 Si:Ga(In), impurity IR excited-state lines 2-82883
 Si:Gd, crystal microstruct., Gd accumulations, electron radiation-induced defects 2-86891
 Si:Ge, atomic mixing effects on high fluence 40 keV Ge⁺ implantation 2-76466
 Si:Ge, Ge diffusion coeff., SIMS study 2-115465
 Si:Ge, ion implantation, high fluence, contrib. of atomic mixing, theoretical and exptl. study 2-98131
 Si:Ge, Ne ion beam induced atomic distrib. of implanted range profiles 2-56002
 Si:H, amorphous, 1.4 eV luminescence lifetime distrib. 2-72540
 Si:H, amorphous, DLTS response due to localized states 2-56492
 Si:H, amorphous, elec. cond., effects of H₂O and NH₃ adsorbates, oxidation and light exposure 2-71984
 Si:H, amorphous, electronic states and total energies 2-66429
 Si:H, amorphous, electronic struct. by soft X-ray spectroscopy 2-104301
 Si:H, amorphous, electronic states (*Japanese*) 2-115645
 Si:H, amorphous, excitation wavelength depend. of luminesc. spectra 2-77586
 Si:H, amorphous, field effect conductance, annealing and light induced changes meas. 2-98750
 Si:H, amorphous, gap states distrib., modulated photocurrent phase-shift anal. 2-92534
 Si:H, amorphous, gap-state absorpt. meas. 2-87827
 Si:H, amorphous, H determ., IR absorption meas. (*Japanese*) 2-71490
 Si:H, amorphous, H₂ evolution 2-66280
 Si:H, amorphous, hole collection length, surface photovoltage study using liq. Schottky barrier 2-56631
 Si:H, amorphous, homogeneous CVD prep. and struct., comp. and photocond. props. 2-87085
 Si:H, amorphous, interface reactions with Au and Schottky barrier formation, expt. study 2-110176
 Si:H, amorphous, ODMR obs. of luminescence fatigue 2-104954
 Si:H, amorphous, order and disorder, curved space description 2-76311
 p-Si:H, amorphous, photoelectrochem. solar cell, expt. study 2-105573
 Si:H, amorphous, photogeneration, geminate recombination model, expt. and theoretical study 2-87315
 Si:H, amorphous, photoinduced midgap absorpt. 2-72528
 Si:H, amorphous, photoluminescence fatigue and photo-annealing 2-110905
 Si:H, amorphous, post-hydrogenated CVD Schottky diode solar cell 2-99796
 Si:H, amorphous, RF glow discharge deposition rate, crossed elec. and mag. fields effect 2-93447
 Si:H, amorphous, Schottky barrier and MOS structs., barrier heights, photoemission study 2-82465
 Si:H, amorphous, Schottky diode spectral response, gap states effect 2-87753
 Si:H, amorphous, spin-depend. recombination at dangling bonds 2-77424
 Si:H, amorphous, sputtered, time-resolved photolum. spectra 2-77581
 Si:H, amorphous, sputtered, time-of-flight and photoinduced mid-gap absorpt., dispersion 2-87432
 Si:H, amorphous, sputtering and glow discharge prep., photoluminescence and midgap state density 2-87855
 Si:H, amorphous, temp. depend. of room temp. ODMR signals 2-104749

elemental semiconductors continued

- Si:H, amorphous, time resolved photoluminescence, quenching and carrier mobility 2-104949
 Si:H, amorphous, undoped, diffusion of holes 2-92651
 Si:H, amorphous film, density of states, field effect determ. technique, annealing and illumination effects 2-61593
 Si:H, amorphous film, glow discharge deposited at 1 Torr, elec. and struct. props. meas. 2-87277
 Si:H, amorphous film, interfacial electronic struct. and density of states 2-66601
 n-Si:H, amorphous film, interaction with metal electrodes 2-87389
 n-Si:H, amorphous film, interaction with metal electrodes 2-87390
 Si:H, amorphous film, laser induced crystn. 2-55849
 Si:H, amorphous film, magnetoresistance study 2-92790
 Si:H, amorphous film, optical props. (Korean) 2-57201
 Si:H, amorphous film, optically induced pot. fluctuations, elec. cond. and thermopower study 2-77050
 Si:H, amorphous film, optical and elec. props. 2-82940
 Si:H, amorphous film, RF sputtered, H content, and config., photoconductivity, IR study 2-82397
 Si:H, amorphous film, RF planar-magnetron sputtering, IR and photoelec. props. (Japanese) 2-99332
 Si:H, amorphous film, reactive ion beam sputtering, optical props. 2-83041
 Si:H, amorphous film, tetrode RF sputtering and optical and elec. props. meas. 2-11072
 Si:H, amorphous film, vacuum evaporated, substitutional doping by ion implantation, elec. cond. and EPR study 2-55850
 Si:H, amorphous films, field effect density of states, annealing and light exposure effects 2-71850
 Si:H, amorphous glow discharge film, photocond. and Fermi level temp. depend., photoinduced changes obs. 2-115810
 Si:H, amorphous plasma deposited film, photocond. IR quenching and gap states, exp. study 2-87318
 Si:H, amorphous Schottky barrier solar cells; CVD prep., electronic props. 2-83484
 Si:H, amorphous Schottky diodes, capacitance-voltage characts. calc. 2-66667
 p-i-n-Si:H, amorphous solar cell struct., deep electron traps 2-56493
 Si:H, amorphous solar cells, hot carrier effects on collection efficiency 2-67852
 Si:H, amorphous solar cells, I-V characts., density of states, and depletion width 2-83483
 Si:H, amorphous sputtered film, dispersive transport, carrier mobility, photoconductivity study 2-82357
 Si:H, amorphous thin film, pure and hydrogenated, adsorbed O₂ layer, electronic struct., XPS and UPS study 2-75254
 Si:H, amorphous thin film solar cells, review 2-105568
 Si:H, As, amorphous film, optical absorption, doping and temp. depend. 2-82945
 a-Si:H, density of states determ., field effect method (Korean) 2-56419
 Si:H, dislocation donor and acceptor states (Russian) 2-92525
 a-Si:H, electronic props., CPA calc. 2-56430
 Si:H, F, amorphous, ODMR study 2-93065
 Si:H, FZ cryst., anomalous defect form. by H doping 2-71476
 a-Si:H, Ga(As), ion implanted, absorpt. and photocond. spectra 2-115820
 a-Si:H, glow discharge, oxidation investig., optical constants. determ. by ellipsometry meas. 2-116578
 Si:H, implanted, radiation defects study by DLTS 2-92522
 Si:H, impurity lattice location, ion channelling studies, review 2-71537
 Si:H, ion implanted, metastable cond. and shallow donor conc. meas. 2-115764
 Si:H, N, amorphous film, elec. and photocond. variation with N doping 2-110339
 a-Si:H, N films, optical and elec. props., solid-state image pickup device appl. 2-82935
 Si:H, N(Ga), amorphous film, ion implanted, photocond. and energy spectrum 2-92698
 a-Si:H, P, photoinduced absorpt. in picosec. range due to deep hole traps 2-72527
 a-Si:H, photoluminesc. emission broadening 2-110920
 a-Si:H, potential distrib. in Schottky and p-i-n structs. by capacitive techniques 2-92749
 a-Si:H, RF sputtered, elec. and EPR meas. 2-115791
 a-Si:H, reassessment of vibr. spectrum 2-57136
 Si:H, three-dimensional H conc. profiles 2-115266
 a-Si:H, time resolved ODMR by frequency response spectroscopy 2-82745
 Si:H, vacancy vibrational behaviour, renormalisation group method 2-81918
 Si:H,As, amorphous RF sputtered film, pulsed laser annealing 2-86726
 Si:H,B, amorphous, ESR lineshape, g-factors, temp. depend. 2-77373
 Si:H,B, amorphous film, NMR study 2-110686
 a-Si:H,B(P) IR absorption spectra, effects of annealing 2-99156
 Si:H,F, amorphous film, NMR and ESR study 2-93003
 Si:H,N, amorphous, prep. from SiH₄-N₂-H₂ mixture and elec. resist. and IR absorpt. meas. 2-93444
 Si:H,O,N, amorphous, ESR of impurity associated defects 2-82699
 Si:H,P amorphous glow discharge thin films, elec. props., heat treatment and P ion implantation effects 2-61467
 Si:H amorphous, oxidation, UPS and Auger study 2-83260
 Si:H amorphous, photoconductivity spectrum 2-104430
 Si:H amorphous, photoluminescence, band gap fluctuation 2-98530
 Si:H amorphous film, DC sputtered, characterization by optical and nuclear methods 2-93308
 Si:H amorphous film, glow discharge deposited; refractive index, 95 to 723K (French) 2-62005
 Si:H amorphous film, glow discharge deposited, heterogeneities and surface effects 2-92420
 Si:H amorphous film, glow discharge deposited, H content and mech. stress 2-104210
 Si:H amorphous film, glow discharge deposition, plasma spectroscopy 2-115605
 Si:H amorphous film, growth by silane laser photodissociation, X-ray and IR spectra study 2-116375
 Si:H amorphous film, H conc. correlation with low freq. noise 2-92795
 Si:H amorphous film, multiple DC discharge growth, ellipsometric study 2-92422
 Si:H amorphous film prep., evaporation method 2-62069
 Si:H amorphous films, H₂ evolution 2-93950

elemental semiconductors continued

- Si:H amorphous films for electrophotography, photosensitivity, glow discharge deposition and doping 2-107435
 Si:H amorphous glow discharge films, elec. and optical props., elec. and mag. field effects 2-82407
 Si:H amorphous layers, refractive index dispersion, dark m-lines method 2-82946
 Si:H amorphous MIS struct., Langmuir-Blodgett film 2-87410
 Si:H amorphous p-i-n solar cell, photocurrent, voltage depend. 2-78211
 Si:H amorphous p-i-n solar cell, expt. study 2-105569
 Si:H amorphous photoreceptor drum, RF glow discharge deposition, electrophotographic props. 2-107436
 Si:H amorphous plasma deposited film, photoluminescence, sub-band gap excitation 2-87856
 Si:H amorphous reactively sputtered film, H anal. by IR spectroscopy, nuclear reaction and SIMS 2-76857
 Si:H amorphous solar cell, photovoltaic performance, film props., plasma deposition optimisation 2-83486
 Si:H amorphous sputtered films struct. correlation with prep. cond., STEM study 2-66400
 Si:H amorphous sputtered film, microstruct. and H bonding environments 2-76847
 Si:H amorphous sputtered thin film, carrier propagation, trapping and mobility 2-87283
 Si:H amorphous thin film Schottky barrier diodes, diode characts., film props. 2-82430
 Si:H amorphous thin films, ion-plated, photoconductivity and optical band gap 2-87331
 a-Si:H and a-Si:H:F, dangling bond centres energy level, ODMR study 2-110732
 a-Si:H film, annealing effects on ESR, elec. and optical props. 2-66588
 a-Si:H film, elec. props. optimisation using cross field plasma deposition, photovoltaic device apps. 2-83038
 Si:H films, amorphous, dependence of gap on hydrogen content, photoluminesc. and IR spectra study (Chinese) 2-110903
 a-Si:H films, growth and characterisation 2-83031
 a-Si:H films, mol. H₂ presence, proton spin-lattice relax. time meas. 2-61786
 a-Si:H films, motional narrowing effects of NMR spectra 2-77395
 a-Si:H films, optical absorption and density of states in band gap 2-72571
 a-Si:H films, Raman scatt. under high press. 2-72505
 a-Si:H films, residual stress elimination 2-61317
 a-Si:H films, SAW attenuation, paramag. defects, IR, ESR and SEM studies 2-110123
 Si:H microcrystalline glow discharge films, phys. props., substrate bias effect 2-87109
 Si:H n⁺-i-n⁺ struct., amorphous, threshold switching 2-82410
 a-Si:H n-i-p large area solar cells conversion efficiency anal. 2-83471
 a-Si:H n-i-p solar cells, built-in potential determ. 2-93903
 a-Si:H p-i-n high efficiency solar cell using SnO₂/glass substrate 2-93902
 a-Si:H p-i-n solar cell, window effects of a-SiC:H layer 2-83472
 a-Si:H RF sputtered films, elec. props. rel. to threshold and memory switching apps. 2-87347
 Si:H₂, neutron irradi., defect states from IR absorpt. (Chinese) 2-110279
 Si:H(F), amorphous, dangling bond ESR, effect of H or F, Huckel mol. orbital calc. 2-56933
 Si:H(F), amorphous, ESR study relation between defects and incorporated H(F) (Japanese) 2-87588
 Si:H(O), interaction between dislocations and H or O, elec. and luminesc. props. (Russian) 2-56487
 Si:H(PH₃), amorphous film, density of gap states, space charge spectroscopy study 2-87181
 Si:In, elec. resist. and mobility, hole scatt. by impurities 2-115750
 Si:In, ion implanted, laser annealed, convection and constitutional supercooling cells 2-66054
 Si:In, luminescence intensity enhancement by thermal treatment 2-57153
 Si:In, P, electron capture coeff. of neutral In and pair recomb., photoluminesc. spectra 2-77569
 Si:In, range distrib. and thermal annealing props. of low-energy implants 2-115258
 Si:In, vibronic spectrum of U₂ isoelectronic centre 2-61953
 Si:In,Li, In X-centre donor-acceptor pair photoluminescence 2-57139
 Si:In amorphous layers, thermal redistrib. of In 2-56003
 Si:In(Sb), laser annealed, all formation and interfacial instability, expt. study and perturbation theory 2-56012
 Si:Li, D⁺ centres, far IR photocond., uniaxial stress and mag. field effects meas. 2-98691
 Si:Li, D⁺ states, electronic struct. and binding energies 2-82280
 Si:Li, neutron transmutation doped, heat treatment effects 2-115304
 Si:Mn, B, Mn²⁺ B⁻ pairs, EPR study 2-110628
 α-Si:Mn²⁺, doping by ion implantation, dark cond. meas. 2-98128
 p-Si:Mn²⁺ Al (B⁻), DTA and electron beam anal., doping effects (German) 2-92010
 Si:N, amorphous CVD film, elec. cond., field effect and gap state density meas. 2-87193
 Si:N, deep levels meas. 2-92511
 Si:N, excited states of sputtered mol. N₂ 2-77657
 Si:N, ion implanted, oxidation inhibition 2-115271
 Si:N, low energy implantation, material composition, oxidation resist. and elec. characts. 2-86694
 Si:N, low energy N implantation, room temp. formation of Si-nitride films 2-86693
 Si:N, photoluminesc. anal. for characterisation of shallow impurities 2-93242
 Si:Ne, Ar, amorphous, ion implanted, localised defect states and impurity distrib., photocond. spectra study 2-61414
 Si:Ni, γ-irrad., elec. cond., photocond. and galvomag. props. 2-115761
 Si:O, C, Czochralski grown, O related donors, 700 to 800°C, expt. study 2-56469
 Si:O, Czochralski grown, defect obs. after high temp. treatment 2-76427
 Si:O, Czochralski grown, precipitated and total O conc., meas. technique 2-103802
 Si:O, diffusion and gettering studies by Cs/SIMS 2-104071
 Si:O, electron irradi., carrier removal and recombination by interstitial complexes 2-115781
 Si:O, incorporation of O impurities in CVD 2-86700
 Si:O, induced recombination centres, struct. and formation kinetics, expt. study 2-86707

elemental semiconductors continued

- Si:O, ion implanted, conductivity mode conversion, dielec. isolation technique appl. 2-61003
 Si:O, Mg influence of Mg on IR absorpt. and elec. cond. props. 2-87258
 Si:O, minority carrier lifetime, heating effects 2-104394
 Si:O, O donor developed around dislocations, expt. study 2-92510
 Si:O, O precip., IR absorpt. and TEM study 2-92208
 Si:O, polycrystalline films, prep. and props. 2-72629
 Si:O, secondary ion yield enhancement, implanted O conc. depend. 2-62036
 Si:O, Si-O-Si complex new absorpt. band 2-72496
 Si:O,H,F, amorphous, photoluminescence, localised states, temp. depend. 2-87854
 Si:O crystal, Czochralski grown, deformed, dislocation configurations 2-76448
 Si:O crystals, indentation rosettes and dislocation locking by O 2-98111
 Si:O donor centres, heat treatment effects, Hall meas. and ESR study 2-61401
 Si:O⁺ implanted, deep level defects study by DLTS (*Chinese*) 2-92506
 Si:O⁺ (C⁴⁺), MOS capacitors and Schottky diodes, ion implantation, elec. props. 2-86696
 Si:O(B), ion implantation in 100 MeV range 2-81805
 Si:O(N), surface crystallinity and anomalous comp. profiles of buried SiO₂ and Si₃N₄ layers 2-86688
 Si:O(N) films, amorphous, effect of O₂ and N₂ introduction on dark conductivity/photoconductivity (*Chinese*) 2-92788
 Si:P, amorphous, ion implantation doping and surface conductivity 2-115262
 Si:P, and other implants, SIMS studies of anomalous behaviour 2-92013
 Si:P, As, Sb, ion implanted, multiphase electron beam annealed, impurity profiles 2-103803
 n-Si:P, B ion implanted, deep level profiles 2-98571
 Si:P, CVD epitaxial growth, P doping process obs. 2-93439
 Si:P, D⁻, centres, far IR photocond., uniaxial stress and mag. field effects meas. 2-98691
 Si:P, dislocation clusters and P diffusion, TEM and X-ray topography study 2-91973
 Si:P, donor state line-broadening mechanisms, photoluminesc. study 2-99181
 Si:P, electrically inactive impurities, precipitation explanation, TEM study 2-67341
 Si:P, electron irradi., electron trap study by transient capacitance 2-110282
 Si:P, electron irradi. damage, capacitance and dielec. loss meas. 2-92037
 Si:P, giant dielectric const. near metal-insulator transition 2-87650
 Si:P, heavily doped, as amorphous antiferromagnet 2-77283
 Si:P, high conc. diffusion, vacancy percolation 2-82028
 Si:P, highly doped, metal-insulator transition, optical and precursive props. 2-72038
 Si:P, ion implanted, distrib. profiles, elec. props. 2-103797
 Si:P, ion implanted, wavelength modulation spectrum 2-104916
 Si:P, ion implanted and annealed, IR reflectivity characterisation, physical model 2-77532
 Si:P, measurement of sheet resistivity of shallow diffused layers for profiling by four-point probe technique 2-98650
 Si:P, metal-insulator transition stress tuning at mK temperatures 2-71868
 Si:P, metal-insulator transition, minimum metallic cond. 2-98544
 Si:P, multivalued Sasaki effect, I-V characs., current saturation 2-56605
 Si:P, neutron transmutation doping, radiation defects and annealing, review 2-71513
 Si:P, neutron transmutation doping, radiation defects, electrical activity, annealing 2-86738
 Si:P, O, electron and neutron irradi., point defects and colour centres, DLTS study 2-103754
 Si:P, polycryst., grain boundary diffusion of P 2-92283
 Si:P, polycrystalline, low press. CVD with in situ P doping 2-93438
 Si:P, polycrystalline film, impurity lateral diffusion lengths meas. technique 2-104062
 Si:P, redistribution of heavy metal impurities, by P diffusion, theory 2-109822
 Si:P, specific heat, effects of electron and impurity correlations 2-104016
 Si:P,B amorphous sputtered solar cell, dopant impurity effects 2-62475
 Si:P crystal, γ -induced point defects, H passivation 2-103758
 Si:P polycryst. film, in situ doped, CW laser annealing, grain size and elec. cond. meas. 2-98771
 Si:P shallow radiation induced defect levels, annealing, AC conductance study 2-76970
 Si:P Z 2-115924
 Si:P₂(P₂⁺), multiple scatt. X α mol. cluster model of complex defects 2-76977
 Si:P⁺, ion implanted, damaged layer study 2-71480
 Si:P⁺(As⁺) layers, ion implanted, electron beam annealing, elec. props. 2-92039
 Si:P, ion implanted, electrolyte electroreflectance spectra study (*Chinese*) 2-93156
 Si:P(As), CVD VPE grown, doping element incorporation, total press. depend. calc. 2-91998
 Si:P(As), dechannelling by dislocations and stacking faults 2-81845
 Si:Pt, minority carrier capture cross section meas. 2-66569
 Si:S, deep donor binding energy, g-value calc. 2-92517
 Si:S, impurity related defect centres, DLTS and optical absorpt. study 2-71919
 Si:S⁺(Se⁺)(Te⁺), impurity states, charge densities and wave functions 2-115700
 Si:S⁺(Se⁺)(Te⁺), multivalley spin splitting of 1s(T₂) states 2-77000
 Si:S(Se), deep levels, quantitative criterion 2-87183
 Si:Sb, laser epitaxy over buried layers 2-56406
 Si:Sb, pipe diffusion and dislocation density 2-110043
 Si:Sb amorphous, sputter depth profiling, mass redistrib. by atomic mixing 2-82974
 Si:Sb(In)(Ga)(Bi)(As), ion implanted, metastable supersaturated solid solns. formation during solid phase epitaxy 2-98283
 Si:Se, donor level photoionisation cross-sections, IR spectra and photocond. study 2-56484
 Si:Sm, IR absorpt. spectra, 1.8 μ m absorpt. band, annealing effects 2-57137
 Si:Sn, cordency and compression effects on isomer shift of impurities 2-56989
 Si:Zn, Cr(Fe)(Mn)(V), donor-acceptor complexes, DLTS and TSC meas. (*German*) 2-98579

elemental semiconductors continued

- Si:Zn,Co, epitaxial layers, doping laws and electrophysical props. 2-66025
 Si:Zn junction, pot. distrib. (*Russian*) 2-92734
 Si:Zn layers, ion implantation, damage annealing 2-103798
 Si:Zn surface, nonuniform depletion relax., expt. study (*Russian*) 2-115849
 Si/In₂O₃-SnO₂ transparent conductor films/polycrystalline junction, appl. to solar cells 2-57711
 Si/LiNbO₃ substrate, SAW parametric oscill. 2-65440
 Si/metal systems, electron beam induced reactions 2-86955
 Si/(Pd-W(Pd-Si))(Pt-W)(Pt-Si), shallow silicide contact of high Schottky barrier formation, expt. study 2-66622
 Si/Si₃N₄ plasma enhanced thermally grown film, interface struct. and stoichiometry, backscattering-channelling study 2-56392
 Si/WSi₂(MoSi₂)-based composite electrodes for MOS-type capacitor structs., elec. props. 2-98752
 p-Si-acetonitrile soln. interface with different redox couples, Fermi level pinning obs. 2-110467
 Si-Ag on Si (111), interface growth, intermixing, UPS study 2-110165
 Si-Be MIS solar cell, with textured surface, large active area 2-88443
 Si-CaF₂-Si heteroepitaxial struct., prep. by vac. deposition and charact. 2-115612
 p-Si-CdS solar cell, single source evaporation prep. and efficiency meas. 2-116800
 Si-CdS(Zn,Cd_{1-x}S) heterojunction solar cell, elec. props. 2-115875
 p-Si-CdSe junction, sputter deposited, elec. props. 2-98736
 Si-Co thin film reactions, Co₂Si and CoSi growth kinetics and thermal stability obs. 2-92290
 Si-Cr interface, CC CrSi₂ formation, diffusion mechanism, ⁵¹Si radioactive marker study 2-61209
 Si-Cr interface morphology and electronic struct., photoemission and band struct., calcs. study 2-82460
 Si-d metal interface, interface, O₂ interaction, photoemission investig. 2-110474
 Si-enriched layers on Ni, obtained by CVD, characterisation 2-105084
 Si-F amorphous film, grown from SiF₂ disproportionation, F conc. determ. 2-92021
 Si-Fe contacts, sputter deposited, barrier height meas. 2-110473
 Si-In₂-SnO₂-p-n solar cell, reactive sputtering fabrication 2-57698
 Si-In₂-SnO₂-p-n solar cells, EBIC response anal. 2-88436
 Si-MOS structures, interface-state density investigation 2-66653
 Si-metal bilayer, laser writing for optical storage, TEM and electron diffr. study 2-91011
 Si-metal contacts, fabricated by chemical reduction and electroless methods, barrier heights 2-110471
 Si-metal diode, ion beam sputtering and etching prep. and elec. props. 2-104488
 Si-metal Schottky barriers, photovoltaic props. implications for grating solar cells 2-116828
 p-Si-Mg solar cells, fundamental props. 2-88442
 Si-Mo interface, MoSi₂ formation kinetics meas. during CW laser scanning 2-92025
 Si-Mo on Si (111), interface reactions, synchrotron UPS and AES studies 2-110173
 Si-Ni interface, ion beam mixing, expt. study 2-66376
 Si-Ni interface, Ni₂Si thermal formation, ion irradi. enhancement 2-56369
 Si-NiSi₂ interface, lattice imaging and defects 2-66378
 Si-Ni(Cr) interface, chem. bonding and density of states, UPS and LCAO calc. 2-110476
 Si-on-sapphire, amorphous, ion implanted, time-resolved optical transmission meas. during pulsed laser annealing 2-61027
 Si-on-sapphire, cryst. defects reduction by room temp. ion implantation 2-92012
 Si-PbTiO₃, RF sputtered ferroelec.-semicond. interface states, DLTS and capacitance study 2-98746
 Si-Pd interface, silicide reactions induced by millisecond laser pulses, Rutherford backscatt. study 2-76495
 Si-Pd₂Si epitaxial interface, defect struct. 2-66381
 Si-Pd₂Si interface, lattice imaging and defects 2-66378
 Si-Pd(Ag) on Si (111)7 \times 7, struct. studies of Schottky barrier formation by surface EXAFS 2-110174
 Si-Pt, interface states, XPS study 2-82423
 Si-Pt(Pd)(Ni) interface bonding, XPS study 2-110477
 Si-Ru contact, Schottky barrier height, effect of silicide form. 2-104466
 Si-sapphire, SOS, heteroepitaxial, hydrogenation induced improvement in electronic props. 2-66669
 Si-sapphire interface, high resolution TEM study 2-66380
 Si-Si₃Ge, epitaxial multilayer films, electron mobility enhancement 2-115921
 Si-Si₃N₄ interface anal. using spectroscopic ellipsometry 2-79647
 Si-Si₃N₄, thin film composition and thickness determ. using elastic backscattering 2-104177
 Si-Si₃N₄ interface, defect evolution, synchrotron X-ray topographic obs. 2-98471
 Si-SiO₂, interface-state generation during electron avalanche injection 2-82416
 Si-SiO₂, laterally seeded, subgrain boundaries formed by graphite strip heater recrystn. 2-56376
 Si-SiO₂, MOS capacitance, surface pot. and surface states 2-72059
 Si-SiO₂, MOS inversion layer, stress induced supercond., electron-phonon coupling 2-56702
 Si-SiO₂, MOSFET inversion layer, energy loss of warm electrons, Shubnikov-de Haas study 2-56703
 Si-SiO₂, Si seeded oscillatory epitaxial growth by CW laser irradi. 2-99329
 Si-SiO₂, thermal oxide, γ -irrad., defects and impurities, EPR study 2-98158
 Si-SiO₂, charge coupled struct., surface charge transport, losses, temp. depend. 2-115851
 Si-SiO₂, dielec. props., built-in charge, pulsed annealing effects 2-72066
 Si-SiO₂, interface, atomic roughness, oxidation parameters influence 2-56372
 Si-SiO₂, interface, built-in charge, localisation depth, double elec. layer 2-115908
 Si-SiO₂, interface, elec. props., negative bias-temp. test influence 2-77190
 Si-SiO₂, interface, elec. characs. 2-92770
 Si-SiO₂, interface, electron irradi., trapped charge sites, XPS study 2-77140
 Si-SiO₂ interface, fixed charge density meas. for thin oxides 2-110481

elemental semiconductors continued

- Si-SiO₂ interface, Fowler-Nordheim tunnelling 2-82462
 Si-SiO₂ interface, Si ion implantation, defects, deep levels, annealing, C-V characts. study 2-61403
 Si-SiO₂ interface, slow and fast states induced by hot electrons, expt. study 2-87395
 Si-SiO₂ interface, two-dimensional systems, electronic props., review 2-82467
 Si-SiO₂ interface electronic struct. 2-56711
 Si-SiO₂ interface in MOS struct. positive state generation during Fowler-Nordheim tunnelling 2-77189
 Si-SiO₂ interface props. studied by constant capacitance DLTS method 2-61606
 Si-SiO₂ interface recombination velocity 2-56713
 Si-SiO₂ interface states, H₂ annealed, surface behaviour 2-56712
 Si-SiO₂ interface states, effect of trichloroethylene, C-V measurement techniques 2-72065
 Si-SiO₂ interface states, AC field effect study 2-115897
 Si-SiO₂ interfaces, electron trapping, injection mode dependent phenomena 2-66655
 Si-SiO₂ junction, interface electronic struct. 2-110485
 Si-SiO₂ layers in MOS n-p junctions, electrochemical doping with As⁺, diffusion coeff., C-V plots 2-66287
 Si-SiO₂ MOS interface states, optical excitation by IR light 2-56714
 Si-SiO₂ MOS struct., interface charge inhomogeneities, surface photovoltage meas. 2-115899
 Si-SiO₂ MOS struct. etched in chloroform RF discharge, charge props. (Russian) 2-61592
 Si-SiO₂ MOS struct. with PbTiO₃ layer, electronic props., laser annealing effect 2-82792
 n-Si-SiO₂ MOS structure, interface minority carrier traps, optical DLTS study 2-77186
 Si-SiO₂ MOS system, interface state generation 2-87408
 Si-SiO₂ photoelectrochemical solar cell performance, surface film effect 2-111568
 Si-SiO₂ structures, traps in transition region, TSCR study 2-98754
 Si-SiO₂ system, photoinjection, carrier trapping 2-77198
 Si-SiO₂-Al MOS struct., H₂ anneal effects on metal-semicond. work function difference 2-92771
 n-Si-SiO₂-SnO₂ solar cell, photovoltaic and elec. props. 2-62476
 Si-SiO₂-electrolyte, SiO₂ thin films, conduct. and electroluminescence study (Russian) 2-87872
 Si-SiO₂ MOS inversion layer high field electron vel., time of flight technique 2-56704
 Si-SiO₂-Ag MOS solar cell degradation; TEM and elec. study 2-93908
 n-Si-SiO₂-SnO₂/In₂O₃ solar cell, edge leakage suppression at low illumination levels 2-57706
 Si-silicide interfaces, electronic struct., review 2-115847
 Si-SiO₂ interface, localised intrinsic Si gap states 2-92714
 n-Si-SnO₂-n-CdSe electrolyte tandem junction solar cells 2-105556
 Si-Ti (Ni) interface, laser and electron beam irradi., silicide form. 2-66377
 SiC:H-Si:H amorphous heterojunction solar cell, high efficiency (Japanese) 2-116825
 Si(Li) detector parameters, electron and X-ray large doses effect, expt. study 2-85496
 Si(Li) p-n semiconductor detectors, optical method for surface channel study 2-70053
 SiO₂ interface degradation and minority carrier lifetime effects of laser beam processing 2-61609
 SiO₂/Si, sputtering, high resolution, using focused Ga⁺ beam 2-116327
 SiO₂-Ge, recombinative luminescence (Russian) 2-61962
 SiO₂-Si interface, H ion elec. behaviour 2-61634
 SiO₂-Si interface effects in avalanche injection of electrons 2-56719
 SiO₂-Si interface states and charge generation by electron tunnelling 2-56720
 Si(001), 2×1 struct. reconstruction, LEED anal. 2-110121
 Si(001) surface, low-energy ion scatt. study 2-104127
 Si(100) and (111), surface electronic struct. changes induced by ion bombard., LEED and AES study 2-82983
 Si(100), electronic correlation and buckling props. calc. 2-110421
 Si(100) surface inversion layer, electron mobility, memory function and Boltzmann eqn. approaches 2-56699
 Si(100) with adsorbed H, stimulated H⁺ desorption correlation with localised state 2-115551
 Si(100)-SiO₂ inversion layers, final-state interaction and intersubband spectroscopy 2-56698
 Si(100)-SiO₂ MIS system, inversion layer electronic struct. 2-115901
 Si(111), (1×1) struct., strongly correlated surface state band model 2-110418
 Si(111), (2×1) struct., Mott insulator model 2-110419
 Si(111), adsorbed Cl(I)(Te), surface EXAFS study 2-110977
 Si(111), charge density calc. for low energy atom diff. 2-111010
 Si(111), chemisorption of Al (Chinese) 2-104139
 Si(111), electronic and atomic struct., spin polarisation effects, theory 2-110417
 Si(111), electronic struct., π -bonded chain model and nonbuckled antiferromag. insulator model 2-110420
 Si(111), laser induced oxidation 2-99568
 Si(111)-Ag interface, chem. reaction, synchrotron radiation photoemission study 2-61212
 Si(111)-Ag interface oxidation and struct., photoemission investig. 2-88380
 Si(111)-Ni interfaces and thin films, valence photoemission study 2-105044
 Si(111)2×1, dangling-bond surface states, photoemission study 2-110430
 n-Si; hole injection from ions in soln. 2-56690
 α -Sn, amorphous, Mossbauer study 2-99004
 α -Sn, band struct., nonlocal pseudopot. calc. 2-110245
 α -Sn, cohesion, polymorphic transition, elastic and dielec. props. 2-60919
 α -Sn, lattice consis. and bulk moduli, self-consistent pseudopot. calc. 2-109741
 α -Sn, n-type, electron irradi., acceptor point defects, elec. resist., thermolec. power and Hall effect study 2-61394
 α -Sn, positron lifetimes, systematic study 2-57207
 SnO₂/n-Si, texturized heterojunction solar cell, spray pyrolysis prep. 2-105567
 SnO₂/n-Si solar cell, low-temp. CVD of SnO₂ film on Si, cell efficiency and stability 2-57713
 SnO₂-Si solar cell, barrier height, temp. and voltage depend. 2-78219
 Su:B(P), heavily doped, defect formation under electron irradi. 2-103822

elemental semiconductors continued

- Te, amorphous thin film, crystallisation, electronic structure, UV photoemission study 2-71355
 Te, anisotropic semicond., band shapes, effect of relativistic operators 2-92459
 Te cluster superlattice in NaX zeolite, I-V characts., current peak periodicity 2-77062
 Te, diffusion kinetics and correl. factors, random-walk method 2-61196
 Te layers for optical data storage, hole formation process 2-70640
 Te, liq., elec. cond., at temps. up to 1200°C and pr. ess. up to 3 kbar 2-77048
 Te, optical activity, current-induced, temp. depend. 2-77483
 Te, photogalvanic effect due to free carrier absorption 2-56640
 Te single crystal, amorphisation by ion implantation 2-103854
 Te, VPE growth with partially ionised vapour, expt. study 2-116368
 Te:Cd, charge carrier governed temp. depend. of EFG for ¹¹¹Cd, TDPAC meas. 2-56982
 ZnSe-Cd heterojunction interface, nature of band discontinuities 2-104463
- elementary particle coupling constants**
 ϕ^4 euclidean scalar field theory on four and three dimensional lattice, continuum limit 2-95619
 ϕ^4 theory, massive, coupling const., temp. depend. calc. 2-101554
 asymptotically non-free theories, low-energy couplings, grand unification 2-54024
 Bogoliubov transformations and coupling constants calc. in MIT bag model 2-54111
 Callan-Symanzik γ function in 1/N_f expansion 2-79829
 decoupling rel. to low-energy BRS invariance 2-74614
 deep inelastic scatt. structure functions, nonperturbative QCD effects 2-84894
 empirical formula connecting coupling const. 2-69383
 fine structure constant, time variability 2-74293
 gluonic currents propagators, two-loop calcs. 2-89937
 grand unified extension, Yukawa and quartic scalar couplings 2-95706
 grand unified theories, baryon generation and symmetry behaviour at high temp. 2-59072
 grand unified theories 2-113195
 Hartree approximation as high density limit 2-74134
 heavy quark potential to two-loop order (Chinese) 2-107622
 local QCD sum rules and quarkonia 2-69422
 massive three-dimensional Q(N) theories, explicit expression for effective pot. 2-84809
 MIT bag model with centre-of-mass correction 2-84864
 momentum subtraction scheme in the axial gauge 2-113150
 muonium-to-antimuonium conversion, upper limit on coupling constant 2-70454
 N=8 supergravity with dynamical SU(8) gauge theory, spin-3/2 fields role 2-95209
 non-Abelian gauge theory, effective theories with broken flavor symmetry 2-101565
 nonlinear field theory, coupling constant depend. in 'special model with internal symmetry 2-95587
 nuclear structure function at large x and A_{QCD} 2-107634
 pairing correl. between particles, final-state interaction effect (Russian) 2-74675
 Pati-Salam-type grand unification, uniqueness 2-54031
 PCAC condition in quark model, G_A/G_V for vector mesons and $\omega\rho\pi$ coupling constant 2-95786
 pion form factor, corrections using perturbative QCD and dimensional regularisation 2-54155
 QCD₃, perturbative results at finite temp. 2-101640
 QCD, effective charges and expansion parameters 2-54058
 QCD, higher order corrections, review 2-54059
 QCD, minimal subtraction and heavy quark decoupling 2-54062
 QCD, one-instanton contribution, IR behaviour 2-79825
 QCD, summation of nonleading logarithms 2-74645
 QCD coupling constant, evolution through flavour thresholds, momentum subtraction scheme 2-79818
 QCD perturbative expansion, general props., review 2-79816
 QCD renormalisation using momentum-space subtraction scheme 2-84854
 QED, scalar, massive, coupling const., temp. depend. calc. 2-101554
 quark-gluon coupling strength estimation from baryon masses 2-69424
 quark-lepton unification
 SU(4)_{PS}×SU(2)_L×SU(2)_R×SU(2)_L×SU(2)_R model 2-54026
 quarkonium decay, renormalisation group predictions 2-10710
 quarkonium systems, interquark pot. using gluon condensate and quark screening 2-64277
 scalar parameters in effective gauge theories, Weinberg method appl. 2-59071
 scale parameter in QCD, effect of quark mass 2-101656
 SO(10)_V×SO(10)_H grand unified extended technicolour models 2-95727
 SO(10) grand unified model, prospects for second neutral vector boson at low mass 2-95715
 SO(10) grand unified model, unification constraints on mirror fermion mass scale 2-89923
 SO(10) grand unified theory, intermediate mass scale through subgroup SU(3)_C×SU(2)_C×U(1)_C 2-84823
 strong coupling constant, renormalisation scheme depend. in QCD 2-101654
 strong-coupling expansion with fermions 2-74615
 SU(2) lattice gauge theory with quarks, mean field anal., coupling constant 2-69336
 SU(5) model, sin² θ_W and M_X two-loop anal. 2-64259
 three-heavy-quark system spectroscopy 2-64297
 unified gauge theories, Lie algebra choice 2-54035
 unified gauge theories, renormalisation group constraints, Yukawa and scalar quartic couplings 2-79806
 Weinberg model, beta function calc. using background field quantisation 2-53979
 Z₂ gauge model on small three-dimens. lattice, partition function 2-89906
 A₁(A₂) tensor mesons in QCD sum rules 2-79837
 $\Delta\pi$ strong coupling constant and $[g_A(0)]_{\Delta\pi}$ weak axial vector coupling constant 2-113318
 e⁺e⁻ annihilation, charged and neutral energy flow anal., QCD coupling constant determ. 2-95853
 e⁺e⁻ annihilation, jet distrib., QCD effective coupling constant 2-54188

elementary particle coupling constants continued

- e^+e^- → hadrons, 22, 34 GeV, annihilation event topology, coupling constant, QCD anal. 2-69475
 e^+e^- → $\mu^+\mu^-$, 34.6 GeV CM, charge asymmetry meas. 2-89954
 e^+e^- physics at PETRA, review 2-79856
 e^+e^- → qqg, three-jet events T distrib. for heavy quarks (*Russian*) 2-54194
f tensor mesons in QCD sum rules 2-79837
 μ N deep inelastic scatt., QCD strong coupling constant examination 2-79889
 μ N → ν NX, Higgs boson coupling const. (*Russian*) 2-95817
pN, 70 GeV/c, ϕ inclusive prod., differential cross section, transition coupling constants 2-69494
 ψ → $\eta(\eta')\gamma$, pseudoscalar mesons mixing in $SU(3)_c$ quark-gluon model 2-54145

elementary particle decay

- see also *electromagnetic decays; elementary particle coupling constants; hadron decay; lepton decay; leptonic decays; nonleptonic decays; semileptonic decays*
charm particles, lifetime meas. high-resolution bubble chamber appl. 2-64788
early Universe, CPT noninvariance and massive scalar particle decay 2-117814
heavy Higgs boson, decay into vector bosons, Weinberg model calc. 2-74644
Higgs boson invisible decays to axions, majorons, neutrinos or light Higgs 2-59207
parity nonconservation, role in cosmic magnetic fields origin 2-63227
pseudoscalar glueball two-proton decay 2-54227
quarks, gravitational decay in unified theories (*Russian*) 2-54228
t, decay into doubly charged Higgs scalars, χ^{++} 2-95890
 W^+ , decay into doubly charged Higgs scalars, χ^{++} 2-95890
 Z^0 → Higgs boson, Higgs trigger in e^+e^- collisions 2-69502
 Z^0 , decay into doubly charged Higgs scalars, χ^{++} 2-95890
 Z^0 decay, exclusive heavy meson prod. in QCD perturbation theory, Z^0 width 2-64334
 Z^0 → 1^+1^- , charge and helicity asymms., Weinberg model calc. 2-107611
 Z^0 → $W^\pm X^\pm$, test of weak boson self-coupling below W^+W^- threshold 2-84843

elementary particle electromagnetic interactions

- see also *Weinberg model*
electroweak model, QCD corrections to intermediate vector boson mass 2-107630
ultra-high-energy EM cascades development in water and Pb including LPM effect 2-73809
 e^+e^- physics at PETRA, review 2-79856

elementary particle gravitational interactions

- see also *supergravity*
direct interparticle gravitational interaction against Riemannian background 2-58669
photons and neutrinos, repulsive gravitational forces, appl. to primordial big-bang 2-106980

elementary particle inclusive interactions

- see also *electron-positron inclusive interactions; elementary particle large momentum transfer interactions; pion-proton inclusive interactions; proton-proton inclusive interactions*
 π^+n , diquark fragmentation functions determ. from pion prod. data 2-84920
average multiplicities, leading log calc. 2-107667
branching model asymptotic precocious KNO scaling 2-113115
charge flow tests for quark charges in two quark or diquark jet prod. 2-79860
cluster model for multiplicity distrib., KNO scaling 2-89982
cosmic ray air shower subcore, TeV interactions high- p_T scaling test 2-84055
deep inelastic electroproduction, twist-4 contrib., QCD anal. 2-54168
deep inelastic polarised electroproduction model 2-54170
deep inelastic processes, mean associated multiplicities (*Russian*) 2-95848
deep inelastic scatt., QCD beyond leading order 2-64289
deep inelastic scatt., two-loop QCD corrections to longit. structure function 2-113274
deep inelastic scatt. in QCD, power corrections theory 2-101730
deep inelastic scattering, Drell-Yan process, one-loop QCD corrections 2-101668
deep-inelastic lepton scatt., charge retention sum rules 2-64332
deep-inelastic scatt., large- x and higher order corrections 2-54167
deep-inelastic scatt. structure functions, renormalisation-convention in dependence beyond leading order 2-69466
diffractive photoproduction cross section, QCD planar ladder diagram anal. 2-69426
Drell-Yan pairs, transverse momentum distrib., QCD calcs., soft emission, nonabelian effects 2-84921
Drell-Yan process, perturbative QCD correction, spectator interactions 2-113231
electron photon cascades/ initiated by hadrons of large transverse momenta 2-106451
electron-photon cascade, incident particle energy determ. error 2-101774
electron-photon showers caused by γ -rays of $E=60$ -2000 MeV, struct. 2-101729
energy dependence of inclusive and semi-inclusive processes in quark-cascade jet model 2-95785
fireball concept 2-84930
gluon attributes, overview 2-54094
hadron interactions in cosmic rays at energies above the accelerator range, reviews 2-113314
hadron interferometry, dynamics vs. symmetrisation 2-53661
hadron transverse momentum distrib. in $\alpha\alpha$ and αp at 31.44, GeV 2-80022
hadron-hadron collisions, lepton pair prod. process, kinematic anal. 2-95887
hadron-hadron interactions, generated particle average multiplicities (*Russian*) 2-79923
hadron-nucleon interactions, diquark fragmentation functions determ. from pion prod. data 2-84920
hadronic collisions, Λ_c^+ and D prod. in valon model 2-107636
hadronic collisions, charm hadron prod. 2-107697
hadronic collisions, charm prod. cross section meas. 2-107694
hadronic collisions, forward-backward jets, QCD predictions, invariant mass spectra 2-95879
hadronic high P_T prod., QCD subprocesses contrib. 2-64288

elementary particle inclusive interactions continued

- hadronic inclusive meson prod., particle correl., recombination model from Kutl-Weisskopf struct. functions 2-95882
hadronic multijet prod., hadron structure functions, S-matrix approach 2-95880
hadronic multiplicities universality evidence and meaning 2-101660
half-favoured inclusive distrib., quark recomb. model 2-79841
hard hadronic collisions, large p_T jets at small angles 2-64287
hard processes, inclusive spectra, scaling violation anal. in QCD 2-59192
hard processes, polarisation asymmetries predicted by QCD and parton model, review 2-69501
high energy neutrino interactions, expt. advances 2-64312
high energy perturbation QCD status 2-54061
high mass diffractive dissociation, jets, gluonia, pomeron fragmentation region 2-64308
inelastic J/ψ photoproduction with linearly polarised photons, QCD based models predictions 2-54176
inelastic neutrino interactions, limit on right handed weak coupling parameters 2-69446
jet interaction at 800 TeV, obs. aboard Concorde 2-95888
lepton-induced reactions, charm hadron prod. 2-107697
magnetic monopole-antimonopole annihilation, two- and three-body contributions 2-117585
multiple hadron prod., quark combinatorial anal., comparison with expt. data (*Russian*) 2-74662
multiplicity distribution model for hadron-nucleon interactions 2-101691
neutrino-nucleon interactions, quark fragmentation functions, contrib. from higher twist effects 2-64314
NN, particle prod. at large transverse momentum 2-69498
nucleon gluon and sea quark structure functions from QCD and DTU correspondence 2-101720
nucleon neutral weak form factors from lepton-nucleon elastic and inclusive processes 2-59150
open charm hadronic prod. in perturbative QCD approach 2-107626
polarised deep-inelastic scatt., total gluon helicity 2-54160
QCD, constraint on anomalous dimension function 2-89941
QCD, evolution eqns. approx. soln. (*Russian*) 2-54100
QCD, experimental evidence, review, book contrib. 2-54082
QCD jets in leading log approx. and beyond, review 2-54092
semi-inclusive hard processes in QCD, eikonal corrections 2-101661
semi-inclusive momentum distribution of the hadron in the quantum field at short distance 2-84885
single particle inclusive leptoproduction in QCD 2-101658
soft parton model, high density events, dual fragmentation extension, multiple Pomeron exchange, 2-84868
 $SU(2)_L \times SU(2)_R \times U(1)_{LR}$ electroweak symmetry and parity violations in electron-nucleon scatt. 2-113185
vector mesons photoproduction study, H-Be target setup 2-108202
 $\alpha\alpha$, 88, 125 GeV, elastic and inelastic interactions in CERN ISR 2-59180
 αp , 88, 125 GeV, elastic and inelastic interactions in CERN ISR 2-59180
ep, deep inelastic structure functions, diquark model 2-101719
ep, elastic photon-gluon scatt. obs. possibility 2-79890
ep, ρ^0 mesons electroproduction cross section 2-54178
ep → eX, deep inelastic scatt., structure functions 2-89965
 νp → $\pi^+ X$, inclusive single soft pion prod., moment sum rules 2-113281
 γN , charmed hadron inclusive photoproduction in VDM (*Russian*) 2-74694
 γN → $(J/\psi)X$, momentum distrib. for inelastic J/ψ photoproduction in QCD 2-54177
 γN → $c\bar{c}X$, charmed particles photoproduction cross section, valence gluons contrib. calc. (*Russian*) 2-74696
 γN → $e^+e^- X(\mu^+\mu^- X)$, deep-inelastic photoproduction, broken colour symmetry effects 2-107668
 γN → $J/\psi X$, inelastic neutrino production of J/ψ in QCD-based model 2-101736
 γp , 20-70 GeV, hyperons and antihyperons inclusive photoproduction study 2-84901
 γp , 25-70 GeV, Λ and $\bar{\Lambda}$ inclusive prod., KDM and quark fusion anal. 2-59159
 γp , large p_T photoproduction in hard scatt. expansion 2-101734
 Γp → γX , contributions to deep Compton effect 2-101728
 γp → πX , higher twist contrib. from direct pion coupling, QCD interpretation 2-95859
 γp → X , 20 GeV, charm particle decay obs. 2-89969
 γq → Mq subprocess, higher twist contrib. in QCD 2-74692
hh, high energy scatt., massive lepton pair prod. in perturbative QCD 2-54220
hh, multi-quark resonant states 2-54198
hh → jet + X, hadron calorimeter reactions, nonleading QCD correction 2-64343
hh multiparticle prod. models, quadjets, fireballs, annihilation relationship multiplicity sure rules 2-64342
hh → $W^+ \gamma X$, W ang. distrib., kinematics, quark subprocess 2-113306
hh → X , inclusive resonance spectra, constituent quark distributions and dual topological pomeron 2-54119
hh → X , jet production, expt. results 2-107648
hh → X , large p_T jet prod., multi-quark scatt. 2-107709
hN, exclusive descript. of multiple prod., inclusive spectra, scaling (*Russian*) 2-113311
hp → $\pi^+ \pi^- X$, particle ratios in quark cascade recombination model 2-54107
K $^+$ N → X, 40 GeV/c, charged particle multiplicities (*Russian*) 2-59195
K $^+$ p, 10.16 GeV, inclusive $\phi(1020)$ prod. cross section, comparison with ψ prod. 2-101778
K $^+$ p, 110 GeV/c, K^{*+} , K^{*0} R^{*0} and ρ^0 inclusive prod., cross sections 2-84927
K $^+$ p → $(f(1270))X$, 32 GeV, inclusive cross-section, rel. to quark recomb. model 2-59202
K $^+$ p → hadrons, 32 GeV/c, multiparticle fragmentation 2-59201
K $^+$ p → $K^{*0}(K^0)X$, 32 GeV, rel. to strange antibaryon prod. 2-59200
K $^+$ p → K^0X , low p_T reaction, quark distrib. in K, valon model 2-107647
K $^+$ p → $K^{*0}(1430)X$, 32 GeV, inclusive cross-section, rel. to quark recomb. model 2-59202
K $^+$ p → $K^{*+}(1430)X$, 32 GeV, inclusive cross-section, rel. to quark recomb. model 2-59202
K $^+$ p → $K^{*+}X$, ($Y^{*+}X$) 147 GeV/c, x and t distrib. 2-74715
K $^+$ p → ΛX , 3.2 GeV/c, rel. to strange meson prod. 2-59200
k $^+$ p → $\pi X(\pi^+ \pi^- X)$, recombination model testing with ρ^0 resonance to ($\pi^+ \pi^-$) background production ratio 2-113236

elementary particle inclusive interactions continued

- $K^+p \rightarrow 2^+X$, 3.2 GeV/c, rel. to strange meson prod. 2-59200
 $K^+p \rightarrow E^+X$, 32 GeV, rel. to strange meson prod. 2-59200
 K^+p , 100, 200 GeV/c, charged multiplicity distrib. universality 2-107704
 lh deep inelastic scatt., struct. functions, rel. to analyticity and renorm-group (Russian) 2-95655
 lN, deep inelastic scatt., baryon prod. and diquark fragmentation 2-95852
 lN-l'X, deep inelastic leptonproduction, review, book contrib. 2-54172
 μ N, deep inelastic scatt., single hadron prod., Q^2 , x and W^2 depend. meas. 2-107669
 μ N, deep inelastic scatt. data, perturbative QCD anal. 2-95777
 μ N, deep inelastic scatt. structure functions, nonperturbative QCD effects 2-84894
 μ N, deep inelastic structure functions, diquark model 2-101719
 μ N, dimuon events, shrinking cone limit and quark spin effects 2-101733
 μ N, inelastic muoproduction of J/ψ , ψ , Υ in QCD based model 2-101736
 μ N, 1209 GeV, heavy neutral muon mass lower limit and bottom hadron prod. 2-95849
 μ N, multiuon prod., review 2-79892
 μ N, nucleon structure function meas. 2-64329
 μp , 100, 150 GeV, ρ , ρ' and 0 diffractive prod., mass distrib. 2-95850
 $\mu p \rightarrow \mu J/\psi$, deep inelastic heavy reson. prod., azimuthal depend. 2-101737
 $\mu p \rightarrow \mu e X$, spin-spin asymmetries, structure function depend. 2-59161
 NN, baryonium, NN and dibaryons, expts. review 2-54219
 NN, in 63 GeV-GeV $\alpha\alpha$ interactions, very high central multiplicity 2-69495
 $nN \rightarrow \Lambda_c^+ X$, 40 GeV, charmed baryon prod. cross section (Russian) 2-89986
 $NN \rightarrow \pi^0 X$, 5 TeV, on C in emulsion 2-69493
 $\nu(p)$, charged-current interactions, strange particle prod. 2-69444
 $\nu(p)N \rightarrow \mu (\mu^+)CCX \rightarrow \mu (\mu^+)X$, diffractive charm-anticharm prod. model 2-89955
 $\nu(p)N \rightarrow \mu (\mu^+)h^+ X$, 200 GeV narrow band beam, fragmentation functions anal. 2-89958
 $\nu(p)N \rightarrow \mu^+ X$, same-sign dimuons phenomenological study 2-69445
 $\nu(p)p$, hadronic system charge props. in quark-parton model, jets 2-79859
 ν N, deep inelastic scatt., structure function F_2 , QCD anal. 2-101731
 ν N, deep inelastic scatt. data, perturbative QCD anal. 2-95777
 ν N, deep inelastic scatt. structure functions, nonperturbative QCD effects 2-84894
 ν N, deep inelastic structure functions, direct diquark contrib. 2-101701
 ν N, deep inelastic structure functions, diquark model 2-101719
 ν N, structure functions, higher twist phenomena 2-79857
 $\nu N \rightarrow \mu X$, radiative corrections from Weinberg-Salam and quark-parton models (Russian) 2-113280
 $\bar{\nu}_\mu$ N, 10-200 GeV, inclusive charged current interactions, struct. functions, scaling, quark-parton anal. 2-101700
 ν_μ neutral current cross-sections from high energy neutrino interactions in D_2 2-54133
 $\nu_\mu(p, p)$, 0.4-10 GeV, charged-current interactions, total cross section meas. 2-54136
 $\nu p(p\bar{p})$, comparison with pp and diquark fragmentation 2-107712
 νp , hadrons multiplicity distrib. 2-54137
 νp neutral current cross-sections from high energy neutrino interactions in D_2 2-54133
 $p(p)N$, 200 GeV/c, in H, Ar, Xe, multiplicities, rapidity distrib., correlations 2-113304
 $pd \rightarrow \pi^+ X$, cumulative prod., differential cross-sections 2-95877
 pN , 100 GeV, inclusive $\Lambda(1520)$ prod. in p-Be interactions 2-95884
 pN , 13 GeV, in Be, electron pair prod., mass distrib. (Japanese) 2-107707
 pn , 19 GeV/c, ρ^0 , $\omega(780)$, ρ' , g non-strange meson inclusive prod., structure functions 2-107708
 pN , 200 and 400 GeV, in nuclear emulsion, rapidity gap correlation 2-59189
 pN , 20.5, 405 GeV, KNO scaling 2-95876
 pN , 350 GeV, charm particle pairs forward prod. study 2-84922
 pN , 350 GeV, limits on $D^0\bar{D}^0$ mixing and bottom particle prod. cross section 2-84923
 pN , 400 GeV, prompt neutrinos prod., results from Fermilab E613 2-107696
 pN , 400 GeV/c, charm prod., Λ_c^+ decay and prod. cross section 2-101779
 pN , 400 GeV/c, in Cu beam-dump, prompt neutrino prod., charmed hadrons 2-84929
 pN , 70 GeV, hadron prod. in high- p_\perp processes (Russian) 2-89989
 pN , 70 GeV, low-energy hadron prod. cross section at zero angle (Russian) 2-89987
 pN , 70 GeV/c, ϕ inclusive prod., differential cross section, transition coupling constants 2-69494
 pn , diquark fragmentation functions determ. from pion prod. data 2-84920
 pN , multiparticle rapidity clustering at 70 GeV/c 2-89983
 pN , shower particle pseudorapidity fluctuations phenomenological investigation 2-59191
 $pN(NN)$, inclusive γ -ray and charged-meson prod. study at greater than 10 TeV 2-73811
 $pN \rightarrow X$, cumulative rapidity gap-distrib., cluster characteristics in emulsion 2-89990
 $pN \rightarrow X$, shower prong distributions, semi-inclusive KND scaling in emulsion 2-113470
 πN , shower particle pseudorapidity fluctuations phenomenological investigation 2-59191
 $\pi N \rightarrow \gamma X$, high-twist production of prompt single photons at large transverse momentum 2-95881
 $\pi N \rightarrow X$, 40 GeV two particle correlations, multiplicity distributions 2-107908
 $\pi N \rightarrow X$, 40 GeV/c, charged particle correlations (Russian) 2-95875
 $\pi N \rightarrow X$, 50, 200 GeV, charge exchange, rel. to additive quark-parton model (Russian) 2-59196
 $\pi^+ N$, 150, 280 GeV, $\psi\psi$ prod. evidence from multiuon prod., cross section 2-101781
 $\pi^- N$, 185 GeV/c, $\chi_1^{*+}(3507)$ and $\chi_2^{*+}(3553)$ hadronic prod. meas. 2-95878
 $\pi^- N$, 225 GeV/c, muon pair prod., at weight depend. 2-69499
 $\pi^- N$, 278 GeV, charm particle pairs forward prod. study 2-84922
 $\pi^- N$, 278 GeV, limits on $D^0\bar{D}^0$ mixing and bottom particle prod. cross section 2-84923

elementary particle inclusive interactions continued

- $\pi^- N$, 40 GeV/c, in ^{12}C , rapidities, multiplicities, correlations, cumulative effect (Russian) 2-113309
 $\pi^- N$, 40 GeV/c, in ^{12}C , relativistic proton average multiplicity, prod. mechs. (Russian) 2-113310
 $\pi^- N$ collisions at 50 GeV/c in a pulsed mag. field, transverse momentum charact. 2-79922
 $\pi^- N \rightarrow \eta X$, 3.8 GeV/c, η -meson prod. cross section (Russian) 2-74704
 $\pi^- N \rightarrow \mu^+ X$, 190 GeV/c, different flavour and colour hadronic systems fragmentation meas. 2-84924
 $\pi^- N \rightarrow pX$, 5 GeV/c, ^{12}C target, inclusive spectra, resonance width (Russian) 2-95870
 $\pi^+ N \rightarrow \pi^+ X$, 2.9 GeV/c, double charge exchange cross sections (Russian) 2-113295
 $\pi^+ N$, 39.5 GeV/c, H and W targets, J/ψ cross section, A. depend. 2-59194
 W-boson and hadron jet production in hadronic collisions (Russian) 2-89985
 μ N, structure functions, higher twist phenomena 2-79857
- elementary particle interaction models**
 see also bootstrapping; composite models of hadrons; diffraction model; duality and dual models; peripheral models; statistical models; vector meson dominance model; Weinberg model
 asymptotic equality of differential cross sections 2-95809
 dilepton angular distrib. coeff. in different frames, geometrical methods 2-95791
 effective interactions of quarks and static properties of hadrons 2-95761
 electromagnetic mass differences in relativistic quark confining potential model 2-107660
 far-acting arion, stable massless 0^-+ Goldstone particles (Russian) 2-101638
 fragmentation collisions by charged particles 2-102583
 generalized effective potential in nonlinear theories of fourth order 2-101568
 geometric dynamics model (Russian) 2-84874
 hadron-nucleon interactions, multiplicity distribution model 2-101691
 hadronic production cross-sections satisfying KNO like constraints 2-101690
 heavy multiparticle states, existence 2-74657
 isospin relations, Schmushkevich counting method appl. 2-107049
 microscopic approach to hadrons and nuclei using quarks 2-95739
 NN bound state widths, rel. to optical pot. 2-59133
 nonpotential interactions, Lie-admissible treatment, conf., Orleans, France (Jan. 1982) 2-74149
 nucleon-nucleon potential in the cluster model with six quarks 2-95763
 pairing correl. between particles, final-state interaction effect (Russian) 2-74675
 phenomenological model of particle physics based on supersymmetry 2-59061
 quasi-two-body phase-space factors in isobar model 2-69483
 scattering integral equations and four-nucleon problem 2-54127
 semi-inclusive momentum distribution of the hadron in the quantum field at short distance 2-84885
 semileptonic weak interactions, induced scalar effects 2-101636
 spin effects, energy depend., eikonal model (Russian) 2-64307
 supersymmetric technicolour model of particle physics 2-107576
 toponium mass spectra in Martin potential model, bottomonia c^+c^- decay 2-107641
 total cross section symmetries for high energy polarised particles and antiparticles (Chinese) 2-95889
 translationally singular pot. for quark-antiquark interaction 2-101696
 urn model, origin of probability distrib. structures 2-95807
 Wu-Yang differential spaces, monopole scatt. (Russian) 2-107653
 $\gamma\gamma \rightarrow \rho^0 \pi^+$, cross-section, p mag. moment, Born model calcs. 2-74667
 $hh \rightarrow hh$, high energy, meson cloud scalar eikonal model (Russian) 2-95873
 hN , multiparticle prod., three-component model 2-74668
 $hN \rightarrow X$, leading hadron noncoherent interaction, optical model calc., gluon cloud loss (Russian) 2-64346
 $K^+N \rightarrow KN$, 0.2-1.6 GeV/c, phase shift and energy depend. partial wave anal. 2-79910
 NN energy dependent single separable pot. models 2-59346
 $np \rightarrow np$, high energies, review of cross sections and models 2-113299
 $\nu n \rightarrow \mu p \pi^0 (\mu^+ \pi^-)$, single-pion prod. by weak charged currents 2-69442
 $\nu p \rightarrow \mu p \pi^+$, single-pion prod. by weak charged currents 2-69442
 νp breakup, 3-body scatt., numerical calc. using Faddeev eqn. (Russian) 2-54204
 pd scatt., 3-body scatt., numerical calc. using Faddeev eqn. (Russian) 2-54204
 pp elastic scatt., Chou-Yang optical model modification 2-84908
 $pp \rightarrow pp$, 6, 12 GeV, forces, exchange mechanisms, eikonals 2-79907
 $pp \rightarrow p\bar{p}p$, pion prod. model 2-107678
 $\pi N \rightarrow X$, 40 GeV two particle correlations, multiplicity distributions 2-107908
 qqq bound-state masses, potentials test 2-95806
 T , spectroscopy, nonrelativistic potential model 2-54099
- elementary particle interactions**
 see also cosmic ray effects and interactions; elementary particle coupling constants; elementary particle electromagnetic interactions; elementary particle gravitational interactions; elementary particle inclusive interactions; elementary particle large momentum transfer interactions; elementary particle scattering; elementary particle strong interactions; elementary particle weak interactions; hadron-deuteron interactions; hadron-hadron interactions; high-energy cosmic ray interactions; lepton-deuteron interactions; lepton-hadron interactions; lepton-lepton interactions; photon-deuteron interactions; photon-hadron interactions; photon-lepton interactions; photon-photon interactions; polarisation in elementary particle interactions; quantum field theory of interactions; unified field theories; vertex functions
 parity nonconservation, role in cosmic magnetic fields origin 2-63227
- elementary particle large momentum transfer interactions**
 see also elementary particle inclusive interactions
 CERN-JINR School of Physics, Hanko, Finland (June 1981) 2-112634
 cosmic ray air shower subcore, TeV interactions high- p_\perp scaling test 2-84055
 deep inelastic lepton-hadron scatt., QCD appl. 2-95743
 elementary particle physics, conf., Jodlowy Dwor, Poland (May 1980) 2-63739
 exclusive processes in QCD 2-54091
 gluon bremsstrahlung effects in large p_\perp hadron-hadron scatt. 2-107703

elementary particle large momentum transfer interactions continued

- hadronic high p_T prod., QCD subprocesses contrib. 2-64288
 hadronic reactions, large perturbative corrections in soft-gluon limit 2-69423
 hard processes, polarisation asymmetries predicted by QCD and parton model, review 2-69501
 high- p_T particle prod., higher twist contrib. 2-64292
 NN, particle prod. at large transverse momentum 2-64998
 non-pion multiple prod. of hadrons in Chacaltaya emulsion chamber expts. 2-112283
 particle and nucl. scatt. at large momentum transfers 2-113248
 perturbative QCD, particle and nucl. scatt. at large p_T 2-113234
 semi-inclusive hard processes in QCD, eikonal corrections 2-101661
 soft parton model, high density events, dual fragmentation extension, multiple Pomeron exchange, 2-84868
 spontaneously broken QCD, short-distance behaviour 2-54068
 $\alpha\alpha$, 88, 125 GeV, elastic and inelastic interactions in CERN ISR 2-59180
 αp , 88, 125 GeV, elastic and inelastic interactions in CERN ISR 2-59180
 e^+e^- annihilation, high-transverse-momentum leptons from B mesons 2-54189
 $e^+e^- \rightarrow \pi^+\pi^-$, higher twist contrib. from direct pion coupling, QCD interpretation 2-95859
 γp , large p_T photoproduction in hard scatt. expansion 2-101734
 $\gamma p \rightarrow \pi^+X$, higher twist contrib. from direct pion coupling, QCD interpretation 2-95859
 pN , 70 GeV, hadron prod. in high- p_T processes (Russian) 2-89989
 pp , 32 GeV/c, inclusive prod. of π^\pm and protons 2-79924
 pp , 63 GeV CM, diquark fragmentation and comparison with νp , $\bar{\nu} p$ interactions 2-107172
 pp , $\sqrt{s}=30$ -63 GeV, high- p_T direct photon and neutral-pion prod. 2-58855
 pp , deep inelastic collisions study with large acceptance transverse energy trigger 2-107705
 $pp \rightarrow \gamma X$, large- p_T photon prod., QCD $O(\alpha_s^2)$ corrections 2-54217
 $pp(pp)$, review of ISR physics results 2-107688
 $\pi N \rightarrow \gamma X$, high-twist production of prompt single photons at large transverse momentum 2-95881
 $\pi^- N$ collisions at 50 GeV/c in a pulsed mag. field, transverse momentum charact. 2-79922
 $\pi^- p$, deep inelastic collisions study with large acceptance transverse energy trigger 2-107705
 $\pi^- p \rightarrow \mu^+ \mu^- X$, Drell-Yan process, higher twist contrib. from direct pion coupling, QCD interpretation 2-95859
 $\pi^- p \rightarrow \pi^+ n$, large momentum transfer, quark-parton model (Russian) 2-59183

elementary particle mass

- see also *baryon mass; lepton mass; mass differences; mass formulae; meson mass*
 axion mass, in CP-conserving method with extra U(1) chiral symm. 2-54012
 bound quark-antiquark states, inverse relativistic problems for charm 2-64268
 charge $2/3$, quark mass constraints from $K_L \rightarrow \mu^+ \mu^-$ and $K_L - K_S$ mass difference 2-113189
 E_8 unification, nonlinear fermion mass relations 2-84829
 electron mass and anomalous mag. moment 2-59093
 exotic bosons, contrib. to B- and L-violation, proton decay, neutron oscills., ν mass 2-107582
 exotic hadrons, mass sum rules from bag model 2-107640
 fermion mass changes due to axion suppression in SU(9) theory 2-101628
 gluino mass in supersymm. theories 2-79782
 grand unified theory implications 2-107579
 heavy quark mass, one-loop radiative correction in U(1) \times SU(2) \times SU(3) model 2-101725
 intermediate bosons, mass in SU(2) $_L$ \times SU(2) $_R$ \times U(1) $_{B-L}$ electroweak gauge model 2-79813
 light current quark masses 2-64270
 nonpotential interactions and origin of masses of elementary particles 2-95799
 photon, in gauge theories 2-64219
 photon rest mass estimate 2-79436
 pure SU(2) lattice gauge theory, glueball masses, Monte Carlo method 2-69339
 QCD, glueball mass spectrum, lattice Monte Carlo calc., SU(2) gauge theory 2-59108
 QCD corrections, intermediate vector bosons 2-107630
 quark mass, effect on QCD coupling constant 2-101656
 quark mass, in variable pressure bag model 2-113242
 quark mass, rel. to overlap integral in Bethe-Salpeter theory (Chinese) 2-53982
 quark masses from effective potentials in internal space 2-59135
 quarks, subquark fermion-boson two body model, Cabibbo model 2-89949
 SO(10) GUT, mass relations and neutrino oscillations, t mass, B lifetime 2-84819
 spin 1/2 fermion scatt., lowest order electroweak corrections, one loop amplitudes, decays, masses 2-59076
 spin kinetic energy, intrinsic mass 2-95808
 SU(2) $_L$ \times SU(2) $_R$ \times U(1) $_{B-L}$, left-right symmetric GUT, proton lifetime, quark-lepton mass ratio 2-95721
 SU(3) lattice QCD, hopping parameter expansion, meson and quark masses 2-69410
 SU(3) lattice QCD, meson spectrum, quark masses, analytic calc. 2-89939
 SU(5) GUT, Higgs boson mass, neutral scalar current suppression with flavour change (Russian) 2-113194
 supersymmetric scalar quark partners, mass constraints 2-101596
 Z_{2K} cyclic group, fermion generation labeling in composite models, t mass 2-101688
 D semileptonic and nonleptonic weak decays, branching ratios, quark mass effects 2-64320
 $K_1 0 \rightarrow \mu^+ e^-$, charged boson mass bounds in Fritzsche-Mandelbaum composite model 2-113253
 QQ states, moment ratios and depend. on quark mass definition 2-113239
 t quark mass, quark-lepton generation number in SU $_c$ GUT (Russian) 2-84827

elementary particle mass continued

- U- and d-quark masses, daughter sum rule tech. appl. to V-A spectral functions 2-59067
 W/p mass ratio, empirical formula 2-69438
elementary particle scattering
 see also *bootstrapping; elementary particle interactions; hadron-deuteron scattering; hadron-hadron scattering; lepton-deuteron scattering; lepton-hadron scattering; lepton-lepton scattering; Mandelstam representation; photon-deuteron scattering; photon-hadron scattering; photon-lepton scattering; photon-photon scattering; polarisation in elementary particle scattering; Pomanchuk poles and trajectories; quantum field theory of elastic scattering; Regge poles and trajectories; relativistic scattering theory; S-matrix theory*
 high energy scattering in complex angular momentum plane 2-101610
 two-body inelastic scatt., cross-section, dual statistical bootstrap model 2-74669
elementary particle strong interactions
 see also *composite models of hadrons; duality and dual models; hadron classification schemes; peripheral models; quantum field theory of strong interactions*
 additive quark model, suitability for describing interactions 2-107624
 confinement and hadron-hadron interactions by general relativistic methods 2-95742
 CP problem in strong interactions axionless soln. using SU(9) \otimes SU(2) \otimes U(1) model (Russian) 2-69379
 effective Schwarzschild radius and internal interaction of leptons 2-107652
 hadronic production cross-sections satisfying KNO like constraints 2-101690
 nonpotential interactions, Lie-admissible treatment 2-74666
 strong interaction corrections to certain electromagnetic effects 2-101633
 U(N) gauge theories on lattices, N= ∞ master field for strong coupling 2-59012
 e^+e^- physics at PETRA, review 2-79856
 NN scattering, phenomenological anal., data tables 2-101136
elementary particle symmetry
 see also *chiral symmetries; conservation laws; discrete symmetries; dynamical symmetry; helicity (elementary particles); isotopic spin (elementary particles); nonlinear symmetries; spontaneous symmetry breaking; SU $_c$ theory; supersymmetry*
 (2+1)-dimensional Poincare group, unitary irreps., classification 2-101529
 baryon mass splitting in quark model with broken symmetry 2-69439
 broken symmetry discovery from expt. scatt. data 2-69376
 cosmic baryon asymmetry generation in supersymmetric SU(5) model 2-113184
 cosmological baryon asymmetry in grand unified gauge models 2-101614
 flexible composition algebras, classification 2-113163
 flexible composition algebras, classification 2-113164
 grand unified theories 2-113195
 internal symmetry, quantum mech., Jordan algebraic approach 2-95094
 invariant tensors, associated first integrals and symm. Lax-like fields appl. 2-79777
 leptons, composite models, group theoretical search 2-89950
 maximal grand unification model based on SU(16), gauge hierarchies and baryon nonconservation 2-95713
 non-Abelian gauge theory, effective theories with broken flavor symmetry 2-101565
 normal unit expression for n particles in symmetric group theory (Chinese) 2-95691
 quark confinement, space-time symmetry, Poincare subgroup 2-69429
 quark-lepton composites, effective symm. 2-74664
 quarks, composite models, group theoretical search 2-89950
 strings, effective Hamiltonian, spatial symm. 2-64295
 SU(2) \times SU(2) \times SU(2) \times SU(2) symmetry scheme for new particles 2-54106
 SU(2) lattice gauge theory, potential and restoration of rot. symm., Monte Carlo simulation 2-101598
 total cross section symmetries for high energy polarised particles and anti-particles (Chinese) 2-95889
 twistor theory, internal symm. 2-69366
 weak interactions and symmetries, reviews 2-59097
 $\gamma N \rightarrow e^+ e^- X(\mu^+ \mu^- X)$, deep-inelastic photoproduction, broken colour symmetry effects 2-107668
 $^6\text{Li}(e, e)$, bremsstrahlung cross-section, sum rule, nucleon symm. effect 2-64396
elementary particle theory
 see also *Bethe-Salpeter equation; complex angular momentum plane; current algebra; dispersion relations; electron theory; elementary particle interaction models; elementary particle symmetry; Feynman diagrams; form factors (elementary particles); group theoretical schemes; helicity (elementary particles); isotopic spin (elementary particles); Lee model; mass formulae; quantum field theory; S-matrix theory; scaling phenomena; structure functions; sum rules; vertex functions*
 cellular automata models of particles 2-95698
 computerised algebraic manipulation program, for elementary particle physics 2-54128
 effective Schwarzschild radius and internal interaction of leptons 2-107652
 internally structured particles, classical motions, conservation laws, geometry 2-107488
 IR singularity cancellation through unitarity relation 2-59025
 isospin relations, Schmuskevich counting method appl. 2-107049
 locality and the structure of particle states in gauge field theories 2-101577
 long range arion field in RF band from massless Goldstone particles 2-113316
 Monte Carlo simulation technique for elementary particle theory, review 2-79855
 noninteger topological charge, fractionally charged self-dual soln. 2-84886
 nonselfadjoint systems, non-Euclidean and non-Desarguesian geometries 2-95054
 organized particles of matter 2-59137
 pretty mathematics role 2-107517
 quasispin groups and their generalisations 2-95681
 research, where is it going? 2-113259
 resonances in coupled channels in nuclear and particle physics 2-59307
 spin kinematics prehistory, Darboux's theory 2-112680
 structure predictions from universe model 2-113180

elementary particle theory continued

$U(p) \times U(q)$ basis $U(p+q)$ and $U(p,q)$ degenerate series representations 2-101582

e-p mass-radius symmetry 2-107651

ψ - η_c hyperfine splitting, potential model calcs., charmonium mass spectrum 2-107650

elementary particle weak interactions

see also neutral currents; quantum field theory of weak interactions; Weinberg model

atomic and nuclear physics exptl. results on weak interactions, review 2-79775

cosmic relic neutrinos, detection through energy splittings 2-117835

electroweak model, QCD corrections to intermediate vector boson mass 2-107630

far-acting arion, stable massless 0^{-+} Goldstone particles (*Russian*) 2-101638

inelastic neutrino interactions, limit on right handed weak coupling parameters 2-69446

left-right mixing limits in weak interactions 2-59099

lepton gas, volume viscosity including massive neutrinos 2-79467

lepton-nucleon scatt. and neutrino puzzle 2-54129

neutrino pair prod. by muons in nucleus Coulomb field 2-54131

neutrinoless double-beta decay and muonium-antimuonium transitions 2-69440

neutron weak interactions, review 2-69460

parity violating weak Hamiltonian, baryon matrix elements, nonleptonic weak reactions 2-95737

parity violation, cosmological evolution effects 2-73835

particles and fields, conf., Santa Cruz, CA, USA (Sept. 1981) 2-79265

semileptonic weak interactions, induced scalar effects 2-101636

spin $3/2$ leptons prod. and decay props., weak interaction processes 2-69441

spin rotation, vacuum torsion effect 2-54046

stellar, weak interaction rates for intermediate mass nuclei, results for $A=21$ to $(A=60)$ 2-58322

stellar weak interaction rates for $A=21$ to 60 nuclei 2-117663

SU(2)_L \times U(1) spontaneously broken gauge theory structure 2-64249

symmetries and weak interactions, review 2-59097

symmetries and weak interactions 2-59098

technicolour, weak interaction confining models, strong SU(2)_L effects 2-113208

weak boson substruct., weak neutral current mixing angle 2-54047

weak nonleptonic processes of strange and charmed mesons, unified SU(4) description 2-59085

$e^+e^- \rightarrow \mu^+\mu^-$, charge asym., weak interaction effects 2-54130

e^+e^- physics at PETRA, review 2-79856

$e^+e^- \rightarrow \tau^+\tau^-$, charge asym., weak interaction effects 2-54130

K^0 production by the weak charged current, final state interaction effect 2-101637

μ decay, Majorana neutrinos role, effective weak Hamiltonian 2-74687

$\pi\pi$, parity non-conserving elastic scatt., observables estimate 2-85042

ν_e , weak interactions and dispersion relations in localised axiomatic field theory 2-89918

^{56}Co , β^+ decay, Fermi-Gamow-Teller mixing, T invariance test in V-A model 2-90055

elementary particles

see also bosons; charm particles; composite particles; cosmic rays; fermions; gamma-rays; hadrons; hypothetical particles; leptons; quantum field theory; strange particles

cosmology relation 2-117839

high-energy physics 2-107570

nuclei and particles, book 2-53444

Universe structure and evolution, effects of elementary particles and microprocesses (*Polish*) 2-79259

elements (chemical)

for specific metals and non-metals see appropriate chemical names

see also element origin; element relative abundance; periodic system of elements

heavy ion-atom collisions, superheavy quasiautom form. 2-96674

inner shell excitation in superheavy quasiautomal systems 2-54929

superheavy elements in monazite, X-ray spectrochem. anal. 2-83436

surfaces, atomically clean, of selected elements, prep. review 2-83251

Z=109, existence in nature, invest. (*Chinese*) 2-59442

Z=110, existence in nature, invest. (*Chinese*) 2-59442

elevators

see lifts

Eliashberg strong-coupling model *see strong-coupling superconductors*

Elinvar

Fe-Mn-V-C dispersion hardened, nonmag., mech. characts. 2-62132

ellipsometers

see also ellipsometry

adjustment of ellipsometer with fixed angle of incidence of light 2-107386

fast polarization modulated ellipsometer using a microprocessor system for digital Fourier analysis 2-95442

IR ellipsometers for thin-film research, design and construction of three types 2-64095

IR polariser selection for ellipsometric instrumentation 2-101442

plasma polarimetry, fast high-sensitivity ellipsometer proposal 2-60800

scanning microellipsometer for spatial characterisation of thin films 2-101443

ellipsometry

see also ellipsometers; polarimetry

adsorption of CO, decomposition and oxidation of surface carbide 2-62432

cyclohexane, superposed Raman lines, coherent ellipsometric obs. 2-102489

cyclohexane-aniline near crit. binary liq. mixture, short-ranged roughness on the near-critical liquid interface 2-56171

film, nonuniform, on solid substrate, ellipsometric parameters computation 2-62008

film growth, ellipsometric microgravimetry anal. 2-92410

IR-ellipsometric spectroscopy with Fourier spectrometer, Mueller-matrix appl. (*German*) 2-64128

light detection linearity determ. 2-69237

LSI structures monitoring, ellipsometry for test diffr. gratings, basic eqn. 2-101444

magneto-optical measurement using polarisation modulation method, S/N ratio calc. 2-112956

see also ellipsometers; polarimetry

adsorption of CO, decomposition and oxidation of surface carbide 2-62432

cyclohexane, superposed Raman lines, coherent ellipsometric obs. 2-102489

cyclohexane-aniline near crit. binary liq. mixture, short-ranged roughness on the near-critical liquid interface 2-56171

film, nonuniform, on solid substrate, ellipsometric parameters computation 2-62008

film growth, ellipsometric microgravimetry anal. 2-92410

IR-ellipsometric spectroscopy with Fourier spectrometer, Mueller-matrix appl. (*German*) 2-64128

light detection linearity determ. 2-69237

LSI structures monitoring, ellipsometry for test diffr. gratings, basic eqn. 2-101444

magneto-optical measurement using polarisation modulation method, S/N ratio calc. 2-112956

see also ellipsometers; polarimetry

adsorption of CO, decomposition and oxidation of surface carbide 2-62432

cyclohexane, superposed Raman lines, coherent ellipsometric obs. 2-102489

cyclohexane-aniline near crit. binary liq. mixture, short-ranged roughness on the near-critical liquid interface 2-56171

film, nonuniform, on solid substrate, ellipsometric parameters computation 2-62008

film growth, ellipsometric microgravimetry anal. 2-92410

IR-ellipsometric spectroscopy with Fourier spectrometer, Mueller-matrix appl. (*German*) 2-64128

light detection linearity determ. 2-69237

LSI structures monitoring, ellipsometry for test diffr. gratings, basic eqn. 2-101444

magneto-optical measurement using polarisation modulation method, S/N ratio calc. 2-112956

see also ellipsometers; polarimetry

adsorption of CO, decomposition and oxidation of surface carbide 2-62432

cyclohexane, superposed Raman lines, coherent ellipsometric obs. 2-102489

cyclohexane-aniline near crit. binary liq. mixture, short-ranged roughness on the near-critical liquid interface 2-56171

film, nonuniform, on solid substrate, ellipsometric parameters computation 2-62008

film growth, ellipsometric microgravimetry anal. 2-92410

IR-ellipsometric spectroscopy with Fourier spectrometer, Mueller-matrix appl. (*German*) 2-64128

light detection linearity determ. 2-69237

LSI structures monitoring, ellipsometry for test diffr. gratings, basic eqn. 2-101444

magneto-optical measurement using polarisation modulation method, S/N ratio calc. 2-112956

see also ellipsometers; polarimetry

adsorption of CO, decomposition and oxidation of surface carbide 2-62432

cyclohexane, superposed Raman lines, coherent ellipsometric obs. 2-102489

cyclohexane-aniline near crit. binary liq. mixture, short-ranged roughness on the near-critical liquid interface 2-56171

film, nonuniform, on solid substrate, ellipsometric parameters computation 2-62008

film growth, ellipsometric microgravimetry anal. 2-92410

IR-ellipsometric spectroscopy with Fourier spectrometer, Mueller-matrix appl. (*German*) 2-64128

light detection linearity determ. 2-69237

LSI structures monitoring, ellipsometry for test diffr. gratings, basic eqn. 2-101444

magneto-optical measurement using polarisation modulation method, S/N ratio calc. 2-112956

see also ellipsometers; polarimetry

adsorption of CO, decomposition and oxidation of surface carbide 2-62432

cyclohexane, superposed Raman lines, coherent ellipsometric obs. 2-102489

cyclohexane-aniline near crit. binary liq. mixture, short-ranged roughness on the near-critical liquid interface 2-56171

film, nonuniform, on solid substrate, ellipsometric parameters computation 2-62008

film growth, ellipsometric microgravimetry anal. 2-92410

IR-ellipsometric spectroscopy with Fourier spectrometer, Mueller-matrix appl. (*German*) 2-64128

light detection linearity determ. 2-69237

LSI structures monitoring, ellipsometry for test diffr. gratings, basic eqn. 2-101444

magneto-optical measurement using polarisation modulation method, S/N ratio calc. 2-112956

see also ellipsometers; polarimetry

adsorption of CO, decomposition and oxidation of surface carbide 2-62432

cyclohexane, superposed Raman lines, coherent ellipsometric obs. 2-102489

cyclohexane-aniline near crit. binary liq. mixture, short-ranged roughness on the near-critical liquid interface 2-56171

film, nonuniform, on solid substrate, ellipsometric parameters computation 2-62008

film growth, ellipsometric microgravimetry anal. 2-92410

IR-ellipsometric spectroscopy with Fourier spectrometer, Mueller-matrix appl. (*German*) 2-64128

light detection linearity determ. 2-69237

LSI structures monitoring, ellipsometry for test diffr. gratings, basic eqn. 2-101444

magneto-optical measurement using polarisation modulation method, S/N ratio calc. 2-112956

see also ellipsometers; polarimetry

adsorption of CO, decomposition and oxidation of surface carbide 2-62432

cyclohexane, superposed Raman lines, coherent ellipsometric obs. 2-102489

cyclohexane-aniline near crit. binary liq. mixture, short-ranged roughness on the near-critical liquid interface 2-56171

film, nonuniform, on solid substrate, ellipsometric parameters computation 2-62008

film growth, ellipsometric microgravimetry anal. 2-92410

IR-ellipsometric spectroscopy with Fourier spectrometer, Mueller-matrix appl. (*German*) 2-64128

light detection linearity determ. 2-69237

LSI structures monitoring, ellipsometry for test diffr. gratings, basic eqn. 2-101444

magneto-optical measurement using polarisation modulation method, S/N ratio calc. 2-112956

see also ellipsometers; polarimetry

adsorption of CO, decomposition and oxidation of surface carbide 2-62432

cyclohexane, superposed Raman lines, coherent ellipsometric obs. 2-102489

cyclohexane-aniline near crit. binary liq. mixture, short-ranged roughness on the near-critical liquid interface 2-56171

film, nonuniform, on solid substrate, ellipsometric parameters computation 2-62008

film growth, ellipsometric microgravimetry anal. 2-92410

IR-ellipsometric spectroscopy with Fourier spectrometer, Mueller-matrix appl. (*German*) 2-64128

light detection linearity determ. 2-69237

LSI structures monitoring, ellipsometry for test diffr. gratings, basic eqn. 2-101444

magneto-optical measurement using polarisation modulation method, S/N ratio calc. 2-112956

see also ellipsometers; polarimetry

adsorption of CO, decomposition and oxidation of surface carbide 2-62432

cyclohexane, superposed Raman lines, coherent ellipsometric obs. 2-102489

cyclohexane-aniline near crit. binary liq. mixture, short-ranged roughness on the near-critical liquid interface 2-56171

film, nonuniform, on solid substrate, ellipsometric parameters computation 2-62008

film growth, ellipsometric microgravimetry anal. 2-92410

IR-ellipsometric spectroscopy with Fourier spectrometer, Mueller-matrix appl. (*German*) 2-64128

light detection linearity determ. 2-69237

LSI structures monitoring, ellipsometry for test diffr. gratings, basic eqn. 2-101444

magneto-optical measurement using polarisation modulation method, S/N ratio calc. 2-112956

see also ellipsometers; polarimetry

adsorption of CO, decomposition and oxidation of surface carbide 2-62432

cyclohexane, superposed Raman lines, coherent ellipsometric obs. 2-102489

cyclohexane-aniline near crit. binary liq. mixture, short-ranged roughness on the near-critical liquid interface 2-56171

film, nonuniform, on solid substrate, ellipsometric parameters computation 2-62008

film growth, ellipsometric microgravimetry anal. 2-92410

IR-ellipsometric spectroscopy with Fourier spectrometer, Mueller-matrix appl. (*German*) 2-64128

light detection linearity determ. 2-69237

LSI structures monitoring, ellipsometry for test diffr. gratings, basic eqn. 2-101444

magneto-optical measurement using polarisation modulation method, S/N ratio calc. 2-112956

see also ellipsometers; polarimetry

adsorption of CO, decomposition and oxidation of surface carbide 2-62432

cyclohexane, superposed Raman lines, coherent ellipsometric obs. 2-102489

cyclohexane-aniline near crit. binary liq. mixture, short-ranged roughness on the near-critical liquid interface 2-56171

film, nonuniform, on solid substrate, ellipsometric parameters computation 2-62008

film growth, ellipsometric microgravimetry anal. 2-92410

IR-ellipsometric spectroscopy with Fourier spectrometer, Mueller-matrix appl. (*German*) 2-64128

light detection linearity determ. 2-69237

LSI structures monitoring, ellipsometry for test diffr. gratings, basic eqn. 2-101444

magneto-optical measurement using polarisation modulation method, S/N ratio calc. 2-112956

see also ellipsometers; polarimetry

adsorption of CO, decomposition and oxidation of surface carbide 2-62432

cyclohexane, superposed Raman lines, coherent ellipsometric obs. 2-102489

cyclohexane-aniline near crit. binary liq. mixture, short-ranged roughness on the near-critical liquid interface 2-56171

film, nonuniform, on solid substrate, ellipsometric parameters computation 2-62008

film growth, ellipsometric microgravimetry anal. 2-92410

IR-ellipsometric spectroscopy with Fourier spectrometer, Mueller-matrix appl. (*German*) 2-64128

light detection linearity determ. 2-69237

LSI structures monitoring, ellipsometry for test diffr. gratings, basic eqn. 2-101444

magneto-optical measurement using polarisation modulation method, S/N ratio calc. 2-112956

see also ellipsometers; polarimetry

adsorption of CO, decomposition and oxidation of surface carbide 2-62432

cyclohexane, superposed Raman lines, coherent ellipsometric obs. 2-102489

cyclohexane-aniline near crit. binary liq. mixture, short-ranged roughness on the near-critical liquid interface 2-56171

film, nonuniform, on solid substrate, ellipsometric parameters computation 2-62008

film growth, ellipsometric microgravimetry anal. 2-92410

IR-ellipsometric spectroscopy with Fourier spectrometer, Mueller-matrix appl. (*German*) 2-64128

light detection linearity determ. 2-69237

LSI structures monitoring, ellipsometry for test diffr. gratings, basic eqn. 2-101444

magneto-optical measurement using polarisation modulation method, S/N ratio calc. 2-112956

see also ellipsometers; polarimetry

adsorption of CO, decomposition and oxidation of surface carbide 2

elongation continued

- nonlinear viscoelasticity theory based on temporarily cross-linked network model 2-75912
plastic foams, mech. props. change during storage, prediction 2-116508
poly(tetramethyleneterephthalate), solid state, Fourier transform IR study 2-76324
polycarbonate, weathered, tensile failure 2-116511
polycarbonate-copolyester miscible blends, mech. props. 2-72775
polyether-polyurethane zwitterionomers, phys. props. and phase segregation 2-67451
polyisobutylene in presence of temp. ramps, shear and elongational stress growth 2-55527
polymer laminated sheets, mechanical interactions 2-77883
polypropylene, rolled, mech. props. rel. to struct. 2-67377
polypropylene film, effect of high O₂ press. and temp. on ageing 2-116576
polyurethane foam, mech. props. change during storage, prediction 2-116508
PVC, conf., Cleveland, OH, USA (Aug. 1980) 2-74153
PVC melt, elongational flow behaviour 2-75913
rubber, elasticity at very large elongation 2-88126
rubber, natural, sound vel. and free retraction vel., strain effects meas. 2-115361
sheet metal, notched tensile elongation and anisotropic ductility 2-62175
steel, 20G18S2F, hardening by ageing and γ to ϵ martensitic transform. (Russian) 2-77832
steel, austenitic stainless, 316, cold worked, 20%, tensile props. correl. 2-72714
steel, austenitic stainless, 316, cold worked, Ti modified, tensile props., irradi. in high flux isotope reactor 2-72764
steel, austenitic stainless, He bubble form., influence of temp., stress and time 2-108114
steel, austenitic stainless, strengthening and weakening of austenite during hot deformation 2-72734
steel, C and alloy, fatigue limits, indirect eval. from static tensile strength 2-72900
steel, Cr-Mo-V, heat resistant, thermomech. fatigue, effect on struct. and mech. props. 2-116546
steel, dual-phase, deform. charact., effect of martensite vol. fraction 2-67443
steel, grain boundary P segregation during tempering, stress effects, XPS study (Russian) 2-116444
steel, low C, elongation, uniform, determ. from stress-strain curves 2-62313
steel, low C, strengthening and weakening of austenite during hot deformation 2-72734
steel, low-pearlite with Nb and V, strengthening phase precip. during hot deform. 2-62133
steel, Si-P, dual-phase, development of high strength sheets 2-105251
steel, stainless, neutron irradi. at 55°C, effect on mech. props. 2-69866
steel, stainless, Type 316 irradi., miniature tensile specimen testing 2-88312
steel, structural, of various strengths, temp. and strain rate effect at tensile and elongation props. 2-62164
steel, transformation behaviour of synthetic weld heat-affected zone, Ni effects 2-72673
steel, V, mech. props. rel. to γ - α transform. kinetics 2-83112
steel reinforced concrete bond specimens, mech. props., finite element anal. (Chinese) 2-83167
steels, ferritic stainless, improvements of irradiation embrittlement 2-67506
superplastic forming processes, influence of material parameters and microstruct. 2-83184
thin sheets, elongation meas., regression formula (German) 2-95300
Al alloys, fatigue limits, indirect eval. from static tensile strength 2-72900
Al-Fe-Mg (0.25, 0.11 wt.%) alloy, alternating periodic serrations in tensile curves 2-99497
Al-glass composite, prep. and mech. props. 2-57319
Al-Mg (4 wt.%) alloy, mech. alloyed powder alloy, tensile behaviour 2-105259
Al-Si-Mg-Sr, hypoeutectic, modified by pure Sr, microstruct. and mech. props. 2-99386
p-Bi₉Sb₁₀, under uniaxial tension, topological electronic transitions 2-66424
C materials, neutron irradiated, restoration of struct. and props. during thermal annealing 2-86733
Cd-Ag, warm deform. and texture strengthening 2-111199
Cu, strength controlling processes, temp. and strain rate effects 2-77891
Cu-Ti, strength and ductility, 4 to 70K (Japanese) 2-105234
Fe whiskers, dislocations by stress appl., X-ray transmission topography 2-115634
Fe-Mn-Al-C, nonequilib. ordered austenite wire fabrication by in-rotating-water spinning method, mech. props. 2-93532
Fe-P-C amorphous wires, prod. by in-rotating-water spinning, mech. props. 2-57317
Fe-Si (3.25 wt.%), quasibrittle fracture nucleation under strain twinning conditions (Russian) 2-62193
Fe-Si-B amorphous wires, produced by in-rotating-water spinning method, mech. props. 2-111233
Fe₂₃Ni₇Cr₁₄P₁B₂, metallic glass, crystn., hardness and tensile deformation meas. 2-91784
Ir-W-Th, DOP-26, Th-doped, weld metal grain struct. and mech. props. 2-99499
Mg alloys, superplasticity in commercial and experimental composition sheets 2-105271
Mo alloys, mechanical properties and nature of fracture, in ductile-brittle transition temp. range 2-72820
Mo-Ti (0.3-2 wt.%), nitrided (Japanese) 2-83176
Nb, mech. props. and struct., influence of long high-temp. holds 2-88114
Nb-W, mech. props. and struct., influence of long high-temp. holds 2-88114
Nb-W(Mo)(TA)-Ti(Zr), creep kinetics under ultrahigh vac. 2-67462
Nb₃Sn tape used for superconducting transmission lines, O₂ content effects 2-92803
Ni-Al-Co(Cr)(Fe)(Mn)(Si) L1₂ cpds., melt quenching, improved mech. props. 2-116472
Ni-base superalloy, Inconel 600, ultra-pure, H embrittlement, effect of C, P, Sn and Sb additions 2-67525
Ni-Cu, Monel 400, liq. metal and H embrittlement, influence of grain boundary P conc. 2-77930

elongation continued

- Pd-Pt-H, strength and plasticity, effect of hydrogenation (Russian) 2-99483
Ti alloys, tensile props. after neutron irradi. 2-72767
Ti, stress-strain relationship, usefulness of Hollman eqn. 2-67415
Ti-Al-Cr-Mo-V, mech. props., statistical anal. 2-72763
Ti-Al-V (6.4 wt.%), laser welded, microstruct. and mech. props. 2-77935
 β Ti-Mo-Zr-(Al), metastable, deform. and fracture 2-57433
W helical fibre reinforced Cu, fibre deform. under tensile load (Japanese) 2-105233
Zn-Al, casting, mech. props. 2-62113

e.m. waves see electromagnetic waves

embrittlement

- see also ductile-brittle transition; hydrogen embrittlement; liquid metal embrittlement
continuum theory 2-109895
creep induced embrittlement, fracture mechanics study 2-67491
glass fibre reinforced polyester, water sorption and mech. props. 2-116522
grain boundaries, role of chem. bonding 2-56073
grain boundary embrittlement, decohesion theory 2-98194
light ion bombardment, simulation of neutron-induced mech. prop. changes 2-103864
Nimonic PE16, solution treated, grain boundary segregation during neutron irradi. 2-109844
PVC, rigid, embrittlement by weathering, indentation testing 2-83310
steel, 4140, mechanism of crack initiation and propag. in In-induced embrittlement 2-111295
steel, austenitic, Ni-Cr-(Mn), P segregation during austenitisation, effect on cracking and embrittlement 2-57357
steel, austenitic stainless, 316, degradation of props. during irradi., preirrad. microstruct. development 2-69865
steel, austenitic stainless, DIN 1.4970, He embrittlement, high temp. in-beam simulation 2-71519
steel, austenitic stainless, fast reactor fuel cladding, failure due to fuel adjacency 2-80089
steel, barothermomechanical treatment effect on struct. and temper embrittlement susceptibility 2-57386
steel, C, 4140, by solid In 2-67477
steel, Cr-Mn, creep induced embrittlement, fracture mechanics study 2-67491
steel, Cr-Mo, segregation of embrittling elements to prior austenite grain boundaries 2-93517
steel, Cr-Mo, temper embrittlement, atom probe anal. 2-67471
steel, Cr-Mo type HT-9, microstruct. effect on mech. props. rel. to fusion reactor apps. 2-88108
steel, Cr-Ni (13, 4-6 wt.%), temper embrittlement (Czech) 2-116535
steel, CrMoV, temper embrittlement rel. to heat treatment 2-83232
steel, ferritic stainless, fracture toughness rel. to first wall and blanket appl. in fusion reactor 2-72804
steel, grain boundary P segregation during tempering, stress effects, XPS study (Russian) 2-116444
steel, leaded, brittle fracture cause 2-111310
steel, low alloy, grain boundary segregation and embrittling effect of P 2-62187
steel, low alloy, heat improved, brittle fracture, thermal embrittlement effects (Russian) 2-88157
steel, low alloy, high strength, fracture, effect of thin film form. 2-67470
steel, medium-C low-alloy En 24, intercritical treatments, duplex struct. 2-105189
steel, Mn-Nb-V, low-pearlite, struct. and mech. props. after controlled rolling 2-57385
steel, Ni-Mn-Mo, high-strength cast maraging, ageing influence on mech. props. 2-67397
steel, P grain boundary embrittlement, electronic model for alloying elements effect 2-105278
steel, reactor pressure vessel, neutron irradi. embrittlement 2-102051
steel, stainless, 1.4970, He embrittlement reduction by finely dispersed TiC precipitates 2-71520
steel, stainless, maraging, susceptibility to warm embrittlement 2-67531
steel, stainless, maraging, tempering and struct. influence on temp. depend. of mech. props. 2-67396
steel, stainless, neutron irradi. at 55°C, effect on mech. props. 2-69866
steel, stainless, tritium charged, helium embrittlement at ambient temp. 2-111312
steels, ferritic stainless, improvements of irradiation embrittlement 2-67506
transition metals and alloys, omega phase formation, effect on mech. props. 2-77806
Type 304, sensitised, low-temp., intergranular fracture and grain boundary chem. 2-105328
Zircaloy fuel rod embrittlement, assessment in water accident situations 2-96119
Zircaloy-2, oxygen embrittlement on long-term exposure to fission product oxides 2-69707
Al alloy castings, low-temp. charact., (French) 2-77895
Cu-Bi (0.1 at.%), grain boundary embrittlement as function of boundary struct. 2-115246
Cu-Cr, failure anal., impurity segregation, Auger spectra study 2-83205
Cu-Ni, failure anal., impurity segregation, Auger spectra study 2-83205
Fe alloys, grain boundary segregation and embrittling effect of P 2-62187
Fe-B-Cr(Co)(Ni), metallic glasses, crystn. behaviour 2-71368
Mo alloys, improvement of mech. props. in CTR gaseous environment 2-108106
Mo sheet, SIMS analysis of oxygen on brittle fracture surface 2-99581
Nb-Mo-Zr, carbide form. and embrittlement in technical Ar at 1100°C 2-72821
Nb-Zr-C, embrittlement during ageing, X-ray, SEM and TEM study (Russian) 2-93585
Ni and alloys, air embrittlement, role of S 2-99541
Ni, grain boundary segregation of S and Cl, high resolution scanning AES and SIMS obs. 2-93518
Ni, high-temp. ductility, Sb, Sn, As and P addition effect, intergranular embrittlement 2-72839
V, ion implanted, mech. props. study after neutron irradi. 2-71511
V-Ti, ion implanted, mech. props. study after neutron irradi. 2-71511

e.m.c. *see* **electromagnetic compatibility**

emergency power supply

miniature batteries, long life, present trends for electronic appls. (Japanese) 2-99776

e.m.f. *see* **electric potential**

emission nebulae *see* **nebulae**

emission spectra *see* **spectra**

emissivity

see also **brightness**

directional emissivity meas., IR spectrometer 2-79694

high temperature heat transfer, emissivities of surface (Japanese) 2-81993

Inconel 600, mechanically polished and sand- and bead-blasted, thermal outgassing props. 2-110161

IR detectors, photon bunching and photon-noise-limited performance 2-79671

IR thermography, exitance graphic interperetation as function of surface temp., emittance and background 2-55405

Kirchhoff's law, nonlinear analogue 2-71676

mica, emissive props. in 7 to 15 μ m spectral region 2-91015

opaque materials, monochromatic directional reflectivity and emissivity determ. (French) 2-64045

radiance simulation and scene discrimination errors 2-79667

radiative cooling to low temperatures with selectively IR-emitting surfaces 2-92241

rough metal surfaces, EM wave absorptivity and emissivity meas. 2-77471

thin films, homogeneous, emissivity calc. 2-71677

Ag, thin films, homogeneous, emissivity calc. 2-71677

Al films, vacuum deposited, effects of impurities on emittance 2-98317

Fe, liq., normal spectral emissivity, 645 nm 2-81992

Fe-Ni alloy, liq., normal spectral emissivity, 645 nm, comp. depend. 2-81992

Ni, liq., normal spectral emissivity, 645 nm 2-81992

Ni-NO₂ black foil, optical and thermal props. 2-67139

NiO microcrystal, IR spectra obs. at high temp. 2-61902

SiO₂, fused, shock temp. determ. by radiance intensity meas. 2-86793

Ti alloys, high melting point, low temp. plasma interaction (Russian) 2-99595

Ti, diffusion of O₂, high temp. interaction, diffusive kinetics under nonstationary heating (Russian) 2-98342

UO₂, emissivity over 1000K to 3130K range 2-86913

W (100), total hemispherical emissivity, adsorbate-induced change 2-61182

W, radiance temp. at melting pt. 2-115442

emित्रons *see* **television camera tubes**

employees *see* **personnel**

employment

see also **personnel**

organic recycling, effect on energy, employment and environmental problems 2-73089

emulsions

see also **nuclear track emulsions; photographic emulsions**

brine-dodecane-pentanol-sodium octylbenzenesulphonate microemulsion, phase diagram and interfacial tensions 2-93832

diffuse interface, optical reflectivity 2-55063

ethanol-H₂O liq. droplets interaction 2-81384

fine dispense, concentrated, coalescence during turbulent stirring 2-60626

fission reactor fuel reprocessing, mixer-settler emulsions, characts. and behaviour 2-74853

four-component systems, with polymeric surfactants, form. and struct. investig. 2-93827

heptane-water-tetraoxyethylene glycol dodecyl ether, low water content, dielec. obs. 2-93830

microemulsion, anomalous shear viscosity obs. near crit. point 2-97631

microemulsion, conc., light scatt. and square-well model 2-83419

microemulsion system, variable freq. H⁺ off-reson. decoupled ¹³C NMR 2-80653

microemulsion viscosity and elec. cond. meas. rel. to petroleum recovery 2-93828

microemulsions, conf., Cambridge, England (Sept. 1980) 2-93823

microemulsions, conf. behaviour 2-57642

microemulsions, statistical mech. of interfacial region 2-57640

microemulsions, struct., dynamics and self-diffusion 2-93831

microemulsions, US relax. investig. 2-93837

nonionic surfactants, struct. and solubilisation props. 2-93829

nonpolar surfactant solns., microemulsion concept 2-93825

oil-in-water microemulsions, high emulsifier content 2-93835

phase equilibria involving microemulsions, Talmon-Prager model 2-98240

phospholipid bilayers, hydrocarbon tail region, fast dynamic processes 2-94004

PVC, conf., Cleveland, OH, USA (Aug. 1980) 2-74153

sodium octylbenzene sulphonate-pentanol-decane-water, microemulsion struct., mag. and elec. birefr. meas. 2-73018

space charge characts., EDTA influence 2-93110

water microemulsions in organic media, dynamic light scatt. 2-93826

water-in-oil microemulsions, dynamic processes investig. 2-93836

water-oil microemulsion, dynamic scaling near critical phase transition point 2-115400

water-oil-nonionic surfactant system, phase inversion 2-93824

Co-Al₂O₃ mag. emulsion, electron diff. study (German) 2-82667

emulsions (nuclear track) *see* **nuclear track emulsions**

emulsoids *see* **emulsions**

encapsulation

see also **packaging**

³H-solute conc. monitoring using encapsulated plastic scintillator 2-73400

dosimeters, fission foils and oxide discs, thin metal encapsulation by resist. welding 2-108139

ion implanted, laser annealed, defect anal. 2-66053

polyacetylene-I₂, effect of encapsulation on cond. 2-56593

shock-compressed matter, recovery capsule anal. 2-76582

B fibre encapsulation, in situ investig. in CVD reactor 2-77782

B₂O₃ encapsulant, effect of water content on purity and stoichiometry of LEC GaAs 2-103674

Cm-Au cermets, remote micro-encapsulation of ²⁴⁴CmO₂ 2-108186

Fe carbonyl based high-frequency magnetic powder materials 2-77331

GaAs:Si, study of encapsulation for annealing 2-77082

InP, annealing encapsulants, AES and SIMS study 2-116584

encapsulation continued

InP, annealing encapsulants, photoluminesc. study 2-116585

PBSiO₂, hydrophobic films, CVD prep. and microelectronic appls. 2-62070

encoding

see also **codes; decoding**

colour coded phase variation visualisation with incoherent optical processing technique 2-108806

colour image retrieval from incoherent speckles with white light processing 2-102737

digital high frequency radiocommunications, applications of microprocessors 2-73781

multichannel frequency-domain image processor 2-90830

optical instruments having multiplex coding, pot. noise stability 2-53810

optical interference filters for Fourier filtering and freq. coding 2-65339

pseudocoloring method using two different spatial modulations, image storage appls. 2-90819

real-time white light pseudocolour density encoder for gray level information 2-108817

seismic sounding, encoded sweep technique for Vibroseis 2-89011

space frequency filter encoding for coherent optical processors (Russian) 2-114205

space-variant optical systems, multiplex hologram representation using ground-glass encoded reference beams 2-65182

speech vocoding, frequency weighted Itakura-Saito spectral distance measure 2-97308

stars, IR imaging using multiplex encoding techniques 2-63262

vowels structure and duration, together specify fricative voicing 2-109128

ENDOR

alkoxy radical radiation products, g-tensor and H⁺ coupling tensors 2-85695

allyl-type free radical trapped in γ -irrad. potassium hydrogen glutamate single cryst., ENDOR investig. 2-56975

benzil in benzophenone-d₁₀, ENDOR and electron nuclear-nuclear triple reson. study, ¹O hyperfine coupling 2-98995

¹⁷O-benzophenone, photoexcited, ODMR and ENDOR, orbital rot. in lowest triplet state 2-59831

bicarbenes, quintet-state, in diacetylene single crystals, ENDOR study 2-104743

lysozyme-Cu²⁺ complex, hen egg-white, ENDOR study 2-62561

nitroxide radicals, diastereomeric, prod. by spin trapping, ESR and ENDOR obs. 2-108584

pheophytin a anion radical, liq. soln., hyperfine coupling, ENDOR and TRIPLE resons. obs. 2-108589

polycacetylene, ENDOR spectrum meas. 2-77421

propanoate, unstable radical, struct. and environment, ENDOR spectra 2-70305

propanoate radical, environment in X-irrad. L-alanine crystal, ENDOR spectra 2-70304

radicals in solution studied by ENDOR and triple resonance spectroscopy, review 2-116091

RF coil construction for cavity 2-107371

ruby:Cr³⁺ effect of ²⁷Al nuclei on hypersound intensification (Russian) 2-77422

spectral diffusion in presence of spin-phonon coupling during RF saturation 2-66895

succinic acid radical, noncrossing of proton spin levels, ENDOR spectra 2-102512

TGS:Cu²⁺ crystals, ¹⁴N quadrupole interactions, ENDOR obs. 2-110730

thymidine-5-thymyl radical, long-range spin interactions, ENDOR obs. 2-110731

thymidine, coupled electron-proton spin system, response to external perturb., ENDOR study 2-77419

transition probabilities in EPR, ENDOR and electron-nuclear multiple reson. transitions 2-110728

tris-sarcosine-calcium chloride: Mn²⁺, ¹H ENDOR spectra 2-93062

urea oxalic acid, radical transformation, ESR and proton ENDOR studies 2-82715

AgCl:S, S centre, ENDOR study 2-93063

(CH₃)₂ undoped film, hyperfine coupling anisotropy, π electron character, ENDOR study 2-116092

CaF₂:O, X-irrad., O centre, EPR and ENDOR study 2-61764

CaF₂:Tm²⁺, optical detect. in transmission band of ENDOR 2-116090

CaF₂:Tm²⁺, uniaxial stress effect on ENDOR, hyperfine parameters 2-72378

Co complex, N,N'-ethylenebis(acetylacetonatiminato) Co(II), ENDOR and double ENDOR expt., hyperfine tensors 2-104744

Co(II) complex, N,N'-ethylenebis(acetylacetonatiminato)Co(II), EPR/ENDOR and semimipirical calcs. study 2-116089

CsCdF₃:Mn²⁺ (Ni²⁺), spin transfer parameters, core electrons effects 2-87627

Cu complex, bis(2,4-pentanedionato)Cu(II) single cryst., ⁶³Cu and ⁶⁵Cu ENDOR 2-77420

Cu II/Ni II mixed ligand chelate complex, single cryst., ⁶³Cu and ³¹P ENDOR study 2-66952

Cu/Ni complex, bis(diethyl-dithiocarbamate) copper/nickel, ¹³C and ¹⁴N ENDOR study 2-98996

Cu(II)/Zn(II) bis(diethyl-dithiocarbamate), ¹³C ENDOR study 2-77418

KMgF₃:Tm²⁺, paramagnetic centres, ENDOR, transferred hyperfine interaction parameters 2-61789

li-o-dimesitylbenzene radical complexes, soln., KEPR, ELDOR and ENDOR 2-59832

d-LiO₂:Mn²⁺, superhyperfine and ⁷Li quadrupolar interactions, ENDOR and RF discrete saturation study 2-56535

Na-o-dimesitylbenzene radical complexes, soln., KEPR, ELDOR and ENDOR 2-59832

NaNO₂:Ag⁺, triplet state, quadrupole interaction, optically detected ESR and ENDOR 2-116093

SrF₂:Tm²⁺, uniaxial stress effect on ENDOR, hyperfine parameters 2-72378

V complex, vanadyl bisacetylacetonate in frozen liq. cryst., ENDOR study 2-72377

V complexes, bis(acetylacetonato)VO(IV) and adducts in frozen soln., ENDOR study 2-110729

YAlO₃:Eu²⁺ (Pr³⁺), perturbed ²⁷Al photon echo ENDOR double reson. 2-104745

YAlO₃:Pr³⁺, two-pulse photon echo ENDOR study 2-98997

ZnO:In, ODMR and ENDOR study 2-82748

energies, molecular dissociation *see* **molecular dissociation energies**

energy, binding *see* **binding energy**

- energy, lattice *see* lattice energy
energy, surface *see* surface energy
energy bands *see* band structure
energy bands, electron *see* band structure
energy control *see* power control
energy conversion, direct *see* direct energy conversion
energy gap
see also superconducting energy gap
alkali graphite intercalation cpds., σ -electron energy bands, secondary electron spectroscopy study 2-93337
amorphous semiconds., band gap fluctuations, photoluminescence 2-98530
amorphous semiconductors, intrinsic, photoconductivity dependence on photogeneration rate 2-72028
Anderson periodic Hamiltonian, finite cell calcs. 2-76883
band gaps and asymptotic behaviour of continued fraction coefficients 2-71846
CdS, thin evaporated films, optical and elec. props. 2-61624
chalcopyrite compounds, ternary, energy band features rel. to electronegativity scale 2-61347
cis-polyacetylene, resonant Raman scatt., theoretical anal. 2-77524
covalent crystal, dynamical aspects of correlation corrections 2-71895
disordered semiconductor under illumination, electron localised state distrib., balance eqn. 2-61411
I-III-IV Se_4 compounds, energy gap, visible-UV absorpt. 2-104904
II-IV-V₂ compounds, bond structure of pseudodirect bandgap systems, review 2-66448
III-V antimonides, phase diagrams 2-116427
IV-VI semiconductor, spectrum in field of reson. light wave 2-77466
Kronig-Penney crystal model, forbidden energy bands 2-104221
lattice dynamics and phase transitions, pseudopot. theory 2-92139
mean internal potential, rel. to density, calc. of phys. characteristics 2-110311
mixed valence systems, classification of states at Fermi energy 2-56422
modulated crystal, excitations near commensurate-incommensurate transition 2-92179
multiphoton absorption, intense field effects, theory 2-93133
narrow-gap semiconductors, in mag. field, plasmon-assisted recombination 2-87297
noble metals, electronic props., one parameter model pot. 2-61331
nonlinear cryst. refractive index, temp. depend. 2-61856
organo-silicon thin films, plasma-polymerised, struct. of energy levels 2-66428
Peierls-Frohlich problem and potentials with a finite number of gaps 2-92435
photoelectrochemical spectroscopy, stress modulated 2-84707
trans-polyacetylene, electrochem. voltage spectroscopy 2-110227
polyacetylene, optical absorpt. spectra, press. depend. meas. 2-77521
trans-polyacetylene, optically excited states, UPS study 2-11030
polyacetylene, soliton excitations and polarons 2-115673
polydiacetylene, spontaneous excitation localisation 2-110300
polyethylene, photoconduction, vacuum UV region, temp. depend. 2-56635
polyiodide chains, resonant Raman scatt., theoretical anal. 2-77524
polymers, elec. cond., bond gaps, valence effective Hamiltonian study 2-76890
polystyrene films, soln. grown, DC electrical props., free and trapped carrier conc., density of states 2-56742
rare earth tungstates, mixed cond. 2-72035
SCL conduction in semiconductors and insulators, interpretation in terms of traps 2-77071
semiconductor, amorphous film, gap states, xerographic spectroscopy 2-77213
semiconductor, band gaps, position depend., formation when placed in mag. field 2-92454
semiconductor, dislocation electron energy spectrum, Hubbard correlations 2-104309
semiconductor, highly doped, energy gap narrowing determ., minority carrier recomb. as function of doping conc. 2-92645
semiconductor superlattice, narrow gap, cond. in strong. mag. field 2-77098
semiconductor superlattices, energy spectrum and zero energy gap condition calc. 2-77168
semiconductor thin films, optical processes, review 2-93310
semiconductor with fluctuating gap width, optical breakdown 2-116303
semiconductors, band gap, thermal fluctuations effect, calc. 2-56437
semiconductors, crystalline and amorphous, evidence for common origin of Urbach tails 2-71862
semiconductors, dielectric const. in strong mag. field, band gap and interband hybridisation effects (*Russian*) 2-93100
semiconductors, ideal vacancy and surface states 2-104226
semiconductors and insulators, dielectric function and exchange correlation potential, energy gap 2-87166
semimetal alloy films, quantum size effect and semimetal-semicond. transition, theory 2-82494
SOS films, rel. between crystallinity and electronic props. 2-92514
statistical mechanics, energy gap, clustering and Goldstone theorem 2-74350
superconductor, magnetically doped, nuclear spin relax., ultrasonic attenuation 2-87450
superconductors, far IR laser thermal spectroscopy 2-98805
TCNQ salts, thermopower and conductivity anisotropies 2-92580
TCNQ stack, numerical approach to band structure 2-98537
TMTSF₂ReO₄, metal-insulator transition 2-71867
TTF-TCNQ, low temp. IR studies 2-87783
AgF(Cl)(Br), electronic struct. calcs. 2-110249
AgInS₂, two-temp. synthesis, props. 2-77725
Al_{1-x}Ga_xAs epitaxial films with variable composition gradient, production 2-87115
Al_{1-x}Ga_xAs epitaxial solid soln., graded band-gap, photolum. (*Russian*) 2-104965
Al_{1-x}Ga_xAs, Γ -X-junction position, effect of alternating axial press. meas. 2-66449
Al_{1-x}Ga_xAs-GaAs superlattice, energy spectrum and zero energy gap condition calc. 2-77168
Al_{1-x}Ga_xIn_xAs, pseudopot. band struct., CPA calc. 2-115657
Al_{0.48}In_{0.52}As, LPE growth lattice matched to InP 2-99355
AlSb, Al_{1-x}Sb_x, vacuum deposition, optical and transport props., impurity states 2-82498
AlSb(As)(P), surface (110), bound and resonant surface states 2-110429
energy gap continued
As-Te, homogeneous film, elec. props., optical forbidden band-width 2-110504
As₂S₃, amorphous, photodarkening, configuration-coordinate model 2-57033
(As₂S₃)_{1-x}(Ti₂Se)_x, chalcogenide glass film, photoconductivity 2-110399
As₂Te_{2-x}, amorphous film, energy gap, composition depend. 2-61337
Au-n-GaAs_{1-x}Sb_x Schottky diode, barrier height 2-115854
BN, electrical cond. meas., 700 to 1400°C 2-92618
Bi thin film, resistivity and energy gap variation with film thickness 2-92791
Bi:Sb, ion implanted, electronic struct., magnetoref. study 2-99095
Bi_{1-x}Sb_x, semicond., valence band struct., elec. and thermal cond. study 2-87143
Bi₂₀Sb₈₀ thin film, band gap and intergrain barrier activation energies 2-72085
BiSeI(Br), band struct., pseudopotential calcs. 2-71860
Bi₂TiO₅, local levels in forbidden band 2-71899
Bi₂XO₅ (X = Ge, Si) energy levels in forbidden zone (*Russian*) 2-61930
C, diamond-like, quasi-amorphous hard film deposition and characteris., review 2-57307
C:H, amorphous glow discharge film, photoluminescence and ESR spin density 2-93244
CdGa₂S₄, nonlinear cryst. refractive index, temp. depend. 2-61856
CdGa₂S₄, ternary semicond., electronic spectrum in region of fundamental absorption edge 2-57123
Cd_{1-x}Hg_xSe mixed cryst., Γ point band struct. parameter, elec. and thermomagnetic studies 2-76923
Cd_{1-x}Hg_xTe, narrow gap, absorption coeff. and optical band gap 2-116146
CdIn₂S₄, fundamental absorpt. edge meas., doping effects 2-61927
CdIn₂Se₄, α - and β -polytypes, optical props. in region of fundamental absorption edge 2-93223
CdP₄, CdP₂, Cd₃P₂, electronic struct., X-ray spectral investig. 2-82221
CdS, two-photon magnetospectroscopy of A-exciton states 2-104260
CdS, Se_{1-x}S_x sprayed thin films, struct. props. and optical band gap 2-110199
CdSe, optical absorpt. saturation near fundamental edge 2-114387
CdSe_{1-x}S_x films, soln. grown, struct. and optical props. 2-56388
CdTe, free excitons at room temp., photoelectrochemical study 2-115670
(CdTe)_{1-x}(ZnSe)_x powders, photoacoustic spectroscopy meas. 2-92464
Cd_{1-x}Zn_xS films, electron bombardment evaporation, visible absorpt. spectra meas. 2-72572
CoBr₂, trigonal cpd., mag. excitations 2-87485
CoCl₂, trigonal cpd., mag. excitations 2-87485
CuGa_{1-x}In_xS₂ solid solns., growth and props. 2-83017
CuGaS₂, band gap temp. depend., exciton reflection spectra 2-104252
CuGaS₂, nonlinear cryst. refractive index, temp. depend. 2-61856
CuGaSnSe, energy gap values, temp. var., optical refl. study 2-56438
CuInS₂, photoluminescence, exciton and near edge emission, energy gap 2-93250
CuIn₂S₈, two-temp. synthesis, props. 2-77725
CuInSe₂, thin film, prep. by RF sputtering, optical props. 2-110962
p-CuO:Li, conduction and valence band edge positions, photoelectrochem. determ. 2-56440
Cu₂S thin films prep. by Activated Reactive Evaporation, elec. and optical props. 2-99354
Cu_{2-x}Se, electrophysical props., effects of uniaxial deform. at different temps. (*Russian*) 2-82353
CuWO₄ anodes, for photoelectrolysis of water, bandgaps 2-61348
Fe₂(As_{1/2}Te_{1/2}Si₂Sb₂)₂ film, sputtered, phys. props. 2-92421
FeCl₂, ladder approximation for uniaxial metamagnets 2-66807
FeF₃ thin films, 'localised electron states, optical absorption study 2-82268
Ga_{1-x}Al_xAs variable-gap optical filter with a controlled pass band 2-75665
Ga_{1-x}Al_xAs-GaAs isotypic heterojunction, compact analytic model (*French*) 2-104474
Ga_{1-x}Al_xSb, LPE layers, photolum. study, cond. band minimum determ. 2-98540
GaAs, doped superlattices, quasi-two-dimensional photoexcited carriers 2-110433
GaAs, n-i-p-i cryst., photoexcited electrons quantisation, photoluminesc. and light scatt. study 2-61576
GaAs n-i-p-i superlattices, electron-hole recomb. across tunable effective gap, photoluminesc. study 2-99182
GaAs NIPi superlattice, tunable optical absorpt. coeff. 2-77477
GaAs-Si-GaAs:Be n-i-p-i superlattice, tunable band gap, theory and expt. study 2-110458
GaAs-Si(Be) artificial doping superlattices, MBE growth, elec. and optical props. 2-92735
GaAs-Al_{1-x}Ga_xAs quantum well heterostructure lasers, band struct., high press. effects 2-85971
GaAs-AlAs (001) superlattice, electronic band struct. 2-61572
GaAs-GaAs_{0.9}P_{0.1} superlattice, strained layer, lattice mismatched, electronic struct., light binding calc. 2-66631
GaAs-oxide interface electronic struct. 2-87409
n-GaAs_{1-x}P_x/Au Schottky diodes, barrier height depend. on energy gap 2-61551
GaAsP_{1-x}GaP strain-layer superlattice, MOCVD growth and photoluminesc. props. 2-98729
GaAsP_{1-x}GaP strained-layer superlattice, electronic struct., tight-binding and effective mass models 2-110454
GaAsP_{1-x}GaP strained-layer superlattice, MOCVD growth and photoluminesc. props. 2-110919
GaAs_{1-x}Sb_x solid soln., ν band gap, composition depend. on $x < 0.01$, photoluminesc. study 2-61972
GaP, multiphoton absorption, intense field effects, theory 2-93133
GaP n-p junction, LED, thermally stimulated noise 2-104444
Ga₂S₃(Se₂)(Te₂), random defect semicond., electronic props. 2-115653
Ga_{1-x}Sn_xSe, solid solns., elec. cond., thermo-EMF and Hall coeff. meas. 2-87259
Ge-chalcogenide films, optical consts. and photo-optical changes, absorption edge 2-93301
Ge-GaAs (100) heterojunction, MBE growth, surface processes, LEED and photoemission study 2-110203
GeS₂, glassy and cryst., pressure-optical studies, network topology analysis 2-67021
GeTe, cubic and rhombohedral, band struct. 2-92468
GeTe, fundamental energy gap calc. 2-92458

energy gap continued

- Hg_{1-x}Cd_xTe, bandgap spin-orbit splitting resonance 2-115719
 Hg_{1-x}Cd_xTe-CdTe LPE layers, electron mobility near zero band-gap crossing 2-87426
 Hg_{1-x}Mn_xTe, elec., optical and mag. props. 2-87140
 HgTe, press. induced semicond.-metal transitions, energy band struct. 2-82234
 HgTe(Se), elec. props. at very high press. 2-82412
 In-Se, melt, elec. cond. and thermo-EMF, temp. depend. 2-87307
 InBr, direct and indirect exciton spectra, absorption and reflection study 2-56446
 In_{1-x-y}Ga_xAl_yAs lattice matched to InP, band-gap energy and electron effective mass, comp. depend. 2-115650
 InGaAlP on (100)GaAs, MBE growth, rel. to energy gap 2-104189
 InGaAs MBE layers, energy gap calc. using Phillips Van Vechten dielec. model, photoluminesc. 2-61939
 In_{0.53}Ga_{0.47}As-InP undoped VPE layers, photoluminesc. meas. 2-99167
 In_{1-x}Ga_xAs_{1-y}P_y solid solns., band gap, comp. depend. 2-92462
 In_{1-x}Ga_xAs_{1-y}P_y LPE system, alloy scattering mobility and energy gap evaluation by dielectric model 2-82485
 In_{1-x}Ga_xAs_{1-y}P_y LPE layer, energy gap and alloy scatt. mobility, meas. and dielec. model 2-98542
 In_{1-x}Ga_xAs_{1-y}P_y-InP LPE layers, strain anal. and optical props. meas. 2-66392
 In_{1-x}Ga_xAs_{1-y}P_{1-x-y}GaAs_{1-y}P_y (100), LPE growth and pulsed room temp. laser operation 2-90926
 In₂O₃ RF sputtered films, optical props. 2-57202
 InP:Fe, semisolating, photocond. mechanism peculiarities (Russian) 2-104435
 InP-InGaAsP DH with 40% external luminesc. quantum efficiency 2-77591
 InP-metal interface, Fermi level pinning and chem. struct., XPS study 2-110475
 β-In₂S₃, two-temp. synthesis, props. 2-77725
 InSb, band struct. calcs., hydrostatic press. effects 2-92457
 InSb, CC two photon magnetoabsorption spectroscopy with CO₂ lasers, energy gap 2-87748
 p-InSb, two-photon magnetoabsorpt. spectra, using CW CO₂ lasers 2-93166
 In₂Te₃, random defect semicond., electronic props. 2-115653
 IrSi_{1.75}, semiconductor thin film, optical and Hall effect meas. 2-77209
 K_{1-x}Pt(CN)₄1.5H₂O, electronic props. and Peierls transition, polarised refl. study 2-82858
 LiCl, energy band calcs., self interaction correction, density of states 2-66445
 Nb₂O₅, photoelectrochem. and solid-state props. 2-72016
 NiF₂ thin films, localised electron states, optical absorption study 2-82268
 P, black, electronic struct., self-consistent pseudopot. calc. 2-66437
 P, black, high press. and temp. cryst. growth and elec. resist. meas. 2-92619
 Pb_{1-x}Ge_xTe, band edge struct. transform. due to ferroelectric transition 2-92456
 PbI₂, cryst. and thin films, electronic absorption spectra meas. 2-67071
 PbI₂ film, prep. by iodination of PBS film, X-ray characterisation 2-67215
 PbI₂ film surface layer, band gap illumination effects 2-92368
 PbInNbO₆, elec. props., band gap energy 2-110395
 PbMO₃, (M=Ti, Zr, Hf), elec. props., band gap energy 2-110395
 Pb_{1-x}Mn_xS solid solns., energy band gap temp. and composition depend., photovoltaic effect meas. 2-110450
 PbO-Bi₂O₃, prep. and electrophysical props. of compounds 2-72619
 PbSnNbO₆, elec. props., band gap energy 2-110395
 Pb_{1-x}Sn_xTe (x=0.59 to 1), valence bonds energy separation, Hall coeff. meas. 2-72010
 p-Pb_{1-x}Sn_xTe, valence band struct., elec. props. (Russian) 2-87144
 Pb_{1-x}Sn_xTe:Cd(Bi), narrow band gap semicond., galvanomag. and optical props., Cd solubility and diffusion (Russian) 2-92666
 Pb_{1-x}Sn_xTe(Se) solid soln., carrier g-factor longitudinal and transverse components, band gap depend. 2-76903
 PbTe crystal growth by travelling heater method 2-93404
 PbTe-Pb_{1-x}Sn_xTe, superlattice, interband optical absorpt. (Japanese) 2-116179
 PtSb₂, elec. props. in DC and microwave fields 2-87313
 Sb₂Se_{1-x} amorphous film, energy gap, composition depend. 2-61337
 Se, amorphous, electronic density of states, cluster model, CPA calc. (Russian) 2-104220
 Se_{0.75}Ge_{0.25} films, obliquely deposited, ion-induced physical and optical densification 2-61042
 Se_{1-x}Te_x, energy gap, photoacoustic study 2-76603
 Si amorphous films, glow discharge and sputter deposited, optical band-gap, absorption coeff. meas. 2-71856
 a-Si, dangling bond centres energy level, ODMR study 2-110732
 Si, effective mass of electrons and holes, and intrinsic conc., temp. depend. 2-98528
 Si film, glow discharge deposited, optical consts. 2-62006
 Si, heavily doped, band gap narrowing calc. 2-115649
 n-Si, heavily doped, electronic struct. and photoluminesc. spectra 2-104290
 Si inversion layers, minigaps, effects of one-dimens. periodic staircases 2-56700
 Si, laser excited, electronic struct. dynamic response, photoemission study 2-72606
 Si:Au, mid-gap level investigation by DLTS and transient capacitance meas. 2-104286
 Si:Au, mid-gap levels investigation by DLTS and transient capacitance meas. (Chinese) 2-66473
 Si:F,H amorphous films, solar cell form., film elec. and optical props. 2-83481
 Si:H, amorphous, obs. of photoinduced changes in gap states bulk density 2-66472
 Si:H, amorphous, Schottky barrier and MOS structs., barrier heights, photoemission study 2-82465
 Si:H, amorphous, Schottky diode spectral response, gap states effect 2-87753
 Si:H, amorphous, sputtered, time-of-flight and photoinduced mid-gap absorpt.; dispersion 2-87432
 Si:H, amorphous film, optical props. (Korean) 2-57201
 Si:H, amorphous film, RF planar-magnetron sputtering, IR and photoelec. props. (Japanese) 2-99332

energy gap continued

- Si:H, As, amorphous film, optical absorption, doping and temp. depend. 2-82945
 a-Si:H, density of states determ., field effect method (Korean) 2-56419
 a-Si:H, electronic props., CPA calc. 2-56430
 Si:H amorphous, photoluminescence, band gap fluctuation 2-98530
 Si:H amorphous glow discharge films, elec. and optical props., elec. and mag. field effects 2-82407
 Si:H amorphous solar cell, photovoltaic performance, film props., plasma deposition optimisation 2-83486
 Si:H amorphous thin film Schottky barrier diodes, diode characts., film props. 2-82430
 Si:H amorphous thin films, ion-plated, photoconductivity and optical band gap 2-87331
 a-SiH and a-Si:H,F, dangling bond centres energy level, ODMR study 2-110732
 Si:H films, amorphous, dependence of gap on hydrogen content, photoluminesc. and IR spectra study (Chinese) 2-110903
 Si:Ne, Ar, amorphous, ion implanted, localised defect states and impurity distrib., photocond. spectra study 2-61414
 Si-SiO₂ interface electronic struct. 2-56711
 Si-SiO₂ junction, interface electronic struct. 2-110485
 SiC, electron irradi., band gap changes 2-92460
 SiC, polytypes, band structure, electrorefraction meas. 2-104851
 Si₃Ge_{1-x} amorphous film, energy gap, composition depend. 2-61337
 SiO₂, energy gap and photoelectric props., effects of blocking electrodes 2-82403
 SmB₆, mixed valence cpd., small energy gap, electron tunnelling and IR spectrum 2-56442
 SnO₂:Sb thick films, spray deposited, elec. cond., Hall mobility and optical gap meas. 2-82415
 SnS₂, electronic props., Phillip's ionicity calc. 2-66440
 SnSe₂, electronic props., Phillip's ionicity calc. 2-66440
 Sr(Sr_{1/3}Nb_{2/3})O₃, band gap, electron mobility, Schottky disorder, elec. cond. meas. 2-61530
 TiSe₂ (S₂) (1T), p-d gaps, relativistic corrections 2-110240
 Ti-Se, melt, elec. cond. and thermo-EMF, temp. depend. 2-87307
 TiPbI₃, TiPbI₃, Ti₃PbBr₃, crystal growth, elec. and optical props. 2-87967
 TiSn₃, TiSn₂, crystal growth, elec. and optical props. 2-87967
 TmSe, mixed valent, hybridisation energy gap, inelastic neutron scatt. obs. 2-61352
 V₂O₅-based glasses, elec. props. 2-82352
 V₂Si superconducting film, far IR laser thermal spectroscopy 2-98805
 WO₃ films, reactively sputtered, electrical and optical props. 2-66673
 Xe, solid, optical absorpt. edge at very high press., rel. to metallisation 2-110244
 Xe, solid, optical props. under very high press. 2-87731
 ZnGeP₂, nonlinear cryst. refractive index, temp. depend. 2-61856
 ZnGeP₂, press. depend. of pseudodirect gaps 2-87141
 ZnO, heavily doped, band gap narrowing, optical transmission study 2-104250
 ZnO, surface (10 $\bar{1}$ 0), localized and delocalized charge transfer during adsorpt. 2-110425
 ZnP₂, photoelectrochemical cell photocathode, appl. to solar cells 2-116840
 ZnP₂, Zn₃P₂, electronic struct., X-ray spectral investig. 2-82221
 α-Zn₃P₂ film, optical band gap 2-62004
 ZnS_{0.8}O, band gap variation due to dopant 2-76922
 (ZnTe)_{1-x}(ZnSe)_x, powders, photoacoustic spectroscopy meas. 2-92464
 ZrSe₂ (S₂), p-d gaps, relativistic corrections 2-110240
- energy gap, superconducting** see superconducting energy gap
- energy level crossing**
 see also Hanle effect
 aligned atoms in intense oscillating RF fields, resonance shifts 2-54791
 atoms, level crossing in the 1s² 2s² 2p^{N-1} 4l and 1s² 2s² 3l' configurations 2-85597
 atoms, optogalvanic spectroscopy, alignment effects 2-64900
 avoided level crossing, dynamics of traversing, Landau-Zener model 2-54811
 diabatic states, novel variational definition 2-102412
 ethylene, nonadiabatic coupling between low lying singlet states, geometrical relax., ab initio CI calcs. 2-96466
 ethylene-d₄, inactive torsion vibr. rot.-vibr. anal., IR obs. 2-80621
 methyl chloride, IR band study of 2ν₂, ν₂+ν₃, 2ν₃², 2ν₃+ν₃ and 4ν₃ reson. (French) 2-90532
 methyl silane, internal rot. studied by avoided-crossing mol. beam spectroscopy 2-108732
 molecular-tunneling spectroscopy in crystals with the use of a double-level-crossing technique 2-76331
 organic crystals, level anticrossing phenomena in phosphoresc. and optical nuclear polarisation 2-104746
 propylene, nonadiabatic coupling between low lying singlet states, geometrical relax., ab initio CI calcs. 2-96466
 pyrene, intersystem crossing, temp. depend. 2-102545
 tetradeterophenanthrenes, vapour phase fluorescence, lifetimes, position depend. deuterium effects 2-85725
 Ba+N₂O(O₂) in solid Ar, visible chemiluminescence, thermoluminescence 2-99682
 C⁶⁺+H(1s), electron capture cross section, Landau-Zener formula 2-114101
 CaO:Mg, neutron or electron irradi., circular polarised luminesc. from F- and F₂-centres 2-110915
 CsH, X^Σ state, laser induced fluoresc. spectrum, pot. energy curve, avoided crossing region 2-108607
 He⁺-Xe, charge transfer reaction, combined drift-tube and beam luminesc. study 2-99671
 He₂, excited states, diagrammatic QDMBPT 2-108370
 n-InSb, far IR studies of bound and free carriers as function of hydrostatic press. 2-93238
 Kr, electron and positron scatt., total cross section meas. 2-114114
 (NH₄)₂SnCl₆, level crossing between NQR and tunnel systems 2-77412
 NaNO₂, phosphoresc. to fluoresc. quantum yield, energy depend. intersystem crossing and vibr. relax. 2-72536
 Ne, self-alignment of 5d₂-level, hollow cathode discharge 2-54810
 Xe, electron and positron scatt., total cross section meas. 2-114114
- energy level transitions, atomic** see atomic spectra
- energy level transitions, molecular** see molecular spectra
- energy level transitions, nuclear** see nuclear energy level transitions
- energy levels** see energy states

- energy levels, atomic *see atomic structure*
 energy levels, molecular *see molecular energy levels*
 energy levels, nuclear *see nuclear energy levels*
 energy levels in solids and liquids *see electron energy states (condensed matter)*
 energy loss of particles
see also channelling: electron energy loss spectra; radiation effects
 air, stopping power of protons and alpha particles 2-70386
 alanine, secondary ion emission, time of flight mass spectra 2-99241
 alkali halides, sputtering under ion bombardment 2-99240
 atom + diatomic molecule, electronically elastic collision, energy loss 2-65073
 atomic collisions in solids, conf., Lyon, France (July 1981) 2-68949
 atomic particle ionisation in crystals, mech. 2-115321
 blocking param. as function of cryst. thickness in shifted particle source case 2-81859
 Born-approx. electron ionisation cross section, oscillator strengths, proton stopping power calc. 2-96644
 Bragg curve spectroscopy ionisation chamber, at Legnaro, heavy-ion mass and charge determ. 2-85471
 Bragg curve spectroscopy using gaseous ionisation chamber 2-90355
 bulk media, gamma-ray spectra and energy loss, fluorec., bremsstrahlung and annihilation effects 2-90311
 butane, stopping cross-sections for α -particles in the energy region 0.3 to 5.5 MeV 2-60715
 cellulose nitrate, low charge discrimination expt. study 2-70074
 cellulose nitrate track detector sensitivity to mass difference in low Z region 2-70108
 channelling, quantum theory, transport coeffs. and equilib. distrib., quasi-classical case 2-66099
 charged light particles, transport calc., energy loss conservation 2-85505
 charged particle propag. in crystalline solids, defect effects, review 2-81818
 charged particles, stopping, Barkas effect or Z^3 -contrib. 2-60765
 collision cascades, low energy, energy sharing and sputtering 2-77691
 condensed gas films, erosion and mol. form. by electronic energy loss of fast ions 2-98171
 condensed gas solid, sputtering by energetic ions, electronic mechanisms 2-99246
 condensed matter, charged particle energy losses 2-98172
 cosmic ray isotope expt. using Cherenkov range detector technique 2-68625
 cosmic ray nuclei, isotope meas. from Ca to Fe by plastic-electronic expt. 2-68624
 CR-39 detector, ions track-profile and range, thermal pre-treatment effect on etching characts. 2-59632
 CR-39 plastic track detector, mass resolution for ^{56}Fe ion beam 2-108319
 CR-39 plastic track detector appl. for protons, ^3He and ^4He ions detection 2-64783
 Cranberg method, for attenuation and multiple scatt. correction, validity test 2-85114
 cylindrical drift chamber performance at CERN ISR 2-90388
 depth profiling with narrow reson. of nuclear reactions, theory and expt. 2-99719
 diamond, channelling of He^+ ions at high depth resolution, backscattering spectra 2-66095
 diamond, stopping power for low energy electrons 2-66098
 dichlorodifluoromethane, temporary anions, electrons transmission spectroscopy, σ^* orbitals obs. 2-108702
 dichlorofluoromethane, temporary anions, electrons transmission spectroscopy, σ^* orbitals obs. 2-108702
 dielectric thin film, secondary ion emission, fission fragment induced 2-99244
 double time-of-flight mass spectrometer for dE/dx meas. of fission fragments 2-64157
 drift detectors, high press., particle identification by dE/dx sampling 2-90389
 electron backscattering from low Z thick absorbers 2-82966
 electron beams, low energy, integral range in massive gas absorbers 2-60706
 electron penetration depth meas. in materials 2-92060
 electron ranges in low energy region, ionometric determ., charge carrier diffusion influence 2-96403
 electronic stopping power, Z oscill. calc. (Chinese) 2-109866
 element concentration assignment in PIXE anal. 2-99727
 energetic ions energy loss fluctuation in condensed matter, statistical model 2-98170
 ergosterol, desorption, fast heavy ion induced 2-98429
 ethane, stopping cross-sections for α -particles in the energy region 0.3 to 5.5 MeV 2-60715
 fast charged particles passing through matter, asymptotic method 2-56062
 fast electrons, penetration, transfer theory 2-98174
 fast heavy ions energy loss and energy loss straggling in matter 2-64818
 fast molecular ions passage through thin foils, collisional effects 2-80843
 fission fragment range meas. in gaseous media using plastic track detectors 2-85503
 focal plane detector for INS-QDD mag. spectrograph 2-75102
 fusion neutron environment, nuclear heat deposition 2-108127
 glass track recorder, energy resolution improvement 2-70084
 glycylglycine, desorption, fast heavy ion induced 2-98429
 heavy ions, stopping power and effect change in elemental target 2-76543
 heavy ions, stopping powers, obs. of gas-solid difference 2-56054
 heavy ions range and energy loss rates in dielectric nuclear track detectors 2-64829
 heavy particles, low energy, modifications of theory of energy-angle distrib. 2-76546
 heavy-ion stopping-power calculation for light absorbers 2-76539
 ice, sputtering by fast heavy ions 2-99239
 inert gases, ionisation sampling resolution and relativistic rise, dE/dx meas. 2-108312
 inertial confinement fusion reaction systems, heat transfer 2-85258
 inner shell ionisation, absence of a density effect 2-86764
 insulator-metal effect on Z, range oscills. in nuclear stopping regime 2-103869
 ion beam, transport equation in three dimens., energy deposition, reflection 2-56052
 ion beam penetration in solids, Monte Carlo simulation 2-92054
 ion beam-pellet interaction, energy and momentum deposition 2-85254
 energy loss of particles continued
 ion effective charges and stopping power of dense media 2-64817
 ion implantation, stopping power, SIMS study 2-56053
 ion inelastic scatt. at surface, collective modes and surface-channelled ions 2-57233
 ion range curves, energy functions, parameterisation in database 2-70117
 ion ranges and energy loss in solids, book 2-74180
 ion straggling and energy loss in dense plasmas 2-103392
 jet chamber of JADE expt. 2-90386
 LBL time projection chamber, fast digital trigger 2-70047
 Lexan polycarbonate sensitivity to mass difference in Fe peak 2-70079
 long focal-plane detector with hybrid structure for spectrograph 2-90380
 low energy electrons, interactions with massive gaseous absorbers, simulation 2-60714
 magnetic monopoles, slow, stopping power 2-75132
 material equivalence calc. method, rel. to photoelec. interactions 2-102356
 materials with $Z_2=23-30$, electronic stopping cross section for 30-300 keV protons 2-66086
 mean fission fragments stopping power, effects of nuclear charge and at. mass changes 2-64819
 metals, stopping power for slow ions, electron exchange and correl. effects 2-86767
 methane, stopping cross-sections for α -particles in the energy region 0.3 to 5.5 MeV 2-60715
 methane, stopping power of protons and alpha particles 2-70386
 molecular-ion dissoci. expts. interpretation 2-80775
 molecules, ionically bonded, stopping power, mean excitation energy, local plasma approx. calc. 2-54916
 MoN film, As ion implantation, stopping power, SIMS study 2-56053
 multi-angle detector for heavy ion reaction studies 2-64748
 multienergy γ -ray scanner, CAMAC-based, attenuator transmission meas. 2-54729
 multiple solid state detectors, energy and primary mass determ. 2-75130
 muon capture probability oscillation, rel. to periodic stopping power (Russian) 2-59667
 neutron thermalisation and cadmium ratios for ^{128}I and ^{108}Ag 2-113842
 open field line fusion plasma, slowing-down, alpha-particle losses 2-71075
 particle identification for heavy ions in time-of-flight spectrometer 2-90346
 particle reflection, scatt. and energy loss effects 2-108324
 particle-matter interaction in dilute and dense media, statistical effects 2-66083
 photonuclear attenuation function meas. from electron accelerator-defectoscope 2-67709
 pions⁺, absorpt. within O_2 -containing organic compounds, energy spectra of emitted particles, therapy appl. 2-111727
 plasma, ionic targets, stopping power, free-electron gas approx. 2-103280
 plastic scintillator for time determ. in mag. spectrometer 2-90396
 point charge penetrating free electron gas, energy loss straggling 2-58701
 polystyrene phantom, penetration of backscatt. electrons for energies between 1 and 25 MeV, dosimetry appl. 2-73370
 position-sensitive detector system for electrons using CCD 2-85477
 propane, stopping cross-sections for α -particles in the energy region 0.3 to 5.5 MeV 2-60715
 proton energy range tables, 1 keV to 10 GeV 2-112663
 protons in Be, Al, Ti, V, Fe, Co, Ni, Cu, Zn, Mo, Rh, Ag, Sn, Ta, Pt, Au, stopping power meas. 2-64820
 radioluminescence, prompt, stochastic model of radiation quality effects in quenching 2-61984
 Roentgen transition radiation detectors, traversing particle ionisation energy loss (Russian) 2-90400
 secondary neutrons, penetration in graphite, Fe, H_2O and concrete 2-54668
 secondary photons, penetration in graphite, Fe, H_2O and concrete 2-54668
 slow monopoles stopping power 2-54730
 solids, energetic ion stopping power 2-81862
 solids, energy loss of fast charged particles, Z^3 corrections 2-90711
 sputtering yields, non-linear, $S_p^{3/2}$ depend., shock wave model 2-77693
 stellar neutrino emission, photo-neutrino energy losses in strong mag. fields 2-58330
 stopping power, relativistic Bloch correction calc. 2-75134
 stopping powers, metallic bond effects on mean excitation energies 2-92064
 stopping-muon rate in Mont Blanc spark chamber telescopes 2-59658
 stopping-power charges of energetic ions in condensed matter, dielec. response approx. 2-81865
 surface barrier detector for heavy ion reactions study 2-90345
 surface wake correl. of ion and ion pair 2-67169
 thin foils, metallic and organic, stopping power meas., angle dependent energy loss of 7 MeV protons 2-71529
 thin metal films, positron transmission, 1-6 keV 2-103871
 track detectors, electrochemical etching, α -particle-energy discrimination 2-108320
 transport eqns., projected range algorithm derivation 2-70115
 transverse energy distribution and the shape of blocking dips in real crystals 2-76553
 vacancy clusters, athermal formation in cascades of atomic collision 2-56061
 valine film, secondary ion emission as function of primary ion velocity 2-99245
 water, liquid, low-energy electrons stopping power, theory 2-86765
 water, liquid, stopping power, density effect calc. 2-86766
 X-ray mass attenuation coeffs. meas. for mixtures 2-113758
 X-ray microanalysis, electron beam geometry influence, Monte Carlo method study (French) 2-73031
 Z-oscillations in channelling stopping power 2-66084
 α -particle slowing-down losses in a rippled mag. field 2-71076
 α -particles, energy straggling effect 2-79318
 γ -cascade shower development in Pb 2-108307
 β , stopping power, in vivo density meas., radiography, biomedical appls. 2-68117
 Ag, mass absorption coeff. and range of beta particles 2-75135
 Ag, stopping power for slow protons, electron exchange and correl. effects 2-86767
 Al, Fermi density effect on stopping power 2-56060
 Al, γ -ray photon multiple scatt., saturation depth 2-115320
 Al, He ion energy straggling, 0.25 to 0.75 MeV/a.m.u., backscatt. study 2-76550
 Al, mass absorption coeff. and range of beta particles 2-75135

energy loss of particles continued

- Al, stopping power for slow protons, electron exchange and correl. effects 2-86767
 Al thin film, surface topography meas. using α -particle energy loss distrib. 2-76552
 $\text{Al}^{1+} + \text{H}^+$, stopping power, generalised oscillator strength formulation 2-114080
 Ar, accelerated projectile fragmentation, computerised track anal. 2-64835
 Ar, solid, erosion by fast He ions 2-98165
 ^{75}As atoms, stopping power in He, Ne and N_2 , recoil nuclei γ -ray emission study 2-102579
 Au, alpha particle stopping cross section at energies below 3 MeV 2-66085
 Au, He ion energy straggling, 0.25 to 0.75 MeV/a.m.u., backscatt. study 2-76550
 Au, ion-electron emission depend. on projectile incidence angle 2-62031
 Au, proton scatt. energy losses, impact-parameter depend. meas. 2-76541
 Au, resonant coherent excitation of B, C, N, O, F ions 2-76537
 Be, mass absorption coeff. and range of beta particles 2-75135
 Be, neutrons moving through matter, phonon analogue of Cherenkov radiation (*Russian*) 2-115322
 C, diminished stopping power for fast N and O diclusters 2-81854
 C, energy loss of H_2^+ traversing ultra-thin foils, cluster effects 2-81855
 C foil, energy loss of 300 keV He^+ and N^+ ions 2-81864
 C, longitudinal range distrib. for ^{12}C ions 2-64821
 C, molecular state of H_2^+ traversing ultra-thin foils 2-81856
 ^{252}Cf fission fragments theoretical energy straggling 2-102353
 CsCl-RbBr film, secondary ion emission as function of primary ion velocity 2-99245
 CsI, desorption, fast heavy ion induced 2-98429
 Cu, alpha particle stopping cross section at energies below 3 MeV 2-66085
 Cu, binary collision simulations of high energy displacement cascades 2-103868
 Cu, γ -ray photon multiple scatt., saturation depth 2-115320
 Cu, He ion energy straggling, 0.25 to 0.75 MeV/a.m.u., backscatt. study 2-76550
 Cu, ion-electron emission depend. on projectile incidence angle 2-62031
 Cu, mass absorption coeff. and range of beta particles 2-75135
 D-T plasma, energy deposition of fast α -particles 2-102259
 D₂, solid film, keV light ions stopping power study 2-113837
 D₂O ice crystal, light ion interaction 2-81842
 D₂O ice film, erosion and mol. form. by electronic energy loss of fast ions 2-98171
 Er film, stopping power and straggling of protons and ^4He ions 2-56051
 Fe, sputtering yield for, Monte Carlo calc. 2-77674
 GaAs:Be(Mg)(Zn)(Cd), ion channelling, electronic stopping power, SIMS study 2-103867
 Ge, detector materials, radiation effects 2-80392
 Ge ions produced by inelastic scatt. of (d,t) fusion neutrons, stopping 2-59669
 Ge, ranges of 0.3-2 MeV H^+ and 0.7-2 MeV H_2^+ ions 2-76547
 H gas time projection chamber development and performance 2-96379
 H time projection chamber development and performance 2-70036
 H^+ -ranges at H^+ -range straggling calc., 1-1000 keV 2-76544
 H_2 , solid, keV light ions stopping power study 2-113837
 H_2^+ , stopping power of protons and alpha particles 2-70386
 H_2^+ dissociation by C foils, interatomic separation and relative vel. distrib. calc. 2-75370
 H_2O mean excitation energy physical state effect as determ. from α -particle stopping power meas. 2-81861
 $^3\text{H}(\text{d,n})^3\text{He}$ neutron source using gas target, energy and angle straggling effects 2-64727
 He, stopping power of protons and alpha particles 2-70386
 ^3He ion ranges in Fe, Cu, Zn, W, Bi, Co 2-66089
 ^6Li ion ranges in Fe, Cu, Zn, W, Bi, Co 2-66089
 N_2 , solid, 1-2 keV/amu H ions stopping power 2-66088
 N_2 , stopping power of protons and alpha particles 2-70386
 $\text{N}_2 + \text{H}^+$, N_2 energy loss spectrum 2-80799
 NaCl, neutron and γ -ray attenuation props., spent fuel disposal appl. 2-107960
 Ni, alpha particle implanted, stopping power and radiation damage distrib., Boltzmann eqn. calc. 2-76548
 Ni, range distrib. of deuterons, target crystallinity effects 2-66092
 Ni thin film, 40 keV Xe^+ implanted, range profile and sputtering efficiency 2-66091
 O₂, stopping power of protons and alpha particles 2-70386
 Pb, mass absorption coeff. and range of beta particles 2-75135
 Pb, thin film, energy-loss straggling of p, d and α -particles in 0.2-2.5 MeV range 2-98169
 Si, amorphous and crystalline, low energy range distrib. of ^{10}B and ^{11}B 2-66090
 Si, detector materials, radiation effects 2-80392
 Si detectors for X-ray, ion and electron spectrometers, low temp. characts. 2-75108
 Si, epitaxial integrated E-dE position sensitive detectors 2-70057
 Si, longitudinal range distrib. for 3 MeV protons 2-64821
 Si, ranges of 0.3-2 MeV H^+ and 0.7-2 MeV H_2^+ ions 2-76547
 Si, transverse oscills. of He and Li nuclei in planar channels 2-81863
 Si(B), range profile, Rutherford backscattering and SIMS meas. 2-98138
 Si(OB), ion implantation in 100 MeV range 2-81805
 SiO₂, photoionization current, electron-phonon scatt. effect 2-56646
 Ti, neutron scatt., 6-8 m/s, total cross-section meas. 2-86761
 UF₆, sputtering by fast heavy ions 2-99239
 UO₂ monocrystal, ^{13}C irradi., blocking, radiation damage (*Russian*) 2-59434
 W, scattering of keV H and He ions 2-77668
 W single crystal, ^{23}Ne irradi., radiation damage, blocking minima (*Russian*) 2-59434
 W, sputtering yield for, Monte Carlo calc. 2-77674
 W, surfaces (001), low energy He atom reflection, calc. 2-69850
 WO₃, scattering of keV H and He ions 2-77668

energy measurement see power measurement

energy-range relations see energy loss of particles

energy resources

see also fuel; geothermal power; hydrogen economy; solar energy concentrators; solar power; wind power
 alternative energy sources development, role of electrical and electronic engineering (*Japanese*) 2-99745

energy resources continued

- Appalachian region hydrocarbon deposits 2-100337
 arid land plants, fuel biomass sources 2-57732
 W Australia, petroleum deposits in Babbagoola Beds, Officer Basin 2-58009
 buildings, energy conservation, EEC model code feasibility 2-73090
 Campi Flegrei geothermal area, Italy, crust struct. study 2-73493
 Cerro Prieto geothermal field, Mexico, conf., Oct. 1979, Mexicali, Mexico 2-62456
 coal gasification technology in electric power generation 2-83447
 conference, alternate energy sources for electrical power, Cape Cod, MA, USA (1981) 2-68962
 consumption statistics, present state and future trends, Netherlands (*Dutch*) 2-67798
 convective-diffusive type catalytic burner using a Pt catalyst supported on inert porous materials for H_2 combustion 2-73163
 domestic crude oil resource appraisal 2-93858
 Economic European Community energy strategy (*German*) 2-78169
 economic systems, dynamic, nonlinear, technological forecasting and resource policy anal. using bond-graph method 2-111531
 energy model design, impact of energy and environmental policy 2-78174
 energy system modelling in Serbia, experience 2-78173
 Euphorbia lathyrus resources and potential 2-99752
 futuristic energy sources 2-73049
 geothermal power utilisation and economics for electric power generation 2-105533
 global modelling, conf., Dubrovnik, Yugoslavia, (Sept. 1980) 2-78172
 hydroelectric power generation along Pacific coast of North America, impact of precip. variability 2-73616
 Iceland, low-temp. geothermal energy 2-83452
 introduction to new energy sources for desalination 2-67823
 Japanese alternative energy policy 2-83441
 Krafla geothermal area, Iceland, groundwater flow obs. 2-73598
 lava lakes, thermal energy extraction 2-73520
 Long-Term Energy Analysis Program assessment 2-83440
 low calorific value heat from renewable and non-renewable resources (*Czech*) 2-88467
 Mt. Hood region, Oregon, USA, geothermal energy potential 2-88846
 municipal solid waste, burning in oilfired power plants, five methods evaluation 2-99754
 natural gas hydrates of northern area of W Siberia, theoretical prospects 2-58041
 new and renewable, information sources, book 2-58564
 New Zealand Liquid Fuels Trust Board, 1981 Dobson lecture 2-57672
 nuclear fusion, potential alternative energy resources 2-90295
 oil exploration, appl. of high spectral resolution airborne spectrometry 2-112157
 oil-bearing rock, energy transition problem in USA 2-93861
 optimal transition from oil to alternative fuels 2-73047
 organic recycling, effect on energy, employment and environmental problems 2-73089
 photosynthetic energy capture and biomass productivity (*Japanese*) 2-73133
 potential uses in Nigeria, other alternative energy resources 2-111560
 power development and planning in India 2-88399
 public power utility unconventional energy sources 2-83446
 qualitative connection between energy resources and energy consumption (*German*) 2-116770
 rationing policy and economic interrelatedness anal. using allocative methods 2-67796
 recovery from municipal refuse, using dual fluidised-bed pyrolysis system 2-83462
 regional interactions model considering energy deficits 2-78175
 renewable sources of energy for electricity 2-88400
 Saudi Arabia future energy demand fulfilment with energy resources other than oil 2-67797
 NW Siberia oil and gas stratigraphic traps, seismic refl. prospecting 2-78586
 solar heating equipment (*Italian*) 2-62461
 solar power satellite—an opportunity for third world development 2-83458
 Soviet energy programme for 1980s, review 2-78170
 supply system and environmental impact model 2-99852
 Swedish hydroelectric power program development, influence of oil crisis and nuclear power program restraint (*Slovak*) 2-88404
 synthetic fuels, CO₂ increase, climatic effects 2-112107
 telemetry system, buried, for in situ energy extraction 2-93860
 trans-Tisza region electrical/thermal energy economy (*Hungarian*) 2-93857
 university building, energy waste, thermodynamics 2-63775
 US energy policy plan, highlights 2-99746
 US energy prospects forecast 2-62449
 USA schists and tar sands resources and exploitation economics (*French*) 2-73053
 water-energy model, regionalisation scheme 2-67848
 wind, energy potential in Andaman, Nicobar and Lakshadweep Islands 2-67815
 Wind Energy Research and Development Programme, in Canada 2-67816
 wind power potential of Belgium 2-105530
 world's energy needs for year 2050, supply from renewable resources, what is required 2-73048
 world supply up to 2020 (*Spanish*) 2-62450
 U deposits in United States, aerial radiometric survey obs. 2-73503
 U resources and fuel cycles, resource utilisation kinetics 2-64541

energy states

see also atomic structure; electron energy states (condensed matter); energy level crossing; molecular energy levels; nuclear energy levels; population inversion
 rare-earth impurities, near valence instability 2-61396

energy states in solids and liquids see electron energy states (condensed matter)

energy storage

see also capacitor storage; direct energy conversion; energy storage devices
 3rd IEEE International Pulsed Power Conference, Albuquerque, NM, USA (June 1981) 2-89461
 absorption solar cooling system, open-cycle, possibilities of storage of cold 2-99842

energy storage continued

- admin building heating by transformer station waste heat utilisation (*German*) 2-67875
 aquifer thermal energy storage system 2-116854
 battery, energy storage systems, safety assessments 2-57693
 Beta cell batteries development and appl., with 80% storage efficiency 2-57689
 Beuken thermoelectric model, thermal systems appls. (*French*) 2-70805
 $\text{CaCl}_2 \cdot 6\text{H}_2\text{O}$ heat storage system for off-peak energy supply and solar heating 2-83519
 calorimetry appl. design modifications and developments 2-53765
 Cardiff Solar Energy Unit activities in solar collector thermal performance and design 2-73148
 chemical energy storage methods 2-78258
 collector systems coupled to well mixed storage, transition time effects 2-99832
 compact plasma source for inductive energy storage 2-90344
 compressed air energy storage, A-5 hybrid design 2-57733
 compressed air energy storage 2-83518
 compressed air safety, socio-economic legal and environmental aspects 2-73152
 compressed air storage power plant, operation prospects 2-78256
 compressed air storage system, hard rock, air storage design 2-62501
 distributed collector solar thermal power plant energy conversion and transport by solar energy dissociation of NH_3 2-78248
 distributed-energy-store railgun projectile velocity meas. 2-95330
 domestic solar heating system optimum sizing procedures comparison 2-111589
 electrochemical, problems 2-73151
 Electrochemical Society, Incorporated, Spring Meeting, conf., Montreal, Canada (May 1982) 2-101133
 European community solar energy R&D programme 2-73069
 flywheel, problems 2-73151
 greenhouse with solar energy storage combined with fuel boiler plant, energy saving 2-99762
 heat energy stored in ground during daily solar cycle, calc. method 2-73153
 homopolar generators, shockwave, disc-type, with gas-pressure supported rotor for pulse power supply systems 2-64642
 horizontal storage tanks thermal stratification anal. using one-D numerical model 2-78259
 hot water storage in aquifers, theory 2-93946
 hot water storage in Bonnauld, Jura aquifer 2-93947
 hydrogen economy assessment for long-term energy systems in Japan 2-73159
 inductor-converter superconductive magnetic energy storage for electric utility usage 2-67895
 La Baronne solar greenhouse using new latent heat storage concept 2-73085
 latent heat solar walls performance anal. using variable parameter test-cell 2-111587
 latent heat storage materials, effect of impurities on melting temp. heat of fusion and sp. ht. 2-62503
 latent heat thermal energy storage in horizontal cylindrical capsule, high Rayleigh no. calcs. 2-116853
 latent heat thermal storage methods 2-78258
 latent thermal energy storage units, heat exchange (*Japanese*) 2-105600
 Mg production process economics projection and impacts on cost of magnesium hydrides 2-73158
 molten salt systems, physical properties data compilations relevant to energy storage 2-62505
 natural-circulation solar-energy stimulated systems for heating water 2-111583
 parabolic dish solar thermal power plants, receiver thermal buffering, digital simulation 2-88409
 passive solar heat storage in houses, methods comparison 2-93942
 power flow for vacuum insulated inductive loads 2-97830
 pulsed power bibliography 2-94940
 pumped water, problems 2-73151
 rural solar collector utilising heat storage by sand/iron filings-mixture, performance anal. 2-78246
 salt gradient stabilised shallow solar ponds, transient thermal behaviour 2-78257
 salt-gradient solar ponds development potential, American research 2-57736
 sensible heat thermal storage methods 2-78258
 solar, unconfirmed aquifer performance obs. 2-57735
 solar energy conversion and storage through synthetic light-driven proton pumps 2-78234
 solar energy storage as H_2 via water electrolysis, system design and evaluation 2-83523
 solar heating systems, liquid-based, effects of thermal stratification on performance 2-111593
 solar long-term storage underground during summer for greenhouse heating in winter (*Japanese*) 2-116852
 solar pond mixing layer development interferometric study in laboratory simulation 2-83516
 solar pond salt replenishment by passive method during operation 2-99843
 solar power systems interface with electric utility systems, technical issues 2-73072
 solar powered building heating, cooling and hot water supply system 2-67887
 solar system for hot water supply delivered to Fujitsu Fanuc Ltd., Fuji factory 2-88476
 space heating by heat receiving wall with heat storage, thermal insulation props. with variable weather 2-99823
 space heating of all-electric bus depot with heat pumps for heat recovery (*German*) 2-67876
 steam energy, problems 2-73151
 stratified solar storage for use in domestic scale systems 2-73155
 thermal energy from solar radiation (*Italian*) 2-99831
 thermal energy storage, conf., Washington, DC, USA (Sept. 1981) 2-58552
 thermal storage power station for peak-load generation near to consumers (*German*) 2-57734
 thermohaline system, double-diffusive, mixed layer development 2-78260
 two-level system using heat pumps (*French*) 2-62504
 underground energy storage in hard rock, geotechnical data base 2-99841
 underground solar water heater performance prediction model 2-83509

energy storage continued

- water vapour-zeolite 13X system rates of solar energy storage and retrieval 2-78251
 wind power plant, thermal energy storage (*German*) 2-62502
 CO_2 - CH_4 reforming-methanation chemical cycle for solar energy conversion and transportation 2-111577
 $\text{CdS}:\text{Cu}$ photoelectrochemical cells, energy conversion and storage 2-116841
 H_2 storage materials: properties and possibilities 2-67894
 MgSO_4 , decomp., kinetics, solar energy storage (*French*) 2-93948
 n-MoSe₂ photoelectrochemical halogen storage cell 2-62481
 Ni- H_2 battery technology development and stations for spacecraft applications 2-83468
 Si solar cell wafer annealing electron accelerator with solid dielectric energy storage 2-90325
energy storage devices
 advanced battery energy storage system (*Japanese*) 2-88479
 electric power storage in metal hydride system (*German*) 2-62508
 Nova, high density energy storage capacitor 2-80309
 solid state batteries for commercial production, Anglo-Danish cooperative research programme, report 2-99782
 subsoil heat accumulator with pebble packing for solar heating appls. 2-73154
 superconducting thin solenoids, design optimisation, energy storage appl. 2-88480
 Si spherical solar cells, development of conversion/storage system 2-88462
energy transfer collisions, molecular *see molecular inelastic collisions*
engineering
see also biomedical engineering; civil engineering; design engineering; electrical engineering; environmental engineering; maintenance engineering; mechanical engineering
 physical science for engineers, book 2-101151
engineering applications of computing *see engineering computing*
engineering computing
see also aerospace computing; chemical engineering computing; civil engineering computing; communications computing; electrical engineering computing; electronic engineering computing; mechanical engineering computing; nuclear engineering computing
 Beuken thermoelectric model (*French*) 2-70821
 diffusion systems, Beuken hybrid simulation appl. 2-70807
 heat transfer problem analysis by Beuken thermoelectric model and digital computer combined 2-70806
 solar collector panels with optimal mass flow rate, temp. distribution computing 2-116849
engineering societies *see societies*
enthalpy
see also heat of
 alcohol-alkane systems, prediction of vapour-liq. equilibria, group-contrib. methods 2-115397
 binary alloys, molten, surface tension, rel. to thermodynamic enthalpy and activities, eqns. 2-61260
 biopolymer denaturing, enthalpy rel. to low temp. heat capacity of helix and coil macromols. 2-67956
 t-butyl chloride, mol. cryst. high press. struct. phase transform., DSC study 2-71633
 calorimeter for high-temperature enthalpy meas., Cu-block design 2-53768
 complexes, thermomechanical props. of clustering reactions in gas phase 2-78081
 diffusion, enhanced, under irradi., thermodynamic anal. 2-110046
 FCC alloys, very dil., free enthalpy of impurity-vacancy binding 2-81814
 fibre reinforced resin, laser induced ablation, semianalytical model 2-105171
 flames, turbulent diffusion, mol. transport effects at moderate Reynolds number 2-99674
 gas, enthalpy determ. in plasmachemical processes (*German*) 2-91578
 grain boundaries, thermodynamic functions, lattice dynamics studies 2-92134
 heat transfer problems, evaluation of enthalpy method soln. 2-65471
 ice calorimeter construction and high temp. enthalpies determ. (*Chinese*) 2-64040
 ion+molecule reaction, enthalpy changes involving H-D exchange, zero-point energy considerations 2-78077
 ketone liquids, dielec. relax. times and thermodynamic props., UHF study 2-87663
 liquid alloys, binary, thermodynamic props. with negative deviation of activities from Raoult's law (*Japanese*) 2-77804
 metal hydrides, thermal solvus and plateau press. hysteresis relationships 2-73008
 methane with solid CO_2 , cryogenic phase behaviour and saturated phase enthalpy relationship 2-74417
 nitrides of group IIIA elements, thermodynamic props., at. no. depend., synthesis method selection 2-66259
 organic compounds, ideal gas thermodynamic props., data tables 2-94922
 oxides, non-stoichiometric doped, O^- ion cond. 2-92267
 phospholipid bilayer membranes, hydration, free energy, enthalpy and entropy determ. 2-116685
 polymer, glassy, approach to thermodynamic equil., improved calorimetric procedure 2-89717
 polymer blend, multicomponent fluid theory applic. to eqn. of state and PVT data 2-115387
 polypropylene, activation enthalpy for vol. relax., thermal stimulation 2-92108
 polystyrene isothermal enthalpy, vitrification press. and cooling rate effects 2-110014
 polyvinyl acetate, nonequil. annealing behaviour, water sorption and glass transition, dielec. and thermal meas. 2-66223
 PVC, glassy, vitrified at elevated press., nonequil. processes 2-66222
 PVC glass, vitrified at elevated press., nonequil. processes, conform. and enthalpic changes 2-86873
 rare earth-thallium alloys, liq., thermodynamic characts., intermetallics form., liquidus behaviour 2-67293
 shock waves reflected interaction with boundary layer in the high enthalpy reservoir 2-60576
 solids, surface free energies and surface segregation 2-98426
 solution, multicomponent regular, stat. thermodynamic eqns. 2-89647
 solutions, associated, equilib. const., enthalpy and entropy of association 2-67760
 Stefan problems, math. formulation 2-70810

entropy continued

- toluene in polyethylene glycol soln., excess thermodynamic quantities determ. by Rayleigh scatt. 2-81989
 tricyclo[4.4.0.0^{3,8}]decane, electronic distrib. chemical effects, atomisation energy calcs. (French) 2-108730
 vapour-gas mix., heat and mass transfer on high-rate evaporation of liqs. 2-91421
 water, ideal-gas thermodynamic props. 2-114963
 AgBrO₃, phase transition temp. and enthalpy, DSC obs. 2-98261
 AgCl-LiCl molten soln., surface tension, activity and thermodynamic props. and density meas. 2-76778
 Ag₂VO₄ superionic conductor, heat of transport 2-92262
 α-Ag₂Se, thermodynamic props. of electrons (German) 2-76712
 BaWO₄ crystal growth from melt, diffusion controlled, activation parameters, DTA 2-65891
 Be₂-C-graphite-UC₂ reactor fuel material, enthalpy and sp. ht. meas. at 1980K 2-115428
²⁴⁹Bk, metal, vapour press. and thermodynamics 2-104022
 Cd-Ge-As glass system, aligned crystallisation, heat transport and interface kinetics 2-71365
 Cd-In, liq., vapour press. and calorimetric meas. 2-67298
 CdTeSe₄, sp. ht. and thermodynamic props. 2-81973
 Co-Ge liquid alloys, thermodynamic excess props. determ. by mass spectrometry 2-98306
 Co₂O₄, heat capacity and thermodynamic props., 5 to 307K, mag. transition 2-81978
 Cr-binary alloys, liq. and solid., enthalpies of formation 2-61175
 CsCl, aqueous soln., enthalpy of dilution 2-105497
 D₂O, thermodynamic props., eqns. of state, data tables 2-94920
 Fe-Co-Cr system, phase diagram, thermodynamic evaluation 2-72667
 Fe-V, σ-phase and solid soln., V self diffusion coeff. meas. 2-98328
 Fe₃Pt, ordered, thermoelectric martensitic transform. free energy changes 2-105143
 GaP, sp. ht., temp. depend., thermodynamic props. 2-86898
³He, liquid, thermodynamic functions 1.5 to 14K (Russian) 2-86966
⁴He, liquid, thermodynamic functions 1.5 to 14K (Russian) 2-86966
 I photodissociation lasers, stimulated light scatt. by thermal waves excited in thermodynamically nonequib. media 2-60164
 (InP), (InAs)_{1-x} solid soln., thermodynamic functions, entropy and enthalpy of mixing 2-86904
 K₂SO₄, arcanite, phase transition, thermodynamic and phenomenological study 2-61129
 KBr(Cl), aqueous soln., enthalpy of dilution 2-105497
 Li-Mg, asymmetric slip, thermal activation parameters 2-86676
 LiCl, aqueous soln., enthalpy of dilution 2-105497
 Mg_{1-x}Fe_x, amorphous, Mossbauer effect and mag. props. 2-66965
 Mn-binary alloys, liq. and solid., enthalpies of formation 2-61175
 (Na,K)AlSi₃O₈, albite-orthose vitreous system, enthalpy of mixing (French) 2-61147
 Na-K melt, partial enthalpy of form. and heats of mixing 2-73005
 NaBr(l), aqueous soln., enthalpy of dilution 2-105497
 NaCl, aq. soln., volumetric props., data tables 2-94921
 NbO_{2+x}, vapourisation study by mass-spectrometric method 2-77810
 Ni, chemisorption of O₂ under equilib. conditions, 850°C, AES study 2-61289
 Ni, strain fluctuations and elastic constants 2-62155
 Ni-Zn, thermodynamic data 2-111145
 O₂, ideal-gas heat capacity eqn. 2-91577
 Pb dilute molten alloys, O₂-Ag(Au)(Bi)(Cu)(In)(Ni)(Sb)(Sn)(Te) interactions 2-62099
 Pd-Cd system, phase stability, struct. studies 2-99392
 Pd₄₈Ni₃₂P₂₀ metallic glass, struct. relaxation mechanism 2-55856
 PuO₂, enthalpy values 2-80084
 PuO₂, high temp. enthalpy 2-80065
 Se, amorphous thin film, photodependence of structural relax. 2-81678
 Ta₂O₅, elec. cond. 2-56582
 ThO₂, enthalpy values 2-80084
 Ti-Co, amorphous, thermal stability study 2-104029
 Ti-Si alloy, liq., enthalpy of form. 2-105127
 (U,Pu)O₂, enthalpy values 2-80084
 UF, UF₂, UF₃ and UF₄, gaseous equilibria, reaction enthalpies and entropies, bond dissociation energies 2-60709
 UO₂, enthalpy values 2-80084
 V-Si alloy, liq., enthalpy of form. 2-105127
 Zn, positron annihilation Doppler broadening profile anisotropy 2-72576
 Zn-Sn-Se phase diagram and electronic props., LPE 2-116428
 Zr-Cu, crystalline and amorphous, enthalpy effects 2-61174
 Zr-Fe(Co)(Ni)(Rh)(Pt), amorphous, thermal stability study 2-104029
 ZrC_x (0.9 ≤ x ≤ 1.01), enthalpy and specific heat, temp. and conc. depend. in region of homogeneity 2-71670
 (ZrO₂)(C₂O₂)_{1-x} solid solns., elec. cond., O₂ press. depend. (French) 2-98704

entropy

see also entropy of substances

- additivity of equations of state in two dimensions 2-81927
 agar-H₂O system, mol. dynamics and entropy changes, PMR study 2-78281
 alkali nitrate-AgNO₃ mixtures, nonisothermal, Soret coeffs. and transport props. 2-71678
 alloys, entropy, role in phase transformations 2-104030
 azulene isomer, multiphoton ionisation fragmentation patterns, maximal entropy theory 2-75360
 biosystems, entropy decreases, theory of sources 2-78278
 black holes, appl. to thermodynamic entropy/energy ratio 2-94767
 black holes, specific entropy and sign of energy 2-112320
 Boltzmann eqn., nonlinear, entropy time derivatives calc. 2-101300
 complexes, thermomechanical props. of clustering reactions in gas phase 2-78081
 compression, entropy jump minimisation 2-60424
 cosmic entropy generation and phase transitions in the early Universe 2-58513
 cosmology, entropy prod. assoc. with viscous dissipation and unification in early Universe 2-79256
 cosmology, nonlinear growth of small-scale entropy perturbations in expanding collisionless medium 2-101045
 counterflow heat exchanger, entropy generation 2-65451
 covariant formulation of dissipative phenomena 2-84570
 creep, Nabarro-Herring type, irreversible thermodynamic analysis 2-98191

entropy continued

- cubic crystals, thermal potential, mechanical instability, and melting entropy 2-92165
 dense fluids, entropy maximisation, irreversible thermodynamics, kinetic eqns. 2-84523
 desorption entropy, surface wave theory 2-56333
 disordered magnet, Ising model with random exchange bonds, Monte Carlo study 2-87468
 disordered systems, two-dimensional, numerical study of electron localization and entropy of mixing 2-61406
 Ehrenfest theorem and information theory 2-112811
 electron density images from imperfect X-ray data, iterative energy maximisation 2-91720
 entropy-to-energy ratio bound, possible violations 2-107197
 entropy-to-energy ratio for bounded systems, universal upper bound 2-107198
 evolution equations, fluxes and the elimination of fast-relaxing variables 2-58761
 expanding Universe, entropy increase rel. to cosmology and biology 2-117836
 fluid dynamics, relativistic, maximum entropy principle 2-76040
 fluids, irreversible thermodynamics, Gibbs relation, entropy balance eqn. 2-95290
 general metastability of statistical populations 2-95291
 hard sphere, charged, entropy calc. within mean spherical approx. 2-60864
 Heisenberg model, classical, chain version of const. coupling theory 2-92945
 Henon attractor, entropy computation 2-74371
 interval dynamics, topological entropy and approaches to chaos 2-89619
 ion-molecule equilibria, entropy effects, Langevin model 2-57631
 irreversible kinetic eqns., distrib. function proportional force, entropy growth (French) 2-69083
 Ising chains, frustrated, ground-state and low temp. props. 2-61726
 Ising spin-glass model, infinite ranged, bounds for entropy 2-92947
 isotropic turbulence spectrum, information theory approach 2-97515
 macromolecule biosynthesis, entropy increase 2-105637
 maximum entropy principle and Bayes' theorem (French) 2-89646
 maximum entropy principle as consequence of Laplace principle 2-74372
 metals, entropy, role in phase transformations 2-104030
 metals, self-diffusion entropies and activation volumes 2-71701
 monomolecular layer, crystal, on contracting surface, model 2-76811
 multi-atom system, coherent radiation and entropy increase, theory (Chinese) 2-90848
 naphthalene isomer, multiphoton ionisation fragmentation patterns, maximal entropy theory 2-75360
 nematic liq. cryst., curvature elasticity, van der Waals theory 2-79714
 nonautocatalytic polymer solution reaction model, stable limit cycles 2-111492
 nonequilibrium current fluctuations, irreversible thermodynamics 2-84584
 nonequilibrium fluid, heat and mass transport, entropy, relax. phenomenological eqns. 2-103011
 np junctions, entropy production, electron-hole recombination, kinetic eqn. simplification 2-110465
 one-dimensional maps, symbolic dynamics, entropies finite precision, noise 2-95236
 phospholipid bilayer membranes, hydration, free energy, enthalpy and entropy determ. 2-116685
 polarons, statistical props. in mag. field, thermodynamics 2-104268
 polymer chains on square and cubic lattices, entropy, lower bounds calc. 2-110013
 Potts model, generalised three-state and antiferromag., phase transitions and entropy 2-66852
 quantum transition rate role in entropy decreasing process 2-84579
 Quartet Ising model, Monte Carlo study consistent with selfduality 2-53681
 radiographic image granularity, conditional entropy in bivariate entropy method 2-107286
 radiographic system, reliability evaluation by transmitted information 2-94168
 Renyi entropies, instabilities 2-79512
 rigid rectangular particles highly heterogeneous populations, lattice statistics 2-74340
 Schreinemakers bundle, props. and their implications 2-63952
 solar differential rotation, axisymmetric hydrodynamic model 2-106661
 spin glass, random-band Ising model, entropy, free energy 2-82621
 spin glass with finite range interactions, Bethe approx. 2-72243
 statistical thermodynamics, oscillator quantisation, Einstein influence 2-69118
 steady energy circulation on finite body, max. mechanical work, Carnot operator 2-60386
 stellar atmospheres, irreversible thermodynamics in radiating fluid 2-112428
 stellar pulsations, entropy evolution for anharmonic multimode oscils. 2-106673
 systems with nonconserving quasi-particle number, entropy and thermodynamics 2-79522
 two-mode laser, homogeneously broadened, latent heat 2-102760
 Universe, expanding, statistical effect of interactions on particle creation 2-106984
²⁴⁹Bk, metal, vapour press. and thermodynamics 2-104022
 FeCo, heat capacity in range 5-300K, anal. of entropy contribs. 2-56211
 Mn-Si (25 to 37.5 at.% Si), phase comp. and thermodynamic props. 2-83094
 NaCl:Ca, aggregation phenomena during isothermal annealing 2-76486

entropy of substances

- actinide metal carbides, extended regular soln. model appl. 2-105499
 alkali halides, molten, entropy calc. within mean spherical approx. 2-60864
 alkali metal halide, hard sphere crystal, entropy study 2-104025
 alkali metals, liq., internal energy and entropy, Gibbs-Bogolyubov variational technique 2-66221
 alloys, liq., entropy of mixing, excess vol. formation, hard sphere model 2-76684
 alloys, ternary, superlattice configuration entropy 2-56216
 aniline, o-, m- and p-halogen derivatives, thermodynamic studies of melting 2-103948
 antiferromagnet, FCC Ising, Monte Carlo study of entropy 2-82618
 atomic liquids, topological entropy and latent heat of fusion 2-71671

entropy of substances continued

- binary liq. mixtures, entropy of mixing, mass density and viscosity meas. 2-86917
- binary liquid, defective two sublattice model 2-99387
- 2,2-bipyridyl-152, complex, form. thermodynamics, visible and far IR obs. 2-108517
- borate glasses, viscosity, temp. depend. at const. struct. temp. 2-104047
- composites, anisotropic materials, irreversible hygrothermomech. behaviour, numerical anal. 2-71723
- configurational entropy, cluster variation calc., group theory appl. 2-104026
- di-Schiff base liq. crysts., gas-liq. chromatography and DSC studies 2-98281
- diffusion, enhanced, under irradiation, thermodynamic anal. 2-110046
- disordered solids, entropy at low temps. 2-56220
- entropy exchange with surroundings, meas. method, determ. of effective thermal resistance under transient state conditions (French) 2-97359
- FCC crystals, harmonic, surface entropy, cell cluster calcs. 2-76798
- ferroelectric, second order phase transition, phys. props. under elec. and mag. fields 2-110782
- ferroelectrics, thermodynamics near second order phase transition in external fields 2-110783
- fluorites, anion Frenkel defects, entropy of formation, quasi-harmonic calc. 2-98074
- gaseous mols., entropies and free energy functions calc. from dimensional model 2-91579
- germanate glass, viscosity, temp. depend. at const. struct. temp. 2-104047
- grain boundaries, thermodynamic functions, lattice dynamics studies 2-92134
- hexamethylbenzene, phase transition, thermal anomaly, heat capacity 2-86899
- p-n-hexyloxybenzylideneamino-p'-chlorobenzene, heat capacity and thermodynamic props. 2-98302
- p-n-hexyloxybenzylideneamino-p'-fluorobenzene, heat capacity and thermodynamic props. 2-98303
- III-V semiconductor based solid solutions, thermodynamic description 2-56194
- ketone liquids, dielec. relax. times and thermodynamic props., UHF study 2-87663
- liquid alloys, binary, compound-forming, entropy of mixing 2-103999
- liquid alloys, configurational entropy and regular associated model of compound-forming binary systems 2-97890
- liquid metal alloys, entropy of mixing 2-115420
- liquid metals, non-simple, sound vel. and entropy, Percus-Yevick phonon description 2-61068
- metal hydrides, thermal solvus and plateau press. hysteresis relationships 2-73008
- metals, liquid, entropy and specific heat calcs. 2-71660
- nematic fluids, Flory statistical mechanics, steric effects 2-60873
- nematic liquid crysts., equilibrium props. and phase transition 2-60874
- nitrides of group IIIA elements, thermodynamic props., at no. depend., synthesis method selection 2-66259
- organic compounds, ideal gas thermodynamic props., data tables 2-94922
- oriented flexible polymers, glass transition (Russian) 2-66225
- polyester, thermotropic nematic, phase transition entropies, influence of mol. weight 2-103990
- polymer, glassy, free vol. fraction, excess entropy and mech. deform. 2-61176
- polymeric glasses, excess entropy and stress-strain behavior 2-76710
- polymeric liq., hydrodynamical eqns. obeying entropy principle 2-91377
- rare earth-thallium alloys, liq., thermodynamic characts., intermetallicides form., liquidus behaviour 2-67293
- semiconductors, electron subsystem entropy changes during melting 2-81990
- solution, multicomponent regular, stat. thermodynamic eqns. 2-89647
- solutions, associated, equilib. const., enthalpy and entropy of association 2-67760
- spin glass theory in Bethe approx., thermodynamic props. 2-72235
- thiourea-ferrocene channel inclusion cpd., phase transitions, sp. ht., dielec. and spectral study 2-56180
- toluene in polyethylene glycol soln., excess thermodynamic quantities determ. by Rayleigh scatt. 2-81989
- transition metal carbides, groups IVb and Vb, extended regular soln. model appl. 2-105499
- water, isentropic compression, one-dimens. finite difference calc. 2-69194
- water, isentropic compression, one-dimens. impact expt., finite difference simulation 2-69195
- AgCl-LiCl molten soln., surface tension, activity and thermodynamic props. and density meas. 2-76778
- Ag₂Se, α to β phase transitions, entropy changes, calorimetric study 2-86847
- Ag₂Sb_{0.5}Se_{0.5}, superionic conductor, cryst. struct. and phase transition study 2-109758
- α -Ag₂Se, thermodynamic props. of electrons (German) 2-76712
- Ag₂Se, α to β phase transitions, entropy changes, calorimetric study 2-86847
- Al-Ti-Be, grain refinement, Be-enhanced 2-83086
- Al₁Gs_{1-x}As superlattice configuration entropy 2-56216
- BaWO₄, crystal growth from melt, diffusion controlled, activation parameters, DTA 2-65891
- CaF₂, anion Frenkel defects, entropy of formation, quasi-harmonic calc. 2-98074
- CaF₂, entropy change in fast-ion transitions 2-71640
- CoTi₂Se₄, sp. ht. and thermodynamic props. 2-81973
- Co-Ge liquid alloys, thermodynamic excess props. determ. by mass spectrometry 2-98306
- Co₂Fe_{1-x}S, electrical resistance, time depend., α -phase transition (German) 2-92626
- Co₂O₄, heat capacity and thermodynamic props., 5 to 307K, mag. transition 2-81978
- Cs-CsF(CsCl)(CsI), liq., enthalpies and entropies of mixing, calorimetry study 2-86877
- Cu, nuclear magnetism at nK temps., mag. susceptibility and NMR study 2-104595
- Cu-Al(Si)(Sn)(Ga) solid soln., H₂ solubility, thermodynamic props. (Russian) 2-92207
- Cu-Si liq. alloy, cpd. forming, configurational entropy and regular associated model 2-97890
- CuGaSe₂(Te₂), specific heat, Debye temp., entropy 2-92231
- CuI, theory of superionic transition 2-66200
- CuInTe₂, specific heat, Debye temp., entropy 2-92231

entropy of substances continued

- Fe-X-C (X=Ti, V, Nb, W, Cr, Mo), C activity, influence of alloying additions (German) 2-93491
- Fe_{3-x}Cr_xO₄, heat capacity, 200 to 850K, λ -type anomaly due to ferri-paramag. transition 2-61161
- Fe₂P, ferromag., sp. ht. meas. 2-92930
- Ga-In-Sb system, quantitative fit to liquidus surface and thermodynamic data, associated soln. model 2-111148
- GaP, sp. ht., temp. depend., thermodynamic props. 2-86898
- Gd₂Ga₂O₇, thermodynamic props., 0.05-25K 2-104623
- H₂ production by water splitting, thermochemical cycles 2-57743
- H₂O-alkaline earth dichloride systems, solid-liq. equilib., diagrams (French) 2-76644
- He II, superfluid, vortex line struct. near λ point (Russian) 2-61234
- ³He, liquid, thermodynamic functions 1.5 to 14K (Russian) 2-86966
- ³He-⁴He dilute mixture, statistical mechanics 2-98378
- ⁴He, liquid, thermodynamic functions 1.5 to 14K (Russian) 2-86966
- In-rich alloys, phenomenological considerations of phase transformations 2-88076
- (InP)_{1-x}(InAs)_x solid soln., thermodynamic functions, entropy and enthalpy of mixing 2-86904
- In₂Te₃, evaporation meas., entropy and heat of formation calc. 2-86845
- K-Cs, liquid, thermodynamic calcs. 2-98308
- KCl:Sr²⁺ solid solns., solvus, impurity precipitation, density meas., thermodynamic anal. 2-92217
- K₂SO₄, arcanite, phase transition, thermodynamic and phenomenological study 2-61129
- LaGe_{1.70}, free energy, heat and entropy of form. determ., 940 to 1060K (Ukrainian) 2-56217
- Li-Pb, liquid, thermodynamic calcs. 2-98308
- δ -Mn₂Ge, mag. phase transitions, magnetisation and entropy study 2-98876
- Na-Ga(Cd), liquid, conc. fluctuations, press. effect, EMF meas. 2-91758
- Na-Hg, liquid, thermodynamic and struct. props., EMF meas. 2-81986
- Na-K, liquid, thermodynamic calcs. 2-98308
- Na-Sn, liquid, entropy of mixing 2-103999
- Na-Sn liq. alloys, thermodynamic props. 2-92234
- Na₂SO₄-NaHCO₃-H₂O system, thermodynamic relations and phase equilib. 2-83406
- NbO_{2-x}, vaporisation study by mass-spectrometric method 2-77810
- Nd, magnetic structure, below 20K, use of first principles mean field theory 2-66776
- O₂, ideal-gas heat capacity eqn. 2-91577
- Pb dilute molten alloys, O₂-Ag(Au)(Bi)(Cu)(In)(Ni)(Sb)(Sn)(Te) interactions 2-62099
- Pb_{0.99}Nb_{0.02}(Zr_{0.68}Sn_{0.25}Ti_{0.07})_{0.98}O₃, ferroelectric, direct heat to electrical energy conversion, pyroelectric meas. 2-67878
- PbO, fusibility diagram and p-T diagram 2-111149
- Pd-Mn-H soln., dil., thermodynamic props. 2-56195
- Pd-Te, liq. and solid alloys, thermodynamic props. 2-67297
- Rb₂ZnBr₄, phase transition, thermodynamic props. 2-71635
- Se_{0.95}Bi_{0.05}, amorphous, crystn., elec. cond. meas. 2-55860
- SnCl₂, entropy change in fast-ion transitions 2-71640
- Tl-Te liq. alloy, cpd. forming, configurational entropy and regular associated model 2-97890
- TmFe₂H₃, heat and entropy of formation and absorption, H₂ desorption isotherms 2-110012
- UF, UF₂, UF₃ and UF₄, gaseous equilibria, reaction enthalpies and entropies, bond dissociation energies 2-60709
- 2UF₄+H₂=2UF₃+2HF, equilib. consts., vapour press., entropy and heat of vaporisation 2-93773
- U₄O_{9-x}, nonstoichiometric, heat capacity and elec. cond., 300 to 1200K 2-110006
- V-H-D system, isotope effects on thermodynamic functions (German) 2-110016
- V₂O₃ single cryst., physical, elec. and mag. props. 2-66251
- ¹³¹Xe solubility in liq. n-alkanes, temp. depend. and thermodynamic functions 2-109996
- Zn-Sn-Se phase diagram and electronic props., LPE 2-116428
- environmental engineering**
see also air conditioning; cooling; lighting; safety; space heating; temperature control
- acoustic noise radiated by electronic exchange power supplies, measurement procedure 2-97280
- aircraft noise, subjective responses of Chinese 2-114545
- ETL Mark VII MHD facility, construction and environmental standards control (Japanese) 2-57717
- NH₃-H₂O absorption refrigeration cycles, solar operated, simulation, design and economics for building cooling 2-99835
- environmental requirements** see environmental engineering
- environmental testing**
see also corrosion testing
- flat-plate photovoltaic modules qualification testing 2-116812
- fungicidal coatings to protect optical surfaces, comparative evaluation of Hg, Sn microelements 2-109092
- optical fibres, acrylate coatings, environmental effects, static fatigue testing 2-81134
- optical fibres with UV cured-acrylate coatings 2-97219
- Cr-MIS solar cell stability analysis 2-116816
- Si solar cells, degradation due to formation of Schottky barrier contact 2-93923
- Si solar cells with screen-printed Ag contacts 2-116815
- epitaxial growth**
see also liquid phase epitaxial growth; vapour phase epitaxial growth
- 2D-3D transition 2-87110
- diamond, on Ni substrate, irradiation with C ions, ESR spectra 2-77371
- overlayer ordering and epitaxy, thermodynamics 2-110205
- polyesters, aliphatic, epitaxial crystallisation on trioxane and aromatic hydrocarbons 2-87107
- polyethylene, epitaxial crystallisation on organic substrates, nucleating agent mode of action 2-87106
- review 2-76865
- silicic epitaxial films Si substrates, characterisation by ion channelling and backscattering techniques 2-56403
- Au on Ag(111), ion scatt., Auger and LEED study 2-82160
- Cr (100), chemisorption of Cl and surface chloride form., struct. and kinetic study 2-66366
- Cu-Sb, chemiepitaxial layer formation, during reactive diffusion 2-76849
- Fe overlayer growth on Ag(110), LEED and AES studies 2-98489
- ⁴He, epitaxial adsorption on graphite, fourth sound meas. 2-86971

epitaxial growth continued

- Ni single crystal, laser irradiated, epitaxial regrowth and defects 2-61031
 NiSi₂ layers, ion irradiated epitaxial reordering 2-71830
 (Pb_{1-x}Sn_x)₁₋₃Te₁₊₃/PbTe, diffusion phenomena, during heteroepitaxy 2-92378
 Sb₂Te, chemiepitaxial layer formation, during reactive diffusion 2-76849
 Sb₂Te, single cryst. growth by hot wall epitaxy 2-93418
 Si, amorphous film, laser induced controlled nucleation and growth process 2-56408
 Si, amorphous film, solid phase epitaxy, laser-induced 2-56405
 Si cryst. growth on insulator, poly Si, graphoepitaxy and bridging epitaxy methods (*Japanese*) 2-103813
 Si, epitaxial growth, ion channelling studies, review 2-71537
 Si film, polycryst., amorphized by Si ion implantation, solid phase epitaxial recrystn. 2-115581
 Si films over SiO₂ patterns, laser-induced lateral vertically-seeded epitaxial regrowth 2-87091
 Si, ion implanted, isothermal annealing, IR refl., refr. index, regrowth rates, and carrier profiles 2-110836
 Si radiation detector, epitaxial crystal growth appl. 2-90367
 Si, recrystn. on amorphous substrate by doughnut shaped CW laser beam 2-56377
 Si, solid phase lateral epitaxial growth onto adjacent SiO₂ film from ion implanted amorphous Si 2-77730
 Si surface, (111), thermal epitaxial growth during ion bombardment, LEED study 2-87088
 Si surface (111), epitaxy, high resolution LEED study 2-98487
 Si; P and compensated Si:P,B, ion implanted, epitaxial regrowth obs. 2-92388
 Si:As, amorphous film, laser induced solid phase epitaxy kinetics, time resolved reflectivity study 2-56384
 Si:Sb, laser epitaxy over buried layers 2-56406
 Si:Sb(In)(Ga)(Bi)(As), ion implanted, metastable supersaturated solid solns. formation during solid phase epitaxy 2-98283
 Si-on-sapphire, cryst. defects reduction by room temp. ion implantation 2-92012
 Si-SiO₂, laterally seeded, subgrain boundaries formed by graphite strip heater recrystn. 2-56376
 Si-SiO₂, Si seeded oscillatory epitaxial growth by CW laser irradi. 2-99329
 Ti epitaxial growth on Cu(100), LEED, AES, UPS and EELS studies 2-56398
 VN heteroepitaxy on sapphire (*Russian*) 2-71814

epitaxial layers

- see also *magnetic epitaxial layers; metallic epitaxial layers; semiconductor epitaxial layers*
 AES, RHEED and TEM characterisation techniques 2-92419
 internal stresses meas., in presence of plastic deform. 2-56401
 interphase boundaries theory, geometric parameters use 2-71808
 lattice parameter, absolute, meas. method 2-82159
 metallic monolayer, equilb. config. in Nishiyama-Wassermann orientation, misfit accommodation 2-115626
 monolayers, Misfit accommodation, dislocations, transition to 1-D coherence 2-115625
 monolayers, misfit accommodation calc. for (111)FCC and (110)BCC substrates 2-110210
 solid solution monocrystalline films with quasiperiodic struct., X-ray diffr. 2-81617
 AlN epitaxial films on Si, electronic conduction in MIS struct. 2-87434
 K₁LiNb₃O₁₂ films for SAW devices 2-82111
 NiSi₂ epitaxial layers on Si(001) substrate, pulsed ion beam annealing, TEM and Rutherford backscattering study 2-66383
 Si epitaxial layer characterisation using a reson. frustrated-total-refl. technique 2-89792
 SiO₂ MBE films on GaAs, deposition conditions, Auger anal., and elec. characts. 2-87116
 Sn, epitaxial layer, semicond.-metal phase change, electron microscopy study 2-66666
 TeO₂ on CdTe, interface struct., high resolution TEM study 2-56367
 VN heteroepitaxy on sapphire (*Russian*) 2-71814

epitaxy see *epitaxial growth***EPR** see *paramagnetic resonance***EPR line breadth**

- AAHBO, nematic liq. cryst., ESR line shape 2-98937
 alkaline earth hexammines, conduction EPR 2-61767
 N-alkyl-phenazinium TCNQF₄ salts, solid-state props. 2-87574
 BPHB, nematic liq. cryst., ESR line shape 2-98937
 cholesteric mesophase induced by chiral probe, ESR obs. 2-76279
 chromium phosphate, polymeric, ESR and spin dynamics 2-82710
 copper calcium acetate hexahydrate, linear chain complex, EPR spectra, temp. depend. 2-61756
 copper phthalocyanine, powder pattern, g and A tensors, EPR obs. 2-80684
 diamond, containing lonsdalite, ESR spectra, structural defects 2-72344
 diamond, epitaxial growth on Ni, irradiation with C ions, ESR spectra 2-77371
 2,2-diphenyl-1-picrylhydrazyl, mag. interaction and spin diffusion, susceptibility and ESR study 2-110566
 F-centres, relaxed excited states, ODMR study 2-61790
 ferroelectric, EPR line broadening, elec. dipole-dipole interaction, spin-spin relax. 2-77360
 fluoranthenyl radical cation salts, ESR linewidths, longitudinal and transverse relax., temp. depend. 2-98961
 impurity ion, relax. to cond. electron bath, method of moments 2-110618
 incommensurate multilattice, NMR lineshape anal. 2-66928
 LaS:Er, ESR and origin of random strains in dil. rare earth alloys 2-56925
 metals, CESR lineshape calc. under anomalous skin effect conditions 2-61768
 nitroxide radical, collisional spin exchange, EPR line broadening 2-114021
 nitroxide spin labels, EPR, inhomogeneous line broadening correction 2-104685
 nitroxide spin probes, hyperfine coupling consts. in H₂O and CCl₄ 2-54874
 noble metal-rare earth alloys, dil., magnetotransport and EPR props. 2-104355
 one and two dimensional magnetic systems, EPR studies, review 2-92993
 one-dimensional spin dynamics, delocalisation effect 2-98939

EPR line breadth continued

- paramagnetic ions doped in paramag. hosts, EPR studies, review 2-116060
 peroxyaminodisulphonate radical, rot. dynamics in alcohol solvents, EPR study 2-77374
 polyacetylene, Br substituted, synthesis and EPR, dynamic nucl. polarisation and Raman study 2-76474
 polyacetylene, cis-trans isomerisation induced by mech. rolling, report 2-72746
 polyacetylene, doped, spin and charge excitations, EPR, spin susceptibility and elec. cond. study 2-76943
 polyacetylene, ESR linebreadth narrowing mechanisms, expt. study 2-77358
 polyacetylene, pristine and I(AsF₆) doped, EPR saturation characteristics meas. 2-92991
 polyacetylene, undoped, p-π orbitals, EPR anisotropy study 2-66894
 pyrene-d-10 in fluorene single cryst., EPR lines and spin-lattice relax. 2-77357
 radical cation salts, CESR and spin-lattice relaxation time 2-93007
 spectral diffusion in presence of spin-phonon coupling during RF saturation 2-66895
 structural phase transitions, central peak width determ. by EPR method (*Russian*) 2-104687
 TCNQ salt, DEDMTSF-TCNQ, phys. props., review 2-86656
 TCNQ salt, Qn(TCNQ)₂, neutron irradi., ESR linewidth anisotropy 2-72332
 TCNQ salt, TMTSeF-DMTSNQ, pure and irradiated, mag. props. 2-98958
 TCNQ salts, disordered, random exchange Heisenberg antiferromag. chain, spin dynamics 2-87501
 TCNQ salts, N-alkyl-phenazinium TCNQ, solid-state props. 2-87574
 TMMC:Cu, heavily doped, ESR study 2-72334
 TMMC:Cu, high temp. dynamics, effect of impurities, EPR study 2-98944
 TMMC, one-dimens., spin dynamics, ESR study 2-72338
 (TMTSF)₂ClO₄, struct. and props., exptl. evidence for importance of interchain couplings 2-55959
 (TMTSF)₂X family of organic metals, spin density waves, mag. props. review 2-66893
 (TMTTF)₂X series, phys. props., role of counterion ordering 2-92469
 TMTTF salts, struct. and props., exptl. evidence for importance of interchain couplings 2-55959
 transition metal complexes, orientation effects in EPR powder samples induced by the static magnetic field 2-104686
 TTF-TCNQ, ESR line broadening and interstack spin-orbit coupling 2-92992
 TTF-TCNQ, interstack spin-orbit coupling and ESR line broadening 2-116056
 tumbling mols., ESR parallel-edge line theory 2-90583
 a-BH, ESR study, annealing effects on signal intensity and linewidth 2-87591
 C₆K (x=8.24), stage and CESR line breadth, temp. depend. 2-87595
 C₆Rb (x=8.24), stage and CESR line breadth, temp. depend. 2-87595
 CaCO₃:Pb²⁺, EPR spectrum, Raman spin lattice relax., hyperfine interaction effect 2-61761
 CaF₂:Mn, EPR rigid lattice dipolar broadening 2-104689
 CaO:Fe³⁺(C₂)³⁺(GD³⁺), ESR dipolar linewidths 2-104688
 CaSO₄, X-irrad., ESR of thermoluminesc. centres 2-66916
 CaWO₄:Ho³⁺, scheelite, ESR line shape, elec. field effects 2-87586
 CdIn_{0.4}Cr_{1.6}S₄, spin glass, microwave mag. reson. study, 4.2 to 300K 2-66908
 Ce_{1-x}M_xPD₃, M=Sc, Y, La, intermediate valence and Gd³⁺ ESR 2-56927
 Ce(Pd_{1-x}M_x)₃, M=Rh, Ag, intermediate valence and Gd³⁺ ESR 2-56927
 CoS₂ single cryst., ferromagnetic and paramagnetic resonance 2-116066
 CsTiF₄, struct. and mag. studies, antiferromagnetism, X-ray and neutron diffr. study 2-65966
 Cu complex, alkanediammonium copper tetrachloride, EPR obs. 2-82704
 Cu complex, bis(aluminum) copper tetrachloride, two-dimens. spin diffusion, EPR and ferromag. reson. study 2-77364
 Cu-Mn spin glass, LF ESR, lineshape and temp. depend. 2-104692
 EuO (Eu_{1-x}Gd_xO) (Eu_{1-x}), mag. semicond., s-d exchange interaction, current carriers effect, expt. study 2-92895
 EuS, EPR linewidth, reson. field, and spin-spin relax. near Curie temp., shape depend. 2-66910
 EuYb_{1-x}(NH₃)₆, dilute alloys, EPR spectra, Eu²⁺ hyperfine struct. 2-104684
 Fe-Mn, amorphous, ferromagnet-spin glass transition, ESR linewidth meas. 2-77305
 p-GaAs:Cr, EPR identification of Cr⁴⁺3d³ using appl. uniaxial stress 2-110629
 Gd₂R_{1-x}Y_xCe₂Be₁₃ (R=La,Y,Lu), cond. electron lattice relax. due to Ce ion 2-72350
 InP:Mn, impurity states electronic struct., ESR and optical absorpt. study 2-82285
 KCl:Ga, triplet excited states of Ga⁺, optical detection of ESR study 2-82749
 K_{1-x}Li_xTaO₃, ferroelectric, dipole-dipole interactions, EPR line width study (*Russian*) 2-82805
 KPBcCr₂F₆, structural and mag. props., X-ray diffr. and EPR study 2-60949
 K₂PbCu(NO₂)₆, Jahn-Teller effect, uniaxial stress effects, ESR study 2-87580
 (La,Gd)B₆, single cryst., exchange interaction and cryst. field splitting, ESR 2-104696
 Li particles, Na impurity distrib., ESR study 2-76485
 Li-Al₂O₃-Cu layers, electron tunnelling, ESR study 2-82714
 Li-Al₂(Zn)(Cd)(Hg)(Sn)(Bi), impurity solubility, dislocation and deformation effects, ESR study (*Russian*) 2-103996
 β-Li₂V₂O₇, quasi-one-dimens. cond., EPR 2-92997
 MgO:Mn²⁺, polycryst., EPR central transition lines, deformation broadening obs. (*Russian*) 2-116058
 NaAl(SO₄)₂·12H₂O:Cr³⁺, EPR linewidth anomaly, struct. fluctuations 2-98952
 NaN₃:Mn²⁺, EPR study of cation vacancy-Mn²⁺ pairs 2-61752
 β-Na₂V₂O₇, quasi-one-dimens. cond., EPR 2-92997
 Ni-Mn, spin glass alloy, effective anisotropy field, EPR study 2-72333
 Ni(BF₄)₂·6NH₃, cryst. field distortion parameter, EPR linewidth and phase transition temp. meas. 2-61420

EPR line breadth continued

- Ni(ClO₄)₂·6NH₃, cryst. field distortion parameter, EPR linewidth and phase transition temp. meas. 2-61420
 PbF₂:Mn, EPR rigid lattice dipolar broadening 2-104689
⁸⁵RbCl (⁸⁵RbCl), F-centres, relaxed excited states, ODMR study 2-61790
 RbCl:Ga, triplet excited states of Ga⁺, optical detection of ESR study 2-82749
 RbH₂(SeO₃)₂ crystals, Cr³⁺ doped, ESR study 2-66903
 a-Si:H, RF sputtered, elec. and EPR meas. 2-115791
 Si:H,B, amorphous, ESR lineshape, g-factors, temp. depend. 2-77373
 a-Si:H film, annealing effects on ESR, elec. and optical props. 2-66588
 Si₃-C₆H₆ amorphous glow discharge films, ESR, IR and optical study 2-56934
 SrO:Fe³⁺ (C₃⁺)(Ga³⁺), ESR dipolar linewidths 2-104688
 (TMTSF)₂PF₆, high press. metallic phase, low temp. ESR, evidence for single paired supercond. 2-56913
 YIG, microstruct. and grain size, ferromagnetic resonance and ESR study 2-115425
 ZnO, green cathodolum. and ESR spectra 2-116275
 ZnO:In(Ga), ESR and ODMR obs. of shallow donors 2-116061

EPROM see *PROM***E⁺PROM** see *PROM***epsilon meson resonances** see *eta meson resonances***equalisers**

- optical fibres, high-freq. broadband signal transmission, signal enhancement by spectral equalisation 2-109051

equations

- for equations used in specific subjects, see the specific indexing heading
 see also *Bethe-Salpeter equation*; *differential equations*; *equations of state*; *functional equations*; *integral equations*; *nonlinear equations*
 No entries

equations of state

- see also *equations of state of gases*; *equations of state of liquids*; *equations of state of solids*; *phase transformations*; *thermodynamics*
 additivity of equations of state in two dimensions 2-81927
 anisotropic nuclear matter, eqn. of state from field theoretical model 2-85094
 benzene, second virial coeff. calc. using Lennard Jones pot. expressions (German) 2-97691
 chlorobenzene, second virial coeff. calc. using Lennard Jones pot. expressions (German) 2-97691
 classical electrodynamic noise, equations of state, Schwinger renormalisation group 2-84533
 cluster integral evaluation by spherical harmonic expansions 2-112803
 collapsing stars, eqn. of state rel. to abundance distrib. of heavy nuclides 2-106758
 Einstein's eqns., for spherically symmetric perfect fluid distrib., exact static soln. 2-95163
 fluid interfaces, surface compositional elasticity and sorption parameters 2-76812
 fluorobenzene, second virial coeff. calc. using Lennard Jones pot. expressions (German) 2-97691
 hard hyperspheres, arbitrary dimensionality, third and fourth press. virial coeffs. 2-107283
 hard hyperspheres of arbitrary dimensionality, third and fourth virial coeffs. 2-58760
 hard-dumbbell mixtures, eqns. of state 2-79511
 heavy-ion collision dynamics, conf., Hvar, Yugoslavia (May 1981) 2-84379
 heavy-ion collisions, light particle emission 2-85092
 inert gases, second dielec. virial coeffs. 2-104801
 ionic system, thermodynamic props. and crit. points, charged hard sphere model (Russian) 2-61107
 isothermal flash problem, eqn. of state calc., stability anal. 2-115383
 isothermal flash problem, phase split calc. 2-115384
 laser-generated shock waves, appl. to equations of state, Lawrence Livermore National Laboratories facilities, review 2-75620
 methane, second dielec. virial coeffs. 2-104801
 nonequilibrium system, quantum virial expansions, collision integrals (Russian) 2-53664
 nonspherical molecule fluids, statistical thermodynamics 2-55824
 nuclear matter, eqn. of state rel. to neutron stars masses 2-106766
 nuclear matter, equation of state study in high-energy heavy-ion collisions 2-84988
 nuclear matter, self-consistent eqn. of state 2-59277
 nuclear-explosive-driven experiments 2-76592
 phenol, second virial coeff. calc. using Lennard Jones pot. expressions (German) 2-97691
 pulsar crust Ae phase, eqn. of state allowing for superstrong mag. field 2-117696
 rigid disks and spheres, eqn. of state 2-95297
 semi-empirical eight-parameter eqn. of state for fluids 2-86826
 shock wave research, rail gun appl. 2-74455
 shock wave stability conditions, eqn. of state 2-70859
 shock waves expts., 100 kV to 78 kJ electric gun appl. 2-74456
 statistical mechanical, appl. to fluid phases 2-56151
 supernova cores, equation of state of hot dense matter rel. to stellar collapse 2-100966
 supernovae, Type II, equations of state, HF calcs. 2-112472
 toluene, second virial coeff. calc. using Lennard Jones pot. expressions (German) 2-97691
 triatomic system, bending process, applicability of momentum density approach 2-85519
 two-dimensional system, thermodynamic props. 2-81985
 two-dimensional system, thermodynamic props. (Chinese) 2-110008
 vapour-liq. equilibria, modification of Martin eqn. of state 2-115398
 p-xylene, second virial coeff. calc. using Lennard Jones pot. expressions (German) 2-97691
 FeO high-press. polymorphism at Earth core conditions 2-88821
 H, quantum mechanical second virial coeff., effect of internal variables (French) 2-95224
 N₂ plasma jet, energy parameters anal. (Russian) 2-65769
- equations of state of gases**
 alkali metal vapour, ionized, eqn. of state 2-76056
 chlorobenzene vapour, second virial coeff. and viscosity coeff. evaluation with regard to intermol. pot. (German) 2-91575
 ethylene, fluid, thermodynamic prop. formulation 2-65680
 ethylene, press.-density-temp. meas. 2-71055

equations of state of gases continued

- hard discs system, equation of state obtained from pressure consistent integral eqn. 2-103575
 mean mol. polarisabilities and second virial coeffs., interferometric determ. 2-97703
 methane, modelling of H attack in ferritic steel 2-57473
 method for formulating equation of state taking internal energy into account 2-71054
 mixtures, barodiffusion coeff. calc., appl. to crit. parameters determ. (Russian) 2-60703
 mixtures, binary diffusion, second virial coeff. meas. 2-60697
 mixtures, Redlich-Kwong-Soave volumes, consistent correction 2-98237
 multicomponent gas, one-dimens., with infinite intermolecular pots., thermodynamics 2-109440
 noble gases, virial series and computer simulation at low densities 2-91573
 shock wave, spontaneous wave emission in longitudinal mag. field (Russian) 2-97740
 Ar-H₂, second interaction virial coeffs. 2-80758
 CO₂-n-paraffins, Peng-Robinson equation of state, interaction parameters determ. 2-66160
 D₂O, thermodynamic props., eqns. of state, data tables 2-94920
 H₂S, gas, equation of state meas. 2-71057
³He, pair potentials, second virial coeff. calcs. (Russian) 2-71766
⁴He, pair potentials, second virial coeff. calcs. (Russian) 2-71766
 N₂, gas, two-parameter equation of state 2-60699
 S, fluid, critical point, equation of state determ. 2-92142
 SF₆, electrochromism data, dielectric virial coeffs. for excited states estimated from dipole moment changes 2-96771

equations of state of liquids

- 1:1 electrolytes, restricted primitive model, mol. dynamics simulation 2-97886
 benzene, equation of state, elastic and thermal props. (Russian) 2-86827
 binary mixtures, isomorphous eqn. of state near liq.-gas crit. point, theoretical anal. (Russian) 2-71601
 binary van der Waals fluid, interfacial density profiles 2-109647
 butylbenzene, liq., equation of state, elastic and thermal props., density, US vel. study (Russian) 2-92144
 cluster expansion for real fluid 2-103582
 critical point props. and Born-Green theory 2-60858
 ethane, liq., fluids, thermodynamic props., mol. dynamics simulations 2-81648
 ethylbenzene, equation of state, elastic and thermal props. (Russian) 2-86827
 ethylene, fluid, thermodynamic prop. formulation 2-65680
 ethylene, press.-density-temp. meas. 2-71055
 fluid system under shear, thermodynamics, simulation 2-60852
 hard discs system, equation of state obtained from pressure consistent integral eqn. 2-103575
 hard sphere system, eqn. of state theory, pair distrib. function 2-71600
 hexylbenzene, liq., equation of state, elastic and thermal props., density, US vel. study (Russian) 2-92144
 Lennard-Jones two centre fluids, thermodynamic props., mol. dynamics simulations 2-81648
 metal with purely repulsive interatomic pot., thermodynamic props. and self-diffusion 2-103585
 methane, liquid, equation of state, appl. to models of major planets 2-73878
 method for formulating equation of state taking internal energy into account 2-71054
 mixtures, Redlich-Kwong-Soave volumes, consistent correction 2-98237
 one-component fluid, spinodal decomposition, hydrodynamic fluctuation theory 2-104002
 polyisoprene chains, unperturbed dimensions 2-75478
 polymer, amorphous, PVT relations, T_g and mol. parameters, glassy and melt states 2-115388
 polymer blend, multicomponent fluid theory applic. 2-115387
 polymer melts, equations of state, bulk creep problems 2-93571
 polystyrene-poly(2,6-dimethyl-1,4-phenylene ether) blend, theoretical eqn. of state and PVT data comparison 2-115387
 polystyrene-poly(2,6-dimethyl-1,4-phenylene ether) blends, glassy and melt states, PVT props., comp. depend. 2-115386
 polystyrenes in isorefractive PMMA-toluene solvents, light scatt. obs., radii of gyration, virial coeffs., θ condition 2-116730
 statistical thermodynamics approach to eqns. of state 2-76707
 toluene, equation of state, elastic and thermal props. (Russian) 2-86827
 water, equation of state and elec. cond. in 100 GPa shock press. range 2-92143
 water, liquid, equation of state, appl. to models of major planets 2-73878
 Ar, freezing line, liq. theory and perturbation theory 2-109960
 CO, liquid, shock compression 2-78103
 CO₂-n-paraffins, Peng-Robinson equation of state, interaction parameters determ. 2-66160
 D₂O, thermodynamic props., eqns. of state, data tables 2-94920
 H₂, liquid, equation of state, appl. to models of major planets 2-73878
 H₂, liquid, Hugoniot diagram meas. up to 10 GPa 2-71605
³He, pair potentials, second virial coeff. calcs. (Russian) 2-71766
⁴He, pair potentials, second virial coeff. calcs. (Russian) 2-71766
 Hg thermodynamic props., density and elec. cond. in metal-nonmetal transition range 2-61170
 NH₃, equation of state and elec. cond. in 100 GPa shock press. range 2-92143
 NH₃, liquid, equation of state, appl. to models of major planets 2-73878
 Na, liquid and solid, eqn. of state and struct., mol. dynamics study using model pseudopot. 2-71606
 NaCl, aq. soln., volumetric props., data tables 2-94921
 S, fluid, critical point, equation of state determ. 2-92142

equations of state of solids

- alloys, ordering transitions, thermodynamic theory (Russian) 2-92150
 chlorides (NaCl, CsCl, AgCl), compressibility and Moelwyn-Hughes parameters at high-press. 2-58040
 dysprosium ethylsulphate, Landau eqn. of state near T_c 2-66839
 high pressure phases, finite strain eqn. of state 2-73544
 metals, high press. 2-61108
 metals at Earth core conditions 2-117300
 minerals, shock wave apparatus for studying at high press. 2-78852
 mixed valence solids, eqn. of state, theory based on metallic H₂ 2-56520
 optical pyrometry, technique at high shock press. 2-69171
 polymer, amorphous, PVT relations, T_g and mol. parameters, glassy and melt states 2-115388

equations of state of solids continued

- polymeric glasses, excess entropy and stress-strain behavior 2-76710
 polymers, equations of state, bulk creep problems 2-73571
 polypyromellitimide, Hugoniot cusp, low press. 2-76581
 polystyrene-poly(2,6-dimethyl-1,4-phenylene ether) blends, glassy and melt states, PVT props., comp. depend. 2-115386
 polysulphone, Hugoniot cusp, low press. 2-76581
 polyvinylidene fluoride, mechanoelc. energy conversion and eqn. of state under shock loading 2-72423
 porous materials, shock Hugoniot diag., analytic model 2-56089
 quartz, shocked, thermodynamic props. of cryst. and fused quartz determ. from radiation emission 2-69193
 random uniaxial dipolar ferromagnet, critical behaviour 2-92935
 shock compression measurement at 1 to 7 TPa 2-81892
 shock Hugoniot expts. using exploding foil electric gun 2-69190
 shock wave equations of state, railgun accelerators appl. 2-69191
 solids, shock loaded, mean and deviatoric stress determ. 2-71560
 transition elements, high press. 2-61108
 Be, equations of states derived from shock wave expts., theoretical anal. 2-71602
 Cs_{1-x}K_x solid solns., eqn. of state, pseudopot. scheme calc. 2-109946
 Cs_{1-x}Rb_x solid solns., eqn. of state, pseudopot. scheme calc. 2-109946
 Cu, equation of state calc. 2-71603
 Cu-Al, impedance-match experiments using high intensity lasers 2-76588
 D₂-ortho molecular under press., rot-libration transition 2-61127
 Fe, equations of states derived from shock wave expts., theoretical anal. 2-71602
 Fe-C, phase equilb., small alloying additions influence (Czech) 2-116424
 Ge-Si, solid solns., equation of state, pseudopot. calc. 2-61109
³He, pair potentials, second virial coeff. calcs. (Russian) 2-71766
⁴He, pair potentials, second virial coeff. calcs. (Russian) 2-71766
 LiTbF₄, Landau eqn. of state near T_c 2-66839
 LiTb_{0.5}Y_{0.5}F₄, randomly diluted Ising dipolar-coupled ferromagnet, mag. eqn. of state 2-61730
 LiTb_{1-x}Y_xF₄, random uniaxial dipolar ferromagnet, critical behaviour 2-92935
 LiTb_{1-x}Y_xF₄, random dipolar-coupled ferromag., mag. eqn. of state 2-104674
 Mg_{0.6}Fe_{0.4}O, eqn. of state at Earth mantle press. 2-78645
 Mo, Hugoniot diagram, meas. using two-stage light-gas gun 2-69192
 Na, liquid and solid, eqn. of state and struct., mol. dynamics study using model pseudopot. 2-71606
 NaCl, equation of state, lattice const. and bulk modulus, SCF calc. 2-71604
 Rb_{1-x}K_x solid solns., eqn. of state, pseudopot. scheme calc. 2-109946
 SiO₂, eqn. of state at high shock pressures, optical pyrometry study 2-69171
 Th, shock Hugoniot eqn. of state 2-66161
 V, porous, eqn. of state and phase diagram parameters, calc. from expt. data 2-71607
 Xe, equations of states derived from shock wave expts., theoretical anal. 2-71602
 Zr, deform., mech. eqn. of state and strengthening mechanisms 2-93556

equilibrium, chemical *see chemical equilibrium***equilibrium, phase** *see phase equilibrium***equilibrium constants** *see chemical equilibrium***equilibrium diagrams** *see phase diagrams***equivalence classes***see also automata theory*

evolution equations which allow an infinite Lie-Backlund algebra, equivalence (French) 2-89520

equivalent circuits*see also network analysis; network synthesis*

- array representation of nonidentical electrical cells based on statistical considerations 2-111543
 coal-fired MHD generator, electrical effects of slag 2-111576
 dielectric volumetric resistance measurement under impulsive gamma-neutron radiation (Russian) 2-95395
 electrical conductors under variable load, temp. rise and distribution calc. (German) 2-103002
 electrochromic films, small signal AC response theory using equivalent circuit 2-110817
 electrostatic plasma probe, equivalent cct. diagram (Russian) 2-103446
 electrosurgical circular dispersive electrodes, distrib. equiv.-circuit models 2-78482
 Josephson junction, resonance cct. model (Japanese) 2-87451
 Korteweg-de Vries eqn., soliton solns., elec. transmission line expt. study 2-74228
 loaded piezoelectric transducers, simplified equivalent cct. 2-91203
 metallic films, elec. cond., inductive contactless meas. technique 2-79617
 millipore-DOPH membranes, membrane-resistance oscillations anal. 2-88517
 neurosynaptic junction, impulse response anal., electrical cct. model 2-94021
 piezoelectric thickness-mode transducer, transient characts., Mason's equiv. cct. analysis 2-60335
 semiconductor/electrolyte/counterelectrode cells, impedance response, equivalent circuit anal. 2-78231
 AlGaAs buried-heterojunction/broad-stripe laser diodes, microwave two-port cct. models 2-114285
 GaAs Schottky structures, surface defect model 2-98724
 InGaAsP buried heterostruct. laser, elec. derivative characteristics and equivalent circuit model 2-65227
 Pb-acid battery, forced electrolyte circulation characts., equiv. cct. (German) 2-99779

erbium*see also nuclei with*

- atom, laser isotope separation by two-step selective photoionisation method 2-64940
 deformation modes of HCP single crystals (French) 2-67417
 film, stopping power and straggling of protons and ⁴He ions 2-56051
 LaS:Er, ESR and origin of random strains in dil. rare earth alloys 2-56925
 magnetoelastic props. near Neel temp., elastic consts. 2-104679
 BaFe₂O₇:Er, dopant effects on mag. props. 2-92968
 BaS:Cu,Er, phosphors, electroluminesc., spectral characteristics 2-67122
 Bi_{2-x}La_xWO₆:Er, luminesc. props. 2-82900
 CaO:Er³⁺, site selective spectroscopy, UV and fluoresc. study 2-110895
 CdF₂:Er, Yb, energy transfer, reson. effects 2-72549
 CeBe₃:Er, ESR thermal broadening 2-61762

erbium continued

- CsMg_{1/2}Er³⁺, thermoluminescence and energy storage 2-99198
 Cs₂NaErCl₆:Er³⁺, optical absorpt. spectra and crystal field anal. 2-82882
 Er, Yb:glass, Er³⁺, ⁴I_{13/2} level population inversion characts. 2-55171
 Er³⁺ doped oxide and fluoride glasses as potential laser materials 2-90903
 Er³⁺ impurity ions in fluoride host lattices, optical props. 2-93276
 Er³⁺ single-photon nonradiative transition regularities 2-114035
 Er:YLF lasers, pump technique comparison 2-96958
 Er³⁺:glass lasers and appls. 2-108887
 Er³⁺:LiYF₄, high-efficiency deep-red laser (850 nm), pumped by doubled Nd:YAG laser 2-60087
 Er³⁺:LiYF₄ crystals, stimulated emission 2-116210
 Er³⁺:YAG laser, water and ethanol as bleachable radiation absorbers (Russian) 2-108919
¹⁶⁷ErII, lifetime meas. using fast-beam laser-modulation spectroscopy 2-108423
 Ge:Er, deep level impurity states, DLTS study 2-56477
 LaF₃:Er³⁺, 0.2 THz phonon stimulated emission, luminescence study 2-81906
 LaF₃:Er³⁺, mag. field depend. optical dephasing 2-104856
 LiYF₄:Er³⁺, spin-lattice relax. anisotropy, ESR study 2-72343
 LiYF₄:Er³⁺, stimulated emission 2-116210
 LiYF₄:Ho³⁺, Er³⁺, multifreq. and cascade prod. of induced emission, delayed induced afterglow from Ho³⁺ 2-87819
 LuPO₄:Er³⁺, IR absorption spectra 2-87822
 Na₂O-CaO-SiO₂ glass:Cu,Er, energy transfer from Cu and Cr to Er 2-99176
 PbF₂-GaF₃-ZnF₂(MnF₂):Er³⁺, fluoride glasses, optical transition probabilities, Judd-Ofelt method 2-61960
 Pr:Gd³⁺, Er³⁺, exchange interaction, g-shift, ESR study 2-72342
 SrS:Cu,Er, phosphors, electroluminesc., spectral characteristics 2-67122
 SrS:Cu,Er, phosphors, electroluminesc., spectral characteristics 2-67122
 YAG:Er³⁺, energy levels of Er³⁺, absorpt. and fluoresc. spectra 2-116252
 YAG:Er³⁺, fluoresc. spectra of Er³⁺, energy level diagram 2-67097
 YAlO₃:Er³⁺, luminescence and cryst. field splitting 2-116239
 Y₂O₃:Er³⁺, energy levels, cryst. field anal., fluoresc. and IR study 2-72534

erbium alloys

- Cu-Er, dil., D permeation meas., trapping impurities effect 2-56254
 Er-H, phase boundaries at 295K, film resist. study 2-86880
 Er-Ni-Al, isothermal sections at 800°C, X-ray analysis (Ukrainian) 2-7802
 ErAl₃, quadrupole interaction at ¹¹¹Cd probe 2-116100
 ErAlGa, mag. props. study 2-72141
 ErCo₂, ⁵⁹Co Knight shift anisotropy, spin echo study 2-110668
 ErCo₂, anomalous hyperfine field and orbital moment 2-56973
 ErCo₂, vol. depend. of first order mag. transition temp. 2-98881
 ErCo₃, H₂ multiplateau absorption isotherms, chem. pot. 2-92348
 ErCo₂-Fe₃, Laves phase cpds. and their hydrides, mag. behaviour 2-56855
 ErFe₂, spin polarised photoemission probing of magnetism 2-67184
 ErFe₂, spin wave temp. depend. 2-104598
 ErMn₂, mag. dipole, elec. quadrupole hyperfine parameters determ., NMR spectra 2-116087
 Er(Mn_{1-x}Cu_x)₂ quasibinary system, HCP struct., stability, Cu effects investig. 2-115179
 ErNi₂, ¹⁸¹Ta TOPAC meas. of non-axial quadrupole interaction 2-93089
 Er₂Si₂C₆, solubility of C and its effects on struct., X-ray and hardness study 2-109997
 ErZn, magnetisation, magnetostriction and paramag. susceptibility 2-104676
 Ho_{1-x}Er_xRh₄B₄, superconductivity and magnetism 2-72098
 Pd-Er dil. alloy, sp. ht., cryst. elec. field effects 2-76700
 Sm₂(Er,Gd)_{1-x}Co₃, mag. props. and mag. induction temp. depend. meas. (Russian) 2-98914
 Yb_{1-x}Er_xAl₃, exchange and electron spin-lattice relax., ESR study 2-82712

erbium compounds*see also erbium alloys*

- BaEr₂F₈, self-activated laser crystal, three-micron stimulated emission of Er³⁺ obs. 2-85976
 CaF₂-ErF₃, cryst. growth from melt, laser props. 2-105063
 (Er,Y)₂Fe₂O₇, epitaxial bubble film, rare earth segregation 2-72633
 Er₂Al₂O₇, garnet, thermal expansion, optical dispersion, refractive index 2-66261
 ErCl₃·6H₂O:Gd³⁺, cryst. field parameters, spin Hamiltonians, polarisability tensors 2-87206
 ErCl₃·6H₂O:Gd³⁺, spin-Hamiltonian parameter superposition model anal. 2-98600
 Er₂Cu₂O₈, cryst. struct. data 2-81757
 ErFe₂H₂, spin reorientation temp., hyperfine fields, Mossbauer study 2-93082
 ErFeO₃, HF absorption and mag. phase diagram at low temp. spin reorientation (Russian) 2-61710
 ErFeO₃, Raman scatt. from mag. excitations 2-77528
 ErFeO₃, spin reorientation, Mossbauer study 2-82756
 ErGa₃, mag. props., struct., anal. 2-66763
 Er(GaM²⁺)₄ (M=Mg,Mn), cryst. struct. 2-60945
 Er_{1-x}Ho_xRh₄B₄, direct evidence for first order phase transition at lower crit. temp. 2-61639
 ErO_{1.5}:CaO, elec. cond., electrolytic region 2-86924
 Er₂O₃, cubic, lattice and binding energies 2-60916
 Er₂O₃, spectral and heat capacity Schottky contribs. 2-81975
 Er,Pr_{1-x}Sb_x, impurity nearest-neighbour distances, EXAFS study 2-82957
 ErRh₄B₄, coexistence of ferromagnetism and superconductivity 2-72105
 ErRh₄B₄, coexistence of ferromagnetism and superconductivity 2-115936
 ErRh₄B₄, film, pair tunnelling meas. 2-87454
 ErRh₄B₄, percolation magnetoresistance in ferromagnetic superconductors 2-56774
 ErRh₄B₄, single cryst., ferromag. and supercond., coexistence 2-56834
 ErRhSi, cryst. struct. and mag. props. 2-55946
 Er₂S₃, vacuum condensates, struct. 2-71822
 ErSi₂, surface morphology, pitting, SEM study 2-92313
 ErTaO₄, cryst. struct. study 2-98038
 (Er₂)₂Y₂O₇:Fe₂O₃, Faraday rotation anisotropy 2-72460

erbium compounds continued

- KEr(MeO₄)₂, (Me=W, Mo), Nd³⁺ and Er³⁺ ion spectra in crystal fields, Stark struct. 2-76999
 LiErP₄O₁₂, absorpt. spectra and Stark energy levels of Er³⁺ ion 2-57118
 (Lu_{1-x}Er_x)₃Al₂O₁₂, garnets, 3 μm stimulated emission and spectroscopic props. 2-93229
 (Y_{1-x}Er_x)₃Al₂O₁₂, garnets, 3 μm stimulated emission and spectroscopic props. 2-93229

ergodic theorem *see statistical mechanics***erosion**

- abrasional shore development during a gradual rise in sea level 2-83838
 Antarctica, ice movement and ice ablation rel. to discoveries of meteorites (German) 2-94662
 basaltic rocks, weathering stages determ. using thermoluminescence 2-62953
 catchment erosion and lake sedimentation as rainfall var. record in Morocco 2-73602
 Chinese rivers, major ion chemistry rel. to erosion 2-100409
 force meas. exerted on sediment grain, piezoresistive gauge rel. to laser Doppler meas. 2-68539
 frost, condensed gas, ion induced erosion, planetary appls. 2-100781
 Garm region, USSR, seismic jointing, erosion patterns and Earth crust stress-strain state 2-73474
 inland cliffs, toppling failure at Ben Lomond, Tasmania 2-83817
 lo, charged particle erosion of SO₂ ice rel. to SO₂ atmosphere, laboratory studies 2-112374
 polymers, quantitative method for determ. of resistance to surface discharges 2-109616
 Sahara dust transported eastward by wind 2-68408
 soil, trace-element conc. in soils contributing to atmos. aerosol 2-62912
 submarine valleys on Ceduna Terrace off S Australia, erosion by turbidity currents 2-117287
 Venus, chemical weathering of igneous rocks rel. to buffering of atmospheric comp. 2-89179

error analysis

- see also error correction*
 anharmonic oscillators, two-coupled, Schrodinger operators 2-58654
 conductivity-temperature-depth systems, digitizing methods and error anal. 2-73704
 convection diffusion problems, finite element method, error anal. 2-103003
 incompressible viscous flow, conforming mixed finite element methods 2-75919
 instrumentation, static metrological properties as multivariable random process (Polish) 2-89651
 Kesters prism fabrication, effect of errors on null-indication accuracy 2-108999
 magnetotelluric impedance tensor, random and bias errors 2-83744
 microdensitometer, scanning, performance evaluation, digitisation of electron micrographs 2-112950
 neutron transport equation, stability, convergence and error estimation for DSN method (Chinese) 2-107922
 noncentrosymmetric crystal, electron distrib. study by diff. methods, error estimation 2-103557
 nonstationary Navier-Stokes problem, finite element approx. 2-95020
 photopeaks parameters determ. in semiconductor gamma-ray spectrometer 2-96368
 reflectance phase, estimation of calc. accuracy from Kramers-Kronig relation 2-110803
 thermal measurements, anal. of random errors (Hungarian) 2-79575
 transient large displacement calcs., error growth 2-101167
 transport processes, finite-difference approximations and superconvergence for the discrete-ordinate equations in slab geometry 2-95286

error compensation

- see also error correction*
 gas anal., compensation for nonoptimal transducer selection (Russian) 2-67790
 optical instrument quality improvement by error compensation 2-53809
 turbine flowmeter, static compensation of slip error (Russian) 2-60680

error correction

- galaxies redshifts, errors corrections rel. to gravitational mechanics of systems of galaxies 2-101055
 measuring instrument systematic error, correction via data compression (Russian) 2-79523
 phase retrieval from intensity data, algorithms comparison 2-102725
 precision instruments errors determ. and correction (German) 2-112854
 stellar proper motions, correction for accidental errors (Russian) 2-63384

error statistics

- geomagnetic data lunar analysis, statistical independence of data subsets rel. to errors estimation 2-105915
 orbit selection for the Stanford Relativity Gyroscope experiment 2-84511

errors*see also coding errors; measurement errors*

- acoustics, ray tracing technique, error investigation 2-114552
 aerosol layers, tropospheric, shortwave radiative props. evaluation uncertainties, expt. and numerical errors 2-94490
 cartography, grid cell size rel. to errors in maps produced by computerised map processing 2-111837
 Dar es Salaam point cloudiness sampling and estimation 2-58114
 DC motors phaselock loop control by optical tachometers, velocity and direction information recovery techniques 2-74404
 differential eqns., error propag. in numerical solns. 2-89128
 diffraction pattern numerical evaluation, undersampling and aliasing error distinction 2-108776
 Fourier transform IR spectrometer, vel. errors influence on optimal design 2-113010
 geomagnetic field approximations, accuracy estimates 2-111851
 linear induction angle convertors complementary error calculation (Russian) 2-95318
 map accuracy test reporting, user's view 2-111838
 map classification accuracy, user approach 2-112140
 microdensitometer positioning errors, random, transfer-function approach 2-84684
 molecular complex, assoc. consts. determ. from NMR data, effect of instrumental error and conc. 2-105472
 prisms, optical, angular error examination 2-70654
 semiconductor thin film, deep level conc. from capacitance transient spectroscopy, errors 2-72084
 thermoelasticity problems, finite element approx. solns. 2-74215

Esaki diodes *see tunnel diodes***Esaki effect** *see tunnelling***ESCA** *see electron spectroscopy; spectrochemical analysis; X-ray photoelectron spectra***ESR** *see paramagnetic resonance***estimation theory**

- see also information theory*
 architectural noise, Kalman's filtering theory under preestablished estimation algorithm form (Japanese) 2-97297
 road traffic noise, dynamical estimation method of objective noise under background noise (Japanese) 2-97288
 sonar radial target length estimation from echo duration 2-60282
 steel, martensite plate size distribution, determ. by kernel estimation 2-88081
 vehicle noise power, individual, estimation by exponential approx. (Japanese) 2-97290

eta meson resonances

- $e^+e^- \rightarrow e^+\eta^-e^-$, 17.15 GeV, cross section meas. 2-79901
 η - η' -glueball mixing in MIT Bag Model, radiative decay widths 2-101671
 $\eta \rightarrow 2\gamma$, three point functions contributions, relativistic corrections 2-79886
 $\eta \rightarrow \delta\pi \rightarrow \eta\pi\pi$, $\delta(980)$ meson quark struct. (Russian) 2-84890
 η' meson first radial excitation mass estimation 2-89937
 η - $\gamma\gamma$, radiative width meas. 2-79901
 ψ - η hyperfine splitting, potential model calcs., charmonium mass spectrum 2-107650

eta mesons

- spontaneous chiral symmetry breaking before confinement, quenched fermions, nonrelativistic quarks, η , glueballs 2-113238
 structure functions, from charge exchange quark-parton model (Russian) 2-59183
 SU(3)×SU(3) bag model with pseudoscalar meson cloud of K, η , η' (Chinese) 2-95792
 Yang-Mills theory, quark confinement, Abelian dominances, oblique confinement, η' mass 2-101653
 $\eta \rightarrow \gamma\gamma$ in SU(5) classification scheme 2-84899
 $\eta \rightarrow \gamma\gamma(\pi^+\pi^-\gamma)(\pi^+\gamma\gamma)(3\pi)$, coloured quark field theory, PCAC approx. 2-89967
 $\eta \rightarrow \pi^0\gamma\gamma$, decay width, $\delta(980)$ quark struct., quark diagram anomalies (Russian) 2-113278
 η - η' -glueball mixing in MIT Bag Model, radiative decay widths 2-101671
 η mass, perturbative QCD estimate, $U_A(1)$ current 2-64278
 η , radiative width determ. from two-photon exchange prod. 2-107665
 $\gamma\gamma \rightarrow \pi^+\pi^-(\pi^0\gamma)$, $f(1270)$ and $A_2(1310)$ production 2-54226
 $\pi^-N \rightarrow \eta X$, 3.8 GeV/c, η -meson prod. cross section (Russian) 2-74704
 $\pi^-p \rightarrow \eta n$, $\epsilon(1300-1400)$ identification and exposition possibilities (Russian) 2-54208
 $T_{\eta\eta}$ mass difference, QCD calc. (Russian) 2-64309

etalons *see interferometers***etchants** *see etching***etching**

- see also crystal defects; dislocation etching; sputter etching*
 anthracene cleavage planes, etching in H₂SO₄-formic acid soln. 2-109781
 biotite mica, electron and α -particle damage, implications for track formation mechanisms 2-59660
 bisphenol-A polycarbonate, track etching photo-oxidative enhancement, chem. basis 2-59617
 Brazilian quartz crystal for track recorder appl., selected etching and annealing props. 2-70093
 bubble garnets, Ne ion implantation, damage profile, Rutherford backscatt. and channelling study 2-71524
 CA80-15 cellulose nitrate track detectors, track etching response 2-113821
 cellulose nitrate, low charge discrimination expt. study 2-70074
 cellulose nitrate films, chem. and phys. parameters influence on track quality 2-59637
 cellulose nitrate plastic detectors, Fe ion registration props. 2-70080
 charged particle tracks development by electrochemical etching, soln. parameter influence 2-70068
 CR-39 detector, ions track-profile and range, thermal pre-treatment effect on etching characts. 2-59632
 CR-39 detector, O effect on track etching 2-59629
 CR-39 detector, track diameters for α -particles, energy sensitivity 2-64782
 CR-39 detector film development for spark counting of recoil proton tracks 2-70097
 CR-39 detectors electrochemical etching, parameter optimisation for neutron-induced samples processing 2-70070
 CR-39 detectors treated by sequential chem. and electrochemical etching, neutron response characts. 2-70096
 CR-39 nuclear track detector, electrochemical etching study 2-70073
 CR-39 plastic, neutron dosimetry based on chem. etching 2-70012
 CR-39 plastic, neutron spectrometry using chem. and electrochemical etching 2-70099
 CR-39 plastic track detector, etching solns., effects on response 2-59633
 CR-39 plastic track detector appl. for protons, ³He and ⁴He ions detection 2-64783
 CR-39 plastic track detector appl. to study ²⁰⁸Pb(¹²C, X) reaction 2-64421
 CR-39 plastic track detector for high resolution α -particle spectroscopy 2-96366
 CR-39 plastic track detector response to 2 MeV microbeams of H, He and Ne 2-101502
 CR-39 plastic track detectors, etching conditions optimisation 2-59634
 CR-39 plastic track detectors with dopants, etching props. and response 2-64784
 CR-39 plastics, neutron dosimetry studies 2-70011
 CR-39 polycarbonate detector, UV radiation influence on nucl. track recording props. 2-96391
 CR-39 polycarbonate foils for biological systems dosimetry appl. 2-59562
 CR-39 polymer detectors for reactor and dosimetry appl., neutron response characts. 2-70095
 CR-39 polymer track detector for Rem-equivalent personnel neutron dosimeters 2-70009
 CR-39 track detector, curing cycle for detector-quality 2-59628
 CR-39 track detector, etching props., post-irradiation annealing effect 2-59630
 CR-39 track detectors, development status 2-59622

etching continued

- CR-39 track detectors, etch pit growth study using Si rubber cast technique 2-64779
 CR-39 with ^6LiF radiation, personnel neutron dosimetry study 2-70013
 Daicel cellulose nitrate, α -particle registration props. applying diffusion etch model 2-70083
 Daicel cellulose nitrate, quasi-relativistic Fe ion registration, diffusion-etch model appl. 2-70082
 electrochemical etching, freq. depend. in polycarbonate detector 2-108255
 electrochemically etched nuclear track detectors, registration efficiency depend. on track formation time 2-70071
 electrolytically controlled nuclear track plastic filter prod. 2-64831
 freshwater mussel tissue, α -emitter distrib. meas. by α -track autoradiography 2-68219
 GaAs:Cr wafers, EPR charact., etch-pit-density and X-ray double diffraction meas. (Japanese) 2-66907
 glass, crack initiation, acid-enhanced 2-77911
 glass, saline leaching, ion bombardment enhancement, radioactive waste appl. 2-74811
 glass, strengthening, by combined etching and ion exchange 2-72860
 glass microstructure, electron microscopy studies 2-91797
 glass track detectors for nuclear reactor flux meas. 2-69769
 glass track recorder, energy resolution improvement 2-70084
 heavy ions range and energy loss rates in dielectric nuclear track detectors 2-64829
 $\text{H}_{80.70}\text{Cd}_{0.30}\text{Te}$ anodic oxidation 2-11344
 integrated optical beam splitters formed in glass channel waveguides, preferential etching fabrication 2-86134
 ion sources, Penning type, with high efficiency, and appls. 2-74574
 kink band formation, expt. and theoretical study 2-109885
 Kodak LR115-II films, α -particles detection at various angles of incidence 2-70077
 laser-enhanced chemical etching of solid surfaces 2-77958
 laser-enhanced plating and etching, mechanisms and appls. 2-77758
 laser-induced chemical etching, of metals and semiconductors 2-78133
 Makrofol track detectors for fission fragments, efficiency calc. 2-70076
 metallic films, chemically deposited, struct., precipitation etching (German, English) 2-116663
 metals, pitting dissolution in aqueous soln., stability 2-77992
 mica track microfilters for hot contaminated air surveillance 2-64830
 microlenses, conical, chemically etched, for coupling single mode lasers into single mode fibres 2-65401
 minerals, α -recoil damage and preferential soln. effect, track prod. mechanism 2-64778
 muscovite mica track detectors, low energy ion track-etch pits study 2-70088
 nuclear track, elec. tree generation by sequential elec. and chem. treatment 2-70072
 nuclear track detection by avalanche-type processes, electrochemical etching and spark counter 2-59638
 nuclear track filters, electron microscope studies 2-64832
 nuclear track recording solids, appl. to high energy phenomena 2-54721
 obsidian artifacts fission track dating 2-73720
 optical fibre, modified CVD preform, central dip reduction by F etching during collapse 2-65384
 optical single-mode fibres, fabrication by modified CVD process 2-114449
 personnel albedo neutron dosimeter using track etch detectors, design and performance 2-70015
 phosphosilicate glass film, H_2O absorpt. and densification 2-115630
 plastic detectors, submicroscopic nuclear tracks, electrolytic studies 2-59616
 plastic foil detector, electrochemical etching using AC voltage 2-59640
 plastic foil detector, electrochemical etching using DC voltage 2-59639
 plastic track detector, etching mechanism, temp. effect 2-54720
 plastic track detectors, neutron detection efficiency, evaluation using light transmission meas. 2-113819
 plastic track detectors, neutron detection efficiency, theoretical model 2-80383
 plastic track detectors, neutron detection efficiency, theoretical and exptl. results comparison 2-80384
 plastic track detectors behaviour in gamma dose field and high temp. conditions 2-70094
 plastic track detectors CR-39 and CN-88, light particle response comparison 2-102343
 plastic track detectors irradiated by heavy ions, IR, UV and ESR studies 2-59613
 plastics for personnel neutron dosimetry, monoenergetic neutron response 2-59549
 PMMA, photoresist, deep UV photoetching by excimer laser 2-57497
 polycarbonate foils, electrochemical etched track props. study 2-70066
 polyethylene, ultrahigh-modulus, nitric acid etching and gel permeation chromatography, struct. obs. and influences 2-109693
 polyethyleneterephthalate solid state nuclear track detector, bulk etching mechanism and kinetics 2-113820
 polymer films, plasma etch characts. rel. to struct. comp., electron resist appls. 2-62244
 polymer resists, track-etch behaviour and chem. development, correlative studies 2-59618
 polymeric detectors, latent and etched track formation, thermodynamic approach 2-59614
 polymers, stratified structures, determ. by plasma etching gravimetry (German) 2-67690
 quartz, plasma and reactive ion etching in planar plasma reactor 2-77970
 quartz wafers, AT-cut, etching in NH_4FHF 2-88244
 sapphire, chemical etching in H_2 stream and in $\text{H}_3\text{PO}_4\text{-H}_2\text{SO}_4$ mixture 2-88232
 semiconductors, localised laser etching in aq. soln. 2-57498
 semiconductors, surface prep. by selective chem. etching 2-83254
 semiconductors and oxides, plasma etching using H_2 plasma 2-83256
 small angle mechanical etching device for use with EDWARDS IBMA 1 apparatus 2-53902
 soda glass detector, fission fragment tracks, efficiency calibration and etchant temp. effect 2-96390
 soda glass detectors, ^{252}Cf fission fragment tracks development, etching conditions study 2-70085
 soda glass nuclear track detectors, etchant development 2-70086
 soda-glass detector, mag. field effects on fission track recording characts. 2-70087

etching continued

- solid state detectors, etched track profiles, SEM studies 2-70091
 solid state nuclear track detectors, particle track optical props. 2-64781
 solid state nuclear track detectors appl. for fission cross-section ratios meas. 2-64444
 solid-state track detectors electrochemical etching process, elec. parameters role 2-70069
 steel, alloy, nitrided, etching techniques 2-72922
 thin electroconducting oxide layers on glass, electrochemical etching (Polish) 2-88248
 thin-film dosimetry for neutrons and alpha particles 2-64697
 track detectors, electrochemical etching, α -particle-energy discrimination 2-108320
 two-phase track developing model 2-70110
 viruses, enveloped, freeze fracture, freeze etching, critical point drying, review 2-57942
 α -particle spectroscopy using CR-39 plastic track detector 2-64744
 Al, plasma etching process, problems of surface morphology and layer deposition 2-67609
 Al, stress dependence of subgrain size 2-103765
 (AlGa)As buried convex waveguide struct. laser with truncated convex active region 2-65258
 As-S-Ag system glass, phase separation and struct. changes on Ag addition to As_2S_3 , fractured surface obs. 2-103649
 $\text{Ba}(\text{OH})_2\cdot 8\text{H}_2\text{O}$, aq. soln., track etchant for plastic detectors 2-64785
 Bi, etching of cleavages in NH_4O_3 -propionic acid solns. 2-109782
 Bi_2Te_3 - Bi_2Se_3 (Sb_2Te_3) thermocouple, surface treatment effect 2-110373
 Cd-Zn eutectic alloys, etch pit generation, chemical, electrolytic and ion beam methods 2-88252
 CdS anodes, polycrystalline, photoetching by cysteine 2-99814
 CdS, photoluminescence, effects of polishing etchant composition 2-93271
 n-CdSe, etched and anodised electrochem. electrode, capacitance-voltage studies 2-66633
 CdTe, light scatt. by inhomogeneities, IR absorpt. and etching meas. 2-77543
 n-CdTe-electrolyte interfaces behaviour modification by surface etching 2-71177
 CoFe_2O_4 single cryst., ellipsometric and magneto-optical study 2-61880
 CsI crystal, dissolution mechanism 2-66228
 Cu single crystal, ion bombardment induced surface topography, incidence angle effect 2-76471
 Cu_2O crystal, dark current-voltage characts. rel. to struct. defects 2-77052
 Fe, electropolishing rel. to other types of metal dissolution 2-57568
 Fe, nitrided, etching techniques 2-72922
 GaAlAs short-cavity laser fabricated by wet chemical etching 2-114279
 GaAs, in situ etching using AsCl_3 in MOVPE 2-99348
 GaAs, oxide removal from chemically etched surfaces, electron and X-ray diff. 2-116561
 GaAs, plasma etching, temp. and discharge freq. effects 2-83255
 GaAs substrate cleaning procedures, AES study 2-88237
 GaAs substrate for MBE, thermal removal of surface C 2-116572
 GaAs, undoped semi-insulating LEC grown, growth striation etching 2-76350
 n-GaAs:Au, impurity profile, electroetching meas. 2-56001
 GaAs:Cr, semi-insulating, photoelectrochem. etching and defect characterisation 2-98072
 $\text{Ga}_{0.47}\text{In}_{0.53}\text{As}$ growth on InP substrates using metalorganic process, factors influencing growth 2-87099
 GaInAsP-InP buried heterostruct. laser fabrication 2-60095
 GaInAsP-InP DH lasers, combined dry and wet etching techniques to form planar (011) facets 2-60100
 GaInAsP-InP integrated optical devices, etched mirrors, grooves and surfaces using stop-etch crystal planes 2-60264
 GaP, oxide removal from chemically etched surfaces, electron and X-ray diff. 2-116561
 GaSb pulled crystals, twin pits in facet regions 2-86668
 Ge, HCl gas phase etched, surface topography 2-98400
 Ge, HCl gas phase etching, surface form. processes 2-99570
 Ge high-purity crystals, H conc. and distrib. 2-70051
 Ge:P, ion implanted, elec. props. 2-77089
 (Hg, Cd)Te, carrier lifetime rel. to wafer processing parameters 2-72001
 Hg_2Cl_2 , surface layer hardness, stress and etching behaviour, surface treatment effects 2-111335
 $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}$ surfaces (100), peroxide etch chemistry 2-111515
 InGaAsP/InP DH wafer, chem. etching characts. 2-88242
 InGaAsP-InP LEDs, prep. and props. of monolithically integrated lenses 2-114473
 InGaAsP-InP system, etch rates for material selective etching 2-72856
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ -InP, etched mirror laser fabrication using HBr-acetic acid- $\text{K}_2\text{Cr}_2\text{O}_7$ etchant 2-114313
 InGaPAs/InP DHS lasers, selective chemical etchant 2-55201
 InP (110), ion bombardment and etching effects, EELS and AES study 2-110099
 InP, etching in $\text{Br}_2\text{:CH}_3\text{OH}$ system 2-75596
 InP, inclusions 2-71433
 InP optical Y-junctions and S-bends formed by single-mode rib waveguides 2-114422
 InP, plasma etching, temp. and discharge freq. effects 2-83255
 InP structured (100) substrate, fabrication by preferential etching for LPE growth 2-99571
 InP surface, prepared by various cleaning methods, anal. by AES 2-88389
 InP-Si $_3$ N $_4$ interface, surface pot. var., I-V, C-V and MISFET characts., surface prep. by etching 2-56710
 InP-SiO $_2$ interface, surface pot. var., I-V, C-V and MISFET characts., surface prep. by etching 2-56710
 KCl-NaCl two-phase mixed cryst., etching obs. of impurity ion defects 2-55988
 LiF, slip on {100} planes 2-81792
 MgO:Fe^{2+} , quenched crystals, kinetic reactions 2-57380
 MgSiO_3 single crystal, chemical and thermal etching 2-67598
 Mn-Zn ferrite single crystal, plastic deform. (Japanese) 2-67435
 $\text{NaCd}(\text{HCO}_3)_3$, cryst. growth and struct. characterisation, etching, X-ray diff. and IR study 2-91920
 NaCl-KCl crystals, Ca doped, etching studies of non-dislocation pits 2-76482
 $\text{Na}_2\text{O-Fe}_2\text{O}_3\text{-SiO}_2$, glass, surface dealcalisation, role of iron oxides 2-73016
 NiO, relative energies of (011) tilt boundaries 2-55982

etching continued

- Pb_{1-x}Ge_xTe thin film structures, growth by MBE 2-92393
 Rn gas passive dosimeters using electrochemically etched tracks in CR-39 2-67918
 Rn passive dosimeter using polycarbonate track etch detector 2-67919
 Si (110), high depth to width ratio profiles produced by anisotropic photo-etching 2-62245
 Si concentrator solar cell, etched multiple vertical junction 2-93920
 Si, Czochralski crystals, intrinsic gettering study 2-76430
 Si, diffusion of P from CVD phosphosilicate glass 2-66295
 Si etch rate thin film monitor for in-situ meas. using light interferometry 2-79654
 Si etching by F and F₂, chemiluminescent reaction 2-88361
 Si film, large grain polycryst., crystallographic orientation, grid-of-etch-pits technique 2-11591
 Si MOS struct., charge motion, TSC meas. 2-115911
 Si, plasma chemical etching, electron stimulated 2-116580
 Si, polycrystalline, etch selectivity and profile control in CCl₄-O₂ plasma 2-82353
 Si, profile control with DC bias in plasma etching 2-88235
 Si radiation detector, epitaxial crystal growth appl. 2-90367
 Si surface, tetrahedrally textured, charact. of ion implanted n⁺ layers 2-76475
 Si wafers, thermally-induced defects characterisation by room-temp. photoluminesc. 2-87837
 Si:C, Czochralski grown, donor form. by annealing at 700°C 2-110283
 SiO₂, polycrystalline films, prep. and props. 2-72629
 Si:P, As, Sb, ion implanted, multiphase electron beam annealed, impurity profiles 2-103803
 Si-CaF₂-Si heteroepitaxial struct. formation by vacuum deposition, etching characts. 2-83026
 Si-SiO₂ interface, atomic roughness, oxidation parameters influence 2-56372
 Si-SiO₂ MOS struct. etched in chloroform RF discharge, charge props. (Russian) 2-61592
 SiC particles, paramagnetic defects treatment effects, ESR study 2-87593
 Si₃N₄, CVD layers in MNOS struct., depth inhomogeneity, pot. distrib., effective resist. and etch rate exam. 2-92769
 Si₃N₄/H, plasma deposited, H content 2-103801
 SiO₂ films, etching by impinging or substrate Si in ultra-high vacuum 2-67218
 SiO₂ free films, preparation by etching 2-77731
 SiO₂, HF plasma discharge, chemical etching, IR spectroscopy study 2-65772
 SiO₂, plasma chemical etching, electron stimulated 2-116580
 SiO₂/Si thermal, F ion implantation and distrib. (Chinese) 2-109821
 SnO₂-Sb₂O₃ transparent conductive film, etching in solutions of alkali metal hydroxides 2-99574
 SrSO₄(001) surface, stratigraphical etch patterns 2-61263
 TaSi₃ evaporated and sputtered films, resist., stress and etching behaviour under various residual gas conditions 2-87094
 U, electrochemically marked, residual contamination and corrosion, SEM and ion microprobe anal. 2-83269
 U exploration, α -track technique principles 2-68525
 VO₂/V₂Si₃/Si, semiconductor-superconductor-semiconductor, Josephson junction fabrication (Japanese) 2-82537
 ZnO (0001) surfaces, chem. etched, topography study 2-98401

ether drift see special relativity

Ettingshausen effect see thermomagnetic effects

europium

- see also nuclei with
 atom, laser isotope separation by two-step selective photoionisation method 2-64940
 atom, photoionisation cross section meas. from excited states rel. to laser isotope separation 2-64939
 atom, photoionisation cross-section, giant reson. 2-102448
 atom, screening ratios, pseudo-relativistic Hartree-Fock calcs. 2-75200
 binding energies of 4f electrons in metallic rare-earth materials 2-56462
 electron irradiation, damage, displacement threshold energy 2-81827
 fusion reactor blankets, neutron multiplication calcs. 2-54643
 relativistic 2p excitation energy calcs. 2-115686
 tris-tetrabutylammonium yttrium hexathiocyanate:Eu³⁺, fluorescence spectra 2-61958
 vacuum UV absorpt. spectra 2-93217
 β -Al₂O₃/La₂O₃:Eu³⁺, optical props., struct., dye laser site-selective excitation and X-ray diff. obs. 2-61959
 BaGeO₃-Al₂O₃-CaF₂-MgF₂:Eu²⁺, glass, spectral-luminescence, IR and Raman study 2-72553
 Ba₃(PO₄)₂:Eu, luminophors, luminescent processes 2-82891
 Bi₂-La₂WO₆:Eu, luminesc. props. 2-82900
 CaF₂:Eu³⁺, annealing temp. and dopant conc., site selective spectroscopy, defect chemistry 2-104917
 CaF₂:Eu²⁺ crystal, scatt. of terahertz phonons, luminesc. detection and piezospectroscopic obs. 2-103926
 CaF₂:Eu³⁺, two photon luminescence excitation and freq. spectrum 2-110937
 CaO:Eu³⁺, site selective spectroscopy, UV and fluoresec. study 2-110895
 CaS:Eu,Sm, phosphor, luminesc., nanosecond IR laser stimulation, dosimeter appl. 2-57140
 CaWO₄:Eu³⁺ and CaWO₄-BaWO₄:Eu²⁺ phosphors, luminesc. props. 2-57150
 CdF₂:Eu, defect chem., site selective spectrosc. obs. 2-104918
 CdF₂:Eu, insulating single cryst., electronic cond. 2-98657
 CdF₂:Eu, localised impurity excited states degenerate with cond. band, absorpt., cond., thermoluminesc., and ESR study 2-56473
 CdF₂:Eu²⁺, insulating, thermally stimulated relax. 2-67129
 Cs₂NaYCl₆:Eu³⁺, optical emission spectra and cryst. field anal. 2-104934
 Eu II, line intensity meas. and oscillator strengths 2-59746
 Eu II, oscillator strengths, astrophysical apps. 2-59747
 Eu³⁺ in germanate glass, energy transfer from Bi³⁺, pumping range increase 2-90906
 Eu+Sr, radiative collision, final-state coherences 2-75377
¹⁵¹Eu atoms and mols. in solid Ar, matrix isolation and Mossbauer study 2-54807
 GaP:Eu epitaxial films, photoluminesc., effect of γ -irrad. 2-93267
 Gd₂MoO₇:Eu³⁺, spectroscopic props. 2-93254
 GdOBr:Eu³⁺, cryst. field effects, fluoresec. study 2-66503

europium continued

- KBr:Eu, with Z-centres, narrowband IR luminesc. and absorpt. spectra obs. 2-116245
 KBr:Eu, with Z-centres, narrowband IR luminesc. and absorpt. spectra obs. 2-116245
 KCl:Eu, F-centre colouring 2-109791
 KCl:Eu, photoconductivity, thermoluminescence and TSC 2-82404
 KCl:Eu²⁺, γ -irrad., optical, EPR, and ITC meas. 2-109831
 KCl:Eu²⁺, impurity-vacancy complexes, conversion under γ -irrad. and F-band bleaching, ESR study 2-76499
 KCl:Eu²⁺, X-irrad., luminesc. and cond. props., elec. field effects (French) 2-116262
 La₂MoO₇:Eu³⁺, spectroscopic props. 2-93254
 LaOBr(1):Eu³⁺, cryst. field effects, fluoresec. study 2-66503
 (LaO)₂CO₃, type Ia and II polymorphs, Eu doped, site selective excitation of fluorescence 2-116226
 (LaO)₂CO₃:Eu, type Ia and II polymorphs, site selective excitation of fluorescence 2-116226
 (LaO)₂S-(YO)₂S[(LuO)₂S]:Eu, STEM analytical and cathodolum. studies 2-72560
 LiLaP₂O₇:Eu³⁺, luminescence of broad band emitters, concentration quenching 2-77575
 LiNbO₃:Eu³⁺, polarised optical absorption bands, splitting 2-82835
 LuPO₄:Eu³⁺, IR absorption spectra 2-87822
 NaCl:Sr²⁺, Eu²⁺, precipitation of SrCl₂, EPR study 2-98956
 PbF₂:Eu³⁺, superionic conductor, optical absorption line broadening due to F⁻ ion motion 2-115456
 RbCl:Eu, photoconductivity, thermoluminescence and TSC 2-82404
 RbI:Eu²⁺, thermoluminescence and optical absorpt., effect of γ -irrad. 2-57192
¹²⁵Sb-¹⁵⁴Eu, NBS long-lived mixed-radionuclide standards, photon emission rates determ. 2-59579
 SmB₆:Eu²⁺, local cryst. fields, EPR study 2-92999
 SrF₂:Eu²⁺, ESR study of forbidden transitions 2-92998
 SrS:Eu,Sm, phosphor, luminesc., nanosecond IR laser stimulation, dosimeter appl. 2-57140
 YAlO₃:Eu³⁺, perturbed ²⁷Al photon echo ENDOR double reson. 2-104745
 Y₂MoO₇:Eu³⁺, spectroscopic props. 2-93254
 Y₂O₃, phosphor, Eu activated, chem. transport method cryst. growth, red luminesc. 2-111040
 YOBBr:Eu³⁺, cryst. field effects, fluoresec. study 2-66503
 YOCr:Eu³⁺, cryst. field parameters, overlap model 2-82298
 ZnS:Cu, Eu, Cl, electron multiplication process, luminesc. kinetics study 2-67121
 ZnS:Cu, Eu, electrolum. and photolum., quantum yield meas. 2-110943
 ZnS:Eu, influence of cryst. lattice field on Eu²⁺ emission spectra 2-87866

europium alloys

- binding energies of 4f electrons in metallic rare-earth materials 2-56462
 hyperfine field, press. depend. 2-92550
 hyperfine field, press. depend. 2-92551
 valence fluctuation systems, systematics 2-56498
 Eu-Au, surface segregation study using surface shifted core levels 2-105047
 EuAl₂, quadrupole interaction at ¹¹¹Cd probe 2-116100
 Eu₇₇Al₂₃, amorphous, elec. field gradient at S-state ion, Mossbauer study 2-104761
 Eu₈₀Au₂₀, amorphous, Mossbauer study 2-82757
 EuCu₂Si₂, valence fluctuation and Cu NQR temp. depend. 2-56512
 EuFe₂Al₆ mixed valence cpd., magnetically ordered, XPS study 2-56513
 EuPd₂Si₂, mixed valence cpd., mag. susceptibility, lattice const., Mossbauer isomer shift 2-56510
 EuRh₃B₃, itinerant mag. ordering 2-104578
 EuSn₃, monocryst., thermopower 2-71952
 (Eu_{1-x}Y_x)₈₀Au₂₀, amorphous, elec. field gradient at S-state ion, Mossbauer study 2-104761
 Eu₆₀Yb₂₀Au₂₀, amorphous, Mossbauer study 2-82757
 Yb_{1-x}Eu_x, mag. interactions, Mossbauer, magnetisation and resist. meas. 2-72382
 Yb_{1-x}Eu_xAl₂, exchange and electron spin-lattice relax., ESR study 2-82712

europium compounds

- see also europium alloys
 chalcogenides, undoped ferromag., real spin 7/2, density of states and band edge shift 2-76885
 europium tris-thenoyl-trifluoroacetate, luminesc. spectra, shifts and widths, temp. depend. 2-72551
 ferromag., magnetisation meas., mag. eqn. of state CC Eu₂Sr_{1-x} alloys, ferromag., magnetisation meas., mag. eqn. of state 2-116001
 (Eu,Tm,Y,Ca)₃(Fe,Ge)₂O₁₂ thin film system, domain boundaries (Russian) 2-77338
 (Eu,Y)₃FeO₁₂, epitaxial bubble film, rare earth segregation 2-72633
 Eu complex, β -diketonates:1,10-phenanthroline, IR and luminesc. spectra 2-113989
 Eu reagents with coordination at pyridine N-atom, NMR, chemical shift, pseudocontact model 2-75322
 EuAs₃, elec. cond. and mag. props. 2-92907
 EuB₆, compressibility, valency and intermediate valence effects 2-56072
 EuB₆, K emission and absorpt. spectra, band struct. 2-87900
 Eu_{1-x}B_xCoO₃, B=Ca,Sr, Mossbauer emission study of defect 2-87631
 Eu₂Bi₂S₄, cryst. struct. refinement (French) 2-71404
 EuCl₃, crystal field splittings by polarisable ligands 2-92539
 EuCl₆³⁻, solns., symmetry, MCD and visible obs. 2-108600
 EuCl₃·6H₂O:Gd³⁺, cryst. field parameters, spin Hamiltonians, polarisability tensors 2-87206
 EuCl₃·6H₂O:Gd³⁺, spin-Hamiltonian parameter superposition model anal. 2-98600
 EuCu₂Si₂, energy balance of mixed-valent Eu ions 2-87197
 EuCu₂Si₂, valence fluctuation study by 3d core level XPS 2-57269
 EuF₂·BaF₂·MnF₂, glass form., quenching, IR study (French) 2-91808
 EuFe₂O₇, garnet, amorphous, struct. props., Mossbauer study 2-103625
 EuGa₂S₄, semicond., injection and thermoelectric currents, trapping 2-87278
 EuGa₂Se₄, cryst. struct. and mag. props. (French) 2-55949
 Eu_{1-x}Gd_xS spin glass, mag. relax., Mossbauer study 2-66833
 Eu(II) cryptate in aq. soln., absorpt. and emission props. 2-104906
 Eu_{1-x}Mo_x(S_{1-x}Se_x)₂, press.-induced non-bulk supercond. 2-110521
 Eu₂(MoO₄)₃, luminesc. and energy transfer 2-82901

europium compounds continued

- EuMo₂S₈, impurity phase supercond. under press., magnetisation meas. 2-92807
 EuMo₂S₈, valence of Eu under high press. 2-82553
 Eu₂Mo₂S₈, superconductivity, thermoelectric power, Fermi surface 2-82510
 EuMo₂S₈(Se₈), supercond. crit. field, electronic struct. 2-92843
 EuNi₂P₂, intermediate valence system, mag. susceptibility and NMR meas. 2-72364
 EuO (Eu_{1-x}Gd_xO) (Eu_{1-x}), mag. semicond., s-d exchange interaction, current carriers effect, expt. study 2-92895
 EuO, conduction band states, effect of electron-magnon interaction 2-66439
 EuO, spin dynamics in paramag. state, method of moments 2-98839
 EuO, static and dynamic props., appl. of correlation theory 2-66742
 Eu-O-Fe cermet, fabrication for reactor control-arm plates 2-107947
 Eu₂O₃, Coulomb (or strong) correlation effects in band structure 2-98538
 Eu₂O₃, cubic, lattice and binding energies 2-60916
 Eu₂O₃, emission material for matrix cathodes with 10A/cm² current density, emission and life testing studies 2-57244
 Eu₂O₃, plasma sprayed, X-ray struct. investigs., plasma jet enthalpy effect 2-99577
 EuP₃, elec. cond. and mag. props. 2-92907
 EuPd₂Si₂, cooperative config. change, isomer shift meas. 2-66964
 EuPd₂Si₂, mixed-valent system, surface shifts, photoelectron spectra study 2-62047
 EuS, bulk and surface valence states 2-104247
 EuS, conduction band states, effect of electron-magnon interaction 2-66439
 EuS, EPR linewidth, reson. field, and spin-spin relax. near Curie temp., shape depend. 2-66910
 EuS film, magnetisation curves in critical temp. range examined by magneto-optic and photomodulation methods 2-66869
 EuS, spin dynamics in paramag. state, method of moments 2-98839
 EuS, static and dynamic props., appl. of correlation theory 2-66742
 Eu₂S₄, crystallographic study of phase transition at 185K 2-97978
 Eu₂Se_{1-x}Te_x, micromagnetism, mag. phase diag., specific heat and mag. meas. 2-82607
 EuSe, magnetic transition, press. induced 2-87504
 Eu_{0.99}Sm_{0.01}Se, hyperfine fields at ¹⁵³Eu, NMR study 2-66924
 Eu₂Sn_{1-x}Mo₂S₈, mag. props. under press. 2-56911
 Eu₂SnS₅, cryst. struct. determ. (French) 2-55916
 Eu_{2-x}Sr_{1-x}Cu₂O_{6-x/2}, cryst. struct. and elec. props., O vacancies (French) 2-91917
 Eu_{0.54}Sm_{0.46}S, ferromag. and spin glass states, magneto-optical rot. and microscopy study 2-72458
 Eu₂Sr_{1-x}S_x, dil. Heisenberg system, with competing interactions, mag. ordering 2-72212
 (Eu₂Sr_{1-x})₂S, dilute, possibility of dipolar spin glass 2-66837
 Eu₂Sr_{1-x}S_x, nearly ferromag., spin correls., neutron diff. study 2-77258
 Eu₂Sr_{1-x}S_x, spin glass transition, AC susceptibility freq. depend. study 2-72221
 Eu_{0.99}Sm_{0.01}Se, hyperfine fields at ¹⁵³Eu, NMR study 2-66924
 EuTe, transferred hyperfine fields, effect of high press. and high mag. fields, Mossbauer study 2-104779
 Eu_{0.53}Y_{0.47}Pb_{0.03}Fe_{0.85}Ga_{1.1} 4O₁₂ epitaxial bubble film, dynamic props. 2-72319
 Eu₂Yb_{1-x}(NH₃)₆, dilute alloys, EPR spectra, Eu²⁺ hyperfine struct. 2-104684
 K₂Eu(NH₂)₆, cryst. struct. and IR spectra, expt. determ. (German) 2-98022
 La_{1-x}Eu_xMo₂S₈, superconductivity and mag. props. 2-72099
 LuPO₄Nd³⁺, Eu³⁺, optical spectra, crystal field interactions 2-67074
 Rb₂Eu(NH₂)₆, cryst. struct. and IR spectra, expt. determ. (German) 2-98022
 Sn₂Eu_{1-x}Mo₂S₈, supercond. props. under high press. and high mag. field 2-110551
 Sn₂Eu_{1-x}Mo₂S₈, anomalous supercond. props., H_{c2}, exchange interaction 2-104553
 Sn₂Eu_{1-x}Mo₂S₈, mag. field induced superconductivity 2-72100
 Sn₂Eu_{1-x}Mo₂S₈, mag. field induced superconductivity 2-72224
 Sn₂Eu_{1-x}Mo₂S₈, lattice instability, elec. study, supercond. props. 2-103979
 (Sn_{1-x}Eu_x)₂Mo₂S₈, superconductivity, press. effect 2-104531
 SrMO₂Eu₂(MO₄)₃ (M=Mo, W), defect formation, electrochemical props. 2-109783
 SrMoO₄Eu₂(MoO₄)₃ solid soln., photolum. and thermolum. 2-110910
 SrVO₃-EuVO₃, perovskite struct., prep. and props. of solid solns. 2-72646
 SrWO₄-Eu₂(WO₄)₃ solid soln., photolum. and thermolum. 2-110910
 TlInTe₂-TiEuTe₂, reactions, microhardness and elec. cond. 2-111167
 Tm_{1-x}Eu_xS, narrow gap mag. semicond., magnetization and elec. cond. 2-92969
 (Y_{1-x}Tm_xCa_{1-x})(Fe₂Ge₂)O₁₂ system films, FMR study of mag. parameters (Russian) 2-77385
 ZrO₂-Eu₂O₃ single crystals of tetragonal struct., Raman scatt., domain struct. existence 2-93191

eutectic alloys

- carbide γ/γ' directional eutectic, fracture under creep conditions (Russian) 2-99517
 carbide directional γ/γ' eutectic, struct. defects after long-term strength tests (Russian) 2-98092
 coupled growth, enhancement in off-eutectic alloys by 'stop-and-go' technique 2-99411
 homogeneity time estimating based on segregation model (Polish) 2-66226
 lamellar eutectic solidification, steady state, at high solidification rates 2-56160
 Ag-Cu eutectic alloys, elec. contact performance, effects of microstruct. (Korean) 2-62239
 Ag-Cu system, T₀ curve between liquid and α -phases, calc. and relevance to rapid solidification 2-105128
 Al-Al₂Pt₃, unidirectionally solidified eutectic, microstruct. and mech. props. 2-116434
 Al-Al₂Cu submicron eutectic thin-film struct. 2-104186
 Al-Cu eutectic, superplastic, fracture strain and strain rate sensitivity (Japanese) 2-57459
 Al-Cu eutectic, superplastic, fracture behaviour (Japanese) 2-57460
 Al-Cu eutectic alloy, substrate temp. effect on rapid solidification 2-93498

eutectic alloys continued

- Al-Cu-Mg eutectic alloys, unidirectionally solidified, structure, and mech. props. (Korean) 2-67312
 Al-Fe(4wt.%), STEM-EDS X-ray microanal. of rod-shaped precipitator 2-67795
 Al-Si (11.3 at.%), fast quenched eutectic alloy, effect of heat treatment on supercond. props. 2-61654
 Al-Si (20 wt.%), hypereutectic alloy, effect on cast struct. of P and Na additions (Japanese) 2-55890
 Al-Si(11.3 wt.%), superconducting props., heat treatment effects (Chinese) 2-98778
 Bi₂Te₃-Sb₂Te₃-GeTe-PbTe system alloys, thermo-EMF, elec. and thermal cond., thermoelec. efficiency 2-56626
 Cd-Pb submicron eutectic thin-film struct. 2-104186
 Cd-Zn eutectic alloys, etch pit generation, chemical, electrolytic and ion beam methods 2-88252
 CdTe-Ge system, phase diagram, determ. by DTA and X-ray diff. (Japanese) 2-105122
 Co-Al eutectic, lamellar, shock-induced incipient fracture 2-72788
 Co-Cr, 2-93501
 Co-Sn eutectic alloy solidification, low-frequency vibration influence obs. 2-116432
 CoB amorphous alloys, hyperfine field, mag. anisotropy, domain walls, NMR study 2-104714
 CoP amorphous alloy, hyperfine field, mag. anisotropy, domain walls, NMR study 2-104714
 Cu-Cu₂Mg system, metastable cubic phase form. by quenching from liq. state 2-99396
 Fe-B, quenched from liq. state, crystn., microstruct. and hardness 2-111166
 Fe-FeSi, hypereutectic films, solidification, lamella to dendritic struct. transition 2-57341
 Fe-FeSi, liquid hypoeutectic alloy, solidification, obs. by droplet method 2-67309
 Gd-In system, phase diagram study (Chinese) 2-111136
 InSb-TiSb eutectic alloy, galvanomagnetic props. 2-104399
 Li₂Pb₈₃ eutectic, compatibility with 316 L austenitic stainless steel 2-111372
 Mo-HfN (0.36 vol.%), texture changes during recrystn. annealing (Russian) 2-93528
 Ni, heat-resisting, directional solidification, B influence on fine struct., diffusion and creep 2-67321
 Ni, heat-resisting cast, directed change of comp. and morphology of primary carbide phases 2-67320
 Ni-base, pseudobinary, thermal stability in temp. gradient 2-67284
 Ni-base eutectic superalloy, γ/γ' - α , interfacial struct. 2-82149
 Ni-Cr based refractory eutectic alloy, electron microscopy study (Russian) 2-98298
 Ni-Mo-Al, γ/γ' - α eutectic, directionally solidified, struct. and creep rupture 2-105326
 Ni-Ni₃Al system, microdendritic precipitation 2-111179
 Ni-Ni₃Si system, microdendritic precipitation 2-111179
 Ni-W, directionally crystallised eutectic, crystallographic struct., electron microscopy study (Russian) 2-91870
 Ni-W, eutectic alloy, directionally solidified, precip. of Ni₄W around W fibres mosaic struct. form. 2-105146
 Ni-W-Co-Cr-Al-Nb-C eutectic CoTaC-741 alloy autoradiographic investig. of Pm distrib. 2-105176
 Ni₂Sb₂-NiSb eutectic system alloys undercooling (Japanese) 2-116433
 Pb-Ag-Sn-Au solder, solidus and liquidus temp., Au addition effects, DTA study 2-93499
 Pb-Sn submicron eutectic thin-film struct. 2-104186
 Pd₈₀Si₁₄Cu₆ eutectic, laser beam interaction 2-99435
 Sn-In system, phase equilibria, cryst. struct., DTA, X-ray and metallographic study 2-92156
 Sn-Pb (38 wt.%), fracture in superplastic flow Region III 2-105300
 Sn-Pb eutectic, superplastic behaviour in as-worked state 2-67442
 Y-IR system, supercond. transition temp., heat capacity and susceptibility meas. 2-82508
 Zn-Al, steady state creep near eutectoid transformation, microstructural anal. 2-77868
 Zn-Al (22 wt.%), comparison of constant strain rate and creep testing procedures 2-99617
 Zn-Al alloys, thermal cycling effect across eutectoid transformation temp. on superplasticity 2-67440
- eutectic structure**
 gray cast Fe, cooling rate influence on eutectic cell struct. and mech. strength (Japanese) 2-62115
 polyethylene-1,3,5-tribromobenzene mixture, eutectic solidification and oriented growth 2-92164
 steel-TiC composite with 10R6M5 high-speed steel, high-density material, processing parameters, struct. and mech. characts. 2-67262
 thin film struct. growth, nonlinear model 2-115587
 Ag-Cu eutectic alloys, elec. contact performance, effects of microstruct. (Korean) 2-62239
 Ag-La (25 at.%), phase diagram invest., thermal anal. and X-ray meas. 2-67301
 AgI-RbI(KI), eutectic mixture, impurity behaviour during crystn. refining 2-111064
 Al-Al₂Ni, chill-cast, directionally solidified, effect of hot-rolling 2-83141
 Al-Al alloys solidified under high press., Cu segregation (Japanese) 2-116449
 Al-Si-Mg-Sr, hypoeutectic, modified by pure Sr, microstruct. and mech. props. 2-99386
 Al-Si-Sb alloys, struct. modification with Sb additions (Chinese) 2-62130
 Al-Ti-Be, grain refinement, Be-enhanced 2-83086
 Bi₁-BiCl₃, phase diagram, eutectic point, crystn. range 2-99405
 Cd-Hg-Te system, eutectic microstructures obs. 2-111155
 Co-Si film, laser melted, lamellar eutectic solidification 2-116431
 Fe-C system, austenite+liquid phase boundaries, expt. determ. by DTA 2-105125
 Fe(ClO₄)₃ eutectic frozen aq. soln., ligand fields, Mossbauer study 2-92543
 GaSe-Sb, phase diagrams, immiscibility of liq. phase, expt. study 2-71614
 GaSe-Sb₂Se₃, phase diagrams, immiscibility of liq. phase, expt. study 2-71614
 GeTe-Co₂Ge, microstructure and mech. props. meas., thermocouples appl. 2-86890
 GeTe-FeGe₂, phase diagram, eutectic composition 2-111154

eutectic structure continued

- K₂O-Al₂O₃-Al₂O₃ system, phase relationships, 1200-1700°C 2-111156
 K₂WO₄-UO₂WO₄ reactions, and phase diagram, DTA study 2-88066
 Na₂MoO₄-Pb₂MoO₄, fusibility diagrams 2-111152
 Ni alloy, heat-resisting, directional solidification, B influence on fine struct., diffusion and creep 2-67321
 Ni-base eutectic superalloy, γ/γ' - α , interfacial struct. 2-82149
 Ni-base pseudobinary eutectics, thermal stability in temp. gradient 2-67284
 Ni-Cr based refractory eutectic alloy, electron microscopy study (*Russian*) 2-98298
 NiO-Y₂O₃, directionally solidified eutectic, crystallography 2-109762
 Pb-Cd-Zn ternary system, microstructures of eutectic and near-eutectic specimens 2-111162
 PbS-NiSb, microstructure and mech. props. meas., thermocouples appl. 2-86890
 PbTe-NiSb, microstructure and mech. props. meas., thermocouples appl. 2-86890
 Si-VSi₂, directional eutectic, structure, comp. dependence, expt. study (*Russian*) 2-99410
 Sn-Pb eutectic, superplastic behaviour in as-worked state 2-67442
 TiN₂-TiB₃ system reaction, polythermal cross-sections 2-105133
 Ti₃As₂Te₂-Te, intersecting section in Ti-As-Te system 2-111153
 Ti₃Te-Zn(Cd)Te, phase equilibria, degree of dissociation 2-72678
 V₂O₃-La₂O₃ system, phase equilb. relations 2-67306

eutectoid steel *see carbon steel*

evaporated layer production *see vapour deposition*

evaporation

see also drying; field evaporation

- Al₂S₃ compounds, prep. by electron beam evaporation, superconductivity and phys. props. (*Russian*) 2-66688
 absorption solar cooling system, open-cycle, possibilities of storage of cold 2-98842
 Arctic tundra surface evaporation on Axel Heiberg Island 2-94411
 atomic beams, production, using laser-induced ablation, anal. 2-96776
 atomic vapour sources for laser isotope separation, electron-beam evaporation and cathode sputtering 2-65101
 binary gas mixture, combined diffusion and forced flow through porous medium, evaporation, drying 2-114874
 butane, rapid evaporation at the superheat limit 2-109173
 butane droplet, evaporative instability at the superheat limit 2-56167
 climate, land-surface evapotranspiration effect 2-83938
 clouds, liquid water evaporation rel. to cloud-top entrainment instability observed during AMTEX 2-100475
 concrete slab, surface heated, heat and mass transfer, evaporation-recondensation mechanism 2-114621
 condensed medium, oscillatory evaporation by EM radiation 2-92312
 controller for thermally sensitive specimens 2-64023
 drops, spherical, evaporation at arbitrary Knudsen numbers 2-56169
 evaporating droplet, vaporization and trajectory characteristic simulation 2-97619
 evapotranspiration on regional scale, satellite thermal IR data 2-106158
 first wall materials vaporisation and melting in fusion devices 2-74919
 flow inside heated porous metal, struct., heat release during evaporative cooling 2-114883
 foam concrete, moisture condensation and re-evaporation 2-70831
 Great Lakes, effects of atmospheric stability on evaporation 2-88919
 heat transfer, press. drop and crit. heat flux in a small vertical tube with R-113 2-91426
 ice single crystal growth and evaporation from vapour phase, interface kinetics 2-97959
 ice single crystal growth and evaporation from vapour phase, interface kinetics, meas. in water vapour environment 2-97960
 ice single crystal growth and evaporation from vapour phase, interface kinetics, meas. under N₂ partial press. 2-97961
 Knudsen layers, strongly nonequilib., numerical investig. 2-81362
 lake annual evaporation estimation from climate data 2-117379
 laminar wavy film flow, condensation and evaporation, Nusselt theory 2-114832
 laser breakdown mechanism in bombardment of water targets with CO₂ laser pulses 2-60367
 δ -Li₂MoO₄, vaporisation and thermal stability 2-66191
 liquid natural gas, spills, vapour dispersion simulation 2-99865
 liquid thin films evaporating into saturated vapour, stability anal. 2-98394
 liquids, evaporation from capillaries, corona discharge field effect 2-114626
 Mediterranean Sea, atmospheric moisture transport and water balance 2-78695
 metal, electron beam evaporation, plasma form. (*Russian*) 2-71504
 metal electrode in plasma focus, evaporation, MHD mechanism (*Russian*) 2-103384
 metals, laser evaporation, reaction to radiation intensity modulation 2-92171
 molecular ion formation from liquids and solids 2-98384
 organic compounds, SIMS, fast evaporation model 2-105033
 Padua, evaporation rate over mainland and sea 2-68445
 porous half space, heated, transient heat and mass transfer, self-similar temp., press. and moisture distrib. 2-114603
 Pyramid Lake, Nevada, evaporation rate from climatic energy flux balance model 2-78847
 rare earth orthophosphate, high temp. behaviour, dissoc. 2-67740
 soil evaporation, active microwave radar meas. 2-68533
 stratosphere aerosol layer, effect of H₂SO₄ evaporation from aerosol particles on S budget 2-112046
 strong evaporation into half space, approx. soln. 2-60387
 strong evaporation into half-space, BGK model 2-97354
 surface, liq. and solid, nonequilibrium condensation, shock tube study 2-60379
 surface waves in evaporating liq., dispersion eqn. 2-92311
 Tokamak reactor plasma, impurity generation 2-74916
 triethanolamine, interfacial resistance to evaporation, under vacuum 2-61256
 turbulent air stream, liq. evaporation, heat and mass transfer 2-65586
 turbulent liquid jets, heat and mass transfer 2-71003
 type 316, first wall material evaporation in ICF reactor utilising gas protection 2-74920
 ultrafine particle prep. by gas evaporation with arc plasma sputtering 2-67231

evaporation continued

- vapour-gas mix., heat and mass transfer on high-rate evaporation of liqs. 2-91421
 water, flow through heated porous layer, evaporative cooling, temp. distrib. 2-65639
 water drops containing salt in high pressure steam environment 2-65472
 Ag/Ag₂Te vaporisation cells, printed cct. power supplies appl. (*Spanish*) 2-88419
 alloy film preparation, evaporation kinetics from melt (*Russian*) 2-66393
 C film formation by laser evaporation and ion beam sputtering 2-116370
 C, first wall material evaporation in ICF reactor utilising gas protection 2-74920
 CdS(Se), evaporation kinetics of thin crystals and films on vacuum annealing, comp. changes meas. 2-10157
 Cu-Ni (40 wt.%), physisorbed ³He desorpt. kinetics, prefactors and compensation effect 2-98458
 Fe film, evaporated at oblique incidence, columnar struct. 2-98493
 Ga-P solutions, evap. of P and vapour press. of P₂, influence of Sn and In 2-56168
 Hg_{1-x}Cd_xTe, cleaved (110) surface room temp., evaporation stability, XPS and UPS study 2-87040
 In-P solutions, evap. of P and vapour press. of P₂, influence of Sn and In 2-56168
 In₂Te₃, 725-895K, mass spectroscopic investigation 2-86845
 Li₂MoO₄, vaporisation and thermal stability 2-66191
 NaCl-KCl mixed cryst., thermal evaporation study 2-109965
 Pr-Tb-O film, thermally evaporated, struct., optical and elec. props. 2-110189
 Se amorphous vacuum condensates, cryst. 2-104181
 Si:H amorphous film prep., evaporation method 2-62069
 Sn₂P₂S₆, thermal evaporation, ferroelectric props. 2-71622
 TiN, formed by evaporation as diffusion barrier between Al and Si 2-83028
 UO₂ surfaces, laser irradi., evaporation mechanism and kinetics 2-93330
 W surface, adsorbed Cs displacement by Sm 2-104164

Evershed effect *see sunspots*

evolution (biological)

- cometary impacts on Earth, geophysical and biological effects 2-101149
 Cretaceous-Tertiary boundary event, and extinction of marine plankton 2-94368
 Cretaceous-Tertiary boundary event due to comet impact in USSR 2-62959
 Cretaceous-Tertiary extinctions, traces of cosmic catastrophe (*Russian*) 2-83820
 extinctions rel. to terrestrial catastrophism, role of galactic spiral arms and comets 2-79039
 Late Mesozoic mass extinctions, asteroid impact theory 2-58055
 origin of life in Precambrian submarine hot springs 2-62958
 Sun, primitive, UV and X-ray emission, influence on biological processes 2-105880
 viral DNAs, evolutionary selection for perfect hairpin structs. 2-99888

EXAFS

- aerosols, atmospheric, X-ray methods for chem. characterisation 2-67907
 atomic local exchange and correlation potentials for electron scattering at solid surfaces 2-105019
 attenuation factors of oscillations amplitude in absorpt., reflectivity and luminesc. meas. 2-57209
 bond lengths, determination using EXAFS and linear phase functions 2-77623
 conference, Boston, MA, USA (Nov. 1979) 2-74160
 core level photoelectron spectroscopy for surface crystallography 2-77694
 dispersive mode, EXAFS for kinetic studies 2-77620
 double crystal monochromator, performance and appl. in energy region 800-4500 eV 2-84758
 Dyson orbitals approach to studies of XPS and EXAFS 2-110976
 Grafoil with Kr submonolayers, EXAFS study 2-82139
 graphite, electronic and struct. props., EELS and secondary electron emission study 2-110999
 laboratory X-ray source appl. to EXAFS spectroscopy 2-58973
 materials science appl., review 2-93388
 metal foils, EXAFS spectra meas. using energy dispersive camera 2-84769
 metal-metalloid alloys, amorphous, EXAFS spectroscopy 2-93328
 noise level and energy resolution effects 2-95575
 photon stimulated desorption, appls. 2-92369
 polystyrene-Ru catalyst, EXAFS studies with synchrotron radiation 2-104998
 scattering formalisms, single and multiple, EXAFS theory 2-95574
 spectrometer and detector system, appl. to amorphous Ge-Se 2-116299
 structure determ., comparison of electron and X-ray techniques 2-54989
 surface analysis, comparison with extended appearance pot. fine struct. 2-110970
 surface struct. determ. by surface EXAFS 2-105003
 surface structure, extended absorption fine struct. anal., review 2-110097
 surfaces, X-ray adsorpt. near edge struct. and local atomic arrangements determ. 2-82954
 synchrotron radiation, generation, measurements and appls. (*Japanese*) 2-85411
 Al, oxide film form., EXAFS study in total yield and refl. modes 2-57212
 As, amorphous, temp. depend. of EXAFS 2-105002
 As-based chalcogenide glasses, EXAFS study 2-91786
 Co complexes, low spin Co (III) porphyrins, bond lengths, EXAFS obs. 2-85689
 Co₂-B, metallic glass, struct., neutron diff., Mossbauer and EXAFS study 2-103640
 CoFe₂O₄, bonding, EXAFS study 2-99226
 Cu cold worked, local struct. EXAFS study 2-60921
 Cu-Ga alloys, EXAFS associated with K-absorption discontinuity 2-99220
 Cu-Ge alloys, EXAFS associated with K-absorption discontinuity 2-99220
 CuBr₂ aq. solns., local struct., EXAFS study 2-71331
 CuFe₂O₄, bonding, EXAFS study 2-99226
 Cu₂Zr₄ amorphous alloy, EXAFS spectra meas. and calc. 2-99222
 Cu(en)₂²⁺ exchanged Y zeolite, X-ray absorpt. obs. 2-93324
 Cu₆₀Zr₄₀, amorphous, EXAFS study, struct. chars. 2-110978
 Dy and Dy cpds., EXAFS and chem. shifts meas. 2-99224
 Er₂Pr_{1-x}Sb_x, impurity nearest-neighbour distances, EXAFS study 2-82957

EXAFS continued

- Fe small molecules, in Ne matrix, EXAFS and matrix isolation spectra studies 2-80650
 Ge-Se, amorphous, EXAFS spectrometer and detector system 2-116299
 Ge(111), adsorbed Cl(I)(Te) for cryst. and amorphous Ge, surface EXAFS study 2-110977
 Ho and Ho cpds., EXAFS and chem. shifts meas. 2-99224
 K₂O-GeO₂ glass struct., EXAFS and X-ray diff. study 2-91792
 Li₂O-GeO₂ glass struct., EXAFS and X-ray diff. study 2-91792
 MnFe₂O₄, bonding, EXAFS study 2-99226
 Mo (100), chemisorption of O, surface EXAFS study 2-105003
 MoGe, amorphous, EXAFS studies 2-93327
 Na₂O-GeO₂ glass struct., EXAFS and X-ray diff. study 2-91792
 Na₂O₂SiO₂ glass, Fe³⁺ coordination number 2-97931
 Nb₂Ge film, EXAFS study, superconducting props. 2-99225
 Ni (100), chemisorption of S, surface EXAFS study 2-105003
 Ni₆₆Y₃₃, amorphous, EXAFS study, struct. characts. 2-110978
 Ni(100), chemisorption of p(2×2) and c(2×2)O, surface EXAFS study 2-93326
 Pd₈₀Ge₂₀, amorphous and crystalline, near-edge and EXAFS studies 2-93325
 Pt catalyst, SiO₂ supported, surface struct., EXAFS study 2-99219
 Pt-IR clusters, catalysts, EXAFS study 2-67149
 RGe₂, X-ray absorpt. spectrum study 2-77621
 Si (111)7×7, SEXAFS studies of I adsorpt. 2-83417
 Si-Pd(Ag) on Si (111)7×7, struct. studies of Schottky barrier formation by surface EXAFS 2-110174
 Si(111), adsorbed Cl(I)(Te), surface EXAFS study 2-110977
 Sm_{1-x}Y_xS, mixed valent, X-ray absorption studies 2-57215
 Sm₂Y_{1-x}S, EXAFS theory, valence fluctuation 2-82956
 Tb and Tb compounds, EXAFS and chem. shifts meas. 2-99224
 Te adsorbed on Si(111)7×7 and Ge(111)2×8, surface EXAFS study 2-66360
 Ti, X-ray absorption spectra, electron relax. effects, core-hole potential 2-87903
 TiC, X-ray absorption spectra, electron relax. effects, core-hole potential 2-87903
 TiN, X-ray absorption spectra, electron relax. effects, core-hole potential 2-87903
 TiSe₂, EXAFS spectra 2-72579
 ZnFe₂O₄, bonding, EXAFS study 2-99226
 Zr,Ti_{1-x}Se₂, EXAFS spectra 2-72579

exchange forces in nucleus *see nuclear forces***exchange interactions (electron)**

- see also antiferromagnetism; ferromagnetism; RKKY interaction; superexchange interactions*
 actinide mononitrides and monochalcogenides, Coqblin-Schneffer interaction and mag. orderings and excitations theory 2-72184
 alkali halides, F centre pairs, exchange effects in ODES 2-56981
 amorphous particles, ferromag., magnetisation calc. 2-72265
 annealed system, Gaussian random bond problem in 1/n expansion 2-77298
 antiferromagnetic garnets, with fluctuational interaction sublattices (Russian) 2-104606
 biaxial crystals, inhomogeneous mag. structs., magnetisation, exchange interaction 2-77285
 binary brasses, effects of exchange and correlation on stability 2-56450
 cerium mononitrides and monochalcogenides, Coqblin-Schneffer interaction and mag. orderings and excitations theory 2-72184
 chromium phosphate, polymeric, ESR and spin dynamics 2-82710
 Class II mixed valence oxovanadates, hopping and delocalised electrons 2-66497
 coercive force due to domain wall pinning 2-72281
 dibenzotetraphthalene-Is complex, regular antiferromag. chain with indirect exchange interaction (Russian) 2-104359
 dimethylammonium manganese chloride, pseudo one-dimensional antiferromag., mag. props. 2-116007
 disordered magnet, Ising model with random exchange bonds, Monte Carlo study 2-87468
 electron gas, correlation energy, Ferrell's validity criterion, exchange and correl. contribs. 2-82262
 excited states, exchange energy, density functional theory 2-71891
 Fermi gas, quasi-one-dimensional phase transitions, renormalisation group study 2-56760
 ferrimagnetic materials, exchange striction and crystal lattice in domains and domain walls 2-72186
 ferromagnet, single ion anisotropy, exchange interactions, order parameter, free energy, quantum theory 2-72194
 ferromagnetic chain, one-dimensional, excess electron-spin wave bound state (Russian) 2-115961
 ferromagnetic disordered alloy with s-f exchange, conduction electron lifetime, composition depend. (Russian) 2-92572
 ferromagnetic film layered structure, dipole-exchange spin waves dispersion 2-82582
 ferromagnetic metals, magnetic props. of the generalised model 2-77326
 ferromagnetic metals, nucl. spin-lattice relax., s-d exchange interaction effects, theory (Russian) 2-93981
 ferromagnetic metals, spin fluctuations, temp. variation of local moment and short range order 2-61717
 ferromagnetism, electron, in narrow energy bands, extended Hubbard model (Russian) 2-61688
 ground state of systems with strong Hund coupling 2-66754
 Heisenberg amorphous ferromagnet with random anisotropy, mag. props. 2-61685
 Heisenberg ferromagnet, quenched random site, mag. states with partial spin glass freezing 2-77252
 Heisenberg ferromagnet, surface spin wave relax. due to scatt. by surface fluctuations (Russian) 2-98857
 Heisenberg ferromagnetic chain, soliton magnetoelastic excitations 2-92887
 Heisenberg ferromagnetic system with quadrature exchange interaction at low temp., spin wave theory 2-56813
 Heisenberg magnet, quenched random site, with competitive exchange interactions, high temp. mag. states in simple cubic and BCC lattices 2-56816
 heterophase ferromagnets, exact solns., critical point effects 2-61718
 Heusler alloys, X₂MnY (X=Ni, Cu, Pd; Y=Al, Sn), Stoner and spin wave excitation spectra, OPW calcs. 2-115990
 hexagonal antiferromagnet, mag. ordering 2-110567

exchange interactions (electron) continued

- induced-moment spin glass, generalised Thouless-Anderson-Palmer eqns. 2-92951
 insulators, magnetic interaction between local mag. moments 2-115996
 Ising model, random, in d dimens., susceptibility, high-temp. series expansion 2-82623
 Ising model, random bond, spin correl. function upper bound 2-56879
 Ising model, random site, free energy, convergence criterion and self-avoiding walk approx. 2-56812
 Ising spin glass, random anisotropy study 2-72228
 jellium, effective interactions including exchange 2-71894
 Kondo alloys with rare earth impurities, degenerate exchange model, Bethe ansatz technique 2-66769
 Kondo lattice, Schrieffer-Wolff transform., mag. transition 2-115973
 magnetic anisotropy symm. in case of predominant exchange interaction (Russian) 2-104608
 magnetic interaction of ion in solid, energy-level splitting 2-77288
 magnetic semicond. in MIS system, 2-D electron gas, subband struct. and magnetisation 2-104497
 magnetic semiconductor, magnon instability, population and damping in presence of two rad. fields 2-66799
 magnetic susceptibility of interacting electrons in solids, many-body theory 2-115962
 magnetism theory, statics and dynamics, book 2-68978
 many-electron systems with degenerate and nonorthonormal localised orbitals, effective (exchange) Hamiltonian 2-56453
 metals, ferromagnetic, exchange cond. shift, ferromagnetic antiresonance study 2-98683
 metals, ferromagnetic, Shenberg effect, Fermi liq. model (Russian) 2-104588
 metals, magnetic surface states, angle resolved photoemission studies 2-66604
 metals, stopping power for slow ions, electron exchange and correl. effects 2-86767
 metamagnets, uniaxial, ladder approx. 2-66807
 molecules, exchange interaction between degenerate π orbitals and orbital valence, theory 2-85560
 n-vector model with random interactions, spin correl. function upper bound 2-56879
 nonuniform electron gas, exchange and correlation energy, small and large wavelength contribution 2-82265
 one-dimensional system, plasmon spectra and exchange contributions, tight binding model 2-76957
 orthorhombic cryst., mag. phase transition, exchange-relativistic interaction (Russian) 2-104611
 paramagnets, strongly exchange enhanced, thermodynamic and transport props., field depend. effects 2-115969
 poly(cobalt n-butylphosphinate), weak ferromagnetism and domain wall motion, susceptibility study 2-82570
 quasi-one-dimensional electron-phonon system, first order calc. of phonon propagator 2-110267
 rare earth alloys, amorphous, induced mag., singlet-singlet model 2-104560
 rare earth alloys, amorphous, resistivity and magnetoresist., crystal field and exchange interactions 2-92560
 rare earth alloys, RNiAl, (R=Y, Gd, Tb, Dy, Ho, Er, Tm, K, Lu), mag. susceptibility and cryst. struct. (Russian) 2-115968
 rare earth intermetallics, form factor anal., evidence for 5d polarisation and higher order exchange terms 2-72147
 rare earth orthoferrites, RFeO₃, local and exchange field inhomogeneity, NMR study 2-87209
 rare earth-transition metal alloys, domain walls, role of the long-range exchange (Russian) 2-98905
 review of magnetic order in solids 2-110586
 s-d exchange or Kondo model, general derivation of Wiegmann's soln. 2-98844
 semiconductors, cubic, paramagnetic centre relax. with exciton interactions 2-61760
 semiconductors, elastic LEED, electron exchange effects and relativistic corrections 2-65815
 semiconductors, magnetic interaction between local mag. moments 2-115996
 semiconductors, n-type, insulating, mag. susceptibility 2-56821
 semiconductors, optical absorption by bound excitons, exchange and spin-orbit effects 2-110263
 semiconductors, polar, excitons and polarons, bounding energies, local density approx. 2-61367
 semiconductors and metals, macroscopic permittivity, local field effects, Fermi liq. theory 2-104280
 semimagnetic semiconductors, acceptor states in mag. field 2-98582
 Sm₂(Mn_{1-x}Fe_x)₂, mag. props. study 2-87542
 spin glass, exchange stiffness energy, area depend. 2-116025
 spin glass alloys, transverse magnetoresistance study 2-77022
 spin glass models, unified treatment 2-116018
 spin glasses, Ising model study thermodynamic props. 2-98901
 spinel spin glasses, mag. phase diagram 2-92912
 surface and interface mag. props. 2-66772
 (TCNQ)₂ complex, mag. props. singlet triplet activation energy, ESR obs. 2-56914
 TCNQ salts, disordered, random exchange Heisenberg antiferromag. chain, spin dynamics 2-87501
 TCNQ salts, triphenylmethylarsonium (TCNQ)₂ and Cs₂(TCNQ)₂, one-dimensional triplet exciton systems, nucl. relax. 2-66940
 tetramethyl p-phenylenediamine perchlorate, Wurster's blue, solid, proton spin-lattice relax. time meas. 2-87612
 thin films, mag. structure with antiferromagnetic exchange interaction at surface (Chinese) 2-98848
 TMMC-Cu, high temp. dynamics, effect of impurities, EPR study 2-98944
 TMMC, mag. props. study 2-66786
 (TMTSF)₂X family of organic conductors, magnetism 2-61750
 transition metals, energy band calcs. of magnetism 2-66749
 trimethylammonium cobalt manganese trichloride, impurity spin resonance 2-98953
 two-dimensional triangular lattice, spin struct. 2-61704
 van Vleck ions coupled to electron gas, induced mag., calc. in narrow-band limit 2-61681
 vector spin glasses, internal field distrib. 2-92946
 Ag, electronic struct., non-muffin-tin and relativistic interaction effects 2-61341

exchange interactions (electron) continued

- Au, electronic struct., non-muffin-tin and relativistic interaction effects 2-61341
- Au, spin-exchange collisions of electrons, secondary electron emission expt. 2-87922
- BaFe₂O₁₉/Gd(Dy)(Ho)(Er)(Yb), dopant effects on mag. props. 2-92968
- CO₂, low energy electron scatt., exchange interaction 2-65091
- CS₃MnCl₃, antiferromag. ordering and mag. struct. below 0.6K, magnetoabsorpt. and MCD study 2-77493
- CdCr₂Se₂In, Ag defect single cryst. growth, elec. and mag. characts., dopant influence 2-91842
- (Cd_{1-x}Mn_x)₂As₂, Shubnikov-de Haas effects 2-98677
- Cd_{1-x}Mn_xTe, spin glass versus antiferromagnetic clustering 2-82613
- Cd_{1-x}Mn_xTe, spin-flip Raman scatt. 2-110870
- n-CdS, field-induced exchange stiffness and dispersion, spin-flip Raman spectra 2-93194
- CdTe:Mn, photo-induced spin glass 2-87513
- Ce compounds, magnetic exchange interactions 2-92894
- CeB₆, mag. ordering, neutron diff. study 2-72155
- CeB₆, mixed valence cpd., anomalous props. 2-56511
- CeSb_{1-x}Te_x, elec. and mag. props. 2-66523
- Co, minority spin bands, inverse photoemission study 2-116293
- Co monolayer on Cu, mag. exchange splitting, photoemission, LEED and Auger study 2-98870
- CoFe_{2-x}In_xO₄, In³⁺ cation distrib., mag. props. 2-98868
- Co₂Mn_{1-x-y}Fe_{2x+y}O₄, solid solns., Zeeman spectra, Mossbauer study 2-61792
- CoPt ferromagnetic alloy, atomic ordering in mag. field, magnetoelastic energy role (*Russian*) 2-92983
- CoS₂ single cryst., ferromagnetic and paramagnetic resonance 2-116066
- Cr_{1/3}NbS₂, helical spin struct. due to antisymmetric exchange interaction 2-72162
- CS₃Cr₂Cl₃, exchange interactions, neutron scatt. study 2-66803
- CS₃Cr₂Cl₃(Br₂), optical absorpt. and Zeeman study 2-98871
- Cu complex, CuCl₂TMSO, Heisenberg 1-D ferromag., single cryst. mag. studies 2-66802
- Cu complex, imidazolate-bridged Cu(II), mag. exchange 2-87488
- Cu, electronic struct., non-muffin-tin and relativistic interaction effects 2-61341
- Cu-Mn, dil., mag. impurity system, spin-resolved scatt., de Haas-van Alphen study 2-82563
- Cu-Mn-Al, exchange anisotropy, hysteresis loops and coercive force study 2-66866
- CuAu type ferromagnetic alloy, atomic ordering in mag. field, magnetoelastic energy role (*Russian*) 2-92983
- CuCl₂·2H₂(D₂O), antiferromag. resonance freq., mag. susceptibility (*Russian*) 2-98966
- Cu₂CrM_{2-x}S₄ (M=Sn, Ti), mag., EPR, and Mossbauer meas. 2-98840
- CuFe dilute mag. alloys, g-factor, mag. field splitting of microcontact spectrum (*Russian*) 2-98527
- CuInS₂(Se₂)(Te₂), mag. susceptibility, 4.2 to 300K 2-66761
- CuMn dilute mag. alloys, g-factor, mag. field splitting of microcontact spectrum (*Russian*) 2-98527
- Dy-Fe intermetallic cpds., mag. and cryst. props., X-ray and Mossbauer study 2-92877
- DyAl, mag. moments and anisotropy, neutron diff. and cryst. field calc. 2-115976
- ErCo_{2-x}Fe_x, Laves phase cpds. and their hydrides, mag. behaviour 2-56855
- ErRh₄B₄, coexistence of ferromagnetism and superconductivity 2-72105
- Eu intermetallics, hyperfine field, press. depend. 2-92550
- Eu intermetallics, hyperfine field, press. depend. 2-92551
- EuFe₂Al₆ mixed valence cpd., magnetically ordered, XPS study 2-56513
- Eu_{1-x}Gd_xS spin glass, mag. relax., Mossbauer study 2-66833
- EuO (Eu_{1-x}Gd_xO) (Eu_{1-x}), mag. semicond., s-d exchange interaction, current carriers effect, expt. study 2-92895
- Eu₂Sr_{1-x}Si_x, dil. Heisenberg system, with competing interactions, mag. ordering 2-72212
- Fe (110) surface, exchange splitting, binding energies 2-77149
- Fe garnet films, interrelation of exchange energy, anisotropy and the Neel temp. 2-82676
- Fe, magnetism, fluctuating local band theory 2-82558
- Fe-Mn, dil., ferromagnetic antiferromagnetic interactions (*Russian*) 2-77282
- Fe-Pd, dil. alloys., model of mag. behaviour 2-72198
- Fe-Rh, mag. transitions press. depend. and bulk modulus, s-d exchange model (*Russian*) 2-92902
- (Fe_{0.8}B_{0.1})_{0.9}R_{0.1} (R=Pr, Nd, Sm, Gd, Tb, Dy, Ho, Er), amorphous, exchange interactions 2-72185
- FeF₂:Mn, localised magnon-pair modes 2-72182
- FeFe_{2-x}In_xO₄, In³⁺ cation distrib., mag. props. 2-98868
- Fe_{1/3}Ni_{2/3}B₁₀Si₃, amorphous, critical mag. behaviour, mag. order disorder transition 2-66821
- Fe₂O₄, magnetite, mag., elec., and crystallographic props., low temp. anomalies 2-82586
- Fe₂P, Curie temp., uniaxial stress effect, expt. study 2-87495
- FePS₃(Se₂), layer cpds., mag. interactions 2-61699
- FeTiO₃, metamagnetic transition, mag. props. 2-92903
- FeZn ferrite, Cu²⁺ substituted, Jahn-Teller effect on ground states 2-66502
- Fe₂Zn_{1-x}F_{2x}, randomly diluted antiferromag., field induced 'exchange-flips' 2-66811
- GaAs:Cr, semi-insulating, EPR of extended defects 2-75990
- GaAs-AlGaAs heterojunctions, 20-electron gas, f-factor enhancement, Shubnikov-de Haas oscils. 2-56685
- p-GaSb, conduction electron spin relax., 4.2 to 77K 2-93008
- GdAlO₃, antiferromagnet, mag. struct., neutron diff. study 2-72161
- GdFeB and GdCoB amorphous thin films, mag. props. 2-72298
- GdFeO₃, magnetisation, H-T phase diagram, Fe³⁺-Gd³⁺ exchange interactions 2-7284
- Gd₂Y_{1-x}Fe_x, indirect exchange param. 2-71942
- Gd, lattice dynamics, Gruneisen coeffs., pseudopot. calc. 2-98226
- ³He, BCC, paramag. phase, exchange models, neutron scatt. test 2-71764
- ³He liquid, surface-induced magnetic susceptibility enhancement effective exchange interactions 2-82059
- ³He, solid, nucl. mag. ordering 2-66318
- Hg_{1-x}Mn_xSe, zero gap, far IR magnetotransmission 2-116159
- n-HgMnTe, optical determ. of exchange interaction 2-104605
- Hg_{1-x}Mn_xTe, indirect exchange interaction, perturbation theory calc. 2-82587

exchange interactions (electron) continued

- HoCo_{2-x}Fe_x, Laves phase cpds. and their hydrides, mag. behaviour 2-56855
- Ho₂Co_{1-x}(Fe_{1-x}), magnetic excitations study 2-110573
- HoMo₈S₈, coexistence of ferromagnetism and superconductivity 2-72105
- HoNi₂, mag. excitations, inelastic neutron scatt. study 2-72154
- InSb, band struct. parameters, exciton magnetoabsorption study 2-115659
- K₂Co_{1-x}Fe_xF₄, magnons, Raman study 2-104596
- K₂Cr₂Cl₆(Br₂), optical absorpt. and Zeeman study 2-98871
- KI:Sn²⁺, spectral line shape, visible-UV study 2-72524
- (La,Gd)B₆, single cryst., exchange interaction and cryst. field splitting, ESR 2-104696
- (La₂A_{1-x})(Mn_{1-x}³⁺Mn_{1-x}⁴⁺)O₃, A=Ca, Ba, Sr, indirect exchange interactions, and Jahn-Teller distortions, neutron diff. study 2-66800
- La₂Gd_{1-x}TiO₃ solid solns., mag. behaviour, mean field model 2-104659
- LaMnO₃, distorted, mag. transition above Curie point, magnetisation and magnetoresist. study 2-110582
- LiGa₂O₄:Cr³⁺ luminescence and absorpt. spectra 2-82908
- Mg_{1/3}Fe_{2/3}O₄ spinel, mol. field coeffs. and exchange interactions 2-66801
- MnO, mag. susceptibility and elastic const., distance depend. exchange interaction effects 2-115995
- MnPS₃(Se₂), layer cpds., mag. interactions 2-61699
- Mn_{1-x}Zn_xFe₂O₄ ferrite, exchange interactions and canted-collinear struct. transition temp. calc. 2-110575
- Na, X-ray absorption edge spectra, spin-orbit and exchange effects 2-105001
- Ni (001) surface magnetism, magnetisation, spin polarised LEED study 2-98911
- Ni complex, hexakis-3 crystal field interactions [imidazole Ni(II)] nitrate, EPR fine struct. 2-72336
- Ni, exchange energy meas. by high freq. sound probe 2-66804
- Ni, exchange splitting of phonon assisted microwave transmission at 9.5 GHz 2-66885
- Ni, ferromagnetic, band struct. calc., optical absorpt., photoemission and magneto-optical data anal. 2-66434
- Ni, magnetism, fluctuating local band theory 2-82558
- Ni, short-range mag. order above Curie temp., photoelectron spectra study 2-87945
- Ni, sound excitation and transmission, resonant and nonresonant, 9.37 GHz 2-61076
- Ni₂Al, de Haas-van Alphen effect and band struct. 2-66422
- NiBr₂, helimagnetic state, inelastic neutron scatt. study of mag. excitations 2-98861
- Ni₂Mn_{1-x}Ni_x, magnetic phase diagram, coexistence of spin glass and ferromag. phase 2-92938
- Ni₂Mn_{1-x-y}Fe_{2x+y}O₄, solid solns., Zeeman spectra, Mossbauer study 2-61792
- NiPS₃(Se₂), layer cpds., mag. interactions 2-61699
- NiZn ferrite, Cu²⁺ substituted, Jahn-Teller effect on ground states 2-66502
- O₂, exchange interaction between degenerate π orbitals and orbital valence, theory 2-85560
- α , β -O₂, magnetisation under high press. 2-66760
- OSf₅, magnetic interactions of intra- and interclusters, neutron diff. study (*French*) 2-66805
- Pb_{1-x}Mn_xTe, quantum transport and mag. energy levels, Shubnikov-de Haas oscils. 2-98676
- Pd₂Pt_{1-x}Fe_x, magnetic state, mixed exchange interaction, magnetisation and susceptibility 2-72208
- Pr:Gd³⁺, Er³⁺, exchange interaction, g-shift, ESR study 2-72342
- Rb₂Cr₂Cl₆(Br₂), optical absorpt. and Zeeman study 2-98871
- RbNiF₃, Heisenberg ferrimagnet, mag. susceptibility, optimal transformation method 2-77277
- RuF₃, magnetic interactions of intra- and interclusters, neutron diff. study (*French*) 2-66805
- n-Si, magnetoelectric effect, spin dependent electrical polarisabilities 2-82375
- Si:H,B, amorphous, ESR lineshape, g-factors, temp. depend. 2-77373
- Si:P, heavily doped, as amorphous antiferromagnet 2-77283
- SiC:N (6H), exchange-coupled vacancy pairs, ESR study 2-116062
- SmB₆, mixed valence cpd., anomalous props. 2-56511
- Sn-Nd(Pr)(Ce), liquid, dil., 4f spin dynamics, TDPAD study 2-56992
- YIG:La, Ga(Tm, Ca,Ge) films, Ne⁺ implanted, magnetisation, FMR and X-ray study 2-98967
- Y_{1-x}Sm_xFe₂O₇, exchange interaction and mag. anisotropy 2-72187
- Yb_{1-x}Al_x, (R=Nd, Eu, Gd, Dy, Er) exchange and electron spin-lattice relax., ESR study 2-82712
- exchange models see peripheral models
- exchanges (chemical) see chemical exchanges
- exchanges (telephone) see telephone exchanges
- excimer lasers
- conference on lasers, New Orleans, LA, USA (Dec. 1980) 2-79281
- dye laser excimer pumping, low power, high pulse rate 2-85984
- electron beam pumped excimer laser system with HV pulsed power supply 2-90939
- high-energy lasers, introduction 2-75553
- high-power tunable lasers, appls. to photochemistry and isotope separation 2-75451
- high-pressure gas lasers, preionisation discharge kinetics 2-96930
- inert gas halide, 200 to 400 nm region laser development 2-108854
- inert gas halide closed loop Mistral laser, flow control 2-108901
- inert gas halide lasers, freq. mixing in extreme UV 2-108956
- inert gas halogen laser study of atomic and mol. nonlinear radiative processes 2-65002
- KrF laser amplifier with phase-conjugate Brillouin retroreflectors 2-108865
- metal halide lasers, compact high temp. UV preionised TE discharge tube 2-96995
- microwave excitation technique 2-96915

excimer lasers continued

- photochemical reactions carried out to study organic compounds transformations under N_2 -laser irradiation 2-57622
 photoetching, deep UV, of PMMA photoresist. 2-57497
 powerful pulsed laser installation, results for CO_2 , XeF, XeBr and XeCl 2-108900
 pulsed visible laser flow and acoustics rel. to beam quality 2-97042
 pumping possibility with ionisation by an external low-power source 2-60139
 rare gas halide laser, high-energy, discharge-pumped, compact, simple 2-85945
 rare gas halide laser gain meas. 2-65204
 transverse acoustic waves in pulsed lasers 2-96961
 UV and VUV systems, conf., Washington, DC, USA (April 1981) 2-106999
 Ar- N_2 laser, intense proton beam pumping, kinetic model 2-75561
 Ar- N_2 laser pumped by intense proton beam 2-114256
 ArF excimer laser, spectral tuning obs. 2-60099
 ArF laser, high-pressure UV-preionised discharge-pumped 2-55120
 Ar $_2$ F $_4$, form. kinetics, fluoresc. meas. of electron beam excited Ar/F $_2$, Ar/NF $_3$ mixtures 2-80708
 Bi $_2$ laser, optically pumped by Cu vapour laser, large gain 2-85946
 Cdi molecular laser action at 475, 656 nm based on Cdi $_2$ photodissoc. 2-55136
 HgBr discharge excited laser system, parameterisation studies, laser output and fluoresc. meas. 2-86003
 HgBr electron-beam-ionised discharge laser studies, fluoresc. and laser performance data 2-85951
 HgBr injection-locked laser oscillator spectrum, injected intensity effect 2-55123
 HgBr laser, pulsed discharge exciter design and testing 2-90936
 HgBr lasers, electrode and laser tube materials for long life operation 2-86004
 HgBr, optical excitation of neutral channel upper laser levels, fluoresc. efficiency 2-85952
 HgBr, photodissociation laser, spectral props. 2-70554
 HgBr $^+$ laser, compact high temp. UV preionised TE discharge tube 2-96995
 HgCl, visible laser, tuning charact., laser emission spectra 2-60065
 Hg ^{79}Br , B \rightarrow X spectrum, excimer laser 2-75555
 I $_2$ laser, optically pumped, CW laser lines 540 to 650 nm range 2-60064
 I $_2$, optically pumped dimer laser development, 540 to 650 nm laser lines 2-80939
 IF laser, discharge pumped, upper state form. kinetics and line tunability 2-85943
 KrCl laser, at 222 nm, UV-preionised (Chinese) 2-96904
 KrCl laser, high-pressure UV-preionised discharge-pumped 2-55120
 KrF 250 J laser, pulsed electron beam pumping system development 2-90938
 KrF discharge excited laser, gain and absorpt. meas. 2-55129
 KrF high-energy discharge-pumped laser 2-85945
 KrF laser, coaxial diode for electron beam pumping 2-60091
 KrF laser, high power, pumping by annular electron beam 2-85986
 KrF laser, high-pressure UV-preionised discharge-pumped 2-55120
 KrF laser, selective UV photolysis of BCl $_3$ for purification 2-88372
 KrF laser, tunable, with narrow bandwidth and diff. limited beam divergence 2-75597
 KrF laser pulse compression in plasma theory 2-90950
 KrF laser pumped by LC circuit, effect of spark gaps 2-80937
 KrF laser pumping using 36 kJ electron beam system 2-90935
 KrF pulsed-periodic laser, average power optimisation 2-55203
 KrF with phase-conjugate Bragg mirror 2-60136
 Kr $_2$ F tunable blue-green laser, fluoresc. and laser parameters meas. for 436 nm transition 2-96924
 KrF* electron beam laser with high specific energy output 2-96931
 KrF* transverse-discharge laser based ultrashort pulse amplification at 248 nm 2-108864
 Li $_2$ molecule, optically pumped ring laser operation 2-75556
 N $_2$ gas laser, increased power output by BF $_3$ addition 2-114244
 N $_2$ high power UV preionised TE lasers, ultraminiature and travelling wave 2-96992
 N $_2$ laser, high-pressure UV-preionised discharge-pumped 2-55120
 N $_2$ laser, transversely excited, beam shape meas. 2-55233
 N $_2$ laser cavity, transversely excited, ionising waves of potential gradient 2-90940
 N $_2$ laser design characteristics, holographic and interferometric appls. 2-114315
 N $_2$ laser performance with modified electrode config. and gas flow arrangement 2-60109
 N $_2$ lasing and dynamics of nanosecond discharge 2-70548
 N $_2$ pulsed atmospheric laser, UV nanosec. light pulse generation, Blumlein circuit (Chinese) 2-90872
 N $_2$ subnanosecond laser construction, use as pulsed fluorometer excitation source 2-75588
 N $_2$ TEA laser, UV preionised, 337 nm operation 2-114250
 N $_2$ TEA laser performance, discharge parameter effects 2-55127
 N $_2$ TEA-TE laser system investigation 2-55130
 Na $_2$ excimer laser, controlled operation, exp. study 2-65251
 Na $_2$, optically pumped dimer laser development, 520 to 560 nm laser lines 2-80939
 Se $_2$ optically pumped multiline laser, continuous oscill. in 387 to 709 nm range 2-85944
 SeF laser pumping possibility with ionisation by an external low-power source 2-60139
 SeF* excimer laser discharge stabilization by low-current density electron beam 2-114257
 Ti-Hg broadband excimer emission, two photon dissociation of TiI-Hg mixture 2-90875
 XeBr high-power high-efficiency elec.-discharge-pumped laser, output charact. 2-55119
 XeBr laser, electron-beam pumping and control 2-96926
 XeBr laser, high-pressure UV-preionised discharge-pumped 2-55120
 XeBr laser, short-electron-beam-excited 2-96925
 XeBr, powerful pulsed laser installation 2-108900
 XeCl discharge laser electrode profiles, analytical design method 2-96966
 XeCl electron beam excited laser generation, special features 2-96917
 XeCl excimer laser, edge-plane rail-gap switch 2-96999
 XeCl high pressure gas discharge laser, short pulse X-ray preionisation 2-90932
 XeCl, high-efficiency joule-level Raman generation in Pb vapour 2-60160
 XeCl laser, 0.5 GW, electron-beam excited 2-60066

excimer lasers continued

- XeCl laser, active mode locking 2-96921
 XeCl laser, discharge stabilised electron-beam excitation 2-96927
 XeCl laser, divergence and spectrum control 2-55133
 XeCl laser, elec. excitation using mag. pulse compression cct. with thyatron 2-60094
 XeCl laser, handling of chemical problems 2-96996
 XeCl laser, high-pressure UV-preionised discharge-pumped 2-55120
 XeCl laser, Raman freq. down-conversion in H $_2$ gas 2-97117
 XeCl laser, short-electron-beam-excited 2-96925
 XeCl laser, third and fifth harmonic conversion expts. 2-108956
 XeCl laser excited by a high-current proton beam 2-96920
 XeCl laser pumped by high-intensity electron beam 2-80936
 XeCl laser radiation, long pulse, Raman conversion via second Stokes shift in H $_2$ 2-60154
 XeCl laser radiation higher-Stokes-order Raman conversion in H $_2$ 2-60161
 XeCl minilaser, high repetition rate, gain and saturation intensity parameters 2-96923
 XeCl, optical excitation of neutral channel upper laser levels, fluoresc. efficiency 2-85952
 XeCl, powerful pulsed laser installation 2-108900
 XeCl pulsed-periodic laser, average power optimisation 2-55203
 XeCl self-sustained discharge laser, kinetic model 2-108856
 XeCl TEA laser, UV preionised, 308 nm operation 2-114250
 XeCl/Xe $_2$ Cl laser, excited state kinetics study using synchrotron radiation 2-96928
 Xe $_2$ Cl laser performance, electron beam pumped, N $_2$ effect 2-108859
 Xe $_2$ Cl tunable blue-green laser, fluoresc. and laser parameters meas. for 520 nm transition 2-96924
 XeF C \rightarrow A laser, photolytically pumped, multijoule performance 2-60070
 XeF discharge excited laser, radiant performance study 2-70547
 XeF electron beam pumped lasers, chem. degradation products 2-102780
 XeF laser, discharge stabilised electron-beam excitation 2-96927
 XeF laser, high-pressure UV-preionised discharge-pumped 2-55120
 XeF laser, short-electron-beam-excited 2-96925
 XeF laser emitting 2-nsec. pulses of near-diff.-limited divergence 2-70599
 XeF laser gain-dependent dispersion 2-97049
 XeF laser mixtures, selective removal of F $_2$ impurity 2-55179
 XeF, powerful pulsed laser installation 2-108900
 XeF TEA laser, UV preionised, 35 nm operation 2-114250
 XeF(C \rightarrow A) laser performance, electron beam pumped, N $_2$ effect 2-108859
 XeF* nuclear pumped laser anal. 2-96929

excimers

see also excimer lasers

- 1,2-benzanthracene in polystyrene matrices, delayed luminesc. time-resolved anisotropy 2-85728
 9-cyanoanthracene-1,3-dienone, photocycloaddition and adduct photodecomp. spectrosc. 2-83391
 9,10-dichloroanthracene, cryst., excimer form., low-temp. fluoresc. 2-104929
 diphenanthrylpropanes, intramol. singlet and triplet excimers, fluoresc. 2-90600
 formation and relax., solvent effects, vibr., pot. energy curves 2-85570
 inert gas halogenides, excimer form., kinetics 2-72961
 intramolecular heteroexcimers, ultrafast intersystem crossing, photolysis obs. 2-65041
 poly(1-vinyl naphthalene) solid, time-resolved spectra following electron beam pulse radiolysis 2-72995
 poly(α -methyl styrene) in solution, excimer struct., fluorescent emission, polarisation 2-65046
 poly(N-vinyl carbazole) films, excimer dynamics 2-116222
 poly(N-vinylcarbazole) film, doped, energy transfer, fluoresc. study 2-116223
 poly-N-epoxypropylcarbazole, films and solns., absorption and emission spectra meas. 2-67119
 poly-N-vinylcarbazole, nitrated, soln., electronic excitation energy transfer, fluorescence and phosphorescence study (Russian) 2-77592
 polystyrene in solution, excimer struct., fluorescent emission, polarisation 2-65046
 pyrene, excited monomer and excimer fluoresc. meas., simultaneous energy transfer 2-108617
 pyrene, excited singlet and excimer states, absorpt. bands 2-102462
 styrene-acrylonitrile copolymers, sequence distrib. and intramol. excimer formation 2-77562
 thioindigo, exciplex form. and fluoresc. quenching by electron donors 2-85724
 Ar-He-O $_2$, ion implantation source, source gas composition and ion current spectrum, optimisation by gas mixing 2-69296
 KrF* broad band emission at 400 nm 2-96625
 LiHe, van der Waals mol., rovibrational struct., optical double reson. 2-70308
 Ne $_2$ excimer, triplet state, O $_2$ quenching rate const. 2-80711
 Sr $_2$ excimer, dissociation energy, laser induced fluoresc. obs. 2-96628
 Ti-Hg broadband excimer emission, two photon dissociation of TiI-Hg mixture 2-90875
 Xe $_2$ Cl, excimer state, absorpt. and emission transition probabilities 2-96583
 XeF $_2$ photolysis, 108-220 nm range, XeF(B,C,D) excimer absolute quantum yield spectral dependences 2-62421
 Xe $_2$ F* emission spectra and quenching kinetics meas. 2-114023
 Xe $_2$ * excimer, de-excitation by SF $_6$ and N $_2$, time resolved fluoresc. study, rate const. meas. 2-70316
- exciplexes see excimers
- excitonic molecules
- biexcitons, in strong mag. fields 2-66458
 exciton-photon interaction, soliton-biexciton transform. 2-61364
 molecular pairs, triplet excitons, nonresonant coherent motion, EPR props., Zeeman effect 2-82696
 non-linear optical response and optical bistability, polariton dispersion, dielec. function calc. 2-55246
 resonance Bose condensate creation with $k=0$, nonlinear exciton effects 2-115665
 semiconductor, biexcitons and intermediate-binding excitons 2-56448
 semiconductors, radiative transitions between exciton sub-bands 2-99155
 semiconductors, two-photon two-exciton light absorpt. 2-87723
 CdS, excitonic polariton and excitonic mol. dispersion curves, two-photon Raman scatt. 2-87159

excitonic molecules continued

- CdS, radiative transitions between exciton sub-bands 2-99155
 CuBr, excitonic mol. luminesc. at 4.2K, time depend. 2-67101
 CuBr, Raman study of exciton-polariton dispersion relation 2-93180
 CuCl, biexciton reson. linewidth, collision broadening or not? 2-87155
 CuCl, diffusion coeffs. of exciton and excitonic mol., picosec. transient grating spectroscopy 2-61926
 CuCl, excitonic mol. broadening under giant two-photon excitation, circular dichroism and light depolarisation study 2-66454
 CuCl, self-induced polarisation rotation effect of elliptically polarised beam 2-108936
 CuCl thin film, probe biexcitons, momentum space condensation, luminesc. study 2-61363
 GaAs, epitaxial layers, biexcitons in quantum wells 2-92479
 GaSe, region of existence of excitonic molecules (*Russian*) 2-76941
 Ge:Se, uniaxially compressed, biexciton-impurity complexes (*Russian*) 2-82242
 Si, excitonic system, equilib. const., recombination luminescence 2-87860
 ZnTe, resonance Bose condensate creation with $k=0$, nonlinear exciton effects 2-115665

excitons

see also excitonic molecules; phonon-exciton interactions

- aliphatic and alicyclic hydrocarbon films, electron transmission spectra and their second energy derivatives 2-72584
 alkali halide, activated, photostimulated luminesc. decay kinetics, radiation defects spatial distrib. (*Russian*) 2-82902
 alkali halide colour centre lasers, electrical pumping 2-102801
 alkali halide crystals, localisation struts. calcs. (*Russian*) 2-56486
 alkali halides, lattice defect creation by electronic excitation, review 2-115218
 alkali halides, sputtering, electron and photon induced 2-99232
 alkali iodides, free exciton luminesc. and sample depend. 2-116234
 alkali metal halide cryst., triplet excitons, hyperfine interactions ESR optical registration study 2-87629
 N-alkyl-phenazinium TCNQ₄ salts, solid-state props. 2-87574
 annihilation of excitons in quasi-one-dimensional crystals 2-98553
 anthracene, cryst., nondipolar Coulomb exciton transfer interactions 2-110255
 anthracene, luminescence obs. at 0.4K, intramol. vibr.-exciton coupling effects 2-61966
 anthracene, monoclinic mol. cryst., diffusion tensor of singlet excitons calc. 2-87158
 anthracene, slip planes crystal growth and photodimerisation 2-86598
 anthracene, triplet-exciton-exciton annihilation, mag. field depend. 2-115669
 anthracene crystals, fluorescence simulation and its rel. to exciton distrib. 2-87838
 anthracene-tetracyanobenzene, triplet-exciton transport between differently oriented sites, EPR 2-116054
 anthracene/tetracyanobenzene, charge transfer cryst., ODMR and EPR spectra calc., triplet exciton coherent motion effects 2-56445
 atomic, molecular and solid state theory, and computational quantum chemistry, conference, Flagler Beach, FL, USA (March 1981) 2-79267
 benzene, mol. cryst., electron-exciton complex mode reson. coupling 2-110256
 benzene clusters, mass-selective two-colour photoionisation 2-75486
 benzophenone, doped, excitonic phosphorescence 2-110935
 biphenyl-naphthalene(pyrene), mixed cryst., triplet exciton fusion, luminesc. study 2-110913
 biphenyl-tetracyanobenzene complex, triplet excitons, intersystem crossing and spin state superposition 2-80701
 Bose condensation, electron-hole gas ground state, spin states, screening, and band struct. effects 2-92476
 bound exciton and hole, three-body model in any number of dimensions 2-110260
 bound exciton recombination, Auger processes effects 2-76931
 bounded nonlocal medium, transient optical reflectivity 2-77478
 density-density correlation function of a system of molecular excitons 2-92482
 diamagnetic excitons, polarisation vibr. interaction in strong mag. field 2-104261
 1,4-dibromonaphthalene, triplet exciton trapping, delayed fluoresc. obs. 2-98547
 4,4'-dichlorobenzophenone, cryst. heating and triplet exciton non-radiative relax. 2-87852
 4,4'-dichlorobenzophenone, triplet excitons, spectrosc. obs. 2-87630
 dielectric permeability at high concentrations of excitons 2-93135
 diphenylacetylene-TCNB charge transfer complexes, single crystals, excited triplet states, EPR investig. 2-92989
 disordered systems, localisation of exciton states, dipole-dipole interactions 2-66496
 doped molecular crystals, steady-state exciton distrib., spatial profile 2-61362
 dye monolayer assemblies on Ag films, exciton surface plasmon interactions 2-71879
 energy transfer models in solids 2-77566
 exciton polaritons, 1-D model study 2-98550
 exciton-exciton interaction freq. averaging, NMR use in exciton spectroscopy (*Russian*) 2-71884
 exciton-photon interaction, soliton-biexciton transform. 2-61364
 excitonic superconductivity along dislocations 2-92813
 furan, phase transition, IR study 2-77509
 Group VI dichalcogenides, semicond., photocurrent spectrosc. 2-87321
 Heisenberg antiferromagnetic chain, alternating, excitation spectra 2-92955
 hydrogenic exciton levels, degenerate, perturbation calc. 2-71877
 II-V semiconductors, amphoteric exciton trapping by 3d impurities 2-76937
 III-V semiconductors, cubic, indirect exciton dispersion 2-92481
 III-V semiconductors, third order susceptibility in true continuum near band edge 2-102852
 impurity-induced and exciton recomb., local centre participation 2-71907
 1-iodanone single cryst., Stark effect of lowest triplet states 2-104321
 inert gas crystals, band struct., adiabatic separation of outer and inner electrons (*Russian*) 2-98514
 insulating crystals, defects, conf., Riga, USSR (May 1981) 2-68967
 insulators, role played by Pauli principle in formation of excitons 2-82240
 interface polar exciton, variational calc. (*Russian*) 2-76940

excitons continued

- isotopically mixed crystals, exciton dynamics, mode-coupling theory, percolation thresholds 2-87154
 luminescence, conf., Ezeriński, (May 1980) 2-84366
 luminescence, excitons, polariton effects, review (*Russian*) 2-93272
 migration with end detectors, time-dependent luminesc. calcs. 2-110904
 mixed valency species, excitation models, vibr. line shapes 2-110884
 molecular cryst., hole bands, mol. tight-binding method 2-82203
 molecular cryst., triplet exciton coherent motion, model calc. 2-56445
 molecular crystal, electronic excitation energy transfer, electric field effects 2-98548
 molecular crystal, optical activity caused by exciton dispersion 2-87738
 molecular crystal surfaces, energy level bending 2-104449
 molecular crystals, directionally deform., impurity states (*Russian*) 2-71917
 molecular crystals, exciton transport in the band limit 2-82238
 molecular crystals, nonlinear optical effects and dielec. props. 2-55248
 molecular crystals, radiative prop. calcs., polaritons and exciton decay 2-104262
 molecular crystals, triplet exciton-exciton annihilation, mag. field depend. 2-115669
 molecular pairs, triplet excitons, nonresonant coherent motion, EPR props., Zeeman effect 2-82696
 multivalley semiconductors, multiexciton complexes bound to donors 2-82247
 naphthalene:anthracene crystals, delayed fluorescence, triplet exciton traps effect (*French*) 2-77576
 naphthalene, cryst., isotopically mixed, subst. disordered, triplet exciton transfer and fusion 2-92474
 naphthalene, cryst., nondipolar Coulomb exciton transfer interactions 2-110255
 naphthalene, cryst., vibr. dephasing, temp. depend., picosec. CARS obs. 2-110827
 naphthalene (-dn) doped mixed crystals, time resolved donor and acceptor fluoresc., energy transport kinetics 2-72532
 naphthalene in perdeuterionaphthalene, temp. depend. photon echo meas., optical dephasing 2-90998
 on-site Coulomb interaction and excitons 2-82239
 one dimensional CDW distorted solid, charge density fluctuations, dielec. function calc. 2-71893
 one-dimensional conductor, electron-libron modes, theory 2-103915
 organic energy conversion, ionised impurity induced photocarrier generation 2-99797
 organic semiconductors, Schottky emission meas., excitonic effects 2-72048
 pair states, population numbers 2-92483
 α -perylene, luminescence and exciton lattice interaction 2-87840
 β -perylene, luminescence study of exciton self-trapping 2-93246
 α,β -perylene, optical absorpt., exciton-lattice interaction 2-87809
 phthalocyanine, x-metal free, electric field induced fluoresc. quenching and photocarrier generation 2-61946
 phthalocyanine polycrystalline film, photoelectrochem. solar energy conversion 2-99815
 polar crystal, Coulomb attraction effect on light absorpt. coeff., Urbach rule and exciton effects (*Russian*) 2-57049
 poly-N-vinylcarbazole, nitrated, soln. electronic excitation energy transfer, fluorescence and phosphorescence study (*Russian*) 2-77592
 polyvinylcarbazole, nitrated, exciton migration and localisation on defect and impurity levels, luminesc. obs. (*Ukrainian*) 2-82896
 pyromellitic N,N-dimethylidimid-anthracene cryst. triplet exciton annihilation, fluorescence 2-71880
 rare earth cpds., mixed valence in a periodic Anderson lattice 2-82296
 rare gas solids, molecular excitons, structured emission 2-76935
 reflection depolarisation spectra, fluctuating internal strains effect 2-67022
 resonance Bose condensate creation with $k=0$, nonlinear exciton effects 2-115665
 rough surface, effect of spatial dispersion on classical field enhancement factors 2-104462
 ruby, Anderson localisation and transition, off-diagonal dipolar interactions 2-87148
 Schottky-barrier electroreflectance, pseudo-exciton effect 2-99091
 semiconductor, biexcitons and intermediate-binding excitons 2-56448
 semiconductor, exciton Bose condensation, electron-hole gas ground state, mean field description 2-92475
 semiconductor, interband electron Raman scatt. of light, Coulomb interaction effects 2-87798
 semiconductor, many-valley, single donor impurities, core excitons shallow-deep instability 2-82282
 semiconductor, many-valley, single-donor impurities and core excitons, real-space eqn. 2-82281
 semiconductor, optical spectra of interacting donors, localised and delocalised characters 2-67086
 semiconductor, photoexcited, screened excitonic refl. rapid relax., picosecond dye laser use 2-57119
 semiconductor exciton, diamagnetic, absorpt. spectra in strong mag. field, theoretical anal. (*Russian*) 2-76939
 semiconductor with impurity, exciton absorption spectra (*Russian*) 2-92485
 semiconductors, anisotropic, exciton-ionised donor complex energy, var. with anisotropy parameter and effective mass ratio 2-110261
 semiconductors, coherent light propag. theory 2-98546
 semiconductors, cubic, paramagnetic centre relax. with exciton interactions 2-61760
 semiconductors, donor-bound exciton complexes, variational calc. 2-61368
 semiconductors, electron-hole liquid, exchange-correlation energy behaviour 2-92478
 semiconductors, exciton bound state form. in cryst. microinclusions, reflection spectra (*Russian*) 2-92484
 semiconductors, free bound exciton alignment in mag. field, review 2-82236
 semiconductors, localised electron states energy spectra (*Russian*) 2-110278
 semiconductors, multi-exciton complexes, review 2-110264
 semiconductors, optical absorption by bound excitons, exchange and spin-orbit effects 2-110263
 semiconductors, polar, excitons and polarons, bounding energies, local density approx. 2-61367
 semiconductors, radiative transitions between exciton sub-bands 2-99155
 semiconductors, three-prion two exciton absorpt., theory (*Russian*) 2-116137

excitons continued

- semifinite crystals, Wannier-Mott excitons, wave functions and normal-incidence refl. 2-82244
 stilbene, monoclinic mol. cryst., diffusion tensor of singlet excitons calc. 2-87158
 strongly anisotropic semiconductors, exciton spectrum 2-98554
 superconductivity in thin film system, excitonic mechanisms (*Japanese*) 2-87441
 superconductor, quasiparticle-injected, Bose-Einstein condensation of excitons 2-56768
 superfluidity in exciton systems 2-110254
 surface wake correl. of ion and ion pair 2-67169
 TCNQ salt, Qn(TCNQ)₂, neutron irradi., ESR linewidth anisotropy 2-72332
 TCNQ salts, N-alkylphenazinium TCNQ, solid-state props. 2-87574
 TCNQ salts, triphenylmethylarsonium (TCNQ)₂ and C₆2(TCNQ)₂, one-dimensional triplet exciton systems, nucl. relax. 2-66940
 tetrabutylammonium bromide, intrinsic absorpt. and exciton luminesc. obs. 2-110933
 tetracene, photoconductivity, mag. field effects, triplet exciton lifetime 2-72021
 tetrachlorobenzene, exciton wave packet width, electron spin echo spectrosc. obs. 2-110619
 1,2,4,5-tetrachlorobenzene, triplet exciton system, impurity assisted scatt. study 2-82241
 5,6,11,12-tetraphenyltriacene polycrystalline layers, triplet exciton pair mag.-reson. spectrum, detected from fluoresc. yield 2-116094
 thianthrene, cryst., charge carrier generation, photocond. study, multiphoton processes 2-77110
 thin crystals with surface heterolayers, exciton optical props. 2-104831
 thin films, crystalline and disordered exciton hopping and luminescence, absorbing boundaries 2-82920
 triplet states coupled pair, electrostatic energy splittings 2-59718
 two-photon transitions to surface states, angular dependences 2-99081
 uniaxial crystals, exciton coupling energy and anisotropic effective electron and hole masses 2-66456
 vanadyl phthalocyanine electronic transitions in soln. and solid state 2-61938
 AgCl, triplet excitons, hyperfine interactions ESR optical registration study 2-87629
 AgCl:Br⁻, pure and doped, band-gap-irrad., luminesc. centres, ODMR and level-anticrossing spectra 2-56980
 AgGaS₂, cathodoluminescence, excitonic luminesc. and edge emission obs. 2-72559
 AlAs-GaAs superlattices, exciton associated optical absorption spectra at 300K 2-104913
 Al₂O₃, amorphous and polycrystalline, dielec. function, lineshape anal., EELS study 2-76955
 As₂Se₃, amorphous, hot photoluminescence 2-93261
 As₂Se₃, cryst. and amorphous, exciton and pair recomb., ODMR study 2-93067
 As₂Se₃, glassy, pulse-induced microcosmic geminate excitons, thermal decay 2-61905
 CaWO₄, IR spectra, vibr. exciton density of state functions 2-99106
 CdGa₂S₄, semicond., exciton states in optical spectra obs. 2-110890
 Cd_{1-x}Hg_xTe, photoluminescence 2-93278
 Cd_{1-x}Mn_xSe, exciton and phonon spectra, photoluminesc. and Raman scatt. study 2-110942
 Cd_{1-x}Mn_xTe, exciton luminescence spin splitting (*Russian*) 2-61976
 Cd_{1-x}Mn_xTe, simple excitons in intermediate mag. held, energy levels calc. 2-61365
 CdMoO₄ crystal, photocond. and luminesc. 2-66591
 CdS, biexcitons, luminescence assisted two-photon spectroscopy study 2-76933
 CdS crystal, group vel. of light meas. near exciton absorpt. bands, Rozhdestvenskii hook method 2-112875
 CdS, electron irradi., exciton reflection spectra and photo EMF, elec. field effects 2-82877
 CdS, excited states of bound excitons, photolum. and magneto-optical spectroscopy 2-116238
 CdS, exciton luminescence and electron-hole plasma near acoustic instability 2-87865
 n-CdS, exciton refl. spectrum, inversion layer effect 2-116207
 CdS, excitons and polaritons in mag. field, theory and two-photon Raman scatt. study 2-104258
 CdS, free exciton momentum relax. (*Russian*) 2-104257
 CdS, grown electrolum. and photolum. study 2-72558
 CdS, heavily doped, exciton absorption band broadening, Green's function calc. 2-77558
 CdS, radiative transitions between exciton sub-bands 2-99155
 CdS, refl. spectrum, additional boundary conditions, linear response theory 2-77548
 CdS, solid particles, excitons, luminesc. and Raman excitation study 2-77570
 CdS thin film, reflectivity spectra near excitonic transition 2-82878
 CdS, two-photon magnetospectroscopy of A-exciton states 2-104260
 CdS, Wannier exciton ionised donor complex, excited states stability 2-92477
 CdS-ZnS, electroabsorption spectra, effective masses 2-77491
 CdS_{0.9}Se_{0.1}, coherent excitation of excitons, self-induced transparency 2-108972
 CdS_{1-x}Se_xTe, isoelectronic impurity-exciton interactions, visible spectra study 2-61395
 CdS_{1-x}Se_x, epitaxial layers grown by H₂ transport from elements, photolum. props. 2-99172
 CdSe, excitonic luminesc. spectra, surface elec. field effect 2-82919
 CdSe, phase spectra of refl. light in exciton reson. region 2-104911
 CdTe, Ag diffused, degradation of elec. and optical props., complex excitonic lines 2-115751
 CdTe, free excitons at room temp., photoelectrochemical study 2-115670
 CdTe, magnetoluminescence, electron and hole g-factors, Zeeman effect 2-99193
 CdTe:Cu(Ag), acceptor levels, elec. and photoluminescence study 2-110296
 CdTe:Mn, bound exciton luminesc. spectra, giant spin splitting 2-93266
 Cr, electron energy loss spectra for clean and oxidized surfaces 2-56663
 CsBr(Cl):Ag⁺, far UV spectra, fluorescence and optical bleaching studies 2-110901
 CsI:Na, tunnelling recomb. luminesc., time evolution 2-72550
 CsI:Na⁺, exciton-Na⁺ interactions, photoluminesc., ODMR and mag. circular pol. study 2-61366

excitons continued

- CsMnF₆, pure, exciton dynamics and energy transfer, fluorescence meas. 2-99171
 Cu halides, spin-orbit splitting, volume, depend. 2-104322
 CuBr, optical constants and exciton spectrum (*Russian*) 2-67131
 CuBr(Cl):I-Ag system light-sensitivity spectra, correl. with Cu halide absorpt. spectra 2-67079
 CuCl, diffusion coeffs. of exciton and excitonic mol., picosec. transient grating spectroscopy 2-61926
 CuCl, excitons, wave-number dependent oscillator strength and longitudinal-transverse splitting calc. 2-98549
 CuGaS₂, band gap temp. depend., exciton reflection spectra 2-104252
 CuGaS₂, luminesc. and refl. spectra of free excitons 2-104963
 CuI single crystals, exciton luminesc. 2-61964
 CuInS₂, photoluminescence, exciton and near edge emission, energy gap 2-93250
 Cu₂O, IS exciton two-photon magnetoabsorpt. spectra, polarisation depend. meas. 2-77498
 Cu₂O IS yellow exciton luminescence intensity temp. depend. 2-87858
 Cu₂O, relaxed excitons, optical and cyclotron reson. study 2-76938
 Cu₂O, third order optical nonlinearity near exciton lines (*Chinese*) 2-99083
 Ga_{1-x}Al_xAs, radiative decay rate exponential distrib. 2-77583
 GaAs, excitonic polariton-induced compensation of pulse broadening in optical fibers obs. 2-91047
 GaAs, ion implanted, excitation size determ. 2-87156
 GaAs, oscillator strength and lifetime broadening of exciton polaritons 2-93141
 GaAs, photoluminescence, elec. field effects, excitons and polaritons 2-99177
 GaAs, quantum well, exciton resonance, hole burning 2-76934
 p-GaAs, quantum wells, bound excitons, photoluminescence 2-104956
 GaAs, resonant Brillouin scatt. under uniaxial stress 2-77542
 GaAs, surface states, intrinsic unoccupied, bremsstrahlung isochromat spectroscopy study 2-98713
 GaAs, third order optical nonlinearity near exciton lines (*Chinese*) 2-99083
 GaAs:Be, MBE layers, photoluminescence, excitonic features 2-116229
 GaAs:Be MBE layers, photoluminescence, bound exciton lines 2-116228
 GaAs:C(Ge) VPE layers, impurity characterisation, photoluminesc. study 2-93264
 GaAs:Cr, exciton and subband-gap absorption, quenching and enhancement, acoustoelectric volt. spectroscopy 2-82235
 GaAs:Cu, luminescence, deep centres in bound exciton form. 2-104960
 GaAs-Al struct., exciton dissociation and annihilation, photo-EMF study 2-82250
 GaAs-Cr₂N₄(Si₃N₄), interface polar exciton, variational calc. (*Russian*) 2-76940
 GaAs-Ga_{1-x}Al_xAs superlattice etalon, room temp. excitonic optical bistability obs. 2-97074
 GaAs-GaAlAs quantum wells, exciton binding energy 2-115668
 GaAs_{0.9}P_{0.1}, resonant Raman scatt. 2-87754
 GaN epitaxial layers, highly excited, photolum. and gain spectroscopy 2-77561
 GaP, Cu related 2.177 eV band exciton, photoluminesc. study 2-110917
 GaP, exciton electroabsorption spectrum, Schrodinger eqn. calc. 2-116154
 GaP, Frenkel core-exciton energy, environmental effects 2-87152
 GaP:Cu, photoluminescence and impurity states 2-104947
 GaP:Cu, photoluminescence, excitons 2-116249
 GaP:N, absorbing medium, linear pulse prop. 2-61860
 GaP:N, photoluminescence time decay temp. depend. 2-93258
 GaP:N epitaxial films, excitation transfer mechanism to NN_i complexes 2-77589
 GaP-O, recombination radiation of exciton bound to Zn-O complex 2-104959
 GaSe, intercalated, low temp. reflection spectra and photoluminesc., exciton characts. (*Russian*) 2-67112
 GaSe, photocond. near fundamental band edge 2-92692
 GaSe-anthracene (Na) intercalation cpds., ESR, photocond., and optical meas. 2-77367
 GaSe-Te_{2-x}Sn single cryst., exciton and impurity electroabsorpt. 2-87741
 GaP:N, N-N pair exciton spectra, J-J coupling and local field effects 2-82248
 Ge, donor-bound excitons, fine struct. splittings 2-82246
 Ge, donor-bound multiexciton complexes, density-functional method 2-82245
 Ge, electron-hole drop kinetics and decay in microwave field, hot carriers 2-92480
 Ge, exciton and electron-hole liq. luminescence, elec. cond. 2-77578
 Ge, exciton thermodynamics 2-71881
 Ge, IR study of indirect exciton Zeeman effect 2-67053
 Ge, luminescence of electron-hole drops, hysteresis, exciton gas-liquid transition 2-82895
 Ge, photogalvanic piezomagnetic effect (*Russian*) 2-82401
 Ge, uniaxially compressed, low-density electron-hole liquid (*Russian*) 2-61370
 Ge:As, bound-exciton luminesc. polarisation in longit. mag. field 2-87864
 Ge-GaAs (110) heterostructures, electronic props. and chem. comp., low-energy EELS study 2-93339
 p-GeSe, layered cryst., photocond., polarised light study (*Russian*) 2-77124
 GeSi_{1-x}In_x, photoluminescence, exciton recombination 2-87857
 He, mol. cryst., hole bands, mol. tight-binding method 2-82203
 Hg₂Br₂, single crystal, UV absorpt. spectra meas. 2-110881
 Hg_{1-x}Cd_xTe, photoluminescence spectrum meas. 2-87844
 Hg₂Cl₂, single crystal, UV absorpt. spectra meas. 2-110881
 InAs-GaSb quantum wells, exciton binding energy 2-115668
 InBr, direct and indirect exciton spectra, absorption and reflection study 2-56446
 InP:Mg VPE layers, implanted and unimplanted, near-edge emission 2-57157
 InSb, band struct. parameters, exciton magnetoabsorption study 2-115659
 InSb, Wannier-Mott exciton at absorpt. edge, quasione dimens. state in strong mag. field, expt. study 2-61369
 InS, exciton selection rules in polarised reson. Raman scatt. by LO phonons 2-67034
 InSe, magnetoabsorption, A exciton study 2-82830

excitons continued

- KBr, intrinsic luminescence under H^+ and He^+ ion bombardments 2-67123
 KBr:Na, fluorescence restoration from lowest singlet state in self-trapped exciton 2-67100
 KCl, F and U centers, excitons, local correl. effects 2-87153
 KCl:Na, fluorescence restoration from lowest singlet state in self-trapped exciton 2-67100
 KI, H-centre creation, exciton non-radiative decay (*Russian*) 2-103755
 KI, intrinsic luminescence under H^+ and He^+ ion bombardments 2-67123
 KI microcrysts., surface electronic transitions and adsorbate charge transfer 2-104453
 KI, recombination luminescence of thermally stable H-centres (*Russian*) 2-104939
 KI:Ti(In), photoluminescence, exciton-Ti $^+$ and -In $^+$ interactions (*Russian*) 2-104938
 LiD single crystals, exciton-absorpt. edge and Urbach rule 2-67080
 LiF, excitons, local correl. effects 2-87153
 LiH, crystal with self-trapping excitons, exciton luminesc. and multiphonon Raman spectrum 2-82922
 LiH single crystals, exciton-absorpt. edge and Urbach rule 2-67080
 MoSe $_2$ (2H), electrolyte electroreflectance and reflectance studies 2-57060
 NaCl, intrinsic luminescence under H^+ and He^+ ion bombardments 2-67123
 NaCl, laser-induced primary defect form. role in optical breakdown 2-66057
 NaF, core excitons, atomic energy calcs. 2-110259
 NaF, core excitons, Na L $_{II,III}$ edge 2-110258
 NaF, core excitons, X-ray edges 2-110257
 NaI crystal with self-trapping excitons, exciton luminesc. and multiphonon Raman spectrum 2-82922
 NaI, excitation spectra of exciton luminescence, hot exciton effects 2-66457
 NdP $_2$ O $_4$ and NdNa(WO $_4$) $_2$, radiation quenching, cross relax. and excitonic behaviour 2-93247
 NdP $_2$ O $_4$ laser material, spectroscopic props., exciton diffusion length 2-90904
 Ne, crystalline, self-localised luminesc. spectrum, fine struct. (*Russian*) 2-116227
 NiO, excitons, local correl. effects 2-87153
 P, amorphous, radiative, triplet luminescence and metastable states, ODMR study 2-93265
 PbI $_2$, cryst. and thin films, electronic absorption spectra meas. 2-67071
 PbI $_2$, dynamical props. of excitons in layer crystals. 2-98551
 PbI $_2$, secondary radiation and reflection spectra, polaritons and excitons (*Russian*) 2-92486
 PbI $_2$:Ga(In), exciton spectra, refl. and photoluminesc. spectra 2-67118
 PbMoO $_4$ crystal, photocond. and luminesc. 2-66591
 PbWO $_4$, crystal, photocond. and luminesc. 2-66591
 Rb $_2$ CrCl $_4$:Mn $^{2+}$, ionic ferromag., impurity induced absorpt. bands 2-110896
 Se, amorphous thin film, photodependence of structural relax. 2-81678
 Si, deformation caused by absorpt. at fundamental band max. 2-77465
 n-Si, dielectric enhancement near metal-nonmetal transition 2-61361
 Si, donor-bound excitons, fine struct. splittings 2-82246
 Si, donor-bound multiexciton complexes, density-functional method 2-82245
 Si, exciton thermodynamics 2-71881
 Si, excitonic system, equilib. consts., recombination luminescence 2-87860
 Si, laser excited, electronic struct. dynamic response, photoemission study 2-72606
 Si surface (111), electron-photon interaction and metal-insulator transition 2-87358
 Si:B, thermally evaporated, near-surface layer impurity distrib., photoluminesc. study 2-110902
 Si:Cu, deep centre long lifetime photoluminescence 2-110938
 Si:Cu, luminescence, excitons and impurity states 2-104946
 Si:In, vibronic spectrum of U $_2$ isoelectronic centre 2-61953
 SiO $_2$, energy gap and photoelectric props., effects of blocking electrodes 2-82403
 SiO $_2$, vitreous and crystalline, UV reflectance spectrum 2-93224
 SnCl $_2$, luminescence at low temp. (*Russian*) 2-57178
 TbF $_3$, intrinsic fluorescence, energy transfer mechanisms 2-87839
 TbP $_2$ O $_4$ and TbNa(WO $_4$) $_2$, radiation quenching, cross relax. and excitonic behaviour 2-93247
 Xe, cryocrystals, exciton spectra, polariton and spatial dispersion effects 2-82904
 Xe crystal, self-trapping of excitons and holes (*Russian*) 2-98552
 Zn,Cd, 2S , localised exciton states (*Russian*) 2-82243
 ZnO, excited states of bound excitons, photolum. and magnetooptical spectroscopy 2-116238
 ZnO, exciton refl. spectra, influence of ion implantation 2-67082
 ZnO, excitons and polaritons in mag. field, theory and two-photon Raman scatt. study 2-104258
 ZnO, excitons exhibiting spatial dispersion, refl. and transmission spectra, additional boundary conditions 2-57122
 ZnO, refl. spectrum, additional boundary conditions, linear response theory 2-77548
 ZnO, surface exciton polariton, attenuated total refl. meas. 2-115666
 ZnS:Ce, Li phosphors, luminesc. excitation and emission spectra 2-57155
 ZnS,Se $_{1-x}$, elec. and optical props., compositional disorder effects, photoluminescence and excitonic spectra 2-57171
 ZnS,Se $_{1-x}$, solid solns., exciton states, effect of disorder 2-115671
 ZnSe, blue emission of cathodoluminesc. 2-77598
 ZnSe, excitation emission, collective phenomena, radiative recombination 2-77579
 ZnSe, exciton-impurity complexes, photoluminesc. spectra study 2-72552
 ZnSe, exciton-plasmon Mott transition 2-56443
 ZnSe MIS structures, blue electroluminescence and I-V characts 2-61982
 ZnSe, phase spectra of refl. light in exciton reson. region 2-104911
 ZnSe, radiative processes in electron-hole drops and exciton-exciton interaction 2-104961
 ZnSe, reson. electronic Raman scatt. and electronic structs. of bound exciton complex 2-67036
 ZnSe, stimulated photoluminescence, lasing mechanism 2-99183
 ZnSe surface, reflectivity spectra near excitonic transition 2-82878

excitons continued

- ZnSe, ZnS,Se $_{1-x}$, organometallic CVD growth, photolum. peak due to I $_2$ bound exciton line 2-111087
 ZnSe,S $_{1-x}$ MIS diodes, blue and violet electroluminescence emission 2-72067
 ZnSe(Te), surface electronic state spectroscopy resonances 2-115842
 ZnTe, edge emission, collective phenomena, radiative recombination 2-77579
 ZnTe, bound exciton time decay, radiative and nonradiative transition rate study 2-76932
 ZnTe, excited states of bound excitons, photolum. and magnetooptical spectroscopy 2-116238
 ZnTe, exciton reflection, amplitude-phase spectra, Brewster effect 2-77551
 ZnTe, resonance Bose condensate creation with $k=0$, nonlinear exciton effects 2-115665
 ZnTe:P, Li, magnetoluminescence, electron and hole g-factors, Zeeman effect 2-99193

exhibitions

No entries

exobiology *see extraterrestrial life*

exoelectron emission

- adhesive failure, fracto-emission of electrons, positive ions and photons 2-77716
 borosilicate glass, field stimulated exoelectron emission 2-77714
 ferroelectrets, exoelectron visualisation of defects 2-67200
 films, evaporated, exoelectron transfer (*Japanese*) 2-57275
 graphite, exoelectron emission, RF stimulated 2-111036
 metal mirrors, pulsed laser initiation of surface plasma, exoelectron emission 2-60144
 metal surface, electron emission under pulsed laser irradi. 2-83010
 phenacite, fast neutron irradi., surface damage obs. 2-81830
 Al, scratched, photostimulated exoelectron emission, storage effect obs. 2-116343
 BeO, thermostimulated exoelectron emission, UV and laser irradi. effects 2-99307
 CaF $_2$ films, thermoluminescence and thermally stimulated exoelectron emission, γ -ray irradi. effects 2-57191
 CaNi $_2$ alloy, gaseous atmosphere effect on exoelectron emission from H cracked surfaces (*Japanese*) 2-77713
 CaSO $_4$ phosphor, thermolum. and thermally stimulated exoelectron emission, SO $_4^{2-}$ radicals role 2-77602
 Cu surface, chem. nature of centres of exoelectron emission 2-83012
 LiF films, thermoluminescence and thermally stimulated exoelectron emission, γ -ray irradi. effects 2-57191
 LiNbO $_3$, uniaxial deform. effect 2-116344
 Ni surface, chem. nature of centres of exoelectron emission 2-83012
 Si surface layer struct., action of directed flow of ionised halogen containing gas (*Russian*) 2-71515
 WO $_3$ films, electron beam excited, exoelectron emission obs. 2-77715

exosphere

- escape mechanisms in terrestrial and planetary atmospheres, thermal and nonthermal processes 2-112359
 geocorona, UV contribution to UV cosmic background 2-84104
 temperature deduction from twilight O $^+$ spectral emissions 2-63153
 temperature inferred from satellite obs. of N $_2$ density 2-73739
 UV scatt. of 58.4 nm reson. radiation field in He geocorona 2-83980
 H atom escape from Earth atmos. due to charge exchange collisions 2-63152

exotic atoms

- see also hadronic atoms; muonic atoms*
 positron-atom system, energy spectrum investigated within Bohr's atomic model 2-59975
 protonium, lifetime, energy shift, nuclear effects 2-59979
 relativistic time dilatation of bound muons and the Lorentz invariance of charge 2-53461
 e $^+$ H, bound state absence determ., finite nucl. mass 2-80847
 K 0 - $\pi\mu$, $\pi\mu$ hydrogen like atoms, formation rate 2-69448
 (K $^+$ μ^+) atom, Coulomb disintegration cross sections and decay rate (*Chinese*) 2-107546
 (π^+ μ^+) atom, Coulomb disintegration cross sections and decay rate (*Chinese*) 2-107546
 (π^+ μ^+) atom, formation from K 0 decay (*Chinese*) 2-107657
 H, critical positron mass, lower bound for binding 2-75474
 He, antiprotonic, X-ray transitions, strong interaction effects 2-108743

expanding universe *see cosmology*expander-compressors *see compressors*expansion, thermal *see thermal expansion*expansion chambers *see cloud chambers*exploding foils *see exploding wires and foils*

exploding wires and foils

- see also discharges (electric); plasma production*
 BLACKJACK 5 pulse generator, Al(Ca)(Ti) imploding plasma expts. 2-91640
 CANDU moderator pipe leak repair by exploding wire shock wave 2-90284
 electron beam formation through explosive electron emission 2-55805
 laser-produced implosion, diagnosis by Ar X-ray lines 2-86472
 melting front stability in elec. exploding wire 2-103406
 plasma pinches, imploding wire prod. 2-65743
 plasma shell, implusions, hydrodynamic instabilities 2-103356
 C $_2$, neutral and ion mols., struct. determ. by Coulomb explosion 2-93795
 NCO neutral and ion mols., struct. determ. by Coulomb explosion 2-93795

explosion bubbles *see bubbles*

explosions

- see also accidents; detonation; nuclear explosions; safety; shock waves*
 airgun-OBS seismic refraction profiling expt., airgun signal waveform anal. 2-117225
 arc discharge cathode spots, explosive model 2-86493
 butane, rapid evaporation at the superheat limit 2-109173
 chamber wall, dynamic loading calcs. 2-61064
 combination in reactive systems, book 2-63766
 confined compressible reactive gas, thermal behaviour 2-89539
 containment and control, in spherical vessels 2-91486
 crater-formation from 10 ton event, slumping and ejecta sliding 2-73554
 crater formation simulation expts. using 10-tons of explosives in sediments 2-73559
 cylindrical charge, detonation initiation shock wave effects 2-114848

explosions continued

- dust explosion temps. meas., IR optical pyrometers design 2-53772
- electrical explosions, cavity form., closure props. 2-75990
- explosion with radiant heat transfer, self-similar problem 2-81352
- explosive, aluminized melt cast, axial longitudinal sound vel. US and weak shock techniques 2-76601
- explosive, aquarium test, shock press. anal. 2-74442
- explosive, Gruneisen parameter meas. 2-76629
- explosive, polymer bonded, high explosive detonation products in varying O_2 atmospheres 2-78105
- explosive, polymer bonded, impact on steel plate, radiographic study 2-78107
- explosive, polymer bonded, thin pulse initiation 2-78104
- fast reactions in energetic systems, conf., Preveza, Greece (July 1980) 2-58544
- fluctuations effect on reactions 2-83385
- galactic central region, post-explosion shock propag. 2-84318
- gasdynamics of detonations and explosions, conf., Göttingen, FRG (Aug. 1979) 2-58549
- Glimm's method applied to underwater explosions 2-55599
- high speed photography of explosive initiation 2-101483
- hypocentre determ. from seismic wave obs. (Japanese) 2-94313
- inductive store pulse compression system for driving high speed plasma implosions 2-86457
- interstellar grains explosions, rel. to molecule cycling between gas and dust 2-89331
- laser breakdown mechanism in bombardment of water targets with CO_2 laser pulses 2-60367
- loading of structures, for amplitude-freq. characs. determ. 2-114634
- magnetogasdynamical spherical shock wave propag. in exponential medium 2-106508
- mechanical ignition mechanisms 2-93794
- metal chalcogenides, mechanochemical synthesis, explosions (German) 2-62053
- molecular ions, molecular struct., and interaction with matter, conference, Haifa, Israel (Jan. 1981) 2-53410
- mullite powders, effect of explosive shock waves 2-98199
- natural factors limiting the spread of radioactivity after serious damage to a reactor (Dutch) 2-64604
- nonstationary disturbances in the boundless liquid under explosion of linear finite-length source (Ukrainian) 2-75987
- NSWC/WO light gas gun and explosive facility, shock wave expts. appl. 2-74451
- optical probe for monitoring dust explosions 2-53808
- plumes and ejecta tracking using UV LADAR 2-93972
- point cylindrical source explosions, initial stage of two colliding shock waves (Russian) 2-109227
- pressure cell bodies, anal. of dynamic stresses and motion in alluvium 2-95392
- quasar explosions, shock waves evolution rel. to triggering of galaxy form. 2-68902
- shock wave experiments using explosives and light-gas gun facilities 2-74446
- steam explosion, simulated reactor core melt-down, pressure pulse triggering effects 2-69801
- stress wave and crack propag. problems, holographic interferometry appl. 2-86242
- supernovae, exploding $10 M_{\odot}$ star as model for Crab supernova 2-89285
- surface explosive instability for high frequency waves 2-71167
- thermal explosions with variable thermal conductivity 2-67752
- TNT, high explosive detonation products in varying O_2 atmospheres 2-78105
- underground explosions, multidimensional simulations rel. to Rayleigh waves synthetic seismograms 2-88747
- uniform current sheet implosion in a low beta plasma 2-86489
- volcanic explosivity index, explosive magnitude for historical volcanism 2-62931
- water distilled, change in elec. cond. under influence of elec. explosion (Russian) 2-61424
- Ar plasma, implosion dynamics 2-103409
- Cu plate, accelerated by reacting and detonating explosives, free surface vel. meas. 2-76591
- NH_4NO_3 -fuel oil(-Al) explosive, aquarium test, shock press. anal. 2-74442
- Si cylinder, mag. flux cumulation by shock-compressed conductive region propag. 2-92884
- TiC_2O_6 and $TiC_2O_6H_m$, oxygen-rich, electric explosion, phase comp. of products 2-88358

exposure meters *see photometers***extended Huckel theory calculations** *see EHT calculations***extended X-ray absorption fine structure** *see EXAFS***extensive air showers** *see cosmic ray showers and bursts***extensometers**

- defect analysis using dilatometry and self-diffusion, review 2-60972
- device for gain determination 2-112866
- dilatometer for the study of rare earths at cryogenic temperatures (French) 2-64014
- dilatometer sensitivity limit 2-60378
- dilatometer using bridge cct. for capacitance meas. 2-112889
- interferometric dilatometer, AC, electromechanical deformation meas. appl. 2-69128
- magnetic tape extensometer (French) 2-89754
- sensitive dilatometer with capacitive displacement detector for absolute measurements of thermal expansion coefficients of solids 2-63972
- sintering, high-temp., obs. of cemented carbides 2-105098

external flows

- ablating surface, cooled with swirled-film, mass transfer 2-70925
- acoustic noise from the flow around a cylinder near a wall (French) 2-97277
- attached water jet, at curved wall, acoustic wave effects (Japanese) 2-91506
- axisymmetric nozzle, supersonic external flowfield, Navier-Stokes soln. 2-114866
- axisymmetric stagnation flow of spherical particle near planar surface 2-114882
- boundary layer, unsteady, three-dimens., freely interacting with external stream 2-65562
- bubbly water flow past supercavitating wedge, compressibility effects 2-71008

external flows continued

- circulation by perfect noncompressible fluid round a -Zukovski profile, resolution by digital calculator (Croatian) 2-65565
- Couette flow, heat transfer, surface roughness effects 2-60545
- cylinder drag behind a disk in supersonic flow, extremal values 2-114843
- drag of flat plate in slip flow, bivariational calcs. 2-75917
- ducted body in detached shock wave regime 2-70983
- elliptical cone, compressible laminar boundary layer, heat transfer coeff. 2-75927
- far flow field, nose geometry effects calcs. 2-75993
- flat plate flow, drag and heat transfer with arbitrary viscosity temp. depend. 2-55572
- flat plate moving at high Mach numbers, unsteady boundary-layer induced pressures 2-81323
- free convection between vertical parallel plates with symmetric heating 2-114806
- free convection heat transfer from upward-facing horizontal isothermal surfaces, investig. 2-114805
- gas bubble, motion in liq., unsteady drag at large Reynolds number 2-60609
- ideal incompressible nonhomogeneous liquid bounded by free surface, solvability of initial boundary value problem (Russian) 2-91375
- laminar flow past permeable sphere, drag coeffs. and separation 2-91383
- laminar natural convection on vertical cylinder, perturbation calcs. 2-97548
- leading edge of semi-infinite vertical plate, free convection heat transfer, $Pr=0.72$ 2-70931
- Newtonian fluid, flow between rollers, coating process models 2-70962
- nonlinear drag-free flow over submerged semi-elliptical body 2-86251
- Obstacle effect on flow, time delay and vertical mass (German) 2-55532
- oil film corrugation, appl. to rough surface anal. 2-112859
- optical visualization of accelerated and decelerated flow over a circular cylinder 2-60675
- oscillating 2-dimens. airfoils, unsteady flow 2-97510
- outer heterogeneous flow of gas containing droplets or particles plast blunt objects 2-65638
- plane parallel flow of a binary mixture of fluids 2-91524
- potential gas flow along a wavy wall and the transonic controversy 2-109360
- pressure pulsations in subsonic or supersonic flow over recess 2-60654
- relaxing gas, flow past notched objects 2-81361
- rotational incompressible non-viscous flows through multiply connected domains 2-60547
- simple gas flows with large density gradient layers 2-76011
- slow steady flow of viscous incompressible fluid over corrugated bed 2-114754
- solid profile movement when surrounded by eddy currents (French) 2-81429
- steady Couette flow, Hall effect 2-65655
- supercritical transonic trailing-edge flow 2-109361
- thin cavities, shapes, asymptotic laws of degeneracy 2-81354
- transient natural convection in shallow enclosures 2-114811
- turbulent shear flows, conf., Toulouse, France (May 1981) 2-58545
- unsteady flow around thin axisymmetrical bodies of variable form (Russian) 2-81309
- viscoelastic fluid flow past convexly curved boundaries, suspended particle effects 2-81368
- viscous fluid flow past an array of spheres 2-86250
- wall jets, 3-dimens., struct., hot-wire investig. 2-76006
- water waves, regular, radiation and diff. by body, Green function theory 2-86291
- wing-fuselage combination in supersonic gas stream, wave resistance decrease 2-70984

extraordinary ray *see birefringence***extrapolation**

- creep strength of irrad. stainless steel, time-temp. depend., extrapolation and interpolation 2-99633
- majority rule model, real-space renormalisation group soln. and finite size scaling 2-84554
- radiographic system, reliability evaluation by transmitted information 2-94168
- seismic wave propagation, method of Richardson extrapolation in ray problem 2-73476
- two-dimensional spectral estimation by linear prediction 2-60308

extraterrestrial atmospheres *see planetary satellite atmospheres***extraterrestrial life**

- bacterial interstellar grains, implications of IR spectroscopy over 2.9 to 3.9 μm waveband in biochemistry and astronomy 2-84347
- civilisations population in the Galaxy 2-106564
- cometary nuclei, biopoiesis 2-63319
- Drake equation for exact technological civilisations in Galaxy, re-examination 2-68638
- micro-organisms sealed in KBr discs, spectra, appl. to interstellar 3.4 μm feature 2-58429
- planetary atmospheres, comparative study and the search for life 2-68991

extraterrestrial radiofrequency radiation *see radiofrequency cosmic radiation***extremum control** *see optimal control***extrusion**

- CONFORM continuous extrusion process 2-88014
- dimension deviation for film coating process (German) 2-67214
- dimension deviation for film coating process (German) 2-83018
- lignosulphonate fibre reinforced polyethylene, fibre form. in hydrostatic extrusion 2-67356
- polyethylene, extruded, microstruct. study by electron microscopy 2-91826
- polyethylene, filled, hydrostatic extrusion 2-67281
- polyethylene terephthalate, semi-cryst., extrusion-drawn, multiple internal refl. IR obs. 2-67042
- polymer processing, modelling of nonisothermal processes 2-77800
- polyolefin-polystyrene blends, thermomech. anal. 2-77801
- polypropylene, drawn films and extruded rods, photoelastic and elastic consts., Brillouin scatt. study 2-83148
- polystyrene, atactic, multistage ultradrawing by solid-state coextrusion 2-72725
- polystyrene, ultradrawn, thermal expansion 2-98316
- PVC, filled, plasticized, rheological and mech. props. 2-67413
- steatite ceramics, extruded, texture effects, glass phase influence 2-111117

extrusion continued

- steel, barothermomechanical treatment effect on struct. and temper embrittlement susceptibility 2-57386
 steel, high-speed, hydroextruded, austenitic grain size 2-111197
 steel, Ni-Mo, austenitic, strengthened by phase strain hardening and hydroextrusion, mech. props. 2-72715
 steel stainless, dense powder metallurgical, prod. methods and mech. props. 2-99371
 strain hardening extrusion, slip-line field analysis using expt. flow patterns 2-116463
 strain hardening extrusion, slip-line field construction from expt. flow patterns 2-116462
 Bi₂Te₃-based alloy, deform. and recrystall., influence of second phase particles Al₂O₃ and ZrO₂ 2-83170
 α -Fe, rolled or hydroextruded, dislocation struct., brittleness and impact toughness meas. (Russian) 2-93560
 Fe-Cr-Al alloy, wrought, prep. and characts. 2-67249
 Nb-Ti alloy, phase comp., hydraulic extrusion process parameters influence 2-57330
 Ni-Mo steel, phase transitions during heating and strengthening (Russian) 2-116438
 UO₂, Al clad fuel cores, compacted and extruded, failure mechanisms 2-85164

eye

- see also contact lenses; vision
 absorption of goldfish eye media 2-111659
 accommodation, effect on visually evoked response 2-73230
 accommodation and vergence, control theory approach 2-116911
 accommodation in human eye, objective continuous meas. using IR optometer (German) 2-100083
 accommodative and vergence controllers, quantitative theory of control sharing 2-78331
 accommodative defocus rel. to acuity development in infant Macaca nemestrina monkeys 2-78329
 accommodative mechanism of human eye, math. model, mech. considerations 2-99962
 accommodative oscillation, enhancement of average accommodative response, simulation study 2-116908
 acuity of human infants, effect of focus 2-67993
 amblyopia, discriminability of spatial phase relationships 2-99996
 amblyopia, rel. to hyperacuity: Vernier, Snellen and grating acuity obs. 2-99991
 amblyopia in monkeys 2-111678
 amblyopic visual system, contrast sensitivity as function of exposure duration 2-111661
 ametropia, component and correlation 2-88536
 angle lambda changes during growth, theory and clinical appl. 2-111657
 anomalous correspondence, covariation with accommodative vergence 2-94024
 association amacrine cells, rel. to selectivity in pigeon retina 2-105699
 astigmatic eye, corrected system, 4X4 system matrix 2-62595
 astigmatism, regular, due to local curv. of ocular surface 2-99943
 asynchronous cortical input and asthenopia 2-111662
 binocular vision, reliability of fixation disparity curves 2-62619
 binocular vision, single, technique to meas. accommodative convergence, heterophoria and AC/A 2-94255
 binocular vision, zone of clear single vision rel. to zone of zero-associated phoria 2-73237
 blue sensitive cones signals, ganglion cells mediation, white-yellow borders detect. independent of brightness 2-68004
 blue-sensitive cones, sensitivity cross the central retina 2-68015
 carp retina, nonlinear characts. of receptive field of horizontal fields 2-105703
 cataractogenesis, effects of heavy ions of rabbit tissues 2-83605
 chromatic dispersion of the ocular media 2-99944
 circadian pacemaker, localisation in the eye of the mollusc, Bulla 2-111666
 colour opponent goldfish ganglion cells, early visual adaptation 2-116910
 colour vision and vision disorders in humans, systems analogue mime 2-94260
 compound eye of Xenopus, stripe projection on optic tectum 2-62609
 cone cell model, hardware, operational characts. 2-83565
 cone cell types in dichromatic colour blindness 2-78339
 cone distribution and three primary colour freq. characts. 2-116906
 cone pigments in frog, fish, and monkey, single-cell microspectrophotometry obs. 2-99972
 cone plasma membrane, fast photoinduced change in conductivity 2-78330
 cone sensitivity spectral dependence model for a Gaussian beam illuminated retina (German) 2-111677
 cone spectral sensitivity, estimation methods 2-99973
 cones, general model for adaptation 2-111672
 conference on bioengineering and microtechniques, Besancon, France (Apr. 82) 2-112638
 cornea, human, mean shape anal. 2-105696
 cornea, rabbit, light SHG conversion efficiency 2-73228
 corneal astigmatism, effects of lifting the lids 2-116907
 corneal endothelium, prep. method for accurate in vitro assessment by optical microscopy 2-88699
 corneal epithelium, mouse, γ -irrad.-induced mitotic delay 2-88618
 corneas, human, preservation by low temp. techniques (French) 2-117105
 corneas of working radiologists, fluorescent light intensities determ. 2-94109
 cyclofusional stimuli containing depth cues, human response 2-88539
 dark adaptation, early, rel. to receptor pot. and lateral effects on retina 2-68008
 dominance, rel. to visual evoked pots. 2-62601
 EEG recording, eye movement artifact nulling by multichannel on-line EOG subtraction 2-62799
 electro-oculographic records, automatic anal., audio-vestibular diagnosis appl. 2-73390
 ERG, local, of primates, fractional recording and component anal. 2-57948
 ERG, local, primate, derivative of red mechanism field sensitivity 2-99976
 ERG a-wave slope as a measure of photoreceptor activity 2-57802
 ERG stimulator microprocessor based 2-73384
 ergo-optometric topics review 2-57800
 evoked potential dependence on stimulated retinal area change rel. to different pattern displacements 2-111664

eye continued

- exchange thresholds for long-wavelength incremental flashes 2-78332
 field experiments, instrument for simultaneous meas. of line of sight, vergence and pupil diameter (German) 2-94256
 fish, colour vision rel. to eye evolution 2-78340
 flicker-photometric and flicker-threshold spectral sensitivity comparison for eye adapted to coloured backgrounds 2-78336
 fluorophotometer, solid state, for ophthalmic appls. 2-94149
 foveal pi mechanism early-stage abnormality in protanopic patient with retinitis pigmentosa 2-116918
 fundoscopic systems, comparison of magnification 2-111765
 fusional response to vertical disparity, nonmotor component, second look using afterimage method 2-94050
 ganglion cell acuity in hooded rats 2-62610
 Haidinger's brushes and macular pigment dichroism 2-88544
 human eye movements, SQUID magnetometer for meas. 2-94218
 hypermetropia corrected with spectacles or contact lenses, AC/A ratio and convergence 2-88538
 image quality and observer performance 2-111681
 immobile eye, stimulation, visual following expts. 2-111671
 insect eye, mechanical model 2-88712
 interpupillary distance meas. by chromostereopsis 2-88546
 intracellular light responses in intact in vivo cat eyes 2-94035
 intraocular lens edge meas., noncontact profiling with focal spot and fringe projection techniques 2-57922
 intraocular melanoma localisation by laser-induced photoacoustic spectroscopic imaging 2-100181
 intraocular pressure, neural control 2-88540
 intraretinal recordings of slow elec. responses to steady illumination, rhesus monkey obs. 2-57810
 laser optometry as measure of eye's ability to accommodate to information displays 2-88702
 laser radiation interaction mechanisms with ocular tissues, human exposure limits implications 2-100059
 laser radiation permissible exposure normalisation 2-83661
 laser speckle visual evoked response, contrib. of central retina 2-105698
 lateral inhibition, optical and information aspects 2-94031
 lens epithelium and radiation cataract, nuclear fragmentation of meridional row cells 2-105807
 lens opacification in cold cataracts, identification of scatt. elements responsible 2-62597
 localisation during tracking on steady background and during steady fixation on moving background 2-83569
 Maxwellian view optical system, calibration of retinal illuminance 2-62873
 methane eyesafe Raman laser, Nd:YAG based, cloud height ranging appls. 2-97058
 monocular viewing, eye movement synchronism 2-57806
 motion and vision, isotropic and anisotropic spatial responses 2-78342
 movement meas. using motion picture camera 2-111766
 movement measurement using a ferromag. contact ring 2-88643
 movement measurement using CCD image sensors, meas. resolution 2-94156
 movement position signal, physiological measure 2-57815
 multiplication noise in human visual system at threshold, quantum fluctuations, min. detectable energy 2-78334
 neurochemically classified interneurons of goldfish retina, local patterns of spatial organisation 2-68002
 oculomotor system, human, biotechnical investg. (Russian) 2-99958
 ocular avascular compartment, volume elasticity in vivo and post mortem 2-73272
 oculomotor mechanism obs., saccadic eye movement as function of task visibility level 2-73234
 oculomotor control and spatial orientation in humans, some contribs. of touch, press. and kinesthesia 2-57831
 oculomotor system as a model for the study of neuronal interaction processes 2-57814
 optical density of the crystalline lens 2-88537
 optokinetic nystagmus, monocular, postnatal development in infants 2-57807
 parafoveal retina short-wavelength-sensitive mechanism field sensitivity in protanopic patient with retinitis pigmentosa 2-116919
 pattern vision dynamics 2-111663
 perceptual suppression during opening, closing and blinking 2-99995
 peripheral field, transformations, model of early stages of human system 2-94027
 peripheral retina, colour vision under photopic conditions 2-94043
 peripheral retina, spectral sensitivity to large and small stimuli 2-116920
 photomechanical movements in the trout retina following brief flashes of light 2-67998
 photoreceptor membrane of visual cell, struct. change due to light damage, small-angle X-ray investg. 2-105759
 photoreceptor membranes, rhodopsin mols. aggregation on exposure to damaging action of light 2-111737
 photoreceptors, light absorpt., transverse incidence 2-62615
 photoreceptors, spectral anal. of spatial sampling, prevention of aliasing by topological disorder 2-111674
 pigments of retina of 'four-eyed' fish 2-94023
 primate retina, model for temporal organisation of X- and T-type receptive fields 2-99947
 prism bar vergences, normalisation 2-116909
 proximal convergence, effects of base-out training 2-73231
 pupillary diameter ocular fatigue relation (Spanish) 2-88542
 pursuit eye movements, retinal location and visual localisation 2-99998
 quantum efficiency determ. method for human eye, radiology appl. 2-73312
 R-G cone difference signal, primates, chromatic adaptation and flicker-freq. effects 2-1116916
 R-G cone difference signal identification in corneal electroretinogram of primates 2-1116917
 receptor interactions and visual persistence 2-1116914
 receptor sensitivity formula refinement 2-62545
 red-green colour deficient, congenital, large-field colour match homogeneity 2-78337
 retina, cat, receptive field props. of X and Y cells, contrast sensitivity meas. 2-111670
 retina, dace, spectral props. of 2nd order neurons 2-99953
 retina, differences in the kinetics of rod and cone synaptic transmission 2-73235
 retina, electronic model based on freq. characts. of vision (Japanese) 2-62606

eye continued

- retina, fish, colour information coding of horizontal cell responses 2-99948
 retina, rabbit, linear visual streak, dendritic struct. of A-type horizontal cells 2-99961
 retina, ratfish, intracellular recordings and HRP injections 2-94034
 retina of monkey, discovery of neuron type contacting photoreceptors 2-105700
 retina of the newborn human infant 2-105702
 retina with multiple efferent systems, in teleost fish 2-57804
 retinal bipolar cells, carp, chromatic props. 2-99952
 retinal cell loss following brain damage to cat 2-105701
 retinal cells, Nissl staining, electron microscopy technique 2-62858
 retinal ganglion cell responses, principal components anal. of variability sources 2-67995
 retinal ganglion cells, turtle, spatial organisation, receptive fields to coloured lights 2-99951
 retinal horizontal cells, information processing 2-68003
 retinal images, stabilised fading 2-78335
 retinal L-type horizontal cells, role in opponent-colour process 2-99949
 retinal late-receptor pot., human, clinical use in dyschromatopsia 2-99950
 retinal Muller cells, photo-induced changes in extracellular K^+ conc. rel. to transretinal pot. generation 2-57801
 retinal on and off pathways, central connections, rhesus monkey obs. 2-88541
 retinal photoreceptors, intact vertebrate, lamellar structure, verification of phases 2-62596
 retinal sensitivity in rats, pupillary light reflex. meas. 2-111673
 retinal tissue damage induced by 6-psc 530-nm laser light pulses 2-57847
 retinitis pigmentosa patients, psychophys. studies of cone optical bandwidth 2-111684
 retinoscopy, dynamic, evaluation of monocular estimation method 2-105695
 rhabdomere, fly, refr. index meas. 2-78328
 rhodopsin molecule in photoreceptor membrane, photodamage, oxidation of SH groups 2-99894
 rhodopsin-GTP-binding proteins, interactions, kinetics and stoichiometric anal., light scatt. meas. 2-57771
 rod afterimage, delayed, expt. obs. 2-116928
 rod and cone channels, interactions above threshold, test of various models 2-111669
 rod and cone responses, summation at absolute threshold 2-94038
 rod external segments, native, release of Ca^{2+} on partial bleaching of rhodopsin 2-68006
 rod monochromat, temporal summation obs. 2-62617
 rod out segment suspension, light-dependent rhodopsin-phosphorylation (German) 2-68010
 rod out segments, modelling birefringence change correlated with metarhodopsin II formation 2-94036
 rod out segment birefringence bands rel. to daily disc membrane synthesis 2-111668
 rod out segments, bounce, near-IR scatt. 2-62599
 rod out segments, bovine, comparative kinetic light scatt. and absorpt. photometry 2-62846
 rod out segments, bovine, incorporation into bilayer lipid membrane, transformation into photoexcitable system 2-116888
 rod out segments and disc vesicles, bovine, shrinkage effects, refractive index, IR scatt. 2-62598
 rod system, saturation and adaptation 2-116915
 saccades, corrective, effect of shifting saccade goal 2-57809
 saccadic eye movements, multipulse control 2-57813
 saccadic movement in preschool children 2-78333
 saccadic movements, global visual processing 2-99965
 saccadic movements, suprathreshold stimuli perception 2-62622
 scanning open and closed polygons 2-94032
 sclera, deform. characts. 2-94098
 scotopic ERG, simulation with electronic model 2-99959
 scotopic spectral sensitivity development, absorpt. spectrum of human ocular media 2-57819
 sensitivity changes caused by on- and off-transients 2-99969
 signal processing in the insect eye 2-88543
 spatial-frequency adaptation, localised effects 2-94037
 spectral dimorphism of crayfish visual pigment in soln. 2-94041
 stimulus vergence rel. to mean accommodation response, accommodation microfluctuations and ocular optical quality 2-67994
 strabismus, humans with alternating fixation, binocular vision 2-99992
 tear film, human, Marangoni convection 2-78358
 tear film pressures induced during blinking, effects of contact lens deform. 2-88535
 tilt aftereffect, interocular transfer in different kinds of strabismus 2-73238
 TV ophthalmoscope for analysing images of retina and choroid 2-100174
 TV pupillometer, solid-state 2-62875
 vascular flow of eye fundus, fluorimetry and differential, luminosity integration as perfusion time function, angiographic photographs appl. 2-57890
 vergence contribution to back vertex power of anterior segment, ocular component anal. 2-62594
 vergence limits meas. method, rot. grid technique 2-105856
 vergence system, course and effect of visual training 2-105697
 vertebrate retina, origin and signal-shaping mechanism of fast photosignal 2-68007
 vertebrate retina response anal. 2-94026
 vertebrate retinas, isolated, light-induced IR transmission changes 2-111658
 vertical alignment, comparison of subjective and objective meas. 2-99964
 vestibulo-ocular reflex, effect of convergence, implications for perceived movement 2-62612

F-centres

see also A-centres; M-centres; R-centres; Z-centres

- alkali halide colour centre lasers, review 2-96956
 alkali halide crystals, Anderson transition in electronic colour centre systems 2-92504
 alkali halide crystals, localisation structs. calcs. (Russian) 2-56486
 alkali halides, colouring curves, computer simulation using heterogeneous nucl. model 2-91960
 alkali halides, F_2 -centres, absorption splitting 2-57134
 alkali halides, F centre pairs, exchange effects in ODSR 2-56981
 alkali halides, F-centre, semicontinuum model 2-60976

F-centres continued

- alkali halides, F-centres, g-factor shift of relaxed excited state 2-56464
 alkali halides, F-centres absorption spectrum, surface polarisation effects, theoretical anal. 2-77556
 alkali halides, lattice defect creation by electronic excitation, review 2-115218
 alkali halides, radiative tunnelling transitions between defects, energies calc. 2-77587
 alkali halides, Stark effect, theoretical problems 2-104850
 alkali metal halide cryst., triplet excitons, hyperfine interactions ESR optical registration study 2-87629
 alkali metals, F-centres, thermal dissociation energy, electrolytic coloration meas. 2-60977
 holographic recording, colour centre conversion intensity depend. 2-90842
 lasers, possibility of visible oscillation (Japanese) 2-70569
 luminescence, effect of spin-orbit coupling on temp. depend. of mag. circular polarisation 2-87861
 luminescence quenching of F centers due to nonradiative de-excitation during lattice relaxation 2-104951
 regularity argument from uncertainty principle 2-84423
 AgCl, triplet excitons, hyperfine interactions ESR optical registration study 2-87629
 AgCl:Br, pure and doped, band-gap-irrad., luminesc. centres, ODMR and level-anticrossing spectra 2-56980
 α -Al₂O₃, corundum, neutron irradi. damage, review 2-115300
 BN with C impurity, ESR signals after high-temp. shock compression, reverse phase transitions, paramag. centres form. 2-56931
 CaO, electron transfer between F-centres, luminescence, ODMR study 2-98999
 CaO, ion irradi., F^+ and F centre form. and annealing, UV spectra and volume study 2-76437
 CaO:Mg, neutron or electron irradi., circular polarised luminesc. from F- and F_2 -centres 2-110915
 CdS, F^+ centres and oxygen radicals, impurities effect 2-93006
 GaAs:Zn(Cu), F- and C-centres, vibr. props., Green's function calc. 2-86811
 KBr, F-centres, relaxed excited state, spin-lattice relax., luminescence study 2-87572
 KBr, photoplastic effects and their temp. depend. 2-71544
 KBr:Na, thermo- and photostimulated recomb. of defects, spectra studies 2-110959
 KBr:Ti³⁺, X-ray irradi. induced defects, optical and TSC meas. 2-81825
 KCl, cryst., electron injection, role of space charge on F centre focus 2-65991
 KCl, depolarisation of positive muons, effect of F' -centres 2-93095
 KCl, F and U centers, excitons, local correl. effects 2-87153
 KCl, F-centre excitation, reson. Raman scatt. study 2-116232
 KCl, photoplastic effects and their temp. depend. 2-71544
 KCl, radiation-induced F- and V-centres formation by γ -rays 2-66058
 KCl:Eu, F-centre colouring 2-109791
 KCl:Eu²⁺, γ -irrad., optical, EPR, and ITC meas. 2-109831
 KCl:Eu²⁺, impurity-vacancy complexes, conversion under γ -irrad. and F-band bleaching, ESR study 2-76499
 KCl:Li, $F_2(H)$ centre relaxed excited state, second order perturbation theory 2-76974
 KCl(I)(Br), F-coloured, light induced refractive index change 2-72441
⁴¹KCl(³⁹KCl), F-centres, relaxed excited states, ODMR study 2-61790
 KI, H-centre creation, exciton non-radiative decay (Russian) 2-103755
 KLi:Li⁺, F and M centres, luminescence and absorption spectra 2-67115
 LiF crystals, X-ray luminesc. obs. of F-aggregate colour centres 2-110931
 LiF lasers based on F_2 centres, lasing action, luminescence 2-80972
 LiF, neutron irradi., excess sp. ht. and thermal cond. 2-61160
 LiH, X-ray irradiated, thermolum., TSC and F centre annealing at low temps. 2-116278
 Li₂O, neutron and γ -irrad., defect production, optical absorpt. study 2-86737
 LiTaO₃, F^+ centre, pot. energy of point ion lattice, Schrodinger eqn. 2-76973
 MgO, additively coloured, photoluminescence, mag. circular polarisation and ODMR study 2-61948
 NaCl crystal, γ -irradiated, F-stimulated photoplastic effect 2-66108
 NaCl, F-coloured, light induced refractive index change 2-72441
 NaCl, γ -irrad., aftereffect and photometry, F-centres and dislocations 2-71547
 NaCl, γ -irrad., radiation induced F- and V-centres, thermal destruction 2-115226
 NaCl, laser-induced primary defect form. role in optical breakdown 2-66057
 NaCl lasers based on F_2 centres, lasing action, luminescence 2-80972
 NaCl, radiation-induced F- and V-centres formation by γ -rays 2-66058
 NaCl:Mn, γ and X-ray irradi. charge compensation thermoluminescence and optical absorption spectra 2-61988
 NaCl:Sm, thermolum. and optical absorption studies of Zi centres 2-72568
 NaF Harshaw crystals, thermoluminesc. γ -ray induced sensitization obs. 2-87878
 NaF Harshaw single crystals, γ -ray irradi., thermoluminescence, relationship to colour centres 2-61991
 NaF lasers based on F_2 centres, lasing action, luminescence 2-80972
 NaF:Ca²⁺, γ -ray irradi. $F_2(H)$ centres; optical absorption spectra study 2-76976
 NaF:Ca²⁺, γ -ray irradi., colour centres and interstitials, luminesc. spectra 2-110960
 NaF:Ce³⁺, F-centres, luminescence and optical study 2-77601
 NaF:Li, single crystal, stability of electronic colour centres 2-91958
 NaI, resonance Raman scatt. induced by F-centres, electron-phonon coupling 2-87788
⁸⁵RbCl (⁸⁷RbCl), F-centres, relaxed excited states, ODMR study 2-61790
 Th, cathodoluminesc. in presence of O₂, CO, and gas mixtures 2-110953
 YAG:Cr³⁺, Czochralski grown, colour centres, optical absorption spectra study 2-91959

F_2 -centres see M-centres

F_3 -centres see R-centres

F_1 -centres see A-centres

F-layer see F-region

F-region

- collisional drift waves, instability with field-aligned currents 2-100650
 cross-field plasma diffusion affected by conducting E-region 2-94552

F-region continued

- depletion of electron content assoc. with radio scintillations 2-78901
 earthquake influence on F-layer electron conc. 2-73777
 electrodynamic interaction with F-region, cond. and plasma density 2-73751
 electron cooling rate from radiowave heating expt. 2-94555
 equatorial anomaly in Indian sector, post-sunset behaviour 2-78908
 equatorial F-region height, forecasting technique 2-112192
 equatorial spread F, study of Rayleigh Taylor instability 2-100626
 equatorial spread-F, in-situ generated gravity waves as seeding mechanism 2-112215
 equatorial spread-F, obs. of turbulent fluctuations 2-73761
 equinoctial anomaly in $N_m F_2$ during high solar activity 2-89068
 F_1 -layer, ion recombination coefficient and short wave solar flux 2-73750
 F_2 layer, December anomaly var. throughout solar activity cycle 2-73752
 F_2 layer at Jicamarca, nighttime Nm increase (2-3 Feb. 1965) 2-84007
 F_2 -layer, angular spectra of reflected vertical EM waves 2-78911
 F_2 -layer, critical frequency prediction technique 2-112184
 F_2 -layer, f_o daytime variations depend. on solar activity 2-117517
 F_2 -layer, postnoon bite-out study at Karachi 2-106390
 F_2 -layer, space correl. of polarisation characts. of partly scattered vector field 2-112200
 F_2 -layer electron density variations due to geomag. disturbances 2-63158
 gravity wave disturbance seen in digital ionogram data 2-73763
 HF echo, unusual long period phase path fluctuation obs. on solar eclipse day, (1980 February 16) 2-106386
 HF radiowave heating of ionosphere, effect on wide band attenuation 2-68555
 HF waves propagation on mid-latitude round-the-world hop path 2-73754
 high latitude, ion temp. variations 2-106400
 ion density diurnal variation at high-latitude 2-73762
 ion density latitudinal inhomogeneities at 500 km altitude 2-112203
 ionisation irregularities at high-latitude, origin and extent 2-94553
 ionization bubble obs. method entailing study of airglow 2-89043
 irregularities and nighttime scintillations at magnetic equator 2-78906
 longitudinal electrostatic field effects on ionospheric struct. 2-112207
 main trough displacement during daytime storms 2-112204
 mid-latitude F-region collapse, rel. to occurrence time of equatorial mid-night temp. bulge 2-100637
 night glow, meas. rel. to total contrib. of atmospheric movements to maintenance of electron conc. 2-73748
 nocturnal intermediate layer occurrence, solar and geomag. influences 2-106411
 plasma stability of mid-latitude F-region in presence of photoelectrons 2-106384
 polar cusp ion drift 2-100644
 radiowave heating experiment, diagnostic wave phase changes 2-73759
 scintillations, global morphology 2-73772
 skywave field strength estimation, HF, in tropical region, AIR method appl., E-mode propagation 2-106413
 solar eclipse effects on F-layers above Gauhati (1980 Feb.16) 2-78907
 equatorial spread instability conditions 2-106396
 spread-F, mid and low latitude, depend. on geomag. activity 2-106407
 spread-F, simultaneous obs. on oblique and vertical incidence records, anal. 2-78904
 spread-F (range spreading type) occurrence in S. hemisphere 2-89067
 topside equatorial spread-F, wave number spectrum for plasma density fluctuations 2-106404
 total electron content variations at 31°S, 1967 to 1974 period 2-63165
 velocity characts. of F-region irregularities 2-106397
 O cooling mechanism from momentum transfer collisions with slow electrons 2-100640
 O^+ diffusion equation in ionospheric F_2 -layer, approximate soln. 2-112193
 O^+ ion flux detection from F-region topside soundings 2-83961

f-values *see oscillator strengths***faces (crystal)** *see crystal faces***facsimile***see also video signals*

- 20 years after conception, applicational fields (Czech) 2-55089
 optical fibres, component performance and price forecast to year 2000 2-65368

facsimile communication *see facsimile***facsimile document reproduction** *see photocopying***facsimile signals** *see video signals***facsimile transmission** *see facsimile***faculae** *see Sun***fading***see also radiowave propagation*

- 14/11 GHz rain attenuation characteristics on the Earth-space paths (Japanese) 2-68435
 atmospheric-induced fading on 23 km links at 9.6, 11.4, 28.8 GHz 2-112034
 data transmission over high freq. links 2-63169
 digital high frequency radiocommunications, applications of microprocessors 2-73781
 envelope statistics of partially saturated processes 2-97299
 ionosphere similar fading method for close-spaced receivers data anal. (Chinese) 2-83952
 ionospheric scintillations, global morphology 2-73772
 line-of-sight radio link, 160 km, received signal level measurements 2-117404
 m-fades, mean power of signal reflected by ionosphere 2-63170
 microwave radio meteorology, fading by beam focusing 2-106295
 mid-latitude lower ionosphere, anisotropic scatt. of short radio waves, 25 MHz 2-89069
 rain fade duration on Earth-space paths, calc. of statistics 2-117432
 tropospheric propagation of meter waves (Polish) 2-100415

failure, electrical *see electrical faults***failure (mechanical)***see also fracture; mechanical strength; plastic deformation*

- adhesive failure, fracto-emission of electrons, positive ions and photons 2-77716
 ceramics, failure prediction by strength and fracture mechanics, comparison 2-88165
 damage models, nonstationary, cumulative 2-103032
 fibre reinforced composites, probability model 2-93620
 optical microscopy appl. (German, English) 2-57569

failure (mechanical) continued

- steel, C, 1018, thick walled cylinders under external press., collapse 2-93584
 transversely isotropic solids, yielding and failure, expt. 2-91262
 MoS₂ films, lubrication and failure mechanisms, substrate surface finish influence 2-110216
 TiC, CVD on cemented WC, growth rate and failure mode 2-116380
 TiC-N₂, CVD on cemented WC, growth rate and failure mode 2-116380
 TiN, CVD on cemented WC, growth rate and failure mode 2-116380
 Zr-Nb (2.5% wt.%), pressure tests for CANDU-PHW, resistance to failure 2-90231

failure analysis*see also electrical faults; wear*

- fault trees top-event probability, probability intervals, approximate method for computation 2-113712
 fission reactor, electrical equipment, failure during TMI-2 accident 2-108094
 flat-plate photovoltaic modules qualification testing 2-116812
 nonidentical sensors, optimal struct. of sensor systems, contradictory failures 2-101394
 nuclear power plant reliability management 2-69810
 photovoltaic array reliability optimization 2-116811
 photovoltaic module reliability improvement through application testing and failure analysis 2-116809
 photovoltaic modules performance and failure analysis in power generating systems 2-116810
 terrestrial solar cells, accelerated stress testing 2-116813
 Three Mile Island Unit 2 safety philosophy and safety systems performance 2-102194
 Cr-MIS solar cell stability analysis 2-116816
 Si photovoltaic cell reliability attributes investigation 2-116814

fallout*see also air pollution*

- ¹³⁷Cs concentrations in northern Alaskan eskimos, 1962-79: effects of ecological, cultural and political factors 2-68173
 Atlantic Ocean and European regional sea pollution 2-117363
 atmospheric debris deposition following nuclear explosion, quantitative anal. (Chinese) 2-59545
 beta-ray activity AD 1976-1980 2-69995
 Greenland ice sheet cores, ²³⁹⁺²⁴⁰Pu/¹³⁷Cs and ²¹⁰⁺²⁴⁰Pu/⁹⁰Sr as fallout records 2-69994
 Mono Lake, California, chemistry of elevated Pu concs. 2-94408
 Mono Lake, California, concs. of fallout and natural radionuclides 2-94407
 nuclear detonation, offside fallout, calc. of conc. of any radionuclide deposited on ground 2-69993
 ocean distribution processes for radioactive pollution (German) 2-100401
 Saguenay Fjord, Quebec, transport mechanism for ²¹⁰Pb, ¹³⁷Cs and Pu fallout radionuclides through fluvial-marine system 2-99856
¹³⁷Cs body burden from radioactive fallout, long term study 2-73377
⁹⁰Sr in surface air and stratosphere, inventory of 1963-75 data 2-111599
²³⁵U fallout from Chinese nuclear weapons test (16th Oct. 1980) (Italian) 2-68473

Faraday effect

- atoms, forward laser light scatt. in mag. field, perturbation theory 2-96515
 bistable magneto-optic switch for multimode optical fibre 2-81082
 bubble material, length and magnetisation, Faraday rot. study 2-92982
 covalent semiconductors, nonequilibrium carriers cascade capture effects on Faraday rotation 2-99093
 Crab Nebula, rotation of plane of polarised radio emission by Sun's super-corona 2-94815
 dispersion relations for magneto-optical difference effects in Faraday config., tensor and scalar form comparison (German) 2-77495
 fibre optical coils, tuned, Faraday rotation rel. to device appls. 2-91078
 filters, magneto-optic, dispersive 2-86075
 garnet film, ion implanted, charge wall dynamics, Faraday effect study 2-72311
 garnet films containing Bi, magneto-optical props. and thermomagnetic recording (Russian) 2-61715
 inertial confinement fusion plasmas, laser diagnostics 2-103450
 ionosphere, Faraday rot. meas. rel. to electron content at mag. equator 2-106385
 ionosphere, VHF Faraday polarisation fluctuations and L-band amplitude scintillations near Appleton anomaly crests 2-100647
 laser beam intensity stabilisation using high-efficient Faraday rotator 2-70666
 laser magnet reson., mid-IR, using Faraday and Voigt effects for sensitive detection 2-79637
 MIS system, ellipticity and Faraday rotation due to 2-D electron gas 2-110822
 negative ion source, self extraction 2-89858
 null Faraday rotation, intraband and interband transitions 2-61500
 optical fibre polarisation modifying props., polarisation time domain reflectometry meas. 2-91080
 optical fibres, monomode, coiled, Faraday rot., isolator, filter and mag. sensor appls. 2-75712
 optical single mode fibres, Faraday effect obs. using polarisation-optical time domain reflectometry 2-65371
 photon 2-75549
 polyquinoxycloalkanes, MCD spectra and electronic spectra 2-80582
 pulsed magnetic field meas., compensation method 2-95412
 rotator for high-power glass laser systems 2-113578
 Tokamak, Faraday rot. meas. using magneto-optically modulated CH₃OH laser 2-97788
 Tokamak plasmas poloidal fields Faraday rotation (Spanish) 2-86436
 toroidal reversed-field Z-pinch poloidal mag. field meas. using far-IR Faraday rot. 2-103442
 ultrahigh vacuum apparatus for combined low-energy electron diffraction, Auger spectroscopy, MeV ion scattering, and nuclear microanalysis 2-89733
 YIG, mag. phase diagram, Faraday effect and absorption coeff. in fields up to 10 MG 2-87508
 Bi₂Dy_{1-x}FeO₃ orthoferrite monocrysts., magneto-optic props. meas. 2-82828
 BiYIG, film, bubbles, mag. props. 2-72315
 CoF₂, noncollinear state, magneto-optical study (Russian) 2-61883
 CrCl₃, mag. ordering at phase transition, Faraday rot. and susceptibility meas. 2-98882
 (Er₂Y_{0.8})FeO₃, Faraday rotation anisotropy 2-72460

Faraday effect continued

- EuO ($\text{Eu}_{1-x}\text{Gd}_x\text{O}$) (Eu_{1-x}), mag. semicond., s-d exchange interaction, current carriers effect, expt. study 2-92895
 FeCO₃, antiferromag. indirect detection of cooling by adiabatic magnetisation 2-98884
 Ge, Faraday rot., nonreson. interband transitions, expt. and Kramers-Kronig anal. 2-57065
 Ge, interband Faraday and Kerr effects 2-72463
 He-Ne lasing medium, resonant Faraday effect, maximum population inversion determ. 2-114238
 n-InSb, free carrier Faraday effect at subMM freq., static elec. field influence 2-99094
 InSb, Landau level nonlinear refr. 2-65292
 Si, Faraday rot., nonreson. interband transitions, expt. and Kramers-Kronig anal. 2-57065
 Si MIS structure, Faraday rotation for inversion layer electrons, Appel-Overhauser model 2-87746
 YIG:Bi thin films, waveguide type optical isolator appls., magneto-optical props. (Japanese) 2-81076

farming

- drought forecasting, Yakima Valley 1977 case 2-74193
 pregnant pigs detection, US echometer appl. (Spanish) 2-62868

fast amplifiers *see pulse amplifiers***fast Fourier transforms**

- acoustic imaging, medical and underwater surveillance systems, microprocessor controlled 2-81192
 acoustic resolution for images from Fresnel or Fraunhofer diffraction using the FFT 2-60306
 ECG spectral anal. for arrhythmias detect. in isolated guinea pig hearts 2-117163
 EEG analysis techniques, multivariate comparison between FFT and period anal. 2-94222
 electron micrograph Fourier transform data, interpolation in tilted-view 3-D reconstruction 2-71302
 electron micrograph image processing minicomputer system 2-107463
 forward and backward projection of acoustic fields using FFT methods 2-70775
 framework dynamic response by FFT 2-109215
 geomagnetic variations, line spectrum at Dourbes, Belgium from Fourier anal. 2-105901
 His bundle activity with cross-correlative waveform alignment 2-94217
 US holography, image reconstruction, single and double FFT methods comparison (Japanese) 2-114559
 LiC₆ intercalation compound, band struct., self consistent extended muffin tin calc. 2-82229

fast-response computer systems

- underwater signal processing, high-speed programmable digital systems 2-63143

fastening *see joining processes***fatigue**

- for corrosion fatigue see stress corrosion cracking; for thermal fatigue see thermal stress cracking*
see also fatigue cracks; fatigue testing
 aircraft skin structs., sonic fatigue life estimation at room and elevated temps. 2-65428
 amorphous metal ribbon reinforced resin matrix composite, mech. props. 2-57410
 borosilicate glass with antireflective surface, strength and fatigue 2-83209
 Chakraborty model for fatigue crack growth rates calc., eqn. modification 2-92096
 coated materials for Tokamak fusion device appl., thermal fatigue props. 2-74909
 composite, differential damage accumulation model 2-93624
 crack growth retardation mechanisms, microroughness model, overload effects 2-109899
 creep damage, wedge-type, in low cycle fatigue 2-98195
 creep-fatigue, mechanistic approach to creep-dominated failure 2-88183
 creep-fatigue interactions, failure mode 2-99522
 creep-fatigue interactions, mechanisms 2-99540
 criteria under combined stresses or strains 2-61060
 cumulative damage conditions for fatigue and creep, phenomenological approach 2-113623
 delrin, static and dynamic fatigue examined using isodensitometry (French) 2-57478
 diamond anvil under stress, CAD study 2-112917
 elastic strain energy accumulation during cyclic loading 2-103892
 elasto-plastic, damage accumulation model (Japanese) 2-103890
 epoxide resin adhesives, having different network structs., fatigue behaviour (Japanese) 2-62202
 FCC metals, pure, fatigue, role of strain hardening 2-111257
 fibre optic army systems, survivability 2-114444
 fibre reinforced composite, unidirectional, fatigue failure criteria 2-93628
 fibre-reinforced plastics, fatigue behaviour 2-116537
 filled polymers, phenolic molding material, fatigue strength 2-76577
 formaldehyde copolymer, serviceability, effect of radiation 2-83223
 fracture toughness change due to cyclic loading effects, model 2-93595
 fretting, finite element anal. and electron microscopy study 2-88193
 fretting-initiated fatigue, aircraft material/structure degradation 2-67479
 fusion reactor materials, thermal stress in materials heated internally by radiation absorption 2-69840
 glass bead-filled Nylon 6, fatigue crack growth and fracture energy 2-105279
 glass cloth reinforced plastic, random loading, fatigue life, stress amplitude evaluation (Japanese) 2-57466
 glass fabric reinforced plastic, orthogonally reinforced, fracture anisotropy under low-cycle loading 2-116539
 glass fibre reinforced composites, at cryogenic temps., fatigue fracture life and mechanisms 2-105341
 glass fibre reinforced composites, at cryogenic temps., tensile and torsional fatigue 2-105340
 glass fibre reinforced epoxy-phenolic, long-cycle fatigue under soft and stiff load 2-83224
 glass fibre reinforced plastic, fatigue life under random loading (Japanese) 2-72813
 glass fibre reinforced polyester resin, long term strength in dil. H₂SO₄ 2-88196
 glass-ceramic, fatigue anal. brittle materials using indentation flaws 2-83211
 fatigue continued
 graphite fibre reinforced epoxy laminate, fatigue damage detection using out-of-plane Moire interferometry 2-88178
 graphite fibre reinforced epoxy laminates, notched, compression fatigue 2-116532
 graphite fibre reinforced epoxy laminates, US and mech. charact. 2-78041
 high cycle, effect of self stresses 2-105310
 Inconel 718, Ni-base superalloy, low cycle fatigue, stress-strain behaviour 2-116516
 Kevlar-29 fibre, tensile fatigue and creep behaviour 2-105299
 laminate, finite element analysis of instability related delamination growth 2-62196
 limit state in variable biaxial stress, complex loading 2-55511
 limit state in variable biaxial stress, simple loading 2-55510
 low cycle fatigue reliability expressions 2-77951
 metal, damage accumulation, math. model 2-56078
 metallic materials, statistical props. of mech. strength (Japanese) 2-99493
 metallic materials, statistical strength (Japanese) 2-111188
 multiaxial loading, fatigue evaluation, new approach 2-62225
 near-threshold crack growth behaviour, unzipping model analysis 2-92097
 Ni single crystal, plateau behaviour 2-115344
 nuclear reactor constructional materials, liq. Na influence on strength, calc. method 2-96112
 nylon, static and dynamic fatigue examined using isodensitometry (French) 2-57478
 optical fibres, coated with UV-curable polyurethane acrylate, temp. depend. 2-75709
 optical fibres, in protective coatings, microbending losses and static-fatigue life 2-81112
 optical fibres, long length, failure prediction based on proof testing 2-97242
 osteonal remodelling, stimulation by fatigue damage, hypothetical mechanism 2-105714
 persistent slip bands, macro- and micro-, slip offsets development during one fatigue cycle 2-98112
 plexiglass, static and dynamic fatigue examined using isodensitometry (French) 2-57478
 PMMA, serviceability, effect of radiation 2-83223
 PMMA cracks, stress intensity factor meas. using method of caustics (Japanese) 2-88180
 polyamide, serviceability, effect of radiation 2-83223
 polyamide 6, struct. parameters variation resulting from fatigue failure process (Polish) 2-83219
 polycarbonate, serviceability, effect of radiation 2-83223
 polyethylene, high-density, cryst., long-term fracture in plane stress state under transient load 2-116538
 polyethylene, serviceability, effect of radiation 2-83223
 polymeric materials, expt. verification of fatigue wear eqn. 2-111326
 polymers, mech. props., influence of mol. wt. and mol. wt. distrib. 2-111306
 polypropylene copolymer, injection moulded, microstruct. effect on dynamic fatigue props. 2-57447
 polystyrene, serviceability, effect of radiation 2-83223
 polysulfone, injection molded, effects of residual stress and orientation on fatigue 2-67536
 PTFE, cryst., long-term fracture in plane stress state under transient load 2-116538
 pure rolling fatigue conditions, anal. of effect of microstruct. and internal stresses 2-57485
 Pyrex glass, borosilicate, static fatigue, functional depend. of failure time on stress 2-67503
 rilsan, static and dynamic fatigue examined using isodensitometry (French) 2-57478
 solid body fatigue resist., loading method influence (Russian) 2-60465
 statistical simulation model of Miner's rule 2-62224
 steel, A572, hot rolled, const. and variable amplitude fatigue and fracture at 25 and -45°C 2-93597
 steel, alloy, fatigue resistance after diamond and hexanite grinding 2-67543
 steel, alloy, high strength, H stress cracking, effect of P conc. 2-77938
 steel, alloy, types HY-130, HY-80 and A517-F, fracture toughness data, correlation of standard and precracked Charpy specimens 2-77925
 steel, alloy type Ck 15, fatigue charact., nitriding effects (German) 2-57475
 steel, alloys, fractographic features and fatigue failure mechanism, 20 GL and 20 GLF 2-72825
 steel, austenitic, a high-strength, fatigue limit, grain size and γ -phase stability influence 2-72822
 steel, austenitic, fatigue, low-cycle, 800°C, dislocation configuration, TEM and SEM study (French) 2-88190
 steel, austenitic, stainless, type 316, fusion reactor first walls, creep fatigue, design limits 2-80218
 steel, austenitic stainless, 316, fatigue under H and He bombardment 2-72802
 steel, austenitic stainless, corrosion resistance, effect of high temp. low cycle fatigue 2-78018
 steel, austenitic stainless, creep-fatigue behaviour, Type 316 2-57440
 steel, austenitic stainless, cyclic strain hardening, during fatigue, elevated temps. 2-93530
 steel, austenitic stainless, fatigue, under different atmospheres, effect of He implantation 2-77905
 steel, austenitic stainless, fatigue and creep fracture combined at 650°C (Japanese) 2-77923
 steel, austenitic stainless, fatigue fracture mode, effect of strain waveform (Japanese) 2-72814
 steel, austenitic stainless, fatigue props., effects of Li environment 2-80170
 steel, austenitic stainless, fatigue threshold, effects of environment, stress ratio and defect size (Japanese) 2-111287
 steel, austenitic stainless, thermal shock fatigue, Type 304 and 316 steels 2-57443
 steel, austenitic stainless 316, containing irradiated He, high temp. fatigue life 2-72801
 steel, austenitic stainless 316, unirradiated high temp. fatigue in vacuum, comparison with V-Cr-Ti (15, 5 wt.%) 2-72805
 steel, B, type 10B35, X-ray facitography on const. fatigue fractured surface (Japanese) 2-77919
 steel, boiler, thermomechanical fatigue curves 2-111318

fatigue continued

- steel, C, fatigue life estimation, under combined bending and torsional stresses (*Japanese*) 2-72816
 steel, C, fatigue life under tension and compression (*German*) 2-77929
 steel, cast components, fatigue strength increase by residual stresses development 2-116551
 steel, constructional, cyclic crack resist., temp. and load asymmetry influence 2-111315
 steel, Cr, cast, fatigue threshold, effects of environment, stress ratio and defect size (*Japanese*) 2-111287
 steel, Cr-Mo, vacuum carburised, SCM 420, fatigue strength, carburised layer microstruct. effects (*Japanese*) 2-105304
 steel, Cr-Mo-V, creep-fatigue failure mechanism map at 565°C 2-105312
 steel, Cr-Mo-V, ferritic, fatigue, high temp., low cycle, strain wave shape and freq. effects 2-105313
 steel, Cr-Mo-V, life anal. for fatigue-creep 2-93583
 steel, Cr-Mo-V type, fatigue crack growth, near-threshold, load ratio, influence 2-105332
 steel, Cr-Ni type, low-cycle fatigue, combined influence of external H atm. and preliminary H impregnation 2-99553
 steel, Cu-(Ni), powder metallurgy materials, characteristic props. relevant to fatigue design 2-83226
 steel, cyclic fatigue strength, rel. to damping ability 2-111317
 steel, cyclic strength and damping capacity, effect of stability of austenite struct. in deform. 2-111307
 steel, eutectoid, thermomechanically treated, fatigue initiation study 2-77934
 steel, fatigue and inelastic deformation under nonuniform stressed state 2-116545
 steel, fatigue strength, residual stresses and surface hardening effects eval. 2-111103
 steel, ferritic, fatigue props., effects of Li environment 2-80170
 steel, high-speed, laser strengthening (*Russian*) 2-67625
 steel, high-speed, pulsed mag. fields effect on fatigue resist., magnetostrictive substruct. strengthening (*Russian*) 2-67487
 steel, impact bending fatigue testing, evaluation of dynamic stress intensity factor (*Japanese*) 2-111285
 steel, low alloy, fatigue failure at inclusions, influence of vacant lattice sites 2-83199
 steel, low C, internal friction, cyclic loading effect 2-77865
 steel, low C, smooth specimens, surface crack propag. in plane bending fatigue 2-77898
 steel, martensitic Cr-Mo-V type, performance under low-cycle fatigue at elevated temp. (*French*) 2-78054
 steel, martensitic stainless, corrosion fatigue props., effect of heat treatment 2-111301
 steel, medium C, high strain multiaxial fatigue 2-116553
 steel, medium-C, pearlitic-ferritic, alloying effect on fatigue failure and fracture toughness 2-111309
 steel, mild, fatigue, deform. behaviour and dislocation struct. (*Japanese*) 2-72811
 steel, mild, spherical wear debris form. in mode II fatigue cracks 2-93636
 steel, mild and low-alloy, high strength residual stress near fatigue fracture surface, meas. by X-ray method (*Japanese*) 2-77918
 steel, Ni-Co-Mo, maraging, biphasic struct., low-cycle impact fatigue strength 2-67530
 steel, Ni-Ti, austenitic, a high-strength, fatigue limit, grain size and γ -phase stability influence 2-72822
 steel, oxidation of fatigue fracture surface with low cracking rates (*French*) 2-62212
 steel, plain C, pearlitic, impact fatigue props. 2-88164
 steel, stainless, Cr-Ni-Al, sheet, fractographic investigation of failure 2-72823
 steel, stainless, EP810, fatigue at cryogenic temperatures 2-67547
 steel, stainless, maraging, tempering and struct. influence on temp. depend. of mech. props. 2-67396
 steel, stainless, type 316, long-life fatigue at temps. up to 593°C 2-105342
 steel, stainless 2-72824
 steel, stainless 13 wt.% Cr hardened, surface working effect on fatigue strength and wear 2-111386
 steel, stainless martensitic Cr-Ni, high-strength corrosion-resistant, fatigue resist. in air and seawater 2-99561
 steel, strengthening by surface plastic deformation, dislocation aspects 2-116615
 steel, structural, fatigue testing, correl. between rate of damage and energy absorpt. 2-88319
 steel, structural, microplastic behaviour before fatigue softening 2-99478
 steel, tensile, hot hardness and fatigue props. of type E36 in as-rolled condition (*French*) 2-62214
 steel, vibration-hardening treatment, influence of polymer-containing oil media, mech. characts. 2-99603
 steel thin-walled tube, crack initiation and fatigue, statistical anal. using Weibull law (*French*) 2-111259
 steel wire, high-elasticity, rapid annealing for prod. lines in thermomech. treatment (*French*) 2-72742
 steels, cast, fatigue props. 2-93601
 steels, maraging, 3.5 GPa-grade, with or without nitriding, fatigue props. (*Japanese*) 2-77915
 superconductors for supercond. magnets, mechanical props. and strain effects, review 2-67469
 surface plasticity, fatigue-induced, meas. method 2-88306
 thermal fatigue cracking, appl. of low cycle fatigue data 2-88153
 Torbar steel reinforced concrete, cold worked ribbed reinforcing bar, fatigue, fracture mechanics approach 2-67494
 Zircaloy-2 fuel cladding, iodine effect on fatigue props. 2-59460
 Al alloy 2024-T3, dimpled loaded hole fatigue strength, mean stress effects 2-67513
 Al alloy 2024-T3, fatigue life, resolution into crack initiation and propag. components 2-93596
 Al alloy 2024-T3, perforated sheets, reinforcement by thermal shock with laser beams 2-116452
 Al alloys, high tensile strength, environmental fatigue strength and fracture (*Japanese*) 2-93612
 Al alloys, impact bending fatigue testing, evaluation of dynamic stress intensity factor (*Japanese*) 2-111285
 Al alloys 2024-T351, fatigue plastic zone size determ. 2-93598
 Al, pre-strained pure, low-cycle fatigue (*Japanese*) 2-62199
 Al, pure, effect of intermittent polishing on low-cycle fatigue 2-105292
 Al, spherical wear debris form. in mode II fatigue cracks 2-93636

fatigue continued

- Al-Al₂O₃, dispersion strengthened, fatigue strength, effect of heat treatment temp. (*Japanese*) 2-93610
 Al-Cu (6 wt.%) alloy, fatigue crack growth, near-threshold, load ratio influence 2-105332
 Al-Si, fracture, fractographic features 2-111302
 Al-Zn-Mg-Cu, high-strength, powder metallurgical, props. and heat treatment 2-72740
 Al-Zn-Mg-Cu alloy, near threshold fatigue crack growth rates, effect of purity and dispersoid type 2-72840
 (Al-4Cu)-Al₂O₃ composite, SAP type, precipitation hardening 2-77836
 B fibre (aluminised) reinforced plastic, orthogonally reinforced, fracture anisotropy under low-cycle loading 2-116539
 B₂O₃-SiO₂ glass, dynamic fatigue study using small scale indentation flaws 2-88186
 C fibre reinforced plastics, fatigue resist. rel. to engineering factors 2-93618
 Cu, fatigue crack growth, near-threshold, load ratio influence 2-105332
 Cu, fatigue-induced grain boundary cavities, small angle neutron scatt. study 2-93581
 Cu, persistent slip bands, macro- and micro-, slip offsets development during one fatigue cycle 2-98112
 Cu, polycrystalline, fatigue failure in air and vac., plastic strain inhomogeneity (*Russian*) 2-67528
 Cu, polycrystalline, low temp. fatigue, grain size effect (*Japanese*) 2-77920
 Cu, polycrystn., fatigue surface damage modifications, by ion implantation 2-55996
 Cu, pure, strain bursts under various forms of static and cyclic loading at ambient temp. 2-62206
 Cu, single cryst., fatigue, obs. of crack nucleation 2-93588
 Cu, single crystals., persistent slip bands, model for crack nucleation 2-93589
 Cu, wrought, engng. fatigue props. review 2-88161
 Cu-Co (2 at.%) alloy, precip. hardened, fatigue softening, precip. state depend. 2-72837
 Cu-Ni-Cr, spinodally decomposed, high cycle fatigue 2-67472
 Cu-Ni-Sn (10, 6 wt.%) spinodal, high cycle fatigue behaviour 2-99532
 Cu-Ti, spinodally decomposed, high cycle fatigue 2-67472
 β -Cu-Zn-Sn (33.8, 3.1 wt.%) pseudoeutectic polycryst., fatigue 2-67517
 Fe, cast, graphitic, struct.-prop. relationships 2-93604
 Fe, cast, grey, fatigue behaviour and mean effects 2-93603
 Fe, cast, spheroidal graphite, fatigue strength of machined and as-cast surfaces 2-93602
 Fe foil, stress meas. using slip initiation 2-72792
 Fe, oxygen effect, crack initiation along slip lines 2-105329
 Fe-Ni-Cr, Alloy 800, mechanical behaviour at 838K 2-77888
 LiF single crystals., push-pull fatigue at high temps., microstructs. 2-105276
 LiF single crystals., push-pull fatigue at elevated temps., mech. props. 2-105275
 Mg-Zn-Cd alloy, wrought MA15, cyclic crack resist. of metal and weld joint 2-99556
 Mo and alloy TZM, ductile-brittle transition, low cycle fatigue effects 2-72807
 Mo, fatigue data 2-69904
 Mo single crystals, cyclic strength at room temp. 2-111319
 Mo single crystals, fatigue failure features 2-77944
 Na₂O-CaO-SiO₂, proof testing in heptane 2-111280
 Na₂O-CaO-SiO₂ glass rods, fatigue props., Vickers indentation flaws 2-99544
 Na₂O-SiO₂ glass, dynamic fatigue study using small scale indentation flaws 2-88186
 Nb-Zr (1 wt.%) alloy, fatigue failure in various struct. states 2-99547
 Ni alloys, heat resistant, high-temp. cyclic creep, effect of cyclic and static stresses 2-67461
 Ni, electroless deposits, heat treatment effects on physical props. 2-57384
 Ni, fatigue induced cavities, small-angle neutron scattering 2-105274
 Ni superalloy, anisotropic fatigue hardening at elevated temp. 2-72927
 Ni superalloy, intergranular fracture assoc. with heterogeneous deform. modes during low-cycle fatigue 2-72834
 Ni superalloy IN 738, applicability of strain range partitioning to high temp. low cycle fatigue life prediction 2-88162
 Ni-base superalloy, cast IN 738, sequential effect of creep and fatigue 2-105330
 Ni-base superalloys, fatigue growth of surface cracks 2-93599
 Ni-Cr-Co, IN 738 LC and IN 939, cast superalloys, high cycle fatigue 2-105318
 Ni-Cr-Fe-(Mo), long-life fatigue test results 2-62226
 Ni-Cr-Mo-W, heat-resist., struct. and strength characts. estimation on temp. and time basis 2-111250
 Pb(Zr,Ti)O₃, solid solns., piezoceramic fatigue strength, influence of polarisation on cyclic strength 2-72797
 SiO₂ fibres, strength/fatigue expts. 2-116523
 SiO₂ optical fibres, static fatigue failure probability rel. to localised bending 2-81133
 Ti alloy, deform. and failure in low-cycle fatigue region, severe cooling effect 2-57479
 Ti-Al laminar composites with a soft layer, low-cycle fatigue 2-67548
 Ti-Al-Mo (5.4 wt.%), fatigue and dislocation behaviour, effects of H 2-99520
 Ti-Al-Nb-Ta alloy, rate and time depend. behaviour under quasistatic monotonic and cyclic loading 2-93578
 Ti-Al-Sn-Zr-Mo (5.2, 4.6 wt.%), low cycle fatigue crack nucleation, role of microstruct. 2-57470
 Ti-Al-Sn-Zr-Mo (6.2, 4, 6 wt.%), low cycle fatigue, cyclic deform. behaviour 2-57471
 Ti-Al-Sn-Zr-Mo-Si, fatigue, low cycle high temp., effects of dwell 2-62208
 Ti-Al-V (6.4 wt.%), compact specimen, initial notch shape effect on fatigue pre-cracking and fracture toughness testing 2-78028
 Ti-Al-V (6.4 wt.%), laser welded, microstruct. and mech. props. 2-77935
 Ti-Al-V-(Mo), low cycle fatigue, effect of stress-strain behaviour 2-57439
 α - β Ti-Mn alloy, fatigue crack propag., plastic zone sizes and strain partitioning 2-72835
 α - β Ti-Mn alloys, near threshold retardation of fatigue crack propag., oxide growth effect 2-72836
 Ti-Mo (30 wt.%), fatigue thresholds and ductile brittle transition temp. 2-57442

fatigue continued

- V-Cr-Ti (15, 5 wt.%) unirradiated high temp. fatigue in vacuum, comparison with 316 stainless steel 2-72805
 W, cross-rolled, tensile and low cycle fatigue meas. 2-72808
 Zr, polycrystalline, fatigue meas., 4.2 to 293K (*Russian*) 2-88159

fatigue cracks

- alloys, fracture and flow in fusion reactor environment 2-85223
 Astroloy, wrought, grain-boundary voids nucleation in intergranular fatigue crack vicinity 2-93626
 biaxial stress field, fatigue crack propag., stress-ratio effect 2-93590
 brittle solids, decrease in durability in cyclic tests, phenomenological model 2-60478
 Chakraborty model for fatigue crack growth rates calc., eqn. modification 2-92096
 closure, at near-threshold stress intensities, due to fracture surface morphology 2-76578
 closure gauge, compliance meas. 2-89704
 corrosion fatigue crack, O conc., influence of mech. variables, theoretical evaluation 2-116591
 corrosion fatigue crack growth, new characterising parameter 2-57487
 corrosion fatigue crack initiation, theoretical considerations 2-78015
 crack opening stress measurement, during fatigue crack growth, electron microscopy technique 2-93719
 crack-crack interaction and coalescence 2-109233
 crack-tip-strain loop appl. to fatigue-crack propag. 2-55501
 cumulative model 2-92092
 current-conducting sensor for recording failure of structures 2-99636
 cyclic elastoplastic deform., crack growth kinetics study using J-integral 2-70881
 damage accumulation model for fatigue crack propagation 2-56081
 dislocation model for crack initiation 2-92100
 ductile crack growth, local criterion (*Japanese*) 2-109897
 environmentally assisted growth, outline model 2-81881
 fatigue threshold criterion (*Japanese*) 2-109898
 fillet welded joint, fatigue crack meas. 2-67680
 fission reactor pressure vessel feedwater nozzle, fatigue cracks, ultrasonic testing 2-59473
 flat specimens, fatigue cracks obs. expt. and data processing automation 2-72899
 fretting fatigue crack, early stage, initiation site and propag. direction, calc. and expt. (*Japanese*) 2-88179
 friction prod. between edges, AE charact. 2-83328
 glass bead-filled Nylon 6, fatigue crack growth and fracture energy 2-105279
 growth retardation mechanisms, microroughness model, overload effects 2-109899
 HYLIFE reaction chamber components, fatigue crack growth calcs. 2-69879
 initiation in vicinity of notches 2-109234
 metallic thin plates, fatigue crack growth thresholds 2-92102
 metals, fatigue limit determination, method for specimens damaged by cracks 2-72901
 metals and alloys, fatigue crack growth, effect of vacuum, review 2-93600
 near-threshold crack growth behaviour, unzipping model analysis 2-92097
 non-propagating threshold of fatigue cracks, numerical approach 2-66113
 plastic enclave, crack-tip, stress intensity factor, crack propag. model 2-81290
 plates, rectangular, in compression, finite out-of-plane deformation formulation 2-91276
 plates with cracks, fracture under tension after loss of stability 2-60481
 PMMA, low viscosity PMMA cement, fatigue crack propag. comparison with PMMA bone cement 2-116528
 PMMA bone cement, fatigue crack propag., comparison with low viscosity PMMA and C fibre reinforced PMMA 2-116528
 polycarbonate, fatigue crack propag., mol. wt. depend. 2-88171
 propagation law, Paris-Erdogan, rel. between consts. C and m (*German*) 2-98193
 reactor materials, cyclic loading influence on Li corrosion behaviour steel Cr-Mo 2-80172
 Rene 95, Ni-base superalloy, fatigue crack propag. thresholds for long and short cracks 2-105314
 residual stress distrib. in vicinity of fatigue crack tip and crack growth (*Japanese*) 2-77917
 residual stresses and fracture props., effects on weld repair processes service performance 2-62222
 semi-elliptical cracks, crack tip stress intensity factors, crit. review 2-91317
 short cracks, effect of microstruct. 2-57441
 steel, 10MnNi2Mo, eval. of mech.-metallurgy (*Czech*) 2-67514
 steel, AISI 4340, mode III fatigue crack propag. 2-99533
 steel, alloy, fracture toughness and fatigue crack growth rate 2-105308
 steel, austenitic, fatigue crack propagation expts. (*Japanese*) 2-57462
 steel, austenitic, influence of gaseous corrosion environment subcritical crack growth 2-83285
 steel, austenitic stainless, 316 and 347 weldments, US inspection of fatigue cracks 2-67671
 steel, austenitic stainless, cyclic loading influence on Li corrosion behaviour 2-80172
 steel, austenitic stainless, fatigue crack growth law 2-111322
 steel, austenitic stainless, fatigue crack growth of surface cracks 538°C (*Japanese*) 2-111288
 steel, austenitic stainless, fatigue crack propagation, influence of neutron irradi. 2-111272
 steel, austenitic stainless, fatigue thresholds, mixed mode 2-99519
 steel, austenitic stainless, sensitised, corrosion fatigue, crack growth and AE behaviour, SEM obs. (*Japanese*) 2-83281
 steel, austenitic stainless 316, fatigue crack propag. in vacuum and air 2-72803
 steel, C, fatigue crack propagation behaviour by cyclic oversteering and understeering 2-105322
 steel, C, rolling-contact fatigue, effect of tangential traction and surface roughness 2-111256
 steel, Cr-Ni-Mo, fatigue crack growth period determination, using microfractographic anal. 2-88305
 steel, crack growth kinetics, under symm. and pulsating load 2-116547
 steel, critical crack opening measurement, fulcrum position determ. 2-116641
 steel, eutectoid, thermomechanically treated, fatigue initiation study 2-77934

fatigue cracks continued

- steel, fatigue crack propagation, intrinsic material scatter 2-93591
 steel, ferritic, fatigue crack propagation expts. (*Japanese*) 2-57462
 steel, high strength, fatigue crack initiation at inclusions, theory 2-67523
 steel, high strength low alloy, fatigue crack initiation and strain-controlled fatigue 2-67520
 steel, hot rolled, fatigue crack propag. beyond general yield 2-116554
 steel, HSLA, tempered Nb-bearing, fatigue crack initiation and propag. 2-111292
 steel, low alloy, Mode III fatigue crack propag. 2-67521
 steel, low C, fatigue crack growth under elastic, elastic-plastic and general yield conditions (*Japanese*) 2-105306
 steel, low C, fatigue crack initiation and propag. in smooth specimens, microscopic study (*Japanese*) 2-93611
 steel, low C, fatigue microcracks, early propag. stage (*Japanese*) 2-105305
 steel, low-alloy, shape and size of plastic deform. zone at blind fatigue crack under tension 2-116549
 steel, low-alloy, unstable crack propag. and arrest during cyclic loading 2-116548
 steel, low-C, effect of sheet thickness on retardation behaviour of fatigue crack propag. (*Japanese*) 2-62200
 steel, martensitic, fatigue crack propagation expts. (*Japanese*) 2-57462
 steel, medium C, fatigue crack growth regularities under torsion 2-116669
 steel, medium-C, track traces on surface of fatigue cracks, nature 2-99548
 steel, Ni-Mo-V, rotor, fatigue crack growth, threshold and low-rate 2-62223
 steel, rotor A470 class 8 type, low frequency fatigue crack growth at 538°C 2-111265
 steel, SNCM 431, effect of environments of fatigue crack propag. under 2-step varying load (*Japanese*) 2-62201
 steel, stainless corrosion fatigue crack initiation mechanisms, influence of corrosion conditions 2-116594
 steel, structural and tool, stress distribution in specimens with fatigue cracks, X-ray diff. determ. 2-67697
 steels, Cr (12 wt.%), sulphide inclusions effects on fracture toughness and fatigue crack growth 2-105296
 steels, influence of duplex microstruct. on fatigue crack growth in near-threshold region 2-111294
 thick cylinders, multiply-cracked, pressurised, stress intensity and fatigue crack growth 2-91318
 thick walled cylinders, pressurised, cracked, strain behaviour 2-116524
 threshold region, fatigue crack growth model 2-92093
 Tokamak first wall, irradi. creep, swelling erosion and embrittlement effects 2-69828
 Al alloy 2024-T351, notched thin plates, cyclic-inelastic deform. and fatigue resistance 2-116525
 Al alloy 6061-T6, fatigue crack propag. rates, mode III 2-67495
 Al alloy 7075-T6, fatigue crack growth obs. and interpret. 2-66116
 Al alloy AK4-1, fatigue crack growth period determination, using microfractographic anal. 2-88305
 Al alloys, fatigue crack propagation and crack, closure under varying stationary loads (*Japanese*) 2-111286
 Al alloys, gel electrode imaging 2-111413
 Al alloys, substrength, improperly quenched, fatigue crack growth 2-57437
 Al bicrystals, fatigue cracks initiation along grain boundaries 2-72844
 Al, crack tip produced dislocations motion during cyclic loading, TEM obs. 2-93625
 Al, fatigue crack behaviour at low stress intensities 2-62191
 Al, isoaxial bicrystals, fatigue crack initiation along primary slip bands in grain boundary affected region (*Japanese*) 2-105302
 Al, notched specimen fatigue damage, isolation of time-depend. strain component 2-67476
 Al-(Zn)-Mg, fatigue crack behaviour at low stress intensities 2-62191
 Al-Cu alloy, tyre track form. on fatigue fracture surfaces 2-88326
 Al-Cu-Mg, prestrained by pulling, corrosion fatigue crack length distrib. (*Japanese*) 2-93613
 Al-Mg-Zn, 7070, crack closure and crack propag. rates 2-56076
 Al-Zn-Mg-Cu (6.2, 2.5, 1.7 wt.%), fatigue crack growth, micromechanisms 2-105273
 Al-Zn-Mg-Cu alloy, near threshold fatigue crack growth rates, effect of purity and dispersoid type 2-72840
 Al₂ alloy sheets, suppression of fatigue growths 2-72798
 C fibre reinforced PMMA cement, fatigue crack propag., comparison with PMMA bone cement 2-116528
 Co-Ni (33wt.%), fatigue crack tip, plane strain distrib. 2-111261
 Cu, tough-pitch, fatigue crack growth rate comparison between in-plane bending and cyclic torsion (*Japanese*) 2-62198
 Cu-Al (7.5 wt.%), fatigue crack growth rel. to plastic zone depth in air and vac. 2-77943
 Fe, Armco, unstable crack propag. and arrest during cyclic loading 2-116548
 Fe, cast fatigue strength, notch sensitivity obs. 2-116534
 Fe, fatigue crack growth, mechanism and kinetics 2-88191
 Fe, high-purity, effect of strain ageing on fatigue crack propagation 2-105316
 Fe-Ni-Cr, A286 superalloy, electron beam welded, fatigue crack growth 2-111300
 Fe-Si (3 wt.%), fatigue crack tip strain loop under single overload 2-77900
 Fe-Si (3 wt.%), plastic deform. around fatigue crack near threshold 2-105315
 Fe-Si (3.5 wt.%), grain-oriented, plastic deform. and fatigue crack growth 2-72785
 Mg-Zn-Cd alloy, wrought MA15, cyclic crack resist. of metal and weld joint 2-99556
 Nb-Zr (1 wt.%) alloy, fatigue failure in various struct. states 2-99547
 Ni-base superalloy, Incoloy-800, fatigue crack growth, elevated temps., sulphidising environments 2-67526
 Ni-base superalloy, Inconel X-750, fatigue and creep crack growth at elevated temps., effect of environment 2-99536
 Ni-base superalloy, powder-formed, near-threshold crack growth, effects of grain size and microstruct. 2-93616
 Ni-base superalloys, P/M, fatigue crack initiation, effect of defects 2-67518
 Ni-base superalloys, P/M, fatigue crack initiation, effect of defects, surface-subsurface transition 2-67519

fatigue cracks continued

- Nimonic API, Ni-base superalloy, crystallographic fatigue crack growth 2-93587
- SiC, slow crack growth parameter eval., fatigue theories 2-88166
- Ti alloy VT3-1, fatigue crack growth period determination, using microfractographic anal. 2-88305
- Ti-Al-Sn-Zr-Mo-Si (6, 2, 4, 2, 0.1 wt.%), H₂ effect on fatigue crack growth 2-72806
- Ti-Al-V, mech. props. after β -annealing 2-67398
- Ti-Al-V (6.4 wt.%), low cycle fatigue crack propag., influence of minor cycles 2-67493
- Ti-Al-V alloy, improvement of fatigue life by ion implantation 2-57444
- Ti-Al-Zr alloy, IM1 685, planar slip material, short fatigue crack growth 2-93605
- α - β Ti-Mn alloy, fatigue crack propag., plastic zone sizes and strain partitioning 2-72835
- α - β Ti-Mn alloys, near threshold retardation of fatigue crack propag., oxide growth effect 2-72836
- W-Ni-Fe, sintered alloy, fatigue crack growth 2-99521

fatigue failure see fatigue

fatigue fracture see fatigue

fatigue life see fatigue

fatigue testing

- for corrosion fatigue testing, see corrosion testing
- accelerated method with stepped loading 2-93704
- aerocomic materials, high-freq. fatigue tests 2-57546
- alloys, fatigue testing, step-by-step loading, expt. planning 2-116652
- compact specimen, initial notch shape effect on fatigue pre-cracking and fracture toughness testing 2-78028
- crack growth data, approx. 2-116647
- crack growth data, statistical processing method 2-116648
- crack growth kinetics, method for investigating cyclic elastoplastic deform. using J-integral 2-70881
- current-conducting sensor for recording failure of structures 2-99636
- data collection and real-time processing 2-105422
- electromagnetic method for fatigue life meas. 2-67693
- fibres, plastic transparent monocryst., fatigue test instrument for four-point bending conditions 2-91098
- fracture mechanics analysis of US fatigue 2-88300
- fracture surface morphology study for fatigue process reconstruction 2-78060
- fusion reactor materials, fatigue test under irradiation, from cyclotron 2-85238
- gauge design 2-111433
- glass fibre reinforced epoxy, magnet coil insulating materials, irradiation studies 2-80181
- grip for compact specimens under tension-compression 2-93707
- heat resisting coatings, optimising thermal fatigue testing 2-99614
- high temperature extensometer for creep and fatigue testing 2-72894
- high-frequency fatigue test, for accelerated estimation of endurance characts. 2-57546
- high-temperature strength materials, unit for microhardness investig. under high-temp. cyclic loading 2-99635
- INSTRON 1122, behaviour under cyclic testing over a small displacement range 2-83312
- life distrib. near fatigue limit, parameter estimation (Japanese) 2-57557
- life predictions, smooth and notched specimens, based on fracture mechanics 2-62367
- low-cycle test rig 2-93706
- metal fatigue processes, microdeform. investigation using photoelectric flexure recording method (Russian) 2-62308
- metals, fatigue crack growth period determination, using microfractographic anal. 2-88305
- metals, fatigue failure curves interpretation, analogy 2-78059
- metals, fatigue limit determination, method for specimens damaged by cracks 2-72901
- metals, fatigue testing, ultrasonic inspection procedures 2-93711
- metals, fatigue testing with asymmetric load cycle, overall stresses determ. 2-62312
- method for fatigue crack growth regularities under torsion 2-116669
- miniaturised fatigue crack growth specimen technology and results for irradi. fusion reactor materials 2-88308
- optical fibre strength/fatigue expts. 2-99622
- optical fibres, acrylate coatings, environmental effects, static fatigue testing 2-81134
- Paris equation parameters correl. with cyclic crack resist. characts. 2-99628
- plate structure, cylindrical, loaded with pulsating press., crack growth rate 2-99627
- pneumatic machine for high-speed metal strength 2-53752
- polymer, fatigue-crack front marking technique 2-116654
- polymer films, creep and life testing apparatus 2-62317
- polymeric materials, accelerated-stress life-test data exhibiting two failure modes, proposed model 2-111424
- prediction of fatigue life under service loading using relative method (German) 2-105418
- random load spectral density shape effect 2-111432
- servo-hydraulic test rig for controlled cyclic strain and temp. testing 2-57559
- sheet specimens with stress concentrators 2-116649
- simple methods of monitoring fatigue, fatigue gauge ring 2-74409
- steel, austenitic stainless, fatigue testing, extrapolation of fatigue life 2-78037
- steel, C, fatigue crack propagation behaviour by cyclic oversteering and understeering 2-105322
- steel, C and alloy, fatigue limits, indirect eval. from static tensile strength 2-72900
- steel, Cr-Ni-Mo, fatigue crack growth period determination, using microfractographic anal. 2-88305
- steel, fatigue strength, test method for under biaxial loading 2-67699
- steel, high-speed, laser strengthening (Russian) 2-67625
- steel, high-speed, pulsed mag. fields effect on fatigue resist., magnetostriuctive substructure strengthening (Russian) 2-67487
- steel, martensitic Cr-Mo-V type, performance under low-cycle fatigue at elevated temp. (French) 2-78054
- steel, multicycle loading with inhomogeneous states of strain, damping and failure 2-99625
- steel, stainless, fatigue life measurement, electromag. method 2-67693
- steel, stainless, Type 316, in-reactor fatigue expt., dynamic irradi. effect on crack propag. 2-88309

fatigue testing continued

- steel, structural, fatigue crack growth in air, crack surface oxide form., test freq. influence 2-105429
- steel, structural, fatigue testing, correl. between rate of damage and energy absorpt. 2-88319
- steel weldments, fatigue strength, low cycle, evolution method at elevated temps. (Japanese) 2-105412
- structural alloys, high temp., high cycle fatigue strength, procedure for estimating 2-62368
- tensile testing machine 2-72904
- TFTR vacuum vessel bellows, fatigue testing 2-59543
- thermoplastic, temp. rise under reversed bending stresses, math. model and test results 2-83227
- Al alloy AK4-1, fatigue crack growth period determination, using microfractographic anal. 2-88305
- Al alloys, fatigue limits, indirect eval. from static tensile strength 2-72900
- Al block temperature controller 2-78057
- Al-Cu alloy, tyre track form. on fatigue fracture surfaces 2-88326
- Ni superalloy, anisotropic fatigue hardening at elevated temp. 2-72927
- Ti alloy, irradi., miniaturised fatigue crack growth specimen technology and results 2-88308
- Ti alloy VT3-1, fatigue crack growth period determination, using microfractographic anal. 2-88305
- Ti-Al-Mo, IM1 550 fatigue testing by positron annihilation 2-62339
- WC-Co hard alloy components, endurance eval. for cyclic loading conditions 2-99634

fault currents

- see also flashover; leakage currents; short-circuit currents
- modular analogue isolator for signal isolation in nuclear power plants 2-85177
- SF₆ insulated substations enclosure burn through probability estimation 2-97807

fault location

- detection of incipient faults in transmission cables using time domain reflectometry techniques: technical challenges 2-101447
- optical fibre cable fault location using modified reflectometry techniques 2-64097
- optical fibres, optical time domain reflectometer 2-84685
- switching substations, HV, SF₆ insulated, partial discharges acquisition and localisation using noise anal. (German) 2-76218

faults, electrical see electrical faults

f.d.m. see frequency division multiplexing

feature extraction see pattern recognition

feedback

- see also control systems
- ASDEX feedback system, plasma control techniques 2-69964
- cardiac pacemaker, feedback from ECG electrodes and blood pressure transducers (German) 2-88693
- correlator with feedback, for geometric shape detect. (Czech) 2-60030
- Cygnus X-1, Compton-cooled feedback mechanism for high and low spectral states 2-63529
- diode laser, feedback noise rel. to carrier-induced index change 2-55162
- diode laser feedback effects due to Rayleigh backscattering from optical fibre 2-75570
- diode lasers with optical feedback spectral characts. 2-55161
- Fourier spectrometer scanning system feedback struct. 2-53849
- injection laser, pulsed, self-modulated light output with optical feedback 2-75610
- lasers, pulsed, with time depend. output mirror reflectivity, energy output optimisation calc. 2-65263
- optical systems with feedback, impulse response 2-60211
- PDX Tokamak, divertor discharge, position control procedure 2-86458
- skeletal muscle function, mathematical model 2-57770
- GaAlAs laser operating at 0.83 μ m, optical feedback-induced changes in output spectra 2-80957
- InSb low-noise photodetector preamplifier for IR astronomy 2-112333
- Pt 100 resistance sensors, linearisation through positive feedback at transmitter (German) 2-89712

Fermi-Dirac statistics see quantum statistical mechanics

Fermi gas see fermion systems

Fermi level

- Al5 superconductors, atomic disorder rel. to superconductivity 2-56769
- amorphous semiconductors, intrinsic, photoconductivity dependence on photogeneration rate 2-72028
- Anderson model, asymmetric, density of states 2-66406
- classical impurity band, density of states 2-110288
- density of states expansion coeff., spectral point schemes, orthogonal functions 2-98513
- electron-phonon interactions, McMillan-Hopfield constant, transferability, rigid-muffin-tin approx. 2-61096
- flicker, burst, and generation-recombination noises, unified model 2-56652
- III-V semiconductor-metal interface, Schottky barrier form. due to surface antisite defects 2-61556
- III-V semiconductors, defect electronic struct., tight-binding calcs. 2-76978
- III-V semiconductors, Schottky barrier form. and MOS interface states, unified model 2-87372
- local boson model interactions with local electronic system with finite Fermi level 2-98556
- mean internal potential, rel. to density, calc. of phys. characteristics 2-110311
- metallic hydrides, electron-phonon coupling parameter rel. to occurrence of supercond. 2-66462
- mixed valence compounds, Goldstone diagrammatic approach 2-61416
- mixed valence ground state, single parameter trial wave function 2-115713
- mixed valence systems, classification of states at Fermi energy 2-56422
- nitride interstitial phases, thermal and elec. cond. characts. rel. to electron energy spectrum 2-71987
- one-dimensional conductor, Peierls transition and electron localisation by random pot. 2-56554
- polystyrene films, soln. grown, DC electrical props., free and trapped carrier conc., density of states 2-56742
- Schottky barrier, effective work function model 2-110440
- semiconductor, amorphous film, gap states, xerographic spectroscopy 2-77213
- semiconductor, space-charge capacitance, quantum effects 2-77080

Fermi level continued

- semiconductor diode, single-injection current, traps lying above Fermi level, elec. cond. at high fields 2-56601
 semiconductors, dislocations, electronic and mech. props. 2-66488
 n-Si/acetonitrile interface, Fermi level pinning and surface states investig. 2-61584
 p-Si:Al, Fermi distrib., and activity coeff. calc. 2-92453
 solar cell, induced-junction, flat Fermi level approx. in space charge layer 2-116829
 superconducting thin film with normal coating, tunnelling size effect (*Russian*) 2-56787
 two-dimensional electron systems, zero-resistance state and quantised Hall effect 2-61491
 two-dimensional system, Anderson localization and supercond. transition temp. 2-61644
 Ag-GaAs (100), interface struct. and electronic props. meas. 2-110171
 Al solubility process in SiC, Fermi level, thermodynamic anal. 2-109992
 Al-GaAs MBE Schottky barrier height, O stabilization 2-87367
 Al-SiO₂-Si tunnel diode, metal deposition and oxide growth technology effect on electronic props. 2-56717
 Au-GaAs (110) interface, Schottky barrier, thermal effects, XPS and UPS study 2-110441
 Bi:Sn, magnetoreflection study, band struct. 2-87747
 C₆Hg (RbHg), intercalate, superconductivity study 2-82512
 C₆Hg(RbHg), intercalate, superconductivity study 2-82512
 Ca, Al_{1-x} metallic glasses, electronic struct., photoemission and soft X-ray spectra 2-104234
 n-Cd₃As₂, ultrathin films, effective mass, effect of size quantisation 2-98526
 CdS(Se)-Al-Au interface, Schottky barrier modulation, soft XPS study 2-110442
 n-CdSe, electrodeposited, Fermi level pinning, low-field electrolyte electrorefl. spectra 2-57059
 n-CdTe-electrolyte interfaces behaviour modification by surface etching 2-77177
 CdTe-metal interface, Schottky barrier form., Fermi level pinning 2-115861
 CdTe-metal interfaces, Fermi level pinning 2-66618
 α-Cu-Zn(Ga)(Al)(Ge), electronic struct., piezoref. study 2-57052
 Cu₃Au (111), surface state near Fermi level, photoelectron spectra 2-92712
 CuCr₂Se₄(Te₄), spin-polarised electronic band struct. 2-104245
 CuZr₂, electronic density of states for cryst. and amorphous phases 2-76909
 Fe overlayer on Pd(111), mag. behaviour, photoemission, LEED and Auger study 2-110611
 Fe₃Si_{1-x}Al_x, elec. resist. and band struct., density of states at Fermi level 2-61440
 β-FeTiH, electronic props., band struct. APW calc. 2-66416
 GaAs, electron irradi., elec. props. and defect annealing 2-104379
 n-GaAs, heavily doped, electronic heat capacity 2-56207
 n-GaAs, heavily doped, Fermi energy and screening length 2-66410
 GaAs, ion implanted, laser annealing, Fermi level pinning model, solar cell fabrication 2-56027
 GaAs overlaid by Ag, surface and contact props. 2-92751
 GaAs, Schottky barrier form., MOS interface states 2-82428
 GaAs, semi-insulating props., compensation by deep levels 2-56465
 n-GaAs, surface (110), surface photovoltage meas. and Fermi level pinning 2-87364
 GaAs, surface donors and acceptors, Fermi energy as function of O₂ exposure 2-110426
 n-GaAs, surface photovoltage meas. and Fermi level pinning, electron tunnelling through dipole layers 2-87392
 GaAs:In, crystals and films, elec. props., isovalent impurities effect 2-82286
 GaAs:Sb, crystals and films, elec. props., isovalent impurities effect 2-82286
 GaAs:Te, MBE grown, elec. cond. and photoluminesc. props. meas. 2-56734
 GaSb, Schottky barrier form., MOS interface states 2-82428
 GaSe-Au(Ni)(Ag) interface, Schottky barrier formation, UPS study 2-110443
 GaSe-metal interfaces, Fermi level pinning, Schottky limit, photoelectron spectra study 2-56670
 p-Ge, impurity band conduction, static and modulated uniaxial constraint effects 2-56575
 p-Ge, negative magnetoresistance obs. (*Russian*) 2-56617
 Ge-GaAs (110) interface, amorphous and cryst. films, electronic struct., XPS study 2-110456
 n-(Hg,Cd)Te, degenerate, two-band Auger recombination lifetime 2-93336
 HgCdTe epitaxial layers, Shubnikov-de Haas effect (*French*) 2-61486
 InAs, donor impurities solubility, Fermi level position effect 2-61153
 InP, electron irradi., defect form. and annealing 2-98159
 InP, ion implanted, laser annealing, Fermi level pinning model, solar cell fabrication 2-56027
 InP, Schottky barrier form., MOS interface states 2-82428
 InP, surface defects and Fermi-level pinning 2-82431
 InP, surface donors and acceptors, Fermi energy as function of O₂ exposure 2-110426
 InP-Au(Ni)(Ag) interface, Schottky barrier formation, UPS study 2-110443
 InP-metal interface, Fermi level pinning and chem. struct., XPS study 2-110475
 Ir, band struct. calc. and photoemission anal. 2-82214
 K₂(x=8, 24) intercalation compounds valence and core-electronic excitations, EELS study 2-87167
 β-LiAl, positive carrier conc. rel. to Li vacancies, Hall effect and lattice parameters study 2-56552
 LiC₆, intercalate, absolute spin susceptibility, paramagnetism 2-77259
 Mg_{0.7}Zn_{0.3} metallic glass, nearly free electron energy bands, pseudopot. formalism 2-71855
 Na₂WO₃, electronic struct., photoemission study 2-115656
 NbH₃, electronic struct., electron-phonon coupling 2-66444
 Nb₃SnH_x, heat capacity, supercond. transition temp. electron phonon interaction, H content effects, expt. study 2-56206
 (PbSe)_x-(SnTe)_{1-x}, influence of In on props. 2-110238
 (Pb_{0.78}Sn_{0.22})Te:In, photoferroelec. behaviour and Hall coeff., expt. study 2-87708
 Pb_{0.5}Sn_{0.5}-Te:In, Fermi level stabilization by defects at low temp., mechanism 2-66487

Fermi level continued

- PbTe:TI, doping effect on superconductivity (*Russian*) 2-110525
 Pd₂Fe and Pd₂FeH₃, electronic struct. and mag. props. in ordered and disordered phases 2-76917
 PtBi, band struct. and optical props. 2-76916
 Si (100), interaction with AsH₃, UPS study 2-77144
 Si (111)-Pd (V), Schottky barrier formation, soft XPS study 2-110445
 Si, amorphous, hopping cond., ion implantation 2-56592
 p-Si, electron irradiated, elec. level of vacancy 2-115696
 Si, glow discharge microcryst., thermoelec. power, Hall effect and density of states meas. 2-98674
 Si:H, amorphous, obs. of photoinduced changes in gap states bulk density 2-66472
 p-Si:H, amorphous, photoelectrochem. solar cell, expt. study 2-105573
 Si:H, amorphous glow discharge film, photocond. and Fermi level temp. depend., photoinduced changes obs. 2-115810
 a-Si:H, density of states determ., field effect method (*Korean*) 2-56419
 Si₃N₄, amorphous CVD film, elec. cond., field effect and gap state density meas. 2-87193
 p-Si-acetonitrile soln. interface with different redox couples, Fermi level pinning obs. 2-110467
 Si-AlN-Au(Al), interface barrier heights, internal photoemission study 2-82464
 n-SiC:P, Fermi level, Fermi-Dirac distrib. and activity coeff. 2-92452
 TaS₂ (2H), intercalation cpds., mag. susceptibility and band struct. 2-104251
 Ti₂Mo₂Se₆, 1-D supercond., electronic struct., SCF scatt.-wave X_α calc. 2-92461
 V, band struct., XPS, NMR and sp. ht. studies 2-104243
 VC₂O₄, quadrupole effects and chem. bonding 2-110723
 V₂Ge(Al), electronic struct., X-ray study (*Russian*) 2-110235
 VPT system, bandstruct. study 2-104242
 V₂Pt, band struct., XPS, NMR and sp. ht. studies 2-104243
 WO₃ films, evaporated and annealed, electronic struct., UPS study 2-115651
 ZrH₂, electronic struct., electron-phonon coupling 2-66444

Fermi liquid see fermion systems**Fermi resonance**

- acetonitrile, optical pumping, rot.-vibr. anal., far-IR obs. 2-54842
 asymmetric-top molecules, centrifugal distortion and quasidegenerate levels 2-90512
 benzene, ground vibr. state, rot. consts., IR obs. 2-85663
 p-chlorobenzyl cyanide, Raman and IR spectra, vibr. assignment 2-90533
 chlorodifluoromethane in liq. Ar, IR and Raman spectra, vibr. anal., overtone and combination bands 2-90546
 crystals, resonance interactions in phonon spectra 2-109924
 l-decane, solns., vibr., relax., bandwidths, IR and Raman obs. 2-64989
 dibromomethane, Fermi resonance, intermolecular interactions, Raman obs. 2-64988
 dichlorobenzoylchlorides, Fermi resonance, Raman and IR obs. 2-54849
 dichloromethane, Fermi resonance, intermolecular interactions, Raman obs. 2-64988
 ethane-d₃, Fermi reson. effect in ν₇ CH stretching fundamentals 2-90497
 l-hexyne, solns., vibr., relax., bandwidths, IR and Raman obs. 2-64989
 methanol, liq. and solns., Fermi reson. solvent and temp. depend., Raman study 2-75296
 methanol (d₁ or d₂)-ammonia (d₃), IR spectra, H-bond, Fermi resonance 2-72502
 methanol-d₃, torsion levels, Fermi reson., internal rot., Doppler limited IR obs. 2-85660
 p-methoxy benzyl alcohol, Raman and IR spectra, vibr. assignment 2-90533
 methyl chloride, IR band study of 2ν₂, ν₂+ν₃, 2ν₃⁰, 2ν₃^{±2}, 2ν₃+ν₅ and 4ν₃ reson. (*French*) 2-90532
 p-nitroaniline, solns. and cryst., Fermi resonance, IR study 2-57103
 organolead amines, vibr., isotope effects IR and Raman obs. (*German*) 2-54847
 parachloroaniline, Fermi reson. in ND, stretching vibr. region 2-85666
 pentafluoroaniline, Fermi reson. in ND, stretching vibr. region 2-85666
 phthalic anhydride cryst., mixing of states and two-particle excitations (*Russian*) 2-104892
 β-poly(L-adanine-ND), Fermi resonance of unperturbed ND stretching mode 2-70462
 polymethylene, cryst. and amorphous, chains Fermi reson. and vibr. spectra 2-116172
 propane-d₆, Fermi resonance, intermolecular interactions, Raman obs. 2-64988
 pyridinium salts, solns., IR spectra, Fermi reson. and ν_{NH} band struct. 2-64981
 trifluoriodomethane, fundamental and overtone IR spectra 2-108508
 TTF-TCNQ, far IR transmission spectra 2-116193
 tyrosine and related cpds., Fermi reson., Raman doublet anal. 2-114000
 BD₄⁻ ion isolated in alkali halides, Raman spectra at 80K 2-116186
 BH₄⁻ ion isolated in alkali halides, Raman spectra at 80K 2-116186
 CH₂, Renner-Teller effect, rot. and vibr. levels, Fermi reson. effects 2-113958
 CO, cryst., two-phonon transitions, vibr., IR study 2-57069
 CO₂, nonlinearly-optical excitation of symm. vibr., Fermi resonance (*Russian*) 2-80842
 CaCO₃, calcite, polarisation hypercombination scatt. spectra, anharmonism effects (*Russian*) 2-56449
 NH₃, (100)X³B₂, state, mol. consts., obs. and estimation of ν₃ vibr. (*French*) 2-54828
 NH₄SO₄, internal modes, normal coordinate anal., Raman study 2-116178
 SF₆, nonlinearly-optical excitation of symm. vibr., Fermi resonance (*Russian*) 2-80842

Fermi surface

- alloys, binary, Fermi surface meas., positron annihilation study, expt., apparatus (*German*) 2-104232
 anisotropic Doppler shifted cyclotron reson. 2-87132
 anisotropic supercond., spin-orbit effects on transition temperature 2-72108
 anomalous fluctuations during structural phase transitions (*Russian*) 2-71636
 conduction electrons, nonlinear magnetisation, mag. susceptibility, electron band struct. (*Russian*) 2-98908
 critical Ginzburg-Landau param., Fermi surface anisotropy effect 2-104533

Fermi surface continued

- cylindrical conductors, quantum energy levels, cond. electron density of states (*Russian*) 2-82208
f.c.c. crystal, deform. pot. and operator associated with (110) screw dislocation 2-76569
graphite, band struct., Fermi surface, KKR calc. 2-82228
graphite intercalation compounds, acceptor-type, pressure effect on electronic props. 2-56425
Hubbard model, metal-insulator transition, Fermi surface, Green's function method 2-61360
Kondo lattice and mixed valence systems, Fermi surface and Fermi liq. props. 2-66768
layer cryst., open Fermi surface, electron hopping, nonmonotonic polarisation near Lifshitz transition 2-82343
metal, electron energy in field of periodic perturbing pot. (*Russian*) 2-61332
metal, hot electron inelastic scatt. by opt. phonons, Fermi surface shape, theoretical anal. (*Russian*) 2-61477
metal film, monocryst., electronic mean free path and Fermi surface area, energy depend. 2-115919
metallic system with nonspherical Fermi surface, elec. cond., single band model 2-82318
metallic thin plate, Sondheimer effect in multichannel electron reflection by surface 2-104508
metals, momentum depend. positron annihilation rate 2-99214
metals, open-orbit effects in thermal magnetoresistance 2-104346
metals, phonon spectrum Taylor singularities (*Russian*) 2-92131
metals, quasi-one-dimensional, displacive transitions, Peierls transitions 2-81955
metals, zone integration method for joint densities of states 2-110230
metals and alloys, elect. struct., symposium, Gaussig, Germany (Apr. '81) 2-68968
metals with open Fermi surface, sound pulse propagation (*Russian*) 2-61078
perspective drawing display program FERMI-SURFACE 2-56424
quantum oscillation effects in cylindrical conductors (*Russian*) 2-61333
rare earth metals, spin wave spectrum, effects of ribbon bridge on fermi surface (*Russian*) 2-82584
semiconductor, degenerate, hot electron inelastic scatt. by opt. phonons, Fermi surface shape, theoretical anal. (*Russian*) 2-61477
spin glass alloys, transverse magnetoresistance study 2-77022
(TMTSF)₂ClO₄, magnetotransport under press. 2-56556
(TMTSF)₂ClO₄, Shubnikov-de Haas oscil. 2-115731
(TMTSF)₂PF₆, magnetotransport under press. 2-56556
(TMTSF)₂X, (X=PF₆, AsF₆) band struct. and Fermi surface, tight binding calc. 2-115660
transition metal dichalcogenides, layered, low dimensional conductors, phys. props., review (*Japanese*) 2-82335
transition metals, cyclotron masses and many-body effects, relativistic APW calc. 2-56426
Ag, electronic energy bands, KKRZ calc. 2-76910
Ag, electronic struct., non-muffin-tin and relativistic interaction effects 2-61341
Ag, Fermi surface radius, Fourier expansion method 2-104230
Ag-Al, Fermi surface of Hume-Rothery phases, positron annihilation study 2-61335
AgMg, electronic energy bands, Fermi surface 2-92448
Al, electronic energy bands, KKRZ calc. 2-76910
Al, Fermi surface parameters, Fourier transform of positron annihilation curves 2-98524
Al, superconducting, magnetoabsorpt. resonances, 35 GHz 2-57067
Al surface (111), angle resolved UV photoemission, direct transitions 2-87947
AlLi, electronic energy bands, Fermi surface 2-92448
Au, electronic struct., non-muffin-tin and relativistic interaction effects 2-61341
Au, Fermi surface radius, Fourier expansion method 2-104230
Be, electronic and struct. props., HF ab initio calc. 2-82218
Bi, magnetoacoustic attenuation coeff. versus temp. curve, anomalous peak 2-110403
p-Bi_{0.9}Sb_{0.1} under uniaxial tension, topological electronic transitions 2-66424
Bi_{1-x}Sb_x alloy, electron Fermi surface comp. depend., magnetoplasma wave study 2-76899
CeSn₃, Fermi surface, linearised APW calc. 2-98525
CeSn₃, mixed valent cpd., Fermi surface props. 2-56427
Co, Fermi surface, relative changes due to uniaxial tension 2-92441
CoAl, electronic struct. and charge transfer, APW band calc. 2-66430
Cu, Compton profile anisotropy, Fermi surface, momentum density, Seitz approx. 2-93317
Cu, electron-phonon effects, elec. and thermal resistivities, Hall effect 2-115728
Cu, electronic energy bands, KKRZ calc. 2-76910
Cu, electronic struct., non-muffin-tin and relativistic interaction effects 2-61341
Cu, Fermi surface changes due to alloying with Al and Ni 2-82209
Cu, Fermi surface radius, Fourier expansion method 2-104230
Cu interelectron interaction parameters, possibility of determ. 2-92443
Cu vacuum evaporated films, defect density and elec. props. from annealing study of elec. resistance 2-110495
Cu-Ga(Ge)(Ni), Fermi surface, density of electron states, positron annihilation study (*German*) 2-104231
Cu-Ge, Fermi surface of Hume-Rothery phases, positron annihilation study 2-61335
CuAl, electronic energy bands, Fermi surface 2-92448
Cu₃Au, Fermi surface, de Haas-van Alphen meas. 2-104229
Eu₂Mo₂S₈, superconductivity, thermoelectric power, Fermi surface 2-82510
Fe-Cr(-Mo), Neel temp. and elec. resist., mag. moment-spin density wave coupling 2-82573
Gd, transverse magnetoresist., Fermi surface topology 2-104228
H₂O, localised orbitals, rel. to Fermi hole 2-113877
Hg_{1-x}AsF₆, quasi-one-dimensional incommensurate, Fermi surface 2-110229
Hg_{1-x}AsF₆, one-dimensional cond., phys. props., review (*Japanese*) 2-82334
Hg_{1-x}AsF₆(SbF₆), Fermi surface, de Haas-van Alphen freqs. 2-76900
Hg_{1-x}SbF₆, one-dimensional cond., phys. props., review (*Japanese*) 2-82334
K, open orbits, rel. to high-field magnetoresistance 2-87227

Fermi surface continued

- KC₈, intercalation compound., cryst. and band struct., Fermi surface, de Haas-van Alphen effect 2-82227
KC₈ (x=4,5,8), intercalation compound, Shubnikov-de Haas oscil. freqs., expt. meas. methods 2-82210
LaSn₃, Fermi surface, linearised APW calc. 2-98525
Li, Fermi surface parameters, Fourier transform of positron annihilation curves 2-98524
Li-Mg, thermo-EMF meas. (*Russian*) 2-82326
Lu, Fermi surface meas. 2-66421
Mg, Fermi surface parameters, Fourier transform of positron annihilation curves 2-98524
Na₂WO₃, conduction band photoelectron spectroscopy, core holes and Fermi surface 2-105040
Nb, Fermi surface, relative changes due to uniaxial tension 2-92441
Nb-Mo, random alloy, Fermi surface, KKR-CPA calc. 2-61334
Nb₂Ge films, critical mag. field temp. depend. (*Russian*) 2-61673
NbH₂, band struct., Fermi surface, and optical absorpt. spectra 2-104246
Nb₃S₂(Se₂)₂(Te₂), Fermi surface, band struct. and elec. cond., LCAO calc. 2-115658
Nb₃Sn, tetragonal, electronic struct., nonorthogonal tight binding and APW calcs. 2-76914
Ni, energy bands, semiempirical study 2-110234
Ni, Fermi surface, relative changes due to uniaxial tension 2-92441
Ni-Ti, electron-phonon interaction contrib. to phonon dispersion curve, pre-martensitic phenomena 2-81915
Ni₃Al, de Haas-van Alphen effect and band struct. 2-66422
n-PbSe_{1-x}Te_x, Shubnikov-de Haas effect meas., 1.2 to 4.2K 2-76902
Pb_{1-x}Sn_xSe, Fermi surface, Shubnikov-de Haas oscillations ang. depend. study 2-82211
n-Pb_{1-x}Sn_xTe, Fermi surface and cond. band, Shubnikov-de Haas study 2-115644
Pr, transverse magnetoresist., Fermi surface topology 2-104228
Pt, conduction electron g-factor anisotropy, de Haas-van Alphen effect meas. 2-92445
RbC₈ (x=2,3,5,8), intercalation compound, Shubnikov-de Haas oscil. freqs., expt. meas. methods 2-82210
ReO₃, press. induced Fermi surface changes 2-76901
(SN)_x, cryst. struct., prep., band struct., Fermi surface and Meissner effect (*Japanese*) 2-82212
Sb, electron energy spectrum, thermal expansion, band struct., pseudo-potential method 2-71858
Sb, magnetoacoustic attenuation at high mag. fields, anomalies 2-110404
Sb₂, electronic energy bands and optical props. 2-82224
Ta, Fermi surface, relative changes due to uniaxial tension 2-92441
TaSe₂ (2H), Raman scatt. from CDW state, commensurate-incommensurate transition 2-66468
Th, band structure, thermoreflectance study 2-104239
TiBe₂, weak itinerant antiferromag., SDW pairing soln. 2-92854
V, positron annihilation radiation, two-dimensional correlation, rel. to Fermi surface topology 2-66423
VH₃, band struct., Fermi surface, and optical absorpt. spectra 2-104246
W thin plates, adsorbed O₂, H₂ and Ag effects on conduction electron diffr. and reflection (*Russian*) 2-71959
W thin plates, adsorbed O₂, H₂ and Ag effects on conduction electron diffr. and reflection (*Russian*) 2-82339
Y, transverse magnetoresist., Fermi surface topology 2-104228
Zr, Hf_{1-x}V_xZr_{1-x}, struct. nonstable supercond. Laves phase, electron spectrum peculiarities (*Russian*) 2-66433
Zr_{1-x}Rh_x system, supercond. props. variation on amorphisation (*Russian*) 2-56781
- Fermi-Thomas model** see *Thomas-Fermi model*
- fermion systems**
see also *electron gas; liquid helium-3*
acoustic plasma modes 2-110071
Anderson impurities, pair of interacting, Fermi liq. relations 2-56491
boson representation of one dimens. two-fermion model 2-112814
Brueckner theory of interacting fermion systems, radial distrib. function 2-90034
coupled quantum mechanical oscillators with independent Fermi systems, pseudo scalar interaction 2-74247
degenerate electron liquids, metallic densities, dielec. function and local field correction calcs. 2-104275
disordered Fermi system, spin susceptibility (*Russian*) 2-56873
electron conductivity in random potential, supersymmetry in localisation theory (*Russian*) 2-58758
electron Fermi sea, positron self-energy, RPA calc. 2-92488
electron liquid, strongly coupled, dielec. screening function at metallic and lower densities 2-56456
electron liquid, two-dimens., sum rules and electron correl. 2-92493
electron-hole Fermi liqs., spin waves at nonzero temps. 2-92893
Fermi fields, Galilei covariance and quasi-free representations 2-101522
Fermi gas, transverse acoustic impedance 2-61238
Fermi liquid, tensor forces and spin susceptibility 2-84962
Fermi systems, structure results for Segal quantisation 2-112731
finite fermion systems, sum rules for dipole transitions, giant resonances (*Russian*) 2-79993
hadrons, critical props. study in degenerate quark gas model 2-84861
instantons in quark plasma, fermion zero modes (*Russian*) 2-59100
intermediate valence systems, local fermi liq. theory 2-56500
interpolating integral eqns. method for quantum fluids 2-115487
Kondo lattice and mixed valence systems, Fermi surface and Fermi liq. props. 2-66768
lattice Fermi gas, one-dimens. weakly nonideal, ground state 2-63932
lepton gas, volume viscosity including massive neutrinos 2-79467
locally gauge-invariant four-fermion models on a lattice 2-107502
many electron system, Schrodinger fluid dynamics, density-functional framework 2-95221
metals, ferromagnetic, Shenberg effect, Fermi liq. model (*Russian*) 2-104588
metals, localised dynamic perturbations, fermion versus boson description 2-82193
metals, spontaneous violation of reflection symm. 2-76949
mixed valence compounds, Anderson model, asymmetric, perturbation treatment in terms of Fermi liq. theory 2-66499
normal form expansion of operators, algebraic approach 2-95233
nuclei and particles, book 2-53444
one-dimensional fermion lattice, thermodynamic props., Monte Carlo calc. 2-84553

fermion systems continued

- one-dimensional interacting Fermi system, low temp. thermodynamics 2-58696
 one-dimensional interacting Fermi system with mag. impurities, magnetisation curve 2-82658
 one-dimensional system, kinetic energy functional 2-53663
 one-dimensional system of interacting fermions, in random pot., cond. 2-66514
 polaron density of states of hole in narrow band of alternate lattice of fermions 2-98557
 pressure study during interactions through mean field pot. 2-101310
 quasi-one-dimensional Fermi gas, phase transitions, renormalisation group study 2-56760
 self gravitating fermions, thermodynamic quantities model 2-58244
 semiconductors, spontaneous violation of reflection symm. 2-76949
 semiconductors and metals, macroscopic permittivity, local field effects, Fermi liq. theory 2-104280
 time-dependent density matrix, inverse problem 2-74318
 Turing machines, with no energy dissipation, quantum mech. models 2-79424
 two dimensional gases of weight charges and SU(N) fermion theories 2-89884
 two-dimensional integrable lattice system, Lorentz group (Russian) 2-53700
 valence fluctuation metals, Fermi liquidology and T/T_f scaling 2-56503
 H, metallic, liquid, transport, props. calcs. 2-56292
³He, superfluid B, collective modes, in weak mag. field, Fermi liquid corrections 2-82058
 SmS, mixed valence cpd., quasi-insulating to Fermi liq. regime change under press. 2-56518

fermions

- see also baryons; fermion systems; leptons
 covariant chronogeometry predictions, macro-micro relationships in universe model 2-113180
 de Sitter Universe, massive spin 1/2 particle 2-58672
 determinant calcs. in chiral and supersymmetric theories (Russian) 2-69378
 discrete spectrum absence in very negative ions, extension to fermions 2-107137
 gauge theories, asymptotic freedom above critical dimensionality, fermion representations 2-69345
 generation nonuniversality, gauge model, intergeneration fermions 2-101626
 lattice fermions, IR regularisation, rel. to θ -vacua 2-69354
 lattice Yang-Mills theory, fermionic determinant 2-53977
 mass changes due to axion suppression in SU(9) theory 2-101628
 massless composite fermion models, discrete chiral symmetries 2-113169
 massless fermion vacuum, dyon disappearance 2-69351
 multiplicity of states in shells of equivalent fermions 2-84527
 O(10), grand unified theories subgroup structure with appl. to fermion mass matrix 2-54020
 quantum solitons, fermion zero modes, supersymm., fractional charges 2-53970
 space-time, fermionic substructure 2-74302
 spin-1/2 particle in mag. field, stochastic description 2-101206
 spin-3/2 particles, in Einstein space, quantum theory 2-58641
 supersymmetric theories, indices, triality and UV divergences 2-89920
 unification of fermions and gauge bosons 2-113118
 wave function classification by Lie superalgebra chains (Chinese) 2-95692

fermium

see also nuclei with

No entries

fermium compounds

No entries

ferrimagnetic properties of substances

- see also ferrimagnetism; ferrites; garnets; magnetic semiconductors
 C DyCo₂, Fe, Hy, lattice parameters and mag. characts. 2-56891
 ferrites, spinel-type, hyperfine mag. field, press. effect 2-104780
 rare earth alloys, RCo₂, C15 type, ⁵⁹Co NMR study, hyperfine field anisotropy 2-66934
 rare earth molybdates, magnetic susceptibility 2-56838
 rare earth-transition metal alloys, domain walls, role of the long-range exchange (Russian) 2-98905
 YIG ferrimagnetic double layer, magnetostatic vol. wave prop., dispersion 2-82672
 Ba_{1-x}Fe_xS₄, Mossbauer spectra, mag. and elec. props. 2-66962
 Co-Gd amorphous films, struct. and mag. props., Mossbauer study (Russian) 2-77429
 CoCr₂S₄Fe³⁺, impurity Jahn-Teller effect, phase transition, mol. field theory 2-61418
 Co_{0.7}Cu_{0.3}Cr₂S₄-Se₂, ferrimag. semicond., elec. cond. and thermoelec. coeff. meas. 2-115763
 Dy-Fe intermetallic cpds., mag. and cryst. props., X-ray and Mossbauer study 2-92877
 Dy₂Fe₂₃, cryst. and mag. props. 2-86626
 Dy(Fe,Al)_{1-x/2}, Laves phases, mag. and cryst. props., X-ray and Mossbauer study 2-92899
 Dy₂(Fe_{1-x}Co_x)₁₇, spontaneous magnetostriction 2-77356
 Dy(Fe_{1-x}Ga_x)₃, mag. props. and Mossbauer spectra, 4.2 to 293K (Russian) 2-104657
 ErFe₂, spin polarised photoemission probing of magnetism 2-67184
 ErFe₂, spin wave temp. depend. 2-104598
 (Fe_{1-x}Co_x)₂Se₈, mag. easy-axis transition, magnetisation and mag. torque study 2-66810
 Fe_{1-x}Cr_xBO₃, ferrimagnet, Mossbauer study 2-72381
 Fe_{1-x}Cr_xO₄, heat capacity, 200 to 850K, λ -type anomaly due to ferriparamag. transition 2-61161
 FeCrS₄, cooperative Jahn-Teller effect, phase transition, mol. field theory 2-61418
 γ -Fe₂O₃, epitaxial growth induced anisotropy, expt. study 2-77287
 Fe₂O₃-MgO-MnO-CoO (41, 3, 1 mol %) ferrite film, thermal and thermomag. treatment 2-72294
 Fe₂O₃, magnetite, single- and poly-crystalline, mag. after effects, relax. spectra 2-77332
 Fe₂O₄, critical exponents and mag. eqn. of state, polarised neutron scatt. obs. 2-104628
 Fe₂O₄, electronic superstruct. 2-71866
 Fe₂O₄, magnetite, multidomain powders magnetostriuctive control of coercive force 2-100374

ferrimagnetic properties of substances continued

- Fe₂O₄ particles in silicate matrix, superparamag. and ferrimag. props., magnetisation study 2-92972
 Fe_{0.999}S, magnetic transitions and crystal struct. 2-82598
 FeZn ferrite, Cu²⁺ substituted, Jahn-Teller effect on ground states 2-66502
 Gd Co amorphous films, torque curves meas. (Russian) 2-98926
 Gd-Co amorphous films, perpendicular mag. anisotropy, effect of O₂ and N₂ addition 2-72299
 Gd-Co uniaxial amorphous ferrimagnet, mag. states 2-110608
 GdCo amorphous film, compensation temp., substrate effects, Hall effect study 2-92974
 GdCo amorphous RF sputtered films, substrate bias effect on film composition and mag. props. 2-56900
 GdCo film, bias-sputtered, perpendicular anisotropy rel. to microstruct. 2-72297
 Gd_{1-x}Co_x amorphous films, oxidation, FMR study 2-82724
 GdFeB and GdCoB amorphous thin films, mag. props. 2-72298
 Ho-Co uniaxial amorphous ferrimagnet, mag. states 2-110608
 La₂Gd_{1-x}TiO₃ solid solns., mag. behaviour, mean field model 2-104659
 Li ferrite, polycryst., anisotropy field determ. from FMR linewidths 2-66809
 Li_{0.5}Fe_{2.5-x}Mn_{1-x}O₄, ferrites, struct. and mag. parameters 2-71418
 MgFe₂O₄-CoFe₂O₄ mixed ferrite, initial susceptibility, coercive force, mag. domain behaviour 2-116030
 MgMn ferrite magnetization, electron beam interaction 2-66868
 Mn-Zn ferrite synthesis from Na₂O-B₂O₃ flux under CO-CO₂ ambients 2-72612
 Mn-Zn spinel ferrites, prep. by wet chemical method, Mossbauer study 2-56990
 MnZn ferrite, temp. and time stability 2-82694
 Ni-Zn ferrite fillers for elastic magnetic materials 2-72658
 NiZn ferrite, Cu²⁺ substituted, Jahn-Teller effect on ground states 2-66502
 RFe₂, magnetisation meas. and mol. field theory anal. 2-92963
 RbNiF₃, Heisenberg ferrimagnet, mag. susceptibility, optimal transformation method 2-77277
 Sr_{1-x}Cr_xTe degenerate mag. semiconductor, struct. transform.-induced mag. ordering 2-56852
 Tb-Fe amorphous films, mag. props., sputtering induced recrystn. effect 2-72300
 TbCO_{2-x}Fe₂Hy, lattice parameters and mag. characts. 2-56891
 Tb_{1-x}Dy_xCo₂ spin orientation, ⁵⁹Co NMR study 2-66950
 Tb(Fe,Co)_{1-x/2}, pseudobinary intermetallic compound, mag. struct., neutron diffraction study (Russian) 2-98846
 Tb_{0.5-x}Y_{0.5-x}Mn_{2x} hydrides, mag. props. 2-87512
 Tb_{0.5-x}Y_{0.5-x}Mn_{2x}, mag. and crystallographic characts. 2-56854
 (Y,Bi)₂(Fe,Ga)₂O₁₂ film, two-layer, bistable mag. bubble domain wall dynamics 2-66880
 YIG film, magnetization meas. from ferrimag. resonance and antiresonance 2-66875
 (YSmCa)_{1-x}(FeGe)_xO₁₂ epitaxial film, cylindrical mag. domain behavior in ion implantation advancement channel 2-77347
 (YTmBi)₂(FeGa)₂O₁₂ (110) garnet film with orthorhombic anisotropy, replication of bubble states 2-72312
- ferrimagnetic resonance**
 Li ferrite, polycryst., anisotropy field determ. from FMR linewidths 2-66809
 Y ferrites, resonance curve width meas. by freq. determ. method (Czech) 2-77383
 YIG film, magnetization meas. from ferrimag. resonance and antiresonance 2-66875
- ferrimagnetism**
 see also ferrimagnetic properties of substances
 crystal, reflectivity spectra, permeability tensor, magnons 2-77473
 exchange striction and crystal lattice in domains and domain walls 2-72186
 garnet film, 2-82681
 microcrystals, mag. props. study by Mossbauer spectroscopy 2-93090
 microwave propagation in ferrimagnets, book 2-58575
 semiconductors, Goldstone magnons, energy spectra and relax. coeffs. calc. 2-61702
 theory of magnetism, statics and dynamics, book 2-68978
- ferrite applications**
 see also ferrite devices
 No entries
- ferrite devices**
 see also ferrite applications; magnetostatic wave devices
 magnetoresistive element position detector using ferrite closure, electrical capacitance meas. basis 2-112885
- ferrites**
 see also ferrimagnetic properties of substances; ferrimagnetism; ferrite applications; ferrite devices
 dielectric parameters at microwave freq., evaluation methods 2-53786
 ferrite-semiconductor struct., cylindrical, azimuthal electron drag by magnetostatic waves 2-92730
 film, reflection of magnetostatic forward waves incident obliquely on metal half-plane 2-87558
 films, magnetic wave precursors, expt. and theoretical study 2-77336
 magnetic disaccommodation of complex mag. susceptibility in AC mag. field, domain wall theory 2-87552
 magnetoelastic hysteresis 2-87566
 magnetostatic volume waves, scattering by metal half-sheet, theory 2-87484
 microwave sintering 2-83071
 mullite form. kinetics, grain comp. and component activity effects 2-77271
 nondispersive magnetostatic forward volume waves under field gradient control 2-72326
 plate, magnetostatic states near spin reorientation transition 2-82675
 plate, magnetostatic wave interaction with elastic waves, dispersion laws, magnetostriction 2-72330
 polycrystalline, ferromag. resonance line dispersion 2-116069
 polycrystalline slab, nonstationary magnetostatic waves 2-87487
 powder, fundamental materials for production (Polish) 2-99365
 rare earth orthoferrites, RFeO₃, local and exchange field inhomogeneity, NMR study 2-87209
 reference materials for bicomplex permeability properties at high and ultrahigh frequencies 2-53794
 single-crystal ferrites, domain boundary inhomogeneous oscills. 2-104653

ferrites continued

spinel, nuclear spin echo in domain walls, pulsed mag. field effects 2-87625
spinel-type, hyperfine mag. field, press. effect 2-104780
standard specimens for magnetic permeability meas. at high and superhigh freq. 2-79626
steel, stainless, duplex austenite-ferrite alloys, weld metal microstructures, heat treatment, TEM, EDS study 2-67406
surface magnetostatic wave, Bragg refl. 2-115994
Villari effect depend on magnetocrystalline props. and magnetostriction 2-87567
YIG layer, reduction in high freq. H₂ plasma (*Russian*) 2-67738
Al₂Fe_{1-x}O₄, single and polycryst., magnetostriction meas. 2-87569
BaCo₂Ti₂Fe₂O₁₀, magnetocryst. anisotropy temp. depend., ferromag. reson. and magnetisation study 2-56849
BaFe₂O₁₀ and BaFe₁₀O₁₇, ⁵⁷Fe spin echo NMR spectra in domains and domain walls 2-104742
BaFe₂O₁₀:Gd(Dy)(Ho)(Er)(Yb), dopant effects on mag. props. 2-92968
Bi₂Dy_{1-x}FeO₃ orthoferrite monocrysts., magnetooptic props. meas. 2-82828
BiFeO₃, spiral mag. ordering, neutron diff. study 2-110569
Ca ferrite:PbF₂, mag. props., substitution effects (*Japanese*) 2-62240
CaFe₂O₄, struct., relationship to rutile and hollandite type struct. 2-60934
Ca₂Fe₂O₇-LaFeO₃ system, Mossbauer resonance study 2-61801
Cd₂Co_{2-x}Fe₂O₄, mag. props. and lattice dynamics, Mossbauer effect study 2-77426
Cd₂Cu_{1-x}Fe₂O₄, mag. props., hyperfine interaction, Mossbauer study 2-116103
Co₂Fe_{1-x}Fe₂O₄, Mossbauer spectra, isomer shifts, quadrupole coupling consts. and effective mag. fields calc. 2-82755
CoFe₂, In₂O₃, In³⁺ cation distrib., mag. props. 2-98868
CoFe₂O₄, bonding, EXAFS study 2-99226
CoFe₂O₄ ferrite, valence states, NMR study 2-110667
CoFe₂O₄ single cryst., ellipsometric and magneto-optical study 2-61880
CoFe₂O₄-P₂O₅ amorphous cpd., prep. and mag. props. 2-61735
Co₂Fe_{1-x}O₄, ⁵⁷Fe Mossbauer study 2-77428
CuFe₂O₄, bonding, EXAFS study 2-99226
CuFe₂O₄ cation distrib. and hyperfine parameters, Mossbauer study 2-99010
CuFe₂O₄ ferrite, elec. cond. mechanism, phase transformation, heat treatment effects 2-71981
Cu_{1-x}M_xFe₂O₄ (M=Mn, Ni), spin struct. and hyperfine fields, Mossbauer study 2-66959
Cu₂Mg_{1-x}Fe₂O₄, spinel ferrites, ionic-covalent bonding, X-ray diff. and absorption chemical shift study 2-65919
Cu₂Zn_{1-x}Fe₂O₄, spinel ferrites, ionic-covalent bonding, X-ray diff. and absorption chemical shift study 2-65919
Cu₂Zn_{1-x}Fe₂O₄ system, Curie temp., cation distrib., magnetisation 2-56851
Cu₂Zn_{1-x}Fe₂O₄ system, elec. resistivity and Curie transition 2-87256
DyFe₂-Co₂O₃, magnetoelasticity near mag. transitions (*Russian*) 2-98925
DyFeO₃, magnetoelasticity near mag. transitions (*Russian*) 2-98925
DyFeO₃, Raman scatt. from mag. excitations 2-77528
ErFeO₃, Raman scatt. from mag. excitations 2-77528
(Eu,Tm,Y,Ca)₂(Fe,Ge)₂O₁₂ thin film system, domain boundaries (*Russian*) 2-77338
Fe-C, ferrite, C cluster formation, critical cluster size, computer calc. 2-67340
(Fe_{1-x}²⁺Zn_x²⁺Fe_{3-x}³⁺)O₄²⁻ ferrites, thermopower-composition depend. 2-61499
(Fe_{1-x}²⁺Co_x²⁺Fe_{3-x}³⁺)O₄²⁻ ferrites, thermopower-composition depend. 2-61499
Fe_{2-x}Cr_xCa₂O₅ sintering, mag. transitions, solid soln. composition depend. 2-98875
(Fe²⁺Fe_{2-x}³⁺Cr_x³⁺)O₄²⁻ ferrites, thermopower-composition depend. 2-61499
FeFe₂-In₂O₃, In³⁺ cation distrib., mag. props. 2-98868
γ-Fe₂O₃, sputtered thin film disks, high density recording characts. 2-77335
Fe₂O₃-MgO-MnO-CoO (41, 3, 1 mol.%) ferrite film, thermal and thermomag. treatment 2-72294
Fe₂O₃, magnetite, mag. elec., and crystallographic props., low temp. anomalies 2-82586
Fe₂O₃, natural magnetite, remanent magnetisation, mag. field freq. effect 2-72276
FeZn ferrite, Cu²⁺ substituted, Jahn-Teller effect on ground states 2-66502
Ho₂Dy_{1-x}FeO₃, magnetoelasticity near mag. transitions (*Russian*) 2-98925
HoFeO₃, Raman scatt. from mag. excitations 2-77528
Li ferrite, polycryst., anisotropy field determ. from FMR linewidths 2-66809
Li ferrites, ordering mechanisms 2-57345
Li_{10-x}Fe_{2+x}O₄, Mn_{1-x}O₄, struct. and mag. parameters 2-71418
Li₁₀Fe₂O₄ for ferrimagnetic pastes, prep. and props., effect of additions of glass and Bi₂O₃ 2-88034
(Li_{10-x}Fe_{2+x}O₄)₁(Cu_{10-x}Fe_{2+x}O₄)₂(CuFe₂O₄)_{1-x-2x}, ferrite solid soln., thermodynamic props. 2-66256
LiFeSnO₄ phase, cryst. struct. characts. 2-65942
Li_{10-x}Zn_{0.5x}Fe_{2+x}O₄, mag. ordering at low temp. 2-66770
Li_{10-x/2}Zn_{x/2}Fe_{2+x/2}O₄ ferrite, magnetisation curves 2-72274
MgFe₂O₄, low temp. formation, characterisation 2-62093
MgFe₂O₄-CoFe₂O₄ mixed ferrite, initial susceptibility, coercive force, mag. domain behaviour 2-116030
MgMn ferrite magnetization, electron beam interaction 2-66868
Mg_{1-x}Mn_xFe₂O₄ ferrites, elect. resistivity and cation distrib. 2-110343
Mg_{1-x}Mn_xFe₂O₄ ferrite, abrupt behaviour of dielec. const. and loss tangent 2-66970
MgO-Fe₂O₃, magnesioferrite, magnetisation changes due to stress waves 2-87544
Mg₂Ti₂FeO₄ spinel, mol. field coeffs. and exchange interactions 2-68601
Mg₂Zn_{1-x}Fe₂O₄, Mossbauer spectra, isomer shifts, quadrupole coupling consts. and effective mag. fields calc. 2-82755
Mn ferrite crystal, Young's modulus and internal stresses, mag. field effects 2-56909
Mn-Zn ferrite single crystal, plastic deform. (*Japanese*) 2-67435
Mn-Zn ferrite synthesis from Na₂O-B₂O₃ flux under CO-CO₂ ambients 2-72612

ferrites continued

Mn-Zn ferroferrites, loss relationships, response to mag. disturbance 2-82627
Mn-Zn ferrous ferrites, raw material and process condition effects on props. 2-83059
Mn-Zn spinel ferrites, prep. by wet chemical method, Mossbauer study 2-56990
MnFe₂O₄, bonding, EXAFS study 2-99226
MnFe₂O₄, IR transmission and reflection spectra 2-57074
Mn₂Fe_{1-x}O₄ ferrite thin films, spin wave resonance 2-110647
MnZn ferrite, monocrystalline 2-87530
MnZn ferrite, temp. and time stability 2-82694
MnZn ferrites, humidity and resistivity 2-87276
MnZn ferrites, hydrostatic press. effect on both sides of thermal spectra secondary peak 2-87570
Mn_{1-x}Zn_xFe₂O₄ ferrite, exchange interactions and canted-collinear struct. transition temp. calc. 2-110575
Mn_{1-x}Zn_xFe₂O₄ spinel ferrite, charge transfer transitions in Dember photoEMF 2-110401
Ni ferrites, dynamic elasticity moduli, mag. polarisation depend. 2-77348
Ni-Zn ferrite, extraordinary Hall effect and carrier scatt 2-82383
Ni-Zn ferrite fillers for elastic magnetic materials 2-72658
Ni-Zn ferrite/Pb(Zr,Ti)O₃ ceramic composite, dynamic magnetoelectric effect 2-116049
Ni₂Cu_{1-x}Fe₂O₄ spinel ferrite, influence of Ni²⁺ ions on distrib. of Mg²⁺ ions, magnetisation meas. 2-60938
NiFe₂O₄-CaFe₂O₄, magnetic props. (*Japanese*) 2-82578
Ni₂Mg_{1-x}Fe₂O₄, FMR and magnetisation meas. 2-82723
Ni₂Mg_{1-x}Fe₂O₄ spinel ferrite, influence of Ni²⁺ ions on distrib. of Mg²⁺ ions, magnetisation meas. 2-60938
NiZn ferrite, Cu²⁺ substituted, Jahn-Teller effect on ground states 2-66502
NiZn ferrite, Villari effect depend. on magnetocrystalline props. and magnetostriction 2-87567
NiZn ferrites containing Co, magnetostriction meas. 2-87568
NiZn ferrites physical and technological effects of V₂O₅ or Bi₂O₃ on props. 2-88041
Ni_{10-x}Zn_{0.5x}Fe_{2+x}O₄, dielectric spectrum, radio and optical freq. 2-99019
Ni_{10-x}Zn_{0.5x}Fe_{2+x}O₄Ti⁴⁺, magnetisation and cryst. struct. study 2-72774
(Ni_{10-x}Zn_{0.5x})Fe_{2+x}O₄ ferrite, switching and surface line emission spectrum obs. under pulse voltage 2-115831
Ni_{10-x}Zn_{0.5x}Fe_{2+x}O₄, polycryst., magnetisation, bulged wall Globus model, friction and energy terms calc. 2-77320
Ni_{1-x}Zn_xFe₂O₄ spinel ferrite, charge transfer transitions in Dember photoEMF 2-110401
SmFeO₃, Raman scatt. from mag. excitations 2-77528
Sm₂Fe₂O₁₂, mag. phase transitions, Ising ordering hypothesis (*Russian*) 2-56860
TiFeO₃, magnetoelasticity near mag. transitions (*Russian*) 2-98925
(Y,Er,Tm,Ca)₂(Fe,Ge)₂O₁₂ system films, FMR study of mag. parameters (*Russian*) 2-77385
Y ferrites, resonance curve width meas. by freq. determ. method (*Czech*) 2-77383
YFeO₃, NMR intensity in domain walls, spin-echo method, low temp. anomalies 2-87626
YFeO₃ orthoferrite crystal, oblique cylindrical domains, dynamics in gradient pulsed field 2-116031
YFeO₃, Raman scatt. from mag. excitations 2-77528
YFeO₃, superionic domain boundary dynamics (*Russian*) 2-82635
Y₂O₃-In₂O₃-Fe₂O₃, superhigh freq. props., Fe and In ions electron struct. influence (*Russian*) 2-66442
(YSmCa)₂(FeGe)₂O₁₂ epitaxial film, cylindrical mag. domain behavior in ion implantation advancement channel 2-77347
Zn_{0.95}Co_{0.05}Fe₂O₄, mag. struct., neutron diff. and Mossbauer study 2-66775
Zn₂Cu_{1-x}Fe₂O₄, mag. ordering 2-66819
ZnFe₂O₄, bonding, EXAFS study 2-99226
ZnFe₂O₄, IR transmission and reflection spectra 2-57074
(ZnFe₂O₄)_{1-x}(γ-Fe₂O₃)_x, hematite precipitation, kinetic study by elec. cond. (*French*) 2-92201
(Zn)₂(Ni)_{1-x}Fe₂O₄, Mossbauer spectra, mag. props. 2-77439

ferroacoustic resonance

No entries

ferroelasticity

see also shape memory effects
alkali cyanides, elastic softening and ferroelastic instabilities 2-56147
alkali superoxides, elastic softening and ferroelastic instabilities 2-56147
ammonium hydrogen oxalate hemihydrate, transition to ferroelastic monoclinic phase, struct. study 2-92191
antiferroelastic Jahn-Teller cryst., metamagnetoelasticity, metamagnetoelasticity (*Russian*) 2-61746
bis-propylammonium tetrachloro-zincate, second order ferro-paraelastic phase transition, birefringence 2-61124
cooperative Jahn-Teller effect, Ham reduction in mol. field theory 2-61417
dicalcium barium acrylate, ferroelastic phase transition, lattice const. and birefringence 2-92187
incommensurate phases, acoustic anomalies 2-66162
Jahn Teller antiferroelastics, metamagnetoelastic and metamagnetoelastic behaviour, EPR spectra 2-98931
Jahn-Teller nonferroelastic crystals, elastic and dielec. props. 2-115331
optically induced change in order parameter near second-order phase transition 2-103946
piezoelectric paraelastic phase, intrinsic ferroelastic transition 2-86848
pseudo-elasticity, temp. and force criteria (*Russian*) 2-92081
squaric acid, protonic ordering, strain effect 2-76664
tanane, ferroelec. and ferroelastic phase transition, soft acoustic mode 2-93122
tanane, ferroelec. and ferroelastic transition, intermol. forces and statistical mech. 2-93123
torsion pendulum for studying phase transitions in ferroelastic crystals. 2-107319
s-triazine, ferroelastic transition, quasiharmonic theory 2-66204
sym-triazine, ferroelectric phase transition, Brillouin and Rayleigh scatt. 2-61917
s-triazine, structural phase transition, quasi-harmonic treatment 2-66203
tris-sarcosine calcium chloride, ferroelastic phase transition, US study 2-66194
BiVO₄, ferro- to paraelastic transition at high-press. and temp. 2-98274
BiVO₄, ferroelastic phase transition, Brillouin scatt. study 2-116200

ferroelectricity continued

- CoCr₂S₄Fe²⁺, impurity Jahn-Teller effect, phase transition, mol. field theory 2-61418
 Cs₂BiCl₆, ceramic, ferroelastic transitions, DTA, X-ray, dielec. and TSC meas. (*French*) 2-109889
 CsHSO₄, ferroelastic phase transition 2-86855
 Cs₂, K₁, BiCl₆, solid soln., phase transitions and cryst. struct. 2-81948
 Cu₂AsS₄, elastic and mag. props., temp. depend., phase transform. 2-116009
 FeCr₂S₄, cooperative Jahn-Teller effect, phase transition, mol. field theory 2-61418
 Fe₂(MoO₄)₃, ferroelastic transition, Mossbauer and elec. cond. study 2-116101
 GdDy(MoO₄)₃, ferroelectric-ferroelastic transition, X-ray topographic study 2-61840
 Hg₂Cl₂, ferroelastic transition, soft modes and central peak neutron scatt. study (*French*) 2-66198
 InS, Gruneisen mode parameters, structural phase transition, high press. Raman study 2-104889
 K₂Ba(NO₃)₄, ferroelastic phase transition, US study 2-66194
 KH₂(SeO₄)₂, ferroelastic phase transition, US study 2-66194
 KH₂(SeO₄)₂, ferroelastic, internal friction and shear modulus 2-103899
 KSc(MoO₄)₂, Raman and IR refl. spectra, 4 to 300K (*Russian*) 2-116170
 KSc(MoO₄)₂, soft phonon modes at ferroelastic phase transition (*Russian*) 2-56148
 KSc(MoO₄)₂Cr monocrystals, ferroelastic phase transitions, Cr³⁺ EPR 2-115404
 Li₂CSO₄, ferroelastic transition, elastic const., acoustic softening 2-98188
 Li₂KSO₄ crystals, anomalous changes in piezoelec. and elastic props. 2-99054
 NbP₂O₇Gd³⁺, monoclinic-orthorhombic ferroelastic transition, EPR study 2-61763
 PbBi₂Nb₂O₈, ferroelasticity, Curie temp., birefringence and spontaneous strain 2-81876
 PbGe₂O₆, polymorphism, cryst. struct., and dielec. props. 2-109754
 Pb₂KNb₂O₇, ferroelectric-ferroelastic domain struct., electron diff. and microscopy study 2-67011
 Pb_{1-x}M_xGe₂O₇ (M=Sr, Ba), polymorphism, cryst. struct., and dielec. props. 2-109754
 Pb₂(PO₄)₂, ferroelastic domain walls, interaction with struct. transition, TEM obs. 2-76655
 Pb₂(PO₄)₂, ferroelastic domain wall interactions, structural transition 2-86681
 Pb₂(PO₄)₂, ferroelastic phase transition, domain walls (*French*) 2-86866
 Pb₂(PO₄)₂-Pb₂(AsO₄)₂, stepwise ferroelastic transition, Raman X-ray, neutron and stress birefringence study 2-115402
 RBH₂(SeO₄)₂Cr³⁺, ferroelec.-ferroelastic, domain struct., EPR study 2-116135
 SrTe₂O₆, ferroelastic state 2-66109
 Tb₂(MoO₄)₃, spontaneous shear strain meas. and free energy expression 2-72433

ferroelectric Curie temperature

- ferromagnetic ferroelectrics, NMR line shape and width (*Russian*) 2-98972
 polyvinylidene fluoride-trifluoroethylene copolymer, ferroelec., refractive index and birefringence meas. 2-57038
 Rochelle salt, dielectric const. var. in strong mag. field 2-110743
 Rochelle salt, ferroelectric, acoustic emission, threshold elec. field 2-92701
 Rochelle salt, ferroelectric, Curie points, temp. variation of thermocurrents study 2-72436
 semiconductor, ferroelec., Curie point and soft mode freq., mag. field effects 2-110791
 sodium diduterophosphate, transition struct. at phase transition (*Russian*) 2-61842
 TGS, electrostriction calcs., ferroelectric transition 2-99061
 TGS, ferroelectric coercive force, temp. depend. near transition point 2-82791
 TGS, influence of const. elec. field on heat cond. 2-66306
 TGS and TGSe, Curie temp. determ. 2-67006
 TGSe-deuterated TGSe system, tetracritical point 2-57026
 tris-sarcosine calcium chloride_{1-x} bromide_x, ferroelectric transition 2-87711
 vibron ferroelectrics, phase transition, Jahn-Teller effect, mag. field effects (*Russian*) 2-82801
 Ba(Sr)(Ca)(Zn_{1/3}Nb_{2/3})O₃-PbTiO₃-PbZrO₃ elec. and optical props. 2-82795
 Ba(Sr)(M_{1/3}Nb_{2/3})O₃-PbZrO₃-PbTiO₃ (M=Pb, Ca, Sr) elec. and optical props. 2-82794
 BaTiO₃, Curie temp. shift in appl. mag. field 2-110787
 BaTiO₃, ferroelectric transition in alternating elec. field (*Russian*) 2-61846
 BaTiO₃, hot pressed ceramics, internal stresses, Curie temp. 2-88017
 BiSbO₄, anomalies of thermal expansion high temp. phase transitions 2-86908
 BiTaO₄, anomalies of thermal expansion high temp. phase transitions 2-86908
 Bi₁₀Ti₂W₂O₃₀, ceramic ferroelectricity, permittivity and losses 2-87701
 Ca(Zn_{1/3}Nb_{2/3})O₃-PbTiO₃-PbZrO₃ elec. and optical props. 2-82795
 CsD₂PO₄, critical props., dielectric const., Ising model 2-67007
 CsH₂PO₄, critical props., dielectric const., Ising model 2-67007
 KH₂PO₄-type ferroelec., Curie temp., isotope effect 2-110786
 KNbO₃, hot pressed ceramics, internal stresses, Curie temp. 2-88017
 LiNbO₃-Fe₂O₃ solid soln. single cryst., congruently melting, phase transition 2-98264
 NH₄HSeO₄, pyroelectric props. 2-99063
 (Na₂Li)NbO₃, hot pressed ceramics, internal stresses, Curie temp. 2-88017
 PbBi₂Nb₂O₈, ferroelasticity, Curie temp., birefringence and spontaneous strain 2-81876
 PbDAsO₄, ferroelec., birefringence and transition temp. 2-72447
 Pb₂Ge₂(O₇F)₂, growth, Curie point, dielectric const. 2-72616
 Pb_{1-x}Ge_xTe_{1-x}, band edge struct. transform. due to ferroelectric transition 2-92456
 PbHAsO₄, ferroelec., birefringence and transition temp. 2-72447
 PbHPO₄, ferroelec., birefringence and transition temp. 2-72447
 Pb₂KNb₂O₇, phase determ. and growth for good quality crystals 2-97957

ferroelectric Curie temperature continued

- Pb(Mg_{1/3}Nb_{2/3})O₃ type materials, electrostrictive effect 2-87683
 PbTiO₃-PbZrO₃-PbNb_{2/3}Li_{1/3}O₃-PbNb_{2/3}Mn_{1/3}O₃-PbSb_{2/3}Mn_{1/3}O₃, stability of electrophysical props. 2-99059
 PbZr_{1-x}Ti_xO₃, solid soln., ferroelec.-paraelec. transition, tricritical point 2-93126
 SbTaO₄, anomalies of thermal expansion high temp. phase transitions 2-86908
 Sn₂P₂S₇, ferroelec. semicond., Curie temp. shift in mag. field 2-110792
 Sr₂Ta₂O₇, ferroelec. transition temp., press. depend., dielec. const. study 2-87713

ferroelectric devices

- heat receiver, two-dimens., internal struct. defects influence on ferroelectric performance 2-66995

- PLZT page composer production for holographic memory (*Hungarian*) 2-55091

- PLZT, transparent ferroelec. ceramic, surface effects for information storage (*Russian*) 2-104846

- STrTiO₃ resonant dielec. electroacoustic transducer 2-86199

ferroelectric domains see electric domains**ferroelectric materials**

- see also *antiferroelectric materials*; *electric domain walls*; *ferroelectric semiconductors*; *ferroelectric thin films*; *ferroelectric transitions*; *lattice dynamics of ferroelectric crystals*
 antimonates, R₂SbO₁₂ (R=Sc, In, Ln, Pr, Tb, Yb), cryst. struct. and dielec. props. 2-109755
 azoxybenzene, switching transients 2-110785
 bis-tetramethylammonium iron tetrachloride, phase transition X-ray study in modulation wavenumber 2-81945
 boracites, symmetry related prop. tensors, pyroelectric and ferroelectric props. 2-99064
 ceramic, acoustic microscopy, imaging of flows, grain struct. and elastic props. 2-105410
 ceramic, internal struct. defects influence on appls. in technology, two-dimens. heat receivers 2-66995
 ceramic, TBK-3, coupling and piezoelec. coeffs., hysteresis, neutron irradiation effects 2-82804
 ceramics, fracture mechanics evaluation of fracture strength 2-77906
 ceramics, low freq. dielectric props. (*Chinese*) 2-104788
 conference, Kyoto, Japan (May 1981) 2-79273
 crystals, dipole defect broadening of NQR and NMR lines 2-110705
 crystals, phase transitions under press., NQR-NMR obs. 2-110692
 dicalcium barium propionate, ferroelectric transitions, ESR study 2-66999
 dicalcium lead propionate, ferroelectric transitions, ESR study 2-66999
 dicalcium strontium propionate, ferroelectric transitions, ESR study 2-66999
 dicalcium strontium propionate, structure and polarisation of ferroelectric phase 2-71431
 dicalcium strontium propionate, switching transients 2-110785
 diffuse phase transition ferroelectrics, electromech. props. 2-99047
 L-DOBACPC series, ferroelec. smectic liq. cryst., appl., elec. and optical props. 2-77455
 DOBAMBC, ferroelectric, dielectric relax. study 2-87662
 D-DOBAMBC series, ferroelec. smectic liq. cryst., appl., elec. and optical props. 2-77455
 DOBAMBC-MBACAB, smectic C-A mixture, ferroelectricity, phase diagrams 2-99075
 electromechanical properties, of crystals with charged domain walls 2-99048
 ellipsoidal particle mixture, randomly oriented, mag. permeability (*Russian*) 2-98917
 ester-ethers, liq. cryst., mol. dimensions. rel. to pitch and elastic coeff. 2-115137
 ferromagnetic ferroelectrics, NMR line shape and width (*Russian*) 2-98972
 glasslike properties at low temps. 2-110778
 guanidinium V(III) sulphate hexahydrate, mag. props. 2-92873
 L-n-hexyloxybenzylidene-n'-amino-2-chloropropylcinnamate, spontaneous polarisation (*Russian*) 2-82773
 incommensurate phase Raman scatt. 2-116197
 isopropylammonium copper trichloride (tetrachloride), dielec. const. and pyroelec. current meas. 2-57004
 Jahn Teller antiferroelectrics, metamagnetoelectric and metamagnetoelectric behaviour, EPR spectra 2-98931
 KTa_{1-x}Nb_xO₃, induced ferroelec. phase transition mech., thermal cond. meas. 2-56274
 liq. crystals, electrooptical props. 2-57061
 loss tangent measurement after superimposing DC bias voltage (*Slovak*) 2-72432
 2-methylbutyl p-(p-n-alkoxybenzylideneamino) cinnamates, ferroelec. smectic C* liq. cryst., helical pitches and wall anchoring, optical study 2-55839
 microwave dielect. props., general purpose meas. systems at 4.2 and 300K 2-69205
 nonpiezoelectric materials, SAW excitation technique 2-114582
 α-nylon 11, ferroelec. transition, dielec. const., thermal expansion and pyroelec. coeff. study 2-116128
 optical bistability, hysteresis, four-wave inversion of wavefront 2-81030
 perovskite ferroelectrics, γ-ray effects on dielectric and electro-optical props. (*Russian*) 2-61809
 perovskite-type, piezoelec. effect with shearing strains induced by mech. stresses 2-99049
 perovskites, oxydic, ferroelec. transitions, IR and Raman spectra and dielec. const. data anal. 2-67008
 piezoceramic materials, multicomponent, highly efficient, with various degrees of ferroelec. hardness 2-72425
 piezoelectric ceramics in layer struct. oxide family, elec. props. 2-93115
 piezoelectric ceramics with ferroelectric characteristics (*German*) 2-82785
 piezoelectric effect, with shearing strains induced by mech. stresses 2-99049
 PLZT ceramic, domain switching, space charge field effects 2-99074
 polar materials, relax. currents and electret effect 2-110748
 polarisation echoes, domain theory 2-57030
 polyvinylidene fluoride, ferroelectric, piezoelectric and pyroelectric polymer, props. and appl., transduction mechanisms, review 2-66994
 polyvinylidene fluoride, piezo and ferroelectricity (*Japanese*) 2-87698
 polyvinylidene fluoride 2-72423
 polyvinylidene fluoride drawn films, NMR second moments, poling effects on anisotropic temp. changes 2-93019

ferroelectric materials continued

- polyvinylidene fluoride-trifluoroethylene copolymer, ferroelec., refractive index and birefringence meas. 2-57038
- polyvinylidene fluoride-trifluoroethylene copolymer films, piezoelec. props. 2-87692
- quadrupole-quadrupole interaction, soft phonon modes, NQR line crit. broadening 2-110707
- reference materials for bicomplex permeability properties at high and ultrahigh frequencies 2-53794
- reference materials for superhigh permittivity 2-53789
- Rochelle salt, deuterated, optical indicative and birefringence props., 42 to 318K (*Russian*) 2-61869
- Rochelle salt, dielectric const. var. in strong mag. field 2-110743
- Rochelle salt, electromechanical resonances for phase transition studies 2-87702
- Rochelle salt, ferroelec., dynamic study 2-56104
- Rochelle salt, ferroelectric, acoustic emission, threshold elec. field 2-92701
- Rochelle salt, ferroelectric, Curie points, temp. variation of thermocurrents study 2-72436
- salicylideneanilines, liq. cryst., mol. dimensions. rel. to pitch and elastic coeff. 2-115137
- Schiff bases forming room temp. ferroelec. liq. cryst., MORA series, synthesis 2-76296
- smectic C liq. cryst., ferroelec., fast electro-optic switching, stroboscopic microscopy obs. 2-93154
- smectic liquid crystals, chiral, props. and appls. 2-82789
- sodium dideuterophosphate, transition struct. at phase transition (*Russian*) 2-61842
- tanane, ferroelec. and ferroelastic phase transition, soft acoustic mode 2-93122
- tanane, ferroelec. and ferroelastic transition, intermol. forces and statistical mech. 2-93123
- tetramethylammonium cobalt chloride, phase transitions, ESR study 2-98267
- tetramethylammonium cobalt tetrachloride-d₁₂, dielec. props. and phase transitions 2-109974
- tetramethylammonium tetrabromocuprate, cryst. struct. and incommensurate-commensurate phase transition 2-65977
- tetramethylammonium tetrachlorocobaltate, phase transitions, deuteration effects, dielec. study 2-98265
- tetramethylammonium tetrachlorozincate-d₁₂, press. induced ferroelec. 2-67004
- tetramethylammonium zinc tetrachloride-d₁₂, dielec. props. and phase transitions 2-109974
- tetramethylanion copper bromide, ferroelec., phase transitions, high press. effects, permittivity study 2-99069
- TGS-Cu²⁺ crystals, ¹⁴N quadrupole interactions, ENDOR obs. 2-110730
- TGS, electrostriction calcs., ferroelectric transition 2-99061
- TGS, ferroelec., submillimetre dielec. spectra 2-87651
- TGS, ferroelec. domain boundaries, X-ray topographic image contrast 2-77462
- TGS, ferroelec. transition, depolarisation field, Brillouin spectra line breadth study 2-67068
- TGS, ferroelec. transition, polarisation relax. time, high press. Brillouin scatt. study 2-87802
- TGS, ferroelec. transition Debye-Waller factor and thermal expansion coeff. 2-57024
- TGS, ferroelectric, low freq. dielec. losses meas. near phase transition of second kind 2-57017
- TGS, ferroelectric coercive force, temp. depend. near transition point 2-82791
- TGS, gamma-irrad., Mandelstam-Briouin light scatt. 2-110879
- TGS, influence of const. elec. field on heat cond. 2-66306
- TGS and TGSe, Curie temp. determ. 2-67006
- TGS crystal, ferroelec. domains, SEM obs. 2-116133
- TGS powder, phonon echo attenuation coeff., freq. depend., 10 to 60 MHz 2-66142
- TGS single cryst., permittivity meas. as a function of geometry 2-61815
- TGSe, crystalline, X-ray topography and laser tomography 2-71290
- TGSe-deuterated TGSe system, tetracritical point 2-57026
- thiourea, ferroelec. normal and deuterated, III phase, low bias elec. field effect meas. 2-67003
- thiourea, submillimetre dielec. spectra, 85 to 300K 2-110744
- thiourea-d₄, elec. field induced commensurate phase, elastic neutron scatt. study 2-104820
- thiourea-d₄, ferroelec. incommensurate-commensurate phase transition in DC bias elec. field 2-67005
- triglycine selenate, AC calorimetry at high hydrostatic pressures 2-66128
- triglycine selenate, cryst., phase transitions under press., NQR-NMR obs. 2-110692
- triglycine sulphate type crystals, with imperfections, piezoelec. props. 2-99052
- tris-sarcosine calcium chloride-_x bromide, ferroelectric transition 2-87711
- tris-sarcosine calcium chloride, brominated, dielec. props., press. and temp. depend. 2-61820
- tris-sarcosine calcium chloride, ferroelastic phase transition, US study 2-66194
- tris-sarcosine-calcium chloride: Mn²⁺, ¹H ENDOR spectra 2-93062
- trissarcosine calcium chloride, deuterated, dielec. props., temp. and press. depend. meas. 2-99071
- trissarcosine calcium chloride, ferroelec., dielec. loss tangent, hydrostatic press. effects meas. 2-116115
- vibronic, nonlinear optical props. (*Russian*) 2-81017
- vibronic, transitional photovoltaic current in initial stage of light irrad. (*Russian*) 2-82399
- vinylidene fluoride/trifluoroethylene ferroelec. copolymer, piezoelec. and polarisation 2-110776
- AgNa(NO₂), piezoelec. relax. 2-99050
- As₂Sb₂Si ferroelec., tricitric points, dielec. meas. 2-93127
- As₂Sb₂Si, phase transitions, permittivity, polarisation (*Russian*) 2-77461
- BaMnF₃, submillimetre dielec. spectra, 85 to 300K 2-110744
- Ba₂NaNb₂O₇, crystal growth and characterization, high SH output power (*Chinese*) 2-77717
- Ba₂NaNb₂O₇ crystals, ferroelec. domains and laser freq. doubling 2-114367
- Ba(Sr)(Ca)(Zn_{1/3}Nb_{2/3})O₃-PbTiO₃-PbZrO₃ elec. and optical props. 2-82795
- ferroelectric materials continued**
- Ba(Sr)(M_{1/3}Nb_{2/3})O₃-PbZrO₃-PbTiO₃ (M=Pb, Ca, Sr) elec. and optical props. 2-82794
- Ba₂Sr_{1-x}Nb₂O₇, low freq. dielec. spectra, 20 to 200°C 2-61830
- Ba₂Sr_{1-x}Nb₂O₇, photorefraction and photoelec. props., ferroelec. polarisation 2-110394
- Ba₂Sr_{1-x}Nb₂O₇:Ce(Sr,Nb₂O₇), photoluminescence, thermoluminescence and photocond. 2-110908
- Ba₂(Sr_{1-x}Nb₂(_{1-x/3})-_{2/3})O₃-PbZrO₃-PbTiO₃ elec. and optical props. 2-82796
- Ba₂Sr_{1-x}O₆, ferroelectric, dielec. and optical props. in fund. absorption region 2-77481
- BaTiO₃, coupled surface waves (*French*) 2-87003
- BaTiO₃, Curie temp. shift in appl. mag. field 2-110787
- BaTiO₃, deformed, light emission during pulsed repolarisation 2-72555
- BaTiO₃, dielec. const. crit. exponents, diffused phase transition 2-110781
- BaTiO₃, dielec. props. near ferroelec. transition, domain struct., mag. field effects 2-104825
- BaTiO₃, electronic spectra of TiO₆⁸⁻ clusters 2-93222
- BaTiO₃ ferroelec. ceramic surface 2-109526
- BaTiO₃, ferroelec. transition Debye-Waller factor and thermal expansion coeff. 2-57024
- BaTiO₃, ferroelec. transition role of polar phonons in chemical bond, Fourier spectroscopy 2-57028
- BaTiO₃, ferroelec.-paraelec. transition, displacive-order-disorder crossover 2-104819
- BaTiO₃, ferroelec.-paraelec. transition, theory 2-116130
- BaTiO₃, ferroelectric transition in superintense laser field 2-61081
- BaTiO₃, ferroelectric transition in alternating elec. field (*Russian*) 2-61846
- BaTiO₃, hot pressed ceramics, internal stresses, Curie temp. 2-88017
- BaTiO₃, low-temp. phase transition in strong elec. field 2-116129
- BaTiO₃, optical props. in vibronic model 2-110815
- BaTiO₃, phase transition, bound symm. (*French*) 2-87714
- BaTiO₃, photorefractive cryst., coherent oscillation by self-induced gratings 2-65310
- BaTiO₃, polarisation in cubic phase 2-87734
- BaTiO₃ sputtered films, energy anal. of high-energy neutral atoms 2-87927
- BaTiO₃-Bi₂TiO₅, low temp. sintered ceramics, microstruct. and elec. props. 2-88035
- BaTiO₃(100) surface, dynamic lattice characts., LEED study 2-115528
- Bi-based layer-structured ferroelectric ceramics, dielectric and piezoelectric props. 2-116122
- BiMO₄ (M=Nb, Tb, Sb), stibiotantalite struct. antiferroelec., ferroelec. and pyroelec., prep. and props. 2-66998
- Bi₂Sb_{2-x}Si ferroelec., tricitric points, dielec. meas. 2-93127
- Bi₂Sb_{2-x}Si, phase transitions, permittivity, polarisation (*Russian*) 2-77461
- Bi₂Sb_{2-x}Si, uniaxial deform., influence on elec. cond. and dielectric const. 2-109886
- Bi₂Ti₂O₇, layer struct., grain oriented ferroelec. ceramics, liq. phase sintering 2-77788
- Bi₂Ti₂O₇, single domain single crystals, electromech. behaviour 2-87690
- Bi₁₀Ti₃W₃O₃₀, ceramic ferroelectricity, permittivity and losses 2-87701
- Bi₂WO₆ powders, obtained in presence of fused salts, morphology 2-97971
- CaTiO₃, electronic spectra of TiO₆⁸⁻ clusters 2-93222
- Ca₃(VO₄)₂, elastic props., Bragg scatt. laser radiation on HF sound 2-115364
- CsD₃PO₄, critical props., dielectric const., Ising model 2-67007
- CsD₃PO₄, ferroelec., static and dynamic crit. props. of dielec. const. 2-61813
- CsD₃PO₄, para. ferro. and antiferroelectric phases, vibr. Raman and IR study 2-77508
- CsD₃PO₄, polarisation fluctuation relax. time near transition point, US dispersion study 2-82770
- CsD₃PO₄, quasi-one-dimens, H-bonded ferroelec., phase diagram, anisotropic compressible Ising model 2-87709
- CsH₂AsO₄, ferroelec., nonlinear electromechanical parameters, second harmonic generation 2-104814
- CsH₂PO₄, critical props., dielectric const., Ising model 2-67007
- CsH₂PO₄, ferroelec., static and dynamic crit. props. of dielec. const. 2-61813
- CsH₂PO₄, one-dimens. ferroelec., crit. slowing down, dielec. meas. 2-77458
- CsH₂PO₄, paraelectric, -OH₂ vibrs. in Raman spectra 2-93207
- Fe₂O₄, electronic superstruct. 2-71866
- Fe₂O₄, magnetite, ferroelec. hysteresis loops, spontaneous polarisation study 2-87715
- GdDy(MoO₄)₃, ferroelectric-ferroelastic transition, X-ray topographic study 2-61840
- Gd₂(MoO₄)₃, permitt. dispersion, infrared refl. and spontaneous parametric scatt. by polaritons 2-104837
- Gd₂(MoO₄)₃, band structure and VUV optical props., Kramers-Kronig anal. 2-110883
- Gd₂(MoO₄)₃, electromechanical resonances for phase transition studies 2-87702
- GeTe, intervalley Jahn-Teller effect and polymorphic ferroelectric transitions 2-87208
- KCl:BaTiO₃ composite crystals, dielect. props. under DC biasing fields 2-104790
- KD₂PO₄, domain structure study using neutron time-of-flight diffractometer 2-65808
- KD₂PO₄, ferroelec., dynamics of proton sublattice, Raman scatt. study 2-86814
- KD₂PO₄, ferroelec. and paraelec. phase transition study by SeO₄²⁻ ESR 2-116126
- KD₂PO₄, ferroelectric fluctuation, diffuse X-ray and neutron scatt. anal. 2-61837
- KD₂PO₄, light scatt. study of acoustic phonon damping 2-86804
- KD₂PO₄-type ferroelectrics, cluster approx. for q-depend. corrls. 2-82800
- K₂Fe(CN)₆·3H₂O, vibrational spectrum and water of cryst. sublattice struct. in ferroelec. phase 2-72506
- KH₂D₂(1-x)PO₄, X-ray and gamma irrad., domain struct. freezing 2-82802
- KH₂PO₄, doped, non-ohmic behaviour 2-104386
- KH₂PO₄, ferroelec., dynamics of proton sublattice, Raman scatt. study 2-86814
- KH₂PO₄, ferroelec., nonlinear electromechanical parameters, second harmonic generation 2-104814

ferroelectric materials continued

- KH₂PO₄, ferroelec. transition Debye-Waller factor and thermal expansion coeff. 2-57024
 KH₂PO₄ lossy crystals, dielec. and ferroelec. props. 2-82776
 KH₂PO₄, paraelectric, very low freq. Raman spectra near ferroelec. phase transition 2-67059
 KH₂PO₄ small crystals, sp. ht., 1.7 to 25K 2-110005
 KH₂PO₄ type ferroelec., instabilities in coupled acoustic and optical modes (Japanese) 2-86806
 KH₂PO₄/NH₄H₂PO₄, soft mode spectra and ferroelec. phase transition 2-57029
 KH₂PO₄/Ti⁴⁺, dynamical charge compensation, ESR, rel. to ferroelec. transition 2-56929
 KH₂PO₄-type cryst., isotopically disordered, central peak, continued-fraction calc. 2-77460
 KH₂PO₄-type ferroelec., Curie temp., isotope effect 2-110786
 K_{1-x}Li_xTaO₃, ferroelectric, dipole-dipole interactions, EPR line width study (Russian) 2-82805
 KNbO₃, ferroelec. transition role of polar phonons in chemical bond, Fourier spectroscopy 2-57028
 KNbO₃, hot pressed ceramics, internal stresses, Curie temp. 2-88017
 KNbO₃, sintering characts. and dielec. props. 2-105108
 KNbO₃/Fe³⁺, vol. phase hologram form., coherent light amplification, optical phase conjugation 2-65311
 K₂Nb₂O₇, layer type ferroelec., rel. to KNbO₃, chem. and crystallographic props. 2-110779
 K₂SeO₄, ferroelec. incommensurate transition, Brillouin scatt. study 2-66997
 K₂SeO₄, incommensurate superlattice, X-ray diff. study 2-55943
 K₂SeO₄, incommensurate phase transition, uniaxial stress depend., Raman scatt. study 2-71638
 K₂SeO₄, phase transform. Raman study 2-72481
 K(Ta_{0.55}Nb_{0.45})O₃, dielec. const. crit. exponents, diffused phase transition 2-110781
 KTaO₃, dielec. nonlinearity, losses, and parametric interactions at UHF 2-99072
 KTaO₃, induced ferroelec. phase transition mech., thermal cond. meas. 2-56274
 KTaO₃/Fe³⁺, cubic cryst. field splitting, anomalous temp. effect, EPR study 2-77366
 K₂ZnCl₄, phase transform. Raman study 2-72481
 La₂Ti₂O₇, high-temp. modifications, cryst. struct. determ. 2-55928
 LiCsSO₄, ferroelec., elastic const. near phase transition, US vel. study 2-56066
 LiD₂(SeO₄), ferroelec., cryst. struct., neutron diff. study 2-81733
 LiH₂(SeO₄)₂/Cu²⁺, EPR spectra, g and A matrices, Q tensor 2-82709
 LiNH₂SO₄, ferroelectric phase transitions, elec. props., IR spectra 2-67000
 LiNH₂SO₄, phase transition, dielectric const., elec. cond. 2-72435
 LiNH₂SO₄, Raman scatt. internal and external vibr., soft modes 2-82834
 LiNbO₃, Czochralski-grown single crystals, growth striations and ferroelectric domain struct. 2-93129
 LiNbO₃, ferroelectric domain struct. and growth striations (Chinese) 2-110793
 LiNbO₃, photorefractive, annealing, charge carrier trapping (Russian) 2-104833
 LiNbO₃, photorefractive and photogalvanic effect under high intensities 2-110796
 LiNbO₃, photovoltaic const. determination by holography technique 2-110392
 LiNbO₃, shock loaded, microwave dielec. const. meas. 2-72398
 LiNbO₃/Eu³⁺, polarised optical absorption bands, splitting 2-82835
 LiNbO₃/Fe, influence of irrad. power on photocurrent 2-56632
 LiNbO₃/PbTe system, ferroelec. polarisation effect on elec. cond. of semiconductor layer 2-110503
 LiTaO₃, F⁻ centre, pot. energy of point ion lattice, Schrodinger eqn. 2-76973
 LiTaO₃, ferroelec. domain boundaries, computer simulation, X-ray and electron microscope study 2-87717
 LiTaO₃, ferroelec. domains and chemical twinning, dislocations and stacking faults 2-93130
 LiTaO₃, ferroelec.-paraelec. transition, displacive-order-disorder crossover 2-104819
 LiTaO₃, paraelec. and ferroelec., elastic props. 2-115326
 LiTaO₃(LiNbO₃), ferroelec. transition, soft modes, IR reflection spectra study 2-67009
 ND₂SeO₄, cryst. struct., X-ray diff. study 2-98003
 (NH₄)₂BeF₄, dielec. props. near nonpolar-incommensurate-polar phase transitions 2-104824
 (NH₄)₂BeF₄, commensurate-incommensurate polar transition, dielectric hysteresis (Russian) 2-82799
 (NH₄)₂BeF₄ crystal, ferroelec. domains, SEM obs. 2-116133
 (NH₄)₂BeF₄, ferroelec., incommensurate phase, quadrupole moment, homogeneous mech. stress effects 2-57023
 (NH₄)₂BeF₄, ferroelec., US study under hydrostatic high press. 2-115362
 (NH₄)₂BeF₄, incommensurate superlattice, X-ray diff. study 2-55943
 NH₄Br(Cl), light scatt. near order-disorder transition 2-99140
 NH₄HSO₄, ferroelec., dielec. susceptibility dispersion, high freq., dipole ordering 2-87666
 NH₄HSO₄, ferroelec. US vel. and attenuation meas. apparatus appl. (Japanese) 2-114566
 NH₄HSeO₄, dielec. and struct. props., isotope effect, pyroelec. and X-ray studies 2-57022
 NH₄HSeO₄, ferroelec. transitions, dielec. const., dielec. loss and DTA study 2-93121
 NH₄HSeO₄, ferroelec. transition, dielec. dispersion study 2-116131
 NH₄LiSO₄, ferroelec. phase transition, thermal expansion study 2-98311
 (NH₄)₂SO₄, ferroelec., EPR study of triple state centre 2-98936
 (NH₄)₂ZnCl₄, cryst. struct. in ferroelec. phase 2-71409
 (NH₄)₂ZnCl₄, ferroelec., phase transition sequence, X-ray diff. and NQR study 2-76360
 (NH₄)₂ZnCl₄, ferroelec. phase transitions, light scatt. study 2-110830
 (NH₄)₂ZnCl₄, phase transitions, X-ray structural study 2-65911
 (NH₄)₂ZnCl₄, X-ray structural study of successive phase transitions 2-65912
 (Na,Li)NbO₃, hot pressed ceramics, internal stresses, Curie temp. 2-88017
 Na_{0.9}Bi_{0.1}TiO₃, ferroelectric, structural phase transitions, X-ray diff. study 2-67002
 Na_{0.9}Bi_{0.1}TiO₃, phase transition props. (Russian) 2-61841

ferroelectric materials continued

- NaD₂(SeO₄), ordered ferroelec. state, paraelec. and ferroelec. phase struct., neutron diff. 2-99065
 NaH₂(SeO₄), cryst., phase transitions under press., NQR-NMR obs. 2-110692
 NaNH₂SeO₄·2H₂O, cryst., phase transitions under press., NQR-NMR obs. 2-110692
 NaNO₂, incommensurate transitions, phenomenological theory 2-57025
 NaNO₂, incommensurate phase transition near Lifshitz point, thermodynamic theory 2-87712
 NaNO₂, incommensurate to ferroelec. transition, thermodynamic theory 2-116127
 NaNO₂, microcrystals, ferroelec. phase transition 2-87706
 NaNO₂, solid and molten, paraelectric phase, molecular dynamics computer simulations, struct. 2-98035
 NaNO₂, specific heat at low temp. 2-76701
 Na₂Se₂(PO₄)₃, ferroelec., ionic cond. meas. 2-92263
 Ni₂B₂O₇/Br_{1-x}Cl_x, elec. and thermal props. near ferroelectric transition 2-66555
 Ni₂B₂O₇, piezoelec. meas. by techniques of admittance circle and motional capacitance 2-99051
 PLZT 7/65/35, ceramic, domain switching, one-dimens. polar responses 2-67010
 PLZT ceramic, ferroelec., electro-optic and strain-optic effects 2-93159
 PLZT ceramic, holographic grating form by electro-optic effect 2-108826
 PLZT ceramics, photoferroelectric props., ion implantation effects, review 2-110393
 PLZT, chemically prepared powders, grain size of mixed oxides 2-72660
 PLZT ferroelec. ceramic, laser beam amplification by dynamic holography 2-108835
 PLZT, solid solutions, regions of homogeneity 2-110003
 PLZT, transparent ferroelec. ceramic, surface effects for information storage (Russian) 2-104846
 PbBi₂Nb₂O₇, ferroelasticity, Curie temp., birefringence and spontaneous strain 2-81876
 PbBi₂Nb₂O₇, layer struct., grain oriented ferroelec. ceramics, liq. phase sintering 2-77788
 PbDAsO₄, ferroelec., birefringence and transition temp. 2-72447
 PbDPO₄, quasi-one-dimens. ferroelec., spontaneous polarisation and dielec. const., Ising model theory 2-74359
 Pb₂Gd₂O₇, refractive index behaviour in high-temp. phase 2-116145
 Pb₂Ge₂(O,F)₁₁, growth, Curie point, dielectric const. 2-72616
 α-PbGe₂O₆, ferroelectric, dielec. and pyroelec. props. 2-61845
 PbGe₂O₆, polymorphism, cryst. struct., and dielec. props. 2-109754
 Pb₂Ge₂O₆, ferroelec., acoustic emission from domain wall motion 2-99077
 Pb₂Ge₂O₇, ferroelectric, electret props. 2-116111
 Pb₂Ge₂O₇, soft mode, neutron and Raman scatt. study 2-93125
 Pb₂Ge₂O₇/Fe³⁺(Gd³⁺), ferroelectric, electret props. 2-116111
 Pb₂Ge₂O₇/Gd³⁺, elec. field effect and model of triclinic paramag. centres 2-66912
 Pb₂Ge₂O₇/Gd³⁺, ferroelec., EPR line intensity, ferroelec. hysteresis 2-116059
 Pb₂Ge₂O₇/Nd³⁺, cryst. growth and spectroscopic props. 2-99178
 PbHAsO₄, ferroelec., birefringence and transition temp. 2-72447
 PbHAsO₄, ferroelectric, neutron diff. structural study 2-82798
 PbHPO₄, ferroelec., birefringence and transition temp. 2-72447
 Pb(Hf_{1-x}Zr_x)₂Ti₂O₉, ferroelectric-antiferroelectric transition (French) 2-99068
 Pb₂KNb₂O₇, ferroelectric-ferroelastic domain struct., electron diff. and microscopy study 2-67011
 Pb₂KNb₂O₇, phase determ. and growth for good quality crystals 2-97957
 Pb_{1-x}(La_{0.5}Li_{0.5})(Zr_{0.7}Ti_{0.3})O₃, transparent ceramic, SHG excited by Q-switched Nd³⁺ glass laser 2-81024
 Pb_{1-x}M_xGe₂O₆ (M=Sr, Ba), polymorphism, cryst. struct., and dielec. props. 2-109754
 Pb(M_{1/3}Nb_{2/3})O₃-based ferroelectrics, M=Mg, Zn, dielec. const. crit. exponents, diffused phase transition 2-110781
 PbMg_{0.33}Nb_{0.66}O₃, ferroelec., electro-optic and strain-optic effects 2-93159
 PbMg_{1/3}Nb_{2/3}O₃, cubic ferroelec., with diffuse phase transitions, photorefractive mech. 2-110797
 Pb(Mg_{1/3}Nb_{2/3})O₃, ferroelectrics, dielec. const. crit. exponent, diffused-phase-transition 2-110781
 Pb(Mg_{1/3}Nb_{2/3})O₃ type materials, electrostrictive effect 2-87683
 Pb(Mg_{1/3}Nb_{2/3})O₃-Pb(Mg_{1/2}W_{1/2})O₃(PbTiO₃) ceramics, electrostriction rel. to phase transition diffuseness 2-87694
 Pb₂MgNb₂O₉ crystals, electromech. props. 2-99047
 Pb_{0.99}Nb_{0.02}(Zr_{0.65}Sn_{0.35}Ti_{0.07})_{0.98}O₃, ferroelectric, direct heat to electrical energy conversion, pyroelectric meas. 2-116788
 Pb(Sn_{1-x}Zr_x)₂Ti₂O₉, ferroelectric-antiferroelectric transition (French) 2-99068
 PbTiO₃, 180° polarisation switching and dielec. props. associated with point defects 2-82803
 PbTiO₃, amorphous ferroelec., time depend. dielec. const. during annealing 2-109676
 PbTiO₃, amorphous state and crystn. process, Raman scatt., SEM, and dielec. meas. 2-81677
 PbTiO₃, electronic spectra of TiO₆⁴⁻ clusters 2-93222
 PbTiO₃, ferroelec., Raman scatt. from amorphous state, rel. to crystallisation process 2-57091
 PbTiO₃, ferroelec. thin films, prep. by RF sputtering and laser annealing 2-82792
 PbTiO₃, phase transition in low temp. range, lattice const. meas. 2-81947
 PbTiO₃, refractive index behaviour in high-temp. phase 2-116145
 PbTiO₃/Mn ceramics, Mn doping effect on dielec. and ferroelec. props. (Chinese) 2-72431
 PbTiO₃-Si, RF sputtered, ferroelec.-semicond. interface states, DLTS and capacitance study 2-98746
 Pb(Zn_{1/3}Nb_{2/3})O₃/PbTiO₃, ferroelec. transitions, dielec., elastic and piezoelec. study 2-116124
 Pb(Zr,Ti)O₃, ferroelec. ceramic, domain switching, butterfly loops 2-67001
 Pb(Zr,Ti)O₃, impurity doping effects 2-86689
 Pb(Zr,Ti)O₃, piezoelectric effect 2-87686
 Pb(Zr,Ti)O₃, single crystal, ferroelec., growth conditions and effect on growth features 2-77724
 PbZrO₃ ceramic, dielec. props., X-ray irrad. effect 2-110745

ferroelectric materials continued

- PbZrO₃, Urbach edge behaviour at ferroelec. phase transitions 2-104838
 PbZr_{1-x}Ti_xO₃, ferroelec. ceramic, mechanoelec. energy conversion under shock loading 2-72423
 PbZr_{1-x}Ti_xO₃, Ti distrib., ferroelectric transition 2-86654
 PbZr_{1-x}Ti_xO₃, solid soln., ferroelec.-paraelec. transition, tricritical point 2-93126
 Pb(Zr_{1-x}Ti_x)₂O₇ system, morphotropic phase boundary 2-62109
 RbDSeO₄, cryst. struct., X-ray diffr. study 2-98003
 RbH(DSO₄), ferroelec., dielec. susceptibility dispersion, high freq., dipole ordering 2-87666
 RbH₂PO₄, crystals, amplitude depend. of dielec. characts. 2-57008
 RbHSeO₄ cryst., near ferroelec. phase transition point, elastic and non-linear dielec. props. 2-57007
 RbHSeO₄, deuterated, ferroelec. transitions, isotope effects, DTA and dielec. study 2-87707
 RbHSeO₄, ferroelec. transitions, dielec. const., dielec. loss and DTA study 2-93121
 RbHSeO₄, Raman spectra, 20-300K 2-99134
 RbH₂(SeO₃)₂·Cr³⁺, ferroelec.-ferroelastic, domain struct., EPR study 2-116135
 RbH₂(SeO₃)₂, ferroelec. and incommensurate transitions, US study 2-66137
 Rb₂ZnBr₄, ferroelectricity and antiferroelectricity coexistence obs. 2-61838
 Rb₂ZnBr₄(Cl₂), phase transform. Raman study 2-72481
 Rb₂ZnCl₄, commensurate and incommensurate phases, ⁸⁷Rb NMR satellite transitions 2-77388
 Rb₂ZnCl₄, elastic behaviour, temp. depend., commensurate-incommensurate transition, Brillouin spectra study 2-61053
 Rb₂ZnCl₄, ferroelectrics, incommensurate phase Raman scatt. 2-116197
 Rb₂ZnCl₄, incommensurate state, elastic stiffness const. temp. depend., Brillouin scatt. 2-115360
 Rb₂ZnCl₄, incommensurate ferroelec., far IR spectra study 2-116174
 Rb₂ZnCl₄, phase transitions, Raman scatt., dielec. const. and spontaneous polarisation study 2-72510
 SbMO₃(M=Nb, Ta, Sb), stibiotantalite struct. antiferroelec., ferroelec. and pyroelec., prep. and props. 2-66998
 SBSBr_{1-x}I_x, phase transitions, permittivity, polarisation (*Russian*) 2-77461
 SbSI acicular crystals, prep. and elec. field alignment 2-98508
 SbSI, cryst., phase transitions under press., NQR-NMR obs. 2-110692
 SbSI, ferroelec. phase transition, Raman scatt. in strong mag. field 2-57027
 SbSI, maximal equitranslational subgroups of the line groups 2-76356
 SbSI, phonon spectrum, soft modes and order parameter near ferroelec. transition 2-103936
 SbSI single cryst., ferroelec., low temp. growth 2-77718
 SbSI, soft mode ion paraelec. phase, temp. depend. 2-109943
 SbSeS_{1-x}I_x and SbSBr_{1-x}I_x, ferroelec., tricrit. points, dielec. meas. 2-93127
 SbSeS_{1-x}I_x, phase transitions, permittivity, polarisation (*Russian*) 2-77461
 Sn-P-S₆, lattice vibr. in ferroelec. phase, Raman spectra anisotropy 2-104888
 Sn₂P₂(Se₂S₆)₂, ferroelec. solid soln., phase transition splitting 2-104823
 (Sr,Ba,Ca)Nb₂O₆, diffuse ferroelec. phase transition, optical and dielec. props. study 2-61844
 Sr_{0.7}Ba_{0.3}Nb₂O₆ crystals, electromech. props. 2-99047
 Sr_{1-x}Ba_x(Nb₂O₆), ferroelectric thermal cond. and permittivity 2-115477
 Sr-Ta-O₇, ferroelec. transition temp., press. depend., dielec. const. study 2-87713
 SrTe-O₂, ferroelastic state 2-66109
 SrTiO₃, antiferrodistortive phase transition, impurity effect 2-82793
 SrTiO₃, dielec. nonlinearity, losses, and parametric interactions at UHF 2-99072
 SrTiO₃, electronic spectra of TiO₆⁴⁻ clusters 2-93222
 SrTiO₃, non-adsorption of carbonate ions, Raman spectra study 2-66347
 SrTiO₃, phase transition study 2-87705
 Tb₂(MoO₄)₃, spontaneous shear strain meas. and free energy expression 2-72433
 V³⁺, guanidium aluminium sulphate hexahydrate, mag. props. 2-92873

ferroelectric phenomena *see ferroelectricity***ferroelectric semiconductor materials** *see ferroelectric semiconductors***ferroelectric semiconductors**

- electrical conductivity, temp. depend., carrier interaction with soft ferroelec. mode 2-110342
 ferroelectric conversion of heat to electricity 2-93934
 highly doped and compensated, model, anomalous photovoltage 2-110384
 III-V type crystals, linear photogalvanic effect 2-110388
 interband model, anomalous photogalvanic effect and narrow-gap semiconds. 2-99073
 IV-VI narrow band gap ferroelec. semicond., phase transitions, microscopic theory 2-110788
 IV-VI semiconductors, lattice dynamics and phase transitions, pseudopot. theory 2-92139
 IV-VI semiconductors, lattice dynamics and phase transitions, shell model, 3D highly nonlinear 2-92140
 narrow band gap, Curie point and soft mode freq., mag. field effects 2-110791
 p-n junction, capacitance, spontaneous polarisation and pyroelectric current 2-115881
 p-n junctions, polarisation switching and pyroelec. current 2-110453
 phase transitions, strong EM field effects, vibronic theory 2-61839
 photo-EMF, origin in ferroelectric and non-ferroelectric materials 2-110379
 photoelectric effects in ferroelectrics with high-mobile nonequilibrium electrons 2-110380
 photogalvanic centres in crystals, models 2-110382
 photovoltaic effect, bulk, in crystals without a centre of symmetry 2-110378
 Symposium, Rostov-on-Don, USSR (June 1981) 2-107001
 TGS, nonequilib. ferroelec. cryst., relax. currents 2-110341
 Ba(Nb_{1-x}Ti_x)₂Sn₁₀₋₁₂O₂₀, semicond. ceramics, space-charge-limited currents and dopant cond. influence, firing procedure effect (*Russian*) 2-56607
 BaTiO₃, ferroelec., domains and grain boundaries, SEM EBIC imaging technique 2-116132
 BaTiO₃, semiconductive ceramics, positive temp. coeff. of resist. under reduced atm. 2-87270

ferroelectric semiconductors continued

- BaTiO₃:Al, acceptor doped, nonstoichiometry 2-77042
 Bi₂GeO₅, photogalvanic effects in impurity induced absorption region 2-110389
 Bi₂GeO₅, sillenite-type non linear crystals, deep localised centres 2-110362
 Bi₂SiO₅, photogalvanic effects in impurity induced absorption region 2-110389
 Bi₂SiO₅, sillenite-type non linear crystals, deep localised centres 2-110362
 Bi₂TiO₅, photogalvanic effects in impurity induced absorption region 2-110389
 Bi₂TiO₅, sillenite-type non linear crystals, deep localised centres 2-110362
 GeTe, magnetic susceptibility change at ferroelec. phase transition 2-77260
 KTaO₃, search for supercond., 0.01 to 4K 2-98787
 α-LiIO₃, bulk photovoltaic and photorefractive effects 2-110387
 LiNbO₃:Fe, emission study of surface states 2-66608
 LiNbO₃:Fe, ferroelectric, anomalous current due to electron drag, photovoltaic effects 2-72027
 LiNbO₃:Fe crystals, anomalous effect of drag of photovoltaic electrons by light 2-110386
 LiNbO₃:CdSe film, alternating field acoustoelectronic effect, CdSe cond. effects 2-72033
 PLZT ceramic, transparent ferroelectric, dielec., optical and semicond. props., reduction effect (*Russian*) 2-99668
 (Pb,Sn,Ge)Te, dielectric props., defects influence 2-93101
 Pb_{1-x}Ge_xTe, band edge struct. transform. due to ferroelectric transition 2-92456
 Pb_{1-x}Ge_xTe narrow band gap ferroelec. semicond., photostimulated phase transition shift 2-110789
 Pb₂InNbO₆, elec. props., band gap energy 2-110395
 PbMO₃ (M=Ti, Zr, Hf), elec. props., band gap energy 2-110395
 PbScNbO₆, elec. props., band gap energy 2-110395
 Pb_{0.9}Sn_{0.1}Te:In, photoferroelec. behaviour and Hall coeff., expt. study 2-87708
 SbSI ferroelec., relax. processes, spontaneous polarisation screening 2-110780
 SbSI, ferroelec., temp. depend. of Sb L₁ absorption edge near T_c 2-110975
 SbSI, thermomodulated spectroscopy of band gap region 2-110823
 SbSI, ferroelec. semicond., optical transitions, temp. depend. meas. near phase transitions 2-57109
 Sn-P-S₆ ferroelec. semicond., curie temp. shift in mag. field 2-110792
 SrTeO₃, ferroelec., elec. cond., freq. and temp. depend. meas. (*Russian*) 2-77066
 SrTiO₃, transient photocurrents and DC photocond. study 2-110390
 SrTiO₃:Cr³⁺, photoelectronic and optical props. 2-82402
 SrTiO₃:Ta, O non-stoichiometry, gravimetric anal. 2-98145

ferroelectric switching

- azobenzene, switching transients 2-110785
 dicalcium strontium propionate, switching transients 2-110785
 semiconductor, ferroelec., p-n junctions, polarisation switching and pyroelec. current 2-110453
 smectic C liq. cryst., ferroelec., fast electro-optic switching, stroboscopic microscopy obs. 2-93154
 symposium on ferroelectric semicond., Rostov-on-Don, USSR (June 1981) 2-107001
 thermoactivated motion of 180°-domain walls, variational calc. 2-110790
 BaTiO₃, deformed, light emission during pulsed repolarisation 2-72555
 PLZT 7/65/35, ceramic, domain switching, one-dimens. polar responses 2-67010
 PbTiO₃, 180° polarisation switching and dielec. props. associated with point defects 2-82803
 Pb(Zr,Ti)O₃, ferroelec. ceramic, domain switching, butterfly loops 2-67001

ferroelectric thin films

- conference, Kyoto, Japan (May 1981) 2-79273
 (Ba,Sr)TiO₃ films on Si substrate, ferroelec. behaviour 2-66996
 (BaSr)TiO₃, planar capacitors in SHF range, capacity and dielectric loss angle meas. 2-58845
 BaTiO₃, prep. from solns. of metal alcoholates 2-72635
 BaTiO₃, sputtered films, energy anal. of high-energy neutral atoms 2-87927
 K₁LiNb₃O₈ films for SAW devices 2-82111
 LiNbO₃ film, plasma assisted deposition and struct. (*Japanese*) 2-115595
 Pb₂Kn₂O₅ films for SAW devices 2-82111
 PbTiO₃ ferroelec. thin films, prep. by RF sputtering and laser annealing 2-82792
 PbTiO₃ ferroelectric film for pyroelectric IR sensor fabrication on Si wafer 2-79668
 Sn₂P₂S₆, thermal evaporation, 2-71622

ferroelectric transitions

- see also critical fluctuations; displacive transformations; ferroelectric Curie temperature; order-disorder transformations*
 centrosymmetric fluid, polar-vector ordering, Landau theory 2-71613
 crystalline ferroelectrics, dipole defect broadening of NQR and NMR lines 2-110705
 dicalcium barium propionate, ferroelectric transitions, ESR study 2-66999
 dicalcium lead propionate, ferroelectric transitions, ESR study 2-66999
 dicalcium strontium propionate, ferroelectric transitions, ESR study 2-66999
 dielectrics, electromechanical resonances for phase transition studies 2-87702
 dielectrics, electromechanical resonances for study of linear and nonlinear props. 2-87682
 displacive transformations, US attenuation study 2-56095
 domain boundaries configuration in cryst. with varied pt. group symmetry in external fields (*Russian*) 2-57032
 double hysteresis loop near first-order ferroelectric transition 2-87716
 electrical conductivity, temp. depend., carrier interaction with soft ferroelec. mode 2-110342
 ferroelectrics, hydrogen bonded, electron spin-lattice relax., impurity dynamics 2-87577
 ferroelectrics, quadrupole-quadrupole interaction, soft phonon modes, NQR line crit. broadening 2-110707
 incommensurate phases, acoustic anomalies 2-66162

ferroelectric transitions continued

- incommensurate-commensurate phase transition, tricritical point, Landau-type theory 2-66167
interband model, anomalous photogalvanic effect and narrow-gap semiconds. 2-99073
isostructural phase transitions, in crystals. 2-98271
IV-VI narrow band gap ferroelec. semicond., phase transitions, microscopic theory 2-110788
Jahn Teller antiferroelectrics, metamagnetoelectric and metamagnetoelectric behaviour, EPR spectra 2-98931
Jahn-Teller impurities effect, soft mode contrib. 2-61843
Jahn-Teller impurity centres, quadratic interaction with ferroelec. soft host mode 2-93128
K₂Ta₂Nb₂O₁₀ induced ferroelec. phase transition mech., thermal cond. meas. 2-56274
lithium ammonium thallium tartrate monohydrate mixed cryst., dielec. and elastic props., antiferroelec. obs. 2-116134
α-nylon 11, ferroelec. transition, dielec. const., thermal expansion and pyroelec. coeff. study 2-116128
optically induced change in order parameter near second-order phase transition 2-103946
perovskites, oxydic, ferroelec. transitions, IR and Raman spectra and dielec. const. data anal. 2-67008
piezoceramics, phase coexistence, domain boundary interactions 2-87703
polyvinylidene fluoride, ferroelec. hysteresis at high temp. 2-116125
polyvinylidene fluoride-trifluoroethylene copolymer films, piezoelec. props. 2-87692
Rochelle salt, electromechanical resonances for phase transition studies 2-87702
second order phase transition ferroelectrics, phys. props. under elec. and mag. fields 2-110782
semiconductor, ferroelec., Curie point and soft mode freq., mag. field effects 2-110791
semiconductors, phase transitions, strong EM field effects, vibronic theory 2-61839
sodium dideuterophosphate, transition struct. at phase transition (*Russian*) 2-61842
soft modes, microscopic polarisability model 2-56149
squaric acid, antiferroelec. phase transition, realisation of Baxter model 2-82790
squaric acid, antiferroelectric, phase transition fronts 2-93124
squaric acid, protonic ordering, strain effect 2-76664
symmetry aspects, unit cell multiplication 2-110784
tanane, ferroelec. and ferroelastic phase transition, soft acoustic mode 2-93122
tanane, ferroelec. and ferroelastic transition, intermol. forces and statistical mech. 2-93123
tetramethylammonium cobalt chloride, phase transitions, ESR study 2-98267
tetramethylammonium cobalt tetrachloride-d₁₂, dielec. props. and phase transitions 2-109974
tetramethylammonium tetrabromocuprate, cryst. struct. and incommensurate-commensurate phase transition 2-65977
tetramethylammonium tetrachlorocobaltate, phase transitions, deuteration effects, dielec. study 2-98265
tetramethylammonium tetrachlorozincate-d₁₂, press. induced ferroelec. 2-67004
tetramethylammonium zinc tetrachloride-d₁₂, dielec. props. and phase transitions 2-109974
tetramethylanion copper bromide, ferroelec., phase transitions, high press. effects, permittivity study 2-99069
TGS, Debye-Waller factor and thermal expansion coeff. 2-57024
TGS, electrostriction calcs., ferroelectric transition 2-99061
TGS, ferroelec. transition, depolarisation field, Brillouin spectra line breadth study 2-67068
TGS, ferroelec. transition, polarisation relax. time, high press. Brillouin scatt. study 2-87802
TGS, ferroelectric, low freq. dielec. losses meas. near phase transition of second kind 2-57017
TGS, gamma-irrad., Mandelstam-Briouin light scatt. 2-110879
TGS and TGSe, Curie temp. determ. 2-67006
TGS single cryst., permittivity meas. as a function of geometry 2-61815
TGSe-deuterated TGSe system, tricritical point 2-57026
thermodynamics near second order phase transition in external fields 2-110783
thiourea, ferroelec. normal and deuterated, III phase, low bias elec. field effect meas. 2-67003
thiourea-d₄, elec. field induced commensurate phase, elastic neutron scatt. study 2-104820
thiourea-d₄, ferroelec. incommensurate-commensurate phase transition in DC bias elec. field 2-67005
tris-sarcosine calcium chloride_{1-x} bromide_x, ferroelectric transition 2-87711
tris-sarcosine calcium chloride, brominated, dielec. props., press. and temp. depend. 2-61820
trissarcosine calcium chloride, deuterated, dielec. props., temp. and press. depend. meas. 2-99071
trissarcosine calcium chloride, press. induced ferroelec.-antiferroelec. transition, dielec. losses study 2-116115
two-sublattice system with asymmetric double minimum pot., tricritical points anal. 2-99070
vibron ferroelectrics, phase transition, Jahn-Teller effect, mag. field effects (*Russian*) 2-82801
Ag₂SbS₃, pyargyrite, cryst., ferroelec. phase transition, elec. field effects on NQR 2-110695
As₂Sb_{1-x}SI ferroelec., tricrit. points, dielec. meas. 2-93127
As₂Sb_{1-x}SI, phase transitions, permittivity, polarisation (*Russian*) 2-77461
Ba(Sr)(M_{1/3}Nb_{2/3})O₃-PbZrO₃-PbTiO₃ (M=Pb, Ca, Sr) elec. and optical props. 2-82794
Ba₂Sr_{1-x}Nb₂O₆, low freq. dielec. spectra, 20 to 200°C 2-61830
Ba₂(Sr_{1-x}Nb₂)₂O₆/PbZrO₃-PbTiO₃ elec. and optical props. 2-82796
Ba₂Sr_{1-x}O₆, ferroelectric, dielec. and optical props. in fund. absorption region 2-77481
BaTiO₃, Debye-Waller factor and thermal expansion coeff. 2-57024
BaTiO₃, dielec. const. crit. exponents, diffused phase transition 2-110781
BaTiO₃, dielec. props. near ferroelec. transition, domain struct., mag. field effects 2-104825
BaTiO₃, ferroelec. transition role of polar phonons in chemical bond, Fourier spectroscopy 2-57028
ferroelectric transitions continued
BaTiO₃, ferroelec.-paraelec. transition, displacive-order-disorder crossover 2-104819
BaTiO₃, ferroelec.-paraelec. transition, theory 2-116130
BaTiO₃, ferroelectric transition in superintense laser field 2-61081
BaTiO₃, ferroelectric transition in alternating elec. field (*Russian*) 2-61846
BaTiO₃, low-temp. phase transition in strong elec. field 2-116129
BaTiO₃, phase transition, bound symm. (*French*) 2-87714
Bi₂Sb_{1-x}SI ferroelec., tricrit. points, dielec. meas. 2-93127
Bi₂Sb_{1-x}SI, phase transitions, permittivity, polarisation (*Russian*) 2-77461
Cs₂D₂PO₄, polarisation fluctuation relax. time near transition point, US dispersion study 2-82770
Cs₂D₂PO₄, quasi-one-dimens, H-bonded ferroelec., phase diagram, anisotropic compressible Ising model 2-87709
CsH₂PO₄, one-dimens. ferroelec., crit. slowing down, dielec. meas. 2-77458
CsH₂(SeO₃)₂, ⁷⁷Se high resolution NMR 2-61779
Cu₂B₂O₇, CC, improper ferroelectric transition 2-72434
GdDy(MoO₄)₃, ferroelectric-ferroelastic transition, X-ray topographic study 2-61840
Gd₂(MoO₄)₃, electromechanical resonances for phase transition studies 2-87702
GeTe, intervalley Jahn-Teller effect and polymorphic ferroelectric transitions 2-87208
GeTe, magnetic susceptibility change at ferroelec. phase transition 2-77260
H-bonded crystals, isotope, tunnelling effects 2-77459
KD₂PO₄, ferroelec. and paraelec. phase transition study by SeO₄³⁻ ESR 2-116126
KD₂PO₄, ferroelectric fluctuation, diffuse X-ray and neutron scatt. anal. 2-61837
KD₂PO₄, light scatt. study of acoustic phonon damping 2-86804
KD₂PO₄-type ferroelectrics, cluster approx. for q-depend. correls. 2-82800
K₄Fe(CN)₆·3H₂O, vibrational spectrum and water of crystn. sublattice struct. in ferroelec. phase 2-72506
KH₂PO₄, Debye-Waller factor and thermal expansion coeff. 2-57024
KH₂PO₄, paraelectric, very low freq. Raman spectra near ferroelec. phase transition 2-67059
KH₂PO₄ type ferroelec., instabilities in coupled acoustic and optical modes (*Japanese*) 2-86806
KH₂PO₄ type structure, Monte Carlo simulation of order-disorder transition 2-104818
KH₂PO₄:NH₄H₂PO₄, soft mode spectra and ferroelec. phase transition 2-57029
KH₂PO₄:Ti³⁺, dynamical charge compensation, ESR, rel. to ferroelec. transition 2-56929
KH₂PO₄-type cryst., isotopically disordered, central peak, continued-fraction calc. 2-77460
KNbO₃, ferroelec. transition role of polar phonons in chemical bond, Fourier spectroscopy 2-57028
K₂SeO₄, ferroelec. incommensurate transition, Brillouin scatt. study 2-66997
K₂SeO₄, incommensurate phase transition, uniaxial stress depend., Raman scatt. study 2-71638
K(Ta_{0.55}Nb_{0.45})O₃, dielec. const. crit. exponents, diffused phase transition 2-110781
KTAO₃, dielec. nonlinearity, losses, and parametric interactions at UHF 2-99072
KTAO₃ induced ferroelec. phase transition mech., thermal cond. meas. 2-56274
KTAO₃:Fe³⁺, cubic cryst. field splitting, anomalous temp. effect, EPR study 2-77366
LiCsSO₄, ferroelec., elastic const. near phase transition, US vel. study 2-56066
Li₂Ge₂O₇, dielec. props. and phase transition 2-57006
LiNH₂SO₄, ferroelectric phase transitions, elec. props., IR spectra 2-67000
LiNH₂SO₄, phase transition, dielectric const., elec. cond. 2-72435
LiTaO₃, ferroelec.-paraelec. transition, displacive-order-disorder crossover 2-104819
LiTaO₃, ferroelectric phase transition, Raman spectra (*Chinese*) 2-77456
LiTaO₃(LiNbO₃), ferroelec. transition, soft modes, IR reflection spectra study 2-67009
(NH₄)₂BeF₄, dielec. props. near nonpolar-incommensurate-polar phase transitions 2-104824
(NH₄)₂BeF₄, commensurate-incommensurate polar transition, dielectric hysteresis (*Russian*) 2-82799
NH₄Br(Cl), light scatt. near order-disorder transition 2-99140
NH₄HSeO₄, dielec. and struct. props., isotope effect, pyroelec. and X-ray studies 2-57022
NH₄HSeO₄, ferroelec. transitions, dielec. const., dielec. loss and DTA study 2-93121
NH₄HSeO₄, ferroelec. transition, dielec. dispersion study 2-116131
NH₄HSeO₄, pyroelectric props. 2-99063
NH₄LiSO₄, ferroelec. phase transition, thermal expansion study 2-98311
(NH₄)₂SO₄, ferroelec., EPR study of triple state centre 2-98936
(NH₄)₂SO₄, paraelec.-ferroelec. phase transition, low temp., thermal anal. 2-104822
(NH₄)₂ZnBr₄, ferroelectric phase transition, NQR study 2-104821
(NH₄)₂ZnCl₄, ferroelec., phase transition sequence, X-ray diffr. and NQR study 2-76360
(NH₄)₂ZnCl₄, ferroelec. phase transitions, light scatt. study 2-110830
Na_{0.5}Bi_{0.5}TiO₃, ferroelectric, structural phase transitions, X-ray diffr. study 2-67002
Na_{0.5}Bi_{0.5}TiO₃, phase transition props. (*Russian*) 2-61841
NaNO₂, incommensurate transitions, phenomenological theory 2-57025
NaNO₂, incommensurate phase transition near Lifshitz point, thermodynamic theory 2-87712
NaNO₂, incommensurate to ferroelec. transition, thermodynamic theory 2-116127
NaNO₂, microcrystals, ferroelec. phase transition 2-87706
NaNO₂, paraelectric phase critical fluctuations 2-82797
NaNbO₃, solid solutions, phase transitions 2-87704
Na₂Se₂(PO₄)₃, ferroelec., ionic cond. meas. 2-92263
Ni₂B₂O₇:Br⁻, Cl⁻, elec. and thermal props. near ferroelectric transition 2-66555
α-PbGeO₄, ferroelectric, dielec. and pyroelec. props. 2-61845
Pb₂GeO₆, soft mode, neutron and Raman scatt. study 2-93125

ferroelectric transitions continued

- Pb_{1-x}Ge_xTe, band edge struct. transform. due to ferroelectric transition 2-92456
- Pb_{1-x}Ge_xTe narrow band gap ferroelec. semicond., photostimulated phase transition shift 2-110789
- Pb_{1-x}Ge_xTe p-n junction diode, capacitance, press. induced phase transition 2-72055
- PbHAsO₄, ferroelectric, neutron diff. structural study 2-82798
- Pb(Hf_{1-x}Zr_x)_{1-x}Ti_xO₃, ferroelectric-antiferroelectric transition (*French*) 2-99068
- Pb(M_{1/3}Nb_{2/3})O₃-based ferroelects., M=Mg, Zn, dielec. const. crit. exponents, diffused phase transition 2-110781
- Pb(M_{1/3}Nb_{2/3})O₃-Pb(M_{1/3}W_{2/3})O₃(PbTiO₃) ceramics, electrostriction rel. to phase transition diffuseness 2-87694
- Pb_{0.78}Sn_{0.22}Te:In, photoferroelec. behaviour and Hall coeff., expt. study 2-87708
- Pb(Sn_{1-x}Zr_x)_{1-x}TiO₃, ferroelectric-antiferroelectric transition (*French*) 2-99068
- PbTiO₃, ferroelec., Raman scatt. from amorphous state, rel. to crystallisation process 2-57091
- PbTiO₃, ferroelec. thin films, prep. by RF sputtering and laser annealing 2-82792
- PbTiO₃-PbZrO₃, solid solutions, phase transitions 2-87704
- Pb(Zn_{1/3}Nb_{2/3})O₃-PbTiO₃, ferroelec. transitions, dielec., elastic and piezoelec. study 2-116124
- PbZrO₃ ceramic, dielec. props., X-ray irradi. effect 2-110745
- PbZrO₃, Urbach edge behaviour at ferroelec. phase transitions 2-104838
- PbZr_{1-x}Ti_xO₃, Ti distrib., ferroelectric transition 2-86654
- PbZr_{1-x}Ti_xO₃, solid soln., ferroelec.-paraelec. transition, tricritical point 2-93126
- RbHSO₄ cryst., near ferroelec. phase transition point, elastic and non-linear dielec. props. 2-57007
- RbHSeO₄, deuterated, ferroelec. transitions, isotope effects, DTA and dielec. study 2-87707
- RbHSeO₄, ferroelec. transitions, dielec. const., dielec. loss and DTA study 2-93121
- RbH₂(SeO₃)₂, ferroelec. and incommensurate transitions, US study 2-66137
- Rb_{1-x}(NH₄)_xH₂PO₄, mixed crystals, competing structural orderings and transitions to glass 2-56192
- Rb₂ZnCl₄, commensurate and incommensurate phases, ⁸⁷Rb NMR satellite transitions 2-77388
- Rb₂ZnCl₄, elastic behaviour, temp. depend., commensurate-incommensurate transition, Brillouin spectra study 2-61053
- Rb₂ZnCl₄, phase transitions, Raman scatt., dielec. const. and spontaneous polarisation study 2-72510
- SbSbBr_{1-x}, phase transitions, permittivity, polarisation (*Russian*) 2-77461
- SbSI, ferroelec., temp. depend. of Sb L₁ absorption edge near T_c 2-110975
- SbSI, ferroelec. phase transition, Raman scatt. in strong mag. field 2-57027
- SbSI, maximal equitranslational subgroups of the line groups 2-76356
- SbSI, phonon spectrum, soft modes and order parameter near ferroelec. transition 2-103936
- SbSI, soft mode ion paraelec. phase, temp. depend. 2-109943
- SbSI, thermomodulated spectroscopy of band gap region 2-110823
- SbSI-polymer composite, preparation and props. 2-88047
- SbSe_{1-x}I_x and SbSbBr_{1-x}, ferroelec., tricrit. points, dielec. meas. 2-93127
- SbSe_{1-x}I_x, phase transitions, permittivity, polarisation (*Russian*) 2-77461
- SbSi, ferroelec. semicond., optical transitions, temp. depend. meas. near phase transitions 2-57109
- Sn₂P₂(Se_{1-x}S_x)₄, ferroelec. solid soln., phase transition splitting 2-104823
- (Sr,Ba,Ca)Nb₂O₆, diffuse ferroelec. phase transition, optical and dielec. props. study 2-61844
- Sr₂TaO₇, ferroelec. transition temp., press. depend., dielec. const. study 2-87713
- SrTeO₃, ferroelec., elec. cond., freq. and temp. depend. meas. (*Russian*) 2-77066
- SrTeO₃, ferroelastic state 2-66109
- SrTiO₃, antiferrodistortive phase transition, impurity effect 2-82793
- SrTiO₃, dielec. nonlinearity, losses, and parametric interactions at UHF 2-99072
- SrTiO₃, phase transition study 2-87705
- SrTiO₃, transient photocurrents and DC photocond. study 2-110390
- Tb₂(MoO₄)₃, spontaneous shear strain meas. and free energy expression 2-72433

ferroelectricity

- see also *antiferroelectricity; ferroelectric devices; ferroelectric materials; ferroelectric switching; ferroelectric transitions*
- band structure and VUV optical props., Kramers-Kronig anal. 2-110883
- bibliography, July-December 1980 2-63770
- charged impurity centre ionisation by polarisation reversal, luminescence 2-76986
- computational methods for ferroelectric measurements (*Chinese*) 2-61836
- crystals, flexoelectric effect and cryst. struct. 2-87699
- dielectric props. meas. in microwave range 2-95405
- domain structure, origin and role 2-61732
- electrooptic activity of crystals with H bonds, macroscopic theory (*Russian*) 2-61876
- EPR line broadening, elec. dipole-dipole interaction, spin-spin relax. 2-77360
- ferroelectric conversion of heat to electricity 2-93934
- imperfect crystal, order parameter, and refractive index, photoinduced changes 2-110798
- paraelectric phase in homogeneous, intense VHF field 2-99067
- phonon physics, conference, Bloomington, IN, USA (Aug.-Sept. 1981) 2-53414
- photogalvanic effect, bulk, as phase transition into state with spontaneous current 2-110383
- photoinduced refractive index variations, theory (*Russian*) 2-61865
- photovoltaic bulk effect, two-dimens. LCAO calc. 2-110400
- pseudospin-phonon system, isolated and isothermal susceptibilities 2-93120
- random impurity electric dipole system, low temp. collective props., Ising model (*Russian*) 2-116136
- smectic B phases, inplane local order of dipoles 2-86549

ferroelectricity continued

- two-dimensional solid-state ferroelec. self-wave medium, nonlinear switching waves obs. 2-89546
- vibrations and microwaves in solids 2-99066
- vibron ferroelectrics, phase transition, Jahn-Teller effect, mag. field effects (*Russian*) 2-82801
- Ba₂NaNb₃O₁₅, tetragonal-incommensurate ferroelastic transition 2-76659
- H₂(Cl,Br)_{1-x}Se_x, phase transition temp., comp. depend. 2-86864
- K₂H(SeO₄)₂, ferroelastic transition and twin structs., X-ray and optical study 2-86854
- SrTiO₃, dielect. resonators nonlinear losses at 4.2K 2-72415
- ferrofluids** see *magnetic fluids*
- ferromagnetic-antiferromagnetic transitions**
- see also *metamagnetism; Morin temperature*
- metamagnetism, spontaneous, new spin Hamiltonian for microphysical two-sublattice model 2-56858
- mixed valence system with two mag. configurations; mag. props. 2-56810
- phase equilib. curve in case of strong cryst. field anisotropy (*Russian*) 2-82594
- Potts model, three-dimensional three-state, phase transition 2-72205
- Potts model, three-state, with two- and three-body interactions, Monte Carlo study 2-74345
- rare earth-cobalt intermetallic, R₂Co type, elec. resist. accompanying metamag. phase transitions (*Russian*) 2-66820
- spin fluctuation theory of coexistence of ferro- and antiferromagnetism 2-104569
- steel, stainless, yield point, temp. depend. at low temps. 2-67463
- Ce_{1-x}La_xMn₂Si₂, mag. props. and struct. 2-87499
- Co₂Ni_{1-x}MnGe, mag. phase diagram, antiferromag.-ferromagnetic transition, neutron diff. study 2-72206
- CrCl₃, mag. ordering at phase transition, Faraday rot. and susceptibility meas. 2-98882
- Dy, critical field anomalies and anisotropy 2-98878
- Dy-Sc, spin glass and antiferromag. transitions, bulk magnetisation study 2-72222
- Dy-Sm, mag. and elec. props. 2-72201
- Fe system, mag. props. near conc. ferromagnetic antiferromag. transition, neutron diff. study (*Russian*) 2-82599
- FeRh, electronic band struct., and mag. order, antiferromag.-ferromagnetic transition 2-82595
- Gd-Y, critical field anomalies and anisotropy 2-98878
- GdCu₂, mag. and crystallographic props., Mossbauer effect, H₂ absorption effects 2-82758
- Gd₅S₄Y₁₆, mag. phase transitions, elec. resist., elastic const. and US attenuation study 2-116006
- Hf_{0.8}Ta_{0.2}Fe₂, ferromagnetic-antiferromag. transition, magnetisation and Mossbauer study 2-87493
- Mn_{1-x}Cr_xSb, mag. phase diagram and struct. 2-104612
- Pd₂MnSn_{1-x}In_{1-x}, ferromag. to antiferromag. transition, NMR study 2-104613
- Pd₂Pt_{1-x}Fe, magnetic state, mixed exchange interaction, magnetisation and susceptibility 2-72208
- (Pd,Pt_{1-x})₂Fe, atomic-ordered, sp. ht. 3 to 20K (*Russian*) 2-56204
- Tb-Ho, critical field anomalies and anisotropy 2-98878
- UAs₂Se_{1-x}, electronic struct. and magnetism 2-66605
- USb₂Te_{1-x}, electronic struct. and magnetism 2-66605
- U_{1-x}Th_xSb, Kondo behaviour, ferromag. and antiferromag. behaviour, transport and mag. meas. 2-77032
- U_{1-x}Th_xSb(Y_{1-x}Sb), electronic struct. and magnetism 2-66605
- ferromagnetic Curie temperature** see *Curie temperature*
- ferromagnetic-paramagnetic transitions**
- see also *Curie temperature*
- alloys, binary, phase separation and mag. ordering in case of one mag. component 2-115421
- chiral Potts and asymmetric clock model, phase diagram, Monte Carlo study 2-92908
- electron ferromagnetism in narrow energy bands, extended Hubbard model (*Russian*) 2-61688
- Heisenberg magnet, anisotropic, cluster variational calc. 2-92954
- itinerant electron system, paramagnetic susceptibility study 2-82559
- magnetic susceptibility tensor, external mag. field depend. 2-98851
- molecular field theory for cryst. and amorphous materials 2-72225
- order-disorder first order transitions, high press. effects (*Russian*) 2-87492
- Potts model, three-state, with two- and three-body interactions, Monte Carlo study 2-74345
- transition metal clusters in activated intermetallic hydrogen sorbers, ferromag.-paramagnetic transition 2-66233
- transition metal cpds., intraatomic Coulomb repulsion in Hubbard model 2-115966
- Ag-Fe (16.8 wt.%), mag. double transition, Mossbauer study 2-87503
- (Cn_{1-x}Co_x)₂MnSn Heusler alloy, mag. transition 2-72203
- DyAl₂, paramagnetic, hyperfine interactions 2-98974
- Fe, ferromagnetic transition, character 2-56872
- Fe-Ni, Invar, magnetic phase transition, electron s-d orbital redistribution, sound vel. change 2-104620
- (Fe_{1-x}Mn_x)₂P, mag. props. 2-61697
- (Fe_{0.65}Mn_{0.35})₂P₂B₂Al₃, amorphous, ferromagnetism collapse 2-104618
- (Fe_{1-x}Mn_x)₂P₂B₂Al₃, amorphous, spin corrls. near ferromag.-spin glass crossover point 2-77268
- Fe₁₀Ni₇₀B₁₀P₁₀, amorphous, mag. phase transition, magnetisation and DC susceptibility meas. 2-56857
- Fe₆₅Ni₃₅Cr₁₀, spin glass, magnetic viscosity obs. (*Russian*) 2-72230
- Fe₁₁Ni₆₉P₁₄B₆, amorphous, elec. resist. near ferromag. transition 2-87218
- Fe₄₀Ni₄₀P₁₄B₆, amorphous, ferromag. phase transition, mol. field theory 2-72225
- Fe₁₅Ni₆₀P₁₄B₆Al₃, amorphous, elec. resist. near ferromag. transition 2-87218
- Fe₂P, orientational phase transition near Curie temp., press. study 2-116008
- Fe₂P, pressure-induced metamag. states, magnetisation study 2-110583
- FeTiH_{1.9}, Pauli paramagnet, mag. susceptibility, magnetisation, hysteresis 2-66765
- Gd, sputtering coeff., temp. depend. 2-87938
- GdAl₃, paramagnetic, hyperfine interactions 2-98974
- GdAl₃, transport and thermal props., critical behaviour near Curie point 2-116005
- K₂CuF₄, two-dimens. ferromag., mag. susceptibility, X-Y anisotropy in Heisenberg system 2-116011
- K₂SeO₄, phase transform. Raman study 2-72481

ferromagnetic-paramagnetic transitions continued

- K₂ZnCl₄, phase transform. Raman study 2-72481
 LaMnO₃, conductivity, magnetisation and neutron diff. in mag. transitions range 2-56850
 LiTb_{1-x}Y_xF₄, random dipolar-coupled ferromag., mag. eqn. of state 2-104617
 MnAs, mag. phase transition, magnetisation, elec. resistivity, mag. field effects 2-72207
 MnP, mag. phase diagram, field parallel to hard direction 2-77297
 Ni, ferromagnetic transition, character 2-56872
 Ni, photon emission from sputtered atoms as function of phase transition 2-77596
 Ni, surface anisotropy irrelevance for mag. crit. behaviour near free surface 2-92923
 NiSiF₆·6H₂O, mag. prop. anomalies (*Russian*) 2-82597
 Pd-Mn, intermediate conc., mag. phase diagram, AC susceptibility study 2-72199
 Rb₂ZnBr₄(Cl₄), phase transform. Raman study 2-72481
 Sm_{0.45}Y_{2.55}Fe_{3.85}Ga_{1.15}O₁₂, thin films, domain struct. near phase transition from homogeneous to domain state 2-61745
 Sn_{1-x}Cr_xTe degenerate mag. semiconductor, struct. transform.-induced mag. ordering 2-56852
 Tb₄Co₃, amorphous alloy, transition to spin glass state, magnetisation, mag. susceptibility meas. 2-61720
 Tb₂Si₄, magnetic, thermal, and elec. props. 2-72177
 TmZn, polarised neutron study, mag. prop. 2-72157
 Y₂Bi_{0.9}Fe_{0.9}Ga_{1.1}O₁₂, thin films, domain struct. near phase transition from homogeneous to domain state 2-61745
 YCo₂ powders, ferromagnet and Mossbauer props., grinding effects (*Russian*) 2-87546
 Y(Fe_{1-x}Al_x)₂, Fe moment localisation, mag. props. 2-82572
 Zr(Fe_{1-x}Al_x)₂, Fe moment localisation, mag. props. 2-82572

ferromagnetic properties of substances

- see also *ferromagnetic relaxation; ferromagnetic resonance; ferromagnetism; magnetic semiconductors*
 alloy, cold rolling induced mag. anisotropy use for cryst. defect analysis (*Russian*) 2-67574
 ALNICO steel, mag. props. (*Chinese*) 2-72262
 amorphous alloys, industrial appl. (*Japanese*) 2-77325
 amorphous alloys, kinetics of induced uniaxial mag. anisotropy rotation 2-87489
 amorphous alloys, magnetoelastic props., review 2-56905
 amorphous alloys, study of struct. relax. by ferromag. reson. with spin exchange 2-87598
 amorphous ferromagnet, tunnel states (*Russian*) 2-104604
 bis(benzylammonium)tetrachlorochromate(II), 2D ionic ferromagnet, cryst. growth 2-111049
 bis(methylammonium)copper tetrachloride, quasi-two-dimensional ferromag., proton spin-lattice relax. 2-61780
 bis-methylammonium copper bromochloride, moment direction, NMR study 2-115974
 bis-methylammonium copper tetrachloride, spin wave instability, subthreshold parallel pumping 2-110574
 cyclohexanemmonium copper trichloride and tribromide, mag. behaviour 2-82614
 dysprosium ethylsulphate, crossover to mean-field behavior at marginal dimensionality 2-77316
 dysprosium ethylsulphate, Landau eqn. of state near T_c 2-66839
 ferroelectrics, NMR line shape and width (*Russian*) 2-98972
 ferromagnetic semiconductors, mag. polarons, review 2-87160
 film, elastic strains in crystallite boundaries, segregated pt. defects effect on induced anisotropy (*Russian*) 2-66877
 film on Ni (100), electronic and mag. struct., interface magnetisation 2-82695
 Heisenberg-Ising ferromagnet, with uniaxial anisotropy, Curie temp. calcs. 2-66806
 Heusler alloys, X₂MnY (X=Ni, Cu, Pd; Y=Al, Sn), Stoner and spin wave excitation spectra, OPW calcs. 2-115990
 Invar, ferromagnetic, thermomag. anal. using electron diff. 2-110584
 Invar 2-66886
 itinerant ferromagnetism study 2-66750
 large ferromagnetic body, heat source recognition rel. to defect detection 2-111439
 magnetic interference meas. and study of methodological problems 2-79628
 magnetic phase transform. control using Barkhausen effect and hysteresis loop 2-116677
 metal, ferromag., magnetic props. of the generalised model 2-77326
 3-d metal ferromagnets, theory of H chemisorption 2-78136
 metallic glass ribbon, plate wave velocity and attenuation, mag. field depend. 2-77350
 metallic glass tape, ferromag., localized struct. variation detection by acoustic emission 2-71361
 metallic glasses, (A_{1-x}B_x)₂P₁₀B₄Al₃, A and B=Fe, Co, Ni, Mn or Cr, mag. phase diagrams 2-92931
 metallic glasses, ferromagnetic, anomalous eddy currents, magnetoelastic effects 2-116047
 metals, amorphous ferromagnets, thermopower 2-82325
 metals, ferromag., spin fluctuations, temp. variation of local moment and short range order 2-61717
 metals, ferromagnetic, exchange cond. shift, ferromagnetic antiresonance study 2-98683
 bis-methylammonium copper bromochloride, ³⁵Cl NMR (*Japanese*) 2-93028
 Mumetal film, RF sputtered, mag. props. and effect of deposition conditions 2-56899
 Permalloy film, Brillouin scatt. from magnons, Stokes-anti-Stokes asymm. 2-116202
 permalloy film, domain mapping off-axis Fresnel holographic method in TEM 2-113070
 Permalloy film, domain struct. and magnetisation switching (*Russian*) 2-104668
 Permalloy film, RF sputtered, mag. props. and effect of deposition conditions 2-56899
 Permalloy film, uniaxial, relax. time under nonlinear ferromag. reson. conditions (*Russian*) 2-61771
 Permalloy film, wall clusters and domain structure conversions 2-82628
 Permalloy laminated films, magnetoresistance, mag. field detection method 2-71949
 Permalloy-FeMn system, uniaxial anisotropy temp. depend. 2-72192

ferromagnetic properties of substances continued

- Permalloy-type materials, soft mag. props., appls. in electronic ultravacuum equipment 2-69299
 poly(cobalt n-butylphosphinate), weak ferromagnetism and domain wall motion, susceptibility study 2-82570
 rare earth alloys, amorphous, induced mag., singlet-singlet model 2-104560
 rare earth alloys, amorphous, mag. props., nonaxial crystal field model 2-77301
 rare earth alloys, RCo₂, C15 type, ⁵⁹Co NMR study, hyperfine field anisotropy 2-66934
 rare earth compounds, RM₂Si₂(Ge₂), NMR studies in ferromag. state 2-82730
 rare earth metals, spin wave spectrum, effects of ribbon bridge on fermi surface (*Russian*) 2-82584
 rare earth small particles, cryst. struct. and mag. props. 2-77330
 rare earth ternary cpds., mag. and supercond. props. 2-115937
 rare earth-Co magnets, demagnetization curves, 300 to 1000K 2-72293
 rare earth-Co matrix magnets heated in dry air, thermal stability and temp. coeffs. 2-72292
 rare earth-transition metal alloys, domain walls, role of the long-range exchange (*Russian*) 2-98905
 rare earth-transition metal intermetallics, RM₆Al₆, (M=Cu, Mn, Fe), mag. props. 2-61734
 semiconductor, homogeneous state instability 2-92932
 semiconductors, electron-magnon impurity states in energetic spectrum 2-98578
 semiconductors, magnetic interaction between local mag. moments 2-115996
 Sm₆(Mn_{1-x}Fe_x)₁₃, mag. props. study 2-87542
 soft magnetic materials, compact, mag. props. and appls. in instruments and devices 2-82653
 standard specimens for magnetic permeability meas. at high and superhigh freq. 2-79626
 steel, C, particles in Sn, effect on superconducting critical current, directional asymmetry 2-92841
 steel, C, type St3, stress meas., combined use of longitudinal and transverse effects of magnetostriction 2-62350
 steel, electric, grain oriented, core loss, effect of degree of grain orientation alignment (*Japanese*) 2-104652
 steel, electric grade, isotropic with planar cubic texture, prod. by two-stage treatment, mag. charact. 2-67379
 steel, electrical, nondestructive testing of mag. props., tensile stresses influence on accuracy 2-58858
 steel, ferromagnetic components FITAN-2M instrument for hardness testing 2-57575
 steel, high Si, ribbons, roller quenched, mag. props., pot. core material of elec. machines and power transformers 2-87522
 steel, high speed R6M3 and R6M5, mag. and elec. props. after heat treatment, NDT appl. 2-67404
 steel, low Si, electrical, mag. ageing characts., coercive force enhancement 2-116034
 steel, polycrystalline A-36, magnetically induced US shear wave vel. change, tensile stress effects 2-98924
 steel, rolled sheet, mag. inspection method for mech. props. 2-62310
 steel, Si, grain orientated, magnetomech. damping and mag. domain struct. 2-56907
 steel, Si, grain oriented, laser processing for reducing core loss 2-72255
 steel, Si (3 wt.%), grain oriented, for transformers, mag. losses 2-72272
 steel, Si-Al bearing electrical, internal oxidation and mag. props., annealing conditions influence 2-72724
 steel, transformer, method for determ. energy of mag. anisotropy induced by coatings 2-72188
 steel plate, Fe losses under nonsinusoidal excitation waves 2-82674
 steel wire, austenite-martensite transform. induced by torsional strain, mag. obs. 2-72696
 superconductor, thin film, thermal oscillations 2-66710
 surface magnetic order investig. by electron capture spectroscopy 2-110616
 thin films, magneto-optical const. meas. using automated system 2-64099
 TMMC, mag. props. study 2-66786
 transition metal alloys, ferromagnetism and spin glass ordering 2-72197
 transition metal cpds., intraatomic Coulomb repulsion in Hubbard model, ferromag.-paramag. transitions 2-115966
 transition metals, BCC and FCC, mag. phase diagram at zero temp. 2-66817
 transition metals, chemisorption of H, self-consistent model 2-115554
 transition metals, ferromagnetic, mag. props. above T_c 2-66788
 transition metals, strong short range mag. order above Curie temp. 2-110594
 transition metals, surface mag. moments and electronic struct., Hubbard model 2-115980
 Al₂O₃-SiO₂-Fe₂O₃, heat treated, Fe valence-coordination state, Mossbauer study 2-103662
 alloy, liq. and solid., conc. and dil., temp.-conc. relationships of susceptibility 2-66766
 Au-Fe-Co system, permanent magnet material for ornamental applic. 2-56890
 Au,Mn disordered alloy, short-range order and ferromag. props., X-ray diff. study 2-97990
 CO, magnetisation direction, temp. depend., 1 MV Lorentz electron microscopy study 2-77286
 CaF₂, nuclear spin diffusion of rare ⁴³Ca spin species 2-92915
 Ca(OH)₂, ferromag. ordering of proton spins 2-110585
 Cd_{1-x}Ag_xCr₂Se₄, photomagnetisation obs. (*Russian*) 2-56912
 CdCr₂Si₂S₈, dil. insulating system, mag. phase diagram 2-110591
 CdCr₂Si₂ crystal, ferromag. resonance, nonstoichiometry effect 2-104709
 CdCr₂Se₄, effect of light on mag. after effects 2-87553
 CdCr₂Se₄, ferromag. semicond., cathodoluminesc. study 2-87876
 CdCr₂Se₄, s-conduction band splitting, photoluminesc. study 2-87849
 Ce-Fe, nuclear orientation and NMR in oriented nuclei 2-61776
 Ce-Si, ferromagnetic dense Kondo behaviour 2-104662
 CeAl₃, electronic struct. and mag. props. 2-66752
 CeBi mag. phase transitions, anisotropic Ising model 2-116021
 Ce₂Co₁₇-Zr, struct. and mag. props. 2-61741
 Ce_{1-x}La_xMn₂Si₂, mag. props. and struct. 2-87499
 CeS₂, heat capacity and mag. ordering 2-104017
 Co alloy, FCC, diffusion of H,D, and T, mag. aftereffect meas. 2-82027
 Co amorphous alloys, Curie temp. and mag. thermal expansion, press.-depend. meas. 2-72323
 Co, jellium model, surface characteristics, var. technique 2-72134

ferromagnetic properties of substances continued

- Co, minority spin bands, inverse photoemission study 2-116293
 Co, polycrystalline film, saturation magnetostriction meas. 2-77337
 Co textured films, NMR and mag. meas. (Russian) 2-98994
 Co:¹⁹F, temp. depend. of local mag. fields 2-82760
 Co:⁵⁵Mn, NMR ON study 2-98971
 Co:⁹⁰Nb, NMR ON study 2-98971
 Co-based amorphous alloys and intermetallic compounds, mag. props., prep. method effects 2-115982
 Co-Cr, mag. behaviour above crit. conc. for ferromag. 2-72204
 Co-Cr film, RF sputtered, HCP phase and perpendicular mag. anisotropy, N₂ induced 2-56394
 Co-Cr film, RF sputtered, perpendicular mag. anisotropy, magneto-optical Kerr effect and reflectivity meas. 2-61878
 Co-Fe, induced mag. anisotropy, role of stacking faults, expt. study (Russian) 2-92897
 Co-Fe, mag. props., review 2-82652
 Co-Fe, magnetostriction meas. at high stress levels 2-82692
 Co-Fe-Nb semihard mag. alloy, cold working effects on precipitate morphologies rel. to mag. hysteresis 2-92962
 Co-Fe-Si-B amorphous ribbons, with induced mag. anisotropy, influence of applied tensile stress on power loss 2-82686
 Co-Ga, mag. and struct. props., Mossbauer study 2-116097
 Co-P, amorphous ferromagnet, ferromagnetic saturation (Russian) 2-87491
 Co-Pt (50 at.%), shear modulus, magnetomech. effects 2-56908
 Co-V FCC alloy, quenched from 1200°C, elec. resist. 2-104345
 Co-Zr amorphous film, coevaporated, magnetisation and ferromag. reson. studies 2-72264
 Co-Zr(Hf) sputtered amorphous film, struct., soft mag. props. and magnetostriction meas. 2-87534
 Co₂Ni₁₀Fe₂Si₁₁B₁₆, amorphous, annealing effects and short range ordering 2-82588
 Co₂Ni₁₀Fe₂Si₁₁B₁₆, amorphous ferromag. alloys, anal. of coercivity 2-87538
 Co, Ni_{1-x}MnGe, cryst. and mag. struct. 2-104581
 Co, Ni_{1-x}MnGe, hexagonal, mag. props. 2-56835
 Co, Ni_{1-x}MnGe, mag. phase diagram, antiferromag.-ferromagnetic transition, neutron diff. study 2-72206
 CoPt ferromagnetic alloy, atomic ordering in mag. field, magnetoelastic energy role (Russian) 2-92983
 CoS₂, pyrite-type ferromag., obs. of strong IR magneto-optical effect 2-116157
 CoS₂, single cryst., ferromagnetic and paramagnetic resonance 2-116066
 CoSi_{1-x}, amorphous sputtered films, anomalous Hall effect 2-71950
 CoUS₂, mag. props. and struct. (French) 2-72143
 Co₉₀Zr₁₀ and Co₉₀Zr₁₀, amorphous, sp. ht., susceptibility, resist. 2-72224
 CrBr₃, domain wall magnetisation temp. depend. (Russian) 2-87545
 CrCl₃, mag. ordering at phase transition, Faraday rot. and susceptibility meas. 2-98882
 CrCoFe permanent magnet, powder metallurgy processing 2-72652
 Cr_{1/3}NbS₂, helical spin struct. due to antisymmetric exchange interaction 2-72162
 CrO₂:Fe particles, noncollinear mag. struct., Mossbauer study 2-77329
 (Cr₂O₇)₄⁴⁻ dimeric units, correl. struct., antiferromag. and ferromag. props. 2-109752
 CsNiF₃, ferromag., transverse spin fluctuations, neutron inelastic scatt. study 2-56836
 Cu complex, bis(anilinium) copper tetrachloride, two-dimens. spin diffusion, EPR and ferromag. reson. study 2-77364
 Cu complex, CuCl₂DMSO, one-dimens. Heisenberg ferromag., spin waves, neutron scatt. study 2-92892
 Cu/Ni compositionally modulated films, magnetisation and Curie temp. meas. 2-87533
 Cu-Co dilute alloy powders, mag. characts. scatter 2-72289
 Cu-Mn-Al, exchange anisotropy, hysteresis loops and coercive force study 2-66866
 Cu-Ni alloy particles, Ni impurity distrib., mag. props. study 2-76485
 Cu-Ni thin film, static and dynamic mag. studies 2-72303
 Cu-Ni-Fe disperse ferromag. particles, mag. state transition with charge in interparticle distance (Russian) 2-104665
 Cu₂AlMn_{0.3}, solid soln. containing disperse ferromag. Cu₂MnAl inclusions, martensitic transition obs. (Russian) 2-98915
 CuAu type ferromagnetic alloy, atomic ordering in mag. field, magnetoelastic energy role (Russian) 2-92983
 Cu₂MnIn(Al)(Sn) films, struct., mag. and transport props. 2-60889
 Dy_{0.5}Cu_{0.5}S_{0.48}, amorphous, random anisotropy props., magnetisation meas. 2-72271
 Er_{1-x}Ho_xRh₂B₄, direct evidence for first order phase transition at lower crit. temp. 2-61639
 ErMn₂, mag. dipole, elec. quadrupole hyperfine parameters determ., NMR spectra 2-116087
 ErRh₂B₄, coexistence of ferromagnetism and superconductivity 2-72105
 ErRh₂B₄, coexistence of ferromagnetism and superconductivity 2-115936
 ErRh₂B₄, percolation magnetoresistance in ferromagnetic superconductors 2-56774
 ErRh₂B₄, single cryst., ferromag. and supercond., coexistence 2-56834
 Eu chalcogenides, undoped ferromag., real spin 7/2, density of states and band edge shift 2-76885
 Eu₂₀Au₈₀ and Eu₆₀Yb₄₀Au₆₀, amorphous, Mossbauer study 2-82757
 EuFe₂Al₈ mixed valence cpd., magnetically ordered, XPS study 2-56513
 Eu(Gd)Mo₂S₈(Se₂), supercond. crit. field, electronic struct. 2-92843
 EuO (Eu_{1-x}Gd_x) (Eu_{1-x}), mag. semicond., s-d exchange interaction, current carriers effect, expt. study 2-92895
 EuO(S), conduction band states, effect of electron-magnon interaction 2-66439
 Eu_{0.99}Rn_{0.01}Se (R=Sr, Sm), hyperfine fields at ¹⁵³Eu, NMR study 2-66924
 EuS, EPR linewidth, reson. field, and spin-spin relax. near Curie temp., shape depend. 2-66910
 EuS film, magnetisation curves in critical temp. range examined by magneto-optic and photomodulation methods 2-66869
 EuSe, magnetic transition, press. induced 2-87504
 Eu_{1-x}Si_xS₂, ferromag. and spin glass states, magneto-optical rot. and microscopy study 2-72458
 Eu₂Sr_{1-x}S_{1+x} alloys, ferromag., magnetisation meas., mag. eqn. of state 2-116001
 Eu₂Sr_{1-x}S_{1+x}, dil. Heisenberg system, with competing interactions, mag. ordering 2-72212
 EuTe, transferred hyperfine fields, effect of high press. and high mag. fields, Mossbauer study 2-104779

ferromagnetic properties of substances continued

- Fe (001) film, surface states, surface magnetisation, electron spin polarisation 2-61540
 Fe acicular particles, mag. props. and morphology, heat treatment effects 2-77328
 Fe alloys, dilute, muon spin rot. studies of local mag. fields 2-72394
 Fe, anisotropic magnetoelastic coupling consts. 2-82689
 Fe carbonyl based high-frequency magnetic powder materials 2-77331
 Fe carbonyl powder based sintered magnetic material, polyorganosilazane resin bonded 2-67261
 Fe complex, bis(N,N-diethyldithiocarbamate)-iron chloride, crit. behaviour, theoretical anal. 2-72240
 Fe complex, bromobis(diethyldithiocarbamate)iron(III), mag. susceptibility, Mossbauer study 2-87632
 Fe, ferromag., expt. search for 1st order phase transition, magnetisation meas. 2-66867
 Fe, ferromag. metals, mag. transition on cooling course 2-116002
 Fe, ferromagnetic transition, character 2-56872
 Fe film, Brillouin scatt. from magnons, Stokes-anti-Stokes asymm. 2-116202
 Fe film, equatorially magnetized, transmitted light intensity odd-parity effect 2-116160
 Fe film, ferromag., Brillouin light scatt. by spin waves 2-66872
 Fe film, magneto-optical Kerr effect, mag. props. 2-77492
 Fe film, single cryst., first order transitions in magnetisation 2-66813
 Fe, high purity mag. and magnetomechanical props., influence of grain size 2-87565
 Fe jellium model, surface characteristics, var. technique 2-72134
 Fe MBE film, [110] orientation, on GaAs, mag. props. 2-66874
 Fe, magnetic aftereffects in specimens containing interstitial solutes and precipitates 2-87551
 Fe, magnetic domain wall motion, wall-defect interactions, mag. meas. 2-116028
 Fe, magnetic domain walls, dislocation struct. effects, magnetomech. damping study 2-56885
 Fe, magnetism, fluctuating local band theory 2-82558
 Fe, muon spin rot. studies of local mag. fields 2-72394
 Fe overlayer on Pd(111), mag. behaviour, photoemission, LEED and Auger study 2-110611
 Fe particles in Hg, aggregate size, mag. prop., US vel. study 2-82668
 Fe, polycrystalline film, saturation magnetostriction meas. 2-77337
 Fe powder, carbonyl, manufacturing conditions and influence on mag. permeability temp. coeff. 2-67242
 Fe powders, textured single-domain, mag. props. meas. (Russian) 2-116038
 Fe, thin film, cross tie walls, mag. field effects, electrostatic TEM study 2-82682
 Fe, thin film, twisted domains, magnetisation, electrostatic TEM study 2-82683
 Fe whiskers, Barkhausen jump field distrib. 2-87540
 Fe¹⁹⁹Au, elec. quadrupole interaction, NMR-ON meas. 2-116075
 Fe⁵⁷O, vel. depend. of transient mag. field of O 2-56534
 Fe:⁵⁵Mn, NMR ON study 2-98971
 Fe-Al (12 wt.%), high permeability mechanism, soft mag. props. 2-82654
 Fe-Al(V)(Si), dilute alloy, electron irradi., impurity-interstitial trapping sites, mag. aftereffect spectra study 2-56895
 Fe-As(Ga)(Ir)(Mn)(Nb)(Ru)(V), dil., impurity hyperfine fields, press. and temp. depend. 2-104610
 Fe-B metallic glasses, rare earth additives, mag. props. study 2-87498
 Fe-B metallic glasses, transition metal substituted, mag. props. and thermal stability 2-87497
 Fe-B-Si amorphous ribbon, crystn., domain struct. and magnetisation study 2-71363
 Fe-B-Si metallic glass, crystn. kinetics, DSC study 2-71364
 Fe-B-Si-C amorphous ribbon, mag. props., deleterious effect of Al 2-87525
 Fe-B-Si-C(Co), Metglas 2605, magnetostriction and mag. anisotropy, meas. using magnetisation loops under stress 2-77352
 Fe-B-Si-C(Co), Metglas 2605, Mossbauer and magnetoelastic coupling 2-77432
 Fe-based amorphous alloys and intermetallic compounds, mag. props., prep. method effects 2-115982
 Fe-based metallic glasses, mag. excitations, neutron diff. study 2-115992
 Fe-Bi-Si metallic glass, form. and mag. props. 2-103648
 Fe-Co, BCC, mag. moments and lattice consts., band theory 2-72133
 Fe-Co powder, form., struct., and mag. props., electrolysis conditions effect 2-83063
 Fe-Co-Bi, amorphous film, magnetisation, Mossbauer study 2-72263
 Fe-Co-Ni system, mag. moment, CPA calc. (Russian) 2-115981
 Fe-Co-W semihard mag. alloys for remanent read switch appl. 2-82626
 Fe-Cr based alloys, damping capacity, mag. field, heat treatment and cold working effects 2-57393
 Fe-Cr system, lattice dynamical parameters, X-ray diff. study (Russian) 2-61101
 Fe-Cr-B amorphous Invar alloy, Curie temp. and high field susceptibility, press. effects 2-72322
 Fe-Cr-Co permanent magnets, mag. props. and Mossbauer effect 2-72282
 Fe-Cr-Co permanent magnet alloys, coercivity mechanism obs. 2-92971
 Fe-Cr-Co-Mo-Ti (24, 15, 2, 0.5 wt.%), magneto alloy, machinable, microstruct. and props. (Chinese) 2-72261
 Fe-Cr-Co-Nb-Al alloy, high-coercivity, microstruct. rel. to mag. props. 2-111333
 Fe-Cr-Co-W, mag. props. and cryst. struct. (Russian) 2-92970
 Fe-Mn, amorphous, ferromagnet-spin glass transition, ESR linewidth meas. 2-77305
 Fe-Mn, dil., ferromagnetic antiferromagnetic interactions (Russian) 2-77282
 Fe-Mn, electron struct. and mag. state, CPA calc. (Russian) 2-87135
 Fe-Mn, shape memory and plasticity transform., superelasticity (Russian) 2-67332
 Fe-Ni, Invar, magnetic phase transition, electron s-d orbital redistribution, sound vel. change 2-104620
 Fe-Ni alloys, critical, mag. struct., Arrott plots and Mossbauer spectra 2-104615
 Fe-Ni film, struct. ordering and mag. anisotropy, Mossbauer study (Russian) 2-93074
 Fe-Ni films, periodic domain walls interactions, electron microscopy study (Russian) 2-87560
 Fe-Ni Invar alloys, magnetocrystalline anisotropy, torque meas. 2-110576

ferromagnetic properties of substances continued

- Fe-Ni-Al-Co-Cu-Ti, thermomag. treatment, struct. form. and mag. props. 2-62152
- Fe-Ni-B based amorphous ferromags., aging effects on mag. props. 2-98909
- Fe-Ni-Co-B-Si-Al, amorphous, initial permeability and long-time stability, freq. depend. 2-72258
- Fe-Ni-Cr alloy, sp. ht. and magnetiz., near Curie pt., anomalous behaviour (*Russian*) 2-66836
- Fe-Ni-Mo-B amorphous alloys, struct. relax., permeability aftereffect and elec. resist. meas. 2-87550
- Fe-Ni-Mo-B ferromag. metallic glasses, mag. and neutron diff. meas. 2-116027
- Fe-Ni-NbC, phase equilib., struct., mag. props. and hardness (*Russian*) 2-67291
- Fe-Ni-P-B based metallic glasses, Mossbauer study under press. 2-72385
- Fe-Ni-Ti, phys. props., reverse martensitic transform. effect (*Russian*) 2-67334
- Fe-Pd, dil. alloys., model of mag. behaviour 2-72198
- Fe-Pt Invar alloys, disordered, mag. props. suggesting premartensitic transform. 2-87490
- Fe-Rh, mag. transitions press. depend. and bulk modulus, s-d exchange model (*Russian*) 2-92902
- Fe-Si, elec. steel grain-oriented sheets, commercial production, review 2-83243
- Fe-Si, elec. steel sheets, nonoriented, mag. core losses reduction, review 2-82649
- Fe-Si, electric steel sheets, fully processed mag. anisotropy, cutting strains effect 2-82590
- Fe-Si, electric steel sheets, semi-processed, mag. anisotropy, cutting strains effect 2-82591
- Fe-Si, electric steel sheets, mag. losses with large biasing DC flux density 2-82650
- Fe-Si, electrical steel, mag. induction meas. in weak mag. fields 2-89753
- Fe-Si, electrotechnical steel type 2011, mag. induction anisotropy determ. 2-92898
- Fe-Si, grain orientated, mag. loss meas. using Epstein square, error anal. 2-79620
- Fe-Si, grain orientated elec. steel, decarburization rate related to surface oxidation, math. model 2-83284
- Fe-Si, grain orientated laminations, coercivity meas. 2-82647
- Fe-Si, grain orientated, domain struct. obs. using high voltage SEM 2-87527
- Fe-Si, grain-oriented and amorphous ribbon, power loss, mag. flux harmonics and domain motion meas. 2-82648
- Fe-Si, high permeability elec. steel, Goss texture, surface energy and primary texture effects 2-83135
- Fe-Si, oxide layer composition, influence on mag. props. 2-56893
- Fe-Si, single cryst., domain struct. depend. on freq. of demagnetising fields 2-87526
- Fe-Si (3 wt.%), domain struct. dynamics and EM losses, relationship to cryst. lattice (*Russian*) 2-87524
- Fe-Si (3 wt.%), grain orientated sheets, effect of spike closure domains on remanence and magnetisation curve 2-82630
- Fe-Si (3 wt.%), grain orientated, magnetostriction meas. at high stress levels 2-82692
- Fe-Si (3 wt.%), grain orientation and core loss relationships in high permeability materials 2-83245
- Fe-Si (3 wt.%), grain orientated, Barkhausen noise meas. 2-87537
- Fe-Si (3 wt.%), mag. loss model 2-82655
- Fe-Si (3 wt.%), magnetisation reversal propag., Barkhausen expts. 2-82656
- Fe-Si (3 wt.%), magnetoelastic hysteresis loop rel. to phase depend. mech. energy of vibrs. (*Russian*) 2-98927
- Fe-Si (3 wt.%), rotational power loss meas., 30 to 100 Hz, using torque magnetometer 2-82651
- Fe-Si (3 wt.%), ruckling process, surface domain wall obs. 2-82632
- Fe-Si (3 wt.%), total power loss meas. 2-79621
- Fe-Si (3 wt.%) alloy, cold rolling induced mag. anisotropy use for cryst. defect analysis (*Russian*) 2-67574
- Fe-Si (3 wt.%) sheets, grain-oriented, magnetisation mechanisms 2-82657
- Fe-Si (3 1/4 wt.%), grain orientated, magnetostriction effects at angles to the rolling direction 2-82691
- Fe-Si (3 1/4 wt.%) grain-oriented elec. steel strip, magnetostriction, stress and temp. effects meas. 2-82690
- Fe-Si (33 at.%) amorphous films, domain struct. characs. 2-82685
- Fe-Si (3wt.%) sheets, grain-oriented, core loss heterogeneity 2-72260
- Fe-Si (3wt.%) single crystal, saw tooth domain struct. and charged wall observed in gradient field (*Japanese*) 2-77321
- Fe-Si alloy, single cryst., mag. domain walls, X-ray diffraction contrast obs. 2-87521
- Fe-Si bicrystalline sample, magnetisation reversal dynamics 2-72259
- Fe-Si ribbon-form alloys, rapid quenching preparation techniques, soft mag. props. (*Japanese*) 2-67240
- Fe-Si sheets, mag. domain struct. and stray field behaviour, grain orientation effects 2-82631
- Fe-Si-Al, dil. alloy, mech. props., elec. cond. and mag. losses meas. 2-83217
- Fe-Si-Al, electric steel sheets, mag. aftereffects meas. 2-82670
- Fe-Si-Al, secondary recrystn. kinetics, Al influence (*Russian*) 2-93417
- Fe-Si-Al, Sendust polycrystals, plastic deform. (*Japanese*) 2-57416
- Fe-Si-Al, Sendust polycrystals, deformability (*Japanese*) 2-57417
- Fe-Si-Al, Sendust single cryst., plastic deform. (*Japanese*) 2-57415
- Fe-Si-Al Sendust ribbon, rapidly quenched, annealing effect on coercive force 2-72273
- Fe-Si-B, mag. induction, effect of Sb and Sn during secondary recrystn. 2-83244
- Fe-Si-B metallic glasses, substituted, saturation magnetisation 2-87481
- Fe-Si; mobility transfer loci owing to orientation aftereffect for steadily moving 180° Bloch wall 2-87528
- Fe-Si(5 at.%), high temp. phonons, neutron inelastic scatt. meas. 2-56121
- Fe-Si(6.5 wt.%), ribbon formed by melt spinning technique, mag. props. 2-110603
- Fe-Ti, magnetic aftereffects in specimens containing interstitial solutes and precipitates 2-87551
- Fe-V, mag. moment distrib., diffuse neutron scatt. study 2-72151
- Fe-Zr amorphous alloy, ferromag-spin glass transition, magnetisation study 2-72220
- Fe-Zr amorphous sputtered films, elec. and mag. props. 2-71948
- Fe₂Zr₂₀, amorphous, mag., Mossbauer, and resist. study 2-72384

ferromagnetic properties of substances continued

- Fe₃Al, hyperfine field and mag. moment, Mossbauer study 2-72380
- Fe₄₀Al₆₀, amorphous films, mag. and transport props. 2-72296
- Fe_{1-x}B_x, amorphous, spin waves, inelastic neutron scatt. study 2-72179
- Fe₈₀B₂₀, amorphous, aging effects on mag. props. 2-98909
- Fe₈₀B₂₀, Metglasses, thermomagnetic treatments 2-88110
- Fe_{1-x}Al_x, amorphous, magnetization and magnetoresist. in high mag. fields 2-61740
- Fe_{1-x} amorphous films, spin glass behaviour and non-ergodicity, FMR study 2-98897
- Fe_{1.00-0.91} amorphous, mag. hyperfine interactions, Mossbauer study 2-82764
- Fe_{1.00-0.9} amorphous film, sputtered ferromag., Mossbauer investig. 2-66957
- Fe₈₁B_{18-x}Bo, ferromagnets, Auger CVV spectra as probe of electronic struct. 2-76906
- Fe₈₅B₁₅(Fe₇₇B₂₃)(Fe₆₀Ni₂₅B₁₅), metallic glasses, AC magnetisation props. meas. cryst. precipitates effect 2-72851
- (Fe_{0.82}B_{0.18})₉₀R₁₀L_{1-x} (R=Pr, Nd, Sm, Gd, Tb, Dy, Ho, Er), amorphous, exchange interactions 2-72185
- Fe_{81.5}B_{14.5}Si₄ glass, spin and energy analysed secondary electron emission 2-87921
- Fe₈₁B_{13.5}Si_{3.5}C₂, amorphous, Mossbauer study 2-99013
- Fe₈₀B₁₅Si_{5-x}Ge_x, amorphous, Curie temp. and crystn. behaviour 2-87496
- Fe₈₀B₁₂Si₈, Metglas, ferromag. reson. absorpt. and ferromag. antireson. transmission meas. 2-72353
- Fe_{1-x} amorphous films, Brillouin scattering from spin waves (*German*) 2-104903
- FeCo and Fe_{0.5}Co_{0.5}Cr_{0.7} films, polycryst., subjected to X-irrad., magnetisation (*Russian*) 2-66876
- Fe_{0.7}Co_{0.3}B_{1.5}Al_{1.5}, metallic glass, atomic site environments, spin echo NMR study 2-72376
- Fe_{0.7}Co_{0.3}B_{1.5}Si_{1.5}, Metglas 2605CO, transverse field annealed, transverse susceptibility and magnetisation 2-72268
- (Fe_{0.63}Co_{0.37})₇₅Si₁₅B₁₀, amorphous, zero-magnetostriction induced mag. anisotropy, formation kinetics meas. 2-72189
- Fe₄Co₂₀Si₁₅B₁₀, amorphous zero magnetostriction alloy, mag. aftereffect 2-72290
- (Fe_{1-x}Co_x)₉₀Zr₁₀ amorphous alloys, mag. induced anisotropy meas. 2-92896
- Fe_{80-x}Cr_xB₁₅Si₅, amorphous, magnetoresist. mag. props. 2-71947
- Fe₃Ga, magnetic struct., neutron diff. obs. 2-92871
- Fe₈Hf₁₉, amorphous, mag., Mossbauer, and resist. study 2-72384
- Fe₈₀M₁₀B₁₀, amorphous alloy, (M=transition metal), mag. and stress annealing 2-87554
- Fe₈₀M₁₀B₁₀ metallic glasses, (M=transition metal), mag. after-effect meas. 2-87549
- (Fe_{1-x}M_x)₇₅P₁₅B₅Al₅, (M=Ni, Mn), amorphous, mag. props. meas. 2-92880
- (Fe_{1-x}Mn_x)₂P, mag. props. 2-61697
- (Fe_{0.65}Mn_{0.35})₇₅P₁₅B₅Al₅, amorphous, ferromagnetism collapse 2-104618
- (Fe_{1-x}Mn_x)₇₅P₁₀B₁₀Al₅, amorphous, spin corrs. near ferromag-spin glass crossover point 2-77268
- Fe₇₀Mo₂₀B₂₀, Metglasses, thermomagnetic treatments 2-88110
- (Fe_{1-x}Mo_x)₇₅P₁₅B₅Al₅, amorphous, anomalous crit. behaviour, random anisotropy effects 2-72232
- (Fe_{1-x}Ni_x)₇₅B₂₅, amorphous, magnetisation and crystals. 2-72266
- Fe₄₀Ni₄₀B₂₀, Co₇₅Fe₁₅Si₅ and Co₇₅Fe₁₅Ni₂₀(SiB)₂₀, amorphous, crystn. in RF mag. field, Mossbauer study 2-103634
- Fe₆₀Ni₂₀B₂₀ amorphous alloys, influence of heating on mag. props. 2-87535
- Fe_{80-x}Ni_xB₂₀ (Fe_{80-x}Ni_xP₁₄B₆), amorphous, magnetoresist. mag. props. 2-71947
- (Fe_{1-x}Ni_x)₈₀B₂₀, glass, mag. props. and crystn., Mossbauer study 2-104754
- Fe₁₀Ni₇₀B₁₅P₅, amorphous, mag. phase transition, magnetisation and DC susceptibility meas. 2-56857
- Fe₉₁Ni₅B₁₀Si₁₀ amorphous alloy, ferromag. resonance, neutron effects 2-87597
- FeNiCo films, nucl. spin echo in NMR and FMR overlap region 2-104741
- Fe₃Ni₃Cr₁₄P₁₃B₆, metallic glass, mag. hyperfine field distrib., Mossbauer study 2-87640
- Fe₃Ni₃Cr₁₄P₁₃P₆, amorphous, Mossbauer study under press. 2-72385
- (Fe_{1-x}Ni_x)_{78-x}Cr₂Si₂₀B₁₂, glass, magnetisation, crystn. and microstruct. 2-77322
- Fe₄₀Ni₃₀Mo₄B₁₈, Metglas MB 2826, internal stresses and spin texture, Mossbauer study 2-87634
- Fe₄₀Ni₄₀P₁₄B₆, amorphous, ferromag. phase transition, mol. field theory 2-72225
- Fe₄₀Ni₄₀P₁₄B₆ amorphous mag. alloys, correlation between power loss and viscosity field 2-87523
- Fe₄₀Ni₄₀P₁₄B₆, amorphous ferromag. alloys, anal. of coercivity 2-87538
- Fe₄₀Ni₄₀P₁₄B₆, amorphous, mag. anisotropy and atomic short-range order, Mossbauer study 2-104607
- Fe₄₀Ni₄₀P₁₄B₆, metallic glass, rotational and alternating loss 2-87536
- Fe₄₀Ni₄₀P₁₄B₆, Metglasses, thermomagnetic treatments 2-88110
- Fe_{80-x}Ni_xP_{20-x}B_y, amorphous ferromag. alloys, mag. aftereffect spectra 2-56894
- Fe_{180-x}Y_xP₁₄B₆, amorphous alloy, mag. props. study, phase diagram 2-110580
- Fe_{180-x}Y_xP₁₄B₆, ESR study in reentrant phase 2-72331
- (Fe_{1-x}Ni_x)_{78-x}P₁₄B₆Al₃, amorphous, spin wave and scaling law anal., magnetisation meas. 2-92888
- Fe₂O₃ and γ-Fe₂O₃ acicular particles, prep. and mag. props. 2-72286
- Fe₂P, Curie temp., uniaxial stress effect, expt. study 2-87495
- Fe₂P, ferromag., sp. ht. meas. 2-92930
- Fe₂P, orientational phase transition near Curie temp., press. study 2-116008
- Fe₂P, pressure-induced metmag. states, magnetisation study 2-110583
- Fe₂Pd_{82-x}Si₁₈, amorphous, spin glass-ferromag. transitions and crit. lines, magnetisation meas. 2-77302
- Fe₂Pt, magnetisation near Curie temp. 2-72275
- FeRh, paramag., ferromagnetic and antiferromag., band struct., muffin-tin calc. 2-82216
- Fe_{1-x}Si_x, pyrrhotines, mag. transitions near Curie point 2-87506
- (Fe_{1.2}Sn)_{1-x}(Fe_{0.68}Sn), solid solns., magnetisation, Curie temps. and lattice const. meas. 2-76365
- FeSi sheets, effect of stacking on coercivity 2-56887
- Fe₃Si_{1-x}, ferromag. alloys, amorphous and crystalline, even magneto-optic spectroscopy 2-104857

ferromagnetic properties of substances continued

- Fe₈₀–₂₀Sn₂₀B₂₀, amorphous ferromagnet, Sn and Fe hyperfine fields, Mossbauer study 2–92552
 FeTiO₃, metamagnetic transition, mag. props. 2–92903
 Fe_{1–x}V_x, disordered, spin wave dispersion relations 2–77279
 Fe₈₀–₂₀W₂₀B₂₀, amorphous, magnetoresist. mag. props. 2–71947
 Fe₉₀Zr₁₀, amorphous, sp. ht., susceptibility, resist. 2–72224
 Fe–phenol-formaldehyde resin, filled polymer, ferromag. adsorbents, mag. props. 2–66871
 Gd, sputtering coeff., temp. depend. 2–87938
 Gd, transition radiation characteristics meas. 2–93316
 Gd–As, dil., As hyperfine interaction, IPAC study 2–92544
 Gd–Tb, magnetocrystalline anisotropy meas. 2–98873
 Gd_{0.5}Ag_{0.48}, amorphous, random anisotropy props., magnetisation meas. 2–72271
 Gd₈₀Au₂₀, amorphous, Mossbauer study 2–82757
 Gd₂(Co_{1–x}Mn_x)₁₇, NMR spin echo study 2–93060
 GdCoSi, synthesis, mag. props. and struct., X-ray and mag. torsion balance anal. 2–72176
 GdFeO₃, magnetisation, H–T phase diagram, Fe³⁺–Gd³⁺ exchange interactions 2–7284
 GdMg, biaxial mag. structs. 2–104580
 GdMnSi, synthesis, mag. props. and struct., X-ray and mag. torsion balance anal. 2–72176
 Gd₂Y_{1–x}Fe_x, indirect exchange param. 2–71942
³He, solid, vacancies, spin polaron, variational method 2–61251
 HgCr₂Se₄, FMR characts., 1.8 to 130K 2–82725
 HgCr₂Se₄, Hall effect during ferromagnetic transition 2–110372
 Hg_{1–x}Mn_xTe, indirect exchange interaction, perturbation theory calc. 2–82587
 HoAl₃, conduction electron polarisation temp. depend., neutron diffr. study 2–72146
 Ho(Co_{1–x}Ni_x)₂, mol. moments rapid changes, magnetisation and spin-echo NMR study 2–72167
 Ho_{1–x}Er_xRh_{0.8}B_{0.2}, superconductivity and magnetism 2–72098
 Ho_{0.8}Lu_{0.2}Rh_{0.8}B_{0.2}, superconductivity and mag. props., μ SR meas. 2–72101
 HoMo_{0.8}Si_{0.2}, coexistence of ferromagnetism and superconductivity 2–72105
 HoMo_{0.8}Si_{0.2} type magnetic superconductors, mag. field effect and supercurrent 2–104529
 HoNi, magnetisation easy direction, temp. depend., mag. torque study 2–72166
 HoNi₂, mag. excitations, inelastic neutron scatt. study 2–72154
 HoP, biaxial mag. structs. 2–104580
 K₂CuF₄, ferromag. stripe domain struct., diffraction efficiency, perturbation theory calc. 2–116029
 K₂CuF₄ ferromagnetic stripe domains, mag. phase grating multiwave diffr. theory 2–57064
 K₂CuF₄, low dimensional mag. system, EPR (*Japanese*) 2–82711
 K₂CuF₄, spin wave instability, subthreshold parallel pumping 2–110574
 K₂CuF₄, two-dimens. ferromag., mag. susceptibility, X–Y anisotropy in Heisenberg system 2–116011
 K₂CuF₄, two-dimens. planar ferromag., phase transitions, neutron scatt. study 2–98877
 K₂CuF₄, two-dimensional planar ferromag. Kosterlitz-Thouless transition 2–66826
 (La_{1–x}Al_x)(Mn³⁺Mn⁴⁺O)₃, A=Ca, Ba, Sr, indirect exchange interactions, and Jahn-Teller distortions, neutron diffr. study 2–66800
 La_{1–x}Ca_xCoO₃, perovskite, prep., ferromagnetic props., rhombohedral distortion 2–61737
 (La_{0.9}Ca_{0.1})MnO_{3–x}, elec. resist. and thermoelec. power 2–66551
 LaCo₂, mag. props., PAC study 2–66954
 LaCo₂–LaMnO₃, magnetic susceptibility and hysteresis loops meas. 2–72726
 La₂Gd_{1–x}TiO₃ solid solns., mag. behaviour, mean field model 2–104659
 LaMnO_{3.09}, distorted, mag. transition above Curie point, magnetisation and magnetoresist. study 2–110582
 LiTbF₄, crossover to mean-field behavior at marginal dimensionality 2–77316
 LiTbF₄, Landau eqn. of state near T_c 2–66839
 LiTb_{0.9}Y_{0.1}F₄, randomly diluted Ising dipolar-coupled ferromagnet, mag. eqn. of state 2–61730
 LiTb_{1–x}Y_xF₄, random uniaxial dipolar ferromagnet, critical behaviour 2–92935
 LiTb_{0.9}Y_{0.1}F₄, random dipolar-coupled ferromag., mag. eqn. of state 2–104617
 Lu₂V₂O₇, cryst. struct., rel. to mag. props., superexchange pathways 2–91923
 Mg_{1–x}Fe_x, amorphous, Mossbauer effect and mag. props. 2–66965
 Mn–Ni(Co) layered mag. thin films, magnetisation and struct. 2–72302
 Mn_{1.1}Al_{0.9}, metastable alloy, mag. and struct. props., X-ray and neutron diffr. and DSC meas. 2–72163
 MnAs, phase transitions with interactive order parameters (*Russian*) 2–61709
 MnBi thin films, polycryst., with perpendicular anisotropy, domain wall coercivity 2–72310
 Mn_{1–x}Cr_x(Fe₂)B, Invar like props. 2–72174
 Mn_{1–x}Cr_xSb, mag. phase diagram and struct. 2–104612
 MnO, crystal dynamics near Curie temp., US attenuation study 2–98928
 MnP, evidence for Lifshitz point in mag. phase diagram 2–66814
 MnP, mag. phase diagram, field parallel to hard direction 2–77297
 Mn_{1–x}Sn_x, spontaneous magnetostriiction and Curie temp. press. depend. meas. (*Russian*) 2–116043
 NH₃ adsorbed on Ni surface, decomposition rate, magnetocatalytic effect absence 2–99709
 Nd–Fe alloys, melt-spun, mag. hardening and crystn. props. 2–88228
 NdAl₃, complete mag. moment vector, magnetisation meas. 2–66784
 NdCo₃, thermal expansion and resist., anomalies obs. at spin-reorientation transition 2–76715
 NdCo₂H₂, ferromag., magnetisation, H₂ press. and comp. depend. meas. 2–82642
 NdD_{2+x}, PMR of paramag. and ferromag. phases 2–66935
 NdH₂, ferromagnetism, susceptibility and magnetisation meas. 2–72159
 Nd₂Sm_{1–x}Co_x, magnetisation curve anomalies meas., 4.2 to 100K (*Russian*) 2–92960
 Nd₂Y_{1–x}Co_x, magnetocrystalline anisotropy meas. (*Russian*) 2–98872
 Ni (001) surface magnetism, magnetisation, spin polarised LEED study 2–98911
 Ni alloys, dil., diffusion of H.D. and T, mag. aftereffect meas. 2–82027
 Ni and Ni–Cr (5 at.%), ferromag., optical props., temp. depend. (*Russian*) 2–61923

ferromagnetic properties of substances continued

- Ni base alloys, ferromagnetic, low temp. mobility of domain walls 2–87529
 Ni, cold rolled, recovery and recrystallisation in magnetic fields 2–62142
 Ni, deformed, small-angle cold neutron scatt. study 2–71548
 Ni, density functional calculation of magnetic susceptibilities 2–66782
 Ni, electroless deposits, heat treatment effects on physical props. 2–57384
 Ni, exchange splitting of phonon assisted microwave transmission at 9.5 GHz 2–66885
 Ni, ferromag. metals, mag. transition on cooling course 2–116002
 Ni, ferromagnetic, band struct. calc., optical absorpt., photoemission and magneto-optical data anal. 2–66434
 Ni, ferromagnetic, EM excitation of acoustic waves, orientational anomalies 2–86801
 Ni, ferromagnetic transition, character 2–56872
 Ni film, Brillouin scatt. from magnons, Stokes-anti-Stokes asymm. 2–116202
 Ni film, single cryst., saturation magnetisation and anisotropy const., ferromag. reson., temp. depend. 2–56896
 Ni film, with oblique mag. anisotropy, anomalous magnetisation loop 2–56897
 Ni jellium model, surface characteristics, var. techniques 2–72134
 Ni, magnetism, fluctuating local band theory 2–82558
 Ni, magnetoelastic coupling and magnetisation 2–116046
 Ni, minority spin bands, inverse photoemission study 2–116293
 Ni, paramag. susceptibility, temp. depend., small Pd additions influence 2–98842
 Ni, photon emission from sputtered atoms as function of phase transition 2–77596
 Ni, polycrystalline, internal friction, plastic deformation and mag. field effects (*Russian*) 2–116489
 Ni, polycrystalline film, saturation magnetostriction meas. 2–77337
 Ni powders, textured single-domain, mag., props. meas. (*Russian*) 2–116038
 Ni rods under torsion, crit. stress and cryst. anisotropy effect 2–72320
 Ni, sound excitation and transmission, resonant and nonresonant, 9.37 GHz 2–61076
 Ni, sp. ht. and resist. meas. crit. parameters, explanation for rounding 2–92929
 Ni surface, (110) and (111), H⁺ ion reflection, ionic charge states, expt. study 2–57234
 Ni, surface anisotropy irrelevance for mag. crit. behaviour near free surface 2–92923
 Ni-⁵⁷Mn, NMR ON study 2–98971
 Ni–Co, relation between damping capacity and magnetomech. props. 2–57397
 Ni–Cu, ordered alloys, magnetisation and electronic struct. calc. 2–82576
 Ni–Cu–Al, FMR and mag. props. 2–77384
 Ni–Cu–H solid soln., phase equilibria and magnetisation meas. (*Russian*) 2–98906
 Ni–Fe, mag. props., review 2–82652
 Ni–Fe (24 to 35 at.%), Curie temp. meas. by Mossbauer expts. 2–77290
 Ni–Fe film, magnetization oscillations excitation (*Russian*) 2–92976
 Ni–Fe films, domain wall struct., low-angle electron deflection study 2–87562
 Ni–Fe patterns for thin film heads, selective microelectrodeposition 2–83046
 Ni–Fe–Co magnetic alloys with stepwise hysteresis loop 2–61738
 Ni–Mn, disordered alloy, spin glass-ferromag. transition, magnetisation study 2–72223
 Ni–Mn(Pt), dil., impurity hyperfine fields, press. and temp. depend. 2–104610
 Ni–Pd alloys, electronic struct. calc. by self-consistent KKR-CPA method 2–56432
 Ni₃Al, de Haas-van Alphen effect and band struct. 2–66422
 NiFe thin films with uniaxial anisotropy, head-on domain walls 2–72309
 Ni_{1–x}Fe_x (100), spin polarised photoemission probing of magnetism 2–67184
 Ni_{1–x}Fe_x (100), spin-dependent density of states, spin-polarised photoemission meas. 2–83004
 Ni₄₀Fe₄₀B₂₀, amorphous, spin-depend. elastic electron scatt. 2–116311
 Ni₃₄Fe₄₀Mo₂₆B₁₈, Metglas 2826MB, stripe domain dragging by temp. gradient 2–72254
 (Ni_{0.9}Fe_{0.07}Co_{0.03})₁₀₀, amorphous, magnetization, annealing influence 2–104660
 Ni₂Mn_{1–x}, magnetic phase diagram, coexistence of spin glass and ferromag. phase 2–92938
 PbFe_{0.2–x}Ga_{0.8–x}O₉ single crystal, prep. and characts. 2–72617
 Pd–Co films, epitaxial, polycryst. and amorphous, transverse anisotropy meas. (*Russian*) 2–92975
 Pd–Co(Fe)(Ni), anomalous Hall effect, cond. tensor (*Russian*) 2–77021
 Pd–Fe (1.5 at.%), spin waves, inelastic neutron scatt. study 2–72178
 Pd–Mn, ferromagnetic-spin glass transition, elec. resist. study (*Russian*) 2–82601
 Pd–Mn, intermediate conc., mag. phase diagram, AC susceptibility study 2–72199
 Pd–Ni thin film, static and dynamic mag. studies 2–72303
 Pd_{2–x}Cu_xSi_{1–x}Fe_x, amorphous, elec. and mag. props. 2–72169
 Pd, Fe and Pd₂Fe₃, electronic struct. and mag. props. in ordered and disordered phases 2–76917
 (Pd_{0.996}Fe_{0.004})_{0.95}Mn_{0.05}, nonlinear mag. susceptibility and sp. ht. meas. 2–87480
 Pd₂MnSn, elec. and mag. props. 2–66522
 Pd₂MnSnIn_{1–x}, ferromag. to antiferromag. transition, NMR study 2–104613
 Pd₂Pt_{1–x}Fe_x, magnetic state, mixed exchange interaction, magnetisation and susceptibility 2–72208
 (Pd_{0.9}Pt_{0.1})₃Fe, atomic-ordered, sp. ht., 3 to 20K (*Russian*) 2–56204
 Pr alloys, amorphous, mag. props., nonaxial crystal field model 2–77301
 Pr amorphous alloys, low temp. mag. props. 2–56870
 Pr–Fe alloys, melt-spun, mag. hardening and crystn. props. 2–88228
 PrAl₃, complete mag. moment vector, magnetisation meas. 2–66784
 Pr(Fe_{0.8}B_{0.2})₃, amorphous, crystn. and mag. moments study 2–71362
 (PrRd₈Ga₃₀)₁₀₀, Fe, metallic glasses, mag., Mossbauer, and struct. studies 2–72270
 Pr₂Si₂Gd₂ ferromagnet, dil. Gd moments, press. depend., magnetisation 2–72195
 Pr₂Ti₂Gd₂ ferromagnet, dil. Gd moments, press. depend., magnetisation 2–72195
 R₂(Co–Mn)₁₇ (R=rare earth), residual induction, mag. props., permanent magnets appl. 2–82662

ferromagnetic properties of substances continued

- RFe₂, R=Y, Sm, magnetisation meas. and mol. field theory anal. 2-92963
 Rb₂CrCl₄, optical and magneto-optical study 2-93220
 Rb₂CrCl₄:Mn²⁺, ionic ferromag., impurity induced absorpt. bands 2-110896
 Rb₂CuBr₄·2H₂O, spin dynamics study 2-66860
 Rb₂CuBr₄·2H₂O, three-dimensional Heisenberg ferromagnet, spin dynamics 2-98903
 SiFe₂Co_{1-x}, ferromag., thermal expansion, mag. contribution meas. 2-86910
 SiFe₂Co_{1-x}, mag. props. and magnetovolume effects, thermal expansion 2-86909
 Sm-Co film, RF sputtered, phase stability and mag. props. 2-72301
 Sm-Co-Cu-Fe-Zr, permanent mag., struct., sintering and annealing effects (Russian) 2-88226
 Sm-transition metal alloys, domain struct. characts. appl. to phase anal. 2-72253
 Sm₂(Co,Cu,Zr,Fe)₁₇, coercive force due to domain wall pinning, theory 2-66864
 Sm₂(Co,Fe,Cu,Zr)₁₇, sintered permanent magnets, coercive force and struct., Sm content effect 2-72278
 Sm₂(Co, Fe, Cu, Zr)₁₇, permanent magnet, coercivity 2-72284
 Sm₂(Co,Mn)₁₇, domain struct. parameters 2-72252
 SmCo₅ and Sm₂Co₁₇, abrupt magnetisation switching anisotropy (Russian) 2-104658
 SmCo₅, permanent magnet, coercivity 2-72284
 SmCo₅, sintered permanent magnets, fine struct. and mag. props. (Russian) 2-104664
 Sm₂Co_{17-x}, struct. and mag. props. 2-61741
 Sm(Co_{0.65}Cu_{0.35})₅, (x=4.5, 5.6, 6), coercive force, precipitation effects (Russian) 2-92961
 Sm(Co_{0.86}Cu_{0.14})₇, struct. and coercivity, heat treatment effects (Russian) 2-88227
 Sm₂(Co_{1-x}Fe_x)₁₇, magnetisation reversal and coercive force, comp. depend. 2-72279
 Sm(Co_{0.66}Fe_{0.2}Cu_{0.14}Zr_{0.06})₇, 4, struct. transformations and coercive force meas. (Russian) 2-98913
 Sm(Co_{0.69}Fe_{0.2}Cu_{0.07}Zr_{0.02})₇, 2, magnetic hardening 2-72283
 Sm₂(Co_{1-x}M_x)₁₇, M=Mn, Zr, struct. and mag. props. 2-72280
 SmD₂, PMR of paramag. and ferromag. phases 2-66935
 Sm₂Dy_{1-x}Fe_x, magnetostriction, temp. depend. meas. 2-77351
 Sm₂(Er,Gd)_{1-x}Co_x, mag. props. and mag. induction temp. depend. meas. (Russian) 2-98914
 SnCo₅, mag. anisotropy due to strong J-mixing 2-56847
 SnMo₅S₈(Se₈), supercond. crit. field, electronic struct. 2-92843
 Tb-Gd alloys, magnetocaloric effect and mag. props. 2-72209
 Tb-Co, elec. resist. accompanying metamag. phase transitions (Russian) 2-66820
 TbFe₂, amorphous film, mag. and elec. props. (Chinese) 2-104750
 Tb₂Si₄, magnetic, thermal, and elec. props. 2-72177
 Tb₂Y_{1-x}Co_x, magnetocrystalline anisotropy meas. (Russian) 2-98872
 TbFe₂, M₁ (M=Cu, Ag, Au, Fe), magnetisation meas. in high and low fields 2-56839
 TiFe_{0.5}Co_{0.5}, thermal expansion, mag. contrib., spontaneous magnetisation 2-115440
 TiFe₂Co_{1-x}, mag. props. and magnetovolume effects, thermal expansion 2-86909
 Tm₂V₂O₇, cryst. struct., rel. to mag. props., superexchange pathways 2-91923
 Tm₂V₂O₇, ferromagnetic behaviour, cryst. field effects 2-104591
 U(Fe_{1-x}Mn_x)₂, effective Curie-Weiss const., susceptibility and magnetisation meas. 2-72165
 USE, critical exponent β, zero-field magnetisation, neutron scatt. study 2-61698
 U₂Te₃, cubic, ferromagnetic struct. study, neutron diffr. patterns 2-104586
 U_{1-x}Th_xSb, Kondo behaviour, ferromag. and antiferromag. behaviour, transport and mag. meas. 2-77032
 VPt₃, FCC and tetragonal, ferromagnetic props., critical behaviour 2-82603
 WC-TiC-TaC-NbC-Co cemented carbide, C content effects 2-77939
 Y-Co alloy, Y₂Co₃ phase identification by thermomag. anal. 2-77292
 Y-Co amorphous powders, mech. grinding prep., struct. and mag. props. (Russian) 2-61742
 Y-Co(Ni), amorphous, mag. props. due to 3d magnetism 2-72269
 Y(Al_{1-x}Fe_x)₁₂, mag. and cryst. struct., magnetisation and Mossbauer spectra study 2-72150
 YCo₅, powders, ferromagnet and Mossbauer props., grinding effects (Russian) 2-87546
 Y₂Co₃, elec. resist., mag. susceptibility, and magnetisation, press. depend. 2-104590
 Y₂Co₃, mag. supercond., hybrid state, resist., magnetoresistance and AC susceptibility study 2-82571
 Y₂(Co_{1-x}Mn_x)₁₇, NMR spin echo study 2-93060
 YFe₂, amorphous, melt-spinning prep., mag. props. 2-72267
 Y_{0.33}Fe_{0.67}, amorphous spin glass, spin dynamics, inelastic neutron scatt. study 2-98892
 YIG, saturation magnetisation and Curie temp. relationship meas. 2-116036
 YMn_{1-x}Co_x, mag. order occurrence, comp. depend. 2-82646
 Yb_{1-x}Eu_x, mag. interactions, Mossbauer, magnetisation and resist. meas. 2-72382
 Yb₂V₂O₇, cryst. struct., rel. to mag. props., superexchange pathways 2-91923
 Yb₂V₂O₇, ferromagnetic behaviour, cryst. field effects 2-104591
 ZnCr₂Al_{2-3x}Si_{3x}, dil. insulating system, mag. phase diagram 2-110591
 Zr(Fe_{1-x}Al_x)₂, ferromag., mag. props., conversion to superparamagnet and spin glass on H₂ absorption 2-92965
 (Zr_{0.9}Hf_{0.1})Fe₂, hyperfine mag. field at ¹⁸¹Ta, radiation defects influence, TDPAC meas. 2-56986
 (Zr_{1-x}Nb_x)Fe₂, spin wave stiffness const. determ., inelastic neutron scatt., magnetisation meas. 2-115989

ferromagnetic relaxationsee also *ferromagnetic resonance*

- Co-H(D), based alloy, mag. relax., isotope effects and diffusion 2-77382
 Ni-H(D) based alloy, mag. relax., isotope effects and diffusion 2-77382
 Pd-H(D) based alloy, mag. relax., isotope effects and diffusion 2-77382

ferromagnetic resonancesee also *ferromagnetic relaxation*

- amorphous alloys, study of struct. relax. by ferromag. reson. with spin exchange 2-87598
 amorphous media and thin films, spin waves 2-72181
 digital recording system for FMR spectra 2-69215
 γ-Fe₂O₃-Mn₂O₃, thin epitaxial film, resonance meas. of mag. moment 2-72295
 ferrites, polycryst., ferromag. resonance line dispersion 2-116069
 film, ultrathin, FMR and static magnetisation orientations 2-104710
 garnet film, domain wall motion damping parameter, FMR study 2-77346
 garnet film, magnetic, domain lattice FMR 2-66879
 garnet film, magnetic profile, FMR determ. 2-72355
 magnetic anisotropy of single domain particles, ferromag. reson. study 2-56946
 magnetically ordered materials, nuclear spin system dynamics, NMR freq. shift 2-77398
 metallic thin films with variable driving field symmetry, reson. of standing spin waves 2-93014
 metals, ferromagnetic, exchange cond. shift, ferromagnetic antiresonance study 2-98683
 one-dimensional magnets with solitons, ferromag. reson. 2-104707
 Permalloy film, uniaxial, relax. time under nonlinear ferromag. reson. conditions (Russian) 2-61771
 pyroelectric detection of magnetic resonance 2-77379
 spin wave parametric excitation threshold, effect of modulating fields (Russian) 2-82722
 ultrathin crystal, ferromag. resonance and magnetization 2-66921
 BaCo₂Ti₂Fe₂O₁₀, polycryst. anisotropy temp. depend., ferromag. reson. and magnetisation study 2-56849
 (BiYLu)₂Fe₂O₇, bubble film, mag. props., FMR study 2-72317
 CdCr₂S₄ crystal, ferromag. resonance, nonstoichiometry effect 2-104709
 Co-Zr amorphous film, coevaporated, magnetisation and ferromag. reson. studies 2-72264
 CoS₂ single cryst., ferromagnetic and paramagnetic resonance 2-116066
 Cu complex, bis(anilinium) copper tetrachloride, two-dimens. spin diffusion, EPR and ferromag. reson. study 2-77364
 Cu-Ni thin film, static and dynamic mag. studies 2-72303
 Eu_{0.53}Y_{2.45}Pb_{0.03}Fe_{3.85}Ga_{1.1} 4O₁₂ epitaxial bubble film, dynamic props. 2-72319
 Fe MBE film, [110] orientation, on GaAs, mag. props. 2-66874
 Fe-Cr-Co permanent magnets, mag. props. and Mossbauer effect 2-72282
 Fe-garnet films, hard-stripe domains, investig. 2-104673
 Fe₂B_{1-x} amorphous films, spin glass behaviour and non-ergodicity, FMR study 2-98897
 FeBO₃, phonon parametric excitation, FMR nonlinear relax. 2-77349
 Fe₈₂Bi₁₈Si₆, Metglas, ferromag. reson. absorpt. and ferromag. antireson. transmission meas. 2-72353
 Fe₂Co₂Cl₂, Raman study of excitations 2-72483
 Fe₄₇Ni₅₃B₁₀Si₁₀ amorphous alloy, ferromag. resonance, neutron effects 2-87597
 FeNiCo films, nucl. spin echo in NMR and FMR overlap region 2-104741
 Fe₂Ni_{80-x}P₁₄B₆ amorphous alloys, ferromag.-spin glass transition, ferromag. resonance study 2-110648
 GdCo amorphous bubble film, FMR spectra, angular depend. 2-72354
 Gd_{1-x}Co_x amorphous films, oxidation, FMR study 2-87274
 GdFe amorphous bubble film, FMR spectra, angular depend. 2-72354
 HgCr₂Se₄, FMR characts., 1.8 to 130K 2-82725
 Ni, exchange energy meas. by high freq. sound probe 2-66804
 Ni, exchange splitting of phonon assisted microwave transmission at 9.5 GHz 2-66885
 Ni film, single cryst., saturation magnetisation and anisotropy const., ferromag. reson., temp. depend. 2-56896
 Ni-Cu-Al, FMR and mag. props. 2-77384
 Ni₂Mg_{1-x}Fe_xO₄, FMR and magnetisation meas. 2-82723
 Pd-Ni thin film, static and dynamic mag. studies 2-72303
 (Y,Eu,Tm,Ca)₂(Fe,Ge)₂O₁₂ system films, FMR study of mag. parameters (Russian) 2-77385
 (Y,Sm,Lu,Ca)₂(Fe,Ge)₂O₁₂ films, H⁺ implanted, laser annealing 2-76492
 (YBiCa)₂(FeSi)₂O₁₂, bubble film, growth induced anisotropy, FMR 2-72316
 Y₂BiFe₃Ga_{1-x}O₁₂ epitaxial film, nonlinear resonance of domain walls 2-87563
 YIG epitaxial films, mag. bubble collapse field and FMR spectrum, ion implantation and annealing effects 2-104670
 YIG, FMR linewidth anisotropy origin, magnetostriction 2-77380
 YIG, microscrit. and grain size, ferromagnetic resonance and ESR study 2-115425
 YIG:Gd, Tm, Ga, He⁺ implanted, mag. and cryst. props. 2-77334
 YIG:La, Ga(Tm, Ca,Ge) films, Ne⁺ implanted, magnetisation, FMR and X-ray study 2-98967
 YIG:Tm,Ca,Ge,Ne layers, ionimplanted, annealing effects on cryst. and mag. props. 2-77333
 Y_{1-x}Sm_xFe₂O₇, exchange interaction and mag. anisotropy 2-72187
 YSmLuCaGeNe(Ge), ion implanted bubble garnet film, mag. and cryst. props. 2-82644

ferromagnetismsee also *ferromagnetic properties of substances*; *ferromagnetic relaxation*; *ferromagnetic resonance*; *Ising model*; *spin waves*

- (110) [001] type ferromags., magnetoelectric sensitivity (Rumanian) 2-87571
 amorphous, magnetostriction, phenomenological theory 2-72324
 amorphous ferromagnet, tunnelling states, spin wave relax., thermal cond. 2-98865
 amorphous particles, ferromag., magnetisation calc. 2-72265
 amorphous solids, ferromagnetic and spin glass states 2-116017
 Anderson localised system, interstate interaction effect on specific heat 2-77303
 Anderson model, extended periodic, coexistent ferromagnetism and supercond. 2-92811
 anisotropic ferromagnet, I-D magnetisation eqns., soliton solns. (Russian) 2-82665
 anisotropic ferromagnet in both random and uniform field; multicritical point 2-56867
 anisotropic Heisenberg ferromagnet, quantum inverse problem 2-87471
 annealed system, mag. mixture, Potts model 2-77299

ferromagnetism continued

- Barkhausen coercivity, domain wall motion 2-82639
 Cayley tree, combined site and bond percolation 2-77310
 Cayley tree basis, local props. 2-87466
 chain, ferromag., soliton dynamics 2-77296
 chain, one-dimensional, excess electron-spin wave bound state (*Russian*) 2-115961
 chaotic states in strong parallel pumping fields 2-56843
 classical ferromag. spin systems, contour probability estimation 2-77249
 classical ferromagnetic chains, interacting boson approach 2-66859
 classical ferromagnetic Heisenberg chain, dynamics in mag. field 2-56811
 classical Ising-Heisenberg chain, instabilities 2-77308
 coercive force due to domain wall pinning 2-72281
 crystals, elastoviscoplasticity in ferromagnetic crystals 2-72321
 cubic ferromagnet, parametrically excited spin wave-thermal spin wave interaction (*Russian*) 2-82585
 cubic Heisenberg ferromagnet, spin wave bound states 2-92891
 cubic lattice, Ising ferromag. transition, Monte Carlo calc. 2-56881
 cylindrical ferromagnetic particle system, magnetization (*Russian*) 2-98916
 deformation measurement of ferromag. materials, using electromech. strain gauge 2-93705
 dilute ferromagnet with mag. moments dependent on local environment, mag. ordering calc. (*Russian*) 2-98833
 dilute magnet, spin wave excitations, fractal effects 2-72180
 disordered alloy with s-f exchange, conduction electron lifetime, composition depend. (*Russian*) 2-92572
 disordered magnet, Ising model with random exchange bonds, Monte Carlo study 2-87468
 disordered magnetic lattice gas, ferromag. and spin glass fluids 2-104629
 disordered spherical model, free energy calcs. 2-72227
 domain struct. parameters, neutron depolarisation and correlation functions 2-116026
 domain structure, origin and role 2-61732
 domain wall dynamic drag by dislocations, magnon interactions (*Russian*) 2-82637
 domain walls, amplitude division electron interferometry studies 2-89874
 Dyson-Maleev transformation in ferromagnets with single ion planar anisotropy 2-66743
 easy-plane ferromagnetic chain, solitons 2-66736
 elastic ferromagnetic strip containing two coplanar Griffith cracks, linear magnetoelastic problem 2-103045
 electromagnetic-acoustic conversion, relationship between linear magnetostriiction and harmonic component of EMF 2-56910
 electron ferromagnetism in narrow energy bands, extended Hubbard model (*Russian*) 2-61688
 electron spectrometer for spin-polarized angle-and energy-resolved photoemission from ferromagnets 2-101501
 ferro- and antiferromagnetism, spin fluctuation theory of coexistence 2-104569
 ferromagnetic, superconductor, Josephson currents 2-110547
 ferromagnetic semiconductor, broad band, density of states in vicinity of Curie point, Dyson eqn. soln. 2-66412
 ferromagnetic semiconductor, critical shift of cond. bound bottom 2-77255
 ferromagnetic semiconductor, elec. cond. in quantising mag. field (*Russian*) 2-104385
 film, Brillouin scatt. from magnons, Stokes-anti-Stokes asymm. 2-116202
 film, dipolar surface spin waves 2-66873
 film, spin wave spectrum and linear excitation 2-98866
 film, susceptibility and spin correlation time near Curie point, Valenta model 2-72306
 films, layered structure, dipole-exchange spin waves dispersion 2-82582
 ground state of systems with strong Hund coupling 2-66754
 Heisenberg amorphous ferromagnet with random anisotropy, mag. props. 2-61685
 Heisenberg chain, classical isotropic, spin dynamics, computer simulation 2-98899
 Heisenberg chains, ferromag., excitation spectrum 2-66741
 Heisenberg ferromagnet, dil. anisotropic, correl. lengths and transition temp., renormalisation group scaling methods 2-66863
 Heisenberg ferromagnet, magnons at the Curie temperature 2-66793
 Heisenberg ferromagnet, $O(4)$ symmetric two-dimens., anal. using rot. invariant auxiliary variables 2-104564
 Heisenberg ferromagnet, polarised neutron scatt. cross section calcs. 2-104584
 Heisenberg ferromagnet, quenched random site, mag. states with partial spin glass freezing 2-77252
 Heisenberg ferromagnet, semifinite, localized impurity states 2-66747
 Heisenberg ferromagnet, simple cubic, with uniaxial and Ising anisotropies, two-magnon bound states and reson. 2-56841
 Heisenberg ferromagnet, surface magnetisation profile and low energy spin polarised inelastic electron scatt. 2-104661
 Heisenberg ferromagnet, surface spin wave relax. due to scatt. by surface fluctuations (*Russian*) 2-98857
 Heisenberg ferromagnet, surface states, exactly soluble models 2-87357
 Heisenberg ferromagnet, uniaxial, kink free energy calc., WKB approx. 2-79495
 Heisenberg ferromagnetic chain, soliton magnetoelastic excitations 2-92887
 Heisenberg ferromagnetic chain, with easy-plane anisotropy, magnons, solitons and crit. field 2-110571
 Heisenberg magnet, quenched random site, with competitive exchange interactions, high temp. mag. states in simple cubic and BCC lattices 2-56816
 Heisenberg model, 1-D, thermodynamic props., static domain wall solitons, perturbation calc. 2-116022
 Heisenberg model, $S=1/2$, Monte Carlo simulation 2-104566
 Heisenberg one-dimensional ferromagnet, soliton wavenumber cut-off 2-110601
 Heisenberg system with biquadratic exchange interaction at low temp., spin wave theory 2-56813
 Heisenberg xxz chains, excitation spectrum, magnons 2-104568
 heterophase ferromagnets, exact solns., critical point effects 2-61718
 impure slab, single Bloch wall thermodynamics 2-82636
 infinite susceptibility above T_c , in Migdal-Kadanoff scheme 2-72245
 insulator, low-temp. magnon thermal cond. 2-66307
 irreversible magnetising properties in amorphous and crystalline material, propag. props. 2-87539

ferromagnetism continued

- Ising, model, triangular, two- and three-spin, variational approx., ferromag. interaction 2-72248
 Ising ferromagnet, crit. temp., cluster variation method 2-104026
 Ising ferromagnet, dipolar, phase transitions with spontaneous modulation 2-104646
 Ising ferromagnet, effective field model, influence of triplet correlations 2-66851
 Ising ferromagnet, inhomogeneous mean-field model 2-104640
 Ising ferromagnet, scaling laws, logarithmic corrections, inner field 2-77312
 Ising ferromagnet, two-dimens., with high cond. of imperfections, sp. ht. 2-104648
 Ising ferromagnets with random anisotropy 2-61684
 Ising model, axial nearest-neighbour, low temp. and near multiphase 2-61727
 Ising model, frustrated, variational real space renormalisation group 2-101336
 Ising model, nonequilibrium system, struct. pulses 2-74361
 Ising model, random, in d dimens., susceptibility, high-temp. series expansion 2-82623
 Ising three-dimensional ferromagnet, heat capacity critical parameters 2-104637
 Ising-Heisenberg ferromagnetic chain, excitation spectrum at zero field 2-82615
 itinerant electron ferromagnet, Curie-Weiss law spin susceptibility, electron-phonon interaction mechanism 2-61687
 itinerant electron system, paramagnetic susceptibility study 2-82559
 itinerant ferromagnet, press. depend. of mag. props. 2-87502
 itinerant ferromagnets, random, percolation limit, mean field scaling relations 2-66756
 itinerant magnetism, two-band model 2-94955
 itinerant-electron ferromagnet, electron-phonon interaction effects 2-92855
 jellium model, surface characteristics, var. technique 2-72134
 localised surface states in case of modified ground state (*Russian*) 2-61535
 macroscopic behaviour with random and statistically vanishing anisotropy 2-72193
 magnetic anisotropy, correlation with inhomogeneity, spin freezing effects 2-115998
 magnetic strength analysis review, mag. props. rel. to struct. 2-66780
 magnetic susceptibility and magnetisation near coupled struct. and mag. transition (*Russian*) 2-82579
 magnetic susceptibility tensor, external mag. field depend. 2-98851
 magnetisation, nonlinear dynamics, soliton models, review (*Russian*) 2-92914
 magnetisation in ferromag. cubic system, field and stress depend. 2-92986
 magnetoacoustic electron reson. of periodic domain structs. (*Russian*) 2-66882
 magnetoelastic soliton 2-82687
 magnetomechanical damping in ferromagnets, review 2-56906
 magnetostatic interface waves in ferromagnets 2-56845
 magnetostatic surface wave resonance interaction with plasma wave 2-72183
 magnetostrictive polycryst. material vibr., hysteresis damping, phenomenological theory 2-66883
 metal, ferromagnetic, strain amplitude dependent damping, mech. model (*Japanese*) 2-56904
 metal, magnetic resistivity theory near ferromagnetic phase transition 2-92569
 metal ferromagnet, electronic surface levels 2-66614
 metallic film, EM wave transmission impedance calc. (*Russian*) 2-87556
 metallic film, spontaneous Hall coeff. 2-110331
 metals, magnetic susceptibility, quantum oscillations in mag. field, theory (*Russian*) 2-87479
 metals, nucl. spin-lattice relax., s-d exchange interaction effects, theory (*Russian*) 2-98981
 metals, Shenberg effect, Fermi liq. model (*Russian*) 2-104588
 microcrystals, mag. props. study by Mossbauer spectroscopy 2-93090
 monoclinic, easy magnetisation axis direction, temp. depend. (*Russian*) 2-115997
 multicomponent classical ferromagnet, mean field crit. temp. bounds and correlation inequalities 2-110596
 $O(n)$ symmetry spin system, generalisation of Migdal recursion relation 2-92911
 one-dimensional easy-plane ferromagnet, classical, dynamic struct. factors, computer simulation 2-66796
 one-dimensional Heisenberg ferromagnets with single site anisotropy, and nonlinear Schrodinger eqns., gauge equivalence 2-110560
 one-dimensional planar spin $1/2$ ferromagnet, excitation spectrum 2-104602
 order-parameter profile in semi-infinite systems at criticality 2-69121
 periodic Gaussian model, helicity modulus, specific heat 2-92936
 phase transitions, critical behaviour, field theoretical model 2-110581
 plate, domain wall dynamic retardation by dislocations 2-92979
 plate, magnetoelastic states near spin reorientation transition 2-82675
 polaron density of states of hole in narrow band of alternate lattice of fermions 2-98557
 Potts ferromagnet, anisotropic planar, phase diagram 2-110588
 Potts model, ferromag. and antiferromag. in $(1+1)$ and $(2+1)$ dimensions 2-72231
 Potts model, three-dimensional three-state, phase transition 2-72205
 prolate spheroidal bodies and current bands, mag. induction calc. 2-90767
 pyrite lattice, annealed Ising bond mixture, phase diagram 2-82622
 random decorated Ising model 2-72236
 random ferro-antiferromagnet, Heisenberg-Mattis model dynamics 2-92953
 random uniaxial dipolar ferromagnet, critical behaviour 2-92935
 recording of characteristic parameters of ferromagnetic hysteresis loop 2-79562
 rigid ferromagnet, thermodynamic model, phase transition phenomena 2-92942
 semiconductors, electron-magnon impurity states in energetic spectrum 2-98578
 semiconductors, spin system cooling in high freq. EM field, electron-magnon interaction mechanism 2-56846
 semiconductors, spin wave excitation by strong static elec. field 2-61748
 simple isotropic compressible ferromagnets, Sak model 2-66827

ferromagnetism continued

- single-ion anisotropy ferromagnet, exchange interactions, order parameter, free energy, quantum theory 2-72194
 soft ferromagnetic elastic plates, coupled magnetomech. eqns. 2-116045
 soft ferromagnetic layers, free wall clusters 2-87531
 soliton statistical mechanics, path-integral approach 2-101187
 spherical bodies and current bands, mag. induction calc. 2-90766
 spin 1 ferromag. chains, spin wave excitation spectrum, variational approx. 2-104601
 spin glasses, magnetic susceptibility phenomenological theory 2-98894
 spin orientation phase transition near the Curie temperature (*Russian*) 2-87509
 spin wave attenuation in ferromagnets, effects of surface amorphisation 2-87486
 spin wave excitations, light scatt., review (*Japanese*) 2-93213
 square lattice anisotropic Potts ferromag., renormalisation group anal. 2-110557
 superconductor, ferromag. Lifshitz point behaviour 2-77230
 superconductor, mixed state, fluctuations and instabilities 2-66727
 superconductors, ferromag., percolation magnetoresist. 2-56774
 surface, ferromagnetic, magnetisation, mag. struct., spin polarised LEED study 2-98910
 surface ferromagnetism induced by surface amorphization in a layered antiferromagnetic system 2-87514
 surface spin waves and domains struct. at interface between ferromag. media 2-115993
 ternary superconductors, magnetism rel. to supercond. props. 2-110517
 theory of magnetism, statics and dynamics, book 2-68978
 thin film, micromag. struct., electron holography technique 2-92981
 twinned ferromagnetic crystals, random ensemble, residual magnetisation calc. (*Russian*) 2-92959
 two dimensional ferromagnetic Heisenberg model, Monte Carlo simulation 2-87520
 two-dimensional kinetic Ising model, real-space dynamic renormalisation group method 2-104647
 two-sublattice, cation distrib., new Mossbauer spectroscopy determ. method 2-56998
 uniaxial ferromagnet, 2-66865
 uniaxial ferromagnet with dislocations, magnetisation distribution, singular lines, domain formation (*Russian*) 2-82664
 uniaxial Heisenberg ferromagnet, exact low temp. renormalisation and uniform mode damping 2-56814
 weakly ferromagnetic materials, inhomogeneous, mag. props. 2-77253

ferromagnets see *ferromagnetic properties of substances; ferromagnetism*

ferrous alloys see *iron alloys*

Feshbach resonances see *atomic resonant states; molecular resonant states*

f.e.t. see *field effect transistors*

few-nucleon reactions see *nuclear reactions involving few nucleon systems*

few-nucleon scattering see *nuclear scattering involving few nucleon systems*

few-nucleon systems see *nuclei with mass number 1 to 5*

Feynman diagrams

- boundary conditions, symmetry breakdown and Feynman path integral 2-95586
 box graph calc., with light-like particles 2-69358
 class B₂-function property of Feynman integrals 2-79738
 dimensional regularisation techniques, rel. to QCD and QED two-point functions 2-89910
 Dirac equation, SL(2,C) invariant representation 2-95598
 discrete quantum theory, space-time Feynman diagram 2-89556
 dissipative quantum-mechanical system dynamics, complex pot. and Feynman integrals 2-95040
 electron, g-2, sixth-order contribs., Feynman graphs 2-69467
 Feynman integral for exponential interaction in 4-dimens. space-time 2-64225
 Feynman integral for exponential interaction in four dims. space-time 2-89914
 hadronic reactions, large perturbative corrections in soft-gluon limit 2-69423
 high-order tadpoles, triangle vertex integrals, dimensional regularisation 2-101527
 Lagrangian field theory, perturbative, Feynman graphs, dispersion relations 2-58998
 loop diagrams in boxes, appl. to QED and QCD vacuum 2-95634
 neutral mesons with heavy quarks and mixing angles in six-quark model 2-54105
 nonrelativistic Feynmann diagrams, with Coulomb interaction, pole amplitude renormalisation 2-58994
 operator-valued maps, Feynman path integrals 2-101211
 perturbative QCD, diagrammatic mass factorisation 2-84850
 photons and electrons, wave function eqns. 2-113200
 Schwinger analysis of, spontaneous pair creation 2-107606
 $\rho \rightarrow \pi\pi\gamma$, tests for ρ meson as gauge particle 2-54164
 $^{12}\text{C}(p,\alpha)^9\text{Be}$, 700 MeV, role of processes with cluster rearrangement 2-95995

fibre optics

Used for fibre optic instruments and their components e.g. fibre optic gyroscopes, endoscopes and fibre lasers. For optical fibre waveguides used in telecommunications, see *optical fibres*
 see also *optical fibres*

- accelerometer, multimode, based on photoelastic effect 2-102925
 accelerometer, portable fibre launched confocal Fabry-Perot, design and performance 2-91087
 accelerometer with segmented photodetector 2-74391
 acousto-optic US sensor using single-mode fibre 2-81098
 adverse environment effects, conf., San Diego, CA, USA (Aug. 1981) 2-112641
 anisotropic single-mode optical fibres, degree of polarisation, theory 2-65373
 army fibre optics systems, survivability 2-114444
 attenuation meas. with aid of microprocessor 2-114483
 biomeasuring system, photo-coupled with liq. cryst. optical modulator (*Japanese*) 2-117045
 biomedical circulation measurement technique, indicator dilution using a fluoroc. indicator 2-117044
 bundle scanner for laser photocoagulation treatment 2-81106
 coherence in optical fibre systems, conf., London, England (May 1982) 2-79286
 coherent-detection system with correl. fields, single-mode, single-freq. laser phase-noise limitation 2-109059

fibre optics continued

- current measurement, fibre-optic detector for difficult environments (*French*) 2-91054
 data bus topology based on low excess-loss symm. biconical-taper transmissive star couplers 2-114447
 densitometer, 2D, for autoradiogram grain density quantitation 2-105870
 differential heterodyne fibre interferometers, phase tracking schemes 2-79665
 digital fibre-optic system error rate evaluation using a normalising transform 2-109060
 dye laser emission, evanescent wave-coupled, in optical fibres 2-102786
 electric field sensor utilising piezoelec. PVF₂ film in single-mode fibre interferometer 2-81096
 endoscopy and lasers for medical use 2-78406
 evanescent-field fibre coupler for microwave signal generation using an optical self-heterodyne technique 2-75611
 experimental package development for Shuttle long-duration exposure facility 2-114446
 Faraday effect obs. in single-mode fibres using polarisation-optical time domain reflectometry 2-65371
 Faraday rotation in tuned optical fibre coils, device appls. 2-91078
 fibre interferometer for minute biological displacements meas. 2-73411
 fluorescent material remote detection via optical fibre cable 2-91077
 gradient index optics, conf., Honolulu, HI, USA (May 1981) 2-58521
 gradient-index fibre lenses of methyl methacrylate-vinyl phenylacetate 2-75687
 GRIN fibre lens arrays, optical imaging and radiometric props., fibre length depend. 2-102935
 guided-wave electronics (*Japanese*) 2-97235
 gyros based on Sagnac effect, fundamental precision limit (*Chinese*) 2-60241
 gyroscope, guided wave propag., relativistic electrodynamics of rotating linear media (*French*) 2-70480
 gyroscope, heterodyne, using coherent source 2-91082
 gyroscope, optical heterodyne, with freq. output, rot. detect. 2-97208
 gyroscope, performance limitations due to end reflections and coherence 2-91083
 gyroscope, sensitivity to environmental mag. fields 2-60249
 gyroscope for rotation sensing 2-60253
 gyroscope with inertial-navigation short-term sensitivity 2-109062
 gyroscopes, birefr. and polarisation effects 2-75690
 gyroscopes, optical Kerr effect compensation 2-91066
 high-sensitivity fibre-optic accelerometer, use of compliant rubber cylinder 2-95327
 hybrid sensors using liq. cryst. light modulators and piezoceramic transducers 2-102930
 hydrophone using multimode waveguide, based on Mach-Zehnder interferometer 2-81189
 index matching single mode fibre alignment system 2-60252
 interferometer, high-noise-rejection 2-58895
 interferometers, optical techniques for signal fading problem soln. 2-53825
 interferometric acoustic sensors, fibre coating optimisation 2-81099
 interferometric and multimode optical fibres, sensor appls. and market prospects (*Norwegian*) 2-70678
 interferometric fibre-optic sensor phase compensation 2-89799
 interferometric sensor, synthetic-heterodyne demodulation technique 2-81101
 interferometric sensor construction, LF laser jitter effect 2-91086
 interferometric sensors, coherent, optical FM appl. 2-91084
 interferometric sensors, correlated laser phase and intensity noise 2-79664
 interferometric sensors, homodyne, signal fading elimination using passive compensation 2-91085
 intracranial and cerebral perfusion press. meas. by fiberoptic applanation method 2-105845
 IR fibre optics, prospective vitreous materials 2-60201
 lamps illumination setting, use of circular neutral wedge filter (*German*) 2-81093
 laser Doppler meter with light guide, optically opaque fluid meas. (*Russian*) 2-114351
 laser Doppler velocimeter with optical fibre pickup, pulsatile blood flow high-resolution meas. 2-83704
 laser dual-beam transit velocimeters 2-81407
 laser system and data analysis techniques for absorbing and non-absorbing excited transients 2-84717
 lens array, graded-index fibre, non-Gaussian imaging props. 2-75686
 light amplification by evanescent wave coupling in a multimode fibre 2-80971
 light-focusing optical fiber displacement-vibration probe 2-97218
 linearly single polarisation fibres with zero polarisation mode dispersion, optimum waveguide struct. 2-65374
 low- and high-birefringence optical fibre development, polarisation props. 2-65372
 magnetic field meas. using Faraday cell sensor and fibre transmission line 2-64074
 magnetic field sensors, thermal phase noise anal. 2-102948
 magnetic field sensors employing metallic glasses 2-95415
 medical applications of optical fibres, technology 2-57884
 medical endoscopes, review of evolution 2-94147
 medical transducer development for precordial LF vibr. meas. system, heart disease diagnosis appl. (*Japanese*) 2-117047
 MFTF fibre optic links in instrumentation systems 2-74987
 micropower pulse frequency modulator for use in an optically isolated catheter system for sensor voltage meas. 2-88645
 multichannel spark gap triggering by ruby laser via fibre optics 2-97826
 optical telecommunication, state-of-the-art survey (*French, German*) 2-70699
 passive fibre optic gyroscope, low noise level obs. 2-97196
 photometer development, for concentration meas. of particles and dyes 2-64091
 pinch discharge plasmas, local elec. field meas., optically-coupled floating double probe 2-60801
 plasma diagnostics using fibre optics, with scintillators, system sensitivity and bandwidth as function of fibre length 2-115042
 polarisation optical time domain reflectometry meas. of fibre polarisation modifying props. 2-91080
 polarisation-maintaining single-mode fibres, stress-induced birefr. and elliptical core types 2-75689
 polarisation-maintaining single-mode-fibre interferometer for autocorrelation function meas. 2-114452

fibre optics continued

- pressure sensor, multimode fibre optic, based on photoelastic effect 2-97212
- pressure sensor based on microbending 2-95360
- progress report and future outlook, fibreoptic industry, 1982 2-81104
- resonator, all-single-mode fibre 2-91068
- ring interferometer, nonlinear phase nonreciprocity 2-112969
- ring interferometer, phase nonreciprocity due to acoustic emission 2-79662
- ring interferometers, nonreciprocity 2-109066
- ring resonator, closed-loop, birefr. effect on reson. freq. 2-97213
- Sagnac gyroscope, intensity-induced nonreciprocity obs. 2-109063
- Sagnac interferometer, freq. modulated heterodyne, for rot. rate detect. 2-81100
- SAW, fibre-optical sensor 2-97323
- scanner using fibre optic directional source array for ball bearing inspection 2-62342
- scintillating optical fibres for fine grained hodoscopes 2-70041
- scintillators, liquid, for plasma diagnostic expts. employing fibre optics 2-109587
- semiconductor diode gain element in series with optical fibre, external cavity controlled operation 2-55221
- semiconductor laser true time resolved spectra meas. technique using multiple fibre array 2-75571
- semiconductor wafer flatness and thin film stress profile meas. using thickness analyzer, fibre-optic appls. 2-63971
- sensor for cryogen level 2-74402
- sensor for tracking line-focus trough-type concentrating solar collectors 2-102931
- sensor technology, state of the art, acoustic, mag., gyro and laser diode sensors 2-81094
- sensor types, review 2-91075
- sensors, applications 2-75705
- sensors, colloquium, London, England (May 1982) 2-89464
- sensors, introduction 2-81105
- sensors, simple analogue and digital types 2-91081
- sensors using fibre optics (*German*) 2-91051
- sensors utilising Ni coated single-mode fibres, acoustic desensitisation 2-109064
- series-connected fibre waveguide system with step refr. index profile, transfer function 2-114463
- signal enhancement by spectral equalisation of high-freq. broadband signals transmitted through optical fibres 2-109051
- signal processor, matrix-vector multiplication and lattice filtering appls. 2-109065
- single mode fibre interferometer, passive compensation scheme 2-84688
- single mode fibre magnetometer, Ni-coated, fabrication and testing 2-60245
- single mode twisted fibre, circular birefr., scatt. light meas. 2-60248
- single-mode fibre-optic sensors for weak magnetic fields 2-89757
- single-mode fibre-optic waveguides, with weak birefr., polarisation props. rel. to device appl. 2-70696
- space application of fibre optics systems 2-114445
- space applications of fibre optics systems 2-91061
- special appls. of technology 2-97189
- strain gauge, single-mode optical fibre, dynamical behaviour 2-81095
- strain gauge based on microbending losses 2-91079
- strain sensors, high sensitivity, for measuring structural distortion 2-74407
- surface examination using spectrometer, fibre-optic meas. head for optical information extraction 2-89822
- temperature distribution sensor using time-domain reflectometry 2-91076
- temperature sensing system, fibre optic instrument 2-81097
- temperature sensors, single-mode-fibre point and extended 2-114450
- transducers, types, development and applications 2-95342
- transducers appl., 1982 status and future potential 2-65400
- transducers using fibres as sensors or light guides 2-97215
- tunable laser optical fibre probe based absorption spectroscopy for combustion meas. appls. 2-101465
- two-dimensional Walsh transforming device using integrated optic device 2-65413
- velocity sensor with optical fibre array 2-70676
- wideband differential interferometric system using optical fibres 2-79663
- $\text{Bi}_2\text{SiO}_{20}$, optical fibre sensor, electric field intensity and voltage meas. 2-65369
- CO_2 laser fibre optics, medical appls. 2-100085
- H_2 in solid SiO_2 optical fibres, new Raman-gain medium 2-90861
- Nd:glass fibre laser, lasing kinetics in periodic giant pulse regime 2-114289

 fibre reinforced composites

- see also carbon fibre reinforced composites; glass fibre reinforced plastics
- acoustic backscattering of subcritical flows 2-111405
- adhesion, fibre surface energy characterisation 2-56326
- aligned short-fibre composites, stiffness, fibre-end crack effects 2-97442
- amorphous metal ribbon reinforced resin matrix composite, mech. props. 2-57410
- angle-ply cylindrical shells, thermoelastic stresses at free boundary 2-114655
- anisotropic materials, irreversible hygrothermomech. behaviour, numerical anal. 2-71723
- breakdown model, unified, for long-acting loads 2-92094
- brittle debonding, antiplane deform. of body with rigid curvilinear crack and interface crack 2-97456
- brittle fracture dynamics, num. expt. and comput. algorithms 2-60475
- brittle matrix, with continuously aligned fibres, average crack spacing 2-103888
- broken fibre of composite with viscoelastic matrix, stress dynamic redistrib. (*Russian*) 2-81258
- coated, raindrop impact, indirect damage 2-62229
- constituents interactions during explosive welding, orthogonal propag. of sandwicheing front 2-62091
- continuous fibre type, fibre vol. fraction determ. 2-93692
- crack, slowly propagating from corner of inclusion, optical obs. 2-83216
- curvilinearly fibre reinforced composites, stress anal. 2-114643
- damaged, stress conc. factors, stat. treatment 2-105281
- deformation measurement problems, refl. holography appl. 2-103118
- directionally reinforced, stress distrib. in components 2-62158
- discs, rotating, stress state, refined calc. 2-81236

 fibre reinforced composites continued

- duplex fibre reinforced composite, double cantilever shear beam model of dynamic fracture 2-93593
- dynamic explanation of the hybrid effect 2-62197
- edge stress determ., finite element calc. 2-109187
- elastic and transport props. of two-component composites, McCoy bounds 2-99473
- elastic modulus difference phenomena 2-62157
- fibre length influence on tensile strength 2-116512
- fibre pull-out, expt. studies 2-67498
- fibre reinforced composites, acousto-US charact. 2-83315
- fracture energy, stability of transverse cracks 2-105283
- glass fibre reinforced cement, dimensional stability 2-67725
- glass fibre reinforced cement, strength assessment of aged fibres 2-99513
- glass fibre reinforced composites, at cryogenic temps., fatigue fracture life and mechanisms 2-105341
- glass fibre reinforced composites, at cryogenic temps., tensile and torsional fatigue 2-105340
- glass fibre-reinforced cement composites, weather influence on creep 2-105228
- hereditary-elastic reinforced plastic, short beam bending 2-55443
- ideally fibre-reinforced elastic strip under tension, instability 2-72760
- inextensible fibre in stretched elastic medium, stress anal. 2-86211
- infinite elastic body, stress field due to cylindrical inclusion with constant axial eigenstrain 2-93580
- insulating materials for supercond. magnets, low temp. irradiation effect 2-80182
- Kevlar reinforced polymer, matrix-induced compression effect on morphology and tensile props. 2-105224
- laminar, multidirectional, deform. and breakdown mechanism 2-114724
- laminated, brittle strength calc., computer algorithm, stress conc. role 2-60474
- laminated composites, three-dimens. inelastic finite element anal. 2-70852
- laminates, edge effect, stress distrib. singularity 2-83153
- laminates, flexural deform., transverse cracks, ply-delamination (*Japanese*) 2-57464
- laminates, rectangular plates, bimodular material, transient response 2-88119
- laminates, stress wave propag., micro-fracture mechanism (*Japanese*) 2-57463
- lignosulphonate fibre reinforced polyethylene, fibre form. in hydrostatic extrusion 2-67356
- macrocrack model 2-92095
- macrocrack problem in fibrous composite with undamaged fibres 2-114729
- metal based, porous, stress-strain state during compression 2-116414
- metal fibre reinforced metal matrix composites, stress redistrib. on local loss of plastic stability of fibres 2-116540
- metal matrix, hot pressing pressure calc. 2-72656
- Metglas ribbon reinforced epoxy, impact resist. 2-111270
- methods of testing in shear 2-93731
- multi-layer composite materials with different moduli in tension and compression, pre- and post-degradation anal. 2-91229
- multilayer laminated plates, thin and thick, hybrid-stress eight-node elements 2-86212
- NDT methods, review 2-62338
- orthotropic fiber-reinforced elastic composites, harmonic wave propag. and dispersive props. 2-93519
- plasma-sprayed coatings, effective contact area 2-83262
- plastic matrix, elastic and fracture props., design and testing 2-88195
- plastic matrix, fatigue behaviour 2-116537
- plastic matrix, flywheels, rot. strength, tensile stress, cracking and buckling failures (*Japanese*) 2-57465
- plastic matrix, impact fracture (*Japanese*) 2-57467
- plastic matrix, resonance charact., Fokker's bond tester method, artificial defect effects (*Japanese*) 2-57556
- plasticity anal., elastic moduli, yield conditions, hardening rules and stress conc. factor derived 2-99510
- plate, multipurpose optimisation 2-60426
- plates, circular, reinforcement optimisation 2-81249
- polyheteroarylene fibre reinforced epoxide binder composites, ^1H NMR study of mol. mobility 2-116073
- polymer, conductive, fibre filled, elec. and phys. props. 2-56562
- polymer matrix, high-performance, adhesive fracture energy, fracture mech. approach, T_g and relax., processes depend. 2-111403
- polymer matrix coatings, internal stresses, reduction by physiochem. means 2-83187
- polyoxymethylene whisker reinforced polymers, Young's moduli, acoustic props. 2-93547
- probability model 2-93620
- pulsed radiation flux exposure, thermokinetic charact. (*French*) 2-65462
- resin matrix, laser induced ablation, semianalytical model 2-105171
- rigid fibre inclusions embedded in elastic plate, yield loci 2-55450
- rod pull out problem, theory and expt. 2-97467
- shear problem of fibrous composite medium 2-55457
- shell structure, rational parameter values calc. and selection 2-60409
- short fibre, probabilistic theory of strength, variable fibre length and orientation 2-67433
- short fibres, unidirectional, prediction of failure modes 2-66114
- spatially reinforced, elastoplastic props. determ. by averaging method 2-62182
- stability problem soln. (*Ukrainian*) 2-114696
- steel, stainless 316L, fibre reinforced bioglass, processing and static mech. props. 2-57412
- steel fibre reinforced methyl methacrylate, crack growth, micromech. studies 2-111263
- steel reinforced concrete, AE appl. to corrosion damage charact. 2-78026
- steel reinforced concrete bond specimens, mech. props., finite element anal. (*Chinese*) 2-83167
- stress concentration at an edge noncoincident with reinforcement direction 2-65486
- structural performance evaluation of composite materials, moire methods appl. 2-105424
- tensile strength relationship with flexure strength 2-83168
- thermal conductivity, transverse effective, determ. 2-98360
- thermal transport properties determ. for thin fibres by composite method 2-104088
- thermoplastic matrix, matrix-fibre adhesion strength estimation 2-105407
- thermosetting plastic matrix with various fibres, mech. strength 2-98183

fibres reinforced composites continued

- Torbar steel reinforced concrete, cold worked ribbed reinforcing bar, fatigue, fracture mechanics approach 2-67494
 unidirectional, fatigue failure criteria 2-93628
 unidirectional, moisture diffusivity 2-86934
 unidirectional, specimen length rel. to struct. and anisotropy 2-83156
 unidirectional, strengths and thermal residual stresses 2-83215
 90° unidirectional fibre composites, mode II dynamic crack vel. correction factors 2-97432
 unidirectional fibre reinforced composites, fully and partially loaded, rate sensitive tensile impact props., test system 2-67684
 viscoelastic, crack development kinetics 2-114731
 Al-Al₃Ni eutectic, high-temp. coarsening 2-57343
 Al₂O₃ fibre FP reinforced pure Pb composite electrodes for Pb-acid battery 2-111544
 Al₂O₃ fibre reinforced Al, work of fracture, effect of isothermal exposure and thermal cycling 2-57472
 Al₂O₃ fibre reinforced Al-Mg, fabrication method 2-67259
 B fibre (aluminised) reinforced plastic, orthogonally reinforced, fracture anisotropy under low-cycle loading 2-116539
 B fibre encapsulation, in situ investig. in CVD reactor 2-77782
 B fibre reinforced Al, acoustic emission and longevity under steady load 2-93619
 B fibre reinforced Al, alloying influence on solubility of fibres, energy calc. 2-66237
 B fibre reinforced Al, dynamic elastic modulus with solid-state chem. interaction 2-83158
 B fibre reinforced Al, fracture and strength charact., chemical action effect (*Russian*) 2-72795
 B fibre reinforced Al, interface struct. and strength 2-77942
 B fibre reinforced Al, work of fracture, effect of isothermal exposure and thermal cycling 2-57472
 B fibre reinforced Al alloy, hot pressing pressure calc. 2-72656
 B fibre reinforced Al and Al-Cu-Mg-Mn, hot pressing, reaction between fibres and matrix 2-83068
 B fibre reinforced Al-epoxyphthalate matrix composite, mech. props. 2-116488
 B filament reinforced Ti, fibre-matrix chem. interactions at high temp. composite strength 2-77783
 Cu wire/cement interface, statistical anal. of decohesion rel. to fibre reinforced composite 2-67475
 Fe-Cu wire reinforced Cu-Fe alloy, age hardening (*German*) 2-111192
 Hg filaments in chrysotile-asbestos matrix, heat capacity near supercond. transition 2-66254
 In filaments in chrysotile-asbestos matrix, heat capacity near supercond. transition 2-66254
 Mo fibre reinforced Fe and Cu composites, porous, stress-strain state during compression 2-116414
 Mo fibre reinforced Ni-Cr, TiN coating on fibres influence on props. 2-67455
 SiC fibre reinforced Al, elasticity, ultrasonic meas. 2-93552
 SiC fibre reinforced Al, tensile props., thermal degradation effects 2-116485
 SiC fibre reinforced glass, flexural strength and elastic modulus 2-83151
 SiC filament reinforced Ti, fibre-matrix chem. interactions at high temp. composite strength 2-77783
 SiC multifilament reinforced Al, prep. and charact., 2-77941
 SiC reinforced lithium aluminosilicate glass-ceramic, thermal transport props. determ. by composite method 2-104088
 SiC whisker reinforced Al alloy composites, deform. behaviour 2-105250
 SiC whisker reinforced Al-Li alloys, mech. props. and microstruct., effect of Li 2-111240
 SiC yarn reinforced lithium aluminosilicate glass-ceramic, high strength and toughness 2-105298
 SiC/B fibre reinforced Ti alloys, heat-resistant, diffusion-affected interaction 2-88029
 W fibre reinforced Cu, helical fibres tensile props. (*Japanese*) 2-77913
 W fibre reinforced Cu composites, tensile yield behavior, effect of thermal history (*Japanese*) 2-105238
 W fibre reinforced depleted U-Ti matrix, corrosion rates and electrochem. behaviour obs. 2-116566
 W fibre reinforced Ni superalloy, high temp. composite, microstruct. stabilisation with ZrO₂, short fibres (*German*) 2-77781
 W helical fibre reinforced Cu, fibre deform. under tensile load (*Japanese*) 2-105233
 W wire reinforced Ni-base superalloy, flow and fracture behaviour during isothermal forging 2-93617

fibres

- see also carbon fibres; composite materials; fibre reinforced composites; glass fibres; optical fibres*
 amorphous hollow, contrast in electron microscopy 2-71306
 failure of fibrous materials under series-parallel struct. and equal load sharing, asymptotic distrib. 2-97458
 fibres, carbon coating produced by liquid metal transfer agent method 2-88245
 fibrous material, thickness independ. moisture meas. using Gunn oscillators (*German*) 2-74426
 heat flow through fibrous layer, two-dimens. problem (*Ukrainian*) 2-81211
 Kevlar-29, tensile fatigue and creep behaviour 2-105299
 length influence on composition material tensile strength 2-116512
 metal filaments, decimicron, prep. and tensile testing 2-62314
 metal-filled cellulose felt, high-porosity material prep., heat treatment and strength props. 2-99383
 nylon monofilaments, oriental, tensile failure obs. by quantitative fractography 2-93723
 plastic fibres, X-ray transition radiation meas. 2-64816
 polyethylene fibre, ultrahigh strength, prep. by zone annealing method, mech. props. (*Japanese*) 2-88051
 polyethylene fibres, influence of low-temp. radiolysis on strength (*Russian*) 2-57402
 polyethyleneterephthalate, β , relax., dielec. meas. 2-104805
 polyimide, gamma, centres occurring during thermal extension, influence on thermal stability (*Russian*) 2-77798
 polymer, acoustic props. meas. apparatus 2-102991
 polymer, oriental, tensile failure obs. by quantitative fractography 2-93723
 polymer films and fibres, acoustic props. meas. apparatus 2-102991
 polymer processing, modelling of nonisothermal processes 2-77800
 refractory fibre formation in an acoustic field 2-93483

fibres continued

- steel, porous fibre materials, corrosion resist. determ. 2-67694
 surface energy characterisation 2-56326
 thermal insulation materials, cemented joints inspection by neutron radiography 2-93697
 thermal transport properties determ. for thin fibres by composite method 2-104088
 transparent, sizing using light scatt., refractive index, correction factors 2-58781
 Al rod fibre texture changes during drawing of initial $\{112\}\{111\}$ and Goss orientations 2-57369
 Al-Si (0.9 wt.%) alloy, sintering in presence of liq. phase, capillary-porous struct. prep. 2-67246
 Al₂O₃ fibre, prep. and changes of microstruct. by heat treatment (*Japanese*) 2-116417
 B, encapsulation, in situ investig. in CVD reactor 2-77782
 B fibres, SiC coated, tensile strength as function of coating thickness 2-77950
 B fibres, strength charact., changes during annealing (*Russian*) 2-72796
 Cu fibre materials, sintered, high-porosity, physicochem. props. 2-83192
 Mo fibre reinforced Ni-Cr, TiN coating on fibres influence on props. 2-67455
 Ni fibre materials, sintered, high-porosity, physicochem. props. 2-83192
 SiC, amorphous, thermal transport props. determ. using composite method 2-104088
 Zr fibre texture by time-of-flight neutron diff. 2-57370

field, crystal internal *see crystal field interactions***field effect devices**

- see also field effect integrated circuits; field effect transistors; metal-insulator-semiconductor devices*
 No entries

field effect integrated circuits

- see also charge-coupled device circuits*
 CMOS RAMs, LSI, radiation resistance for Jupiter radiation belt 2-68595
 enlarger timer, using CMOS 7217 IC 2-84730
 MOS LSI static RAM, passivated, meas. of internal signal waveforms using stroboscopic SEM 2-58970
 NMOS chip autofocus system for lens shutter cameras 2-101478
 photodiode arrays for spectrometry using ultraviolet light 2-95488
 SOS, laser annealed, electron Hall mobility and residual stresses, heat treatment effects, Raman study 2-98745
 GaAs LEC grown semi-insulating, charact. for integrated circuit appl. 2-98654
 Ga_{1-x}Al_xAs laser FET monolithic IC, very high freq. operation 2-96969
 InP MISFET, monolithic integration with GaInAsP/InP laser, LPE growth 2-65242
 POCl₃ deposition, microdefects form. in IC masking oxide during unintentional P diffusion 2-71721
 poly-Si beam recrystallisation for IC fabrication 2-111065
 Si n⁺-p junction leakage behaviour, O precip. effects, double poly-Si gate FET DRAM technology 2-61568
 Si, polysilicon, thin film, CW laser-recrystallised material, for device manufacture 2-56409
 Si, reactive ion etching, contamination of blanket etched surfaces, MOS VLSI appls. 2-116568
 SiO₂ ultra-thin films, high-field generation of electron traps and charge trapping 2-66682

field effect transistors

- see also field effect integrated circuits; insulated gate field effect transistors; junction gate field effect transistors; Schottky gate field effect transistors*
 GaAs field effect transistors, ballistic electron motion 2-98658
 GaAs-Al_xGa_{1-x}As heterojunction FET, 2-D electron gas, quantum galvanomagnetic props. 2-56686
 GaAs-Al_xGa_{1-x}As heterojunction FET, 2-D electrons, far-infrared cyclotron resonance 2-56941
 In_{0.51}Ga_{0.49}As integrated pin/FET photoreceiver, 1-1.7 μ m 2-74503

field emission, electron *see electron field emission***field emission, ion *see field ion emission*****field emission electron microscopes**

- see also field emission electron microscopy*
 current stability, ion bombardment effect 2-64179
 electrostatic high-resoln. probe, operation 2-64172
 high-vacuum demountable field-emission electron/ion microscope for use at 4.2K 2-58965

field emission electron microscopy

- see also field emission electron microscopes*
 atomic or molecular polarisability measurement using trajectories in inhomogeneous elec. field theory 2-102707
 ferromagnetic thin film, micromag. struct., electron holography technique 2-92981
 metals, adsorbed atom diffusion coeffs., FEM 2-115555
 Ni surface, stepped, CO adsorpt. and dissociation, FEM study 2-92358
 Pd, adsorbed on W curved cryst. surface, equilb. coverage distrib., field electron probe-hole study 2-56360
 TIC field emitter, field emission ion and electron microscopy, AES and atom-probe studies 2-115520
 W, adsorption of N₂/O₂ mixture at low temp., FEM study 2-76804

field emission ion microscopes

- see also field emission ion microscopy*
 high-vacuum demountable field-emission electron/ion microscope for use at 4.2K 2-58965
 point-projection imaging of macromolecular contours 2-69302

field emission ion microscopy

- see also atom probe field ion microscopy; field emission ion microscopes*
 airlock for resistively heatable specimen 2-89863
 ferritin, adsorbed on W, field desorption imaging technique 2-76829
 ferritin clusters, point-projection imaging of macromolecular contours 2-69302
 image simulation for arbitrary cryst. struct. and orientation 2-55817
 loop temperatures in FIM, meas. and calc. 2-89865
 point-projection imaging, of unstained ferritin clusters 2-94263
 transition metals, effects of H₂ on field evaporation and field on microscopic imaging (*German*) 2-103569
 Ir, adsorbed ethylene, decomposition, surface struct. effects, comparison with Pt 2-98460
 K submonolayer adsorbed on W, field emission flicker noise, cross-correlation coeff. 2-99306

field emission ion microscopy continued

- Pt, ion-irradiated, atomic resolution obs. of point defect struct. of depleted zones 2-103862
 Si adatoms on W surfaces, atomic processes, direct obs. by FIM 2-115570
 Si surface (111), field evaporation in presence of H_2 , chemisorption, field ion microscope study 2-71799
 TiC field emitter, field emission ion and electron microscopy, AES and atom-probe studies 2-115520
 α -U, field ion microscopy 2-86622
 W (001) surface atomic structure, reconstruction, FIM study 2-66331
 W, cold worked, grain boundary dislocations, topographic anal., field ion microscopy study 2-115242
 W, faulty field evaporation at divacancies in [222] 2-57271
 W, ion-irradiated, atomic resolution obs. of point defect struct. of depleted zones 2-103862

field evaporation

- charge exchange mechanism, activation energy formulae 2-87054
 electrothermodynamic cycle calc. of ionic potentials 2-93383
 evaporation field formula including repulsive ion-surface interaction 2-93382
 ferritin, adsorbed on W, field desorption imaging technique 2-76829
 liquid metal ion source, emission mechanism, theory 2-89856
 mechanism, criterion for a prior prediction 2-99304
 metal surface, non-adiabatic processes 2-87939
 Muller-Schottky mechanism, theoretical anal. 2-93384
 post-ionization of field evaporated ions; a theoretical explanation of multiple charge states 2-87955
 theory, field sensitivity, expt. data anal. 2-57272
 transition metals, effects of H_2 on field evaporation and field on microscopic imaging (*German*) 2-103569
 Fe-Ni-Mo alloy, field vaporis., auto-ion mass spectrometry obs. (*Russian*) 2-67198
 GaP (111), surface comp., atom probe FIM study 2-92326
 Ir, field evaporation events as Markov chains, time of flight atom probe study 2-93381
 metallic glasses, field evaporation events as Markov chains, time of flight atom probe study 2-93381
 Mo, adsorbed CO dissociation, pulsed voltage and pulsed laser atom-probe study 2-76828
 NaCl, field-enhanced evaporation direct obs. 2-77709
 Ni-Mo, Ni-Mo-W and Ni-Nb alloys, field vaporis., auto-ion mass spectrometry obs. (*Russian*) 2-67198
 Pt-Rh alloys, field evaporation events as Markov chains, time of flight atom probe study 2-93381
 Si surface (111), field evaporation in presence of H_2 , chemisorption, field ion microscope study 2-71799
 W, faulty field evaporation at divacancies in [222] 2-57271
 W, field evaporation, electrothermodynamic cycle calc. 2-93383

field intensity patterns (antenna) see antenna radiation patterns**field interactions (condensed matter)**

- see also crystal field interactions; hyperfine field interactions (condensed matter)
 glass: Gd^{3+} , EPR with $g \approx 6.0$, reinterpretation 2-110636
 phosphate glass: Nd^{3+} , radiative and nonradiative props. 2-61951
 rare earth amorphous alloys, cryst. elec. field and local symm., mag. props. 2-72170
 silicate glass: Nd^{3+} , radiative and nonradiative props. 2-61951
 thiofluorenone, phosphorescence spectra, optically resolved zero field splittings 2-87835
 thioxanthione, phosphorescence spectra, optically resolved zero field splittings 2-87835
 xanthione, phosphorescence spectra, optically resolved zero field splittings 2-87835
 Bef_2 - NdF_3 based glasses, absorpt. and emission spectra of Nd^{3+} , at. struct. computer simulation 2-57149
 $PrCl_3$ complexes in soln., optical absorption spectrum, cryst. field parameters 2-116205

field ion emission

- evaporation field formula including repulsive ion-surface interaction 2-93382
 liquid metal ion sources, hydrodynamics 2-59578
 liquid metal ion sources, space charge effects for different geometries 2-77708
 metal microparticles and ions, field emission study 2-77110
 Al, liquid, field emission ion source, emission characteristics meas. 2-74570
 Ir surface, adsorption of H_2 , N_2 , work function changes, field emission study 2-87047
 Si film, produced by field emission deposition, props. 2-71836

field ion microscopy, atom-probe see atom probe field ion microscopy**field ionisation**

- butanoic acid, ionised, single and double H-rearrangements involving β -bond cleavage studied using field ionisation 2-105456
 emitter wires for field desorp. and ionisation, resistive heating 2-101490
 field evaporated ions, post-ionization, multiply charged states 2-87955
 hexanoic acid, ionised, single and double H-rearrangements involving β -bond cleavage studied using field ionisation 2-105456
 hydrogenic atoms, Rydberg states, ionisation rate in static electric fields 2-113928
 liquid metal ion source, emission mechanism, theory 2-89856
 organic molecules, surface ionisation on Pt needle shaped emitters 2-105054
 pentanoic acid, ionised, single and double H-rearrangements involving β -bond cleavage studied using field ionisation 2-105456
 In, Rydberg states, electric field ionisation 2-102652
 Na, excited $3d$ state, electric field ionisation 2-90485
 Rb, Stark states, field-induced stabilisation 2-80535
 SiH_4 on W-emitter, surface interaction, field ionisation mass spectra 2-105503
 W, field adsorption of Ne, electron-stimulated field desorption study 2-105053
 Xe+Xe, Rydberg atom, state changing, ionisation, electric field effects 2-114096

field measurement, electric see electric field measurement**field measurement, magnetic see magnetic field measurement****field plotting**

- see also field strength measurement
 body surface maps, signal anal. and display with a microcomputer mapping system 2-100145
 epicardial mapping by online display (*Japanese*) 2-57914
 thoracic impedance cardiograms, surface mapping 2-68180

field strength measurement

- see also electric field measurement; magnetic field measurement
 No entries

field theories, unified see unified field theories**field theory, classical see classical field theory****field theory, crystal see crystal field interactions****field theory, electromagnetic see electromagnetic field theory****field theory, meson see meson field theory****field theory, quantum see quantum field theory****fields, electric see electric fields****fields, magnetic see magnetic fields****filament lamps**

- IES approved method for electrical and photometric meas. 2-69234
 polarisation degree of spiral filament radiation, analytical determ. 2-102894
 Mo-cup/quartz seals for lamps and lasers 2-79596

filled polymers

- anisotropic, long-term strength prediction 2-92083
 cellulose felt, metal-filled, high-porosity material prep., heat treatment and strength props. 2-99383
 ceramic particle-PMMA composite, optimum strength 2-105280
 coke filled, strength and deform. props. 2-83188
 conductive, fibre filled, elec. and phys. props. 2-56562
 current-conducting pastes based on polymer binders and fine Ag and graphite powders, prep. and electrophys. props. 2-99384
 diamine cured epoxy resins, microballoon filled, acoustic, mech. and phys. props. 2-60322
 dynamic and mech. props. (*German*) 2-88123
 elastomer, filled, effect of large strains on ageing 2-105191
 elastomer-filler interaction, filler effect on viscosity 2-57390
 epoxy mixture, Al_2O_3 filled, shock-loading response 2-71570
 epoxy resin, glass, C, aramid filled, dynamic mech. props., effect of boiling water 2-88117
 epoxy resin, particulate reinforced, thermal expansion 2-110017
 epoxy systems, elastomer filled, viscoelastic fracture 2-67512
 epoxyphthalate-Al matrix, B fibre reinforced, mech. props. 2-116488
 fibre reinforced coatings, internal stresses, reduction by physicochem. means 2-83187
 fibre reinforced thermoplastics, matrix-fibre adhesion strength estimation 2-105407
 flow, eqns. of motion of nonlinear viscoelastic liq. appl. 2-81250
 glass bead-filled Nylon 6, fatigue crack growth and fracture energy 2-105279
 glass fibre unidirectionally reinforced terephthalate-polyester filled resin, laminate, filament wound tubes, resin flexibility effects on props. 2-116497
 highly filled polymeric rubber composites, struct. changes under stretching, acoustic obs. (*Russian*) 2-109703
 metaloplastics—high conductivity materials 2-56563
 nitrile rubber/phenolic filled polymeric system, Charpy impact testing, ductile-brittle transition temp. meas. 2-83326
 oligoxypropylene, filled, mol. mobility, dielec. loss obs., filler conc. effect (*Russian*) 2-66977
 organic filled plastics, components determ. by thermogravimetric anal. 2-83321
 phenolic molding material, fatigue strength 2-76577
 PMMA, thin walled glass microsphere filled, effective elastic moduli, US meas. 2-88118
 polybutadiene, effect of glass filler size on tensile props. and tear strength 2-88137
 polybutadiene, filled elastomer, fracture, electron and positive ion emission time correlations meas. 2-116345
 polyester resin, quartz powder filler, cryogenic thermal expansion meas. method 2-65460
 polyethylene, C black filled crosslinked, elec. props. 2-66560
 polyethylene, low density, stainless steel non-agglomerating spherical powder filled, rheological anal. of melt 2-114749
 polyethylene based, hydrostatic extrusion 2-67281
 polyethylene oxide- $LiClO_4$ filled polymer electrolytes, electrochem. and mechanical props. 2-115458
 polyethylene oxide- $LiClO_4$ filled polymer electrolytes, electrochem. and physical props., prep. condition effects 2-115459
 polyimide, glass-fabric-filled, mech. strength as function of γ -ray irradiation 2-80180
 polymer filler affinity, rheological determ. 2-91371
 polypropylene, rubber toughened, creep kinetics, effect of rubber particles 2-67360
 polypropylene reinforced with glycerol-treated mica, rheology, tensile props. 2-111216
 polystyrene, high-impact, rubber-toughened, internal struct. of rubber particles and craze breakdown 2-105297
 polyvinyl acetate, plasticised, filled by fluoroplast, impulse NMR study (*Russian*) 2-56959
 PTFE based composites, filler effect on friction and wear behaviour 2-111325
 PVC, C black filled, polarised IR transmittance and elec. resist. study 2-99102
 PVC, plasticized, rheological and mech. props. 2-67413
 sheet moulding compounds, fracture behaviour, influence of constituents on mech. props. 2-67481
 sheet moulding compounds, fracture behaviour under tensile load 2-67480
 styrene-acrylonitrile copolymer, flake-filled, fracture mechanics (*Japanese*) 2-111291
 teflon, glass-filled, Fluorogold, polarisation props. in far IR 2-81056
 thermal cond. meas. and calcs. 2-104084
 ureaformaldehyde resin, $BaSO_4$ filled, internal deform. determ. (*Bulgarian*) 2-99508
 viscoelasticity, linear eqns., aftereffect kernels choice 2-91272
 C fibre reinforced plastics, fatigue resist. rel. to engineering factors 2-93618

filled polymers continued

- C particle filled, elec. cond. as a function of C content 2-92617
- Fe-phenol-formaldehyde resin, filled polymer, ferromag. adsorbents, mag. props. 2-66871
- Pb(Zr, Ti)O₃ filled, flexible composite transducers 2-74399
- polyimide: Pd filled polymer film, conductive, synthesis and characterization 2-57328

films

- see also adsorbed layers; coatings; foils; helium films; Langmuir films; liquid films; monolayers; optical films; polymer films; replicas; thick films; thin films
- No entries

filtering and prediction theory

- see also information theory; Kalman filters; random processes; Walsh functions
- adaptive filter performance with nonlinearities in the correlation multiplier 2-97311
- air pollutant concentrations, predicted by revised GMDH algorithms 2-57749
- gravity data multifiltering, resolving power (Hungarian) 2-57952
- Lageos laser range data, outliers removal/detect., appl. to observatory sites relative motion 2-100191
- least square predictors, enhancement of sinusoids in coloured noise and whitening performance 2-75785
- linear filter coefficients accuracy determined by iteration of least squares method, geophysics appl. 2-78567
- marine seismic reflection records processing, compensation for source heave by use of a Kalman filter [underwater sound] 2-68513
- ocean surveillance, attribute problem, combined probabilistic and fuzzy set technique 2-63147
- optical information processing techniques, fundamentals and appls. 2-114210
- optimal signal detection in ECG 2-62811
- pattern recognition, space-invariant, hybrid optical-digital image processing 2-108811
- phase and frequency tracking by forward dynamic programming 2-60311
- power reactors, one-dimensional heat conduction 2-108082
- resolution enhancement of two-dimensional medical sonograms 2-62711
- seismic sounding, frequency domain mapping approximation of moveout filters with appls. 2-100295
- smoothing methods, exponential, appl. for predicting time series from small samples (Russian) 2-58591
- speech elements synthesis using acoustic tube mode (German) 2-97306
- speech vocoding, frequency weighted Itakura-Saito spectral distance measure 2-97308
- TV rate electron microscope images, noise reduction by digital filtering 2-113054
- two-dimensional spectral estimation by linear prediction 2-60308
- vowel recognition, various linear prediction parametric representations evaluation 2-97316
- Wiener filtering, appl. to meas. of seismic waves interstation phase and group vels. and Q 2-88748

filters

- see also active filters; band-pass filters; digital filters; high-pass filters; Kalman filters; low-pass filters; microwave filters; optical filters; passive filters; spatial filters
- comb. used for mean SAW phase velocity 2-81183
- low-background hard X-ray spectrometer, APACHE, 10.6 μ m laser fusion expts. appl. 2-101508
- regulating one channel filter for seismic multiple wave fields subtraction in reflected wave method 2-111889
- SAW filters, low-loss low-ripple, using bidirectional centrosymmetric transducers 2-81196
- SAWD, powerful passives 2-97336
- two-channel SAW filters with capacitive electrode weighting 2-81203
- Weber-type gravitational antenna, mechanical filter for suspension 2-53653
- X-ray diagnostic equipment, radiation quality improvement 2-78412

filters, optical see optical filters**filtration**

- depression curve in inhomogeneous ground 2-60634
- fine-pored filter, gas diffusion, laser radiation control effect 2-97649
- fluidised beds, gas-solid, particulate removal, simulation 2-81386
- gas diffusion through porous membranes, laser control, phenomenological model 2-55661
- nonlinear filtration flows, boundedness and convergence 2-81392
- nonstationary filtration, heat cond. problems, soln. by integral relations method 2-60348
- one-dimensional flow through partially saturated porous medium 2-97643
- PWR radioactive waste processing, ultrafiltration system operational impact 2-108014
- radioactive waste, evaporator pretreatment by ultrafiltration 2-64499
- radioactive waste, mobile ion exchange and filtration treatment 2-64500
- vapour filtration in dispersed media, heat and mass transfer eqns. 2-60640

FIM, atom-probe see atom probe field ion microscopy**fine structure, atomic see atomic fine structure****fine structure, molecular see molecular fine structure****finite element analysis**

- 2-D magnetic fields for grid system with arbitrary distortions of grid lines, numerical calc. 2-90765
- acetabular components in total hip arthroplasty, axisymmetric model 2-105725
- acoustic emission numerical simulation by finite difference method 2-75758
- acoustic waveguide problems solved using finite element method 2-81145
- annular crack, static finite element stress intensity factors 2-103088
- annular plates, polar orthotropic, natural freqs. 2-65508
- anodic leveling under secondary and tertiary current distribution conditions 2-88270
- arbitrarily shaped surfaces, finite element approx. of EM diffraction 2-96804
- automobile passenger compartment, structural-acoustic finite element anal. 2-75780
- axisymmetrical problems, limit analysis, numerical determ. of complete static solns. 2-89535
- beam, prismatic, plastic analysis of torsion 2-86216
- beam models, elastic, nonlinear, planar, computational post-buckling anal. 2-60434

finite element analysis continued

- beams, finite element for study of coupled bending-prevented torsion 2-97374
- beams and rods, elastic, non-linear theory, finite element representation 2-109194
- bicrystals, anisotropic, stress conc. on grain boundary, finite element anal. 2-115577
- bimaterial structures, elastodynamic fracture anal. using finite element method 2-55499
- bimodulus composite materials, laminated plates, behaviour 2-97385
- biological materials freezing, numerical stability of finite element solns. 2-67962
- birefringence properties twin-cored optical fibres 2-86105
- bone, human tibia, torsional stress anal. by finite element method 2-94097
- bone fracture site properties monitoring with external fixation, finite element and expt. analysis 2-62821
- clad fibre acoustic waveguides, refined finite element anal. 2-109096
- complex structures, surface crack stress intensity factors, EPAS-J1 appl. 2-69804
- composite material, elastic, effective constitutive coeffs., effect of slip between components (French) 2-55422
- composite material, partially cohesive, homogenised constitutive law 2-60396
- composite materials with different moduli in tension and compression, pre- and post-degradation anal. 2-91229
- compressible potential flow, transonic eqn. soln. by optimal control and finite element methods 2-103187
- computation, conference, Paris, France (Aug. 1981) 2-107009
- concave flexural acoustic transducer response 2-114579
- concrete, plastic-fracture model 2-55503
- conforming axisymmetric shell element 2-109216
- contact problems for the elastic beam 2-114671
- contact problems with friction, numerical realisation 2-97472
- contact resistance meas., geometrical contris., finite element modelling and expt. results 2-110446
- continua, 2D and 3D stress analysis using UNCLE finite element scheme 2-97388
- continua, unbounded, homogeneous, finite element formulation 2-103029
- continuous incompressible media, penalty finite element anal., round-off error 2-79358
- continuum mechanics, rel. to solid state physics, review (German) 2-91232
- controlled nuclear fusion expts., finite element network method for three-dimensional eddy current calc. (German) 2-108104
- convection diffusion problems, finite element method, error anal. 2-103003
- convection dominated, finite element method for solving flow problems, upwinding technique 2-91456
- corner cracked holes, stress intensity factors under general loading conditions 2-60483
- Couette flow with mixed interpolation finite elements anal. 2-86257
- coupled fluid-structure system, vibr. anal. computation 2-109225
- crack propagation, steady state, mol. dynamics simulation 2-92098
- crack stress intensity factor estimation with singular components of the total finite element soln. 2-103093
- crack tip, superposition of the finite element method on the singularity terms in determining the stress intensity factor 2-65525
- crack tip elements, quarter-point, optimum size 2-103094
- craze deformation, finite-element analysis, surface displacements and stresses 2-67590
- degenerated shell finite elements, reduced integration, numerical conditioning 2-107099
- diffusion problems, random, non-stationary, one-dimens., finite element anal. 2-103012
- duct-radiated sound fields, 2-D finite element analysis 2-114503
- ductile fracture, in plane strain, reduced integration effect on 2D isoparametric element 2-97453
- ductile materials, modelling of low rel. erosion by spherical particles 2-86790
- dynamic crack propagation, numerical anal., generation and prediction studies 2-86222
- earthquakes, two-dimensional modelling rel. to effect of underground struct. on ground surface motions 2-105954
- ECG three-dimensional inverse problem soln. using finite element method 2-94230
- eddy current calcs. in thin conducting plates, using finite element-stream function code 2-55034
- eddy current computations in 3-D, methods 2-55039
- eddy current problem, 3D, calc. using finite element method 2-55032
- eddy current problem, in 2D, hybrid finite element-boundary integral formulation 2-55036
- eddy currents, finite element anal., PE2D package 2-55029
- edge cracks, diffraction of long wavelength horizontally polarised shear waves, NDT 2-83304
- edge-defined film-fed growth, heat transfer effect on interface shape and solute segregation 2-97955
- eigenvalues, finite difference methods 2-58587
- elastic bodies contact, dual finite element analysis 2-60485
- elastic isotropic solid, point defects elastic interaction, defect-matrix modulus influence 2-56006
- elastic-plastic boundary-value problems, finite element soln. for capturing failure states 2-91278
- elastic-plastic problems, finite element soln. 2-81259
- elasticity, constrained problems, finite element methods 2-79362
- elasticity, convergence of approximate solns. for nonlinear incompressible problems (French) 2-89534
- elasticity theory, resolvent finite element method relations construction 2-109188
- elasto-plasticity equilibrium problem anal. using finite element methods 2-91267
- elastoplastic bodies obeying Hencky's constituent law 2-84443
- elastoplastic problem soln. by finite element method 2-75868
- elastoplasticity laminate structure modelling with mixed finite element 2-91260
- electromagnetic fields, two-dimensional, determ. using finite element method (Rumanian) 2-108764
- electromagnetic finite element calculation, inclusion of hysteresis processes 2-55026
- electrostatic fields digital determ. using finite element anal. (Rumanian) 2-108765

finite element analysis continued

- element stiffness matrices, derivation by assumed strain distrib. 2-109186
 EM field in system of conductors, appl. of finite element method 2-55040
 EM scattering of dielectric cylinders, finite element anal. 2-96813
 explosive-metal interaction problems with complex sliding surfaces, three-dimens. dynamic analysis 2-91372
 fast fracture analysis, moving singularity finite element models 2-65516
 fast running crack band, dynamic finite element anal. 2-91328
 fastener effects, in finite element models 2-109182
 fatigue, fretting, finite element anal. and electron microscopy study 2-88193
 fatigue, US, fracture mechanics anal. 2-88300
 femur, state of stress, 3D finite element analysis and expt. meas. 2-100037
 finite cracked bodies, dynamic stress intensity factors under harmonic loading 2-97431
 flat overlay waveguides for SAW using acoustic surface impedance 2-91182
 flexible pipes, finite-element simulation of pulsatile flow, arterial disease appl. 2-105636
 flexural transducer using shear mode piezoelectric ceramics, finite element analysis 2-91200
 floating elastic plate, optimisation of wave-damping props. (*Ukrainian*) 2-103015
 flow, low-speed, calcs., STEALTH computer code appls. 2-109267
 flow problems, alternating direction implicit finite element method 2-91374
 flow separation pattern, comparison using FEM and FDM 2-81324
 fluid flow problem, simple, isoparametric and rational basis elements, expt. investigation 2-70889
 fluid-structure interaction problems, computer implementation aspects 2-109645
 foundations, nonlinear boundary conditions 2-60418
 fracture mechanics parameter, elastic-plastic, preloaded specimens (*Japanese*) 2-91331
 fracture toughness specimens, elastic-plastic stress state, effect of side grooves, finite element anal. 2-111394
 framed underground structures, dynamic response 2-109190
 framework dynamic response by FFT 2-109215
 fusion material, irradiated, miniaturised disc bend test development 2-88316
 fusion reactor particle transport, one-dimens. discrete ordinates calc., Galerkin quadrature formulation 2-80221
 gas flow through a tube, finite element soln. 2-97694
 general structures, creep induced buckling 2-114692
 graphite, water-cooled pyrolytic targets, design and operation at LAMPF 2-108188
 HCDA, fluid-structure interaction, finite element calc. 2-74873
 heated concrete, moisture and heat transfer, finite element program 2-69711
 heterogeneous materials, bounds for effective cond. by finite element method 2-98606
 hip joint total prosthesis, stress/strain analysis of Ti net cement construction (*German*) 2-88691
 hybrid elements, recent developments 2-79372
 ice, fusion rate, heat transfer, finite element anal. 2-55407
 incompressible mixed finite elements for Stokes and Navier Stokes equation (*French*) 2-89540
 incompressible viscous flow, conforming mixed finite element methods 2-75919
 incompressible viscous flow, unsteady Navier-Stokes eqn. finite element soln., fractional step method 2-75918
 induction machines in heave mode, dynamic behaviour anal. using finite element and Fourier anal. 2-80871
 inviscid subsonic boattail flow, finite element anal. 2-70979
 J-integrals, three-dimens.; evaluation by elastic analysis (*Japanese*) 2-109245
 laminate, finite element analysis of instability related delamination growth 2-62196
 laminated composites, three-dimens. inelastic finite element anal. 2-70852
 large deformation static and dynamic finite element analysis of extensible cables 2-60442
 laser mirrors, water-cooled, Fresnel ripple mapping 2-97040
 layer composites, edge stress determ., finite element calc. 2-109187
 linear materials, plane problems, uncoupled thermoviscoelastic response for all Poisson ratios, finite element formulation 2-81243
 LMFBF debris tray free convection flow, finite element solns. 2-90263
 LMFBF subassemblies, response to pressure transients, arbitrary Lagrangian-Eulerian finite element method 2-74875
 magnetic field, saturable, EMF, torque and stiffness, finite element anal., stationary method 2-80874
 magnetic fields, two dimens. problems, NMLAP finite element program 2-55018
 magnetic fields in axisymmetric boundaries 2-55025
 magnetoelastic waves propagation, nonlinear, from cylindrical cavity (*Ukrainian*) 2-116041
 magnetostatic fields, integral and differential eqns. formulation, numerical solns. 2-55017
 magnetostatics, 3D mag. vector problem, point iterative algorithm 2-55013
 magnetostatics, 3D problem, vector pot. formalism 2-55011
 magnetostatics, anisotropic nonlinear 3D problems, two scalar pot. finite element anal. 2-55009
 magnetostatics, complementary and dual energy finite element principles 2-55006
 magnetostatics, linearised scalar pot. formulation, discrete parametric boundary problem 2-55010
 membrane, axisymmetric, Mooney, rubber, large deforms., finite element computation 2-79361
 metal forming, rigid-plastic anal. using finite element method, formulation for finite deform. 2-105180
 metal forming simulation 2-72758
 MHD channel flow problems, finite element method 2-103219
 microcalorimeter, heat cond. batch, computer simulation for deconvolution by D-B finite element technique 2-117161
 mirror, deformable, primary, design, space telescope appls. 2-102895
 multilayer laminated plates, thin and thick, hybrid-stress eight-node elements 2-86212
 multilayer shell, inclined, isoparametric triangular finite element 2-91273

finite element analysis continued

- multiwire drift chambers, method for comprehensive anal. using finite element approach 2-90391
 myocardial elastic props., 3D finite element reconstructions from 2D echocardiograms 2-94101
 Navier-Stokes eqns., anal. of upwind discretisation schemes 2-95021
 Navier-Stokes equations, Galerkin finite element soln., significance of chequerboarding 2-101173
 noncatalytic reactions model solution 2-99702
 nonisothermal classical plasticity, computational aspects 2-109192
 nonlinear dynamic structural response, implicit time integration, numerical stability 2-109204
 nonlinear magnetic field problems with complex current sources, finite element anal. 2-102686
 nonNewtonian fluids in channel, flow calc. using finite element method 2-109373
 nonstationary Navier-Stokes problem, finite element approx. 2-95020
 nonuniform rotating blades, flexibly attached, torsional vibration analysis 2-91298
 notch, stress distrib., elasto-plastic finite element anal., geometry effects 2-109240
 nuclear reactor fluid-structure interactions, finite difference anal. 2-59511
 optical waveguides, anisotropic, approximate scalar finite-element anal. 2-81075
 particle beams, space charge forces, finite element anal., PE2D and TOSCA computer programs 2-55055
 planar arbitrarily anisotropic diffused optical waveguide anal., finite element method 2-86096
 plane stress problems in elasticity, finite element method appl. (*Chinese*) 2-103037
 plasma, two-dimens., numerical simulation, implicit method 2-97780
 plate, thin, large displacement bending and post buckling analysis, finite element models 2-109212
 plate, viscoelastic, cracked, dynamic anal. by 'finite element' method, \bar{J} -integral 2-103102
 plate assemblies, prismatic, elastic and elasto-plastic, local instability numerical anal. 2-109193
 plate tectonics, finite element study of deformation of Aegea 2-94353
 plates, composite, laminated, edge effects 2-103028
 plates, thermoviscoelastic, dynamic problem soln. by Laplace transform-finite element method 2-81246
 plates, thick, rectangular, laminated, composite, non-linear bending 2-70849
 plates, thin and moderately thick, invariant 8-node hybrid-stress elements 2-103040
 plates and shells, optimum design with allowance for temp. effect 2-114640
 radiative transfer, analytic soln. of difference eqns. 2-78946
 reactor thermal transient finite element anal. using isoparametric anal. 2-96230
 RIKEN SSC, sector magnet structural anal. by finite element method (*Japanese*) 2-64717
 rod, short, 3-D finite element anal. 2-70871
 rod pull out problem, theory and expt. 2-97467
 rotating machinery vibration anal. using finite elements 2-69012
 rotational flow in a skewed shrouded rotor geometry, finite element anal. 2-60549
 saturated porous media, nonlinear transient phenomena 2-76017
 scattering, finite element method analysis with Lagrange multipliers 2-107176
 Schrodinger equation, numerical integration, finite difference methods 2-79409
 Schrodinger equation, numerical integration in finite difference schemes 2-79408
 seismicity of N China Plain, finite element anal. and exptd. studies 2-94305
 semiconductor, continuation method for calc. of potentials and currents 2-72008
 semiconductor transport equations, 3-D transient finite element model 2-71962
 shell, spherical, under a conc. load at the apex, min. weight design 2-103024
 shell, thin, penalty function element for analysis 2-86207
 shell analysis, deep, conforming finite element family 2-60397
 shell approximation via finite quadrilateral elements 2-103026
 shell structures, stresses, use of doubly curved finite elements 2-55479
 shells, circular cylindrical, reinforced, static anal. using geodesic beam finite elements 2-60398
 shells, cylindrical, under nonaxisymm. press., nonlinear deform. and stability, finite-element anal. 2-65481
 shells, shallow, arbitrarily shaped, static anal. 2-103023
 shells of revolution, linear node and transitional shell finite element 2-86208
 single mode azimuthally inhomogeneous fibre, finite element anal. of stress-induced birefringence 2-75698
 skin and subcutaneous tissue, 2-D steady state temp. distrib., finite element anal. 2-57784
 slow crack growth 2-75901
 solar collector panels with optimal mass flow rate, temp. distribution computing 2-116849
 sparse matrix solver, node-oriented, for fission reactor design 2-107931
 spine, stress distrib. model, 3D surgical simulation 2-116959
 springs, large displacements and dynamic stability, helical finite elements 2-114630
 spurious reflection of elastic waves in nonuniform meshes of constant and linear strain finite elements 2-114704
 stability problems, rods and shells, characts. of discrete schemes 2-81266
 stability-enhancing two-step method for fluid calculations 2-107102
 stationary Stokes problem, finite element subspaces with optimal rates of convergence 2-75924
 steel, double cantilever beam specimens, finite element simulation of fast fracture 2-77897
 steel, SA533B-1, plane strain large-scale yielding, crack tip intense strain region 2-116527
 steel fibre reinforced methyl methacrylate, crack growth, micromech. studies 2-111263
 steel plates loaded by uniaxial in-plane compression, evaluation of elastic-plastic analyses 2-91265
 steel reinforced concrete bond specimens, mech. props. (*Chinese*) 2-83167
 Stokes problem, mixed finite element method 2-114755

finite element analysis continued

- stress intensity factor evaluation, using singular finite elements 2-97435
 stress intensity factor evaluation using combined integral-eqn. and finite-element method 2-107093
 stress intensity factor near crack tip, finite element anal. 2-81286
 stretched-grid coordinate system model computational instabilities 2-117323
 strip rolling, plane strain, simulation by rigid-plastic finite element method 2-114737
 structure analysis, direct second-order finite element method 2-107100
 structure-to-structure mech. interaction anal., three dims. 2-107930
 Sturm-sequence check for eigenproblems resulting from variational principles with subsidiary conditions 2-53491
 surface crack, empirical stress intensity factor eqn. 2-65515
 tapered cantilever beams with elastic foundation, stability subjected to concentrated follower force at free end 2-97268
 temperature distribution in human torso 2-99902
 terrestrial electricity, refined finite-difference simulations using local integral forms 2-88732
 thermally-loaded structures, cracks, elastic-plastic anal. 2-86226
 thick plate buckling FEM 2-114690
 thin hard coatings, effect on Hertzian stress field, finite element anal. 2-93652
 three dimensional solid shell transition elements 2-109181
 three-dimensional diffusion neutronics, mixed finite difference formulation 2-80048
 three-dimensional field computation 2-55028
 torus, full, eight-coil, superconducting, magnetoelastic buckling, finite element anal. 2-103047
 trabecular bone, porous foam model, loading 2-62548
 transient heat conduction eqn., finite element method and principle of max. norm. (Chinese) 2-109157
 transient incompressible fluid flow, quadratic finite element program user's manual 2-54487
 transient large displacement calcs., error growth 2-101167
 transport-diffusion algorithm and its applications to the Navier-Stokes equations 2-69114
 turbulent flow in dust, finite element soln. 2-97652
 tutorial approach 2-74197
 two dimensional waveguide equation soln. using finite element method 2-102918
 two-dimensional finite elements, geom. shape effect 2-107098
 two-dimensional steady-state skin effect, integrodifferential finite element formulation 2-55027
 unified Timoshenko beam finite element 2-91296
 universal pre- and post-processing system, for finite element analysis 2-107932
 viscous fluid flow, stationary and axially symmetric, numerical anal. 2-70895
 viscous incompressible flows, Lagrangian-Eulerian finite element formulation 2-55530
 water, freezing rate, heat transfer, finite element anal. 2-55407
 water, isentropic compression, one-dimens. finite difference calc. 2-69194
 water, isentropic compression, one-dimens. impact expt., finite difference simulation 2-69195
 water flooding problem, one-dimens., with gravity, finite-element method 2-81389
 WC-Co alloys microscopic behaviour in deformation, anal. using finite elements (Japanese) 2-77882
 wire drawing, plastic flow and stress/strain distrib., calc., computer program 2-99480
 Al films, laser machined holes, TEM, SEM and numerical study 2-86725
 Be, multiaxial stress-fracture criterion, use of notched beams 2-116555
 Cr films, laser machined holes, TEM, SEM and numerical study 2-86725
 Li blanket design of fusion reactor, MHD finite element anal. 2-113731
 Na₂O-SiO₂ glasses, mech. props., finite element method calcs. 2-111232
 Ni-base superalloys, fatigue growth of surface cracks 2-93599
 Si, numerical simulation of two dimensional impurity diffusion, finite element technique 2-71732
 Si-Fe, domain structs. and stress distrib. due to ball-point scratching 2-82629
 SiFe laminations, skew domain wall bowing and shearing, asymmetric roll orientation 2-82680

Finlay-Freundlich red-shift hypothesis see *gravitational red shift*

fires

- see also *accidents; combustion; flames; safety*
 forest fire smoke, relation between light scatt. coeff. and particulate matter conc. 2-105617
 LMFBR, spray and pool fires, model expts. 2-74878
 plumes, method for optical effects determ. 2-11479
 propagation of IR, radar and visible radiation 2-113386
 thermal plumes, axisymm., turbulent struct. 2-114794

fission

- see also *fission of plutonium; fission of uranium; photofission; spontaneous fission*
 actinide nuclei, fission cross-sections, double humped barrier model anal. 2-64391
 actinides, fission energy depend., superfluid model (Russian) 2-59325
 Brownian motion and fission rate, Fokker Planck eqn. soln. 2-54452
 Brownian motion model 2-59323
 Brownian motion study of fission rate 2-54451
 collective nuclear variables, inertial parameters from Feynman path integrals, HI collisions, fission 2-113333
 fast fission, deep inelastic reactions, compound nucleus form., in dynamic macroscopic model 2-96034
 fissibility parameter isospin depend. in droplet model 2-54456
 fusion-fission excitation functions, rot. liquid parameters, statistical corrections 2-107892
 heavy ion induced, scission point stretch model 2-74781
 heavy ion reaction study using solid state nuclear track detector 2-64423
 heavy-ion collisions, fast fission phenomenon, dynamical model 2-85090
 heavy-ion collisions, fast fission phenomenon 2-113532
 heavy-ion collisions, role of rotational degrees of freedom 2-113548
 heavy-ion collisions at medium energies 2-113530
 heavy-ion Coulomb excitation and Coulomb fission expts., nuclear forces exclusion 2-59397
 heavy-ion reactions, conf., Saclay, France (May 1982) 2-112650

fission continued

- mass asymmetry in fusion and fission processes induced in heavy ion reactions (Rumanian) 2-90155
 neutron cross section for fission nuclei in region of unresolved resonances (Russian) 2-85007
 nuclear fission dynamics and collective phenomena, symposium, Bad Honnef, Germany (Oct. 1981) 2-112657
 nuclear fragmentation theory, Schrodinger eqn. with time depend. mass parameter 2-54342
 pre-actinide nuclei, low-energy fission, ang. anisotropy anal. (Russian) 2-101877
 precision dissipation in nuclear fission from a microscopic point of view 2-64390
 prompt fission neutron spectra, average multiplicities, evaporation theory calc. 2-90083
 prompt mass distrib., study using structure-sensitive statistical model 2-69688
 quasi-thermodynamic theory of fission charge distribution (Chinese) 2-107841
 rotating actinides, pair correlations and the fission barrier at very high angular momenta 2-90176
 rotating nuclei, equilibrium shapes and fission barriers with macroscopic two-centre model 2-90180
 transport theory of coupled system with simultaneous relative motion, collective oscillations and single-particle excitations 2-59383
 triple fission probability, semiclassical estimate (Russian) 2-59324
 (γ ,f), fission isomers 2-107916
 (p,f) on nuclei near Pb and lighter nuclei, fast p, shell effects in fission (Russian) 2-90185
 (^3He), pion-induced fission study in model using harmonic oscillator cluster wave functions 2-80038
 Ag(p,f), 155-200 MeV, fission product anisotropy, cross-section (Russian) 2-59435
 ^{241}Am (n,f), A=241, 242ⁿ, delayed neutron yield meas. 2-101953
 ^{241}Am (n,f), delayed neutron yields 2-54453
 ^{241}Am (e,f), 100-1000 MeV, electrofission cross sections, electron/photon yield ratio 2-96059
 ^{213}At asymmetric fission in ^{209}Bi (α ,f) (Russian) 2-80042
 (Au¹²C,X), 30-84 MeV/u, linear momentum transfer determ. 2-85071
 Au(Ne,X), relativistic nuclear collisions, fission and deep spallation characs. 2-90135
 Au(U,f), fission study (French) 2-96055
 ^{197}Au (¹²C,X), 72.5 MeV, ^{209}At excited compounds nucleus lifetime by axial blocking, levels 2-54317
 ^{197}Au (²⁰Ne,X), 13 MeV/N, correlation between fission fragment and light charged-particles 2-113566
 ^{197}Au (²⁰Ne,f), 252 MeV, ang. momentum, stat. equilib., sequential fission, very asymmetric systems 2-69689
 ^{197}Au (³⁵Cl,f), fast fission, expt. study 2-107917
 ^{197}Au (⁴⁰Ar,X), energy equilib. in composite nuclei, correl. between evaporative ¹H, ²He and fission 2-90139
 Au(p,X), relativistic nuclear collisions, fission and deep spallation characs. 2-90135
 ^{207}Bi (n,f), 14.7 MeV, fission cross section meas. 2-96058
 ^{207}Bi (p,f), 60 MeV, fragment γ -multiplicity, collective modes, spin, shell effects 2-113338
 (¹²C,X) on U, Th, Au, Ni, 30-84 MeV/u, linear momentum transfer determ. 2-113539
 ^{249}Cf (n,f), thermal neutron induced fission product yields 2-59433
 ^{249}Cf (α ,f), 28, 36 MeV, fission fragments mass distrib. study (Russian) 2-90184
 ^{249}Cf (n,f), delayed neutron yield meas. 2-101953
 ^{245}Cm (n,f), A=246, 248, cross section meas. 2-101951
 ^{245}Cm (n,f), delayed neutron yield meas. 2-101953
 ^{168}Er (⁸⁴Kr,f), 12.4 MeV, ternary reaction proximity effects, fission 2-69683
 ^{168}Er (⁸⁶Kr,X), ang. momentum transfer at 6, 12 MeV/A, time depend. HF study 2-101914
 $^{199}\text{Hg}^*$ compound nuclei, anomalous behaviour of evaporative H/He 2-113563
 In(p,f), 155-200 MeV, fission product anisotropy, cross-section (Russian) 2-59435
 ^{118}In (p,f), A=191, 193, 68, 85, 100 MeV, Rb isotopic distrib. and neutron emission 2-90181
 (¹²Li,X), 74.8-94.4 MeV, on A=181-208, fusion-fission, hot high spin nuclei decay 2-113334
 ^{175}Lu (¹⁹F,X), emission from ^{194}Hg compound nuclei, fission-evap. competition 2-90138
 ^{62}Ni (³⁵Cl,X), 200, 215 MeV, fission and fusion excitation functions, meas. and stat. anal. 2-69684
 ^{237}Np (α ,f), 28, 36 MeV, fission fragments mass distrib. study (Russian) 2-90184
 ^{237}Np (e,f), 10-34 MeV, giant resonances, comments 2-90170
 ^{237}Np (e,f), 10-34 MeV, giant resonances, reply to comments 2-90171
 ^{237}Np (e,f), 100-1000 MeV, electrofission cross sections, electron/photon yield ratio 2-96059
 ^{237}Np (γ ,f), characteristics in E1 giant resonance region 2-54462
 ^{237}Np (n,f), 20 keV-30 MeV cross-section ratio, rel. to ^{235}U 2-54454
 ^{237}Np (n,f), absolute rate meas. in FFTF 2-102147
 ^{237}Np (n,f), average number of prompt neutrons meas. 2-54461
 ^{237}Np (n,f), delayed neutron yields 2-54453
 Np(γ ,f), delayed neutron yield meas. 2-101953
 Pb(U,f), fission study (French) 2-96055
 ^{208}Pb from ^{181}Ta + ^{19}F and ^{170}Er + ^{30}Si , fission and evaporation competition: expt. and theory 2-101916
 ^{208}Pb level density effects on stat. calcs. for high spin fission from ^{197}Au (¹²Li,X) 2-113335
 (^{208}Pb ,X) on ^{64}Ni , ^{48}Ca , fusion-fission, mol. capture, symmetric fragmentation 3D-TDHF calc. 2-96042
 ^{210}Po , fission and neutron emission competition at high spin, deformation, stat. theory 2-69685
 ^{141}Pr (³⁵Cl,X), 200, 215 MeV, fission and fusion excitation functions, meas. and stat. anal. 2-69684
 ^{151}Sm (⁴⁰Ar,X), emission from ^{194}Hg compound nuclei, fission-evap. competition 2-90138
 ^{151}Sm (⁴⁰Ar,X), energy equilib. in composite nuclei, correl. between evaporative ¹H, ²He and fission 2-90139
 Sm(p,f), 155-200 MeV, fission product anisotropy, cross-section (Russian) 2-59435
 ^{118}Sn (³⁵Cl,X), 200, 215 MeV, fission and fusion excitation functions, meas. and stat. anal. 2-69684

fission continued

- ¹³⁶Sn(⁴⁰Ar, X), energy equilib. in composite nuclei, correl. between evaporative ⁴He and fission 2-90139
¹²²Sn (129Xe,f), 12.5 MeV, nonequilibrium effects in sequential fission 2-69682
¹²²Sn(¹²⁹Xe,f), 12.5 MeV, ternary reaction proximity effects, fission 2-69683
 Sn(p,f), 155-200 MeV, fission product anisotropy, cross-section (Russian) 2-59435
¹⁵³Tb, fission barrier 2-101950
²²⁹Th(n,f), short-lived products, yield, from γ -ray spectra 2-54455
²³²Th (γ f), delayed neutron yield meas. 2-101953
²³²Th (n,f), absolute rate meas. in FFTF 2-102147
²³²Th(α , α f), total kinetic energies and mass distrib. of fission fragments 2-90174
²³²Th(α ,f), 70-1000 MeV, fission fragment ang. correlations, momentum transfer 2-59429
²³²Th(d,f), 70-1000 MeV, fission fragment ang. correlations, momentum transfer 2-59429
²³²Th(e,f), 5.5-7 MeV, ang. distrib., E2 strength concentration near fission barrier 2-64446
²³²Th(n, f), reactor neutron induced fission, charge distrib. meas. 2-90179
²³²Th(n,f), 14 MeV, fragment yields and charge distrib., liquid drop anal. (Chinese) 2-96060
²³²Th(n,f), delayed neutron yield meas. 2-101953
²³²Th(n,f), fission rate meas. in FFTF 2-102146
²³²Th(p,X), 0.15-24 GeV, Kr and Xe isotopes prod. 2-54394
²³²Th(p,f), 15 MeV, correl. between ang. anisotropy and fragment mass 2-59431
²³²Th(p,f), 4-11 MeV, excitation function meas. 2-96061
²³²Th(p,f), 70-1000 MeV, fission fragment ang. correlations, momentum transfer 2-59429
²³²Th(p,f), 8-22 MeV, fission fragment yields and excitation functions, statistical anal. 2-90182
²³⁵U/²³⁷Np, A=235, 238, fission cross section ratio meas. with 13.5-14.8 MeV neutrons 2-96056
²³⁵U(γ ,f), A=233, 234, 238, delayed neutron yield meas. 2-101953
²³⁵U/²³⁷Np, fission cross-section ratio meas. using nuclear track detectors 2-64444
²³⁸U, X on ⁶⁴Ni, ⁴⁸Ca, fusion-fission, mol. capture, symmetric fragmentation 3D-TDHF calc. 2-96042
²³⁸U/²³⁷Np, fission cross-section ratio meas. using nuclear track detectors 2-64444
²³⁸U/²⁰⁸Pb, X(f), 1.768 GeV, damped reaction, fission fragment spin correlations 2-54457
^W(²³Ne,f), fission product ang. distrib. long-lived component (Russian) 2-59434
¹⁸²W(¹²C, X), emission from ¹⁹⁴Hg compound nuclei, fission-evap. competition 2-90138
¹⁷⁴Yb(¹⁶Ne, X), emission from ¹⁹⁴Hg compound nuclei, fission-evap. competition 2-90138
⁹⁰Zr(²⁴Kr,f), 12.4 MeV, ternary reaction proximity effects, fission 2-69683

fission counters

- active well coincidence calibration for ²³⁵U meas. 2-113840
 apatite, fission track induced radiation damage study using absorpt. spectroscopy 2-70111
 apatite, ion induced track formation mechanism 2-59664
 foil targets prep. for fission ionisation chambers by painting 2-108184
 Makrofol KG fission track detector sensitivity to damage by radiations 2-96385
 Makrofol track detectors for fission fragments, efficiency calc. 2-70076
 multilayer ionisation chamber with ²³⁵U for fission fragment detection 2-113817
 Muscovite mica track recorders, fission track counting, optical efficiency and observer objectivity 2-64836
 neutron fluence determ. from Makrofol plastic track detect. (German) 2-54724
 neutron scintillation detectors, threshold determ. with thin ²⁵²Cf source 2-102333
 nuclear track, elec. tree generation by sequential elec. and chem. treatment 2-70072
 particle track size distrib. meas. in contaminated soils 2-113818
 PETP foil, tracing on particle tracks under different expt. conditions 2-70067
 sensitivity increase with transmission line electrode configuration 2-96396
 soda glass detectors, ²⁵²Cf fission fragment tracks development, etching conditions study 2-70085
 soda glass nuclear track detectors, etchant development 2-70086
 soda-glass detector, mag. field effects on fission track recording characts. 2-70087
 solid state nuclear track detector appl. in neutron dosimetry 2-70008
 solid state nuclear track detector efficiency for fission fragments 2-59636
 solid state nuclear track detectors for fission fragments, detection efficiencies 2-70075
 solid state track recorder, track counting, Buffon needle method 2-64837
 solid state track recorders, annealing effects 2-59661
 solid-state nuclear track detectors, conf., Bristol, England, Sept. 1981 2-58532
 solid-state track detectors electrochemical etching process, elec. parameters role 2-70069
 TFR, epithermal neutron diagnostic, mechanical design 2-80284
 thermocouple neutron detector response in normal and intrinsic config. 2-113816
 thermoelectric type neutron detectors time response in neutron pulse monitoring 2-64751
 thin film scintillation detector response to ²³⁸U fission fragments 2-64752
 U estimation in plants using fission track technique 2-67898

fission of plutonium

- odd isotopes, isomeric photofission cross-sections 2-107916
 Pu, muonic, prompt fission, muon distrib. among fragments (Russian) 2-107920
¹Pu, A=242, 244, spontaneous fission fragments energy and mass distrib. 2-90175
¹Pu(n,f), A=238,240,241, delayed neutron yields 2-54453
¹Pu(n,f), A=238-42, delayed neutron yield meas. 2-101953
¹Pu(n,f), A=239-41, absolute rate meas. in FFTF 2-102147
¹Pu(n,f), A=239-41, fission rate meas. in FFTF 2-102146

fission of plutonium continued

- ²³⁹Pu (n,f), double-energy fission fragment meas., mass resolution correction 2-108318
²³⁹Pu/²³⁵U, fission cross-section ratios meas. using nuclear track detectors 2-64444
²³⁹Pu/²³⁵U, fission cross section ratio meas. with 13.5-14.8 MeV neutrons 2-96056
²³⁹Pu(e,f), 100-1000 MeV, electrofission cross sections, electron/photon yield ratio 2-96059
²⁴⁰Pu(n,f), isomer-yield ratios, primary angular momenta 2-90172
²⁴⁰Pu(n,f), pol.n, 0.01-0.30 eV, polarisation asymm., P violation (Russian) 2-101954
²⁴⁰Pu fission barrier from Skyrme like effective force, SkM parametrisation 2-107918
²⁴¹Pu(n,x), fast neutron cross section, statistical model calc. 2-113475
²⁴¹Pu(n,f), thermal, fission fragments energy and mass distrib. 2-90175

fission of uranium

- 10 to 200 keV target nucleus spin orientation effects (Russian) 2-54460
²³⁵Pu/²³⁵U, fission cross-section ratios meas. using nuclear track detectors 2-64444
²³⁵Pu/²³⁵U, fission cross section ratio meas. with 13.5-14.8 MeV neutrons 2-96056
 U(C,X), 10 MeV/n obs. with U ions on SSNTD 2-101949
 U(¹²C,X), 30-84 MeV/u, linear momentum transfer determ. 2-85071
 U(O,X), 10 MeV/n obs with U ions on SSNTD 2-101949
 U(U,f), fission study (French) 2-96055
²³⁵U/²³⁷Np, A=235, 238, fission cross section ratio meas. with 13.5-14.8 MeV neutrons 2-96056
²³⁵U(γ ,f), J=12-30 MeV, A=235, 238, ¹³⁴I independent isomeric yield ratio 2-69686
²³⁵U(γ ,f), A=233, 234, 238, delayed neutron yield meas. 2-101953
²³⁵U(γ ,f), A=233, 238, characteristics in E1 giant resonance region 2-54462
²³⁵U(n,f), A=232, 233, 235, 238, delayed neutron yield meas. 2-101953
²³⁵U(n,f), A=233, 235, 238, fission rate meas. in FFTF 2-102146
²³⁵U(n,f), A=233, 235, isomer-yield ratios, primary angular momenta 2-90172
²³⁵U(n,f), A=233,235, thermal, internal excitation energy at scission point 2-59432
²³⁵U, fission and neutron emission competition at high spin, deformation, stat. theory 2-69685
²³⁵U(n,f), delayed neutron yields 2-54453
²³⁵U(n,f), thermal, ⁹⁵Nb and ¹³¹I isomeric yield ratios, fission fragment ang. momentum 2-54458
²³⁵U fission, energy dissipation, fragments, evaporation, liquid drop model from ²³³U(d,pf) (French) 2-90177
²³⁵U (n,f), 0.17 to 8.1 MeV, fission yields 2-101952
²³⁵U mean fission fragments, nuclear charge and at. mass 2-64819
²³⁵U(d,pf), 11.7 MeV, neutron prod. thresholds (Russian) 2-59436
²³⁵U(n,f), 0.2-1.2 MeV, cross-section, absolute determ. 2-90173
²³⁵U(n,f), 20 keV-30 MeV, cross-section ratio rel. to ²³⁷Np 2-54454
²³⁵U(n,f), charge distrib. dispersion, quantum and statistical fluctuation effects (Russian) 2-90157
²³⁵U(n,f), fission spectrum averaged cross section for ¹⁹⁹Hg(n,n')¹⁹⁹Hg 2-96054
²³⁵U(n,f), long-range α emission in p-wave neutron induced fission 2-74784
²³⁵U(n,f), nonequilibrium statistical theory of mass distrib., deformation (Chinese) 2-80043
²³⁵U(n,f), quasi-thermodynamic theory of fission charge distribution (Chinese) 2-107841
²³⁵U(n,f), residual energy liberation by fission products 2-90183
²³⁵U(n,f), thermal, 600 keV, light charged particles polar and equatorial emission 2-85108
²³⁵U(n,f), thermal, electron and antineutrino spectrum cal., $\bar{\nu}$ oscillations 2-80041
²³⁵U(n,f), thermal, fission products decay, beta-ray spectra calc. 2-85109
²³⁵U(n,f), thermal neutrons, ¹²⁵Sn and ¹²⁵Sb β -decays 2-107812
²³⁵U(n,f), vel. selected fission products, isobaric elemental yields determ. 2-64443
²³⁵U, fission, Brownian motion model 2-59323
²³⁵U fission fragments, thin film scintillation detector response 2-64752
²³⁵U, fission process, viscosity coefficient with the pairing interaction (Chinese) 2-107816
²³⁵U projectiles fission induced by ¹²C target in Makrofol detector 2-64445
²³⁸U spontaneous fission decay constant meas. from etched fission track density 2-96057
²³⁸U/²³⁵U, fission cross section ratios meas. using nuclear track detectors 2-64444
²³⁸U/²³⁵U, fission cross section ratio meas. with 13.5-14.8 MeV neutrons 2-96056
²³⁸U(¹²C,f), fission product ang. distrib., long-lived time component (Russian) 2-59434
²³⁸U/²⁰⁸Pb, 252 MeV, ang. momentum, stat. equilib., sequential fission, very asymmetric systems 2-69689
²³⁸U(⁴⁰Ar,X), ⁴He emission in fusion-like and inelastic reactions, exptl. study 2-101929
²³⁸U(⁸⁴Kr, X), 12.5 MeV/u, four-pronged events obs. using mica SSNTD 2-64422
²³⁸U(α ,f), 28, 36 MeV, fission fragments mass distrib. study (Russian) 2-90184
²³⁸U(e,f), 5-11.7 MeV, cross-section, E2 resonance strength 2-90178
²³⁸U(e,f), 100-1000 MeV, electrofission cross sections, electron/photon yield ratio 2-96059
²³⁸U(e⁺,f), 10-35 MeV, absolute cross sections, DWBA virtual photon spectra test 2-59428
²³⁸U(μ ,f), probability in muonic atom, fission barrier enhancement 2-74783
²³⁸U(n,f), fission fragments ang. distribution study using SSNTD 2-59636
²³⁸U(p,f), 10-100 MeV, spallation yields and fissionability calc. 2-59430

fission products

- attenuated mean fission fragment, nuclear charge and at. mass 2-64819
 beta decay properties from a statistical model 2-101849
 Clinch River Breeder lumped fission product uncertainty anal. 2-101995
 compound nucleus, from direct reaction, fission product ang. distrib. (Russian) 2-101876
 CR-39 track detectors, etch pit growth study using Si rubber cast technique 2-64779

fission products continued

- data with reactor applications, statistical distrib. approach 2-64464
double time-of-flight mass spectrometer for dE/dx meas. of fission fragments 2-64157
double-energy fission fragment meas., mass resolution correction 2-108318
electron probe microanalyser, modifications for radioactive sample anal., appls. (French) 2-73033
fission gas release, thermal resolution under transient heating 2-102041
fission gas release model from reactor fuel undergoing transient heating 2-64532
fragment range meas. in gaseous media using plastic track detectors 2-85503
heavy ion collisions, spin and isospin fluctuations and depend. on dinuclear complex shape 2-64420
HTR fission product release forecasting (German) 2-107945
integral testing of evaluated fission product data 2-107938
LWR, fission product behavior during core degradation and quenching 2-80161
LWR, fission product chemical behaviour in fuel rods under accident conditions 2-80087
LWR fuel isotopic analyses, database 2-102079
magnetoplumbite crystal struct. as radwaste host 2-107954
Makrofol track detectors for fission fragments, efficiency calc. 2-70076
multilayer ionisation chamber with ^{238}U for fission fragment detection 2-113817
oxide fuel, fission gas release at high burn-up 2-80066
oxide fuel, gas release swelling, gas porosity development kinetics model 2-80063
prompt mass distrib. study using structure-sensitive statistical model 2-69688
rare gas holdup bed capacity, statistical moment theory appl. 2-102271
reactor, stability to Xe oscills., neutron height distrib. shape effect 2-64574
reactor fuels, radial fission product distrib. reconstruction using nondestructive γ scanning 2-85143
release from fuel rods following LOCA (German) 2-64601
scattering measurements using solid state nucl. track detectors 2-90420
soda glass detectors, ^{252}Cf fission fragment tracks development, etching conditions study 2-70085
solid state nuclear track detectors for fission fragments, detection efficiencies 2-70075
solid-state track detectors electrochemical etching process, elec. parameters role 2-70069
sputtering of radioactive substances, by fission products, optical investigation method 2-116326
thin film scintillation detector response to ^{238}U fission fragments 2-64752
Three Mile Island accident, physical chemistry of fission products rel. to reactor safety research 2-85203
transmutation effects in high level radioactive waste forms 2-73172
TRISO-coated HTGR fuel particles, gaseous fission product release predictions 2-74810
ZED2, ^{99}Mo distrib. anal. expts. 2-90274
 β -decay props. using statistical model 2-54326
(p,f) on nuclei near Pb and lighter nuclei, fast p, shell effects in fission (Russian) 2-90185
Ag(p,f), 155-200 MeV, fission product anisotropy, cross-section (Russian) 2-59435
 ^{213}At asymmetric fission in $^{209}\text{Bi}(\alpha, f)$ (Russian) 2-80042
 $^{197}\text{Au}(^{20}\text{Ne}, X)$, 13 MeV/N, correlation between fission fragment and light charged-particles 2-113566
 $^{197}\text{Au}(^{20}\text{Ne}, f)$, 172 MeV, fission after incomplete fusion, correl. between fission fragments 2-113558
 $^{197}\text{Au}(^{40}\text{Ar}, X)$, 343 MeV, heavy fragment pairs, coincidence studies 2-113559
 $^{209}\text{Bi}(^{40}\text{Ar}, X)$, 255 MeV, fragment spin alignment and misalignment 2-90153
 $^{209}\text{Bi}(p, f)$, 60 MeV, fragment γ -multiplicity, collective modes, spin, shell effects 2-113338
Br, short-lived fission products, gas-phase chem. separation 2-75450
 $^{249}\text{Cf}(n, f)$, thermal neutron induced fission product yields 2-59433
 $^{249}\text{Cf}(\alpha, f)$, 28, 36 MeV, fission fragments mass distrib. study (Russian) 2-90184
 ^{252}Cf fission fragments, Xe gas excitation, recombination luminesc. time delay 2-90361
 ^{252}Cf fission fragments theoretical energy straggling 2-102353
 ^{252}Cf spontaneous fission, fission fragments deexcitation, Monte Carlo calc. 2-54459
 ^{252}Fm , A=244, 246, spontaneous fission products average total kinetic energy meas. 2-85110
HTGR fuel pellets fission product diffusion coeff. 2-80086
chemical reaction, release during HTGR accidents 2-96255
 ^{131}I uptake in organic resin, rel. to activated charcoal 2-85397
 ^{134}I independent isomeric yield ratio from $^{235}\text{U}(\gamma, f)$ 2-69686
In(p,f), 155-200 MeV, fission product anisotropy, cross-section (Russian) 2-59435
 ^{85}Kr disposal, immobilisation, storage, cost and safety 2-64510
 ^{85}Kr fixation on KrF_2 with zeolites 2-102085
 ^{85}Kr storage cylinder, adsorption, heat transfer 2-64694
 ^{104}Nb , ^{106}Mo , beta-decay half life meas. 2-95976
 $^{237}\text{Np}(\alpha, f)$, 28, 36 MeV, fission fragments mass distrib. study (Russian) 2-90184
 ^{240}Pu , A=242, 244, spontaneous fission fragments energy and mass distrib. 2-90175
 $^{239}\text{Pu}(n, f)$, isomer-yield ratios, primary angular momenta 2-90172
 $^{241}\text{Pu}(n, f)$, thermal, fission fragments energy and mass distrib. 2-90175
Se, short-lived fission products, isolation and obs. by organometallic reactions 2-75449
 ^{84}Se , A-85.88, ground-state decay branchings using gas-phase rapid chem. system 2-74750
 ^{84}Se , A-85.88, fission products, on-line system for isolation and study 2-96404
Si surface barrier detectors, plasma decay times for fission fragments and α -particles 2-102338
Sm(p,f), 155-200 MeV, fission product anisotropy, cross-section (Russian) 2-59435
Sn(p,f), 155-200 MeV, fission product anisotropy, cross-section (Russian) 2-59435
(Th, UO_2), stability of simulated fission product phases 2-80061
 $\text{ThO}_2\text{-UO}_2$, fission gas release at high burn-up 2-80083
 $^{238}\text{Th}(n, f)$, short-lived products, yield, from γ -ray spectra 2-54455

fission products continued

- $^{232}\text{Th}(\alpha, \alpha'f)$, total kinetic energies and mass distrib. of fission fragments 2-90174
 $^{232}\text{Th}(\alpha, f)$, 70-1000 MeV, fission fragment ang. correlations, momentum transfer 2-59429
 $^{232}\text{Th}(d, f)$, 70-1000 MeV, fission fragment ang. correlations, momentum transfer 2-59429
 $^{232}\text{Th}(n, f)$, reactor neutron induced fission, charge distrib. meas. 2-90179
 $^{232}\text{Th}(n, f)$, 14 MeV, fragment yields and charge distrib., liquid drop anal. (Chinese) 2-96060
 $^{232}\text{Th}(p, f)$, 15 MeV, correl. between ang. anisotropy and fragment mass 2-59431
 $^{232}\text{Th}(p, f)$, 70-1000 MeV, fission fragment ang. correlations, momentum transfer 2-59429
 $^{232}\text{Th}(p, f)$, 8-22 MeV, fission fragment yields and excitation functions, statistical anal. 2-90182
(U,Pu)C, swelling investigation 2-64479
UC, fission products effect on thermophysical parameters 2-96113
 UO_2 fuel, fission gas disposition, granular computer model 2-107957
 UO_2 in-reactor fuel elements, fission gas extraction, fuel rod design 2-113625
 UO_2 kernelled HTR fuel particles, production of CO during burn-up 2-102045
 UO_2 pellet, pulse n irradi., ^{137}Xe and ^{137}I release (Japanese) 2-64476
 $^{235}\text{U}(n, f)$, A=233, 235, isomer-yield ratios, primary angular momenta 2-90172
 $^{235}\text{U}(n, f)$, A=233, 235, thermal, internal excitation energy at scission point 2-59432
 $^{235}\text{U}(n, f)$, thermal, ^{95}Nb and ^{132}I isomeric yield ratios, fission fragment ang. momentum 2-54458
 ^{238}U fission, energy dissipation, fragments, evaporation, liquid drop model from $^{235}\text{U}(d, pf)$ (French) 2-90177
 $^{235}\text{U}(n, f)$, 0.17 to 8.1 MeV, fission yields 2-101952
 $^{235}\text{U}(n, f)$, residual energy liberation by fission products 2-90183
 $^{235}\text{U}(n, f)$, thermal, fission products decay, beta-ray spectra calc. 2-85109
 $^{235}\text{U}(n, f)$, vel. selected fission products, isobaric elemental yields determ. 2-64443
 ^{238}U spontaneous fission decay constant meas. from etched fission track density 2-96057
 $^{238}\text{U}(^{208}\text{Pb}, Xf)$, 1.768 GeV, damped reaction, fission fragment spin correlations 2-54457
 $^{238}\text{U}(\alpha, f)$, 28, 36 MeV, fission fragments mass distrib. study (Russian) 2-90184
 $^{238}\text{U}(n, f)$, fission fragments ang. distribution study using SSNTD 2-59636
 ^{135}Xe , poisoning effect in first Hanford reactor 2-63797
ZrC, diffusion of metal fission products 2-85153

fission reactor cooling and heat recovery

- see also cooling: fission reactor core control and monitoring
2x6 rod bundle, controlled flow and power transients, natural convection 2-108076
adiabatic two-phase flow in VK-50 reactor core riser, hydrodynamics (Russian) 2-74891
AGR, Windscale, UK, final expts. on transient anal. codes 2-64628
AGR, Windscale, UK, fuel pin development, coolant composition, reactor operation 2-64627
3D-ATRLOCA code anal. of generic research reactor 2-96202
auxiliary feedwater system alternatives 2-102125
benchmark problems for fluid-structure interactions 2-90204
boiling phenomena within a narrow gap 2-90262
BOR-60, Na-water interaction processes in micromodule steam generator 2-90266
BWR4/Mark I blackout sequence assessment and containment failure mode analysis 2-96268
BWR: small break LOCA; ROSA-III expt. 2-54614
BWR: small break LOCA, fuel bundle conditions, TRAC-BD1 calcs. 2-54635
BWR: small break LOCA, PIPER-ONE analysis program 2-54601
BWR: small break LOCA, TLTA expts., RELAP4/MOD6 calcs. 2-54622
BWR, bypass flows, thermal-hydraulic anal. 2-54556
BWR, condensate feedwater system, dynamic anal. code 2-74863
BWR, drywell volume effect on chugging pressure 2-96205
BWR, flow pattern identification by noise techniques 2-96140
BWR, large-break LOCA, emergency cooling tests, ROSA-III expts. 2-74883
BWR, local void fraction, RMS neutron noise relation in bubbly flow region 2-96189
BWR, manual depressurization under transient conditions 2-96208
BWR, pipe rupture, feedwater check-valve behaviour, in HDR 2-102104
BWR, refill-reflood program, expt. test plan 2-64580
BWR, small break LOCA, RETRAN-02 anal. 2-54593
BWR, small break LOCA, review 2-54586
BWR, small break LOCA, simulation test results 2-54589
BWR, small break LOCA, TRAC-BD1 anal. 2-54595
BWR, SUR-100 type, detector signal anal., void and bubble effect (German) 2-54536
BWR, thermal-hydraulic stability analysis of interconnected boiling channels 2-102170
BWR channel flow split, analytical soln. 2-102172
BWR control during fast overpressurisation transients by bubble injection 2-102176
BWR feedwater nozzle and control-rod-drive return line nozzle cracking 2-59497
BWR fuel, thermal performance during pressurisation transients 2-102233
BWR heat transfer analysis in an annular flow regime 2-102165
BWR jet pump instrumentation penetration seal replacement 2-102140
BWR loss of heat sink accident, mitigation actions 2-96209
BWR overpressurisation transient, pressure propagation phenomena 2-102239
BWR piping, stress corrosion cracking, utility research programme 2-96106
BWR plant diagnosis system, operating experience 2-96190
BWR power plant, reduction of corrosion products (Japanese) 2-64566
BWR pressurisation transient simulations steam dome-downcomer region, thermal nonequilibrium 2-102173
BWR primary system piping, stress corrosion cracking resistance, full-scale testing 2-80125

fission reactor cooling and heat recovery continued

BWR refill-reflood program 2-59508
 BWR residual heat removal equipment, dynamic and static anal. 2-96204
 BWR small-break loss-of-coolant accidents, two simulation tests 2-102244
 BWR stability anal. 2-102171
 BWR stability testing: reaching the limit-cycle threshold at natural circulation 2-102138
 BWR suppression pool scrubbing effect on degraded core accident consequences 2-54568
 BWR transient model qualification for pressurisation transients 2-96275
 CANDU, heat transfer from fuel channel to surrounding water 2-64617
 CANDU, horizontal fuel channel reflooding expts. following LOCA 2-64616
 CANDU power cycle improvement by moderator heat recovery 2-64587
 CDS phase II heterogeneous reactor, unprotected LOF anal. of transition phase 2-96290
 circular duct containing assembly of circular cylinders, guided waves 2-60269
 COMMIK-2 code, two fluid model, improved iteration scheme 2-90214
 computerized fault diagnostics in a nuclear reactor via analytic redundancy 2-96215
 condensation in a pipe, mathematical benchmark problem 2-90208
 containment anal., heat transfer from saturated and superheated atm. 2-113711
 coolant, post-accident dose rates, Cs isotope effect 2-108088
 coolant circulator pumps for water cooled graphite reactors 2-90268
 coolant heat transfer computational techniques, stability 2-90270
 core boil-off expt., anal. using THERMIT code 2-102175
 core component hold-down spring vibration testing 2-102072
 core flow redistrib. modeling during reactor shut down cooling 2-96082
 corrosion product buildup in cooling loop equipment 2-96196
 countercurrent flow tests assessment of TRAC-PD2 2-102008
 countercurrent flow with air and water, liquid carry-over and entrainment 2-96214
 Creare countercurrent flow tests, TRAC-PD2 refill calcs. 2-54562
 critical flow test, data review and anal. 2-54558
 critical heat flux, heating methods in expts., effect on results 2-113692
 critical heat flux expts. on rod bundle cooled by Freon 12 2-108080
 critical heat flux in two phase flow 2-102167
 critical heat fluxes in the absence of coolant flow in vertical steam-generating channels 2-113691
 cross mixing in two-phase rod clusters with longitudinal flow direction under stationary and transient conditions (*German*) 2-113678
 decontamination using conc. chemicals 2-102284
 design and development of a postaccident sampling system 2-113721
 dissolved gas conce. determ. in coolant in normal and accident conditions 2-102281
 double-wall surfaces for heat-exchange equipment 2-54549
 EBR-II, sodium and water flow meas., pulsed neutron activation method 2-74864
 electrochemical cell for measuring the activity of oxygen in sodium 2-102060
 electromagnet pump idealised model, for molten metals (*French*) 2-69771
 EM flowmeter calibration using voltage fluctuation cross calibration 2-96147
 energy exchangers use with He gas turbine installations in HTR (*Russian*) 2-54553
 EPRI valve testing at the Marshall Steam Station 2-102206
 EPRI/PWR safety and relief valve test program 2-102219
 establishment of a permanently coolable state 2-80153
 fast breeder, Na-cooled, pool and loop structures as primary circuits, construction features (*German*) 2-64624
 fast reactor temperature noise, RMS anal. in fuel assembly with local blockage 2-96157
 faster-than-real-time computer code for loss-of-coolant and feedwater transient prediction 2-102009
 FBR, sodium mist trapping efficiency, mesh-packed trap 2-64474
 FBR fuel pins, heat conductance modelling 2-90244
 FBR fuel subassembly, wire-spaced, local coolant flow vel. field calc. 2-85181
 feedwater 2-loop control system development (*Japanese*) 2-59490
 FFTF heat transport system 2-102118
 FFTF natural circulation tests 2-102121
 FFTF primary heat transport HVAC system 2-102119
 FFTF primary pump replacement 2-102120
 FFTF sodium and cover gas impurity monitoring 2-102123
 film boiling heat transfer, low-quality and subcooled, high-temp. results 2-64609
 finely dispersed corrosion products, phase composition in coolant system 2-113687
 flooding, flow phenomena, photographic study anal. 2-64613
 flow meter, 16-channel thermal correlation type, for RBM-K reactor (*Russian*) 2-102181
 flow near end plates in CANDU-type 19 rod fuel bundle 2-108058
 flow rate distributions analysis for heat exchangers using THAUPR code 2-102002
 flow regime effects on integral and local slip in vertical two-phase flow 2-102161
 fluid-structure interactions, finite difference anal. 2-59511
 fluid-structure problems with rigid wall loads, modal recovery methods for soln. 2-113586
 fluidised bed concept, thermal design calcs. 2-102103
 forced convection boiling in oscillating accel. field, critical heat flux 2-113680
 fuel pin temperature calcs. 2-64537
 fuel rod bundle flow area reduction model 2-80152
 fuel rods, gap conductance for arbitrary Knudsen number 2-74828
 GCFR flow transient anal., numerical scheme 2-90213
 GCRIT, critical two phase flow through orifices code 2-102006
 Gentilly 2 steam generators in situ rebuilding of tube bundles 2-64589
 graphite, corrosion in HTR, calc. using REACT/THERMIX code (*German*) 2-102012
 HCDA, irreversible energy losses of flow through porous and perforated plates 2-74874
 HDR blowdown and snapback, fluid-struct. anal. using FLUX code 2-107933
 HDR blowdown expt., anal. for fluid-struct. interaction 2-108085
 HDR blowdown test, K-FIX pre and post test anal. 2-108060

fission reactor cooling and heat recovery continued

HDR vessel, blowdown, coupled fluid-structure interactions 2-108083
 heat exchangers, shell and tube type, multidimens. numerical modelling 2-112894
 heat removal from a stratified UO₂-sodium particle bed 2-96279
 heat removal from cruciform cross-section fuel rods 2-113595
 heat removal from fuel debris following hypothetical core disruptive accident 2-96278
 heat supply station, organic coolant appl. 2-64490
 heat transfer in gas-cooled assemblies with artificial roughness 2-113688
 heat transfer of gas flow through a tube, finite element soln. 2-97694
 homogeneous model of the flow of a liquid in rod assemblies 2-90267
 HTGR, primary coolant system selection 2-102113
 HTR primary coolant circuit, 1 distrib., sorption on graphite 2-80123
 hydrazine injection effects on coolant impurity conc. 2-64535
 in-channel thermohydraulic calculations of nuclear reactor fuel-element assemblies 2-113684
 incompressible laminar flow anal. using nodal coarse mesh method 2-102160
 inverse heat conduction soln. procedure appl. 2-90273
 Karlsruhe subassembly monitoring system, functions and struct. 2-96170
 licensing aspects of steam generator repair programs 2-102132
 liquid film thickness meas. using US technique 2-102163
 liquid metal fast breeder reactors, appl. of boundary elements method to potential fluid flow problems 2-80148
 LMFBR, annulus thermal entrance region, turbulent heat transfer to liquid Na 2-85183
 LMFBR, cavitation in submerged jets 2-102162
 LMFBR, cladding relocation model for the SIMMER-II safety analysis code 2-102198
 LMFBR, contaminant evaporation rates from Na pool 2-74869
 LMFBR, core disruptive accident, molten fuel-coolant interaction, primary vessel damage 2-85186
 LMFBR, core meltdown accident, multiphase, multicomponent hydrodynamics 2-74871
 LMFBR, flow and peak temp. redistrib. during reactor shutdown cooling 2-102234
 LMFBR, fuel deposition on primary coolant circuit surfaces 2-54544
 LMFBR, fuel element malfunction, temperature noise, pattern recognition 2-96152
 LMFBR, fuel/coolant interaction, finite heating rate model, parametric study 2-69760
 LMFBR, initiating phase thermal hydraulics modeling for transition phase anal. 2-96292
 LMFBR, large heterogeneous core, transition phase calc. 2-96085
 LMFBR, local sodium boiling detection 2-96219
 LMFBR, modeling Na-fuel reaction swelling in breached mixed oxide fuel elements 2-80162
 LMFBR, Na boiling detection by reactor noise anal. 2-96158
 LMFBR, Na vapour bubble collapse, acoustic emission noise, detection and interpretation 2-96159
 LMFBR, natural convection expts., flow visualisation 2-96211
 LMFBR, normal coolant blockage, recirculating flow distrib., heat transfer, calc. 2-85202
 LMFBR, O₂ metering, electrochem. probes 2-90265
 LMFBR, porous blockage, sodium boiling pattern 2-74870
 LMFBR, sodium boiling noise detection, IAEA-1WGFR specialists meeting report 2-96167
 LMFBR, sodium void reactivity, physics assessment 2-102232
 LMFBR, sodium void worth anal. using unified diffusion coeff. 2-101991
 LMFBR, transient boiling calculations in rod bundles using the THESES code 2-102003
 LMFBR boilers, duplex tubes and Foster-Wheeler-type tubesheet, development project results 2-90241
 LMFBR coolant channels temp. profile calc. 2-90272
 LMFBR coolant regulation by MHD chokes 2-102106
 LMFBR debris tray free convection flow, finite element solns. 2-90263
 LMFBR decay heat removal by passive guard vessel cooling 2-96280
 LMFBR deposition of impurities from the sodium coolant in the region of magnetic and electromagnetic fields 2-102111
 LMFBR Direct Reactor Auxiliary Cooling System modeling in SSC 2-96083
 LMFBR fuel assembly, 217 pin wire wrap spaced, friction factor correlation 2-102156
 LMFBR fuel management strategies for structural compatibility 2-113653
 LMFBR heat transfer from heat-generating boiling pools pertaining to transition phase and PAHR 2-96293
 LMFBR pipe break accident 2-102241
 LMFBR primary containment response to changes in UIS flow paths 2-96277
 LMFBR secondary coolant, H partial press. in Ar over Na 2-80156
 LMFBR shutdown heat removal test facility, natural convection, scaling requirements 2-54538
 LMFBR thermal hydraulic transient pipe flow models with thermal buoyancy 2-102177
 LOCA, small break, energy transfer mechanisms 2-96217
 LOCA, transient mass and heat flow, scaling laws 2-74884
 LOCA containment wall steam condensation, heat transfer coeffs. 2-64605
 LOCA hydroloads calculations with multidimensional nonlinear fluid-structure interaction 2-108084
 LOCA test program, event tree anal. 2-96261
 local boiling behind a central blockage in a simulated LMFBR fuel bundle 2-96288
 local heat-transfer coefficient and its use in calculating fuel-element temperature conditions 2-90269
 LOFT, large break LOCA expts. comparison to Semiscale Mod-1 2-96258
 LOFT small break LOCA anal. 2-108102
 LOFT test L2-3 analysis 2-69806
 loose part detection using acoustic emission detectors in NSSS 2-96179
 LWR: small break LOCA; LOFT test data anal. 2-54618
 LWR: small break LOCA; safety relief valves, flow behaviour studies 2-54608
 LWR: small break LOCA, air-water flow visualisation expts. 2-54607
 LWR: small break LOCA, boil off transient, heat transfer mechanisms 2-54609
 LWR: small break LOCA, cold leg breaks, TRAC-PD2 modeling 2-54621

fission reactor cooling and heat recovery continued

- LWR; small break LOCA, energy transport mechanisms, PKL tests 2-54613
 LWR; small break LOCA, heat transfers above two phase mixture level 2-54604
 LWR; small break LOCA, LOFT L3-1 and L3-6 expts., RELAP4/MOD6 simulation 2-54627
 LWR; small break LOCA, LOFT L3-1 and L3-7 expts., RELAP5 calcs. 2-54629
 LWR; small break LOCA, LOFT L3-1 test, RELAP4/MOD6 calcs. 2-54632
 LWR; small break LOCA, LOFT RELAP models comparison 2-54598
 LWR; small break LOCA, nonequilibrium effects in choked nozzle flow 2-54603
 LWR; small break LOCA, operator responses during simulations 2-54612
 LWR; small break LOCA, POSEIDON-T model anal. 2-54597
 LWR; small break LOCA, primary coolant pump operation effects 2-54616
 LWR; small break LOCA, primary coolant pump operation effects, RELAP5 calcs. 2-54624
 LWR; small break LOCA, RELAP5 horizontal stratified flow model 2-54623
 LWR; small break LOCA, Semiscale test S-07-10D, TRAC calcs. 2-54634
 LWR; small break LOCA, simulation using minicomputer 2-54602
 LWR; small break LOCA, TMI accident simulation using SICLE 2-54631
 LWR; small break LOCA, TRAC appl. 2-54628
 LWR; small break LOCA, TRAC-PD2 calcs. and semiscale MOD-3 tests 2-54620
 LWR, degraded core cooling hydrodynamics 2-113681
 LWR, interfacial heat transfer between overlying liquid layers with gas agitation 2-102169
 LWR, limiting dryout flux in a large particle heat generating debris bed 2-102168
 LWR, post-departure from nucleate boiling operation 2-59507
 LWR, small break LOCA, Babcock and Wilcox analysis 2-54584
 LWR, small break LOCA, core damage detection and control 2-54581
 LWR, small break LOCA, fuel supplier's perspective 2-54585
 LWR, small break LOCA, LOBI program 2-54615
 LWR, small break LOCA, LOFT and semiscale system facilities 2-54579
 LWR, small break LOCA, LOFT test L3-6, result anal. 2-54583
 LWR, small break LOCA, multiple aperture anal. 2-54588
 LWR, small break LOCA, operational perspective 2-54580
 LWR, small break LOCA, present licensing perspective 2-54577
 LWR, small break LOCA, RELAP5 system modeling capability 2-54592
 LWR, small break LOCA, research perspective 2-54576
 LWR, small break LOCA, safety significance perspective 2-54578
 LWR, small break LOCA, two phase mixture level swell, void fraction meas. 2-54606
 LWR, small break LOCA accident anal. conf., Monterey, CA, USA (Aug. 1981) 2-53424
 LWR, small break LOCA analysis Yankee Atomic Electric Co. approach 2-54587
 LWR, spacer grid effects on rod bundle heat transfer 2-102166
 LWR, steam generator tube profile data reduction 2-102141
 LWR, subcooled boiling model 2-102010
 LWR, two-fluid vapour-liquid flow, interfacial exchange relations, regime-map approach 2-97634
 LWR core meltdown accident modeling by MELSIM and LUECKE 2-80053
 LWR fuel assembly model, press. drop and heat transfer study 2-90188
 LWR vessel loads from in-vessel steam explosion 2-108086
 Marviken Critical Flow Test Program 2-59485
 model coolant pump steady under single and two-phase flow conditions 2-108077
 modified ICE technique for two-phase systems with strong mass sources 2-90211
 multifrequency-multiparameter eddy current anal. method for PWR steam generator tubes 2-69795
 multiphase fluid dynamics eqns., solution method 2-90209
 natural circulation in multiloop PWRs, simulator programming 2-102018
 natural circulation steam generators for LWR and HWR, circulation ratio 2-102114
 natural convection boiling burnout in annulus 2-96137
 neutronic response to two phase flow 2-96141
 nonequilibrium transient two-phase flow modeling 2-90212
 NSSS, B&W 205 fuel assembly system changes since TMI 2-102128
 nuclear reactor safety and cooling in emergency, measures (German) 2-59502
 nuclear reactor vessel level monitoring system for assessing inadequate core cooling 2-64561
 OMOD: prediction of two-phase mass flow through orifices 2-102007
 on-line acoustic survey for internal valve leakage 2-102205
 on-line leak detection method for OWL-1 loop by ARX modeling using dewpoint signals 2-59489
 on-line reactor coolant monitoring 2-102279
 Peach Bottom-2, turbine trip tests, RETRAN anal. 2-54561
 phase-boundary search process for controlling time-step size 2-90215
 PHWR, noise anal. appl. including primary coolant flow rate 2-96144
 pipe rupture accident, steam jet, high-pressure, impingement, nozzle reaction, press. distrib. 2-65629
 pipes, circumferentially cracked, bending failure by flattening 2-65534
 piping systems, dynamic behaviour, gap-size effect 2-64569
 piping systems, integrated transient anal., three-dimens. method 2-74876
 piping tearing modulus stability concepts anal. 2-64538
 plate, local and integral strain behaviour, elastic plastic anal. 2-65535
 porous media approach to thermal hydraulic anal. 2-90216
 post dryout and decompressive flashing systems, gas-liquid thermal non-equilib., unified approach 2-96228
 post-accident sampling at the James A. FitzPatrick Plant 2-102134
 post-test analysis of TRAN-1 and TRAN-2 final fuel distributions 2-102200
 power reactor, heat conduction, filtering theory application 2-108082
 pressure transducers appl. in thermohydraulic expts. (German) 2-64598
 primary coolant system leakage detection using acoustic emission 2-64594
 primary coolant temperature, optimal control 2-102102

fission reactor cooling and heat recovery continued

- pulse echo ultrasound for steam generator tube to support gap measurement 2-64584
 pulsed neutron activation method, appl. to sodium and water flow 2-74865
 PWR; small break LOCA, ALMOD model anal. 2-54596
 PWR; small break LOCA, LOFT L3-6 expt., RETRAN anal. 2-54630
 PWR; small break LOCA, loop seal behaviour study 2-54610
 PWR; small break LOCA, loop seals effect on mixture levels in cold leg break 2-54611
 PWR; small break LOCA, RELAP4/MOD7, TRAC-PIA, TRAC-PD2 calcs. 2-54626
 PWR, boiling detection and monitoring by incore neutron noise analysis 2-96184
 PWR, circulation ratio and carry-under determination 2-108054
 PWR, coolant, analytical and sampling problems bibliography 2-58579
 PWR, differential pressure meas. instrumentation system for LOCA investigation 2-96193
 PWR, emergency core cooling heat transfer tests 2-59505
 PWR, fluid-struct. interaction, effect on steam system design 2-107935
 PWR, hydrodynamic mass method anal. 2-107936
 PWR, loss-of-coolant accident, local void stabilisation (German) 2-69799
 PWR, low freq. press. oscillations 2-96183
 PWR, moderator temp. coeff. reduction by Gd substitution 2-96079
 PWR, natural circulation cooling without void formation 2-96207
 PWR, primary coolant system, pressure sensor time const. 2-90264
 PWR, response to scram at 50% load and open grid transient 2-108056
 PWR, small break LOCA, cold leg break, RELAP4 calc. 2-54633
 PWR, small break LOCA, drift flux model, two phase flow anal. 2-54619
 PWR, small break LOCA, early pump trip effects, TRAC anal. 2-54617
 PWR, small break LOCA, LOFT L3-5, L3-6 expt., RELAP4-5 calcs. 2-54590
 PWR, small break LOCA, simulation using RELAP4/MOD7 code 2-54591
 PWR, small break LOCA, SMABRE simulator code 2-54600
 PWR, small break LOCA, thermal hydraulic transient anal. code 2-54599
 PWR, small break LOCA, two phase natural circulation in once through system 2-54605
 PWR, steady state thermal measurements on steam generator 2-108055
 PWR, steam line rupture, RETRAN-01 anal., impact of plant modifications 2-102005
 PWR, thermo-mechanical analysis and application to depressurization and wave propagation 2-107934
 PWR, thermohydraulic transients prediction computer codes, capabilities and limitations 2-102254
 PWR, thermosiphons, review 2-65587
 PWR, tube bundle flow during steam generator wet layup, anisotropic modelling 2-113682
 PWR, unblocked bundle forced and gravity reflood, data evaluation and anal. 2-64612
 PWR circuits, chemical decontamination LOMI reagents development by CEGB, in Britain 2-90305
 PWR cold leg and downcomer with vent valve flow, fluid and thermal mixing in atmospheric transparent model 2-102178
 PWR cooldown, RETRAN anal. 2-102235
 PWR core, heat-up anal., heat transfer results 2-54557
 PWR diagnosis shock and vibr. anal. metal parts impact 2-96180
 PWR fuel pins, annular, safety related design, thermal-hydraulics anal. 2-102075
 PWR LOCA, reflood heat transfer, effect of grid spacers 2-113704
 PWR LOCA cold leg thermal stratification prediction 2-102238
 PWR LOCA droplet deentrainment in arrays of cylinders 2-102164
 PWR LOCA expt. data anal. for reflood coolant density 2-102236
 PWR model cold leg and downcomer with loop flow, fluid and thermal mixing 2-102179
 PWR performance adjustments via on-line parameter optimisation 2-101964
 PWR primary circuit overpress. protection 2-113717
 PWR primary flow meas. by correlation anal. of ^{16}N fluctuations 2-96143
 PWR small break LOCA, core degradation 2-80077
 PWR stations, damp steam circuits, summary of erosion-corrosion observation 2-85170
 PWR stations, steam generator feed pumps, investigations on resistance to erosion corrosion 2-85171
 PWR steam generator denting, cost benefit anal. 2-69796
 PWR thermal mixing, COMMIX-1A anal. 2-102174
 PWR transient pressurizer pressure behavior 2-102158
 PWR transient without scram with a PORV stuck open 2-96273
 PWR vapour region collapse mechanisms, steam chugging calculations with the PELE-IC code 2-108061
 PWR vessel failure due to debris-vessel interaction, thermal anal. 2-102243
 PWR-BWR thermal-hydraulic anal. programmes, comparative study (Spanish) 2-69698
 PWRs, secondary cooling system, corrosion product transport 2-54527
 quenching of a high-temperature particle bed 2-102237
 Rancho Seco overcooling transient simulation by TRAC-PD2 2-96274
 RBMK 1500 cassettes, testing in Leningrad Nuclear Power Station reactor 2-102108
 reactor noise-metering and its application in monitoring reactor circulation loops for leaks 2-113689
 reactor parameter monitoring by low freq. press. pulsations 2-102197
 reactor simulators, analytical modules 2-102019
 reflood tests on 161-rod bundle 2-59504
 reflux capsule steam generator for sodium-cooled reactors 2-102115
 rod bundles, disperse film flow, phase interaction, channel geometry effect 2-64576
 ROSA III, heat loss and fluid leakage tests 2-85185
 ROSA-IV cold leg break anal. using RELAPS 2-113720
 roughness element, response of fully developed pipe flow 2-108059
 scale effect on subcooled critical flow 2-96200
 Semiscale Mod-1, large break LOCA expts. comparison to LOFT 2-96258
 Semiscale Mod-2A upper head injection test series results 2-96260
 SGHWR, controlled depressurisation expt., RELAP and RETRAN anal. 2-59494
 SIMMER-II simulation of thermite freezing and plugging experiments 2-96213

fission reactor cooling and heat recovery continued

- SIMMER-II with the k-ε turbulent flow model 2-96212
 skewed initial temp. distrib. effect on reflow transient 2-96201
 slab core reflooding, two-phase region thickness 2-108075
 sodium boiling modeling in W-1 sodium loop safety facility expt. 2-102240
 solubility of gases in water coolant 2-113594
 SOPHT, CANDU simulation model 2-54625
 steam generator model testing 2-113690
 steam generator replacement at Surry Power Station; ALARA aspects 2-102277
 steam generator replacement at Surry Power Station 2-85167
 steam generator replacement at Surry Power Station 2-102129
 steam generator replacement through the side of the containment building 2-102131
 steam generator support plate integrity, radiographic evaluation system 2-59476
 steam generator tube performance 2-113706
 steam generator tube repairs, hydraulically expanded tube to tubesheet joints 2-64544
 steam generator tubes, buckling and fatigue susceptibility 2-59475
 steam generator tubes, vibration due to liq. and two phase flow 2-59492
 Surry-A steam generator, research program at Hanford 2-102133
 swimming pool research reactor, neutron noise anal., reactivity and boiling appl. 2-96145
 temperature and void fluctuations caused by inlet coolant velocity noise 2-64579
 temperature fluctuations during reactor transients, safety aspects 2-96166
 Thermal-Hydraulic Out-of-Reactor Safety facility, expansion tank, flow, numerical study 2-85182
 thermal-hydraulic transient expts., uncertainty anal. method 2-85180
 thermocapillary flows around hemispherical bubbles 2-102157
 TMI-2 accident anal., thermal hydraulic behaviour using RELAP4/MOD6/U4/J2 2-96226
 TMI-2 containment building accident water sampling and reactor primary coolant accident source term 2-102280
 TRAC, improved coupling of conduction and flow eqns. 2-90271
 TRAC methods for LWR small break LOCA anal. 2-54594
 TRAC-PIA post-test analysis of Semiscale Mod-3 Test S-07-6 2-96259
 TRAC-PD2 and RELAP5/MOD1 predictions of heated rod bundle experiments 2-102004
 TRAC-PD2 prediction of a FLECHT-SEASET bottom forced reflow experiment 2-96245
 TRAC-PF1 stratified flow model assessment 2-96246
 transient analysis code, RETRAN, appls. 2-54488
 transient film boiling of high-pressure water in a rod bundle 2-96199
 transient incompressible fluid flow, quadratic finite element program user's manual 2-54487
 transient boiling tests at 1-4 bar 2-108057
 transuranium element removal from RBMK-1000 coolant system 2-54567
 Turkey Point steam generator repair program 2-102130
 two loop feedwater/level control system for BWR 2-102116
 two phase flow prediction in vertical geometries 2-64582
 two-phase flow, one-dimensional 6-eqn. model 2-85178
 two-phase flow meas., γ-ray Compton profile appl. 2-108072
 two-phase flow meas., from reactor neutron noise anal. 2-108071
 two-phase flow meas., impedance, ultrasound and microwave appls. 2-108069
 two-phase flow meas., multiple γ-rays, tracers, activation and optical methods 2-108068
 two-phase flow meas., nuclear and optical methods 2-108073
 two-phase flow using neutron noise as reactor instrument 2-96142
 two-phase flow visualisation, computerised tomography and NMR scanning appls. 2-108070
 two-phase nozzle flow expt., code verification 2-85179
 unsteady two-phase flow, loss of coolant accident in power plant 2-90261
 vapor content of boiling coolant in tube and rod assemblies 2-113685
 VISIONS: Versatile, Interactive Simulator Of Nuclear Systems 2-101971
 VVER, safety valves in first loop, need and problems created 2-59491
 VVER-440, power distrib. monitoring, coolant sensing method 2-64578
 water, radionuclide anal. system, ion-exchange method 2-75064
 water level detection, using ex-reactor neutron detectors, response calc. 2-108062
 water pipe corrosion, on-line monitoring 2-72887
 Westinghouse PWR, small break LOCA, inadequate core cooling studies 2-54582
⁶⁰Co deposition on pipe walls in high-temp. water 2-80113
⁶⁰Co, origin in LWR cooling system 2-80353
 Cr-Mo ferritic steel for LMFBR primary and secondary systems 2-64536
 He heated steam generators for HTR, layout, stresses, design (German) 2-102180
 He temp. distrib. effect of energy liberation in reactor with spherical fuel elements 2-96195
 N₂O₄, generalised eqn. of transfer for unsteady-state processes (Russian) 2-54554
 Na cooled Th cycle breeder with coated particles 2-102153
 Na, extreme overheating study 2-59469
 Na forced convection, wall heat transfer coeff. for condensation and boiling 2-97635
 Na saturated particle bed, heat transfer behaviour 2-107958
 O₂ induced corrosion, design guide for secondary systems for reduction 2-64586
 U-ZrH research reactor, 3 MW, safety considerations in design 2-96080
 UO₂-Zircaloy-4 interface, gap conductance meas., concentric and eccentric gaps 2-108074
 Zr-Nb (2.5% wt.%), pressure tubes for CANDU-PHW, manufacture, inspection, mech. props. 2-90231

fission reactor core control and monitoring

- see also fission reactor safety; fission research reactors; nuclear engineering; nuclear reactor instrumentation
 advanced digital metal impact monitor for PWR 2-85176
 AGR, Windscale, UK, final expts. on transient anal. codes 2-64628
 alarm information handling problems in control rooms (Finnish) 2-80163
 Beloyarsk Nuclear Power Station, power distrib. regulation 2-102105
 benchmarking of ARMP modules against BWR measured data 2-102000
 Browns Ferry-3, partial control rod insertion, neutronics anal. 2-96206
 BWR, bypass flows, thermal-hydraulic anal. 2-54556

fission reactor core control and monitoring continued

- BWR, core and fuel management in the Shimane nuclear power station 2-113679
 BWR, flow pattern identification by noise techniques 2-96140
 BWR, local void fraction, RMS neutron noise relation in bubbly flow region 2-96189
 BWR, neutronic and process signals, cause and effect anal. 2-96154
 BWR, noise anal., characteristics and time history 2-96186
 BWR, second transit time, expt. evidence 2-96188
 BWR, stability anal., neutronic modeling 2-101982
 BWR, stability estimation using multivariable autoregressive model 2-96192
 BWR, stability monitoring using noise anal. 2-96187
 BWR, SUR-100 type, detector signal anal., void and bubble effect (German) 2-54536
 BWR benchmark verification of control rod effects on SIMULATE models 2-101999
 BWR control blade pins and rollers, non-Co alloys test project 2-85156
 BWR control during fast overpressurisation transients by bubble injection 2-102176
 BWR control rod pattern optimisation using power shape monitoring system 2-102112
 BWR control rods, ASEA-ATOM design, operational experience 2-80095
 BWR control rods, post-irrad. examination 2-80094
 BWR fuel rods, post-irrad. anal., power distrib., in Quad Cities-1 2-107962
 BWR hybrid power shape core monitoring system 2-64585
 BWR incore power feedback effects by radial coherence meas. 2-96191
 BWR noise, systems with feedback, coherence anal. 2-96149
 BWR operating experience with gamma-sensitive traversing in-core probes 2-102139
 BWR plant diagnosis system, operating experience 2-96190
 BWR scram system, operation and safety concerns 2-96218
 BWR stability testing: reaching the limit-cycle threshold at natural circulation 2-102138
 CANDU, bimodal analysis and spatial control 2-64592
 CANDU, first fuel charge, burnup improvements 2-113638
 CANDU reactor benchmark problems 2-90205
 Clinch River Breeder, initial loading mock-up expt. 2-101994
 Clinch River Breeder lumped fission product uncertainty anal. 2-101995
 CLUB—a multigroup integral transport theory code for analysis of cluster lattices 2-96070
 component vibrations, detection, local-global interaction calc. 2-108063
 computerized fault diagnostics in a nuclear reactor via analytic redundancy 2-96215
 conference on new directions in nuclear energy, Brussels, Belgium (April, 1982) 2-101122
 control and instrumentation system reliability (Japanese) 2-74857
 control room CRT displays, symbol selection methodology 2-69786
 control room review, human engineering factors 2-69781
 control room reviews, human factors 2-69785
 control room reviews, important issues 2-69780
 control room reviews, interview approaches 2-69784
 core surveillance and operator training, simulation techniques (Japanese) 2-74859
 Coupled Fast Reactivity Measurement Facility, central flux spectrum, sensitivity and error anal. 2-54541
 critical parameters of reactors with TBC-2M type fuel and different neutral reflectors (Russian) 2-80052
 diagnostic system for reactor core and plant control system, process signal noise anal. 2-96296
 digital computer programs, verification in safety systems 2-101970
 digital reactor protection system with no stored programs 2-96203
 EBR-II, operational safety, computer code 2-54560
 fast critical assemblies, with high ²⁴⁰Pu content, sodium void reactivity anal. 2-69696
 fast reactor, N₂O₄ cooled, relation between initial and steady state conditions (Russian) 2-54571
 fast reactor burn-up calculations 2-69702
 fast reactor parameters, optimisation, system approach (Russian) 2-54552
 fast reactor temperature noise, RMS anal. in fuel assembly with local blockage 2-96157
 few-group constants for the HEU and MEU cores in the KUCA 2-96068
 FFTF control system experience 2-102122
 FFTF MIDAS computerized operational work control system 2-69793
 FFTF power range testing 2-102117
 FREY code analysis of fuel rod transients 2-69797
 FREY code for operational transient evaluation 2-64611
 HTR pebble bed core, 1-dimens. model, reinforcement learning control, heuristic approach 2-85122
 HTR rod drive electrohydraulic load simulator (German) 2-69770
 HTR stability against xenon induced power oscillations (German) 2-90275
 human factors, behavioral learning objectives for plant simulation at TMI 2-69775
 human factors, conflict decision aid for nuclear reactor instrumentation 2-69779
 human factors, emergency procedure reviews, effectiveness 2-69774
 human factors, error rates in quantification of instrumentation/control data 2-69772
 human factors, interview techniques for gathering data on operational experience 2-69777
 human factors, operator role modeling 2-69773
 human factors applications questionnaire for control rooms 2-69776
 human factors effect on control panel modifications 2-69778
 imitative model for automated control and monitoring system 2-113590
 improved fuel utilization through advanced burnable absorbers 2-113642
 incentives for improved burnable absorber designs 2-113643
 Indian Point-1 reactor ThO₂-UO₂ isotopes anal. 2-54534
 information and measuring apparatus design for nuclear power stations 2-54543
 integral testing of evaluated fission product data 2-107938
 JOYO, reactor noise anal. 2-96171
 Karlsruhe subassembly monitoring system, functions and struct. 2-96170
 large symmetric cores, buckling method extension, neutron transport eqn., flux 2-113584
 liquid metal regulator system, critical assembly study 2-54550

fission reactor core control and monitoring continued

- LMFBR, fuel element malfunction, temperature noise, pattern recognition 2-96152
- LMFBR, Na boiling detection by reactor noise anal. 2-96158
- LMFBR, Na vapour bubble collapse, acoustic emission noise, detection and interpretation 2-96159
- LMFBR, noise anal. for core surveillance 2-96168
- LMFBR, nonmultiplying media, neutron noise transmission, wave propag. anal. 2-54539
- LMFBR, sodium boiling noise detection, IAEA-1WGFR specialists meeting report 2-96167
- LMFBR absorber system design, safety requirements 2-96081
- LMFBR diagnostic techniques, signal processing techniques 2-96169
- loose part detection using acoustic emission detectors in NSSS 2-96179
- LWGRs, Beloyarsk, reactivity steam effects 2-64573
- LWR, German, noise surveillance systems 2-96178
- LWR, post-departure from nucleate boiling operation 2-59507
- LWR, small break LOCA, core damage detection and control 2-54581
- LWR (U,Pu) mixed fuel reloading programme, computer code qualification program 2-69743
- LWR fuel cycle, burnable poison reactivity control 2-113639
- LWR fuel cycles, burnable absorber reactivity control technology 2-113640
- microprocessor based reactor vessel level/containment monitor 2-85175
- Monticello cold load critical measurements 2-102155
- moving coil type control rod drive mechanism development 2-96138
- MR research reactor, fuel pin testing using gaseous absorber 2-113683
- multivariable controller design for CANDU reactor 2-113705
- multivariate signal analysis for process noise source identification 2-96150
- neutron distribution in reactor core with TBC-2M fuel assemblies (*Russian*) 2-80149
- neutron noise, conf., Tokyo, Japan (Oct. 1981) 2-94885
- neutron noise, propagating disturbances theory 2-96155
- neutron noise calculation, binary operators, Green's functions 2-85117
- neutron noise measurements on Bugey 2 PWR 2-96182
- neutron noise theory for fast reactors 2-96172
- neutronic response to two phase flow 2-96141
- noise, correlation functions, forward eqn. approach 2-107942
- noise analysis, signal transmission path anal. 2-64565
- noise data acquisition and source modelling for power reactors 2-96177
- noise diagnostic methods developed on research reactors 2-96156
- noise sources and space-depend. reactor transfer functions 2-96161
- nonuniform fuel burnup, time power series anal. method 2-101959
- North Anna, control panel improvement 2-102126
- nuclear power station, man-machine interfaces (*Japanese*) 2-74858
- nuclear reactor vessel level monitoring system for assessing inadequate core cooling 2-64561
- Oldbury nuclear power station, computerised monitoring and control system 2-108053
- on-line diagnosis algorithm based on noise analysis 2-96153
- optimal fuel depletion strategy 2-113605
- Palo Verde control room human factors study: methodology 2-69782
- Palo Verde control room human factors study: results 2-69783
- pebble bed HTR, reactivity effects of water entry 2-64559
- PHWR, noise anal. incl. primary coolant flow rate 2-96144
- power coefficient validation of the Keweenaw ARMP model 2-101998
- power factor, optimal control 2-113707
- power reactor, surveillance and diagnostics, stochastic semiempirical methods 2-107941
- PROTEUS-LWHCB experiments: two-rod heterogeneity effects 2-113693
- PWR, boiling detection and monitoring by incore neutron noise analysis 2-96184
- PWR, core internal vibr., neutron noise monitoring 2-96173
- PWR, core vibr. surveillance by neutron flux monitoring 2-96175
- PWR, gadolinia loaded assemblies, automated diffusion theory parameterisation 2-102150
- PWR, internal struct. vibr., monitoring and diagnosis by neutron noise 2-96176
- PWR, loss-of-coolant accident, local void stabilisation (*German*) 2-69799
- PWR, low freq. press. oscillations 2-96183
- PWR, moderator temp. coeff. reduction by Gd substitution 2-96079
- PWR, on-line protection for departure from nucleate boiling ratio 2-102159
- PWR, optimal depletion strategies determ., by gradient ascent method 2-90201
- PWR, vibrationally induced neutron fluctuations, cylindrical two-group model 2-107928
- PWR baffle/reflector constns., ENDF/B-V based few group calcs. 2-101980
- PWR burnable poisons, Gd₂O₃-UO₂ and B₄C-Al₂O₃ comparison 2-80098
- PWR control rod materials, irradi. behaviour 2-80154
- PWR core monitoring by incore noise analysis 2-96181
- PWR diagnosis shock and vibr. anal. metal parts impact 2-96180
- PWR gross power distrib., calc. by modified Borresen coarse-mesh scheme 2-101981
- PWR noise experiments, anal. and instrumentation 2-96174
- PWR operating experience with gadolinia fuel 2-113644
- PWR primary flow meas. by correlation anal. of ¹⁶N fluctuations 2-96143
- PWR prototypic gamma thermometers, fabrication and elec. calibration 2-64564
- PWR-BWR thermal-hydraulic anal. programmes, comparative study (*Spanish*) 2-69698
- RAMONA-3B code for BWR transients, B transport calc. in standby liquid control system 2-96247
- random-parametric reactor model with direct feedback and non-white noise 2-96165
- rapid power control capability of the ASEA-ATOM BWR 2-113703
- RBMK high power reactors, design provisions for operational capability 2-54481
- RBMK homogeneous lattices, spectral indices meas. 2-54545
- RBMK reactors, use of depleted absorbers 2-113626
- reactivity approach to reactor core diagnostics 2-64563
- reactivity margins in heavy-water-moderated production reactors 2-101984
- reactivity temperature coefficients of liquid salt reactors 2-113593
- reactor noise, differential and whitened correlation—simple new methods for transit time measurements 2-96139
- reactor noise, partial and multiple coherence 2-96148

fission reactor core control and monitoring continued

- reactor noise analysis, models and information contraction 2-96164
- reactor noise analysis, safety appl. (*Japanese*) 2-96222
- reactor noise analysis by dynamic data system methodology 2-96151
- reactor noise comparative anal. 2-96160
- reactor noise patterns, reactivity feedback and spatial higher harmonics effects 2-96162
- real-time quasi-three-dimensional BWR core simulator 2-101972
- reliability evaluation of a nuclear reactor safety control system 2-54636
- rod type lattice, thermal neutron parallel diffusion length, reactor appl. 2-64450
- Shimane power station, Japan, core and fuel management (*Japanese*) 2-64568
- SIMODEX fuel management program, Darlington A reactor fuelling simulation 2-64461
- simulation of fuelling operations for CANDU-type reactors 2-64462
- slab reactor, absorber withdrawal rate, temporal power series method, fuel burn-up 2-113677
- SLOWPOKE reactor, small-signal dynamic simulation 2-102013
- spatial effects in reactivity meas. using inverse soln. of kinetic eqns. 2-113592
- stability to Xe oscills., neutron height distrib. shape effect 2-64574
- stand-by fuel assembly, efficient utilisation anal. 2-54537
- stochastic reactor kinetic eqn. 2-96163
- subcritical assembly, k_{eff} determ. using asymmetric source method 2-101997
- subcriticality measurements using ²⁵²Cf driven power spectral density meas. 2-90282
- swimming pool research reactor, neutron noise anal., reactivity and boiling appl. 2-96145
- temperature fluctuations during reactor transients, safety aspects 2-96166
- temperature noise measurements, survey of methods, results and models 2-96146
- thermal reactor physics, future directions 2-101990
- transient analysis, inverse reactivity appls. 2-107940
- transient reactor control system, analytical design considerations 2-64453
- transient test reactor facility, real time point kinetics simulation on micro-computer 2-64625
- Two-dimensional adiabatic kinetics model with feedback using a simplified temperature iteration scheme 2-54473
- two-phase flow meas., from reactor neutron noise anal. 2-108071
- two-phase flow using neutron noise as reactor instrument 2-96142
- vacuum channel, high temp., for intrareactor investigs. (*Russian*) 2-80150
- VVER, electromechanical control and protective equipment electric drives testing (*Czech*) 2-85169
- VVER-440, power distrib. monitoring, coolant sensing method 2-64578
- VVER-440, thermal power meas., correlation-dispersion method 2-64577
- WWER-440, automated vibration monitoring system 2-96185
- ZPPR, large core expts., adjusted data set tests 2-101992
- ZPPR criticality anal., cell modelling influence 2-101996
- Al₂O₃-B₄C annular burnable absorber, fabrication, development, appl. 2-80100
- Al₂O₃-B₄C burnable poison, gas release, swelling, high fluence effects 2-80099
- B containing burnable poisons 2-80101
- Gd burnable poison in PWR fuel, possibilities 2-113645
- Gd₂O₃ burnable absorbers, LWR neutronics effect 2-80097
- Hf, control rod suitability, post-irrad. examination, mech. performance 2-80155
- Hf, PWR control rod appl. 2-80096
- Rh in-core detector sensitivity study 2-102154
- UO₂-Gd₂O₃ burnable poison reactivity control in PWRs 2-113641
- fission reactor decommissioning**
see also *fission reactor safety; radiation protection; radioactive waste*
- cost study 2-64701
- economic planning 2-108162
- fuel preparation facilities, decommissioning problems 2-108033
- fuel preparation facilities, decommissioning problems 2-108034
- fuel preparation facilities, decommissioning problems 2-108035
- research reactor, concrete biological shielding, demolition and removal 2-108155
- Th processing facility, decommissioning, population dose 2-64700
- fission reactor fuel**
see also *claddings; fission of plutonium; fission of uranium; fission reactor fuel preparation and reprocessing; isotope separation; radioactive waste*
- 16-rod cluster test sections, enthalpy and mass flow distrib. 2-64531
- 18 pin bundle, operation 200 days after failure 2-54497
- accounting system at BNPF, bulk meas. techniques 2-80068
- advanced coated particles for HTGR, irradi. performance 2-113658
- advanced fuel cycles for CANDU: AECL's fuel development program 2-64542
- AGR, Windscale, UK, final expts. on fuel 2-64628
- AGR, Windscale, UK, fuel pin development, coolant composition, reactor operation 2-64627
- auditing of design, fabrication and performance 2-64525
- auditing of design and fabrication, fuel and core performance improvement 2-64526
- automated gamma densitometry of fuel pellets, rods, and control rods, 2-80073
- AVR reactor, physical behaviour on insertion of LEU fuel elements 2-113662
- barrier fuel bundles, failure resistance demonstration 2-80093
- bubble-bubble forces, effect on coalescence 2-102048
- burnup improvement through reshuffling of fuel bundles of the first fuel change in CANDU-600 2-64543
- BWR, fuel reconstruction for improved U utilisation 2-54517
- BWR extended burnup fuel cycles, advances 2-108011
- BWR fuel, thermal performance during pressurisation transients 2-102233
- BWR fuel rods, post-irrad. anal., power distrib., in Quad Cities-1 2-107962
- BWR operating experience at Shimane-1 with WNS-type initial fuel 2-102151
- CAMAC gamma-ray scanning system, for nuclear safeguards 2-53906
- Canadian safeguards program 2-54526
- CANDU, alternative fuel cycle assessment 2-113649
- CANDU, first fuel charge, burnup improvements 2-113638
- CANDU advanced fuel cycles, economic potential 2-113650

fission reactor fuel continued

- CANDU recycle fuels, development and fabrication experience 2-113659
 CANDU spent fuel repositories, temp. maxima, heat transfer study 2-90238
 CANDU [fuel elements, finite element modelling code] 2-74826
 canwall failure modeling in TRANSIT HYDRO code for whole core transition, phase anal. 2-96295
 Caramel fuel, experience at Osiris (*French*) 2-64487
 carbide fuel elements, Na-bonded, irradi. to goal burnup, behaviour 2-80107
 characterisation and quality control, conf., Karlsruhe, Germany (June 1981) 2-84372
 claddings, anti-deposition coating, CVD method 2-64485
 claddings, anti-deposition coating, sol-gel method 2-64485
 coated particles, failure detection in HTGR, by acid leaching 2-64475
 computational benchmark for adjacent poisoned fuel rods 2-113599
 conference, Canadian Nuclear Soc., Ottawa, Ont., Canada (June, 1981) 2-63743
 conference on new directions in nuclear energy, Brussels, Belgium (April, 1982) 2-101122
 criticality control, subcritical mass limits for ^{237}Np , $^{238,240,241}\text{Pu}$ and $^{241,244}\text{Cm}$ 2-96118
 criticality safety of LWR fuel elements and components 2-96133
 destructive analysis, meas. and shearing machine 2-107973
 Dodewaard BWR, fuel utilisation 2-113636
 dry spent fuel storage, element and cladding integrity 2-64521
 element dummies, ampoule testing facility in dissociating N_2O_4 medium (*Russian*) 2-54522
 fast reactor operating data, fuel tolerance effect (*German*) 2-96092
 FBR fuel optimisation using data bank system BESEX 2-85150
 FBR fuel pin performance with mixed fuel to cladding gaps 2-80079
 FBR fuel pins, heat conductance modelling 2-90244
 FBR fuel pins, transient irradi. expts., in Petten HFR 2-69704
 FBR helical wire bundle, temp. form factor reduction, design, research and development 2-102076
 fissile content measurement of fresh BWR and PWR assemblies 2-80074
 fissile materials worths, first-order perturbation calcs., intracell adjoint flux heterogeneity effects 2-96097
 fission gas release, thermal resolution under transient heating 2-102041
 fission gas release model from reactor fuel undergoing transient heating 2-64532
 fission-fusion system, long term fuel dynamics, doubling and half-life times 2-113748
 flow near end plates in CANDU-type 19 rod fuel bundle 2-108058
 fluoride melts of U, Th, Be, Li mixtures specific elect. cond. meas. 2-56235
 fracture mech. props. influence on reactor fuel behaviour 2-85145
 Fragma fuel management experience and development 2-113637
 FREY code analysis of fuel rod transients 2-69797
 fuel charge and physical starting organization at Loviisa II. Nuclear power plant (*Hungarian*) 2-90221
 fuel cycle strategies for the LWR-LMFBR transition in the United States 2-113602
 fuel elements, state of art 2-54503
 fuel pin behaviour during transients, computer codes 2-90220
 fuel pin failure, by melt through 2-102049
 fuel pin temperature calcs. 2-64537
 Fuels and Materials Examination Facility, transfer tunnel transporter 2-107975
 fusion-fission hybrids, CODAC, TIMOC, ORIGEN calc. model, breeding, fuel 2-113747
 gap conductance for arbitrary Knudsen number 2-74828
 gas chromatography in nuclear fuel rod fabrication 2-85141
 GCFR, design, fuel, safety and economics 2-64456
 GCFR fuel rods, venting and pressure equalisation, chemical effects 2-54499
 hazard potential anal. of fission materials (*German*) 2-85152
 heavy water seed blanket breeder reactor on the uranium-plutonium cycle 2-113600
 high precision Davis-Gray titrations, appl. to standards for safeguards 2-69740
 HM precompiled subroutine library for reactor fuel/coolant interactions 2-69700
 Hot Fuel Examination Facility, Ar cell, decontamination and refurbishment 2-108152
 Hot Fuel Examination Facility, data acquisition and process control system 2-107968
 Hot Fuel Examination facility, element laser profilometer system 2-107967
 hot fuel examination facility, flow path for FFTF components 2-107965
 Hot Fuel Examination Facility, in-cell materials handling 2-107972
 hot fuel examination facility, operating philosophy and experience 2-107964
 Hot Fuel Examination Facility, radiography station 2-107969
 Hot Fuel Examination facility, subassembly profilometer 2-107966
 HTGR, accident condition performance of fuels 2-85154
 HTGR, neutron resonance absorb. in fuel 2-64451
 HTGR, Pu cross section calc. method (*German*) 2-80056
 HTGR fuel and fuel cycle experience in the United States 2-113657
 HTR fuel irradi. facility, programmable logic controller appl. 2-69761
 HTR fuel testing, irradi. device for abnormal thermal conditions 2-69706
 HTR modules, fuel cycle performance 2-113663
 HTR spherical fuel elements, graphic matrix materials (*German*) 2-90245
 hybrid reactor symbiotic systems, fuel flow dynamics 2-54661
 IAEA nuclear materials safeguards information system, development and function 2-74809
 IAEA nuclear materials safeguards Inspectorate, credibility after Tamuz 2-74807
 IAEA nuclear materials safeguards Inspectorate, field experience extent and nature since 1962 2-74808
 IAEA safeguards, Belgian experiences 2-69733
 IAEA safeguards, effect on system design 2-69739
 IAEA safeguards, impact on USA safeguards activities 2-69736
 IAEA safeguards, Japanese experience 2-69734
 IAEA safeguards, joint interaction with Euratom 2-69732
 IAEA safeguards, USA agreement 2-69735
 IAEA safeguards 2-69731
 IAEA safeguards application at Trojan Nuclear Plant 2-69738
 IAEA safeguards experience to date 2-69730
 improved fuel utilization through advanced burnable absorbers 2-113642

fission reactor fuel continued

- impurity effect on fuel pins behaviour (*German*) 2-85151
 in-channel thermohydraulic calculations of nuclear reactor fuel-element assemblies 2-113684
 incentives for improved burnable absorber designs 2-113643
 Indian Point-1 reactor $\text{ThO}_2\text{-UO}_2$ isotopic anal. 2-54534
 inspector-instrument interface in portable NDA instrumentation 2-74856
 irradiated fuel, fission products, isotope correl. anal. 2-54502
 irradiation expts. in research reactors, Canadian experience 2-113666
 irradiation tests in RAPsodie and Phenix 2-113694
 KFA/NUCLEBRAS research and development program on thorium utilization in PWRs 2-113648
 LIFE-GCFR, computer code for GCFR fuel performance 2-69710
 LMFR fuel assemblies testing in transient reactor test facility 2-64625
 LMFR, fuel/coolant interaction, finite heating rate model, parametric study 2-69760
 LMFR, large diameter pellets and single enrichment 2-69713
 LMFR, modeling Na-fuel reaction swelling in breached mixed oxide fuel elements 2-80162
 LMFR, stainless steel fuel elements, carburisation profiles 2-54490
 LMFR fuel assembly, 217 pin wire wrap spaced, friction factor correlation 2-102156
 LMFR fuel management strategies for structural compatibility 2-113653
 LMFR fuel pins, in-situ time-integrated imaging 2-85142
 LWR, conversion performance characteristics as function fuel-to-coolant volume ratio 2-54518
 LWR, fission product chemical behaviour in fuel rods under accident conditions 2-80087
 LWR, grain growth 2-80082
 LWR (U,Pu) mixed fuel reloading programme, computer code qualification program 2-69743
 LWR fuel bundle, severe core damage anal. package, conceptual design 2-80078
 LWR fuel burnup extension 2-102054
 LWR fuel cycle, burnable poison reactivity control 2-113639
 LWR fuel cycle, techniques for increased burnup 2-108012
 LWR fuel cycles, burnable absorber reactivity control technology 2-113640
 LWR fuel fabrication, quality assurance 2-85159
 LWR fuel isotopic analyses, database 2-102079
 LWR fuel pin failure anal. in LWRLAFM code 2-96263
 LWR fuel rod behavior, during reactor in-pile tests in LOCA 2-90224
 LWR fuel rod calcs., fuel characts. requirement 2-85149
 LWR fuel rod failure propagation anal. 2-96257
 LWR fuel rod rigging, closed-form math. soln. 2-64467
 LWR radiological consequences of recycling Pu 2-102190
 LWR reactor pins, thermochem. eval. 2-102043
 Magnox fuel, irradiated, radiation exposure of the public from normal transport 2-105838
 mixed oxide fuel pins, fuel-cladding mech. and chem. interaction 2-54498
 modular dry storage of spent LWR fuel 2-113669
 MR research reactor, fuel pin testing using gaseous absorber 2-113683
 natural U axial blankets, operating experience in PWRs 2-113597
 natural U demand evaluation for thermal reactor systems 2-113652
 neutron assay of bulk nuclear materials 2-80071
 neutron cost criteria for long-term fissile fuel enhancement 2-64588
 neutron distribution in reactor core with TBC-2M fuel assemblies (*Russian*) 2-80149
 neutron radiography, handbook 2-68977
 neutron resonance parameters (*Japanese*) 2-59448
 nondestructive assay of plutonium fuel for FFTF and supporting operations 2-80075
 nuclear fuel and waste management problem 2-69712
 nuclear fuel component cost calc. 2-90249
 nuclear fuels, Gd determ. techniques for quality control (*German*) 2-96089
 optical methods for appl. in nuclear fuel characterisation 2-85135
 optimal fuel depletion strategy 2-113605
 oxide fuel, fission gas release at high burn-up 2-80066
 oxide fuel, gas release swelling, gas porosity development kinetics model 2-80063
 oxide fuel, O/M ratio determ. method 2-113633
 oxide fuel, swelling and gas release during fast temp. transients 2-90223
 pellet diameter reduction, cost, neutronics, safety 2-74829
 pellet shape and structure influence on fuel pins operating behaviour 2-85148
 performance, continuous monitoring 2-64528
 Phenix, fuel performance improvement 2-113606
 photon interrogation for bulk measurement of transuranic materials 2-80072
 Pickering B, fuelling strategy 2-113598
 plate type dispersion fuel technology status 2-113661
 PROTEUS-LWHCB experiments: 'two-rod heterogeneity' effects 2-113693
 PWR, fuel charging machine (*German*) 2-54690
 PWR, improved U utilisation 2-54516
 PWR, moderator temp. coeff. reduction using Gd_2O_3 -lined rods 2-54489
 PWR fuel assemblies, poolside reconstitution 2-102077
 PWR fuel assembly, neutron assay 2-80076
 PWR fuel behaviour, Belgian research 2-108013
 PWR fuel deformation in LOCA 2-90247
 PWR fuel fabrication examination 2-90260
 PWR fuel performance and manufacturing—an integrated approach 2-113654
 PWR fuel pins, annular, safety related design 2-102075
 PWR fuel rods, azimuthal temp. distrib., steady-state and blowdown conds. 2-90278
 PWR fuel rods, high-temp., post-irrad. performance 2-54496
 PWR operating experience with gadolinia fuel 2-113644
 PWR U/Pu fuel cycle improvements by maximising conversion 2-113647
 PWR-RCC fuel assemblies, seismic anal. 2-113624
 quality assurance auditing 2-64527
 quality control of nuclear fuels, technical and economic aspects 2-85132
 radial fission product distrib. reconstruction using nondestructive γ scanning 2-85143
 RBMK reactors, use of depleted absorbers 2-113626
 recycled U systems, evaluation for LWRs 2-113635
 recycling of the reprocessed uranium in PWRs 2-113634
 reduced enrichment, effect on fuel cycle for research reactors 2-113660
 rolled fuels for materials testing reactors (*French*) 2-64488

fission reactor fuel continued

- roughness element, response of fully developed pipe flow 2-108059
safeguards, backscattered γ radiation energy distrib. from two component system 2-93734
safeguards, isotopic anal. using automated transportable mass spectrometer 2-80382
safeguards bulk and in-process measurements for fissile materials 2-69741
secondary electron detector for irradiated nuclear fuel 2-70064
sheath failure model, comp. with expt. results 2-54528
shell elongation of RBMK fuel element under cyclic power changes 2-113629
Shimane power station, Japan, core and fuel management (*Japanese*) 2-64568
slab reactor, absorber withdrawal rate, temporal power series method, fuel burn-up 2-113677
sodium safety facility, test sections, handling at Hot Fuel Examination Facility 2-107971
solid state track detectors appl. in nuclear safeguards 2-69768
spent fuel, surface drywell storage 2-64519
spent fuel composition, comparison of predicted and measured data 2-70020
spent fuel from WER-440 reactor, isotope build-up anal. 2-96114
spent fuel transport, cask fleet projections, rel. to storage site location 2-64522
spent fuel transport, safety assessment, source term database 2-64520
spent reactor fuel monitoring, safeguard instrument 2-74802
sphere-pac fuel, simulation, fuel-cladding mech. interaction 2-80112
sphere-pac fuel pin loading, stochastic simulation program 2-80111
stand-by fuel assembly, efficient utilisation anal. 2-54537
strategies for fuel management in coupled systems of thermal and fast reactors 2-113601
stressed shell fuel isolation container, design, fabrication and testing 2-108019
tandem mirror fusion, fissile breeder, blanket engineering 2-85392
thermal power density distrib., γ -scanning anal. 2-54501
thermomechanical design 2-64468
TMI-2 accident anal., fuel rod behaviour, core damage using TOODEE-2-J 2-96227
transportation of nuclear material 2-108158
TRISO-coated HTGR fuel particles; gaseous fission product release predictions 2-74810
U, procurement in USA, foreign/domestic supplies 2-64529
U exploration, α -track technique principles 2-68525
UC-PuC fuel pins, neutron irradi., swelling, microstruct., fission gas release 2-80108
UO₂, Zircaloy clad combustible CAMEL fuel for research reactors (*French*) 2-96093
VVER fuel composition optimisation 2-102061
water reactor fuel, performance-related characts. 2-85133
weighing machine, for Fuels and Materials Examination Facility 2-107976
Westinghouse wet local burnable poison design anal. for 15X15 assemblies 2-54484
WSA-4 mixed oxide fuel pin, irradi. creep deform. due to gradual temp. reductions 2-107953
ZEBRA fuel, neutron outputs, meas. and calc. 2-69746
Zircaloy fuel assemblies, design and performance features 2-113655
Zircaloy-2, steam oxidised, oxide/ α and α/β phase interface advance kinetics 2-66300
Am-U mixed oxide fuel, chemical simulation study 2-59455
Be-C-graphite-UC₂ reactor fuel material, enthalpy and sp. ht. meas. at 1980K 2-115428
¹⁵⁴Eu, ¹⁵⁵Eu ratio, radioactivity and burnup in nucl. reactor fuel samples 2-74834
Gd burnable poison in PWR fuel, possibilities 2-113643
HTGR fuel pellets fission product diffusion coeff. 2-80086
Na cooled Th cycle breeder with coated pellets 2-102153
Na saturated particle bed, heat transfer behaviour 2-107958
²³⁷Np, FFTF absolute fission rate meas. 2-102147
(Pu,U)O₂ FFTF fuel pellets, pre-irradiation microstruct. 2-80080
(Pu,U)O₂ fuels, unirradiated, Pu solubility determ. (*German*) 2-85138
(Pu,U)O₂, Pu radial redistribution 2-80081
Pu container, for air transport, safeguards appl. 2-107959
Pu, economic value assignment methods 2-113651
Pu fuelled assemblies, handling and storage 2-102191
Pu in storage vaults, movement monitoring and detection 2-74803
Pu isotopic anal. using automated mass spectrometer 2-74563
Pu measurement for nuclear safeguards, automated analytical instrumentation appl. 2-74804
Pu recycling in BR3 reactor, post-irradiation examination 2-102082
Pu rich, high converting cores in PWRs 2-113646
Pu solutions, neutron coincidence counting 2-80070
Pu transport casks shielding calc. code comparison 2-108159
Pu Z 2-102055
Pu/(U+Pu) ratio determ. in FBR fuel pellets by X-ray fluoresc. anal. 2-85139
PuC LMFBR fuel rods, modelling code, URANUS 2-90227
PuCoC, ternary compound struct., X-ray diff. anal. 2-102040
PuNiC, ternary compound struct., X-ray diff. anal. 2-102040
PuO₂, enthalpy values 2-80084
PuO₂ fuel tubes, uniformity testing, γ -ray monitor appl. 2-54491
PuO₂, high temp. enthalpy 2-80065
PuO₂, raw material, large package transportation design 2-102031
PuO₂-UO₂ mixed oxide fuel rods construction and manufacture (*German*) 2-96095
²³⁹Pu, A=239.41, FFTF absolute fission rate meas. 2-102147
²³⁹Pu, A=239.41, fission rate meas. in FFTF traversable fission chamber expt. results 2-102146
²³⁹Pu(n,f), A=238.240.241, delayed neutron yields 2-54453
²³⁹Pu decay, γ transition emission probabilities and energies 2-74744
SiC coated HTGR fuel pellet, corrosion by Pd fission product 2-90229
Sm₂U₂O₇, mixed oxide lattice parameters 2-59462
(Th,U)O₂, stability of simulated fission product phases 2-80061
Th content in mineral ore by fission track technique 2-83976
ThO₂, calcination and sintering, theoretical and expt. studies 2-85165
ThO₂, enthalpy values 2-80084
ThO₂ powder, initial sintering stage study by emanation thermal anal. 2-88032
ThO₂-UO₂, mixed oxide fuel, at. homogeneity evaluation 2-85136
ThO₂-UO₂, fission gas release at high burn-up 2-80083

fission reactor fuel continued

- ²³³Th, FFTF absolute fission rate meas. 2-102147
²³³Th, fission rate meas. in FFTF traversable fission chamber expt. results 2-102146
²³³Th(n, γ), 1-408 keV, capture cross-section 2-64400
(U,Gd)O₂ solid soln., near stoichiometric, Gd effect on thermal cond. 2-80060
(U,Pu)C, swelling investigation 2-64479
(U,Pu)O₂, combustible fuel elements irradi. in fast reactor, ¹³C presence (*French*) 2-96096
(U,Pu)O₂, enthalpy values 2-80084
(U,Pu)O₂ fuel element, strongly radioactive, X-ray microanal. (*French*) 2-67786
(U,Pu)O₂ inhomogeneous sphere-pac fuel, performance under irradi. 2-113656
(U,Pu)O_{2-x}, relationship between FBR fuel and product quality (*German*) 2-96094
U concentration absolute determ. by hyperpure Ge LEPS 2-116742
U deposits in volcanotectonic depressions, classification scheme 2-63140
U, determination in rocks by γ -spectrometry 2-54504
U, effect of contact with diolylmethane 2-113630
U exploration in sandstone areas, track-etch method data interpretation 2-68526
U fuel in nuclear power plants, choice and economical characts. (*Croatian*) 2-69708
U in spent fuels and waste solids, delayed neutron interrogator control system 2-74855
U isotopic anal. using automated mass spectrometer 2-74563
U isotopic ratios in Chalk River and CANDU fuel 2-102080
U measurement for nuclear safeguards, automated analytical instrumentation appl. 2-74804
U mine waste, safe disposal problems 2-64546
U, natural availability, enrichment prospects and status 2-102073
U, oxidation in O₂ and CO₂, surface spectroscopy 2-80059
U resources and fuel cycles, resource utilisation kinetics 2-64541
U slab, steady state fast neutron spectra, comparison of diffusion and transport theory 2-59445
U supply analysis, price rel. to demand 2-64530
U+Pu solution critical expts., K_{eff} from ENDF/B-V data 2-90237
U, density, lattice parameters and elec. resist. up to 100 kbar 2-76387
UC, fission products effect on thermophysical parameters 2-96113
UC fuel pins, intragranular fission gas diffusion model, for LMFBR 2-80106
UC LMFBR fuel rods, modelling code, URANUS 2-90227
UC-PuC, fuel element fabrication and test 2-80110
UC-PuC fuel pins, He-bonded, irradi. performance in EBR-II 2-80103
UC-PuC fuel pins, He-bonded, transient performance in TREAT 2-80105
UC-PuC fuel pins, irradi. performance in EBR-II 2-80102
UC-PuC mixed fuel, He-bonded, irradi. to goal burnup, behaviour in EBR-II 2-80104
UC-PuC mixed fuel, performance modelling code LIFE-4C, verification expts. 2-80109
UC-PuC sphere-pac fuels, fabrication and in-reactor performance 2-102096
U₂C₃, neutron irradi., mag. susceptibility, Neel temp., lattice consts. 2-66073
UN, fission-damaged, phys. and mech. props. 2-113620
UO₂, Al clad fuel cores, compacted and extruded, failure mechanisms 2-85164
UO₂ and (U,Pu) mixed oxide fuels 2-107952
UO₂, CEA fuel rod components design for power reactor assemblies (*French*) 2-96091
UO₂, close to stoichiometry, chemical potential 2-113631
UO₂, densification, fission-induced 2-76508
UO₂, enthalpy values 2-80084
UO₂, fission gas release, effect of irradi.-induced resoln. 2-107951
UO₂ fuel, fission gas disposition, granular computer model 2-107957
UO₂ fuel, Indian experience on prod. and quality control 2-85163
UO₂ fuel, swollen, with nonuniform grain size, interconnected pores stability 2-93481
UO₂ fuel pellets, fracture toughness, rel. to design specification 2-102078
UO₂ fuel pellets, low-density, fabrication tests 2-93479
UO₂ fuels, qualitative approach for characterisation 2-85160
UO₂, high temp. data on Seebeck coeff., elec. cond., thermal cond., specific heat 2-115796
UO₂ in-reactor fuel elements, fission gas extraction, fuel rod design 2-113625
UO₂, infinite breeding medium, neutron characteristics 2-96077
UO₂, interaction with W and Mo 2-59470
UO₂, irradiated, diffusion coeffs. of gaseous and volatile species 2-102042
UO₂, kernelled HTR fuel particles, production of CO during burn-up 2-102045
UO₂, LWR fuels prod. and structural props. characterisation (*German*) 2-85134
UO₂, LWR fuels prod. and characts. (*German*) 2-85158
UO₂ pellet, pulse n irradi., ¹³⁵Xe and ¹³¹I release (*Japanese*) 2-64476
UO₂ pellets, occluded gas anal. by mass spectrometer and fuel quality control 2-85140
UO₂ pellets, thermal shock resist., bench tests and calcs. (*German*) 2-85144
UO₂, polycryst., creep behaviour 2-86779
UO₂ powder manufacture, LWR fuel quality control, prod. parameters determ. (*German*) 2-96088
UO₂ powders, positron lifetime spectra 2-80062
UO₂, shock-compression parameters from 5 to 330 GPa 2-103901
UO₂, sintered, retention and release of water 2-90222
UO₂, sintering, low temp., effect of O₂ partial press. (*Korean*) 2-67233
UO₂, surfaces, laser irradi., evaporation mechanism and kinetics 2-93330
UO₂-Cr disperser system, interdiffusion and chem. diffusion 2-85146
UO₂-GdO₃, LWR fuels prod. and characts. (*German*) 2-85158
UO₂-GdO₃, thermal cond. and plasticity meas. (*German*) 2-85147
UO₂-GdO₃ burnable poison reactivity control in PWRs 2-113641
UO₂-PuO₂, mixed oxide fuel, at. homogeneity evaluation 2-85136
UO₂-PuO₂, mixed oxide fuel, U and Pu distrib. (*German*) 2-96090
UO₂-PuO₂, Pu conc. distrib. determ. using X-ray diff. line profile anal. (*German*) 2-85137
UO₂-PuO₂ pellets, structure development during reduction sintering from granulated powders 2-85161

fission reactor fuel continued
 UO_2 -PuO₂ pellets fabrication using granular technique, process parameter influence 2-85162
 UO_2 , hypostoichiometric, equilib. vapour press. and comp. at high temp. 2-80058
 UO_2 , oxygen diffusion 2-80085
 U_2O_5 , nonstoichiometric, heat capacity and elec. cond., 300 to 1200K 2-110006
 ^{235}U , A=233, 235, 238, FFTF absolute fission rate meas. 2-102147
 ^{235}U , A=233, 235, 238, fission rate meas. in FFTF traversable fission chamber expt. results 2-102146
 $^{235}U(n,f)$, delayed neutron yields 2-54453
 $^{235}U(n,f)$, 0.17 to 8.1 MeV, fission yields 2-101952
 ^{235}U , isotopic abundance in UF₆ cylinders, X-ray spectrometry meas. 2-80069
 ^{235}U systems, subcritical limits 2-96223
 ^{235}U systems, subcritical limits 2-96224
 $^{235}U(n,f)$, residual energy liberation by fission products 2-90183
 ^{238}U neutron capture rate determ. using Ge(Li) detector 2-102029
 ^{238}U resonances, Doppler chem. binding effect rel. to activation rate 2-107963
Xe tagged fuel elements, double failures resolution techniques 2-90235
Y stockpiling, amount, form and economics, European utility view 2-102074
ZrC, diffusion of metal fission products in fuel particle coating 2-85153

fission reactor fuel preparation and reprocessing

see also *isotope separation; radioactive waste*
accident analyses of compacted spent fuel 2-96129
advanced isotope separation cascade design considerations 2-69748
AGR, fuel plug units, maintenance 2-108156
air monitoring requirements and alarm response procedures in reprocessing plants 2-64597
n.n. alkyl aliphatic amides as extracting agents for actinide separation 2-107996
alpha, monitor for reprocessing plant 2-69997
alpha waste management strategy within fuel cycle, incentives for integration 2-107991
alpha-pyrohydrolytic pilot plant results of U and Pu recovery 2-108031
alternative fuel cycle evaluation 2-108041
ANS/ANS-8.3-1979-American National Standard Criticality Accident Alarm System 2-96130
AUPu conversion process, operating experience 2-108027
Barnwell fuel processing plant, research, development and demonstration activities 2-64552
boiler radiation levels at Point Beach PWR power station, refuelling shut-down chemistry test results 2-108100
CANDU once through Th fuel cycle 2-96136
ceramic, fabrication by hot impact densification 2-102099
conference, Canadian Nuclear Soc., Ottawa, Ont., Canada (June, 1981) 2-63743
conference on new directions in nuclear energy, Brussels, Belgium (April, 1982) 2-101122
continuous nuclear criticality surveillance of technological facilities 2-90254
control laboratory automation 2-64556
coprocessing solvent extraction flowsheet studies for LWR and FBR fuels 2-108046
corrosion of materials in reprocessing plants 2-64554
criticality considerations of interim spent fuel storage 2-90253
criticality design for low enriched U/H₂O systems 2-90255
criticality of normal compacted spent fuel 2-96128
criticality safety, expt. benchmark needs 2-90251
criticality safety, solid angle method use 2-96325
criticality safety of an annular tank for fissile solution 2-90257
criticality safety of LWR fuel elements and components 2-96133
criticality safety pipe intersection standard, review 2-96131
cross-section validation for fuel storage pools (enrichment 4.29 wt%) 2-90258
decommissioning of fuel preparation facilities 2-108033
decommissioning of fuel preparation facilities 2-108034
decommissioning of fuel preparation facilities 2-108035
engineering concepts for spent fuel encapsulation processing techniques and final disposal casks 2-108004
epithermal-thermal symbiotic reactor system 2-64682
mono-2-ethylhexylphosphoric acid effect on regeneration of spent fuel cells 2-113632
experimental breeder power station KNK II, use for fuel cycle development (German) 2-102081
extractor and filter choice procedures 2-113674
fast reactor fuel cycles 2-59478
fast reactor fuel reprocessing, status in France 2-108044
fast reactor operating data, fuel tolerance effect (German) 2-96092
FBR fuel elements, fabrication options 2-102094
FBR fuel reprocessing by fluoride volatility method, U branch 2-108047
first cycle studies of coprocessing flowsheets 2-69752
fissile material breeding in fusion reactors 2-54533
fissionable material for slow fission reactors, supply by fusion reactors (German) 2-93879
fuel cycle development, optimisation in nuclear energetics 2-59482
fuel dissolution, economic incentive for critical experimentation 2-90252
fuel processing plant model with sensitivity analysis 2-80129
gas chromatography in nuclear fuel rod fabrication 2-85141
gaseous diffusion plant, Eurodif, cost struct., economics 2-102087
GCFR fuel pins, remote pressurisation and resealing 2-108022
handling radioactive wastes from nuclear power plants and reprocessing spent nuclear fuel 2-54530
harmonisation and standardisation in nucl. safeguards, symp., Ispara, Italy (April 1982) 2-112658
HERMES pilot research facility for FBR fuel reprocessing 2-108043
hot experimental facility, remote handling electromech. three-axis development 2-108025
hot experimental facility, remote maintenance requirements 2-108026
HTGR, fuel reprocessing, USA/FRG cooperative agreement 2-69750
HTGR fuel reprocessing plant, thermal aspects in design 2-74852
HTR dissolver off-gas separation in reprocessing plant (German) 2-80147
HTR fuel elements, dry mechanical graphite separation process (German) 2-90239
IAEA safeguards, Belgian experiences 2-69733
IAEA safeguards, Japanese experience 2-69734
IAEA safeguards, USA initial experience 2-69757

fission reactor fuel preparation and reprocessing continued
Indian Point-1 reactor ThO₂-UO₂ isotopes anal. 2-54534
integral planning of nuclear fuels cycle facilities in Yugoslavia 2-108042
integrated cleaning process for head-end off-gas 2-108048
irradiated fuel ³H and fission product release during heat treatment 2-69753
laboratory automation system radar for fuel reprocessing analytical services (German) 2-59484
LMFBR fuel reprocessing pilot plant, design principles 2-108052
Los Alamos L_{III} edge densitometer for U, Pu conc. meas. in reprocessing solns. 2-69758
LWR fuel fabrication, quality assurance 2-85159
LWR fuel reprocessing in the United States 2-108050
LWR fuel storage, criticality calcs. using Monte Carlo and ENDF/B-V data 2-96127
LWR fuel storage geometries, expt. and theoretical study comparison 2-90259
LWR radiological consequences of recycling Pu 2-102190
Magnox fuel elements manufacture for nuclear power stations, safety assurance 2-59481
management of spent fuel from the Belgian nuclear power plants 2-108040
manpower and training for the nuclear fuel cycle 2-54532
mixer-settler emulsions, characts. and behaviour 2-74853
neutron absorber solutions for criticality control 2-96132
noble gas recovery and treatment systems, critical review 2-59454
nondestructive assay techniques for safeguards at Hanford 2-69759
nuclear fuel component cost calc. 2-90249
nuclear fuel recovery, Switzerland (German) 2-59483
nuclear waste related to elec. prod. unit, management cost 2-107979
optical methods for appl. in nuclear fuel characterisation 2-85135
pellet shape and structure influence on fuel pins operating behaviour 2-85148
pellets, optical carriage mechanism for obs. of glass coating form. during free fall 2-60214
plasma focus fission fuel breeder 2-55793
PVC, chlorinated, use a neutron absorber in fissile material solns. 2-96134
PWR, once-through fuel cycle, selective Th use 2-64549
PWR fuel fabrication examination 2-90260
PWR radioactive waste processing, ultrafiltration system operational impact 2-108014
PWR spent fuel storage rack, reactivity sensitivity 2-96126
PWR with tight-lattice core, conversion ratio enhancement 2-64457
quality control of nuclear fuels, technical and economic aspects 2-85132
radioactive liquid waste solidification, prod. facility 2-108032
radiological protection activities of German Federal Republic (German) 2-59479
recycled U systems, evaluation for LWRs 2-113635
recycling of the reprocessed uranium in PWRs 2-113634
remote control using computerised X-ray fluorescence 2-64557
remote visual displays for nuclear maintenance tasks, optimisation methodology 2-54535
reprocessing and waste management experience-PFR fuel cycle 2-108045
reprocessing in breeder fuel cycles 2-108036
reprocessing of plutonium-enriched and high burnup fuel 2-108038
reprocessing of plutonium-enriched LWR fuels 2-108039
reprocessing problems 2-54529
reprocessing problems with graphite containing fuel elements 2-108037
role of fusion hybrids for fissile fuel production in future power generation systems 2-102261
safe automated fabrication, batch furnace operation, chemical anal., automated handling 2-108024
safeguard evaluating methodology for fast reactor fuel fabrication processes 2-69755
safeguarded fast reactor fuel fabrication processes 2-69756
safeguards in process monitoring 2-69742
safety in the fuel cycle, review 2-102092
secure automated fabrication, review 2-108023
spent fuel composition expt. comparison with ORIGEN2 calc. 2-69751
spent fuel element cutting by high speed water jet (German, English) 2-113672
spent fuel extraction, chem. equilib., diluent props. effect 2-64547
spent fuel management, IAEA cost study 2-108002
spent fuel storage concepts away from reactor, cost comparisons 2-69749
sphere-pac fuel fabrication using internal gelation process 2-108029
sprinkler operation in high assay gaseous diffusion cascade 2-90256
Spraphenix fuel element manufacturing, computer data acquisition system 2-102093
thermal outgassing of irradiated fuel 2-69754
water reactor fuel, performance-related characts. 2-85133
³H removal, fuel dissolution, insoluble material in irradiated fuel 2-108051
KF-ThF₄ melt, density and kinematic viscosity temp. depend. 2-113675
NO control and recovery 2-64553
NO₂ control and recovery 2-64553
NaF-ThF₄ melt, density and kinematic viscosity temp. depend. 2-113675
Pu contaminated materials from nuclear fuel cycle, treatment and disposal 2-107978
Pu fuel fabrication residues and wastes 2-107977
Pu, multiple recycling effect on mixed oxide fuel, radiation protection consequences 2-59477
Pu processing, criticality alarm system 2-96135
Pu recovery from fuel fabrication residues 2-108030
Pu recovery from waste by incineration and pyrolysis 2-102030
Pu recycling in BR3 reactor, post-irradiation examination 2-102082
Pu-enriched fuel, fabrication in Belgium 2-102098
Pu-enriched fuel, recycling in LWRs 2-102097
Pu(IV) complex formation, with SO₄ ions, spent fuel extraction appl. 2-64548
PuO₂ fuel, ceramic, preparation for FBRs 2-102100
PuO₂, secondary dissolution method 2-64550
PuO₂, reduction by γ -radiolysis in aqueous HNO₃ 2-96125
TeO₂ coextraction in Purex process 2-64551
Th processing facility, decommissioning, population dose 2-64700
Th reprocessing, pulse columns study 2-80146
Th-Pu fuels, reprocessing flowsheet 2-108049
ThO₂-UO₂, mixed oxide fuel, at homogeneity evaluation 2-85136
(U,Pu)O₂ fuel pellets fabrication from gel microspheres 2-108028
U enrichment, private ownership role 2-102089

fission reactor fuel preparation and reprocessing continued

- U enrichment, technological developments in USA 2-102086
- U enrichment industry, structure, rel. to supply, and separation markets 2-102088
- U extraction from sea-water by method of dispersion and deposition 2-102084
- U, natural availability, enrichment prospects and status 2-102073
- U recovery from aqu. soln. using calcined $\text{CaO} \cdot \text{Al}_2\text{O}_3 \cdot \text{SO}_3$ powders 2-80144
- U, recovery from seawater, ion exchange method 2-64555
- UC-PuC, fuel element fabrication and test 2-80110
- UC-PuC, reactor fuel processing for LMFBR 2-80143
- UC-PuC sphere-pac fuels, fabrication and in-reactor performance 2-102096
- UCl_4 - CaCl_2 melt, density and surface tension meas. 2-113676
- UCl_4 - MgCl_2 melt, density and surface tension meas. 2-113676
- UF_6 , laser induced fluoresc. and absorpt., temp. controlled vacuum cell and two-stage pumping system 2-84637
- UH_3 , isotope separation 2-96122
- UO_2 , electrolysis in chloride melts, cathodic processes 2-54531
- UO_2 fuel, Indian experience on prod. and quality control 2-85163
- UO_2 fuels, qualitative approach for characterisation 2-85160
- UO_2 kernels in cladding tubes, dense sphere-pacs, direct pelletizing (*German*) 2-80145
- UO_2 , LWR fuels prod. and structural props. characterisation (*German*) 2-85134
- UO_2 , LWR fuels prod. and characts. (*German*) 2-85158
- UO_2 pellets, occluded gas anal. by mass spectrometer and fuel quality control 2-85140
- UO_2 - Gd_2O_3 , LWR fuels prod. and characts. (*German*) 2-85158
- UO_2 - PuO_2 , mixed oxide fuel, at. homogeneity evaluation 2-85136
- UO_2 - PuO_2 , mixed fuel pins, fabrication for SNR-300 MkII reactor 2-102095
- UO_2 - PuO_2 , mixed powder, prod. by denitrification using microwave heat 2-102101
- UO_2 - PuO_2 pellets, structure development during reduction sintering from granulated powders 2-85161
- UO_2 - PuO_2 pellets fabrication using granular technique, process parameter influence 2-85162
- UO_2 -UC, spherical nuclear fuel, prod., appl. using thermochem. principles 2-108021
- $\text{UO}_2 + 4\text{C} \rightarrow \text{UC}_2 + 2\text{CO}$, carbothermic reduction rate determ. 2-102083
- U_3O_8 , recovery from phosphate rock 2-102091
- $\text{UO}_2(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$, conversion to UF_6 , in reprocessing plant 2-102090
- ^{235}U , separation and enrichment by cation exchange chromatography 2-59480

fission reactor instrumentation *see nuclear reactor instrumentation***fission reactor materials**

- see also claddings; fission reactor fuel; fusion reactor materials; materials handling; moderators; radioactive waste*
- absorber rods for Co and Cd control in ZED-2 2-85184
- alloys, complex, high temp. radiation damage 2-109843
- American National Standard for nuclear criticality safety in operations with fissionable materials outside reactors 2-96116
- analytical measurements, quality control soln. standards 2-70018
- ANS/ANS-8.3-1979-American National Standard Criticality Accident Alarm System 2-96130
- automated gamma densitometry of fuel pellets, rods, and control rods, 2-80073
- automatic ultrasonic testing system 2-107974
- BCC metals, mech. props., effects of low-temp. neutron irradiat. 2-103845
- borosilicate-glass rasching rings as neutron absorbers-ANS-8.5 2-96323
- breeder core components, structural design criteria 2-59471
- BWR Co impurity in coolant, source identification 2-64534
- BWR control blade pins and rollers, non-Co alloys test project 2-85156
- BWR control rods, post-irrad. examination 2-80094
- BWR feedwater nozzle and control-rod-drive return line nozzle cracking 2-59497
- BWR pipes, control methods for stress corrosion cracking 2-90276
- BWR piping, stress corrosion cracking, qualified improvements 2-80126
- BWR piping, stress corrosion cracking, utility research programme 2-96106
- BWR piping welds, growing stress corrosion cracks, shape prediction model 2-108015
- BWR primary system piping, stress corrosion cracking resistance, full-scale testing 2-80125
- BWR torus decontamination 2-102231
- Canadian safeguards program 2-54526
- CANDU power cycle improvement by moderator heat recovery 2-64587
- CANSWEL-2 code for creep predictions in Zircaloy fuel can following LOCA 2-113616
- ceramics, neutron irradiat. damage 2-115301
- cladding damage following fuel rod bundle flow area reduction model 2-80152
- cluster test coil supercond. mag., acoustic emission meas. 2-69896
- concrete, containment wall elements, reinforced, strain development, failure anal. 2-96109
- concrete, penetration depth for nondeformable missiles 2-113622
- concrete, transient structure code for thermal loading 2-74881
- concrete, vinyl monomer additives, effect on radiative styrene polymerisation (*Russian*) 2-54523
- concrete containment structures, simultaneous pressure and shear, design considerations 2-96108
- concrete containment walls, reinforced, cyclic shear, numerical modelling 2-96110
- concrete structures, category I reinforced, margins to failure, NRC expt./anal. programme 2-96102
- concrete wall elements, reinforced, biaxially tensioned, peripheral shear strength 2-96111
- conference, in-situ testing and inspection of irradiated components, Paris, France (Nov. 1981) 2-68963
- constructional, liq. Na influence on strength, calc. method 2-96112
- constructional alloys and steels, radiation swelling and transformation 2-59467
- core component hold-down spring vibration testing 2-102072
- creep, irradiat. and thermal, by dislocation climb, theory 2-86709
- cross sections for interactions with fission neutrons 2-54511
- cumulative damage conditions for fatigue and creep, phenomenological approach 2-113623
- deformation measurement using acoustic sensors 2-102110

fission reactor materials continued

- ditolylmethane, contact effects on fuels and structural materials 2-113630
- electrochemical cell for measuring the activity of oxygen in sodium 2-102060
- element reliability under intense dynamic stress, routine and abnormal operation 2-108081
- FACSIMILE code for void swelling and creep calc. with vacancy loops 2-67468
- FBR, materials development, core appl. 2-90232
- FCC metals, neutron irradiat., low temp., saturation phenomena 2-103836
- Fessenheim PWR power station, test of morpholine treatment of water-steam circuit 2-85172
- FFTF reactor characterization program 2-101977
- fission product plateau in primary circuit, nondestructive measuring method, verification expt. (*Japanese*) 2-59464
- fluid-structure problems with rigid wall loads, modal recovery methods for soln. 2-113586
- FTR, gamma-ray measurements 2-101978
- fuel rod bundle flow area reduction model 2-80152
- Fuels and Materials Examination Facility, transfer tunnel transporter 2-107975
- Gentilly 2 steam generators in situ rebuilding of tube bundles 2-64589
- GMZ graphite, thermal cond., neutron irradiat. induced changes 2-54510
- graphite, corrosion in gas-cooled reactors, by H_2O , O_2 , CO_2 , H_2 , temp. depend. (*German*) 2-102025
- graphite, corrosion in HTR, calc. using REACT/THERMIX code (*German*) 2-102012
- graphite, pore population balance eqn. 2-69744
- harmonisation and standardisation in nucl. safeguards, symp., Ispra, Italy (April 1982) 2-112658
- HCD, fluid-structure interaction, finite element calc. 2-74873
- heated concrete, moisture and heat transfer, finite element program 2-69711
- high pressure reactor components, sandwich hologram interferometry use for NDT 2-93732
- HTGR fuel element graphite, gasification as HEAD-END process (*German*) 2-80127
- HTR facilities material requirements (*German*) 2-107948
- hydrazine injection effects on coolant impurity conc. 2-64535
- Inconel 600, SCC using const. strain rate test 2-57520
- Inconel 600, stress corrosion cracking in high-temp. water 2-83297
- Inconel 600 alloy, stress corrosion cracking 2-83298
- Inconel 600 surfaces, H_2 and CO adsorpt. behaviour under laser-induced thermal desorpt. 2-66357
- Inconel 625, high-temp. air oxidation 2-80115
- Inconel alloy 600, stress corrosion cracking in PWR boilers 2-80124
- Inconel X750, age hardenable, stress corrosion cracking in hot water, rel. to prior heat treatment 2-83299
- Inconel X750, stress corrosion cracking, yield strength, rel. to heat treatment, Zr levels 2-83300
- inorganic material insulated flexible triaxial cable for fast breeder reactor 2-69747
- irradiation techniques in materials testing reactors (*French*) 2-64572
- large-current conductor development for superconducting poloidal coils 2-85365
- LMFBR boilers, duplex tubes and Foster-Wheeler-type tubesheet, development project results 2-90241
- LMFBR secondary coolant, H partial press. in Ar over Na 2-80156
- LMFBR structures, design and anal. 2-96074
- LWR barrier claddings, I SCC susceptibility 2-80091
- LWRs, NRC containment safety margins programme 2-96232
- materials testing reactors, France, role and use (*French*) 2-64571
- metallic surfaces, initial state after assembly 2-54506
- metals, cascade damage, ion-irrad. study 2-103860
- metals, fission neutron damage rates and efficiencies 2-103835
- metals, ion and neutron bombarded, primary recoil spectra and subcascade effects meas. 2-76529
- miniature discs, bending, ductility equipment, in fast neutron environment 2-74830
- NDT, nuclear power stations, review 2-67718
- neutron effects, in solids, conf., Argonne, USA (Nov. 1981) 2-101119
- nondestructive testing (*French*) 2-64606
- nuclear components, structural anal., practical anal. of ratchetting 2-113585
- nuclear facilities, inspection methods for safeguard systems 2-74805
- nuclear power plant primary circuit structural metals, remotely controlled NDT devices, methods and technology 2-90234
- nuclear power reactors, safeguard instrumentation status 2-74854
- Nuclear Regulatory Commission, research on structures, materials and mech. engineering 2-96100
- nuclear safeguard system effectiveness, framework for evaluation 2-74806
- passive γ -ray assay, practical standards 2-70017
- pipe, noncircular bending, thin-shell anal. 2-65485
- pipe whip tests by finite element methods 2-69745
- pipes, circumferentially cracked, bending failure by flattening 2-65534
- piping systems, dynamic behaviour, gap-size effect 2-64569
- piping systems, integrated transient anal., three-dimens. method 2-74876
- piping tearing modulus stability concepts appl. 2-64538
- plant components, nondestructive evaluation, review 2-57587
- plasticity, endochronic theory review 2-97396
- plate, local and integral strain behaviour, elastic plastic anal. 2-65535
- polymer cable insulation, aging, for equipment qualification 2-107961
- power stations, structural, materials and mech. engineering, conf., Paris, France (Aug. 1981) 2-94897
- pressure vessel burst protection system, dynamic behaviour with various boundary conditions 2-64608
- pressure vessel defects, survey for UK 1962-1978 2-64533
- pressure vessel feedwater nozzle, fatigue cracks, ultrasonic testing 2-59473
- pressure vessel steel and concrete, temp. effects 2-64482
- PWR burnable poisons, Gd_2O_3 - UO_2 and B_4C - Al_2O_3 comparison 2-80098
- PWR control rod materials, irradiat. behaviour 2-80154
- PWR cracks and flaws detection using ultrasonic techniques 2-74866
- PWR pressure vessel integrity, flaw assessment 2-96240
- PWR pressure vessels, construction, inspection and safety 2-80067
- PWR pressure vessels, role of NDT in integrity assurance 2-88298
- PWR safety anal., impacts, fluid-structure interaction 2-96235
- PWR small breem LOCA, core degradation 2-80077

fission reactor materials continued

PWR stations, damp steam circuits, summary of erosion-corrosion observation 2-85170
PWR stations, steam generator feed pumps, investigations on resistance to erosion corrosion 2-85171
PWRs, secondary cooling system, corrosion product transport 2-54527
pyrocarbon coatings, deposition and charact., prod. by use of CO₂ dilution 2-113617
Q list components, safety anal., system interaction 2-102229
radioactive materials, cutting, underwater electric arc saw appl. 2-108165
radiographic checking, radiative background effect 2-54505
RBMK-1000, principle indices of technological media 2-113591
reference materials and nuclear safeguards in USA 2-70019
reinforced concrete, containment elements, shear tests, research status and needs 2-96104
remote maintenance in high rad. fields at Douglas Point NGS 2-64591
remotely controlled repairs at Douglas Point NGS 2-64590
Ringhal's Unit-2, secondary water chemistry 2-64581
robot applications to inspection and repair 2-108064
safeguards, backscattered γ radiation energy distrib. from two component system 2-93734
seismic safety margins research programme, of NRC 2-96073
special nuclear material, vault inventory systems, hardware options 2-69721
steam generator support plate integrity, radiographic evaluation system 2-59476
steam generator tube repairs, hydraulically expanded tube to tubesheet joints 2-64544
steam generator tubes, buckling and fatigue susceptibility 2-59475
steel, 316 plates, effects of C and N on corrosion resist. to liq. Li 2-105370
steel, austenite stainless, unstable fracture, theoretical and expt. study with soft tensile testing machine 2-111262
steel, austenitic, Laves phase scale precipitation of type 0Kh16N15M3B following neutron irradi. 2-54509
steel, austenitic, strongly radioactive, X-ray microanal. of C diffusion (French) 2-67786
steel, austenitic stainless, depend. on thermomech. pretreatments 2-93607
steel, austenitic stainless, fast reactor fuel cladding, failure due to fuel adjacency 2-80089
steel, austenitic stainless, fatigue crack growth law 2-111322
steel, austenitic stainless, fatigue crack propagation, influence of neutron irradi. 2-111272
steel, austenitic stainless, fuel pin cladding, neutron irradiated, energy dispersive X-ray spectrometry, STEM anal. 2-69709
steel, austenitic stainless, Nb-stabilised, neutron irradiated, void-swelling and precipitation 2-105154
steel, austenitic stainless, neutron irradi., type 316, increased He content effect on void form. and solute segregation 2-109846
steel, austenitic stainless, oxidation in CO₂ coded reactors 2-64483
steel, austenitic stainless, swelling and microstruct., fission-fusion correl. 2-85222
steel, austenitic stainless, type 09Kh16N15M3B, irradiation induced creep 2-102062
steel, austenitic stainless, type 304, haematite, suspended, deposition rate in boiling water system under BWR conditions 2-77979
steel, austenitic stainless, type 304, low-temp. sensitisation in BWR welds 2-80119
steel, austenitic stainless, unstabilised, creep crack growth in air and Na 2-111264
steel, austenitic stainless, void swelling in type 316 under long time proton irradi. 2-102038
steel, austenitic stainless 316, radiation induced evolution, neutron spectra effects 2-109845
steel, austenitic stainless 316, yield strength changes during fission or fusion irradi., microstruct. origins 2-71507
steel, austenitic stainless type 316, liq.-metal embrittlement in LMFBRs 2-80088
steel, C, type ASTM A533-B, fracture surfaces, solute segregation distrib., Auger anal. 2-80120
steel, containment, buckling research, NRC programme 2-96233
steel, corrosion scale action on H and ³H permeation (German) 2-90242
steel, Cr, oxidation in CO₂ coded reactors 2-64483
steel, Cr-Mo, ferritic, carburisation-decarburisation in liq. Na environment 2-111369
steel, Cr-Mo (2¹/₄, 1, at.%), heat treatment for breeder reactor boilers 2-54500
steel, Cr-Mo-Mb-V, used in vapour generators for fast neutron reactors 2-77826
steel, Cr-Mo-Nb-V, fast breeder reactor components, precip. study (French) 2-80809
steel, creep in type 09Kh16N15M3B at 623-823K in reactor 2-59468
steel, ferritic and austenitic, LMFBR materials, neutron irradi. effects 2-107950
steel, fractographic anal. rel. to corrosion fatigue mech. of types A533-B, Ducol W30, C-Mn and 304 2-88267
steel, FV548, irradiated with 1 MeV electrons, void nucleation and growth 2-103819
steel, heavy-section, controlled flaw prep. for fracture mech. testing 2-72929
steel, irradiation expts. in Petten HFR 2-69703
steel, mild, oxidation in CO₂ coded reactors 2-64483
steel, pressure vessel, crack vel. and dynamic fracture toughness during brittle crack propag. (Japanese) 2-111283
steel, pressure vessel, thick-walled, brittle-failure resist. 2-99626
steel, reactor pressure vessel, neutron irradi. embrittlement 2-102051
steel, reactor pressure vessel, radiation damage, evaluation by elastic-plastic fracture mechanics 2-57486
steel, SAE 1015, flow props., from hardness test, Luders strain 2-80117
steel, stainless, austenitic, ion irradi. mode effects on void form. 2-86756
steel, stainless, austenitic Cr-Ni, combined shock loading and high-speed deform. effects 2-99560
steel, stainless, coolant tubing, Co deposition 2-80114
steel, stainless, Cr-Mo-Ni, irradi., time-temp. depend. of long-term strength 2-99633
steel, stainless, deposition of radioactive corrosion products on reactor components 2-59463
steel, stainless, fuel rod cladding failure due to stress corrosion cracking 2-59474
steel, stainless, martensitic, microstruct. obs. of neutron irradi. ferritic alloys 2-109847

fission reactor materials continued

steel, stainless, type 304, dual-ion bombarded, crit. cavity sizes 2-109861
steel, stainless, type 304L, surface blistering by 6 MeV alpha particles, temp. thresholds 2-80219
steel, stainless austenitic, Cr-Ni-Mo (15, 15, 1 wt.%), DIN 1.4970, precipitation behaviour (German) 2-67343
steel, stress intensity factors during brittle crack propagation and at arrest in ESSO specimens (Japanese) 2-77916
steel, structural, durability eval. taking account of defects 2-111431
steel austenitic weld, mechanised in-service US inspection in nuclear plants 2-99620
steel cylinders, with reinforced circular cutouts, buckling, area replacement method calc. 2-96107
steels, austenitic stainless, type AISI 304 and AISI 316, dynamic testing, for large reactor structs. 2-74825
steels, austenitic stainless types 316, 347, high flux reactor irradi., microstruct., TEM study 2-80118
steels, C, pressure vessel, ASTM A533-B, microhardness, temp. depend. 2-80121
steels, Cr-Mo-V-Nb, with (n, α) He, yield strength, tensile strength, neutron hardening 2-80122
steels, ferritic, corrosion by flowing liq. Pb (French) 2-105369
steels, ferritic stainless, improvements of irradiation embrittlement 2-67506
steels, with different Cu contents, ductile-to-brittle transition temp. depend. on radiation temp. (German) 2-67505
Stellite-6, in fission reactors, ⁶⁰Co release rates 2-80114
structural mechanics, conference, Paris, France (Aug. 1981) 2-94898
structural research, at Commissariat a l'Energie Atomique 2-96101
subcritical neutron multiplication meas. safety standard 2-96117
superphoenix breeder for nuclear reactors (Italian) 2-113722
TREAT specimens, handling in Hot Fuel Examination Facility 2-107970
tritium storage, immobilisation in inorganic solids 2-102033
two species diffusion in sphere 2-99428
Type 304, sensitised, low-temp., intergranular fracture and grain boundary chem. 2-105328
ultimate load design and testing of a cylindrical prestressed concrete vessel 2-102039
water properties, Fortran library of subroutines 2-96098
water properties, STP computer code 2-96099
Zircaloy cladding, irradi., stress corrosion cracking under constant load 2-80090
Zircaloy, corrosion and hydriding during irradi. in high temp. water 2-113665
Zircaloy, irradi., rapid stress corrosion crack growth 2-93676
Zircaloy, neutron irradi., microstruct. and dimens. changes, irradi. growth theory 2-109848
Zircaloy, stress corrosion crack propag. in I₂, effects of texture and microstruct. 2-67638
Zircaloy, unirradiated, stress corrosion crack propag. 2-83276
Zircaloy cladding, ductility loss by inner surface oxidation 2-59461
Zircaloy fuel cladding tube, biaxial stress effect on I₂ SCC 2-83275
Zircaloy fuel rod embrittlement, assessment in water accident situations 2-96119
Zircaloy-2, cold rolled, stress corrosion failure in methanol-HCl media, texture dependence 2-99579
Zircaloy-2, corrosion in high temp. water, ion beam induced nucl. reaction study 2-57517
Zircaloy-2, diffusion of T, effect of low irradi. damage, O conc., δ -hydride form. 2-82025
Zircaloy-2, neutron irradi., evidence of basal or near basal slip 2-86675
Zircaloy-2, oxygen embrittlement on long-term exposure to fission product oxides 2-69707
Zircaloy-2 fuel cladding, iodine effect on fatigue props. 2-59460
Zircaloy-2 sphere, in the Ar and Zr, thermal accommodation coeffs. 2-74827
Zircaloy-4, Cr, Sn and O content effect on solid state phase boundary temp. 2-83083
Zircaloy-4, oxidation kinetics, high temp., simulation of parabolic and linear behaviour 2-111370
Zircaloy-4, reaction in steam-H₂ mixture at high temp. 2-83274
Zircaloy-4, solid state phase equilib., 750 to 1050°C 2-83082
Zircaloy-4 fuel cladding, anisotropic creep behaviour 2-90243
Zircaloy-4 tubing, determ. of critical I₂ conc. for stress corrosion cracking, 500-900°C 2-105371
Zircaloy-IV/D₂O system, thermal neutron spectrum 2-101960
Al, erosion-corrosion in high temp. high velocity water, water chemistry 2-57515
Al, fast neutron irradi., interstitial clustering in cascades, diffuse X-ray scatt. 2-103833
Al, fast neutron irradi., positron annihilation 2-87894
Al, PWR, containment sprays, H₂ evolution 2-74882
Al, resistivity damage rate under neutron irradi. at 4.6K, 2-103827
AlB₁₂, gas behaviour in hot pressed specimens 2-64489
Al₂O₃-B₂C annular burnable absorber, fabrication, development, appl. 2-80100
Al₂O₃-B₂C burnable poison, gas release, swelling, high fluence effects 2-80099
B containing burnable poisons 2-80101
B₂C, irradiated, crack propag. induced by swelling and thermal gradients 2-77912
Co, resistivity damage rate under neutron irradi. at 4.6K, 2-103827
Cr-Mo ferritic steel for LMFBR primary and secondary systems 2-64536
Cu and Cu-Ge, low dose fission neutron irradi. damage 2-103829
Cu barriered Zircaloy cladding tube for BWR fuel 2-80092
Cu, binary collision simulations of high energy displacement cascades 2-103868
Cu, heavy ion-irradi., vacancy loop form. 2-103863
Cu, neutron irradi., 0.1-24 MeV, free interstitial prod. cross sections 2-103834
Cu, neutron irradi., long-time, elevated temps., damage-rate meas. 2-103832
Cu, neutron irradi., yielding, surface effect 2-103842
Cu-Ge, heavy ion-irradi., vacancy loop form. 2-103863
Cu₃Au, ordered, displacement cascade damage, TEM obs. 2-103861
Cu₃Au, ordered alloys, fundamentals mechanisms of neutron damage 2-103830
D₂O, thermodynamic properties in SI units 2-74179
EuO-Fe cermet, fabrication for reactor control-arm plates 2-107947
Fe, low dose fission neutron irradi. damage 2-103829
Fe, neutron irradi., TEM study 2-103838

fission reactor materials continued

- α -Fe, neutron irradiation, damage, low dose, TEM study 2-102050
- Fe, resistivity damage rate under neutron irradiation at 4.6K, 2-103827
- Fe-Cr (0-15 wt.%), mech. props. changes by fast neutron irradiation 2-67504
- Fe-Cr-Ni alloys, neutron irradiation, defect recovery 2-66074
- Fe-Cr-Ni alloys, neutron irradiation, swelling under electron irradiation, reactor conditioning effect 2-109837
- Fe-Cr-Ni-based alloys, commercial, electron irradiation, void swelling 2-103820
- Fe-Cr(Al), mech. props., effect of fast neutron irradiation, 2-103844
- Fe₉₀B₁₀ metallic glasses, response to irradiation with 800 MeV protons 2-80188
- Fe₉₀Ni₁₀P₁₀B₁₀ metallic glasses, response to irradiation with 800 MeV protons 2-80188
- Gd₂O₃ burnable absorbers, LWR neutronics effect 2-80097
- H bound in moderators, thermal neutron scattering cross sections, data tables 2-101137
- HF, control rod suitability, post-irradiation examination, mech. performance 2-80155
- ³H permeation through metallic materials in HTR (German) 2-90240
- Hf, Bi ion irradiation, dislocation loops 2-86758
- Hf, PWR control rod application 2-80096
- Mo, interaction with UO₂ 2-59470
- Mo, low dose fission neutron irradiation, damage 2-103829
- Mo, microcrack behaviour in neutron irradiation, single crystals 2-54508
- Mo, neutron total cross-section, at 0.04-2.20 eV 2-85131
- NO₂, radiolysis kinetics in low pressure range (Russian) 2-54521
- Na, extreme overheating study 2-59469
- Nb, neutron irradiation, induced defects, detrapping of N and O atoms during post-irradiation annealing 2-103839
- NbTi compacted monolithic conductor, fabrication and performance 2-69925
- Ni and Ni-C solid solutions, microhardness, effect of neutron irradiation 2-103847
- Ni, diffusion of He 2-104063
- Ni, resistivity damage rate under neutron irradiation at 4.6K, 2-103827
- Ni-Be (1at.%), radiation induced homogeneous precipitates, HVEM obs. 2-83124
- Ni-Cr austenite steel, stable oxide film formation in N₂O₄ coolant 2-113627
- Ni-Cr-Mo-Co-Fe(Al), aluminide coated, compatibility in simulated HTGR 2-113664
- Ni₃Al, irradiation, defect aggregation 2-103748
- Pt, neutron irradiation, stage I recovery, effect of impurity atom size 2-103837
- Pt, surface blistering by 6 MeV alpha particles, temp. thresholds 2-80219
- Pt, thermal and fast neutron irradiation, Stage II recovery 2-103831
- Pt-Cu(Au), thermal and fast neutron irradiation, Stage II recovery 2-103831
- TiC limiters in ISX-B Tokamak, operational history 2-74900
- V-Nb(Al), dil. alloys, radiation-induced defects, interaction with O 2-103840
- W, interaction with UO₂ 2-59470
- Zr alloys, hydrogen charged, subcritical crack nucleation and propagation, acoustic emission obs. 2-72936
- Zr alloys, irradiation creep and growth (Japanese) 2-96087
- Zr alloys, stresses induced by oxide layers in fission reactor 2-85155
- Zr alloys diffusion bonding to C steels 2-64545
- Zr, Bi ion irradiation, dislocation loops 2-86758
- Zr, radiation induced dimensions changes 2-103809
- Zr-Nb, fuel cladding, thermal expansion coefficient, anisotropy 2-54507
- Zr-Nb (2.5 wt.%), metallographic obs. of hydride morphology at H₂ induced crack tip 2-88174
- Zr-Nb (2.5% wt.%), pressure tubes for CANDU-PHW, manufacture, inspection, mech. props. 2-90231
- ZrO₂ on Zr (0001) crystallographic relationship, transmission electron diffraction study 2-109727

fission reactor operation

- see also fission reactor cooling and heat recovery; fission reactor core control and monitoring; fission reactor safety
- AD 10 digital computer for time-critical simulation 2-102022
- adiabatic two-phase flow in VK-50 reactor core riser, hydrodynamics (Russian) 2-74891
- AGR, Hinkley Point B, UK, operational experience 2-64570
- AGR, Windscale, UK, fuel pin development, coolant composition, reactor operation 2-64627
- auxiliary pipe, remote welding repair 2-108065
- backfit integration in plant operation, controlled work package 2-102124
- backfits, planning and implementation challenge 2-113699
- Bilibinsk station, operation with automatic power and frequency control 2-102107
- boiler radiation levels at Point Beach PWR power station, refuelling shutdown chemistry test results 2-108100
- BWR, core and fuel management in the Shimane nuclear power station 2-113679
- BWR, operating cycle extension 2-54542
- BWR operating experience at Shimane-1 with WNS-type initial fuel 2-102151
- BWR plant transients, calculation using RAMONA-3B computer code 2-102186
- BWR power plant dynamics simulation using hybrid computer system 2-102187
- computer usage in outage planning and management 2-113700
- conference, Canadian Nuclear Soc., Ottawa, Ont., Canada (June, 1981) 2-63743
- construction completion and the construction/startup interface 2-113698
- continuous system simulation, multiprocessor computers application 2-102021
- core surveillance and operator training, simulation techniques (Japanese) 2-74859
- dynamic performance models, validation methods 2-102188
- element reliability under intense dynamic stress, routine and abnormal operation 2-108081
- engineers as shift supervisors in nuclear power plants (German) 2-64558
- fast reactor operating data, fuel tolerance effect (German) 2-96092
- FFTF, Na/Ar analysis, role in operational decisions 2-102228
- FFTF MIDAS computerized operational work control system 2-69793
- Forschungs- und Messreaktor Braunschweig reactor, 1980 operation (German) 2-54555
- Hanford reactor, account of ¹³⁵Xe fission product poisoning 2-63797

fission reactor operation continued

- human factors guided survey for systems development 2-69792
- human performance: simulation's role 2-69790
- in-reactor maintenance and repairs 2-108066
- La Crosse BWR, backfitting, cost and impact 2-101966
- Limerick BWR-4 simulator 2-102185
- LWR, accident dynamics, economic simulation 2-102249
- maintenance, electrical penetrator for biological shield 2-108067
- modification procedure system applicable to the Contract Program 2-113701
- multicycle refuelling, multiplication factors, application to PWR and CANDU, review 2-80157
- natural U axial blankets, operating experience in PWRs 2-113597
- neutron cost criteria for long-term fissile fuel enhancement 2-64588
- nuclear power plant operation, advanced display-control concepts 2-85173
- nuclear power plant operational training simulators, upgrading for accident simulation 2-102248
- nuclear power plant remote data acquisition and display system 2-85196
- nuclear power plant status during abnormal reactor operating conditions, accident sequence identification 2-113713
- nuclear power plant training simulators, lessons from recent accidents 2-102246
- operating US power reactors 2-85168
- operator diagnostic training, device optimisation 2-69789
- operator training performance testing using limited scope simulator 2-69791
- operator training, systematic design 2-102127
- outage management system 2-102202
- power plant operational training simulators, design in light of TMI 2-102247
- power plant simulation, modular modelling system 2-102017
- power plant simulator, role expansion to include engineering design aid 2-102016
- power plant startup—preparing for and managing problems 2-113696
- power plant training simulator improvements in Japan for greater safety 2-102182
- probabilistic risk assessment for improved safety and operation 2-102230
- remote maintenance in high radiation fields at Douglas Point NGS 2-64591
- remotely controlled repairs at Douglas Point NGS 2-64590
- reporting requirements for operational experience data 2-102220
- Ringhals Unit-2, secondary water chemistry 2-64581
- robot applications to inspection and repair 2-108064
- robots application in nuclear power plants (Japanese) 2-74860
- Shimane power station, Japan, core and fuel management (Japanese) 2-64568
- simulation as aid to licensing authorities during commissioning 2-102183
- simulation methods, conf., Arizona, USA, 1981, Jan. 2-101129
- simulator capability improvement in light of TMI-2 accident 2-102184
- stand-by fuel assembly, efficient utilisation analysis 2-54537
- start-up period estimation 2-54551
- startup organization—Vogtle electric generating plant 2-113697
- task analysis in complex technology 2-69787
- task analysis methodologies for safety-related operator actions 2-69788
- technical management discipline in the Clinch River Breeder Reactor Plant project 2-113695
- USA, power reactor operation, July and August 1981 2-59488
- Washington Public Power Supply System WNP-2 equipment qualification program 2-113702

fission reactor safety

- see also fission reactor cooling and heat recovery; fission reactor core control and monitoring
- 2X6 rod bundle, controlled flow and power transients, natural convection 2-108076
- 18 pin bundle, operation 200 days after failure 2-54497
- accident analysis, using simulation language DSNP 2-102253
- accident simulation codes, REPAID, VVER-D, SICHTA, DYN79, test calculations (Slovenian) 2-59449
- accidents, public miscommunication: an engineer's perspective 2-102210
- acoustic emission multichannel monitoring system 2-102109
- acoustic emission technology for nuclear reactor structure monitoring 2-57584
- adjoint-based sensitivity method for reactor safety analysis 2-59496
- advanced digital metal impact monitor for PWR 2-85176
- advances due to improved computing technology 2-102245
- aerosol filtration developments since 1968, nuclear application 2-96312
- AGR, Windscale, UK, final experiments on transient analysis, codes 2-64628
- AGR Windscale concluding experiments 2-85166
- air monitoring requirements and alarm response procedures in reprocessing plants 2-64597
- 3D-AIRLOCA code analysis of generic research reactor 2-96202
- airtightness criteria for technological compartments and reactor building 2-113589
- alarm information handling problems in control rooms (Finnish) 2-80163
- anomalous condition monitoring apparatus development (Japanese) 2-96194
- ANS standards and regulatory guides for criticality safety 2-96242
- ANS/ANS-8.3-1979—American National Standard Criticality Accident Alarm System 2-96130
- ANS/ANSI standards 2-96264
- atmospheric radionuclide releases, automated response system WIND 2-54569
- ATWS, frequency analysis, for LWRs 2-64614
- automated status analysis system, implementation at Forsmark-1 2-96252
- auxiliary feedwater system alternatives 2-102125
- boiler radiation levels at Point Beach PWR power station, refuelling shutdown chemistry test results 2-108100
- BOR-60, Na-water interaction processes in micromodule steam generator 2-90266
- breathing air supply systems 2-113718
- Browns Ferry-3, partial control rod insertion, neutronics analysis 2-96206
- Browns Ferry-3 in- and ex-vessel neutron spectral analysis 2-108097
- bubbler-vacuum system for accident consequence restriction in VVER reactors 2-54566
- building wake dispersion factors for post LOCA control room habitation 2-54483
- BWR4/Mark I blackout sequence assessment and containment failure mode analysis 2-96268
- BWR: small break LOCA: ROSA-III experiment 2-54614

fission reactor safety continued

BWR; small break LOCA, fuel bundle conditions, TRAC-BD1 calcs. 2-54635
 BWR; small break LOCA, PIPER-ONE analysis program 2-54601
 BWR; small break LOCA, TLTA expts., RELAP4/MOD6 calcs. 2-54622
 BWR, condensate feedwater system, dynamic anal. code 2-74863
 BWR, drywell volume effect on chugging pressure 2-96205
 BWR, large-break LOCA, emergency cooling tests, ROSA-III expts. 2-74883
 BWR, manual depressurization under transient conditions 2-96208
 BWR, media systems, failure modes, effect anal., design review 2-113612
 BWR, pipe rupture, feedwater check-valve behaviour, in HDR 2-102104
 BWR, refill-reflood program, expt. test plan 2-64580
 BWR, ROSA III LOCA/ECC tests, run 912 data 2-108101
 BWR, small break LOCA, RETRAN-02 anal. 2-54593
 BWR, small break LOCA, review 2-54586
 BWR, small break LOCA, simulation test results 2-54589
 BWR, small break LOCA, TRAC-BD1 anal. 2-54595
 BWR control during fast overpressurisation transients by bubble injection 2-102176
 BWR feedwater nozzle and control-rod-drive return line nozzle cracking 2-59497
 BWR fuel, thermal performance during pressurisation transients 2-102233
 BWR improvements for degraded core considerations 2-101968
 BWR loss of heat sink accident, mitigation actions 2-96209
 BWR operating experience with gamma-sensitive traversing in-core probes 2-102139
 BWR overpressurisation transient, pressure propagation phenomena 2-102239
 BWR pipes, control methods for stress corrosion cracking 2-90276
 BWR plant transients, calc. using RAMONA-3B computer code 2-102186
 BWR pressurisation transient simulations steam dome-downcomer region, thermal nonequilibrium 2-102173
 BWR radiation assessment and control, 1978 to 1980, review 2-113719
 BWR refill-reflood program 2-59508
 BWR residual heat removal equipment, dynamic and static anal. 2-96204
 BWR scram system, operation and safety concerns 2-96218
 BWR small-break loss-of-coolant accidents, two simulation tests 2-102244
 BWR solid state safety system self-testing 2-85200
 BWR suppression pool scrubbing effect on degraded core accident consequences 2-54568
 BWR torus decontamination 2-102231
 BWR transient model qualification for pressurisation transients 2-96275
 BWR transients, computer model 2-102015
 CANDU, Darlington, GS A, safety related systems separation 2-64621
 CANDU, heat transfer from fuel channel to surrounding water 2-64617
 CANDU, horizontal fuel channel reflooding expts. following LOCA 2-64616
 CANDU, Pickering A power station, human error trend anal. 2-64622
 CANDU, safety design criteria 2-64623
 CANDU core seismic integrity tests 2-74885
 CANDU fire protection program 2-64619
 CANDU moderator pipe leak repair by exploding wire shock wave 2-90284
 CANDU reactor benchmark problems 2-90205
 CANDU reactor trip logic using field programmable logic arrays 2-69764
 CANDU safety, bibliography of AECL publications 2-89502
 CANDU safety research: a status report 2-64615
 CANSWEL-2 code for creep predictions in Zircaloy fuel can following LOCA 2-113616
 canwall failure modeling in TRANSIT HYDRO code for whole core transition, phase anal. 2-96295
 CDS phase II heterogeneous reactor, unprotected LOF anal. of initiation phase 2-96289
 CDS phase II heterogeneous reactor, unprotected LOF anal. of transition phase 2-96290
 combined heat and power stations near large cities, additional safety requirements 2-93880
 complex structures, surface crack stress intensity factors, EPAS-J1 appl. 2-69804
 computer hardware and software system requirements for NUREG 0696 2-85195
 computer usage in outage planning and management 2-113700
 computer-aided identification of benchmark criticality data 2-90217
 concrete, containment wall elements, reinforced, strain development, failure anal. 2-96109
 concrete, penetration depth for nondeformable missiles 2-113622
 concrete, reinforced containments, design and construction, permissible shear stress 2-96105
 concrete, transient structure code for thermal loading 2-74881
 concrete containment structures, research needs 2-96103
 concrete containment structures, simultaneous pressure and shear, design considerations 2-96108
 concrete containment walls, reinforced, cyclic shear, numerical modelling 2-96110
 concrete structures, category I reinforced, margins to failure, NRC expt./anal. programme 2-96102
 concrete wall elements, reinforced, biaxially tensioned, peripheral shear strength 2-96111
 conference, Canadian Nuclear Soc., Ottawa, Ont., Canada (June, 1981) 2-63743
 conference, in-situ testing and inspection of irradiated components, Paris, France (Nov. 1981) 2-68963
 conference on new directions in nuclear energy, Brussels, Belgium (April, 1982) 2-10122
 containment anal., heat transfer from saturated and superheated atm. 2-113711
 containment venting, H₂ deflagration property transient modeling 2-80057
 control room human factors, emergency procedure reviews, effectiveness 2-69774
 coolant, post-accident dose rates, Cs isotope effect 2-108088
 core component hold-down vibration testing 2-102072
 core meltdown phenomenology for LWRs and LMFRs 2-102252
 Creare countercurrent flow tests, TRAC-PD2 refill calcs. 2-54562

fission reactor safety continued

critical experiments on accident-related configurations for fast reactors 2-102152
 critical flow test, data review and anal. 2-54558
 critical heat fluxes in the absence of coolant flow in vertical steam-generating channels 2-113691
 criticality safety, expt. benchmark needs 2-90251
 cross mixing in two-phase rod clusters with longitudinal flow direction under stationary and transient conditions (*German*) 2-113678
 cumulative damage conditions for fatigue and creep, phenomenological approach 2-113623
 decontamination using conc. chemicals 2-102284
 decontamination using dilute chemicals 2-102285
 defense in depth concept for control, limitation and protection system channels (*German*) 2-113709
 design and development of a postaccident sampling system 2-113721
 design and evaluation of nuclear reactor control room display 2-96241
 diagnostic system for reactor core and plant control system, process signal noise anal. 2-96296
 digital computer programs, verification in safety systems 2-101970
 dissolved gas conc. determ. in coolant in normal and accident conditions 2-102281
 dynamic performance models, validation methods 2-102188
 EBR-II, operational safety, computer code 2-54560
 efficiency estimates for multiresponsive problems 2-90283
 elastoplastic material behaviour, modelling, rel. to nuclear reactor safety 2-62186
 electrical equipment, failure during TMI-2 accident 2-108094
 electrochemical cell for measuring the activity of oxygen in sodium 2-102060
 element, reliability under intense dynamic stress, routine and abnormal operation 2-108081
 emergency dose projection, review, appl. 2-108092
 emergency planning, INPO role 2-108090
 emergency preparations near nuclear power stations 2-108089
 emergency response facility in nuclear power plant, microcomputer use for data acquisition 2-85207
 emergency response system, microcomputer based for public officials 2-102215
 EPRI valve testing at the Marshall Steam Station 2-102206
 EPRI/PWR safety and relief valve test program 2-102219
 equipment qualification, EPRI test programme 2-108096
 equipment qualification, irradi. requirements 2-108095
 equipment qualification, Nuclear Regulatory Commission program 2-108093
 establishment of a permanently coolable state 2-80153
 events resulting in reactor shutdown and their causes from July to Aug. 1981 2-59499
 extreme quantile sampling for safety analyses 2-90280
 FAST experiments, UVABUBL anal. 2-96285
 fast reactor, N₂O₄ cooled, relation between initial and steady state conditions (*Russian*) 2-54571
 fast reactors, HCDA anal. 2-96236
 faster-than-real-time computer code for loss-of-coolant and feedwater transient prediction 2-102009
 fault tree analysis package for design engineers 2-85192
 fault tree as a tool in safety analysis of nuclear power plants 2-64620
 fault trees top-event probability, probability intervals, approximate method for computation 2-113712
 FFTF, Na/Ar anal. role in operational decisions 2-102228
 FFTF control system experience 2-102122
 FFTF reactor liner system, H₂ evolution during HCDA, purging and scrubbing 2-74880
 FFTF sodium and cover gas impurity monitoring 2-102123
 film boiling heat transfer, low-quality and subcooled, high-temp. results 2-64609
 Final Safety Analysis Report, independent design review 2-102218
 finely dispersed corrosion products, phase composition in coolant system 2-113687
 finite viscoelastic solid on springs, excitation and dynamic response 2-114683
 fission gas release from breached cladding 2-96265
 fission product behaviour following LOCA (*German*) 2-64601
 flooding, flow phenomena, photographic study anal. 2-64613
 fluid contribution to fuel assembly damping 2-96262
 fluid-structure anal., safety calc. codes 2-96238
 fluid-structure interactions, finite difference anal. 2-59511
 FREY code analysis of fuel rod transients 2-69797
 FREY code for operational transient evaluation 2-64611
 fuel, pellet diameter reduction, cost, neutronics, safety 2-74829
 fuel cycle safety, review 2-102092
 fuel pin temperature calcs. 2-64537
 fuel rod bundle flow area reduction model 2-80152
 FUMO-E: an internal fuel motion model for annular fuel 2-102199
 GCFR, design, fuel, safety and economics 2-64456
 GCFR flow transient anal., numerical scheme 2-90213
 German risk study, basic aspects and results 2-59495
 Grand Gulf results of reactor safety study methodology appl. program 2-96248
 graphite, corrosion in HTR, calc. using REACT/THERMIX code (*German*) 2-102012
 HCDA, fluid-structure interaction, finite element calc. 2-74873
 HCDA, irreversible energy losses of flow through porous and perforated plates 2-74874
 HDR blowdown and snapback, fluid-struct. anal. using FLUX code 2-107933
 HDR blowdown expt., anal. for fluid-struct. interaction 2-108085
 HDR blowdown test, K-FIX pre and post test anal. 2-108060
 HDR safety programme in Germany, simulated large scale breakdowns (*German*) 2-80158
 HDR vessel, blowdown, coupled fluid-structure interactions 2-108083
 health and safety program at Whiteshell Nuclear Research Establishment 2-90318
 heat conduction, filtering theory application 2-108082
 heat removal from a stratified UO₂-sodium particle bed 2-96279
 heat removal from fuel debris following hypothetical core disruptive accident 2-96278
 heavy particle filters, testing and sorption material removal (*German*) 2-85396
 high radiation levels effects on B anal. equipment and pH probes 2-102137

fission reactor safety continued

- HTGR, accident condition performance of fuels 2-85154
 HTGR block type core, seismic research 2-113714
 HTGR operation safety, Fort St. Vrain nuclear generating station, USA 2-64626
 HTR, anticipated transients without scram study (*German*) 2-69805
 HTR fission product release forecasting (*German*) 2-107945
 HTR primary coolant circuit, I distrib., sorption on graphite 2-80123
 human factors, error rates in quantification of instrumentation/control data 2-69772
 hypothetical core disruptive accident, freezing liq. penetration in tube flow, analytic model 2-96294
 IAEA safeguards application at Trojan Nuclear Plant 2-69738
 IAEA safeguards impact on NRC 2-69737
 information and measuring apparatus design for nuclear power stations 2-54543
 interactive safety assessment, computational techniques 2-113710
 international Standards and nuclear safety 2-96244
 isotope specific noble gas monitoring from reactors using Ge gamma spectrometer 2-64595
 jet impingement problem, solution using computer graphics and three dimensional modelling 2-54575
 Large Scale Test Facility design for PWR small break LOCA integral expt. 2-85204
 licensing impact on design, fire protection 2-101969
 liquid containers, seismic response, prediction status and research needs 2-96234
 LMFBR, boiling pool flow dynamics, gas injection expt. 2-96286
 LMFBR, cladding relocation model for the SIMMER-II safety analysis code 2-102198
 LMFBR, contaminant evaporation rates from Na pool 2-74869
 LMFBR, core design, seed blanket modular assemblies, LOF effect 2-74795
 LMFBR, core disruptive accident, molten fuel-coolant interaction, primary vessel damage 2-85186
 LMFBR, core disruptive accident anal., structural mech. 2-74877
 LMFBR, core meltdown accident, multiphase, multicomponent hydrodynamics 2-74871
 LMFBR, core transient performance, design methods 2-85126
 LMFBR, flow and peak temp. redistrib. during reactor shutdown cooling 2-102234
 LMFBR, fuel deposition on primary coolant circuit surfaces 2-54544
 LMFBR, initiating phase thermal hydraulics modeling for transition phase anal. 2-96292
 LMFBR, large heterogeneous core, transition phase calc. 2-96085
 LMFBR, local sodium boiling detection 2-96219
 LMFBR, modeling Na-fuel reaction swelling in breached mixed oxide fuel elements 2-80162
 LMFBR, Na+concrete interaction following coolant leak 2-74879
 LMFBR, normal coolant blockage, recirculating flow distrib., heat transfer, calc. 2-85202
 LMFBR, pool-type transient anal. program EPRI-CURL-P 2-54572
 LMFBR, porous blockage, sodium boiling pattern 2-74870
 LMFBR, pressure and porosity effects on sodium-concrete interactions 2-96282
 LMFBR, safety problems solns. 2-54565
 LMFBR, SIMMER-II boilup capability calibration 2-96291
 LMFBR, sodium boiling noise detection, IAEA-IWGFR specialists meeting report 2-96167
 LMFBR, sodium void reactivity, physics assessment 2-102232
 LMFBR, spray and pool fires, model expts. 2-74878
 LMFBR, surface area enhancement in molten metal-water thermal interactions 2-96287
 LMFBR, transient anal. code, FORE-2M, expt. verification 2-85125
 LMFBR, UO₂ vapour bubble behaviour, FAST results 2-96284
 LMFBR absorber system design, safety requirements 2-96081
 LMFBR blanket rod bundles, peak temp. rise 2-85201
 LMFBR debris tray free convection flow, finite element solns. 2-90263
 LMFBR decay heat removal by passive guard vessel cooling 2-96280
 LMFBR HCDA, gas blowdown into 2-dimens. liquid pool, hydrodynamic chars. 2-113715
 LMFBR heat transfer from heat-generating boiling pools pertaining to transition phase and PAHR 2-96293
 LMFBR pipe break accident 2-102241
 LMFBR primary containment response to changes in UIS flow paths 2-96277
 LMFBR primary tanks, seismic response 2-96084
 LMFBR shutdown heat removal test facility, natural convection, scaling requirements 2-54538
 LMFBR subassemblies, response to pressure transients, arbitrary Lagrangian-Eulerian finite element method 2-74875
 LMFBRs, internal loading and containment, conf., Ispra, Italy (Aug. 1981) 2-74155
 LOCA, nonhomogeneous conditions in containment due to separation effects 2-96229
 LOCA, simulation of containment cooling with outside spray after a core meltdown 2-96231
 LOCA, small break, energy transfer mechanisms 2-96217
 LOCA, transient mass and heat flow, scaling laws 2-74884
 LOCA containment wall steam condensation, heat transfer coeffs. 2-64605
 LOCA hydroloads calculations with multidimensional nonlinear fluid-structure interaction 2-108084
 LOCA test program, event tree anal. 2-96261
 LOCA tests, touch-sensitive colour graphic monitoring system 2-64560
 local boiling behind a central blockage in a simulated LMFBR fuel bundle 2-96288
 LOFT, large break LOCA expts. comparison to Semiscale Mod-1 2-96258
 LOFT, neutron shielding, B₂C and TiH_{1.6} appls. 2-108148
 LOFT small break LOCA anal. 2-108102
 LOFT test L2-3 analysis 2-69806
 LWR, small break LOCA; LOFT test data anal. 2-54618
 LWR, small break LOCA; safety relief valves, flow behaviour studies 2-54608
 LWR, small break LOCA, air-water flow visualisation expts. 2-54607
 LWR, small break LOCA, boil off transient, heat transfer mechanisms 2-54609
 LWR, small break LOCA, cold leg breaks, TRAC-PD2 modeling 2-54621

fission reactor safety continued

- LWR, small break LOCA, energy transport mechanisms, PKL tests 2-54613
 LWR, small break LOCA, heat transfers above two phase mixture level 2-54604
 LWR, small break LOCA, LOFT L3-1 and L3-6 expts., RELAP4/MOD6 simulation 2-54627
 LWR, small break LOCA, LOFT L3-1 and L3-7 expts., RELAP5 calcs. 2-54629
 LWR, small break LOCA, LOFT L3-1 test, RELAP4/MOD6 calcs. 2-54632
 LWR, small break LOCA, LOFT RELAP models comparison 2-54598
 LWR, small break LOCA, nonequilibrium effects in choked nozzle flow 2-54603
 LWR, small break LOCA, operator responses during simulations 2-54612
 LWR, small break LOCA, POSEIDON-T model anal. 2-54597
 LWR, small break LOCA, primary coolant pump operation effects 2-54616
 LWR, small break LOCA, primary coolant pump operation effects, RELAP5 calcs. 2-54624
 LWR, small break LOCA, RELAP5 horizontal stratified flow model 2-54623
 LWR, small break LOCA, Semiscale test S-07-10D, TRAC calcs. 2-54634
 LWR, small break LOCA, simulation using minicomputer 2-54602
 LWR, small break LOCA, TMI accident simulation using SICLE 2-54631
 LWR, small break LOCA, TRAC appl. 2-54628
 LWR, small break LOCA, TRAC-PD2 calcs. and semiscale MOD-3 tests 2-54620
 LWR, accident dynamics, economic simulation 2-102249
 LWR, core damage sensitivities 2-80160
 LWR, degraded core cooling hydrodynamics 2-113681
 LWR, fission product behavior during core degradation and quenching 2-80161
 LWR, fission product chemical behaviour in fuel rods under accident conditions 2-80087
 LWR, limiting dryout flux in a large particle heat generating debris bed 2-102168
 LWR, post-departure from nucleate boiling operation 2-59507
 LWR, postulated core meltdown, containment failure due to steam explosion 2-85189
 LWR, safety related design issues 2-96072
 LWR, small break LOCA, Babcock and Wilcox analysis 2-54584
 LWR, small break LOCA, core damage detection and control 2-54581
 LWR, small break LOCA, fuel supplier's perspective 2-54585
 LWR, small break LOCA, LOBI program 2-54615
 LWR, small break LOCA, LOFT and semiscale system facilities 2-54579
 LWR, small break LOCA, LOFT test L3-6, result anal. 2-54583
 LWR, small break LOCA, multiple aperture anal. 2-54588
 LWR, small break LOCA, operational perspective 2-54580
 LWR, small break LOCA, present licensing perspective 2-54577
 LWR, small break LOCA, RELAP5 system modeling capability 2-54592
 LWR, small break LOCA, research perspective 2-54576
 LWR, small break LOCA, safety significance perspective 2-54578
 LWR, small break LOCA, two phase mixture level swell, void fraction meas. 2-54606
 LWR, small break LOCA accident anal. conf., Monterey, CA, USA (Aug. 1981) 2-53424
 LWR, small break LOCA analysis Yankee Atomic Electric Co. approach 2-54587
 LWR, transient problems, computational methods, accuracy and efficiency 2-64452
 LWR, transient vapour-liquid flow in channels, two-fluid description 2-97636
 LWR (U,Pu) mixed fuel reloading programme, computer code qualification program 2-69743
 LWR accident analysis using RELAP5 computer code 2-102255
 LWR accident analysis using TRAC computer code, development assessment status 2-102256
 LWR core meltdown accident modeling by MELSIM and LUECKE 2-80053
 LWR fuel bundle, severe core damage anal. package, conceptual design 2-80078
 LWR fuel pin failure anal. in LWRLAFM code 2-96263
 LWR fuel rod behavior, during reactor in-pile tests in LOCA 2-90224
 LWR fuel rod failure propagation anal. 2-96257
 LWR pressure vessel mockup, expt. data and calc. anal. 2-102142
 LWR radiological consequences of recycling Pu 2-102190
 LWR safety, homogeneous non-equilibrium critical flow model 2-69800
 LWR vessel loads from in-vessel steam explosion 2-108086
 LWRs, NRC containment safety margins programme 2-96232
 Magnox fuel elements manufacture for nuclear power stations, safety assurance 2-59481
 MANUAL, computerized approach to develop efficient failure location strategies 2-96253
 MARCH code for LWR safety assessment 2-96267
 measurement and level assessment using multiattribute utility theory 2-96220
 meteorological data for reactor accident risk calculations 2-54570
 meteorological information system with enhanced reliability for emergency preparedness 2-54687
 molten salt reactors, improved inherent safety 2-69798
 monitored components, time-depend. unavailability 2-96250
 multistation utility emergency preparedness exercises 2-102212
 natural circulation in multi-loop PWRs, simulator programming 2-102018
 natural convection boiling burnout in annulus 2-96137
 natural factors limiting the spread of radioactivity after serious damage to a reactor (*Dutch*) 2-64604
 New York State emergency response plan evaluation 2-102214
 noble gas recovery and treatment systems, critical review 2-59454
 NRC equipment qualification program for nuclear power generating facilities 2-85174
 NSSS, B&W 205 fuel assembly system changes since TMI 2-102128
 nuclear criticality safety, need for expt. benchmarks 2-90281
 nuclear power plant, signal validation methodology 2-96298
 nuclear power plant best-estimate models, verification 2-102250
 nuclear power plant operation, advanced display-control concepts 2-85173

fission reactor safety continued

nuclear power plant operational training simulators, design in light of TMI 2-102247
 nuclear power plant operational training simulators, upgrading for accident simulation 2-102248
 nuclear power plant remote data acquisition and display system 2-85196
 nuclear power plant safety systems, verification and validation program 2-85198
 nuclear power plant safety systems in USSR, reliability criteria 2-90279
 nuclear power plant status during abnormal reactor operating conditions, accident sequence identification 2-113713
 nuclear power plant training simulators, lessons from recent accidents 2-102246
 nuclear power plants, emergency response facilities utilisation described in NUREG-0696 2-85197
 nuclear power station control room design, lessons of TMI accident 2-96221
 nuclear reactor digital protection system 2-102195
 nuclear reactor safety and cooling in emergency, measures (*German*) 2-59502
 nuclear reactor vessel level monitoring system for assessing inadequate core cooling 2-64561
 nuclear review boards at Northeast Utilities 2-102226
 offsite independent nuclear safety review at TVA: how it's done 2-102224
 on-going plant probabilistic risk assessment studies 2-85199
 on-line acoustic survey for internal valve leakage 2-102205
 on-line diagnosis algorithm based on noise analysis 2-96153
 on-line leak detection method for OWL-1 loop by ARX modeling using dewpoint signals 2-59489
 on-site emergency preparedness, NRC appraisal 2-108091
 operator actions, safety related, available data assessment 2-85193
 outage management system 2-102202
 Peach Bottom Atomic Power Station Offsite Review Committee 2-102222
 Peach Bottom-2, turbine trip tests, RETRAN anal. 2-54561
 penetration of solid fuel debris into concrete following core melt accident 2-96283
 phased-mission system reliability analysis, PHAMAS computer code 2-59451
 physics and engineering aspects of nuclear reactor safety 2-54559
 pipe, noncircular bending, thin-shell anal. 2-65485
 pipe rupture accident, steam jet, high-pressure, impingement, nozzle reaction, press. distrib. 2-65629
 pipes, circumferentially cracked, bending failure by flattening 2-65534
 piping systems, integrated transient anal., three-dimens. method 2-74876
 piping tearing modulus stability concepts appl. 2-64538
 plant integrity to tornado propelled missile impact 2-59509
 plant integrity to tornado propelled missile impact 2-59510
 plant technical specifications and their effect on overall plant safety 2-102221
 plasticity, endochronic theory review 2-97396
 post accident conditions, emergency monitoring and assessment systems 2-102213
 post accident sampling, NSAC workshop 2-102278
 post dryout and decompressive flashing systems, gas-liquid thermal non-equilib., unified approach 2-96228
 post-accident sampling at the James A. FitzPatrick Plant 2-102134
 post-accident sampling system optimization for an operating plant 2-102135
 post-test analysis of TRAN-1 and TRAN-2 final fuel distributions 2-102200
 postcritical heat flux region, forced convective heat transfer and quenching 2-91217
 power plant outage and accidents, electric utility incentives, financial risks 2-85187
 power plant training simulator improvements in Japan for greater safety 2-102182
 power plants, integrated approach to design, procurement and installation of computer system 2-85194
 power stations, uncertainty analysis of system reliability and availability assessment 2-69803
 PRESCON-2 simulation of the OECD/CSNI containment analysis standard problem no.2 2-64466
 pressure vessel burst protection system, dynamic behaviour with various boundary conditions 2-64608
 pressure vessel defects, survey for UK 1962-1978 2-64533
 pressure vessel steel and concrete, temp. effects 2-64482
 pressure vessels, in-service inspection automation 2-102193
 pressure vessels, reliability estimation 2-96115
 primary coolant system leakage detection using acoustic emission 2-64594
 primary structures, thermo-mech. loading, limit design anal. 2-74872
 probabilistic risk analysis advances (*German*) 2-64602
 probabilistic risk assessment, uncertainty propag. techniques 2-69802
 probabilistic risk assessment for improved safety and operation 2-102230
 probabilistic risk assessment limitations and safety 2-113708
 prompt notification system design for nuclear power stations 2-102216
 prototype large breeder reactor, operability review 2-59506
 public information system for emergencies 2-102207
 public reaction to emergency planning 2-102208
 public response to emergency planning: a public official's viewpoint 2-102209
 PWR; small break LOCA, ALMOD model anal. 2-54596
 PWR; small break LOCA, LOFT L3-6 expt., RETRAN anal. 2-54630
 PWR; small break LOCA, loop seal behaviour study 2-54610
 PWR; small break LOCA, loop seals effect on mixture levels in cold leg break 2-54611
 PWR; small break LOCA, RELAP4/MOD7, TRAC-PIA, TRAC-PD2 calcs. 2-54626
 PWR, differential pressure meas. instrumentation system for LOCA investigation 2-96193
 PWR, emergency core cooling heat transfer tests 2-59505
 PWR, fluid-struct. interaction, effect on steam system design 2-107935
 PWR, hydrodynamic mass method anal. 2-107936
 PWR, loss-of-coolant accident, local void stabilisation (*German*) 2-69799
 PWR, moderator temp. coeff. reduction by Gd substitution 2-96079
 PWR, natural circulation cooling without void formation 2-96207
 PWR, on-line protection for departure from nucleate boiling ratio 2-102159
 PWR, small break LOCA, cold leg break, RELAP4 calc. 2-54633

fission reactor safety continued

PWR, small break LOCA, drift flux model, two phase flow anal. 2-54619
 PWR, small break LOCA, early pump trip effects, TRAC anal. 2-54617
 PWR, small break LOCA, LOFT L3-5, L3-6 expt., RELAP4-5 calcs. 2-54590
 PWR, small break LOCA, simulation using RELAP4/MOD7 code 2-54591
 PWR, small break LOCA, SMABRE simulator code 2-54600
 PWR, small break LOCA, thermal hydraulic transient anal. code 2-54599
 PWR, small break LOCA, two phase natural circulation in once through system 2-54605
 PWR, steam line rupture, RETRAN-01 anal., impact of plant modifications 2-102005
 PWR, thermo-mechanical analysis and application to depressurization and wave propagation 2-107934
 PWR, thermohydraulic transients prediction computer codes, capabilities and limitations 2-102254
 PWR, unblocked bundle forced and gravity reflood, data evaluation and anal. 2-64612
 PWR circuits, chemical decontamination LOMI reagents development by CEBG, in Britain 2-90305
 PWR containment pressurization, potential influence of core concrete interactions 2-96271
 PWR cooldown, RETRAN anal. 2-102235
 PWR core, heat-up anal., heat transfer results 2-54557
 PWR cracks and flaws detection using ultrasonic techniques 2-74866
 PWR fuel deformation in LOCA 2-90247
 PWR fuel pins, annular, safety related design 2-102075
 PWR fuel rods, azimuthal temp. distrib., steady-state and blowdown conds. 2-90278
 PWR LOCA, reflood heat transfer, effect of grid spacers 2-113704
 PWR LOCA cold leg thermal stratification prediction 2-102238
 PWR LOCA droplet deentrainment in arrays of cylinders 2-102164
 PWR LOCA expt. data anal. for reflood coolant density 2-102236
 PWR plant, proving commercial reactor safety in the LOFT facility 2-102196
 PWR pressure vessel integrity, flaw assessment 2-96240
 PWR pressure vessel safety assurance 2-102053
 PWR pressure vessels, construction, inspection and safety 2-80067
 PWR primary circuit overpress. protection 2-113717
 PWR safety anal., impacts, fluid-structure interaction 2-96235
 PWR small break LOCA, core degradation 2-80077
 PWR steam generator, response to scram at 50% load and open grid transient 2-108056
 PWR transient pressurizer pressure behavior 2-102158
 PWR transient without scram with a PORV stuck open 2-96273
 PWR vapour region collapse mechanisms, steam chugging calculations with the PELE-IC code 2-108061
 PWR vessel failure due to debris-vessel interaction, thermal anal. 2-102243
 PWR vessels, tackling the pressurized thermal shock issue 2-102192
 PWR-BWR thermal-hydraulic anal. programmes, comparative study (*Spanish*) 2-69698
 PWR-RCC fuel assemblies, seismic anal. 2-113624
 Q list components, safety anal., system interaction 2-102229
 quenching of a high-temperature particle bed 2-102237
 radioactive material released from nuclear power plants in 1978 2-59498
 radiiodine control in power reactors, evolution and current state 2-85401
 radiological analysis of primary coolant and containment atmosphere 2-102136
 radionuclide composition of gaseous effluents from Beloyarsk power station 2-116858
 radionuclide inventory impacts on reactor accident consequences 2-96254
 RAMONA-3B code for BWR transients, B transport calc. in standby liquid control system 2-96247
 Rancho Seco overcooling transient simulation by TRAC-PD2 2-96274
 randomly loaded structures, life prediction 2-96239
 reactor components, nondestructive testing (*French*) 2-64606
 reactor neutron dosimetry, status and problems using radioactivation (*Japanese*) 2-96320
 reactor noise analysis, safety appl. (*Japanese*) 2-96222
 reactor parameter monitoring by low freq. press. pulsations 2-102197
 reactor safety film, computerised animation 2-54574
 reactor shielding, computational methods book 2-53442
 reactor shutdown events and their causes 2-85190
 real-time reactor perimeter γ -ray monitoring systems 2-54675
 realistic estimates of the consequences of nuclear accidents 2-74886
 reflood tests on 161-rod bundle 2-59504
 reinforced concrete, containment elements, shear tests, research status and needs 2-96104
 RELAP-5 computer code for reactor transient behaviour during loss-of-coolant accidents, descriptive evaluation 2-108098
 reliability anal. of safety system, probability theory (*Chinese*) 2-80159
 reliability evaluation of a nuclear reactor safety control system 2-54636
 reporting requirements for operational experience data 2-102220
 research overview (*German*) 2-102189
 risk anal., limit lines, complementary cumulative distribution function 2-90277
 risk assessments, point estimates 2-96249
 risk estimates, realistic assessment 2-74867
 risk meter for continuous monitoring of operating plants 2-96251
 ROSA-IV cold leg break anal. using RELAP5 2-113720
 rotating machinery surveillance and diagnostic system for Grand Gulf power station 2-102204
 roughness element, response of fully developed pipe flow 2-108059
 safety parameter display system for the River Bend nuclear station 2-102203
 San Onofre nuclear power station, public response to education program 2-102211
 scale effect on subcooled critical flow 2-96200
 seismic anal. of soil struct. systems in nonlinear framework 2-59453
 seismic behavior of liquid-filled shells 2-108087
 seismic design, review 2-96237
 seismic safety margins research programme, of NRC 2-96073
 Semiscale Mod-1, large break LOCA expts. comparison to LOFT 2-96258
 Semiscale Mod-2A upper head injection test series results 2-96260

fission reactor safety continued

Senior Nuclear Safety Overview Committee functions in the preoperational phase 2-102225
 Senior Nuclear Safety Overview Committee operations; a consultant's viewpoint 2-102223
 severe accident consequence analysis; comparison calculations with the MARCH 1.1 and RACAP-1 codes 2-102242
 SGHWR, controlled depressurisation expt., RELAP and RETRAN anal. 2-59494
 SHAPS program for piping system integrated transient anal. 2-96276
 SIMMER-II simulation of thermite freezing and plugging experiments 2-96213
 SIMMER-II with the k-k turbulent flow model 2-96212
 simulation as aid to licensing authorities during commissioning 2-102183
 simulation methods, conf., Arizona, USA, 1981, Jan. 2-101129
 simulator capability improvement in light of TMI-2 accident 2-102184
 skewed initial temp. distrib. effect on reflood transient 2-96201
 snubber reliability improvement study 2-69807
 sodium boiling modeling in W-1 sodium loop safety facility expt. 2-102240
 sodium safety facility, test sections, handling at Hot Fuel Examination Facility 2-107971
 solid fuel dispersal in loss of flow accident possibilities using fission gas 2-102201
 SOPHT, CANDU simulation model 2-54625
 space fission reactor, shielding optimisation 2-108141
 spent fuel transport, safety assessment, source term database 2-64520
 Standards subcommittee on criticality safety admin., practices, overview 2-96243
 standby systems, availability anal. 2-74888
 status analysis system, implementation 2-64455
 steam drums, AE obs. 2-111387
 steam explosion, need for reassessment (*German*) 2-64600
 steam explosion, simulated reactor core melt-down, pressure pulse triggering effects 2-69801
 steam generator replacement at Surry Power Station: ALARA aspects 2-102277
 steel, containment, buckling research, NRC programme 2-96233
 steel austenitic weld, mechanised in-service US inspection in nuclear plants 2-99620
 steel cylinders, with reinforced circular cutouts, buckling, area replacement method calc. 2-96107
 steel-water reaction effects during postulated core melt down 2-96269
 steels, austenitic stainless, type AISI 304 and AISI 316, dynamic testing, for large reactor struts. 2-74825
 stochastic analysis of transients 2-64603
 structural mechanics, conference, Paris, France (Aug. 1981) 2-94898
 subcriticality measurements, using ²⁵²Cf driven power spectral density meas. 2-90282
 submerged gravel scrubber for containment venting 2-96281
 Swedish district heating reactor SECURE, design features (*German*) 2-80164
 Switzerland strives for greater nuclear plant safety (*German*) 2-64610
 target curve with maintenance time in optimal xenon shutdown problems 2-59501
 task analysis methodologies for safety-related operator actions 2-69788
 temperature fluctuations during reactor transients, safety aspects 2-96166
 thermal transient finite element anal. using isoparametric anal. 2-96230
 Thermal-Hydraulic Out-of-Reactor Safety facility, expansion tank, flow, numerical study 2-85182
 thermal-hydraulic transient expts., uncertainty anal. method 2-85180
 Three Mile Island, degraded core accident rel. to nuclear reactor safety research 2-85203
 Three Mile Island accident, evaluation of response of TLDs to ¹³³Xe radiations 2-64691
 Three Mile Island nuclear power plant accident 2-74887
 Three Mile Island Unit 2 reactor recovery progress 2-64607
 Three Mile Island Unit 2 safety philosophy and safety systems performance 2-102194
 TMI, implementing the lesson learnt 2-59500
 TMI, public response, topological characterisation 2-102217
 TMI-2, preoperational test precursor of 1979 accident 2-113716
 TMI-2 accident anal., fuel rod behaviour, core damage using TOODEE-2-J 2-96227
 TMI-2 accident anal., thermal hydraulic behaviour using RELAP4/MODE/4/J2 2-96226
 TMI-2 containment building accident water sampling and reactor primary coolant accident source term 2-102280
 TRAC, improved coupling of conduction and flow eqns. 2-90271
 TRAC methods for LWR small break LOCA anal. 2-54594
 TRAC-PIA post-test analysis of Semiscale Mod-3 Test S-07-6 2-96259
 TRAC-PD2 prediction of a FLECHT-SEASET bottom forced reflood experiment 2-96245
 TRAC-PFI stratified flow model assessment 2-96246
 transient analysis, inverse reactivity appls. 2-107940
 transient analysis code, RETRAN, appls. 2-54488
 transient event database searching, computer program, PLUNGE 2-54573
 transient film boiling of high-pressure water in a rod bundle 2-96199
 transient model for the ablation of concrete following core meltdown in LWR 2-96078
 transient reactor test facility, evidence for time depend. neutron flux/spectrum anomaly 2-96225
 transient two-phase flow in nuclear reactors, various models, foundations and limitations 2-102251
 transients, point kinetics eqns., sensitivity anal. 2-101958
 transition boiling heat transfer tests 2-108057
 transuranic radionuclides in nuclear power plant environs, concentrations and distribution 2-59503
 TREAT hodoscope spatial resolution enhancement 2-96210
 transuranium element removal from RBMK-1000 coolant system 2-54567
 two loop feedwater/level control system for BWR 2-102116
 two phase flow instrumentation related with LWR safety research (*Japanese*) 2-64567
 two-phase nozzle flow expt., code verification 2-85179
 UKAEA criticality dosimeter, slow neutron sensitivity 2-70021
 unsteady two-phase flow, loss of coolant accident in power plant 2-90261
 US selected safety related events reported in Sept.-Oct. 1981 2-85191
 USSR power stations, safety control 2-54563
 vibration characts. meas., w.r.t. safety in earthquakes (*German*) 2-64599

fission reactor safety continued

VVER, safety valves in first loop, need and problems created 2-59491
 VVER-440, radiation safety in commercial power stations 2-54564
 Washington Public Power Supply System WNP-2 equipment qualification program 2-113702
 Water Reactor Analysis Package, Evaluation Model, LOCA calcs., WRAP-EM codes 2-85188
 water-level meas. tests in reactor vessel using ex-core neutron detectors 2-108099
 Westinghouse PWR, small break LOCA, inadequate core cooling studies 2-54582
 X-ray inspection of nuclear fuel elements 2-74868
 Yankee Atomic Electric Company Offsite Review Committee responsibilities 2-102227
 Zircaloy fuel rod embrittlement, assessment in water accident situations 2-96119
 Al, PWR, containment sprays, H₂ evolution 2-74882
 CO burning during core meltdown in PWR 2-96270
 I behaviour in containment following LOCA with fuel failure 2-64618
 I, chemical reaction, release during HTGR accidents 2-96255
 I plateau in air sampling lines following LOCA, sampling procedure 2-96272
 I release from irradiated UO₂ at ambient temp. 2-96266
 I releases following PWR steam generator tube rupture accident 2-96256
 Na cooled Th cycle breeder with coated particles 2-102153
 Na, extreme overheating study 2-59469
 Na saturated particle bed, heat transfer behaviour 2-107958
 O₂ induced corrosion, design guide for secondary systems for reduction 2-64586
 Pu fuelled assemblies, handling and storage 2-102191
 U-ZrH research reactor, 3 MW, safety considerations in design 2-96080
 UC-PuC fuel pins, He-bonded, transient performance in TREAT 2-80105
 UO₂ fuel, fission gas disposition, granular computer model 2-107957
 UO₂ in-reactor fuel elements, fission gas extraction, fuel rod design 2-113625
 UO₂ pellet, pulse n irradi., ¹³³Xe and ¹³⁷I release (*Japanese*) 2-64476
²³⁵U systems, subcritical limits 2-96223
²³⁵U systems, subcritical limits 2-96224

fission reactor theory and design

see also fission reactors; fission research reactors; neutron transport theory
 6000 kW floating power plant for drill rigs 2-101961
 accident analysis, using simulation language DSPN 2-102253
 accident simulation codes, REPAID, VVER-D, SICHTA, DYN79, test calc. results (*Slovenian*) 2-59449
 3D-AIRLOCA code anal. of generic research reactor 2-96202
 airtightness criteria for technological compartments and reactor building 2-113589
 annual current approx. for neutron transport interface current approach 2-96071
 auxiliary feedwater system alternatives 2-102125
 bare homogeneous reactor assembly, collision escape probability, Wigner rational approx. 2-85115
 benchmark data testing for thermal reactor applications 2-101986
 benchmark problems for fluid-structure interactions 2-90204
 benchmark testing of anisotropic diffusion coefficients for multigroup slab lattice cells 2-90197
 benchmarking of ARMP modules against BWR measured data 2-102000
 Bitter-type magnet, TF coil support development 2-59527
 BN-600, design, construction and commissioning experience 2-113587
 BOKR-BIS program for two-dimensional calculation of an RBMK on a series ES computer 2-59450
 Boltzmann equation, solution method for arbitrary irregular geometries 2-90200
 Borrensen model computation for neutronic benchmark problems 2-54474
 breeder core components, structural design criteria 2-59471
 building wake dispersion factors for post LOCA control room habitation 2-54483
 BWR, fuel reconstruction for improved U utilisation 2-54517
 BWR, media systems, failure modes, effect anal., design review 2-113612
 BWR, small break LOCA, RETRAN-02 anal. 2-54593
 BWR, stability anal., neutronic modeling 2-101982
 BWR, thermal-hydraulic stability analysis of interconnected boiling channels 2-102170
 BWR, transient anal., multiregion neutronics model, coarse mesh nodal coupling method 2-74794
 BWR benchmark verification of control rod effects on SIMULATE models 2-101999
 BWR control rod pattern optimisation using power shape monitoring system 2-102112
 BWR improvements for degraded core considerations 2-101968
 BWR piping welds, growing stress corrosion cracks, shape prediction model 2-108015
 BWR plant control room design, human factors 2-102257
 BWR plant transients, calc. using RAMONA-3B computer code 2-102186
 BWR scram system, operation and safety concerns 2-96218
 BWR stability anal. 2-102171
 BWR stability testing: reaching the limit-cycle threshold at natural circulation 2-102138
 BWR transients, computer model 2-102015
 CANDU, alternative fuel cycle assessment 2-113649
 CANDU, bimodal analysis and spatial control 2-64592
 CANDU, dynamic flux synthesis with discontinuous trial functions 2-64459
 CANDU advanced fuel cycles, economic potential 2-113650
 CANDU core seismic integrity tests 2-74885
 CANDU reactor benchmark problems 2-90205
 CANSWEL-2 code for creep predictions in Zircaloy fuel can following LOCA 2-113616
 canwall failure modeling in TRANSIT HYDRO code for whole core transition, phase anal. 2-96295
 CDS phase II heterogeneous reactor, unprotected LOF anal. of initiation phase 2-96289
 cell homogenisation, accurate background cross-section method 2-54475
 Clinch River Breeder, initial loading mock-up expt. 2-101994
 Clinch River Breeder lumped fission product uncertainty anal. 2-101995

fission reactor theory and design continued

CLUB—a multi group integral transport theory code for analysis of cluster lattices 2—96070
 CMEA countries, nuclear energy complex system development planning (*Czech*) 2—62464
 COMMIX-2 code, two fluid model, improved iteration scheme 2—90214
 computational benchmark for adjacent poisoned fuel rods 2—113599
 computer-aided identification of benchmark criticality data 2—90217
 condensation in a pipe, mathematical benchmark problem 2—90208
 conference, Canadian Nuclear Soc., Ottawa, Ont., Canada (June, 1981) 2—63743
 construction contract management philosophies 2—113609
 containment venting, H_2 deflagration property transient modeling 2—80057
 controlled nuclear fusion expts., finite element network method for three-dimensional eddy current calc. (*German*) 2—108104
 coolant heat transfer computational techniques, stability 2—90270
 core boil-off expt., anal. using THERMIT code 2—102175
 core flow redistrib. modeling during reactor shut down cooling 2—96082
 core meltdown phenomenology for LWRs and LMFBRs 2—102252
 core neutronics, iterative calc. acceleration, dominant error vector eigenvalue 2—54477
 correlated selection method of neutron flux estimation 2—101962
 cost control program for major power plant construction projects 2—113611
 countercurrent flow tests assessment of TRAC-PD2 2—102008
 countercurrent flow with air and water, liquid carry-over and entrainment 2—96214
 Coupled Fast Reactivity Measurement Facility, central flux spectrum, sensitivity and error anal. 2—54541
 coupled fluid-structure system, vibr. anal. computation 2—109225
 critical expts. anal. using ENDF/B-IV and ENDF/B-V data 2—101974
 critical parameters of reactors with TBC-2M type fuel and different neutral reflectors (*Russian*) 2—80052
 degenerated shell finite elements, reduced integration, numerical conditioning 2—107099
 discrete ordinates method, acceleration improvement 2—107924
 discrete-ordinates nodal method, two-dimens. exponential expansion 2—107923
 Dodewaard BWR, fuel utilisation 2—113636
 doubly connected domains of complicated shape, nonlinear diffusion type problem 2—114606
 doubly heterogeneous lattice, equivalence relation 2—90187
 dynamic modelling experiences, with PWRs and FBRs 2—102020
 dynamic performance models, validation methods 2—102188
 efficiency estimates for multiresponsive problems 2—90283
 element stiffness matrices, derivation by assumed strain distrib. 2—109186
 ENDF/B unresolved resonance region formalism representation 2—101973
 event trees, qualitative use in design decisions 2—101967
 extreme quantile sampling for safety analyses 2—90280
 fast critical assemblies, with high ^{240}Pu content, sodium void reactivity anal. 2—69696
 fast critical assembly, reactor model, neutron leakage effect in cell calcs. 2—90192
 fast reactor, periodically pulsed, neutron kinetics theory 2—69695
 fast reactor appls. of current resonance theory, overview 2—85121
 fast reactor burn-up calculations 2—69702
 fast reactor criticality perturbations, group macroconstants derivatives 2—101963
 fast reactor parameters, optimisation, system approach (*Russian*) 2—54552
 fast reactor technical economical anal., parameter optimisation (*Russian*) 2—54486
 fast reactors, data adjustment, treatment of self shielding factors 2—101993
 fast reactors, system anal. techniques (*Russian*) 2—54485
 fast reactors, two group general response matrix nodal program 2—101976
 fastener effects, in finite element models 2—109182
 faster-than-real-time computer code for loss-of-coolant and feedwater transient prediction 2—102009
 fault tree as a tool in safety analysis of nuclear power plants 2—64620
 FBR fuel pins, heat conductance modelling 2—90244
 FBR fuel subassembly, wire-spaced, local coolant flow vel. field calc. 2—85181
 FBR helical wire bundle, temp. form factor reduction, design, research and development 2—102076
 feedback of experience for engineering improvement 2—113615
 few-group constants for the HEU and MEU cores in the KUCA 2—96068
 FFTF, fission rate assessments 2—102148
 FFTF, nuclear emulsion neutron spectrometry 2—102144
 FFTF, proton recoil proportional counter meas. 2—102145
 FFTF, reaction rates and neutron flux spectra 2—102149
 FFTF design summary 2—101965
 FFTF primary heat transport HVAC system 2—102119
 FFTF reactor characterization program 2—101977
 Final Safety Analysis Report, independent design review 2—102218
 finite difference effects in the synthetic acceleration method 2—90194
 finite element analysis, computation, conference, Paris, France (Aug. 1981) 2—107009
 finite element response matrix method for coarse-mesh calculations 2—90195
 fissile materials worths, first-order perturbation calcs., intracell adjoint flux heterogeneity effects 2—96097
 fission reactor primary structures, thermo-mech. loading, limit design anal. 2—74872
 flow rate distributions analysis for heat exchangers using THAUPR code 2—102002
 fluid-structure anal., safety calc. codes 2—96238
 fluid-structure interactions, finite difference anal. 2—59511
 fluid-structure problems with rigid wall loads, modal recovery methods for soln. 2—113586
 FREY code for operational transient evaluation 2—64611
 FTR, gamma-ray measurements 2—101978
 fuel cycle strategies for the LWR-LMFBR transition in the United States 2—113602
 fuel pin behaviour during transients, computer codes 2—90220
 fuel sheath failure model, comp. with expt. results 2—54528

fission reactor theory and design continued

FUMO-E: an internal fuel motion model for annular fuel 2—102199
 fusion-fission hybrids, CODAC, TIMOC, ORIGEN calc. model, breeding, fuel 2—113747
 GCFR, design, fuel, safety and economics 2—64456
 GCFR flow transient anal., numerical scheme 2—90213
 geometrical shadowing factor in multi-region annular cells for closely packed lattices 2—101985
 HDR blowdown and snapback, fluid-struct. anal. using FLUX code 2—107933
 HDR blowdown expt., anal. for fluid-struct. interaction 2—108085
 HDR blowdown test, K-FIX pre and post test anal. 2—108060
 HDR vessel, blowdown, coupled fluid-structure interactions 2—108083
 heat removal from cruciform cross-section fuel rods 2—113595
 heat transfer of gas flow through a tube, finite element soln. 2—97694
 heavy water breeder, conceptual core design 2—64458
 heavy water seed blanket breeder reactor on the uranium-plutonium cycle 2—113600
 hexagonal geometry, few-group diffusion code, HEXAN 2—102014
 high order method in flux mapping 2—64463
 HTGR, neutron resonance absorpt. in fuel 2—64451
 HTGR, primary coolant system selection 2—102113
 HTGR, Pu cross section calc. method (*German*) 2—80056
 HTR fission product release forecasting (*German*) 2—107945
 HTR pebble bed core, 1-dimens. model, reinforcement learning control, heuristic approach 2—85122
 HTR rod drive electrohydraulic load simulator (*German*) 2—69770
 hybrid reactors, blankets sustained by exogenous neutrons, flux spectrum extremisation criteria 2—113746
 hypothetical core disruptive accident, freezing liq. penetration in tube flow, analytic model 2—96294
 IAEA safeguards, effect on system design 2—69739
 imitative model for automated control and monitoring system 2—113590
 in-channel thermohydraulic calculations of nuclear reactor fuel-element assemblies 2—113684
 in-reactor thimble system for FTB characterization 2—102143
 information and measuring apparatus design for nuclear power stations 2—54543
 integral testing of evaluated fission product data 2—107938
 intermediate resonance parameters derived from exact resonance integrals 2—101983
 inverse heat conduction soln. procedure appl. 2—90273
 ISNF one dimens. model, evaluation 2—101975
 iterative solution of the fully implicit HEM equations 2—90210
 jet impingement problem, solution using computer graphics and three dimensional modelling 2—54575
 KAHTER high temp. pebble bed reactor, computation checking (*German*) 2—90218
 KFA/NUCLEBRAS research and development program on thorium utilization in PWRs 2—113648
 La Crosse BWR, backfitting, cost and impact 2—101966
 Large Scale Test Facility design for PWR small break LOCA integral expt. 2—85204
 large symmetric cores, buckling method extension, neutron transport eqn., flux 2—113584
 layer composites, edge stress determ., finite element calc. 2—109187
 licensing impact on design, fire protection 2—101969
 LMFBR, annulus thermal entrance region, turbulent heat transfer to liquid Na 2—85183
 LMFBR, cavitation in submerged jets 2—102162
 LMFBR, core design, seed blanket modular assemblies, LOF effect 2—74795
 LMFBR, core transient performance, design methods 2—85126
 LMFBR, heterogeneous oxide, thermal-hydraulic anal., conceptual design 2—102001
 LMFBR, initiating phase thermal hydraulics modeling for transition phase anal. 2—96292
 LMFBR, large heterogeneous core, transition phase calc. 2—96085
 LMFBR, modeling Na-fuel reaction swelling in breached mixed oxide fuel elements 2—80162
 LMFBR, peak power calcs., generalised perturbation theory, Taylor series expansion 2—107943
 LMFBR, sodium void worth anal. using unified diffusion coeff. 2—101991
 LMFBR, surface area enhancement in molten metal-water thermal interactions 2—96287
 LMFBR, transient anal. code, FORE-2M, expt. verification 2—85125
 LMFBR, transient boiling calculations in rod bundles using the THEBES code 2—102003
 LMFBR absorber system design, safety requirements 2—96081
 LMFBR blanket rod bundles, peak temp. rise 2—85201
 LMFBR coolant channels temp. profile calc. 2—90272
 LMFBR Direct Reactor Auxiliary Cooling System modeling in SSC 2—96083
 LMFBR fuel management strategies for structural compatibility 2—113653
 LMFBR heat transfer from heat-generating boiling pools pertaining to transition phase and PAHR 2—96293
 LMFBR pipe break accident 2—102241
 LMFBR primary containment response to changes in UIS flow paths 2—96277
 LMFBR primary tanks, seismic response 2—96084
 LMFBR static neutronic benchmark problems, results summary 2—90207
 LMFBR structures, design and anal. 2—96074
 LMFBR thermal hydraulic transient pipe flow models with thermal buoyancy 2—102177
 LOCA hydroloads calculations with multidimensional nonlinear fluid-structure interaction 2—108084
 local reactivity in space-dependent dynamics of nuclear reactors 2—96069
 LWGRs, Beloyarsk, reactivity steam effects 2—64573
 LWR, data processing and reduction, uncertainties 2—101987
 LWR, safety related design issues 2—96072
 LWR, small break LOCA, RELAP5 system modeling capability 2—54592
 LWR, subcooled boiling model 2—102010
 LWR, transient problems, computational methods, accuracy and efficiency 2—64452
 LWR, transient vapour-liquid flow in channels, two-fluid description 2—97636
 LWR, two-fluid vapour-liquid flow, interfacial exchange relations, regime-map approach 2—97634
 LWR accident analysis using RELAP5 computer code 2—102255

fission reactor theory and design continued

- LWR core meltdown accident modeling by MELSIM and LUECKE 2-80053
 LWR fuel assembly model, press. drop and heat transfer study 2-90188
 LWR fuel bundle, severe core damage anal. package, conceptual design 2-80078
 LWR fuel pin failure anal. in LWRAFM code 2-96263
 LWR kinetics, computer code 2-107939
 LWR pressure vessel mockup, expt. data and calc. anal. 2-102142
 macroparticle accel. for controlled thermonuclear fusion 2-96304
 maintenance management evaluation criteria 2-113614
 MANUAL, computerized approach to develop efficient failure location strategies 2-96253
 MARCH code for LWR safety assessment 2-96267
 modal approximation methods, linear system of eqns. row-by-row elimination method 2-69697
 modified ICE technique for two-phase systems with strong mass sources 2-90211
 multigroup diffusion calculations in hexagonal geometry using modal interface method 2-90193
 multigroup effective cross-section determination for neutron physics analysis of fast neutron reactors (*Bulgarian*) 2-85123
 multigroup neutron diffusion criticality calculations using variational spline functionals 2-90202
 multiphase fluid dynamics eqns., solution method 2-90209
 multiplying assembly, multigroup multiparticle formalism, Kolmogorov eqns. 2-85113
 multivariable controller design for CANDU reactor 2-113705
 multivariate signal analysis for process noise source identification 2-96150
 natural circulation steam generators for LWR and HWR, circulation ratio 2-102114
 natural U axial blankets, operating experience in PWRs 2-113597
 natural U demand evaluation for thermal reactor systems 2-113652
 neutron distribution in reactor core with TBC-2M fuel assemblies (*Russian*) 2-80149
 neutron noise, propagating disturbances theory 2-96155
 neutron noise theory for fast reactors 2-96172
 neutron resonance parameters (*Japanese*) 2-59448
 neutron streaming, deterministic calc. in (*r-z*) geometry, transfer matrix method 2-107925
 neutron transfer optimum distrib. problem 2-96076
 neutron transport in a reactor system with temperature feedback 2-59447
 neutron transport problems having analytical solutions 2-90206
 nodal Green's function method extension 2-90189
 nodal integration method, for neutron diffusion problems 2-54466
 noise, correlation functions, forward eqn. approach 2-107942
 noise calcs., binary operator separability 2-80054
 noise sources and space-depend, reactor transfer functions 2-96161
 nonequilibrium transient two-phase flow modeling 2-90212
 nonlinear dynamic structural response, implicit time integration, numerical stability 2-109204
 nonsteady retardation of neutrons in a medium with a large cavity 2-101956
 nonuniform fuel burnup, time power series anal. method 2-101959
 NSSS, B&W 205 fuel assembly system changes since TMI 2-102128
 nuclear components, structural anal., practical anal. of ratchetting 2-113585
 nuclear power system simulation, general purpose software, role 2-102023
 nuclear reactor, optimal power factor control 2-113707
 Nuclear Regulatory Commission, research on structures, materials and mech. engineering 2-96100
 numerical integration using model partitioning, nuclear power system simulation appl. 2-102024
 on-line noise anal. using time series anal. 2-64454
 one-group nodal code, fourth order polynomial interpolation 2-107944
 optimal fuel depletion strategy 2-113605
 outage management system 2-102202
 particle and radiation leakage importance, definition, anal. and interpretation 2-96064
 phase-boundary search process for controlling time-step size 2-90215
 phased-mission system reliability analysis, PHAMAS computer code 2-59451
 Phenix, fuel performance improvement 2-113606
 Pickering B, fuelling strategy 2-113598
 piping systems, dynamic behaviour, gap-size effect 2-64569
 plant integrity to tornado propelled missile impact 2-59509
 plant integrity to tornado propelled missile impact 2-59510
 point approximation in the theory of coupled reactor systems 2-54480
 porous media approach to thermal hydraulic anal. 2-90216
 power coefficient validation of the Kewaunee ARMP model 2-101998
 power plant simulator, role expansion to include engineering design aid 2-102016
 power reactor surveillance and diagnostics, stochastic semiempirical methods 2-107941
 power stations, structural, materials and mech. engineering, conf., Paris, France (Aug. 1981) 2-94897
 PRESCON-2 simulation of the OECD/CSNI containment analysis standard problem no.2 2-64466
 probabilistic analysis of alternative strategies for US FBR development 2-113603
 probabilistic risk assessment for improved safety and operation 2-102230
 prototype large breeder reactor, operability review 2-59506
 PWR, fluid-struct. interaction, effect on steam system design 2-107935
 PWR, gadolinia loaded assemblies, automated diffusion theory parameterisation 2-102150
 PWR, heterogeneous flux shapes from nodal calcs. 2-101979
 PWR, hydrodynamic mass method anal. 2-107936
 PWR, moderator temp. coeff. reduction by Gd substitution 2-96079
 PWR, moderator temp. coeff. reduction using Gd₂O₃-lined rods 2-54489
 PWR, optimal depletion strategies determ., by gradient ascent method 2-90201
 PWR, small break LOCA, simulation using RELAP4/MOD7 code 2-54591
 PWR, steam line rupture, RETRAN-01 anal., impact of plant modifications 2-102005
 PWR, thermo-mechanical analysis and application to depressurization and wave propagation 2-107934
 PWR, thermohydraulic transients prediction computer codes, capabilities and limitations 2-102254

fission reactor theory and design continued

- PWR, tube bundle flow during steam generator wet layup, anisotropic modelling 2-113682
 PWR baffle/reflector constns., ENDF/B-V based few group calcs. 2-101980
 PWR burnable poisons, Gd₂O₃-UO₂ and B₄C-Al₂O₃ comparison 2-80098
 PWR cooldown, RETRAN anal. 2-102235
 PWR dynamics, with partial boiling, computer code, KINE 2-90191
 PWR fuel pins, annular, safety related design 2-102075
 PWR gross power distrib., calc. by modified Borresen coarse-mesh scheme 2-101981
 PWR performance adjustments via on-line parameter optimisation 2-101964
 PWR thermal mixing, COMMIX-1A anal. 2-102174
 PWR vapour region collapse mechanisms, steam chugging calculations with the PELE-IC code 2-108061
 PWR vessel failure due to debris-vessel interaction, thermal anal. 2-102243
 PWR with tight-lattice core, conversion ratio enhancement 2-64457
 PWR-RCC fuel assemblies, seismic anal. 2-113624
 RAMONA-3B code for BWR transients, B transport calc. in standby liquid control system 2-96247
 Rancho Seco overcooling transient simulation by TRAC-PD2 2-96274
 random-parametric reactor model with direct feedback and non-white noise 2-96165
 randomly loaded structures, life prediction 2-96239
 rapid shift of a reactor to a constant power level 2-54482
 RBMK 1500 cassettes, testing in Leningrad Nuclear Power Station reactor 2-102108
 RBMK high power reactors, design provisions for operational capability 2-54481
 RBMK homogeneous lattices, spectral indices meas. 2-54545
 RBMK-1000, principle indices of technological media 2-113591
 reactivity margins in heavy-water-moderated production reactors 2-101984
 reactivity temperature coefficients of liquid salt reactors 2-113593
 reactor noise analysis, models and information contraction 2-96164
 reactor noise analysis by dynamic data system methodology 2-96151
 reactor noise comparative anal. 2-96160
 reactor noise patterns, reactivity feedback and spatial higher harmonics effects 2-96162
 reactor shielding, computational methods book 2-53442
 reactor simulators, analytical modules 2-102019
 real-time quasi-three-dimensional BWR core simulator 2-101972
 reference design, development and utilisation, Italian experience 2-113607
 REFUEL computer program, BWR optimum refuelling patterns determ. 2-59452
 RELAP-5 computer code for reactor transient behaviour during loss-of-coolant accidents, descriptive evaluation 2-108098
 reliability management of nuclear power plant 2-69810
 research on fast-reactor performance with uncertainties in the initial data 2-113588
 Ringhal's Unit-2, secondary water chemistry 2-64581
 rod type lattice, thermal neutron parallel diffusion length, reactor appl. 2-64450
 rules for design and construction—the French approach 2-113613
 SARGS program for power boost test anal. 2-90219
 scheduling techniques applied at Framatome for the French nuclear program 2-113610
 seismic anal. of soil struct. systems in nonlinear framework 2-59453
 seismic behavior of liquid-filled shells 2-108087
 seismic design, review 2-96237
 seismic effects, appraisal of near field effect from historical Eastern Canadian earthquakes 2-78597
 seismic safety margins research programme, of NRC 2-96073
 severe accident consequence analysis: comparison calculations with the MARCH 1.1 and RACAP-1 codes 2-102242
 SHAPS program for piping system integrated transient anal. 2-96276
 shells, cylindrical, thermal stresses based on improved theory 2-69699
 SIMODEX fuel management program, Darlington A reactor fuelling simulation 2-64461
 simulation methods, conf., Arizona, USA, 1981, Jan. 2-101129
 simulation of fuelling operations for CANDU-type reactors 2-64462
 simultaneous solution for fluxes at two points in the two-group diffusion equation 2-64465
 skewed initial temp. distrib. effect on reflood transient 2-96201
 slab reactor, absorber withdrawal rate, temporal power series method, fuel burn-up 2-113677
 SLOWPOKE reactor, small-signal dynamic simulation 2-102013
 SNR-1300, alternate radial blanket subassembly designs 2-113604
 solid fuel dispersal in loss of flow accident possibilities using fission gas 2-102201
 solubility of gases in water coolant 2-113594
 space-time kinetic theory 2-54478
 sparse matrix solver, node-oriented, for fission reactor design 2-107931
 spatial effects in reactivity meas. using inverse soln. of kinetic eqns. 2-113592
 stability to Xe oscills., neutron height distrib. shape effect 2-64574
 start-up period estimation 2-54551
 statistical distribution approach to calculation of nuclear data 2-64464
 steam generator model testing 2-113690
 stochastic reactor kinetic eqn. 2-96163
 strategies for fuel management in coupled systems of thermal and fast reactors 2-113601
 structural mathematical model for reliability, calc. method 2-113596
 structural mechanics, conference, Paris, France (Aug. 1981) 2-94898
 structure analysis, direct second-order finite element method 2-107100
 structure-to-structure mech. interaction anal., three dims. 2-107930
 subcritical assembly, k_{eff} determ. using asymmetric source method 2-101997
 subnodal technique in the context of the Analytic Nodal Method 2-64460
 symmetry considerations in reactor calcs. 2-80055
 thermal reactor physics, future directions 2-101990
 thermal reactors, by problems 2-101989
 thermal reactors, key problems 2-101988
 three-dimensional diffusion neutronics, mixed finite difference formulation 2-80048
 time absorption eigenvalue searches for subcritical systems 2-90199

fission reactor theory and design continued
time-dependent, one-dimensional, multigroup transport theory benchmark problems 2-90203
time-independent reactors, asymptotic equivalence of neutron diffusion and transport 2-85116
TRAC, improved coupling of conduction and flow eqns. 2-90271
TRAC-PIA post-test analysis of Semiscale Mod-3 Test S-07-6 2-96259
TRAC-PD2 and RELAP5/MOD1 predictions of heated rod bundle experiments 2-102004
TRAC-PD2 prediction of a FLECHT-SEASET bottom forced reflood experiment 2-96245
TRAC-PF1 stratified flow model assessment 2-96246
transient analysis, inverse reactivity appls. 2-107940
transient model for the ablation of concrete following core meltdown in LWR 2-96078
transient reactor control system, analytical design considerations 2-64453
transients, point kinetics eqns., sensitivity anal. 2-101958
transport calculations, vectorised Monte Carlo algorithms 2-107937
transport equation solutions in (x,y) geometry, comparison of soln. methods 2-90196
Two-dimensional adiabatic kinetics model with feedback using a simplified temperature iteration scheme 2-54473
two-dimensional finite elements, geom. shape effect 2-107098
ultimate load design and testing of a cylindrical prestressed concrete vessel 2-102039
unconditionally stable acceleration method for arbitrary weighted differencing schemes 2-90198
universal pre- and post-processing system, for finite element analysis 2-107932
University of Missouri Research Reactor, design, construction and testing of nuclear-pumping facility 2-96075
unsteady two-phase flow, loss of coolant accident in power plant 2-90261
vapor content of boiling coolant in tube and rod assemblies 2-113685
VISIONS: Versatile, Interactive Simulator Of Nuclear Systems 2-101971
VVER-1000 Novovoronezh plant, design features, start-up results 2-54479
Westinghouse wet local burnable poison design anal. for 15X15 assemblies 2-54484
zero power reactors, stochastic neutron transport theory 2-107927
Zircaloy fuel assemblies, design and performance features 2-113655
Zircaloy-IV/D₂O system, thermal neutron spectrum 2-101960
ZPPR, large core expts., adjusted data set tests 2-101992
ZPPR criticality anal., cell modelling influence 2-101996
He temp. distrib. effect of energy liberation in reactor with spherical fuel elements 2-96195
U slab, steady state fast neutron spectra, comparison of diffusion and transport theory 2-59445
U-ZrH research reactor, 3 MW, safety considerations in design 2-96080
UC fuel pins, intragranular fission gas diffusion model, for LMFBFR 2-80106
UC-PuC mixed fuel, performance modelling code LIFE-4C, verification expts. 2-80109
UO₂ in-reactor fuel elements, fission gas extraction, fuel rod design 2-113625
UO₂ infinite breeding medium, neutron characteristics 2-96077
²³⁸U self-shielding factors, rel. to unresolved resonances 2-85124

fission reactors

see also fission reactor decommissioning; fission reactor materials; fission reactor operation; fission reactor theory and design; fission research reactors; hybrid reactors; nuclear engineering; nuclear physics; nuclear power stations
1981 world survey of status and developments (German) 2-90285
accelerator breeder concept, feasibility, practicability and economic 2-85391
Alcator-C, impurity injection effects 2-81453
BWR plants from Toshiba, status and design features 2-113725
CANDU - the versatile option 2-113723
CANDU moderator pipe leak repair by exploding wire shock wave 2-90284
conference, Canadian Nuclear Soc., Ottawa, Ont., Canada (June, 1981) 2-63743
fast breeder, capital costs versus fuel prod. rate trade off comp. to hybrid systems 2-113724
fast breeder, Na-cooled, pool and loop structures as primary circuits, construction features (German) 2-64624
fast breeder convertor, performance rel. to other nuclear energy systems 2-75071
fast power reactors, scientific technological development loss 2-54637
fast reactor construction programme, logistical and economic obstacles 2-74889
fast reactor fuel cycles 2-59478
fast reactors, role in nuclear energy schemes (Czech) 2-59512
FFTF wide range He mass spectrometer leak detector 2-83319
French administrative organisation for reactor construction 2-113608
French range of nuclear reactors for heat production (German) 2-80167
HTGR application in tar sands oil recovery 2-64632
LWRs, high temp., corrosion producing salts, chemistry 2-99688
neutrino interaction expts., reactor, PIK appl. 2-64575
neutron source characterisation for fusion material studies 2-85228
PWR feedwater control valves, computerised acoustic monitoring 2-74892
PWR pressure vessel, ultrasonic inspection 2-102052
role of fusion hybrids for fissile fuel production in future power generation systems 2-102261
slow fission reactors, possibility of supply by fusion reactors (German) 2-93879
small reactors for low-temperature heating 2-64631
status of power-reactors projects undergoing licensing review 2-85205
superphoenix breeder for nuclear reactors (Italian) 2-113722
Swedish district heating reactor SECURE, design features (German) 2-80164

fission research reactors

see also fission reactor core control and monitoring; fission reactor theory and design; nuclear reactor instrumentation
AGR Windscale concluding expts. 2-85166
BOR-60, Na-water interaction processes in micromodule steam generator 2-90266
Caramel fuel, experience at Osiris (French) 2-64487
Clinch River Breeder, initial loading mock-up expt. 2-101994

fission research reactors continued

Clinch River Breeder lumped fission product uncertainty anal. 2-101995
Clinch River breeder reactor demonstration project, Tennessee in USA future progress possibilities 2-74890
concrete, biological shielding, demolition and removal 2-108155
conference on new directions in nuclear energy, Brussels, Belgium (April, 1982) 2-101122
counting-Campbell neutron meas. system and expt. in test reactor 2-69767
critical experiments on accident-related configurations for fast reactors 2-102152
EBR-II, operational safety, computer code 2-54560
few-group constants for the HEU and MEU cores in the KUCA 2-96068
FFTF, fission rate assessments 2-102148
FFTF, nuclear emulsion neutron spectrometry 2-102144
FFTF, proton recoil proportional counter meas. 2-102145
FFTF, reaction rates and neutron flux spectra 2-102149
FFTF absolute fission rate meas. 2-102147
FFTF control system experience 2-102122
FFTF design summary 2-101965
FFTF heat transport system 2-102118
FFTF natural circulation tests 2-102121
FFTF power range testing 2-102117
FFTF primary heat transport HVAC system 2-102119
FFTF primary pump replacement 2-102120
FFTF reactor characterization program 2-101977
FFTF sodium and cover gas impurity monitoring 2-102123
FFTF traversable fission chamber expt. results 2-102146
Forschungs- und Messreaktor Braunschweig reactor, 1980 operation (German) 2-54555
FTR, gamma-ray measurements 2-101978
Harwell Pluto program, 1982 2-108103
HDR blowdown and snapback, fluid-struct. anal. using FLUX code 2-107933
HDR blowdown expt., anal. for fluid-struct. interaction 2-108085
HDR blowdown test, K-FIX pre and post test anal. 2-108060
HDR vessel, blowdown, coupled fluid-structure interactions 2-108083
heat supply station, organic coolant appl. 2-64490
in-reactor thimble system for FTB characterization 2-102143
irradiation techniques in materials testing reactors (French) 2-64572
JOYO, reactor noise anal. 2-96171
KAHTER high temp. pebble bed reactor, computation checking (German) 2-90218
large demonstration fast reactors, capital investment and financing options 2-69809
Large Scale Test Facility design for PWR small break LOCA integral expt. 2-85204
LMFBR shutdown heat removal test facility, natural convection, scaling requirements 2-54538
LOFT, large break LOCA expts. comparison to Semiscale Mod-1 2-96258
LOFT, neutron shielding, B₂C and TiH₁₆ appls. 2-108148
LWR, small break LOCA, LOFT and semiscale system facilities 2-54579
LWR, small break LOCA, LOFT test L3-6, result anal. 2-54583
materials testing reactors, France, role and use (French) 2-64571
MR research reactor, fuel pin testing using gaseous absorber 2-113683
NBS reactor, July 1980 to June 1981 research programs 2-108079
nuclear fission research survey over last decade in Netherlands (Dutch) 2-96330
ORPHEE, at Saclay, description (French) 2-64629
PROTEUS-LWHCB experiments: two-rod heterogeneity effects 2-113693
PWR, small break LOCA, LOFT L3-5, L3-6 expt., RELAP4-5 calcs. 2-54590
reactor parameter monitoring by low freq. press. pulsations 2-102197
reactor shutdown events and their causes 2-85190
reduced enrichment, effect on fuel cycle for research reactors 2-113660
rolled fuels for materials testing reactors (French) 2-64488
ROSA III, heat loss and fluid leakage tests 2-85185
Semiscale Mod-1, large break LOCA expts. comparison to LOFT 2-96258
Semiscale Mod-2A upper head injection test series results 2-96260
SHEBA, neutron and γ -ray dose meas. 2-96328
SHEBA, neutron and γ -ray spectrum meas. for criticality monitors 2-96198
SHEBA, solution critical assembly, facility description 2-96197
small-scale experimental reactor combined with a simulator for training purposes (French) 2-64630
swimming pool research reactor, neutron noise anal., reactivity and boiling appl. 2-96145
TRAC-PIA post-test analysis of Semiscale Mod-3 Test S-07-6 2-96259
transient reactor control system, analytical design considerations 2-64453
transient reactor test facility, evidence for time depend. neutron flux/spectrum anomaly 2-96225
transient test reactor facility, real time point kinetics simulation on micro-computer 2-64625
TREAT hodoscope spatial resolution enhancement 2-96210
University of Missouri Research Reactor, design, construction and testing of nuclear-pumping facility 2-96075
UO₂, Zircaloy clad combustible CAMEL fuel for research reactors (French) 2-96093
vacuum channel, high temp., for intrareactor investigs. (Russian) 2-80150
ZED2, ⁹⁹Mo distrib. anal. expts. 2-90274
ZED-2, Co and Cd absorber rod expts. 2-85184
zero power reactors, stochastic neutron transport theory 2-107927
ZPPR, large core expts., adjusted data set tests 2-101992
ZPPR criticality anal., cell modelling influence 2-101996
U-ZrH research reactor, 3 MW, safety considerations in design 2-96080

fissures *see cracks*

flame sprayed coatings

No entries

flame spraying

No entries

flames

see also chemically reactive flow; combustion; fires
acetylene-O₂ flame, two-photon excitation of O 2-96526

flames continued

- axisymmetric, temp. distrib. meas. by holographic interferometry, refr. effects 2-69170
- combustion noise, influence of droplet size of liquid fuel 2-102975
- fast reactions in energetic systems, conf., Preveza, Greece (July 1980) 2-58544
- glass-potting pipe, flaming regimes, coolant mixed convection effects 2-60670
- jets, submerged diffusion flame in immiscible fluid, combustion 2-60594
- laminar diffusion flame, on vertical flat plate burner, elliptic field calcs. 2-70899
- laser diagnostic probes for flames, combustion products and sprays 2-89824
- methane diffusion flame, comparison between CARS and corrected thermocouple temp. meas. 2-107322
- methane-air flame, nascent NO detect. by multiphoton ionis. 2-59863
- methane-air flame, OH number density meas. using laser induced fluorescence, vibr. level relax. effects 2-116695
- methane/air atmospheric flame, laser-induced OH fluoresc. spatially resolved with diode array detector 2-65031
- methane/air flame, in plane OH combustion species visualisation, quantitative 2-116696
- methane/air sooting diffusion flames, laser induced visible fluorescence 2-116699
- minority species concentration measurements by photoacoustic technique 2-93793
- oil-spray flames, burning processes studies, gas turbine low NO_x combustor design appls. 2-62403
- point-absorption measurements using spatially resolved optical Stark-modulation spectroscopy 2-78109
- premixed flame in uniform straining flow 2-109350
- premixed flames in turbulent flows, mol. diffusion and thermal expansion effects 2-65657
- propagation in laminar flow, strain influence 2-114758
- propane highly sooting atmospheric flame, laser-induced OH fluoresc. spatially resolved with diode array detector 2-65031
- sooting flame particle size diagnostics using photon correl. spectroscopy 2-64112
- species identification using laser saturation fluoresc. spectrosc. 2-93839
- turbulent diffusion flame in 2-D shear layer, probability density function 2-109306
- turbulent diffusion flames, mol. transport effects at moderate Reynolds number 2-99674
- velocity meas. using laser-enhanced ionisation flame velocimeter 2-91557
- CO-air turbulent diffusion flame, laser absorpt. sampling probe 2-78145
- C₂O₂ flame, photolysis, C₂O radical prod., laser induced fluoresc. 2-96617
- H-air flames, reson. multiphoton optogalvanic detect. of H 2-108435
- H₂ flame, molecular emission cavity anal., spectral studies 2-99675
- H₂-air flame with aspirated Na, spatially resolved optical Stark-modulation spectroscopic anal. 2-78109
- NCO radical, fluoresc., in flame, intracavity laser excitation 2-108604
- NO in atmospheric flame, resonantly enhanced two photon photoionisation 2-70365
- Na⁺ and Li⁺ in H₂/O₂/Ar flame, ionic diffusion, mobility coeff. and flame temp. determ. by dual laser ionisation 2-105484
- OH laser-induced fluoresc. in flame, conc. profile, two-dimens. imaging 2-99678
- SiF₂+F(F₂) chemiluminescent reaction 2-88361
- SiO₂ particle deposition in a burner 2-116374

flare stars *see variable stars***flares, solar** *see solar flares***flash lamps**

- camera, Pentax LX system, AF-280T and AF-400T electronic flash unit performance, data recording facilities 2-74526
- coaxial flashlamps, laser pumping charact., review 2-65239
- coumarin 6 dye vapour lasing, flashlamp-pumped 2-70560
- INP-16 pumping flash lamps, parametric standard series 2-97137
- multiple flash lamp system for laser pumping, demountable design 2-90912
- plasma expansion in flashtubes and influence of arc structure on elec. cond. meas. 2-103545
- POPOP vapour excitation efficiency by wide-band flashlamp radiation 2-65047
- pumping performance improvement, for dye laser excitation with intense pulse preionisation (*Chinese*) 2-55176
- rhodamine 6G dye laser excitation with intense pulse preionisation, flashlamp pumping performance improvement 2-102787
- thermal variableness, equipment for meas. (*Hungarian*) 2-79574
- Nd:YAG laser using radiation from high-freq. electrodeless discharge, pumping system investigation and development 2-114319
- Xe flashlamps, visible light emission theoretical model 2-55713
- Xe pulsed flash lamps and filter envelopes of quartz tubes for use in lasers (*Chinese*) 2-55177

flash photolysis *see photolysis***flashover**

- arc discharges, AC, on polluted insulator surfaces, pollution flashovers, expt. study 2-71271
- diffusion-pump oil, Dow Corning type 704, vacuum flashover 2-91706
- electrode protrusion influence on cylindrical spacer surface flashover voltage in SF₆-N₂ gas mixtures 2-91710
- plastic insulator flashover, mag. inhibition, expt. study 2-91695
- power flow for vacuum insulated inductive loads 2-97830
- solid dielectric in vacuum, surface flashover 2-91689
- SF₆ flashover voltage dependence on tangential field strength of contaminated insulator surfaces 2-103532

flaw detection *see crack detection***flexoelectricity**

- chiral smectic-C, flexoelectric effect, helicoidal twisting (*Russian*) 2-60887
- crystals, flexoelectric effect and cryst. struct. 2-87699
- MBBA, nematic liq. cryst., flexoelectrically controlled twist of texture 2-81662

flexural strength *see bending strength***flicker noise** *see random noise***flip-chip devices***see also thin film circuits*

No entries

floating zone method (crystal growth) *see zone melting***floating zone refining** *see zone refining***floculation***see also colloids; sedimentation*

- Mg(OH)₂, periodic crystallisation from gel media, spacing coeff., flocculation value 2-87961
- Mg(OH)₂, periodic crystallisation in agar-agar gel 2-116350

flow

see also boundary layers; chemically reactive flow; compressible flow; Couette flow; electrohydrodynamics; external flows; flow instability; flow measurement; flow through porous media; Knudsen flow; laminar flow; magnetohydrodynamics; multiphase flow; non-Newtonian flow; pipe flow; plasma flow; Poiseuille flow; pulsatile flow; rotational flow; shear flow; stratified flow; supersonic flow; transonic flow

No entries

flow birefringence

- aqueous soln. of milling yellow, study of basic patterns of light scattering 2-80899
- colloidal solutions, scattered light streaming birefringence 2-55687
- critical fluids, flow birefringence 2-82820
- nonequilibrium collisionless gas, birefringence (*Russian*) 2-60718
- nonlinearity, theory 2-82818
- polymer melts, biaxial extension flow, transient stress and flow birefringence meas. 2-55610
- polymer solutions, orifice flow, birefringence and pressure drop meas. 2-97673
- polystyrene and poly(α -methylstyrene) solutions, oscillatory flow birefringence props. at infinite-dilution 2-116147
- sol-gel transition, dielec. tensor anisotropy induced by vel. gradient 2-57641
- As-S, melt structure, polymerisation temp., orientation birefringence study 2-65840
- S, melt structure, polymerisation temp., orientation birefringence study 2-65840

flow charts *see flowcharting***flow control**

- biomedical fluid flow-rate sensor for meas. and control 2-62830
- blood flow control device for extracorporeal circuits 2-57932
- gas-liquid two-phase flow, slug flow to bubbly flow pattern conversion 2-103201
- LMFBR coolant regulation by MHD chokes 2-102106

flow diagrams *see flowcharting***flow instability**

- airfoil, unsteady incompressible inviscid aerodynamics 2-65567
- anisotropic Erickson fluid, flow of fibre suspension between coaxial cylinders, Couette flow stability 2-65566
- annular flow stability in horizontal tubes 2-114875
- atmosphere, anal. of stability of Walker circulation in tropics 2-100468
- atmosphere, cloud-top entrainment instability observed during AMTEX 2-100475
- atmosphere, free Rossby wave instability at finite amplitude 2-100472
- atmosphere, pulse asymptotics of Charney baroclinic instability problem 2-100467
- attached water jet, at curved wall, acoustic wave effects (*Japanese*) 2-91506
- autoscillations derived from loss of stability of nonisothermal Couette flow 2-81316
- axially developing flow in an annulus, spatial stability non-axisymm. disturbances 2-103211
- axisymmetric flow between counter-rotating cylinder, symmetry to disturbance 2-97559
- baroclinic flow, phase space anal. 2-103148
- baroclinic instability of source-sink driven flow, theory for two-layer rotating fluid 2-103145
- Benard convection, slow spatial variation effects 2-70948
- Benard convection, two-component, discontinuous transitions, critical and multicritical phenomena 2-70915
- Benard effect, review (*Polish*) 2-81317
- Benard instabilities in polar fluids 2-60511
- binary mixture, stability of plane-parallel convective flow 2-55556
- boiling water, unsteady thermal equilibrium outflow, 2-dimens. calc. 2-86335
- boundary layer, unsteady, three-dimens., freely interacting with external stream 2-65562
- Boussinesq fluid, inviscid, finite amplitude internal gravity waves, parametric instabilities 2-91470
- breaking Kelvin-Helmholtz billows, numerical study with Reynolds-stress turbulence closure model 2-109281
- buoyancy and surface tension driven instabilities, negative Rayleigh and Marangoni no.'s effects 2-97503
- cambered valve leaflets that maximise initial rate of closure 2-109285
- capillary liquid jets in parallel airstream, instability and breakup 2-81379
- Casson model slurries laminar-turbulent transitions in pipeflow 2-81320
- cellular convection, symmetry and pattern transitions anal. 2-65590
- cellular structure, wavelength selection, thermoconvection in porous materials 2-70954
- channel flow, nonparallel developing, stability 2-55664
- collapsible tube, thick-walled, two modes of instability 2-103212
- combustion wave stability, heat loss effects 2-60671
- compressible flat plate boundary layers, 3D spatial stability, heat transfer effect 2-109364
- compressible fluid, parallel flows, inviscid stability, initial-value problem 2-114764
- compressible fluid flow stability at high Mach numbers 2-81318
- compressible laminar boundary layer, oscillations, heat transfer and skin friction 2-86258
- compressible stratified shear flow, Brunt-Vaisala freq. induced instability 2-109392
- convection rolls, instability, mean flow generation 2-109324
- convective flow in rectangular boxes, external mag. field effect, linearised theory 2-114791
- convective instability in a HF vibr. field under weightlessness conditions 2-86280
- convectives modes in rectangular enclosures 2-70952
- Couette flow, inviscid plane, stability 2-114765
- crossflow development, momentum integrals method 2-91392
- deep-water waves, instability and breaking 2-55600
- discrete solids in partially-filled pipe flow, transport models 2-97641
- dissipative fluids, complementary energy principles 2-53529

Flow instability continued

- dissipative systems, quasiperiodicity to chaos transition, renormalisation group 2-91397
 double-diffusive convection in an inclined fluid layer 2-65585
 dusty gas, unsteady flow between parallel plates, one plate oscill. effects 2-114769
 dusty gas, viscous incompressible unsteady pipe flow, MHD study 2-81400
 electromagnetically driven flow between conducting cylinders, instability sequences 2-103226
 equatorial beta-plane low wavenumber instability 2-112032
 explosive, polymer bonded, high explosive detonation products in varying O₂ atmospheres 2-78105
 falling parabolic jets, Poiseuille flow, instabilities, vorticity induced wave-forms 2-76030
 fast capillary jets nonaxisymmetric flow buckling regime 2-109384
 film, liq., irregular flow down vertical column, curvature effect on flow stability 2-55668
 finite-area vortex regions, instability, merger and breaking 2-109333
 flat plate moving at high Mach numbers, unsteady boundary-layer induced pressures 2-81323
 flow in multiply-connected domains 2-70893
 flow induced vibration in shell and tube heat exchangers 2-53755
 fluid in finite slot heated from below, stability, wall radiation and cond. effects 2-109279
 fluid layer, convective, heat flux 2-70953
 fluidised beds, voidage instability; wave hierarchy interpretation 2-55660
 gas bubble, motion in liq., unsteady drag at large Reynolds number 2-60609
 gas bubbles in compressible fluids, oscills., boundary stability 2-76012
 gas flow patterns in horizontal epitaxial reactor cells observed by interference holography 2-70907
 generalised Newtonian fluid, stability down inclined plane 2-97509
 geophysical flows, nonlinear hydrodynamic stability of planetary vortices 2-100563
 giant molecular clouds form, through Parker Jeans instability 2-68845
 Ginzburg-Landau eqn., 3-freq. motion and chaos 2-103150
 Gortler vortices stability in boundary layers 2-91459
 Hagen-Poiseuille MHD flow, stability, nonlinear theory 2-103221
 Hele-Shaw boxes, heat transfer, stability holographic interferometry study 2-55677
 heterogeneous porous media, onset of thermohaline convection, ground-water 2-70943
 homeotropic nematic liq. cryst., thermal oscillatory stability, theory 2-115135
 horizontal plate, free convection fluctuating boundary layer 2-114812
 hydrodynamic stability, electron and ion beam study 2-74894
 hydromagnetics, thermal convection instability of two component fluid layer 2-106501
 ideal incompressible fluid, rotating flow, stability to disturbances 2-75976
 ideal ponderable liquids, jet stability charact. 2-76008
 impinging jets, dynamics, noise generation 2-65627
 inelastic power-law fluid, unsteady flow in circular tube 2-81371
 interfacial wave nonlinear self-modulation 2-86290
 internal gravity waves in stratified shear flow, instabilities 2-114767
 interstellar matter, Parker instability in self gravitating gas layer 2-68605
 inviscid stability of plane Couette flow, convection of initially conc. vorticity, calcs. 2-114763
 Jeffery-Hamel flow in convergent channel, linear stability 2-86338
 Kelvin-Helmholtz instabilities in supersonic flow with shear layers, astrophysical appl. 2-58249
 laminar boundary layer flow into a suction slot, separation region meas. 2-109273
 laminar incompressible flow, boundary layers, unsteady mixed convection 2-91448
 laminar instability waves, control using new technique 2-75925
 laser Doppler anemometer investig. of laminar boundary layer stability (Russian) 2-114943
 laser with saturable absorber and two-component Benard convection, model problem 2-55105
 linear inviscid stability of rotating Poiseuille flow 2-109412
 linear stability equations for compressible laminar boundary flows 2-97582
 linear stability of plane-parallel unsteady flows 2-86261
 liquid dispersion modelling, hydrodynamic instability factors (Ukrainian) 2-60506
 liquid films, stability of flow over flat surface under gas flow 2-91394
 liquid flow in circular cylinders, nonlinear Marangoni convection 2-97540
 liquid flow in rectangular cylinders, nonlinear Marangoni convection 2-97541
 liquid-filled ellipsoids, instabilities of spin-up and spin-down flows 2-70916
 liquid-gas flows, bubble interaction study 2-60616
 low Reynolds number flow due to impulsively started circular cylinder 2-60550
 macromolecules, dil. solns., Couette flow, embryo cells and overstability 2-91466
 magnetic buoyancy, instability anal. 2-76036
 magnetisable fluids, interface stability between moving layers 2-86321
 magnetofluid, ferromagnetic particle microrotations, surface instability 2-86264
 MHD stability of closed config. with an azimuthal current 2-60667
 micropolar fluids heated from below, overstable motion possibility 2-65568
 mixing layers spatial instability, vel. ratio effect 2-97507
 mixing-layer-wedge system, self oscillating vortex form., nonlinear stability theory 2-70910
 natural convection past inclined porous layers 2-97545
 naturally permeable plane channel, unsteady flow of incompressible fluid 2-71034
 nearly parallel flows, linear stability problem, completeness theorem 2-86263
 nematic liquid cryst., homeotropic, cusp-shaped hydrodynamic instability 2-91766
 nematic liquid cryst., hydrodynamic instability, convective struct., defects 2-71349
 nematic liquid crystals, Couette flow, Pieranski-Guyon instability 2-97505
 neutron star, magnetosphere accretion disk interface, Kelvin-Helmholtz instabilities 2-112480

Flow instability continued

- non-Newtonian fluid unsteady flow through elliptical long ducts with press. gradient 2-109402
 non-steady convective regimes using Poincare sections 2-75962
 nonequilibrium phenomena: outlines and bibliographies of a workshop 2-97504
 nonlinear critical layers and their development in streaming-flow stability 2-75929
 nonlinear Kelvin-Helmholtz and Rayleigh-Taylor instability, surface tension effects 2-91395
 nonlinear phenomena at phase transitions and instabilities, conf., Geilo, Norway (Mar-Apr. 1981) 2-94882
 nonlinear stability and instability of transonic flows through a nozzle 2-55633
 nonlinear wall roughness effects on high Reynolds no. stability 2-109287
 nonparallel developing flow in annulus, stability to asymmetric disturbances 2-103151
 nonsteady gas flow through pipeline systems 2-81315
 nonuniform flow in induction pump, instability suppression 2-103147
 nonuniform viscosity fluid, flow in converging and diverging channels 2-71033
 ocean, ageostrophic instability of ocean currents 2-73577
 ocean, baroclinic instability in eastward flowing jet rel. to mesoscale eddies detachment 2-83830
 once-through steam generator in Integrated Type Marine Reactor, two-phase flow stability anal. (Japanese) 2-71007
 oscillating 2-dimens. airfoils, unsteady flow 2-97510
 oscillating airfoils, subsonic flow, viscous-inviscid interaction 2-70978
 oscillatory plane Poiseuille flow, instability calcs. 2-65648
 pair correlation function near a convective instability 2-55570
 parallel plate channel, linear spatial stability of developing flow 2-97660
 pipe flow, vortex breakdown, flow visualisation 2-55593
 planar relativistic Brillouin flow, resistive wall effect on stability 2-109422
 Poiseuille flow, plane, in subcritical range, nonlinear stability theory 2-76029
 polymer solutions, orifice flow, birefringence and pressure drop meas. 2-97673
 porous medium convection with nonlinear density effects 2-75826
 post-instability in fluid mech., mathematical model 2-97533
 pulsating jet flow, pressure distrib. around sphere meas. 2-60693
 pulsed core jet, velocity field and entrainment meas. 2-60603
 quasigeostrophic fields stability induced by pot. vorticity, appl. to oceans and atm. 2-65569
 radio galaxies, flow instabilities in particle beams rel. to radio source struct. 2-106910
 Rayleigh-Taylor instability in stratified fluids, normal modes and symmetries 2-70913
 Rayleigh-Benard convection, phase diffusion 2-70950
 Rayleigh-Taylor instabilities, three-dimens. perturbations development 2-60509
 Rayleigh-Taylor instability of superposed fluids 2-75934
 relaxing gas, flow past notched objects 2-81361
 resonant sideband instabilities in wave propagation in fluidized beds 2-114894
 Rossby wave instability (Chinese) 2-60563
 rotating coaxial cylinder rheometer, dynamic viscosity unsteady meas. 2-103228
 rotating Couette flow, stability of a hollow vortex 2-75977
 rotating hydromagnetic flow between concentric cylinders, current induced instabilities 2-70912
 rotating stall in blade rows, shear flow with linear velocity profile 2-75971
 self-similar converging flows, one dimens. stability 2-97508
 sheared liquid layers instability 2-109283
 shock wave interaction with wall cavity 2-114852
 small-scale structure in unstable fluids, contour dynamical method 2-63824
 smectic A liquid crystals, undulation instability under shear 2-97915
 smectic liquid cryst. imaging device based on photochem. reaction 2-99692
 solar corona, hydrodynamic stability of closed structs. and response to heating perturbations 2-58307
 solar pond mixing layer development interferometric study in laboratory simulation 2-83516
 spherical fluid layer, small perturbations 2-60508
 spiral flow between rot. cylinders, linear stability calc. 2-91396
 stabilised flow of viscous liq. through rot. cylindrical channel, low Rossby numbers 2-114905
 stability of convection rolls in vertical mag. field 2-91434
 stability of fluid flow in channel with porous walls 2-103146
 stable convection disappearance between free-slip boundaries 2-114796
 stratified flow, vortex breakdown study 2-65593
 stratified fluid, Rayleigh-Taylor hydromagnetic instability 2-114925
 stratified fluid between rot. coaxial cylinders, instability of MHD flow 2-114768
 stratified rotating fluid, hydromagnetic Rayleigh-Taylor instability 2-75933
 stratified shear flow, Couette and Garcia flows, unstable modes, evolution eqn. 2-71006
 supersonic jet coherent struct., instability and mixing zone visualisation using laser light sheets (French) 2-86362
 suspensions, unsteady flow through rectangular pipe 2-97663
 swirling pipe flow, unsteady vortex breakdowns, flow modes 2-81344
 symmetric instability due to horizontal shear on equatorial beta plane 2-109282
 synergetics, chaos and order in nature, conf., Schloss Elman, Bavaria, FRG (April-May 1981) 2-58543
 Taylor expt., multiplicity of flows 2-109284
 Taylor-Couette flow, hysteresis effect 2-97499
 Taylor-Couette flow stability, nonlinear anal. 2-75932
 thin cylindrical shells in cross flow, model for aeroelastic instability 2-55541
 thin films electrically cond. liq., flow stability 2-109286
 three-dimensional separated flow topology 2-97492
 TNT, high explosive detonation products in varying O₂ atmospheres 2-78105
 tube bundles in transverse flow, vibrs. (French) 2-55666
 turbulence onset in hydrodynamics instabilities, expt. study 2-65570
 turbulent convection, generation of large scale circulation 2-81338
 turbulent flows, acoustics, Euromech 142 report 2-114784

flow instability continued

- universal Strouhal number assessment for two-dimensional bluff bodies 2-55590
- unstable flow characts. over rectangular cavity and effect on mass exchange 2-91551
- unsteady flow, noise source mechanisms 2-75946
- unsteady heat transfer in laminar non-Newtonian boundary layer over a wedge 2-81334
- unsteady hydromagnetic free convective flow through a porous medium 2-65641
- unsteady transonic flows with shocks, field panel method calcs. 2-109356
- unsteady transonic indicial response model 2-109359
- unsteady transonic pot. flow over airfoils implicit algorithm 2-65612
- unsteady turbulent boundary layers, vel. and turbulence profile meas. 2-109299
- unsteady turbulent boundary-layer data compilation 2-55555
- unsteady two-phase flow, loss of coolant accident in power plant 2-90261
- unsteady viscoelastic flow through magnetofluidynamic porous medium in circular pipe 2-97662
- Venus atmosphere circulation, inertial instability rel. to irregularities of planetary rotation rate (*Russian*) 2-100792
- vertical buoyancy induced flows in cold water, instability and disturbance growth 2-109280
- viscoelastic fluid, flow between eccentric rotating cylinders, linear stability 2-97506
- viscometric flow stability (*German*) 2-70914
- viscous diffusion simulation for extension of surface vorticity method to boundary layer and separated flows 2-70911
- viscous fluid, convective flow, stability studied by method of local pot. 2-60507
- viscous fluid, MHD fluctuating flow past a permeable bed 2-71037
- viscous incompressible fluid flow along an elastic wall, stability 2-114766
- viscous liquid, stationary axisymmetric MHD flow, stability 2-103222
- viscous liquid, thin film flow in gas jet, droplet detachment 2-60566
- vortex dynamics, Kelvin waves, stability 2-55591
- vortex filaments, stability, nonlinear Schrodinger eqn. anal. 2-75973
- vortex shedding in three-dimensional flow in circular pipe, stabilisation (*Japanese*) 2-60559
- vortex sheet, stabilising effects on finite core 2-114817
- vortex sheet, stability to two-dimens. disturbances 2-70960
- vortex-street wake, stability props., inviscid model 2-114816
- water, flow in inclined channel, turbulence, stability eqn. 2-86341
- water, laminar boundary layers, heated, stability, minimum critical Reynolds number estimation 2-109272
- water, thermally stratified buoyant flows, mixing and heat transfer study 2-70942
- water sheet jets issuing from slit nozzles; linear stability theory, appl. to fusion reactors 2-60602
- water waves, wind generated, laminar boundary layer flow model, non-linear theory 2-114830
- wavy Taylor vortex flow, fractional mode numbers 2-103149
- weakly conducting fluid flow instability in oxidation reduction electrode reactions 2-86260
- whirling instabilities in heat exchanger tube arrays 2-97261
- ⁴He, liquid, convection and turbulence, Rayleigh-Benard expt. 2-110060
- Hg Rayleigh-Benard expt., period doubling cascade, quantitative meas. 2-60510
- N₂O₄, relax., unsteady quasi-1-dimens. flow 2-86262

flow measurement

- see also anemometers; flow visualisation; flowmeters; laser velocimeters
- accuracy of calculating flows upon disappearance of discontinuity by the method of large particles 2-60652
- aerodynamic force meas. on cylindrical struct. in the wake of parallel cylinder 2-81340
- air, simple volumetric method 2-55678
- air bubbles, size and rise velocity meas. in liquids 2-60608
- air-solid pipe flow, laser-Doppler velocimetry meas. 2-97672
- air-water, two-phase flow through pipeline with gate valve and orifice plates 2-71020
- airfoil, near-wake, mean velocity and turbulent struct. meas. 2-55589
- aqueous soln. of milling yellow, study of basic patterns of light scattering 2-80899
- arterial haemodynamics including bifurcation influence, comparison with flow pattern noninvasive meas. 2-57836
- biomedical circulation measurement technique, indicator dilution using a fluoresc. indicator 2-117044
- biomedical fluid flow-rate sensor for meas. and control 2-62830
- blood, flow meas. by US pulsed Doppler, accuracy calcs. 2-111758
- blood, mag. labelled, flow meas. using magnetic tag detect. 2-83589
- blood, mean flow meas. system 2-94227
- blood, regional cerebral flow, non-invasive meas. using ¹³³Xe (*German*) 2-88648
- blood flow velocity measurement using laser Doppler microscope 2-94261
- blood pressure and flow meas. instrumentation development 2-78479
- boundary layers and wakes, Reynolds stress, high resolution LDA meas. 2-109298
- calibration of hot-wire probes including low velocity range 2-89653
- cardio-pulmonary assessment using computerised rotating vane spirometer 2-117123
- centrifugal fan rotor; mean flow rel. and vel. fluctuation meas. 2-60683
- cerebral blood flow, local, in vivo mapping by Xe-enhanced CT 2-83651
- cerebral blood flow determ. using positron emission meas. of fluoromethane kinetics 2-62753
- channel flow, free surface, turbulence struct. and transport mechanism study 2-65646
- channel flow, shear turbulence, coherent struct., pattern recognition 2-70929
- circular cylinder near wake, turbulence meas., downstream cylinder effects 2-75965
- circulation system, gas bubble driven, turbulence, vel. field meas. 2-65661
- colloidal solutions, scattered light streaming birefringence 2-55687
- compressible flows, density gradient meas., moire deflectometry 2-109424
- compressor rotor axial transonic flow meas. using laser anemometer 2-60687
- concentration meas. of particles and dyes, fibre optic photometer development 2-64091
- conducting liquids, using magnetic induction based. probe (*German*) 2-109431
- coolant (*Russian*) 2-102181

flow measurement continued

- coronary venous blood flow, method for continous monitoring 2-83692
- cross-correlation flowmeter, technique development using signal processing 2-114958
- cubic body immersed in turbulent boundary layer, flow pattern and press. distrib. meas. 2-86272
- curved pipe secondary flow boundary-layer collisions, electrochemical meas. 2-114902
- direct-flow analyzer of the disperse composition of dust 2-60679
- drops, impulsive collapse, spectral study 2-76004
- EBR-II, sodium and water flow meas., pulsed neutron activation method 2-74864
- electrolyte solns., single ionic drift velocities, NMR meas. 2-71679
- electromagnetic, theory, appl. to blood 2-81414
- electronic flow sensor for energy monitoring with external sensing elements 2-81419
- ethanol, supercooled aq. soln., viscosity, Poiseuille flow meas., photon correl. spectroscopy 2-98322
- flat plate, symmetric turbulent wake development 2-114813
- flow field in balance rheometer, energy considerations 2-55686
- flow in streamwise corners having large transverse curvature 2-109400
- flow patterns and hydraulic losses in bent pipes, appl. to heat exchangers 2-81394
- fluid flow measurement, laser Doppler velocimetry, review 2-91566
- fluid-saturated porous medium, nonlinear cellular convection, heat transport 2-81332
- fluidised bed, bubble behaviour meas. with probe 2-71047
- foetus, human, Doppler US meas. of blood flow 2-83612
- gas flow local velocity meas. at low pressures 2-74390
- gas flow vel. and temp. simultaneous meas., noncontact optoacoustic technique 2-97669
- gas flow velocity meas., thermoanemometer appl. 2-114950
- gas turbine radio telemetry systems, design, development and operation 2-60692
- gas volumetric mass meas. using micro-flowmeter (*French*) 2-91562
- gas-liquid pipe flow meas., basic standardised parameters analysis 2-65669
- granulometer, electro-optical, for meas. of flowing particles 2-91564
- heated flat plate, mixed, forced and free convection study 2-91449
- heated turbulent boundary layer, density and vel. statistics meas. 2-109303
- holographic interferometry appl. (*French*) 2-60042
- hot wire probe, for high-speed and high-temp. gas dynamics 2-65672
- hot-wire anemometer meas. corrections, appl. to boundary-layer flow 2-114952
- hot-wire probes in nominally 2-D wall jet, interference effects 2-86358
- hydrazine, supercooled aq. soln., viscosity, Poiseuille flow meas., photon correl. spectroscopy 2-98322
- inflated buildings, two dimens., cross wind effect on boundary layers 2-70927
- laminar pulsating instantaneous flow rate meas. using venturi meter (*Japanese*) 2-114760
- large-scale jet-mixing struct., coherence with press. field 2-65625
- laser anemometer for intra-rotor flow mapping in turbomachinery 2-60686
- laser anemometry particles, sizing criteria 2-86363
- laser diagnostic probes for flames, combustion products and sprays 2-89824
- laser Doppler anemometer, two-colour, for nozzle flow meas. 2-65673
- laser Doppler anemometry appl., simultaneous meas. of particle velocity, size and concentration (*German*) 2-64211
- laser Doppler anemometry system, two-phase flow meas. 2-65674
- laser Doppler meter, investig. of transition to turbulence in hydrodynamic flows (*Russian*) 2-114929
- laser Doppler system with transient recorder for study of particles in flowing fluid 2-74582
- laser Doppler velocimeters performance and appl. 2-81408
- laser double focus method, turbomachine complex flow processes obs. (*German*) 2-81415
- laser speckle photography for point vel. meas. in slow flows 2-76043
- laser-Doppler anemometry, real-time velocity measurement (*German*) 2-97680
- light scattering analysis of laminar, vortical and turbulent flow of dispersions 2-76015
- liquid, horizontal layer, free-convection flow struct., boundary condition 2-70933
- liquid film type evaporator, downward flow, heat transfer coeff. meas. 2-70934
- liquid-bubble mixture flow local velocity meas., using hot-wire anemometers (*German*) 2-81426
- liquid-liquid two-phase flows in annuli, capacitance method for determ. position and struct. of interface (*German*) 2-76052
- low-density high velocity flow meas., electron beam fluoresc. (*Japanese*) 2-81416
- magnetic fusion devices, press. and gas flow meas. techniques 2-55789
- magnetic induction, using rotating EM field, open channel flow meas. (*German*) 2-81417
- mass flow measurement sensors development 2-97681
- mean flow measurement near open rotor 2-60689
- metals, molten, local velocity and mass transfer meas. using incorporated mag. probe 2-114949
- microcomputer-based flow sensing systems (*French*) 2-60681
- microscopically inhomogeneous flows, seed-particle-track images, rapid digitised storage 2-97676
- mixing-layer-wedge system, self oscillating vortex form., nonlinear stability theory 2-70910
- molecular flow, thermal expansion, nonlinear interaction vel. determ. 2-65620
- muscle blood flow, meas. method using radiolabelled microspheres, rat appl. 2-111822
- myocardium, regional flow estimation using CT, stochastic formulation 2-100104
- nasal flow in unrestrained domestic rabbits, meas. instrument, olfactory research appl. 2-111817
- natural convection across vertical and inclined air layers 2-91443
- non-intrusive meas. of flowing gas temp., concentration and density, by laser apparatus (*German*) 2-81420
- nozzles with different contraction shapes, discharge coeff. meas., boundary layer 2-65633
- nuclear reactor thermohydraulic expts., zero drift and linearity problems (*German*) 2-64598

flow measurement continued

ocean turbulence and current meas. with metal-clad hot wire sensors 2-58158
 oil-spray flames, burning processes in gas turbine low NO_x combustors, laser velocimeter appls. 2-62403
 optical advances in Laser Transit Anemometry 2-60688
 optical probe for high-temperature local void fraction determination 2-55676
 optimal gas mass flowrate measurement regimes 2-55688
 pipe flow of suspension meas., using electric micro-probe method (*German*) 2-81425
 pipe probe for low speed flow meas., wind-tunnel tests 2-65659
 plumes, conc. fluctuations and fluxes in turbulent boundary layer 2-70926
 polarisation flowmeter concept for poorly conducting fluids 2-71041
 polymer solns., flow around rotating sphere, normal stresses determ. using electrochemical diagnostics 2-97561
 polyoxyethylene soln., pipe flow, mass transfer, NMR study 2-103192
 pressure probe for 3 dimensional flow meas. 2-60694
 Preston tube calibrations and direct force floating element meas. in turbulent boundary layer 2-97519
 pseudoplastic transient flow, numerical and exptl. simulation methods 2-91492
 pulsating jet flow, pressure distrib. around sphere meas. 2-60693
 pulsed core jet, velocity field and entrainment meas. 2-60603
 pulsed neutron activation method, appl. to sodium and water flow, in nuclear reactor 2-74865
 pulsed ultrasonic Doppler velocimeter, fluid turbulence meas. 2-76047
 pulsed ultrasonic Doppler velocimeter, laminar and turbulent flow meas. 2-76048
 renal blood flow, determ. by math. interpretation of radionephrograms (*Russian*) 2-73316
 respiratory flow measurement by inductance pneumography 2-83680
 saline water, laminar buoyancy-driven flow near melting ice surface, transport meas. 2-70901
 sea current meas., underwater US propag. obs. by two period M-sequence model 2-78876
 secondary flow meas. by freq. tracking laser Doppler anemometer 2-91559
 self-heated thermistors for flow rates and energy measurement (*German*) 2-86361
 self-streamlining wind tunnel, development of transonic section 2-71040
 sensors, characteristics, effect of direct connection of supply and outlet conduit (*Bulgarian*) 2-81413
 separated flow velocity fields measured using hot-wire anemometer with mechanotron sensing device 2-71050
 separated flows meas. using wall flow direction probe 2-97679
 side flow, effect on mixing impeller 2-91560
 single path contrapropagating flowmeters, generation and propagation of pulses 2-103235
 split film probe response under electrical perturbations 2-103234
 static characteristics linearisation by analogue and numerical methods (*Slovak*) 2-107287
 stratified flow, by conductor heat loss determ. (*German*) 2-68540
 stratified slurries, through horizontal venturi meters 2-109387
 stream-varying mass vel. and elec. cond., EM method meas. 2-58842
 subsonic flow, vel. component meas. by static pipe 2-109352
 supersonic air ejectors, zero-secondary flow performance 2-75992
 supersonic air gap sensor, static characts. (*Japanese*) 2-91568
 supersonic gas flow meas., by electron beams (*German*) 2-81423
 supersonic jets, convergent nozzles, broadband shock noise, acoustic meas. 2-65617
 supersonic mixing nozzles, laser Doppler velocimeter meas. 2-91507
 swirling jet flow, turbulence intensity meas. 2-103154
 Taylor expt., multiplicity of flows 2-109284
 Taylor flow, diffusion coeffs. determ. 2-71046
 temperature and pressure measurement techniques for an Advanced Turbine Test Facility 2-60691
 thermoanemometric expt. at low and high turbulence intensities 2-60515
 transducer difference freq. detector cct. 2-103233
 transducers, intelligent, with built-in semiconductor circuits for physical quantities conversion into digital signals (*German*) 2-76045
 transit time flowmeters, errors in cross-correlation peak location 2-97678
 triple-split probe for reversing flow, characts. and calibration 2-89654
 turbine blade trailing-edge flow meas. using intensity correl. meas. on schlieren imager 2-109432
 turbine in flotation cell, turbulence, vel. fluctuations, pumping capacity, anemometry study (*French*) 2-103153
 turbine rotor blade flow meas. 2-60684
 turbomachinery flow meas., conf., New Orleans, LA, USA (March 1980) 2-58537
 turbomachinery rotor blade passage, relative flow measurement probes 2-60685
 turbomachinery rotor flow, aerodynamic and turbulence meas. techniques 2-60682
 turbulence measurements with inclined hot wires, calibration procedure 2-91399
 turbulent boundary layers, pressure driven 3D, direct force wall shear meas. 2-97526
 turbulent flow, meas. by improved anemometry method 2-65658
 turbulent flow, Reynolds stresses meas. with pulsed wire anemometer 2-75935
 turbulent gas flows using electric and mag. probes 2-109429
 turbulent intensity determ. using probability after-effects, laser method 2-109427
 turbulent shear flows, fully developed, struct. of large eddies, hot-wire anemometers meas. 2-75937
 two-phase, γ -ray Compton profile appl. 2-108072
 two-phase, from reactor neutron noise anal. 2-108071
 two-phase, laser Doppler anemometry, data collection and processing (*German*) 2-65675
 two-phase, nuclear and optical methods 2-108073
 two-phase bubbly flow, flow struct. wave props. fluctuation meas. 2-60613
 two-phase flow, droplet size distrib. determ. method 2-71011
 two-phase flow, multiple-exposure image interpretation methods 2-109433
 two-phase flow, void fraction, press. fluctuations effect, expt. techniques 2-91561
 two-phase flow in pipe, by capacitive methods (*German*) 2-81424

flow measurement continued

two-phase flow meas., impedance, ultrasound and microwave appls. 2-108069
 two-phase flow meas., multiple γ -rays, tracers, activation and optical methods 2-108068
 two-phase gas-liquid pipe flow, review (*French*) 2-55665
 unsteady turbulent boundary layers, vel. and turbulence profile meas. 2-109299
 US flowmeters survey (*French*) 2-75802
 using Raman spectroscopy (*German*) 2-81421
 velocity distribution meas. in horizontal circular pipe using laser Doppler velocimeter (*Japanese*) 2-114956
 vertical buoyancy induced flows in cold water, instability and disturbance growth 2-109280
 viscous liq., vortex press. and vel. field determ. technique 2-70957
 vortex flowmeter for non-corrosive gas 2-109426
 wall jets, 3-dimens., struct., hot-wire investig. 2-76006
 water, channel turbulent flow struct., hot-film meas. 2-114900
 water, flow in vertical channels, press. drop meas. (*Hungarian*) 2-109436
 water droplet drag in accel. and decel. flow 2-65666
 wave-amplitude vacillation investigation using light-speckle velocity meas. technique 2-109428
 wave-turbulent current interaction investig. 2-65665
 white-light speckle method for flow velocity distrib. meas. 2-103229
 CO₂, flow through porous plate into channel, natural convection study 2-65583
 Ge well counter for blood flow meas. by microsphere technique 2-62847
 H₂O, expanding vapour flows, cluster conc. determ., time of flight mass spectra 2-55002

flow process charts see *flowcharting*
flow resistance see *viscosity*
flow separation
 airfoil thickness and Reynolds number influence on separation 2-97605
 bubble ring cavitation on hemispherical headforms 2-86313
 compressible Navier-Stokes equations soln. using integral method 2-91373
 compressible turbulent flow, free shear layer reattachment, Navier-Stokes eqns. 2-65576
 diaphragm in 2-dimens. channel, flow separation 2-86334
 duct flow, with separation at inlet, turbulent heat transfer 2-91441
 2D flow between parallel plates, mass transfer, turbulence promoters effect, flow separation obs. by visualisation 2-97513
 flows around two-dimensional models with two crests 2-114750
 fluid sheet detachment point from rigid boundary, curvature effect 2-97491
 impulsively-started flow about four types of bluff body 2-97566
 incompressible fluid, flow past a body, marginal separation 2-114781
 incompressible separated flow, laminar and turbulent boundary layers, heat, mass and momentum transfer (*German*) 2-81335
 laminar boundary layer flow into a suction slot, separation region meas. 2-109273
 laminar flow, over hemispherical headforms, separation bubble, cavitation inception 2-60593
 laminar flow past permeable sphere, drag coeffs. and separation 2-91383
 laminar incompressible flow, large Reynolds number, wake flowfield development calc. 2-70896
 laminar separation bubble, cavitation gaseous microbubble growth anal. 2-60631
 leading zone of separation of flow over a blunt body, calc. 2-60573
 nozzle, separated two-phase flow 2-97622
 oscillating airfoils, subsonic flow, viscous-inviscid interaction 2-70978
 oscillations of an impinging turbulent jet: coherence characterization via conditional sampling 2-114864
 pattern comparison using FEM and FDM 2-81324
 rectangular duct, S-curved, 3-D turbulence and press. meas., vortices 2-75969
 research in Bangalore in the 1950s and 1960s 2-79337
 separating flow over backsteps and cavities 2-91494
 shear-layer driven cavities 2-97484
 single-phase flow in bent channels, laminar and turbulent flow, forced convection visualisation study 2-75951
 stalled airfoils, turbulent separation, viscous-inviscid interaction method 2-114774
 supersonic laminar viscous flow past a cone, heat transfer, flow separation, vortices 2-109362
 thin cavities, shapes, asymptotic laws of degeneracy 2-81354
 thin profile trailing edge, supersonic flow, boundary layer, flow separation 2-75995
 three-dimensional separated flow topology 2-97492
 transonic turbulent separated flow, Navier-Stokes eqn. 2-109355
 3-D turbulent boundary layers, Reynolds stresses and mean flow field meas. 2-91404
 turbulent flow separation, review 2-60525
 turbulent separation bubble, discrete-vortex simulation 2-97557
 velocity fields measuring using hot-wire anemometer with mechanotron sensing device 2-71050
 viscous diffusion simulation for extension of surface vorticity method to boundary layer and separated flows 2-70911
 viscous flow, development near sharp trailing edge on bodies, flow separation 2-55550
 vortices, flow visualisation studies 2-81347
 wakes, two-dimens. formation at very high Reynolds number, secondary shedding effect 2-103171
 wall flow direction probe for meas. separated flows 2-97679

flow through porous media
 air-water system, flow in packed bed, heat transfer 2-109399
 binary gas mixture, combined diffusion and forced flow through porous medium, evaporation, drying 2-114874
 Biot's linear consolidation theory method 2-91526
 boiling, in porous bed, parametric calcs. 2-97353
 combined convection on a vertical permeable surface for different Prandtl numbers 2-60642
 conductive fluid hydromagnetic free convection 2-97647
 convection in porous container with fault-like geometry, initial and boundary conditions effect 2-71024
 convection with nonlinear density effects 2-75826
 convective mass transfer in porous media, boundary and inertia effects 2-97645
 cooled porous medium with curved boundary, heat transfer 2-55579
 creeping flow in two-dimensional networks 2-91532

flow through porous media continued

- dense bubble swarm, interphase transport and velocity in homogeneous liq. and porous medium 2-114895
 double porosity, comparison theorem calcs. 2-71022
 Ekman layer on a porous plate in slip flow 2-97596
 elastico-viscous fluid rotating unsteady flow past an infinite plate with const. suction or injection 2-81377
 exothermic reaction zone in porous media, filtration combustion wave stability 2-114889
 filtration depression curve in inhomogeneous ground 2-60634
 fine-pored filter, gas diffusion, laser radiation control effect 2-97649
 fission reactor, core disruptive accident, flow energy losses 2-74874
 fissured porous media, voidage and flow nonuniformities, review 2-103205
 flow between rotating disc and porous disc, Navier-Stokes eqns. 2-114815
 flow distribution in perforated channels with a permeable end face 2-114903
 flow over plates with suction through porous strips 2-109398
 fluctuating flow of viscoelastic fluid past porous plate in rot. medium with applied mag. field 2-114856
 fluid saturated porous media, transitions in time dependent thermal convection 2-109318
 fluid-saturated porous medium, nonlinear cellular convection, heat transport 2-81332
 free convection and mass transfer MHD flow through porous medium 2-114798
 free convection at small Rayleigh number in porous cavities of rectangular, elliptical, triangular and other cross-sections 2-114787
 free convection effects on oscillatory flow in Stokes problem 2-106510
 free convection flow with constant heat sources in a porous channel 2-86279
 free convective flow with uniform lateral mass flux in porous medium, local non-similar solns. 2-91433
 free convective MHD flow and mass transfer past an accelerated vertical porous plate 2-114923
 freezing around pipes in crossflow through a porous medium, heat transfer 2-71014
 freezing around pipes in crossflow through porous medium 2-71015
 gas diffusion, in porous media, mass transfer in transition region calc. 2-70995
 gas diffusion through porous membranes, laser control, phenomenological model 2-55661
 gas leakage through joints of rough surfaces (*Russian*) 2-60636
 gas liquid downflow through packed bed, stochastic model (*French*) 2-91529
 gas liquid trickling flow through packed bed, liq. flow struct. (*French*) 2-91528
 gas-liquid cocurrent flow in packed bed, heat transfer 2-109399
 gases, flow in creeping porous media, deformation effects 2-86331
 geological disposal, radionuclide chain fissure flow 2-64495
 heat exchange in porous materials, effect on HF oscills. 2-103163
 heat generating fluid, heat transfer along a porous cylinder, convection 2-70945
 heated magnetisable fluid, convective motion in porous media 2-103169
 Hele-Shaw flow with a cusping free boundary 2-55656
 heterogeneous porous media, onset of thermohaline convection, groundwater 2-70943
 horizontal porous layer, fluid saturated, natural convection 2-55582
 hydraulic conductivity in porous media (*German*) 2-114897
 hydromagnetic free convection flow past porous plate in rot. fluid 2-75949
 incompressible viscous fluid, flow through channel with permeable surface, MHD 2-86352
 infiltration of porous medium under influence of electric current 2-65642
 infinite flat nonconductivity porous plate, Rayleigh's problem for MHD with suction 2-86353
 infinite-series solution for the creeping motion through an orifice of finite length 2-55658
 inhomogeneous fluidised beds, porosity and expansion investigation 2-103208
 laminar air flow in porous tube with uniform mass injection 2-55654
 laminar boundary layer, porous medium, blowing, heat transfer, conjugate problem 2-60502
 laminar flow along a porous vertical wall, boundary layer thickness anal. 2-103144
 laminar flow in porous tube with uniform mass injection 2-55653
 laminar flow in porous walled channel with velocity slip 2-86254
 laminar flow past permeable sphere, drag coeffs. and separation 2-91383
 laminar visco-elastic flow and heat transfer between two stationary uniformly porous discs of different permeability 2-91384
 laser anemometer appl. to hydrodynamics investig. in chromatographic columns (*Russian*) 2-114941
 laser Doppler anemometer, investig. of flow vel. distrib. in packed beds. (*Russian*) 2-114940
 liquids, flow in creeping porous media, deformation effects 2-86331
 low frequency two dimensional flows through a sparse array of bodies 2-114893
 LWR, degraded core cooling hydrodynamics 2-113681
 magnetic fluid flow through porous annulus 2-71023
 mass transfer, coefficients in packed beds at very low Reynolds numbers 2-91531
 microgeometric modelling, quantitative methods, appl. to fluid flow 2-94364
 miscible displacement in porous media, time stepping methods 2-60643
 natural convection in porous layer, stability 2-109323
 natural convection past inclined porous layers 2-97545
 natural convective boundary layer, high Prandtl fluid, saturated porous media 2-55583
 naturally permeable plane channel, unsteady flow of incompressible fluid 2-71034
 nonlinear filtration flows, boundedness and convergence 2-81392
 oil displacement by fluid, capillary bundle model 2-91535
 one-dimensional flow through partially saturated porous medium 2-97643
 percolation and capillary displacement in porous media 2-91533
 permeable rectangular channel with injection from two sides, hydrodynamics 2-114906
 plane-vertical seepage flow, porous media, connection with Picard's theorem 2-81391
 polymer solution, rodlike, flow through fine pores, pure size influence on rheological behaviour 2-76018
 porous layer saturated by ideal gas, onset of convection 2-114790

flow through porous media continued

- porous medium bounded by porous plate, free convection and mass transfer 2-114898
 porous working element with radial gas feed, hydrodynamic props. (*Russian*) 2-60635
 pressure transients in an idealised horizontal two fluid reservoir 2-97644
 properties of motion of liquids in porous materials 2-60641
 pulsatile flow in heated porous channel, combined free and forced convection 2-71031
 quartz, diffusion of adsorbed Br₂ and acetone 2-66294
 radioactive waste, disposal, nuclide transport, groundwater buoyancy effects 2-64492
 radioactive waste, geological disposal, actinide chain migration modelling 2-64496
 rotating fluid, effects of mass transfer and free-convection currents on flow past infinite porous plate 2-106498
 saturated media, eqns of motion 2-86330
 saturated porous media, nonlinear transient phenomena 2-76017
 slow flow through a periodic array of spheres 2-114891
 soil water diffusivity rel. to bulk density, estimation method 2-78889
 sorbable mixture, nonstationary motion regimes 2-97648
 spouts in a bed of silica powder associated with fluidization by outgassing of adsorbed water 2-114892
 square dead-end channel with one porous wall, air flow (*Russian*) 2-60647
 squeeze film between porous annular curved plates 2-71026
 stability of fluid flow in channel with porous walls 2-103146
 steady 2-dimens. incompressible laminar viscoelectric channel flow with suction or injection 2-97650
 steady Couette flow, Hall effect 2-65655
 steady stratified flows in porous media 2-109393
 Stokeslet perpendicular to a plane wall with a circular hole 2-97646
 Stokes flow through periodic arrays of spheres 2-55657
 superposed porous and fluid layers, convection onset prediction 2-91451
 suspensions, stationary spheres in incompressible fluid, linear hydrodynamics 2-81390
 thermal convection in multilayered porous media, anisotropic modelling 2-75961
 thermal instability in a porous medium with random vibrations 2-97642
 thermally driven cavity flows, boundary layer structure near corners 2-55659
 thermally-driven cavity flow, horizontal boundary layer struct. 2-91534
 transport problems, self-consistent effective parameters 2-81388
 tube, porous rectangular, tube, viscous fluid steady flow 2-60637
 two component fluid in horizontal porous layer, convection, linear and nonlinear stability 2-70938
 two-phase flow through porous media, three dimens., randomised, network model 2-91510
 unsteady hydromagnetic free convective flow through a porous medium 2-65641
 unsteady MHD flow through two parallel porous plates, Laplace transform soln. 2-55655
 unsteady viscoelastic flow through magnetofluidynamic porous medium in circular pipe 2-97662
 vertical cylinder with saturated porous material, thermal convection 2-91452
 viscoelastic fluids, flow through porous media, modelling 2-60633
 viscous electrically conducting fluid, Couette flow in porous annulus 2-86252
 viscous fluid, flow through porous media, permeability calcs. 2-103206
 viscous fluid, free and forced convection flow through parallel porous walls, MHD 2-103160
 viscous fluid, MHD fluctuating flow past a permeable bed 2-71037
 water, flow through heated porous layer, evaporative cooling, temp. distrib. 2-65639
 water flooding problem, one-dimens., with gravity, finite-element method 2-81389
 water oscillatory flow at 4°C past an infinite porous plate, hydromag. free convection effects 2-81401
 CO₂, flow through porous plate into channel, natural convection study 2-65583
 CO₂, permeability through cellulose acetate membranes (*Spanish*) 2-86307
 CaCl transport through Nuclepore membranes, flows and activation energy 2-84560
- flow visualisation**
 Benard convection, flow visualisation using holographic interferometry 2-114948
 cavitation, desinent, effect of short and laminar separation bubbles 2-65623
 colloidal solutions, scattered light streaming birefringence 2-55687
 corrugated duct heat transfer, press. drop, flow visualisation 2-114911
 cross-flow arrays of cylinders, heat transfer flow visualisation 2-65660
 electric machine air-cooling flow-visualization technique (*Japanese*) 2-55684
 2D flow between parallel plates, mass transfer, turbulence promoters effect, flow separation obs. by visualisation 2-97513
 flow velocity field meas. using optical processor with coherent optical negative feedback (*Russian*) 2-114933
 free convective mass transport, electro-chemical flow visualisation 2-103161
 gas-liquid two phase vertical flows, press. fluctuations and flow pattern recognition 2-114881
 gasdynamic jet, seeded, visualisation by laser light (*German*) 2-55681
 Hele-Shaw boxes, heat transfer, stability holographic interferometry study 2-55677
 high solidity vertical axis windmills, analytic model of aerodynamic performance 2-86357
 idealised ground-vehicle bodies, aerodynamic effects of shape, camber, pitch and ground proximity 2-60571
 image spectrogram interpretation in some metrological appls. 2-79685
 laser anemometer meas. of boundary layer susceptibility to planar and three dimens. disturb. (*Russian*) 2-114942
 liquid convection, Rayleigh-Benard, flow field meas., speckle velocimetry appl. 2-76051
 microcomputer-based flow sensing systems (*French*) 2-60681
 optical visualization of accelerated and decelerated flow over a circular cylinder 2-60675
 oscillating lifting surface, boundary layer flow, visualisation study 2-109425

flow visualisation continued

- phase contrast flow visualisation, diff. theory 2-55675
- pipe flow, vortex breakdown, flow visualisation 2-55593
- plane Poiseuille flow, flow visualisation study of transition triggered by TiO₂ coated mica particles 2-109410
- rotational flow, Taylor- and wavy-vortex waves, spatial and temporal charact. 2-70959
- separating flow over backsteps and cavities 2-91494
- shapes travelling at 6.85 Mach number, large amplitude oscillatory motions, schlieren photography 2-114951
- shock waves reflected interaction with boundary layer in the high enthalpy reservoir 2-60576
- single-phase flow in bent channels, laminar and turbulent flow, forced convection visualisation study 2-75951
- stratified fluid, freely convective mass transport 2-60607
- subsonic compressible gas flow, flow visualisation at junctions 2-75991
- supersonic jet coherent struct., instability and mixing zone visualisation using laser light sheets (French) 2-86362
- supersonic mixing nozzles, laser induced fluoresc. visualisation 2-109423
- swirling pipe flow, unsteady vortex breakdowns, flow modes 2-81344
- Taylor expt., multiplicity of flows 2-109284
- Taylor-vortex flow between concentric cylinders, steady states investigated by flow visualisation 2-109330
- travelling waves superposition in circular Couette system 2-70973
- turbulent boundary layer, coherent struct., visualisation by quadrant anal. 2-91408
- two-phase, computerised tomography and NMR scanning appls. 2-108070
- vortex shedding, from rectangles in 2-dimens. time-depend. flow 2-65596
- vortex shedding behind 2-dimens. bluff bodies, investig. 2-65664
- vortex-leading-edge interaction 2-75975
- vortices, confined, dynamics, flow visualisation and laser-Doppler anemometer meas. 2-97562
- vortices, flow visualisation studies 2-81347
- wall turbulence mechanism, flow visualisation and anemometry studies 2-91400
- wall-attached cylinder in crossflow, heat transfer, visualisation, appl. to fins 2-55580
- water, thermally stratified buoyant flows, mixing and heat transfer study 2-70942
- wavy Taylor vortex flow, fractional mode numbers 2-103149
- He-filled bubbles, neutral density, stereo photography of 3D fluid motion in engine cylinder 2-60674

flowcharting

- see also systems analysis
- computer code for designing wind and solar powered desalting plants 2-67832

flowmeters

- see also anemometers; flow measurement; laser velocimeters
- bearingless windmill-type gas flowmeter 2-71043
- calibration using laser speckle photography 2-76043
- cross-correlation flowmeter, technique development using signal processing 2-114958
- Doppler rate meter with electronic signal recording system 2-97671
- elbow flowmeter, 90°, discharge coeff., reduced cross-sectional area effect 2-60678
- EM, reference, improved ERO-1 design 2-55682
- EM flowmeter calibration using voltage fluctuation cross calibration 2-96147
- EM integrating flowmeter for high mag. Reynolds numbers 2-74861
- fibre optic sensors, applications 2-75705
- flow regime indicator, development 2-71048
- gas flow meter calibration system 2-65663
- gas volumetric mass meas. using micro-flowmeter (French) 2-91562
- insulating lining of the transmitter of an induction flowmeter (Polish) 2-91565
- magnetic induction based probe, conducting liquids flow rate meas. (German) 2-109431
- mass flow measurement sensors development 2-97681
- MHD flowmeter signal, information charact. 2-86360
- MHD velocity pulsation meter, sensitivity depend. on construction parameters 2-103232
- pipe flowmeter physical props. (Slovak) 2-55680
- polarisation, for poorly conducting fluids 2-71041
- self-calibrating meas. systems (German) 2-53726
- sensors for force, pressure, displacement and flow, conf., Enschede, Netherlands (May 1982) 2-94913
- single path contrapropagating flowmeters, generation and propagation of pulses 2-103235
- testing using mobile laboratories 2-55683
- thermistor transducer to measure very weak flows (French) 2-65668
- transducers, intelligent, with built-in semiconductor circuits for physical quantities conversion into digital signals (German) 2-76045
- transit time, errors in cross-correlation peak location 2-97678
- travelling waves superposition in circular Couette system 2-70973
- turbine flowmeter, static compensation of slip error (Russian) 2-60680
- US, clamp-on design 2-71044
- US Doppler flow velocimeter, differential type using correl. method (Japanese) 2-114954
- US flowmeters, multichannel, errors due to flow structure variations in pipes 2-97674
- US flowmeters using sing-around and Doppler effect, principles 2-76046
- variable-area flowmeter with microcomputer (German) 2-86364
- viscous flowmeters, design 2-76044
- volume-type flowmeter for high viscosity liqs. (Polish) 2-97677
- vortex flowmeter for non-corrosive gas 2-109426
- weakly conducting media, correlation flowmeter 2-103231

fluctuations

- see also Brownian motion; critical fluctuations; current fluctuations; noise; random processes
- ϕ^4 -kinks, diffusion const., quantum corrections 2-112817
- air-solid two-phase flow in pipe at low air vel., flow pattern and press. fluctuation 2-114876
- anisotropic solid, fluctuations, and thermodynamic props. 2-115435
- annealed system, Gaussian random bond problem in 1/n expansion 2-77298
- atmosphere millimetre-wave turbulence, signal intensity and arrival angles fluctuations meas. 2-117395
- atmosphere total O₃ concs., anal. for natural and man-made trend variability 2-100454

fluctuations continued

- aurora low frequency fluctuations, role of current carrying props. of double layers 2-100622
- bimolecular reaction kinetics, reagent density fluctuations 2-72956
- binary mixture crit. soln. point, coexistence curve, noncritical fluctuations and Fisher renormalisation 2-103937
- bounded capillary fluctuations, self-gravity constraint 2-114828
- Burgess' variance theorem, extension to autocorrelation functions and spectra 2-61532
- canonical ensemble, energy fluctuations, higher moments 2-79463
- charged two-component fluid in equilib., nonlinear hydrodynamic fluctuation theory 2-103581
- chemical reaction system, fluctuations, space-time correlation (Chinese) 2-111459
- chiral smectic C liq. cryst., effect of fluctuation of tilt angle on pitch 2-109668
- P/Comet Halley Z 2-68670
- cosmic microwave background, ang. fluctuations of temp. in Universe with massive neutrinos (Russian) 2-63718
- cosmological density fluctuations, rel. to multipole moments in Rubin-Ford data 2-106892
- deep inelastic heavy-ion collisions, statistical fluctuations, expt. evidence and theoretical implications 2-85093
- deep inelastic reactions, total energy and γ -ray multiplicity, statistical fluctuation effect 2-96043
- density fluctuations dynamics in BBGKY hierarchy 2-97885
- diatomic model fluid, vortex viscosity, fluctuation expression 2-65597
- disclotic liquid crystals, longitudinal fluctuation of order parameter 2-76287
- Earth rotation, irregular changes, 1966 to 1981, and correl. with gravity fluctuations (Russian) 2-105896
- explosive reactions, fluctuations effect 2-83385
- Fermi gas, quasi-one-dimensional phase transitions, renormalisation group study 2-56760
- fluctuating rate, low-frequency spectrum 2-84536
- fluctuation-dissipation relations for systems with internal multiplicative noise 2-107232
- fluid, density correl. function, Brillouin scatt., nonequilibrium fluctuations 2-104899
- fluid, nonequilibrium steady state, fluctuations, correl. functions 2-103583
- fluid phase, spinodal decomposition in linear regime, hydrodynamic fluctuation theory 2-71653
- fluids far from equilibrium, nonlinear reson. coupling of shear and heat fluctuations 2-114797
- frequency separated waves in scattering medium, fluctuation correlation, statistical characts. 2-108794
- gas-liquid two phase vertical flows, press. fluctuations and flow pattern recognition 2-114881
- gravity, irregular changes, 1966 to 1981, and correl. with Earth rotation fluctuations (Russian) 2-105896
- Green Bay, Lake Michigan, numerical models and obs. of water level fluctuations 2-106160
- grid-generated turbulence, temp.-fluctuations, Lagrangian dispersion theory 2-109295
- harmonic liquid, one dimens., nonequilibrium steady state fluctuations, Fokker-Planck eqn. 2-103584
- heavy-ion collision dynamics, conf., Hvar, Yugoslavia (May 1981) 2-84379
- heterophase ferromagnets, exact solns., critical point effects 2-61718
- holographic vision with pulsed illumination of object, effect of turbulent med. 2-90845
- Hopf bifurcation with fluctuating control parameter, Fokker-Planck eqn. soln. 2-84541
- incommensurate-commensurate transition, domain walls and fluctuations, in two and three dimensions 2-66164
- inhomogeneous gas, thermal hydrodynamic fluctuations, kinetic theory 2-81430
- ionosphere, effect of large-scale inhomogeneities on reflected wave field struct. 2-112197
- ionosphere electron density inhomogeneities, model determ. of volumetric characts. 2-112196
- ionosphere EM wave propag., long period HF phase path fluctuation during solar eclipse, (1980 February 16) 2-106386
- irreversible thermodynamic stability criteria, thermal fluctuation effects 2-79514
- Ising model, BCC, with competing interactions, fluctuation induced first order transition, free energy series study 2-77306
- Josephson junction, quantum tunneling and zero-point motion limit of noise fluctuations 2-61666
- lake water-level fluctuations, inverse method for wind stress determ. 2-106151
- laminar-turbulent boundary layer transition, vel. fluctuations distrib., skewness coeff. 2-109278
- Langevin eqns., coupled, nonlinear, asymptotic props. and cusp bifurcation in weak noise limit 2-107239
- Langevin eqns., coupled, nonlinear, asymptotic props. and transition to limit cycle in weak noise limit 2-107240
- light, partially coherent, photon counting distrib., computer simulation by Monte Carlo methods 2-60015
- light beam fluctuations, student expt. 2-79305
- liquid crystal, US propagation rel. near nematic-smectic A transition (Russian) 2-98202
- liquid-vapour interface, fluctuations round equilibrium, hydrodynamic theory 2-86977
- Lorentz transformation on fluctuating space-time basis 2-79356
- macroscopic systems, unstable state decay 2-74334
- magnetic superconductors, fluctuations and defects in spiral state 2-92849
- Malthus-Verhulst model, vectorial stochastic representation, transient behaviour near instability point 2-95246
- mesa struc. res. mobility-fluctuation 1/f noise 2-104443
- microparticles in low temp. plasma, heat transfer (Russian) 2-71197
- mixed valence system, fluctuation effects at OK 2-56495
- multiple scattering medium, intensity fluctuations, fourth moment eqn. soln. 2-53600
- multiplicative noise, analytical and numerical studies 2-107244
- multiplicative noise stabilisation 2-107245
- multivariable t, theory 2-101323
- nonadditive fluctuations, generalised Langevin equation 2-79472

fluctuations continued

- nonequilibrium plasma fluctuations theory, spectral line broadening effect 2-76076
 nonequilibrium steady state, fluctuation-dissipative relation for autocorrelation function (*Russian*) 2-58716
 nonlinear optical phenomena and fluctuations, introduction 2-97101
 nonlinear oscillators self-synchronisation in presence of fluctuations 2-74330
 nonlinear phenomena at phase transitions and instabilities, conf., Geilo, Norway (Mar.-Apr. 1981) 2-94882
 nonlinear waves, reson. test field model 2-65606
 nonmonochromatic waves scattering 2-90782
 nonuniform nonlinear samples, mobility-fluctuation 1/f noise 2-104443
 nonuniform systems, statistical theory, reduced description, density fluctuations 2-84519
 one-component fluid, spinodal decomposition, hydrodynamic fluctuation theory 2-104002
 one-dimensional Hubbard model, charge-density fluctuations, spatial correlations, strong interaction limit (*Russian*) 2-87472
 one-dimensional randomly inhomogeneous medium, EM wave intensity fluctuations radiative transfer 2-85869
 optical bistability, absorptive, fluctuations and transitions 2-97091
 optical bistability, dispersive, with fluctuations, Fokker Planck eqn. 2-97090
 Peierls instability, quantum fluctuation effects, Monte Carlo study 2-104253
 physical systems, correl. functions of fluctuation forces, Langevin eqn. appls. 2-53675
 plane EM wave intensity behind strongly-refracting chaotic phase screen, fluctuation correl. 2-85868
 plasma, wavenumber and freq. spectra estimation by fixed probe pairs, theory 2-91671
 plasma drift wave turbulence, electric field and density fluctuations, saturation spectra 2-91613
 ring lasers, frequency characts. investig., small perturbation method 2-114321
 semiconductor, carrier density fluctuations due to trap distrib. 2-98660
 separating flow over backsteps and cavities 2-91494
 Seyfert galaxies, variability of emission-line spectra and optical continua 2-106906
 simple systems, higher order correlations 2-75239
 solar wind MHD fluctuations, statistical props. from Helios-2 obs. 2-100697
 SOS structures, Hall mobility and capacitance meas., internal stresses and pot. fluctuations influence 2-82470
 space charge fluctuations, constant magnetic field effect on electron cloud in equilibrium 2-93362
 stellar mass loss rate, effects of stochastic fluctuations on evolution 2-106674
 synergetics, chaos and order in nature, conf., Schloss Elman, Bavaria, FRG (April-May 1981) 2-8543
 thermal conduction appl. to Alcatraz, flutter interpretation 2-71251
 thermal fluctuations in the presence of two dissipative steady-state currents 2-65561
 thermal perturbations, nonlinear theory of fluctuations 2-93754
 (TMTSF)₂PF₆, spin density wave fluctuation effects on NMR relax. 2-87616
 turbine in flotation cell, turbulence, vel. fluctuations, pumping capacity, anemometry study (*French*) 2-103153
 turbulent plane jet interacting with small amplitude waves, mean flow characts. 2-65628
 two-dimensional dense electron gas, dynamic form factor, polarisability and intrinsic cond. at zero temp. 2-56537
 two-dimensional systems, quantum fluctuations 2-98241
 universal power-law tails for singularity-dominated strong fluctuations 2-107237
 Universe, stochastic density fluctuations in radiation era 2-106969
 wall jet, turbulent diffusion, vel. and temp. field mean and turbulent charact. 2-91498
 wind velocity fluctuations, power spectrum at 8 km and 86 km 2-100449
 (GaAl)As diode laser, linewidth broadening due to electron number fluctuations 2-60077
 NaAl(SO₄)₂·12H₂O·Cr³⁺, EPR linewidth anomaly, struct. fluctuations 2-98952
 NbS₃, nonlinear conductivity and charge density wave transitions 2-98631

fluctuations in superconductors

- used only for thermal (thermodynamic) fluctuations around the order parameter near the critical point
 amorphous inhomogeneous alloy, upper critical field and paraconductivity 2-77244
 antiferromagnetic superconductor, impurity and spin-fluctuation effects 2-82525
 charge density wave superconductors, impurity and fluctuation effects 2-82526
 collective oscillations, fluctuating, and elec. field penetration into supercond. 2-110534
 film, thermodynamic fluctuations of order parameter, review 2-98809
 film, vortex phase dielec. const., AC impedance meas. 2-72116
 granular film, superconducting transition, quantum fluctuations and topological transition 2-56767
 Josephson network, multiconnected, partial destruction of Meissner state 2-98813
 non-equilibrium superconductors, fluctuation induced cond. near supercond. transition 2-66714
 organic conductors and superconductors, review 2-115734
 proximity sandwich, fluctuation cond. 2-61658
 superconducting superheated granules, diamagnetic interactions 2-56765
 (TMTSeF)₂PF₆ superconductor, thermal conductivity 2-92822
 (TMTSF)₂ClO₄, magnetotransport under press. 2-56556
 (TMTSF)₂ClO₄, one dimensional organic supercond. detected via tunnel spectroscopy 2-56793
 (TMTSF)₂ClO₄, one-dimens. fluctuating supercond., energy gap, far IR magnetoabsorpt. study 2-98808
 (TMTSF)₂ClO₄, organic supercond., mag. field depend. thermal cond. 2-92821
 (TMTSF)₂ClO₄, organic supercond., sp. ht. meas. 2-56778
 (TMTSF)₂PF₆, magnetotransport under press. 2-56556
 (TMTSF)₂PF₆, one dimensional organic supercond. detected via tunnel spectroscopy 2-56793

fluctuations in superconductors continued

- (TMTSF)₂PF₆ superconductor, X-ray irradiation induced defects 2-92031
 (TMTSF)₂X family of organic superconductors, survey of low dimensional phenomena 2-56751
 (TMTSF)₂X superconductors, props. 2-56802
 TMTSF-DMTCNQ, low temp. metallic state and superconductivity 2-72104
 TMTSF-DMTCNQ superconductor, X-ray irradiation induced defects 2-92031
 Al, granular, mag. susceptibility meas., grain clustering near T_c 2-61651
 NbN highly granular films, supercond. props., laser thermal spectroscopy 2-72113
 Sn film, paraconductivity, comparison with Maki-Thompson theory 2-98810
 Sn small particles, NMR study 2-66712
 Zr,Pd, amorphous, upper critical field and paraconductivity 2-77244
- fluctuations of cross sections** see statistical theory of nuclear reactions and scattering
fluid composition control see chemical variables control
fluid composition measurement see chemical variables measurement
fluid dynamics
 see also aerodynamics; biological fluid dynamics; drag reduction; flow; hydrodynamics; liquid oscillations; Navier-Stokes equations; rarefied fluid dynamics; relativistic fluid dynamics; surface waves (fluid); turbulence; wakes
 alternating direction implicit finite element method for flow problems 2-91374
 Applied Mathematics and Mechanics Society Meeting, Wurzburg, Germany (April 1981) 2-84377
 area-preserving mappings, renormalisation group for intermittency 2-69023
 axisymmetric flows, modelling of strain histories for memory integral fluids 2-60496
 book 2-94926
 Boussinesq eqn. linearisation 2-112711
 bubble form. at vent pipe exit, hydrodynamics 2-71017
 Burgers system, nonlinear, stability and bifurcation 2-75923
 chaotic region near period three, Liapunov number behaviour 2-69024
 combination in reactive systems, book 2-63766
 confined fluid dynamics windmill and Carnot operators 2-112850
 conformal mapping methods, convergence characteristics 2-109263
 container-liquid system dynamics, capillarity effect 2-91228
 continuum systems, gauge groups, Noether's theorem 2-112708
 cooling oil in transformers, flow simulation 2-91226
 die swell calc., mesh effects 2-60696
 directional cylindrical waves, non-linear propag. 2-53530
 discharge jet interaction with multiple port diffusers 2-86318
 discretised Poisson-Neumann problem on domain composed of rectangles, direct soln. 2-95015
 dissociating gas, unsteady flow 2-86356
 elastic liquid flow through U-shaped vessel, computer modelling 2-60587
 elastico-viscous fluids, normal and reverse squeezing flows, lubrication props. 2-97602
 equilibrium figures for rotating fluids 2-95022
 finite difference equations soln., reassessment 2-91376
 flow, heat transfer and chemical reactions, simulation using computer code system 2-91571
 flow, low-Reynolds number, past two equal circular cylinders, matched asymptotic anal. 2-109271
 flow in multiply-connected domains 2-70893
 flow past finite circular cylinder at high subcritical and supercritical Reynolds number 2-75967
 flow past periodic arrays of cylinders, heat transfer calc. 2-97537
 fluid mechanics, basic research needs review 2-60518
 free liquid jet and its influence on direct contact heat transfer, hydrodynamics 2-97607
 free oscillations and forced motion in natural basins 2-111976
 gas flows with vibr. relax., behaviour of discontinuities 2-60564
 gas multi-dimensional discontinuous flow calcs. 2-70892
 gas plane steady flow, intrinsic geom. and physical props. 2-91379
 gas-driven fracture propagation 2-89541
 granular materials, flow, nonlinear constitutive model, appl. to gravity flow 2-97685
 Hamiltonian flow, Maslov's method sharpening 2-107103
 hydrodynamics and heat transfer theory, similarity anal. and asymptotic models 2-75827
 ideal fluid, analogy with point particle classical mechs. 2-114753
 impactor, two-dimensional virtual, theory and obs. 2-75920
 impulsively-started flow about four types of bluff body 2-97566
 incompressible and compressible fluid flow, low-speed, calcs., STEALTH computer code appls. 2-109267
 incompressible flow over inlets, 2D theory 2-103137
 incompressible flow problems, Leonard method valid at infinite mesh Reynolds number 2-91382
 incompressible nonlinear fluid, fading memory, eqns. of motion, global smooth solns. 2-109266
 inhomogeneous fluids, eqns. of motion, generalised Langevin theory 2-70891
 inviscid dynamics, two dimens., low-order models randomness 2-103136
 inviscid eqns., boundary approx. 2-114751
 isovector fields for problems in solid and fluid mech. 2-63822
 lakes, elongated homogeneous, extended channel model for prediction of motion 2-111974
 linear wave equation applications 2-107122
 liquid flow about sphere, velocity field characteristics, polymer additives effect 2-60499
 liquid flow through sharp inlet edged orifice, hydrodynamics 2-97608
 liquid-air interface in lubrication flows, boundary conditions 2-91493
 low-gravity fluid flows 2-97493
 marker-cell method in the displacement of a liquid from a channel with a recess 2-60676
 metals, levitation-melting process in mag. field, fluid dynamical aspects 2-70839
 molecular structure and fluid dynamics, exptl. study methods (*German*) 2-55826
 nematic liquid cryst. flow pattern symmetry, nonlinear effect 2-71350
 newtonian and non-Newtonian flow near a re-entrant corner 2-60657
 Newtonian fluids, flow between two flat plates interrupted by slit, pressure hole problem 2-60655

fluid dynamics continued

- non-linear propagation of waves induced by general vibrations of plates 2-53531
- nonequilibrium phenomena: outlines and bibliographies of a workshop 2-97504
- nonlinear dissipative system, flow hysteresis, one-dimens. map anal. 2-84447
- nonlinear fluid oscillations in spherical containers, pendulum analogy 2-91477
- nonlinear two-dimensional sail theory 2-70890
- nonstationary fluid flow, polygonal path procedure (*German*) 2-101174
- numerical modelling in diffusion convection, conference, Sunderland, England (May 1981) 2-89466
- outflow boundary conditions, Euler and Navier-Stokes equations 2-97485
- perfect fluids, eqns. of motion, variation principles 2-112710
- perfect inviscid fluid, gauge theory 2-112709
- physics data handbook 2-58565
- planar guide for card by means of lateral suction slots 2-97684
- plane irrotational motion in presence of wall (*French*) 2-95014
- potential field around a thin oblate body of revolution, uniform asymptotic solns. 2-91380
- radiation magnetogasdynamics, sonic discontinuity propag., singular surface theory 2-76039
- rectangular basins with flat bottom, fluid motion, first order channel model appl. 2-111975
- research, contrib. to aircraft design 2-70966
- separated flows around two-dimensional models with two crests 2-114750
- shock tube problem, rarefaction wave, conservation law, numerical soln. 2-70994
- simple flow problem, isoparametric and rational basis elements, expt. investigation 2-70889
- singularities in fluid dynamics 2-95023
- sloshing eigenvalues of two-dimensional regions with holes 2-58623
- sloshing frequencies, upper and lower bounds by intermediate problems 2-58624
- small-scale structure in unstable fluids, contour dynamical method 2-63824
- stability-enhancing two-step method for fluid calculations 2-107102
- Stokes flow, two dimensional, boundary integral eqn. method 2-65556
- Stokes problem, mixed finite element method 2-114755
- Stokes problems, c-complete systems, boundary methods 2-89538
- suspensions, fluid dynamics and mass transfer (*German*) 2-86322
- symmetry and broken symmetry in condensed matter physics, conf., Paris, France (Sept. 1980) 2-68966
- transitional fluid flow, noise in chaotic systems 2-97489
- tube banks; closely-packed oval, twisted, hydraulic drag and heat transfer (*Russian*) 2-60659
- two region slab with eroding boundary, transient mass diffusion problem 2-97683
- umbrella-shaped body vibrating in a fluid, average force acting on the body 2-70759
- unstable flows, growth of 3D localised disturbances 2-97500
- unsteady flow in unconfined aquifers, uniform asymptotic expansion 2-91378
- unsteady fluid dynamic forces on two dimens. finite plate at small mach numbers 2-91381
- variational principles for perfect and dissipative fluid flows 2-75922
- viscoelastic fluid flows, finite element calculation, approx. error 2-60586
- viscoelastic fluids, convergent numerical scheme, stability 2-60497
- weak discontinuities in relativistic viscous fluid associated to transverse anal. longitudinal waves (*French*) 2-70967

fluid flow see flow**fluid instability see flow instability****fluid mechanics**

- see also capillarity; cavitation; compressibility of gases; compressibility of liquids; fluid dynamics; hydrostatics; Mach number
- constitutive eqn. for simple fluid 2-97488
- continuous incompressible media, penalty finite element anal., round-off error 2-79358
- continuum models of discrete systems, conf., Stockholm, Sweden (Jun.-Jul., 1981) 2-84380
- Eulerian, Lagrangian eqn. of motion 2-75921
- exact mapping function for systems of profiles 2-53527
- finite difference eqn. soln. assessment 2-65559
- generalised Faxen formula for particle drag calculation (*French*) 2-84445
- nonlocal dielectric fluids, dispersion of surface waves 2-75978
- nonlocal EM fluids theory 2-74220
- research in Bangalore in the 1950s and 1960s 2-79337
- solid-fluid mixture vibration problem soln., existence and uniqueness (*French*) 2-84442
- Spacelab payload for materials science expts. 2-116346
- topological charge, dynamical invariant 2-60498

fluid theory, dense see liquid theory**fluid valves see valves****fluidised beds**

- bubble behaviour meas. with probe 2-71047
- Casson model surmises laminar-turbulent transitions in pipeflow 2-81320
- coarse solids, fine particle behaviour 2-71027
- energy recovery from municipal refuse, using dual fluidised-bed pyrolysis system 2-83462
- evolution of the inhomogeneous state of a fluidized bed 2-60639
- fission reactor concept, thermal design calcs. 2-102103
- gas flow, bubble clouds and wakes, three-phase model 2-71025
- gas-solid, particulate removal, simulation 2-81386
- heat transfer between fluidised beds of large particles and immersed surfaces, mechanistic theory 2-114890
- mass transfer between fluidized bed and capillary-porous body 2-60638
- mass transfer between the gas and solid particles in a fluidized bed 2-114896
- packed beds, flow and heat transfer anal. 2-55588
- particle diffusion and heat exchange in stagnant fluidised bed 2-103207
- pilot-scale, heat transfer to horizontal tubes 2-65640
- porosity and expansion investigation 2-103208
- power station with supercharged fluidised bed combustion for district heating (*German*) 2-91527
- radiant heat exchange between fluidised bed and surface 2-60364
- resonant sideband instabilities in wave propagation in fluidized beds 2-114894
- spouts in a bed of silica powder associated with fluidization by outgassing of adsorbed water 2-114892

fluidised beds continued

- steam power stations with atmospheric fluidised-bed combustion boilers
- limestone consumption reduction methods 2-71028
- suspensions, electromagnetic field effects 2-103202
- three-phase packed and fluidised bed, heat transfer coeff. 2-71013
- TVA 20 MW fluidised bed pilot plant design for atmospheric fluidised bed combustion 2-91530
- voidage instability; wave hierarchy interpretation 2-55660
- SiH₄ heterogeneous decomposition in fixed bed reactor, Si production appl. 2-116376

fluidised powders see powders**fluidity see viscosity****fluids**

- see also bubbles; classical theories of fluid structure; disperse systems; fluid mechanics; fluidised beds; gases; gravity waves; liquids; non-Newtonian fluids; quantum fluids; quantum theories of fluid structure
- No entries

fluorescence

- see also atomic fluorescence; fluorescent lamps; fluorescent screens; molecular fluorescence; nonradiative transitions; X-ray fluorescence analysis
- acrylic, dye doped, UV sensitive phosphors for Si imaging detectors, fluoresc. props. 2-116224
- adenine cation cryst., luminesc., excitation wavelength depend. 2-104941
- anthracene, triplet exciton-exciton annihilation, mag. field depend. 2-115669
- anthracene crystals, fluorescence simulation and its rel. to exciton distrib. 2-87838
- attenuation curves, pulsed excitation, numerical calcs. 2-53844
- B-cell subpopulations, identification by 2-colour fluoresc. anal. 2-88519
- bean leaves, greening etiolated, fluoresc. lifetime spectra 2-67976
- beta-induced fluorescence HPLC detector 2-84777
- biomedical circulation measurement technique, indicator dilution using a fluoresc. indicator 2-117044
- biphenyl-naphthalene(pyrene), mixed cryst., triplet exciton fusion, luminesc. study 2-110913
- bulk media, gamma-ray spectra and energy loss, fluoresc., bremsstrahlung and annihilation effects 2-90311
- 3-chloro-1-(4-halophenyl)-1-propanone, IR spectra 2-99105
- chlorophyll, in soln., lipid vesicles and liposomes, conc. quenching, fluoresc. study 2-67955
- chlorophyll in barley leaves with blocked carotenoid biosynthesis, luminesc. analysis of triplet states 2-78307
- chlorophyll-a and its derivatives in solid solns., sharp line fluoresc. and vibronic spectra 2-87836
- chloroplasts, mag. oriented, field conc. and temp. depend. of fluoresc. polarisation 2-100040
- chloroplasts, pea, picosec. fluorimetry of 685 to 732 nm bands at low temp. 2-105676
- coronene, UV sensitive phosphors for Si imaging detectors, fluoresc. props. 2-116224
- diamond, electron impact, small angles of incidence, radiation spectra (*Russian*) 2-92062
- 1,4-dibromonaphthalene, triplet exciton trapping, delayed fluoresc. obs. 2-98547
- 9,10-dichloroanthracene, cryst., excimer form., low-temp. fluoresc. 2-104929
- diffusion coeff. determ. by fluoresc. correlation spectroscopy 2-95243
- 1,4-dihydroxyanthraquinone-d₀(d), electronic states, vibr. Raman and IR study 2-57070
- 6,7-dihydroxycoumarin, aq. soln., pH effect, fluoresc. and UV-visible study 2-65049
- dye absorbed molecule surface interaction, polarised absorpt. and fluoresc. spectroscopy 2-71795
- dyes in PMMA, thermal lens meas. of quantum yield for luminesc. solar concentrators 2-57678
- exponential decays characterisation, lambda invariance test 2-108630
- exponential depression as a test of estimated decay parameters 2-108629
- flow microfluorocytometry and fluoresc. polarisation (*Japanese*) 2-62728
- gasdynamic jet, seeded, visualisation by laser light (*German*) 2-55681
- glass laser, fluorescence in small and large signal gain regimes 2-60200
- glasses, fluorescence, anomalous homogeneous linewidths 2-57167
- high-temperature plasma, laser diagnostics by reson. fluoresc. method 2-109596
- hydrocarbons, polycyclic aromatic, films, struct. and props., substrate temp. effect 2-104205
- isobacteriochlorin, synthetic, in glassy matrix, fluoresc. spectrum and energy selection 2-70319
- laser diagnostic probes for flames, combustion products and sprays 2-89824
- laser-II, conf. proceedings held at Kanpur, India, March 1979 2-58530
- laser-induced fluorescence signals, interface for registration 2-107411
- liquid crystal dye laser in region of thermodynamic phase transition (*Russian*) 2-80944
- liquid solutions, fluorescent, self-depolarisation 2-82885
- liquids, fluoresc. highly absorbing, laser meas. of spectral extinction coeffs. 2-74504
- liumogen, UV sensitive phosphors for Si imaging detectors, fluoresc. props. 2-116224
- low-density high velocity flow meas., electron beam fluoresc. (*Japanese*) 2-81416
- micelles, fluoresc. quenching, polydispersity effects 2-62436
- molecular crystals, triplet exciton-exciton annihilation, mag. field depend. 2-115669
- molecules in small particles, fluoresc. and Raman scatt., double reson. 2-104878
- naphthalene: 2(1,4-diiodotetrafluorobenzene), exciton-phonon coupling, triplet energy transfer, Raman spectrosc. obs. 2-104869
- naphthalene:anthracene crystals, delayed fluorescence, triplet exciton traps effect (*French*) 2-77576
- naphthalene, cryst., isotopically mixed, subst. disordered, triplet exciton transfer and fusion 2-92474
- naphthalene (-dn) doped mixed crystals, time resolved donor and acceptor fluoresc., energy transport kinetics 2-72532
- oil colour fluorescence, laser induced, oil painting pigment identification 2-99165
- optical absorpt. and fluoresc. spectra, crystal field anal. 2-72525
- optical excitation trapping in diffusion limit, differential eqn. approach 2-82910
- optical glass, optical properties 2-60198

fluorescence continued

- organic photoconductors, carrier generation and elec. field induced fluorescence quenching 2-67108
- organic photosemiconductor, model systems for primary photoprocess in photobiology (*Russian*) 2-62574
- pentacene in benzoic acid, optical dephasing, optical absorpt. and picosecond photon echo expt. 2-70626
- pentacene-benzoic acid mixed crystal, antihole prod., hole burning, fluorescence study 2-108973
- (perylene)₂TCNQ, single cryst. Raman spectra, temp. depend., isotope effects 2-72470
- photochlorophyllide energy transfer to chlorophyll in green leaves 2-105678
- photosynthesis, modelling using spectroscopy of polymer films with high conc. of zinc phthalocyanine 2-105679
- photosynthesis modelling, solid polymer films with high protoporphyrin IX conc., spectral characs. 2-78312
- photosynthetic membrane, electrogenic props. reconstruction of isolated preps. of reaction centres 2-78311
- photosystem I enriched particles, nature of long wave fluoresc. 2-67978
- phthalocyanine, x-metal free, electric field induced fluoresc. quenching and photocarrier generation 2-61946
- picosecond spectroscopy and correlated single photon counting method (*Japanese*) 2-112999
- plant leaves, mag. modulation of fluoresc. intensity, primary photosynthetic reactions 2-78310
- polarisation meas., rel. to uniaxial deform. models 2-103133
- poly(N-vinyl carbazole) films, excimer dynamics 2-116222
- poly(N-vinylcarbazole) film, doped, energy transfer, fluoresc. study 2-116223
- poly-N-epoxypropylcarbazole, films and solns., absorption and emission spectra meas. 2-67119
- poly-N-vinylcarbazole film, extrinsic carrier photogeneration CT fluorescence quenching by electric field (*Japanese*) 2-110963
- polymer film, stretched, partially oriented mol. fluoresc. polarization, electronic transition moment 2-77609
- polystyrene-polyphenylene oxide blends, solid photo-energy transfer 2-104944
- polyvinylcarbazole, nitrated, exciton migration and localisation on defect and impurity levels, luminesc. obs. (*Ukrainian*) 2-82896
- porphin in n-decane host, optical dephasing of S₁-S₀ transition studied by photochemical hole-burning 2-72531
- propynal, nonradiative relax., fluoresc. and phosphoresc. 2-104933
- pulsed tunable dye-laser microspectrofluorometer 2-105859
- pyromellitic N,N-dimethylidimino-anthracene cryst. triplet exciton annihilation rate, fluorescence 2-71880
- ratio deconvolution, quenching and inner filter effects 2-99715
- resonance fluorescence, collective atomic effects, scaling factor 2-102427
- rhodamine 6G, soln., fluorescence saturation, effects of exciting laser pulse shape 2-93252
- rhodamine 6G-malachite green, soln., fluoresc. decay time meas. 2-67120
- ruby:Cr³⁺, generation, detect. and reson. trapping of very high freq. acoustic phonons 2-93277
- solar chromosphere, O I resonance triplet and intercombination doublet form. by Lyβ fluoresc. 2-112398
- styrene-acrylonitrile copolymers, sequence distrib. and intramol. excimer formation 2-77562
- supersonic mixing nozzles, laser induced fluoresc. visualisation 2-109423
- surface structure, extended absorption fine struct. anal., review 2-110097
- surface temp. profiles, using EuTTA fluorescence emission 2-79579
- tetrabenz(o,c,d,j,l,m)perylene film, impurity controlled, crystn. rate, absorpt. and fluorescence spectra study 2-56395
- time-resolved fluoresc. relax., deconvolution calcs. 2-80710
- tris-tetrabutylammonium yttrium hexathiocyanate:Eu³⁺, fluorescence spectra 2-61958
- xanthene-aromatic hydrocarbon system mixed triplet-triplet annihilation, mag. field effect 2-93256
- Ag surface (111), NO scatt. laser induced fluoresc. 2-99256
- Al₂O₃:Cr³⁺, heavily doped, fluoresc. spectra and decay times 2-110925
- Al₂O₃:Cr³⁺, single-ion-pair fluoresc. ratios and Anderson localisation 2-57176
- β-Al₂O₃/La₂O₃:Eu³⁺, optical props., struct., dye laser site-selective excitation and X-ray diff. obs. 2-61959
- BaF₂:Ho³⁺ single cryst., fluoresc. and excitation spectra 2-61943
- BeF₂-NdF₃ based glasses, absorpt. and emission spectra of Nd³⁺, at. struct. computer simulation 2-57149
- CaF₂:Tb³⁺ single cryst., fluoresc. spectrum 2-61945
- CaO:Eu³⁺(Er³⁺)(Pr³⁺), site selective spectroscopy, UV and fluoresc. study 2-110895
- Ca₂Y₂Ge₂O₁₂:Tb³⁺ garnet, luminescence studies 2-61952
- CdP₄, CdP₃, CdP₂, CdP, electronic struct., X-ray spectral investig. 2-82221
- CdS thin films, radiative and nonradiative recomb. times 2-92789
- CdS:Se_{1-x}, fluorescence line narrowing, localised exciton states, and spectral diffusion 2-82909
- CsBr(Cl):Ag⁺, far UV spectra, fluorescence and optical bleaching studies 2-110901
- CsCl, direct radiative recombination of core-hole highly excited states 2-87911
- CsMnCl₂·2D₂O, hot magnon sideband in fluorescence spectrum 2-82918
- CsMnF₃, pure, exciton dynamics and energy transfer, fluorescence meas. 2-99171
- Cs₂NaErCl₆, fluoresc. spectra and lifetimes 2-110922
- CsNdP₂O₇, cryst. and glass, room temp. fluoresc., laser material use 2-93240
- GaAs, plasma etching by tetrachloromethane, kinetic study by nonperturbative optical techniques 2-116565
- GaAs:Sn LPE layer, deep level free-to-bound fluorescence line shapes 2-77564
- GdAlO₃:Cr³⁺, fluoresc. spectrum, splitting and line shape 2-93262
- Gd₂Ga₂O₇:Nd³⁺ garnet films prep. by LPE, crystallographic and optical characterisation, laser appls. 2-83044
- Gd₂MoO₇:Eu³⁺, spectroscopic props. 2-93254
- GdOBr:Eu³⁺, cryst. field effects, fluoresc. study 2-66503
- GdOCl:Bi³⁺, Stark level, cryst. field anal., fluoresc. study 2-66504
- In film, coated with phthalocyanine mols., luminesc. and transmittance meas. 2-85731
- InP, plasma etching by tetrachloromethane, kinetic study by nonperturbative optical techniques 2-116565
- KBr:Na, fluorescence restoration from lowest singlet state in self-trapped exciton 2-67100

fluorescence continued

- KCl:Na, fluorescence restoration from lowest singlet state in self-trapped exciton 2-67100
- KClO₄:superradiance and high-gain mirrorless laser activity 2-87820
- LaF₃:Gd³⁺, two-photon absorption lines, selection rule violation, anisotropy and anomalous intensity 2-77555
- LaF₃:Pr³⁺, fluoresc. quenching by cross relax. 2-82917
- LaF₃:Pr³⁺, interaction strength of weakly coupled pairs measured by a two laser spectroscopy technique 2-82881
- LaF₃:Pr³⁺, phonons created by quenching process, direct detection 2-71595
- LaF₃:Pr³⁺ single cryst., fluoresc. line 2-61944
- LaF₃:R³⁺, Pr³⁺ where R=Nd, Dy, fluoresc. obs., decay time meas. 2-110914
- La₂MoO₇:Eu³⁺, spectroscopic props. 2-93254
- LaOBr(Li):Eu³⁺, cryst. field effects, fluoresc. study 2-66503
- (LaO)₂CO₃, type Ia and II polymorphs, Eu doped, site selective excitation of fluorescence 2-116226
- LaOCl:Ti³⁺, Stark level, cryst. field anal., fluoresc. study 2-66504
- La_{1-x}Po_xNd_{1-x}, resonant fluoresc. line narrowing 2-104943
- La_{1-x}Pr_xF₃, inhomogeneous broadening, time resolved fluoresc. meas. 2-116251
- β-La₂S₃:Nd, Ce, efficient energy transfer from band excitation to Nd³⁺ 2-67102
- La_{1-x}Tb_xPo_{1-x}Tb³⁺, strong self quenching of Tb³⁺ in stoichiometric materials 2-72542
- LiCeP₂O₇ crystals, growth and spectral properties (*Chinese*) 2-99163
- LiCl:Cu⁺(Ag⁺), luminesc. props. and impurity electronic struct. 2-57161
- LiErP₂O₇ crystals, growth and spectral properties (*Chinese*) 2-99163
- LiEuP₂O₇ crystals, growth and spectral properties (*Chinese*) 2-99163
- LiF, laser action and spectra of M-centres 2-75580
- LiF:U, fluoresc. and MCD spectra 2-57160
- LiHoP₂O₇ crystals, growth and spectral properties (*Chinese*) 2-99163
- LiNd(PO₃)₂, weak fluorescence quenching 2-77559
- Li₂O-P₂O₅-UO₂²⁺ glass, energy levels, absorpt. and fluoresc. study 2-77563
- LiPrP₂O₇ crystals, growth and spectral properties (*Chinese*) 2-99163
- LuPO₄:Pb²⁺(Nd³⁺), IR spectra, Zeeman effect and fluoresc. obs. 2-72522
- Na atom crystal, metastable polarised, parameter 2-114067
- NaCl:Cu⁺(Ag⁺), luminesc. props. and impurity electronic struct. 2-57161
- NaF:Cu⁺ single cryst., UV absorpt. and fluoresc. study 2-67084
- NaF:U, fluoresc. and MCD spectra 2-57160
- Na₂La₂Tb(PO₄)₂Cl₂:Tb³⁺, strong self quenching of Tb³⁺ in stoichiometric materials 2-72542
- NaNO₂, phosphoresc. to fluoresc. quantum yield, energy depend. intersystem crossing and vibr. relax. 2-72536
- Na₂O-CaO-SiO₂ glass:Cu,Cr,Er, energy transfer from Cu and Cr to Er 2-99176
- Na₂O-CaO-SiO₂:UO₂²⁺ glass, energy levels, absorpt. and fluoresc. study 2-77565
- NdP₂O₇ and NdNa(WO₄)₂, radiation quenching, cross relax. and excitonic behaviour 2-93247
- POCl₃-P₂O₅-Cl₄-SnCl₄:Nd³⁺, liquid laser performance and fluorescence 2-70556
- Pd complex, one-dimens. semicond. reflectance, absorpt. and luminesc. study 2-61961
- Pt complex, one-dimens. semicond. reflectance, absorpt. and luminesc. study 2-61961
- Pt, inverse photoemission, density of states, fluorescence 2-77698
- SiO₂:Nd glass, plasma torch CVD and fluorescence props. meas. 2-93436
- TbF₃, intrinsic fluorescence, energy transfer mechanisms 2-87839
- TbP₂O₇ and TbNa(WO₄)₂, radiation quenching, cross relax. and excitonic behaviour 2-93247
- ThCl₄:Pa⁴⁺, absorpt. and emission spectra, spin-orbit and crystal field parameters 2-99158
- UO₂(NO₃)₂·6H₂O, cryst. and frozen solns., visible spectra and fluorescence decay rates 2-61949
- YAG:Er³⁺, energy levels of Er³⁺, absorpt. and fluoresc. spectra 2-116252
- YAG:Er³⁺, fluoresc. spectra of Er³⁺, energy level diagram 2-67097
- YAG:Nd garnet, fluorescence lifetimes, particle size and refractive index effects 2-67114
- Y₂MoO₇:Eu³⁺, spectroscopic props. 2-93254
- Y₂O₃:Ce³⁺(Sm³⁺)(Dy³⁺)(Yb³⁺), energy levels, cryst. field anal., fluoresc. and IR study 2-72534
- Y₂O₃:Gd³⁺, Stark levels, cryst. field splitting, fluoresc. study 2-66505
- Y₂O₃:Nd laser oscillation props., point defect conc. effects 2-96954
- Y₂O₃:Nd powders, fluorescence lifetimes, particle size and refractive index effects 2-67114
- YOBr:Eu³⁺, cryst. field effects, fluoresc. study 2-66503
- YOCl:Bi³⁺, Stark level, cryst. field anal., fluoresc. study 2-66504
- YPO₄:Pr³⁺(Nd³⁺), IR spectra, Zeeman effect and fluoresc. obs. 2-72522
- Yb₂O₃:Gd³⁺, Stark levels, cryst. field splitting, fluoresc. study 2-66505
- ZnO:Cu,Yb(Tm) phosphors, photo- and electro-luminesc. studies 2-110909
- ZnP₂, Zn₃P₂, electronic struct., X-ray spectral investig. 2-82221

fluorescence of atoms see atomic fluorescence

fluorescence of molecules see molecular fluorescence

fluorescent lamps

- IES approved method electrical and photometric meas. 2-69233
- particle layer luminescence, two-const. models, fluoresc. lamp appl. 2-65157
- Ar-Hg plasma fluoresc. lamps, radiation prod. efficiency, mol. gas admixture effects 2-76070
- Hg-Ar discharge, analytical model for low-pressure gas discharges 2-81596

fluorescent screens

see also electroluminescence

- contrast-frequency characs. for recording IR radiation 2-58883
- frequency-contrast charact. reduction for IR imaging (*Russian*) 2-55350
- radiography, industrial, with phosphor screens 2-58987
- rare-earth intensifying screens, significance for dose reduction in X-ray diagnosis 2-78448
- X-ray intensifying screens, efficiency improvement by special design 2-78423

fluorimetry *see spectrochemical analysis***Fluorine***see also nuclei with*

adsorption on Si, SIMS and quartz cryst. microbalance obs. 2-82125
 atom, analysis of fine-structure excitation energies in Dirac-Fock and perturbation theories 2-75455
 atom, electron affinity, electron correl. SCF, GTO, CI calcs. 2-113895
 atom, hyperfine components of spin-orbit splitting, direct absorpt. meas. 2-80518
 atomic laser, gain and saturation meas. 2-90880
 carboxylic acid Langmuir-Blodgett films, frictional force, shear strength, rel. to fluorination 2-61318
 concentration profile, nuclear microprobe meas., appl. in archaeology and geology 2-100572
 diatomic molecules thermal dissociation with bound electron excited states 2-93764
 fast ions reson. coherent excitation in Au crystals 2-76537
 graphite:F⁻, ion implanted, ¹⁹F NMR spectroscopy study 2-61773
 intercalated with graphite, chem. synthesis by ion implantation, optical reflectivity 2-92006
 ion, implantation and distrib. in SiO₂/Si (*Chinese*) 2-109821
 ion implantation, improvement in Si minority carrier lifetime 2-66651
 ions, electron affinity calc. using MCSCF wave function, CI calcs. 2-96759
 laser, high-pressure UV-preionised discharge-pumped 2-55120
 molecular mag. props., electron correl. effects 2-108398
 molecule, ground and excited states, variational cellular calcs. 2-80447
 molecule, HF Slater wave functions calc. 2-96441
 molecule, rotational constants, using coherent anti-Stokes Raman spectroscopy of vibr. Q branch 2-85671
 molecule, valence shell dipole excitation, electron energy-loss meas., RPA exchange calcs. 2-65088
 molecule, vertical ionisation pots. calc. by perturbation corrections to Koopmans' theorem 2-70445
 multiply-ionised atoms, K-shell Auger rates 2-96525
 polyacetylene:F⁺, ion implanted, ¹⁹F NMR spectroscopy study 2-61773
 solid, electric hyperfine interactions 2-93088
 C:F, implanted and evaporated layers characterisation by RBS and PIXE anal. 2-99724
 Co:¹⁹F, temp. depend. of local mag. fields 2-82760
 F⁻ aqueous ion, intermol. nuclear spin-spin coupling and scalar relax., quantum and statistical mech. calcs. 2-90641
 F⁻, dipole hyperpolarisability, HF, CI and GTO calcs. 2-70149
 F⁻, dipole polarisability, electron correl. effects, MBPT CHF calc. 2-113893
 F⁻, electron correl. SCF, GTO, CI calcs. 2-113895
 F⁻, hydrated, mixed electrostatic quantum chem. approach MO calcs. 2-85530
 F⁻, methanol solvate, IR multiphoton dissoc. 2-85755
 F⁺ ion bombardment of Si, chem. sputtering yields meas. 2-87928
 F⁺, energy and transition probabilities correl. wavefunctions calcs. 2-113874
 F-H⁺ simultaneous decoupling in triple reson. ¹³C NMR 2-80659
 F+acetaldehyde (ethylene oxide) reactions, vibr. spectra of free radicals prod. in solid Ar 2-105453
 F+D₂, reactant-product angular momentum coupling, classical mechanical theory appl., Franck-Condon transition 2-72971
 F+H₂, collinear reactive scatt., hyperspherical description 2-105467
 F+H₂, cross sections, opacity functions, quasiclassical trajectory calcs. 2-83362
 F+H₂, dynamical instability, external perturbations in laser fields 2-99666
 F+H₂, kinetic field pot., Morse function, pot. energy surface 2-85770
 F+H₂, collinear reactions, S-matrix propag. along Delves' radial coordinate 2-62382
 F+H₂, reactive collisions, 3-dimens., reson. energies, semiclassical calcs. 2-111478
 F+HD(H₂)(D₂), collinear reactive scatt. resons. 2-111469
 F+Si surface, reaction, gas phase products anal. 2-83409
 F+SiF₃ chemiluminescent reaction 2-88361
 F+Xe, mol. form., at. beam scatt. study with mag. anal. 2-108738
 F+Xe 2-80784
 F+CO(N₂)(O₂)(CO₂), electron detachment cross sections meas. 2-59927
 F⁻+Cl₂ reactions, flowing afterglow study 2-62387
 F⁻+H₂, associative detachment reaction 2-114075
 F⁻+H₂(D₂)(HD), reactive scatt. 2-88345
 F⁻+H⁺, polarisation pots. and three body induction effects calc. from perturbation theory 2-108676
 F⁻+He(Ne)(Ar), electron detachment cross sections meas. 2-59927
 F⁻+Kr⁺, ion-ion recombination, reaction rates 2-99672
 F⁻+ZrF₄, enthalpies of reaction, mass spectrometric determ. 2-116719
 F⁺+He, radiative electron capture processes, X-ray prod. cross sections 2-96725
 F⁺+Ne, excited states, electron excitation and capture, X-ray spectra 2-75418
 F⁺+He, radiative electron capture processes, X-ray prod. cross sections 2-96725
 F⁺+He, one-electron capture cross sections 2-96723
 F⁺+Ne, F K-shell X-ray prod., charge state depend. 2-96708
 F⁺+Ne, inner-shell excitation, quasisonant charge transfer, K-Auger emission 2-75416
 F₂+Ca, chemiluminesc. reaction, product vibr., product alignment depend. 2-83348
 F₂+Ga(In), product form. rate, excited states, chemiluminescence obs. 2-83359
 F₂+Li, chemi-ionisation reactions 2-72968
 F₂+Li, excited atom system, pot. surface for weakly bound electron in coulombic and point pot. field 2-108411
 F₂+Mu(H)(D)(T), collinear reactions, semi- and quasi-classical probabilities calcs. 2-105473
 F₂+SiF₃ chemiluminescent reaction 2-88361
 F₂, electronic struct., CNDO/2 and INDO calcs. 2-102389
 F₂ isoelectronic sequence, 2s²2pⁿ-2sⁿ-1pⁿ⁺¹ intersystem transitions 2-80530
¹⁸F, effective activity for very short-lived radioisotopes (*Japanese*) 2-101851
 Fe:F, concentration depth profiling using nuclear reson. reactions 2-98139

Fluorine continued

He-F₂ mixture low-temp. plasma, spectral characts. and electric parameters 2-81457
 Ne-F₂ mixture low-temp. plasma, spectral characts. and electric parameters 2-81457
 Si:BF₃⁺ single cryst., pulsed laser irradiated, ion implanted, F conc. profile 2-115263
 Si:F, amorphous, dangling bond ESR, effect of H or F, Huckel mol. orbital calc. 2-56933
 Si:F, amorphous, ESR study relation between defects and incorporated F (*Japanese*) 2-87588
 Si:F, H, amorphous, density of localised states, DLTS study 2-98591
 Si:F, H amorphous films, photoelec., and optical props. Schottky barrier solar cell form. 2-83480
 Si:F,H,P films, critical vol. fraction of crystallinity for conductivity percolation 2-56379
 Si:F,H amorphous films, solar cell form., film elec. and optical props. 2-83481
 a-Si:F and a-Si:F, B(P) films, cathodic deposition, charact. 2-88011
 a-Si:F and a-Si:F, H films, motional narrowing effects of NMR spectra 2-77395
 Si:H, F, amorphous, ODMR study 2-93065
 Si:H,F, amorphous film, NMR and ESR study 2-93003
 a-Si:H,F, dangling bond centres energy level, ODMR study 2-110732
 Si:O,H,F, amorphous, photoluminescence, localised states, temp. depend. 2-87854
 Si:F amorphous film, grown from SiF₂ disproportionation, F conc. determ. 2-92021
 SiO₂:F, vitreous silica optical fibre preform, Raman spectra anal. 2-65382
 SnO₂:F,Sb film, spray coated, dopant effects on elec. cond. and optical absorpt. props. 2-72088
 SnO₂:F films, spray prep. and elec. and optical props. 2-105069
 SnO₂:F transparent cond. films., prep. and props., review 2-105068
 SnO₂:F(Sb,F) film, elec. resist. and optical absorpt. and reflection spectra meas. 2-66675
 Ti+F, heavy ion-atom collision, double to single K vacancy production ratio 2-90678

fluorine compounds

alkali halides:HFH⁺, IR spectra 2-82843
 fluoerovskites, 3rd and 4th order elastic const. 2-98181
 fluoride in Arabian Sea 2-111967
 fluorites, anion Frenkel defects, entropy of formation, quasiharmonic calc. 2-80704
 fluorocarbon spheres, coupling between ¹⁹F and ³He nuclei on surface, NMR data anal. 2-110664
 photography, gelatin partial substitution using F₂-containing surface active substances (*Russian*) 2-74550
 FCN, anharmonic force fields, ab initio calcs. 2-75174
 FCN, excited vibr. states, rot. spectra, equilib. struct. 2-96543
 FCI molecule, quadrupole moments of F nuclei 2-70442
 F₂Cl, electronic struct., CNDO/2 and INDO calcs. 2-102389
 FClO₂⁻ radical, coupled transitions, higher order effects ESR spectra 2-90578
 FClO₂⁻ radical anion, ESR spectra and struct. 2-65022
 FD+Li, collinear exchange reactions, quantum mech. calcs. 2-62381
 FH electron density, pseudoatom expansion 2-60931
 FH+Li, collinear exchange reactions, quantum mech. calcs. 2-62381
 FH+Li, endothermic reaction, vibr. threshold, pot. energy surface 2-99658
 FH₂⁺ ground state, near Hartree-Fock calcs. 2-80460
 F₂NO(PO), photoelectron spectra, bond struct., X_α approx. 2-54769
 F₂O, vibr. spectra, triple resonances 2-108463
 FSCN, He(I) photoelectron spectra, valence ionisation energies, HF Slater calcs. 2-80728
 FSO₂ radical, coupled transitions, higher order effects ESR spectra 2-90578
 FT+Li, collinear exchange reactions, quantum mech. calcs. 2-62381
¹⁸F-5-fluorouracil, dosimetry and preliminary human studies 2-78452
 H+XY and X+HY where X and Y are halogen atoms, semiempirical pot. energy surfaces 2-99644
 OH, bond functions for ab initio calcs., MCSCF calcs. 2-96438

flux (magnetic) *see magnetic flux*flux (neutron) *see neutron flux***flux creep***see also flux pinning*

No entries

flux crystal growth *see crystal growth from solution***flux flow***see also flux pinning*

film, localised resistive domains, model (*Russian*) 2-56806
 Josephson contacts, connected soliton states (*Russian*) 2-87456
 Josephson junctions, vortex lines, eqn. of motion 2-82550
 Josephson transmission line, fluxon propagation 2-87460
 two-dimensional superconductors, vortex dynamics 2-110554
 type II superconductors, with uniform movement of vortex lines 2-56804
 vortex-vortex system stability, cutting of bent vortex lines 2-98828
 weak link, current-biased, fluxoid tunnelling, QED theory 2-72117
 In film, localised resistive domains, model verification (*Russian*) 2-56806
 Nb-Ta ribbon, abnormal transverse field effects, pinning characts. 2-110552
 NbSe₂, anomalous flux entry 2-87462

flux-line lattice
 corrugated film in transverse mag. field, vortex struct., upper crit. field increase, crit. currents (*Russian*) 2-56805
 cylinder in axial mag. field, mag. flux density distrib. calc. 2-98827
 monofilamentary nonideal type II supercond. wires, linear array, abnormal transverse field effect 2-56775
 pinned, elastic Green's function 2-61674
 rare earth ternary cpds., mag. and supercond. props. 2-115937
 superconducting film, vortex phase dielec. const., AC impedance meas. 2-72116
 superconductors, type II, vortex lattice alteration at defects, pinning (*Russian*) 2-92846
 two-dimensional superconductors, vortex dynamics 2-110554
 type II superconducting cylinder with longitudinal current, flux-line instability in absence of vol. pinning 2-82551
 type II superconductor, oscillating disc, hysteresis losses and mag. phenomena 2-66729
 vortex-vortex system stability, cutting of bent vortex lines 2-98828

flux-line lattice continued

- Nb, peak effect near $H(c_1)$, crit. current meas. 2-77245
 Nb₃Al, supercond., ultimate crit. current density (*Chinese*) 2-110556
 Nb₃(AlGe), supercond., ultimate crit. current density (*Chinese*) 2-110556
 V₃(HfZr), supercond., ultimate crit. current density (*Chinese*) 2-110556

flux line motion *see flux flow***flux pinning***see also flux creep; flux flow*

- A15 superconductors, atomic disorder rel. to superconductivity 2-56769
 flux-line lattice, pinned, elastic Green's function 2-61674
 Josephson transmission line, fluxon propagation 2-87460
 metals, supercond., subsurface layers quality eval., electrophys. methods 2-115959
 monofilamentary nonideal type II supercond. wires, linear array, abnormal transverse field effect 2-56775
 narrow thin films, obs. of flux trapping threshold 2-82529
 neutron irradiation effects on alloy superconductors [for fusion reactor magnets] 2-110553
 superconductors, type II, vortex lattice alteration at defects, pinning (*Russian*) 2-92846
 superconductors, vortex line pinning to small defects 2-87464
 trapped flux, distrib. of pinning force 2-61669
 type II superconductors, total pinning force calc. without threshold criterion 2-61675
 Nb foil, He ion irradi., supercond. props., pinning mechanisms (*Russian*) 2-66728
 Nb, polycrystalline and single cryst., vortex pinning obs. (*Russian*) 2-115958
 Nb, subsurface layers quality eval., electrophys. methods 2-115959
 Nb:Ar, O₂ supercond. thin films, ion implantation effects on supercond. props. 2-77226
 Nb-Ta ribbon, abnormal transverse field effects, pinning characts. 2-110552
 Nb₃Sn, supercond., low bulk pinning, min. in AC losses 2-92842
 PbGa₂Mo₂S₈, flux pinning force, scaling laws (*Russian*) 2-92845
 PbMo_{0.8}S_{2.2}, thin film, sputtered supercond., crit. currents and scaling laws 2-61677
 PbMo_{0.5}S_{2.5}, scaling law parameters, upper critical field, critical current meas. 2-56803
 SnGa₂Mo₂S₈, flux pinning force, scaling laws (*Russian*) 2-92845
 Ti-Nb-Si-Ge foil, struct. and supercond. props. (*Russian*) 2-92818

flux vortex flow *see flux flow***flux vortex lattice** *see flux-line lattice***fluxmeters***see also magnetic field measurement; magnetic flux*

- certification in nW range, metrological aids 2-95411
 superconducting susceptometer for high-accuracy routine operation 2-101429

fluxoid array *see flux-line lattice***foams***see also bubbles*

- formation hydrodynamics from a viscous fluid with bubbles 2-114869
 laser absorption rate in low density foam target, obs. and computer calc. 2-90960
 latex spheres, STEM image processing 2-113071
 liquid thin films, stability, rel. to foam stability 2-71779
 plastic, mech. props. change during storage, prediction 2-116508
 polymeric foam, compressive deform. 2-116510
 polystyrene, monodisperse lattices, particle size determ., stopped-flow spectroscopy 2-84593
 polyurethane foam, mech. props. change during storage, prediction 2-116508
 polyurethane foams, elastic, fracture under short-term loading, statistical obs. (*Russian*) 2-109900
 sea, electrodynamic description of densely packed dispersed systems, thermal radioemission 2-73019
 sea foam IR reflectivity, 0.5 to 2.8 microns 2-106346
 sea surface obs. and calc., empirical microwave emissivity model 2-100393

focused collision sequences *see sputtering***focusing***see also self-focusing*

- aperture and far-field distributions expressed by the Debye integral representation of focused fields 2-102711
 autofocus, through-the-lens, for Pentax ME-F camera 2-53860
 autofocus system for lens shutter cameras using NMOS technology 2-101478
 axicon focused laser, appl. to plasma prod. 2-65741
 beam optical systems, spherical aberration, analytical expressions 2-80903
 Canon AF 35 M, automatic focusing distance meas. system (*Italian*) 2-101474
 charged particle steering by bent single crystals, possible appl. 2-80359
 combined electron focusing and deflection systems, fundamental rays and aberrations (*German*) 2-90794
 cone-edge focusing by single round electrostatic lenses 2-55056
 converging spherical wave diffraction, focal shifts 2-60017
 cyclotrons, radial-longitudinal coupling and focusing complementarity 2-85427
 cylindrical mirror energy analyser, improved aberration corrector 2-65148
 diaphragm aperture, focusing of light beams with Gaussian intensity distrib. 2-97163
 electric deflectors with a spatial main path, ion optics 2-53890
 electron bombardment system focusing adjustment for thin film prep. (*Chinese*) 2-62067
 electron focusing-deflection system with multi-stage deflectors, relativistic aberration theory 2-75507
 electron focusing-deflection system with multi-stage deflectors, relativistic aberration theory (*Chinese*) 2-90792
 electron microscopy, surface relief investigation using defocused images 2-112865
 gradient singlet, ideal imaging of point at infinity 2-108998
 inclined-plane electron spectrometer, focusing props. study with intrinsic Ge detector 2-64739
 intense ion beams, very low emittance, generation method, inertial confinement fusion driver appls. 2-96359
 intense ultrarelativistic electron beams in vacuum, image-field focusing 2-85453

focusing continued

- ion beam source focusing using inverse reflex tetrode, expt. study 2-89855
 ion focusing by travelling wave field in linear accelerator, efficiency 2-102288
 ion mass and energy analyser 2-101488
 ionosphere radio wave reflection, focusing by large-scale ionospheric inhomogeneities 2-112197
 laser systems, large solid-state, aberrations and focusability 2-97035
 lens-shutter automatic focusing camera rangefinder system simulations 2-91027
 light propagation, linear nonuniform medium, phase conjugation, aperture probing, interference, optimum focusing 2-85896
 liquid sphere, acoustic wave focusing, reson. features 2-102964
 low-energy ion beam transport, periodic focusing structure 2-75088
 magnetic focusing prisms with hyperbolic field, aberrationless variants 2-55058
 magnetised Fe lenses, nonlinear focusing effects on muons 2-64735
 mapping Karlsruhe nucl. microprobe, elemental conc. mapping 2-99725
 microwave radio meteorology, fading by beam focusing 2-106295
 mirror, deformable glass, thickness profile determ. for variable focus device 2-70648
 neutralised rippled magnetically focused electron beam, electrostatic stability anal. 2-85881
 optical element focusing props., optical profilometer method for high sensitivity and wide dynamic range 2-107295
 optical radiation focusing onto microscopic objects, theory 2-86031
 parametric oscillators, singly and doubly resonant, threshold pump intensity, focusing effects 2-81020
 particle beam, variable phase focusing, expt. study (*Russian*) 2-113806
 projection photolithography system, focusing and alignment by wavefront conjugation 2-84727
 proton and nuclear microprobe developments 2-95550
 quasiparallel ray bundles, focal spot dimensions 2-102717
 Russian quadruplet, rotational misalignments 2-108197
 solar corona, radio waves focusing in large-scale coronal geometries rel. to Sun radar cross sections 2-100875
 sound focusing by a liq. sphere 2-60279
 speckle, time-varying, correlations near focal plane of lens 2-55068
 synchrotron X-radiation sagittal focusing with curved crystal 2-84753
 TE focus wave mode pulse formulations, homogeneous Maxwell eqns. 2-102702
 wavefront coherence depend. on focusable power, optical spatial filter characts. (*Chinese*) 2-60219
 X-rays and gamma rays, focusing method using bent diffraction crystals 2-53909
 CO₂ Antares laser, alignment gimbal positioner 2-102814
 CdS, plastically deformed, light propag. obs., dislocations effect 2-67024
 Cu, surface (110), Ne^+ and H_2O^+ ion scatt., angular distrib., surface geometry 2-62035
 N₂⁺ ion beam trajectories, direct obs. during deceleration 2-102709

focusing, particle *see focusing; particle optics***fog**

- acidity of dew, frost and fog 2-94478
 Aki-Nada, Japan, fog occurrence without rain, case study 2-100460
 atmospheric, nonequilibrium acoustic phenomena 2-70744
 Cape Cod Canal, tidal current connection with fog, temp. anal. 2-94429
 chamber characts., used for electrooptical device performance meas. 2-96834
 droplet distrib. functions for lidar 2-73610
 extinction in visible/IR in fog and snow 2-117388
 fog dissipation due to solar heating of land 2-100522
 formation in salt-laden marine winds 2-83927
 light scattering and colour of haze, theory 2-68483
 Los Angeles, photochem. smog chem. composition 2-83530
 microphysical struct. obs. made using optical-electrical method (*Chinese*) 2-78740
 millimetre-wave propagation through fog, meas. at Ballistic Research Laboratory 2-117392
 multiday smog episode in California S. coast air basin, trace pollutants 2-57748
 optical properties of aerosols growing to fog 2-117451
 pollutant reversible absorption into fog layer 2-83870
 pulsed clearing of synthetic aqueous aerosols by CO₂ laser radiation 2-65279
 smog formation in California, NO_x emission effects 2-62522
 supercooled fog, dissipation by artificial nucleation of ice crystals. 2-100484
 survey of fog and related EM wave propag. characts. 2-112087
 winter fog in West Germany during Meppen 80, optical and physical props. 2-117449

foils

- constant fatigue damage gauge design 2-111433
 electrodeposits, ESCA signal intensity dependence on surface area (roughness) 2-110098
 electron scattering physics 2-72586
 energy dispersive X-ray anal. 2-73032
 fission foil targets prep. for fission ionisation chambers by painting 2-108184
 materials with $Z_p=23-30$, electronic stopping cross section for 30-300 keV protons 2-66086
 metallic foils, high-speed casting by double-roller quenching technique 2-99370
 nuclear target development, conf., Gatlinburg, TN, USA (Oct. 1980) 2-106997
 pion-induced β -activity in extended foils, 2D meas., cancer treatment dosimetry appl. 2-73369
 point defect sink strength, thin foil, with bulk recombination 2-60970
 polycarbonate foils electrochemically etched with methyl alcohol-KOH soln., low neutron fluences meas. 2-64756
 polypropylene foil condenser, thermoelectret, TSC study 2-72406
 textured foils, primary elastic consts. meas. method 2-81301
 thickness determ. by electron probe microanal. (*French*) 2-110995
 transparent thin target, laser irradiated, rear surface temp. meas. 2-57220
 X-ray analysis, single-scattering model, spectral resolution 2-116766
 Ag foil, adsorbed thiophene reactive layer, molecular SIMS 2-87056
 Al alloys, vacancies generation study during oxidation, electron microscope method 2-72897
 Al foil, deformation twinning, TEM study 2-66013

foils continued

- Al, oxide film chem. composition, influence on surface props., SIMS, XPS, AES 2-104209
 Al, surface oxidation and segregation, SIMS studies 2-105388
 Au, elec. cond., 4.2 to 20K, Cl, annealing effect 2-104344
 Be foils, high purity, prep. by vapour deposition 2-108195
 C, energy loss of 300 keV He^+ and N^+ ions 2-81864
 C foils behaviour under ion irradiation 2-66076
 C stripper foil lifetimes, temp. influence 2-75090
 C stripper foils, laser treated, prep. and tests 2-108174
 C stripper foils, procedure for rapid evaluation 2-108175
 C, stripper foils, recent development work and meas., review 2-108176
 C stripper foils for JAERI tandem accelerator, development apparatus 2-96344
 Co-based alloy, foil thickness meas. from convergent-beam diff. patterns, error assessment 2-95557
 Cu, twin boundary struct., high resolution electron microscopy study 2-71471
 Cu-Ni composition modulated foils, thermoelec. props. meas. 2-98629
 Cu-Ti alloy, thin foil, microstruct. changes 2-71826
 Fe foil, electroforming at high current density 2-99359
 Fe-Ni, ferrite-austenite orientational relationships during $\gamma \rightarrow \alpha$ transformation (Russian) 2-93505
 Nb foil, He ion irradiat., supercond. props., pinning mechanisms (Russian) 2-66728
 Ni-NO₂ black foil, optical and thermal props. 2-67139
 Pd, chemisorption of CO, segregated P effect 2-115557
 Pt, foil, graphite covered, Br₂ lobular scatt. 2-99269
 Ti-Nb-Si-Ge foil, struct. and supercond. props. (Russian) 2-92818

Fokker-Planck equation

- adiabatic processes in condensed phases, quantum stochastic Fokker-Planck theory 2-89615
 alpha-particle distrib. function, collisional losses, Fokker-Planck basis calc., for Tokamak reactor 2-81556
 asymptotic methods in the theory of linear kinetic equations 2-101361
 atoms and ions undergoing Brownian motion, nonlinear light absorption calc. (Russian) 2-70197
 bistable system with multiplicative noise, enhancement of critical onsets 2-74331
 Boltzmann-Fokker-Planck eqn., numerical soln. 2-84566
 Brownian motion, boson operator representation 2-112820
 Brownian motion, in quantising magnetic field, quasiclassical model 2-58710
 Brownian particle in uniform field, Fokker-Planck eqn., kinetic boundary layer 2-84520
 bunch diffusion due to RF noise 2-113799
 condensed phase, molecular dynamics, Fokker-Planck approach 2-74328
 dechannelling model based on the stochastic theory for the axial channelling particles 2-98173
 deep inelastic collisions, approach to irreversibility 2-54347
 desorption kinetic equations 2-61283
 desorption times, from rate eqn., master eqn. and Fokker-Planck eqn. 2-61284
 diffusion processes, class of exact solns. to Fokker-Planck eqns. 2-95279
 dissipative heavy-ion collision, local equilibration effects 2-107889
 dye laser threshold region, quantum description 2-65212
 dye molecules, excited state lifetime and fluoresc. quantum yield, solvent viscosity effects 2-70320
 eigenvalue and definite evolution operator soln. 2-89641
 electron channelling, axial, in single cryst., multiple scatt. (Russian) 2-56063
 electron-cyclotron resonant heated electron distribution functions, bounce-averaged Fokker-Planck calc. 2-103307
 exact solutions to some Fokker-Planck equation with non linear drift 2-101354
 fission, Brownian motion model 2-59323
 fluctuating nonlinear waves, reson. test field model 2-65606
 fusion reactor Fokker-Planck calculations using standard discrete-ordinates transport codes 2-90298
 generalized Fokker-Planck equation for quantum systems 2-95234
 Grad-Fokker-Planck equations of collision moments 2-86382
 harmonic liquid, one dimens., nonequilibrium steady state fluctuations, Fokker-Planck eqn. 2-103584
 heavy-ion collisions, relative motion phase space evolution, numerical studies 2-113564
 Hilbert and Chapman-Enskog asymptotic expansion methods for linear evolution equations 2-58733
 Hopf bifurcation with fluctuating control parameter, Fokker-Planck eqn. soln. 2-84541
 interstellar magnetic fields, Fokker-Planck eqn. for plane-parallel fields in thin galactic disc 2-68905
 ion stochastic heating by LH wave, two dimens., Fokker-Planck eqn. soln. 2-103398
 Langevin eqns. with multiplicative coloured noise 2-89620
 lower and upper bounds for the eigenvalues of the Fokker-Planck equation in detailed balance 2-84540
 magneto-acoustic cyclotron instability due to neutral beam injection 2-109490
 magnetoplasma, quiescent collisional, nonstationary irreversible thermodynamics 2-97706
 magnetoplasmas, symmetric, collisional transport theory, perturbative-variational method 2-109465
 molecular dipole reorientation, Fokker-Planck Kramers autocorrel. functions and IR spectra 2-104860
 molecular laser, rot. exchange kinetics 2-75559
 molecular-ion dissoci. expts. interpretation 2-80775
 multiplicative noise, analytical and numerical studies 2-107244
 neutral beam injection heating, TEXTOR simulation, Monte Carlo method 2-81574
 neutron transport, diffusion length, absorber conc. 2-58739
 nonadiabatic processes in condensed phases and on surfaces, quantum stochastic theory 2-89616
 nonequilibrium phase transitions, fluctuation dynamics (French) 2-84586
 nonlinear oscillator, Hamiltonian model 2-107242
 open field line fusion plasma, slowing-down, alpha-particle losses 2-71075
 optical bistability, absorptive, fluctuations and transitions 2-97091
 optical bistability, dispersive, with fluctuations, Fokker-Planck eqn. 2-97090
 optical bistability, generalised coherent state P-representation 2-97097

Fokker-Planck equation continued

- path integrals for Fokker-Planck equation described by generalized random walks 2-84528
 perturbed system, transient moments, Fokker-Planck spectrum 2-74333
 phonon thermal baths, reduced models 2-81924
 physisorption kinetic eqns., compensation effect 2-115532
 plasma, neoclassical transport coeffs., variational calc. using full Fokker-Planck collision operator 2-76083
 plasma instability, Vlasov-Fokker-Planck description 2-76126
 plasma kinetic theory, review, book contrib. 2-71093
 radiation boundary condition and Fokker-Planck eqn. reduction in diffusion eqn. 2-101304
 radiation transfer in strongly magnetised plasma, Fokker-Planck eqn. 2-78945
 random differential equations in river water quality modeling 2-78264
 reaction-diffusion system fluctuations (Chinese) 2-111450
 relativistic plasma, runaway electrons, Fokker-Planck eqn., recursive soln. 2-65689
 resonance-light pressure, theory 2-90847
 semiconductor diffusion processes, numerical solns. of Fokker-Planck eqn. 2-71733
 stochastic particle acceleration in turbulent plasma 2-112822
 suspension, of dipolar Brownian particles in electric field, transport and relaxation 2-79505
 test particle distrib., interaction with electron gas, Fokker-Planck coeff. calc. 2-84087
 turbulent superfluid-multiplicative noise in Vinen eqn. 2-82052
 two-level atom, resonance fluorescence, classical and quantum mech. approaches 2-113922
 Vlasov-Fokker-Planck operator, point spectrum 2-76085
 weakly nonpotential system, Kramers time 2-112804
 zitterbewegung-possessing particles, generalised Fokker-Planck equation 2-107276
 H atom problem in stochastic electrodynamics, stochastic process nonrecurrence 2-74236
- food processing industry**
 sugar cane, aerodynamics of pneumatic drag, mathematical model for more efficient sorting methods (Spanish) 2-55609
- forbidden gap** see energy gap
- Forbush decreases** see cosmic ray variations
- force**
 see also atomic forces; coercive force; Coriolis force; force measurement; molecular force constants; nuclear forces
 magnetic field, saturable, EMF, torque and stiffness, finite element anal., stationary method 2-80874
 parabolic trough solar collectors mean wind loading anal. by wind tunnel force and moment tests 2-78228
- force constants** see lattice dynamics; molecular force constants
- force measurement**
 see also dynamometers
 AC force transducer using amorphous ribbon cores 2-84613
 dynamic calibration and checking of force gauges 2-95366
 electrical force measuring transducers review 2-95358
 hydroelastic gate model, transducers for force and vibration meas. (German) 2-76053
 knee ligament force meas., appl. and evaluation of Buckle transducer 2-105878
 lift force on sediment grain, piezoresistive gauge rel. to laser Doppler meas. 2-68539
 muscular action measurement, use of strain gauge meas. method (German) 2-88709
 orthosis, lower limb, transducer for loads meas. 2-100158
 piezoelectric strain transducer for force meas. in presses, up to 500 tons (German) 2-64019
 quantum amplifier limits 2-84590
 review 2-107303
 Salter Abbey electronic gauge, hand-held 2-101395
 sensors for force, pressure, displacement and flow, conf., Enschede, Netherlands (May 1982) 2-94913
 strain-gauge balances, capacitive transducer linearisation 2-58809
 strain-gauge load cell, advantages over electronic proving ring 2-101381
 transducers, intelligent, with built-in semiconductor circuits for physical quantities conversion into digital signals (German) 2-76045
 SI strain gauges application to pressure and force measurement in biomedicine (Czech) 2-57917
- force meters** see force measurement
- forecasting, technological** see technological forecasting
- forging**
 metal forming simulation 2-72758
 metals, shear bands, occurrence during isothermal hot forging 2-57383
 solid cylinders, acoustic emission during forging 2-105433
 steel, cold forgeability, effect of microstruct. 2-99456
 steel, low-alloy, rolling rolls quality, forging and heat treatment influence 2-67392
 steel stainless, dense powder metallurgical, prod. methods and mech. props. 2-99371
 superalloys, gas turbine hot section components fabrication, using advanced forming methods 2-93475
 Fe-base superalloy A-286, effect of composition and high energy rate forging on precipitation 2-11183
 LiF, forging processes development for large scale deform. without optical props. degradation 2-60194
 W fibre reinforced Ni superalloy, high temp. composite, microstruct. stabilisation with ZrO₂ short fibres (German) 2-77781
 W wire reinforced Ni-base superalloy, flow and fracture behaviour during isothermal forging 2-93617
- form factors, atomic** see atomic structure
- form factors (elementary particles)**
 see also form factors (nuclear)
 baryon form factor, non-renormgroup contrib., double log. suppression (Russian) 2-95840
 deuteron form factor, quark exchange corrections (Russian) 2-54256
 effective T and S form factors, single logarithms accuracy calc. (Russian) 2-59153
 exclusive processes in QCD 2-54091
 N, EM form factors, from $\pi^+p \rightarrow e^+e^-n$ and $\pi^-n \rightarrow e^-e^+p$ (Russian) 2-64341
 neutral mesons, form factor in QCD, with account for gg states (Russian) 2-64293

form factors (elementary particles) continued

- nucleon neutral weak form factors from lepton-nucleon elastic and inclusive processes 2-59150
 nucleons, pionic corrections to props. in cloudy bag model 2-54104
 perturbative QCD, conf., Tallahassee, FL, USA (March 81) 2-53409
 pion EM form factor using extended VDM 2-95838
 pion form factor, corrections using perturbative QCD and dimensional regularisation 2-54155
 pion form factor and sum rules in QCD 2-113273
 pion form factor at intermediate momentum transfer in QCD 2-107661
 QCD, EM transition form factor of 1^{++} meson, large momentum behaviour (Chinese) 2-79827
 quark core of nucleons, electromagnetic properties in confining potential 2-113245
 quark potential model for light and heavy quark systems 2-54103
 quark-hadron form factors, damping, and diffraction scatt. 2-74689
 relativistic quark model in infinite momentum frame and nucleons static characts. 2-79843
 semi-inclusive hard processes in QCD, eikonal corrections 2-101661
 d, elastic EM form factors, parton light-cone approach, quark interchange 2-95837
 e radius and energy radiation 2-54156
 e⁻, infrared QED 2-107598
 ed-ed, EM form factor meas. procedure 2-113276
 e⁺e⁻ → a+b+X, cross section, QCD soft gluon emission resummation 2-79899
 e⁺e⁻ → hadrons, 12-36.7 GeV CM, total cross section meas. 2-95854
 e⁺e⁻ → π⁺π⁻, pion form factor meas. near threshold using localised discharge spark counter 2-90356
 J/ψ → BB, B=baryon, isospin-violating EM contrib. 2-69456
 K p, 30 GeV/c, elastic scatt., hadronic form factors and quark size determ. (Russian) 2-54213
 Λ → p e ν, Cabibbo theory comparison, form factors, radiative corrections 2-113269
 n, elastic EM form factors, parton light-cone approach, quark interchange 2-95837
 n, relativistic form factors for hadrons with quark-model wave functions 2-95839
 N → Δ(1232), EM transition form factor, πN dynamics 2-113277
 ν_e(p) elastic scatt., cross sections, Weinberg-Salam theory, form factors (Russian) 2-113264
 ν_ed → μ pp, momentum transfer distrib., axial vector form factors 2-101703
 νp → μ p π⁺, nucleon axial-vector elastic form factor charact. mass 2-69442
 p, elastic EM form factors, parton light-cone approach, quark interchange 2-95837
 p, relativistic form factors for hadrons with quark-model wave functions 2-95839
 pp, 30 GeV/c, elastic scatt., hadronic form factors and quark size determ. (Russian) 2-54213
 π, EM form factors, from π⁻p → e⁺e⁻n and π⁺n → e⁺e⁻p (Russian) 2-64341
 π, EM form factors and struct. functions, dressed quark model 2-59149
 π, relativistic form factors for hadrons with quark-model wave functions 2-95839
 π, wave function and EM form factor, large momentum behaviour, QCD and renormalisation theory 2-59148
 π → e ν γ, radiative decay, axial form factor, QCD nonperturbative contrib. 2-84895
 π form factor and QCD sum rules (Russian) 2-79881
 π⁺ charge form factor, rel. to proton 2-89964
 Σ⁺ → n e ν, Cabibbo theory comparison, form factors, radiative corrections 2-113269
 Σ⁺ Λ e⁺ ν, A polarisation and vector/axial vector form factor ratio 2-84892
 W[±] → P[±] γ, P=pseudoscalar meson, strong interaction effects 2-59155
 Z⁰ → P⁰ γ, P=pseudoscalar meson, strong interaction effects 2-59155

form factors (nuclear) continued

- A=12 system, isovector 0⁺ → 1⁺ transition, chiral symmetry and axial charge density 2-95961
 A=3-4 nuclei, binding energy, radii, form factors, Jastrow variational calc. 2-59261
 A=6 nuclei structure in α+2N model, ground and excited states variational study 2-79948
 analytic parametrisation, appl. to ³He 2-107744
 electron scatt. from complex nuclei, review 2-54358
 EM interactions on light nuclei, review 2-54359
 heavy ion reactions, isovector mode inelastic excitation, microscopic form factors, giant dipole resonances 2-59232
 heavy-ion fusion, barrier-penetration model 2-96040
 hyperspherical harmonic expansion method, higher order effects 2-59270
 inclusive processes, model for nuclear response function 2-59231
 inelastic electron scatt. form for 2⁺ states excitation in ¹⁷O nuclei 2-54361
 leptoproduction of neutrino pairs by nuclear Coulomb field, equiv. photon approx. 2-85029
 light nuclei ground and excited states in the three-body model, variational study 2-79960
 pion-nucleus optical pot., pion absorpt. contrib. 2-74779
 short-range correl. on one- and two-body props. of nuclei 2-54266
 (e,e), target charge distrib., form factors 2-59338
⁴He, charge form factor, meson exchange current, three-body forces 2-74729
 (p,α), microscopic form factor for DWBA anal. 2-54374
 π⁺He³ H coupling constant, in dispersion relation and impulse approx. 2-79945
¹⁷O(e,e), 80-338 MeV, M1 form factor, rel. to shell model 2-107852
¹²C RMS radius, charge distribution, from factors, from (e,e) measurements 2-113357
¹²C(γ,π⁺)¹²B, nuclear form factors in timelike region and pion photoproduction 2-64395
¹²C(μ,ν), (p,ν), total and differential cross sections, pseudotensor form factor effects 2-69646
¹²C(ν,e⁺e⁻), (p,e⁺e⁻), total and differential cross sections, pseudotensor form factor effects 2-69646
¹²C(μ,μ), total and differential cross sections, pseudotensor form factor effects 2-69646
¹³C(e,e')¹³C*, DWIA anal. using Cohen-Kurath wave function 2-101880

form factors (nuclear) continued

- ⁴⁰Ca, charge form factor from hyperspherical function method (Russian) 2-107747
⁴⁰Ca(e,e'), 31-65 MeV, form factors meas. for 10.32 MeV transition 2-85034
⁴⁰Ca(e,e'), spin-isospin mode excitation 2-95993
⁴⁰Ca(π⁺, π⁺), 64.8 MeV, elastic scatt. cross section ang. distrib. 2-90165
^ACu(e,e), A=63, 65, cross sections for elastic mag. scatt. 2-113465
²H EM form factor in six-quark models of two nucleon current 2-79987
²H, elastic EM form factors, parton light-cone approach, quark interchange 2-95837
²H form factor, quark exchange corrections (Russian) 2-54256
²H form factor, six-quark structure 2-95913
²H magnetic form factor, quark model of two-baryon currents 2-84863
²H(e,e'), inelastic scatt., cross section and polarisation of recoil electron 2-69648
²H(e,e), EM form factor meas. procedure 2-113276
³H, binding energy, size, form factor, NN pot. in many-body variational approach (Russian) 2-59259
³H, charge form factor and density, three-body force effect 2-54251
³H, three nucleon bound state with mesonic and internal nucleonic degrees of freedom 2-59246
³H, two-pion exchange three nucleon force effects, form factor 2-95927
³H(e,e'), 77-147 MeV, charge form factor and charge radius 2-69522
³H(e,e), EM struct. at large Q² 2-95912
³He, charge form factor and density, three-body force effect 2-54251
³He magnetic form factor, from realistic wave functions 2-59237
³He, three nucleon bound state with mesonic and internal nucleonic degrees of freedom 2-59246
³He, two-pion exchange three nucleon force effects, form factor 2-95927
³He(π⁺, π⁺)³H, differential cross-section, optical model calc., mag. radius depend. 2-96046
⁴He, charge form factors from hyperspherical function method (Russian) 2-107747
⁴He, nucleon-trinucleon overlap function parameterisation and meson exchange corrections effect 2-113377
^AHe, A=3, 4, binding energy, size, form factor, NN pot. in many-body variational approach (Russian) 2-59259
^AHe, A=3, 4, form factors, multi-quark cluster effect 2-84948
^AHe(e,e), A=3, 4, EM struct. at large Q² 2-95912
⁶Li(e,e'), 80-300 MeV, magnetic form factor, cluster model anal., exchange currents 2-69523
⁶Li(γ,π⁺)⁶He, nuclear form factors in timelike region and pion photoproduction 2-64395
⁷Li charge form factor calc. 2-90123
¹⁴N(p, p'), 0.8 GeV, elastic and inelastic scatt., ang. distrib. meas. 2-90107
¹⁶O, charge form factors from hyperspherical function method (Russian) 2-107747
¹⁶O(e,e'), spin-isospin mode excitation 2-95993
¹⁶O(e,p), quasifree scatt., structure functions, bound state, distorting optical pot. 2-113464
¹⁷O, magnetic form factor, higher order effects 2-54255
¹⁷O magnetic form factor, three-body effects 2-59234
¹⁷O(e,e'), magnetic elastic form factor and $1d_{5/2}$ orbit radius 2-59341
¹⁸O(e,e'), inelastic scatt. from low-lying even-parity states 2-64397
²⁰⁸Pb(e,e'), 40.5, 50.4, 60.3, 75.2 MeV, transverse electric form factors, M1 transition strength levels 2-113358
³²S(e,e'), spin-isospin mode excitation 2-95993
^ASc, A=43,45,47, levels, J^π, microscopic form factors, DWBA anal. of Ti(p,α) 2-101812
⁸⁸Sr(e,e'), 1⁺ state form factor quenching, Δ(1232) isobar influence 2-84950
²³⁸U(γ,γ), 2-10 MeV, Delbruck scatt., nuclear resonance fluor., Coulomb correction effect 2-90085

formal logic

- climate change, application of Boolean logic 2-100540
 interval-valued fuzzy sets of higher type, union, intersection and complementation redefined 2-79340
 quantum theory, Hilbert space formulation, logic, book 2-74174

formation, heat of see heat of formation**forming processes**

- see also casting; electroforming
 near-contact explosive forming 2-62087
 polymeric-ceramic low-shrinkage material, optimum form. conditions 2-67280
 sheet metal forming, physical behaviour 2-105222
 sheet metals, neck growth and forming limits 2-93561
 sheet metal forming, plastic instability 2-105223
 steel, mild, cold forming suitability 2-72718
 steel, uniaxial straining, thermal effects 2-99500
 superplastic forming processes, influence of material parameters and microstruct. 2-83184
 thermoplastic, forming by utilisation of recovery induced thermal deform. props. (Japanese) 2-88111
 V₂O₅-P₂O₅ glass alloys, forming in electrochemical cells, threshold switching 2-67276

Foucault currents see eddy currents**fountain effect see superfluid helium-4****Fourier analysis**

- see also Fourier transforms; harmonic analysis; waveform analysis
 Alfven waves generation of mean EMF in collisionless plasma 2-86404
 amorphous system hyperfine field distrib., Mossbauer study, Fourier method 2-104758
 44-i Bootis, W Ursae Majoris star, truncated four-term Fourier series for single night light curve 2-112497
 chemisorbed layers, island size distrib., LEED and Fourier anal. 2-115510
 computerised tomography, multispectral imaging, use in limited-angle reconstruction 2-73332
 cylindrical shells, internally loaded, stress anal. 2-60403
 dielectric films, polarisation distrib., numerical evaluation from thermal-pulse data 2-93103
 electronic music, digital techniques for sound synthesis (Prench) 2-70785
 fast polarization modulated ellipsometer using a microprocessor system for digital Fourier analysis 2-95442
 Gaussian functional measures, nonstandard infinite dimensional vector space approach 2-95076

Fourier analysis continued

- geomagnetic variations, line spectrum at Dourbes, Belgium from Fourier anal. 2-105901
- gravity anomalies due to horizontal slab like bodies with lateral density var., Fourier spectrum interpretation 2-111841
- impulse noise and continuous noise anal., integrating sound level meter 2-100045
- induction machines in heave mode, dynamic behaviour anal. using finite element and Fourier anal. 2-80871
- Mossbauer spectra, hyperfine interaction, Fourier anal. 2-104766
- NGC 4254, spiral galaxy, spectral anal. of asymmetric spiral pattern 2-74082
- nuclear medicine, multigated Fourier functional images, interpretation 2-117062
- ocean seiches at Haifa Bay, E.Mediterranean Sea, anal. of eigenfreqs. of resonating water body 2-117307
- plates, sandwich, with complex boundary conditions, bending, finite Fourier series method 2-114682
- quasars clustering, Fourier Power Spectrum Analysis of objective-prism survey 2-79242
- seismology, waveforms calc. in transversely isotropic media via numerical Fourier inversion 2-88776
- shell, cylindrical axially compressed, with random axisymm. imperfections, buckling, reliability calc. 2-81261
- singular smoothing procedure 2-63801
- steplike waveforms conversion, using continuous and discrete Fourier transforms 2-89521
- subcellular macromolecular arrays, model, periodic struct. anal. in STEM 2-78507
- X-ray analysis, distortion distributions calc. 2-115090
- X-ray line broadening, determ. using Fourier coeffs. 2-71288
- yield loci, mono- and polycrystals, analytical description (*German*) 2-76571
- Ag, Fermi surface radius, Fourier expansion method 2-104230
- Au, Fermi surface radius, Fourier expansion method 2-104230
- Cu, Fermi surface radius, Fourier expansion method 2-104230
- Pt sputtered thin film, microstruct. and dislocation density, X-ray diffr. study 2-104201
- ZnS films, struct. and dislocation density, X-ray diffr. study 2-104203

Fourier series see series (mathematics)

Fourier transform optics

- see also Fourier transform spectroscopy
- achromatic Fourier transformer, spatially coherent 2-96847
- acousto-optical time-integrating signal processor for discrete Fourier transformations 2-96839
- all-mirror system, Fourier transform props. 2-108809
- astro speckle interferometry, phase problem, simple resolving modification 2-94622
- complex amplitude addition and subtraction by holographic Fourier transform., coherence and misalignment influence 2-65190
- correlator with feedback, for geometric shape detect. (*Czech*) 2-60030
- dipole-sheet transform 2-75531
- discrete Fourier spectrum restoration using linear programming 2-114206
- distorted boundary imaging, astigmatism influence (*Czech*) 2-96844
- electrooptic integrated optics spectrum analyzer, weighted discrete Fourier transform 2-55356
- far-IR spectroscopy using PET-microcomputer-based Fourier transform and data acquisition system 2-95491
- fast Fourier transform algorithm, Winograds, OTF calc. appl. 2-114196
- finite extent object image restoration by singular value decomp. technique 2-75529
- fringe-pattern analysis using Fourier-transform method, computer-based topography and interferometry appls. 2-58890
- hexagonal sampling techniques appl. to Fourier and Fresnel digital holograms 2-96858
- hologram linear recording using pseudorandom diffuser 2-70516
- holograms, image plane, with scatt. props., reconstruction, Fourier filtering 2-102748
- holograms, volumetric phase, transparency image regeneration and spatial filtering (*Russian*) 2-70518
- holographic interferometry, double-exposure, in Fourier phase 2-114220
- holographic interferometry, time average, in Fourier plane, for high amplitude vibr. anal. 2-114221
- holographic memories, random phase mask efficiency 2-85920
- holography, image reconstruction, homomorphic system of logarithmic Fourier transform type, computer methods 2-60048
- image improvement, noise smoothing 2-70511
- image processing techniques, fundamentals and applics. 2-114210
- interference filters for Fourier filtering and freq. coding 2-65339
- iterative procedures for signal reconstruction from Fourier transform phase 2-60033
- lens, for micro-meas. with wide angular spectrum (*Chinese*) 2-70643
- light, low intensity, spectral study using time-interval probability Laplace or Fourier transform meas. 2-85925
- microdensitometer positioning errors, random, transfer-function approach 2-84684
- moire patterns in scanned halftone pictures 2-108805
- noncoherent Fourier-transforming interferometers 2-74498
- noninteger order differentiation and its optical implementation 2-114197
- object support reconstruction from the support of its autocorrel. 2-75533
- one-dimensional images, Fourier phase recovery 2-102731
- one-dimensional signal optical processing 2-90829
- optical bistability, transverse effect calc. using fast Fourier transform techniques 2-75623
- phase problems, unique solvability in more than one dims., underlying theory 2-75534
- phase retrieval using logarithmic Hilbert transform, algorithm for distortion reduction 2-60031
- quasi-interferometry with coded correlation filtering 2-107392
- radiographs, signal and graininess interrelationship 2-69308
- raster-scanned signals, power spectrum 2-85904
- statistical signatures of scale and amplitude vars. in Fourier spectra 2-102735
- thermal self-action, fast Fourier transformation 2-60184
- time-domain signal transform, using compact acoustooptical signal processor 2-114195
- time-integrating acousto-optical processor for Fourier transform. 2-108818
- white light multiplexed meas. of incoherent Fourier spectrum 2-70513

Fourier transform spectroscopy

- adsorbate, thin, Fourier transform IR emission spectra, surface analytical technique 2-116746
- alcohols, Fourier transform far-IR matrix isolation spectra, vibr. freqs. of H bonded system 2-113978
- atmospheric appls. 2-78878
- atmospheric IR emission meas. using balloon-borne cryogenic Fourier transform spectrometer 2-117474
- atmospheric limb sounding, interferogram smearing effect 2-73691
- biological macromolecules, low temp. photolysis and recomb. kinetics, Fourier transform IR spectra 2-116881
- blood protein aqueous solns., Fourier transform IR spectra obs. 2-116883
- butyronitrile, quadrupole coupling, hyperfine struct., microwave Fourier transform spectra 2-64965
- capillary gas chromatography with Fourier transform IR spectroscopy detection, status report 2-116751
- chiral molecules, vibr. circular dichroism, mid-IR FT study 2-96609
- chloroform, ^1H Cw off-reson. decoupled ^{13}C NMR, spin dynamics 2-108570
- chloromethane, IR absorpt. line intensity of ν_4 and $3\nu_6$ perturbed bands (*French*) 2-114046
- chromatography, high-press. liq., Fourier transform IR spectroscopy interface with solvents elimination 2-116744
- chromatography, high-press. liq., IR spectra recording using Fourier transform technique 2-116743
- conference, Norwich, England (Sept. 1981) 2-74152
- diffuse reflectance IR spectra in quantitative analysis, specular component induced problems 2-113013
- diffuse reflectance IR spectroscopy as quantitative analysis tool 2-113014
- Digilab FTS-15B, improved changeover between regular and gas chromatography-infrared spectroscopy 2-53855
- dimethyl disulphide cleavage, ^1H NMR and ^{199}Hg FTNMR equilib. consts. 2-72358
- double modulation FT IR, appl. to adsorbates on metal surfaces 2-95490
- epoxy polymer film, Fourier transform IR spectra using heated ATR for T_g determ. 2-116167
- EPR spectra simulation, modulation effects inclusion 2-53800
- ethane, collision induced adsorpt. in microwave and IR region 2-54838
- far IR Fourier spectrometer, microcomputer control and data analysis 2-95492
- far-IR spectroscopy using PET-microcomputer-based Fourier transform and data acquisition system 2-95491
- fast inversion-recovery Fourier transform expts., optimisation 2-54875
- fast-scanning Fourier spectrometers, receiver-amplifier circuit characts. 2-89833
- formyl fluoride, ν_2 fundamental band, high resolution laser Stark and Fourier transform spectroscopy 2-108598
- Fourier transform spectrophotometer, high resolution system for Doppler-limited study 2-74509
- gas chromatography with Fourier transform IR spectroscopy detection, algorithms and techniques 2-116750
- gas chromatography with Fourier transform IR spectroscopy detection, systems design requirements 2-116752
- gas chromatography with Fourier transform IR spectroscopy detection, interferometer stability, error sources 2-116753
- gas chromatography with matrix isolation Fourier transform IR spectroscopy detection, complex sample analysis 2-116754
- gas chromatography/mass spectroscopy/ Fourier transform IR spectroscopy, instrument design and optimisation 2-116755
- gas chromatography/mass spectroscopy/ Fourier transform IR spectroscopy, small FTIR spectrometer system use 2-116756
- high-resolution Fourier transform spectra, simultaneous line strength and collisional width determ. 2-101470
- HPLC-Fourier transform IR technique using nondispersive detector 2-69268
- increased resolution by using a bandpass filter 2-79321
- inorganic coating, Fourier transform IR spectra 2-77606
- IR, band shape anal. 2-95489
- IR, conf., Columbia, USA (June 1981) 2-112640
- IR photothermal beam deflection Fourier transform spectrometer 2-84718
- IR reflection spectroscopy, of adsorbed species, instrumental considerations 2-89831
- IR spectroscopy, Hadamard transform, plane-resolving anal. of flat samples 2-74523
- IR-ellipsometric spectroscopy with Fourier spectrometer, Mueller-matrix appl. (*German*) 2-64128
- isotopically enriched compounds, ^{13}C resons. assignment by spin echo FT NMR 2-90576
- kinetics, multiple pulse FT NMR investig. method 2-89769
- lens, for micro-meas. with wide angular spectrum (*Chinese*) 2-70643
- lipid thermotropic mesomorphism of Acholeplasma laidlawii B, temp. induced phase transition obs. 2-116889
- magic angle setting using quadrupolar nuclei 2-79633
- mass spectrometer, collision-induced disoc. 2-53887
- matrix isolation spectroscopy, IR performance and developments 2-113002
- methane, vibr., ^{12}C and ^{13}C , IR obs. 2-90539
- methyl chloride, IR band study of $2\nu_2$, $\nu_2 + \nu_5$, $2\nu_5^0$, $2\nu_5^{\pm 2}$, $2\nu_3 + \nu_5$ and $4\nu_3$ reson. (*French*) 2-90532
- methyleneimine, vibr.-rot., Coriolis interaction, IR obs. 2-75260
- Michelson interferometer, He-cooled, for far-IR astronomy on GIRL 2-117595
- Michelson interferometer, refractively scanned, performance characts. in Fourier transform spectroscopy 2-113008
- Michelson interferometer spectrometer, calibration procedures 2-113009
- monolayer system, IR refl.-absorpt. spectroscopy techniques comparison 2-116748
- MOSFET, tilted inversion layer, tunnelling 2-77193
- multiplex spectroscopy for optical spectra, aperture ratio 2-79680
- $^{14}\text{NH}_3$, ^{15}NO , and ^{16}NO , submillimeter wave, diode laser, Fourier transform and grating spectra, vibr.-rot. anal. 2-108485
- numerical dates accumulation method 2-64118
- organic coatings on steel, Fourier transform IR spectroscopy, coating chem. interaction and mol. struct. and orientation 2-116603
- organic overlayers on reflective substrates, surface emission Fourier transform IR spectra obs. 2-116225
- particle size and strain determ. from Fourier X-ray line shape anal. of single reflection 2-97846
- l-pentene, photo-induced isomerisation, Fourier transform IR spectroscopy obs. 2-116708

Fourier transform spectroscopy continued

- peptides, functional group spectroscopy using Fourier transform IR absorbance subtraction 2-116882
- permittivity meas. of low loss materials using dispersive Fourier transform spectrometric technique 2-101426
- phased and absolute value FT NMR spectra, shift distortions and resolution 2-101430
- photoacoustic and diffuse reflectance IR spectroscopy, analytical technique comparison 2-113012
- photoacoustic IR spectroscopy, analytical appls. 2-116747
- photoacoustic IR spectroscopy, cell design and saturation effects in depth profile meas. 2-113011
- photochemical systems, Fourier transform IR spectroscopy obs. 2-116708
- pigment photodecomposition in paint, diffuse refl. FT IR spectrosc. obs. 2-89830
- polar molecules in inert gas matrices, far-IR Fourier transform spectroscopy obs. of mol. motion 2-113977
- polar molecules in solid inert gas matrices, mol. motion, far IR Fourier spectroscopy 2-93193
- polarizing interferometer for far IR Fourier spectroscopy 2-74490
- polyacetylene:AsF₆, soliton pinning mode Fourier transform IR study 2-93175
- polycarbonate film on metal, photochem. degradation, Fourier transform IR spectra obs. 2-116709
- polyelectrolyte solutions, counterion binding, FT NMR self-diffusion investigation. 2-82729
- polyethylene terephthalate, amorphous, conform. changes during vol. recovery, Fourier transform IR spectra obs. 2-61906
- polymeric coatings on mirrors, photochem. degradation, study using FT-IR reflection absorbance 2-79691
- polymers deformation studies by time resolved Fourier transform IR spectroscopy 2-89832
- polypropylene film, stretched, time-resolved Fourier transform IR spectra, stretching-relax. obs. 2-116287
- polystyrene film, Fourier transform IR techniques comparison for quantitative analysis 2-116749
- protein adsorption, from sheep's blood, Fourier transform IR obs. 2-100015
- pulsed photoacoustic signals, freq. anal. and appl. to chem. anal. 2-89819
- PVC, glassy, vitrified at elevated press., nonequil. processes 2-66222
- quantitative flow FT ¹H NMR, repetitive pulse conditions 2-103767
- rapid-scanning spectrometer, electrodynamic drive with pneumatic sliding bearing 2-69258
- saturation transfer EPR, signal phase depend. rel. to rot. correl. times 2-89760
- scanning system feedback struct. 2-53849
- semiconductors, deep level determ., deep level Fourier spectroscopy method 2-66479
- slow-scanning Fourier transform spectroscopy, bolometer-preamplifier for balloon-borne appls. 2-112334
- smoothing of spectral data in the Fourier domain 2-79678
- spectral range extension, N₂O and CO₂ wavenumber meas. standards 2-74522
- spectrometer, double-beam optically compensated, performance 2-113003
- spectrometer, far-IR, high-resolution, developments 2-113007
- spectrometer, IR, beam condenser-microscope system for high press. studies and general microsampling 2-113006
- spectrometer, IR, for use at Cassegrain focus of astronomical telescope 2-117594
- spectrometer, IR, using cooled interferometer, appl. to emission spectra obs. of organic overlayers on refl. substrates 2-116225
- spectrometer, IR, vel. errors influence on optimal design 2-113010
- spectrometer accessories and attachments for capability enhancement 2-112992
- spin exchange obs. by 2D Fourier transform ¹³C cross polarisation magic angle spinning 2-87615
- Stark effect measurement by microwave Fourier transform spectroscopy 2-89826
- stressed polymers microstruct. changes, vibr. Fourier transform IR spectroscopy 2-93201
- surface analytical technique, IR emission, feasibility 2-116745
- surface EM wave versus IR refl.-absorpt. spectroscopy of very thin films on metals 2-110964
- surfaces, Fourier transform vibr. IR emission spectroscopy 2-78139
- thermal neutron sect. technique, neutron spectr. modulation 2-103563
- thioformaldehyde-d₃(d₂), matrix isolated form., vibr., IR obs. 2-96556
- time-resolved IR, rapid-scanning, spectral anomalies analysis using computer model 2-113004
- time-resolved IR spectroscopy of pulsed transient phenomena, progress review 2-113005
- CO, pressure broadening coeff. for rot.-vibr. lines of J states 2-108472
- CO₂, collision-broadened linewidths and band intensities near 2600 cm⁻¹ 2-59792
- CO₂ free jets, rot. energy distrib. FT IR emission spectrosc. obs. 2-108688
- CO₂, wave-number calibration tables, 500-900 cm⁻¹ region 2-113971
- ¹³C¹⁸O, high temperature, spectral meas. in 4.3 μm region 2-80584
- ¹³C¹⁶O₂, high temperature, spectral meas. in 4.3 μm region 2-80584
- Cd₃As₂, spin-flip resonances, subMM magnetospectroscopy 2-93167
- Cu cold worked, local struct. EXAFS study 2-60921
- FeOCl intercalates with Lewis base, Fourier transform IR obs. of struct. 2-116166
- GaAs:C, site of substitutional C impurity, Fourier transform IR absorption study 2-91991
- GaAs:Cr, semi-insulating, impurity modes, far-IR Fourier transform spectroscopy obs. 2-116214
- Ge, amorphous, far-IR vibr. spectra using double-beam Fourier transform spectrometer 2-113003
- Ge-Si alloy, far-IR vibr. spectra using double-beam Fourier transform spectrometer 2-113003
- H₂, solid and liq., IR spectrum, rot. double transitions 2-87755
- H₂O, wave-number calibration tables, 500-900 cm⁻¹ region 2-113971
- H₂¹⁸O, self-broadening coeff. of lines belonging to 2p₂, ν₁ and ν₃ bands, meas. and calc. 2-54897
- He-CO mixtures, pressure broadening coeff. for rot.-vibr. lines of J states 2-108472
- InAs, far-IR dielec. response at room temp., dispersive Fourier transform spectroscopy, phonon freqs. 2-116165
- InBr₃ in aq. soln., far IR spectra 2-87760
- InSb, electron stimulated IR luminesc., HF modulation interferometric obs. 2-116271

Fourier transform spectroscopy continued

- KI, far IR optical const. determ. by dispersive Fourier transform spectrometry 2-99112
- ¹⁴N₂ and ¹⁵N₂, B¹²Σ_g⁻-B³Π_g system, Fourier and IR emission spectrum, rot. anal. 2-108503
- NH₃, molecular vibr. rot. states, high and very high resolution spectroscopy 2-80838
- NO₂, rot. anal. of 13200 and 13400 cm⁻¹ bands by Fourier transform spectroscopy 2-113975
- N₂O, absolute wavenumbers between 1118 and 1343 cm⁻¹ by IR Fourier transform spectroscopy 2-113976
- Na salts, ²³Na FT NMR high resolution spectra 2-87601
- O₂ in DMSO-d₆, electron spin-echo modulation, Fourier transform appls. 2-59828
- OCS, IR spectra, absorpt., overtone and combination bands meas. 2-108500
- OCS, wave-number calibration tables, 500-900 cm⁻¹ region 2-113971
- p-p⁺Pb_{0.8}Sn_{0.2}Te LPE layer, IR plasma refl. spectra (*Chinese*) 2-93295
- RuCl₃ in aq. soln., far IR spectra 2-87760
- Si (111) inversion layers, valley degeneracy and intersubband spectroscopy 2-61542
- Si, amorphous, far-IR vibr. spectra using double-beam Fourier transform spectrometer 2-113003
- Si, Fourier transform IR spectra obs. of temp. depend. of O impurity 2-116215
- Si:H amorphous sputtered film, microstruct. and H bonding environments 2-76847
- Te₂, laser induced fluoresc. spectrum studied by Fourier transform spectrometry, RKR pot. and dissoci. energies 2-65043
- β-VH_{0.59}, H superstruct. and diffusion, ¹H NMR, Fourier transformed spectra, spin-spin and spin-lattice relax. times 2-82739
- VO, rot. struct., spin-orbit coupling, Fourier transform IR obs. 2-75262

Fourier transforms

- see also fast Fourier transforms; Fourier analysis; Fourier transform optics*
- anthracene crystal, charge transfer energies, Fourier transform calc. 2-71934
- Brownian motion Z 2-89618
- α-bungarotoxin structure by averaging electron density of noncrystallographically related mols. 2-60964
- cylinder, hollow, transversely isotropic, stresses and deform. under ring and radial loads 2-91241
- direct Fourier transform NMR tomography with modified Kumar-Welti-Ernst method 2-73310
- Fourier-Borel transform, generalized version 2-94976
- Hamiltonian systems, integrable, canonical coords. 2-74261
- lossy magnetoplasma, transmitted impulse response by convolution method 2-91623
- organic molecules, extended, crystal chem. and morphology 2-65907
- orthorhombic lattices, dipolar configurations of minimum dipole interaction energy 2-109734
- photoacoustic imaging using Fourier transform technique 2-91180
- potential field geophysical studies, harmonic anal., reconciliation of discrete and integral transforms 2-78655
- sectionalized, appln. to high speed coherence processing of acoustic signals 2-70772
- shells, shallow, hyperbolic paraboloidal, dynamic anal. by finite Fourier transform method 2-103025
- sleep-wake patterns charact. rel. to sudden infant death syndrome, Fourier, Walsh and Haar transforms 2-62819
- sound field, mode representation and generalised ray representation 2-65422
- speech enhancement, phase unimportance 2-97312
- steplike waveforms conversion, using continuous and discrete Fourier transforms 2-89521
- strip, elastic, moving across rigid step, numerical soln. 2-109252
- structural vibration anal., freq. depend. damping, transfer functions and numerical Fourier transform. 2-75888
- synthetic aperture tomographic imaging for microwave diagnostics, duality with Fourier domain approach 2-80915
- time series through randomly broken windows 2-84102
- vectorcardiograms for rhythm analysis, Fourier shape descriptors 2-62816
- vehicle noise power, individual, estimation by exponential approx. (*Japanese*) 2-97290
- Volterra analysis to weakly nonlinear EM field problems, appl. to whistler propag. 2-102685
- Wyoming subbituminous coals, liquefaction yields and product structure, analysis by Fourier transform infrared spectrometry 2-62448
- e⁺e⁻ → A+B+X where A and B are back to back jets, Fourier transform from b to k_T 2-64333
- Al, Fermi surface parameters, Fourier transform of positron annihilation curves 2-98524
- Fe₃B₁₉ metallic glass, struct. factor, time of flight neutron diff. study 2-103644
- Li, Fermi surface parameters, Fourier transform of positron annihilation curves 2-98524
- Mg, Fermi surface parameters, Fourier transform of positron annihilation curves 2-98524
- Ni₆₀Nb₄₀ metallic glass, struct. factor, time of flight neutron diff. study 2-103644

fractionation *see* distillation**fracture**

- see also brittle fracture; crack-edge stress field analysis; cracks; creep fracture; ductile-brittle transition; ductile fracture; embrittlement; fatigue; fracture toughness; stress corrosion cracking*
- alloys, two-phase, lamellar eutectic, shock-induced fracture 2-111260
- bimaterial structures, elastodynamic fracture anal. using finite element method 2-55499
- brittle crack propagation, debonding of two linear chains of atoms 2-86787
- brittle materials, fracture and defects (*French*) 2-86780
- brittle solid, hysteresis in abrasive wear 2-67559
- cantilever beam, brittle, fracture under lateral impact load 2-91348
- ceramic polycrystals, struct. reliability, processing-depend. phenomenon 2-77908
- ceramic-like body, process design, prod. from recycled waste glass, phys. props. 2-111126
- ceramic-like body, process design, prod. from recycled waste glass, microstruct. and devitrification 2-111127

fracture continued

- ceramics, failure prediction by strength and fracture mechanics, comparison 2-88165
 ceramics, fibrous, low-density, fracture behaviour 2-77910
 ceramics, thermal stresses rel. to fracture 2-62218
 collective effects in an ensemble of microcracks and transition to macrofracture (*Russian*) 2-88156
 composite materials, fibre length influence on tensile strength 2-116512
 composites, combined deformation by creep and fracture, driving process 2-115342
 concrete, plastic-fracture model 2-55503
 conference, Cannes, France (March 1981) 2-89454
 continuum mechanics, rel. to solid state physics, review (*German*) 2-91232
 cortical bone, spiral fracture, sheep expts. 2-116956
 3-D crack configurations, energy release rate and J-integral 2-97444
 crack extension criterion and energy change 2-103098
 crack extension criterion development 2-103097
 crack growth, plane strain, equivalence of final stretch and crack tip opening angle 2-60482
 creeping materials, energy balance approach to fracture 2-91324
 crystal, ideal, chain model of fracture 2-66117
 damage accumulation in solids under load, computer modelling 2-92099
 damage mechanics, continuum mechanics approach to damage and fracture (*Japanese*) 2-60471
 delayed fracture theory, incubation stage and macroscopic crack development 2-60477
 dislocation-free zone model, comparison with expts. 2-103889
 ductile materials, deformed in torsion, failure anal. 2-56074
 duplex fibre reinforced composite, double cantilever shear beam model of dynamic fracture 2-93593
 dynamic fracture mechanics, infinite body effect, practical appl. 2-65517
 dynamic fracture process, quantitative characterisation by acoustic emission source wave anal. (*Japanese*) 2-83306
 Earth crust, slow fracture propag. on fault surface with embedded viscous layer 2-117219
 elastic strips, dynamic crack propag. simulation and dynamic stress intensity 2-70867
 elastic unbounded body, plane elliptical fracture thermal stress intensity coeff. determ. 2-55444
 elastic-plastic fracture problems, energy-release rate 2-91337
 elastomers, strength and useful life, network degree influence (*German*) 2-67532
 epoxy resin-glass adhesion, fracture energy, rel. to crack velocity 2-78066
 epoxy systems, elastomer filled, viscoelastic fracture 2-67512
 failure criteria for fusion reactor first wall structural design 2-69839
 fast fracture analysis, moving singularity finite element models 2-65516
 fibre composites, 90° unidirectional, mode II dynamic crack vel. correction factors 2-97432
 fibre reinforced composite, dynamic explanation of the hybrid effect 2-62197
 fibre reinforced composites, breakdown model, unified, for long-acting loads 2-92094
 fibre reinforced composites, fibre pull-out, expt. studies 2-67498
 fibre reinforced composites, laminar, multidirectional, deform. and breakdown mechanism 2-114724
 fibre reinforced composites, macrocrack model 2-92095
 fibre reinforced composites, short unidirectional fibres, prediction of failure modes 2-66114
 fibre reinforced composites, viscoelastic, crack development kinetics 2-114731
 fibre reinforced laminates, stress wave propag., micro-fracture mechanism (*Japanese*) 2-57463
 fibre reinforced plastic, elastic and fracture props., design and testing 2-88195
 fibre reinforced plastic, impact fracture (*Japanese*) 2-57467
 finite cracked bodies, dynamic stress intensity factors under harmonic loading 2-97431
 glass, bottles, anal. of symmetric fracture mirrors 2-67489
 glass, fracture under static load 2-99523
 glass fibre reinforced composites, at cryogenic temps., fatigue fracture life and mechanisms 2-105341
 glass fibre reinforced epoxide, cylindrical shells, deform. and fracture under internal pulse load 2-83225
 glass fibre reinforced epoxy laminate, failure under dynamic torsional loading 2-88194
 glass fibre reinforced polyethyleneterephthalate, plates, struct. invest. 2-62217
 glass fibre reinforced rubber, short glass fibre failure surfaces, SEM study 2-67499
 glycerine, liq. fracture strength, temp. depend. 2-61051
 graphite fibre reinforced epoxy, centre-notched angle ply composites, tensile fracture 2-57450
 Griffith and external cracks, stress distrib. 2-97434
 half-space, layered, SH wave generation from stress discontinuity motion 2-103095
 halide crystals, mechanoluminescence 2-104975
 Hermitian cubic boundary elements, for plane problems of fracture mechanics 2-81285
 Hertzian fracture angle, depend. on Poisson's ratio and indentation technique 2-81883
 high speed photography techniques and appls. 2-101483
 highly filled polymeric rubber composites, struct. changes under stretching, acoustic obs. (*Russian*) 2-109703
 ice, mech. props. 2-115349
 inorganic crystals, mechanoluminescence 2-104975
 interface crack, with contact zone 2-70869
 interfaces, crack profiles determ. 2-116627
 J-integrals, appls. to 3D cracks (*Japanese*) 2-60472
 laminated cylindrical shell, strength on nonproportional loading 2-114725
 linear failure criterion under multiaxial stress states 2-93594
 material momentum tensor and path-independ. integrals of fracture mech. 2-58612
 mechanical disintegration prediction 2-81887
 mechanics, error anal. of photoelasticity study 2-55502
 mechanics, foundations 2-97433
 metal coating, reflective, failure by cracking 2-61319
 metal fibre reinforced metal matrix composites, stress redistrib. on local loss of plastic stability of fibres 2-116540
 metals, Orowan mechanism for abrupt localized flow and fracture initiation ahead of yielding notch 2-111266

fracture continued

- metals, plastic molding, viscous fracture criterion 2-62195
 metals with BCC lattice, fracture after cooling, cold brittleness (*Russian*) 2-77902
 Mises elastic-plastic boundary as core region in fracture criteria 2-86228
 mixed mode, nonlinear energy method 2-109237
 model adhesive joints, failure loads when subjected to tension, compression or torsion 2-97454
 Moire methods, fracture mech. appl. 2-65550
 non-metallic media, fracture resulting from spherical and plane waves 2-66112
 noncircular flaws, two-dimens., fracture mechanics, equiv. area approx. 2-109232
 notch stress anal. and crack fracture mechanics relationships 2-109251
 optical fibre fracture parameters and testing (*French*) 2-70694
 optical fibres, factors affecting low strength breaks, fractographic analysis 2-75688
 optical fibres, long length, failure prediction based on proof testing 2-97242
 piezoelectric ceramics, mech. props. under large amplitude operation, transducer appl. (*Japanese*) 2-67510
 pipe, circumferentially cracked, fracture instability 2-62220
 plane strain cumulative fracture 2-97445
 plasticised epoxide, fracture under superposed hydrostatic pressure 2-105293
 plates, viscoelastic, ageing, with linear cracks, durability (*Ukrainian*) 2-103092
 plates with cracks, fracture under tension after loss of stability 2-60481
 PMMA, notched specimens, glassy, plastic deform. and fracture due to bending 2-116531
 PMMA, rigidity modulus near a running crack tip, US method 2-77928
 poly(phenylene oxide), tensile props. and density, effect of residual stresses 2-67401
 poly(styrene-co-acrylonitrile), gamma-irrad., crack healing, fracture toughness 2-111305
 1,2-polybutadiene characterisation above glass transition temp. 2-72774
 1,2-polybutadiene viscofluid, strength characterisation in uniaxial extension 2-72829
 polycarbonate, notched specimens, glassy, plastic deform. and fracture due to bending 2-116531
 polycarbonate, weathered, tensile failure 2-116511
 polycarbonate-copolyester miscible blends, mech. props. 2-72775
 polymer base anisotropic materials, long-term strength prediction 2-92083
 polymer glasses, in surface active medium, strength, time depend. (*Russian*) 2-109891
 polymer laminated sheets, mechanical interactions 2-77883
 polymers, combined deformation by creep and fracture, driving process 2-115342
 polymers, elastic and fracture props., design and testing 2-88195
 polymers, failure under load with constant strain rates (*German*) 2-72830
 polymers, linear flexible chain, uniaxial extension in extremely broad range of stresses and strain rates 2-55525
 polymers, mech. props., influence of mol. wt. and mol. wt. distrib. 2-111306
 polypropylene, rolled, mech. props. rel. to struct. 2-67377
 polystyrene, atactic, mol. fracture 2-72817
 polystyrene, high impact, synthetic rubber modified, Charpy impact (*Japanese*) 2-88182
 polyurethane foams, elastic, fracture under short-term loading, statistical obs. (*Russian*) 2-109900
 propellants, high energy, fracture and fragmentation during dynamic loading 2-72789
 PVC, notched specimens, glassy, plastic deform. and fracture due to bending 2-116531
 PWR fuel rods, high-temp., post-irrad. performance 2-54496
 quartzite fracture energy and compressive stress 2-83809
 refractories, acoustic emission and deformation-fracture behaviour under three-point bend test 2-62230
 residual stresses and fracture props., effects on weld repair processes service performance 2-62222
 rock hydraulic fracture near Earth surface, size limit 2-68336
 rocks, experimental studies of fracture rel. to finite element anal. of seismicity of N China Plain 2-94305
 rocks, impulsive strain effects correl. with detonation parameters of strain-generating explosive charges shock wave effects [-] 2-73541
 rocks, in-situ fracture mapping using geotomography and brine tracers 2-74798
 rocks, US radiation from crack in strained rock specimen 2-117295
 rocks at New Mexico HDR geothermal site, hydraulic fracturing 2-57995
 rod pull out problem, theory and expt. 2-97467
 rubber, natural, tear fracture, SEM study 2-93622
 rubber, natural and styrene butadiene, tensile rupture, SEM obs., vulcanisation and filler effects 2-116533
 sandstone, 2-72791
 sheet materials, method of estimating work of crack propag. 2-116643
 sheet moulding compounds, fracture behaviour, influence of constituents on mech. props. 2-67481
 sheet moulding compounds, fracture behaviour under tensile load 2-67480
 silicate glasses, destruction by laser beam and compressive stress (*Russian*) 2-99562
 silicate glasses, ultimate strength rel. to other mech. and thermal characts. 2-88177
 solid bodies, fracture by compressibility along cracks 2-81886
 solid cylinder, couple-stress effect on diametral compression 2-65514
 solid cylinders, acoustic emission during forging 2-105433
 solids, fracture and strengthening, phenomenological theory 2-66119
 solids irradiated by powerful pulsed electron beams, fracture theory 2-61035
 spalling rupture under shock deformation, modelling 2-81885
 specimen geometry, inherent stress biaxiality 2-109256
 specimen thickness, effect on crack propag. and branching in delayed failure 2-86782
 statistical nature 2-72800
 steady state crack propagation, mol. dynamics simulation 2-92098
 steatite ceramics, extruded, texture effects, glass phase influence 2-111117
 steel, 37KhN3(MF), fracture and mech. props. (*Russian*) 2-105288

fracture continued

- steel, 40 Kh, fracture structure and energy content in bending, notch direction effect 2-67546
- steel, 40KhN2MA, mechanical props. and struct., effect of austenitisation temp. and hot deform. (Russian) 2-77901
- steel, alloy, quenched and tempered, fracture, effect of H₂ 2-67527
- steel, austenitic stainless, unstable fracture, theoretical and expt. study with soft tensile testing machine 2-11262
- steel, austenitic, Ni-Cr(Mn), P segregation during austenitisation, effect on cracking and embrittlement 2-57357
- steel, austenitic stainless, 316, TEM observations of crack tip-cavity interactions 2-71521
- steel, austenitic stainless, fast reactor fuel cladding, failure due to fuel adjacency 2-80089
- steel, austenitic stainless, powder, hot ductility effect of Pb and Bi 2-88129
- steel, C, retarded fracture, H influence 2-67540
- steel, C and alloy, heat-treated, deform. and fracture processes by acoustic emission method 2-105420
- steel, Cr-Ni-Mo-V, secondary naphthalene-like fracture obs. (Russian) 2-99516
- steel, crack development determination, electropotential method appl. 2-116642
- steel, CrMoV, temper embrittlement rel. to heat treatment 2-83232
- steel, dispersion hardened, 12Kh1MF, grain boundary fracture under creep (Russian) 2-105287
- steel, double cantilever beam specimens, finite element simulation of fast fracture 2-77897
- steel, dual-phase, deform. characts., effect of martensite vol. fraction 2-67443
- steel, dynamic fracture parameter determ. 2-105291
- steel, ferritic weld metal, COD and Charpy V test data correlation 2-57586
- steel, fracture structure defects observation, opt. system 2-93716
- steel, high strength, delayed fracture crack growth, macroscopic and microscopic processes 2-72845
- steel, high-tensile, retarded failure tendency determ. method 2-116644
- steel, low alloyed powders and compacts, hot ductility, correl. with other props. 2-88148
- steel, low C, cylindrical shells, deform. and fracture under internal pulse load 2-83225
- steel, low-alloy, quenched and tempered, transcryst. cleavage microcracks initiation and propag. 2-111320
- steel, low-C sheet, strain rate effect as strain to fracture 2-105338
- steel, maraging, N18K9MST, influence of Ti additions on delayed fracture props. (Russian) 2-105286
- steel, martensitic, fracture, delayed, high temp. deformation influence (Russian) 2-93586
- steel, melt comp. effect on solidification cracking rel. to continuous casting 2-83107
- steel, Mg, quenched and tempered, fracture behaviour 2-83221
- steel, Ni-Cr, low alloy, nucleation threshold stresses for dynamic fracture 2-72787
- steel, Ni-Cr, stress corrosion cracking in NaCl soln. near lower temper martensite embrittlement range 2-83264
- steel, stainless, Cr-Ni-Al, sheet, fractographic investigation of failure 2-72823
- steel, stainless, martensitic, fracture mechanics, fusion reactor first wall struct. appl. 2-69837
- steel, stainless, pipe, circumferentially cracked fracture instability 2-62221
- steel, stainless 2-72824
- steel, structural, of various strengths, temp. and strain rate effect at tensile and elongation props. 2-62164
- steel, wear mechanisms of boundary-lubricated surfaces 2-67561
- steel wire, austenite-martensite transform. induced by torsional strain, mag. obs. 2-72696
- steels, ferritic stainless, improvements of irradiation embrittlement 2-67506
- superhard materials, plasticity and strength investigations by microindentation method 2-116668
- superplastic flow, fracture processes 2-72828
- superplasticity, mechanical, microstructural and fracture processes, conf., Pittsburgh, USA (Oct. 1980) 2-79277
- thermally activated macrofracture of inhomogeneous solid, kinetic theory 2-103099
- thermomechanical failure criteria, stress intensity factors incl. crack closure effect 2-75903
- thin walled structures, expt. determ. of uniaxial compression charact. 2-91283
- tubular samples, fracture during compression 2-83214
- two-dimensional struct., shock-induced signals, microscopic constraints 2-76584
- viruses, enveloped, freeze fracture, freeze etching, critical point drying, review 2-57942
- waste disposal glass, fracture surface energy, temp. effect 2-54495
- weight function calc. for mixed mode fracture problems, modified virtual crack extension method 2-91323
- Westerly granite, shear fracture energy from post-failure behaviour 2-58037
- X-ray fractography, review (Japanese) 2-78034
- Al alloy D16AT, heat-treated, deform. and fracture processes by acoustic emission method 2-105420
- Al alloys 7075, acoustic emission and inclusion fracture 2-62298
- Al, intercrystalline fracture obs. by high power US (Russian) 2-88160
- Al-Al₂O₃, powder metallurgical, heat resistant, props. 2-72875
- Al-alloy, hinge joint length, charact. parameter study 2-99514
- Al-Cr-Zr, powder metallurgical, heat resistant, props. 2-72875
- Al-Cu, two-phase, inhomogeneity of plastic deform. and fracture modes 2-105245
- Al-Cu eutectic, superplastic, fracture strain and strain rate sensitivity (Japanese) 2-57459
- Al-Cu eutectic, superplastic, fracture behaviour (Japanese) 2-57460
- Al-Mg, heat-treated, deform. and fracture processes by acoustic emission method 2-105420
- Al-Si, fracture, fractographic features 2-111302
- Al-Zn (9.5 at.%), high temp. creep mechanism and dissolution process, expt. study 2-88146
- Al-Zn-Mg, slatiness of fracture after rolling 2-111303
- AlN polytype ceramic formation, mech. props. (Japanese) 2-88044
- Al₂O₃ ceramics, reaction with saturated steam 2-111334

fracture continued

- Al₂O₃, fracture, crack-tip plasticity, electron channelling study 2-88170
- Al₂O₃, hot pressed, fracture stress reflecting spots 2-88172
- Al₂O₃, sintered, variable microstruct., strength meas. (French) 2-88154
- β -Al₂O₃-Na₂O, hot-pressed polycryst., fracture energy at high temp. 2-93630
- As-S-Ag system glass, phase separation and struct. changes on Ag addition to As₂S₃, fractured surface obs. 2-103649
- Au evaporated film, tensile fracture, SEM and TEM obs. (Japanese) 2-115631
- Au, film, tensile fracture mechanism, SEM study (Japanese) 2-92428
- Au, ruptured, final separation, role of glide and twinning 2-83200
- B fibres, SiC coated, tensile strength as function of coating thickness 2-77950
- Be, multiaxial stress-fracture criterion, use of notched beams 2-116555
- C fibre strand, tensile test damping method 2-72915
- Co-Al eutectic, lamellar, shock-induced incipient fracture 2-72788
- Cu, fracture and deformation props. meas. at elevated temperatures (Russian) 2-88158
- Cu, intercrystalline fracture obs. by high power US (Russian) 2-88160
- Cu wire/cement interface, statistical anal. of decohesion rel. to fibre reinforced composite 2-67475
- Cu-Al-Ni β -phase shape memory alloys, intergranular fracture origin 2-72838
- Cu-Ti, strength and ductility, 4 to 70K (Japanese) 2-105234
- Fe, fracture and deformation props. meas. at elevated temperatures (Russian) 2-88158
- Fe, intercrystalline fracture obs. by high power US (Russian) 2-88160
- Fe-C (1.3 wt.%), martensite, acoustic emission during ageing, microcracking 2-57387
- Fe-Cr-Ni, austenite-ferrite struct., tensile props. and fracture (Japanese) 2-105239
- Fe-Ni-Cr, A286 superalloy, electron beam welded, fatigue crack growth 2-111300
- La₉₀Al₁₀, amorphous, fracture surface morphology (Russian) 2-99518
- Mo, strength and ductility in complex stress state, 293-173K 2-111251
- Mo-Hf-C, powder metallurgical, props. 2-111228
- Mo-Ti (0.3-2 wt.%), nitrided (Japanese) 2-83176
- Mo-Ti-Zr-C, powder metallurgical, props. 2-111228
- Na₂O-CaO-SiO₂ glass, irradi., failure, micromechanical model (Russian) 2-77947
- Nb, H-charged, self-fracture 2-62207
- Nb, Pd and Ni coated, hardening and fracture initiation, H₂ absorption-desorption effects (Japanese) 2-57458
- Nb-W-Mo-Zr-Re, deform. and fracture, alloying and heat treatment influence 2-111252
- Nb-W(Mo)(TA)-Ti(Zr), creep kinetics under ultrahigh vac. 2-67462
- Nb(C,N), fracture props., Young's modulus, Hertzian indentation testing 2-62216
- NbC, fracture props., Young's modulus, Hertzian indentation testing 2-62216
- NbN, fracture props., Young's modulus, Hertzian indentation testing 2-62216
- Ni, fracture initiation and dynamic recrystn. during hot deform. 2-105317
- Ni, intercrystalline fracture obs. by high power US (Russian) 2-88160
- Ni-S, intragranular S segregation, SEM and AES study (French) 2-109998
- Ni-base superalloy, Inconel 600, ultra-pure, H embrittlement, effect of C, P, Sn and Sb additions 2-75255
- Ni-Cr-Co, Mar M002, cast superalloy, creep and fracture, effect of hot isostatic pressing 2-88184
- (Pb₉₀Sn₁₀)₂Bi₂Nb₂O₁₀, piezoelectric, ceramic, mech. strength 2-77907
- Se, ion plated on α -brass, adhesion and interface chemistry 2-66405
- Se-Ge-As glass, microstruct., fracture surface study by SEM 2-91796
- Se-Sn-As glass, microstruct., fracture surface study by SEM 2-91796
- Si, fracture and crack propagation, dislocation generation, X-ray study 2-115346
- Si, multicryst., directionally solidified, fracture 2-81884
- Si, polycrystalline, grain boundaries, chem., compositional and elec. props. 2-76458
- SiC, anisotropic tribological props. 2-88219
- SiC fibre reinforced Al, tensile props., thermal degradation effects 2-116485
- SiC, single cryst., friction damage, surface and subsurface, SEM and TEM study 2-67566
- SiC, surface states, rel. to mech. fracture, ESR obs. 2-110639
- Ti-Al (8.6 wt.%), dislocation pile-ups and tensile fracture, influence of grain size and age-hardening 2-105320
- Ti-Al-Sn-Zr-Mo prealloyed spherical powders, consolidation 2-7777
- Ti-Al-V alloy orthopaedic implants, fracture cause 2-105855
- β Ti-Mo-Zr-(Al), metastable, deform. and fracture 2-57433
- TiB₃, porous, Al penetration and fracture 2-57456
- W bicrystals, grain boundary fracture 2-83198
- W fibre reinforced Cu, helical fibres tensile props. (Japanese) 2-77913
- W helical fibre reinforced Cu, fibre deform. under tensile load (Japanese) 2-105233
- W wire, splitting, knife-edge compression test 2-116536
- W wire reinforced Ni-base superalloy, flow and fracture behaviour during isothermal forging 2-93617
- WC-Co (6 wt.%), substoichiometric, η -phase particles 2-105290
- WC-Co cemented carbide, bend deform. up to 1273K 2-57432
- WC-TiC-TaC binderless cemented carbides, effect of hot isostatic pressing 2-111120
- Zn-Al eutectic, superplastic, fracture behaviour (Japanese) 2-57460
- Zn-Al eutectoid, superplastic, fracture strain and strain rate sensitivity (Japanese) 2-57459
- ZrO₂ ceramics, meas. of crystallographically transformed zone produced by fracture 2-99531
- ZrO₂, sintered, struct. and fracture behaviour 2-88187

fracture strength see fracture toughness

fracture strength testing see fracture toughness testing

fracture toughness

- see also notch brittleness; notch ductility; notch strength
- alloys, equiaxed two-phase, fracture in alloys with isolated plastic particles 2-77937
- alloys, equiaxed two-phase fracture in alloys with isolated elastic particles 2-77936
- alloys, fracture and flow in fusion reactor environment 2-85223

- fracture toughness continued**
 amorphous metal ribbon reinforced resin matrix composite, mech. props. 2-57410
 arch shaped specimen K_{Ic} and compliance computation by the infinite similar element method (*Chinese*) 2-105398
 bars, torsional, with angle sections, SIF K_{III} calcs. for cracks, torsional rigidity (*Chinese*) 2-103090
 bone, mech. behaviour, effect of moisture 2-83593
 borosilicate glass with antireflective surface, strength and fatigue 2-83209
 brittle material, martensitic transformation toughening mechanics 2-88080
 ceramics, fibrous, low-density, mech. props., micromech. model 2-77909
 chevron notch three point bend fracture toughness specimen 2-91351
 chevron-notched short bar, and rod specimens, extended range stress intensity factor 2-97449
 compact specimens, crack displacements for J_I testing 2-97450
 concrete fracture toughness parameters theoretical and experimental anal. (*Italian*) 2-67482
 continuous damage theory, statistical aspects 2-81288
 continuous fibrillated polyolefin film reinforced cement, toughness 2-116521
 crack-tip fracture stress under general yielding of ligament (*Chinese*) 2-62189
 creep induced embrittlement, fracture mechanics study 2-67491
 cyclic loading effects, model 2-93595
 cylindrical specimen with ring shaped crack, fracture toughness meas. 2-65524
 diamond, microstrength meas. 2-93743
 ductile materials, estimate of fracture toughness from fracture surface geometry (*German*) 2-77949
 dynamic material toughness, depend. on vel. and loading parameters 2-97447
 elastic/plastic indentation damage, median/radial crack system 2-111275
 epoxy resins, materials variables controlling transverse cracking 2-105295
 fatigue crack closure, at near-threshold stress intensities, due to fracture surface morphology 2-76578
 ferroelectric ceramics, fracture mechanics evaluation of fracture strength 2-77906
 fibre reinforced composite, damaged, stress conc. factors, stat. treatment 2-105281
 fibre reinforced composite, fracture energy, stability of transverse cracks 2-105283
 glass, microstrength meas. 2-93743
 glass, vacuum durability, isotherm 2-72843
 glass bead-filled Nylon 6, fatigue crack growth and fracture energy 2-105279
 glass breaking stress meas., implications for structural design 2-57570
 glass fibre reinforced cement, strength assessment of aged fibres 2-99513
 glass fibre reinforced epoxy, fracture behaviour 2-72809
 glass fibre reinforced epoxy, fracture energy maps, hygrothermal ageing effects 2-57449
 glass fibre reinforced epoxy, fracture toughness of short fibre composites in modes II and III 2-67484
 glass fibre reinforced epoxy, short fibres, matrix effect on fracture toughness 2-62205
 glass fibre reinforced plastic, ultimate resist. under proportional deform. conditions 2-62211
 glass fibre reinforced polyester laminates, dynamic fracture toughness (*Japanese*) 2-111284
 glass shell, spherical, breaking external hydrostatic press. prediction 2-97457
 graphite, fine-grained, oxidation effects on thermal expansion coeff. and thermal shock fracture initiation 2-77896
 graphite fibre reinforced composite laminates, fracture toughness, effect of notch length, specimen thickness 2-111271
 high strength, precipitation kinetics during discontinuous cooling (*French*) 2-99467
 hot-work tool steels, performance 2-67473
 ice, polycryst., tensile strength as function of grain size 2-105272
 instability conditions, in development of fracture toughness expressions 2-56075
 insulating film deposition technology, secondary passivation 2-62075
 J and M integrals, expl. nondestructive eval. 2-91362
 mechanical props. for use at high temps. 2-105343
 metaphosphate glasses, fracture toughness 2-88176
 Metglas 2826, Ni-Fe-base metallic glass, dynamically compacted, mech. props. 2-99527
 numerical analysis of dynamic crack propagation, generation and prediction studies 2-86222
 optical fibres, spliced, reinforcement by nylon moulding method tensile strength 2-109070
 plate structure, cylindrical, loaded with pulsating press., crack growth rate 2-99627
 PLZT, piezoelectric. ceramic, mech. strength 2-77907
 PMMA, crack resist., temp. and rate relationships with high loading rates 2-67542
 poly(styrene-co-acrylonitrile), gamma-irrad., crack healing, fracture toughness 2-111305
 1,2-polybutadiene, rupture strength criteria above vitrification temp. (*Russian*) 2-67474
 polycarbonate, notched, fracture difference between atmospheric and hydrostatic press. 2-57448
 polyisoprene, rupture strength criteria above vitrification temp. (*Russian*) 2-67474
 polymer, high-performance, adhesive fracture energy, fracture mech. approach, T_g and relax. processes depend. 2-111403
 polypropylene, isotactic, fracture toughness eval. (*German*) 2-111304
 polypropylene-polyethylene copolymers, random and impact, fracture toughness 2-67535
 quartz single cryst., fracture toughness, room temp. (*Japanese*) 2-67507
 sapphire, microstrength meas. 2-93743
 sapphire single cryst., fracture toughness, room temp. (*Japanese*) 2-67507
 steel, 10MnNi2Mo, eval. of mech.-metallurgy (*Czech*) 2-67514
 steel, 20G18S2F, hardening by ageing and γ to ϵ martensitic transform. (*Russian*) 2-77832
 steel, alloy, fracture behaviour, effects of comp. variations and ageing treatments in air and H₂ 2-67522
 steel, alloy, fracture toughness and fatigue crack growth rate 2-105308
 steel, alloy, high strength, crack arrest toughness 2-77931
- fracture toughness continued**
 steel, alloy, HY80 and HY130, fracture toughness transition temp., effect of loading rate 2-62227
 steel, alloy, types HY-130, HY-80 and A517-F, fracture toughness data, correlation of standard and precracked Charpy specimens 2-77925
 steel, alloy 2-77933
 steel, alloy Charpy-V type specimens, fracture appearance, effect of notch root radius and austenitising temp. 2-99534
 steel, austenitic, high Mn content plate for fusion reactor construction 2-69835
 steel, austenitic cutting tool heat treatment, for austenite grain size meas. as hardness assessment method (*German*) 2-57476
 steel, austenitic stainless, fatigue crack growth of surface cracks 538°C (*Japanese*) 2-111288
 steel, austenitic stainless 316, rapidly solidified, high Ti stabilised, mech. props. and struct., irradi. effects 2-72765
 steel, barothermomechanical treatment effect on struct. and temper embrittlement susceptibility 2-57386
 steel, case hardened, fracture behaviour evaluation by means of fracture mechanics values (*German*) 2-83204
 steel, constructional, cold brittleness eval. using fracture mech. criteria 2-99555
 steel, constructional, cyclic crack resist., temp. and load asymmetry influence 2-111315
 steel, constructional, resist. to fracture, thermomech. treatment influence 2-67403
 steel, Cr, fracture toughness, correl. with sulphide inclusion level (*German*) 2-93615
 steel, Cr-Mn, creep induced embrittlement, fracture mechanics study 2-67491
 steel, Cr-Mn, medium C, design for wear appls. 2-83235
 steel, Cr-Mo, high strength, delayed fracture strength, influence of residual stress due to surface treatment (*Japanese*) 2-72810
 steel, Cr-Mo type HT-9, microstruct. effect on mech. props. rel. to fusion reactor apps. 2-88108
 steel, Cr-Mo-V type, pearlitic, stresses influence during ageing on loss of strength 2-99549
 steel, Cr-Ni-Mo, fracture, nonmetallic inclusions shape influence 2-72819
 steel, Cu(Ni), powder metallurgy materials, characteristic props. relevant to fatigue design 2-83226
 steel, die, hardened with vanadium carbonitride, props. 2-111211
 steel, embrittlement, role of H 2-67537
 steel, ferritic stainless, fracture toughness rel. to first wall and blanket appl. in fusion reactor 2-72804
 steel, heat resistant, die, struct. and mech. props., alloying effect 2-111243
 steel, high hardness, grain size effect on fracture toughness (*Japanese*) 2-77921
 steel, high strength, intercritically rolled, dynamic mech. props. 2-88113
 steel, high-speed, powder prod. by pneumoacoustic atomisation, mech. characts. 2-67250
 steel, low C, structural, fracture toughness in grain coarsened region of weld heat-affected ones 2-62190
 steel, low-alloy, detachment cleavage study 2-116519
 steel, low-alloy, low-pearlite, V addition effect on struct., phase comp., and mech. props. 2-72818
 steel, low-alloy, mech. props., rare earth elements effect 2-72773
 steel, low-C, impact toughness, simultaneous influence of Ca and S 2-111311
 steel, low-C low-alloy, Si and Ni additions, effect on mech. props. 2-105333
 steel, low-pearlite, rolling regime influence on strength and toughness props. 2-99545
 steel, maraging, 00Kh11N10M2T, struct. changes and mech. props. caused by reverse α to γ transition (*Russian*) 2-77819
 steel, medium-C, pearlitic-ferritic, alloying effect on fatigue failure and fracture toughness 2-111309
 steel, medium-C low-alloy En 24, intercritical treatments, duplex struct. 2-105189
 steel, Mn-Nb-V, low-pearlite, struct. and mech. props. after controlled rolling 2-57385
 steel, Mn-Ni, low-C, cast, replacing Ni with Mn for low temp. operation 2-72731
 steel, Ni, Mn and Ni-Mn based, maraging, economically alloyed, heat treatment influence on struct. and props. 2-67394
 steel, pressure vessel, crack vel. and dynamic fracture toughness during brittle crack prop. (*Japanese*) 2-111283
 steel, reactor pressure vessel, neutron irradi. embrittlement 2-102051
 steel, reactor pressure vessel, radiation damage, evaluation by elastic-plastic fracture mechanics 2-57486
 steel, stainless, cast 13%Cr, QLT treatment effect on toughness (*Japanese*) 2-77914
 steel, stainless, maraging, susceptibility to warm embrittlement 2-67531
 steel, stainless, Ni-Cr-Mo-Nb-Al, precip.-hardening, struct. and props. after heat treatment 2-72728
 steel, stainless, tritium charged, helium embrittlement at ambient temp. 2-111312
 steel, stainless 316L, fibre reinforced bioglass, processing and static mech. props. 2-57412
 steel, stainless 321 and 310, creep and fracture at elev. temp. 2-93558
 steel, stress-relieved SAW metal, Nb microalloyed, mech. props. and microstruct. 2-105192
 steel, structural, crack resist., 77-293K 2-111316
 steel, structural, durability eval. taking account of defects 2-111431
 steel, structural, fracture toughness rel. to strength, struct. aspects 2-77946
 steel, tempered, pseudo-intercrystalline brittleness mechanism 2-67502
 steel, tool, high speed, S 6-5-2 (M2), Nb and C effects on struct. and tool life (*German*) 2-57360
 steel, tool, high speed, S 6-5-2 and S 10-4-3-10, cooling during hardening process, effects on toughness (*German*) 2-57367
 steel fibre reinforced methyl methacrylate, crack growth, micromech. studies 2-111263
 steel stainless, dense powder metallurgical, prod. methods and mech. props. 2-99371
 steel-Al deformation welds, fracture toughness testing 2-67483
 steels, Cr (12 wt.%), sulphide inclusions effects on fracture toughness and fatigue crack growth 2-105296
 steels, shear stress and spall strength under shock loads, review 2-83213
 Tokamak first wall, irradi. creep, swelling erosion and embrittlement effects 2-69828

fracture toughness continued

- Al alloy, precipitation hardened, pseudo-intercrystalline brittleness mechanism 2-67502
 Al alloy K_{IC} test data statistical treatment (*Chinese*) 2-105397
 Al alloys, shear stress and spall strength under shock loads, review 2-83213
 Al alloys, stable fracture mechanism, fractographic study (*Japanese*) 2-111281
 Al- Al_2O_3 -graphite composite system, threshold switching characts. correl. with fracture path 2-105331
 Al-Cu-Mg-Mn-Si-Fe sheet, fracture toughness and crit. crack length, inhibiting layer effect 2-72826
 Al-Li-Cu-Zr-Cd system alloys, microstruct.-prop. rels. 2-111210
 Al-Mg-Mn-Zr-Ca-Ti, chem. comp. optimisation rel. to fracture toughness, Mn, Zr, Cr and Ti additions effect 2-77945
 Al-Mg-Si, J_{IC} evaluation by R-curve and stretched-zone-width methods (*Japanese*) 2-111399
 Al-Zn-Mg-Cu-Cr, 7XXX series alloys, influence of microstruct. and strength on fracture 2-111293
 Al_2O_3 fibre reinforced Al, work of fracture, effect of isothermal exposure and thermal cycling 2-57472
 Al_2O_3 , grain size depend. of fracture energy 2-57457
 Al_2O_3 , notched bend specimens, memory effect of crack resist. during slow crack growth 2-105284
 Al_2O_3 , sintered and fusion cast, and ruby and sapphire, fracture induced photon emission, appl. to fracture mechanics 2-93293
 β - Al_2O_3 - Na_2O , hot-pressed polycryst., fracture energy at high temp. 2-93630
 Al_2O_3 - ZrO_2 -MgO, MgO and ZrO_2 effects on microstruct. and mech. props. 2-88038
 B fibre reinforced Al, fracture and strength characts., chemical action effect (*Russian*) 2-72795
 B fibre reinforced Al, interface struct. and strength 2-77942
 B fibre reinforced Al, work of fracture, effect of isothermal exposure and thermal cycling 2-57472
 B_2C , hot pressed, mech. props., effect of porosity and grain size 2-116543
 C fibre reinforced epoxy, fracture energy maps, hygrothermal ageing effects 2-57449
 C fibre reinforced plastic, non-linear stress-strain effects in flexural wrinkling 2-77870
 CaO - TiO_2 - ZrO_2 system multiphase ceramics for bushing prod., mech. props. 2-67478
 Co-CoAl alloys, equiaxed two-phase fracture in alloys with isolated elastic particles 2-77936
 Co-CoAl alloys, equiaxed two-phase, fracture in alloys with isolated plastic particles 2-77937
 Co-Si-B with and without group IV-VIII transition metals, amorphous wire prod. by melt spinning into rotating water, mech. props. 2-105104
 Cu and alloy, low ductility failure and cavitation during grain boundary migration (*Japanese*) 2-105301
 Cu, shear stress and spall strength under shock loads, review 2-83213
 Fe, embrittlement, role of H 2-67537
 Fe, pure, H_2 effect on deform. and fracture microprocess (*Chinese*) 2-62188
 Fe-Cr-Al alloys, rapidly quenched, microstructs., mech. props., elec. cond. 2-111332
 Fe-Mn-Al-C, nonequilib. ordered austenite wire fabrication by in-rotating-water spinning method, mech. props. 2-93532
 Fe-P alloys, fracture mode and toughness, C effects 2-57484
 $Fe_{90}Ni_{10}B_{20}$, metallic glass, rel. between struct. relax. and sp. ht. 2-72750
 HfF_4 based IR transparent glasses 2-97133
 Na_2O - B_2O_3 phase-separated glasses, fracture toughness to Young's modulus relationship 2-93609
 Na_2O - CaO glass, thermally toughened and untoughened, crack initiations at microindentations 2-105285
 Na_2O - CaO - SiO_2 , scored glass, fracture toughness 2-83208
 NbC_x , single cryst., prep., struct. and mech. props. 2-98108
 Ni alloy, heat-resisting, EP-741P, fracture behaviour investig. by thermal microscopy, P/M alloys 2-67545
 Ni-Al-Co(Cr)(Fe)(Mn)(Si) L_{12} cpds., melt quenching, improved mech. props. 2-116472
 Ni-Cr alloy, brazed ring, geom. parameters selection, tolerable stresses 2-99640
 Ni-Cr alloys MA 6000E, scaled-up thermomech. processing 2-77856
 Pb, shear stress and spall strength under shock loads, review 2-83213
 PbO - B_2O_3 glasses, comp. depend. of fracture toughness, Vickers hardness and fracture surface energy 2-72793
 PbO - B_2O_3 phase-separated glasses, fracture toughness to Young's modulus relationship 2-93609
 PbO - GeO_2 (SiO_2) binary glass systems, fracture toughness and crack tip flow mechanism 2-105282
 PbO - ZnO - B_2O_3 , critical load for median crack initiation in Vickers indentation 2-111279
 Si, brittle fracture crit. stress, ion implantation and surface treatments effect 2-81882
 Si Czochralski wafers, heat treated, brittle and ductile, fracture and yield stresses meas. 2-92091
 Si, microstrength meas. 2-93743
 Si_3N_4 - Al_2O_3 - N_2 , hot-pressed β -sialon, oxidation effect on room temp. strength 2-93629
 Si_3N_4 - Al_2O_3 - N_2 , hot-pressed β -sialon, fracture strength and Weibull distrib. 2-93631
 SiC, polycryst., containing excess Si, neutron irradiated, microstruct. study 2-71514
 SiC, siliconised, strengthening and proof testing 2-88168
 SiC, sintered and reaction-bonded, radiation response, B isotope effects 2-80191
 SiC yarn reinforced lithium aluminosilicate glass-ceramic, high strength and toughness 2-105298
 Si_3N_4 , hot press, uniaxial tensile and flexural stress rupture strength 2-57453
 Si_3N_4 , hot-pressed at high press., temp. depend. of stress intensity factor 2-83212
 Si_3N_4 , reaction bonded, mech. props., creep and thermal shock behaviour, influence of microstruct. variables 2-116541
 Si_3N_4 -refractory compound cutting tool ceramics, mech. props. 2-72842
 Si_3N_4 -TiC composites, fracture toughness and strength 2-83202
 SiO_2 , commercial glass, critical load for median crack initiation in Vickers indentation 2-111279

fracture toughness continued

- Ta, strength, temp. and deform. rate influence, plastic deform. mechanisms 2-67464
 Ti alloy VT3-1, struct. and hot rolling temp. influence 2-105324
 Ti-Al-V, mech. props. after β -annealing 2-67398
 Ti-Al-V (6.4 wt%), compact specimen, initial notch shape effect on fatigue pre-cracking and fracture toughness testing 2-78028
 TiB₂-W(Mo)(Cr), sintering and props. 2-111109
 TiC-W(Mo)(Cr)(Nb), sintering and props. 2-111109
 TiN-W(Mo)(Cr)(Ta)(Nb), sintering and props. 2-111109
 UO_2 fuel pellets, fracture toughness, rel. to design specification 2-102078
 W fibre reinforced Ni superalloy, high temp. composite, microstruct. stabilisation with ZrO_2 short fibres (*German*) 2-77781
 WC-Co (25 wt%), martensitic transform., transverse rupture strength 2-105289
 WC-Co VK6 hard metal, optimum conditions for hot pressing, characts. 2-67247
 WC-Ni cemented carbides, prep. and props. 2-111119
 WC-TiC-TaC-NbC-Co cemented carbide, C content effects 2-77939
 Zr-Nb (2.5% wt%), pressure tubes for CANDU-PHW, failure resistance 2-90231
 ZrC-C composites, strength 2-116544
 ZrO_2 - Y_2O_3 single crystal, room temp. strength and fracture 2-111274
 ZrO_2 - Y_2O_3 - Bi_2O_3 , Bi_2O_3 effect on elec. and mech. props. 2-67265
- fracture toughness testing**
 see also notch testing
 aggregate materials, notch sensitivity in fracture testing 2-99611
 alloy, structural, cracked, loading cyclicality effect on failure resist. 2-99630
 brittle materials, microstrength meas. 2-93743
 ceramic tubes, closed-end, test method for strength and fracture 2-93688
 ceramics, methods and results (*German*) 2-72918
 compact specimen, initial notch shape effect on fatigue pre-cracking and fracture toughness testing 2-78028
 compact specimens, crack displacements for J_I testing 2-97450
 composite shell, cylindrical, supporting power under axial compression, prep. influence 2-60476
 crack tip opening under plane strain, determ. method 2-99629
 double specimen method for J_{IC} testing (*Chinese*) 2-62289
 ductile material, fracture phenomenon under EM force, fracture toughness determ. (*Japanese*) 2-111401
 elastic-plastic stress state of fracture toughness specimens, effect of side grooves, finite element anal. 2-111394
 epoxy resin, expt. K-value determ., appl. to brittle fracture (*Japanese*) 2-111402
 glass, implications for structural design 2-57570
 glass, sheet, estimated from strength of small specimens 2-72928
 glass shell, sectional, with dismantable joint, strength and damage content 2-105431
 Hopkinson split bar technique, appl. to dynamic fracture toughness eval. (*Czech*) 2-67686
 J and M integrals, exptl. nondestructive eval. 2-91362
 low-temperature attachment 2-62315
 metals, critical stress intensity coefficient determination, using specimens of different size 2-62311
 metals and alloys, fracture toughness initiation, at high loading rates by stress waves, new expt. method 2-105432
 method for use under biaxial loading 2-67696
 miniaturised fatigue crack growth specimen technology and results for irradiation reactor materials 2-88308
 nitrile rubber/phenolic filled polymeric system, Charpy impact testing, ductile-brittle transition temp. meas. 2-83326
 nonmetallic structural materials, brittle, strength testing 2-72910
 nylon monofilaments, oriental, tensile failure obs. by quantitative fractography 2-93723
 piezoceramics, fracture toughness determ. with kerf specimens 2-116670
 PMMA, Young's modulus of craze, crit. temp. for craze growth, interferometric obs. 2-105206
 polyethylene, high density, plane strain fracture toughness testing 2-67692
 polymer, high-performance, adhesive fracture energy, fracture mech. approach, T_g and relax. processes depend. 2-111403
 polymer fibre, oriental, tensile failure obs. by quantitative fractography 2-93723
 polymers, microtension test, new scale of specimen 2-78035
 sheet, hydrogen embrittlement under multiaxial loading conditions, punch-stretch testing, fracture limit diagram 2-88323
 short rod chevron notch specimen for fracture toughness testing of brittle materials, compliance calibration 2-67679
 short-rod chevron notch specimen compliance calibration for fracture toughness testing of brittle materials 2-93718
 steel, 4340, fracture behaviour under mode III loading 2-99612
 steel, Cr-Mn-Si-Ni, K_{IC} test data statistical treatment (*Chinese*) 2-105397
 steel, critical stress intensity coefficient determination, using specimens of different size 2-62311
 steel, ductile crack initiation and notched bend specimens 2-111314
 steel, embrittlement susceptibility by H_2 eval. using delayed fracture test, procedures comparison (*French*) 2-78053
 steel, ferritic, irradiated, fracture toughness testing using electropot. technique, miniature specimen prep. 2-88310
 steel, heat-resist., plasticity and strength determ. under long-term tensile stress 2-105404
 steel, heavy-section, controlled flaw prep. for fracture mech. testing 2-72929
 steel, high speed, fracture toughness testing, precracking 2-93720
 steel, high strength, AE during fracture toughness tests, mech. condition effects (*Japanese*) 2-57555
 steel, J_{IC} evaluation by R-curve and stretched-zone-width methods (*Japanese*) 2-111399
 steel, J_{IC} meas. in transition region (*Japanese*) 2-111400
 steel, low C, crack resist. determ. in brittle crack propag. from impact bend test results 2-72908
 steel, low-alloy, crack resist. determ. in brittle crack propag. from impact bend test results 2-72908
 steel, pressure vessel, thick-walled, brittle-failure resist. 2-99626
 structural materials, prediction of tearing instability, acoustic emission rating parameter 2-111393
 thin sheet, scale factor effect 2-72909
 US, quantitative determ. feasibility, review 2-72930

fracture toughness testing continued

- welded steel plates, lowering ships construction costs 2-72895
 Al alloy $\Delta 76\text{chT}$, thin sheet, fracture toughness, scale factor effect 2-72909
 Al alloys, critical stress intensity coefficient determination, using specimens of different size 2-62311
 Al alloys, high strength, fracture toughness determ. with chevron notched short rod and short bar specimens 2-67678
 Be, multiaxial stress-fracture criterion, use of notched beams 2-116555
 SiC, fracture parameters evaluation, controlled flaw method (French) 2-88293
 SiC, residual stresses and CNTD process scaling to larger specimen sizes 2-72657
 Si_3N_4 , mech. behaviour, meas. methods (French) 2-93691
 Ti alloy, irradiated, miniaturised fatigue crack growth specimen technology and results 2-88308
 Ti alloys, critical stress intensity coefficient determination, using specimens of different size 2-62311
 ZrO exhaust-gas-sensor electrolytes, tubes, closed-end, test method for strength and fracture 2-93688

francium

- see also nuclei with
 atom, hyperfine field trends in isotope series 2-75201
 isotopes, nuclear mag. moments, relativistic many-body perturbation theoretic investigation 2-70152

francium compounds

No entries

Franck-Condon factors

- acetylene, non-Franck-Condon behaviour in photoionisation, triple differential photoelectron studies 2-80731
 approximate formulas for Franck-Condon factors 2-102539
 aqueous solutions, thermal electron transfer correl., photoelectron emission 2-70408
 2,2'-bipyridine, lowest electronic states, two-photon excitation spectra 2-70237
 sec-butyl chloride, γ -irradiated, long-range hole transfer, Franck-Condon factors 2-82272
 n-butyl chloride, pulse irradiated, liq. charge transfer from solvent radical to solutes 2-90682
 CS radical, band intensity parameters and ground state dissociation energy 2-114045
 4-cyano-2,6,N,N-tetramethylaniline, twisted internal charge transfer state fluoresc. 2-108615
 electron transfer processes, Franck-Condon factors, electrostatic interactions 2-99690
 formaldehyde- d_0 - d_2 , $^1\text{A}_2$ - $^1\text{A}_1$ absorpt. spectrum, absolute spectrum, absolute vibronic intensities 2-85685
 glyoxal, torsional mode, Franck-Condon factors, single vibronic level emission 2-108634
 harmonic model, displaced, Franck-Condon amplitude for two-photon processes 2-54898
 intermolecular H^+ transfer between equivalent mols., diffusion induced tunnelling 2-88339
 phenylacetylene, charge transfer states, two-photon obs., INDO/S calcs. 2-70366
 polar crystals, polaron IR optical absorpt. 2-104862
 two-level system, absorpt. line broadening in radiation field, nonimpact theory 2-90481
 $\text{Ar}^+ + \text{N}_2(\text{CO})$, charge transfer, spin-orbit states, threshold electron-secondary ion coincidence study 2-96715
 AsS^+ mol., true pot. energy curves, dissociation energy, r-centroids, Franck-Condon factors 2-75205
 BaH, potential energy curves, Franck-Condon factors 2-70164
 Br_2 , $\text{B}^+(2\text{P}_{1/2})$ state, spontaneous predissociation 2-80746
 CO_2 , CK and OK emission spectra, core state vibr. excitations and symmetry breaking 2-70276
 CaH, potential energy curves, Franck-Condon factors 2-70164
 Cs_2 , rot. lines meas. by Doppler free polarisation spectroscopy and ODR, fluoresc., mol. const., pot. energy curves 2-80689
 Cu_2 , a^2E_g state, Ne matrix isolation, absorpt. and fluoresc. obs. 2-114027
 $\text{F} + \text{D}_2$, reactant-product angular momentum coupling, classical mechanical theory appl., Franck-Condon transition 2-72971
 GaAs, deep level elec. field induced phonon assisted tunnel ionisation 2-71909
 GaP, deep level elec. field induced phonon assisted tunnel ionisation 2-71909
 H, atomic beam, Doppler shifted emission spectra, appl. to plasma diagnostics 2-80520
 H_2 , Franck-Condon factors, appl. to photoelectron spectra 2-108623
 H_2 , radiative transition probability meas. 2-114052
 HBr^+ , intramolecular dynamics, PES obs. 2-75353
 HCN^+ , intramolecular dynamics, PES obs. 2-75353
 ^{200}Hg , ^{78}Br , B-X spectrum, excimer laser 2-75555
 I_2 , D' to A' transition, vibr. anal., Franck-Condon and band profile calcs., weak emission 2-108546
 $\text{K}_4(\text{Pt}_2\text{H}_2\text{P}_2\text{O}_{10}) \cdot 2\text{H}_2\text{O}$, electronic spectra 2-65035
 MgO, Franck-Condon factors, rot. depend. 2-59862
 N_2 , Franck-Condon factors, appl. to photoelectron spectra 2-108623
 N_2^+ , intramolecular dynamics, PES obs. 2-75353
 $\text{N}_2 + \text{H}^+$, N_2 energy loss spectrum 2-80799
 $\text{N}_2^+ + \text{Ar}$, charge transfer, threshold electron-secondary ion coincidence study 2-96717
 NH^+ , Franck-Condon factors, rot. depend. 2-59862
 NO^+ , Franck-Condon factors, rot. depend. 2-59862
 NO_2 , A, B, state, vibr., reson., fluoresc. intensities 2-102517
 NOAr, direct photodissociation, fluoresc. spectra 2-59874
 NOHe, direct photodissociation, fluoresc. spectra 2-59874
 NONe, direct photodissociation, fluoresc. spectra 2-59874
 O_2 , valence shell photoionisation, shape reson. induced non-Franck-Condon effects 2-90634
 OH $^+$, Franck-Condon factors, rot. depend. 2-59862
 PO in $\text{C}_2\text{H}_2/\text{air}$ flame, two-photon ionisation processes 2-102549
 PbO , transition moment variation with internuclear separation 2-80733
 ^{121}Sb - ^{123}Sb mol. bands, RKR curves, Franck-Condon factors 2-64966
 SiH, Franck-Condon factors, rot. depend. 2-59862
 SiH^+ , Franck-Condon factors, rot. depend. 2-59862
 SrH, potential energy curves, Franck-Condon factors 2-70164

Franck-Read sources

- Cu_2NiZn , ordering alloy, mech. props. 2-105216

Fraunhofer lines see solar spectra**free-electron approximation**

- atomic collisions, pair-potential calcs. 2-65069
 metal, adsorption of He, kinetics, polarization induced dissipation 2-98447
 one-dimensional metals, thermopower calc. 2-71951
 Al cluster, CO adsorpt. 2-87057
 Si, elastic and inelastic backscattering of slow electrons 2-105018

free electron lasers

- axial magnetic field inclusion in laser theory 2-80977
 Cherenkov laser as possible near MM wave source, multiphoton analysis 2-80979
 coherent dynamics, coupled Maxwell and Boltzmann eqns. 2-75584
 conference, 12th International Quantum Electronics, Munich, Germany (1982) 2-79268
 conference on lasers, New Orleans, LA, USA (Dec. 1980) 2-79281
 constant period free-electron lasers based on single-pass linear accelerator technology, anal. 2-75582
 cyclotron interaction of electron beam with coparallel luminous waves 2-80887
 diffraction radiation generator near-MM sources, unstable resonator and output coupling 2-97010
 electron accelerators, interactions between EM fields and electrons 2-113764
 electron beams from ACO storage rings 2-65238
 electron motion due to superposed EM waves, free-electron laser appls. 2-80885
 electron motion in helical wiggler stochastic particle instability 2-90909
 electron-EM field interactions, review 2-108892
 elliptically polarised free electron laser amplifier, electron motion 2-60090
 gain, of FEL with linearly polarised wiggler 2-102808
 helical wiggler, mag. field calc. 2-65237
 high gain laser pulse amplifier with variable wiggler magnets 2-70574
 high power lasers and appls., Int. School of Physics, Varenna, Italy, July (1978) 2-74141
 hybrid electron synchrotron laser, expt. study and computer simulation 2-55172
 hybrid free electron laser device, GYROFEL, estimation of intracavity power levels 2-108891
 Josephson junction analogy, Hamiltonian model, cooperative and chaotic behaviour 2-110543
 LURE, French synchrotron radiation facility, status report 2-85417
 Madey's gain-spread theorem and stochastic processes theory 2-102807
 magnetic bremsstrahlung gain, quantum theory, appl. to electron lasers 2-90853
 magneto-Compton regime, laser gain 2-70575
 magnetron, rippled field, free-electron laser type instability 2-58839
 multicomponent wiggler config. in small-signal regime 2-90910
 multiphoton transitions and saturation 2-114293
 nonlinear self-consistent treatment of transverse dimens. effects 2-80976
 normalised nonlinear eqns. formulation 2-55173
 photon statistics of a free-electron laser 2-85981
 Raman-type, operation 2-114294
 relativistic electron beam, amplification in magnetic fields 2-70577
 relativistic electron beam, helically distorted, equilibria calc., free electron laser appl. 2-80975
 relativistic electron beam, low gain near cyclotron reson. 2-85983
 relativistic electron beam, passing through mag. field, stimulated emission 2-75502
 relativistic electron trajectories in free electron lasers with an axial guide field 2-70576
 sideband instability, fluctuating space-charge effects 2-85982
 single-particle theory 2-75583
 spontaneous radiation, squeezed coherent state generation 2-55175
 steady oscils., onset calcs. 2-102809
 stimulated Cherenkov interaction and appls., electron beam momentum modulation by laser field 2-55052
 storage ring laser, ACO, gain meas. versus theory 2-55174
 storage ring operation 2-75585
 storage rings, electrons polarisation using free electron laser 2-64711
 synchrotron radiation sources and instrumentation, review 2-108770
 transverse optical klystron expt. in Adone 2-102806
 tunable far IR, appls. for solid state system spectroscopy 2-80978
 two-stream, free-electron lasers 2-90908

free energy

- Abrikosov vortex state near upper crit. field, Ginzburg-Landau theory 2-66726
 actinide metal carbides, extended regular soln. model appl. 2-105499
 acyl halides, thermodynamic properties calcs., 100-1500K 2-109446
 adsorption of hydrocarbon on SiO_2 -supported water surfaces, meas. using gas chromatographic technique 2-57636
 alloys, molten, cpd. forming, thermodynamic props. in weak interaction approx. 2-91759
 alloys, molten, regular and cpd. forming, short range order and conc. fluctuations 2-91757
 alloys, motive force of diffusion and change in the free energy on the phase separation (Japanese) 2-56242
 amphiphilic bipolar mols. monolayer on aq. substrates, phase transition models 2-92340
 antiferromagnetic-superconductors, one-dimensional, ordered state in presence of homogeneous mag. field 2-61648
 aqueous solutions, free energies, electron transfer, photoelectron obs. 2-110009
 aqueous solutions, thermal electron transfer correl., photoelectron emission 2-70408
 Baxter-Wu Ising model, random bond, free energy and specific heat 2-53696
 BCC crystal-melt interface, mol. theory 2-92343
 binary alloys, molten, surface tension, rel. to thermodynamic enthalpy and activities, eqns. 2-61260
 binary brasses, effects of exchange and correlation on stability 2-56450
 binary liquid, defective two sublattice model 2-99387
 binary solutions, Gaussian formalism for free energy as function of comp. 2-83088
 binary system, cluster variation approx., pair correl. function, free energy expansion 2-79492
 binary systems, equilib. phase diagrams, kinetic eqn. and free energy calcs. 2-86839
 bounds in lattice gauge theory 2-107512

free energy continued

- CCP lattice, vacancy pair defects, free energy 2-60975
 centrosymmetric fluid, polar-vector ordering, Landau theory 2-71613
 columnar discotic mesophases, elasticity, dislocations, instabilities 2-65851
 commensurate-incommensurate transition, one-dimensional, crit. behaviour 2-92145
 complex stability, free energy of form., solvent effects 2-83405
 condensed media, Van der Waals forces contrib. to free energy (*Russian*) 2-56222
 continuum statistical mechanics, Dobrushin uniqueness techniques and decay of correl. 2-112800
 creep fracture, intergranular, aggressive environments 2-83201
 crystalline-fluid state equilib., unitary classical molecular theory 2-109643
 defects, bound and unbound, pressure variation of Gibbs energy 2-98348
 dimethylsulphoxide, solution, dielectric study of mol. interactions 2-99016
 dislocations, rectilinear, equil. splitting theory, stacking fault energy (*Russian*) 2-65996
 disordered spherical model, free energy calcs. 2-72227
 DNA, torsional rigidity from supercoiling data 2-99874
 drawn, crystal stability and mech. props., statistical-mech. approach 2-86586
 elastic phase transitions, Landau theory appl. 2-98246
 electrolyte solutions, excess Gibbs mixing free energy 2-84578
 electron transfer reactions, low temp. free energy rels. 2-111474
 equilibrium fluid phases, surface tension along interface 2-103938
 equilibrium systems, exact eqns. for correl. moments 2-58765
 ethanol-water-ethylene glycol mixture, viscous behaviour 2-71688
 ferroelectric double hysteresis loop near first order transition 2-87716
 ferromagnet, single ion anisotropy, exchange interactions, order parameter, free energy, quantum theory 2-72194
 fluid, mean-spherical model, extremum condition 2-55825
 gaseous mols., entropies and free energy functions calc. from dimensional model 2-91579
 gases, acoustic wave oscils. effect on free energy 2-71062
 grain boundaries, computer mol. dynamics study, migration, sliding and annihilation, 2D solid 2-103781
 grain boundaries, thermodynamic functions, lattice dynamics studies 2-92134
 group theory application to phase transitions (*Japanese*) 2-101153
 Heisenberg ferromagnets, 1-D, thermodynamic props., static domain wall solitons, perturbation calc. 2-116022
 Heisenberg magnet, anisotropic, cluster variational calc. 2-92954
 Heisenberg model, classical, chain version of const. coupling theory 2-92945
 Heisenberg model, free energy and Green's function, functional integration method 2-98835
 Heisenberg spin glass, magnetisation profiles 2-110600
 Heisenberg spin-Peierls system in mag. field, commensurate and incommensurate states 2-92952
 incommensurate phases in tetragonal tungsten bronze struct., Landau free energy anal. 2-66213
 Ising antiferromagnet, FCC, Monte Carlo study of entropy 2-82618
 Ising model, axial nearest-neighbour, low temp. and near multiphase 2-61727
 Ising model, BCC, with competing interactions, fluctuation induced first order transition, free energy series study 2-77306
 Ising model, random, critical temp., generalised transfer formalism 2-116020
 Ising model, random site, free energy, convergence criterion and self-avoiding walk approx. 2-56812
 Ising model, regular and random, on Cayley tree, higher order susceptibilities 2-77248
 Ising model, series expansion for gen. temps. 2-72239
 Ising model, stochastic process for computer simulation at equilib. 2-104636
 Ising model, with infinite-range coupling, critical props. 2-79485
 Ising triangular lattice, modulated struct., domain boundaries, free energy 2-98831
 IV-VI narrow band gap ferroelec. semicond., phase transitions, microscopic theory 2-110788
 ketone liquids, dielec. relax. times and thermodynamic props., UHF study 2-87663
 kink free energy calc., WKB approx. 2-79495
 lattice, classical, metastability and restricted equil. conditions 2-107264
 lattice models, thermodynamic and correlation functions, cluster variation calc. 2-89630
 linear Heisenberg system, spin motions 2-87519
 liquid alloys, binary, thermodynamic props. with negative deviation of activities from Raoult's law (*Japanese*) 2-77804
 liquid droplets condensation and nucleation from vapour, thermodynamic theory 2-98255
 liquid mixtures, free-vol., non-random mixing theory 2-66230
 liquid-vapour interface, density profile, generalised van der Waals theories 2-92309
 magnetic chains, solitons, functional integration approach 2-66737
 melting, molecular dynamics study for two dimensions 2-81938
 metal hydrides, thermal solvus and plateau press. hysteresis relationships 2-73008
 metallic glasses, struct. stability 2-65863
 metals, liq., self-diffusion and viscosity (*Russian*) 2-66268
 metals, phonons, use of stationarity props. within finite temp. density functional approach 2-56128
 methane-ethane crit. mixt., liq.-gas crit. line prediction and interaction param. evaluation 2-71623
 mixed-valent systems, perturbative theory 2-56499
 monotonicity of the free energy in the stochastic Heisenberg model 2-53683
 nematic liq. cryst., curvature elasticity, van der Waals theory 2-97914
 nematic liq. cryst. elasticity coeff. 2-55834
 nematic liquid cryst., light scattering at uniaxial-biaxial transition 2-92197
 nonautocatalytic polymer solution reaction model, stable limit cycles 2-111492
 nonuniform fluid with long-range attractions, statistical mechanics 2-65833
 nonuniform systems, statistical theory, reduced description, density fluctuations 2-84519
 nucleation, two-dimens., free energy of form. calc. 2-76344

free energy continued

- nucleation, two-dimensional, nucleus size dependence of interfacial tension calc. 2-65893
 nucleation, work and rate thermodynamic relation with nucleus size 2-88375
 order-disorder transformation 2-66169
 organic compounds, ideal gas thermodynamic props., data tables 2-94922
 perovskite struct. $ABCl_3$ crystals, phase transition sequence, thermodynamic description 2-103983
 phase diagrams, ternary, computer calc. (*Korean*) 2-67289
 phase separation and aggregation of precipitates, change in motive force of diffusion and free energy 2-92157
 phospholipid bilayer membranes, hydration, free energy, enthalpy and entropy determ. 2-116685
 polaron statistical parameters in mag. field 2-104267
 polyelectrolyte solution containing mixture of same charge counterions, thermodynamic props., cell model 2-116721
 polyethylene, calc. of free surface energy at cryst.-melt interface on cryst. (*Russian*) 2-56299
 polyethylene, high-pressure phase transition, thermodynamic anal. 2-76656
 polymer blends, phys. and thermodynamic props., review 2-67450
 polymer solutions, props., extrapolation formulae 2-60860
 polystyrene spheres, two-dimensional, hypernetted chain approx. 2-102020
 Potts model, semi-infinite, low temp. phase 2-53679
 Potts model, three state, in 2D, interface props. 2-112828
 Potts models on pseudo-lattices, absence and presence of phase transitions 2-53680
 powders, mass transfer routes in reactions 2-72963
 precipitates, reversion of particles possessing sharp concentration gradients, theory 2-105148
 quantum systems, spin polarised, internal energy, lower-bound formula and quantum theory of corresponding states 2-71768
 Quartet Ising model, Monte Carlo study consistent with selfduality 2-53681
 rare earth alloys, dil. origin of random strains., rel. to ESR of LaS:Er 2-56925
 rare earth-thallium alloys, liq., thermodynamic characts., intermetallics form., liquidus behaviour 2-67293
 reference hypernetted chain eqn., local thermodynamic equil. 2-76266
 simple fluids, hypernetted chain approx. 2-103580
 sine-Gordon breather gas, thermodynamics, soliton gas phenomenology 2-89642
 sine-Gordon model, two dimens., discrete translational invariance and mass renormalisation 2-113095
 solids, surface free energies and surface segregation 2-98426
 solution, multicomponent regular, stat. thermodynamic eqns. 2-89647
 solutions, electrostatic free energy and internal energy approx. evaluation 2-62424
 spin glass, random-band Ising model, entropy, free energy 2-82621
 spin glass, randomly layered Ising model on square lattice, criticality condition 2-104645
 spin glass theory in Bethe approx., thermodynamic props. 2-72235
 spin glass with finite range interactions, Bethe approx. 2-72243
 spin glasses, 2-J model, minimum free energy principle appl. 2-110592
 spin glasses, free energy surface of mean-field model, reversibility and irreversibility 2-92922
 spin glasses, Ising model study thermodynamic props. 2-98901
 spin glasses, nature of ordering 2-66862
 spin glasses, Parisi's solution of SK model, alternative soln. 2-116014
 spin glasses, random bond model, theory 2-61719
 square lattice, adsorbed polymer chain, critical exponents for self-avoiding lattice walks 2-107250
 steel, alloy, interphase boundary migration, bowing mechanism 2-83129
 steel, austenitic stainless, stress corrosion cracking, intergranular, susceptibility effects of comp., thermodynamic model 2-93659
 superalloys thermodynamics, activity coeffs. of Al, Ti, Cr, Fe, Co, Ni, Mo and W 2-99390
 superconducting alloys, Ginzburg-Landau functional calc. 2-92815
 supercooled liquids, dynamics 2-109558
 tandem mirrors, electrostatic pot. parallel variation drives instabilities 2-109571
 ternary system, Kohler method rel. to subregular model 2-62103
 thermodynamics of heterogeneous equilibria, book 2-58572
 toluene in polyethylene glycol soln., excess thermodynamic quantities determ. by Rayleigh scatt. 2-81989
 topological rubber elasticity theory 2-95008
 topological rubber elasticity theory in simple cubic lattice networks 2-95009
 transition metal carbides, groups IVb and Vb, extended regular soln. model appl. 2-105499
 transition metal layered chalcogenophosphates, effect of bond ionicity on Li electrochemical intercalation 2-71392
 s-triazine, ferroelastic transition, quasi-harmonic theory 2-66204
 s-triazine, structural phase transition, quasi-harmonic treatment 2-66203
 tris-sarcosine calcium chloride, brominated, dielec. props., press. and temp. depend. 2-61820
 TTF-TCNQ, low temperature phases, CDW-CDW Coulomb interaction 2-92590
 two dimensional dense hard discs fluid, equil. props., semiclassical statistical mechanics 2-81647
 type II superconductors, thermodynamic potentials 2-104552
 vertex model, two-dimens., ice type, free energy, polarisation 2-95275
 Ag-Tb(Dy)(Ho)(Tm), dilute alloys, magnetostriction, free energy calc., single ion Hamiltonian 2-92987
 Al-Ca, Gibbs energy and heat of form., solid electrolyte galvanic cell meas. 2-110011
 Al-Ge-Sn, liq. alloy, thermodynamic props., EMF meas. 2-104031
 Au-Mn alloys, thermodynamic anal. 2-99402
 Ba-Zn alloys, liq. 2-72670
 BaMnF₄, magnetoelectric phenomena, freq. depend. 2-66888
 BaWO₄, crystal growth from melt, diffusion controlled, activation parameters, DTA 2-65891
 Bi-In melts, thermodynamic activities by Knudsen cell-mass spectrometry 2-67296
 CaO-SiO₂, thermodynamic treatments 2-61167
 Cd-In, liq., vapour press. and calorimetric meas. 2-67298
 Cl₂, fluid, liq.-vapour interphase, perturbation-variational theory 2-115502
 Co-Cr(Mn), computer calc. of phase diagram (*Japanese*) 2-105120

free energy continued

- Co-Ge liquid alloys, thermodynamic excess props. determ. by mass spectrometry 2-98306
 Co-Mn system, phase equilibrium for activity determ. 2-83096
 Co-O-Zr(Ti), liq., solubility of oxides 2-98295
 Co-S system melts, thermodynamic activity of S 2-105126
 Cr-Ni-Fe, free energy Kohler method rel. to subregular model 2-62103
 CuI, theory of superionic transition 2-66200
 CuInSe₂, spray pyrolysis and heat treatment, for photovoltaic appl. 2-71843
 D₂O, thermodynamic props., eqns. of state, data tables 2-94920
 DyCo₂, vol. depend. of first order mag. transition temp. 2-98881
 ErCo₂, vol. depend. of first order mag. transition temp. 2-98881
 Fe complex, (Fe,Zn)₂(2-pic)₂Cl₂:EtOH, high spin-low spin transitions, lattice expansion effect 2-87510
 Fe, Pourbaix diagram, EMF-pH, presence of solid Fe(OH)₂ 2-116597
 Fe-Ni-Mo-B, metallic glasses, annealed, phase transforms 2-67302
 Fe-O-Zr(Ti), liq., solubility of oxides 2-98295
 Fe-Sb(Ni), ultra-high purity, interactive co-segregation of Sb and Ni at grain boundaries 2-93512
 Fe-Si (3wt.%) single crystal, saw tooth domain struct. and charged wall observed in gradient field (*Japanese*) 2-77321
 Fe₂Pt, ordered, thermoelastic martensitic transform, free energy changes 2-105143
 FeTa₂O₆, free energy of form. at 1470-1750K 2-111507
 GaP, sp. ht., temp. depend., thermodynamic props. 2-86898
 GeAs, I₂ chem. vapour transport, thermodynamics and kinetics 2-97949
 H⁺ donor-acceptor system association, solvent effects on intermol. interaction (*French*) 2-114488
³He, liquid, effective mass, energy depend. 2-104099
³He, liquid, thermodynamic functions 1.5 to 14k (*Russian*) 2-86966
³He, superfluid, B-phase, texture in large cylindrical geometry near T_c, NMR study 2-71756
³He-⁴He dilute mixture, statistical mechanics 2-98378
⁴He-A, rotating, vortex lines, analytic and singular, order parameters and energies 2-56289
⁴He, liquid, thermodynamic functions 1.5 to 14k (*Russian*) 2-86966
 Hg-Na liq., elec. and thermodynamic props., mag. susceptibility, compound form. effect 2-82314
 HoCo₂, vol. depend. of first order mag. transition temp. 2-98881
 In-P-O phase diagram, condensed phase portion 2-99406
 (InP)₂(InAs)₂, solid soln., thermodynamic functions, entropy and enthalpy of mixing 2-86904
 K-Cs, liquid, thermodynamic calcs. 2-98308
 La-Sb-Dy, dilute alloys, magnetostriction, free energy calc., single ion Hamiltonian 2-92987
 LaGe₂, free energy, heat and entropy of form. determ., 940 to 1060K (*Ukrainian*) 2-56217
 Li-Ge alloys, thermodynamic studies, appl. to negative electrodes for molten salt batteries 2-76709
 Li-Pb, liquid, thermodynamic calcs. 2-98308
 N₂ fluid, liq.-vapour interphase, perturbation-variational theory 2-115502
 N₂ liquid, energy difference functions in Monte Carlo simulations, free energy calcs. 2-81654
 Na, thermodynamic props. from lattice and mol. dynamics, pseudopot. calc. 2-104028
 Na-Cs liquid alloys with atomic size mismatch, conc. fluctuation 2-81965
 Na-Ga(Cd), liquid, conc. fluctuations, press. effect, EMF meas. 2-91758
 Na-Hg, liquid, thermodynamic and struct. props., EMF meas. 2-81986
 Na-In, liq., elec. resist., and thermodynamic props., simultaneous meas. 2-82313
 Na-K, liquid, thermodynamic calcs. 2-98308
 Na-K liquid alloys with atomic size mismatch, conc. fluctuation 2-81965
 Na-Sn, liq., elec. resist., and thermodynamic props., simultaneous meas. 2-82313
 Na-Sn liq. alloys, thermodynamic props. 2-92234
 NaCl, aq. soln., volumetric props., data tables 2-94921
 NaCl-CaCl₂-SrCl₂, molten, thermodynamic props. and phase diagram, calc. using computer (*Chinese*) 2-105129
 NaNO₂, incommensurate phase transition near Lifshitz point, thermodynamic theory 2-87712
 Na₂SO₄-NaHCO₃-H₂O system, thermodynamic relations and phase equilib. 2-83406
 Nd-Rh(-O) systems, thermodynamics and phase equilib. 2-56218
 Nd, magnetic structure, below 20K, use of first principles mean field theory 2-66776
 Ne, liquid, thermodynamic props. calc. (*Russian*) 2-115436
 Ni-O-Zr(Ti), liq., solubility of oxides 2-98295
 NiAsS, standard free energy of formation 2-83101
 O₂ fluid, liq.-vapour interphase, perturbation-variational theory 2-115502
 Pd alloys, dil., correlation between band struct. and hydride formation 2-98516
 Pb dilute molten alloys, O₂-Ag(Au)(Bi)(Cu)(In)(Ni)(Sb)(Sn)(Te) interactions 2-62099
 Pb-Bi(Sb) melts, activity coeff. of O 2-67299
 Pb-Sn, phase diagram calcs., thermodynamic anal. 2-72668
 PbF₂, Debye screening length saturation, free energy 2-86929
 Pd-Mn-H soln., dil., thermodynamic props. 2-56195
 Pd-Ti, liq. and solid alloys, thermodynamic props. 2-67297
 SiC, 6H-type, double spiral interpretation, edge free energy anisotropy 2-109714
 SiC cluster, electronic component of free energy in gas phase 2-59987
 Si₃N films, CVD deposition, thermodynamic evaluation 2-77753
 SiO₂, vitreous, free energy of structural models, bond lengths and energies 2-97924
 Sn,Pb_{1-x} (x=0.998, 0.03), equilibrium surface composition 2-115516
 TaSe₂ (2H) structure, CDW, interlayer interactions effects 2-76950
 TaSe₂ (2H), incommensurate CDW phases 2-103722
 Tb₂(MoO₄)₃, spontaneous shear strain meas. and free energy expression 2-72433
 Ti-H system, thermodynamics 2-111139
 W bicrystals, grain boundary fracture 2-83198
 W surface (001), transition to incommensurate reconstruction induced by H adsorpt. 2-56313
 Zn-Sn-Se phase diagram and electronic props., LPE 2-116428
 ZnO-based green phosphor, mechanism of formation in presence of ZnS 2-111508
 ZnO+CO=Zn(gas)+CO₂, reaction free energy 2-53708

free field rooms see anechoic chambers

free induction decay (optical) see optical coherent transients

free radical reactions

- alkenes, free radical addition, charge transfer and spin transfer during chemical bond form., MO anal. 2-99646
 alkoxy radical+O₂, reaction, thermal source of HO₂ radicals 2-62384
 copolymers, complex radical synthesis mechanism, unit distrib. and comp. heterogeneity (*Russian*) 2-78096
 fast reactions in energetic systems, conf., Preveza, Greece (July 1980) 2-58544
 hydrocarbons, radical ion pair reactions, nucl. spin polaris. effects 2-65007
 methane, ionis., free radical form. and combination, reaction with ethane 2-99656
 methyl radicals, IR absorpt. detection, recombination rate, reaction with O₂ study 2-85647
 organic cpds., ground state reactions, HF MO theory 2-116687
 vinyl monomers, radical polymerisation, mol. mass and branching centre distrib. (*Russian*) 2-111494
 CH+NO(N₂O)(NO₂)(N₂), reaction absolute rate consts. at room temp. 2-99653
 HO+HNO₂(H₂O₂), reaction rates, flash photolysis and reson. fluoresc. 2-105460
 NH+propane, insertion and fragmentation products, press. depend. 2-83352
 NH₂ radical, energy transfer, intraresonator laser spectroscopy study 2-93776
 OH+HNO₂, temp. depend. of rate const. for stratosphere conditions 2-78794
 SO+O₂(O₃)(NO₂), rate coeffs., chemiluminescence study 2-99651
- free radicals**
 see also free radical reactions; paramagnetic resonance of free radicals
 acetaldehyde free radicals in solid Ar, IR vibr. spectra prod. from F atom reaction 2-105453
 aliphatic acetoxy radicals, long-range acetyl-proton coupling, EPR obs. 2-70301
 alkane radical cation, spectroscopic identification 2-80735
 alkane radical cations, radiation prod., the use of freons and perfluoro(cyclo)alkanes as matrix 2-80642
 alkoxy radical+O₂, reaction, thermal source of HO₂ radicals 2-62384
 alkoxy radical radiation products, g-tensor and H⁺ coupling tensors 2-85695
 alkyl radicals, muon-electron hyperfine coupling consts. 2-80846
 allyl-type free radical trapped in γ-irrad. potassium hydrogen glutamate single cryst., ENDOR investig. 2-56975
 amines, spin-trapped radicals, reactions, radiolysis, ESR 2-110644
 aminoalkyl radicals, ionisation pots., stabilisation energies, MO-SCF calcs. 2-96437
 p-aminophenoxyl radical, time resolved resonance Raman scatt. 2-70253
 anthraserquinone radical anions, aq. soln., stability, EPR obs. 2-90585
 ascorbic acid free radicals, kinetics obs. continuous flow method, ESR imaging appls. 2-108587
 assay by ESR, spectral simulations appls. 2-111528
 benzene radical anion, vibrational spectra and freq. shifts, IR and Raman 2-108455
 1,3-benzodioxole radical cations, hyperfine splitting const., ESR, MO calcs., correl. with reactivity (*German*) 2-102511
 p-benzosemiquinone free-radical anions, reson. Raman spectra 2-80619
 para-benzosemiquinone radical anion, halogen derivatives, radiolytically prepared, reson. Raman spectra 2-59807
 benzyl chloride parent ions struct., biol. isomerisation process 2-78078
 benzyl radicals in gas phase, laser-induced fluoresc., excitation spectrum 2-80702
 biological structures, US effect, free radical participation, pseudomonol. kinetics 2-100047
 p,p'-biphenylsemiquinone free-radical anions, reson. Raman spectra 2-80619
 butadienyl, interstellar, detect. of N=1-0 transition in (Taurus MC-1) 2-68867
 n-butyl chloride, pulse irrad. liq. charge transfer from solvent radical to solutes 2-90682
 4-carboxybenzophenone, photoreduction, quenching, radical form. and disproportionation 2-67756
 complexes, interacting mol. orbitals and mag. reson. 2-80681
 CS radical, band intensity parameters and ground state dissociation energy 2-114045
 9-cyanoanthracene-1,3-dienes, photocycloaddition and adduct photodecomp., spectrosc. 2-83391
 cyclopropyl radical, struct. and vibr. anal., ab initio HF calcs. 2-59688
 dianisylnitroxy bis(p-methoxyphenyl)-aminy oxide, interacting mol. orbitals and mag. reson. 2-80681
 5,10-dihydrophenazine, free radical cation, reson. Raman spectra 2-114004
 dipeptides, polycryst., γ-irrad. ESR and chromatographic separation of radicals 2-110643
 diphenyl ketyl radical, fluoresc. quenching by methyl methacrylate and p-chlorobenzene diazonium tetrafluoroborate 2-90602
 diphenylpicridylhydrazyl, interacting mol. orbitals and mag. reson. 2-80681
 diradical states, struct., building-up principles 2-64845
 1,5-dithiacyclooctane, EPR studies of isomeric monomeric cation radicals and dimers formed on oxidation 2-75331
 ethoxy radical, A→X fluoresc. spectra, collision-free lifetimes 2-96618
 ethyl acetate, cation radical, equilb. struct., SCF MO LCAO CNDO calcs. 2-96456
 ethyl radical, (1,2) H migrations, ab initio POL-CI calcs. 2-59708
 ethyl radical, conformational preference, ab initio UHF fragment interaction anal. 2-113876
 ethyl radical, IR spectrum assignment 2-70239
 ethylene chloride radical molecular SCF calcs. (*French*) 2-85534
 ethynethionyl radical, 4114 Å absorpt. spectra and rot. const. 2-75300
 ethynyl radical, interstellar, detect. of N=3-2 transition in Orion rel. to mol. rot. consts. determ. 2-63556
 ethynyl radical+H₂→C₂H₂+H reaction rate const., ab initio determ. 2-83358
 fluorobenzenes, containing free radicals, NMR relax. 2-54870
 fluorotetraallylic tin radical, non-RRKM decomposition 2-88340
 free radical-aromatic ligand π complexes, spin density transfer mechanism, struct. effect 2-111491
 Freon-11 in gas mixtures, multiphoton dissoc., electronically excited C₂ radical form 2-85757

free radicals continued

- hexyl-3 radicals, intramol. vibr. relax. 2-54829
hydrocarbons, radical ion pair reactions, nucl. spin polaris. effects 2-65007
hydroxymethylene radical, unimol. reactions, energy barriers calcs. 2-62383
indophenoxyl, interacting mol. orbitals and mag. reson. 2-80681
lyoluminescence and spin trapping 2-110948
methoxy radical, A-X fluoresc. spectra, collision-free lifetimes 2-96618
methoxy radical, π -E state, spin-orbit coupling const. meas. 2-59692
methoxy radical, Jahn-Teller energy surface, spin-orbit splitting and Zeeman effect, perturbation theory 2-75198
methoxy radical, unimol. reactions, energy barriers calcs. 2-62383
methyl carbene triplet radical, (1,2) H migrations, ab initio POL-CI calcs. 2-59708
methyl radical, electronic states, resonance enhanced multiphoton ionisation obs. 2-65062
methyl radical, geometry, restricted and unrestricted Hartree-Fock calcs. 2-85541
methyl radical, umbrella mode, photofragment IR emission spectroscopy, vibr. progression and pot. parameters 2-72997
methyl radicals, IR absorpt. detection, recombination rate, reaction with O_2 study 2-85647
methyl radicals, selective stepwise ionisation 2-59865
5-methyl-10-hydrophenazine free radical cation, reson. Raman spectra 2-114004
methylene ($-d_2$), Renner-Teller effect, laser induced fluoresc., radiative lifetimes, vibronic levels 2-80717
methylene anion radical, exptl. investig. using ESR of γ -irrad. lithium alkyls 2-108588
2-methylfuran radical, hyperfine splitting consts., ESR study 2-90587
methylsulphuryl radical, electronic struct. ab initio SCF-MO calcs. 2-85533
2-methylthiophene, radical, hyperfine splitting consts., ESR study 2-90587
nitroxide radical, collisional spin exchange, EPR line broadening 2-114021
nitroxide radicals, diastereomeric, prod. by spin trapping, ESR and ENDOR obs. 2-108584
nonafluorobutyl radical generation by IR multiphoton dissoc. of nonafluorobutylbromide 2-116716
olefinic alcohols radicals, EPR study 2-77376
organic ion radical semicond., trimerised, electron-mol. vibr. coupling 2-96536
organometallic radicals, spin trapping by quinones, optically active complex form. 2-110645
phenoxy monosubstituted radicals, resonance Raman spectra 2-70263
phenoxy- $d_6(d_4)$, aq. radicals, solvent effects, resonance Raman obs. 2-70254
phenoxyl radical, Raman spectrum in stopped-flow expts. 2-80627
pheophytin a anion radical, liq. soln., hyperfine coupling, ENDOR and TRIPLE resons. obs. 2-108589
polyamines, spin-trapped radicals, reactions, radiolysis, ESR 2-110644
polyethylene mechanical degradation, free radicals and end groups from chain scission 2-90751
progesterone, single cryst., γ -irrad., stable free radical, EPR 2-70303
propanoate, unstable radical, struct. and environment, ENDOR spectra 2-70305
propanoate radical, environment in X-irrad. L-alanine crystal, ENDOR spectra 2-70304
pyrene-dimethylaniline, donor to radical pair electron transfer, triplet form., delayed fluoresc. obs. 2-85720
4-spirotricyclohexyl-2'-2'-spirocyclohexyl-1,2,3,4-tetrahydroquinoline and nitroxyl radical formed in oxidation, cryst. and mol. struct. 2-98062
cis-stilbene radical cation, electron transfer reaction, CIDNP formation, electron exchange effect 2-70279
2,2,6,6-tetramethylpiperidyl oxide radical, solvation of Na^+ 2-80677
triethylamine radical cation, electron transfer reaction, CIDNP formation, electron exchange effect 2-70279
verdazyl radicals, single cryst. and polycryst., EPR 2-93011
vinyl formal radical, γ -CH formyl- H^+ coupling, INDO-MO-SCF calcs. 2-90455
vinyl radical, (1,2) H migrations, ab initio POL-CI calcs. 2-59708
 $B_3N_3H_6^+$ radical, photoelectron spectrum, theoretical models calcs. 2-80722
 BO_2 , prod. by $BO+O_2$, reaction kinetics studied by laser induced fluoresc. 2-72952
 C_4 radicals, excited, chemiluminesc. in diffusion flame 2-62400
CCN radical, Doppler limited dye laser excitation spectroscopy, spin-orbit and spin-rot. coupling const. 2-108538
CCl, $A^2\Delta$ state predissoc. investig. 2-80747
CCl radical, microwave spectra, rot. transitions, mag. and electric quadrupole hyperfine coupling consts. 2-108476
CF radical, far-IR rot. spectrum 2-75255
 CF_2 , mm and sub millimeter spectrum, prod. in DC glow discharge, rot. transition freq. 2-108481
 CF_2 radicals in C_2F_4 and CF_4 discharge plasmas, laser induced fluorescence study 2-81575
 CH^+ , A'' state, Δ -doubling of energy levels, rot. adiabatic treatment 2-59689
 CH^+ , A'' state, Δ -doubling of energy levels, rot. adiabatic treatment 2-59689
 CH^+ , A'' state, Δ -doubling of energy levels, rot. adiabatic treatment 2-59689
 $CH+NO(N_2O)(NO_2)(N_2)$, reaction absolute rate consts. at room temp. 2-99653
 C_2H radical, rot. consts., excited states, IR obs. 2-64972
CN radical in its ground state, vibr.-rot. transitions, IR laser spectrum, spin-rot. fine struct. 2-59800
CO radical, dissociation energy from pot. curves 2-108731
 $CO(a^1\Pi)$, metastable free radicals, radiative lifetimes quenching coeffs. 2-65050
 $^{12,13}CO^+$, matrix isolated in Ne, EST study 2-102508
CaBr 2 -radical, microwave rot. spectra, unresolved hyperfine struct. investig. 2-90519
CaBr radicals, mol. beams and IR-RF double reson. studies 2-59835
CaCl 2 -radical, microwave rot. spectra, unresolved hyperfine struct. investig. 2-90519
CaCl, radicals, mol. beams and IR-RF double reson. studies 2-59835
CaF radicals, mol. beams and IR-RF double reson. studies 2-59835
 Cl_2 struct., props., CNDO/2 and INDO calcs. 2-102388
 Cl_2 struct., props., CNDO/2 and INDO calcs. 2-102388
 ClO_2 radical, coupled transitions, higher order effects ESR spectra 2-90578

free radicals continued

- ClO_2 radical, anion, ESR spectra and struct. 2-65022
FSO $_2$ radical, coupled transitions, higher order effects ESR spectra 2-90578
HCO A state, predissoc., laser optogalvanic study, rot. quantum number, Coriolis interaction 2-80743
 $HO+HNO_3(H_2O_2)$, reaction rates, flash photolysis and reson. fluoresc. 2-105460
 HO_2 radical, thermal prod. by alkoxy radical + O_2 reaction 2-62384
 HSO_2 radical, Stark shift, fluoresc., electric dipole moment determ. 2-85713
 $Mn(CO)_5$ radical, CO matrix isolated, IR and visible obs. 2-80600
MoN, matrix isolation, electronic states, ESR study 2-70296
N heterocyclic radicals, CIDEP, polarisation theory test 2-75328
NCO radical, fluoresc., in flame, intracavity laser excitation 2-108604
NCO radical, rot. const., vibr. rot. band, laser mag. reson. obs. 2-75332
 $NF+O_2$, energy transfer from O_2 Δ_g state 2-65032
NH, laser absorpt. meas. in NH_3/O_2 flames, oscillator strength determ. 2-88388
 NH_2 , IR-optical double reson., vibr.-rot. transitions, fluoresc. 2-96607
 NH_2 , laser absorpt. meas. in NH_3/O_2 flames, oscillator strength determ. 2-88388
 NH_2 radical, IR spectra, ν_1 and ν_3 bands obs. by difference freq. laser spectroscopy 2-108498
 NH_2 , Rydberg excited state, vibr. freq., MRDCI calcs. 2-113892
 NH_2 decomposition on Pt and Fe surfaces at high temp., NH radical prod. 2-72959
 NH_4 radical, ground state, electronic struct., Rydberg spectra, SCF-X-SW calcs. 2-64874
 $NH_3(ND_3)$, Rydberg spectra 2-75299
NO, valence and Rydberg states, SCF and CI calcs. 2-96470
 NO_2 radical form. by picosecond UV photolysis of nitromethane, laser induced fluoresc. probing 2-105494
 NO_2 radical, line shape, absorpt. cross section, visible obs. 2-64991
 $^{14,15}NH_3$, matrix isolated in Ne, EST study 2-102508
 O^+ radicals in type A zeolites, form. and stability, cation interaction, EPR study 2-104702
 O_2^+ radicals in type A zeolites, form. and stability, cation interaction, EPR study 2-104702
OD ($A^2\Sigma^+$) radicals, electron impact dissoc. of D_2O , excitation and polarisation anal. 2-102648
OH, $A^2\Sigma^+$, $B^2\Sigma^+$ and $C^2\Sigma^+$ states, radiative lifetimes and dipole moments 2-102538
OH, atmos. oxidation of halocarbons, model 2-68406
OH conc. in atmos. rel. to solar activity 2-106210
OH free radicals, collisional broadening of far-IR and microwave spectrum 2-96643
OH, laser absorpt. meas. in NH_3/O_2 flames, oscillator strength determ. 2-88388
OH laser-induced fluoresc. in flame, conc. profile, two-dimens. imaging 2-99678
OH, microwave-microwave double reson. in presence of collisions, reson. and nonreson. pumping (French) 2-54885
OH radical in flames, $A^2\Sigma^+-X^2\Pi(0-0)$ trnsition, mag. field effects 2-59813
OH radical species identification using laser saturation fluoresc. spectrosc. 2-93839
OH, $X^2\Pi$ state, vibr. rot. emission bands, rot. anal. 2-54827
 $OH+H_2$, interstellar rate coeffs. for rotational excitation 2-70400
 $OH+HNO_2$, temp. depend. of rate const. for stratospheric conditions 2-78794
PF(b $^1\Sigma^+$), metastable free radicals, radiative lifetimes quenching coeffs. 2-65050
 PH_2 radical, hyperfine struct. of \tilde{X}^2B_1 and \tilde{A}^2A_1 from intermodulated fluoresc. spectroscopy 2-108735
Pb(II)tetraphenylporphyrin, cation radical, optical and ESR spectra 2-80682
SF radical, rot. and centrifugal distortion const., microwave obs. 2-75249
 SO , Δ state, rel. to rot. anal. of $A^3\Pi-X^3\Sigma$ spectrum 2-113869
SO radical, $A^3\Pi$ and $B^3\Sigma^+$ excited states, vibr. level lifetimes 2-114049
SO radicals, absolute absorpt. cross-sections, 190 to 235 nm 2-64998
 $SO(X^3\Sigma^+)$, free radicals, $v=3-0$ vibr. overtone bands, IR obs. 2-102477
SeD radical, vibr.-rot. spectrum studied by laser mag. reson., fine struct., spin-orbit splitting 2-65023

freezing

see also refrigeration

- binary solution, spherically symmetric freezing precipitate, time depend. soln. 2-109961
biological cells, genetics, cryogenic preservation, effects on struct. 2-62573
biological materials, numerical stability of finite element solns. 2-67962
blood, human red cells, cryopreservation 2-62850
Bridgman-Stockbarger technique, freezing rate deviation from very low translation rates 2-97951
Bridgman-Stockbarger technique, freezing rate deviation from moderate translation rates 2-97952
cell freezing induced geometry changes, effect on dose from internal isotopes decay 2-67982
cellular freezing damage, unilamellar liposomes as a model system 2-73210
cooled pipes, in crossflow through porous medium freezing 2-71015
corneas, human, preservation by low temp. techniques (French) 2-117105
cryosurgery, appl. to otolaryngology 2-62828
formulae for freezing outside a circular tube with axial variation of coolant temperature 2-114625
frostbite, animal models 2-62563
heat transfer problems, evaluation of enthalpy method soln. 2-65471
ice, nucleation behaviour, in $MgAl_2$ ($M=Rb, K, NH_4$) 2-86829
multicomponent fluids, surface tension and freezing theory, singlet density-direct correl. function appl. 2-92310
multidimensional solidification, conduction shape factor calcs. 2-91212
pipes, in crossflow through a porous medium, heat transfer 2-71014
porous medium with water supply, model of freezing and existence theorems (French) 2-114627
supercooled liquid, unstable state onset time, Suzuki scaling method calcs. 2-103953
supercooled liquids, dynamics 2-109958
tetraethyloxysilane, mol. dynamics below freezing pt., PMR relax. investig. (German) 2-110689

freezing continued

- viruses, enveloped, freeze fracture, freeze etching, critical point drying, review 2-57942
- water, freezing rate, heat transfer, finite element anal. 2-55407
- Ar, freezing line, liq. theory and perturbation theory 2-109960
- H₂O supercooled droplets, reorientation during freezing on ice substrates 2-92162
- Hg_{1-x}Cd_xTe crystals, second phase investig. 2-92225
- KAgI₃, ice-nucleating behaviour 2-86829
- NH₄AgI₃, ice-nucleating behaviour 2-86829
- PbI₂, ice nucleating behaviour in presence of soluble salts 2-71619
- RbAgI₃, ice-nucleating behaviour 2-86829

Frenkel defects

- alkali halides, lattice defect creation by electronic excitation, review 2-115218
- alkaline earth fluorides, thermal neutron irradiated, point defects study 2-65985
- fluorites, anion Frenkel defects, entropy of formation, quasi-harmonic calc. 2-98074
- ionic crystal having Frenkel or Schottky disorder, finite length effects in lattice gas treatment 2-60973
- semiconductor crystals, gamma and electron irradi., struct. ordering, Frenkel pair annihilation model 2-76500
- semiconductors, chain Frenkel pair annihilation 2-65986
- semiconductors, Frenkel defect chain annihilation 2-115223
- TTF-TCNQ, electron irradi. effects 2-103821
- AgCl(Br), neutron irradi., Frenkel defects, struct., and annealing, NMR study 2-91952
- Al-Cr dilute alloy, irradi., self interstitial trap and clustering at impurities 2-76689
- Au, electron irradiated, damage rates 2-66067
- α-Fe, dil., electron irradiated, damage rates 2-66067
- α-Al₂O₃, native disorder, determ. of parameters 2-76432
- CaF₂, anion Frenkel defects, entropy of formation, quasi-harmonic calc. 2-98074
- Cu, irradiated, atomic displacement, temp. depend. of threshold energy 2-66042
- CuAu, fast neutron irradiated, defect production, resist. meas. (French) 2-76510
- Cu₃Au, fast neutron irradiated, defect production, resist. meas. (French) 2-76510
- Eu, electron irradi. damage, displacement threshold energy 2-81827
- Fe, impurity migration stimulated by generation and recombination of Frenkel pair 2-76749
- GaAs, ion irradi., Frenkel defects and annealing 2-115316
- GaP, Frenkel core-exciton energy, environmental effects 2-87152
- GaP, ion irradi., Frenkel defects and annealing 2-115316
- n-Ge, electron and γ-ray bombarded, defect accumulation kinetics, intensity dependence meas. 2-115295
- n-Ge, electron pulsed bombardment, defect formation obs. 2-115294
- Ge/Sb, Au, cleaved in He, surface Frenkel defects, elec. cond. study 2-115224
- InAs, ion irradi., Frenkel defects and annealing 2-115316
- InP, ion irradi., Frenkel defects and annealing 2-115316
- KBr:Na, thermo- and photostimulated recomb. of defects, spectra studies 2-110959
- Mg, electron irradiated, Frenkel defects study by diffuse X-ray scatt. 2-65989
- Mg₂SiO₄, forsterite, defect struct., graphical representation 2-81780
- Ni-Fe(Cu), electron irradi., Frenkel defects, elec. cond. (German) 2-98080
- Si, gamma-ray irradi., metastable Frenkel pair form., elec. props. 2-115289
- Si₃N₄, thin films, elec. cond. and breakdown props. 2-87435

frequency allocation

- biotelemetry requirements 2-83721

frequency changers *see frequency converters***frequency control**

- see also automatic frequency control*
- FM sideband optical heterodyne techniques and laser freq. control for precision spectroscopy 2-64122
- RATAN-600 exact time and frequency service 2-94611
- US transducer frequency control using PLLs 2-97337
- AlGaAs DH laser, short-term freq. stability improvement 2-65256

frequency converters

- see also frequency multipliers; mixers (circuits); optical frequency conversion*
- photomultiplier cathode radioheterodyning operating regime, threshold characts. 2-59644

frequency division multiplexing

- coherent optical processor, freq.-multiplexed, intensity moment computation, design 2-114198
- fibre-optic high bandwidth multichannel link utilising wavelength multiplexing 2-97186
- integrated-optic wavelength multi- and demultiplexers using chirped grating and ion-exchanged waveguide 2-10191
- light emitting diodes and photodetectors for wavelength-division-multiplexed light-wave systems 2-81120
- semiconductor lasers, longitudinal mode control by rectangular conical diffractor system, wavelength-division-multiplexing transmission 2-55190
- wavelength demultiplexer, high-capacity, with large-diameter GRIN rod lens 2-60254

frequency domain analysis

- His bundle activity with cross-correlative waveform alignment 2-94217
- hologram, long-wave, image reconstruction by max. entropy method 2-96864
- inhomogeneous lossy dielectric slab, direct and inverse scattering, time domain and freq. domain anal. 2-65143
- rheoencephalographic signals, brain blood vessels appl. (Chinese) 2-83665
- seismic sounding, frequency domain mapping approximation of moveout filters with appls. 2-100295

frequency doublers *see frequency multipliers***frequency measurement**

- see also atomic clocks*
- 28 THz absolute frequency reference grid 2-58793
- AC Josephson effect, voltage standard 2-63962
- activities overview at National Physical Laboratories, New Delhi, India 2-89658
- atomic frequency standards, use of optical pumping by lasers 2-89683
- automated high accuracy phase measurement system appl. 2-107311

frequency measurement continued

- bipolar transistors, digital balanced instrument for f_T and β_0 meas. (Chinese) 2-69156
- Chinese primary freq. standards, features and evaluation results 2-63992
- DC motors phaselock loop control by optical tachometers, velocity and direction information recovery techniques 2-74404
- Deep Space Network, frequency and timing capabilities 2-63999
- digital, statistical description 2-89696
- digital range or short time intervals, counter cct., stability and accuracy (Slovak) 2-95404
- Earth's surface, time and frequency generation and maintenance at arbitrary points 2-94614
- errors analysis, for meas. based on pulsed coincidence principle, accuracy analysis 2-58798
- far IR lasers, frequency control and modulation by Stark effect 2-60130
- far IR lasers phase-locked by Stark effect 2-102845
- flicker noise, statistical model 2-63985
- fly wheelbeat frequency meas., microprocessor-based instrument 2-117179
- heart rate monitor for runners and joggers (German) 2-78475
- hyperfine splittings due to blackbody radiator, influence on freq. standards 2-64910
- International Radio Consultative Committee role in co-ordination of time and frequency activities 2-89665
- international time and freq. comparison by orbiting H maser clock 2-64000
- IR, using Schottky diodes, extension to 4 THz range 2-74389
- laser cooled stored ion expts. at NBS, appls. to freq. standards 2-63996
- laser frequency meas. and metre redefinition 2-53718
- laser frequency stability, Allan variance real-time processing system 2-63983
- laser frequency standard based on mono-ion oscillator 2-89656
- laser radiation wavelength unit, Soviet meas. standards 2-58773
- laser wavelength meas., errors identification and elimination 2-60134
- laser wavelength meas. using multibeam Fizeau interferometer 2-60111
- lasers with nonlinearly absorbing cells, absorption saturation method, ultimate precision 2-55279
- LASSO experiment and its operational organization 2-89670
- LF time signals for time and frequency dissemination system of moderate accuracy, sophistication and cost 2-89673
- microwave Ramsey pattern in laser pumped Cs beam, appls. in freq. standard 2-63993
- mono-ion oscillator as potential ultimate laser frequency standard 2-89681
- NBS primary freq. standard, design considerations and performance 2-63989
- optical frequency measurement at NRC and progress towards frequency measurement of visible light 2-64002
- optical frequency standards, appl. of laser cooling of atoms 2-63998
- optical frequency synthesis at NPL 2-64003
- optical laser frequency standards, phase-stabilization technique 2-58792
- precise T&F intercomparison between NPL, India and PTB, Federal Republic of Germany via Satellite Symphonie-1 2-89677
- precise time transfer techniques, satellite laser ranging, Indian contribution 2-89671
- precise time-keeping, time and frequency transfer using SABCTV 2-89675
- precision time-keeping, modern methods, evolution of TAI and UTC 2-89668
- prediction error variance, time and frequency instabilities analysis 2-107294
- primary caesium clock development, review, satellite time comparison techniques and NRC 2-89672
- primary freq. standards and precision spectroscopy, impact of lasers 2-63994
- quartz resonators, frequency noises analysis 2-63966
- ring lasers, frequency characts. investig., small perturbation method 2-114321
- satellite geodesy appl. 2-88724
- saturated absorption stabilized lasers, metrological aspects 2-60133
- secondary measured standards, heterodyne double-PLL structure 2-79526
- stability determ., bias due to addition of time interval meas. 2-107307
- standard based on high-resolution optical Ramsey resonances in Ca at. beam 2-102409
- standard time and frequency in Korea, and dissemination by AM/FM broadcasting network 2-89663
- standard time and frequency signals transmission, over Cuban TV channels 2-69145
- standard time/frequency dissemination, India, radio broadcasting appl. 2-79539
- standards, astronomical research appls. 2-89156
- standards, reliability, serviceability and performance 2-89661
- state-selected beam low temp. H₂ maser, recent progress 2-58797
- stimulated resonance Raman transitions, appln. to high resolution spectroscopy and freq. standards 2-58909
- sub-mm wavelength standards, based on Mg(Ca) metastable beam 2-107293
- superconducting devices, precision metrology appl. 2-94937
- T/F comparisons, precise international, ground and satellite TV systems 2-89674
- time and frequency, methods and techniques used in New Zealand 2-89660
- time and frequency, present status in Indonesia 2-89659
- time and frequency in Japan 2-89664
- time and frequency meas., conf., New Delhi, India (Feb. 1981) 2-95306
- time and frequency meas., recent activities at Radio Research Laboratories 2-89657
- time and frequency services in Kenya, establishment, future radio broadcasting appl. 2-89662
- time dissemination capabilities via navigation satellites 2-89676
- time synchronisation via INSAT-1 direct reception system 2-89678
- time/frequency services of the US National Bureau of Standards and some alternatives for future improvement 2-89666
- timing receiver, satellite, NNSS 2-89679
- UV lasers, pulse width meas. using multiphoton ionization autocorrelation 2-60137
- visible light, absolute freq. meas. 2-64001
- VLF phase meas. for precise T&F intercomparison 2-89667
- VLF signals instant of arrival meas., error determ. and elimination 2-58799
- VLF studies at NPL, New Delhi—experimental set-up and morphology of the data 2-89669

frequency measurement continued

- ¹³⁵Ba⁺, hyperfine struct. determ. rel. to microwave freq. standard possibilities 2-65105
¹³⁷Ba⁺, hyperfine struct. determ. rel. to microwave freq. standard possibilities 2-65105
 Cs atomic beam freq. standard, beam profile 2-107305
 Cs beam freq. standard at radio research laboratories, Tokyo 2-63991
 Cs beam freq. standard NRLM-II 2-63990
 Cs beam frequency standard, optically-pumped 2-53720
 Cs beam primary freq. standards, improved performances with new-design resonators 2-63995
 Cs beam time and frequency primary standards in Federal Republic of Germany 2-63987
 Cs frequency standard realisation, CO₂ laser phase-locking 2-102844
 Cs Rydberg states, millimetre, wave spectroscopy, appln. to freq. metrology 2-58918
 H₂ masers, comparison between frequency stability of active and passive types 2-58796
 H₂ masers, passive, use as frequency standards 2-58795
 He-Ne laser, 633-nm, ¹²⁷I₂ stabilised, freq. depend. on modulation amplitude and wall temp., report 2-75618
 Hg ion freq. standard, prospects 2-63997
²⁰¹Hg⁺ stored ion microwave and optical freq. standards 2-89682
¹²⁷I₂ hyperfine components (520 THz), absolute frequency meas. 2-108929
²⁰Ne 260 THz emission, absolute frequency meas. 2-108929
 Rb atomic clock, satellite-borne, sapphire lamp development and appl. 2-89685
 Rb atomic frequency standard, optically pumped 2-89684
 Rb frequency standards, progress and prospects 2-58794
 Rb frequency standards based on hyperfine transitions meas. 2-107306
 Rb miniature high performance freq. standard, design and performance 2-89686
 Y ferrites, resonance curve width meas. by freq. determ. method (Czech) 2-77383

frequency meters

- 200 MHz, digital readout, use with divide-by-100 prescaler 2-84665
 femtosecond laser pulse duration meas. system 2-95428
 sigmatron, instrument for meas. wave nos. of pulsed and CW lasers 2-95464
 ultra-high resolution freq. meter for periodic signals contaminated by phase noise 2-95326

frequency modulation

- cat auditory cortex responses to FM of tones 2-116931
 electronic music, digital techniques for sound synthesis (French) 2-70785
 fibre optic coherent interferometric sensors, optical FM appl. 2-91084
 fibre optic Sagnac interferometer, freq. modulated heterodyne, for rot. rate detect. 2-81100
 FM sideband optical heterodyne techniques and laser freq. control for precision spectroscopy 2-64122
 FM spectroscopy and frequency domain optical memories 2-64123
 semiconductor laser amplifiers, injection locked and resonant type, optical FM signal amplification 2-80959
 AlGaAs CSP, BH and TJS lasers, direct FM characts. 2-80960

frequency multipliers

- LiNbO₃-CdSe multilayer struct. with periodic-array contacts, freq. doubling 2-92705

frequency regulation *see frequency control***frequency response**

- high-sensitivity fibre-optic accelerometer, use of compliant rubber cylinder 2-95327
 microphones, structures and characteristics, users guide 2-65438
 split film probe response under electrical perturbations 2-103234

frequency stability

- see also frequency control; laser frequency stability*
 bias due to addition of time interval meas. 2-107307
 clocks, modeling of frequency random walk instability and effects on spectral spreading 2-95314
 prediction error variance, time and frequency instabilities analysis 2-107294
 superconduction stabilised oscillator as a frequency standard (German) 2-69123
 H maser with state-mixed beam 2-90856
 H₂ extremely small maser prototype 2-90859
 He-Ne/CH₄ ultrastable lasers based on saturable absorption effect (Polish) 2-55187

frequency triplers *see frequency multipliers***friction***see also internal friction; lubrication*

- 16 mm raw film stock, frictional props. meas. 2-69274
 alloys, creep behaviour, friction stress concept appl. 2-62167
 anisotropic dry friction, theoretical model 2-67557
 beam supported at axially oscillating mount, destabilising effect of Coulomb friction on vibr. 2-60450
 boundary lubrication, dynamic behaviour of surface-adsorbed molecules 2-57489
 bronze-graphite antifriction material, sintered, struct. and mech. props. 2-67556
 carboxylic acid Langmuir-Blodgett films, frictional force, shear strength 2-61318
 cast Fe products, friction and wear 2-88221
 ceramics, friction and wear against metals 2-88210
 combined convection in wavy-walled channel, skin friction, heat transfer rate and press. drop 2-114799
 combined convection stagnation heat transfer from an isothermal cylinder with internal sources or sinks 2-114800
 compressible materials with internal friction, finite plastic flows, discussion and reply 2-60422
 contact problem, periodic, with allowance for additional load acting away from die 2-114740
 contact problems with friction, numerical realisation 2-97472
 contact problems with nonlinear friction, asymptotic methods appl. 2-91341
 Coulomb friction in two-dimensional rigid body systems 2-55518
 cylinder, elastic, supersonic rolling with friction on plane, closed form soln. 2-109253
 cylinders, elastic layer covered rolling contact driving a loaded sheet in the nip 2-91345
 diamond materials, friction and wear against metals 2-88210

friction continued

- dislocation vibration entropy 2-55970
 drag reducing fluids, heat transfer and friction, diameter effect prediction 2-109404
 elastic systems with amplitude-dependent hysteresis, friction, multifreq. resonance vibrs. 2-114633
 elastic wave refl., refr. and absorpt. at frictional interface, P and SV motion 2-97425
 explosive, solid, detonation, crit. conditions 2-57617
 fatigue cracks, friction prod. between edges, AE charact. 2-83328
 Fe, electrolytic, friction and wear, strain and failure processes investigation by acoustic emission method 2-116633
 fine-diamond grinding of optical glass, friction and dispersal 2-97244
 flow through smooth concentric annuli, turbulent friction calcs. 2-60520
 frictional force rotor, demonstration equipment 2-94951
 glass surface, review 2-92318
 hydrobionts, frictional resistance under unsteady conditions of motion (Russian) 2-83583
 hydrodynamic interaction of two spherical particles, friction matrix calc. 2-103140
 infinite plane with curved notch, contact problem of elasticity theory 2-65539
 interface between two elastic solids, disturbance caused by plane elastic pulse 2-97471
 machine recorder, sensitivity improvement 2-62316
 mechanical system forced oscills. with allowance for dry friction 2-114712
 metal parts, magnetisation effect on interaction of rubbing surfaces (Russian) 2-77952
 metal powder pressing, external friction coeff. rel. to applied press. 2-67244
 metals, friction and wear, strain and failure processes investigation by acoustic emission method 2-116633
 metals, intrinsic property 2-61061
 metals, tribolayers, formed by frictional contact in liq. He 2-62234
 nonlinear mechanical system with dry friction, oscillations (Ukrainian) 2-55471
 plasticity, technological problem formulation and soln. 2-114679
 PMMA thin films, time dependence effects in shear 2-67554
 polyethylene, high density and ultrahigh mol. wt., friction, effect of linear and rot. motions 2-57493
 polyethylene oxide, critical Weissenberg numbers, solvent effects 2-109371
 polyimide-bonded graphite fluoride films, bonded solid film, effect of load area of contact and contact stress on wear mechanisms 2-88224
 polymer films, molecular processes during friction, thermally stimulated depolarization current obs. 2-67560
 polymers, friction and wear, book 2-79295
 polymers, friction coefficient eqn. 2-11327
 polyvinyl alcohol thin films, time dependence effects in shear 2-67554
 powder rolling, coeff. of external friction calc. 2-116402
 PTFE, friction, effect of linear and rot. motions 2-57493
 PTFE based composites, filler effect on friction and wear behaviour 2-111325
 reactive paths in the diffusion limit, frictional coupling effects 2-105443
 resonant systems Q-factor and internal friction meas., using digital meter 2-58813
 rigid punch sliding on elastic and viscoelastic layer 2-97464
 ring, thin, elastic, incomplete, impinging on a frictional barrier, stick/slip conditions 2-103114
 ring, thin elastic deformation in a frictional channel 2-91252
 rotating curved channel flow, friction resist. study (German) 2-103172
 rubber, rotational sliding, second order stresses, seizure and buckling, frictional torque meas. 2-99565
 rubbing rough bodies, effect of tangential load on stressed state 2-67558
 semiconductors, tribolayers, formed by frictional contact in liq. He 2-62234
 shell, nonlinear, shallow, interaction with rigid punch, contact problem (Ukrainian) 2-103109
 shell, rolled cylindrical, loaded by internal pressure, elastic deform. and layers slippage 2-91340
 skin friction meas. using hot wire gauges (French) 2-109435
 slider, cylindrical, cantilevered, elastic edge stress singularities 2-103113
 snow, surface friction and resistance props., review 2-88925
 solids with initial gap between, contact transmission of wave motion 2-109219
 steel, austenitic stainless, impregnation of H during friction in H₂SO₄, influence on wear 2-67555
 steel, high C, friction and wear, strain and failure processes investigation by acoustic emission method 2-116633
 steel, surface layers formed by friction, AES and X-ray emission spectra study (Russian) 2-93635
 strip rolling, plane strain, simulation by rigid-plastic finite element method 2-114737
 surface covered by soft metal film, friction between single protuberance and surface 2-88203
 surface parameter effects 2-67565
 torsion test to identify hereditary-type constitutive equation 2-97394
 vibrating bodies, thermoelastic damping theory 2-81277
 water, flow in vertical channels, press. drop meas (Hungarian) 2-109436
 Al alloys, dispersion hardened composites, fabrication and wear props. 2-57363
 Cu-Ni alloys, friction and wear 2-88217
 Fe alloy, friction glazing, surface melting interpret. of white etching areas 2-67550
 Fe, Armo, electrochem. props. in friction, H absorpt. influence 2-67651
 Fe-base binary alloys, in contact with SiC single cryst., adhesion, friction and wear 2-88199
 Fe-Tribaloy 700 mixture, sintering temp. effect on microstruct. and mech. and tribological props. 2-77775
 MoS₂(Se₂)(Te₂), sputtered dichalcogenide layers, friction props. 2-72849
 2NO₂=2NO+O₂, friction law, averaged vel. profile in turbulent reactive tube flow (Russian) 2-55548
 NbSe₂, sputtered dichalcogenide layers, friction props. 2-72849
 SiC, anisotropic tribological props. 2-88219
 SiC, single cryst., friction damage, surface and subsurface, SEM and TEM study 2-67566
 SiC single cryst., XPS, AES and friction studies 2-93633
 TaSe₂, sputtered dichalcogenide layers, friction props. 2-72849
 WS₂, sputtered dichalcogenide layers, friction props. 2-72849

friction, internal *see internal friction*

frictional electricity *see triboelectricity*

fuel *see also coal; fission reactor fuel; pulverised fuels*

automobile engine using hydrogen storage technology, mixture formation and combustion 2-83443
biomass sources, chemical conversion and end fuel products 2-62500
coal mining using advanced techniques, commercialisation potential 2-62451
coal water slurries, combustion characts., test programme 2-99753
compressed natural gas, commercial fleet road vehicles appl. 2-111535
continuous microbial production of hydrogen gas 2-83520
cooperative international liquid hydrogen automotive progress report 2-73166

Daimler-Benz hydride vehicle project 2-57742
energy consumption in Israeli industry and agriculture 2-83442
engine fuels from biomass, possibilities 2-83517
enhanced oil recovery, commercialisation potential 2-62451
evaluation of fuel saving developments in gas technology 2-73052
explosive, aquarium test, shock press. anal. 2-74442
flash carbonisation of coal to produce synthesis gas and low-sulphur char 2-99748

fossil, gas sorption systems for S compounds, NH_3 , computer simulation 2-73057

fossil, thermodynamic props. meas. at Bartlesville Energy Technology Center 2-53764

heavy oil, commercialisation potential 2-62451

hydrogen as fuel gas 2-57738

liquid fuel alternatives, nonlinear programming model 2-62454

liquid fuel production from coal and shale oil 2-62453

liquid fuels, coal-derived, potential health problems 2-67805

liquid fuels from gas and coal, assessment of comparative economics 2-99747

liquid natural gas, spills, vapour dispersion simulation 2-99865

methane from geopressured aquifers, commercialisation potential 2-62451

methanol, co-production, in gasification combined cycle power plant 2-67801

oil fired, burning municipal solid waste, energy recovery, five methods evaluation 2-99754

oil shale, commercialisation potential 2-62451

oils characterisation by thermogravimetry 2-73034

petroleum analysis, UV spectroscopy appl. 2-67912

photoacoustic Fourier transform IR spectroscopy, analytical appls. 2-116747

propellant, solid, shock-induced instability due to crack-like defects 2-78106

renewable, recycling of municipal, agricultural and industrial wastes 2-67847

sewage treatment plants energy consumption, absorption heat pump utilisation of energy yielded (*German*) 2-88410

shale oil, production, technology, effects on power industry 2-67800

solar energy storage as H_2 via water electrolysis, system design and evaluation 2-83523

solar H_2 production using two-step-thermochemical cycles 2-83522

supply organization, economic region (*Russian*) 2-83445

survey of substitute fuels 2-116772

synfuels and coal, technical and economic aspects 2-73059

synthetic liquid and gas fuels, future trends 2-99750

tight gas sands, commercialisation potential 2-62451

transport-fuel production from protein-extracted grass and lucerne 2-78177

underground coal gasification, commercialisation potential 2-62451

use of hydrogen in dual-fuel engines 2-57671

utilisation of wood and peat as fuel in Finland 2-99751

wood gasification to liquid fuels, research and development aspects 2-78176

H_2 catalytic combustion, advantages and disadvantages of using catalytic heater 2-99850

H_2 catalytic combustion, fundamental conditions for burner design 2-99749

H_2 ignition when injected into high temperature oxidiser experimental study 2-99847

H_2 production by thermochemical decomposition of water using bench scale plant employing Mark-13 process 2-83521

H_2 utilisation as fuel, technico-economic potentialities for steel production 2-83444

H_3PO_4 fuel cell power plants, effects on performance and economics of alternative fuels 2-62473

fuel batteries *see fuel cells*

fuel cells

11 MW fuel cell power plant for electric utility dispersed generation appls. 2-73108

$\text{C P}_2\text{O}_5$ aged electrodes in-situ regeneration of active surface area by electrochemical methods 2-78205

Electrochemical Society, Incorporated, Spring Meeting, conf., Montreal, Canada (May 1982) 2-101133

high temperature fuel and steam electrolysis cells using proton conductive solid electrolytes 2-105554

high temperature solid electrolyte fuel cells 2-73107

internal resistance measurement technique 2-105550

low-temperature direct methanol fuel cell efficiency and application comparison with Otto and Diesel heat engines 2-105587

molten carbonate fuel cells, electrolyte distrib. thermodynamics 2-88425

molten CO_2 -electrochem. cell for CO_2 concentration for manned spacecraft 2-83469

power plant, development trends 2-73109

power plants, current status and future developments (*Czech*) 2-57695

reactions, electrode kinetic investigations, cell design 2-57696

redox systems appl. 2-62472

review of direct conversion of chemical energy into elec. energy (*German*) 2-111548

solar energy storage as H_2 via water electrolysis, system design and evaluation 2-83523

three-electrode solid-state fuel cell for evaluating working electrodes 2-93890

H_3PO_4 fuel cell power plants, effects on performance and economics of alternative fuels 2-62473

fuel cells continued

S tolerant catalysts, Toyo T-12 and T-12/T-48 combination, for processing no.2 fuel oil for use in fuel cells 2-62474

SrTiO_3 , matrix material for molten carbonate fuel cell electrolyte structs. 2-88426

fugacity

see also kinetic theory of gases

renormalized $(1/\sigma)$ expansion for lattice animals and localization 2-101347

$\text{SiO}_2\text{-Al}_2\text{O}_3\text{-CaO MgO:Ce}$, U glass-forming melts, U chem., redox interactions 2-93771

full wave rectification *see rectification*

function approximation

see also Chebyshev approximation; interpolation

advection equation, stability and convergence of polynomial spectral methods (*French*) 2-75964

neutron transport theory, approximation methods, review 2-74787

neutron transport theory, monokinetic, A_n method, convergence and appl. 2-74793

Pade approximants, basic theory, book 2-79288

Pade approximants, extension and appl., book 2-79289

function generators

see also pulse generators; square-wave generators

digital standard sound source waveform synthesizer (*Japanese*) 2-102987

MM and sub-MM wavelength interferometry, use of two-oscillator operating modes 2-76199

triangular waveform generator, electronic switching, appl. to cyclic voltammetry 2-93846

functional analysis

see also harmonic analysis

anharmonic oscillator, cubic, functional expansion appl. 2-63847

Bargmann transform, Zak transform, and coherent states 2-74349

Birman-Schwinger principle, appl. 2-107144

bound, antibound and resonant states, overcompleteness set 2-53570

caustics of the harmonic double cusp near an E_n point 2-94980

density functional formalism at finite temperatures with some applications, review 2-112746

Feynman path integrals and the trace formula for the Schrodinger operators 2-53550

functional integration appl. 2-101157

Gaussian functional integrals in statistical physics, explicit evaluation 2-53668

generalised $\text{SU}(2)$ spherical harmonics 2-113165

generalized Brownian functionals 2-101335

Henon-Heiles family, normalised, reduced, global geometry of bifurcations 2-94981

integrable systems in multidimensional spaces 2-95132

Kirchhoff type equations and multivalued functionals 2-95135

Kowalewski's asymptotic method, Kac-moody Lie algebras and regularization 2-53551

method for solving $J_1(x)Y_1(\rho x) - J_1(\rho x)Y_1(x) = 0$ 2-94979

non-Gaussian parametric systems, functional statistical anal. 2-112685

nonlinear random processes, external field effects 2-107241

pair summator eqns. with kernels in form of Bessel functions, solution 2-95029

path integrals, asymptotic evaluation 2-95079

path integration of a generalized quadratic action 2-101220

polarons, path integral formalism, functional variational approach (*Russian*) 2-76942

polymer base anisotropic materials, long-term strength prediction 2-92083

quantum mechanical semigroups, propagator, semiclassical approx., functional integral method 2-79420

quantum theory, path spaces, polygonal path approximations 2-79404

rotating harmonic oscillators, continued fraction theory 2-95093

scalar QED, effective potentials, functional evaluation (*Chinese*) 2-89928

semiclassical phase integrals, higher order, Chebyshev series approx. and Taylor series expansion calcs. 2-101204

special functions of math. phys., algebraic, geometric and system-theoretic props. 2-95684

spectral theory conf., Dublin, Ireland (July, 1980) 2-53417

theory of τ functions in integrable systems 2-95134

univalent functions theory 2-95055

Volterra analysis to weakly nonlinear EM field problems, appl. to whistler propag. 2-102685

functional equations

elasticity, linearized theory, variational principles, stress functions 2-112703

elliptic variational inequalities, mixed formulation and approximation 2-84436

fluid dynamics, Riabouchinsky functional, second variation 2-53532

Fourier-Borel transform, generalized version 2-94976

lattice spin models, star-triangle relation anal. 2-63911

magetostatics, complementary and dual energy finite element principles 2-55006

nonlinear diffusion eqn. $n_t = (n^{-1}n_x)_x$, asymptotic behaviour 2-95278

quantum optics, stochastic averages, functional integration calc. 2-90846

statistical mechanics, moderately dense gas, functionals generating method (*Ukrainian*) 2-76054

symmetric operators in Krein space, exponential map 2-95078

Volterra-series computation of nonlinear optical polarisation 2-108945

functionals *see functional equations*

functions

see also Bessel functions; Boolean functions; Green's function methods; random functions; transfer functions; vertex functions; Walsh functions

elliptic motion of arbitrary eccentricity and semi-major axis, H_1 , H_2 , H_3 functions expansion 2-106482

influence, appl. to buckling anal. of columns and plates 2-114700

Jacobi functions products 2-107149

Laplace transforms of Airy functions 2-107151

Legendre functions, family of sums of products 2-95075

linear response functions, expansion 2-82310

Voigt profile functions, automatic anal. for spectral line intensity distrib. (*French*) 2-64917

fundamental constants *see constants*

fundamental law tests

lunar laser ranging, general relativity fourth test 2-89607

fundamental law tests continued

- PSR 1913+16 (pulsar+compact star) general relativity test and gravit. radiation evidence 2-63498
- special theory of relativity and radar astronomy 2-74206

fundamental particles *see elementary particles***fundamental physics concepts** *see physics fundamentals***fundamentals of physics** *see physics fundamentals***furnaces**

see also electric furnaces; refractories

- aerodynamic levitation apparatus coupled with solar furnace for study of matter in the liquid state (*French*) 2-109430
- alloys, vacuum induction melting 2-69177
- blackbody furnaces, medium temp. cylindrical cavity (*Chinese*) 2-69176
- Cassegrain solar furnace concentration 2-99764
- Cassegrainian solar furnace, computational investigation 2-73065
- diffusion furnaces, temp. profile meas., systematic error model (*German*) 2-58819
- evaluation of fuel saving developments in gas technology 2-73052
- graphite furnace for electrothermal at. absorpt. spectrometry, TaC coating (*Japanese*) 2-112995
- measurement of transient temp. fields heat flux sensor with thermocouples appl. (*German*) 2-64041
- quench furnace system, horizontal, for gas-solid reactions at high temps. 2-64043
- Raman spectroscopy, high press. high temp. techniques, appl. to solns. 2-89820
- solar, for melting point meas. of oxides in different atms. 2-58830

Furry theorem *see quantum electrodynamics***fusion** *see melting***fusion, nuclear** *see nuclear fusion***fusion-fission reactors** *see hybrid reactors***fusion reactor fuel**

- advanced fusion reactors, book contrib. 2-74941
- breeding ball blanket for fusion reactors 2-69813
- burn performance of inertial confinement fusion targets 2-69876
- clean-up system based on Pd-diffuser 2-69894
- D-T: ^3He , liq., anomalous vapour press. meas. 2-66188
- FED, ^3H transport and control 2-85375
- fission-fusion system, long term fuel dynamics, doubling and half-life times 2-113748
- gas jet IF targets 2-85251
- glass microballoons, coating technique using acoustic levitation 2-85244
- handling, conference, Tokyo, Japan (Oct. 1980) 2-107022
- hybrid reactor symbiotic systems, fuel flow dynamics 2-54661
- inertial confinement fusion target, deflagration wave with radiative energy transport 2-54654
- inertial fusion targets, physical meas. 2-85247
- laser target, density matched coating, plasma polymerisation 2-54655
- laser target, plasma coating, mol. beam levitation technique 2-54657
- mass-spectrometric analysis of hydrogen and helium isotopes 2-90297
- pellets, design for commercial ICF power plant 2-85253
- purification system based on Pd-Ag alloy membrane 2-69897
- SENRI-I, conceptual design, ^3H breeding ratio, neutronics calc. 2-75004
- SENRI-I, conceptual design, ^3H recovery system, calcs. 2-75005
- spent plasma processing, exhaust plant 2-85378
- Tritium System Test Assembly fuel Cleanup System 2-85379
- D pellets, injection technique for plasma refuelling 2-74939
- D, rectification, feeder current phase composition influence 2-54660
- D-T content in glass microballoons, X-ray counting method 2-85242
- D-T filled ICF target, positioning and freezing using cold mol. beam and quadrupole elec. field 2-85245
- D-T mixture in glass shell, tritium, induced X-ray emission 2-67774
- D-T mixtures, lasers for compression and fusion 2-69815
- D_2+T_2 , liq. and solid, chem. exchange reactions, IR spectra study 2-96301
- DT gas filled spherical targets, heavy-ion fusion, scaling laws 2-74940
- DT-DD hybrid pellet for inertial confinement fusion 2-113728
- H isotope separation, Boynton's mathematical model adaption 2-69898
- H isotope separation by gas chromatography 2-85381
- H isotope separation in cryogenic distillation columns, dynamic simulation 2-69899
- H, isotope separation with UH_3 , UD_3 , and $\text{UH}_3\text{D}_{1.5}$ 2-96122
- H production in fusion-fission hybrids 2-69884
- H production using two-temp. zone blanket in thermo-chemical prod. 2-69883
- H separation from blanket ^3H production streams 2-69885
- H-T separation, cryogenic distillation column with feedback stream, simulation 2-90289
- ^3H , build-up in liq. Li blanket in ICF chamber 2-75008
- ^3H confinement and recovery from Li_2Pb blanket 2-69886
- ^3H cryopumping, blocking by ^3He 2-84649
- ^3H migration and deposition anal. code 2-75009
- ^3H on-line monitor development with γ -ray rejection and energy discrimination 2-75057
- ^3H , permeation rates for fusion reactor materials 2-75000
- ^3H , permeation through first wall 2-85376
- ^3H , physical data and behaviour in fusion systems 2-75006
- ^3H recovery from contaminated water by laser multiple photon dissociation 2-85380
- ^3H , separation using falling liquid film condenser 2-75011
- ^3H sorption from liq. Li using Y sorbers 2-85382
- ^3H storage using molecular sieves 2-85377
- ^3H technology for magnetic fusion energy program 2-85374
- T breeding in LiAlO_2 blanket, performance of various techniques 2-113727
- T breeding studies in Li-blankets, on-line method 2-64633
- T production in Li_2Bi , absorpt. in Ni, FBR blanket design 2-80220
- T sorption from molten Li using Y metal 2-80175

fusion reactor ignition

see also fusion reactor materials; plasma heating; plasma production

- 3rd IEEE International Pulsed Power Conference, Albuquerque, NM, USA (June 1981) 2-89461
- 10 kHz 10MW average power neutralised Li ion beam injector 2-96308
- 200 GW light ion beam power transport 2-90303
- Antares CO_2 laser system automatic opto-mech. beam alignment system 2-108894
- Antares laser alignment gimbal positioner 2-102814
- ASDEX neutral beam injector, performance 2-80264

fusion reactor ignition continued

- ASDEX neutral injectors, damping element in high voltage circuits 2-74944
- ASDEX periplasmatron ion sources, development, fabrication and testing 2-80273
- beam trajectories calculation code for ion source in neutral beam injector 2-80269
- burning fusion plasma, compression-decompression control, thermal instability suppression 2-76102
- ceramic to metal brazed rectangular insulator for neutral beam accelerators 2-59541
- charge-exchange method for storing heavy ions for inertial thermonuclear fusion 2-113740
- conductance thermal accommodation and beaming from neutralizer gas cells 2-80271
- controlled thermonuclear reactions, brief progress review 2-96300
- Defin I laser fusion facility, optical system, preliminary expts. 2-115029
- dielectric satellite spectra from dense laser-produced plasmas 2-71110
- Doublet III, neutral beam injector system, operating experience 2-80265
- Doublet III neutral beam injection upgrade for long pulse operation 2-80266
- Doublet III neutral beam injector, mag. shielding and eddy current meas. 2-74946
- Doublet III neutral beam power system 2-74945
- driver options for steady-state Tokamak reactors 2-80249
- EBT, reactor, potential control, heating and confinement 2-103426
- exploding-puff target, ion vel. spectra simulation 2-109466
- FED, RF assisted current start-up 2-69965
- FRTP prototype power reactors with neutral-beam heating and pellet injection 2-80250
- fuel density-radius product in laser fusion expts., direct meas. 2-103452
- fusion research engineering problems, conf., Chicago, IL, USA (Oct. 1981) 2-63744
- harnessing the Sun's fire on Earth, inertial confinement and magnetic confinement 2-108120
- heavy ion beam ignition for inertial confinement fusion systems 2-113733
- heavy ion-beam imploded targets, fusion power 2-90293
- high power lasers and appls., Int. School of Physics, Varenna, Italy, July (1978) 2-74141
- hydrodynamic stability, electron and ion beam study 2-74894
- ICF, transport of light ion beams in plasma channels 2-80236
- ICF implosions, thermal front propag. and smoothing 2-90296
- ICF target, organometallic polymer preheat shield fabrication 2-85243
- ICF target expts., high energy small emittance accelerator utilisation 2-108171
- ICRF heated Tokamak plasmas, anisotropy and tail form. 2-55760
- impact fusion, EM gun appl. 2-54651
- inertia confinement by means of light ions (*German*) 2-90287
- inertial confinement driver, imploding shell concepts 2-102258
- inertial confinement fusion reactor, heavy ion beam driven, target design 2-69814
- inertial confinement fusion target, deflagration wave with radiative energy transport 2-54654
- inertial confinement fusion target, energy gain 2-80217
- inertial confinement targets, light ion beam fusion, energy deposition 2-64634
- intense ion beams, very low emittance, generation method, inertial confinement fusion driver appls. 2-96359
- intense light ion beam reactors, plasma channels 2-69867
- INTOR, LHFF heating, numerical simulation 2-113742
- INTOR neutral beam injector concept 2-80259
- ion beam generation in RPI and SOWA ion implosion facilities 2-69816
- ion beam transport in laser-initiated plasma channels 2-55752
- ion beam-pellet interaction, energy and momentum deposition 2-85254
- ion guns, charge exchange effect, appl. to confinement devices 2-96352
- knock-on particle preheat in ion beam fusion targets, theory 2-90291
- laser absorption rate in low density foam target, obs. and computer calc. 2-90960
- laser diagnostics for inertial confinement fusion plasmas 2-103450
- laser fusion, beam diagnostics of multi-wavelength laser 2-55234
- laser fusion physics expts., diagnostic techniques 2-109586
- laser fusion target dynamics, time and space resolved radiography 2-74893
- laser fusion target implosion, X-ray and α -particle microfresnel zone plates, batch production method 2-84774
- laser inertial-confinement fusion, high-power short-pulse CO_2 laser systems 2-75599
- laser produced plasmas, magnetic confinement fusion research applications (*Japanese*) 2-86451
- laser systems, large solid-state, aberrations and focussability 2-97035
- laser targets, high-precision optical monitoring technique 2-85263
- laser-accelerated targets, flash X-radiography study 2-113726
- laser-driven, smoothing of beam modulation for accelerated targets, X-ray shadowgraphy study 2-115028
- laser-driven hydrodynamics, model expts. 2-59514
- laser-driven ICF, nonuniform irradi., two-dimens. fluid simulation 2-113729
- laser-fusion and laser-plasma interactions 2-76165
- laser-produced implosion, diagnosis by Ar X-ray lines 2-86472
- light ion beams as the driver for inertial confinement fusion 2-85252
- linear Extrap pinch, equilib. study 2-109580
- inertial confinement fusion, cryogenic targets, heating 2-85260
- macroparticle accel. for controlled thermonuclear fusion 2-96304
- magnetic booster target low velocity high yield impact fusion 2-54653
- magnetic bottles, ion cyclotron resonance, heating, confinement, fusion appl. 2-91633
- magnetic fusion plasma, D^0 additional heating, secondary plasma effects 2-81536
- MFTF HVDC beam components protection by electronic crowbar 2-74948
- MFTF sustaining neutral beam power supply safety procedures 2-74960
- neutral beam injector development for JET 2-81503
- Nova, control system, data acquisition, architecture and system design 2-75023
- Nova, high density energy storage capacitor 2-80309
- Nova, laser sequencing, synchronization, and safety systems 2-75022
- Nova, optical components 2-75014
- Nova, power system and energy storage 2-75015
- Nova alignment and laser diagnostic systems, data acquisition 2-75019
- Nova alignment and laser diagnostics systems 2-75018
- Nova frequency conversion system 2-75020

fusion reactor ignition continued

- Nova front end subsystem 2-75017
- Nova laser pulse power system, hardware current status 2-90937
- Nova laser system for inertial confinement fusion 2-75012
- Nova mechanical systems 2-75013
- Nova power systems and energy storage 2-75016
- Nova target systems 2-75021
- Novanet, a local computer network, and nova target data acquisition system 2-75024
- Particle Beam Fusion Accelerator (PBFA-I), HV modular interconnecting and operating systems 2-90326
- Particle Beam Fusion Accelerator design, implementation and effective operation 2-90323
- Particle Beam Fusion Accelerator magnetically insulated transmission lines combined into disc feed 2-96309
- particle beam fusion targets, shock effects meas. 2-69811
- PDX neutral beam injection system, installation and start-up 2-80262
- PDX neutral beams, arc notching 2-80274
- plasma science conf., Ottawa, Canada (May 1982) 2-107015
- plasma-materials interactions in scrapeoff region of ISX-B Tokamak 2-74918
- proportional counter for laser fusion target compression meas. 2-75118
- pulsed cooling water systems for actively cooled beam dumps 2-74943
- Pulselac, high intensity accelerators for ion beam fusion 2-90324
- Q-value assessment of D-T- μ (muon catalyzed) fusion 2-69871
- radial ion diode for generating intense focused proton beams 2-96351
- RF linear accelerator for heavy ion fusion 2-80243
- RIGGATRON Tokamak fusion demonstration experiment program 2-69870
- sputtering erosion estimates for NBET beam dumps 2-74947
- Target Development Facility, light ion fusion, conceptual design and engineering 2-80237
- temporal pulse-shaping for laser-fusion experiments using a cavity-dumped Q-switched oscillator 2-64637
- TFTR, neutral beamline performance characteristics 2-80263
- TFTR neutral beam injector, beam induced pressure variations 2-80272
- TFTR neutral beam system test facility, gas density distrib. meas. 2-80270
- thermonuclear detonation waves 2-54662
- thermonuclear ignition in Tokamak like configurations from scaling laws 2-59513
- thermonuclear plasma, ignition by lower hybrid heating 2-76127
- thermonuclear plasma, neutron diagnostic method (*German*) 2-109604
- thin foil targets, ablative accln. by intense proton beams 2-54656
- Tokamak, evaporation of injected pellets and classical flux limit parameter 2-85262
- Tokamak plasma, He injection, α -particle conc., ignition temp. 2-81502
- Tokamak plasma, ignited, compression-decompression feedback control of stability 2-96306
- Tokamak plasma, ion beam heating coulomb collisions 2-81534
- Tokamak plasma, mag. compression heating effects on ignition 2-103400
- Tokamak plasma, mag. field effect on neutral beam heating 2-81531
- toroidal plasma, burning, thermal instability and possibility of its static stabilisation 2-81544
- uncertainties associated with inertial fusion ignition, worst case driving energy 2-108105
- Wendelstein VII-A neutral injectors, operating experience 2-80267
- ZEPHYR, compact ignition and burn study 2-109547
- ZEPHYR D-T ignition expt., prompt and delayed radiation calcs. 2-54648
- ZEPHYR ignition expt., heating 2-81543
- ZEPHYR ignition expt., thermonuclear burn, dynamics, thermal instability 2-80222
- ZEPHYR neutral beam injection system, conceptual design 2-80268
- CO₂ laser, pulse propag. simulation using saturable absorbers, laser fusion appl. 2-80992
- CO₂ laser fusion driver concepts, advanced 2-97070
- CO₂ laser fusion systems, phase aberrations and beam cleanup techniques 2-102816
- CO₂ pulse generation system, laser fusion appls. 2-97071
- D-T filled ICF target, positioning and freezing using cold mol. beam and quadrupole elec. field 2-85245
- D-T mixtures, lasers for compression and fusion 2-69815
- D-T wall-confined fusion cycle energy gains, shock wave heating 2-90294
- DT μ catalyzed fusion, energy production possibilities 2-69872
- ²³⁵U, inertially controlled ignitor in controlled thermonuclear fusion 2-113734
- V²⁺:MgF₂ solid state laser for fusion appls. 2-97062

fusion reactor materials

- see also *fission reactor materials; fusion reactor fuel; radioactive waste*
- 12 T yin-yang magnets design 2-75038
- accelerator component development, fusion material test device 2-85237
- acetylene, liq. and solid, getter for T₂ gas 2-84638
- acoustic emission triangulation of mechanical disturbances in superconducting magnets 2-69918
- Alcator actively cooled limiters, design 2-80338
- alloy, austenitic, microstruct. development, effects of pulsed dual-ion irradiation 2-109852
- alloy, binary, FCC and BCC, electron irradiation, rad. induced segregation at internal sinks 2-86731
- alloy, ion bombardment, solute redistribution process 2-109858
- alloy, irradiation, recoil resolution and particle stability, dissolution and inverse coarsening 2-86719
- alloy development 2-108116
- blanket materials for DT fusion reactors 2-69818
- blankets, coolant reactions 2-69855
- breeder materials, compatibility with struct. 2-69854
- breeders, ceramic, preparation, characts. and chemistry 2-69856
- breeding materials, interactions with structural alloys 2-69853
- breeding materials, Li compound, irradiation study 2-69858
- bulk shield design, materials considerations, for fusion engineering device, FED 2-69862
- C:H(D), ion-implanted impurity retention, release and isotope exchange 2-69848
- C NbTi superconductor for magnets, fusion neutron damage 2-80184
- ceramic and organic insulators for fusion appl., review 2-80179
- ceramic materials in liq. metals, thermodynamic stability 2-80176
- ceramic to metal brazed rectangular insulator for neutral beam accelerators 2-59541
- ceramics, Li-containing, appl. as solid breeder material 2-69852

fusion reactor materials continued

- Cluster Test Facility and Test Module Coil development 2-85364
- coated materials for Tokamak fusion device appl., thermal fatigue props. 2-74909
- complex, high temp. radiation damage 2-109843
- concrete moisture retention, curing effect, implication for shielding 2-85330
- conference, Seattle, WA, USA (Aug. 1981) 2-68954
- constant tension D magnet, shape determ. using iterative numerical approach 2-64665
- creep, irradiation, and thermal, by dislocation climb, theory 2-86709
- CRT blanket thermal analysis during a major plasma disruption 2-69880
- cryostable low loss cable for 3.8 MJ pulsed supercond. coil 2-75036
- CTR first wall, conceptual design and material consideration 2-80344
- data base for irradiation data of type 316 stainless steel 2-69841
- diatomic materials, displacement cascades 2-86710
- dipole magnets, iron free, anal. and design 2-64668
- dislocation sink strengths, rate theory of irradiation damage 2-86716
- displacement cascades, molecular dynamic calcs. 2-86711
- Doublet III B-coil centerpost, prestressed epoxy-glass cylinder 2-59536
- Doublet III IR monitoring of, TiC coated graphite protecting injection system 2-80281
- Doublet III neutral beam ion sources, epoxy insulators and bonded joints 2-59539
- ductility tests, small scale, bulge test applicability 2-88314
- EBT fusion power plant, cost, blanket and shield materials effect 2-69861
- EBT-P development supercond. coils 2-85359
- EBT-P vacuum linear concepts, thermal performance 2-85285
- EBT-P vacuum seals 2-85287
- EBTR magnet design 2-69912
- element reliability under intense dynamic stress, routine and abnormal operation 2-108081
- European LCT coil, progress report 2-85363
- European programme of fusion materials 2-69822
- failure criteria for fusion reactor first wall structural design 2-69839
- Fast Flux Test Facility, instrumented in-reactor test capabilities 2-85235
- fatigue test under irradiation, from cyclotron 2-85238
- FCC metals, high energy recoils, computer simulation, cascade shapes and sizes 2-86712
- FED, materials related problems 2-69819
- FED pump limiter material consideration 2-74904
- first wall, irradiation, creep characts. 2-85220
- first wall, response to major plasma disruptions 2-69825
- first wall, shock attenuation, protection by liquid Li blanket 2-69812
- first wall, welded joint, microstruct. and erosion during ion bombardment 2-113738
- first wall alloys, preferential sputtering effect 2-69878
- first wall candidates, material props. relationship to design 2-69877
- first wall material, radiation blistering, review 2-113735
- first wall materials, He bubble migration, creep rupture behaviour 2-69827
- first wall materials in fusion reactor, impurity ions sputtering yields 2-74921
- first wall materials vapourisation and melting in fusion devices 2-74919
- fission-fusion hybrid blanket simulation in a fission test reactor 2-69992
- FMIT Li target, water testing 2-102266
- foam target, low density, efficient laser absorpt., obs. and computer calc. 2-90960
- fracture and flow in fusion reactor environment 2-85223
- fusion research engineering problems, conf., Chicago, IL, USA (Oct. 1981) 2-63744
- glass fibre reinforced epoxy, magnet coil insulating materials, irradiation studies 2-80181
- glass-ceramic, 14 MeV neutron irradiation effects 2-85208
- graphite, dynamic response of fusion reactor components with temperature-dependent properties 2-69838
- graphite, electron induced methane production in fusion reactor environment 2-69903
- graphite, He⁺ bombardment, microstruct. changes 2-76524
- graphite, material for limiter, shield and injector plates 2-113739
- graphite, neutron irradiation, defect prod. and annealing behaviour 2-80189
- heat flux in tubes locally heated by high-energy beams 2-69881
- heat-transfer limitations on pellets used in ICF reaction chambers 2-80241
- HIBALL reactor, ferritic steel struct., point defect production and behaviour 2-69830
- high heat flux components, lab. testing 2-80210
- HYLIFE reaction chamber components, fatigue crack growth calcs. 2-69879
- ICF first walls, protection using INPORT concept 2-69829
- ICF liquid metal first wall surfaces, gas dynamics and heat transfer 2-80242
- ICF target, multishell plastic form cushion materials, prep. by thermally induced phase inversion 2-80198
- ICF target characterisation by holographic interferometry 2-85250
- ICF targets, metal shell technology based on hollow jet instability 2-80197
- ICFR, He interaction with displacement damage, rate theory applic. 2-85232
- impurity levels in Tokamak reactor with turbulent plasma blanket (*Russian*) 2-103383
- impurity screening of scrape off plasma in Tokamak 2-90302
- Inconel 625, sequentially He⁺ implanted, surface exfoliation suppression 2-76522
- inertial confinement fusion targets, thin-wall, free standing, fabrication by CVD 2-80196
- inertial confinement targets, light ion beam fusion, energy deposition 2-64634
- inertial fusion targets, capillary gas filling 2-80193
- insulators, thermal cond. meas. 2-69860
- Intense Pulsed Neutron Irradiation Source-I, neutron irradiation facilities 2-85236
- internally cooled superconducting magnet, extended operating field 2-69909
- INTOR, first wall materials problems 2-69824
- INTOR, graphite moderated breeder blanket designs, neutronics anal. 2-80256
- INTOR, materials considerations 2-69820
- INTOR, materials testing expt. design 2-80258

fusion reactor materials continued

- INTOR, nuclear systems, overview 2-69980
 INTOR ³H breeding blanket design, mechanical and structural considerations 2-69882
 INTOR divertor collector plate, materials selection 2-74903
 INTOR first wall erosion during plasma disruption 2-80345
 INTOR first wall system design 2-80253
 INTOR like Tokamak, ³H inventory and permeation calcs. 2-85333
 INTOR tritium breeding blanket, conceptual design 2-80255
 ion beam sputter deposition onto levitated and stalk mounted laser fusion targets 2-88003
 ion bombarded by 10 MeV ⁴He⁺ ions, depth depend. of radiation hardening 2-88095
 ion irradiation, simulation studies on Fe 2-109857
 irradiated material, point defect-edge dislocation rate consts. and bias factors using lattice relax. and Monte Carlo simulations 2-86718
 irradiation creep, cascade-induced point defect fluctuations 2-86708
 irradiation creep by climb controlled glide mech. in pulsed fusion reactors 2-76573
 irradiation creep enhancement 2-85221
 irradiation facilities, neutron source characterisation 2-85228
 irradiation test cell diagnostics 2-85234
 irradiation test facility, hot cell workstation design 2-108154
 irradiation test facility, neutron environment calc. for d+Li facilities 2-85229
 isotope exchange, H recycling and impurities in ISX-B Tokamak 2-71189
 ISX-C superconducting Ohmic heating solenoid 2-69915
 Japanese LCT and domestic test facility, status 2-85361
 Japanese program of materials research for fusion reactors 2-69821
 lanthanide blankets, neutron multiplication calc., in hybrid and fusion reactors 2-54643
 Large Coil Program, two-phase ⁴He quench anal. 2-69910
 Large Coil Test Facility pulse coil support and transport system, design features 2-69907
 Large Coil test stand structural analysis 2-69905
 Large Coil turn heaters, cryogenic voltage withstand and heat transfer tests 2-69906
 laser fusion target defect characterisation method 2-85249
 laser fusion target dynamics, time and space resolved radiography 2-74893
 laser fusion targets, characterisation by a phase modulation interferometer 2-79656
 laser fusion targets, coating thickness variations meas., automated computer anal. of X-ray radiographs 2-79533
 laser fusion targets, fabrication using laser and spark erosion machining 2-80194
 laser fusion targets, noncentricity characterization by interferometry 2-85248
 laser fusion targets, RF vs. DC sputter gun Cu coating 2-83024
 laser-seal-welded targets, for particle beam fusion expts., fabrication 2-80195
 lenticular bubble growth, rel. to blistering and flaking 2-74926
 limiters, sputtered surface redeposition 2-69962
 liquid metals, fusion reactor appls., corrosion and compatibility 2-69864
 LOTUS facility, neutron anal. for hybrid and fusion blanket configurations 2-113745
 low density cavity gas fireball dynamics in the light ion beam target development facility 2-80238
 low Z coatings for first wall and limiter, erosion resistance 2-85266
 low-activation design, for STARFIRE 2-85320
 low-Z limiters in reactors, in-situ maintenance 2-74906
 magnet system for a thermal barrier tandem mirror reactor 2-64671
 magnetically confined reactors, first wall/blanket/shield technol., thermomech. and thermohydraulic testing 2-85261
 materials handbook for fusion energy systems 2-69826
 materials studies, neutron source charact. and radiation damage calc. 2-102309
 mechanical-radiation effects test capsule for simulating fusion material environments 2-88311
 mechanical-radiation indentation tests, time-depend. flow props. determ. 2-88315
 mechanical-radiation, testing, miniaturised disc bend test development 2-88316
 metal, void growth during irradi., cyclic pulsed temp. effect 2-86717
 metal carbides, material for limiter, shield and injector plates 2-113739
 metallic limiters in Doublet III, changes in near-surface microstructure 2-74901
 metals, cascade damage, ion-irrad. study 2-103860
 metals, fission neutron damage rates and efficiencies 2-103835
 metals, ion and neutron bombarded, primary recoil spectra and subcascade effects meas. 2-76529
 metals, irrad. struct., evolution, effect of cascades 2-86713
 methane formation in hydrogen-implanted graphite and carbides 2-80216
 MFTF magnet cases, weld-flaws, inspection, anal., removal 2-59532
 MFTF magnet line supports, design, fabrication, testing 2-59537
 MFTF-B magnet system, induced currents, computer circuit anal. 2-64667
 microhardness test techniques for high energy neutron source expts. 2-88313
 miniature tensile specimen technology for neutron irrad. materials testing 2-88312
 miniaturised fatigue crack growth specimen technology and results for irrad. fusion reactor materials 2-88308
 Mo, ion irradiation, by H⁺ and He⁺ damage struct., blistering process, TEM study 2-76520
 modular first wall concept for steady state operation 2-80346
 modular stellarator magnet design 2-69913
 neutron effects, in solids, conf., Argonne, USA (Nov. 1981) 2-101119
 neutron irrad. test facility 2-102310
 neutron irradiation, fabrication of large diameter targets for RTNS-II using electroforming 2-85446
 neutron radiation effects 2-80211
 Nimonic PE16, ion bombarded, damage struct. 2-109855
 Nimonic PE16, solution treated, grain boundary segregation during neutron irrad. 2-109844
 Nimonic PE-16, candidate materials, radiation-induced segregation 2-85227
 nonmetals, multicomponent, radiation damage parameters, neutron and x-ray interactions 2-74898

fusion reactor materials continued

- normal conducting steady-state toroidal magnet systems for large Tokamaks 2-59516
 Nova target systems 2-75021
 OHTE confinement test helical coil, C18200 chrome-copper selection 2-59535
 organic insulators for composite supercond. magnet, radiation resist. in magnet location 2-108118
 organometallic polymer, ICF target preheat shield fabrication 2-85243
 particle beam fusion targets, shock effects meas. 2-69811
 physical sputtering code for fusion applications 2-80252
 plasma-materials interactions in scrapeoff region of ISX-B Tokamak 2-74918
 polyimide, glass-fabric-filled, mech. strength as function of γ -ray irradiation 2-80180
 pool boiling helium heat transfer from two large monolithic copper stabilizers 2-69911
 preparation by rapid solidification, improved irrad. performance 2-108107
 prestressed cast steel pressure vessel, tension anal. (German) 2-96120
 prime candidate alloys, path A, rapidly solidified, microstruct. 2-85210
 pulsed electron and cyclotron beam irradiation, microstructure evolution 2-76505
 pulsed irradiation, effects on microstruct., swelling, creep 2-54641
 radiation effects, use of Los Alamos Meson Physics Facility 2-85239
 reduced gradient test module, neutronics anal. 2-85305
 response to plasma disruption induced heat loads 2-59540
 Ripple Reduction Poloidal Field Coils for Tokamak fusion reactors 2-64666
 RTNS-II rotating target neutron source for fusion materials research 2-108190
 solid divertor targets for e-beam testing, thermal and structural anal. 2-80337
 β -spodumene (LiAlSi₃O₈), preliminary evaluation as fusion reactor structural material 2-69836
 stainless steel, type 304, H ion backscatt., energy and ang. depend. 2-69849
 stainless steel limiters in ISX-B Tokamak, operational history 2-74900
 steel, alloy, ferritic, development for use at 4K 2-59534
 steel, austenitic, high Mn content plate for fusion reactor construction 2-69835
 steel, austenitic, stainless, type 316, fusion reactor first walls, creep fatigue, design limits 2-80218
 steel, austenitic stainless, 14 MeV neutron irrad., strengthening and microstruct. alterations, determ. by microhardness 2-103848
 steel, austenitic stainless, 316, cold worked, 20%, tensile props. correl. 2-72714
 steel, austenitic stainless, 316, cold worked, Ti modified, tensile props., irrad. in high flux isotope reactor 2-72764
 steel, austenitic stainless, 316, degradation of props. during irrad., preirrad. microstruct. development 2-69865
 steel, austenitic stainless, 316, fatigue under H and He bombardment 2-72802
 steel, austenitic stainless, candidate materials, radiation-induced segregation 2-85227
 steel, austenitic stainless, corrosion in Li test loop, for type 304 2-72867
 steel, austenitic stainless, corrosion inhibition expts. in liq. Li 2-80171
 steel, austenitic stainless, Cr-Mn, low-Ni, intergranular Li penetration 2-11371
 steel, austenitic stainless, Cr-Mn, uniaxial tensile props., Li exposure influence 2-80178
 steel, austenitic stainless, creep fracture model after neutron irrad. and He injection 2-88173
 steel, austenitic stainless, cyclic loading influence on Li corrosion behaviour 2-80172
 steel, austenitic stainless, depend. on thermomech. pretreatments 2-93607
 steel, austenitic stainless, DIN 1.4970, He embrittlement, high temp. in-beam simulation 2-71519
 steel, austenitic stainless, electron irrad., swelling behaviour, influence of He 2-109836
 steel, austenitic stainless, fatigue props., effects of Li environment 2-80170
 steel, austenitic stainless, H recycling props. 2-74934
 steel, austenitic stainless, He bubble form., influence of temp., stress and time 2-108114
 steel, austenitic stainless, ion-irrad., void swelling and microchem. segregation 2-111181
 steel, austenitic stainless, irrad. in EBR-II and HFIR, swelling, microstruct. development and He effects 2-108109
 steel, austenitic stainless, irradiated in EBR-II and HFIR, swelling and microstruct./microchem. evolution 2-108110
 steel, austenitic stainless, microstruct., dual ion-irrad., influence of He injection rate 2-109853
 steel, austenitic stainless, microstruct., in situ obs. of heavy-ion damage 2-86754
 steel, austenitic stainless, Mn, irrad. with 46 MeV Ni⁺, microstruct. before and after 2-92051
 steel, austenitic stainless, rapidly solidified, path A prime candidate alloy, neutron irrad., microstruct. 2-108112
 steel, austenitic stainless, rapidly solidified, path A prime candidate alloy, microstruct. after Fe and He ion irrad. 2-108115
 steel, austenitic stainless, simultaneous ion bombardment, neutron irrad. and stress/temp. cycling 2-108113
 steel, austenitic stainless, surface blistering by neutron irrad. 2-54659
 steel, austenitic stainless, swelling, effect of solid transmutation products 2-108111
 steel, austenitic stainless, swelling and microstruct., fission-fusion correl. 2-85222
 steel, austenitic stainless, type 316, corrosion in molten LiF-LiCl-LiBr 2-80174
 steel, austenitic stainless, types 304-SS and 316-SS, exposed to liq. Li, microstructural changes 2-80169
 steel, austenitic stainless, void nucleation, during HVEM irrad., effect of implanted He 2-109834
 steel, austenitic stainless, void swelling, 1.1 MeV N-ion irrad., TEM study 2-109854
 steel, austenitic stainless, void swelling, during HVEM irrad. 2-109835
 steel, austenitic stainless 316, containing irrad. induced He, high temp. fatigue life 2-72801
 steel, austenitic stainless 316, dynamic response of fusion reactor components with temperature-dependent properties 2-69838

fusion reactor materials continued

- steel, austenitic stainless 316, fatigue crack propag. in vacuum and air 2-72803
- steel, austenitic stainless 316, He embrittlement, microstruct. aspects 2-71518
- steel, austenitic stainless 316, radially solidified, B doped, pre-irrad. spatial distrib. and stability of boride particles 2-85211
- steel, austenitic stainless 316, rapidly solidified, high Ti stabilised, mech. props. and struct., irrad. effects 2-72765
- steel, austenitic stainless 316, rapidly solidified Al_2O_3 dispersion strengthened, microstruct., path A alloys 2-88094
- steel, austenitic stainless 316, unirradiated high temp. fatigue in vacuum, comparison with V-Cr-Ti (15, 5 wt.%) 2-72805
- steel, austenitic stainless 316, yield strength changes during fission or fusion irrad., microstruct. origins 2-71507
- steel, austenitic stainless 316, Ti effect on microstructs. changes rel. to void swelling 2-86741
- steel, commercial, high fluence neutron irrad., swelling behaviour 2-109842
- steel, Cr-Mo, cyclic loading influence on Li corrosion behaviour 2-80172
- steel, Cr-Mo, ferritic, carburisation-decarburisation in liq. Na environment 2-111369
- steel, Cr-Mo type HT-9, microstruct. effect on mech. props. rel. to fusion reactor apps. 2-88108
- steel, Cr-Mo-V martensitic stainless, weldments, transform. and tempering 2-88107
- steel, ferritic, corrosion inhibition expts. in liq. Li 2-80171
- steel, ferritic, fatigue props., effects of Li environment 2-80170
- steel, ferritic, irrad., fracture toughness testing using electropot. technique, miniature specimen prep. 2-88310
- steel, ferritic, triple beam ion irrad., depth distrib. of displacement damage 2-86752
- steel, ferritic stainless, fracture toughness rel. to first wall and blanket appl. in fusion reactor 2-72804
- steel, martensitic, ferritic, Cr-Mo-V-W, low temp. irrad. with (n, α)He prod., effect on tensile props. 2-71508
- steel, martensitic, for mag. fusion reactors, buckling induced stresses 2-113730
- steel, martensitic stainless HT-9, hydrogen compatibility, effect on fracture and ductility 2-72766
- steel, stainless, 1.4970, He embrittlement reduction by finely dispersed TiC precipitates 2-71520
- steel, stainless, austenitic, ion irrad. mode effects on void form. 2-86756
- steel, stainless, austenitic, precip. and cavity form. during irrad. 2-86735
- steel, stainless, cavity swelling, model based on fission-fusion correl. 2-85226
- steel, stainless, D^+ beam irrad., surface erosion 2-74933
- steel, stainless, ferritic/martensitic, suitability for first wall/blanket material 2-69891
- steel, stainless, H recycling simulation, wall temp. effect in type 304 2-74936
- steel, stainless, martensitic, fracture mechanics, fusion reactor first wall struct. appl. 2-69837
- steel, stainless, neutron irrad. at 55°C, effect on mech. props. 2-69866
- steel, stainless, surface damage, AR ion induced, implantation effects 2-98164
- steel, stainless, tritium charged, helium embrittlement at ambient temp. 2-111312
- steel, stainless, type 304L, surface blistering by 6 MeV alpha particles, temp. thresholds 2-80219
- steel, stainless, Type 316, fusion radiation damage simulation expt., He-to-DPA ratio calcs. 2-85230
- steel, stainless, type 316, H^+ impact, D desorption, in Tokamak first walls 2-69845
- steel, stainless, Type 316, in-reactor fatigue expt., dynamic irrad. effect on crack propag. 2-88309
- steel, stainless, type 316 and DIN 1.4970, suitability for first wall material 2-69832
- steel, stainless, Type 316 irrad., miniature tensile specimen testing 2-88312
- steel, stainless, Types 304 and 316, dual ion bombarded, He partitioning to extended defects 2-86755
- steel, stainless, types 304 and 316, He⁺ irrad., surface roughness, form Xe adsorpt. 2-76525
- steel, stainless, types 304 LN and 12R72HV, CC D trapping, α -irrad. effect 2-69844
- steel, stainless type 316, neutron-induced He implantation in fusion the coolant pipes 2-69863
- steel Cr-Mo (2.25, 1 wt.%), in Pb-Li liq., Pb conc. effect on corrosion susceptibility 2-80173
- steel tubes, stainless long time effects in radiation enhanced permeation of H₂ 2-98345
- steels, austenitic stainless, types 316, 347, high flux reactor irrad., microstruct., TEM study 2-80118
- steels, ferritic stainless, fast neutron irrad., microstruct. obs. 2-108108
- structural fusion reactor materials, rate theory and swelling induced by the displacement damage 2-80192
- superalloys, commercial, high fluence neutron irrad., swelling behaviour 2-109842
- superconducting 20 MJ induction coil for Tokamak poloidal field system 2-80234
- superconducting magnet, electromechanical strain measurement 2-69921
- superconducting magnet alloys, neutron irrad. effects, review 2-110553
- superconducting magnet materials, low temp. irradiation effect 2-80182
- superconducting magnet windings, He vapour induced quench propagation 2-69919
- superconducting magnets, quench source triangulation using acoustic emission 2-69920
- superconducting magnets, shorted turns, safety implication 2-69916
- superconducting poloidal field coils for Tokamak reactors 2-80233
- superconductor, A15 type, ion and neutron damage studies 2-110549
- surface Ar⁺ ion irrad. damage 2-74929
- surface interactions, relation to first wall and in-vessel component performance 2-69817
- Swiss LCT coil cooldown anal. 2-85362
- TASKA, a fusion engineering test facility for the 1990s 2-69823
- testing facility, neutron shielding design 2-108145
- testing in fission reactors 2-85298
- TEXT iron yoke, bonded centre leg fabrication 2-85283
- textured surfaces by ion bombardment, sputtering yield and related phenomena, review 2-76528

fusion reactor materials continued

- TFTF poloidal field coils epoxy impregnation molding system 2-69927
- TFTR, bakeable optical windows. 2-80333
- TFTR, epoxy impregnation system for Large Coil Program 2-69928
- TFTR coils, electrical insulation qualification tests 2-59533
- TFTR Li blanket module design 2-85533
- TFTR plasma chamber insulator materials test program 2-59538
- TFTR vacuum vessel, design and fabrication 2-75046
- TFTR vacuum vessel bellows, fatigue testing 2-59543
- TFTR vacuum vessel dielectric joint material selection test and fabrication 2-59542
- thermal stress in materials heated internally by radiation absorption 2-69840
- thermocouples, effects of fusion neutrons 2-85240
- TMX Upgrade magnet system mechanical issues 2-64669
- Tokamak, first wall damage in Cat-D and D-T types 2-109605
- Tokamak first wall, irrad. creep, swelling erosion and embrittlement effects 2-69828
- Tokamak reactor, first wall erosion and plasma impurity flux reduction 2-74907
- Tokamak reactors, cracked beam under influence of dynamic electromagnetic force 2-96302
- Tokamak reactors, magnet engineering challenges 2-69917
- Tokamak superconducting coils, normal shield use to reduce transient field induced losses 2-64670
- TORUS SUPRA vacuum vessel and limiter, design and mechanical anal. 2-80334
- toroidal field coil structure for the Culham Mark II Tokamak Reactor 2-102267
- TOSKA superconducting test facility, instrumentation layout 2-69914
- TPE-2, ceramic vacuum chamber and wall conditioning 2-80329
- transient elastic stresses in ICF reactor first wall structural systems 2-69831
- trap activation model for H retention and isotope exchange 2-69846
- type 316, first wall material evaporation in ICF reactor utilising gas protection 2-74920
- unistructure elastomer insulator for fusion plasma shutter 2-90304
- USA, supercond. magnets for fusion research, problems 2-75034
- vacuum seal materials and dielectric breaks for fusion reactor appl. 2-80190
- void nucleation by gas atoms, He generation rate and conc. effect 2-86720
- wall and limiter erosion elimination techniques 2-85265
- wall interactions role in fuel recycling, impurity generation and wall props. 2-109529
- water pipe corrosion, on-line monitoring 2-72887
- winding prestrain for circular solenoid for ELMO Bumpy Torus, anal. 2-69922
- Zircaloy, dynamic response of fusion reactor components with temperature-dependent properties 2-69838
- ZT-40, all metal vacuum chamber 2-75047
- Al, fast neutron irrad., positron annihilation 2-87894
- Al, fusion neutron simulation study, comparison of electron and self-ion damage 2-85225
- Al, fusion-neutron irrad. damage rates 2-103828
- Al, irradiated with Al ions, pure and He doped 2-86747
- Al, microstructural evolution during 600 MeV proton irrad., He prod. rate effects 2-86746
- Al, thermal outgassing props. between 20°C and 320°C 2-59544
- Al-Mg-V, candidate material for NET/INTOR first wall, development and evaluation 2-69834
- Al-Si low-activation alloys, fusion reactor suitability 2-64649
- Al-V low-activation alloys, fusion reactor suitability 2-64649
- Al₂O₃ on Mo, fusion reactor structural materials, plasma spray coating 2-74914
- B, first wall coatings by plasma CVD 2-74910
- B, ion implantation, H/D isotope exchange, local mixing model 2-56048
- B limiters in ISX-B Tokamak, operational history 2-74900
- B vapour deposited coatings, ion implantation, temp. cycling effects 2-74924
- B₂₀Fe₄₀Ni₄₀, metallic glass, He ion irrad., sputtering and blistering 2-76521
- BiC, first wall coatings by plasma CVD 2-74910
- C coated and polished stainless steel, secondary electron yields 2-80214
- C coatings to modify PLT lower hybrid waveguide surfaces 2-80213
- C, first wall material evaporation in ICF reactor utilising gas protection 2-74920
- C, H isotope exchange, depth resolved meas. 2-69847
- C-SiC, structured composite limiters for ablation control in fusion devices 2-74902
- C+H reactivity electron beam enhancement, in pyrolytic graphite 2-74938
- Cu, 14 MeV neutron irrad., strengthening and microstruct. alterations, determ. by microhardness 2-103848
- Cu alloys, high strength, suitability for first wall 2-69833
- Cu coated laser fusion targets preparation by molecular beam levitation 2-83023
- Cu, Cu-Mn(Al)(Ni), neutron irrad., 14 MeV, damage development and hardening 2-109841
- Cu, fusion-neutron irrad. damage rates 2-103828
- Cu, Ni partial diffusion coeff. after ion irrad., fusion neutron effects simulation 2-86757
- Cu, reactor-irrad., defects and transmutations 2-102265
- Cu stabiliser for composite supercond. magnet, radiation resist. in magnet location 2-108118
- Cu stabiliser in supercond. magnet, radiation damage, review 2-80183
- Cu, superconducting magnet stabiliser, fusion neutron damage 2-80184
- Cu-Be, TEM obs. of microstruct. evol. in simulated ion irrad. alloys 2-86745
- Cu-Ni (40 at.%) Ar⁺ irrad., subsurface composition modification 2-74932
- Cu-Au, displacement cascade damage, produced by fusion-neutron irrad. 2-85224
- Cu-Au, fusion neutron disordering 2-85219
- (Fe,Ni)V long range ordered alloy, resistance to neutron and ion irrad. 2-85217
- (Fe,Ni)V, long-range ordered alloys, fusion reactor appl., mech. props. 2-85218
- Fe, ion irradiation, void swelling and solute segregation 2-85212
- Fe, neutron irrad., TEM study 2-103838
- Fe, sputtering yield for, Monte Carlo calc. 2-77674

fusion reactor materials continued

- Fe-Cr-Ni alloys, electron-irrad., swelling and Ni segregation 2-11182
 Fe-Cr-Ti-Mo-TiO₂, dispersion strengthened, void swelling in HVEM, influence of fabrication procedure 2-11189
 Fe-Cr-Ti(Si), ion irradiation, void swelling and solute segregation 2-85212
 Fe-Ni-Cr, mass transfer and corrosion in Li, Ni conc. effect 2-72866
 Fe-(C,r), triple beam ion irrad., microstruct. 2-109856
 Fe₄₀Ni₄₀Pt₁₀B₁₀ metallic glasses, response to irradiation with 800 MeV protons 2-801189
 graphite, pyrolytic, H ion backscatt., energy and ang. depend. 2-69849
 H trapping due to ion irrad., implications for neutron irrad. 2-108117
 He, generation, total cross sections for fast neutrons 2-85231
 He partitioning, low doses, trap theory 2-86715
 Li₂ZrO₃, breeding compounds for ³H, preparation 2-69857
 Li blanket design, MHD finite element anal. 2-113731
 Li-Pb-Bi, liq. breeds blanket material, candidate studies 2-75001
 LiF spatial filter aperture for laser initiated vacuum plasma shutters 2-97162
 LiF-LiCl-LiBr salt mixture for extracting tritium from fusion reactor Li blanket 2-80174
 Li₂O, neutron and γ -irrad., defect production, optical absorpt. study 2-86737
 Li₂O powder, neutron irrad., T release study 2-76509
 Li₁₇Pb₈₃ blanket candidate, ³H confinement and recovery 2-69886
 Li₁₇Pb₈₃, breeding blanket, in-situ ³H recovery 2-75010
 Li₄SiO₄, breeding compounds for ³H, preparation 2-69857
 Li₄SiO₄, fusion blankets, displacive transform. 2-69859
 Li₂TiO₃, thermophysical and chemical data, breeding blanket candidate 2-75007
 Li₂ZrO₃, thermophysical and chemical data, breeding blanket candidate 2-75007
⁷Li(n,x), cross-section evaluation, ³H prod., ENDF/B-V calcs. 2-69887
 MgAl₂O₄, fission neutron irradiation, structural props. study 2-80187
 MgO, fission neutron irradiation, structural props. study 2-80187
 Mo alloy TZM, void swelling after high fluence neutron irrad. 2-85213
 Mo alloys, improvement of mech. props. in CTR gaseous environment 2-108106
 Mo and alloy TZM, ductile-brittle transition, low cycle fatigue effects 2-72807
 Mo, blistering by D⁺ beam irrad. 2-74933
 Mo, CVD SiC coating, D⁺ irrad., surface damage 2-76523
 Mo, detraping of implanted He and N 2-81808
 Mo dil. alloys, fusion-neutron irrad. damage rates 2-103828
 Mo, fatigue data 2-69904
 Mo, H ion backscatt., energy and ang. depend. 2-69849
 Mo, ion bombarded by 10 MeV ⁴He⁺ ions, depth depend. of radiation hardening 2-88095
 Mo monocrystal, (110) surface, chemisorbed gas, desorption by low-energy ions 2-74923
 Mo, neutron irrad., anneal hardening, influence of purity, cold work and alloying elements 2-103843
 Mo, neutron irrad., void coarsening during annealing 2-86734
 Mo, precipitation at room temp., TEM and THDS obs., He platelet form. 2-88088
 Mo-D, ion-implanted, permeation and re-emission rate, rel. to irrad. damage 2-74937
 Mo-He, ion implanted, exfoliation modes, near-surface stress effects 2-74927
 Mo-RE (0-50.2 wt.%), surface Ar⁺ ion irrad. damage 2-74929
 Mo-Re, re effect on void swelling, in-situ obs. in HVEM 2-86743
 Mo-Ti and alloy TZM, void swelling behaviour under heavy ion bombard. 2-86744
 Mo-TiC (23.5 mol.%), ion bombardment, surface damage 2-74930
 Mo₅₀Ru₁₀B₄₀, metallic glass, inertial confinement fusion target material appl. characs. 2-87104
 Nb and alloys, ion irradiated by ³⁶Ni⁺ and ⁴He⁺, swelling 2-85216
 Nb and dil. alloys, fusion-neutron irrad. damage rates 2-103828
 Nb and Nb-Zr, He bubble behaviour, alloying effects 2-86742
 Nb, He⁺ irrad., surface swelling 2-74931
 Nb, NbO-Nb vapourisation study by mass spectrometric methods 2-92170
 Nb, surface damage during irrad. in plasma accelerator 2-113737
 Nb, thermal diffusion of T, role in T permeation theory through fusion reactor first wall 2-85233
 NbB₃, fusion reactor materials, light ion sputtering yield, depend. on angle of incidence 2-74922
 Nb₂Ge superconductor, neutron radiation damage 2-80185
 NbO₂, vapourisation study by mass-spectrometric method 2-77810
 Nb₃Sn conductor, coil performance test for advanced cluster test facility 2-69923
 Nb₃Sn, displacement cascade, TEM obs. 2-109862
 Nb₃Sn forced flow conductor production for Large Coil Program 2-75039
 Nb₃Sn large capacity conductor, resistive voltage 2-69926
 Nb₃Sn Large Coil magnet, Westinghouse manufacturing plan 2-85358
 Nb₃Sn, multifilamentary supercond., prod. by external diffusion method 2-75035
 Nb₃Sn, neutron damage, changes in critical props. and damage-energy anal. 2-80186
 Nb₃Sn superconductor for High Field Test Facility, development and manufacture 2-75037
 Nb₃Sn superconductor jacket, forced flow design in Westinghouse Large Coil Program 2-69908
 Nb₃Sn-Cu composites for fusion magnets, in-situ development 2-75033
 NbTi superconductor wire for Tokamak toroidal field coil 2-69924
 Ni, cavities depth distrib. induced by 20 keV He ion irrad. 2-86748
 Ni first wall, passive He pumping, regeneration 2-71190
 Ni, He bubble growth at dislocations, kinetics and phys. mechanisms 2-109826
 Ni, irrad. creep, 17 MeV deuterons, stress depend. 2-86749
 Ni, irrad. creep, pulsed, 15 MeV deuterons 2-86751
 Ni, light ion sputtering, depend. on angle of incidence 2-74922
 Ni, polycrystalline, chemisorbed gas, desorption by low-energy ions 2-74923
 Ni, void swelling, pulsed ion beam effects 2-85214
 Ni-D, ion-implanted, permeation and re-emission rate, rel. to irrad. damage 2-74937
 Ni-Al(Si), irrad. creep enhancement, 21 MeV deuteron bombardment 2-86750
 Ni-Si films, compositional change induced by Ar⁺ ion bombardment 2-86753

fusion reactor materials continued

- Ni₃Mn, ordered alloys, fundamentals mechanisms of neutron damage 2-103830
 Pb, irrad., time-depend. flow props. from indentation tests 2-88315
 Pd, H ion implantation by low voltage glow discharge plasma 2-96305
 Pd membrane pumps in thermonucl. power plants, material sputtering effects 2-79601
 Pt, surface blistering by 6 MeV alpha particles, temp. thresholds 2-80219
 Pt-Rh (10 wt.%) surface, blister formation by irrad., exposure and temp. depend. 2-74928
 SiC ceramics, neutron irrad. and proof tested, flexural strength 2-115307
 SiC, D⁺ ion irrad., secondary ion sputtering, energy anal. 2-77675
 SiC, He⁺ bombardment, microstruct. changes 2-76524
 SiC INPORT units, cavity tube bank lines, mechanical response 2-80327
 SiC, sintered and reaction-bonded, radiation response, B isotope effects 2-80191
 SiC:B 2-115302
 Si₃N₄, neutron irradiated, X-ray anal. of internal strain 2-93557
 SiO₂, neutron irradiation effects 2-85209
 SiO₂-based glass ceramics, neutron irradiation effects 2-85209
 Si₂ON₂, neutron irradiated, X-ray anal. of internal strain 2-93557
 Ta coating material for ICF dry wall design 2-74908
 Ta protective coatings on Al, Cu, AISI 316L, Inconel 600 for fusion reactor appl. 2-74911
 Ti alloy, irrad., miniaturised fatigue crack growth specimen technology and results 2-88308
 Ti alloys, tensile props. after neutron irrad. 2-72767
 α -Ti, Bi ion irrad., dislocation loops 2-86758
 Ti gettering efficiency in respect to C and N in Li 2-80177
 Ti, H ion implantation by low voltage glow discharge plasma 2-96305
 Ti, hybridising in H plasma, embrittlement, sorption, rel. to contamination 2-74935
 Ti, neutron irrad., strength changes 2-71510
 Ti, neutron-irradiated, H absorption and desorption rate constants 2-76817
 Ti-Al-Sn-Zr-Mo-Si (6, 2, 4, 2, 0.1 wt.%), H₂ effect on fatigue crack growth 2-72806
 Ti-Al-V, candidate materials, radiation-induced segregation 2-85227
 Ti-Al-V (6.4 wt.%), He⁺ irrad., surface swelling 2-74931
 Ti-Al(V)(V-Mo), ion irradiated, segregation 2-109859
 Ti-Al(V)(Mo-Zr), fast neutron irrad., H₂ effect on mech. props. at high temp. 2-72768
 Ti-V (3 wt.%), ion irradiated, segregation 2-109859
 TiB₂, coating for fusion reactor first wall, characterisation by lattice constant meas. 2-74912
 TiB₂, ion implantation, H/D isotope exchange, local mixing model 2-56048
 TiB₂, limiters in ISX-B Tokamak, operational history 2-74900
 TiB₂, on Mo, fusion reactor structural materials, plasma spray coating 2-74914
 TiB₂+H reactivity electron beam enhancement 2-74938
 TiC, CVD coatings, 2 keV D bombardment, sputter yield, surface modification 2-74925
 TiC coated graphite, performance in electron beam tests 2-69843
 TiC coated limiter testing in Tokamaks 2-69842
 TiC, coating materials for Tokamak limiters and walls, thermal testing 2-102264
 TiC coating on graphite for Doublet III limiters, process evaluation and characterisation. 2-74899
 TiC coating on Mo, thermal and mechanical props. 2-69902
 TiC, first wall coating, preferential sputtering partial yields 2-80212
 TiC, ion implantation, H/D isotope exchange, local mixing model 2-56048
 TiC on Mo, fusion reactor structural materials, plasma spray coating 2-74914
 TiC:H(D), ion-implanted impurity retention, release and isotope exchange 2-69848
 TiC-Mo, coating by reactive sputtering and electron beam technique 2-74915
 TiC-Mo, erosion yields by vacuum arcs in mag. field, temp. depend. 2-74917
 TiC+H reactivity electron beam enhancement 2-74938
 TiC_{99.9}, ion bombardment, surface damage 2-74930
 TiH₂, wall, plasma contamination reduction 2-115037
 TiN, coating materials for Tokamak limiters and walls, thermal testing 2-102264
 TiN coating on Mo, thermal and mechanical props. 2-69902
 TiN film on Mo, stainless steel, C, prep. for fusion reactor first wall 2-74913
 Tib, first wall coating, preferential sputtering partial yields 2-80212
 V and V-Ti, He bubble behaviour, alloying effects 2-86742
 V dil. alloys, fusion-neutron irrad. damage rates 2-103828
 V, hydrogen permeation, surface impurity layer effects 2-85241
 V, ion implanted, mech. props. study after neutron irrad. 2-71511
 V, neutron irrad., preimplantation of He effect on microstruct. 2-85215
 V, neutron irrad., strength changes 2-71510
 V, surface damage during irrad. in plasma accelerator 2-113737
 V-C(Mo)(Nb)(Fe), neutron irrad., void form., effect of substitutional and interstitial elements 2-103849
 V-Cr-Ti (1.0.1 wt.%), neutron irrad., preimplantation of He effect on microstruct. 2-85215
 V-Cr-Ti (15.5 wt.%) unirradiated high temp. fatigue in vacuum, comparison with 316 stainless steel 2-72805
 V-Ti, ion implanted, mech. props. study after neutron irrad. 2-71511
 V-Ti (20 wt.%), He injected and neutron irrad., tensile props. and microstruct. 2-71509
 VB₃, ion implantation, H/D isotope exchange, local mixing model 2-56048
 V-Si, neutron irrad. defects influence on supercond. props. 2-110550
 W, cross-rolled, tensile and low cycle fatigue meas. 2-72808
 W, fusion-neutron irrad. damage rates 2-103828
 W, ion irradiation, by H⁺ and He⁺ damage struct., blistering process, TEM study 2-76520
 W, scattering of keV H and He ions 2-77668
 W, surfaces (001), low energy He atom reflection, calc. 2-69850
 WO₃, scattering of keV H and He ions 2-77668
 Zr gettering efficiency in respect to C and N in Li 2-80177
 Zr-Al alloy, compatibility in Tokamak 2-69851

fusion reactor theory and design

see also fusion reactor ignition; fusion reactor materials; plasma confinement; plasma heating; plasma production
 advanced fuel cycles, engineering constraints 2-85322
 Alcator actively cooled limiters, design 2-80338
 alpha-particle distrib. function, collisional losses, Fokker-Planck basis calc. 2-81556
 APEX, design and operation 2-85278
 Argonne plasma engineering expt. Tokamak design and operation 2-102260
 axisymmetric mirror, hot annulus electrons, non-adiabatic motion 2-85334
 beam dump, design 2-85257
 Beta IV, engineering design 2-85282
 Bitter plate TF magnet for ZEPHYR Ignition Test Reactor, structural behaviour 2-59530
 Bitter-type magnet plate design with compound conductor of ultrahigh mechanical strength 2-59526
 blanket, convection in conducting liquid 2-85256
 blanket-shield, neutron spectra 2-108133
 blanket-shield calcs., multigroup cross-section library validation 2-102269
 blankets, first wall thermal-hydraulic models 2-85255
 blankets, flowing particle bed type, thermal hydraulics 2-85259
 breeding ball blanket for fusion reactors 2-69813
 burn performance of inertial confinement fusion targets 2-69876
 catalysed blankets, nuclear performance for process heat prod. 2-108132
 commercial Tokamak hybrid reactor, Th-fuelled packed fluidised bed blanket design 2-85394
 concrete moisture retention, curing effect, implication for shielding 2-85330
 constant tension D magnet, shape determ. using iterative numerical approach 2-64665
 CTR first wall, conceptual design and material consideration 2-80344
 DC gradient-B pumping of tandem-mirror thermal barriers 2-80247
 Del'fin I laser fusion facility, optical system, preliminary expts. 2-115029
 design challenges for remote maintainability 2-85346
 dipole magnets, iron free, anal. and design 2-64668
 diverted plasma, neutral-particle transport, Monte Carlo model 2-97712
 Doublet III, plasma shape and externally applied equilibrium field 2-69892
 Doublet III and Big Dee Tokamak vacuum vessels, design 2-85246
 Doublet III B-coil centerpost, prestressed epoxy-glass cylinder 2-59536
 Doublet III modification to large dee facility 2-85341
 Doublet III vessel wall protection for 7 MW neutral beam heated plasma operation 2-85271
 driver options for steady-state Tokamak reactors 2-80249
 EBT, core β limits, effect on reactor performance 2-103374
 EBT, design point selection 2-69958
 EBT, field error criteria anal. 2-69955
 EBT, fusion product confinement and heating 2-69957
 EBT, magnetics/transport aspects 2-69956
 EBT, reactor, potential control, heating and confinement 2-103426
 EBT commercial fusion reactor, optimisation study 2-85312
 EBT commercial power plant design, maintenance considerations 2-80302
 EBT commercial reactor, design 2-85314
 EBT commercial reactor, design integration 2-85313
 EBT reactor, design considerations for nonmagnetic divertor 2-74905
 EBT reactor, first wall/blanket/shield design 2-85303
 EBT-P, plasma chamber design concepts, structural performance 2-85286
 EBT-P development coils, design and construction 2-69974
 EBT-P vacuum linear concepts, thermal performance 2-85285
 EBT-P vacuum seals 2-85287
 EBTR, impurity control system, pumped limiter, anal. and design 2-80246
 EBTR magnet design 2-69912
 eddy current calculations for the Tokamak fusion reactor through fields harmonics content 2-59518
 eddy current load estimation for toroidal shells as a result of plasma disruptions 2-64672
 ELMO Bumpy Torus, engineering overview 2-64656
 ELMO Bumpy Torus, instrumentation and control system 2-64660
 ELMO Bumpy Torus, intrinsic engineering problems 2-64655
 ELMO Bumpy Torus, plasma heating system instrumentation and control design 2-64662
 ELMO Bumpy Torus, system integration 2-64659
 ELMO Bumpy Torus, toroidal divertor mechanical design 2-64663
 ELMO Bumpy Torus data acquisition system 2-64661
 ELMO Bumpy Torus fusion reactor design study 2-64657
 ELMO Bumpy Torus Proof of Principal Facility, design 2-64658
 end plug designs for tandem mirror reactors with thermal barriers 2-69873
 engineering challenges of underground contained fusion 2-85326
 Engineering Test Facility, neutron beam injectors, neutron and γ -ray streaming calcs. 2-54650
 Engineering Test Facility, vacuum pumping duct, shielding nucleonics 2-54645
 exhaust, impurity control, refuelling, TIGER study 2-74942
 external hybrid poloidal coil system anal. 2-64676
 failure criteria for fusion reactor first wall structural design 2-69839
 fast ion driven EM instabilities at low threshold, expt. study 2-69966
 fat banana carrier injection for electric field generation in Tokamaks 2-69874
 FED, design overview 2-75025
 FED, first wall/shield design 2-75029
 FED, magnetic systems design 2-75027
 FED, materials related problems 2-69819
 FED, plasma engineering assessments 2-75026
 FED, poloidal field coil system 2-69967
 FED, TF coil casing, enhanced cooling with He channels 2-69933
 FED, vacuum pumping system design 2-80342
 FED first wall and limiter features 2-80313
 FED fuel injectors and diagnostic instrumentation 2-80316
 FED internal resistive initiation coil electromagnetics in baseline design 2-80319
 FED magnets, structural design procedures 2-69973
 FED shielding anal. and design 2-80315
 FED superconducting coils protection system 2-80318
 FED torus design 2-80314
 field reversed theta pinch, FRX-C expt. engineering design 2-86468
 first wall, reliability strategy 2-80306

fusion reactor theory and design continued

first wall candidates, material props. relationship to design 2-69877
 first wall/blanket/shield, EM effects, expt. program 2-85296
 first wall/blanket/shield system, EM effects testing 2-85297
 first walls, plasma disruption, heat transfer modelling 2-85299
 FMIT liquid Li target design 2-85331
 FMIT radiation shielding issues 2-85332
 Fokker-Planck calculations using standard discrete-ordinates transport codes 2-90298
 FRTP prototype power reactors with neutral-beam heating and pellet injection 2-80250
 fueling profiles effect on particle transport and He ash accumulation 2-69895
 Fusion Engineering Device pump limiter material consideration 2-74904
 fusion reaction products, shear-Alfvén wave effect on confinement 2-65746
 fusion research engineering problems, conf., Chicago, IL, USA (Oct. 1981) 2-63744
 fusion research in China 2-71257
 graphite stack, 14.7 MeV neutron bombardment, neutron spectra meas. 2-108128
 heat-transfer limitations on pellets used in ICF reaction chambers 2-80241
 heavy ion beam fusion reactor, HIBALL, time-depend. neutronics anal. 2-54642
 heliotron fusion reactor, neutronics anal. 2-85307
 HIBALL, beam line penetrations, radiation shielding anal. 2-108123
 HIBALL, three-dimens. neutronics and photonics anal. 2-108125
 HIBALL reactor, ferritic steel struct., point defect production and behaviour 2-69830
 ICF, neutralised ion beams, Pierce instability, theory 2-90292
 ICF high target gain, repetition problems 2-80240
 ICF implosions, thermal front prop. and smoothing 2-90296
 ICF liquid metal first wall surfaces, gas dynamics and heat transfer 2-80242
 ICF reactor dry wall design, coating requirements 2-74908
 inertial confinement fusion reaction systems, heat transfer 2-85258
 inertial confinement fusion reactor, laser ducts, neutron attenuation 2-108124
 inside-barrier Tandem Mirror Test Facility, plasma engineering considerations 2-69959
 INTOR, conceptual design, engineering features 2-69978
 INTOR, conceptual design overview 2-69977
 INTOR, graphite moderated breeder blanket designs, neutronics anal. 2-80256
 INTOR, magnet design 2-69983
 INTOR, materials testing expt. design 2-80258
 INTOR, nuclear systems, overview 2-69980
 INTOR, shielding system design 2-108126
 INTOR, superconducting poloidal field coils 2-80261
 INTOR, toroidal field structural system, design and anal. 2-69982
 INTOR—the next step in the fusion program? (German) 2-91645
 INTOR ^3H breeding blanket design, mechanical and structural considerations 2-69882
 INTOR divertor design 2-80254
 INTOR first wall system design 2-80253
 INTOR internal resistive initiation coil electromagnetics in baseline design 2-80319
 INTOR like Tokamak, ^3H inventory and permeation calcs. 2-85333
 INTOR mechanical configuration design review 2-69981
 INTOR neutral beam injector concept 2-80259
 INTOR physics 2-69979
 INTOR poloidal divertor, design performance 2-80209
 INTOR power handling and conversion 2-80260
 INTOR radiation shielding for personnel access 2-80257
 INTOR tritium breeding blanket, conceptual design 2-80255
 irradiation test facility, shield design, neutron streaming anal. 2-54647
 ISX, pump limiter for steady state heat and particle removal 2-80207
 ISX-C/ATF, vacuum vessel, coil joints and supports, design and anal. 2-80330
 Joint European Torus magnet coils (German) 2-91646
 JT-60, coil load tests 2-59523
 JT-60, cooling and heating system for vacuum vessel 2-85267
 JT-60, poloidal divertor configuration, mag. struct. 2-85264
 JT-60 poloidal field coil fatigue strength design studies 2-59522
 JT-60 poloidal field coils, nonlinear stress analysis 2-59521
 JT-60 vacuum vessel, dynamic response under EM forces 2-113732
 lanthanide blankets, neutron multiplication calc., in hybrid and fusion reactors 2-54643
 large Coil Test Facility coil, design 2-59520
 Large Coil Test Facility pulse coil support and transport system, design features 2-69907
 layout, plastic model appls. in Magnetic Fusion Test Facility 2-85293
 LCP, USA magnet manufacturers QA and QC 2-69976
 LCT, pool boiling superconducting coils 2-69975
 limiters, sputtered surface redeposition 2-69962
 liquid jet experiment for ICF 2-85329
 LOTUS facility, neutron anal. for hybrid and fusion blanket configurations 2-113745
 low density cavity gas fireball dynamics in the light ion beam target development facility 2-80238
 low Z coatings for first wall and limiter, erosion resistance 2-85266
 low-Z limiters in reactors, in-situ maintenance 2-74906
 magnet system for a thermal barrier tandem mirror reactor 2-64671
 magnetic fusion, phase-change blanket for low T inventory 2-85306
 magnetic fusion devices, ionisation gauges for press. meas., review 2-84655
 magnetic fusion system, ideal MHD theory 2-96303
 materials, reduced gradient test module, neutronics anal. 2-85305
 materials irradi. test facility, deuterium and neutron activation, calc. programs 2-108121
 MFTF electrical systems, status and plans 2-85276
 MFTF liquid nitrogen shields for yin-yang magnet system, design and fabrication 2-69931
 MFTF magnet cases, weld-flaws, inspection, anal., removal 2-59532
 MFTF magnet line supports, design, fabrication, testing 2-59537
 MFTF magnet support system, design and fabrication 2-59528
 MFTF-B, A-cell and transition coils, design features 2-85357
 MFTF-B, central cell solenoid magnets, design features 2-85356
 MFTF-B, neutron effects, Monte Carlo anal. 2-85277

fusion reactor theory and design continued

- MFTF-B magnet system, induced currents, computer circuit anal. 2-64667
 Mirror Fusion Test Facility magnet system 2-85355
 missile generation due to electrical arcing in high field fusion magnets 2-59531
 modular first wall concept for steady state operation 2-80346
 modular stellarator magnet design 2-69913
 modular stellarator reactor, conceptual design 2-85318
 Moving Ring Field-Reversed Mirror Reactor, low-activation blanket design 2-85317
 moving-ring reactor, prototype design 2-85319
 multigroup method for ion slowing down with velocity diffusion 2-90300
 neutron environment, nuclear heat deposition 2-108127
 neutron streaming through Fe duct, neutron and gamma-ray spectra, calcs. 2-75062
 neutron transport, tensorial transform technique appl. 2-102262
 normal conducting steady-state toroidal magnet systems for large Tokamaks 2-59516
 normal copper PF coils, design and fabrication consideration for easy replacement 2-59519
 OHTE reactor concepts 2-85315
 one-dimensional kinetic ion model for field reversed mirror dynamics 2-90301
 PDX diagnostic control system 2-74977
 PDX getter pump system, design and test results 2-80339
 PDX neutral beams, arc notching 2-80274
 PDX operating controls 2-74975
 PF coil current sheets for circular section tori to produce specified internal fields 2-64675
 physical sputtering code for fusion applications 2-80252
 plasma losses from a magnetic well 2-80248
 plasma performance, contour analysis 2-108119
 plasma source radial variation effects on uncollided flux 2-69875
 proton beam transport in laser-initiated discharge channels, expt. study 2-91630
 pulsed field heating in Tokamak reactor TF-coil helium vessels 2-59517
 rates of loss of material from inertial fusion reactor surfaces exposed to pellet emissions 2-80343
 reversed field pinch reactor, advanced fuel use 2-85321
 review, book contrib. 2-69890
 RF linear accelerator for heavy ion fusion 2-80243
 RFP, design principles 2-85343
 RFP discharges, steady state current drive 2-85335
 RFP experiment, shell stress analysis 2-85345
 Ripple Reduction Poloidal Field Coils for Tokamak fusion reactors 2-64666
 S-1 Spheromak, control and data acquisition systems 2-74974
 S-1 Spheromak, vacuum vessel stress analysis 2-80332
 S-1 Spheromak coil systems, engineering design and construction 2-69972
 safety analysis code, ATHENA-FK 2-85300
 safety systems, cost optimisation 2-75002
 SENRI-I, conceptual design, ^3H breeding ratio, neutronics calc. 2-75004
 SENRI-I, conceptual design, ^3H recovery system, calcs. 2-75005
 SENRI-I, conceptual design 2-75003
 shaping and controlling dee-shaped Tokamak plasmas 2-85366
 small toroidal reactors, transport scaling laws 2-80245
 solenoids, transversely isotropic, mechanical stresses 2-59524
 solid divertor targets for e-beam testing, thermal and structural anal. 2-80337
 spherical compression waves, appl. to ICF 2-109368
 spherical fusion plasma confinement field of Surmac type 2-64680
 Spheromak, integral transform technique for solving the Grad-Shafranov equilibrium equation 2-90299
 Spheromak approach to high power density reactors 2-85328
 STANSOL program for solenoid mechanical and struct. props. anal. 2-59525
 stellarator, modular coils, optimisation techniques 2-109563
 superconducting magnets responses, finite element anal. 2-59529
 swimming pool type Tokamak reactor, divertor collector plate design 2-108135
 Tandem Mirror blanket configuration 2-85347
 tandem mirror design, SATYR, radioactivity, biological hazard, afterheat levels 2-108134
 Tandem Mirror Fusion Reactor, monte Carlo position-dependent angular source biasing 2-54639
 tandem mirror reactor, heat-pipe liquid pool blanket design 2-85308
 tandem mirror reactor, plasma direct converter 2-85309
 tandem mirror traps, microstability and plasma interaction along mag. field 2-109492
 Tandem Mirrors, design and engineering problems 2-85348
 Target Development Facility, light ion fusion, conceptual design and engineering 2-80237
 Technology Development Facility conceptual design 2-85349
 TFTR, cylindrical ducts, 14 MeV neutron streaming 2-108122
 TFTR, diagnostic system, neutronics calc. 2-54649
 TFTR, engineering design 2-85338
 TFTR, Li blanket module, neutronic design 2-85311
 TFTR, torus gas injection control system, design and development 2-74973
 TFTR, vacuum vessel design and fabrication 2-80199
 TFTR blanket module, source-to-incident flux relation 2-90290
 TFTR diagnostic vacuum controller 2-74976
 TFTR fixed limiters, design and anal. 2-75049
 TFTR fixed limiters design and anal. 2-75050
 TFTR grounding system 2-80312
 TFTR Li blanket module design 2-85353
 TFTR movable limiter blades for ohmic and neutral beam heat plasmas 2-85272
 TFTR neutral beam test cell concrete shielding structure design 2-80325
 TFTR phase II bumper limiter design 2-80336
 TFTR power conversion system, design and cost 2-80311
 TFTR sector module, design characteristics 2-69929
 TFTR sector module assembly procedures development 2-69930
 thermal cyclic stresses on first wall and blanket 2-85302
 thermal design consideration of shields for levitated coils 2-69932
 TMX modular gettering system 2-80340
 TMX Upgrade, first wall and beam dump design 2-80208
 TMX Upgrade magnet set geometry design 2-69971
 TMX Upgrade magnet system mechanical issues 2-64669

fusion reactor theory and design continued

- TMX Upgrade neutral-beam injection system 2-80324
 TMX-axisymmetric magnet set design study 2-64664
 TMX-U, electron cyclotron resonance heating 2-85383
 TMX-Upgrade, design and construction 2-85337
 TMX-Upgrade, vacuum system mechanical design 2-80331
 TMX-Upgrade vacuum system 2-80200
 TMX-Upgrade vacuum system design and analysis 2-80304
 Tokamak, circular cross section, beta limit, stabilising effects 2-113741
 Tokamak, coupled circuit transient current response 2-64674
 Tokamak, major plasma disruptions 2-69893
 Tokamak, multipole null field generation calcs. 2-64678
 Tokamak, neutron streaming, staged Monte Carlo calcs., statistical errors, bias 2-64636
 Tokamak, pulsed poloidal field coil system optimisation 2-64681
 Tokamak, solid breeder blanket, He cooled, design 2-85354
 Tokamak building design considerations for a large Tokamak device 2-80320
 Tokamak equilibria, vertically asymmetric, MHD stability 2-109564
 Tokamak fusion reactor, INTOR-J, radiation streaming calc. 2-54646
 Tokamak fusion reactor, oscillating limiter 2-85310
 Tokamak limiter design 2-75048
 Tokamak reactor, breeder components, thermal cycling effects 2-85301
 Tokamak reactor, first wall erosion and plasma impurity flux reduction 2-74907
 Tokamak reactor, plasma edge conditions 2-69961
 Tokamak reactor, subsystem interaction investigation methodology 2-85324
 Tokamak reactor, supercond. thin solenoid design optimisation 2-88480
 Tokamak reactors, magnet engineering challenges 2-69917
 Tokamak reactors, sheath region, kinetic's study 2-69960
 Tokamak toroidal field coils, central support optimisation 2-64679
 Tokamak vacuum systems, He leak detection in D_2 atmos. 2-84640
 Tokamaks, sensitivity study, FORTRAN code 2-85323
 TORE SUPRA vacuum vessel and limiter, design and mechanical anal. 2-80334
 toroidal field coil casing, eddy current losses calc. 2-64677
 toroidal field coil structure for the Culham Mark II Tokamak Reactor 2-102267
 toroidal magnet systems, model for finite thickness orthotropic shells 2-64673
 TPE-1R(M) reversed field pinch experiment 2-85344
 transient elastic stresses in ICF reactor first wall structural systems 2-69831
 transport, one-dimens, discrete ordinates calc., Galerkin quadrature formulation 2-80221
 triggered reconnection compact toroid reactor, first wall and blanket design 2-85316
 UWTOR-M, a conceptual design study of a modular stellarator power reactor 2-85327
 vacuum mechanical pump, T compatible 2-84645
 vacuum vessel cooling and heating system, design, fabrication and testing 2-58268
 W shielding calculations improvement 2-108131
 water sheet jets issuing from slit nozzles; linear stability theory, appl. to fusion reactors 2-60602
 WILDCAT D-D Tokamak commercial reactor, conceptual design 2-85350
 ZEPHYR D-T ignition expt., prompt and delayed radiation calcs. 2-54648
 ZEPHYR neutral beam injection system, conceptual design 2-80268
 z, nonequilibrium particle distrib., effects on energy evolved in a plasma 2-60726
 CC Li blanket, heat flow, thermoelectric MHD effect 2-85304
 D pellets injection technique for plasma refuelling 2-74939
 D-T neutrons, graphite moderated, spectra 2-108129
 D-T plasma, energy deposition of fast α -particles 2-102259
 D-T Tokamak reactors, plasma edge and divertor characts. 2-65747
 D-T wall-confined fusion cycle energy gains, shock wave heating 2-90294
 Li blanket design, MHD finite element anal. 2-113731
 Li coolant test loop 2-85292
 Li fire modelling, in fusion reactors 2-54644
 Nb₃Sn superconductor jacket, forced flow design in Westinghouse Large Coil Program 2-69908
 ^AW , $A=182, 183, 184, 186$, neutron emission spectra at 0.1-20.0 MeV 2-108130

fusion reactors

- see also fusion reactor ignition; fusion reactor materials; fusion reactor theory and design; hybrid reactors; plasma heating*
 1.5 MW high-freq. amplifier for ICRH of fusion plasma 2-85387
 Advanced Toroidal Facility, data system design considerations for a pseudo-steady-state device 2-80231
 Aleator, high speed digital data acquisition system data acquisition 2-74995
 APEX Tokamak, impurity detection by Doppler shift laser fluorescence spectroscopy 2-85279
 Argonne Pulsed Cable Test Facility for the development of superconducting ohmic heating coils 2-85360
 ASDEX divertor Tokamak, operational experience 2-85339
 ASDEX feedback system, plasma control techniques 2-69964
 ASDEX fusion experiments, circuit breaker investigation 2-64635
 ASDEX fusion exptl. data collection system 2-80229
 ASDEX Ohmic heating pressurised air blast breaker 2-69943
 Beta II field reversed plasma gun expt., data acquisition system 2-74992
 blankets, thermal stresses in neutron multipliers 2-80168
 CAMAC module for neutral beam water flow calorimetry 2-80283
 Canadian engineering program 2-64650
 capacitive accumulators as energy source for controlled thermonuclear fusion 2-64643
 charge, quantum state and energy distributions of impurities released in plasma-wall interaction processes 2-109530
 control and instrumentation for Tokamak-type fusion reactors (*Japanese*) 2-74897
 controlled thermonuclear fusion electrical engineering problems 2-64638
 controlled thermonuclear reactions, brief progress review 2-96300
 cryosorption vacuum pumping of hydrogen and helium mixtures 2-75052
 Culham multi-MW Beam Line Facility for JET component testing 2-80323
 Culham Summer School lectures, postgraduate level, book 2-68980

fusion reactors continued

- data acquisition and communications computer network for fusion experiment 2-80227
- data measuring control complexes for Angara-5 fusion reactor 2-54658
- dense plasma focus, filling system for working chamber using D-T mixture 2-113736
- development, international cooperation, benefit to USA 2-93876
- difficulties in providing conditions for reactions (*Hungarian*) 2-96299
- Dobulet III, neutral density meas. 2-80205
- Dobulet III, 60 GHz microwave components for ECH experiments 2-74957
- Dobulet III, data acquisition and control system for Thomson profile diagnostic 2-80226
- Dobulet III, data acquisition system, expansion and redundancy 2-74993
- Dobulet III, dee-shaped plasma, equilibrium and axisymmetric stability 2-109491
- Dobulet III, distributed computer system, data management 2-80224
- Dobulet III, first wall impurity deposition 2-80206
- Dobulet III, leak testing program 2-80201
- Dobulet III, real time two wavelength interferometer system 2-80278
- Dobulet III, Thomson scattering profile diagnostic, mechanical engineering 2-80291
- Dobulet III 2 MW ECH power supply system 2-85388
- Dobulet III data archival anal. retrieval system 2-80228
- Dobulet III Doppler ion diagnostic software system using Northern 1710-31 and LSI-11/2 2-74998
- Dobulet III fusion machine nears crucial test phase 2-113743
- Dobulet III neutral beam mode control 2-85372
- Dobulet III operator generated command language for computer control 2-80225
- Dobulet III results and implications for future Tokamaks 2-69868
- EBT, CAMAC based inter-computer communication system 2-85370
- EBT vacuum system problems and development 2-80202
- electric power from near-term fusion reactors 2-85325
- electromagnetic systems for tokamak reactors, engineering problems 2-64639
- engineering feasibility challenges for the magnet community 2-69969
- engineering opportunities in inertial confinement fusion 2-80239
- EPRI fusion program and its thrust in fusion engineering 2-64653
- Eta-Beta II parameter evaluation 2-85280
- European communities possible development and utilisation (*German*) 2-90288
- facility approach to Tokamak operation 2-85281
- fast-liner—compression fusion systems, book contrib. 2-76182
- FED, baseline configuration and maintenance 2-75030
- FED, ion cyclotron resonance heating system 2-74958
- FED, ion cyclotron resonance heating system characteristics 2-74959
- FED, optimal neutral beam heating 2-80251
- FED, parameters, effect on performance and cost 2-75031
- FED, PF coil replacement considerations 2-80300
- FED, plasma diagnostic instruments 2-80321
- FED, plasma engineering anal. 2-80244
- FED, RF plasma heating 2-75028
- FED control power 2-75032
- FED frame seal welder and cutter 2-80298
- FED neutral beam injectors, remote maintenance 2-80301
- first wall coatings with low Z materials for fusion devices, conf., Nagoya, Japan (1980) 2-89463
- fuel cycle characteristics of D-T fusion reactor and base-satellite system 2-102263
- fueling of magnetic confinement devices 2-81483
- Fusion Engineering Development Plan 2-64654
- fusion experiments, generalised control system 2-74962
- fusion plasma physics, nonlinear diffusion eqn. 2-55707
- fusion reactor, HYFIRE, high temp. water electrolysis appl. 2-88417
- fusion research engineering problems, conf., Chicago, IL, USA (Oct. 1981) 2-63744
- fusion-product energy-loss measurements from laser-imploded micro-balloons 2-80276
- gas jet targets for laser plasma interaction studies 2-109551
- gyrotron, parameter effect on performance for fusion reactor ECRH 2-85385
- gyrotron development for fusion reactor ECRH 2-85384
- gyrotron development for fusion reactor heating 2-85386
- high energy neutral beam injector for fusion reactor based on magnetron 2-75094
- high power neutral beam generator control by arc-current regulation 2-74979
- high surface heat flux test facility water cooled cathodes testing 2-85275
- history of fusion technology development 2-64652
- homopolar generators, shockwave, disc-type, with gas-pressure supported rotor for pulse power supply systems 2-64642
- homopolar generators, shockwave, for power supply to thermonuclear installations 2-64641
- hot ion mode Tokamaks, suitability for commercial power 2-85336
- HT-1, feedback control system for plasma position 2-74972
- hybrid fusion, introduction 2-102270
- HYLIFE ICFR, plasma-jet interaction, 2D model 2-97719
- ICF, fuel density radius diagnostic using SSNTD CR-39 2-80275
- ICF, thermalization of heavy ion beams in the final lens of vacuum reactor vessels 2-80326
- ICF, workshop, New Orleans, LA, USA (Nov. 1981) 2-101131
- impact fusion, EM gun appl. 2-54651
- instrumentation and control, development strategy 2-85373
- instrumentation hardening 2-74982
- international collaboration, US strategy 2-93877
- international cooperation, organisation, administration, obstacles 2-93878
- INTOR 2-69869
- INTOR as an engineering test devices 2-80223
- INTOR Tokamak ballooning stability, alpha-particle diamagnetic drift effects 2-109560
- ISX, Ti gettering experience 2-80215
- ISX-B, deposition probe meas. of impurity and plasma fluxes near wall 2-81583
- ISX-B Tokamak, plasma-limiter interactions, high-speed photographic obs. 2-76142
- Japanese fusion program developments and current-status (*German*) 2-91648
- JET, large scale cryopump system design 2-75051
- JET, lower hybrid freq. grill launcher design, mechanical aspects 2-74952

fusion reactors continued

- JET, magnet system status, main assembly problems 2-69968
- JET, neutral injection system, engineering design and manufacturing 2-80322
- JET, neutral injection system status 2-75041
- JET, neutron diagnostic device, remote handling aspects 2-80299
- JET, remote welding and cutting 2-80297
- JET, time of flight telescope spectrometer for neutron diagnostics 2-80285
- JET flywheel-generator-converter, design fabrication and erection 2-69939
- JET neutral injection beam line, calorimeter and ion dump design 2-75044
- JET Ohmic Heating Circuit 2-69940
- JFT-2 Tokamak, density fluctuation obs. by microwave interferometry 2-86390
- JT-60, data processing system 2-74999
- JT-60, prototype injector unit construction 2-75043
- JT-60, real-time plasma control, cascade struct., design concept 2-74969
- JT-60, ZENKEI central control system design 2-74964
- JT-60 prototype ion source for neutral beam injector 2-75042
- lanthanide blankets, neutron multiplication calc. 2-54643
- large scale thyristor DC circuit breaker for fusion application 2-69938
- laser fusion, elementary level introduction 2-102268
- Lawrence Berkeley Laboratory neutral beam engineering test facility power supply system 2-69950
- LCT protective dump switch tests 2-69954
- linear magnetic fusion system, book contrib. 2-76180
- liquid metal two-phase flow pattern, transverse mag. field effect, fusion reactor heat exchanger 2-80307
- magnetic booster target low velocity high yield impact fusion 2-54653
- magnetic confinement, book 2-74173
- magnetic fusion devices, press. and gas flow meas. techniques 2-55789
- magnetic fusion reactors, book contrib. 2-76184
- magnetic plasma confinement in fusion research (*German*) 2-91644
- magnetically confined, first wall, blanket and shield, engineering test program 2-85295
- magnetically confined plasma, heating by neutral beams, feasibility 2-81504
- magnetoelastic microscope for inertial confinement fusion program, beam profile meas. 2-85447
- maintenance, opportunistic replacement of parts 2-69901
- MTFF, display management system 2-74984
- MTFF, local controls and instrumentation 2-74980
- MTFF, neutral beam aiming and calorimetry 2-80282
- MTFF, power supply hardware protection, CAMAC based interlock system 2-74989
- MTFF, shot synchronisation 2-74988
- MTFF, timing system 2-74986
- MTFF control systems, tools and implementation methods 2-85367
- MTFF database notification facility 2-85369
- MTFF device configuration management system 2-74966
- MTFF distributed database management system 2-85368
- MTFF fibre optic links in instrumentation systems 2-74987
- MTFF long pulse neutral beams, instrumentation system 2-74985
- MTFF magnet, transport and installation, mag. field meas. 2-69970
- MTFF neutral beam arc power supplies, output current transient elimination 2-69947
- MTFF neutral beam power supplies, 80 kV snubber core assemblies, test and design 2-69948
- MTFF neutral beam power supplies, air insulated source cables 2-69945
- MTFF neutral beams supervisory control software 2-85371
- MTFF personnel safety interlocks, use of programmable controllers 2-74968
- MTFF superconducting magnet system low level signal data acquisition system 2-74996
- MTFF Supervisory and Control and Diagnostic system, debugging process 2-74967
- MTFF-B electron cyclotron resonance heating system 2-74949
- MTFF-B plasma diagnostic system, mechanic considerations 2-80287
- MTFF-B plasma diagnostic system 2-80286
- MTFF-B plasma diagnostics system instrumentation and data acquisition system 2-80288
- mirror fusion reactor, book contrib. 2-71254
- multigigahertz beam diagnostics for laser fusion 2-109588
- neutral beam development at BNL, for fusion reactors 2-75045
- Neutral Beam Engineering Test Facility, beam dump design 2-85274
- neutral beams, future needs 2-75040
- neutral-beam systems for magnetic fusion reactors 2-80203
- OHTE, torus assembly fabrication 2-85269
- Particle Beam Fusion Accelerator Performance Monitoring and Evaluation System 2-96409
- PDX, 60 GHz ECRH system 2-85389
- PDX, 60 GHz microwave components for ECH experiments 2-74957
- PDX, fast ion diagnostics neutral beam injector 2-81578
- PDX, Langmuir probe meas. of density and electron temp. 2-81582
- PDX CO₂ laser expt., optical mounts and shutter window grating system design 2-85288
- PDX laser blow off trace element injectors anal. 2-81580
- PDX neutral beam computer system, development and operation 2-74971
- PDX neutral beam reionization losses 2-80204
- plasma control using TRAIL (Tokamak rail gun limiter) 2-69888
- plasma direct converters, measured and projected performance 2-69963
- plasma generator for PLT/PDX neutral beam injectors 2-80377
- plasma physics and controlled nuclear fusion workshop, Cambuquira, Brazil, (Feb. 1982) 2-109579
- PLT, deuterium flux in edge plasma 2-81581
- PLT, deuterium incident on limiter-like probe, flux and energy 2-76174
- PLT, high voltage RF coaxial vacuum bushing design considerations 2-74953
- PLT, ICRH, 9 inch stub tuner design 2-74954
- PLT, Langmuir probe meas. of density and electron temp. 2-81582
- PLT 800 MHz RF generator for lower hybrid resonance heating 2-74955
- PLT laser blow off trace element injectors anal. 2-81580
- PLT lower hybrid RF monitoring system 2-85390
- pneumatic hydrogen pellet injector development at Oak Ridge National Laboratory 2-85289
- positive ion based neutral injectors for fusion reactors, status and trends 2-75093
- power supply systems for tokamak thermonuclear installations 2-64640

fusion reactors continued

- prospects of energy transformation between fusion reactor and OTEC plant 2-78193
 pulsed power for inertial confinement fusion 2-80235
 radiolytic conversion systems, fuel synthesis 2-54640
 research and development, ref. to international collaboration 2-93875
 reversed field pinch reactor, heating burn simulations 2-81569
 review, book contrib. 2-69889
 RIGGATRON Tokamak fusion demonstration experiment program 2-69870
 role of fusion hybrids for fissile fuel production in future power generation systems 2-102261
 sequential control optimisation 2-74970
 STARFIRE, ion cyclotron resonance heating system 2-74958
 STARFIRE, ion cyclotron resonance heating system characteristics 2-74959
 steady state magnetron H⁻ source for fusion reactors 2-75095
 stellarator fusion plasma confinement review 2-91649
 surface data for fusion devices, conf., Nagoya, Japan (Dec. 1981) 2-107019
 Tandem Mirror Experiment-Upgrade, construction, project planning and management methods 2-85294
 tandem mirror machines, beam waveguide launcher for high power ECRH heating 2-74956
 TCA Tokamak, RF system for Alfvén wave heating 2-74951
 technological problems for future energy exploitation (German) 2-54638
 technology, shift from science to engineering 2-74895
 technology based on Tokamak principle (German) 2-90286
 TEXT, Central Control System computer software requirements 2-74981
 TEXT, motor generator installation and operation 2-69936
 TEXT, start-up and operation 2-85340
 TEXT poloidal field power systems operation 2-69934
 TEXT toroidal field power supply operation 2-69935
 TEXTOR, control and data acquisition system 2-74963
 TEXTOR, ICRF antenna for heating system 2-74950
 TEXTOR, magnetising circuit 2-69946
 TEXTOR, poloidal field thyristor amplifier with improved power factor 2-69941
 TEXTOR toroidal field power supply system commissioning tests 2-69942
 TFR Tokamak expt, data acquisition system 2-74994
 TFR, DC coupled auto zeroing low noise high impedance amplifier 2-74990
 TFR, epithermal neutron diagnostic, mechanical design 2-80284
 TFR, multichannel far-IR interferometer, electrical design 2-80279
 TFR, multichannel far-IR interferometer, optical and mechanical arrangement 2-80280
 TFR, neutral beam heating, plasma position and current control, optimal anal. 2-74961
 TFR, Rogowski coil and diamag. loop, design, fabrication and testing 2-80295
 TFR, X-ray imaging system, mechanical design 2-80294
 TFR, X-ray pulse height anal. system 2-80292
 TFR diagnostic voltage loops 2-80303
 TFR diagnostics, stable support struct., design and anal. 2-80293
 TFR diagnostics grounding 2-80296
 TFR first plasma diagnostics 2-80289
 TFR microchannel plate detector for high energy neutrons 2-80399
 TFR multistage ignition crowbar development 2-69949
 TFR neutral beam calorimeter fabrication and instrumentation 2-85273
 TFR neutral beam lines fast shutter valve 2-80305
 TFR neutral beam system, cable information retrieval program 2-74997
 TFR neutral beam test cell cryogenics 2-80341
 TFR neutral beam test facility, discharge ion sources and power supply 2-69951
 TFR ohmic heating pulsed energy conversion system, plasma striking voltage production 2-80310
 TFR plasma discharge, position and current control, optimal control theory anal. 2-86459
 TFR structural instrumentation 2-74991
 TFR vacuum vessel bakeout and cooling systems 2-85270
 thermonuclear installation power supply injector systems design 2-64645
 thermonuclear plants injection system power supplies design 2-64647
 thermonuclear reactor injector power supply systems design 2-64646
 thyristor power supplies control using automatic pulse phase shifter 2-69937
 thyristor supply systems for experimental thermonuclear reactors, design problems 2-64644
 TMX, ECRH diagnostic system control and data systems 2-80232
 TMX, heavy ion beam probe control using high speed auxiliary crate controller 2-74965
 TMX, microwave interferometer for plasma density meas. 2-74983
 TMX Upgrade, magnet power supply, power factor correction appl. 2-69953
 TMX-U, machine and plasma diagnostic instrumentation systems 2-80290
 TMX-Upgrade, diagnostic timing system 2-80230
 Tokamak, Frascati FT, DD charged fusion products confinement 2-81570
 Tokamak, unipolar arcs, initiation and spot types, influence of surface conditions 2-76173
 Tokamak, wall interactions, edge plasma modelling, transport, impurity rate and diffusion eqn. 2-109528
 Tokamak de Varennes 2-64651
 Tokamak fuelling simulation 2-81573
 Tokamak fusion test reactor diagnostics and instrumentation, nuclear aspects 2-74896
 Tokamak limiter, EM rail gun applic. 2-54652
 Tokamak plasma properties, changes during impurity injection 2-81579
 tokamak plasma-position control systems 2-64648
 Tokamak poloidal coil power supply system 2-80308
 Tokamak reactor plasma, impurity generation 2-74916
 Tokamak wall material transport meas. using nuclear activation techniques 2-103407
 Tokamaks, EM effects of plasma disruptions 2-80317
 Tokamaks JET, JT-60, T-15, TFTR and reactors, needs for impurity control, exhaust and plasma-wall interactions 2-71231
 Tokamaks with high performance resistive mags., test reactors and appls. 2-85351
 toroidal pinch devices, fusion appls., book contrib. 2-71252
 TPE-2 screw pinch device, engineering tests and performances 2-85342

fusion reactors continued

- TRACT program, engineering needs 2-85352
 US magnetic fusion program strategy and progress (German) 2-91647
 utility requirements for R and D planning, decision-making 2-69900
 vacuum vessel leak detection system 2-80335
 Varennes Tokamak, parameters and special features 2-85284
 Varennes Tokamak, power supply design 2-69944
 very high level neutral beam control system 2-74978
 ZT-40M system design, modification, and installation 2-69952
 D-T fusion reactors, implications for world energy problem (German) 2-93879
 Cr gettering, comparison with Ti gettering for fusion reactors 2-79600
 Cu electroplating for LINAC accelerating structures for heavy ion fusion 2-85291
 D-T fusion reactor, performance rel. to other nuclear energy systems 2-75071
 D₂-pellet injection system 2-85290
 DT reactors, non-perturbing diagnostic for fuel mixture ratio and power density 2-80277
 H, trapping, detraping and re-emission from fusion first walls 2-109584
 O₂(¹Δ), laser appl. to nuclear pumped laser fusion reactor 2-80328
 PDX, deuterium flux in edge plasma 2-81581
 Ti gettering, comparison with Cr gettering for fusion reactors 2-79600
- fuzzy set theory**
 domain shift operations 2-80907
 interval-valued fuzzy sets of higher type, union, intersection and complementation redefined 2-79340
 ocean surveillance, attribute problem, combined probabilistic and fuzzy set technique 2-63147
 solar-powered dual absorption system, selection criteria using fuzzy decision anal. 2-111539
 transport eqn., soln. using fuzzy typical values 2-101363
- g-factor**
 see also *gyromagnetic ratio*; *Zeeman effect*
 alkali halides, F-centres, g-factor shift of relaxed excited state 2-56464
 alkoxy radical radiation products, g-tensor and H⁺ coupling tensors 2-85695
 ammonium oxalate: Cu²⁺, EPR study 2-110627
 cadmium acetate dihydrate: Cu²⁺, single cryst., EPR study of low symm. site 2-56918
 CC¹⁹⁴Ir, oriented in Fe and Ni, NMR, elec. quadrupole moment and g-factor 2-98977
 chalcogenide glasses: Mn²⁺, EPR study, HFS at g≈4.3 2-110625
 electron, g-2, sixth-order contribs., Feynman graphs 2-69467
 electron anomalous g-factor correlation, resonant cavity model 2-69465
 electron gas, two-dimensional, in strong mag. field 2-56454
 EPR, spin Hamiltonian, orthorhombic HF and g tensors 2-70297
 fluoride glass: Co²⁺(Ni²⁺), ESR study (Chinese) 2-110622
 fluoride glass: Cr³⁺(Mo³⁺), ESR study (Chinese) 2-110621
 fluorophosphate glass: Co²⁺(Ni²⁺), ESR study (Chinese) 2-110622
 fluorophosphate glass: Cr³⁺(Mo³⁺), ESR study (Chinese) 2-110621
 Heisenberg ferromagnet, surface spin wave relax. due to scatt. by surface fluctuations (Russian) 2-98857
 lattice-dynamical contributions to g-values 2-92444
 linear molecule, closed electronic shell, g-factor calcs. (Russian) 2-85520
 linear triatomic molecule, vibr. g-factor semiempirical calcs. 2-90510
 metals, point contact spectroscopy of g-values 2-66425
 methoxy radical, Jahn-Teller energy surface, spin-orbit splitting and Zeeman effect, perturbation theory 2-75198
 methyl silane, ground vibronic state, Stark and Zeeman effects, mol. beam mag. reson. 2-85697
 muon anomalous g-factor correlation, resonant cavity model 2-69465
 N=Z nuclei, mag. moments of T=0 states 2-79946
 neodymium ethylsulphate nonahydrate, ligand field theory 2-92541
 nitroxyl radicals, hyperfine splitting consts., g-factors pH effect on EPR spectra 2-108585
 noble metal-rare earth alloys, dil., magnetotransport and EPR props. 2-104355
 noble metals with rare earth impurities, magnetotransport and EPR props. 2-66528
 paramagnetic ions doped in paramag. hosts, EPR studies, review 2-110600
 phosphate glass: Co²⁺(Ni²⁺), ESR study (Chinese) 2-110622
 phosphate glass: Cr³⁺(Mo³⁺), ESR study (Chinese) 2-110621
 polyacetylene, Br substituted, synthesis and EPR, dynamic nucl. polarisation and Raman study 2-76474
 polyacetylene, undoped, p-π orbitals, EPR anisotropy study 2-66894
 R₂(SO₄)₃.Gd³⁺.8H₂O 2-72340
 R(NO₂)₃.Gd³⁺.6H₂O, EPR spectra, host-lattice effects meas. 2-72340
 rare earth nuclei, in Fe, transient mag. field, ^{152,154}Sm appl. 2-95915
 RCl₃.Gd³⁺.bH₂O, EPR spectra, host-lattice effects meas. 2-72340
 semiconductor, carrier recombination, spin depend., Kaplan-Solomon-Mott model 2-61483
 semiconductor, deep donor binding energy, g-value calc. 2-92517
 spectroscopic splitting factors, g-values, meas. in EPR spectroscopy, microprocessor-based 2-101433
 TCNQ salt, DBTTF-TCNQ, pure and TCNQF₄ doped, ESR studies 2-87576
 TCNQ salt, DBTTF-TCNQF₄, ESR studies 2-87575
 TCNQ salt, TMTSF-DMTSNQ, pure and irradiated, mag. props. 2-89858
 (TMTSF)₂ClO₄, struct. and props., exptl. evidence for importance of interchain couplings 2-55959
 TMTSF-PMTCNQ, weakly disordered, low temp. metallic phase, Hall effect 2-92591
 TMTTF salts, struct. and props., exptl. evidence for importance of interchain couplings 2-55959
 top, relativistic, EM interaction, classical theory 2-79350
 triatomic linear molecule, vibr. g-factor theory 2-59780
 (3,3)TTF-Phan-TCNQ, electronic props., cond. and ESR meas. 2-92621
 verdazyl radicals, single cryst. and polycryst., EPR 2-93011
 AgClS, S centre, ENDOR study 2-93063
 AlN:Mn, luminescence, and EPR spectra 2-57174
 α-Al₂O₃:V, zero field splitting, g-factors (Chinese) 2-110310
 Bi₂GeO₅:Cr, light induced charge transfer processes, optical absorption and EPR 2-99159
 Bi₂SiO₅:Cr, light induced charge transfer processes, optical absorption and EPR 2-99159
 BiVO₄.Gd³⁺, EPR spectra, g-factor, spin Hamiltonian monoclinic symmetry (Russian) 2-93001

g-factor continued

- ⁶Ba, A=202, 203, 205, high spin states, g-factors from ²⁰³Tl(α,γ)
2-90015
⁸Ca, A=39, 41, I-forbidden M1 transitions and effective g-factors
(Chinese) 2-95963
(Cd_{1-x}Mn_x)₂As₂, Landau levels, cyclotron effective mass and effective g-factor 2-110269
CdS, excitons and polaritons in mag. field, theory and two-photon Raman scatt. study 2-104258
CdTe, magnetoluminescence, electron and hole g-factors, Zeeman effect 2-99193
Ce_{1-x}M_xPd₃, M=Sc, Y, La, intermediate valence and Gd³⁺ ESR 2-56927
Ce(Pd_{1-x}M_x)₃, M=Rh, Ag, intermediate valence and Gd³⁺ ESR 2-56927
¹³⁴Ce spectroscopy and mag. moments at backbending 2-101809
¹³⁵Ce, f_{7/2}⁺ isomer mag. moment 2-54262
Co(II) complex, N,N'-ethylenebis(acetylacetonatiminato)Co(II)
EPR/ENDOR and semielemental calcs. study 2-116089
CoS₂ single cryst., ferromagnetic and paramagnetic resonance 2-116066
Cs, Rydberg atom in mag. fields, Landau limit of spectrum 2-59721
CuFe dilute mag. alloys, g-factor, mag. field splitting of microcontact spectrum (Russian) 2-98527
CuMn dilute mag. alloys, g-factor, mag. field splitting of microcontact spectrum (Russian) 2-98527
Cu₂O, IS exciton two-photon magnetoabsorpt. spectra, polarisation depend. meas. 2-77498
⁶⁰Dy, A=158, 164, high spin states EM props. 2-95917
¹⁵⁹Er backbender, g-factors of high spin states in cranked HFB 2-69533
Fe I to XXVI, energy levels, data compilation 2-94925
FeZn ferrite, Cu²⁺ substituted, Jahn-Teller effect on ground states 2-66502
GaAs:Cr, semi-insulating, EPR of extended defects 2-87590
GaAs:Cr²⁺, EPR resonance parameter calcs. 2-104691
GaAs-AlGaAs heterojunctions, 20-electron gas, f-factor enhancement, Shubnikov-de Haas oscils. 2-56685
GaAs-GaAlAs multilayers, high field magneto-transport, spin splitting, g-factors 2-56684
Ga_{0.47}In_{0.53}As-InP heterojunction, 2D electron gas, quantum oscils., magnetoresistance study 2-110466
Gd_{1-x}Co_x amorphous films, oxidation, FMR study 2-82724
¹⁴⁷Gd, A=144,147,148, yrast isomers quadrupole moments 2-74731
¹⁵³Gd, levels, J^π, log ft, T_{1/2}, g-factor, from ¹⁵³Tb β⁺ decay 2-95962
Ge, IR study of indirect exciton Zeeman effect 2-67053
Ge:As, donor ground state, diamag. and Zeeman shifts, four-wave mixing spectroscopy 2-99096
⁶⁸Ge, 6⁻ and 7⁻ states, g-factors from ⁵⁸Ni(¹²C, p) 2-113363
H₂O, vibr.-rot., quadrupole moment, g-factor, spin-rot., ab initio SCF calcs. 2-64867
HfSiO₄:Nd³⁺(Yb³⁺), EPR study 2-72341
¹⁶⁷Ho, hyperfine structure meas. in metastable states 2-113903
⁷I, A=117, 119, 121, high spin states, bands, J^π, T_{1/2}, isomer g-factor from Sn(⁶Li, 3n) 2-113337
¹¹⁹I, isomeric bandheads, mag. moments rel. to quasiparticle-core coupling 2-95914
InAs, effective g-value determ. by four-wave mixing spectroscopy 2-55260
InAs-GaSb superlattice, Shubnikov-de Haas oscils. under tilted mag. fields 2-56687
InP:Mn, impurity states electronic struct., ESR and optical absorpt. study 2-82285
IrBr₂²⁻, Zeeman levels, mag. optical activity-reson. Raman spectra 2-85668
K, g factor correction calc. 2-85565
KCl:H, I, relaxed excited state of atomic H centres, ODMR study 2-99000
KCl:KCN irrads. single cryst., EPR study 2-77375
K:PbCu(NO₃)₆, Jahn-Teller effect, uniaxial stress effects, ESR study 2-87580
K(UO₂)₂(NO₃)₃, NO₃ radical in γ-irrad. single crystals, EPR study 2-56937
K₂(UO₂)₂(NO₃)₄, NO₃ radical in γ-irrad. single crystals, EPR study 2-56937
⁸K, A=39, 41, I-forbidden M1 transitions and effective g-factors (Chinese) 2-95963
(La,Gd)B₆, single cryst., exchange interaction and cryst. field splitting, ESR 2-104696
Li, g factor correction calc. 2-85565
LuPO₄:Cm³⁺, EPR, g-factors, excited state doublet wave function 2-104700
Mg particles, g-factor quantum size effect, EPR study 2-104693
Mg(NH₄)₂(SO₄)₂.6H₂O:CrO₄²⁻, irradiated, EPR studies 2-61753
N, metastable ²P state, EPR spectrum 2-64901
NH₄MgPO₄:Ni²⁺.6H₂O, X- and γ-irrad. damage, EPR and absorpt. spectra study 2-57135
(NH₄)₂(UO₂)₂(NO₃)₄, NO₃ radical in γ-irrad. single crystals, EPR study 2-56937
Na, g factor correction calc. 2-85565
Na particle, CESR g-shift, shape depend. 2-116063
²⁰Ne 4⁺ yrast state g-factor, transient field precession meas. from ¹²C(¹²C, α) 2-59239
Ni(BF₄)₂.6NH₃, cryst. field distortion parameter, EPR linewidth and phase transition temp. meas. 2-61420
Ni(ClO₄)₂.6NH₃, cryst. field distortion parameter, EPR linewidth and phase transition temp. meas. 2-61420
Ni,Mg_{1-x}Fe_xO₄, FMR and magnetisation meas. 2-82723
NiSiF₆.6D₂O, single cryst., EPR meas. 2-61758
NiZn ferrite, Cu²⁺ substituted, Jahn-Teller effect on ground states 2-66502
⁸Os, A=186,188, mag. moment meas. 2-54261
PO₄³⁻, matrix isolated, HF, interaction, g tensors, EPR study 2-70298
³¹p_{3/2}⁺ and 5/2⁺ state g-factors from ²⁸Si(α,pγ) 2-79947
n-Pb_{1-x}Sn_xTe, Fermi surface and cond. band, Shubnikov-de Haas study 2-115644
Pb_{1-x}Sn_x(Te,Se) solid soln., carrier g-factor longitudinal and transverse components, band gap depend. 2-76903
PbTe epitaxial layer, optical four-wave mixing 2-93315
²⁰⁴Po, 15⁻ isomer mag. moment and Po internal mag. field in Ni 2-69534
Pr:Gd³⁺, Er³⁺, exchange interaction, g-shift, ESR study 2-72342
Pt, conduction electron g-factor anisotropy de Haas-van Alphen effect meas. 2-92445
¹⁹⁷Pt^m decay, levels, lifetimes and g-factors quasiparticle phonon coupling model anal. from ¹⁹⁷Pt(n,γ) 2-69602
²³⁹Pu, short lived fission isomer, g-factor 2-64356
Rb, g factor correction calc. 2-85565
RbCl:H, I, relaxed excited state of atomic H centres, ODMR study 2-99000
Se₂, B'₂⁻ state, Lande factors and perturbations, pulsed dye-laser studies 2-75462
Si, CVD, amorphous, post-hydrogenated, doping effects, cond. and EPR meas. 2-66679
Si, heat treatment centres, g-values 2-66918
Si:H,B, amorphous, ESR lineshape, g-factors, temp. depend. 2-77373
Si:H(F), amorphous, dangling bond ESR, effect of H or F, Huckel mol. orbital calc. 2-56933
Si:O donor centres, heat treatment effects, Hall meas. and ESR study 2-61401
n-Si:_n(6H), impurity-vacancy pairs, EPR study 2-61766
²⁰⁵Tl,²⁰⁷Tl, amorphous glow discharge films, ESR, IR and optical study 2-56934
(TMTSF)₂PF₆, high press. metallic phase, low temp. ESR, evidence for singlet paired supercond. 2-56913
¹³⁰Te₂, ground electronic state, Lande factor meas. 2-108641
Ti, first spectrum, effective interactions calcs. 2-80517
TiO₂:Cr(Fe), rutile pigments, EPR study 2-104695
Ti₂⁺, matrix isolated, HF, interaction, g tensors, EPR study 2-70298
²⁰⁵Tl, J^π=25⁺/2 isomer g factor and proton anomalies orbital magnetism 2-54260
TmAsO₄, local props. of Tm³⁺ and Yb³⁺, ¹⁶⁹Tm and ¹⁷⁰Yb Mossbauer meas. 2-99006
YAlO₃:Nd³⁺(Er³⁺)(Dy³⁺), luminescence and cryst. field splitting 2-15239
YIG film, magnetization meas. from ferrimag. resonance and antiresonance 2-66875
¹⁶⁵Yb backbender, g-factors of high spin states in cranked HFB 2-69533
¹⁷²Yb nonbackbender, g-factors of high spin states in cranked HFB 2-69533
ZnO, excitons and polaritons in mag. field, theory and two-photon Raman scatt. study 2-104258
ZnS:Ge³⁺(Sn²⁺), photosensitive EPR, g-factors and hyperfine interaction 2-77369
ZnTe:P, Li, magnetoluminescence, electron and hole g-factors, Zeeman effect 2-99193
Zr, Lande g-factors, multimode saturation reson. in optogalvanic spectroscopy 2-85578
ZrSiO₄:Nd³⁺(Yb³⁺), EPR study 2-72341
- gadolinium**
see also nuclei with
(0001) surface, adsorption of Xe, charge transfer instability absence 2-115552
analysis technique in nuclear fuels for quality control (German) 2-96089
atom, energy levels, isotope shifts and electronic configs. 2-113875
atom, laser isotope separation by two-step selective photoionisation method 2-64940
atomic vapour sources for laser isotope separation, electron-beam evaporation and cathode sputtering 2-65101
electron diffraction pattern of Fm3m phase, Ge₂O₃ effects, theory 2-91868
ferromagnetic, sputtering coeff., temp. depend. 2-879

gadolinium continued

- NbP₂O₄·Gd³⁺, monoclinic-orthorhombic ferroelastic transition, EPR study 2-61763
 P₂O₅ glasses, Gd³⁺ doped, vibronic spectra comparison with Raman and IR spectra 2-72499
 Pb₂Ge₂O₁₁·Gd³⁺, elec. field effect and model of triclinic paramag. centres 2-66912
 Pb₂Ge₂O₁₁·Gd³⁺, ferroelec., EPR line intensity, ferroelec. hysteresis 2-116059
 Pb₂Ge₂O₁₁·Gd³⁺, hyperfine interaction, discrete saturation, ESR study 2-104697
 Pb₂Ge₂O₁₁·Gd³⁺ ferroelectric, electret props. 2-116111
 Pr₂Gd³⁺, Er³⁺, exchange interaction, g-shift, ESR study 2-72342
 Pr₂S₂Gd, ferromagnet, dil. Gd moments, press. depend., magnetisation 2-72195
 Pr₂Ti₂Gd, ferromagnet, dil. Gd moments, press. depend., magnetisation 2-72195
 PrVO₄·Gd³⁺, ESR spectrum, temp. depend. 77 to 300K 2-66913
 RCl₃·6H₂O·Gd³⁺, (R=Nd,Sm,Eu,Tb,Dy,Ho,Er,Tm), cryst. field parameters, spin Hamiltonians, polarisability tensors 2-87206
 Sb₂Gd, ESR and photoluminesc. spectra 2-93000
 Se_{1-x}Ce_xAl₂Gd, EPR, intermediate valence 2-56926
 Si₂Gd, crystal microstruct., Gd accumulations, electron radiation-induced defects 2-86891
 SrO·Gd³⁺, ESR dipolar linewidths 2-104688
 ThOS₂·Gd³⁺, spin Hamiltonian parameters, superposition model anal. 2-92850
 ThS₂·Gd³⁺, spin Hamiltonian parameters, superposition model anal. 2-92850
 Tm₂Y_{1-x}VO₄·Gd³⁺, EPR study of Jahn-Teller induced random strains 2-77368
 W-Gd point contact M/M diode, improved performance 2-98761
 YIG:Ga, Gd film, confined stripe domain lattice, mag. domain walls normal modes obs. 2-92980
 YIG:Gd, Tm, Ga, He⁺ implanted, mag. and cryst. props. 2-77334
 Y₂O₃·Gd³⁺, ESR absorption spectra, hyperfine structure 2-66911
 Y₂O₃·Gd³⁺, Stark levels, cryst. field splitting, fluoresc. study 2-66505
 Yb₂O₃·Gd³⁺, Stark levels, cryst. field splitting, fluoresc. study 2-66505

gadolinium alloys

- charge transfer and isomer shift, ¹⁵⁵Gd Mossbauer spectra 2-104777
 Ce_{1-x}Gd_xRu₂, self induced vortex state, Meissner effect, NMR study 2-87463
 Co-Gd amorphous films, struct. and mag. props., Mossbauer study (*Russian*) 2-77429
 Cr(Mo)(W)-Gd-B, phase comp. and cryst. struct. 2-116426
 Gd Co amorphous films, torque curves meas. (*Russian*) 2-98926
 Gd-Al thin films, crystallographic phases following electron beam annealing 2-55888
 Gd-As, dil., As hyperfine interaction, IPAC study 2-92544
 Gd-Co, amorphous alloy films, changes in struct., mag. anisotropy and mag. domains (*Chinese*) 2-62238
 Gd-Co, RF-sputtered amorphous film, magneto-optical spectra (*Japanese*) 2-116158
 Gd-Co amorphous films, perpendicular mag. anisotropy, effect of O₂ and N₂ addition 2-72299
 Gd-Co uniaxial amorphous ferrimagnet, mag. states 2-110608
 Gd-Fe thin films, comp. graded, mag. field meas. appl. 2-112939
 Gd-Ge, mag. props., interband mixing effect (*Ukrainian*) 2-77261
 Gd-In system, phase diagram study (*Chinese*) 2-11136
 Gd-La alloys, band struct., elec. resistivity and mag. moment 2-76912
 Gd-Tb, magnetocrystalline anisotropy meas. 2-98873
 Gd-Y, critical field anomalies and anisotropy 2-98878
 Gd-Y alloys, mag. phases, temp. depend. of elastic props. 2-82564
 Gd_{0.5}Al_{0.5}, amorphous, random anisotropy props., magnetisation meas. 2-7271
 GdAl, spin glass, nonlinear susceptibility 2-72215
 GdAl₃, paramagnetic, hyperfine interactions 2-98974
 GdAl₃, quadrupole interaction at ¹¹¹Cd probe 2-116100
 GdAl₃, transport and thermal props., critical behaviour near Curie point 2-116005
 Gd_{0.17}Al_{0.83}, amorphous, spin glass props. 2-72271
 Gd_{0.17}Al_{0.83}, amorphous spin glass, mag. props. 2-92933
 GdAlGa, mag. props. study 2-72141
 Gd_{0.9}Al_{0.1}, amorphous, elec. field gradient at S-state ion, Mossbauer study 2-104761
 Gd₆₀Au₄₀, amorphous, Mossbauer study 2-82757
 GdCe_{1-x}Be_x, cond. electron lattice relax. due to Ce ion 2-72350
 GdCo amorphous bubble film, FMR spectra, angular depend. 2-72354
 GdCo amorphous film, compensation temp., substrate effects, Hall effect study 2-92974
 GdCo amorphous RF sputtered films, substrate bias effect on film composition and mag. props. 2-56900
 GdCo film, bias-sputtered, perpendicular anisotropy rel. to microstruct. 2-72297
 GdCo₂, anomalous hyperfine field and orbital moment 2-56973
 GdCo₂, magnetisation reversal, domain wall vel., temp. depend. 2-82643
 Gd₂Co, amorphous films, oxidation, FMR study 2-82724
 Gd₂Co₂, sputtered film, amorphous, radioactive tracer diffusion 2-92429
 GdCo, elec. resist. accompanying metamag. phase transitions (*Russian*) 2-66820
 GdCoB amorphous thin films, mag. props. 2-72298
 GdCo₂H, NMR spin echo study 2-56972
 Gd₂(Co_{1-x}Mn_x)₂, ⁵⁹Co NMR, influence of easy direction of magnetisation 2-104740
 Gd₂(Co_{1-x}Mn_x)₂, NMR spin echo study 2-93060
 GdCu₂, mag. and crystallographic props., Mossbauer effect, H absorption effects 2-82758
 GdCu₂, Ga₂, mag. order 2-98845
 GdF₃, Mossbauer spectrum, dipolar contrib. and quadrupole effect 2-93092
 GdFe amorphous bubble film, FMR spectra, angular depend. 2-72354
 GdFe₂, ⁵⁷Fe local fields, NMR study rare earth ion and interionic dist. effects 2-82744
 GdFeB amorphous thin films, mag. props. 2-72298
 GdMg, biaxial mag. structs. 2-104580
 GdMn₂-GdNi₂, intermetallic cpds., struct., mag. and elec. props. 2-92878
 GdNi₂, spin polarised energy band struct. calcs. 2-92449
 GdNi₂, amorphous hyperfine fields, magnetisation, Mossbauer study 2-104764
 GdNi₂, Pt₂, phase relationships and struct., 2-109744

gadolinium alloys continued

- GdPtSi, cryst. struct. 2-65922
 Gd₂R_{1-x}Ce_xBe₁₃, (R=La,Y,Lu), cond. electron lattice relax. due to Ce ion 2-72350
 Gd_{1-x}R_xNi (R=rare earth), phase relationships and struct., 2-109744
 GdSn₃, monocry., thermopower 2-71952
 Gd_{65.4}Y_{34.6}, mag. phase transitions, elec. resist., elastic const. and US attenuation study 2-116006
 Gd₂Y_{1-x}Fe_x, indirect exchange param. 2-71942
 La_{1-x}Gd_xAl₂, cryst. struct., mag., elec. and ESR props. 2-92564
 La_{3-x}Gd_xIn, EPR study, mag. and superconducting props. (*Russian*) 2-93002
 Lu_{1-x}(Y_{1-x})Gd_xAl₂, cryst. struct., mag., elec. and ESR props. 2-92564
 Mg-Zn-Gd, amorphous, elec. resist., mag. interference effect 2-82312
 Sm₂(Er,Gd)₂-Co₂, mag. props. and mag. induction temp. depend. meas. (*Russian*) 2-98914
 Tb-Gd alloys, magnetocaloric effect and mag. props. 2-72209
 Th-Gd spin glasses, time and field depend. of magnetisation 2-72216
 Yb_{1-x}Gd_xAl₂, exchange and electron spin-lattice relax., ESR study 2-82712
- gadolinium compounds**
 see also gadolinium alloys
 garnet melt, simulated, fluid flow patterns 2-97953
 magnetic refrigeration materials, 2 to 20K 2-64050
 AlF₃-YF₃-GdF₃-CaF₂-SrF₂-BaF₂-NaF₆-PF₆(AsF₆) glass, optical and thermal props. 2-11345
 Ba_{0.75}Gd_{0.25}F_{2.1}, solid electrolyte, ionic cond. 2-92273
 Ca_{1-x}Gd_xF_{2+x}, solid electrolyte, ionic cond. 2-92273
 Eu_{1-x}Gd_xO, mag. semicond., s-d exchange interaction, current carriers effect, expt. study 2-92895
 Eu_{1-x}Gd_x spin glass, mag. relax., Mossbauer study 2-66833
 Ga_{1-x}Ca_xMnO₃, electronic cond. (*German*) 2-110356
 Gd₂(Y_{1-x}Fe_x)O₂, epitaxial bubble film, rare earth segregation 2-72633
 Gd complex, bis(phthalocyaninato)Gd, compressed discs, elec. cond. props. 2-61463
 GdAlO₃, antiferromagnet, mag. struct., neutron diffr. study 2-72161
 GdAlO₃·C₂³⁺, fluoresc. spectrum, splitting and line shape 2-93262
 GdAlO₃·C₂³⁺, optical props. meas. in paramag., antiferromag. phases 2-93275
 GdBr₃, compressibility, valency and intermediate valence effects 2-56072
 Gd_{1-x}B_xCoO₃, B=Ca,Sr, Mossbauer emission study of defect 2-87631
 GdCl₃ in rare gas solids, EPR anal. 2-102509
 GdCl₃, electrical resistivity and reflectivity meas. 2-92630
 GdCl₃, photoelectron spectra meas. (*German*) 2-90628
 GdCoSi, synthesis, mag. props. and struct., X-ray and mag. torsion balance anal. 2-72176
 Gd₂CrSe₆, single crystal growth, crystal struct. 2-87959
 GdBr₃, antiferromagnetic ordering study 2-72160
 GdBr₃(MoO₄), ferroelectric-ferroelastic transition, X-ray topographic study 2-61840
 GdF₃ in rare gas solids, EPR anal. 2-102509
 GdF₃·CaF₂·Nd₂O₃, trigonal crystals, disordered, spectroscopy and laser emission 2-82905
 GdFeO₃, magnetisation, H-T phase diagram, Fe³⁺-Gd³⁺ exchange interactions 2-72784
 GdFeO₃, garnet, amorphous, struct. props., Mossbauer study 2-103625
 Gd₂Fe₂O₁₂-Y₂Fe₂O₁₂, system, cation interdiffusion 2-71736
 Gd₂Ga₂, mag. props., struct., anal. 2-66763
 Gd₂Ga₂O₁₂, garnet, formation, DTA and X-ray phase anal. 2-67207
 Gd₂Ga₂O₁₂, cryst. growth and prep. defects, bubble memory substrates appl. 2-92405
 Gd₂Ga₂O₁₂ films, mag. moment flip wave velocity (*Russian*) 2-56898
 Gd₂Ga₂O₁₂, garnet single crystals, slip systems 2-66007
 Gd₂Ga₂O₁₂, lattice const. determ. using measured beam and cryst. tilts 2-97848
 Gd₂Ga₂O₁₂, mag. refrigeration material, heat capacity meas. 2-64050
 Gd₂Ga₂O₁₂, solubility and enthalpy in PbO-B₂O₃-Fe₂O₃(Ga₂O₃) high temp. solvent 2-109991
 Gd₂Ga₂O₁₂, thermal cond. meas. between 60 mK and 20K (*French*) 2-86957
 Gd₂Ga₂O₁₂, thermodynamic props., 0.05-25K 2-104623
 Gd₂Ga₂O₁₂·Ho³⁺, cascade generation of Ho³⁺ ions, solid laser appl. 2-85975
 Gd₂Ga₂O₁₂·Mg, Zr channelling study 2-81841
 Gd₂Ga₂O₁₂, Nd crystals grown by Czochralski method, Nd effective distrib. coeff. 2-76481
 Gd₂Ga₂O₁₂·Nd³⁺, garnet films prep. by LPE, crystallographic and optical characterisation, laser appl. 2-83044
 Gd₂Ga₂O₁₂-Gd₂Fe₂O₁₂, system, cation interdiffusion 2-71736
 GdMnSi₃, synthesis, mag. props. and struct., X-ray and mag. torsion balance anal. 2-72176
 Gd₂(MoO₄)₃, permitt. dispersion, infrared refl. and spontaneous parametric scatt. by polaritons 2-104837
 Gd₂(MoO₄)₃, band structure and VUV optical props., Kramers-Kronig anal. 2-110883
 Gd₂(MoO₄)₃, electromechanical resonances for phase transition studies 2-87702
 β²-Gd₂(MoO₄)₃, luminesc. and energy transfer 2-82901
 Gd₂Mo₂Eu₂, spectroscopic props. 2-93254
 GdMo₂Se₂(Se₂), dipole antiferromagnetism, collinear struct. and spin wave vector (*Russian*) 2-98847
 GdMo₂Se₂(Se₂), supercond. crit. field, electronic struct. 2-92843
 GdNa(ReO₄)₂·4H₂O, cryst. struct. (*French*) 2-65930
 GdNbO₄, cryst. struct. refinement 2-103726
 GdO, -CaO, elec. cond., electrolytic region 2-86924
 GdO, burnable absorbers, LWR neutronics effect 2-80097
 Gd₂O₃, C-type, Stark levels, cryst. field splitting, UV study 2-66505
 Gd₂O₃, cubic, lattice and binding energies 2-60916
 Gd₂O₃, emission material for matrix cathodes with 10A/cm² current density, emission and life testing studies 2-57244
 Gd₂O₃-U₂, burnable poison appl. in PWRs 2-80098
 GdOBr·Eu³⁺, cryst. field effects, fluoresc. study 2-66503
 GdOCl·Tb³⁺, Stark level, cryst. field anal., fluoresc. study 2-66504
 Gd(OH₃)₃²⁺, aq., chemical behaviour of Gd₄³⁺, changes in inner coordination sphere 2-116684
 Gd_{1-x}Pb_xFe_{1-x}Ge_{1-x}O₁₂, epitaxial garnet film, Faraday ellipticity 2-87745
 Gd_{1-x}Pb_xFe_{1-x}Sn_{1-x}O₁₂, epitaxial garnet film, Faraday ellipticity 2-87745
 GdRh₂B₄, cryst. elec. field determ., Mossbauer study 2-87207
 Gd(Rh_{1-x}Ru_x)₂B₄, supercond. crit. temp., comp. depend., role of B 2-87439

gadolinium compounds continued

- GdRhSi, cryst. struct. and mag. props. 2-55946
 Gd₂Ru₂O₇, IR spectra and elec. cond. 2-110835
 Gd₂SiO₇, struct. and defects, high resolution electron microscopy study 2-65952
 Gd_{2-x}Si_{1-x}Cu₂O_{6-x/2}, cryst. struct. and elec. props., O vacancies (*French*) 2-91917
 GdTaO₄, cryst. struct. study 2-98038
 KGd(MeO₄)₂, (Me=Mo,W), Nd³⁺ and Er³⁺ ion spectra in crystal fields, Stark struct. 2-76999
 KGd(WO₄)₂:Ho³⁺, 2- μ m stimulated emission 2-104915
 (La,Gd)B₆, single cryst., exchange interaction and cryst. field splitting, ESR 2-104696
 La,Gd_{1-x}TiO₃ solid solns., mag. behaviour, mean field model 2-104659
 NaGdSiO₄xNaOH (x=0.2), cryst. struct. refinement 2-76372
 Sm_{1-x}Gd_xB₆, solid solns., valence states, X-ray absorption spectra study 2-87202
 (U,Gd)O₂ solid soln., near stoichiometric, Gd effect on thermal cond. 2-80060
 UO₂:Gd₂O₃, elec. cond., effects of doping 2-87262
 UO₂:Gd₂O₃, LWR fuels prod. and characts. (*German*) 2-85158
 UO₂:Gd₂O₃, thermal cond. and plasticity meas. (*German*) 2-85147
 (YGdTm)₂(FeGa)₂O₁₂, bubble motion, vertical Bloch line annihilation during creep 2-77343
 ZrF₄-BaF₂-GdF₃, fluoride glass, prep., optical and physical props. 2-102891
 ZrO₂-Gd₂O₃ cubic lattice solid solution microstructure 2-116624
 ZrO₂-Gd₂O₃ single crystals of tetragonal struct., Raman scatt., domain struct. existence 2-93191

gain (amplification) see amplification**gain measurement**

- bipolar transistors, digital balanced instrument for τ_T and β_0 meas. (*Chinese*) 2-69156
 CO gasdynamic laser gain kinetics 2-90877

galactic cosmic rays

- 10^{13} to 10^{14} eV primaries, anisotropies determ. from cooperative obs. of EAS in Tasmania (*Japanese*) 2-106454
 acceleration by shock waves 2-117534
 acceleration by shock waves in lossy media and γ -ray prod. 2-106433
 acceleration in interstellar medium by shock waves 2-89088
 acceleration in OB star winds and gamma-ray production 2-63396
 acceleration mechanisms (*French*) 2-58209
 acceleration by shock waves 2-63194
 active galaxy nuclei cosmic ray production 2-106907
 antimatter cosmic rays detect. technique 2-117609
 antiprotons at sub-GeV energies, secondary production 2-58212
 components anisotropy, origin and energy spectra 2-117536
 confinement in interstellar molecular clouds, rel. to COS-B γ -ray sources 2-112271
 diffusion, effect of solar wind mag. inhomogeneities 2-73804
 electron spectrum, determ. from COS-B gamma-ray meas. and local interstellar gas density 2-74051
 extragalactic component, origin 2-58211
 galactic halo size and diffusion coeff., effect of galactic fountain MHD instabilities 2-63587
 gamma rays, origin of 0.511 MeV annihilation line from galactic centre (*Russian*) 2-101074
 gamma-ray diffuse emission, rel. to space variation of cosmic ray intensity (*German*) 2-94868
 halo round Galaxy from γ -ray evidence 2-63676
 haloes, neutrino EM decay as photoionisation source 2-74066
 heliospheric intensity gradients over solar cycle 2-84049
 intensity over past 10^6 yrs from lunar specimens cosmogenic nuclides 2-106434
 interactions with solar wind magnetic field 2-106435
 interplanetary propagation, solns. of spherically symmetric cosmic ray transport eqn. 2-106439
 low-energy relativistic electrons 2-89089
 modulation and propagation in interplanetary space rel. to cosmic ray var. 2-106436
 modulation by solar wind and diffusion coeff. energy depend. 2-106437
 nuclei, charge abundance at source in 600-1000 MeV/nucleon range 2-68575
 nucleon-interstellar matter interactions, gamma ray prod. 2-63568
 origin and acceleration in galactic centre during periods of activity 2-106438
 β origin, obs. and models anal. 2-117535
 positron spectrum and origin for different propagation models 2-63192
 radial intensity gradient and heliosphere large scale modulation 2-58210
 relativistic cosmic rays, propag. and nonthermal radiation emission 2-117537
 solar modulation by interplanetary mag. piston, kinetic theory 2-112275
 solar wind magnetic field effect on cosmic ray drift 2-106440
 source abundances and propagation of $Z < 30$ relativistic cosmic rays 2-89086
 static equilibrium configurations with interstellar matter and mag. fields 2-63606
 in supernova remnants, relativistic particles content rel. to Bell's accel. mechanism 2-106432
 X-ray transition radiation generated on interstellar dust, contrib. to cosmic X-rays 2-117533
⁴He(³He,X), ⁶Li prod. in galactic cosmic ray interaction with interstellar medium 2-54416

galactic nuclei

- α -model accretion disk for load emission-line region 2-84310
 active galactic nuclei, highlight model as possible explanation for ultrarelativistic expansion vels. 2-94851
 active galactic nuclei, rel. to early stages of stellar evolution 2-106672
 active galactic nuclei, theory of steady accretion disks 2-100913
 active galactic nuclei, time-dependent X-ray spectra of Compton-cooled plasmas 2-78948
 active galaxies, jets 2-89383
 active galaxies, photometric observations and structure 2-74085
 active galaxies, rot. compact radiosources and ang. momentum transfer from nucleus to outlying gas 2-89359
 active galaxies, time depend. narrow emission line profile interpretation, emitting regions 2-68922
 active galaxies X-ray sources, identification and X-ray/optical luminosity-redshift relations 2-117795
 active galaxy nuclei cosmic ray production 2-106907

galactic nuclei continued

- active nuclei in various evolutionary states accounting for X-ray/ γ -ray backgrounds 2-117739
 AM 064-741, southern ring galaxy, rot. vels. of interstellar gas and stellar component of nucleus 2-79216
 Arakelyan 144, spectrophotometry of nucleus (*Russian*) 2-74106
 Arakelyan galaxies of high surface brightness, emission lines spectrophotometry (*Russian*) 2-106925
 black holes, geometrically thin accretion discs, inner edge struct. 2-94593
 black holes in galactic nuclei, pancake detonation of stars 2-63654
 black holes spherical accretion, multiple Compton scatt. effect on temp. and emission spectra 2-58379
 black holes supercritical accretion discs, physical props. 2-84262
 bright galaxies with strong nuclear radio sources, H I distrib. and nature, UHF obs. 2-117785
 3C 449, cD galaxy, double jet model with orbiting massive object at centre 2-79226
 Centaurus A (NGC 5128) nucleus 2.2 μ m mapping 2-94840
 Cygnus A, interpretation of milli-arcsecond radio jet 2-68884
 elliptical galaxies, two-component dynamical model rel. to central luminosity cusps 2-106820
 elliptical galaxies with nuclear radiosources and optical emission lines, H I survey 2-112545
 emission line galaxies, 9.6 μ m minimum due to silicate absorpt. round nuclei 2-117742
 emission line galaxies, gas characts. and ionising mechanism 2-63629
 energy dissipation and heating due to binary stars formation and hardening 2-94797
 energy production, massive oscillators as possible sources 2-58241
 evolution, effect of binary stars formation and hardening 2-94798
 Galaxy, 0.511 MeV variable γ -ray source 2-89151
 Galaxy, 511 keV annihilation line radiation obs. 2-106961
 Galaxy, abundances and chem. evolution 2-112575
 Galaxy, black hole existence possibility, mass upper limit 2-63670
 Galaxy, central black hole, mass upper limit 2-112579
 Galaxy, comparison with other galaxies 2-63671
 Galaxy, confirmation of positron annihilation line time variability 2-106962
 Galaxy, cosmic ray origin and accel. during periods of activity model 2-106438
 Galaxy, gas distrib. and dynamics 2-63669
 Galaxy, gas distribution and velocity field from SHF, UHF, VHF obs. 2-112578
 Galaxy, gas dynamics and density 2-112576
 Galaxy, ionised gas clouds rel. to apparent variability of 'point' radio source (*Russian*) 2-101074
 Galaxy, IRS 1, 7, 12, 16, 19 galactic centre sources, 2 μ m spectra 2-101091
 Galaxy, radial motions and spiral struct. origin 2-112580
 Galaxy, structure from IR astronomy 2-63668
 Galaxy, thermal radioemission from H II and star form. regions 2-63697
 Galaxy central 2 kpc, CO behaviour 2-63667
 gravitational radiation bursts from active galactic nuclei and globular clusters, characts. 2-106504
 IC 342, Scd galaxy, interstellar gas temp. meas. from NH₃ radio spectrum obs. 2-68629
 IC 4329A, luminosity, visible obs. 2-68890
 IC 5063 (PKS 2048-57), radio-emitting elliptical galaxy, discovery of very red nucleus from IR obs. 2-112565
 IC 5174/75, very large interacting galaxy pair, active nucleus rel. to recent encounter 2-63633
 isolated galaxies, multiaperture UVB photometry rel. to nonstellar radiation from nuclei 2-58449
 jet-like structure, form, and double radiosources 2-94842
 BL Lacertae objects radiation origin from elliptical galaxy nuclei black holes 2-117745
 M101, element abundances and electron temps. from visible obs. 2-68889
 M31, central extended radiosource size and nature, UHF obs. 2-84325
 M31, dynamical models of nucleus 2-84314
 M31 and central 50 pc, surface brightness distrib. and spectrum, UV obs. 2-112546
 M33, optical struct., mass and rot. and luminosity, visible obs. 2-74089
 M51, optical spectrophotometry of nuclear region 2-58451
 M81, Seyfert galaxy stellar population from UV continuum spectra 2-117747
 M81 (=NGC 3031), nucleus X-ray source detect. and Seyfert activity, obs. 2-94827
 Markarian 1066 and 744, luminosities and masses 2-117750
 Markarian 290, Seyfert 1 galaxy, central region struct., visible spectral obs. 2-63627
 Markarian 298 (=IC 1182-4), Seyfert 1 galaxy, centre struct., visible obs. 2-117749
 Markarian 558, nucleus parameters from spectral obs. 2-117760
 Markarian galaxies, criteria for nuclei existence and numbers 2-58455
 Markaryan 314 (NGC 7468), remarkable irregular galaxy, obs. of central giant H II regions 2-101042
 Markaryan 673, 686, spectrophotometric and isodensitometric obs. (*Russian*) 2-101073
 Markaryan 744, Seyfert galaxy, vel. field of galactic nucleus 2-101041
 mass ejection from centre leading to galaxy large scale struct. 2-58461
 massive black holes, accretion discs MHD flows and radio jets 2-89141
 MCG 5-29-86, optical jet like features from nucleus, SHF/UHF obs. 2-101038
 narrow emission line galaxies, X-ray spectrum and time variability 2-74081
 NGC 1068, Seyfert galaxy, IR speckle interferometry obs. 2-84324
 NGC 1097, hot spots and amorphous nucl. region, spectral visible obs. 2-74102
 NGC 1275, multifreq. VLBI obs. of galactic nucleus 2-74080
 NGC 1365, Seyfert 1 galaxy, radio struct., SHF, UHF obs. 2-94825
 NGC 1365, Seyfert like nucleus surrounded by H II regions, visible obs. 2-58470
 NGC 2997, hot spot galaxy, structure and dynamics of nucleus 2-89378
 NGC 4151, Seyfert galaxy, struct. and jets, UHF obs. 2-63651
 NGC 4151, UV continuum vars., 1978 February to 1980 May, from IUE obs. and comparison with X-ray and optical obs. 2-101063
 NGC 4388, Seyfert galaxy in Virgo cluster, nucleus emission, visible obs. 2-89374
 NGC 4945, obs. of H₂O maser emission in galactic nucleus 2-94852
 NGC 5253, obs. of high-excitation optically obscured H II region in galactic nucleus 2-79217

galactic nuclei continued

- NGC 5548, Seyfert 1.5 galaxy, radiostructure of nucleus, UHF/SHF/visible obs. 2-117740
 nonthermal radiation optical spectrum shape and variability 2-79207
 photography at 1.1 μm 2-68628
 PKS 2152-69, radio galaxy, optical spectrum 2-79211
 quasars, review of activity and assoc. nebulous regions (*Russian*) 2-94857
 quasars as active galaxy nuclei, use for probing distant Univ-rse 2-79263
 quasi-stellar objects, luminosity and density evolution in rotating mag. superstars model 2-106952
 radiation processes in active galaxies 2-63683
 radio galaxies, interpretation of millisecond jets 2-68884
 radio sources, compact, inverse Compton radiation spectra from relativistic flows 2-74114
 radio sources, compact, synchrotron radiation from relativistic flows 2-74113
 radiogalaxies, collimated beam formation driven by high energy particles from nucleus, hydrodynamics and MHD 2-106942
 radiogalaxies, effect of galactic gas shapes of radio sources 2-68883
 radiosources, extragalactic, millisecond VLBI nuclei; arcsecond position, UHF obs. 2-79231
 recurrent activity in galactic nuclei, possible mechanism (*Russian*) 2-101072
 relativistic jet production and propagation in active galaxies 2-117763
 Seyfert 1 galaxies, mid-IR nuclear continua 2-79209
 Seyfert galaxies, emission-line profiles 2-101056
 Seyfert galaxies, IR, optical and UV obs. of H line emission 2-74079
 spectral line radiation line radiation press., effect on gas and dust 2-63232
 spiral galaxies blueness, due to metallicity on age 2-89350
 structure and evolution of nuclear discs, theory 2-94833
 X-ray emission, log N-log S relation and luminosity functions from complete sample 2-58270
 X-ray emission, log N-log S relation from medium-sensitivity survey by Einstein Observatory 2-58271
 X-ray emission, self-absorbed cyclotron high harmonics, Comptonisation 2-84332
 X-ray narrow-line galaxies, mid-IR nuclear continua 2-79209
 X-ray obs. from Einstein Observatory 2-84311
 X-ray selected active nuclei in clusters of galaxies 2-106882
 X-ray selected active nuclei rel. to quasar redshift distrib. 2-117792
 X-ray selected redshift distrib. active nuclei rel. to quasar redshift distrib. 2-117792
 X-ray sources, SHF obs. 2-79244
 O III forbidden emission line widths 2-84313

galactic radio waves see radiofrequency cosmic radiation

galaxies

see also BL Lacertae-type objects; clusters of galaxies; galactic nuclei; H I regions; H II regions; intergalactic matter; Magellanic Clouds; Markarian galaxies; nebulae; radiogalaxies; Seyfert galaxies; The Galaxy

- 0351+026, 250 surrounded by optical nebulosity, similar to M31, obs. 2-89400
 0903+50, SN 1982c field search (1982 March 1) 2-58372
 1004+68, SN 1982d field search (1982 March 1) 2-58372
 A, field, blue objects classification from visible spectra obs. 2-68926
 A 1367, spiral-rich cluster of galaxies photometry 2-106937
 Abell 2069, X-ray cluster of galaxies, clumpy distrib. of galaxies and X-ray emission 2-68910
 Abell 2241E and W, dominant galaxies X-ray and radio behaviour 2-94846
 Abell 76, ring galaxy, star formation and metallicity, visible obs. 2-117746
 Abell 98, two-component cluster, internal dynamics, redshift obs. 2-89385
 active galaxies, internal material magnetic braking and infall to galactic centre 2-117744
 active galaxies, rot. compact radiosources and ang. momentum transfer from nucleus to outlying gas 2-89359
 active galaxies, two-colour diagram analysis from JHK obs. 2-89375
 AM 064-741, southern ring galaxy, kinematics from photometric and spectroscopic obs. 2-79216
 Anon 2256-40, SN discovery (1982 May 30) 2-79130
 anonymous galaxies in Phoenix and Fornax, supernovae discoveries, approximate positions and magnitudes 2-117691
 anonymous galaxies in Phoenix and Pavo, supernovae discoveries, approximate positions and magnitudes 2-112473
 anonymous galaxy in Centaurus, supernova discovery and photographic magnitude 2-68803
 Arakelian 144 (MCG 10-12-23), spectrophotometry 2-89368
 Arakelian 583, high surface brightness, spectrophotometric obs. 2-106908
 Arakelyan 144, spectrophotometry of nucleus (*Russian*) 2-74106
 Arakelyan galaxies of high surface brightness, emission lines spectrophotometry (*Russian*) 2-106925
 axisymmetric self-similar galaxy models, rel. distrib. functions 2-63620
 bar-driven spiral density waves 2-101032
 barred galaxies, bulge components rot. characters. 2-89349
 barred galaxies, spiral struct., generating mechanism 2-63649
 barred spiral structure 2-101059
 barred spirals starformation inhibition due to dense clouds high vel. 2-79199
 binary galaxies, analysis of Karachentsev sample 2-58472
 binary galaxies, separation, radial vel. and brightness, distrib. 2-58458
 binary galaxy systems collision haloes merging and stripping 2-84330
 Bootes void emission line galaxies, velocities and distances from spectra 2-94828
 bright early-type spiral galaxies, multiperture UBVIJHK photometry for inner (bulge) regions 2-106891
 bright galaxies, intermediate band filter spectrophotometry obs. 2-101053
 bright galaxies, UVB obs. and photometric transformations 2-106905
 bright galaxies redshift, visible spectral obs. 2-63622
 βC 273, surrounding nebulosity galactic nature from deep CCD obs. 2-84345
 3C 48, detection of galaxy underlying QSO 2-74122
 Canes Venatici ring galaxy, discovery of new object 2-112557
 Carina dwarf spheroidal galaxy, discovery of C stars 2-68774
 central velocity dispersion in elliptical and lenticular galaxies as an extragalactic distance indicator 2-84307
 chemical and dynamic evolution, connections 2-112596

galaxies continued

- chemical evolution, effects of local and large scale interstellar medium inhomogeneities 2-112573
 chemical evolution models, constraints imposed by $\Delta Y/\Delta Z$ ratio 2-74107
 chemical evolution of two-component galaxies, generalised model allowing for gas inflow 2-106897
 chemical evolution rel. to QSO elemental relative abundance 2-106953
 classification of normal galaxies, dynamical basis 2-106914
 clumpy irregular galaxies, search for interstellar CO 2-106920
 cluster galaxies, gas stripping by intergalactic gas flow 2-58477
 cluster galaxies, radii of halos rel. to cluster mass segregation, relaxation and Coulomb logarithm 2-58475
 cluster galaxies, surface number density contour maps rel. to clusters substructure 2-106938
 coherent galactic oscillations, star formation model 2-63612
 Coma cluster central region galaxies, D_{25} diameters and positions (*French*) 2-63643
 companion galaxies, spectroscopic characts. and differential redshifts 2-74078
 companion galaxies to bright spirals, Poisson statistics rel. to assoc. with quasars 2-106954
 conference at Christ Church, Oxford, England (September 1981) 2-112661
 conference on chemical and dynamical evolution, in Torun, Poland (September 1977) 2-107016
 conference on large scale characts. College Park, USA (June 1978) 2-58542
 conference on molecular clouds and star form., Goutelas, France (May 1980) (*French*) 2-63753
 coronae of spiral galaxies 2-117771
 cosmic string self-intersection, galaxy formation 2-117833
 cosmological voids, formation and gas props. (*Russian*) 2-68947
 counts, relation to luminosity function, evolution and cosmology 2-84331
 deep optical samples, appl. to estimation of mean density of Universe 2-84355
 density wave propagation in spiral galaxies 2-58452
 differential rotation and ang. rot. curves 2-74095
 disc chemical evolution model 2-112572
 disc galaxies, formation and evolution, composition and struct. 2-63658
 disc galaxies, gaseous spiral arms produced by oval distortions 2-63647
 disc galaxies, mass-radius relation from density scaling of angular momentum-mass relation 2-63235
 disc galaxies, stability and masses 2-84329
 disc galaxies, tidal interactions 2-89373
 disc galaxies dynamics, relaxation time of one-dimensional self-gravitating system 2-106484
 disc galaxies spiral struct., density wave theory 2-63660
 disclinations in galactic structures 2-63657
 dish like galaxies, Poisson's eqn. general soln. (*Chinese*) 2-63641
 disk galaxies, simulation of merging and remnants 2-112549
 disk galaxies, sizes of rings and lenses 2-63637
 disk galaxies dynamics, Vlasov simulation in axisymmetric case 2-74104
 disk galaxies dynamics, Vlasov simulation in nonaxisymmetric case 2-74105
 disk galaxies evolutionary changes caused by star form. 2-112569
 disk-halo galaxies, boundary layer flows 2-112595
 distance and expanding Universe (book) 2-74192
 distance scale in extragalactic astronomy 2-106990
 distance scales, for distances to extragalactic objects 2-117768
 distances, QSO-galaxy assoc. with redshift differences 2-117762
 double galaxies, in close groups/clusters orientation, ang. momentum and peculiar motions 2-117753
 double galaxies, orbital masses from homogeneous sample 2-101043
 double galaxies, quantum effects in red shift intervals 2-89353
 double galaxies, struct. and kinematics, method for orbital motion determ. 2-117752
 double galaxies, UVB photometric catalogue 2-106561
 Draco dwarf spheroidal galaxy, discovery of C star 2-68723
 dusty King spheres, elliptical galaxy model 2-101048
 dwarf disc galaxies and massive halos 2-101039
 dwarf galaxies, gas poor, winds and surrounding gas clouds rel. to L_{α} absorpt. lines 2-58482
 dwarf galaxies, optical emission spectra rel. to primordial He abundance 2-117828
 dynamics, galactic shock wave evolution, density wave theory 2-79172
 E-SO galaxies in Virgo cluster, UVB photometry 2-106935
 early evolution of $1.2 \times 10^{12} M_{\odot}$ galaxy, including galactic wind 2-112577
 early galaxies and Population III stars 2-94793
 edge-on galaxies, surface photometry and luminosity distrib. for eight objects 2-101040
 edge-on spiral galaxies, surface photometry rel. three-dimensional light and mass distrib. 2-89364
 elements gravitational separation in certain evolutionary stages leading to observed distrib. 2-112570
 elliptical galaxies, ellipticity effect on photometric profiles 2-63644
 elliptical galaxies, isothermal models for phase space struct. of $r^{1/4}$ galaxies 2-112563
 elliptical galaxies, line strength-colour relation rel. to accuracy of interstellar reddennings from H I and galaxy counts 2-106838
 elliptical galaxies, relation between true and apparent flattenings 2-106900
 elliptical galaxies, stability of periodic orbits in triaxial galactic models 2-79210
 emission line galaxies, 8-13 micron obs. and nature 2-117742
 evolution, particle-mesh simulation, on vector and array processors 2-101061
 evolution, stochastic models, directed percolation anal. 2-74091
 evolution from H β luminosity calcs. 2-106894
 evolution of elliptical and disc galaxies 2-101075
 expanding Universe, void enlargement, Einstein-de Sitter model, galaxies 2-117770
 extragalactic astronomy (book) 2-68986
 faint blue galaxies behind Virgo cluster, radial vel. meas. (*Russian*) 2-63656
 faint galaxies, numbers distribution function 2-63631
 faint galaxy photometry using COSMOS, accuracy 2-106913
 flattened isothermal models 2-106886
 formation, density perturbations origin, effect of phase transformations 2-117840
 formation, effects of hidden mass and Population III objects 2-117844

galaxies continued

- formation, gravitational instability theory, effect of isothermal perturbations 2-79251
 formation, implication of galaxy clusters shapes and orientations 2-74110
 formation, implications of Dirac large numbers hypothesis 2-106977
 formation, max. density in clouds of heavy neutrinos (*Russian*) 2-95891
 formation, nonlinear effects on evolution of adiabatic cosmological perturbations 2-58510
 formation, nonlinear effects rel. to isothermal perturbations prod. by primordial sound spectrum 2-58511
 formation, nonlinear growth of density perturbations in expanding collisionless medium 2-101045
 formation, nonstandard theories tested by anisotropy conditions 2-84352
 formation, theory of stochastic density fluctuations in radiation era of Universe 2-106969
 formation, triggering by quasar explosions 2-68902
 formation and cosmological structure produced by phase transition near nuclear density 2-58509
 formation and evolution of galaxies and clusters of galaxies, review 2-101070
 formation from collision of two clouds, subsequent evolution 2-117774
 formation in early Universe, effect of density perturbations and monopole prod. 2-63720
 formation in gravitino dominated Universe 2-112627
 formation in gravitino-dominated Universe 2-84333
 formation of elliptical and spiral galaxies in rotating haloes 2-101068
 formation theory, string in SO(10) grand unified theory 2-84822
 formation theory implications for microwave background large scale var. 2-117843
 formation within baryon symm. cosmology based on grand unified theories 2-117838
 Fornax dwarf spheroidal galaxy globular clusters multiaperture JHK photometry 2-101065
 galaxy counts and H I column densities rel. to interstellar reddening, accuracy and maps 2-106838
 gas layers, warping and thickness 2-63678
 gaseous disc rotation and convection mechanism for MHD dynamo 2-63244
 gaseous planes, warp and thickening 2-63679
 gaseous response to bar-like distortions 2-63662
 giant elliptical galaxies, stellar population evolution 2-89398
 giant molecular clouds formation in spiral arms 2-94823
 globular cluster content, specific cluster freq. in spirals and ellipticals. to galaxy mergers 2-106921
 gravitational clustering leading to voids 2-94872
 gravitational interactions between galaxies, rel. to origin of angular momenta 2-89384
 gravitational lenses, spheroidal lens model for triple quasar (Q1115+080) 2-112607
 H I and continuum struct. comparison with other galaxies 2-63672
 halo formation, neutrino-adiabatic theory 2-74097
 halo mass in spirals 2-112594
 haloes condensed objects and QSO gravit. lensing 2-101089
 halos, clustering of massive neutrinos in adiabatic galaxy form. scenario 2-68906
 halos formation, role of massive neutrinos 2-58512
 halos gas dynamics, numerical simulation 2-100729
 Henon-Heiles family, normalised, reduced, global geometry of bifurcations 2-94981
 Henon-Heiles system, analytic struct. 2-112558
 high surface brightness galaxies, 3.66 GHz flux, SHF obs. 2-58457
 hole in space distrib., devel. and galaxy peculiar vel. around it 2-89415
 Hubble constant, global value from Type I SN max. absolute mags. 2-84306
 IC 1727 and NGC 672, interacting galaxies, rot. and mass from spectroscopic obs. (*French*) 2-58464
 IC 342, Sd galaxy, CO gas distrib. following light distrib., EHF obs. 2-101037
 IC 4553, broad OH emission detected in UHF 2-117757
 IC 5174/75, very large interacting galaxy pair, struct. rel. to recent encounter model 2-63633
 inhomogeneous axisymmetric stellar system, stability 2-63636
 inner ring structures as distance indicators, ring diameters calibration as quaternary indicators 2-89160
 interacting galaxies, radial vels., visible obs. 2-58456
 interacting spherical galaxies, escape velocities 2-79215
 intergalactic matter interactions 2-112589
 internal dynamics, cluster influences 2-63610
 internal dynamics, relativistic, new integral of motion 2-79170
 internal motion, retrograde closed orbits in a rotating triaxial potential 2-100708
 interstellar cloud complexes in external galaxies, temp. meas. via NH₃ radio spectrum 2-68629
 intervening galaxies high redshift mol. clouds causing quasar absorpt. line spectra 2-84346
 intervening galaxies to quasars, possible interpretation for spectral energy distrib. in quasars 2-68919
 intervening galaxies to quasars, prod. of low excitation absorpt. lines 2-89360
 intervening galaxies to Seyfert galaxies and quasars, constraints from redshifted mol. line obs. 2-74100
 IR colour-absolute magnitude relations 2-63653
 irregular galaxies, chemical evolution 2-89363
 irregular galaxies, global props. from optical and radio obs. 2-101054
 irregular galaxies evolution and star form. histories from H II regions anal., H α obs. 2-117743
 isolated galaxies, multiaperture UVB photometry 2-58449
 isolated galaxies, optical positrons 2-58466
 Kazarian 1, 3, 4 and 6, UV excess galaxies, morphology and spectrophotometry obs. 2-58454
 large scale structure from ejection of masses from central region 2-58461
 late type galaxies in Southern Hemisphere, isophotal diameters 2-94841
 late-type low surface brightness galaxies, optical and H I study 2-94834
 Lick catalogue, QSO-galaxy assoc., statistical analysis of large sample 2-112605
 Local Group and universal isotropy 2-79219
 Local Group peculiar motion from Scl galaxies B-V vs HM relation 2-89390
 M101, distance modulus determ. from dia. of giant ringlike H II region 2-68900
 M101, gas clouds, tidal stability 2-58445

galaxies continued

- M101 (NGC 5457) Sc I galaxy, dust and metallicity from UV obs. 2-74090
 M101 H II regions, element abundances and galactic age, visible obs. 2-68889
 M31, 20 cm radio emission from optically identified SNRs 2-58420
 M31, 33, 51, distribution of H II regions 2-94618
 M31, central region nova-like objects, B-obs. 2-63445
 M31, discoveries, precise positions and spectra of four novae 2-112462
 M31, dynamical models of nucleus 2-84314
 M31, element abundance gradients from supernova remnants and H II regions 2-63618
 M31, globular cluster optical polarization meas., magnetic fields 2-63547
 M31, H I distribution and spiral arm delineation 2-73859
 M31, H I gas distrib. and motions (*Japanese*) 2-68893
 M31, high resolution H I obs. 2-112559
 M31, isophotes, B-surface photometry 2-63624
 M31, kinematics (*Japanese*) 2-74088
 M31, obs. of optical warp 2-68887
 M31, search for globular clusters, BV obs. 2-63642
 M31, spectroscopic obs. of Nova 4 and discovery of (Nova 5) 2-117684
 M31 (Andromeda Galaxy), struct. of S6 spiral arm (*Russian*) 2-106926
 M31 (Andromeda Nebula), photoelectric UVB photometry of globular clusters (*Russian*) 2-112520
 M31 and M33, spiral galaxies, structure and population from UV photometry obs. 2-112552
 M31 central region, velocity modulated photographs of planetary nebulae 2-74042
 M31 globular clusters, dynamics and metallicity, visible obs. 2-106825
 M31 motion rel. to Milky Way in Local Group 2-63687
 M32, elliptical galaxy, deconvolution of brightness profile from seeing 2-84320
 M32 and M81 early type galaxies, vel. dispersion and radial vel., visible obs. 2-63635
 M33, catalogue and obs. of star cluster system 2-106556
 M33, star formation and blue star mass function 2-112556
 M33 supernova remnants, radio map at 21 cm, UHF obs. 2-58438
 M51, optical spectrophotometry of nuclear region 2-58451
 M82, starlight and scatt. light contrib. separation, colour/polarisation anal. 2-79214
 M86 in Virgo cluster, gas stripping by intergalactic gas flow 2-58477
 M87, jet mag. field struct. from polarimetry in UVB 2-106915
 M87, jet morphology, UVB obs. 2-84322
 M88, spiral galaxy surface photometry 2-112553
 M 31 bulge, far UV surface brightness distrib. rel. to hot evolved stars and star form. rate 2-63632
 M 33, H II region NGC 604, WR stars and interstellar wind driven bubbles 2-74052
 magnetic fields, contrib. of parity nonconservation to cosmic magnetic fields origin 2-63227
 magnetic fields, plane parallel, in thin gaseous disc in random motion, Fokker-Planck eqn. 2-68905
 mass loss, mild evolutionary correction to ang. size test size test 2-68882
 masses, Universal significance 2-117817
 master list of nonstellar optical astronomical objects 2-58563
 MCG 5-29-86, edge-on stellar disk or jets problem (*Japanese*) 2-117754
 mergers, 1200-body simulations 2-74094
 missing mass as massive neutrinos, detection method using emitted UV photons 2-11773
 Monte Carlo simulation, computer technique 2-58262
 Monte Carlo simulations for galaxies in rich clusters 2-84319
 morphological structure model 2-58453
 narrow emission line galaxies, X-ray obs. 2-89347
 narrow emission line galaxies, X-ray spectrum and time variability 2-74081
 nearby galaxies, general and H I parameters, H I UHF obs. 2-63645
 nearby galaxies distance determ. from Cepheids IR photometry 2-84103
 neutrino galaxies, model 2-74076
 neutrino-dominated Universe, galaxy and cluster form. 2-101107
 NGC 1097, hot spots and amorphous nucl. region, spectral visible obs. 2-74102
 NGC 1275, spectra nature and obs. 2-89355
 NGC 1332, discovery of nearby supernova (1982 March 29) 2-63483
 NGC 1332, dust shell form. around supernova, evidence from K-band photometry 2-117690
 NGC 157, 2903, 4321 and 5248, SAB galaxies, CO emission mapping, EHF obs. 2-74086
 NGC 1947, elliptical galaxy, dust lane rot., spectral obs. 2-68895
 NGC 253, dust content and distance 2-101049
 NGC 253, southern hemisphere galaxy, search for H₂O maser emission 2-94852
 NGC 2655 and 2715, extended H I envelopes, mass and diameters 2-89360
 NGC 2685, prolate galaxy model rel. to observed stellar rot. rate 2-106912
 NGC 2841, 5055 and 7331, spiral galaxies, radio continuum, UHF obs. 2-63621
 NGC 2841 and 7331, CO 115 GHz obs., of molecular rings in Sb galaxies 2-117756
 NGC 2997, distribution of H II regions 2-94618
 NGC 3067, Sb III galaxy, evidence for nonluminous matter, visible/UHF obs. 2-79201
 NGC 3115, absorption line vel. and vel. dispersion profiles 2-84316
 NGC 3310, spiral, rotation curve rel. to massive halo suggestion 2-112555
 NGC 3359, barred spiral galaxy, H I kinematics and struct. 2-79206
 NGC 3504, barred spiral galaxy, evidence for predominantly circular internal motions 2-106919
 NGC 3718, peculiar lenticular galaxy, polarisation and reddening due to interstellar matter, visible obs. 2-63628
 NGC 3992, barred spiral galaxy, disc mass from rot. vel. from H I UHF obs. 2-117741
 NGC 4185, supernova discovery near nucleus, photographic magnitude (March 22 1982) 2-58371
 NGC 4244 and 5907, spiral galaxies disc thickness from light distrib. 2-106901
 NGC 4254, spectral anal. of asymmetric spiral pattern 2-74082
 NGC 4303 (M61), search for H II regions, photometry obs. 2-84328
 NGC 4490, supernova discovery and photovisual magnitude, (1982 April 15) 2-68801

galaxies continued

- NGC 4490, supernova magnitude estimates, (1982 March 29 to April 22) 2-68802
- NGC 4536, photometric obs. (1981 March-July) of SN (*Russian*) 2-74001
- NGC 4565 and 891, edge on spiral galaxies, search for globular clusters 2-79202
- NGC 4649, elliptical galaxy with strong UV flux, IUE obs. rel. to stellar content 2-68886
- NGC 4736, spheroidal galaxy, vel. dispersion and radial vel. 2-63635
- NGC 4874 and 4889, dusty King spheres model of ellipticals 2-101048
- NGC 4945, southern hemisphere galaxy, H₂O maser emission obs. 2-94852
- NGC 521, supernova discovery and photographic magnitude (1982 August 19) 2-112474
- NGC 5236 and 5253, historical SN, radio search at 1.5 GHz 2-100962
- NGC 5253, obs. of high-excitation optically obscured H II region in galactic nucleus 2-79217
- NGC 5408, irregular galaxy, X-ray emission from star formation burst 2-106911
- NGC 5426 and 5427, interacting spiral galaxies, mass distrib. and surface photometry, visible obs. 2-101064
- NGC 55, discovery of large shell nebula 2-63575
- NGC 5905, NCG 5908, double spiral galaxy, H I obs. 2-68894
- NGC 5963, low surface brightness spiral, mass-to-light ratio 2-101031
- NGC 628, outlying H I ring around Sc I galaxy, 21 cm obs. 2-106887
- NGC 6503, spiral galaxy, mass and vel. fields from H α obs. 2-112560
- NGC 6643, rotation and mass distrib. in spiral 2-117772
- NGC 672 and IC 1727, interacting galaxies, rot. and mass from spectroscopic obs. (*French*) 2-58464
- NGC 6744, spectrophotometry and abundances of H II region in outer arm 2-58422
- NGC 6822, Local Group irregular galaxy, catalogue of diffuse nebulae and emission-line stars 2-106559
- NGC 6946, interstellar spectrum of SN 1980k 2-74059
- NGC 6946, Scd galaxy, 2.8 cm radio continuum distrib. obs. 2-68897
- NGC 6946, Scd galaxy, CO gas distrib. following light distrib., EHF obs. 2-101037
- NGC 6946, SN 1980k progenitor upper mass limit from visible obs. 2-94759
- NGC 6946, UVB photometry of bright Type II supernova (SN 1980k) 2-106760
- NGC 7252 (Arp 226), merged disk galaxies 2-58443
- NGC 7552, 7582 (2A 2315-428), X-ray fluxes meas. by Einstein Observatory 2-94866
- NGC 7713, discovery of possible SN, photographic mag. 2-100965
- NGC 7713, spectrum and BV photometry of supernova 2-106759
- NGC 7814, edge-on spiral galaxy, surface photometry rel. to light, colour and mass distrib. in disc. and spheroid 2-89365
- NGC 925, barred spiral, ionised gas vel. field, visible obs. 2-68896
- nonthermal radiation emission due to relativistic electrons 2-117537
- normal galaxies, models for far-IR emission 2-63619
- nuclear discs, structure and evolution 2-94833
- nuclei, possible mechanism for recurrent activity (*Russian*) 2-101072
- optical spectra and redshifts for 71 galaxies 2-101069
- orbits in galaxies, scale-free models 2-58447
- origin, effect of neutrino mass 2-117839
- peculiar galaxies, X-ray obs. from Einstein Observatory 2-84311
- peculiar velocities, estimate for field galaxies 2-74109
- Pegasus dwarf irregular galaxy, photometry of resolved stars 2-63617
- Pegasus I galaxies, H I content 2-89388
- perturbations of the Hubble flow 2-63722
- plane galactic orbits in stationary and time-dependent rotating bars 2-79171
- pregalactic inhomogeneities spectrum resulting from early Universe density fluctuations 2-101066
- protogalactic gas cloud collisions, induced star formation 2-112551
- protogalaxies gas cloud collisions, hydrodynamical simulation 2-112550
- pulsating Einstein sphere, model stellar system 2-117713
- QSO C IV absorption lines, evidence for intervening galaxy hypothesis 2-106963
- quasar compact companions as remnant cores of galaxies 2-89399
- quasars, obs. of nebulous regions around 3C 48, 3C 207 and (3C 273) (*Russian*) 2-94857
- radial velocities of galaxies detected in Arecibo 2380 MHz survey, meas. 2-101050
- radial vels. in Virgo cluster (*Russian*) 2-74111
- radioastronomy review, history, development and state of art (*German*) 2-89148
- redshifts, errors correction rel. to gravitational mechanics of systems of galaxies 2-101055
- redshifts distribution, evidence for Universe large scale anisotropy 2-79253
- redshifts of parent galaxies of supernovae, spectrum features, visible obs. 2-101052
- redshifts of Rubin-Ford galaxy sample, statistical anal. of multipole moments 2-106892
- redshifts survey, density field and induced gravity field 2-68881
- redshifts survey, large scale space distrib. 2-58448
- relativistic electron adiabatic deceleration in galactic wind, steady-state case 2-63638
- rotating axisymmetric galaxy, dynamical instability rel. to bar deform. 2-84323
- rotating galactic bar, equilib. and stability, numerical expt. 2-106888
- rotation, implication of obs. for struct., form and origin 2-117777
- rotation curves at large galactocentric distances, interpretation 2-94829
- rotational standard of rest 2-63648
- S0-Sb edge-on disk galaxies, bulge component rotation 2-84315
- S0-type galaxies, extended maximum likelihood anal. of apparent flattenings 2-68903
- Sa-type galaxies, global props. from H I obs. 2-89366
- SC galaxies, CO emission depend. on luminosity and star form. rate 2-106903
- Sc mass distrib. 2-63611
- Schwarzschild triaxial galaxy model stability, self consistent n-body numerical expts. 2-89352
- Sculptor type galaxies discovery and survey in M81/M82 group 2-112598
- secular stability of rotating axisymmetric galaxy, gravitational radiation effect 2-84317

galaxies continued

- Sextans A, Im Y dwarf galaxy, brightest stars distance and absolute magnitudes, obs. 2-101035
- Shane-Wirtanen catalogue, galaxy clustering information 2-106931
- shapes description, theoretical approach 2-106895
- shock waves and corrugation waves in galaxies, numerical simulation 2-101071
- SO galaxies radio continuum props., UHF obs. 2-63634
- southern galaxies, multiaperture BV photometry 2-106918
- space distribution, search for large-scale linear filament struct. in apparent distrib. (*Russian*) 2-112567
- spatial homogeneity and redshift-distance laws 2-106982
- spectral energy distrib. of spiral and irregular galaxies, results of UV photometry from OAO 2-74077
- spherical galaxies, M/L and vel. anisotropy determ. method rel. to massive black hole in (M87) 2-94835
- spherical galaxies head-on collisions, size and shape changes 2-101057
- spherical stellar system, two-component model 2-106820
- spherically symmetric collisionless stellar systems, stellar dynamics and models, stability anal. 2-106830
- spheroidal galaxies, formation and evolution, composition and struct. 2-63658
- spiral arm morphology correl. with galaxy luminosity anal. mass 2-63623
- spiral arm props., meas. rel. to model predictions 2-63613
- spiral arms, effect of twisted mag. field on equilib. struct. of polytropic and degenerate 2-106497
- spiral arms, gravitating cylinder stability problem 2-84080
- spiral arms of disk-like galaxies, Poisson eqn. general soln. 2-101060
- spiral density wave shocks causing interstellar clouds compression and star form. 2-63661
- spiral density waves, generation by bars in differentially rotating discs 2-101044
- spiral galactic structure, implications of collisionally supported giant molecular clouds 2-112523
- spiral galaxies, angular momentum orientation in various clusterings 2-63626
- spiral galaxies, b and bc types, arm width and luminosity 2-89361
- spiral galaxies, colour magnitude relation use as distance indicator 2-89158
- spiral galaxies, components of pairs and isolated, mean surface brightness 2-63630
- spiral galaxies, density wave theory, effects of resonant stars at corotation 2-79212
- spiral galaxies, extended maximum likelihood anal. of apparent flattenings 2-68903
- spiral galaxies, formation of disc and spheroidal components 2-112568
- spiral galaxies, gas dynamics effect on star form., molecule form. and spiral struct. 2-107029
- spiral galaxies, inertial frames determined from rot. laws 2-94582
- spiral galaxies, luminosity profile from visible surface photometry obs. 2-79203
- spiral galaxies, mag. field configuration rel. to heliosphere 2-58218
- spiral galaxies, mass and luminosity distrib. rel. to Tully-Fisher relation 2-58450
- spiral galaxies, spiral structure origin and density wave 2-112580
- spiral galaxies, structural features, spiral density waves prod. 2-117775
- spiral galaxies gas dynamics, comparative study of computational methods 2-94617
- spiral galaxies in nine clusters, H I contents and colour props. 2-79223
- spiral galaxies of high luminosity, rot. curve 2-63664
- spiral galaxies of Pegasus I cluster, optical and 21 cm survey rel. to H I content 2-79205
- spiral galaxies sequential star formation models and galacto-detonation waves struct./evolution 2-117748
- spiral galaxies with finite disc thickness, asymptotic soln. and general eigenvalue problem general condition 2-89371
- spiral galaxies with finite disc thickness, three-dimens. asymptotic density-pot. relation 2-89370
- spiral galaxy with finite disc thickness, modal theory 2-89369
- spiral structure, pitch angle empirical behaviour 2-74096
- spiral structures, plasmas and density wave theory 2-63684
- spirals, large-scale magnetic fields, dark lane evidence 2-101030
- spirals, local vel. field and luminosity classification calibration 2-106885
- spirals, matter distrib. model (*Chinese*) 2-84327
- spirals, use of colour-absolute magnitude relations as distance indicator 2-63653
- static properties of galaxies in supercluster filaments, Monte-Carlo simulations 2-84321
- stellar dynamics, transitions between epicyclic stellar orbits induced by massive gas clouds 2-68837
- stellar dynamics paired collision dynamics, regularised system of differential eqns. 2-117712
- structure, effect on observed galactic cosmic ray positron fluxes 2-63192
- structure and evolution, effect of stochastic self-propagating star form. 2-106909
- supernova in anonymous galaxy in Centaurus, discovery and photographic magnitude (1982 June 22) 2-89287
- supernova in anonymous galaxy in Telescopium, discovery and photographic magnitude (1982 June 21) 2-89286
- supernova in anonymous galaxy in Telescopium, discovery and apparent photographic magnitude 2-94760
- supernovae location inside parent galaxies, new method 2-106757
- surface photometry of galaxies, bibliography 2-107031
- symmetrical galaxies evolution, two-parameter scheme 2-106896
- triaxial elliptical galaxy, stationary and slowly rotating model 2-63650
- triple galaxies in Karachentseva's list, radial vel., absolute magnitude and dimensions, obs. 2-63686
- Tully-Fisher relation, depend on Hubble type rel. to use of 21 cm line width as distance indicator 2-63615
- tumbling prolate galaxies, gas disks orientation 2-89351
- turbulence, plasma containment, and galaxies 2-89372
- two component galaxies, struct. model 2-112571
- UGC 6697 in Abell 1367, gas stripping by intergalactic gas flow 2-58477
- UGC 7576 (=MCG 5-29-86), optical photometry of peculiar disk galaxy 2-117755
- Ursa Minor dwarf galaxy as member of Magellanic Stream 2-68901
- UV excess galaxies, spectroscopic obs. (*Russian*) 2-112566
- UV galaxies, activity depend. on nucleus and morphology, obs. (*Russian*) 2-94832
- violently relaxed galactic systems, massive neutrinos 2-106522

galaxies continued

- Virgo cluster galaxies, parameters, catalogue 2-63275
 Vilsov simulation for stellar systems dynamics in infinite homogeneous case 2-74103
 warp excitation, fluid model of disk-halo interaction 2-63236
 wind effect on galactic antimatter cosmic rays 2-117609
 X-ray narrow-line galaxies, mid-IR nuclear continua 2-79209
 Zwicky magnitude scale, reliability in estimation of blue luminosity 2-68899
 Zwicky magnitudes, transformation to, Holmberg and B_T magnitude systems 2-74099

gallium

- see also nuclei with
 atom, core effective potentials, ab initio calcs. 2-70140
 atom, matrix isolated, MCD study 2-80537
 atom, $np^1_{1/2,3/2}$ Rydberg series, dye laser study 2-114123
 coating on Si (112), surface struct., LEED study 2-71784
 diffusion in quartz and amorphous SiO_2 , neutron activation anal. 2-66289
 diffusion in Si, SIMS studies, isotope effects 2-104070
 film, adsorbed inert gas monolayer, UPS meas. 2-57261
 film, low temp. ion beam irradiation 2-103858
 laser resonance line, obtained by $Ga(CH_3)_3$ photodissociation 2-80942
 liquid, electronic density of states, Green's function and perturbative calcs. 2-71854
 liquid ion source and scanning ion microprobe system (Japanese) 2-113039
 liquid layer dispersion on surface of Ag film (Russian) 2-71778
 liquid metal embrittlement of cold rolled dil. Al-Ti alloy 2-88189
 melt, diffusion of P and As, calc. from rate of solution 2-110020
 metastable β -phase, neutron inelastic scatt. study of phonons at melting temp. 2-56119
 Nernst effect and Hall effect, quantum oscillations obs. 2-98628
 nonlinear acoustic wave propag. 2-76602
 nonstoichiometric solution of As, vapour pressure 2-109994
 ring, temp-induced elec. field domain in neg. differential cond. regime (Russian) 2-99076
 sputtering, atomic excitations, optical spectroscopy study 2-77689
 surface, oxidation, photoemission spectra study 2-93376
 Al-oxide-Ga thin film tunnel junction, zero bias anomaly, mag. field depend. 2-82546
 CdGeP₂-Ga photoelectrochromism spectrum, imbedded n-p junction depth effect 2-61523
 p-CdSnAs₃-Ga, transport coeffs., temp., field, and press. depend. 2-77061
 Ga⁺, electron impact excitation to 4P level, absolute emission cross sections 2-90720
 Ga + F₂, product form. rate, excited states, chemiluminescence obs. 2-83359
 Ga + O, reactions in Ar matrix, IR spectra of prods., vibr. 2-96564
 Ga + C-foil, relative level excitation study 2-75398
 GaAs-Ga interface formation, electronic props., photoemission LEED and Auger study 2-98744
 GaI and GaII, 13-500 eV electron impact excitation, autoionising transitions, ejected electron spectrum 2-75211
⁶⁷Ga and related elements, conf., Ranff, Canada (Sep. 80) 2-53413
⁶⁷Ga citrate, use in lung cancer diagnosis (Russian) 2-62733
 Ge:As₂Ga, heavily doped by neutron doping, fundamental optical absorpt. edge profile 2-93145
 Ge:B, Al, Ga, residual acceptor impurity distrib., photothermal ionisation spectroscopy study 2-81807
 p-Ge:Ga, impurity states, oscillator strengths, quadrupole moments 2-104303
 Ge_{1-x}Si_x-Ga, solid solubility, regular soln. model 2-61150
 InSb:Ga, lattice thermal cond., 0.35-3K 2-98353
 KCl:Ga, triplet excited states of Ga⁺, optical detection of ESR study 2-82749
 KCl:Ga⁰, hyperfine consts., relativistic many body calc. 2-104327
 PbI₂:Ga, exciton spectra, refl. and photoluminesc. spectra 2-67118
 Pb_{1-x}Mn_xTl_{1-x}Ga, influence of doping on kinetic props. 2-87261
 PbTe:Ga, doping effect on electrophys. props. 2-56578
 RbCl:Ga, triplet excited states of Ga⁺, optical detection of ESR study 2-82749
 p-Si:Fe:Ga, interstitial Fe and Fe-acceptor pairs, DLTS and Hall effect study 2-66476
 Si:Ga, doping during MBE, AES and isothermal desorpt. spectra study 2-109819
 Si:Ga, electron irradi., luminesc. of traps 2-61969
 Si:Ga, float zone cryst., neutron irradi., X-centre formation, expt. study 2-98162
 Si:Ga, heavily doped, free electron zone-phonon transition, luminescence 2-61954
 Si:Ga, impurity IR excited-state lines 2-82883
 Si:Ga, ion implanted, dopant redistrib. after flash lamp annealing, He⁺ backscatt. study 2-86936
 Si:Ga, ion implanted, electron beam annealing by multiple-scan method 2-92036
 Si:Ga, ion implanted, metastable supersaturated solid solns. formation during solid phase epitaxy 2-98283
 Si:Ga:Li⁺, sharp line donor-acceptor pair recombination luminesc. 2-104928
 Si:H, Ga, amorphous film, ion implanted, photocond. and energy spectrum 2-92698
 a-Si:H, Ga, ion implanted, absorpt. and photocond. spectra 2-115820
 SiO₂:Ga, variations of surface concs. with oxide content 2-82098
 YIG:Ga, Gd film, confined stripe domain lattice, mag. domain walls normal modes obs. 2-92980
 YIG:Ga-ZnO, SAW parametric amplification obs. 2-92332
 YIG:Gd, Tm, Ga, He⁺ implanted, mag. and cryst. props. 2-77334
 ZnO:Ga, ESR and ODMR obs. of shallow donors 2-116061
 ZnSe:Ga, defect levels 2-115691
 ZnSe:Ga, MBE growth and elec. cond. and photoluminesc. props. meas., blue LED appl. 2-87986
 ZnSe:Ga diffused single cryst., elec. props. and impurity profile 2-61014

gallium alloys

- see also gallium compounds
 rare earth alloys, R₂Ga₂Co, (R=Sm,Gd,Tb,Dy,Ho,Er,Tm,Lu,Y), cryst. struct. study 2-115180
 rare earth alloys RAlGa, mag. props. study 2-72141
 rare earth-copper-gallium system, RCu₂RGa₂ sections, phase form. and crystallographic characts. (Ukrainian) 2-83080

gallium alloys continued

- rare earth-gallium-nickel system, phase comp. and crystallographic characts. (Ukrainian) 2-83079
 AgGa, Coulomb pseudopotential from normal-state resistivity, and T_c 2-98790
 Co-Ga, mag. and struct. props., Mossbauer study 2-116097
 Co-Ga alloys, B2 struct., defect struct. and lattice parameters (German) 2-81784
 Cr-Ga, effect of press. on Neel temp. 2-72202
 α -Cu-Ga, electronic struct., piezoref. study 2-57052
 Cu-Ga, Fermi surface, density of electron states, positron annihilation study (German) 2-104231
 Cu-Ga (23.7 wt.%), migration kinetics of β - ζ_m transformation interface 2-72691
 Cu-Ga alloys, EXAFS associated with K-absorption discontinuity 2-99220
 Cu-Ga solid soln., H₂ solubility, thermodynamic props. (Russian) 2-92207
 Dy(Fe_{1-x}Ga_x)₂, mag. props. and Mossbauer spectra, 4.2 to 293K (Russian) 2-104657
 Fe-Ga, dil., impurity hyperfine fields, press. and temp. depend. 2-104610
 Fe-Ni(Ti)(Ga)(Al)(Co)(Pt), flow stress at low temp., influence substitutional elements 2-105213
 Fe₂Ga, magnetic struct., neutron diff. obs. 2-92871
 Ga-Al-Sb system, saturated melt-solid phase interaction 2-66348
 Ga-In, liquid, interference functions, radial atomic distrib. and elec. resist. 2-103595
 Ga-Te, liq. alloys, appl. of percolation theory and transport coeffs. 2-66516
 Ga-Ti, Ga₂Ti₃ struct., electron and X-ray diff. study 2-60926
 Ga-Ti(V)(Cr) melts, contact reactions with quartz and graphite, X-ray diff. study 2-82085
 GdCu_{1-x}Ga_x, mag. order 2-98845
 Hf-Nb-Ga and Hf-Ti-Ga solid solns., mag. and X-ray struct. investig. (Russian) 2-67292
 Ho₂Ga₂Co₇, cryst. struct. study 2-115180
 In-Ga, FCT struct., supercond. transition temp., resistive meas. 2-56749
 InGaSn-Si, interface contact potential difference (Chinese) 2-92748
 Mg-Ga liq. system, thermodynamics studies 2-66257
 Na-Ga, liquid, conc. fluctuations, press. effect, EMF meas. 2-91758
 Na₂Ga₃, cryst. struct. 2-65921
 Nb-Ga films, supercond. energy gaps, electron tunnelling meas. (Russian) 2-82534
 Nb-Ga high T_c supercond. wires, prep. by heating and quenching in liq. He 2-77770
 Nb-Ga-Si system, crystallographic phases, supercond. transition temp., X-ray diff. study 2-86837
 Nb-Ga, electrical resistivity, temp. depend. 2-61442
 Nb₂Sn_{1-x}Ga_x, infiltration process prep., supercond. props. 2-61676
 NiGa, vacancy conc. and mobility 2-103751
 Ni₂Ga, ordered alloy, dislocation struct. (Russian) 2-98094
 NiGa₂Si(Sn)₂ mixtures, phase diagram invest. 2-67303
 Ni₂Zn₂Ga₂, crystal struct., phase diagram meas. 2-109749
 Pb-Si-Ga-As, phase equilibria, calc. of phase diagrams 2-66170
 (PrRd₈Ga₂₀)_{100-x}Fe_x metallic glasses, mag., Mossbauer, and struct. studies 2-72270
 RGe₂, X-ray absorpt. spectrum study 2-77621
 RNi₂Ga, mag. susceptibility and cryst. struct. meas. (Russian) 2-61695
 Si-Ga, refinement of boundaries of regions of homogeneity 2-11168
 Sn-Si-Ga-As, phase equilibria, calc. of phase diagrams 2-66170
 TmAlGa_{2-x}, cryst. struct. study 2-55889
 V₂Ga tapes, composite processes, Ga and Mg additions effect on supercond. props. (Japanese) 2-77773
 Y-Cu-Ga system, phase form. and crystallographic characts. (Ukrainian) 2-83080
 Zr-Ti-Ga solid solns., mag. and X-ray struct. investig. (Russian) 2-67292

gallium arsenide

- (110), chemisorption of Al (Chinese) 2-104139
 adsorption of Al on (110) surface rel. to Schottky barrier form. 2-115546
 ambipolar diffusion of high density electrons and holes 2-110367
 amorphous and cryst., melting point, laser and electron beam annealing 2-109829
 anodic oxidation, island stage 2-111342
 anodic oxide film, struct. inhomogeneity 2-87096
 band struct., nonlocal pseudopot. calc. 2-110245
 band struct., photoemission with synchrotron radiation (Japanese) 2-93377
 band structure, tight binding calc. 2-66443
 bicrystals, electron tunnelling through grain boundaries 2-66624
 bulk crystals soln. grown by slow cooling, const. temp. steady-state processing macrosegregation 2-91845
 buried heterostructure lasers, individually addressable, 50 μ m spaced array 2-90918
 C-CD, electroabsorption, spatial light modulation appl. 2-114416
 carrier drift and recombination instabilities due to nonlinear interactions, expt. study (Russian) 2-115784
 carrier mobility, electron-electron scatt. effect 2-77040
 chemisorbed H, surface optical phonon obs. 2-115550
 chemisorption of Ge on (110) surfaces, defect states 2-56659
 conduction band-acceptor optical transitions probability 2-116254
 conference on GaAs and related cpds., Oiso, Japan (Sept. 1981) 2-94906
 contamination layers on GaAs, optical concs., multiple angle ellipsometric analysis 2-53818
 crystal growth from melt (German) 2-57281
 crystal growth-property relationships, Bridgman-type apparatus for study 2-86612
 CVD, thermodynamic anal. of Ga/AsCl₃/H₂/inert gas system (Chinese) 2-111079
 CVD from trimethyl gallium-AsH₃ flowing vapour 2-116381
 cylindrical cryst., O₂ adsorp., orientation depend. 2-110146
 cylindrical sample, adsorp. of O₂, orientation depend., AES meas. 2-115565
 decomposition due to laser irradi. 2-93331
 deep acceptor at 77 MeV, photoluminesc. study 2-57145
 deep impurity profile, persistent photocurrent meas. technique 2-115267
 deep level elec. field induced phonon assisted tunnel ionisation 2-71909
 deep level transient spectroscopy using CAMAC components 2-101469
 deep levels, optical matrix elements and cross sections, impurity superlattice model 2-56467

gallium arsenide continued

- defect energy level press. depend. 2-104295
degenerate band, bound polaron energy, variational and perturbation calc. 2-115674
density of states of photoemitting bands, Kindig-Spicer method 2-56416
depth profiling in near surface region by low energy PIXE 2-99716
detectors at room temp., present status 2-90366
diode lasers, 1.2 to 1.7 μm , struct., operating principles and performance 2-102818
direct-gap crystals, three-photon absorpt. 2-97079
dislocation-free crystal prod. by doping, necking procedure in LEC growth 2-76337
donor defect, H passivation 2-87173
doped superlattices, quasi-two-dimensional photoexcited carriers 2-110433
doped with conducting inclusions, negative geometric magnetoresistance (Russian) 2-104517
electrical defect, Hall effect, SIMS and mass spectra meas. 2-76984
electrical surface props. determ. by thermo-optical acousto-electric voltage method 2-92720
electrochemical solar cells electro hole recombination translation into chemical terms 2-111574
electron capture by multiphonon emission at A and B levels 2-61947
electron drift velocities, high field temp. depend. 2-56598
electron drift velocity meas. at high elec. fields 2-66567
electron drift velocity meas. using variable frequency microwave time-of-flight technique 2-98664
electron irradi., elec. props. and defect annealing 2-104379
electron irradi., luminescence of deep radiative centres obs. 2-57187
electron irradiated, IR study of annealing 2-56033
electron mobility, space charge and central cell scatt. contribs. 2-104369
electron mobility, space charge and central-cell scatt. contribs. 2-104368
electron transient response, Boltzmann eqn., Monte Carlo technique 2-61458
electron trap, effect of elec. field and current injection 2-72009
electron traps and deep levels 2-98583
electron-bombarded, IR absorpt. spectra, 'shallow' levels 2-72507
electronic bands, critical points in first Brillouin zone 2-56435
electronic density of states, cluster-Bethe-lattice approach 2-66413
electronic struct. induced by short-ranged defects, calc. method 2-104296
electrostatic effects of hydrogenic donor complexes on magneto-optical spectra 2-82279
epitaxial, electron mobility, temp. depend., impurity and phonon scatt. (Russian) 2-104513
epitaxial film, residual donor impurity conc., photothermal ionization study 2-98148
epitaxial film growth on amorphous substrate, CLEFT process, TEM and cathodoluminescence study 2-77749
epitaxial films, activated, photoemission, surface purity and perfection effect 2-72608
epitaxial growth by liquid phase electroepitaxy 2-62082
epitaxial layers, biexcitons in quantum wells 2-92479
epitaxial layers, donors contaminants study far-IR photoconductivity method 2-56732
epitaxial layers, MBE and LPE, luminesc. props. 2-72564
etching, in situ, using AsCl_3 in MOVPE 2-99348
excitonic polariton-induced compensation of pulse broadening in optical fibers obs. 2-91047
far IR magneto-absorption, Zeeman effect, cyclotron resonance 2-99099
field effect transistors, ballistic electron motion 2-98658
film, amorphous, plasma deposition and characterisation 2-111094
film, elec. cond., relaxation and lifetime behaviour, macroscopic aspects, theory 2-82492
film, high purity OMCVD grown using trimethyl and triethyl gallium sources, acceptor incorporation 2-99350
film, laser CVD deposition and charactrs. 2-82162
film and single crystal, pulsed Nd:YAG laser annealing of defects, implanted sample obs. 2-56026
GaAs:Cr wafers, EPR charact., etch-pit-density and X-ray double diffraction meas. (Japanese) 2-66907
GaAs-Al_xGa_{1-x}As heterojunctions, low temp. quantised Hall effect 2-87381
galvanostatic anodisation in methanodic KOH 2-88239
gamma-irradiated, near-intrinsic emission intensity, nontrivial annealing induced increase 2-93260
grating fabrication, submicron, by holographic exposure 2-91036
Gunn domain quenching by external microwave elec. field 2-77106
Gunn effect, high freq. limit 2-92676
heat treated in H_2 - Ar_2 surface thermal decomposition, Ar_2 partial press. effects 2-62246
heavily doped, electron pulsed annealed, elec. quality meas. 2-98161
heavily doped, electronic heat capacity 2-56207
heterostructure laser diodes modulation (German) 2-80954
heterostructures, radiative recombination, efficiency and lifetimes 2-87833
high field transport and impact ionization, band struct. depend. 2-77070
high purity, electron-phonon coupling associated with BA and DA transitions (Chinese) 2-93239
high purity, MBE grown, residual donor conc., photothermal ionisation spectroscopy study 2-66032
hot photoexcited electrons, theoretical study 2-82367
hot photogenerated carriers, slow picosecond kinetics 2-61517
hot-electron diffusion const., Monte Carlo calc. 2-98656
hot-electron plasma, excitation of electrostatic oscillations, calc. 2-66580
i-n heterostruct., low temp. diffusion, laser plasma pulse stimulated 2-56263
IC, pulse annealing techniques optimisation 2-56693
III-V semiconductors, third order susceptibility in true continuum near band edge 2-102852
impact ionization and high field transport, band struct. depend. 2-77069
IMPATT diodes, γ -ray irradi. effects on elec. and recombination props. 2-76501
implantation annealing using incoherent light focused by elliptical mirrors 2-76490
impurity atoms and positron states, positron annihilation study 2-104996
impurity band transport in large mag. fields 2-61487
impurity central-cell potential, reson. carrier scatt., theory 2-115740
impurity scatt. in quantising mag. fields 2-115972
impurity subsystem, metal-insulator transition (Russian) 2-71872
injection lasers, influence of waveguiding props. on longitudinal spectrum 2-96947

gallium arsenide continued

- interfaces, disloc. surface reactions 2-57250
ion implant activation using multiple-scan electron beam annealing 2-56040
ion implant. amorphisation optical and EPR studies 2-103789
ion implanted, excitation size determ. 2-87156
ion implanted, laser annealed, defect anal. 2-66053
ion implanted, laser annealing, Fermi level pinning model, solar cell fabrication 2-56027
ion implanted, pulsed laser annealing, dopant profile redistrib. and surface melting duration 2-56024
ion implanted, pulsed ruby laser annealing, SIMS and elec. obs. 2-56023
ion implanted, range statistical parameter calcs. (Chinese) 2-109818
ion implanted, transient and furnace annealing behaviour 2-56022
ion implanted, Zn diffusion profiles meas. 2-92285
ion implanted and annealed, defect conc. distrib. study 2-71923
ion irradi., Frenkel defects and annealing 2-115316
ion-implanted, review of furnace annealing, thermal pulse annealing and laser annealing 2-67400
IR absorption of 78 meV acceptor 2-77552
IR absorption props. at 10.6 μm , photoacoustic spectroscopy (Chinese) 2-93230
laser, bistable, buried heterostruct. static and dynamic charactrs. 2-65231
laser, bulk, tunable picosecond pulse generation, two-photon absorpt. excitation 2-55164
laser, bulk crystal, two-photon pumped synchronously mode-locked 2-114291
laser beam erosion, role of thermochemical effect 2-61028
laser diode emission spectra in pulsed mag. fields up to 26 T 2-85970
laser diodes, CW DH, superhigh differential quantum efficiency and strong self-sustained pulsation 2-80961
lasers, electrophotography appl. 2-74536
lasers with inhomogeneous current injection, bistability and pulsations 2-108879
lateral epitaxial CVD, growth on Ge-Si substrates with low dislocation density 2-116371
layer growth on insulating substrates, ion beam deposition (Japanese) 2-116384
layers, elec. field effect on growth in GaAs- AsCl_3 - H_2 system 2-57302
LEC growth, effect of water content of B_2O_3 encapsulant on purity and stoichiometry 2-103674
LEC grown, photoluminescence, deep acceptor levels 2-99191
LEC grown semi-insulating, charact. for integrated circuit appl. 2-98654
LEC growth, donor impurities, photoluminescence evaluation 2-116230
LEC growth of homogeneous undoped semi-insulating crystals with in-situ melt purification 2-93408
LEC semi-insulating crystals, appearance of negative peak in photo-induced transient spectroscopy 2-104312
LED, shallow-junction, surface-emitting, spectral tuning through gamma radiation 2-115287
liquid encapsulated Czochralski, compensation mechanism, melt stoichiometry 2-111057
liquid encapsulated Czochralski growth, dislocation form. 2-81785
liquid encapsulated Kyropoulos growth method 2-99323
low-field mobility temp. depend. with optic phonon scatt., Monte Carlo calc. 2-104383
LPE, substrate orientation and surface morphology 2-67229
LPE layers, dislocations as growth step sources, rel. to interface struct. 2-115615
LPE layers, high-purity, residual impurity photoluminesc. studies 2-99164
luminescence in bulk semi-insulating samples, quenching effect 2-87862
material properties relevant to modern semiconductor elements (German) 2-98533
MBE, Mn incorporation behavior 2-104191
MBE grown, high-purity, props. and characterisation 2-56613
MBE grown (100) autoepitaxial films and substrates, struct. and comp. and surfaces 2-56383
MBE growth on Ge (100), interface morphology, RHEED study 2-56386
MESFET, normally-off, deep levels, photoinduced current spectroscopy study 2-110281
MESFETs, deep level impurities, effects on small signal and LF noise props. 2-98586
mesostructure dielectrics 2-61473
metal-semiconductor transition in strong mag. fields 2-92708
metallised, volatile component loss and contact resistance during annealing 2-92753
metalorganic VPE layers, impurity redistribution, SIMS study 2-115582
microwave freq. noise, electron heating conditions 2-104446
minority carrier lifetime and diffusion length, EBIC method in SEM 2-98667
minority carrier lifetime meas. using SEM with intensity modulated electron beam 2-87301
MIS structs., relationship between charge- and current-based DLTS 2-87180
MIS structure, dielectric dispersion prop. meas. at very low freq. (Japanese) 2-64069
MOCVD layers, low temp. growth at atm. pressure 2-93441
monolithic SAW device, new SAW modes obs. 2-104134
MOS interface states, DLTS and photoionisation study 2-110488
MOS solar cells, high efficiency, by anodic oxidation processes 2-88448
MOS struct., photoionisation cross-section and interface state threshold meas. 2-98759
 $n^+n^-n^+$ and $n^+p^-n^+$ structs., near ballistic transport, intervalley scatt. and nonparabolic conduction band effects 2-92733
 $n^+n^-n^+$ Schottky device, ballistic and quasiballistic electron spectroscopy, numerical simulation 2-56669
 n -i-p-i cryst., photoexcited electrons quantisation, photoluminesc. and light scatt. study 2-61576
 n -i-p-i superlattices, electron-hole recomb. across tunable effective gap, photoluminesc. study 2-99182
 n -type, epitaxial film, magnetoresistance, electric field effect 2-77100
 n -type, epitaxial layer on semi-insulating GaAs:Cr, current limitation due to IR radiation obs. 2-66626
 n -type, heavily doped, Fermi energy and screening length 2-66410
 n -type, high-purity, epitaxial, H_2 passivation of deep donor centres obs. by DLTS 2-98570
 n -type, hopping conduction in an arbitrary magnetic field 2-92665
 n -type, hot electrons, inertial props., Monte Carlo calc. 2-56628
 n -type, impact ionisation induced negative far IR photocond. 2-115805

gallium arsenide continued

n-type, magnetoresist. of hot electrons at 77K 2-61495
 n-type, microwave irradi., hot carrier mobility, phonon accumulation effects 2-66566
 n-type, MIS Schottky barriers, electron trapping in oxide layer 2-77196
 n-type, negative far IR photocond. obs. in mag. field 2-98690
 n-type, surface (110), surface photovoltage meas. and Fermi level pinning 2-87364
 n-type, surface photovoltage meas. and Fermi level pinning, electron tunneling through dipole layers 2-87392
 n-type chaotic motions in electrical avalanche breakdown caused by weak photoexcitation 2-110359
 n-type epitaxial, far IR photocond. saturation 2-87319
 n-type Schottky barrier, deep level and shallow impurity profile simultaneous meas. with C-V method (*Chinese*) 2-92505
 near-IR emitters as radiation-to-light converters for nucl. environments 2-113825
 negative electron affinity, photocathodes, thickness of Cs_2O activation layers 2-57270
 neutron irradiated, deep level transient spectroscopy 2-115695
 NIPi superlattice, tunable optical absorpt. coeff. 2-77477
 nonlinear material, second-harmonic lasing in asymmetrical dielectric waveguides 2-108953
 nonradiative processes and defects, obs. by acoustic spectroscopy 2-53446
 nuclear polarisation front appearance during optical spin polarisation (*Russian*) 2-56953
 ohmic contact, laser alloying 2-61024
 one phonon density of states determ. by disorder-activated first-order Raman scatt. 2-66151
 optical bistability with guided waves, theory 2-97073
 optical detection of NMR, nuclear relax. near shallow donors 2-82747
 optical props., ellipsometry meas. 2-57200
 oscillator strength and lifetime broadening of exciton polaritons 2-93141
 oxide layer struct., diffuse X-ray scatt. study 2-71831
 oxide removal from chemically etched surfaces, electron and X-ray diffr. 2-116561
 p^+-n^+ struct., forward I-V characs., photon generation effects 2-115882
 p-n homojunction LEDs, emission spectra calc., ghost peak form. 2-61980
 p-n homojunction solar cell, minority carrier diffusion length modification 2-92644
 p-type, heavily doped, coupled LO phonon-plasmon modes and forbidden TO modes, Raman scatt. study 2-57101
 p-type, inhomogeneously doped, IR plasma reflectivity, computer calc. 2-61885
 p-type, linear photogalvanic effect 2-110388
 p-type, MBE grown, impurity characterization by far-IR photoconductivity in high mag. fields 2-66565
 p-type, photoluminescence, time resolved, by population mixing 2-57138
 p-type electrochemical electrode, cathodic photocurrent meas., surface recombination and trapping effects 2-92746
 p-type MBE film, lightly doped, dynamic SIMS study 2-87097
 photoacoustic IR spectroscopy 2-99108
 photoacoustic spectra meas. 2-92117
 photoconductive detectors, thin film, ultrafast operation 2-101463
 photocurrent determ. of hole diffusion lengths 2-82396
 photoelectrochemical photovoltaic cell using I_3^-/I^- redox couple in acetonitrile 2-111570
 photoelectric memory effects, theoretical model 2-82394
 photoelectrical fatigue obs. at cryogenic temps. (*Russian*) 2-77125
 photoelectrochem. cell, real time IR imaging appl. 2-58902
 photoelectron spectra, Monte Carlo simulations 2-67197
 photoexcited carriers, time-resolved diffusion profiles, nonlinear luminesc. study 2-116221
 photoexcited electron system, far IR magnetosabsorpt. and cyclotron reson. study 2-87744
 photogalvanic effects and photon drag 2-110391
 photoluminescence, elec. field effects, excitons and polaritons 2-99177
 piezo-optical coeffs., dispersion dependences 2-116151
 piezobirefringence dispersion due to strain-dependent lattice effects 2-67017
 planar doped barrier design and growth by MBE 2-93425
 plasma etching, temp. and discharge freq. effects 2-83255
 plasma etching by tetrachloromethane, kinetic study by nonperturbative optical techniques 2-116565
 polycrystalline, scanning cathodolum. microscopy 2-71313
 polycrystalline n-type film, hole diffusion lengths, lateral variation meas. technique 2-98770
 positron annihilation at low temp. 2-62009
 positron lifetimes, systematic study 2-57207
 proton irradi., damage distrib. and proton range, TEM study 2-76507
 proton irradiated, profiles interpretation obtained by C(V) technique 2-98663
 proton-bombarded, deep levels study 2-66474
 quantum well, exciton resonance, hole burning 2-76934
 quantum well lasers, temp. depend. of threshold current calc. 2-75573
 radiative recomb. and light absorpt., dislocations effect 2-104962
 Raman spectrum, phonon modes, ion implantation and annealing effects 2-82833
 recombination-type semi-insulating material prep. for high power CO_2 laser windows (*Chinese*) 2-99317
 refractory ohmic contacts, laser and thermal anneal 2-87386
 relaxed surface, (110), angular resolved initial state spectra 2-87948
 resonant Brillouin scatt. under uniaxial stress 2-7542
 SAW charge transport, monolithic delay line appl. 2-115522
 SAW focusing effects 2-82112
 SAW generation by photoexcitation, Brillouin spectra detected 2-98413
 Schottky barrier diodes, electron irradi., piezoelec. phenomena, deep level effects 2-115893
 Schottky barrier form., MOS interface states 2-82428
 Schottky barrier formation, defect states model 2-98722
 Schottky barrier solar cells, grain boundary recombination anal. 2-93907
 Schottky structures, surface defect model 2-98724
 Schottky-barrier cells, I-V characs. including recomb. effects 2-82459
 semi insulating, electron/hole mobility relations 2-110352
 semi-insulating, anti-Stokes luminesc. and deep centre EL2, expt. study 2-87830
 semi-insulating, bulk growth by LEC 2-57283
 semi-insulating, point defect chemistry, paramag. resonance technique review 2-93005

gallium arsenide continued

semi-insulating behaviour and thermal stability, stoichiometry effect 2-110348
 semi-insulating bulk crystal growth by Liquid Encapsulation Czochralski process, Ga inclusion minimization 2-67212
 semi-insulating LEC, deep level nonuniformity distrib., photolum. spectroscopy 2-76964
 semi-insulating props., compensation by deep levels 2-56465
 semi-insulating wafer, dislocation density and sheet resistance variations 2-109801
 semiconductor junction laser, CQL type, AEG-Telefunken product with 10 mW continuous output (*German*) 2-80988
 seminsulating, Cr gettering by Ne ion implantation, elec. activation of implanted Si 2-55993
 shallow donor binding energies, effect of band non-parabolicity 2-98581
 solar cell array, monolithic 2-88449
 solar cell construction, for space (*French*) 2-99803
 solar cell maximum power point and fill factor determining analytical expressions 2-83501
 solar cells, Mexican research and development, current status and applications 2-111562
 solar cells, research advances 2-105560
 solar cells, thin film, review 2-105568
 sputtered films, substrate-epitaxial interface effect on C-V characs. of Schottky barriers 2-77156
 sputtering, high resolution, using focused Ga^+ beam 2-116327
 step development during MBE growth, RHEED study 2-76860
 stripe injection lasers, regular integrated array 2-80998
 struct. changes in high elec. field, X-ray diffr. study 2-98043
 substrate, interdiffusion of metal films, book contrib. 2-61215
 substrate cleaning procedures, AES study 2-88237
 substrate for Ag film, Auger lineshape variation during epitaxial growth 2-87916
 substrate for MBE, thermal removal of surface C 2-116572
 substrate for Sb monolayer, LEED dynamic anal. 2-115110
 substrate for Ta_2O_5 film, thickness determ. by Monte Carlo method (*Chinese*) 2-110179
 substrate for ZnSe film, elec. props. and impurity profile 2-61014
 substrate for ZnSe VPE film, optoelectronic props. control 2-116382
 superlattice alloy, impurity sheet doped, band struct. 2-110242
 surface, (001), adsorbed Pb, electronic struct., angle-resolved photoemission study 2-110424
 surface, (001), faceting, steps and reconstruction, theoretical model 2-92327
 surface, (110), adsorbed Al, surface struct., LEED study 2-110120
 surface, (110), adsorbed Al, surface structure, first-principles pseudopot. determ. 2-110143
 surface, (110), Al chemisorpt., extended Huckel mol. orbital calc. 2-66345
 surface, (110), chemisorbed H, pseudopot. calc. 2-110423
 surface, (110), chemisorption of Ge, UPS and work function studies 2-110412
 surface, (110), He atom diffr., theoretical anal. using He-surface potentials 2-77685
 surface, (110), struct. anal. at room temp. 2-82099
 surface, (110), vacancies and adsorbed H, electronic struct. calc. 2-110422
 surface, electron state density, low energy electron reflection study (*Russian*) 2-87362
 surface, struct. and electron states 2-98395
 surface (001), epitaxial relationship with MBE grown Al and Ag layers 2-56396
 surface (001), reconstructed, domain struct., RHEED evidence 2-98408
 surface (100), reconstructed, atomic and electronic struct. 2-115518
 surface (110), formic acid adsorption, EELS study 2-98454
 surface (110), O_2 adsorption, density of valence states, photoemission study 2-82142
 surface (110), oxidation, low intensity laser radiation effect 2-111341
 surface (110), Sb overlayers, LEED/AES/XPS/TDS characterization 2-87060
 surface composition, X-ray photoelectron spectroscopy and ellipsoid meas. (*Ukrainian*) 2-104124
 surface composition and etching in Cl_2 ion beam 2-61262
 surface donors and acceptors, Fermi energy as function of O_2 exposure 2-110426
 surface layer struct., external photoeffect under X-ray diffr. conditions 2-98402
 surface oxide phase form. by H_2O or O_2 adsorpt., UPS, XPS and SIMS study 2-115544
 surface oxide thin film, carrier photoinjection 2-92699
 surface passivation, hydrogenation/nitridation mechanism 2-77961
 surface ripples under picosecond laser illumination 2-81822
 surface state reduction by plasma growth of oxyfluorides 2-110427
 surface states, intrinsic unoccupied, bremsstrahlung isochromat spectroscopy study 2-98713
 surface states and the analytic properties of Bloch waves in the tight-binding approximation 2-56656
 surface Tamm state energy spectrum, Green's function calc. (*Russian*) 2-77154
 surface-barrier structs., reverse current and elec. breakdown 2-92755
 thermal expansion coeff. calcs. 2-86911
 thermally oxidised, Lloyd's mirror interference method for determ. of photoelastic index variation 2-64096
 thin layers, positron profiles and positron annihilation 2-87897
 third order nonlinear optical susceptibility, meas. using surface plasmons 2-114353
 third order optical nonlinearity near exciton lines (*Chinese*) 2-99083
 tunnel homojunction, MBE growth and elec. props., multipap cascade solar cell interconnect appl. 2-57701
 two-photon absorption coeffs., band structure calcs. 2-65293
 E-type, hot carrier, picosecond absorpt. spectroscopy 2-92640
 ultrafine semicond. wire, high electron mobility, theory 2-98655
 undoped epitaxial layers grown by CVD, residual impurity depend. on growth time 2-56404
 undoped semi-insulating LEC grown, growth striation etching 2-76350
 unipolar structures with ultrathin triangular barriers, elec. props. 2-82445
 velocity/field characteristic meas. using HF modulated solid-state laser diode 2-82350
 VPE, interdiffusion coeffs. of growth components 2-56382

gallium arsenide continued

- VPE, transition region width between active and buffer layers (*Chinese*) 2-67222
- Wannier-Mott excitons, wave functions and normal-incidence refl. 2-82244
- whisker growth during MBE 2-76876
- whiskers, elec. cond., hydrostatic press. influence 2-77064
- X-ray photoelec. emission and refl. from polar (111) and (111) faces 2-105049
- Ag-GaAs (001), Ag MBE growth and interfacial diffusion, AES, LEED and SEM study 2-93432
- Ag-GaAs (100), interface struct. and electronic props. meas. 2-110171
- Ag-GaAs Schottky diodes formation on Kelvin, AES and LEED characterised surfaces cleaned by ion bombard. 2-87391
- (Al,Ga)As DH lasers, reliability, substrate dislocation density and GaAs:Sb active layer effects 2-55193
- (Al,Ga)As lasers with Ga(As,Sb) active layers, device characts. 2-90890
- (Al,Ga)As/GaAs heterostruct., MBE grown, interface quality and electron mobility, substrate temp. effects 2-56385
- (Al,Ga)As/GaAs heterostruct., single and multiple period modulation doped, electron mobility meas. 2-56676
- (Al,Ga)As/GaAs heterostruct., electron mobility meas., AlAs mole fraction influence 2-56677
- Al/GaAs Schottky barriers, elec. field in depletion layer 2-98043
- Al-Al_{0.3}Ga_{0.7}As MOD diode, electron beam evaporation prep. 2-62068
- Al-GaAs, LPE film growth, interdiffusion coeff. of components in solns., temp. depend. 2-76717
- Al-GaAs and Al-Al_{0.3}Ga_{0.7}As-GaAs MBE contacts, Schottky barriers, stability props. meas. 2-98723
- Al-GaAs interface, far IR radiation generation by surface wave difference freq. mixing 2-55252
- Al-GaAs MBE Schottky barrier height, O stabilization 2-87367
- Al-GaAs Schottky barriers, influence of interface composition 2-82432
- Al-GaAs(110) interface, possibility of adatom cluster formation 2-61555
- Al-InAlAs-InGaAs heterostructure, current transport 2-104486
- AlAs-Al_{0.3}Ga_{0.7}As-GaAs superlattices, absorption meas. at high press. 2-82933
- AlAs-GaAs heterojunction laser with distributed Bragg mirror, CW operation at 50°C 2-85996
- AlAs-GaAs superlattice, Zn diffusion and disordering along its layers, expt. study 2-56253
- AlAs-GaAs superlattice, disorder by Si implantation 2-76465
- AlAs-GaAs superlattice, resonance impact ionisation states 2-92738
- AlAs-GaAs superlattices, exciton associated optical absorption spectra at 300K 2-104913
- (Al,Ga)As buried convex waveguide struct. laser with truncated convex active region 2-65258
- AlGaAs buried-heterojunction/broad-stripe laser diodes, microwave two-port cct. models 2-114285
- AlGaAs CHD-LOC laser diodes for optical fibre data transmission 2-55355
- AlGaAs QCL10 semiconductor laser for information readout 2-60102
- AlGaAs CSP, BH and TJS lasers, direct FM characts. 2-80960
- AlGaAs CW DH nearly single mode laser, intensity fluctuations in longitudinal modes 2-65224
- AlGaAs CW injection laser with external resonator, emitted radiation mode beats and fluctuations 2-65228
- AlGaAs crank structure high power TJS laser, 15 mW single mode CW operation at high temp. 2-80982
- AlGaAs DH laser, injection locked and resonant type modes, optical FM signal amplification 2-80959
- AlGaAs DH laser, short-term freq. stability 2-65256
- AlGaAs DH laser diodes aged under pulsed operating conditions, degradation behaviour 2-80966
- AlGaAs DH lasers, narrow stripe, gain-guided, proton-bombarded, LPE grown, far field asymm. 2-108877
- AlGaAs DH undoped injection lasers, anal. of longitudinal mode behavior 2-65229
- AlGaAs external grating loaded lasers, oscill. centre freq. tuning, quantum FM noise, direct freq. modulation characts. 2-85961
- AlGaAs injection lasers, acoustooptic modulation resonances 2-55226
- AlGaAs inverted strip buried heterostructure lasers 2-114302
- AlGaAs large optical cavity BH window laser, fabrication and props. 2-96967
- AlGaAs laser, freq. stabilisation to H₂O vapour absorpt. line 2-60129
- AlGaAs laser amplifier, Fabry-Perot cavity type, noise characts. 2-80958
- AlGaAs laser diode, spontaneous and stimulated emission, picosecond. meas. 2-65216
- AlGaAs laser diode, multipurpose (*Danish*) 2-70565
- AlGaAs laser diode (*German*) 2-90927
- AlGaAs lasers, frequency stabilization based on H₂O and Rb-D₂ lines 2-65267
- AlGaAs lasers, high injection region luminesc. decay and injected carrier lifetime 2-85962
- AlGaAs lasers with micro-cleaved mirrors suitable for monolithic integration 2-65259
- AlGaAs narrow stripe proton isolated DH lasers for optical communication, HF intensity noise behaviour during accel. life testing 2-65223
- AlGaAs, optoelectronic integration in integrated optics, review 2-65410
- AlGaAs, organometallic VPE growth, O₂ gettering by graphite and SiC baffles 2-67220
- (Al,Ga)As strip BH lasers prepared by hybrid crystal growth 2-80951
- AlGaAs travelling-wave-type semiconductor laser, polarisation characts., gain sensitivity 2-75572
- AlGaAs, undoped, MOCVD growth and charact. 2-98497
- AlGaAs/GaAs terrestrial concentrator solar cell array, 1 kWp, performance 2-88451
- AlGaAs-GaAs, tunnel heterojunction, MBE growth and elec. props., multigap cascade solar cell interconnect appl. 2-57701
- AlGaAs-GaAs heterostructure, modulation doped, reson. light scatt. in strong mag. fields 2-61921
- AlGaAs-GaAs injection laser with external dispersive cavity, bistable operation and spectral tuning 2-70566
- AlGaAs-GaAs laser, use of plated heat sink 2-55192
- AlGaAs-GaAs solar cells, high efficiency and humidity resistant 2-88450
- AlGaAs-GaAs superlattice avalanche photodiode, multilayer detector for low noise apps. 2-53841
- AlGaAs-GaAs zigzag mesastripe heterostruct. injection laser, radiative characts. 2-55154
- Al_{0.15}Ga_{0.85}As:Si MBE layer, donor activation energy determ. from elec. transport props. meas. 2-98769

gallium arsenide continued

- Al_{0.15}Ga_{0.85}As-GaAs heterostruct., modulation doped, photocond. effects 2-56679
- p-Al_{0.7}Ga_{0.3}As-p-GaAs-n-GaAs solar cell, minority carrier diffusion length modification 2-92644
- p-Al_{0.7}Ga_{0.3}As-p-GaAs-n-GaAs, concentrator solar cell, temp. and intensity behaviour 2-93892
- p-Al_{0.7}Ga_{0.3}As-p-GaAs-n-GaAs, concentrator solar cell, LPE growth with electrolytic contacts 2-93893
- Al_{1-x}Ga_xAs laser, single-mode picosecond pulse generation by injection locking 2-90949
- Al_{1-x}Ga_xAs, oxide-defined, narrow-stripe, large-optical-cavity laser, thermal waveguiding obs. 2-97001
- Al_{1-x}Ga_xAs terraced-heterostruct. large optical cavity diode laser, LPE growth and high-power CW single-mode operation 2-114298
- Al_{1-x}Ga_xAs-GaAs concentrator solar cell with high conc. ratio and no forced cooling 2-93898
- Al_{1-x}Ga_xAs-GaAs heterojunction CCD, quantum efficiency, heterojunction spike effects 2-87376
- Al_{1-x}Ga_xAs, MBE layers, spin polarised photoelectron emission meas. 2-93365
- Al_{1-x}Ga_xAs, metalorganic VPE grown, residual shallow acceptors, photoluminescence study 2-93245
- Al_{1-x}Ga_xAs BH high quantum efficiency low threshold microcleaved laser fabrication 2-96976
- Al_{1-x}Ga_xAs, composition control and superlattice fabrication by pulsed MBE 2-99342
- Al_{1-x}Ga_xAs, compositionally graded, electron drift vel., time-resolved optical refl. meas. 2-115771
- Al_{1-x}Ga_xAs epitaxial films with variable composition gradient, production 2-87115
- Al_{1-x}Ga_xAs epitaxial film, homogeneous, high resistivity, synthesis 2-116397
- Al_{1-x}Ga_xAs epitaxial layers, MBE growth, substrate temp. influence on morphology 2-76853
- Al_{1-x}Ga_xAs epitaxial layer, graded band gap, dopant impurity effects on carrier lifetime, dislocation density and internal stresses (*Russian*) 2-77215
- Al_{1-x}Ga_xAs epitaxial solid soln., graded band-gap, photolum. (*Russian*) 2-104965
- Al_{1-x}Ga_xAs, growth of variance epitaxial layers, by isothermal mixing of melts 2-88009
- Al_{1-x}Ga_xAs, Γ-X-junction position, effect of alternating exial press. meas. 2-66449
- Al_{1-x}Ga_xAs heteroepitaxial struct., graded-index, current controlled thickness composition profile 2-88013
- Al_{1-x}Ga_xAs heterostructure lasers, visible 300K operation, high press. measurements 2-114300
- Al_{1-x}Ga_xAs, LPE short-time growth, anal. 2-61306
- Al_{1-x}Ga_xAs laser, longitudinal mode self-stabilisation 2-96950
- Al_{1-x}Ga_xAs MOCVD quantum well heterostruct. laser, visible operation 2-114268
- Al_{1-x}Ga_xAs multielectrode rib waveguides, electrooptic polarisation modulation 2-65345
- Al_{1-x}Ga_xAs multielectrode rib waveguides, electrooptic polarisation modulation 2-81065
- Al_{1-x}Ga_xAs p-n junction, double injection, electroluminescence 2-61981
- Al_{1-x}Ga_xAs proton-isolated narrow stripe visible laser grown by MOCVD 2-80984
- Al_{1-x}Ga_xAs, pulse beam technique for composition control of MBE 2-83027
- Al_{1-x}Ga_xAs solar cell, two-element cascade cell design 2-93913
- Al_{1-x}Ga_xAs solid soln., electroc. epitaxy distinctive features 2-88012
- Al_{1-x}Ga_xAs:Si(Ge)(Be)(Mg)(Zn), acceptor states, photoluminesc. study 2-104931
- p-Al_{1-x}Ga_xAs:Ge, LPE grown, photolum. spectrum 2-57143
- Al_{1-x}Ga_xAs:Mg²⁺ ion implantation study, rel. to elec. activation 2-86692
- Al_{1-x}Ga_xAs:Si MBE layers, deep electron traps, annealing characts. DLTS study 2-98589
- Al_{1-x}Ga_xAs:Si(Sn), epitaxial films, doping effects on elec. props. 2-110502
- n-Al_{1-x}Ga_xAs:Te solid soln. LPE layers, carrier diffusion length, conc. depend. 77-300K (*Russian*) 2-56741
- Al_{1-x}Ga_xAs/GaAs concentrator solar cells, organometallic, vapour phase epitaxial, fabrication and performance 2-93921
- Al_{1-x}Ga_xAs/GaAs heterostructures, single and multiple period modulation and doped, I-V characts., suitability for FETs 2-56682
- Al_{1-x}Ga_xAs/GaAs modulation-doped structs., transport props., rel. to Monte Carlo calcs. 2-98731
- p-Al_{1-x}Ga_xAs/p-GaAs/n-GaAs concentrator solar cell, design without collection grid 2-93894
- p-Al_{1-x}Ga_xAs/p-GaAs/n-GaAs/i-GaAs high volt.-low current solar cells, design 2-93895
- Al_{1-x}Ga_xAs-Al-Al_{1-x}Ga_xAs struct., instabilities in MBE growth 2-66395
- Al_{1-x}Ga_xAs-GaAs DH long lifetime lasers (*Chinese*) 2-65270
- Al_{1-x}Ga_xAs-GaAs heterostruct., modulation doped, MBE grown, carrier mobility, substrate temp. effect 2-61567
- Al_{1-x}Ga_xAs-GaAs heterostructure grown by LPE, Auger electron spectra (*Chinese*) 2-66388
- Al_{1-x}Ga_xAs-GaAs heterojunction, single period, mobility enhancement 2-77165
- Al_{1-x}Ga_xAs-GaAs heterostruct. photovoltaic converters, fabrication by VPE 2-105562
- Al_{1-x}Ga_xAs-GaAs heterojunction, single period modulation doped, normal and inverted, electron mobility, substrate temp. influence 2-115876
- Al_{1-x}Ga_xAs-GaAs interface, extrinsic layer, photolum. study 2-115576
- Al_{1-x}Ga_xAs-GaAs picosecond photodetectors, bias-free selectively doped 2-95466
- Al_{1-x}Ga_xAs-GaAs superlattice, energy spectrum and zero energy gap condition calc. 2-77168
- Al_{1-x}Ga_xAs DH laser, rake lines, influence of cooling rate and melt config. in LPE 2-77760
- AlGaAsSb-GaSb, multilayer avalanche photodiode low noise detector for 1.3 μm fibre optic systems 2-53833
- AlGaAsSb-GaSb long-wavelength detectors, 1.3 to 1.55 μm, for fibre optics 2-53840
- Al_{1-x}Ga_xAs-Sb_{1-x}As_{1-x} LPE growth on (111)-B oriented GaSb 2-98495
- Al_{1-x}Ga_xAs-Sb_{1-x}As_{1-x} epitaxial surface, photoemission study 2-93371
- Al_{1-x}Ga_xAs-Sb_{1-x}As_{1-x} and GaAs(110)-Al adsorbed system, surface struct., LEED study 2-110120
- Al_{1-x}Ga_xAs-In_{1-x}As, pseudopot. band struct., CPA calc. 2-115657

gallium arsenide continued

- (Al,Ga)_{1-x}(In)_xAs lattice matched to InP substrate, MBE growth 2-105080
- Al_{0.5}Ga_{0.5}Sb-Al_{0.5}Ga_{0.5}As_{0.5}Sb_{0.5} heterostructure LED, moisture transducer appl. 2-79594
- Al_{0.5}Ga_{0.5}As superlattice configuration entropy 2-56216
- Au-GaAs (110) interface, Schottky barrier, thermal effects, XPS and UPS study 2-110441
- Au-GaAs Schottky barrier solar cell, conversion efficiency 2-99793
- Au-n-GaAs, Sb, Schottky diode, barrier height 2-115854
- Au-oxide-n-GaAs MIS struct., barrier height meas. by internal photoemission technique 2-72063
- AuGe/GaAs, ohmic contacts, interface struct., SIMS study 2-82150
- CaAlAs BH laser and bipolar phototransistor, monolithic integration 2-55360
- CaGa:Cr, surface carrier conc., use of transverse electroreflectance 2-57058
- (Ga,Al)As diode laser, single frequency CW, output power and temp. depend. of linewidth 2-75568
- (Ga,In)(As,P) microwave and optoelectronic heterostruct. growth using multibarrel reactors 2-77747
- (Ga,In)As, equil. consts. derivation from LPE, VPE growth data, solid activity coeffs. determ. 2-98481
- GaAlAs buried heterostruct. laser, monolithic integration with bipolar phototransistor 2-60259
- GaAlAs buried multiheterostructure laser 2-80983
- GaAlAs DH LEDs, recombination-induced deep level form., DLTS study 2-98588
- (GaAl)As DH lasers, long-lived, bonded with In, elimination of In solder deterioration 2-85988
- GaAlAs DH separated multilayer stripe geometry laser mode calcs. 2-85963
- GaAlAs DH shallow proton stripe geometry laser grown by MO-CVD 2-55206
- (GaAl)As DH visible lasers on p-GaAs substrate, reliable and mode-stabilised 2-55207
- (GaAl)As diode laser, linewidth broadening due to electron number fluctuations 2-60077
- GaAlAs double heterojunction sub-nanosec. laser (Chinese) 2-65245
- (GaAl)As gain guided lasers, analysis at threshold 2-75575
- (GaAl)As heterostructure laser formed by LPE, growth and dissolution kinetics, temp. programming effects 2-104187
- GaAlAs heterostructures on GaAs, simultaneous LPE method for multilayer structures in multislice boat 2-111100
- GaAlAs laser operating at 0.83 μ m, optical feedback-induced changes in output spectra 2-80957
- GaAlAs layers, localised transmutation doping by ²⁷Al(p, γ) ²⁸Si reaction 2-103792
- GaAlAs, metalorganic CVD, electronic defect levels study 2-71922
- GaAlAs Schottky barrier restricted laser 2-96977
- (GaAl)As semiconductor diode lasers, linewidth charact. 2-65230
- GaAlAs semicylindrical Zn-diffused stripe laser diodes 2-114278
- GaAlAs short-cavity laser fabricated by wet chemical etching 2-114279
- GaAlAs single-mode laser, dynamic wavelength tuning 2-55144
- GaAlAs solar batteries with radiative cooling concentrating systems optimal parameters determ. 2-99785
- GaAlAs transverse junction stripe lasers for 20 Gbit/s optical time multiplexing 2-81118
- GaAlAs visible laser, V-channelled substrate inner stripe, stabilised mode operation 2-55183
- GaAlAs visible wavelength terraced-substrate lasers 2-55157
- GaAlAs:Zn, variable gap semicond., photon transport of carriers, photoluminescence study 2-116256
- GaAlAs/GaAs DH lasers, self-sustained pulsation characts. (Chinese) 2-108874
- GaAlAs-GaAs, channelled substrate narrow stripe laser, expt. characterisation 2-96982
- (GaAl)As-GaAs DH lasers, narrow oxide stripe, lateral current spreading and diffusion problem 2-80964
- GaAlAs-GaAs DH lasers, large-scale utilisation (Czech) 2-114284
- n-GaAlAs-GaAs heterojunction interface, MBE grown, 2-D electron gas, tangential magnetoresist. study 2-77162
- GaAlAs-GaAs MOCVD grown wavelength division solar cells, fabrication and characts. 2-105572
- GaAlAs-GaAs transverse DFB cavity laser, room temp. operation 2-102817
- GaAlAs-GaAs-GaAlAs passive etalon, optical bistability obs. 2-102859
- Ga_{0.9}Al_{0.1}As_{0.7} CW room-temp. visible single quantum well diode laser grown by MOCVD 2-85960
- Ga_{0.9}Al_{0.1}As, growth by temp. gradient LPE with convective flow (Chinese) 2-111097
- Ga_{0.9}Al_{0.1}As, heterostructures, radiative recombination, efficiency and lifetimes 2-87833
- Ga_{1-x}Al_xAs, anharmonicity and disorder-induced effects, Raman study 2-57083
- Ga_{1-x}Al_xAs, electron drift mobility calcs. 2-77084
- Ga_{1-x}Al_xAs epitaxial layers and single crystals, anharmonicity and disorder-induced effects, Raman study 2-67052
- Ga_{1-x}Al_xAs, epitaxial layers, Hall mobility-drift mobility ratio, press. depend. 2-87431
- n-Ga_{1-x}Al_xAs for high sensitivity pressure sensors, resist. variation with press. 2-95338
- Ga_{1-x}Al_xAs, Hall electron mobility, scatt. parameters 2-115790
- Ga_{1-x}Al_xAs heterostructure diodes, laser irr., electroluminescence emission 2-82926
- Ga_{1-x}Al_xAs LPE layers, dislocations config. TEM study (Chinese) 2-67670
- Ga_{1-x}Al_xAs LPE layer, refractive index, surface reflection meas., 1.96 eV 2-93296
- Ga_{1-x}Al_xAs laser, high CW output power, lateral grating array 2-96974
- Ga_{1-x}Al_xAs laser FET monolithic IC, very high freq. operation 2-96969
- Ga_{1-x}Al_xAs, MOCVD grown, elec. props. of Se and Zn 2-98774
- Ga_{1-x}Al_xAs, radiative decay rate exponential distrib. 2-77583
- Ga_{1-x}Al_xAs single quantum well visible laser, MOCVD grown, low threshold and high efficiency obs. 2-96971
- Ga_{1-x}Al_xAs variable-gap optical filter with a controlled pass band 2-75665
- Ga_{1-x}Al_xAs:Be-GaAs p-p-n solar cells, Be diffused doping and elec. props. meas. 2-105557
- Ga_{1-x}Al_xAs:Si, Ge, LPE growth and doping, elec. and photolum. props. 2-116393

gallium arsenide continued

- Ga_{1-x}Al_xAs:Si, LPE layers, photon recycling, photoluminescence study 2-82897
- Ga_{1-x}Al_xAs:Sn layers, electron and γ -ray irr., elec. cond., press. effects (Russian) 2-104512
- Ga_{1-x}Al_xAs:Zn, metalorganic CVD film, elec. cond. 2-56733
- Ga_{1-x}Al_xAs-GaAs double heterostruct., laser annealed, electrolum. device performance 2-55158
- Ga_{1-x}Al_xAs-GaAs isotopic heterojunction, compact analytic model (French) 2-104474
- Ga_{1-x}Al_xAs/In_{1-x}Ga_xP on GaAs, LPE growth 2-99361
- Ga_{1-x}Al_xAs, MBE grown, persistent photocond. centres, capacitance spectroscopy meas. 2-98688
- (GaAs,Sb) active layers for (Al,Ga)As lasers, device characts. 2-90890
- GaAs, 1-D photoluminescence distrib. 2-77567
- GaAs DH laser, ultra-short light pulse generation by Nd:YAG laser controlled opto-electronic switch (Chinese) 2-90959
- GaAs metal Schottky barrier contacts, exptl. study 2-72057
- GaAs overlaid by Ag, surface and contact props. 2-92751
- p-GaAs, quantum wells, bound excitons, photoluminescence 2-104956
- p-GaAs, reduction of fast surface states 2-66602
- GaAs solar cells, formed by UV laser chem. doping 2-67853
- GaAs substrates and GaAs-Al_{0.5}Ga_{0.5}As DH epitaxial wafer, defects meas. by X-ray topography (Chinese) 2-67669
- GaAs, surface reconstruction, buckling, ionicity and π -bonded chains 2-92337
- GaAs, thermally oxidised, interface comp. studies using Auger depth profiling 2-78154
- GaAs vapour-phase transport on V-shape grooved GaAs substrate 2-99347
- GaAs:Ag(Au), LEC grown, DLTS study 2-98572
- GaAs:Al(P), ion implanted, radiation damage 2-115317
- n-GaAs:As, impurity profile, electroetching meas. 2-56001
- GaAs:B⁺ ion implanted, lattice damage profile, multilayer anal., ellipsometry study 2-92059
- GaAs:B(Se), depth profiling using spectroscopic ellipsometry 2-79647
- GaAs:Be, MBE layers, photoluminescence, excitonic features 2-116229
- GaAs:Be, p-type doping in metalorganic VPE, hole conc. and cond. 2-105089
- GaAs:Be MBE layers, photoluminescence, bound exciton lines 2-116228
- GaAs:Be(Mg)(Zn)(Cd), ion channelling, electronic stopping power, SIMS study 2-103867
- GaAs:Be(Si), channelling depth distrib. as function of implant energy and fluence 2-98125
- GaAs:C, site of substitutional C impurity, Fourier transform IR absorption study 2-91991
- GaAs:C layers, elec. props., and electron microscopy 2-61628
- GaAs:C(Ge) VPE layers, impurity characterisation, photoluminesc. study 2-93264
- GaAs:Cr, APR spectra, illum. effect 2-66898
- GaAs:Cr, charge transfer induced by press. 2-66484
- GaAs:Cr, deep level optical spectroscopy 2-71902
- GaAs:Cr, deep level photoluminescence, vacancies and annealing 2-99190
- GaAs:Cr, defect centre struct. photocapacitance study 2-104305
- p-GaAs:Cr, EPR identification of Cr³⁺ using appl. uniaxial stress 2-110629
- GaAs:Cr, exciton and subband-gap absorption, quenching and enhancement, acoustoelectric volt. spectroscopy 2-82235
- GaAs:Cr, Fe liquid encapsulated Czochralski cryst., SIMS 2-115270
- GaAs:Cr, generation of paramagnetic defects, EPR study 2-66906
- GaAs:Cr, horizontal Bridgman-grown for ion implantation, elec. characts. 2-115756
- GaAs:Cr, impurity levels, elec. cond., IR spectra and photocond. study 2-56485
- GaAs:Cr, ion implanted, annealing, Cr redistrib., SIMS study 2-76484
- GaAs:Cr, ion implanted, postannealed material state 2-103793
- GaAs:Cr, O, ion implanted, Cr redistribution and Cr-defect-O interactions, SIMS and TEM study 2-98149
- GaAs:Cr, optical absorpt. spectroscopy on Cr-related defects 2-57129
- GaAs:Cr, phonon scatt., tunnelling parameter, thermal cond. study 2-61086
- GaAs:Cr, photoconductivity, instability, mixed cond. anal. 2-72026
- GaAs:Cr, photoluminescence, Cr diffusion 2-99184
- GaAs:Cr, Se, hot implanted, effects of damage-impurity interaction on elec. props. 2-71990
- GaAs:Cr, semi-insulating, EPR of extended defects 2-87590
- GaAs:Cr, semi-insulating, photoelectrochem. etching and defect characterisation 2-98072
- GaAs:Cr, semi-insulating, Bridgman growth method, props. 2-98675
- GaAs:Cr, semi-insulating, inhomogeneities, scanning leakage current meas. 2-109800
- GaAs:Cr, semi-insulating, impurity modes, far-IR Fourier transform spectroscopy obs. 2-116214
- GaAs:Cr, Si, damage and Si lattice location studies 2-76479
- GaAs:Cr, Si, ion implanted, AlN capped annealing, carrier profiles 2-66023
- GaAs:Cr, Si, ion implanted, Hall effect, depth profiles (Slovak) 2-98669
- GaAs:Cr, Si implanted, thermally annealed, semi-insulating, deep levels 2-76966
- GaAs:Cr, Sn, Cr and Sn migration obs. during open tube diffusion 2-98343
- GaAs:Cr, spin dependent carrier capture, ODMR study 2-98998
- GaAs:Cr, with grain boundaries, elec. props. (Russian) 2-71989
- GaAs:Cr₂O₃, electron lifetime meas., photocond. and high field meas. 2-92655
- GaAs:Cr₂Si⁺, ion implanted semi-insulating substrate, carrier conc. uniformities meas. 2-98134
- GaAs:Cr₂Si⁺, Se⁺, Mn, ion implanted, Mn redistribution after annealing, SIMS study 2-86699
- GaAs:Cr (Cr₂O₃), supersaturated soln., precipitation processes, TEM study 2-92203
- GaAs:Cr relaxation semiconductors with thin-film contacts, props. 2-66636
- GaAs:Cr structures, semi-insulating, mag. field influence of the small signal impedance (Slovak) 2-61485
- GaAs:Cr surface states, two-beam transverse acoustoelec. spectroscopy study 2-82463
- GaAs:Cr²⁺, APR study 2-66897
- GaAs:Cr²⁺, deep levels, EPR spectra study 2-77365
- GaAs:Cr²⁺, substitutional impurities, dynamic Jahn-Teller theory 2-76995

gallium arsenide continued

- GaAs:Cr³⁺, zero-phonon optical absorpt. lines, dynamic Jahn-Teller model 2-57130
- GaAs:Cr-n-GaAs epitaxial layer junction, current limitation due to IR radiation obs. 2-66626
- GaAs:Cr(Si), semi-insulating, incorporation of anomalously large amounts of Si 2-98133
- GaAs:Cu, electron irradi., photoluminescence 2-61967
- p-GaAs:Cu, electron irradi., photoluminescence 2-87851
- GaAs:Cu, luminescence, deep centres in bound exciton form. 2-104960
- GaAs:Cu, recombination radiation band, piezospectroscopic study 2-77588
- GaAs:Fe, Cr, LEC grown, impurity densities and Fe(Cr) redistrib. 2-98146
- GaAs:Fe, LCAO calcs. of photoionisation of deep centre 2-104304
- GaAs:Fe(O), ion implanted and electron irradi., deep levels and electron traps, annealing 2-98584
- GaAs:Ge crystal, doping profiles, atomic absorpt. spectra meas. 2-109823
- p-GaAs:Ge LPE layer, electron diffusion length determ. by EBIC method 2-56736
- GaAs:Ge(Se), neutron transmutation doped, elec. props., metal-nonmetal transition 2-87284
- GaAs:Ge(Sn)(Se)(Zn), doping by vapour phase epitaxy, carrier Hall mobility (French) 2-98129
- GaAs:H, amorphous, photoinduced midgap absorpt. 2-72528
- GaAs:In, crystals and films, elec. props., isovalent impurities effect 2-82286
- GaAs:In, elec. cond., Hall effect and deep levels 2-115760
- GaAs:Mg, organometallic-VPE growth, doping control 2-87991
- GaAs:Mg(Ca), MBE, doping behaviour 2-92386
- GaAs:MgCr(Mn)(Fe), epitaxial layers, impurity redistrib., SIMS study 2-98344
- GaAs:N, radiation damage and near edge optical props. 2-71523
- GaAs:O, deep electron traps, elec. and optical props. 2-98585
- GaAs:O, determ. of O by ³He activation anal. 2-98147
- GaAs:O, impurity levels and photocond., temp. depend. 2-115817
- GaAs:S, ion implanted, elec. props., ion energy depend. 2-71999
- GaAs:S, ion implanted, elec. carrier and atomic profiles correlation 2-72000
- GaAs:S, ion implanted, elec. props. and impurity distrib. 2-98141
- GaAs:S, MOCVD epitaxial layer, S donors, photothermal ionisation study 2-98569
- GaAs:S, S diffusion, vacancy reduction effects, theory 2-115464
- GaAs:S, VPE (Chinese) 2-93435
- GaAs:Sb, crystals and films, elec. props., isovalent impurities effect 2-82286
- GaAs:Sb, LPE, Sb distrib. 2-104182
- GaAs:Se, ion implanted, pulse diffused n⁺ layers form. using As₂Se₃ diffusion source 2-55998
- GaAs:Se, ion implanted, carrier props. and photolum. meas. (Korean) 2-56585
- GaAs:Se implanted, dose depend. of epitaxial regrowth 2-56378
- GaAs:Se implanted layer, low temp. annealing, Rutherford backscatt. channelling study 2-71818
- GaAs:Se⁺, ion implanted, transient annealing using graphite strip heater, elec. cond. study 2-82348
- GaAs:Se⁺, ion implanted, high temp. annealed, damage, defects and elec. props. 2-98097
- GaAs:Si, Ar, ⁴⁰Ar implant pretreatment, ²⁸Si implanted n layer, carrier mobility and activation efficiency 2-91995
- GaAs:Si, bulk Bridgman crystals, O related gettering of Si during growth 2-61005
- GaAs:Si, defect struct., effect of annealing Zn and Cu diffusion 2-55976
- GaAs:Si, disordered, optical detection of multiple trapping relax. 2-72005
- GaAs:Si, donor states, photothermal ionisation spectra study 2-98767
- GaAs:Si, heavily doped, electron scatt. 2-92652
- GaAs:Si, highly doped, MOVPE grown, photolum., SIMS and Hall meas. 2-77568
- GaAs:Si, interface struct. between Ga facet grown region and normal region (Chinese) 2-110167
- GaAs:Si, ion implantation, elec. props., for dual gate MESFET (Chinese) 2-109817
- GaAs:Si, ion implanted, surface polaritons, frustrated internal refl. spectra study 2-71886
- GaAs:Si, ion implanted rad. damage, X-ray rocking curve study 2-66075
- GaAs:Si, ion implanted and proton irradi., deep levels, laser beam annealing 2-98587
- GaAs:Si, ion-implanted, laser annealing effects 2-103811
- GaAs:Si, low dose implants, CW laser annealing 2-56028
- GaAs:Si, Sn epitaxial films, double doping effect on defects 2-76867
- GaAs:Si, study of encapsulation for annealing 2-77082
- GaAs:Si, thermally stimulated optical absorpt., impurity level spectroscopy 2-104292
- GaAs:Si epitaxial layers, multilevel doping using single AsCl₃/SiCl₄ doping source 2-55994
- GaAs:Si LPE layer, photolum. and carrier conc. (Russian) 2-99174
- GaAs:Si quantum well, degenerately doped, stimulated emission, luminescence 2-65215
- GaAs:Si-GaAs:Be n-i-p superlattice, tunable band gap, theory and expt. study 2-110458
- GaAs:Si(B)(O), unintentional and intentional doping 2-98132
- GaAs:Si(Be) artificial doping superlattices, MBE growth, elec. and optical props. 2-92735
- GaAs:Si(Cd), positron annihilation at low temp. 2-62009
- GaAs:Si(Sn), ion implanted, Raman spectra study 2-110837
- GaAs:Sn, ion implanted, surface accumulation after laser beam annealing, Rutherford backscattering study 2-61006
- GaAs:Sn, ion implanted, laser annealed, TEM study 2-66050
- GaAs:Sn, nucleation effects during MBE growth 2-76845
- GaAs:Sn, Te MBE layer, doping using SnTe source 2-92004
- GaAs:Sn LPE layer, deep level free-to-bound fluorescence line shapes 2-77564
- GaAs:Te, Cu contamination during heat treatment, photolum. study 2-91993
- GaAs:Te, defect struct. after Cd diffusion 2-103762
- n-GaAs:Te, degree of electronic compensation, laser IR microscopy 2-67043
- GaAs:Te, implanted, laser annealed, metastable Te donor conc., expt. study 2-56025
- GaAs:Te, MBE grown, elec. cond. and photoluminesc. props. meas. 2-56734

gallium arsenide continued

- GaAs:V, photoluminesc., optical absorpt., and ESR study 2-82916
- GaAs:Zn, Cd, hot photoluminescence spectrum and polarisation 2-82894
- GaAs:Zn, ion implanted, depth distrib., annealing, SIMS and Rutherford backscattering obs. 2-56000
- GaAs:Zn, ion implanted, laser annealing, expt. study 2-61024
- GaAs:Zn, Zn diffusional doping, open-tube method 2-104060
- GaAs:Zn(Cu), F- and C-centres, vibr. props., Green's function calc. 2-86811
- GaAs/Al_{0.3}Ga_{0.7}As interface, MBE grain, deep levels obs. 2-56463
- GaAs/Ga_{1-x}Al_xAs solar cell fabrication using VPE, performance evaluation 2-73124
- GaAs/GaAlAs lasers nonplanar structures fabrication, by metalorganic chemical vapour deposition 2-85958
- GaAs/GaAlAs W-shaped diffused stripe DH lasers grown by metal-organic CVD 2-65232
- GaAs/GaAsAl solar cells, technology, characts. (Spanish) 2-99799
- GaAs/Sb interface, elastic low-energy electron diff. 2-76842
- GaAs/(AlGa)As heterojunction, modulation doped, intersubband scatt. 2-61573
- GaAs/(AlGa)As heterostructures, plasma dispersion in a layered electron gas 2-104276
- GaAs/(AlGa)As twin-mesa laser integrated with passive waveguide, controllable single mode operation 2-55209
- GaAs-Ag interface, formation, struct., electronic states 2-104485
- GaAs-Al contact elec. and physical characts., GaAs surface comp. effect (Ukrainian) 2-104124
- GaAs-Al single crystal microjunctions by MBE 2-82456
- GaAs-Al struct., exciton dissociation and annihilation, photo-EMF study 2-82250
- GaAs-Al_{0.36}Ga_{0.64}As DH laser, temp. depend. of lasing characts. 2-80965
- GaAs-Al_{0.3}Gd_{0.7}As DH lasers, near field spectrum (Chinese) 2-65219
- GaAs-Al_{0.3}Ga_{0.7}As heterojunction, modulation doped, two-dimens. electron gas, intersubband scatt. obs. 2-110457
- GaAs-Al_{0.3}Ga_{0.7}As modulation doped heterostruct., 2D electron gas transport props. meas. 2-98739
- GaAs-Al_{0.3}Ga_{0.7}As heterojunction FET, 2-D electron gas, quantum galvanomagnetic props. 2-56686
- GaAs-Al_{0.3}Ga_{0.7}As heterojunction FET, 2-D electrons, far-infrared cyclotron resonance 2-56941
- GaAs-Al_{0.3}Ga_{0.7}As heterostructure, Hall resist. meas., fine struct. const. determ. 2-58777
- GaAs-Al_{0.3}Ga_{0.7}As heterojunctions, zero-resistance state of two-dimensional electrons in a quantizing magnetic field 2-61570
- GaAs-Al_{0.3}Ga_{0.7}As heterostructure, cyclotron and plasmon emission from two-dimens. electrons 2-61770
- GaAs-Al_{0.3}Ga_{0.7}As heterojunction, two-dimens. electron system, magneto-phonon reson. obs. 2-98734
- GaAs-Al_{0.3}Ga_{0.7}As multilayer struct., electron-LO phonon modes, Raman scatt., theory 2-110825
- GaAs-Al_{0.3}Ga_{0.7}As quantum well struct., single particle and collective excitations temp. and incident light intensity depend. 2-61920
- GaAs-Al_{0.3}Ga_{0.7}As quantum well structs., extrinsic photoluminesc. 2-82912
- GaAs-Al_{0.3}Ga_{0.7}As quantum well heterostructure lasers, band struct., high press. effects 2-85971
- GaAs-Al_{0.3}Ga_{0.7}As solar cells with various types of concentrating systems 2-99788
- GaAs-Al_{0.3}Ga_{0.7}As stripe geometry heterolasers, power-current characts., bleaching effects 2-114283
- GaAs-Al_{0.3}Ga_{0.7}As:Si, heterojunction barriers, elec. transport and MBE growth 2-82448
- GaAs-Al_{0.3}Ga_{0.7}As-GaAs double heterojunction, p⁺-n-n⁺ diode, for high temp. electronic app. 2-77163
- GaAs-AlAs (001) superlattice, electronic band struct. 2-61572
- GaAs-AlAs p-n structures, voltage relax. and electrolum. intensity 2-92741
- GaAs-AlAs p-n structures, recombination current meas. at fivefold charge centres in space charge layer 2-82450
- GaAs-AlGaAs avalanche photodetector, single-carrier-type dominated impact ionisation 2-84701
- GaAs-AlGaAs diode laser coupled to external resonator of narrow spectral bandwidth, bistable operation 2-108881
- GaAs-AlGaAs heterojunctions, 2D-electron gas, f-factor enhancement, Shubnikov-de Haas oscils. 2-56685
- GaAs-AlGaAs heterojunction, zero-resistance state and quantised Hall effect 2-61491
- GaAs-AlGaAs heterojunctions and multiple quantum well heterostructs., doped, reson. inelastic light scatt. 2-61919
- GaAs-AlGaAs heterojunction, 2-D electron gas, cyclotron resonance of photoconductivity 2-66920
- GaAs-AlGaAs heterojunction, two-dimensional magnetotransport in the extreme quantum limit 2-82376
- GaAs-AlGaAs heterojunctions solar cells at high level of optical excitation 2-116832
- GaAs-AlGaAs heterostruct., mobility calc. of two-dimensional electron gas at 4.2 K 2-66628
- GaAs-AlGaAs heterostructures grown by MBE and their application to devices (Japanese) 2-87380
- GaAs-AlGaAs injection laser with double strip contact, waveguide props. of active region 2-85972
- GaAs-Au interface, solid state reactions, cryst. struct. and microstruct. correlation 2-115616
- GaAs-AuGeNi ohmic contacts, characts. 2-66637
- GaAs-Cl₂ system, complex heterogeneous equilibria 2-97954
- GaAs-Cr₂N₃(Si₃N₄), interface polar exciton, variational calc. (Russian) 2-76940
- GaAs-Ga interface formation, electronic props., photoemission LEED and Auger study 2-98744
- GaAs-Ga_{1-x}Al_xAs, quantum well struct., energy spectrum of donors, effective mass theory 2-56664
- GaAs-Ga_{1-x}Al_xAs, superlattices, mobility tensor (French) 2-104475
- GaAs-Ga_{1-x}Al_xAs DH laser, deep level luminescence spectra (Chinese) 2-65217
- GaAs-Ga_{1-x}Al_xAs double heterojunction laser, deep level luminesc. 2-102790
- GaAs-Ga_{1-x}Al_xAs multiquantum well struct., band edge absorpt. and gain spectra after short pulse excitation 2-62003
- GaAs-Ga_{1-x}Al_xAs quantum well struct., donor states, effective mass approx. 2-110459
- GaAs-Ga_{1-x}Al_xAs superlattice etalon, room temp. excitonic optical bistability obs. 2-97074

gallium arsenide continued

- GaAs-Ga_{1-x}Al_xAs:H multiple quantum wells, impurity photoluminescence 2-104955
- GaAs-Ga_{1-x}Al_xAs_{1-y}P_y heterostructure lattice matching rel. to laser fabrication (Chinese) 2-66375
- GaAs-Ga_{1-x}In_x-P DH, interface recomb. and carrier confinement study 2-77605
- GaAs-GaAlAs curved rib waveguides, bending loss minimisation, ion beam milling fabrication 2-75676
- GaAs-GaAlAs DH injection laser, 200 Mb/s modulation expt. (Chinese) 2-55223
- GaAs-GaAlAs DH laser diode obs. (Chinese) 2-90887
- GaAs-GaAlAs graded refractive index separate confinement heterostructure laser grown by organometallic VPE 2-96975
- GaAs-GaAlAs low-threshold oxide stripe lasers grown by MOCVD 2-85959
- GaAs-GaAlAs multilayers, high field magneto-transport, spin splitting, g-factors 2-56684
- GaAs-GaAlAs multiple quantum well lasers grown by MO-CVD, far-field radiation patterns 2-114271
- GaAs-GaAlAs quantum wells, exciton binding energy 2-115668
- GaAs-GaAlAs superlattices, phonon-limited near equilib. transport 2-56680
- GaAs-GaAlAs superlattice, doped quantum wells, wavevector-freq. depend. dielec. const. 2-104279
- GaAs-GaAlAs-GaAs rectifying structures fabricated by metalorganic CVD composition grading 2-115871
- GaAs-GaAs_{0.7}P_{0.3} superlattice, strained layer, lattice mismatched, electronic struct., tight binding calc. 2-66631
- GaAs-III-V-VI semiconductor homogeneous solid solutions, physico-chemical props., transfer effects 2-87260
- GaAs-InAs(100) heterojunction, MBE growth, lattice disorder, Rutherford backscatt. and channelling study 2-110202
- GaAs-insulating film interface, MESFET struct., elec. and optical props. 2-110486
- n-GaAs-metal interfaces, physical characts. (Chinese) 2-66634
- GaAs-n-AlGaAs heterojunction, real-space transfer oscillator 2-66625
- GaAs-oxide interface electronic struct. 2-87409
- GaAs-oxide interface states, two-beam transverse acoustoelec. spectroscopy study 2-82463
- GaAs-Se(S), comparison of H₂S and H₂Se n-type doping by MOCVD 2-103800
- GaAs-Si₃N₄ interface quality improvement by surface treatment and annealing 2-110487
- GaAs-Si-Ge split spectrum triple solar cell system, design and performance 2-83477
- GaAs-W(Ta)(Re)(Ir)(Mo), refractory contacts, interface reactions and Schottky barrier form. 2-110444
- GaAs-YIG layered struct., magnetostatic surface wave amplification 2-115988
- GaAs-ZnSe heterostructure, photosensitivity spectra and luminesc. 2-92691
- GaAs_{1-x} solid soln., photoluminesc. obs. for X<0.01 2-61972
- GaAs(Ge), MBE grown, deep levels and photoluminesc., MBE As₂/As₄ flux ratio effects 2-99341
- (GaAs)_{1-x}Ge_x single-crystal metastable alloys, growth and optical props. 2-116360
- GaAsP, composition modulated, electron microscopy intensity distrib., moire fringe images 2-97873
- GaAsP, deep level studies on traps showing nonexponential kinetics 2-115689
- GaAs_{0.2}P_{0.8}, resonant Raman scatt. 2-87754
- GaAs_{0.35}P_{0.65}N VPE LEDs, deep centre studies by photocapacitance method 2-56637
- GaAs_{0.6}P_{0.4}Te, electron trap spectrum obs. by DLTS and transient capacitance meas. 2-87302
- GaAs_{1-x}P_x epilayer, minority carrier lifetime and diffusion length, EBIC method in SEM 2-98667
- GaAs_{1-x}P_x, minority carrier lifetime meas. using SEM with intensity modulated electron beam 2-87301
- GaAs_{1-x}P_xN, temp. depend. of luminescence intensity 2-82930
- GaAs_{1-x}P_xO, point defect induced electronic struct., calc. method 2-76981
- GaAs_{1-x}P_xO₂, electronic struct. induced by short-ranged defects, calc. method 2-104296
- GaAs_{1-x}P_xTe(Si), donor states, impurity optical absorpt. spectra study 2-82287
- n-GaAs_{1-x}P_x/Au Schottky diodes, barrier height depend. on energy gap 2-61551
- GaAsP_{1-x}GaP strain-layer superlattice, MOCVD growth and photoluminesc. props. 2-98729
- GaAsP_{1-x}GaP strained-layer superlattice, electronic struct., tight-binding and effective mass models 2-110454
- GaAsP_{1-x}GaP strained-layer superlattice, MOCVD growth and photoluminesc. props. 2-110919
- GaAs_{1-x}Sb_x LPE layer, carrier mobility and photolum., composition depend. 2-77214
- GaAsSb_{1-x} LPE growth on InAs substrates 2-88010
- GaInAs epitaxial layer device type structures, defects 2-71461
- Ga_{0.47}In_{0.53}As, conduction band Γ-L separation, UPS study 2-61344
- Ga_{0.47}In_{0.53}As high mobility thin epitaxial layers grown by MBE 2-115585
- Ga_{0.47}In_{0.53}As, MBE grown, Si doping and elec. props. meas. 2-92005
- n-Ga_{0.47}In_{0.53}As, quasi-Schottky barrier diode using fully depleted p⁺-Ga_{0.47}In_{0.53}As layer, MBE growth 2-56668
- Ga_{0.47}In_{0.53}As, VPE growth and charact. for microwave device appls. 2-83043
- p-Ga_{0.47}In_{0.53}As:Zn-SiO₂ MIS struct., interface states and field effects meas. 2-98758
- Ga_{0.47}In_{0.53}As-Al_{0.49}In_{0.51}As modulation doped heterostruct., current transport meas. at moderate elec. fields 2-82446
- Ga_{0.47}In_{0.53}As-InP heterojunction, 2D electron gas, quantum oscills., magnetoresistance study 2-110466
- Ga_{0.47}In_{0.53}As-InP LP-MO CVD superlattices, two-dimensional electron gas props. 2-66629
- Ga_{1-x}In_xAs epitaxial layers, Raman spectra 2-82934
- Ga_{1-x}In_xAs majority carrier photodetectors with large gain-bandwidth products 2-95474
- Ga_{1-x}In_xAs Ge LPE layers, doping profiles, atomic absorpt. spectra meas. 2-109823

gallium arsenide continued

- Ga_{1-x}In_xAs films, vapour growth from In/Ga alloy source, characterisation 2-99351
- (Ga_{1-x}In_x)As nonlinear adaptive optics approaches at 1.3 μm 2-90997
- Ga_{1-x}In_x-As-GaAs n-n⁺ heterojunction, Schottky diode and photodetector appl. 2-115869
- GaInAsP epitaxial layer device type structures, defects 2-71461
- GaInAsP groove laser on semi-insulating InP using laterally diffused junction 2-75595
- GaInAsP laser with new gain guiding struct., transverse and longit. mode operation 2-102797
- GaInAsP low press. MOCVD growth, for microwave device and optoelectronic device appl. 2-98496
- GaInAsP low threshold current CW operation of multiple infill buried heterostruct. 1.3 μm lasers 2-65247
- GaInAsP/InP 1.6 μm BH laser, wavelength var. due to direct modulation 2-55225
- GaInAsP/InP laser, monolithic integration with InP MISFET, LPE growth 2-65242
- GaInAsP-InP 1.3 μm DH, LPE (Chinese) 2-93449
- GaInAsP-InP 1.5 μm DBR lasers with built-in optical waveguide, room temp. operation 2-75593
- GaInAsP-InP 1.55 μm distributed Bragg reflector integrated laser directly coupled to external waveguide 2-60117
- GaInAsP-InP BH 1.5 μm lasers fabricated by hybrid combination of LPE and VPE 2-60101
- GaInAsP-InP BH integrated laser with butt-jointed built-in DBR waveguide, 1.6 μm CW operation 2-80987
- GaInAsP-InP buried heterostruct. laser fabrication 2-60095
- GaInAsP-InP DH lasers, combined dry and wet etching techniques to form planar (011) facets 2-60100
- GaInAsP-InP DH laser with monolithically integrated passive waveguide, LPE regrowth 2-60118
- GaInAsP-InP DH laser on semi-insulating InP substrate with terrace struct. 2-75591
- GaInAsP-InP DH lasers, MBE grown, 1.3 micron 2-114273
- GaInAsP-InP integrated twin guide DBR laser emitting at 1.55 μm, low threshold current 2-60119
- GaInAsP-InP integrated optical devices, etched mirrors, grooves and surfaces using spot-etch crystal planes 2-60264
- GaInAsP-InP mesa lasers, low threshold 2-114272
- GaInAsP-InP surface emitting injection laser with short cavity length 2-75594
- Ga_{0.1}In_{0.9}As_{0.45}P_{0.55}, heterostructures, radiative recombination, efficiency and lifetimes 2-87833
- Ga_{1-x}In_xAs_{1-y}P_y LED, spontaneous emission efficiency and nonradiative recombination meas. at 1.58 μm 2-116220
- Ga_{1-x}In_xAs_{1-y}P_y, epitaxial layer, charact. of electron-pumped lasers 2-75577
- Ga_{1-x}In_xAs_{1-y}P_y, effects of two longitudinal optical phonon modes on electron distrib. 2-82349
- Ga_{1-x}In_xAs_{1-y}P_y lasers, pressure dependence of threshold current 2-90889
- Ga_{1-x}In_xAs_{1-y}P_y lattice matched to InP, band struct., disorder bowing calc. 2-98541
- Ga_{1-x}In_xAs_{1-y}P_y VPE growth and charact. for microwave device appls. 2-83043
- Ga_{1-x}In_xP_{1-y}, internal strain determ. using Vegard's law 2-103709
- GaInPAs/InP heterostructure LED service life, 1.2-1.3 μm range 2-60082
- GaInPAs-InP mesastructure heterojunction lasers buried in InP or GaInPAs, radiation mode composition 2-60083
- GaInPAs/InP heterojunction lasers, service life, 1.2-1.3 μm range 2-60082
- GaN-GaAs MIS capacitors, interface states characts., G-V, C-V and transient capacitance anal. 2-92776
- n⁺GaP-i-Al_{0.4}Ga_{0.6}As:Cr(Fe)-M structures, I-V characts. 2-104477
- GaP_{1-x}As_x, phonon line shape and disorder correl. 2-56127
- GaPAs_{1-x} filamentary crystals, strain meas. props. and piezoelectric effect (Russian) 2-66992
- GaS:Cr, impurity redistribution after implantation with Ga₂As₂O, SIMS and TEM study 2-115276
- GaS:O relaxation semiconductors with thin-film contacts, props. 2-66636
- GaSb(InAs)-Ga_{1-x}In_xAsSb_{1-y} heterostructure LED, moisture transducer appl. 2-79594
- Ge-GaAs, (110) and (111), MBE grown, interface morphology, RHEED study 2-98470
- Ge-GaAs (100) heterojunction, MBE growth, surface processes, LEED and photoemission study 2-110203
- Ge-GaAs (110) heterostructures, electronic props. and chem. comp., low-energy EELS study 2-93339
- Ge-GaAs (110) interface, amorphous and cryst. films, electronic struct., XPS study 2-110456
- Ge-GaAs (110) interface electron states, polarisation dependent UPS study 2-110455
- Ge-GaAs heterojunction, work function, interface state effect (French) 2-61559
- Ge-GaAs interface, two-dimens. electron states, light scatt. study 2-110885
- (In, Ga)(As, P) lasers at 1.3 μm, anomalous effect of carriers on dielec. const. 2-102791
- In-GaAs-P/InP system, improved LPE techniques for low threshold lasers at 1.55 μm 2-99357
- p-In_{0.53}Ga_{0.47}As epitaxial layers, minority carrier high field transport meas. 2-82493
- InAs-GaAs, heterojunction band discontinuities, MBE growth, XPS study 2-77166
- InGaAlAs-InGaAs, multilayer avalanche photodiode low noise detector for 1.3 μm fibre optic systems 2-53833
- In_{1-x-y}Ga_xAl_yAs lattice matched to InP, band-gap energy and electron effective mass, comp. depend. 2-115650
- InGaAs MBE layers, energy gap calc. using Phillips Van Vechten dielec. model, photoluminesc. 2-61939
- InGaAs MIS diode, C-V characts., composition depend. 2-77188
- InGaAs, metalorganic VPE growth on InP substrate 2-61309
- InGaAs:Te, VPE growth for photodetectors 2-111086
- InGaAs-InP avalanche photodiodes for long wavelength optical fibre systems, review 2-81117
- InGaAs-InP p⁺-n heterojunctions, fabrication and charact. 2-99362
- InGaAs-InP photodetectors for the near infrared spectrum (German) 2-84704
- In_{0.53}Ga_{0.47}As, Be⁺ ion implantation 2-55989
- In_{0.53}Ga_{0.47}As, electron drift velocity meas. at high elec. fields 2-66567

gallium arsenide continued

- p-In_{0.53}Ga_{0.47}As film, high field transport characts. of minority electrons 2-98699
- p-In_{0.53}Ga_{0.47}As, hot-carrier relax. 2-57141
- In_{0.53}Ga_{0.47}As integrated pin/FET photoreceiver, 1-1.7 μm 2-74503
- In_{0.53}Ga_{0.47}As, LPE growth on structured InP substrates 2-105093
- In_{0.53}Ga_{0.47}As, lattice defects detection using selective photoetching 2-103763
- In_{0.53}Ga_{0.47}As surfaces (100), peroxide etch chemistry 2-111515
- In_{0.53}Ga_{0.47}As:Be, Si, ion implanted, n⁺ layers, sheet resist., electron mobility and conc. 2-66022
- In_{0.53}Ga_{0.47}As:Si, n-layer formation by Si implantation 2-92001
- In_{0.53}Ga_{0.47}As/InP heterostruct. avalanche photodiodes, deep levels 2-110284
- In_{0.53}Ga_{0.47}As-In_{0.48}Al_{0.52}As interface, MBE grown, two-dimens. electron gas 2-98730
- In_{0.53}Ga_{0.47}As-InP heterojunction, two-dimensional electron gas study 2-77161
- In_{0.53}Ga_{0.47}As-InP heterojunction, modulation doped, quantum Hall effect 2-110464
- In_{0.53}Ga_{0.47}As-InP photoconductive detector, pulse dispersion and preheating effects 2-115765
- In_{0.53}Ga_{0.47}As-InP undoped VPE layers, photoluminesc. meas. 2-99167
- In_{0.77}Ga_{0.23}As, lattice-mismatched MBE growth on InP 2-57296
- In_{0.77}Ga_{0.23}As, concentrated, laser recrystn., solute redistribution, AES study 2-56014
- In_{0.77}Ga_{0.23}As system, alloy scatt., elec. cond. and Hall coeff. meas. 2-92627
- InGaAsP (E_g \geq 1.15 eV) layers, growth by LPE under P overpressure 2-67226
- InGaAsP (InGaAs) LPE layers, room temp. electron diffusion lengths 2-56730
- InGaAsP buried heterostruct. laser, elec. derivative characteristics and equivalent circuit model 2-65227
- InGaAsP DH lasers, shunt current and excess temp. sensitivity of I_{th} and η_{ext} 2-96948
- InGaAsP DH laser diodes, very short wavelength (621.4 nm) pulsed operation 2-108876
- InGaAsP DH RF-modulated diode laser, picosecond optical pulse generation 2-114277
- p-InGaAsP diode lasers, radiative and Auger recomb. rates meas. 2-102792
- InGaAsP heterostructure lasers coupled to InGaAsP waveguides, monolithic integration 2-55188
- InGaAsP injection laser, mode spectra and single-longit.-mode power depend. on cavity length 2-85968
- InGaAsP LPE layers, melt-carry-over 2-98473
- InGaAsP LPE on InP, growth temp. and impurity doping effect on comp. 2-98482
- InGaAsP laser, optically pumped, tunable CW mode-locked action 2-65233
- InGaAsP lasers, Auger recomb. rate 2-114276
- InGaAsP lasers, interband Auger recomb. 2-80967
- InGaAsP low threshold channelled substrate buried crescent DH lasers for 1.55 μm communication 2-102822
- InGaAsP MIS diode, C-V characts., composition depend. 2-77188
- InGaAsP, optical props. meas., angle of incidence reflectance spectroscopy appl. 2-53847
- InGaAsP, optically pumped semiconductor platelet lasers, tunable CW laser action 2-114290
- InGaAsP platelet laser, optically pumped 2-55191
- InGaAsP, refr. index at energies below direct band edge 2-110800
- InGaAsP relationship between struct. and props. 2-71486
- InGaAsP, semicond. laser for optical transmission appl. (German) 2-55151
- InGaAsP short-cavity injection lasers with one high-reflectivity mirror 2-114275
- InGaAsP sources and detectors for the 1.0-1.7 μm wavelength range 2-95467
- InGaAsP tunable thin-film laser, Nd:YAG laser pumped, for high bandwidth fibre spectral meas. 2-65248
- InGaAsP:Zn(Cd), acceptor impurities, photoluminescence study 2-99189
- InGaAsP/GaAs superlattice struct., hydride VPE growth 2-99352
- InGaAsP/InGaP visible laser diodes, CW operation 2-99352
- InGaAsP/InP DFB lasers, 1.5 μm range 2-102794
- InGaAsP/InP DH, nature of electron leakage 2-87377
- InGaAsP/InP DH, photolum. intensity 2-87881
- InGaAsP/InP DH laser diodes for 1.3 and 1.55 micron operation 2-55205
- InGaAsP/InP DH stripe geometry lasers using proton-defined LPE-grown wafers (Chinese) 2-65244
- InGaAsP/InP DH wafer, chem. etching characts. 2-88242
- InGaAsP/InP double heterostruct. lasers, aged, TEM obs. of dark defects 2-55143
- InGaAsP/InP double heterostructs. on InP, large area LPE growth 2-99358
- InGaAsP/InP dual-wavelength BH laser, expt. study 2-75590
- InGaAsP/InP lasers, with chemically etched mirrors 2-75596
- InGaAsP/InP misfit dislocations, photoluminescence, TEM and etching study 2-98109
- InGaAsP-InP 1.3 μm laser diodes, loss mechanism characterisation by acoustic and optical meas. 2-80947
- InGaAsP-InP 4 Gbit/s multiplexer and laser, 1.3 micron, direct modulation 2-114274
- InGaAsP-InP BH distributed feedback laser, 280 Mbits/s single mode fibre transmission 2-60255
- InGaAsP-InP BH laser, 1.3 μm , hole-burning at high energy tails in spontaneous emission spectra 2-75569
- InGaAsP-InP BH laser under high current operation, output power saturation 2-80953
- InGaAsP-InP buried heterostructure laser reliability, degradation modes 2-80946
- InGaAsP-InP DH laser structures, effective refr. index and first-order-mode cutoff conditions 2-75576
- InGaAsP-InP DH 1.3 μm laser, temp. depend. of lasing characts. 2-80965
- InGaAsP-InP DH lasers, rapid degradation obs. due to (110) dark line defects 2-85983
- InGaAsP-InP DH 1.3 μm laser, doping effects exam. by SEM and V-I characts. (Chinese) 2-90885

gallium arsenide continued

- InGaAsP-InP DH laser, accelerated facet degradation obs. in water 2-90893
- InGaAsP-InP DH LED, aged, dark defects 2-91974
- InGaAsP-InP DH lasers with inhomogeneous excitation, optical bistable-switching operation 2-102796
- InGaAsP-InP DH lasers, self-aligned structures 2-114281
- InGaAsP-InP dual-wavelength buried heterostruct. laser array emitting at 1.26 and 1.55 μm 2-75592
- InGaAsP-InP heterostructure, luminescence method of determ. elastic stresses 2-104957
- InGaAsP-InP LEDs, prep. and props. of monolithically integrated lenses 2-114473
- InGaAsP-InP LPE grown wavelength division solar cells, fabrication and characts. 2-105572
- InGaAsP-InP laser, asymmetric longitudinal mode competition, mechanism 2-60076
- InGaAsP-InP laser, intensity noise under influence of reflection and modulation 2-80950
- InGaAsP-InP layers, catastrophic degradation, laser induced 2-61022
- InGaAsP-InP long-wavelength detectors, 1.3 to 1.55 μm , for fibre optics 2-53840
- InGaAsP-InP single-mode buried waveguide structures grown on channelled (111)B InP substrates 2-114421
- InGaAsP-InP stripe geometry DH laser, bistability and differential gain characts. 2-80948
- InGaAsP-InP stripe geometry DH lasers, spatial hole burning, self-consistent soln. 2-90892
- InGaAsP-InP system, etch rates for material selective etching 2-72856
- InGaAsP-InP V-grooved substrate BH laser with smooth far field pattern and stable ageing characts. 2-80985
- InGaAsP-InP V-grooved substrate BH laser, fabrication by one-step epitaxy 2-80995
- InGaAsP-InP wavelength division solar cells, homojunction and heteroface struct. 2-83476
- In_{0.48}Ga_{0.52}As_{0.99}P_{0.01} lattice matched to GaAs, LPE from In melt rich in P, photoluminesc. obs. 2-88008
- In_{1-x}Ga_xAs_{1-y}P_y, buried crescent laser, internal loss meas. at 1.3 μm 2-114269
- In_{1-x}Ga_xAs_{1-y}P_y, double carrier confinement heterojunction laser, high temp. stability operation 2-114299
- In_{1-x}Ga_xAs_{1-y}P_y, epitaxial layer, X-ray rocking curve in symm. Bragg case 2-115584
- In_{1-x}Ga_xAs_{1-y}P_y, low temp. LPE on InP, immiscible domain 2-98494
- In_{1-x}Ga_xAs_{1-y}P_y, solid solns., band gap, comp. depend. 2-92462
- In_{1-x}Ga_xAs_{1-y}P_y:Cd(Zn) LPE junction laser, SEM, EBIC study 2-102821
- In_{1-x}Ga_xAs_{1-y}P_y-InP laser with grooved transverse junction, high-power single-mode operation 2-96970
- In_{1-x}Ga_xAs_{1-y}P_y-InP V-grooved substrate BH 1.3 μm laser, aging tests 2-114303
- In_{1-x}Ga_xAs_{1-y}P_y LPE layer, energy gap and alloy scatt. mobility, meas. and dilec. model 2-98542
- In_{1-x}Ga_xAs_{1-y}P_y lasers and LEDs, Auger recombination 2-55160
- In_{1-x}Ga_xAs_{1-y}P_y laser, facet degradation and passivation, AES study 2-90920
- In_{1-x}Ga_xAs_{1-y}P_y, low field mobility and thermoelectric power, scatt. mechanisms 2-82362
- In_{1-x}Ga_xAs_{1-y}P_y-InP LPE layers, strain anal. and optical props. meas. 2-66392
- In_{1-x}Ga_xAs_{1-y}P_y-GaAs_{1-y}P_y (100), LPE growth and pulsed room temp. laser operation 2-90926
- In_{1-x}Ga_xAs_{1-y}P_y, antisite defects, deep levels, alloy composition depend. 2-110297
- In_{1-x}Ga_xAs_{1-y}P_y LPE layers, lattice matched to InP, comp. modulation, expt. study 2-87084
- p-In_{1-x}Ga_xAs_{1-y}Mn epitaxial layers, doping characts., elec. and luminesc. props. 2-76866
- In_{1-x}Ga_xAs_{1-y}Py BH laser on mesa substrate, lasing props. meas. 2-114305
- In_{1-x}Ga_xAs_{1-y}Sb, solid soln., LPE growth, unstable comp. regions, regular soln. approx. 2-92204
- InGaP/GaAs superlattice struct., hydride VPE growth 2-99352
- InGaPAs, calc. of miscibility gap with strictly regular solution approx. 2-86875
- InGaPAs/InP DHS lasers, selective chemical etchant 2-55201
- InGaPAs_{0.01}Zn(Te)(Se) LPE layer on GaAs, doping effect on physical, elec. and optical props. 2-110501
- In_{1-x}Ga_xP_{1-y}As_y, high purity, LPE growth 2-93459
- In_{1-x}Ga_xP_{1-y}As_y-GaAs, reproducible LPE growth by P vapour control on substrate 2-88007
- In_{0.53}Gd_{0.47}As:Te degenerate LPE layers, electron mobility 2-61620
- InP/InGaAsP double heterogeneous epitaxial wafers, stress induced defect migration 2-92287
- InP-Ga_{0.47}In_{0.53}As-InP DH epitaxial layers, chem. interface width and struct., Auger meas. technique 2-87086
- InP-Ga_{0.47}In_{0.53}As_{1-y}Py heterostructure LED, moisture transducer appl. 2-79594
- InP-InGaAsP DH with 40% external luminesc. quantum efficiency 2-77591
- InP-InGaAsP planar heterostructure avalanche photodiodes, multiplication noise 2-56675
- InP-InGaAsP-InGaAs struct., LPE growth, lattice defects study 2-71454
- InP-InGaAsP-InP DH wafer, LPE grown, misfit dislocations 2-98096
- In_{2-x}Sn_xO_{3-x}GaAs:Be heterojunction solar cell, AES and EBIC evaluation 2-78214
- Nb-GaAs structure, anodization and Rutherford backscatt. meas. 2-110184
- Pd-GaAs interface reactions, struct. characterisation by X-ray diffr. 2-110172
- Pt/n-GaAs Schottky interface, effects of surface treatments 2-98743
- Sb overlayers, on GaAs (110), struct. 2-76862
- Si crystals growth for use in solar cells, methods and economics (Italian) 2-93409
- Si₃N₄-GaAs interface, sputtered, ellipsometric study, optical props. 2-76841
- SnTe-GaAs, heterojunction, open-circuit EMF meas. 2-87378
- V-GaAs structure, anodization and Rutherford backscatt. meas. 2-110184
- W-GaAs Schottky barrier, elec. props. and interface chem., XPS study 2-115853

gallium arsenide continued

- W-GaAs:Se⁺ Schottky barrier, high temp. elec. and interdiffusion stability meas. 2-87365
 ZnSe-GaAs heterojunction, photovoltaic props. meas. 2-73121
 ZnSe-GaAs(110) heterojunction band discontinuities, XPS study 2-111024

gallium compounds

see also gallium alloys; gallium arsenide

- (001)-2×4 reconstructed surface band struct. 2-72042
 Se₃I₂ 2-71415
 CC(p)/GaP, energy loss process for nonequilib. hot carriers 2-92641
 CCAI_{1-x}Ga_xSb, LPE growth on (111)-B oriented GaSb 2-98495
 electrical properties, effect of gamma irradiation (*Russian*) 2-76498
 Ga_{1-x}Al_xP, solid soln., variation of comp. gradient during LPE 2-83047
 mol. consts. calcs. 2-96530
 tri-iodide ammine, formation of GaN by pyrolysis, influence of vel. front on electrophys. props. 2-72630
 AlGaAsSb-GaSb, multilayer avalanche photodiode low noise detector for 1.3 μm fibre optic systems 2-53833
 AlGaAsSb-GaSb long-wavelength detectors, 1.3 to 1.55 μm, for fibre optics 2-53840
 Al_{1-x}Ga_xAs_{1-y}Sb_y, LPE growth on (111)-B oriented GaSb 2-98495
 AlGaInSb semiconductor system, LPE growth 2-83045
 Al_{1-x}Ga_xSb_{1-y}Al_{1-x}Ga_xAs_{1-y}Sb_y heterostructure LED, moisture transducer appl. 2-79594
 Au-n-GaAs_{1-x}Sb_x Schottky diode, barrier height 2-115854
 BaF₂-MnF₂-GaF₃ ternary system, identification of 4 new structural types (*French*) 2-55948
 Ca₂Ga₂GeO₇, cryst. struct. anal. 2-115203
 CaO-Ga₂O₃-GeO₂ system, phase form. 2-111150
 CdGa₂S₄ crystals, spatial dispersion effects 2-72446
 CdGa₂S₄, electroabsorption, luminescence studies 2-61875
 CdGa₂Te₄, amorphous film, structural ordering, effect of group I metal impurities 2-87114
 CdSnAs₂-GaSb heterojunctions, LPE fabrication and props. 2-92743
 xCuCr₂S₄(1-x)Ga_{0.6}Cr₂S₄ (0≤x≤0.4) semiconducting spinel, spin-glass state 2-66840
 CuGa_{1-x}In_xS₂ solid solns., growth and props. 2-83017
 CuGaS₂, band gap temp. depend., exciton reflection spectra 2-104252
 CuGaS₂, luminesc. and refl. spectra of free excitons 2-104963
 CuGaSe₂(Te₂), specific heat, Debye temp., entropy 2-92231
 Eu_{0.53}Y_{0.47}Pb_{0.03}Fe_{3.95}Ga_{1.1}O₁₂ epitaxial bubble film, dynamic props. 2-72319
 Ga alumina, ionic and electronic cond. meas. 2-71703
 Ga-In-Sb system, quantitative fit to liquidus surface and thermodynamic data, associated soln. model 2-111148
 Ga-P solutions, evap. of P and vapour press. of P₂, influence of Sn and In 2-56168
 Ga-Sb, phase diagrams, thermodynamic anal. (*Russian*) 2-93494
 GaAlSb-GaSb photodetectors for the near infrared spectrum (*German*) 2-84704
 Ga_{1-x}Al_xSb, impact ionisation an alternative interpretation, comments 2-56600
 Ga_{1-x}Al_xSb, LPE layers, photolum. study, cond. band minimum determ. 2-98540
 n-Ga_{1-x}Al_x-Sb-p-GaSb heterojunction, elec. and photoelec. characterization 2-98732
 Ga(As,Sb) active layers for (Al,Ga)As lasers, device characts. 2-90890
 GaAs, bonding, charge density anal., X-ray diffr. study 2-81710
 GaAs, high resistivity, thickness dependence of photoacoustic spectra 2-79683
 GaAs, photocond. at high optical excitation rates, struct. disorder effect 2-115818
 GaAs photodiodes, thermometric characts. 2-101460
 GaAs:Cr²⁺, EPR resonance parameter calcs. 2-104691
 GaAsP, deep level studies on traps showing nonexponential kinetics 2-115689
 GaAs_{1-x}P_{0.4}Te, electron trap spectrum obs. by DLTS and transient capacitance meas. 2-87302
 GaAs_{1-x}P_x, minority carrier lifetime meas. using SEM with intensity modulated electron beam 2-87301
 GaAs_{1-x}P_xN, temp. depend. of luminescence intensity 2-82930
 GaAs_{1-x}P_{1-x}GaP strained-layer superlattice, electronic struct., tight-binding and effective mass models 2-110454
 GaAs_{1-x}P_{1-x}GaP strained-layer superlattice, MOCVD growth and photoluminesc. props. 2-110919
 GaAs_{1-x}Sb_x LPE layer, carrier mobility and photolum., composition depend. 2-77214
 GaBr, isotopically invariant Dunham coeff. 2-85643
 Ga₂Br₆, mol. consts. calcs. 2-96530
 GaCl₃, pot. energy distrib., normal coordinate calcs. 2-77516
 GaCl₃-(π-) donor complexes, NQR study 2-108567
 Ga₂Cl₆, mol. consts. calcs. 2-96530
 GaF, mol. force consts., bond lengths, pot. energy functions, electronegativity anal. 2-75463
 GaH, electronic ground states, dissociation energies 2-70375
 Ga₂I₆, mol. consts. calcs. 2-96530
 Ga_{0.7}In_{0.3}As growth on InP substrates using metalorganic process, factors influencing growth 2-87099
 GaInAsP low press. MOCVD growth, for microwave device and optoelectronic device appl. 2-98496
 GaInAsP-InP buried heterostruct. laser fabrication 2-60095
 Ga_{1-x}In_xAs_{1-y}P_y, effects of two longitudinal optical phonon modes on electron distrib. 2-82349
 Ga_{1-x}In_x-P, LPE growth on GaAs (100) and (111)B, orientation dependence meas. 2-93450
 Ga_{1-x}In_x-P:Be(Sn), MBE growth using Pb flux and elec. characterisation 2-78987
 Ga_{1-x}In_xSb, voltage-current curves, scatt. effects, Monte Carlo calc. 2-104382
 Ga_{1-x}Mn_xSb solid solns., carrier scatt. mechanisms 2-56571
 Ga₂Mo₂S₄, preparation and crystallochem. props. 2-65949
 GaN CVD growth on sapphire, growth kinetics and surface morphology meas. 2-111081
 GaN epitaxial layer, optimized growth conditions 2-66391
 GaN epitaxial layers, highly excited, photolum. and gain spectroscopy 2-77561
 GaN, gas phase deposition by pyrolysis of Ga tri-iodide ammine, vel. front 2-72630

gallium compounds continued

- GaN, heteroepitaxial layers, characterisation by Kossel effect technique 2-92380
 GaN heteroepitaxial layer, growth and doping kinetics, cathode luminesc., elec. props. 2-104185
 GaN, thermodynamic props., at. no. depend., synthesis method selection 2-66259
 GaN-GaAs MIS capacitors, interface states characts., G-V, C-V and transient capacitance anal. 2-92776
 Ga(NO₃)₃ in heavy water, ⁶⁹Ga and ⁷¹Ga nuclei, mag. relax., quadrupole coupling const. 2-77405
 β-Ga₂O₃, single cryst., valence force field, Raman study 2-77514
 [Ga(OH)₂]₂P₂O₇·12H₂O, preparation and props. 2-72643
 Ga₂O₃·H₂O, AC proton conduction 2-115451
 GaP (111), surface comp., atom probe FIM study 2-92326
 GaP, absorption coefficient, electron-phonon and hole-phonon interactions 2-67016
 GaP, band structure, tight binding calc. 2-66443
 GaP crystal with induced anisotropy, anisotropic Bragg diffr. of light by ultrasound 2-61873
 GaP, Cu related 2.177 eV band exciton, photoluminesc. study 2-110917
 GaP, deep donor binding energy, g-value calc. 2-92517
 GaP, deep level elec. field induced phonon assisted tunnel ionisation 2-71909
 GaP, deep level studies on traps showing nonexponential kinetics 2-115689
 GaP donor states 2-104287
 GaP, donor-Ga vacancy complex form., electron trap behaviour 2-115688
 GaP, doped homoepitaxial layers, dislocations, TEM study 2-103773
 GaP, exciton electroabsorption spectrum, Schrodinger eqn. calc. 2-116154
 GaP film, ion beam sputter deposition, substrate heating effects, TEM and Rutherford backscatt. study 2-110773
 GaP first dynode photomultiplier tubes, probability and time distrib. of afterpulses 2-90376
 GaP, Frenkel core-exciton energy, environmental effects 2-87152
 GaP, grain boundaries, elec. and EBIC studies 2-115252
 GaP, heteroepitaxial MBE growth on Si (100), elec. props., heterojunction form. 2-57297
 GaP, impurity atoms and positron states, positron annihilation study 2-104996
 GaP, indirect gap absorpt., invariants method appl. 2-77474
 GaP, ion irradi., Frenkel defects and annealing 2-115316
 GaP, Kossel line broadening near scratch 2-103566
 GaP LED, deep level, luminesc. study 2-110949
 GaP LEDs, LPE growth on LEC and synthesis solute diffusion substrates 2-111098
 GaP, large diameter single cryst., computer controlled LEC growth 2-99327
 GaP, lattice dynamics under hydrostatic pressure 2-98223
 GaP layer, liq. phase heteroepitaxy from limited and unlimited sources, growth kinetics 2-56380
 GaP light emitting diodes, microcomputer-corrected spectrosc. meas. 2-58910
 GaP, MBE growth, P₂ beam source technique 2-57300
 GaP metal Schottky barrier contacts, exptl. study 2-72057
 GaP, metallised, volatile component loss and contact resistance during annealing 2-92753
 GaP, multiphoton absorption, intense field effects, theory 2-93133
 GaP, ODMR study of P₀ antisite defect 2-98573
 GaP ohmic contacts, laser annealed, for high temp. devices 2-56692
 GaP, optical props., ellipsometry meas. 2-57200
 GaP, oxide removal from chemically etched surfaces, electron and X-ray diffr. 2-116561
 GaP p⁺-n junctions, highly doped, injection symmetry 2-115868
 GaP p-n junction, LED, thermally stimulated noise 2-104444
 n-GaP photoelectrochemical electrode, stabilisation and surface recombination, exptl. study 2-77176
 p-GaP, photoelectrode, photocurrent onset pot. and flatband pot., exptl. study 2-62480
 GaP, piezo-optical coeffs., dispersion dependences 2-116151
 GaP, piezo-optical study of phonons 2-67023
 GaP polar-on-nonpolar MBE on Si(211), nucleation and growth, sublattice ordering 2-110204
 GaP, positron lifetimes, systematic study 2-57207
 GaP prism coupler investigation (*Chinese*) 2-97169
 GaP, proton irradi., elec. cond. and electron conc. meas. 2-77053
 GaP, Raman scattering efficiencies for Γ-phonons 2-57100
 GaP Schottky barrier, struct. model and elec. characteristics and AES study 2-110170
 GaP, shock induced phase transition 2-71626
 GaP, sp. ht., temp. depend., thermodynamic props. 2-86898
 GaP substrate, impurity outdiffusion by postgrowth annealing 2-115460
 GaP thin film, vacuum deposited, heteroepitaxial growth, struct., characterisation 2-87985
 GaP, thin film struct., electron beam irradi., current characteristics meas. 2-56738
 GaP, uniaxially stressed, free carrier absorpt. spectra (*Russian*) 2-87818
 GaP with chemisorbed H, surface optical phonon obs. 2-115550
 GaP:B, electron irradi., interstitials, IR study 2-103747
 GaP:B grown by LEC technique, IR absorpt. band, resonant and gap modes 2-99157
 GaP:Cr, optical absorpt. spectroscopy on Cr-related defects 2-57129
 GaP:Cu, ion damaged, depth profiling of gettered Cu, SIMS study 2-98150
 GaP:Cu, photoluminescence and impurity states 2-104947
 GaP:Cu, photoluminescence, excitons 2-116249
 GaP:D, electronic struct. and optical props. 2-92518
 GaP:Fe, LCAO calcs. of photoionisation of deep centre 2-104304
 GaP:Fe crystal, electron irradiated, IR absorpt. 2-61908
 GaP:Fe³⁺, tetrahedral paramag. complex, distortions effects, ESR study 2-110633
 GaP:Mg, LPE growth, minority carrier lifetime, photoluminescence study 2-82488
 GaP:N, absorbing medium, linear pulse propag. 2-61860
 GaP:N, luminescence spectra undulations 2-104950
 GaP:N, photoluminescence time decay temp. depend. 2-93258
 GaP:N, Te VPE layer, minority carrier lifetime, dislocations influence 2-115920
 GaP:N,Te, epitaxial layers, photoluminescence study 2-61968

gallium compounds continued

- GaP:N epitaxial films, excitation transfer mechanism to NN_1 complexes 2-77589
 GaP:N LED, yellow sideband radiation increases during ageing 2-116261
 GaP:N LED degradation, surface corrosion 2-116559
 GaP:Nd(Sm)(Eu)(Yb) epitaxial films, photoluminesc., effect of γ -irrad. 2-93267
 GaP:Ni, charge state of Ni^{2+} , piezoabsorpt. and Zeeman meas. 2-99087
 GaP:O, impurity state of e symm. 2-110287
 GaP:O, point defect electron states, enfeebled O bonding and metastability 2-61351
 GaP:O, recombination radiation of exciton bound to Zn-O complex 2-104959
 GaP:S, homoepitaxial layers, influence of microdefects on dislocation generation 2-92377
 GaP:S LEC epitaxial layer, microdefects and dislocation generation, TEM study 2-115236
 GaP:V, photoluminesc., optical absorpt., and ESR study 2-82916
 GaP:Zn, density, plastic deform. effects, defect struct. 2-71545
 GaP:Zn, O, photoinduced Zn, O dissociation, photoluminescence 2-87859
 GaP:Zn,O, IR upconversion obs., IR quantum counter appl. 2-70605
 GaP-AIP(100) superlattice band struct. 2-110460
 p-GaP-Au, ion beam contacting by Be implantation 2-115889
 p-GaP-electrolyte junctions, hot electron injection, Mott Schottky plots 2-92744
 n⁺GaP-i-Al_xGa_{1-x}As:Cr(Fe)-M structs., I-V characts. 2-104477
 GaP,As_{1-x} filamentary crystals, strain meas. props. and piezoelectric effect (Russian) 2-66992
 GaP(110), chemisorbed H, pseudopot. calc. 2-110423
 GaS, elastic props. under high pressure, by Brillouin scattering 2-72517
 GaS, layer compounds, electronic structs. and ionicity, bond orbital model 2-86613
 GaS, layered, atomic vibr., Mossbauer study 2-110739
 GaS, layered compound, elastic consts. and compressibility 2-86773
 p-GaS, single crystal, mechanical and electrical strength (Russian) 2-92636
 GaS, uniaxially deformed, absorpt. and photoluminesc. spectra, energy bands 2-67081
 GaS₂, amorphous film, optical props. (Russian) 2-62007
 GaS₂, random defect semicond., electronic props. 2-115653
 GaS₂-LaS₂-NdS₂, chalcogenide mini lasers, emission cross section and threshold power 2-96955
 GaSb (001) surface struct., ion scatt. spectroscopy study, time of flight energy anal. 2-76790
 GaSb, band structure, tight binding calc. 2-66443
 p-GaSb, conduction electron spin relax., 4.2 to 77K 2-93008
 GaSb, Czochralski growth of low dislocation density crystals, X-ray study 2-93407
 p-GaSb for ohmic contacts to p-type semiconductors 2-87387
 GaSb, melt-grown single cryst., defect etchant for dislocations and growth striations 2-91972
 GaSb, native defects, MS-X α calcs. 2-82270
 GaSb, positron lifetimes, systematic study 2-57207
 GaSb pulled crystals, twin pits in facet regions 2-86668
 GaSb, reverse-biased tunnel diode, temp. coeff. of tensor sensitivity 2-87374
 GaSb, Schottky barrier form., MOS interface states 2-82428
 GaSb, Schottky barrier formation, defect states model 2-98722
 GaSb, single crystal, Czochralski growth, twinning, seed cryst. polarity effects 2-99319
 GaSb single crystals, Czochralski growth under reducing conditions 2-99321
 GaSb, third order susceptibility of III-V semiconductors in the true continuum near the band edge 2-102852
 GaSb:Te, Hall coeff. and L minima under hydrostatic press. 2-115793
 GaSb:Te, Kondo effect obs. under high press. 2-61459
 GaSb-AlSb superlattice, spatially extended optical interface modes 2-66339
 GaSb-AlSb superlattices, MBE growth, photoluminescence 2-99188
 GaSb-InAs-AlSb, multiheterostructs., two dimens. quantum states and semimetal-semicond. transition, theoretic al study 2-61575
 (GaSb)_{1-x}Ge_x epitaxial film, ion mixing during RF sputtering deposition 2-82161
 GaSe amorphous film, electroabsorpt. meas. 2-72456
 GaSe, high symm. layer cryst., interlayer force constants, linear chain model 2-71390
 GaSe, intercalated, low temp. reflection spectra and photoluminesc., exciton characts. (Russian) 2-67112
 GaSe, intercalated with Na⁺ and Ca²⁺, prep. and elec. props. 2-66549
 GaSe, layer compounds, electronic structs. and ionicity, bond orbital model 2-86613
 GaSe, layered compound, elastic consts. and compressibility 2-86773
 GaSe, layered semicond., oxidation, XPS and AES study 2-57502
 GaSe, photocond. near fundamental band edge 2-92692
 GaSe, region of existence of excitonic molecules (Russian) 2-76941
 p-GaSe, single crystal, mechanical and electrical strength (Russian) 2-92636
 GaSe single crystals, surface photo-EMF at high excitation levels 2-61522
 GaSe, struct. phase transition, exciton refl. and photoluminesc. spectra 2-103985
 GaSe, uniaxially deformed, absorpt. and photoluminesc. spectra, energy bands 2-67081
 GaSe:Ni(Fe)(Cr), luminescence spectra, absorption edge, struct. defects (Russian) 2-93273
 p-GaSe:Sn, dark current, anomalous temp. depend. 2-77063
 GaSe:Sn, interference oscills. in temp., depend. of photocurrent and transmission 2-87329
 GaSe-anthracene (Na) intercalation cpds., ESR, photocond., and optical meas. 2-77367
 GaSe-Au(Ni)(Ag) interface, Schottky barrier formation, UPS study 2-110443
 GaSe-metal interfaces, Fermi level pinning, Schottky limit, photoelectron spectra study 2-56670
 GaSe-metal Schottky barriers, optical band rectification and photomemory 2-115892
 GaSe-Sb, phase diagrams, immiscibility of liq. phase, expt. study 2-71614
 GaSe-Sb₂Se₃, phase diagrams, immiscibility of liq. phase, expt. study 2-71614
 GaSe-Sn layer-barrier-structures, elec. props. (Russian) 2-77181

gallium compounds continued

- GaSe-SnO₂ heterostructure, depth profile, XPS and AES study 2-61299
 GaSe-SnO₂/In₂O₃ heterojunction, near UV detector 2-53839
 Ga₂Se₃, IR spectra, radiation effects 2-57110
 Ga₂Se₃, ordered and disordered phases, struct., electron diff. and microscopy obs. 2-60957
 Ga₂Se₃, random defect semicond., electronic props. 2-115653
 GaSe_{1-x}S_x, layered semiconductors, Brillouin scattering meas. using microprocessor-controlled Fabry-Perot interferometer 2-79655
 GaSe_{1-x}S_x, polype phase transition X-ray diff. obs. 2-60912
 GaSe,Te_{1-x}Sn, interference oscills. in temp., depend. of photocurrent and transmission 2-87329
 GaSe,Te_{1-x}Sn single cryst., exciton and impurity electroabsorpt. 2-87741
 Ga₂Sn₂Fe_{2-x-y}O₄, Mossbauer study of A site cation arrangement 2-93071
 Ga_{1-x}Sn_xSe, solid solns., elec. cond., thermo-EMF and Hall coeff. meas. 2-87259
 GaTe, electrical and optical props. (Russian) 2-57189
 GaTe:Sn, interference oscills. in temp., depend. of photocurrent and transmission 2-87329
 GaTe:Sn, strongly compensated, localised state cond., 77 to 289K 2-77079
 Ga₂Te₃, random defect semicond., electronic props. 2-115653
 GaP:N, N-N pair exciton spectra, J-J coupling and local field effects 2-82248
 Gd₂Ga₂O₇, garnet single crystals, slip systems 2-66007
 Ge-Te, vitreous and crystalline materials, short range order, Mossbauer and electron spectra 2-103657
 (GeO)₂Ga₂Se₃, cryst. struct. determ. (French) 2-91886
 (In, Ga)(As, P) lasers at 1.3 μm , anomalous effect of carriers on dielec. const. 2-102791
 In-Ga-Sb, phase diagrams, thermodynamic anal. (Russian) 2-93494
 InAs-GaSb, semimetallic superlattices, subband widths, cyclotron resonance and far infrared magnetotransmission study 2-56709
 InAs-GaSb heterojunction, self-consistent calcs. 2-110461
 InAs-GaSb multiheterojunction, double cyclotron resonance and interband transitions 2-61574
 InAs-GaSb quantum wells, exciton binding energy 2-115668
 InAs-GaSb superlattice, Shubnikov-de Haas oscills. under tilted mag. fields 2-56687
 InAs-GaSb superlattice, highly doped, effective mass, carrier density, helicon wave propag. determ. 2-56688
 InAs-GaSb superlattices, semimetallic, far IR magnetoabsorpt. 2-61881
 n-InAs-GaSb superlattice, cyclotron resonance and Shubnikov de Haas study 2-87131
 InAs-GaSb superlattice, band structure, envelope-function approx. 2-104472
 InAs-GaSb superlattices, ion beam crystallography 2-116318
 InGaAlP DH layers, MBE growth on (100) GaAs substrates, laser appls. 2-104206
 InGaAlP on (100)GaAs, MBE growth 2-104189
 p-InGaAsP diode lasers, radiative and Auger recomb. rates meas. 2-102792
 InGaAsP MIS diode, C-V characts., composition depend. 2-77188
 InGaAsP on InP LPE for 1.3 micron high radiance IR LEDs and for photodiodes 2-111101
 InGaAsP relationship between struct. and props. 2-71486
 InGaAsP/InP DH, nature of electron leakage 2-87377
 InGaAsP/InP DH, photolum. intensity 2-87881
 InGaAsP/InP high radiance IREDs with emission wavelength 1.3 micron and transmission rate 140 Mbit/s 2-109079
 InGaAsP-InP BH laser, 1.3 μm , hole-burning at high energy tails in spontaneous emission spectra 2-75569
 InGaAsP-InP DH LED, aged, dark defects 2-91974
 InGaAsP-InP laser, asymmetric longitudinal mode competition, mechanism 2-60076
 InGaAsP-InP layers, catastrophic degradation, laser induced 2-61022
 InGaAsP-InP system, etch rates for material selective etching 2-72856
 In_{1-x}Ga_xAs_{1-y}P_y, low temp. LPE on InP, immiscible domain 2-98494
 In_{1-x}Ga_xAs_{1-y}P_y-InP, etched mirror laser fabrication using HBr-acetic acid-Kr₂Cr₂O₇ etchant 2-114313
 In_{1-x}Ga_xAs_{1-y}P_y LPE system, alloy scattering mobility and energy gap evaluation by dielectric model 2-82485
 p-In, Ga_{1-x}As_{1-y}Mn epitaxial layers, doping characts., elec. and luminesc. props. 2-76866
 InGaAsB lasers, interband Auger recomb. 2-80967
 In_{1-x}Ga_xAs_{1-y}Sb_y, quaternary system, pseudoquaternary phase diagram calc. 2-62104
 InGaP/GaAs superlattice struct. hydride VPE growth 2-99352
 In_{1-x}Ga_xP, LPE growth on GaAs, composition self-modulation obs. 2-116395
 In_{1-x}Ga_xP mixed crystals, light scatt. by phonon polaritons 2-104891
 In_{1-x}Ga_xP:Te(Se)(Cd)(Zn)(Si)(O), epitaxial film, photo-, electro- and cathodoluminescence involving deep levels 2-116258
 In_{1-x}Ga_xP:Zn, photoluminesc., 0.6 < x < 1.0 2-57148
 In_{1-x}Ga_xP/Ga_{1-y}Al_yAs on GaAs, LPE growth 2-99361
 InGa_{1-x}P LPE layer, N conc. and In content, correlation 2-71819
 In_{1-x}Ga_xP_{1-y}As_y, optical props., ellipsometry meas. 2-57200
 InP-InGaAsP DH with 40% external luminesc. quantum efficiency 2-77591
 InP-InGaAsP-InP DH wafer, LPE grown, misfit dislocations 2-98096
 InSe-GaAs heterojunction, EMF with large temp. gradients 2-115870
 LaGa₃, cryst. struct., X-ray diff. study, least squares technique (French) 2-81739
 LiGa₂O₄:Cr³⁺ luminescence and absorpt. spectra 2-82908
 Mn_{0.2}Ga_{0.8}S₃, cryst. struct., least squares method (French) 2-65963
 MoGa₂(CuS₂)_{0.0556}, cryst. struct., X-ray diff. study 2-65953
 Na₂O-Ga₂O₃-SiO₂, glass transition temp., relation to glass comp. 2-66219
 1.67[(Na₂O)₁(K₂O)_{1-x}]-1.33ZnO.10.34Ga₂O₃, mixed alkali effect, cond. minimum 2-61200
 PbF₂-GaF₃-ZnF₂(MnF₂):Er³⁺, fluoride glasses, optical transition probabilities, Judd-Ofelt method 2-61960
 Sb-GaAs struct., γ -irrad. effect on photoelectric props. 2-61516
 SnO₂-GaSe p-n heterojunctions, I-V characts. and space charge thickness 2-115883
 n-SnO₂-p-GaTe heterojunction, electrical and optical props. (Russian) 2-57189
 T 2-109080

- gallium compounds continued**
 TiGaS₂(Se₂), layer semicond., hopping cond., freq. compensation effect 2-104381
 Tm₃(TmGa_{2-x})Ga₂O₇, Czochralski growth, optical and X-ray topography quality obs. 2-93413
 Y₂SmO₄Ga_{1-x}Fe_xO₁₂ epitaxial bubble garnet film, mag. props. 2-87561
- galvanoluminescence** *see luminescence*
- galvanomagnetic effects**
see also Hall effect; magnetoresistance; Suhl effect; thermomagnetic effects
 electron-hole plasma, magnetostatic mode, anomalous diffusion 2-104407
 extrinsic semiconductors and semimetals, Kane spectrum of electrons, non-linear galvanomagnetic effects (*Russian*) 2-92660
 metal, electron relax. time under acoustic phonon scatt. in quantising mag. field (*Russian*) 2-66533
 metals and alloys, review of elec. resist. of materials at cryogenic temps. 2-104353
 negative luminescent radiation of intrinsic semiconductors (*German*) 2-93280
 noble metals with rare earth impurities, magnetotransport and EPR props. 2-66528
 p-i-n structure, small-signal double injection in mag. field 2-77172
 semiconductor, bounded, galvanomag. and thermomag. effects under mutual electron-phonon drag conditions 2-77094
 semiconductor superlattice, narrow gap, cond. in strong, mag. field 2-77098
 semiconductor with layered inhomogeneity, anisotropy of galvanomag. effects (*Russian*) 2-61496
 semiconductors, galvanomagnetic and thermomagnetic phenomena in strong mag. field, hot electron-phonon mutual drag effects (*Russian*) 2-77101
 semiconductors, magnetodiode effect with monopolar injection, space charge limiting effects calc. (*Russian*) 2-77102
 strong magnetic field, quantum theory, macroscopic current operator (*Chinese*) 2-98604
 transition metal alloys, amorphous, thermoelec. powers and resistivities 2-98611
 two dimensional, two component system, galvanomagnetic props., metal-dielec. transition (*Russian*) 2-82309
 two-dimensional disordered potential, quantised Hall conductance and current carrying extended edge states in mag. field 2-77201
 Ag film, cond. electrons inelastic lifetime, magneto-conductance meas. 2-110494
 AgBr microcrystals, in gelatin layers, slow electron mobility, size effect 2-92661
 Au film, cond. electrons inelastic lifetime, magneto-conductance meas. 2-110494
 Cu film, cond. electrons inelastic lifetime, magneto-conductance meas. 2-110494
 GaAs:Cr structures, semi-insulating, mag. field influence of the small signal impedance (*Slovak*) 2-61485
 GaAs_{1-x}Sb_x LPE layer, carrier mobility and photolum., composition depend. 2-77214
 Ge, galvanomagnetocombinational elements, fluctuation processes 2-87351
 n-InSb, hopping cond. below 1K in mag. field 2-98673
 K, galvanomagnetic and thermomagnetic props. 2-87226
 LaMnO₃, conductivity, magnetisation and neutron diff. in mag. transitions range 2-56850
 Pb_{1-x}Sn_xTe: Cd(Bi), narrow band gap semicond., galvanomag. and optical props., Cd solubility and diffusion (*Russian*) 2-92666
 Pd-Au-V solid soln., elec. props. (*Russian*) 2-92562
 Pd-Fe-Au(Cr) solid soln., elec. props. (*Russian*) 2-92562
 β-ZnPt₂, galvanomagnetic isotropic effects, quasi-Hall effect 2-77095
- galvanomagnetism** *see electromagnetism*
- galvanometers**
 automatic microbalance based on F117 photogalvanometer 2-74387
 film soundtrack recording, reduction of electrostatic power dissipation in galvanometer (*Russian*) 2-58951
- galvanothermoelectric effects** *see thermomagnetic effects*
- game theory**
see also information theory
 nuclear power utilisation optimisation criteria (*Rumanian*) 2-78192
- gamma fission reaction** *see photofission*
- gamma radiation** *see gamma-rays*
- gamma-ray absorption**
 computerised tomography, γ-emission, attenuation correction 2-94162
 photofraction correction for voluminous sources and mean photon path 2-113827
 quartz glass, absorption characteristics for γ-ray dosimetry 2-96322
 CaMoO₄ and CaWO₄ scintillators, mass absorpt. coeffs. 2-104983
 PbWO₄ scintillators, mass absorpt. coeffs. 2-104983
- gamma-ray angular distribution**
see also gamma-ray spectra
 heavy ion collisions, spin and isospin fluctuations and depend. on dinuclear complex shape 2-64420
 (n,γ), E1 transitions, p-state spectroscopy 2-107867
²¹Al, resonance states γ-decay and bound levels study 2-54307
⁷⁵As, level struct., γ-ray correlation study and theoretical model, from ⁷⁵Se electron capture 2-95920
²⁰⁵At, high-spin state props. study 2-59220
⁸¹Bi, A = 203, 205, in-beam studies and shell model features 2-113394
⁷²Br high spin states, J^π transitions from ⁸⁸Ni(¹⁶O, np) 2-69507
⁸¹Br(⁷Li, 4n), 19-32 MeV, ⁸⁴Sr high spin states study 2-54428
¹¹⁴Cd, spins, multipolarities, mixing ratios, from ¹¹⁵Cd(n, γ) ang. correl. 2-95960
¹³⁴Ce spectroscopy and mag. moments at backbending 2-101809
¹⁵³Er, high spin states study 2-69514
¹⁵¹Eu, low-lying states study via (n,n'γ) reaction 2-54245
¹⁹F, analogue resonances from ¹⁸O(p,x'γ)¹⁹F γ-ray emission meas. 2-107820
⁷⁶Ge(¹²C, 4nγ), 48-60 MeV, ⁸⁴Sr high spin states study 2-54428
⁷⁶Ge(p, γ), <30 MeV, cross sections, ang. distrib., Legendre polynomial coeffs. 2-69654
³He(α, γ)⁶He, E_{cm} = 107-1266 keV, capture reaction and solar neutrino problem 2-59380
¹²⁴I, odd-odd nucleus, excited states produced in (p,n) reaction, γ-spectra study 2-101814
⁸⁹Nb, γ-ray spectroscopy 2-95965
- gamma-ray angular distribution continued**
¹⁸⁰Os, side bands props. study using in-beam spectroscopy method 2-54246
¹⁰¹Ru, high spin collective excitations 2-54235
²⁸Si, energy levels calc. from ²⁴Mg(α, α) and ²⁴Mg(α, γ)²⁸Si reactions meas. 2-101815
¹⁶⁰Tb-¹⁶⁰Dy, nuclear orientation in Tb metal 2-54320
¹⁶⁰Tb, A = 116, 118, 120, 122, high-spin states, I_{g7/2} proton-hole excitations collective props. 2-59218
²⁰⁵Tl, J^π = 25⁺/2 isomer g factor and proton anomalies orbital magnetism 2-54260
¹⁶⁶Tm, odd-odd nucleus, band structure study 2-69515
¹²⁰Xe, high-spin states, I_{g7/2} proton-hole excitations collective props. 2-59218
⁶⁴Zn(⁷Li, pxnγ), excited states study in ⁶⁸Ge, ⁶⁹Ge 2-54437
- gamma-ray applications**
see also radiation therapy
 analysis of binary mineral mixtures by gamma-gamma method, two-beam probe optimisation 2-73026
 austenitic welding material, NDT, combined methods (*German*) 2-116661
 electronically collimated gamma camera, reconstruction algorithms comparison 2-73320
 elemental anal. using neutron-capture γ-ray spectroscopy 2-67777
 medicine, breath-by-breath radioabsorptometric assay of Xe in expired air 2-100092
 Mossbauer spectroscopy, application in mineralogy, soil science, ceramics 2-53905
 prompt γ-ray anal. probes, Monte Carlo model 2-67778
 prompt gamma activation of environmental and terrestrial samples 2-57669
 source and appl. of γ-rays and X-rays, symposium, Ann Arbor, MI, USA (June 81) 2-58525
 thin layer activation technique, wear and corrosion meas. appl. 2-95324
 Fe content, meas. in human body, in-vivo, γ-rays nuclear reson. scatt. appl. 2-68111
 Ge laminar emission camera 2-73324
 Mn content determ. in steels using proton-induced prompt γ-ray emission 2-67779
- gamma-ray astronomical observations**
 A 0535+26, X-ray source, balloon borne γ-ray obs. 2-58252
 anomalous gamma-ray transient, 1979 March 5, precise source location 2-69934
 burst, 1979 March 5, search for high freq. pulsations in burst onset 2-68931
 burst sources in 10 keV to 9 MeV range, spectral obs. 2-58487
 burst sources of 1979 November 16, correlation and obs. 2-58488
 burst sources with E > 3 × 10⁻⁶ erg cm⁻², frequency 2-58486
 bursts, search for assoc. high-energy (≥ 10¹⁵ eV) gamma ray photons 2-84349
 bursts detection > 1 GeV 2-89409
 cosmic background flux upper limits from M87 X-ray and γ-ray obs. 2-63714
 cosmic gamma-ray bursts, log N-log S curve meas. by SIGNE expts. 2-89407
 Cygnus X-1, γ-ray emission 2-89151
 Cygnus X-3, photon energies above 500 GeV 2-74026
 galactic centre, 511 keV annihilation line radiation obs. 2-106961
 galactic centre, gamma-ray lines and transients 2-117765
 galactic centre, positron annihilation radiation 2-117764
 galactic centre 0.511 MeV variable γ-ray source 2-89151
 galactic centre region, confirmation of positron annihilation line time variability 2-106962
 galactic gamma-ray lines (*Japanese*) 2-79245
 galactic plane, balloon-borne 0.3-5 GeV obs. 2-64743
 galactic plane γ-ray emission obs. 2-89151
 Galaxy anticentre region, gamma-rays, by MPI balloon-borne Compton telescope 2-89147
 gamma ray burst of 1974 June 10, spectral anal. 2-58494
 gamma ray burst of 1980 April, 19 origin from neutron star and spectrum var. 2-58495
 gamma ray burst source observed from balloon on 1980 7th October 2-58252
 Markarian 501, hard X-ray/γ-ray, obs. anal. 2-74087
 NP 0532, pulsar, balloon borne obs. 2-58252
 primordial black holes, explosion rate near Solar System, upper limit, from γ-ray obs. 2-89409
 PSR 0531, Crab pulsar, transient UHE pulsed γ rays 2-74005
 PSR 0531+21, gamma-ray interpulse, emission obs. 2-74004
 PSR 1822-09, pulsed emission, X-ray and γ-ray upper limits 2-117695
 solar flare, 1979 November 8, gamma-ray and optical obs. 2-106642
 solar flare, high resolution meas. of 2.223 MeV neutron capture line 2-68698
 solar flare γ-ray observations with HEAO-3 high resolution γ-ray spectrometer 2-89151
 solar flare of 1980 October 7, characts. 2-58252
 Sun, gamma-ray line at 2.2 MeV, SN flare obs. 2-100889
 Vela pulsar, pulsed emission, X-ray and γ-ray upper limits 2-117695
- gamma-ray astronomy**
see also gamma-ray sources (astronomical)
 background radiation derivation from using galaxy counts as galactic matter tracer 2-89413
 Compton telescope, balloon-borne, props. and performance 2-89147
 COS-B results 2-117797
 Cos-B satellite (ESA) mission, 1975-81 operational experiences 2-68617
 cosmic background, spectrum and origin 2-117803
 cosmic ray propagation halo round Galaxy from γ-ray evidence 2-63676
 diffuse background and pulsar magnetic window 2-100967
 galactic cosmic rays-interstellar matter interactions, gamma ray prod. 2-63568
 galactic gamma-ray astronomy, review (*German*) 2-94868
 galactic gamma-ray astronomy, review 2-106964
 galactic gamma-ray lines (*Japanese*) 2-79245
 galactic large scale and small scale features 2-89411
 Galaxy spiral arms delineation from enhanced γ-ray emissivity 2-89411
 HEAO-3 high resolution γ-ray spectrometer 2-89151
 position sensitive scintillation detectors for gamma-ray imaging telescope 2-100738
 resolving power of gamma-ray telescope with aperture coding 2-89150
 review 2-89085

gamma-ray astronomy continued

- spectrometer for hard X-ray and soft gamma ray telescope, design 2-112326
 Sun, flare gamma ray lines, emission processes 2-58498
 telescope, efficiency calibration for 5-50 MeV γ -rays 2-112325
 telescope using coded aperture imaging 2-78954
 telescope with arc minute angular resolution, plans 2-94598

gamma-ray detection and measurement

- see also *gamma-ray spectrometers; radioactivity measurement*
 5 kV vacuum feedthrough connector with low capacitance and microphony 2-75122
 Al₂O₃ plastic-equivalent gas, appl. to ionisation chambers for ^{60}Co γ -rays and 14.8 MeV neutrons 2-83657
 absolute radio-frequency measurements of the exposure dose rate of pulses of photon radiation 2-113759
 analytical approx. to γ -ray spectrum peak obtained with Ge(Li) detectors 2-102320
 astronomical telescope, efficiency calibration of 5-50 MeV γ -rays 2-112325
 atmospheric debris deposition following nuclear explosion, quantitative anal. (Chinese) 2-59545
 automatic peak search method in gamma-ray spectra 2-108311
 bremsstrahlung photons with muon background suppression, system for labelling 2-108322
 CAMAC gamma-ray scanning system, for nuclear safeguards 2-53906
 camera nonidealities, computer correction 2-96405
 cellophane film, blue, γ -radiation response under controlled humidity conditions 2-78450
 Cherenkov 90-channel mass spectrometer 2-64771
 Compton polarimeter using high-purity Ge planar diodes 2-89876
 computerized gamma spectrum analysis with application to multicomponent activation detectors 2-54723
 concrete shields, lightweight and heavyweight, secondary γ -dose distrib. 2-96319
 conversion electron Mossbauer spectrometer equipped with ceramic electron multiplier detector 2-102323
 cryostat design for positron annihilation research at $-195\text{--}800^\circ\text{C}$ 2-107329
 direct reading radioisotope equipment (Bulgarian) 2-85433
 dosimeter calibration, collimation conditions effect obs. 2-59560
 dosimetry, dye film, use for dose distrib. mapping in intense γ -ray fields of irradi. medical products 2-117091
 dosimetry using high temp. thermolum. peaks in LiF 2-117090
 electrets, X- and γ -dose meas. appl. 2-75055
 environmental γ -ray, meas. methods, for nuclear plants 2-54669
 environmental gamma ray dose monitoring using TLDs (Czech) 2-62538
 FBX dosimetric system, modified, tissue-equivalent, characts. 2-78451
 gas sampling EM calorimeter in saturated avalanche mode 2-108229
 graphite calorimeter as ^{60}Co γ -radiation absorbed dose standard 2-70006
 hand held monitor 2-85499
 HELICON, heavy liq. total absorpt. counter for electrons or photons 2-96372
 HERMES, high energy gamma radiation measuring system 2-102332
 high angular resolution 2-D correlation apparatus for positron annihilation studies 2-108321
 hybrid sum-coincidence spectrometer with two obs. channels (French) 2-102317
 imaging detectors, multiple electron scatt. simulation 2-54716
 in situ methods for quantifying gamma-radiation levels and radionuclide concentrations 2-80405
 ionisation chamber, freon filled, environmental rad. exposure rate meas. 2-96369
 ionisation chamber for exposure dose rate meas. of X- and γ -rays 2-102345
 isotope specific noble gas monitoring from reactors using Ge gamma spectrometer 2-64595
 lead-glass calorimeters and laser based monitoring system for European Hybrid Spectrometer 2-102327
 lead-glass gamma-ray detector for relativistic heavy-ion collisions 2-108230
 lead-glass segmented hodoscope for multiple photon final states detection 2-96378
 microdosimetric parameters for photons rel. to depth in water using wall-less and walled counters 2-68167
 multienergy γ -ray scanner, CAMAC-based, attenuator transmission meas. 2-54729
 multiplication ionisation chamber survey meter for low level X- and γ -ray monitoring 2-59558
 NE 213 scintillation detector, gamma-calibration 2-64749
 neutron beam dosimetry using ionisation chambers (Czech) 2-59559
 neutron-gamma discrimination, dynamic range increase by gain switching 2-90412
 nuclear emulsions, γ cascade shower treatment 2-102354
 observations in energy range $0.3 < E < 5.0$ GeV from balloons 2-64743
 phoswich detector for beta-gated gamma coincidence counting 2-75116
 photofraction correction for voluminous sources and mean photon path 2-113827
 photomultiplier, square tube type S83003E, photocathode response uniformity 2-75112
 photon detector response functions, Monte Carlo calcs. 2-108233
 plastic scintillators for single pulse transmission Mossbauer spectroscopy 2-102342
 plastic track detectors behaviour in gamma dose field and high temp. conditions 2-70094
 POKER-CAMP, program for calc. of detector responses and phantom organ doses in γ -fields 2-59670
 portable multichannel analyser from on-site radiation monitoring 2-54725
 portable photon measuring and imaging system, safeguards appl. 2-80398
 position sensitive scintillation detectors for gamma-ray imaging telescope 2-100738
 positron lifetimes in metals, meas. apparatus 2-111396
 primary γ -rays intensity meas. from ^{197}Au (n,γ) ^{198}Au 2-75129
 probe design for root activity meas. in situ 2-88483
 prompt and delayed gamma distrib. anal. 2-59655
 proportional tube EM calorimeter with conductive plastic tube 2-75114
 proportional wire calorimeter 2-102328
 pulsed Cherenkov gamma-detector, use of hollow lightguide, influence on time resolution 2-64772
 radiation detectors for X-ray and γ -ray spectroscopy, needs and prospects 2-58974

gamma-ray detection and measurement continued

- radiophotoluminescent glasses, use in dosimetry of ^{252}Cf neutrons and γ -rays (Russian) 2-88668
 real-time reactor perimeter γ -ray monitoring systems 2-54675
 ring detector for meas. of Rayleigh scattering of Mossbauer radiation 2-85492
 scintillation counter with a recording efficiency proportional to the energy of γ radiation 2-85488
 scintillation detectors, dependence of spectrometric props. on energy of radiation 2-85487
 self-powered flux detector, neutron and γ -ray sensitivities expt. meas. 2-64766
 self-powered flux detectors, Monte Carlo simulation 2-64765
 semiconductor counter, gamma-ray detection, sensitivity calc. 2-64792
 semiconductor spectra, prospects for near state-of-the-art anal. in laboratory 2-58978
 SHEBA, neutron and γ -ray dose meas. 2-96328
 SHEBA, neutron and γ -ray spectrum meas. for criticality monitors 2-96198
 solar cell dosimeters (Chinese) 2-59608
 source and appl. of γ -rays and X-rays, symposium, Ann Arbor, MI, USA (June 81) 2-58525
 STS-6 counters, γ -counting efficiency meas. 2-108268
 supersonic jet gas target for γ -ray spectroscopy meas. 2-102297
 Swedish air monitoring network for particulate radioactivity 2-75058
 thermoluminescent dosimetry using rare earth doped BaSO₄ phosphor 2-78777
 tomographic γ -ray scanner for industrial appls. 2-57548
 two-crystal Compton polarimeter using Ge(Li) detectors 2-64814
 universal spectrometer for obtaining gamma reson. spectra of Fe containing materials 2-108222
 VVER-440, thermal power meas., correlation-dispersion method 2-64577
 γ - γ correlation experiments at high spins 2-108313
 γ p coincidence techniques in conjunction with (t,p γ) reaction, feasibility test 2-64815
 BGO scintillator based gamma ray detector, characts. 2-108276
 Bi₄Ge₂O₁₂ detector array for coded aperture X-ray telescope 2-78954
 Bi₄Ge₂O₁₂ detector resolution for high-energy EM showers 2-96381
 Bi₄Ge₂O₁₂ scintillation detector, energy resolution meas. from 1 to 50 MeV 2-64764
 Bi₄Ge₂O₁₂ scintillation detector, time resolution 2-96386
 CdTe detector, miniature, evaluation in left ventricular function monitoring 2-105818
 ^{144}Ce , specific activity determ. by $4\pi\beta$ - γ coincidence method (Chinese) 2-59654
 ^{60}Co irradiation unit, dose distrib., calc. and meas. comparison 2-78449
 $^{137}\text{Cs}/^{109}\text{Ag}$ γ -ray peak ratio anal. using Spectran-F and Spectran-III computer program 2-96408
 Ge detector, efficiency calibration for 30-2800 keV γ -rays 2-59599
 Ge detector, efficiency calibration for 30-2800 keV γ -rays 2-108232
 Ge detectors, α -emitting nuclides as absolute efficiency calibration source 2-59580
 Ge detectors, timing props. 2-113823
 Ge gamma spectrometers, convection between temporal and amplitude characts. 2-85473
 Ge gamma-ray spectrometer system using closed-cycle cryogenic refrigerator, performance study 2-70030
 Ge high-purity detector, single open-ended, internal potential distrib. 2-96389
 Ge, hyperpure detector, energy resolution, count-rate depend. 2-70032
 Ge planar detectors array for in-situ gamma spectroscopy 2-85481
 Ge radiation detector, low-energy background formation, role of edge dead zones 2-108272
 Ge spectroscopy, peak-fitting using 80 keV doublet of ^{133}Ba 2-113811
 Ge(Li) coaxial detectors, time resolution improvement by time walk correction 2-64750
 Ge(Li) coaxial detectors arrangement for Compton linear polarimeter 2-90395
 Ge(Li) complex γ -ray spectrum anal. method, using standard response matrix (Chinese) 2-59653
 Ge(Li) detector, energy and efficiency calibration using $^{166}\text{m}\text{He}$ sources 2-75121
 Ge(Li) detector, energy resolution, count-rate depend. 2-70032
 Ge(Li) detectors, ^{226}Ra standard source for efficiency calibration 2-113792
 Ge(Li) gamma-ray detector, relative efficiency in 0.8 to 6.1 MeV energy range 2-85490
 HgI₂ detector unit, implantable and externally powered, for radioisotope studies in small animals 2-57936
 HgI₂ gamma-radiation detectors development, appl. in nuclear medicine for blood flow meas. 2-73322
 HgI₂ position sensitive detector, operating characts. 2-70059
 LiF and LiF TLD polycryst., SEM obs. of neutron irradi. damage, surface defects, TLD and response and recovery 2-115298
 NaI scintillation counter, spectrum anal. program 2-54734
 NaI(Tl), cosmic component of background counting rate 2-113834
 NaI(Tl) counter, calibration 2-90407
 NaI(Tl) detector, solid angles and intrinsic efficiencies for photon emission, Monte Carlo code 2-75119
 NaI(Tl) multicrystal low-background gamma-spectrometer 2-96364
 NaI(Tl) scintillation detector with current-stabilised photomultiplier, characts. study 2-108267
 Pb-scintillator sampling shower counter characts. for electron and photon detection 2-75099
 Pb-scintillator sandwich shower detectors for electron, photon detection 2-64746
 Pb-solid Ne sandwich detector, EM calorimeter development 2-90393
 PuO₂ fuel tubes, uniformity testing, γ -ray monitor appl. 2-54491
 Rn subsurface distrib. meas. with LR-115, CR-39 and thermolum. detectors 2-67913
 ^{152}Sm - ^{154}Eu - ^{152}Eu , NBS long-lived mixed-radionuclide standards, photon emission rates determ. 2-59579
 ^{90}Se , A=85-88, fission products, on-line system for isolation and study 2-96404
 Si diffused p-n junction X-ray and γ -ray detector, design, fabrication and characts. 2-59596
 Si(Li) detector efficiency curve for X-ray parallel beam 2-59600
 Si(Li) detector parameters, electron and X-ray large doses effect, expt. study 2-85496

gamma-ray detection and measurement continued

U rocks, simultaneous γ , Ra determ. using scintillation detectors (Chinese) 2-63109
 Xe, liquid, γ -ray detectors, present status and future plans 2-90362

gamma-ray diffraction

applications of γ -ray diffractometry 2-103568
 crystallography and related techniques 2-65816
 focusing method using bent diffraction crystals 2-53909
 graphite, pyrolytic, thermally scatt. radiation diffrr., X-ray and Mossbauer γ -ray diffrr. study 2-62014
 KCl, γ -ray diffrr. by thermal diffuse scatt., Mossbauer study 2-61796
 α -Li₂O, elec. field related extinction reduction in diffraction expts. 2-7861
 NaF, electron density by γ -ray diffractometry 2-76998
 Tb₂(MoO₄)₃, spontaneous shear strain meas. and free energy expression 2-72433

gamma-ray effects

see also biological effects of gamma-rays; radiolysis

alkane radical cations, radiation prod., the use of freons and perfluoro(cyclo)alkanes as matrix 2-80642
 sec-butyl chloride, γ -irrad., long-range hole transfer, Franck-Condon factors 2-82272
 cellulose nitrate, preirradiated, alpha-particles registration, statistical behaviour 2-70078
 dielectric volumetric resistance measurement under impulsive gamma-neutron radiation (Russian) 2-95395
 dipeptides, polycryst., γ -irrad. ESR and chromatographic separation of radicals 2-110643
 fluorite, colouring by neutron and gamma radiation 2-103816
 FTR, gamma-ray measurements 2-101978
 fusion materials, nonmetals, radiation damage parameters, neutron and x-ray interactions 2-74898
 glass fibre reinforced epoxy, magnet coil insulating materials, irradiation studies 2-80181
 heat and radiation resistant cable for LMFBR appl. 2-69763
 lithium alkyls, γ -irrad., ESR obs., rel. to methylene anion radical 2-108588
 lyoluminescence and spin trapping 2-110948
 Makrofol KG fission track detector sensitivity to damage by radiations 2-78385
 metals, FCC, vacancy migration, trapping and clustering by γ -ray spectra 2-56996
 natural rubber, molten, radiation effects on struct. 2-71374
 optical fibres, radiation damage, thermoluminesc. anal. 2-114435
 optical fibres, radiation resistant, recent progress 2-114434
 optical fibres, thick core all-glass, radiation sensitivity in reactor radiation fields 2-75692
 organic insulators for composite supercond. magnet, radiation resist. in magnet location 2-108118
 pentaerythritol tetranitrate cryst., γ -irradiated, plane shock initiation 2-78108
 perovskite ferroelectrics, γ -ray effects on dielectric and electro-optical props. (Russian) 2-61809
 plastic track detectors behaviour in gamma dose field and high temp. conditions 2-70094
 poly(styrene-co-acrylonitrile), gamma-irrad., crack healing, fracture toughness 2-111305
 polychinons, ladder and partly-ladder, paramag. characts., irrad. effects 2-104571
 polyethylene:anthracene, trap depth 2-61479
 polyethylene, cryst. polymer chemorheology and Young modulus meas. 2-111218
 polyethylene, oxidation above melting point, γ -radiation effect on kinetic parameters (Russian) 2-67578
 polyethylene, TSC after low temp. γ irrad. 2-110365
 polyethylene moderator, power densities in spallation neutron source environments 2-102027
 polyglycidyl methacrylate (PGMA), negative electron resist., γ -irrad., ESR study and INDO UHF MO calc. 2-93010
 polyimide, glass-fabric-filled, mech. strength as function of γ -ray irradiation 2-80180
 polymeric insulating material degraded under specified conditions, radiation induced conductivity 2-110397
 polystyrene, negative electron resist., γ -irrad., ESR study and INDO UHF MO calc. 2-93010
 polyvinylidene fluoride films, γ -irrad., piezoelectric props. 2-87687
 progesterone, single cryst., γ -irrad., stable free radical, EPR 2-70303
 PVC electrical characts. deterioration when irradiated by Co⁶⁰ γ -rays (Japanese) 2-56031
 quartz, γ -ray irrad., smoky, low energy density of states gap, tunnelling model, US attenuation meas. 2-61324
 quartz, defects created by γ -ray, electron, and neutron irrad., thermal phonon transport study 2-56273
 quartz glass, absorption characteristics for γ -ray dosimetry 2-96322
 ruby cryst., additional absorpt. spectra irrad. with fast electrons and γ -rays (Russian) 2-82880
 secondary-electron field in material irradiated by γ quanta 2-99303
 semiconductor crystals, gamma and electron irrad., struct. ordering, Frenkel pair annihilation model 2-76500
 single crystals, β - γ induced ang. correl., nucl. quadrupole interaction invest. 2-110313
 space-charge distribution in lamellar structures 2-61034
 steel, austenitic stainless, SCC, gamma ray effects (Japanese) 2-57533
 strontium tartrate tetrahydrate, Co²⁺ centres, optical absorpt. studies 2-115220
 SYNROC-B ceramic waste, leachability study, γ -ray effects 2-74833
 TCNQ salt, N-n-propylquinolinium(TCNQ)₂ powders, pure and irrad., IR spectra 2-93189
 tetracyclohexylcyclotetraphosphine, solid, γ -irrad., ESR study 2-77377
 TGS, gamma-irrad., Mande'shtam-Briouin light scatt. 2-110879
 thermoluminescent dosimeters, laser heating technique 2-104971
 thermoplastic elastomer, SBS type, γ -irrad. in air and vacuum, stress relaxation, oxygen effects 2-65877
 triglycine sulphate type crystals, with imperfections, piezoelec. props. 2-99052
 trimethyltin-manganese pentacarbonyl single crystals, γ -irrad., EPR obs. 2-82705
 TTF-TCNQ, γ -irradiated, mag. susceptibility meas. 2-87475
 zeolites, A, X and Y, characterisation of Ag species by EPR and spin echo techniques 2-72339

gamma-ray effects continued

Ag-Zn-(Au), disordering temp. changes under action of γ -irrad. (Russian) 2-61123
 Al-SiO₂-Si, MOS struct., low temp. var. of oxide change and surface state density conc. under γ -irrad. 2-104496
 Al₂O₃ (Si,Ti) thermoluminescent phosphor appl. for environmental and personnel dosimetry 2-96316
 α -Al₂O₃ cryst., additional absorpt. spectra irrad. with fast electrons and γ -rays (Russian) 2-82880
 As-Se-Ge glass, γ -irrad., hardness meas., Ge constant effects 2-56080
 Ba(ClO₄)₂·3H₂O, EPR and optical absorpt. of ClO₄ 2-93012
 Bi₂GeO₂₀, photoluminescence spectra, effects of annealing, Al doping, X-ray and γ -ray irrad. (Russian) 2-61936
 CaF₂ films, thermoluminescence and thermally stimulated exoelectron emission, γ -ray irrad. effects 2-57191
 CdSb, γ -irrad., X-ray scatt. near K-absorpt. edge (Russian) 2-62015
 Cr(CO)₆Mn(CO)₄NO, gamma-irrad., anisotropic EPR spectrum 2-82717
 CsNO₃, gamma-irradiation effect on cryst. struct. 2-115288
 Cu stabiliser for composite supercond. magnet, radiation resist. in magnet location 2-108118
 Ga_{1-x}Al_xAs:Sn layers, electron and γ -ray irrad., elec. cond., press. effects (Russian) 2-104512
 GaAs, gamma-irradiated, near-intrinsic emission intensity, nontrivial annealing induced increase 2-93260
 GaAs IMPATT diodes, γ -ray irrad. effects on elec. and recombination props. 2-76501
 GaAs LED, shallow-junction, surface-emitting, spectral tuning through gamma radiation 2-115287
 GaP:Nd(Sm)(Eu)(Yb) epitaxial films, photoluminesc., effect of γ -irrad. 2-93267
 GaSe, elec. props., effect of gamma irradiation (Russian) 2-76498
 n-Ge, electron and γ -ray bombarded, defect accumulation kinetics, intensity dependence meas. 2-115295
 Ge epitaxial layers, LPE growth in γ -radiation field, struct. and electro-physical parameters 2-115599
 Ge, gamma irrad., defect levels, DLTS study 2-76980
 Ge, gamma irradiated, use of thermal annealing for radiation hardening 2-56032
 Ge, gamma-ray induced defects, thermal and electrical stability 2-92033
 Ge, solubility in liq. In, γ -ray effects, expt. study 2-115423
 Ge:Au, hopping cond. after γ -ray neutron, and electron irrad. 2-115758
 Ge:Cu, γ -ray irrad., Cu atom activation and concentration 2-115704
 Ge:H, interaction of H with point defects, under ⁶⁰Co gamma-irrad. 2-115279
 n-Ge:Sb, defect cluster form. and shaping after high-energy particle irrad. 2-76535
 GeO₂-B₂O₃-SiO₂ fibre composition and radiation hardness 2-114438
 GeO₂-B₂O₃-SiO₂:Ce fibre composition and radiation hardness 2-114438
 GeO₂-P₂O₅-SiO₂ fibre composition and radiation hardness 2-114438
 GeO₂-P₂O₅-SiO₂:Ce fibre composition and radiation hardness 2-114438
 GeSx, glass, photoinduced EPR meas., dangling bonds role 2-56932
 H, liquid, moderator, power densities in spallation neutron source environments 2-102027
 InSb:Ge(Sn)(Co), gamma-ray, electron and proton beam irrad., defect annealing, elec. props. (Russian) 2-103817
 KCl crystals, γ -irrad. influence on absorpt. coeff. at CO₂ laser radiation wavelength 2-87828
 KCl crystals, γ - and X-irradiated, dislocation models of mechanoluminescence 2-77595
 KCl, γ -ray irrad., impurity-vacancy dipoles, ionic cond. study 2-109790
 KCl, radiation-induced F- and V-centres formation by γ -rays 2-66058
 KCl:Eu²⁺, γ -irrad., optical, EPR, and ITC meas. 2-109831
 KCl:Eu²⁺, impurity-vacancy complexes, conversion under γ -irrad. and F-band bleaching, ESR study 2-76499
 KCl:SnCl₂, thermoluminescence on γ -irrad. 2-61992
 KH₂D₂(1-x)PO₄, X-ray and gamma irrad., domain struct. freezing 2-82802
 KOsO₃N, single cryst., γ -irrad., paramag. d³ defect, EPR investig. 2-93009
 LiF crystals, γ -irrad., bulk laser damage threshold meas. 2-86028
 LiF films, thermoluminescence and thermally stimulated exoelectron emission, γ -ray irrad. effects 2-57191
 LiF, laser action and spectra of M-centres 2-75580
 LiF TLD-100 phosphor, sensitisation and supralinearity, Z-centres and nonluminescent centres role, expt. study 2-99197
 LiF:Mg:OH crystals, gamma-irrad. new emission centres 2-116248
 LiNbO₃, single crystal, effects of γ -irradiation on dielectric consts. and optical transmission 2-61814
 LiNbO₃(Ni), γ - and X-ray irradiated, ESR, optical absorpt. and elec. cond. 2-98951
 LiNbO₃:Fe, cryst., absorpt. spectra, γ -ray effects (Russian) 2-93232
 Li₂O, neutron and γ -irrad., defect production, optical absorpt. study 2-86737
 MgAl₂O₄, spinel, γ - and X-irrad., defect trap levels TSC and thermoluminesc. study 2-56608
 MgF₂-like crystals, colouring by neutron and gamma radiation 2-103816
 MgO insulated nuclear instrument cable, gamma radiation and temp. effects 2-69765
 MgO, neutron and γ -ray effects on dissolution and corrosion 2-76688
 NH₄Cl:Ni, γ -irrad., off-centre impurity model, EPR investig. 2-82701
 NH₄MgPO₄:Ni²⁺·6H₂O, X- and γ -irrad. damage, EPR and absorpt. spectra study 2-57135
 NaCl crystal, γ -irradiated, F-stimulated photoplastic effect 2-66108
 NaCl crystals, γ irrad. influence on absorpt. coeff. at CO₂ laser radiation wavelength 2-87828
 NaCl crystals, γ - and X-irradiated, dislocation models of mechanoluminescence 2-77595
 NaCl, γ -irrad., aftereffect and photomemory, F-centres and dislocations 2-71547
 NaCl, γ -irrad., dislocation multiplication under static load (Russian) 2-91983
 NaCl, γ -irrad., radiation induced F- and V-centres, thermal destruction 2-115226
 NaCl, γ -irrad. suppression of photoplastic effect by mag. field (Russian) 2-86776
 NaCl, radiation-induced F- and V-centres formation by γ -rays 2-66058
 NaCl:Mn, γ and X-ray irrad. charge compensation thermoluminescence and optical absorption spectra 2-61988
 NaClO₂, γ -irrad., annealing, radiolysis products studied by mass spectrometry (Russian) 2-78167

gamma-ray effects continued

- NaF Harshaw crystals., thermoluminesc. γ -ray induced sensitization obs. 2-87878
 NaF Harshaw single crystals., γ -ray irradi., thermoluminescence, relationship to colour centres 2-61991
 NaF:Ca²⁺, γ -ray irradi. F₂(1) centres, optical absorption spectra study 2-76976
 NaF:Ca²⁺, γ -ray irradi., colour centres and interstitials, luminesc. spectra 2-110960
 NaNO₂, gamma-irradiation effect on cryst. struct. 2-115288
 Na₂TiO₇, γ -ray effects investig. 2-76502
 Nd³⁺, glass laser, time, energy and spectral charact., γ -ray induced defect influence 2-55169
 Nd³⁺:YAG laser; time, energy and spectral charact., γ -ray induced defect influence 2-55169
 PbO-SiO₂ glass, electron and gamma irradiated, charge trapping and release 2-57013
 PbS, lattice period, influence of composition and γ -irradiation 2-76382
 RbI:Eu²⁺, thermoluminescence and optical absorpt., effect of γ -irrad. 2-57192
 RbNO₃, gamma-irradiation effect on cryst. struct. 2-115288
 Sb-GaSe struct., γ -irrad. effect on photoelectric props. 2-61516
 Si, electron and γ -irrad., defect prod. and lifetime control 2-109833
 Si, epitaxial layer, boundary segregation of impurities, under action of γ -radiation, or quenching 2-87095
 Si, gamma and proton radiation defects formation, dislocation effects, elec. cond. and Hall coeff. study 2-86729
 Si, gamma-ray irradi., metastable Frenkel pair form., elec. props. 2-115289
 n-Si, heat treated, γ -irradiated, photoelec. props. 2-77120
 Si, proton and γ -irrad., defect clusters, Hall effect study 2-115225
 Si:Ni, γ -irrad., elec. cond., photocond. and galvomag. props. 2-115761
 Si:P crystal, γ -induced point defects, H passivation 2-103758
 Si-SiO₂, thermal oxide, γ -irrad., defects and impurities, EPR study 2-98158
 SiO₂ fibres, glass-clad, effects of ionising radiation 2-114440
 SiO₂ fibres, plastic clad, γ -irrad., low temp. response 2-114439
 SiO₂ insulated nuclear instrument cable, gamma radiation and temp. effects 2-69765
 SiO₂:Ge optical fibres, graded index and polymer clad, γ -ray effect on strength 2-86114
 SiO₂, stress-strain curves and internal stresses, bulge and tensile tests 2-82190
 ZrHNa(PO₄)₂, γ -ray effects investig. 2-76502

gamma-ray interactions

see also *gamma-ray scattering*

No entries

gamma-ray lasers

- amplification using X-ray pumping techniques 2-114227
 coherent and incoherent pumping with intense optical radiation 2-96878
 relativistic charged channelled particles, spontaneous and stimulated γ radiation 2-72521
 review 2-108847
 tuning and stimulation of gamma radiation 2-96879

gamma-ray polarisation

- two-crystal Compton polarimeter using Ge(Li) detectors 2-64814
 Ge(Li) coaxial detectors arrangement for Compton linear polarimeter 2-90395

gamma-ray production

- EM waves direct conversion into hard radiation on free electrons at cyclotron autoreson. 2-113781
 photon pulses, radioisotope standard sources, photomultiplier charact. 2-64738
 portable γ -irradiator equipment (Bulgarian) 2-85432
 Si, channeling radiation from 5-55 GeV e⁻(e⁻) 2-56057

gamma-ray scattering

see also *Compton effect; gamma-ray interactions*

- alloy composition variation det. using gamma-ray scattering analysis 2-70031
 applications of γ -ray diffractometry 2-103568
 atomic number dependence of elastic scatt. cross-sections of 0.145 MeV γ -rays 2-54352
 collimated photon scatt., nondestructive examination appl. 2-57549
 Compton profile, directional, meas. by use of annular γ -ray source 2-77612
 photofraction correction for voluminous sources and mean photon path 2-113827
 radioisotope imaging, point source scatt. contribs. from finite size objects, Monte Carlo simulation 2-111782
 Ag alloys, Roman, analysis by scatt. and X-ray fluoresc. of monoenergetic gamma-rays 2-116738
 Al, γ -ray photon multiple scatt., saturation depth 2-115320
 Au, 279 keV γ -rays Compton scatt. by L shell electrons 2-67140
 Au, gamma ray incoherent scatt. at 662 keV 2-80543
 Cu, γ -ray photon multiple scatt., saturation depth 2-115320
 Pb layers, differential γ -ray albedo depend. on layer thickness 2-96407
 Ta, gamma ray incoherent scatt. at 662 keV 2-80543
 U, gamma ray incoherent scatt. at 662 keV 2-80543
 Yb, gamma ray incoherent scatt. at 662 keV 2-80543

gamma-ray sources see *gamma-ray production***gamma-ray sources (astronomical)**

- 0.511 MeV line, possible effects of positronium negative ion 2-106500
 active galactic nuclei in early evolutionary states accounting for X-ray/ γ -ray backgrounds 2-117739
 anomalous gamma-ray transient, 1979 March 5, precise source location 2-68934
 black holes, constraints on gamma-ray production by spherical accretion with e⁻-e⁺ pair prod. 2-68808
 burst, 1979 March 5, search for high freq. pulsations in burst onset 2-68931
 burst continua and possible cyclotron absorpt. lines, interpretation 2-58497
 burst events, emission mechanism and source distance 2-117798
 burst of 1974 June 10, spectral lines anal. 2-58494
 burst of 1979 March 5, emission mechanisms spectral and temporal constraints 2-58500
 burst of 1979 March 5, model involving neutron star accretion and gravit. radiation role (Chinese) 2-63708
 burst of 1980 April 19, spectrum time variations and origin 2-58495
 burst of March 5 1979, origin rel. to short γ -bursts 2-106956

gamma-ray sources (astronomical) continued

- burst source, 1978 November 19, BV and near-IR photometry of optical candidates 2-94865
 burst source, emission line prod. through graser 2-84073
 burst source, neutron star accreted layer thermonuclear model, shock wave 2-94862
 burst source, neutron star thermonuclear model, mag. field effects 2-94861
 burst source (1979 March 5), binary neutron star accretion mechanism (Chinese) 2-79246
 burst source due to neutron star accretion and H-He shell flash 2-106959
 burst source locations, statistical study 2-58491
 burst source observed from balloon on 1980 7th October 2-58252
 burst source spectra, evidence for origin from magnetised neutron stars 2-74125
 burst sources, asteroid impact mechanism 2-94869
 burst sources, attempts at correl. with radio pulses 2-58489
 burst sources, computerised X-ray source model for burst spectra 2-89410
 burst sources, IR scans of error regions 2-68932
 burst sources, time-dependent spectra of Compton-cooled plasmas 2-78948
 burst sources (1967 July to 1979 June) 2-106552
 burst sources positions 2-58490
 burst sources review (Polish) 2-106966
 burst spectra, evidence for neutron star origin 2-58493
 burst systematics 2-58484
 bursters, burst luminosity 2-58492
 bursters, evolutionary diagram 2-106767
 bursters, high-precision meas., review 2-117796
 bursters, model of origin and evolution 2-106958
 bursts, search for assoc. high-energy ($\geq 10^{15}$ eV) gamma ray photons 2-84349
 bursts and late stages of stellar evolution 2-100960
 bursts detection >1 GeV 2-89409
 bursts from compact stars, correl. with charged particle relativistic ejection mechanism 2-106694
 bursts in 10 keV to 9 MeV range, spectral obs. 2-58487
 bursts low energy spectra, source physical conditions and geometry 2-58496
 bursts of 1979 November 16, correlation and obs. 2-58488
 bursts with $E > 3 \times 10^{-6}$ erg cm⁻², frequency 2-58486
 CG 189+1 and CG 075+00 fields, search for corresponding X-ray sources 2-74126
 clusters of galaxies, gas interaction with cosmic rays, gamma ray prod. 2-58211
 clusters of young and massive stars, phases 2-89411
 compact gamma ray point sources, optical thickness at subgamma ray frequencies 2-74127
 cosmic gamma-ray bursts, log N-log S curve meas. by SIGNE expts. 2-89407
 cosmic gamma-ray bursts, physical processes rel. to 1979 March 5 event in LMC 2-112609
 Cygnus X-3, star model with pulsar component 2-106781
 Cygnus X-3, X-ray binary, γ -ray anal. from $>10^{12}$ eV EAS obs. 2-84283
 diffuse sources and cosmic ray shock accel. 2-106433
 discrete sources and cosmic ray shock accel. 2-106433
 electron-positron annihilation line in bursts, theory 2-84348
 galactic bursts, intrinsic burst luminosity distrib. 2-101033
 galactic centre, 511 keV annihilation line radiation obs. 2-106961
 galactic centre, gamma-ray lines and transients 2-117765
 galactic centre, origin of 0.511 MeV annihilation line rel. to ionised gas clouds (Russian) 2-101074
 galactic centre, positron annihilation radiation 2-117764
 galactic centre region, confirmation of positron annihilation line time variability 2-106962
 galactic centre region, search for 511 keV line variability 2-58463
 galactic gamma ray emission, COS-B meas. rel. to cosmic rays and local interstellar medium 2-74051
 galactic gamma-ray astronomy, review 2-106964
 galactic gamma-ray sources, review (German) 2-94868
 galactic intrinsic burst luminosity distrib., implications 2-58462
 Galaxy anticenter region, gamma-ray obs. by MPI balloon-borne Compton telescope 2-89147
 gamma ray amplification through stimulated annihilation radiation 2-58499
 GB 720514 and GB 740723, burst sources correl. with X-ray sources 2-63707
 interstellar molecular clouds, cosmic rays confinement rel. to γ -ray emission 2-112271
 MCG 8-11-11, emission similarity to background radiation 2-58506
 neutron star accretion spectra, role of cyclotron reson. processes 2-58374
 neutron stars, magnetosphere and surface plasma processes in strong mag. field 2-58501
 NGC 1275 and 4151, emission similarity to background radiation 2-58506
 origin and nature 2-117799
 point sources and relativistic electron propag. and emission 2-117537
 PSR 0531, Crab pulsar, transient UHE pulsed γ rays 2-74005
 PSR 0531+21, gamma-ray interpulse, emission obs. 2-74004
 pulsar high energy particles, motion and γ -ray emission 2-63489
 short γ -bursts rel. to burst of March 5 1979, origin 2-106956
 spectra of gamma rays from relativistic plasma, theory 2-73832
 supernova remnants in dusty interstellar medium, emission 2-117729
 temperature from spectral distrib. 2-101092
 transient of 1979 March 5, data review 2-58485
 transients, neutron stars, line formation processes and anal. 2-58498
 transients and related phenomena, conf., San Diego, USA (Aug. 1981) 2-53408
 Vela pulsar, pulsed emission, X-ray and γ -ray upper limits 2-117695

gamma-ray spectra

- see also *gamma-ray angular distribution; gamma-ray spectra of liquids and solids; nuclear decay theory*
 A=144-150, proton rich nuclei with N \approx 82, beta decay studies 2-95977
 actinides, gamma-ray spectra, anal., environmental contamination appl. 2-54712
 analysis program CAELCO, for nuclide identification, conc. calc. 2-57649

gamma-ray spectra continued

- analytical approx. to γ -ray spectrum peak obtained with Ge(Li) detectors 2-102320
- automatic peak search method in gamma-ray spectra 2-108311
- ^{231}Th decay, γ -ray emission probabilities meas. 2-54300
- coal, ash content determ., γ -ray backscatt. spectral method 2-58136
- coal, concentration of Th, U and K, gamma-ray spectra meas. 2-67781
- computation, SAMPO code, minicomputer realisation on PDP 11/34 (Hungarian) 2-102324
- elemental anal. using neutron-capture γ -ray spectroscopy 2-67777
- gases, time-integrated perturbation factor minima, Scherer-Blume theory 2-91589
- multiply scattered X-rays in geophysical media, spectra transform. 2-58175
- (n, γ), high-precision spectroscopy, nuclear struct. research 2-107803
- neutron capture spectra, conference, Grenoble, France, (Sept. 1981) 2-107014
- neutron streaming through Fe duct, neutron and gamma-ray spectra, calcs. 2-75062
- photopeaks parameters determ., errors analysis 2-96368
- plastic scintillators for single pulse transmission Mossbauer spectroscopy 2-102342
- prompt gamma-ray spectroscopy and its use in elemental analysis 2-57648
- relativistic heavy ion collisions, Ca(Ne,X), Ca(Ar,X), Pb(Ne,X), Pb(Ar,X), γ -ray spectra 2-101919
- relativistic plasma, high energy gamma rays production spectrum 2-73832
- semiconductor spectra, prospects for near state-of-the-art anal. in laboratory 2-58978
- trypsinogen, bovine, intramol. reorientation, $^{199}\text{m}\text{Hg}$ perturbed ang. correl. obs. 2-67938
- (n, γ), E1 transitions, p-state spectroscopy 2-107867
- NN \rightarrow π^0 (Δ), 2 GeV, obs. in relativistic nucleus collisions 2-101919
- (I,γ), γ coincidence techniques feasibility test 2-64815
- ^{22}Ac levels and transitions 2-54301
- ^{21}Al , A=25, 29, beta decay, γ -spectra and branching ratios 2-107810
- ^{21}Al , resonance states γ -decay and bound levels study 2-54307
- ^{21}Al (n, γ), ^{28}Al complete level schemes, γ -ray energies 2-107869
- ^{21}Al (n, γ), γ -ray energies, ^{28}Al level scheme 2-107804
- ^{75}As atoms, stopping power in He, Ne and N_2 , recoil nuclei γ -ray emission study 2-102579
- ^{75}As , perturbed directional correlations meas. in gaseous H_2 $^{75}\text{Se}/\text{He}$ sources 2-74748
- ^{78}As , β^- , β^- decay, γ -rays spectroscopy 2-69597
- ^{207}At , high-spin state props. study 2-59220
- ^{207}At , low-seniority shell-model structure 2-54233
- ^{207}Bi , A=203, 205, in-beam studies and shell model features 2-113394
- ^{78}Br , high-spin states in-beam study 2-54234
- ^{81}Br ($^{6}\text{Li},\alpha\text{n}$), 19-32 MeV, ^{81}Sr high spin states study 2-54428
- ^{81}Br high spin states, J $^\pi$, yrast bands, transitions from $^{82}\text{Se}(\text{Li}, \alpha\text{n}\gamma)$ 2-69506
- ^{12}C ($^{13}\text{C},\text{X}$), E_{cm} =4-15.8 MeV, fusion cross section meas. 2-54465
- ^{40}Ca (μ,p), 40-130 MeV, photon spectra 2-59337
- $^{12}\text{Cd}^{\text{m}}$, decay study by γ -ray and conversion electron spectroscopy 2-54306
- ^{134}Ce spectroscopy and mag. moments at backbending 2-101809
- ^{141}Ce , radiative β -decay 2-54319
- ^{252}Cf , high energy γ -ray obs. following spontaneous fission 2-84989
- ^{35}Cl (n, γ), ^{36}Cl complete level schemes, γ -ray spectra 2-107869
- ^{24}Cm energy levels from thermal neutron capture γ -rays 2-84992
- $^{137}\text{Cs}/^{109}\text{Ag}$ γ -ray peak ratio anal. using Spectran-F and Spectran-III computer program 2-96408
- ^{63}Cu (n, γ), ^{63}Zn , 5-7.8 MeV, EM props. of states in ^{63}Zn 2-54386
- ^{151}Dy , A=152-161, quasi-continuum γ -ray deexcitation, yrast states, stat. model anal. of (α , xn), (^{13}C , xn) 2-79973
- Er, nuclei near N=82, lifetimes of transitions from very high spin states 2-54314
- ^{151}Er , A=148, 150, in-beam gamma spectroscopy, seniority isomerism 2-101838
- ^{151}Er , high spin states study 2-69514
- ^{158}Er , high spin nuclei, alignment effects in correl. spectra 2-54308
- ^{168}Er , macroscopic and microscopic anal. of gamma motion 2-95896
- ^{171}Er , highly mixed $13/2^+$ states, structure and decay 2-59219
- ^{152}Eu , ^{152}Sm (^{152}Gd), radioactive decay, gamma-gamma coincidence studies 2-74747
- ^{19}F , analogue resonances from $^{18}\text{O}(\text{p},\text{x}\gamma)^{19}\text{F}$ γ -ray emission meas. 2-107820
- ^{143}Gd , complex beta-decay schemes 2-79984
- ^{143}Gd , ϵ/β^+ decay, branching ratio anomalies and evidence for structures in β -decay strength 2-54327
- ^{156}Gd , levels study using (n, γ) reaction 2-79934
- Ge spectroscopy, peak-fitting using 80 keV doublet of ^{133}Ba 2-113811
- ^{75}Ge , $5/2^+$ level at 192.5 keV, 52.5 keV transition 2-84956
- ^{76}Ge ($^{12}\text{C},\alpha\text{n}$), 48-60 MeV, ^{76}Sr high spin states study 2-54428
- ^1H (n, γ) ^2H , natural width of 2.223 MeV capture line from meas. in solar flare 2-68698
- ^{14}Hf , A=176, 178, K-allowed E1 transition probabilities between multi-quasiparticle high-spin states 2-54310
- ^{140}Ho , in-beam gamma spectroscopy, seniority isomerism 2-101838
- ^{160}Ho (n, α), 7-15 MeV, total cross section, γ -spectra, direct-semidirect mechanism 2-101889
- ^{124}I , odd-odd nucleus, excited states produced in (p,n) reaction, γ -spectra study 2-101814
- ^{121}In , decay study by γ -ray and conversion electron spectroscopy 2-54306
- ^{84}Kr , A=76, 82, 84, Coulomb excitation and lifetime meas. of 2_1^+ states 2-54309
- ^{76}Kr , collective band structure to high spin and shape coexistence 2-64351
- ^{135}La levels study by X-ray and conversion-electron spectroscopy (Russian) 2-64370
- ^{137}La , N=80 nucleus, medium-spin levels and 360 ns $1^+=19/2^-$ isomer 2-54232
- ^{140}Mo (n, γ) ^{140}Mo , A=98, 100, gamma-ray spectra, energy levels 2-113485
- ^{104}Mo , energy level scheme from singles and $\gamma\gamma$ coincidence spectra 2-95976
- ^{14}N , first-excited state decay, γ -ray energy meas. 2-107796
- NaI scintillation counter, spectrum anal. program 2-54734
- ^{23}Na , low energy resonances obs. in $^{23}\text{Ne}(\text{p},\gamma)^{23}\text{Na}$, A=21, 22 2-101891
- ^{23}Na , beta decay, γ -spectra and branching ratios 2-107810
- ^{89}Nb , γ -ray spectroscopy 2-95965

gamma-ray spectra continued

- $^{40}\text{O}(\alpha,\alpha')\gamma$, A=17, 18, γ -ray prod. yields meas. 2-64399
- $^{40}\text{O}(\text{n},\text{n}')\gamma$, A=17, 18, γ -ray prod. yields meas. 2-64399
- ^{16}O , partial decay width determ. for 2^- 8.87 MeV level 2-79970
- $^{16}\text{O}(\mu,\text{p})\gamma$, 40-130 MeV, photon spectra 2-59337
- ^{18}O , first excited level lifetime from Doppler-broadened lineshape anal. 2-54311
- ^{172}Os , A=172, 174, contrasting high-spin yrast bands and LF anomaly in ^{172}Os 2-113329
- ^{180}Os , A=176,178,180, high-spin yrast and non-yrast bands study 2-101789
- ^{180}Os , side bands props. study using in-beam spectroscopy method 2-54246
- ^{190}Pb , ^{210}Pb , A=194-196, decay props. study using γ -ray spectroscopy 2-85002
- ^{210}Pb radioactive dating of lake sediments, γ -ray spectroscopic method appl. 2-58087
- ^{140}Pd , A=108, 110, multiphonon vibr. states structure 2-64433
- ^{92}Pd , excited states study 2-69600
- ^{136}Pm γ -decays from ^{136}Sm decay 2-69612
- ^{147}Pm , level structure and γ - γ directional correl. studies 2-59283
- ^{204}Po , 15^- isomer mag. moment and Po internal mag. field in Ni 2-69534
- Pu γ -ray spectra anal. using portable microcomputer 2-74394
- Pu, isotopic composition, γ -ray spectroscopy appl. 2-54711
- ^{239}Pu decay, γ transition emission probabilities and energies 2-74744
- ^{228}Ra , K=0 bands and ^{228}Fr decay scheme 2-101844
- ^{84}Rb , A=93-100, β -delayed neutron emission to excited states in Sr isotopes 2-95978
- ^{85}Rb , decay scheme and transition probabilities 2-84994
- ^{210}Rn , yrast traps and high-spin states 2-79936
- ^{84}Ru (n, γ), A=100, 102, reson. capture meas., nuclear spectroscopy and spin calc. 2-107752
- ^{107}Ru , high spin collective excitations 2-54235
- ^{84}Ru , A=114, 116, high-spin states and multiquasiparticle excitations 2-113339
- ^{119}Sb levels from $^{119\text{m}}\text{Te}$ decay, 153 and 270 keV transition characts. 2-107793
- ^{45}Sc (n, γ), thermal, γ -rays energy and intensity meas. 2-54375
- ^{94}Se , A=85-88, fission products, on-line system for isolation and study 2-96404
- ^{71}Se , β -decay daughter of ^{71}Br , decay scheme and half-life study 2-101845
- ^{83}Se , coexisting intruder bands and role of proton subshell closure 2-54241
- ^{28}Si , energy levels calc. from $^{24}\text{Mg}(\alpha,\alpha)$ and $^{24}\text{Mg}(\alpha,\gamma)^{28}\text{Si}$ reactions meas. 2-101815
- ^{27}Si ($^{12}\text{C},\text{X}$), fusion cross section energy depend. by evaporation residue meas. 2-59440
- ^{139}Sm , ^{139}Pm , decay props. study from γ -ray, β^+ and internal conversion electron spectroscopy 2-54324
- ^{147}Sm nuclear states characts. and diluting transitions props. (Russian) 2-64369
- ^{155}Sm , rotational-vibrational band structure 2-54231
- ^{118}Sn , excited 0^+ states and elec. monopole transitions 2-69605
- ^{84}Sr , A=77-80, extreme prolate deformation 2-101802
- ^{84}Sr ground-state decay, γ branching ratios meas. 2-84991
- ^{84}Sr decay, probability for 909 keV γ emission 2-74745
- ^{181}Ta ($^{136}\text{Xe},\text{X}$), 1150 MeV, X-ray spectra, giant dipole strength function 2-101859
- ^{14}Tb , A=144, 145, identification and decay, levels in ^{145}Gd 2-59286
- ^{146}Tb γ -decays from ^{145}Dy decay 2-69612
- ^{147}Tb , single-proton states study 2-54240
- ^{160}Tb , ^{160}Dy , nuclear orientation in Tb metal 2-54320
- ^{14}Te , A=116, 118, 120, 122, high-spin states, $1g_{7/2}$ proton-hole excitations collective props. 2-59218
- ^{14}Te , A=118, 120, band structure study using $\text{Sn}(\alpha, 2\text{n})\text{Te}$ 2-89992
- $^{125}\text{Te}^{\text{m}}$, M4 K-conversion coeff. meas. of 109.3 keV transition 2-69606
- ^{229}Th (n,f), short-lived products, yield, from γ -ray spectra 2-54455
- ^{232}Th decay chain, gamma-rays intensities meas. 2-95958
- ^{232}Th (^{208}Pb , $^{208}\text{Pb}\gamma$), 5.3 MeV, high spin states struct., E2 matrix element 2-113328
- ^{166}Tm , odd-odd nucleus, band structure study 2-69515
- UF_6 , isotope separation by CF_4 and CO_2 lasers, γ -ray spectra study 2-113671
- ^{214}U (^{208}Pb , $^{208}\text{Pb}\gamma$), 5.3 MeV, high spin states struct., E2 matrix element 2-113328
- ^{215}U decay, γ -ray emission probabilities meas. 2-54300
- ^{236}U (^{208}Pb , $^{208}\text{Pb}\gamma$), 5.3 MeV, high spin states struct., E2 matrix element 2-113328
- ^{238}U (n, γ), 7-15 MeV, total cross section, γ -spectra, direct-semidirect mechanism 2-101889
- ^{51}V (Li,X), Li ions spectroscopic deformation effects, γ -emission study 2-101930
- ^{140}Xe , A=119, 121, level structure and $h_{11/2}$ bands anal. in IBF model 2-95898
- ^{120}Xe , high-spin states, $1g_{7/2}$ proton-hole excitations collective props. 2-59218
- ^{122}Xe , ^{122}I , ^{122}Te , decay scheme and periods, energies, intensities of transitions 2-64373
- ^{165}Yb level scheme from gamma-rays observed in ^{165}Lu - ^{165}Yb 2-107795
- ^{90}Zr , excited 0^+ levels study 2-59288

gamma-ray spectra of liquids and solids

- see also Mossbauer effect
- computation, SAMPO code, minicomputer realisation on PDP 11/34 (Hungarian) 2-102324
- FCC metals, self-interstitials, hyperfine interaction evidence, theoretical anal. 2-71437
- GDP-1 gamma flow detector for panoramic radiography of annular welded joints of hollow cylindrical articles 2-111436
- graphite intercalation cpds., HNO_3 mol. orientation, nucl. reson. scatt. study 2-103724
- metals, FCC, vacancy migration, trapping and clustering by γ -ray spectra 2-56996
- rare earth alloys, RAl_2 (R=La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er), quadrupole interaction at ^{111}Cd probe 2-116100
- synthetic phospholipid bilayers, ordering effects due to N_2O 2-62571
- tetrafluoromethane, elec. hyperfine interaction at F site, TDPAD study 2-82303
- X-ray Linac, 10 MV, induced radioactivities in head 2-102287

gamma-ray spectra of liquids and solids continued

- Ag dilute alloys, electric field gradients, point defects, PAC meas. 2-93085
 Ag, proton irradi., In-vacancy interaction, TDPAC study 2-56004
 AgIn dilute alloy, internal oxidation, TDPAC study 2-93080
 Al, plastically deformed, lattice defect trapped at In impurities, PAC study 2-92022
 Au dilute alloys, elec. field gradients, point defects, PAC meas. 2-93085
 Be, elec. quadrupole interaction and its temp. variation at ^{109}Rh 2-56987
 $\text{CaF}_2\text{-PrF}_3(\text{NdF}_3)(\text{SmF}_3)$, radiation induced F^\cdot interstitials, TDPAC study 2-98163
 CdSe, temp. depend. of EFG, TDPAC study 2-93072
 $\text{CeO}_2\text{-CaO}$, O vacancy diffusion, ^{181}Ta gamma-gamma angular correlation study 2-116096
 Co^{19}F , temp. depend. of local mag. fields 2-82760
 Cu compounds, annihilation radiation triple coincidence meas. 2-77437
 Cu dilute alloys, electric field gradients, point defects, PAC meas. 2-93085
 Cu^{13} , ion implanted with Xe^{+} , Xe-defect configuration spatial anisotropy, ^{133}Xe TDPAC study 2-61044
 Cu^{111}In , defects obs. by channelling and perturbed $\gamma\gamma$ ang. correl. 2-81844
 DyNi_5 , ^{181}Ta TOPAC meas. of non-axial quadrupole interaction 2-93089
 ErNi_5 , ^{181}Ta TOPAC meas. of non-axial quadrupole interaction 2-93089
 F_2 , solid, electric hyperfine interactions 2-93088
 Fe^0 , vel. depend. of transient mag. field of O 2-56534
 Gd-As, dil., As hyperfine interaction, IPAC study 2-92544
 GeSe_2 , $\text{Te}_2\text{-x}$, chalcogenide glasses, broken chemical order, X-ray and DTA study 2-103638
 HF^{110}Cd , ^{111}Cd probe nuclei elec. field gradient temp. depend., TDPAC study 2-104326
 HfO_2 , temp. depend. of EFG, TDPAC study 2-93072
 Ho containing $^{166\text{m}}\text{Ho}$, mag. struct. determ. using low-temp. nucl. orientation 2-56984
 ^{197}Ir decay, use of clinical accelerator in spectroscopic studies 2-85407
 K_2HfF_6 , phase transitions, TDPAC study 2-92181
 K_2ZrF_6 , high resolution TDPAC meas. 2-56988
 La_2Co_3 , mag. props., PAC study 2-66954
 Nb, vacancy and interstitial annealing and migration, PAC study 2-86663
 Ni_2P_{18} , amorphous, ion implanted, TDPAC study 2-104771
 Pb^{207}Np , ion implanted, 5f electron localisation and relax., TDPAC study 2-56991
 Pd ions recoiling through Fe, Gd and Tb foils, transient mag. fields. γ -ray spectra study 2-66891
 Sn, temp. depend. of quadrupole interaction of ^{113}Sn , TDPAD meas. 2-82752
 Sn-Nd(Pr)(Ce), liquid, dil., 4f spin dynamics, TDPAD study 2-56992
 $\text{TaS}_2\text{-2H}$, intercalation cpd. with NaOH, supercond. transition temp. and charge transfer 2-92804
 TeCd, charge carrier governed temp. depend. of EFG for ^{111}Cd , TDPAC meas. 2-56982
 Ti, temp. depend. of quadrupole interaction of ^{69}Ge , TDPAD meas. 2-82752
 U, positron annihilation photons Doppler broadening 2-67141
 W, ion implanted with Xe^{+} , Xe-defect configuration spatial anisotropy, ^{133}Xe TDPAC study 2-61044
 W, vacancy trapping at ^{111}In , TDPAC meas. 2-76487
 ^{184}W 4^- and 6^- rot. states, gyromag. ratios from Larmor precession 2-69517
 $(\text{Zr}_{0.9}\text{Hf}_{0.1})\text{Fe}_2$, hyperfine mag. field at ^{181}Ta , radiation defects influence, TDPAC meas. 2-56986
 $\text{ZrO}_2\text{-CaO}$ (Y_2O_3) solid solns., O vacancy diffusion, ^{181}Ta gamma-gamma angular correlation study 2-116096

gamma-ray spectrometers

- see also gamma-ray spectra
 axial spectrometer for reverse Compton scattering 2-95573
 Cherenkov spectrometers for labelling bremsstrahlung photons 2-108322
 computerised gamma-ray spectrometry 2-58979
 conversion electron Mossbauer spectrometer equipped with ceramic electron multiplier detector 2-102323
 crystallography and related techniques 2-65816
 fast neutron induced γ -ray spectroscopy system 2-96360
 HERMES, high energy gamma radiation measuring system 2-102332
 high count rate gamma-ray spectroscopy, coincidence losses correction method 2-64745
 hybrid sum-coincidence spectrometer with two obs. channels (French) 2-102317
 isotope specific noble gas monitoring from reactors using Ge gamma spectrometer 2-64595
 microcomputer controlled sample changer system for γ -ray spectroscopy 2-96365
 microprocessor controlled Mossbauer spectroscopy, software package 2-107476
 microprocessor-based Mossbauer fitting program 2-84772
 Mossbauer resonance analyser of cassetite 2-57658
 Mossbauer spectrometer, with constant velocities, recording unit 2-107478
 Mossbauer spectrometer-computer complex, organisation principle 2-113093
 Mossbauer spectroscopy cell for in situ catalytic studies 2-113092
 observations in energy range $0.3 < E < 5.0$ GeV from balloons 2-64743
 portable scintillation spectrometer, appl. to environmental radiation meas. (Japanese) 2-85472
 radiation detectors for X-ray and γ -ray spectroscopy, needs and prospects 2-58974
 semiconductor, errors in photopeak parameters determ. 2-96368
 source and appl. of γ -rays and X-rays, symposium, Ann Arbor, MI, USA (June 81) 2-58525
 space-borne, orbital performance of Stirling cycle mechanical refrigerators 2-113087
 standard reference data development 2-60327
 standards for efficiency calibration, γ -rays intensity meas. from ^{197}Au (n,γ) ^{198}Au 2-75129
 sum-coincidence spectrometer with two Ge(Li) detectors (French) 2-102819
 supersonic jet gas target for γ -ray spectroscopy meas. 2-102297
 transuranics, assay in environmental samples, X-ray/ γ -ray spectrometer appl. 2-54713

gamma-ray spectrometers continued

- universal spectrometer for obtaining gamma reson. spectra of Fe containing materials 2-108222
 Ge detectors for high X-ray and γ -ray dose-rates systems 2-59595
 Ge gamma spectrometers, convection between temporal and amplitude characts. 2-85473
 Ge gamma-ray spectrometer system using closed-cycle cryogenic refrigerator, performance study 2-70030
 Ge low energy photon spectrometer for absolute determ. by U conc. 2-116742
 Ge planar detectors array for in-situ gamma spectroscopy 2-85481
 Ge spectrometer calibration from nuclear data 2-75096
 Ge(Li) complex γ -ray spectrum anal. method using standard response matrix (Chinese) 2-59653
 Ge(Li) high resolution spectrometry, absolute γ -ray meas. (Rumanian) 2-90349
 NaI(Tl), cosmic component of background counting rate 2-113834
 NaI(Tl) multicrystal low-background gamma-spectrometer 2-96364
- gamma-ray transport** see photon transport theory
- gamma-rays**
 No entries
- gamma transition** see glass transition (polymers)
- Gamow-Teller transitions** see beta-decay
- garnets**
 includes ferrimagnetic insulators, $\text{M}_3\text{Fe}_2\text{O}_{12}$, for rock-type garnets, $\text{MM}(\text{SiO}_4)_3$, see minerals
 also see ferrimagnetic properties of substances
 antiferromagnetic garnets, with fluctuational interaction sublattices (Russian) 2-104606
 bubble film, effective domain wall mass meas., reson. techniques 2-77345
 bubble garnets, ion implantation border line, pot. barrier study 2-77339
 bubble garnets, Ne ion implantation, damage profile, Rutherford backscatt. and channelling study 2-71524
 continuous laser with a lightguide resonator 2-60125
 crystal habit and atomic struct., correspondence, computer investigations 2-65909
 epitaxial bubble film, ion implantation strain annealing, propag. device stability 2-88100
 epitaxial film, bubble domain radial expansion dynamics 2-77344
 epitaxial films, bubble characterisation for process control 2-72313
 film, domain wall motion damping parameter, FMR study 2-77346
 film, ion implanted, charge wall dynamics, Faraday effect study 2-72311
 film, large magnetic domains, stability and switching 2-82681
 film, magnetic, domain lattice FMR 2-66879
 film, magnetic profile, FMR determ. 2-72355
 films, LPE growth, interfacial and volume transport processes 2-110195
 films, with orthorhombic anisotropy, fast 1- and 2- μm bubbles 2-77342
 films containing Bi, magneto-optical props. and thermomagnetic recording (Russian) 2-61715
 inclusions, in diamond, state of Earth's upper mantle 2-62929
 ion implanted, damage evaluation, Monte Carlo simulation 2-76519
 ion implanted bubble films, CEMS characterisation 2-72387
 laser, mode locking stability 2-65235
 layers, refractive index dispersion, dark m-lines method 2-82946
 LPE grown garnets, mono-molecular steps movement 2-61307
 LPE growth and defects, review 2-82168
 magnetic bubble, wall struct. (Japanese) 2-66881
 magnetic bubble LPE films, mag. parameter drift control (Chinese) 2-110612
 magnetic struct., Luttinger-Tisza method 2-115979
 magnetic structures, Mossbauer diffr. patterns, group theoretical anal. (Russian) 2-116095
 magnetoelastic and magnetostatic waves obs. in inhomogeneously magnetised crystal 2-104603
 melt, simulated, fluid flow patterns 2-79753
 rare earth garnet epitaxial films, induced mag. anisotropy 2-72308
 rare earth garnets, $\text{RFe}_2\text{O}_{12}$, amorphous, struct. props., Mossbauer study 2-103625
 rare earth iron garnets, magneto-optic anisotropy, many-sublattice model 2-72465
 rare earth magnetic garnet epitaxial bubble film, rare earth segregation 2-72633
 stimulated emission of Ho^{3+} , $^5\text{I}_7 \rightarrow ^5\text{I}_8$ laser transition at $2\mu\text{m}$ 2-110892
 thin films, domain struct. near phase transition from homogeneous to domain state 2-61745
 $\text{Y}_{3-x}\text{La}_x\text{Pb}_2\text{Fe}_{1-x}\text{Ga}_2\text{O}_{12}$, epitaxial layers, interface anal. using SIMS 2-82171
 YIG, mag. phase diagram, Faraday effect and absorption coeff. in fields up to 10 MG 2-87508
 YIG ferrimagnetic double layer, magnetostatic vol. wave prop., dispersion 2-82672
 YIG layer, reduction in high freq. H_2 plasma (Russian) 2-67738
 $\text{BiLu}_2\text{Fe}_2\text{O}_{12}$ garnet magneto-optical cryst., doped, near IR absorpt. reduction obs. 2-72473
 BiYIG, film, bubbles, mag. props. 2-72315
 (BiYLu) Fe_2O_{12} bubble film, mag. props., FMR study 2-72317
 $\text{Ca}_2\text{Al}_2\text{Fe}_2\text{O}_{12}\text{Cr}^{3+}$, broad-band emission 2-104914
 $\text{Ca}_2\text{NaMg}_2\text{V}_2\text{O}_{12}$, ESR and optical absorpt. spectra of red V ions 2-110624
 $\text{Ca}_2\text{NaMg}_2\text{V}_2\text{O}_{12}$, tetrahedral sites and elec. field gradient distrib., ^{51}V NMR study 2-110665
 $\text{Ca}_2\text{Y}_2\text{Ge}_2\text{O}_{12}\text{Tb}^{3+}$ garnet, luminescence studies 2-61952
 $\text{Ca}_2\text{Y}_2\text{Mg}_2\text{Ge}_2\text{O}_{12}\text{Cr}^{3+}$, broad-band emission 2-104914
 $\text{Dy}_2\text{Al}_2\text{O}_{12}$, mag. struct., neutron diffr. study 2-92869
 Er^{3+} :YAG laser, water and ethanol as bleachable radiation absorbers (Russian) 2-108919
 $\text{Er}_2\text{Al}_2\text{O}_{12}$ garnet, thermal expansion, optical dispersion, refractive index 2-66261
 ($\text{Er}_2\text{Y}_2\text{Al}_2\text{O}_{12}$) Fe_2O_{12} , Faraday rotation anisotropy 2-72460
 (Eu,Tm,Y,Ca) $(\text{Fe}_2\text{Ge}_2\text{O}_{12})$ thin film system, domain boundaries (Russian) 2-77338
 $\text{Eu}_{0.33}\text{Y}_{2.65}\text{Pb}_{0.03}\text{Fe}_{3.85}\text{Ga}_{1.1}\text{O}_{12}$ epitaxial bubble film, dynamic props. 2-72319
 Fe garnet films, interrelation of exchange energy, anisotropy and the Neel temp. 2-82676
 Fe-garnet films, hard-stripe domains, investig. 2-104673
 GaAs-YIG layered struct., magnetostatic surface wave amplification 2-115988
 $\text{GdGa}_2\text{O}_{12}$ garnet, formation, DTA and X-ray phase anal. 2-67207

garnets continued

- Gd₃Ga₅O₁₂, cryst. growth and prep. defects, bubble memory substrates appl. 2-93405
- Gd₃Ga₅O₁₂ films, mag. moment flip wave velocity (*Russian*) 2-56898
- Gd₃Ga₅O₁₂, garnet single crystals, slip systems 2-66007
- Gd₃Ga₅O₁₂, lattice const. determ. using measured beam and cryst. tilts 2-97848
- Gd₃Ga₅O₁₂, mag. refrigeration material, heat capacity meas. 2-64050
- Gd₃Ga₅O₁₂, solubility and enthalpy in PbO-B₂O₃-Fe₂O₃(Ga₂O₃) high temp. solvent 2-109991
- Gd₃Ga₅O₁₂, thermal cond. meas. between 60 mK and 20K (*French*) 2-86957
- Gd₃Ga₅O₁₂, thermodynamic props., 0.05-25K 2-104623
- Gd₃Ga₅O₁₂, Mg, Zr, channelling study 2-81841
- Gd₃Ga₅O₁₂:Nd crystals grown by Czochralski method, Nd effective distrib. coeff. 2-76481
- Gd₃Ga₅O₁₂:Nd³⁺ garnet films prep. by LPE, crystallographic and optical characterisation, laser appls. 2-83044
- Gd₃Pb₂Fe₃Ge₃O₁₂ epitaxial garnet film, Faraday ellipticity 2-87745
- Gd₃Pb₂Fe₃Ge₃O₁₂ epitaxial garnet film, Faraday ellipticity 2-87745
- HolG, mag. umbrella struct., neutron diff. study 2-77267
- Lu₃Al₅O₁₂, garnet, thermal expansion, optical dispersion, refractive index 2-66261
- Lu₃Al₅O₁₂:R³⁺ garnet, multiphonon nonradiative transition probability 2-110936
- (Lu_{1-x}Er_x)₃Al₅O₁₂, garnets, 3 μ m stimulated emission and spectroscopic props. 2-93229
- Mg₂Y₂Mg₂Ge₂O₁₂:Cr³⁺, broad-band emission 2-104914
- Mn₂Cr₂Ge₂O₁₂ garnets, mag. phase diagram (*Russian*) 2-56861
- Na₃Li₂Fe₂F₁₂, garnet cryst. struct., bond lengths and angles, X-ray diff. study (*German*) 2-91936
- SmTmCaGe garnet (100) films, Neel walls and line transitions 2-110614
- Sm_{0.45}Tm_{0.55}Fe₃O₁₂ epitaxial film, magnetostriction const. meas. by double crystal X-ray diff. 2-56903
- Sm_{0.45}Y_{0.55}Fe₃Ge₃O₁₂ thin films, domain struct. near phase transition from homogeneous to domain state 2-61745
- Tm₃(Tm, Ga_{2-x})₂Ga₂O₁₂, Czochralski growth, optical and X-ray topography quality obs. 2-93413
- (Y,Bi)₃(Fe,Ga)₅O₁₂ film, two-layer, bistable mag. bubble domain wall dynamics 2-66880
- (Y,Eu,Tm,Ca)₃(Fe,Ga)₅O₁₂ system films, FMR study of mag. parameters (*Russian*) 2-77385
- (Y,Sm,Lu,Ca)₃(Fe,Ga)₅O₁₂ films, H⁺ implanted, laser annealing 2-76492
- YAG, computer controlled growth method (*Japanese*) 2-105055
- YAG, flux grown, surface and bulk growth-induced strains 2-57280
- YAG, interface shape control using IR radiation convergence type heater in F2 growth 2-93410
- YAG pumped tunable dye lasers, characts. and appls., review 2-96940
- YAG, single cryst., Czochralski grown, dislocations and inclusions, birefringence study (*Chinese*) 2-109709
- YAG:Cr³⁺, Czochralski grown, colour centres, optical absorption spectra study 2-91959
- YAG:Er³⁺, energy levels of Er³⁺, absorpt. and fluoresc. spectra 2-116252
- YAG:Er³⁺, fluoresc. spectra of Er³⁺, energy level diagram 2-67097
- YAG:Fe cathodoluminesc. props., Fe ions absence effects 2-110957
- YAG:Nd, absorpt. and stimulated emission cross sections, nonreciprocity due to vibronic interactions 2-82879
- YAG:Nd continuously excited laser resonator acousto-optic switch (*Polish*) 2-97006
- YAG:Nd crystals, Czochralski grown, defect disclosure by thermolum. 2-93289
- YAG:Nd crystals, radiation colour centres rel. to growth defects, absorpt. and luminesc. obs. 2-71445
- YAG:Nd garnet, fluorescence lifetimes, particle size and refractive index effects 2-67114
- YAG:R³⁺ garnets, multiphonon nonradiative transition probability 2-110936
- Y₃Al₅Fe₃O₁₂, mag. circular dichroism and IR absorption spectra of ⁶A₁-E transition 2-87749
- Y₃Al₅O₁₂, garnet, thermal expansion, optical dispersion, refractive index 2-66261
- Y₃Al₅O₁₂:Tb single crystal, phosphor's produced by ion implantation 2-76472
- (YBiCa)₃(FeSi)₅O₁₂, bubble film, growth induced anisotropy, FMR 2-72316
- Y₃BiFe₃Ga₅O₁₂ epitaxial film, nonlinear resonance of domain walls 2-87563
- Y₃Bi₂Fe₃Ga₅O₁₂ thin films, domain struct. near phase transition from homogeneous to domain state 2-61745
- (Y_{1-x}Er_x)₃Al₅O₁₂, garnets, 3 μ m stimulated emission and spectroscopic props. 2-93229
- Y₃Fe₃O₁₂ epitaxial garnet film, Faraday ellipticity 2-87745
- (YGdM)₃(FeGa)₅O₁₂, bubble motion, vertical Bloch line annihilation during creep 2-77343
- YIG, amorphous, electric field gradient sign distrib., Mossbauer study 2-82765
- YIG, amorphous, Mossbauer Zeeman spectrum, linewidth asymm. 2-110736
- YIG, amorphous, second order quadrupole shift in Mossbauer spectrum 2-77440
- YIG, amorphous speromag., quadrupole energy shifts of ⁵⁷Fe Mossbauer lines 2-72386
- YIG, Bloch line dynamics (*Russian*) 2-92958
- YIG, domain wall mobility, initial susceptibility freq. spectra study 2-92957
- YIG epitaxial film, magnetostriction const. meas. by double crystal X-ray diff. 2-56903
- YIG epitaxial films, mag. bubble collapse field and FMR spectrum, ion implantation and annealing effects 2-104670
- YIG, FMR linewidth anisotropy origin, magnetostriction 2-77380
- YIG film, ion-implanted substituted, depth-selective ⁵⁷Fe Mossbauer spectroscopy 2-82751
- YIG film, magnetization meas. from ferrimag. resonance and antiresonance 2-66875
- YIG film, magneto-optical 3 layer unidirectional TE-TM mode converter, film thickness and waveguide length effects calc. 2-55358
- YIG films, oblique magnetization, volume and surface magnetostatic wave propag. 2-116040

garnets continued

- YIG magnetometer, phase-locked, for remote meas. of small field changes in fluctuating background 2-112937
- YIG, magnetostatic and magnetoelastic waves, interaction with growth striations obs. 2-115991
- YIG, microcrystalline, activation energy, synthesis by hot spray, spray dry and sol-gel methods 2-72659
- YIG, microstruct. and grain size, ferromagnetic resonance and ESR study 2-115425
- YIG phase containing glass ceramics, prep. and mag. characts. 2-67278
- YIG, polycryst., magnetisation, bulged wall Globus model, friction and energy terms calc. 2-77320
- YIG, polycrystalline, thermal cond., 77-300K (*Russian*) 2-98358
- YIG, saturation magnetisation and Curie temp. relationship meas. 2-116036
- YIG, solubility and enthalpy in PbO-B₂O₃-Fe₂O₃(Ga₂O₃) high temp. solvent 2-109991
- YIG, spin waves, mag. props. 2-66795
- YIG, spin-wave instability threshold in single crystals, meas. for oblique pumping 2-98859
- YIG, visible and IR refractive index dispersion (*Chinese*) 2-110794
- YIG:Bi single cryst., polar Kerr rotation spectra (*Chinese*) 2-77482
- YIG:Bi thin films, waveguide type optical isolator appls., magneto-optical props. (*Japanese*) 2-81076
- YIG:Ca film, mag. dichroism study of Fe⁴⁺ centres 2-72461
- YIG:Ca(Ge)(Si) garnets, rapid diffusion processes 2-71719
- YIG:Fe²⁺, irreversible photomag. effect 2-98918
- YIG:Ga, Gd film, confined stripe domain lattice, mag. domain walls normal modes obs. 2-92980
- YIG:Ga-ZnO, SAW parametric amplification obs. 2-92332
- YIG:Gd, Tm, Ga, He⁺ implanted, mag. and cryst. props. 2-77334
- YIG:La, Ga(Tm, Ca,Ge) films, Ne⁺ implanted, magnetisation, FMR and X-ray study 2-89967
- YIG:Pr⁴⁺, cryst. growth from melt, spontaneous magnetisation and mag. anisotropy meas. 2-77273
- YIG:Si, mag. domain struct., photoinduced mag. effects 2-104672
- YIG:Si(Ge), microcrystalline anisotropy of Fe²⁺ at zero temp. 2-56848
- YIG:Tm,Ca,Ge,Ne layers, ionimplanted, annealing effects on cryst. and mag. props. 2-77333
- Y₂O₃-In₂O₃-Fe₂O₃, superhigh freq. props., Fe and In ions electron struct. influence (*Russian*) 2-66442
- (YSmCa)₃(FeGe)₅O₁₂ epitaxial film, cylindrical mag. domain behavior in ion implantation advancement channel 2-77347
- (YSm)₃(FeGa)₅O₁₂ epitaxial films, bubble domain parameters, effect of easy magnetisation axis tilt (*Russian*) 2-104669
- Y_{1-x}Sm_xFe₃O₁₂, exchange interaction and mag. anisotropy 2-72187
- Y_{1-x}Sm_xGa₃Fe₃O₁₂ epitaxial bubble garnet film, mag. props. 2-87561
- (YSmLuCa)₃(FeGe)₅O₁₂ films, ion implanted, cubic anisotropy meas. 2-77340
- (YSmLuCa)₃(GeFe)₅O₁₂-metal interface, mag. parameters, bubble memories 2-72318
- YSmLuCaGeG:Ne(H), ion implanted bubble garnet film, mag. and cryst. props. 2-82644
- (YTmBi)₃(FeGa)₅O₁₂ (110) garnet film with orthorhombic anisotropy, replication of bubble states 2-72312

gas see gases

gas analysis see chemical analysis

gas blast circuit breakers

- ASDEX Ohmic heating pressurised air blast breaker 2-69943
- DC arc in constant diameter nozzle flow 2-97808

gas breakdown see electric breakdown of gases

gas bubbles see bubbles

gas-discharge displays

- plasma bubble domains obs. and mag. bubble analogue, appls. 2-91685

gas discharge lamps see discharge lamps

gas-discharge tubes

- see also gas-discharge displays; ion sources; mercury arc rectifiers; thyristors
- laser-controlled gas-phase switches, optical processes 2-97806
- Ne, local dependence of emissive line intensities obs. 2-103537

gas discharges see discharges (electric)

gas dynamics see aerodynamics

gas ionisation see ionisation of gases

gas lasers

- see also chemical lasers; excimer lasers; gasdynamic lasers; ion lasers
- acetic acid-d₂, optically pumped submm. laser, 363-756 μ m range 2-55134
- acetonitrile, optical pumping, rot.-vibr. anal., far-IR obs. 2-54842
- acetylene-d₂, optically pumped rotationally relaxed grating tuned laser oscillations obs. 2-96900
- adjustment method without using photocell 2-75614
- aero-optical phenomena rel. to laser beam quality, overview 2-97036
- alkali atom high power radiative-collisional lasers 2-108863
- Antares CO₂ laser system automatic opto-mech. beam alignment system 2-108894
- atomic resonance line laser status, appl. to quantitative analysis 2-80942
- breakdown voltage lowering in gas-laser tubes, theoretical analysis 2-60098
- bromotrifluoromethane, optically pumped CW far IR laser, emission lines and tentative assignments 2-96911
- capacitive high-frequency discharge prospects in laser technology 2-65241
- carbon tetrafluoride 16 μ m optically pumped laser, tuning characts. 2-102782
- carbon tetrafluoride laser modelling 2-102776
- carbon tetrafluoride optically pumped molecular laser, 16 μ m range emission 2-114252
- carbontetrafluoride laser, optically pumped, tunable pump laser stabilisation 2-102777
- carbonyl fluoride, strong far IR laser action obs. 2-102775
- carbonyl fluoride continuous submm.-wave laser source 2-96919
- CO₂ laser beam, plane-polarized, passing through Z-pinch plasma, Faraday rotation meas. 2-65760
- conference on lasers, New Orleans, LA, USA (Dec. 1980) 2-79281
- copper vapor laser, sealed, assembly 2-90934
- cis 1,2-difluoroethene laser, optically pumped far-IR emission 2-55125
- difluoromethane, far IR lasing mols., pump offset freqs., Doppler-free optoacoustic spectroscopy meas. 2-108857

gas lasers continued

difluoromethane- d_2 , efficient far IR lasing gas, wavelengths and freqs. meas. 2-96913
 discharge laser, externally sustained, elec. field computation in cavity 2-90948
 discharge laser electrode profiles, analytical design method 2-96966
 electric lasers, pulsed, glow discharge stability 2-90879
 electron-beam diode, high-intensity, for laser pumping, operating modes 2-114295
 electron-beam-discharge lasers, pulsed beam divergence calc. 2-70596
 externally maintained discharge growth, mag. field effects, paraxial model 2-60820
 far IR CW laser generation using 2- and 3-photon interaction 2-60063
 far IR lasers, frequency control and modulation by Stark effect 2-60130
 far IR molecular laser, saturation param. and power enhancements, non-linear Hanle effect 2-60183
 flowing gas lasers, pulsed, active attenuation of acoustic disturbances 2-90911
 fluorocarbon 12, CW optically pumped CF_2Cl_2 , subMM laser action 2-96906
 fluoromethane optically pumped laser, collisional narrowing 2-85940
 fluoromethane submillimetre laser, optically pumped, diffusion and vibr. bottleneck 2-96909
 fluoromethane subMM laser using new resonator type 2-81000
 formaldehyde- d_2 , submillimetre laser, optically pumped, diffusion and vibr. bottleneck 2-96909
 formic acid submillimetre laser, optically pumped, diffusion and vibr. bottleneck 2-96909
 formic acid submm. laser, optically pumped, tuning possibility 2-114246
 gas-discharge lasers, noise, influence of the Penning process 2-114242
 high power laser optical systems, flow field effects, thermal blooming control 2-97037
 high power lasers and appls., Int. School of Physics, Varenna, Italy, July (1978) 2-74141
 high-energy lasers, introduction 2-75553
 high-power tunable lasers, appls. to photochemistry and isotope separation 2-75451
 high-pressure gas lasers, preionisation discharge kinetics 2-96930
 I tunable anti-Stokes Raman laser, 178 nm 2-75560
 laser-guided electric discharges in the atmosphere, review 2-103276
 liquid crystal camera for IR HCN laser mode examination 2-70595
 metal surface laser hardening, Gaussian and Doughnut beam, effect of heat source pattern (Japanese) 2-78008
 metal vapour hollow cathode discharge lasers, coil hollow cathode design 2-55199
 metal vapour lasers, contaminants, decontamination procedures 2-86032
 metal-vapour, for laser hydrographic appls. 2-68521
 metal-vapour pulsed lasers, numerical modelling 2-114253
 methane Raman amplifiers, intensity averaging and four-wave mixing 2-55255
 methanol, CH_3OD , CW laser pumped, lasing transitions at 57, 82 and 103 μm , direct gain meas. 2-96910
 methanol large offset far IR laser lines, CO_2 waveguide laser pumped, obs. and assignment 2-80935
 methanol laser, optically pumped, CO stretch states and vibr. states, far IR laser lines 2-55122
 methanol magneto-optically modulated laser, for Faraday rot. meas. in Tokamaks 2-97788
 methanol optically pumped laser, collisional narrowing 2-85940
 methanol optically pumped submm. laser, emission lines, 150-970 μm range 2-55135
 methanol- d_4 , optically pumped, new far IR laser lines and freq. meas. 2-96912
 methanol- d_4 CW far-IR waveguide laser, optically pumped, relax. oscills. 2-75558
 methyl alcohol, CO_2 laser pumped, wavelengths for new laser lines 2-96907
 methyl fluoride, isotopic $^{13}CH_3F$, optically pumped pulsed far IR laser, cavity operation 2-97009
 methylamine optically pumped submm. laser, emission lines 2-55135
 molecular gas, for laser hydrographic appls. 2-68521
 molecular gas laser output with two combined levels, spatial hole burning elimination (Chinese) 2-96903
 multimode CW gas laser operation, stability conditions obtained using Lyapunov theorem 2-114249
 nitromethane optically pumped submm. laser, 311-1070 μm range 2-55134
 nonpotential oscills. in active mol. plasma in HF alternating field 2-60748
 PDX CO_2 laser ext., optical mounts and shutter window grating system design 2-85288
 powerful pulsed laser installation, results for CO_2 , XeF, XeBr and XeCl 2-108900
 pulsed, flow conditioning and pressure damping of shock waves 2-55195
 pulsed glow discharges in laser excitation and breakdown 2-81601
 pulsed high power gas lasers using broad area electron beam technology 2-96965
 ring laser, emission fluctuations, active medium excitation shot noise effect 2-114228
 ring laser oppositely travelling wave freq. diff. splitting 2-81008
 ring laser unidirectional lasing region control using mag. field 2-81001
 saturated absorption stabilized lasers, metrological aspects 2-60133
 submillimetre laser with off-axis pump beam injection for heterodyne radiometry/spectroscopy 2-90928
 TEA CO_2 lasers, effect of circuit inductance on operation 2-70538
 TEA CO_2 multiple-pass laser amplifier, energy extraction 2-70539
 tetrafluoromethane high-repetition-rate laser, 16 μm 2-75598
 theory of lasers operating simultaneously on two coupled transitions 2-108849
 three level gas, optically pumped, time-depend. pulse amplification 2-85941
 three-level gas excited by two unidirectional waves, amplification 2-70552
 transverse acoustic waves in pulsed lasers 2-96961
 triatomic molecules, linear, gas lasers utilising cascade transitions 2-70541
 vinyl fluoride, strong far IR laser action obs. 2-102775
 water vapour laser, population inversion by rapid heating of mol. system 2-108860
 wavefront distortions in power optics, conf., San Diego, CA, USA (Aug. 1981) 2-94890

gas lasers continued

Ar-Xe high-pressure electrical-discharge laser, pulsed lasing mechanism 2-70546
 Bi_3 , CW laser, optically pumped, hyperfine struct. 2-96914
 Br_2 - CO_2 -He solar-pumped electronic-to-vibrational energy transfer lasers 2-80933
 CO branch-selected laser, opto-galvanic effect obs. 2-102774
 CO closed-loop CW elec. discharge laser with cryogenically cooled active medium 2-114320
 CO industrial electrical-ionisation laser with turbocompressor cooling 2-80938
 CO laser, all-glass vacuum-insulated, N $_2$ -cooled 2-114247
 CO laser, fundamental and second harmonic freq. emission 2-102781
 CO moderate-pressure electric-discharge laser 2-55204
 CO TEA laser operating at room temp., output characts. (Chinese) 2-60097
 CO tunable sealed laser using selective, nonselective resonators, spectra and energy characts. 2-55131
 CO_2 16 μm laser action study 2-96887
 CO_2 advanced laser fusion systems, glancing incidence optics appls. 2-97029
 CO_2 air breathing elec. discharge laser, high-gain operation 2-114301
 CO_2 amplifier with saturating absorber, pulse shaping 2-114325
 CO_2 Antares I laser system, large-aperture beam diagnostics 2-97061
 CO_2 Antares laser, alignment gimbal positioner 2-102814
 CO_2 Antares laser system, optical tooling and surveying techniques 2-102813
 CO_2 CW electron-beam-controlled lasers for technological appls., Ar use in working mixtures 2-55116
 CO_2 CW electron-beam-controlled technological laser, upper active level relax. rate determ. 2-90865
 CO_2 CW high power atm. laser radar power amplifier 2-96991
 CO_2 CW high-power laser, development (Japanese) 2-102762
 CO_2 CW laser, mode quality and tuning 2-75558
 CO_2 CW laser using high-speed current regulated power supply, optovolt-
 taic effect 2-114318
 CO_2 CW multibeam high-power laser excited by AC discharge 2-85995
 CO_2 CW sealed high-pressure laser, high efficiency 2-55110
 CO_2 CW unstable resonator laser, output instability, mode-medium interactions 2-102764
 CO_2 coaxial low-pressure laser, thermal regime 2-80932
 CO_2 dual electron-beam controlled laser (Chinese) 2-90923
 CO_2 electroionisation laser, physical processes numerical simulation 2-75554
 CO_2 electroionisation laser, resonator, wavefront inversion efficiency, theory 2-114381
 CO_2 electron beam ionised discharge laser, closed cycle operation, discharge product meas. 2-97065
 CO_2 electron-beam-controlled closed-cycle laser, gas mixture catalytic regeneration 2-70584
 CO_2 electron-beam-controlled atm. press. laser, specific pump power influence on operating efficiency 2-114234
 CO_2 electron-beam-ionisation CW laser, plasma active medium, chem. reactions obs. 2-90866
 CO_2 fast-circulation laser with unstable cavity resonator, radiation dynamics 2-75600
 CO_2 fast-flow laser discharge chamber processes, diagnostic procedure 2-65200
 CO_2 five colour laser stabilisation and switching 2-108903
 CO_2 flyable laser beacon development 2-102820
 CO_2 frequency-switchable laser with intracavity CdTe modulator, design and performance 2-60093
 CO_2 frequency-switching waveguide laser for atm. pollution monitoring 2-96893
 CO_2 gas lasers utilising cascade transitions 2-70541
 CO_2 gas transport laser, operating characts. 2-114232
 CO_2 gas transport laser, for metal processing, cutting and heat treating 2-116611
 CO_2 high power laser, direct narrow line tuning 2-96980
 CO_2 high power waveguide TE laser, preionised 2-96992
 CO_2 high-power gas-discharge technological lasers, systems and methods for pumping 2-96986
 CO_2 high-power laser beam, temporal and spatial power distrib. meas. 2-97048
 CO_2 high-power laser systems, math. simulation 2-60060
 CO_2 high-power short-pulse laser systems for inertial-confinement fusion 2-75599
 CO_2 high-power TE laser using graphite anode and Mo wire cathode 2-60107
 CO_2 high-pressure electric-discharge laser with continuous freq. tuning and narrow emission line 2-96892
 CO_2 high-pressure laser, short light pulse generation, coherent effects role 2-70540
 CO_2 hot, saturation of short laser pulse transmission at 10.6 μm 2-97121
 CO_2 IR beam retroreflected through a turbulent atm., statistical props. 2-100561
 CO_2 IR source for spectroscopy 2-81042
 CO_2 incoherent IR emission, amplification, coeff. determ. 2-65199
 CO_2 isotope laser status and appls. in tunable laser spectroscopy 2-108850
 CO_2 isotope laser technology status 2-96894
 CO_2 isotope lasers, sealed-off, $00^{\circ}1$ - $10^{\circ}0$, $02^{\circ}0$ $_1$ and 11 vibr. band, transition small signal gain and saturation intensity 2-102766
 CO_2 large laser, design and construction of short pulse front end 2-102815
 CO_2 large laser amplifier, in situ optical breakdown 2-102832
 CO_2 large laser system, passive retropulse protection through enhanced optical breakdown 2-102833
 CO_2 large vol. laser amplifier, internal parasitic oscill. suppression 2-90869
 CO_2 laser, ballast resist. helical transversely excited, with water vapour and low ionisation pot. additive 2-102768
 CO_2 laser, double electron beam controlled, freq. selection (Chinese) 2-65246
 CO_2 laser, electron beam preionised, discharge plasma characts. 2-80931
 CO_2 laser, etalon-coupled, cavity dumping and coupling modulation techniques 2-114334
 CO_2 laser, fast-flow, pumped by steady-state RF capacitive discharge 2-114235
 CO_2 laser, gain limitations, ν_2 mode vibr. temp. meas. 2-55112

gas lasers continued

- CO₂ laser, high power, output pulse shaping with externally sustained discharge 2-114339
 CO₂ laser, high power continuous wattage (*Japanese*) 2-70583
 CO₂ laser, high press., UV preionised, transversely excited, discharge parameters, meas. and theory 2-90929
 CO₂ laser, high-power, continuous freq. tunable 2-65254
 CO₂ laser, optical radar appl. 2-97067
 CO₂ laser, output stability, effect of Ge window's interference effect (*Chinese*) 2-70581
 CO₂ laser, photoacoustic spectroscopy of IR window materials 2-70633
 CO₂ laser, pulse propag. simulation using saturable absorbers, laser fusion appl. 2-80992
 CO₂ laser, Stark-effect modulation with NH₂D (*Chinese*) 2-60128
 CO₂ laser, transversely excited sequence laser, design criteria 2-80994
 CO₂ laser active medium, preionisation electron density determ. 2-90864
 CO₂ laser amplifier, 1800 Torr electron-beam-controlled discharge, small signal gain spectrum 2-102763
 CO₂ laser beam diagnostics and alignment using high-damage threshold IR Smartt interferometer 2-101452
 CO₂ laser beam profile shaper with interlaced binary diffraction gratings 2-108920
 CO₂ laser excitation, high power, multiple electrode system 2-55182
 CO₂ laser frequency stabilisation by optoacoustic tracking of SF₆ Lamb dip 2-70579
 CO₂ laser frequency stabilisation using OsO₄ narrow resonances 2-90965
 CO₂ laser fusion driver concepts, advanced 2-97070
 CO₂ laser fusion systems, phase aberrations and beam cleanup techniques 2-102816
 CO₂ laser high-power optics, absorption's dominant role 2-97043
 CO₂ laser interferometer for plasma electron density meas. 2-114231
 CO₂ laser irradi. of SF₆-H₂, S₂F₁₀-H₂ mixtures, ignition of HF chem. laser 2-96936
 CO₂ laser light, low-reflectance absorber 2-55239
 CO₂ laser optics design, weak refl. influence from anti-refl. coated surfaces 2-90933
 CO₂ laser phase-locking, Cs frequency standard realisation 2-102844
 CO₂ laser polarised performance determ. method (*Chinese*) 2-65272
 CO₂ laser radiation, up conversion by difference freq. mixing in proustite 2-90978
 CO₂ laser resonator reflecting grating freq.-selective loss investigation 2-65342
 CO₂ laser two-wavelength and power-balanced oscill., differential asort. meas. appl. 2-90964
 CO₂ laser with plasma mirror, electron-beam-controlled 2-70582
 CO₂ laser-active media nonlinear optical inhomogeneities 2-60061
 CO₂ laser-enhanced chemical etching of solid surfaces appl. 2-77958
 CO₂ laser-induced multiphoton dissociation, energy pooling, temp. effects 2-102555
 CO₂ lasers, freq. synchronisation and phase locking 2-114324
 CO₂ lasers used in Doppler lidars, freq. stabilisation (*Chinese*) 2-65273
 CO₂ miniature sealed laser, service life, gas filling stabilisation 2-55202
 CO₂ multichannel laser interferometer using PbSnTe detector array for plasma electron line density meas. 2-53828
 CO₂ nanosecond laser pulses, temporal shaping in multiphoton saturable absorbers 2-102828
 CO₂ one-atmosphere laser amplifier pulse propag. 2-97059
 CO₂ optically pumped FIR laser for collision-induced absorption spectroscopy 2-55200
 CO₂ powerful pulsed laser installation 2-108900
 CO₂ pulse generation system, laser fusion appls. 2-97071
 CO₂ pulsed elec. discharge lasers, phase grating effects 2-102765
 CO₂ pulsed laser, low-voltage passive mode locking device 2-114297
 CO₂ pulsed TEA laser stabilised by double preliminary discharge, 1.1 kJ/litre input energy density 2-96890
 CO₂ RF-excited laser construction 2-114309
 CO₂ single mode, mode locked TEA laser 2-55178
 CO₂ stabilised laser parasitic amplitude modulation due to cavity periodic misalignment 2-55231
 CO₂ TE hybrid unstable resonator laser, single longit. and transverse mode operation 2-65198
 CO₂ TEA laser, doped with tripropylamine, extended lifetime operation 2-114304
 CO₂ TEA laser, injection mode locked, pulse broadening 2-60059
 CO₂ TEA laser, injection locked single mode operation with high energy extraction 2-96981
 CO₂ TEA laser, injection locking depend. on injected radiation intensity 2-108904
 CO₂ TEA laser, intense 11 μ m pulses production from O¹¹1-[1¹⁰0.03⁰] band 2-90867
 CO₂ TEA laser, multiple injection mode locking 2-86014
 CO₂ TEA laser, preionizing spark arrays, comparison of transverse and linear geometries 2-55111
 CO₂ TEA laser, semiconductor preioniser, expt. study 2-80993
 CO₂ TEA laser, single longit. mode operation by injection locking with tunable CO₂ waveguide laser 2-55189
 CO₂ TEA laser, stabilised, with double photopreionisation and low-ionisation-pot. additives 2-96891
 CO₂ TEA laser, UV preionised 2-60110
 CO₂ TEA laser, UV preionised 10.6 μ m operation 2-114250
 CO₂ TEA laser, variable short pulses 2-80996
 CO₂ TEA laser excited by preionised discharge through a dielectric 2-96993
 CO₂ TEA laser oscillator, triple discharge system, output characteristics (*Korean*) 2-55196
 CO₂ TEA laser performance, dependence on circuit config. 2-90930
 CO₂ TEA laser performance with high levels of O₂ contamination 2-102767
 CO₂ TEA laser with unstable resonator, emission spectrum anal. using Fabry-Perot interferometer 2-70600
 CO₂ TEA lasers, electron-beam controlled discharge, electron beam intensity distribution 2-114233
 CO₂ TEA passively mode-locked laser, single variable-duration nanosec. pulse emission 2-55115
 CO₂ TEA sealed long-life lasers, medium pulse repetition 2-114314
 CO₂ TEA UV-preionised lasers, medium pulse repetition 2-114314
 CO₂ transversely excited waveguide laser (*Chinese*) 2-55185
 CO₂ tunable single-longit.-mode oscillator for efficient optical pumping 2-85992
 CO₂ UV preionised TEA laser using circularly profiled electrodes, high output power density 2-60106

gas lasers continued

- CO₂, UV-preionised TEA laser, discharge energy loading characts. 2-55113
 CO₂ waveguide laser, gain optimisation 2-108851
 CO₂ waveguide laser mode aberration by Brewster angle windows 2-60131
 CO₂ waveguide laser pump source for far-IR laser plasma diagnostic appls. (*Japanese*) 2-90925
 CO₂ wavelength selection and intracavity modulation using elec. controlled echelette grating 2-65268
 CO₂-laser modulator, microwave behaviour (*German*) 2-86015
 CO₂-N₂ laser, plasma tube impedance, radiation fluctuations effects, theory 2-90863
 CO₂-N₂-He laser, vibr.-temp. model for determ. populations of N₂ and CO₂ levels 2-85936
 CO₂-TEA laser mode-locking by intracavity plasma switching 2-55224
 Cs vapour tunable electronic Raman laser at 16 μ m 2-75557
 Cs vapour tunable IR laser system based on stimulated electronic Raman scatt. effect (*Chinese*) 2-90871
 Cu transitions in Cu₂Br₂ vapour laser, parametric study 2-86000
 Cu vapour, development and appls., review 2-96916
 Cu vapour, pulse generator for laser energizing 2-85989
 Cu vapour laser, active medium, wavefront reversal 2-60068
 Cu vapour laser, decay of ²D<sub>3/2,5/2 levels (*Russian*) 2-90878
 Cu vapour laser, externally heated, parametric study appls. 2-80991
 Cu vapour laser development, computer modelling 2-85999
 Cu vapour lasers, contaminants, decontamination procedures 2-86032
 Cu vapour lasers, pulse width var. 2-85950
 Cu vapour transverse-discharge laser, Cu vapour conc., degree of gas heating 2-60067
 CuBr, short-pulse high-repetition-rate laser, for bathymetry 2-90917
 CuCl double-pulsed laser, temp. effects 2-102773
 CuCl high-power pulsed lasers with flowthrough design 2-60112
 CuCl laser, operating characts., Na and K addition effects 2-108862
 D₂ laser, mid IR operation obs. 2-96901
 DF laser lines, optoacoustic meas. of HCl specific absorpt. coeffs. 2-121116
 D₂O laser emission investigation at 50, 66, 83, 111 and 116 μ m 2-102779
 D₂O, optically pumped laser, wave interaction, for IR emission study 2-55128
 F atomic laser, high-pressure UV-preionised discharge-pumped 2-55120
 H halide laser analysis 2-114254
 H₂ discharge, laser action obs. at 3.767 μ m 2-55118
 H₂ laser, mid IR operation obs. 2-96901
 HCN CW sub-MM laser output characts. based on temp. props. of electrons and gases 2-96922
 HCN CW submillimeter wave laser, submillimeter wavelength meas. 2-102811
 HCN laser, polarisation modulation, for heterodyne plasma interferometer 2-109594
 HCN-CW laser, effect of oxygen 2-85937
 HF pulse chemical laser initiated by Blumlein discharge (*Chinese*) 2-65209
 He-²²Ne laser, freq. stabilisation by intracavity polarisation spectroscopy of CH₄ 2-86007
 He-Cd laser, noise characteristic 2-70543
 He-Cd⁺ hollow-cathode laser, high-voltage 2-86001
 He-Ne, electrophotography appl. 2-74536
 He-Ne, methane stabilised (3.39 μ m) and I₂ stabilised (633 nm), international comparisons results 2-102772
 He-Ne ¹²⁷I₂ stabilised lasers at 633 nm and 612 nm BIPM and IMGG intercomparison 2-102769
 He-Ne 0.633 μ m laser freq. stabilised to Ne saturated absorpt. (*Chinese*) 2-65202
 He-Ne dual cavity laser (*Chinese*) 2-60122
 He-Ne frequency locked laser, self-irrad. opto-galvanic effect 2-114336
 He-Ne frequency stabilised tunable multimode lasers 2-86026
 He-Ne frequency-stabilised laser design and construction project for students 2-94968
 He-Ne internal mirror lasers, freq. stabilisation by flowing-water method 2-70594
 He-Ne internal mirror multimode laser, polarisation props. 2-60062
 He-Ne intra-cavity laser alignment (*Chinese*) 2-65274
 He-Ne intracavity laser using getter alloy ZrAl 16 (*Chinese*) 2-96972
 He-Ne laser, 0.63 μ m, stabilised without freq. deviation 2-60114
 He-Ne laser, 633 nm, ¹²⁷I₂ stabilised, power shifts for various mirror curvatures, report 2-97056
 He-Ne laser, 633-nm, ¹²⁷I₂ stabilised, freq. depend. on modulation amplitude and wall temp., report 2-75618
 He-Ne laser, I₂ stabilised, frequency stability in gravit. field, dG/dt depend. 2-112798
 He-Ne laser, influence of foreign atoms and mols. 2-96710
 He-Ne laser, intensity stabilisation by mag. field induced light polarisation 2-65264
 He-Ne laser, with heated I₂ absorption cell, high frequency stability 2-60135
 He-Ne laser in hollow cathode discharge, output power 2-96899
 He-Ne laser line, linewidth and profile meas. method using optogalvanic spectroscopy 2-70542
 He-Ne laser operation, microwave field influence 2-114243
 He-Ne laser power meas. in visible region, international intercomparison 2-102771
 He-Ne laser radiation nonlinearity orientation mechanism and self-focusing in nematic liquid cryst. mesophase 2-97127
 He-Ne laser stabilised with ¹²⁷I₂, nonlinear frequency shifts at 633 nm 2-102770
 He-Ne laser system, mag. induced mode locking investig. 2-80928
 He-Ne laser tube positive column region gas temp. meas. by thermal expansion method (*Chinese*) 2-95369
 He-Ne lasers, discharge noise investigation (*Chinese*) 2-65201
 He-Ne lasers at 633 nm, ¹²⁷I₂ stabilised, freq. shifts at low I₂ press. 2-96897
 He-Ne lasers with I₂ saturated absorption freq. stabilisation (*Polish*) 2-96978
 He-Ne lasing medium, resonant Faraday effect, maximum population inversion determ. 2-114238
 He-Ne long laser, tunable single mode operation 2-114239
 He-Ne methane freq. stabilised laser oscill. period for optical time scale 2-101379</sub>

gas lasers continued

- He-Ne multimode laser, radiation intensity fluctuations due to nonequidistant mode distrib. 2-55117
 He-Ne ring laser, internally loss modulated, mode locked travelling wave oscillations calc. 2-55227
 He-Ne ring laser, natural fluctuations of difference between opposite wave freqs. 2-70590
 He-Ne ring laser, secondary mode beat stabilisation 2-114236
 He-Ne single frequency stabilised laser 2-85994
 He-Ne single-mode laser output, bistable behaviour obs. in polarisation 2-97050
 He-Ne totally sealed-off long-lifetime laser, metal glass sealing (*Chinese*) 2-90924
 He-Ne two-mode modulated-parameter laser 2-114237
 He-Ne visible beam retroreflected through a turbulent atm., statistical props. 2-100561
 He-Ne visible laser transitions, unsaturated gain coeff. and saturation intensity determ. 2-114240
 He-Ne/CH₄ ultrastable lasers based on saturable absorption effect (*Polish*) 2-55187
 He-Ne/1₂ linear two-mode laser, high-contrast power resons. 2-114241
 He-Ne/methane ring laser, freq. stability 2-65278
 He-Xe 3.51 μ m laser radiation scatt. 2-70597
 He-Xe high-gain single-mode laser, mode-pulling, mode-splitting and pulsing, 3.51 μ m 2-55198
 He-Xe plasma recombination laser excited by 10.6 μ m laser pulses 2-96898
 HeNe injection locking of 1.5 μ m semiconductor laser for linewidth reduction to <1.5 MHz 2-65222
 HeNe laser, hologram recording 2-96857
 K vapour, resonance four-photon parametric superluminesc. obs. for two-photon pumping 2-108853
 Kr lasers, singly ionised, excitation mechs. 2-70545
 Li vapour, two-photon laser 2-65208
 Li₂ pulsed laser, optically pumped 2-114255
 Mn vapour laser, compact 534.1 nm high pulse repetition freq., construction techniques 2-60104
 N₂, educational appls. 2-79330
 N₂, high peak power, compact, design and construction 2-65250
 N₂ laser, discharge excited, high power operation 2-114306
 N₂/CO₂ mixtures, double discharge TEA CO₂ laser uniform excitation 2-60058
 NH₃, 12 μ m, CW optically pumped, Raman processes 2-65203
 NH₃, 12 μ m Raman laser, pumped by low-power CO₂ laser pulses 2-55121
 NH₃ FIR optically pumped lasers, two-photon light shift 2-60069
 NH₃ laser emission, 20.9 to 148.7 μ m, optically pumped by TE-CO₂ laser 2-85938
 NH₃ pulsed optically pumped laser, energy characts., numerical model 2-70553
¹NH₃, CW far-IR waveguide laser, optically pumped, relax. oscils. 2-75558
 NH₃-N₂ high-power laser tunable in 745 to 930 cm⁻¹ range, laser chemistry appls. 2-96997
 NH₃-N₂ mid-IR high power tunable laser, development and appl. 2-65257
 N₂O optically bistable laser 2-96918
¹⁴NH₃ laser, optically pumped, Stark tuning at 10.78 μ m 2-80934
¹⁵NH₃ far IR lasers, optically pumped, two-photon light shift and Autler-Townes splitting 2-96908
 Ne atomic laser, high-pressure UV-preionised discharge-pumped 2-55120
 Ne II short wavelength laser design 2-65206
²⁰Ne 260 THz emission, absolute frequency meas. 2-108929
 O₂(Δ)₁ laser appl. to nuclear pumped laser fusion reactor 2-80328
 Pb vapour laser, small-scale, pulsed 2-85949
 Pb vapour lasers, contaminants, decontamination procedures 2-86032
 Rb vapour, resonance four-photon parametric superluminesc. obs. for two-photon pumping 2-108853
 Ti, visible laser oscillations obs. 2-85942
 Ti atomic laser, two photon dissociation of TII-Hg mixture, 535 nm stimulated emission 2-90875
 Tm vapour laser, optically pumped 2-55124
¹³⁶Xe laser, 5d[3/2]₁⁰6p[3/2]₁ transition in weak mag. field, polarisation bistability obs. 2-90870

gas permeability see permeability**gas phase electron diffraction**

- anharmonic oscillators, classical and semiclassical coordinate probability distrib. function 2-70415
 barbelene, struct., gas phase electron diff. obs. and force field calcs. 2-85806
 bis(4,4-dimethyl-2,5-cyclohexadiene-1-ylidene), mol. struct. studied by gas phase electron diff. 2-96733
 bis(trifluoromethyl)disulphide mol. struct. by gas electron diff. 2-70416
 bis(trifluoromethyl)sulphone, electron diff., CH₃/CF₃ substitution effect 2-90704
 3-bromopropene, mol. struct., conformers, gas-phase electron diff. 2-75431
 chloro-2,4-dimethyl-1,2-dihydro-1,5,2,3-phosphaoxadiazole, gas phase electron diff. 2-90703
 chlorocyclopentane, struct. and pseudorot. pot. function determ. by gas phase electron diff. 2-90698
 1,12-di-iodododecane-cis-dodecaborane(12), mol. struct., electron diff. obs. 2-90694
 diatomic molecules, vibr. excited fast electron scatt., appl. to electron diff. 2-108711
 1,1-dichlorocyclopropane, rot. consts., mol. struct., HF calcs., electron diff. obs. 2-108364
 dicyclobutylidene, mol. struct., gas phase electron diff. 2-90695
 4,4-dimethyl-1-methylene-2,5-cyclohexadiene, mol. struct. studied by gas phase electron diff. 2-96733
 hexafluoroazomethane, struct., vibr. normal coordinate anal., electron diff., IR and Raman obs. 2-113981
 hexafluorobut-2-ene-d₆(d₂), struct., vibr. normal coordinate anal., electron diff., IR and Raman obs. 2-113981
 methyl vinyl sulphone, mol. struct., electron diff. study 2-75433
 non-crystalline substances, diff. studies, book 2-58566
 perfluoromethylamines, mol. struct., electron diff. and microwave spectra, normal coordinate anal. 2-90701
 polyatomic molecules, anharmonic shrinkage effect on mol. vibr. on electron diff. 2-114105

gas phase electron diffraction continued

- 1,3-propanediol, gas phase electron diff., mol. struct., H-bonds 2-96734
 tetrafluoromethane hot mol., anharmonic shrinkage effects, electron diff. study 2-102625
 tetrafluoromethane hot mol., thermal expansion, electron diff. study 2-102624
 trifluoroacetylfluoride, mol. struct., torsional barrier, gas phase electron diff. 2-75432
 tris(trimethylsilyl)methane, struct., gas phase electron diff. study 2-114106
 AlCl₃, general harmonic force field and vibr. freqs., temp. variation technique of gas-phase electron diff. 2-80811
 CO₂, structural parameters determ. by gas electron diff., chemical binding effect 2-96730
 CS₂, mol. struct. determ. by gas phase electron diff. 2-96763
 CsNO₂, mol. struct. by gas phase electron diff. 2-90705
 CsNO₂, electron diff. patterns, struct. 2-75435
 GeBr₂, mol. struct., electron diff. 2-90702
 HfCl₄, gas, mol. struct. and force field, electron diff. obs. 2-90696
 N₂H₄, mol. struct. studied by gas phase electron diff. 2-90700
 RbNO₂, mol. struct. by gas phase electron diff. 2-90705
 ReO₂, mol. struct. in gas phase, electron diff. study 2-90728
 SF₆ hot mol., anharmonic shrinkage effects, electron diff. study 2-102625
 SF₆ hot mol., thermal expansion, electron diff. study 2-102624
 SOBr₂, mol. struct. gas phase electron diff. study 2-114107
 SOF₄, mol. struct., resolution of multiple model problem 2-90699
 SiF₄ hot mol., anharmonic shrinkage effects, electron diff. study 2-102625
 SiF₄ hot mol., thermal expansion, electron diff. study 2-102624
 TiNO₃, electron diff. patterns, struct. 2-75434
- gas-surface interactions see sorption**
- gas technology, natural see natural gas technology**
- gas turbine power stations**
 combined cycle power station, coal gasification 2-67870
 gas turbine/steam turbine combined cycle using liquefied hydrogen as fuel, performance anal. 2-73164
 KILnGAS coal gasification process for combined cycle power generation, evaluation 2-62452
 solar receiver for solar gas-turbine plant, test results 2-73139
- gas turbines**
 see also gas turbine power stations; turbogenerators
 Advanced Turbine Test Facility, temp. and press. meas. techniques 2-60691
 aero gas turbines, corrosion prevention by organometallic cpd. additives 2-116623
 blades life extension, mechanical and metallurgical aspects 2-99369
 centrifugal fan rotor; mean flow rel. and vel. fluctuation meas. 2-60683
 compressor rotor axial transonic flow meas. using laser anemometer 2-60687
 crack detection system for gas turbine servicing 2-111418
 endwall boundary layer flows and losses in an axial turbine stage 2-86274
 flow meas., conf., New Orleans, LA, USA (March 1980) 2-58537
 flutter spectral measurements using stationary pressure transducers 2-60690
 intra-rotor flow mapping in turbomachinery using laser anemometer 2-60686
 laser-optical blade tip clearance measurement system 2-60092
 marine environment operation, state-of-the art review of factor contributing to hot corrosion 2-72869
 mean flow measurement near open rotor 2-60689
 noise attenuation and ecological aspects of gas turbines 2-91157
 oil-spray flames, burning processes studies, low NO_x combustor design appls. 2-62403
 open cycle, efficiency improvement and superiority of steam injection 2-81208
 radio telemetry systems, design, development and operation 2-60692
 recording materials, rotational hysteresis meas. with gas turbine 2-74472
 rotor blade flow meas. 2-60684
 rotor blade passage, relative flow measurement probes 2-60685
 rotor flow, aerodynamic and turbulence meas. techniques 2-60682
 steel, stainless 2-72824
 superalloys selection for hot section components, use of advanced forming methods 2-93475
 theory for fine particle deposition in two-dimensional boundary layer flows and application to gas turbines 2-86273
 vibration and overspeed monitoring 2-91136
- gasdynamic lasers**
 aero-optical phenomena rel. to laser beam quality, overview 2-97036
 high-energy lasers, introduction 2-75553
 multiphase hypersonic lasers, gas-dynamic problems 2-76014
 nitrocellulose-nitroglycerin solid fuel based gasdynamic laser 2-96963
 optical vibrator, optimum parameters calcs. rel. to flow variables 2-114245
 CO gasdynamic laser gain kinetics 2-90877
 CO supersonically flowing gasdynamically cooled CW laser, microwave excitation 2-96994
 CO₂, 16- μ m gasdynamic laser in intracavity cascading mode 2-96888
 CO₂ CW gasdynamic lasers operating at 16 and 14 μ m, thermal excitation 2-96895
 CO₂, gas lasers utilising cascade transitions 2-70541
 CO₂ gasdynamic laser, 16.8 to 17.2 μ m output obs. 2-90868
 CO₂ gasdynamic laser, shock driven, vibr. temps. and gain. coeff. 2-102761
 CO₂ laser with optical feedback, vibr. energy transfer 2-96889
 CO₂ mixing type gasdynamic laser characteristics 2-80930
 CO₂ thermally pumped gasdynamic laser, transitions between ν_1 , ν_2 mode levels, 16 to 17.2 μ m emission 2-55114
 CO₂-Ar pulsed 18.4 μ m gasdynamic laser, shock-tube driven 2-96896
 CO₂-N₂, turbulent mixing of relaxing gases in a supersonic nozzle 2-60521
 CO₂-N₂ gasdynamic laser, flowing mixture, gain saturation 2-65197
 CS₂ gasdynamic laser, mol. vibr. rot. anal. 2-70549
 Cl recombination, prelasing investigations 2-114973
 He-Xe plasma recombination laser excited by 10.6 μ m laser pulses 2-96898
- gaseous insulation**
 air, oscillating lightning impulse voltage, breakdown behaviour of nonuniform electrode arrangements 2-97821

gaseous insulation continued

- air gaps, discharge phenomena at positive switching-impulse voltage 2-76214
 air impulse ratios of gaps in compressed gases 2-97820
 compressed gas, spatial and temporal predischarged development 2-103531
 discharge voltages of non-corona air gaps of different shape at high frequency (*Russian*) 2-97805
 gas discharges and appls., conf., London, England (August/September 1982) 2-101134
 perfluorocarbon gas dielectrics fragmentation under low energy electron impact 2-103272
 spark decomposition studies of dielectric gas mixtures 2-103533
 strongly electronegative gases, meas. of figure of merit, effect of electrode surface roughness 2-103528
 transient voltage measurement of gaseous ionisation, sensitivity and error anal. 2-97822
 C_2F_6 dielectric strength, ionisation and attachment cross sections meas. 2-103269
 CF_4/SF_6 dielectric strength, ionisation and attachment cross sections meas. 2-103269
 CO impulse ratios of gaps in compressed gases 2-97820
 CO_2 impulse ratios of gaps in compressed gases 2-97820
 He impulse ratios of gaps in compressed gases 2-97820
 N_2 analysis of Paschen curves using Townsend breakdown eqn. 2-109450
 N_2 gas filled gapped surge arresters, effect of microsurface of coaxial electrodes on time delay of step voltage breakdown 2-103529
 N_2 impulse ratios of gaps in compressed gases 2-97820
 N_2 -Cu arc discharge near anode, transport coeffs at atmospheric press. 2-103502
 SF_6 analysis of Paschen curves using Townsend breakdown eqn. 2-109450
 SF_6 and N_2 formative time lag meas. (*German*) 2-76219
 SF_6 and SF_6 mixtures, transport parameters calc. 2-103273
 SF_6 compressed, electrode surface roughness modelling and prediction of breakdown 2-103527
 SF_6 compressed, optimisation of pressure and surface roughness parameters 2-103526
 SF_6 corona stabilisation and critical pressure 2-103260
 SF_6 DC and 60 Hz AC corona, inception mechanisms 2-81600
 SF_6 development of predischarged currents in sphere to sphere arrangement for lightning impulse voltages 2-103262
 SF_6 dielectric behaviour in nonuniform fields near critical pressure 2-103257
 SF_6 effect of coatings on impulse breakdown for electrodes with different surface roughness 2-103530
 SF_6 elec. insulation, plasma breakdown, engineering problems (*German*) 2-76213
 SF_6 flashover voltage dependence on tangential field strength of contaminated insulator surfaces 2-103532
 SF_6 gas filled gapped surge arresters, effect of microsurface of coaxial electrodes on time delay of step voltage breakdown 2-103529
 SF_6 impulse ratios of gaps in compressed gases 2-97820
 SF_6 insulation, impulse corona effects on subsequent breakdown 2-65790
 SF_6 mixtures having small amount of electronegative gas in nonuniform field gaps, breakdown strengths 2-103259
 SF_6 mixtures with enhanced corona stabilisation 2-103520
 SF_6 oscillating lightning impulse voltage, breakdown behaviour of nonuniform electrode arrangements 2-97821
 SF_6 positive and negative mean ion mobilities in corona discharges 2-103524
 SF_6 positive glow pulses and sparks in 1 cm point-to-point gaps 2-103521
 SF_6 prebreakdown discharges in highly nonuniform fields in rel. to gas-insulated system 2-81602
 SF_6 sparked, SF_6 detect. 2-88387
 SF_6 spectrometric anal. during an elec. discharge 2-91708
 SF_6 transport and elec. props. calc. 2-114964
 SF_6 transport parameters calc. for non-equilibrium medium 2-103274
 SF_6/N_2 gas mixture compositions effects on discharger switching time in nanosecond range (*Russian*) 2-97804
 SF_6 -air mixtures, impulse corona in negative rod-plane gaps 2-103523
 SF_6 -air mixtures, prebreakdown phenomena in long nonuniform field gaps 2-103258
 SF_6 - CO_2 mixtures, impulse corona in negative rod-plane gaps 2-103523
 SF_6 -insulated systems, volt-time performance 2-103263
 SF_6 - N_2 gas mixtures, meas. of impulse positive point predischarged growth 2-103519
 SF_6 - N_2 mixture, arc discharge, thermal and elec. conductivity coeffs., theory and expt. 2-103501
 SF_6 - N_2 mixtures, impulse corona in negative rod-plane gaps 2-103523
 SF_6 - N_2 mixtures, optimisation of pressure and surface roughness parameters 2-103526
 SF_6 - N_2 mixtures, positive and negative mean ion mobilities in corona discharges 2-103524
 SF_6 - N_2 mixtures, prebreakdown phenomena in long nonuniform field gaps 2-103258

gases

see also aerodynamics; compressibility of gases; density of gases; dielectric properties of gases; diffusion in gases; electric breakdown of gases; electrical conductivity of gases; equations of state of gases; ionisation of gases; kinetic theory of gases; liquefaction of gases; luminousness of gases; Scott effect; Senftleben-Beenakker effect; specific heat of gases; thermal conductivity of gases; thermal diffusion in gases; viscosity of gases
 mixtures, gasdynamic separation; theory 2-75998

gauge field theory

- see also Weinberg model; Yang-Mills theory
 σ models, strong coupling vs. large N 2-53943
 σ -model, critical anal. of semiclassical results, instanton contrib. 2-113117
 ϕ^4 euclidean scalar field theory on four and three dimensional lattice, continuum limit 2-95619
't Hooft-Polyakov monopoles, Fermi statistics admission 2-113110
 $A_0=0$ gauge propagator and Wilson loop for abelian and nonabelian theories 2-95613
abelian gauge theories and spin systems, massless phases and symmetry restoration 2-53926
Abelian gauge theory, Euclidean path-integral representation 2-107532

gauge field theory continued

- Abelian gauge theory, spontaneously broken gauge invariance, massive vector mesons, Higgs bosons 2-84783
 Abelian Higgs model, strong coupling limit, CP^{n-1} model correspondence 2-113125
 abelian lattice gauge theories, duality and θ parameter, CP violation 2-79742
 Abelian supergauge supersymm. theory in Wess-Zumino gauge, multiplicative renormalisability 2-101603
 Abelian supergauge theory, renormalisation in Wess-Zumino gauge 2-74619
 Adler-Bell-Jackiw anomaly and fermion number breaking in mag. monopole presence 2-107509
 algebraic field theory, localisation 2-101511
 anisotropic σ -model, multi-instanton solns. 2-53963
 anomaly eqns. solns. based on $SU(N) \times SU(N)$ hypercolour and superalgebras 2-84846
 anti-de Sitter background and gauged extended supergravity 2-107224
 antisymmetric tensor gauge field representation 2-84802
 antisymmetric tensor gauge fields, instantons and disorder 2-79746
 antisymmetric tensor gauge fields and gravity, unified geometry 2-101289
 asymptotic freedom above critical dimensionality, fermion representations 2-69345
 atomic gauge in conformally invariant theories of Weyl-Dirac type 2-107586
 axial gauge, singularity-free canonical theory 2-79757
 axial gauge, Ward identities, in quantum gravity 2-53639
 axial gauge gravity, matter field infinities 2-63874
 axially symmetric $SU(2)$ multimonopoles 2-64228
 background field gauge, effective Lagrangian 2-53964
 background field method, Feynman rules and renormalisation 2-89885
 Backlund transformations and lattice systems with G-gauge symmetries 2-74603
 baryons, loop average in large N limit 2-69420
 book 2-79297
 book 2-84399
 BRS invariance principle based gauge fixing procedure 2-64216
 canonical quantisation of gauge fields, gravitational field 2-53640
 canonical transformations, renormalisability, gauge depend. of general gauge theories (*Russian*) 2-113149
 Cauchy problem for coupled Yang-Mills and scalar fields in the Lorentz gauge 2-84780
 CERN-JINR School of Physics, Hanko, Finland (June 1981) 2-112634
 charge space, single particle, gauge invariance, rel. to rot. invariance 2-59004
 charges and monopoles, quantum field theory regularisation 2-84837
 Chern number for gauge fields on R^4 2-95601
 chiral models, implications for gauge theories and large N 2-53992
 classical solutions, spherically symmetric monopoles, Lax pairs, Toda lattices 2-54000
 classical $SU(2)$ gauge theory, axially symmetric solns. 2-53956
 classical theorem, qualitative and exact results 2-95667
 classification using Carmeli scheme 2-101535
 compact QED in three space-time dimensions, expansion near weak coupling 2-113202
 compact QED with an extended lattice action 2-89897
 compact single gauge group with arbitrary symmetry breaking, mag. monopole solns. 2-113104
 composite quarks and Cabibbo mixing 2-59128
 composite $SU(3)$ gauge bosons in nonAbelian theory 2-59129
 conformal gravity, gauge formulation 2-53638
 conformal gravity and anomalies, de Sitter space, field theories 2-69077
 conformal invariance and space-time torsion 2-89586
 conformal invariance in QED 2-101634
 connections with L^p bounds on curvature 2-53921
 continuum systems, gauge groups, Noether's theorem 2-112708
 cooling Universe, gauge symmetry breaking, unified interactions 2-117840
 cosmological constant and gauge-covariant theory 2-63727
 covariant Schrödinger eqn. via path integrals 2-53576
 CP violation, mass matrix in Higgs-boson model 2-69387
 CP violation in broken supersymmetric theories 2-101593
 degenerate supersymmetric vacua and gravitation 2-84508
 Deser-Van Nieuwenhuizen algebraic vierbein gauge 2-84503
 differential geometry, fiber bundles and physical theories 2-69332
 diffraction in accelerators, colliders and QCD 2-107627
 dimensional regularisation techniques, rel. to QCD and QED two-point functions 2-89910
 Dirac equation, gauge invariance 2-107518
 Dirac monopoles, existence of Lagrangian 2-113121
 Dirac quantisation, gauge choice 2-95636
 Dirac vacuum, stability and decay in external gauge fields 2-84811
 discrete chiral symmetries, massless composite fermion models 2-113169
 disorder variables and local kink operators, euclidean functional integral approach 2-53953
 dual BRS identities and renormalisation 2-84782
 duality in chiral field theories, Abelian and non-Abelian gauge potentials 2-113172
 duality-transformed Wilson loop operator 2-107500
 dynamically broken supergravity and hierarchy problem 2-107223
 dyons, field equation and equation of motion 2-107527
 dyons, generalised field eqns., quaternionic formulation 2-89889
 dyons of charge $e\theta/2\pi$, gauge transformation topology in Georgi-Glashow model 2-59038
 E(6) grand unified gauge model, mass hierarchy for quarks and leptons 2-69393
 early Universe, vacuum phase transitions, primordial irregularities 2-101106
 effective action divergences in chiral superfield in external supergauge field (*Russian*) 2-113176
 Eguchi-Kawai lattice gauge model, in $SU(N)$, $N=2, 3, 4, 5, 10$, Monte Carlo calc. 2-101542
 Einstein gravity as a symmetry-breaking effect in quantum field theory 2-95205
 Einstein open metric, vacuum instability, spontaneous broken symm. phase 2-74295
 Einstein-Cartan-Weyl system solns., neutrino couplings to gravity 2-63877
 electron transport theory, intracollisional field effect, gauge treatment 2-58752

gauge field theory continued

electroweak gauge models, lepton number conservation 2-95705
 electroweak unification of quarks and leptons in $Sp(8)$ and $Sp(10)$ symplectic gauge symmetry 2-101623
 electron dynamics, Lie-admissible formulation, gauge degrees of freedom 2-113251
 Euclidean (QED), construction via lattice gauge theory, boundary conditions, vol. depend. 2-59089
 Euclidean fields, infrared singularities caused by gauge fixing 2-54004
 excited glueball states in four-dimensional $SU(3)$ lattice gauge theory 2-107633
 experimental status of gauge theories 2-113153
 extended Becchi-Rouet-Stora invariance for gravity via local $OSp(4|2)$ supergravity 2-101293
 extended supersymmetry, analytical constraints 2-95672
 Faddeev-Popov formula, nonperturbative modification 2-107538
 fermion determinant calcs. in chiral and supersymmetric theories (*Russian*) 2-69378
 fermion free gauge theories with scalar fields, most general two-loop counterterm 2-59037
 FF gauge-invariant scalar operator in pure QCD, renormalisation 2-59008
 field strength formulation transformation of functional integral 2-113140
 field theory quantisation in sector with zero charges 2-59043
 finite temperature QED, mass generation 2-113198
 finite-temperature behavior of mass hierarchies in supersymmetric theories 2-79779
 flux confinement in leading logarithmic model 2-95751
 four-dimensional QCD, West's proof of confinement 2-84852
 four-dimensional Z_2 lattice gauge theory linearisation 2-84799
 free energy density bounds 2-107512
 free massless spin field, quasiloal observables, C^* -algebra translation group 2-95045
 $g\phi^4$ theory, Green function in instanton field 2-107549
 gauge and spin field hamiltonians in the finite lattice approach 2-53950
 gauge fermions model in grand unification $SU(5)$ theory 2-84817
 gauge hierarchies of $SU(N)$ grand unification 2-107575
 gauge invariant spontaneously broken spinor theory without genuine gauge and Higgs fields 2-59051
 gauge symmetries without scalar mesons, spontaneous breakdown 2-59003
 gauge unification of relativistic and unitary spin 2-74632
 general affine gauge gravity, short range component, quark confinement 2-59030
 general gauge theories with fermions, dynamical symmetry breaking, complementarity principle 2-79740
 general relativity, gauge theory 2-107202
 generalised BRST quantisation 2-79763
 generalised connections and gauge fields on fibre bundles, book 2-84365
 generalised Maxwell eqns. and mass generation gauge mixing 2-53955
 generalised theory of gravitation, field redefinition of string Lagrangian 2-95169
 generalised Villain models, Migdal recursion relations 2-107543
 generalized gauge theories and the constituents of massless particles 2-101575
 generation nonuniversality, gauge model, intergeneration fermions 2-101626
 geomagnetic symmetry breaking and Weinberg-Salam model 2-79791
 global, non-Abelian charges 2-53937
 global isospin invariance, effective gauge theory 2-79750
 globally supersymmetric, spontaneously broken, cancellation of quadratically divergent mass corrections 2-89895
 glueball mass, in $SU(2)$ lattice gauge theory, Monte Carlo calc. 2-107635
 grand unification, Dynkin weights, global supersymm. 2-69385
 grand unified gauge models, cosmological baryon asymmetry 2-101614
 grand unified model with Bogolubov's symmetry breaking mechanism 2-79801
 grand unified model with composite fermions based on $SO(3)\times SU(8)$ group 2-69394
 grand unified theories, baryon generation and symmetry behaviour at high temp. 2-59072
 grand unified theories, effective parameters and renormalisation group 2-84826
 grand unified theories, fermions and Higgs fields 2-95720
 grand unified theories, monopoles and early Universe, review 2-79790
 grand unified theories 2-113195
 grand unified theory building, Higgs mesons 2-107579
 gravitation, gauge action principles, twistor bundles 2-101284
 gravitation, gauge approaches, differences, critical anal. 2-53634
 gravitation, gauge theory and nodal singularity 2-74303
 gravitation, gauge theory formulation, Poincare, de Sitter and conformal cases 2-53637
 gravitation, relativity and equivalence principles 2-58683
 gravitation, translation gauge theory, geometric struct. 2-95191
 gravitation singularities, foliation anal. 2-112790
 gravitation tensorial theory in the framework of special relativity 2-84501
 gravitation theory, gauge formulation 2-95195
 gravitational and cosmological constants in broken symmetry theories of gravity, temp. depend. 2-84505
 gravitational theory coupled to twist-tensor matter fields, dynamic torsion 2-101292
 gravity, Dirac Hamiltonian formalism 2-95203
 gravity, gauge theories, Hamiltonian dynamics 2-84506
 gravity theories with asymptotically flat instantons 2-58678
 Gross-Neveu model, scale-dependent phase structure analysis 2-112748
 hadronisation by colour bremsstrahlung 2-54097
 Hamiltonian lattice gauge theories, gauge-invariant variational methods 2-95627
 hamiltonian $U(1)$ and Z_2 models, gauge invariant variational study, critical space-time dimensionality 2-59039
 Hamiltonian $U(N)$ lattice gauge theory, $N=\infty$ phase transition absence 2-95628
 Harrison-Neugebauer-type transformations for instantons, multicharged monopoles as limits 2-95623
 heat kernel lattice gauge theory, phase transition at large N 2-89900
 heavy fermions in gauge theories, general spinor loop anal. 2-107501
 Heisenberg model in 2-dimens. with x-y like anisotropy, unit topological charge instanton config. 2-53952
 Higgs fields, dynamical origin, singular fluctuation loops 2-89890

gauge field theory continued

high-derivative field theories, counting of states 2-107226
 higher dimensional gravity, spontaneous compactification 2-95199
 holonomy group and spontaneous symmetry breaking 2-74596
 homology theory of lattice fermion doubling 2-113099
 't Hooft-Polyakov monopole, accelerating, fields calc. 2-101521
 horizontal $SU(3)_H$ gauge symmetry and flavor changing neutral currents 2-79812
 hot quark-gluon plasma, collective excitations, dispersion laws (*Russian*) 2-54080
 hot $SU(2)$ glue, Monte Carlo study 2-53995
 induced gravity, upper bound 2-101290
 induced Kaluza type interactions (*Chinese*) 2-79804
 infrared asymptotics of power type for the gluon propagator in the axial gauge 2-95650
 instanton paramagnetic medium at finite temperature 2-53999
 instanton-induced baryon and lepton number violating processes in $SU(2)\times U(1)$ electroweak theory 2-54027
 instantons and the interaction of heavy quarks in QCD vacuum 2-79821
 interface between QFT and stat. mech. 2-95663
 intermediate bosons, mass in $SU(2)_L\times SU(2)_R\times U(1)_{B-L}$ electroweak gauge model 2-79813
 Kalb-Ramond particles, massless, dynamical stability 2-101556
 Kaluza-Klein theories, zero modes of internal Dirac operator 2-113138
 Kaluza-Klein theory, group covariance generalisations of gravitation 2-112755
 Kaluza-Klein vacuum instability 2-53635
 Lagrangian field theory, invisible Goldstone bosons 2-95736
 large- N lattice gauge theory, reduction of dynamical degrees of freedom 2-69333
 large- N lattice group theory, random surface counting 2-53965
 lattice fermions, numerical study using stochastic method 2-89909
 lattice gauge field topology 2-101509
 lattice gauge fields, nonAbelian, Bianchi identity 2-95635
 lattice gauge theories, alternative actions 2-107485
 lattice gauge theories, four-dimens., Monte Carlo simulation fast algorithm 2-64214
 lattice gauge theories, Monte Carlo calcs. 2-54003
 lattice gauge theories, torus magnetic-flux free energy inequalities and confinement 2-79747
 lattice gauge theories, with $SU(3)$ subgroup gauge, phase struct. 2-89904
 lattice gauge theories 2-53991
 lattice gauge theories with fermions on lattice, strong-coupling limit 2-101549
 lattice gauge theory, compact $U(1)$ in four dims., Monte Carlo simulation 2-69355
 lattice gauge theory, continuum limit results 2-89907
 lattice gauge theory, Hamiltonian, spacelike Wilson loops, deconfining roughening transition 2-69353
 lattice gauge theory, large N limits as classical mechanics 2-79427
 lattice gauge theory, mean-field approx. 2-89901
 lattice gauge theory, microcanonical ensemble formulation 2-101544
 lattice gauge theory, mixed, phase diagram for large N 2-101516
 lattice gauge theory, Monte Carlo calcs., review 2-53916
 lattice gauge theory, Monte Carlo calcs., vectorisation for CYBER 205 computer 2-95590
 lattice gauge theory, Monte Carlo simulation, review 2-79733
 lattice gauge theory, off-axis plaquette-plaquette correl. functions 2-107536
 lattice gauge theory, quasiclassical approx. bridging gap between strong and weak coupling regions 2-89886
 lattice gauge theory, roughening transition 2-53993
 lattice gauge theory, $SU(2)$, $SO(3)$, $Z(2)$, mean field soln. with corrections 2-69337
 lattice gauge theory, $SU(3)$ discrete subsets, Monte Carlo simulation 2-95612
 lattice gauge theory 2-95668
 lattice gauge theory universality at large N 2-113100
 lattice gauge-Higgs system, magnetic monopole, mag. charge distrib. 2-59034
 lattice QCD, axial current matrix element evaluation, quenched approx. 2-101560
 lattice QCD, large- N , mean field approx., chiral symm. breaking 2-89903
 lattice QCD, quark-antiquark state in strong-coupling limit 2-84851
 lattice R-gauge theories 2-95652
 lattice Schwinger model and anomalies 2-101562
 lattice $SU(2)$ gauge theory, finite temp. Monte Carlo study 2-53994
 lattice theories of fermions, criterion for chiral symmetry 2-84806
 lattice versions of quantum field theory models in two dimensions 2-101517
 lattice Yang-Mills theory, fermionic determinant 2-53977
 light composite fermion spectrum from gauge theory of quark and lepton constituents 2-64304
 light front coordinates, canonical formalism (*Russian*) 2-53989
 linear deformation problems for Ernst eqn. 2-95155
 linearised theory of gravity, quantisation 2-107217
 local, massive vector fields, metrical connections 2-74598
 local gauge invariance theories and spontaneous symmetry breaking (*French*) 2-89911
 local quantum field theory, analyticity, renormalisation group (*Russian*) 2-95655
 locality and the structure of particle states in gauge field theories 2-101577
 loop diagrams in boxes, appl. to QED and QCD vacuum 2-95634
 loop space formulation 2-69359
 Lorentz group nonlinear realisations, effect on electrodynamics 2-112699
 Lorentz invariance restoration, energy-momentum dispersion of glueballs 2-107515
 low-energy supersymmetric models 2-79783
 lowest lying scalar glueball 2-95766
 magnetic charge quantisation, topological meaning 2-74597
 Majoron emission by neutrinos in Gelmini-Roncadelli gauge model 2-54048
 many body content of gauge theories, spontaneous supersymmetry breaking, colour confinement 2-59020
 mass, in gauge theories 2-64219
 massive electrodynamics, gauge technique 2-107602
 massive particle states, localisation props. 2-64212
 massless composite states, existence limitations in gauge theory 2-54050

gauge field theory continued

- massless composites with massive constituents, model field theories 2-84872
 massless fermion vacuum, dyon disappearance 2-69351
 massless QCD₂, Lax representation 2-101646
 massless scalar electrodynamics, pair condensation 2-84836
 mathematical methods in hydrodynamical systems, conf., La Jolla, California, USA (Dec. 1981) 2-112637
 matrix model, large N, baryons, WKB wave functions 2-74616
 maximal grand unification model based on SU(16), gauge hierarchies and baryon nonconservation 2-95713
 MHD, dissipation-free, Hamiltonian, canonical construction 2-103227
 mixed SO(3) SU(2) lattice gauge theories, phase structure, monopoles 2-53949
 modified Eguchi-Kawai model 2-107535
 modified lattice gauge theory, order parameters 2-95626
 momentum subtraction scheme in the axial gauge 2-113150
 monopoles connected by strings, cosmological evolution 2-58516
 multi-instanton gas in non-Abelian gauge theories, thermodynamics, physical model 2-59033
 multidimensional unified gauge theories, geodesic motion 2-74633
 N=1,2 supersymmetric tensor gauge multiplet, conformally invariant theory 2-59031
 N=8 supergravity with dynamical SU(8) gauge theory, spin-3/2 fields role 2-95209
 neutrinoless double- β decay in SU(2) \times U(1) theories 2-95975
 non-Abelian axial anomalies, nonperturbative proof 2-84808
 non-Abelian fields, charges and strings 2-107529
 non-Abelian gauge field to string transformation 2-54066
 non-Abelian gauge fields, space-time symmetries 2-74592
 non-Abelian gauge symmetry, two-dimensional model 2-84788
 non-Abelian gauge theories, covariant calculations at finite temps. 2-113141
 non-Abelian gauge theories, local observables 2-59009
 non-Abelian gauge theory, canonical quantisation 2-69315
 non-Abelian gauge theory, effective theories with broken flavor symmetry 2-101565
 non-Abelian gauge theory, path mean values 2-113147
 non-Abelian gauge theory, topological susceptibility in finite space-time vol., semiclassical formula 2-101519
 non-Abelian magnetic monopole incorporation, exact results 2-107548
 non-Fock linear boson systems and their applications in two-dimensional models 2-95649
 nonAbelian classical source, gauge field solns. 2-53975
 nonAbelian gauge theories, colour confinement, local gauge symm. restoration 2-101540
 nonAbelian gauge theories, spont. symm. breaking, gauge hierarchy, Lagrangian, decoupling 2-74613
 nonAbelian mag. monopoles, internal struct. 2-101555
 nondegenerate quantum system, EM field interaction, gauge-invariant time-depend. perturbation theory 2-63843
 noninteracting Bose and Fermi fields, Euclidean lattice thermodynamics, finite size effects 2-89902
 nonlocal gauge theories 2-101543
 nonrelativistic coloured constituent quark models, explicit gluonic components in multiquark wave functions 2-95752
 O(3) lattice, topological charge 2-101514
 O(3) lattice spin model, Z₂ vortices, Monte Carlo calc. in two dims. 2-89898
 O(N) σ model, dynamical supersymmetry breaking 2-95618
 O(N) grand unified theories, gauge hierarchy problem 2-79792
 O(N) lattice models, N=2,4, two dims., Monte Carlo calcs. 2-53997
 O(N) nonlinear σ -model, lattice action near continuum limit 2-101551
 off-axis glueball masses, strong coupling expansions from lattice gauge theory 2-95782
 one-loop instanton determinants calc. using particle propagators 2-101513
 P exponential, quantum expectation value, coupling const. anomalous counterterms absence 2-89915
 perfect inviscid fluid, gauge theory 2-112709
 periodic QED models, U(1) gauge group with mixed actions, phase structure 2-84839
 periodic quantisation method, periodicity condition investigation 2-107171
 perturbative QCD, conf., Tallahassee, FL, USA (March 81) 2-53409
 perturbative QCD, optimum renormalisation scheme 2-101538
 perturbative QCD coupling, large N behaviour 2-113218
 perturbative solution non-existence 2-101533
 phase relativization in non-Abelian gauge theories 2-53941
 photon propagator singularity in axial gauges 2-89929
 pion-nucleon σ commutator, spin-orbit interaction, QCD calc. (Russian) 2-95770
 Poincare gauge theory, gravitational singularity 2-58681
 Polyakov's bosonic string theory, regular classical solutions 2-101692
 Polyakov's quantised string theory, bosonic boundary terms 2-101693
 Pontryagin index for SU(N) gauge fields on Hypertorus 2-107493
 Potts model, first-order phase transitions 2-58717
 principal bundles, free gauge field quantisation 2-69317
 proton decay and SU(5) grand unified model 2-79802
 proton decay operator anal. in SU(7) grand unified theory 2-84821
 pure SU(2) lattice gauge theory, glueball masses, Monte Carlo method 2-69339
 QCD, chiral flavour symm., spontaneous breaking 2-79752
 QCD, chiral symm. breaking 2-69409
 QCD, dynamical chiral symm. breaking, pseudoscalar meson spectra (Russian) 2-95771
 QCD, Dyson eqns., confinement, chirality 2-74647
 QCD, fragmentation functions, scaling, timelike cut vertices 2-79751
 QCD, glueball mass spectrum, lattice Monte Carlo calc., SU(2) gauge theory 2-59108
 QCD, gluon condensation, vacuum props., axial gauge formalism 2-79823
 QCD, gluon condensation, vacuum props. 2-79822
 QCD, gluon propagator, effective Lagrangian 2-95758
 QCD, gluon propagator, IR asymptotic form 2-95745
 QCD, hadron masses, instantons role 2-107615
 QCD, local and nonlocal light cone expansion, anomalous dimensions 2-95743
 QCD, master field Poincare invariance, SU(N_c) gauge field construction 2-69405
 QCD, minimal subtraction and heavy quark decoupling 2-54062

gauge field theory continued

- QCD, nonlinear effects, self-consistent treatment 2-107618
 QCD, nonperturbative power corrections calc. (Russian) 2-54079
 QCD, one-instanton contribution, IR behaviour 2-79825
 QCD, operator-product expansion and vacuum instability 2-95640
 QCD, perturbative, box graph calc., with light-like particles 2-69358
 QCD, perturbative, qq degenerate state role 2-69425
 QCD, quark-gluon plasma, instantons role 2-107616
 QCD, renormalization group functions, prescription depend. 2-53971
 QCD at nucl. dimensions, book contrib. 2-113221
 QCD confinement, infrared behaviour of gluon propagator, Wilson loop 2-113227
 QCD gluon, compositeness 2-54076
 QCD in matrix formalism of first-order eqns. 2-64280
 QCD phase transition, mechanical analogue 2-95639
 QCD physical vacuum, instanton liquid role 2-107506
 QED, Hamiltonian formulation in superaxial gauge 2-113199
 QED, locally gauge invariant charged states 2-84835
 QED, scalar, massive, coupling consts., temp. depend. calc. 2-101554
 QED, three-dimensional lattice, string tension, upper and lower bounds calc. 2-101629
 quantised gauge theory, dimensional reduction and Osp(4+NM/2) supersymmetry 2-107520
 quantized Wilson loops with dimensional regularization 2-113108
 quantum field theory of charges and monopoles 2-59013
 quantum field theory of elec. and mag. charges, IR problem and radiation effects 2-89894
 quantum gravitation, extended BRS symmetry, superfield approach 2-79456
 quantum gravity, asymptotic freedom in renormalisable theory 2-101287
 quantum gravity, graviton self-energy in general axial gauge 2-69076
 quantum stress energy in nearly conformally space-times, correction of formula 2-95202
 quantum system, time evolution, rel. to parallel transport 2-101210
 quark-lepton unification in SU(4)_{PS} \times SU(2)_L \times SU(2)_R \times SU(2)_L \times SU(2)_R model 2-54026
 quarkless SU(2) lattice gauge theory, strong coupling expansion, phase transition, effective action 2-59041
 quasi Goldstone fermions 2-113129
 quenched Eguchi-Kawai model, Monte Carlo 2-107534
 quenched Eguchi-Kawai model, phase transition 2-113130
 quenched Eguchi-Kawai model, spontaneous symmetry breaking 2-84798
 radical unification, effective generalisation of hypercharge from isospin, SU(2) dynamics 2-59069
 Rarita-Schwinger field in non-abelian Klein-Kaluza theories 2-101524
 recent progress, conf. Bad Honnef, Germany (Sept. 1980) 2-53432
 Redel-like model and testing Lorentz invariance 2-101548
 reductive Lie-admissible algebras applied to H-spaces and connections 2-113162
 relativistic strings path integral 2-84877
 renormalisable model with Peccei-Quinn global symmetry, axion elimination by 't Hooft mechanism 2-95755
 renormalisation of gauge theories in nonlinear gauges 2-59042
 representation group, gauge field derivation (Chinese) 2-53981
 residual gauge invariance after axial gauge fixation 2-74599
 Riemannian geometry on compact four dims. manifolds 2-107494
 Robertson-Walker Universes, gravit. radiation, gauge-invariant definition 2-69065
 S-matrix, gauge invariance/independence, in quantum theory and relativistic QFT 2-107550
 scalar parameters in effective gauge theories, Weinberg method appl. 2-59071
 scalar-tensor gravitation theories, Weyl scalings, spinor matter interactions 2-58682
 scattering in lattice gauge theories 2-53998
 Schwinger model and two dims. SU(n) QCD, equivalence demonstration 2-101641
 self dual monopoles 2-107514
 self-dual gauge fields, Atiyah-Drinfeld-Hitchin-Manin construction 2-113096
 self-dual SU(2) gauge fields on Euclidean space, soliton solns. 2-95597
 self-duality, resulting hidden charges 2-74612
 SL(2,C) gauge theory of gravitation and Noether's theorem, conserved vector current 2-95198
 SO_N and Sp_{2N} gauge theory, topological expansion, large N limit 2-113116
 SO(10)³ effective technicolour model, CP violation and axions 2-84824
 SO(10) grand unified model, prospects for second neutral vector boson at low mass 2-95715
 SO(10) grand unified model, unification constraints on mirror fermion mass scale 2-89923
 SO(10) grand unified theory, string appearance on spontaneous symmetry breaking 2-84822
 SO(10) supersymm. grand unified model, gauge hierarchy 2-95703
 SO(10) unification from higher dimensions 2-58677
 SO(10) unified gauge theory, CP violation, axions 2-74636
 SO(14) theory, spinor representation, U(1)_r embedding and symmetry breaking 2-113183
 SO(1,1) \times SO(2) gauge model, exactly solvable sector, classical relativistic string descript. 2-113135
 SO(2N) nonAbelian gauge theories, symm. breaking, gauge boson condensation 2-74604
 SO(3) lattice gauge theory, defect melting 2-95617
 SO(3) lattice gauge theory, monopoles, vortices, confinement 2-89896
 softly broken symmetry restoration at high temps. 2-107503
 soliton bag model study 2-69417
 spin 3/2 fields, wave eqn., spinor gauge invariance 2-107528
 spin 5/2 gauge field, Hamiltonian formalism 2-95633
 spinor field representation of Stiefel-Whitney class 2-101547
 spinor gauge fields and gravitation (Chinese) 2-95204
 spontaneous symmetry breaking and gauge theory 2-113152
 spontaneously broken conformal gauge theory of gravitation 2-58679
 spontaneously broken gauge theory, duality transform. 2-69349
 spontaneously broken gauge theory, vacuum tunnelling 2-107531
 static axially symmetric self-dual gauge field eqns., soln. generation techniques 2-84795
 static axially symmetric self-dual gauge field eqns. for arbitrary group, complete integrability 2-53945
 static axially symmetric self-dual gauge fields, algebraic construction 2-84796

gauge field theory continued

- statistical mechanics of quarks and hadrons, conf., Rielefeld, Germany (Aug. 1980) 2-53423
- stochastic quantisation using supersymmetry formalism 2-95577
- string theory, relationship with gauge-invariant QCD 2-107614
- structure functions, deep inelastic, Regge behavior, in perturbative QCD 2-95769
- $SU(2)_L \times SU(2)_R \times U(1)_{B-L}$ gauge theory, neutrino masses, intermediate mass scales and cosmology 2-84825
- $SU(2)_L \times SU(2)_R \times U(1)_{B-L}$ electroweak symmetry and parity violations in electron-nucleon scatt. 2-113185
- $SU(2)_L \times U(1) \times SU(3)_c$ gauge model, spontaneously broken B-L symm., H-H oscillations 2-84820
- $SU(2)_L \times U(1)$ spontaneously broken gauge theory structure 2-64249
- $SU(2)_L \times U(1)$ weak gauge theory, experimental test 2-59068
- $SU(2)_c$, spherically symmetric static sourceless soln., currents, symmetry breaking 2-53917
- $SU(2) \times SU(2)_a$ theory, strong bounds on weak couplings 2-95711
- $SU(2) \times U(1) \times SU(2)_f$ gauge model, weak gauge bosons above or straddling standard-model masses 2-64256
- $SU(2) \times U(1)$ gauge models, permutation symmetries and fermion mass matrix 2-69392
- $SU(2) \times U(1)$ Weinberg-Salam model, strongly interacting Higgs sector effects 2-64246
- $SU(2) \otimes U(1)$ model, dynamical symmetry breaking and radiative correction to weak-isospin relation 2-95714
- $SU(2)$ adjoint Higgs model 2-95788
- $SU(2)$ gauge theory, symmetry breaking 2-79739
- $SU(2)$ lattice gauge theories, asymptotically free scaling onset 2-107544
- $SU(2)$ lattice gauge theories, interquark pot., Monte Carlo evaluation 2-95753
- $SU(2)$ lattice gauge theory, continuum limit estimates near crossovers 2-95611
- $SU(2)$ lattice gauge theory, first order phase transition 2-69335
- $SU(2)$ lattice gauge theory, potential and restoration of rot. symm., Monte Carlo simulation 2-101598
- $SU(2)$ lattice gauge theory, Z_2 mag. monopoles 2-59047
- $SU(2)$ lattice gauge theory dynamics, monopoles and vortices 2-79745
- $SU(2)$ lattice gauge theory with quarks, mean field anal., coupling constant 2-69336
- $SU(2)$ monopoles, Corrigan-Goddard conditions for n monopoles, exact solns. 2-79764
- $SU(2)$ monopoles in self-dual axially symmetric Abelian backgrounds 2-113171
- $SU(2)$ vector potential, quantisation, for EM field 2-79735
- $SU(2)$ -invariant lattice theories, local and global invariance, algebraic struct. 2-69327
- $SU(2)$ - $SO(3)$ lattice gauge system, phase diagram 2-107557
- $SU(2)$ - $SO(3)$ lattice gauge theory, 2nd order deconfining transition, continuum limit 2-79743
- $SU(3)_C \times SU(2)_L \times U(1)$ gauge GUT, low-energy parameters, particle masses 2-107589
- $SU(3)_C \times SU(2)_L \times U(1)$ model, CP-violation from horizontal interactions 2-107593
- $SU(3) \times SU(2) \times U(1) \times G$ spontaneously broken supersymmetric theories, neutral current conservation laws 2-59060
- $SU(3) \times SU(2) \times U(1)$ gauge theories, naturality problems 2-79817
- $SU(3) \times SU(2) \times U(1)$ model, supersymmetric extension 2-79803
- $SU(3)$ gauge field theories, wave solns. 2-74593
- $SU(3)$ gauge theory, Neugebauer-Kramer mapping 2-95660
- $SU(3)$ gauge theory at finite temp., first-order phase transition 2-107545
- $SU(3)$ glueball mass numerical estimation 2-84857
- $SU(3)$ lattice gauge theory predictions for low- Q^2 phenomenology 2-54074
- $SU(3) \times SU(2) \times U(1) \times U(1)$ model, low-energy softly-broken supersymmetry 2-101546
- $SU(4)$ and $SO(6)$ monopole solns. in tensor representation 2-95596
- $SU(4)$ lattice gauge theory, Monte Carlo algorithm vectorization 2-53927
- $SU(5)$, early Universe supercooling, gauge coupling const. temperature depend. 2-58520
- $SU(5)$ grand unified theories, symmetry breaking effects 2-84818
- $SU(5)$ ground unified theory, Universe and supersymmetry 2-101616
- $SU(5)$ Higgs problem with adjoint + vector representations 2-54022
- $SU(5)$ model, $\sin^2 \theta_W$ and M_X two-loop anal. 2-64259
- $SU(5)$ model with nonminimal Higgs field, symmetry breaking patterns 2-107595
- $SU(5)$ monopole solns. using 5×5 tensor representation 2-95702
- $SU(6)$ lattice gauge theory, phase transition, Monte Carlo study 2-69344
- $SU(8)_L \times SU(8)_R$ grand unified model, spontaneous breaking and asymptotic freedom (Russian) 2-74639
- $SU(8)$ hyperunification, composite quarks and leptons derivable from $SO(8)$ extended supergravity 2-95712
- $SU(1|n|n)$ graded algebra, local gauge theory, superunified model appl. 2-59048
- $SU(N)$ chiral (QCD) $_2$, massless baryons and anomalies, chiral limit 2-69414
- $SU(N)$ gauge field eqns., exclusion of dyon soln. 2-84810
- $SU(N)$ gauge theory, Wilson line 2-84866
- $SU(N)$ gauge theory couplings on asymptotic lattices 2-89905
- $SU(N)$ grand unification model, electroweak interactions in case of many generations 2-64255
- $SU(N)$ Higgs problem with adjoint representation, and Michel's conjecture 2-59015
- $SU(N)$ lattice gauge theories, boson representation 2-58995
- $SU(N)$ lattice gauge theory with a generalized Villain's action 2-69321
- $SU(N)$ magnetic monopoles, topological study 2-95625
- $SU(N)$ non-Abelian gauge theories, symm. breaking, gauge boson condensation 2-74604
- $SU(N)/Z_N \times SU(n)/Z_n$ spin system, phase struct. in two dims. 2-101518
- $SU(N)/Z_N$ lattice gauge theories, phase transitions in 4 space-time dims. 2-107541
- superfiber bundle structure of gauge theories with Faddeev-Popov fields 2-101528
- supergravity, R invariance and spontaneous supersymmetry breaking 2-84510
- supergravity, spontaneous breaking of supersymm. and gauge invariance 2-107221
- superluminal light propag., in hadronic matter, rel. to curved spacetime gauge symm. 2-101530

gauge field theory continued

- supermanifolds and Becchi-Ronet-Stora transformations 2-74594
- superselection rules, local aspects 2-101510
- superspace, negative dimensions, and quantum field theories 2-95610
- superspace gauge theories with central charges 2-53948
- supersymmetric constraints and gauge fields on superspace 2-89916
- supersymmetric dual string theory, vertices and trees 2-84876
- supersymmetric flavour unification model $SU(11)$, invisible axion and proton decay 2-95726
- supersymmetric gauge theories, patterns of symmetry breaking 2-113131
- supersymmetric gauge theories, symmetry breaking mechanism 2-79760
- supersymmetric gauge theory, loop dynamics in superspace 2-84791
- supersymmetric lattice gauge theories 2-84789
- supersymmetric $SU(2)$ gauge theories, elec. dipole moment for monopoles 2-107663
- supersymmetric $SU(5)$ model, naturally massless Higgs doublets 2-113184
- supersymmetric theories, broken global symmetries 2-79799
- supersymmetric theories, effective pot. 2-84794
- supersymmetry, multidimensional space combination, interaction unification 2-101585
- supersymmetry breaking, grand unified models 2-113193
- superweak CP violation and right-handed horizontal interactions in Weinberg-Salam theory 2-59073
- symmetry constrained Dirac fields 2-113112
- temporal gauge formalism, local and global gauge symm., nonlocal operator 2-107486
- tensor fields, antisymm., covariant quantisation (Russian) 2-64226
- thermodynamic props. 2-79753
- three-dimensional $O(N)$ theories, vacuum stability 2-84840
- time-non-local conserved currents 2-95594
- Toda molecule equations 2-107514
- topological excitations, renormalisation group anal. 2-64215
- topological obstructions to gauge-independent descriptions of broken symmetry 2-95624
- topologically massive gauge theories, gravity models in 3D space-time 2-95194
- tumbling $SU(N)$ gauge theories 2-59036
- two dimensional gases of weight charges and $SU(N)$ fermion theories 2-89884
- two-dimensional non-abelian spin models, vortex condensation 2-79765
- $U(1) \otimes SU(2) \otimes SU(2)$ gauge theory, unification and family structure as consequences of universality 2-54023
- $U(1)$ and $SU(2)$ gauge theories in 2+1 dims., mass gap, variational estimation 2-59040
- $U(1)$ compact gauge theory, in four dims., plaquette-plaquette correls., Monte Carlo study 2-79758
- $U(1)$ pseudoscalar field in QCD, effective Lagrangian 2-84856
- $U(N)$ gauge theories on lattices, $N=\infty$ master field for strong coupling 2-59012
- $U(N)$ lattice gauge theories, two-dims., partition function complex zeros 2-59045
- $U(N)$ lattice gauge theory, planar random surfaces on lattice 2-101550
- $U(N)$ planar field theories 2-79768
- unification of fermions and gauge bosons 2-113118
- unified, walls bounded by strings 2-95722
- unified conservation law 2-107210
- unified gauge theories, Lie algebra choice 2-54035
- unified gauge theories, renormalisation group constraints, Yukawa and scalar quartic couplings 2-79806
- unified geometrical theory of gravity and internal gauge interactions 2-84499
- vacuum medium props. in non-Abelian gauge theory 2-95730
- vacuum periodicity in instanton angle, chiral perturbation theory and fractional topological charge 2-101645
- vacuum state determination from Universe hot dense phase dynamical evolution 2-106978
- variational techniques, book 2-74181
- vector-like gauge theories with massless fermions, phase structure 2-53946
- Wadia's model of lattice gauge theory, elimination of phase transition 2-101558
- weak boson mass spectra in extended gauge models $SU(2)_L \times U(1) \times G$ 2-107573
- Wilson loop functionals and related eqns. for irregular paths, renormalisation 2-95588
- Wilson loops in lattice gauge theory, rigorous perimeter law upper bound 2-101559
- Witten-type supersymmetric models, light singlet particles and cosmological consequences 2-107591
- Z_2 gauge model on small three-dims. lattice, partition function 2-89906
- Z_p lattice gauge model, phase struct. in presence of θ parameter, dyonic condensation 2-79741
- ed-ied, d pol., neutral current effects, gauge model test 2-101727
- e^+e^- , Bhabha polarised scatt., multiboson electroweak gauge models 2-54132
- e^+e^- annihilation, sum rules, in electro-weak gauge theories 2-54195
- $e^+e^- \rightarrow q\bar{q}$, broken colour gauge symm. test 2-79900
- K_L-K_S mass difference, left-right symmetric electroweak theory, constraint on mass scale 2-64250
- $\mu^+ \rightarrow e^+ \nu_\mu \bar{\nu}_\tau$, radiative correction to decays with massive Dirac neutrinos 2-69461
- $\mu^- N \rightarrow e^+ N$, in nuclei, exotic lepton violating reaction mediated by Majorana neutrinos 2-59156
- $\mu N(\bar{\nu} N)$, deep inelastic scatt., weak current phenomenological strict. 2-79858
- $\rho^+ \rightarrow \pi^+ \pi^0$ in SLAC lattice QCD theory 2-69455
- W boson condensation in mag. field, spontaneously broken symm. restoration (Russian) 2-59062
- Z boson mediation, neutral current processes, observables relationships 2-113206
- $^{12}C(\gamma, \pi^+)^{12}B$, nuclear form factors in timelike region and pion photoproduction 2-64395
- $^6Li(\gamma, \pi^+) ^6He$, nuclear form factors in timelike region and pion photoproduction 2-64395

Gaussian noise *see random noise*

Gaussian orbital calculations *see GO calculations*

Gaussian-type orbital calculations *see GTO calculations*

Ge-Si alloys

- amorphous, defect vibrs., Green function-CPA calc. 2-98233
- amorphous, optical props. and photoconductivity 2-104920
- amorphous film, energy gap, composition depend. 2-61337
- electron pulse processing, solid soln. synthesis 2-66063
- equation of state of solid soln., pseudopot. calc. 2-61109
- magnetoresistance and carrier mobility 2-56621
- neutron doped, compensation, composition depend. 2-76477
- phase diagrams and electronic theory for binding forces (*Japanese*) 2-72672
- pressure-induced covalent-metallic phase transition, pseudopot. calc. 2-87149
- solid soln., press.-vol. relation, covalent-metallic transition 2-82232
- solid solns., mode Gruneisen parameter for long wave phonons, elastic consts. 2-109942
- spin-orbit splitting, electrorefl. study 2-116155
- Ge-Si:H, amorphous sputtered alloys, elec., optical and struct. props. 2-98644
- Ge_{1-x}Si_x, carrier heating by elec. field, effect of electron irradi. 2-77076
- Ge_{1-x}Si_xGa(In), solid solubility, regular soln. model 2-61150
- Ge_{1-x}Si_xH, amorphous, photoluminescence, localised states, temp. depend. 2-87854
- Ge_{1-x}Si_xIn, photoluminescence, exciton recombination 2-87857
- Si-Ge-B amorphous film, glow discharge deposited, elec. cond., optical absorpt. and EPR study 2-71965
- Si-Si₃Ge₄ epitaxial multilayer films, electron mobility enhancement 2-115921
- Si-SiGe/TiO₂/Pt tandem type amorphous solar cells, spectral response width, plasma anal. 2-83487
- Si_{1-x}Ge_xH, amorphous, photoinduced midgap absorpt. 2-72528

gegenschein *see zodiacal light*

Geiger counters

- dead-time loss estimation and correction using events time distrib. 2-64824
- gamma radiation hand held monitor 2-85499
- personnel criticality dosimeter calibration 2-70101
- Philips research and development 2-59641
- positive corona, initial electrons detection using Geiger counter region 2-103516
- threshold voltage variation of counter under additional RF supply voltage 2-75104
- UOSAT radiation monitoring application 2-117500
- β activity in mass separator collector, distrib. meas. using multichannel system 2-64826

Geiger Muller counters *see Geiger counters*

gelatin

see also gels

- aqueous soln., study of US vel. and associated parameters 2-71577
- dichromated gelatin, effective hologram recording with pulsed laser radiation 2-108830
- dichromated gelatin, sensitivity increase by hardening for high sensitivity vol. holographic recording 2-90844
- dichromated gelatin, volume holographic recording with high sensitivity 2-90843
- dichromated gelatin diffuse-object holograms 2-114213
- dichromated gelatin gratings, absorpt. and refr. index modulations 2-70520
- dichromated gelatin holens for simplified colour image processing system 2-108796
- electroplating process in dendrite growth, gelatin additive in bath 2-71845
- microradiography with gelatin as image detection material 2-62341
- photographic, aldehyde partial inactivation by SO₂ 2-99712
- photographic, IAG, trace metal determ. by atomic absorpt. spectroscopy 2-74542
- photographic, ribonucleic acid content 2-99711
- photographic developer components penetration into gelatin and emulsion layers (*Russian*) 2-67771
- photographic layers appl. to reliefography (*Russian*) 2-53875
- photographic thin gelatin layers, swelling 2-95507
- photography, gelatin partial substitution using F₂-containing surface active substances (*Russian*) 2-74550
- relief image formation in layers of gelatine, chemical conversion kinetics (*Russian*) 2-53874

gels

- agar, self-diffusion of Zn (II) 2-61223
- agar-agar, periodic crystallisation of Mg(OH)₂ 2-116350
- agarose gels, laser light-scattering study of struct. 2-97897
- borosilicate oxynitride glass form. by ammonolysis of porous borosilicate gels 2-57326
- cylindrical, shear waves and internal viscosity, theory and light scatt. study 2-103135
- densitometry, direct, using modified microphotometer 2-78502
- diallyl phthalate polymer below gel point, rheology 2-65553
- elastodynamics 2-103041
- fission reactor fuel claddings, anti-deposition coating, sol-gel method 2-64485
- flow birefringence at sol-gel transition 2-57641
- gelatinous layer optical modulators, theory (*Russian*) 2-55324
- gelation, nearby critical kinetics 2-78094
- glass transform. by sintering, densification and crystn. phenomena 2-77794
- glasses, sol-gel method and prep. from melt, comparison 2-77791
- glasses and glass-ceramics, prep. from gels, conf., Padova, Italy (Oct. 1981) 2-74151
- hydroxypropyl cellulose, eq. soln., temp.-viscosity relationships (*Japanese*) 2-86919
- hydroxypropylmethylcellulose, eq. soln., temp.-viscosity relationships (*Japanese*) 2-86919
- macromolecular systems, structure and dynamics study by NMR methods, conf., Prague, Czechoslovakia (July 1981) 2-84376
- media for electrolytic growth of Ag dendrites and single crysts., surface morphology 2-87962
- media for periodic crystallisation of Mg(OH)₂ spacing coeff., flocculation value 2-87961

gels continued

- methylcellulose, eq. soln., temp.-viscosity relationships (*Japanese*) 2-86919
- microgel polymer thin films, cationic and anionic charged, elec. and phys. props. 2-56729
- microgels, soft-sphere, model, static and dynamic light scatt. behaviour of regularly branched chains 2-93819
- oligomer-polymer composites, phase struct. and props. during curing (*Russian*) 2-111135
- polyacrylamide, neutron and quasiclastic light scatt., screening length rel. to elastic modulus 2-93820
- polyacrylamide gels, deswelling under reverse osmosis 2-105504
- polydimethylsiloxane gels, swelling and orientational order, NMR obs. 2-62437
- polyelectrolyte gels, extended hexagonal, such as muscle, Donnan pot. meas. 2-73217
- polymer gels, diffusion of solutes 2-92249
- polymer gels, solvent effects, statistical mechanical model 2-91754
- polymer gels, transverse modes, light scatt. 2-98231
- polymer swollen crosslinked gels, NMR studies 2-87605
- polystyrene, isotactic, extended and threefold helical conform., solvent geometry effect 2-78144
- polystyrene networks, specific vol. meas. at different degrees of swelling 2-109660
- PVC, conf., Cleveland, OH, USA (Aug. 1980) 2-74153
- silica aerogel prep. for Cherenkov counters 2-75101
- silicate glass, prep. from colloidal gels by sintering 2-72663
- silicates, sol-gel transition, gel-to-glass conversion 2-76315
- silicon tetraethoxide, sol-gel transition in hydrolysis rel. to form of glass fibre and films 2-77793
- soft, with fixed rectangular boundaries, shear waves 2-103895
- sol-gel process, history and principles 2-77792
- sol-gel transition, critical behaviour percolation, kinetic model 2-105481
- B₂O₃-SiO₂ gels, crystn. rel. to glass prep. 2-76309
- B₂O₃-SiO₂ glass prep. by hot pressing of gels 2-76309
- Co₂ gels for protective coatings, TEM exam. technique 2-105400
- Fe₂O₃·H₂O gel, pure, prep., struct. and mag. props. 2-67769
- Fe₂O₃·xH₂O gel, pure, prep., struct. and mag. props. 2-67770
- GeO₂-SiO₂ glasses from gels to increase oxidation resist. of porous Si-containing ceramics 2-77797
- Li₂O-Al₂O₃-SiO₂ gels, crystn. rel. to glass prep. 2-76309
- Na₂O-B₂O₃-SiO₂ gel-derived single layer antireflection films 2-77732
- Na₂O-SiO₂ gels, crystn. rel. to glass prep. 2-76309
- Na₂O-SiO₂ gels prep. for gel-glass process, action of atmospheric agents 2-76317
- SiO₂ and SiO₂-TiO₂ glasses prep. by sol-gel process 2-77795
- SiO₂ gel to glass transform., Raman and IR spectra study 2-77506
- SiO₂ gels, surface characts., effect of inclusion of polyglycol 4000 2-78143
- SiO₂ monolithic dried gels 2-76310
- SiO₂-Al₂O₃-MgO gel glasses, prep. and crystn. characts. 2-76319
- SiO₂-B₂O₃ system, glass form. by gel process from metal alkoxides 2-88048
- SiO₂-Fe₂O₃ system, gel-glass transform., Mossbauer spectra, thermal anal., and X-ray diffr. 2-76318
- SiO₂-P₂O₅ gels and glasses, mixed bonds, spectrosc. obs. 2-76314
- SiO₂-TiO₂ gels and glasses, mixed bonds, spectrosc. obs. 2-76314
- TiO₂-SiO₂ gel prep. to obtain high homogeneity glasses by low temp. synthesis 2-77796
- V₂O₅ amorphous phase, hydrated 2-55847
- V₂O₅ layers deposited from gels, threshold switching obs. 2-87350

general relativity

- see also cosmology; gravitation; gravitational red shift; Schwarzschild metric; space-time configurations; unified field theories*
- γ -law equation of state leading to interior Schwarzschild metric 2-89584
- $\lambda\phi^4$ theory, quartic self-coupling const., curvature effects in closed Einstein Universe 2-89601
- active galaxies, relativistic jet production and propag. 2-117763
- algebraic degeneracy of conformal curvature 2-95160
- analytical mechanics in noninertial reference frames 2-101272
- anisotropic fluid spheres, solutions to radiating and rotating cases 2-112763
- astrophysics, tenth Texan symposium (Baltimore, Dec. 1980) 2-112645
- asymptotic structure in general relativity 2-95176
- asymptotic twistor space structure 2-53609
- asymptotically flat space-time, coupled gravit. and scalar field, linearisation stability 2-112771
- axially symmetric electrovac. solns. 2-74274
- axially symmetric gravitational two-body problem 2-95170
- axially symmetric gravitational two-body problem 2-95171
- axially symmetric nonstatic Einstein-Rosen space times, Ricci classification 2-95173
- axially symmetric two-body problem, boundary conditions, time scales, quadrupole formula 2-95178
- Bianchi type III model, with cosmological const., general soln. 2-68940
- Bianchi type V₁₀ cosmological models with matter and EM field, exact solns. 2-106972
- big bang singularity and cosmological uniformity 2-117842
- bilocal formalism and energy-momentum problem of gravity field 2-79437
- binary stars spin nutation due to general relativistic and quadrupole effects 2-58383
- bipolar vacuum gravit. fields, new class 2-89599
- black hole, orbiting vorticity free rings, metric 2-68807
- black hole in external gravit. field 2-106771
- black holes, distortion by external fields, evolution 2-68809
- black holes, general covariance, accelerated frames and particle concept 2-84081
- black holes, oscillating, pulsar model 2-94764
- black holes, specific entropy and sign of energy 2-112320
- boost problem 2-95175
- chaos, nonlinear dynamics, in general relativity 2-112765
- chaotic behaviour, review 2-84494
- charged NUT metric 2-107192
- charged particle bunch, gravit. expts., Schwarzschild space-time theory 2-63883
- charged particles, static balance, Bonnor's conjecture anal. 2-95190
- charged sphere in general relativity, interior soln. 2-69059
- charged test particle momenta, general relativistic inverse problem 2-74288

general relativity continued

classical problems and advances 2-101274
 closed cosmological model, correspondence between Brans-Dicke theory and general relativity 2-74132
 co-moving space in Einstein's gravitation theory, regular min of the scale factor 2-74276
 conformastat vacuum space times 2-53619
 compact complex manifold solns., Einstein-Kahler surfaces, gravit. instantons 2-84486
 complex quaternions, their connection to twistor theory 2-95145
 conference, New Orleans, LA (May 1981) 2-112646
 conformal invariance and space-time torsion 2-89586
 conformal relativity in Riemannian formalism, free-field eqns. 2-74600
 conformal relativity in Riemannian formalism, free-field eqns. solns. 2-74601
 conformal scalar equations, in arbitrary dimens., explicit solns. 2-101263
 conformally flat, anisotropic spheres in general relativity 2-95153
 conformally flat space-time with perfect fluid and heat flux, Einstein eqns. solns. 2-84491
 cosmological models, Einstein-Cartan-Maxwell-Bianchi type V 2-112618
 cosmological models, temporal finiteness and infinity in relativity 2-106989
 cosmological redshift-magnitude relation perturbation in inhomogeneous relativistic model, redshift eqns. 2-89418
 cosmology, geodesic instability, internal time 2-58518
 cosmology, perfect fluid models, anisotropic, nonstatic homogeneous 2-68939
 cosmology without singularity and nonlinear gravitational Lagrangians, generalised Einstein eqns. 2-101099
 curvature collineations for metric tensor, Riemann tensor 2-53615
 curved space time, wave function in classical gravitational field 2-84487
 cylindrically and axially symmetric spacetimes, linearisation, Einstein vacuum eqn. solns. 2-95147
 de Broglie frequency, time transform., mass decrease in gravit. field 2-95179
 dense relativistic matter, variational approach using functional techniques 2-79134
 Dicke-Brans-Jordan cosmology, cosmological red shift time var. 2-117813
 Dirac equation, generalisation to accelerating frames 2-53933
 Dirac equation for H atom 2-107181
 direct interparticle gravitational interaction against Riemannian background 2-58669
 early Universe, scalar field, coherent-state representation 2-74136
 Einstein's λ -transformation and the invariance of Einstein's tensor 2-63867
 Einstein's eqns., for spherically symmetric perfect fluid distrib., exact static soln. 2-95163
 Einstein's eqns., Melnick-Tabensky solns. 2-112757
 Einstein's eqns., wave solns. anal. 2-101278
 Einstein's eqns. self-similar solns. 2-95161
 Einstein's field equations, simple solutions 2-107189
 Einstein's field equations, solns. for static fluid spheres 2-112762
 Einstein's vacuum field eqns., general axially symmetric static soln. 2-95165
 Einstein eqn. solution, soliton family (French) 2-95144
 Einstein equations, cylindrical elastic and empty rot. frame solns. 2-79429
 Einstein equations, Petrov type III perfect fluid soln. 2-58662
 Einstein equations, static axisymm. solns. 2-74286
 Einstein equations, stationary axisymm. one-soliton solns. 2-63864
 Einstein space, static, thermal propagator 2-74292
 Einstein vacuum eqn., bunches of differential forms (Russian) 2-112764
 Einstein vacuum field eqns., analytic null asymptotically flat solns., existence 2-74283
 Einstein vacuum field eqns., Nengebauer's N=2 soln., electrovac generalisation 2-95162
 Einstein-Maxwell eqns., stationary cylindrically symm. electrovac soln. 2-69068
 Einstein-Maxwell eqns., Weyl-killing tensor metrics 2-101285
 Einstein-Maxwell field, with conjugate tensor, forces interaction 2-53631
 Einstein-Maxwell fields, pseudopot. approaches 2-95186
 Einstein-Maxwell theories, unification scheme 2-89591
 Einstein-Podolsky-Rosen and Bell paradoxes resolution 2-69052
 Einstein-Rosen metric, charged fluid distrib. 2-53625
 Einstein-Yang-Mills equations, absence of stationary solns. 2-84490
 Einstein-Yang-Mills equations, class of source-free equations 2-95580
 electrically conducting fluid, differential rotation 2-112766
 electromagnetism four-dimensional formulations, metric depend. 2-95180
 EM energy tensors and Lorentz eqn. of motion of fields 2-53612
 empty spaces and perfect fluids with homothetic transformation 2-107185
 energy, local and total, relationship derivation 2-107179
 energy release mechanism in astrophysical objects 2-100733
 energy-momentum of isolated systems cannot be null 2-74280
 entropy of self-gravitating radiation 2-74272
 entropy-to-energy ratio bound, possible violations 2-107197
 entropy-to-energy ratio for bounded systems, universal upper bound 2-107198
 EPR paradox resolutions, quantum mechanics 2-95150
 equivalence principle, rel. to anomalous motions of solar-system bodies 2-68603
 equivalence principle rel. to quantum theory 2-74304
 Ernst eqns., with EM fields, similarity solns. 2-95159
 ether formulations of relativity 2-107190
 evolution of perturbations in an inflationary Universe 2-106968
 existence theorem for Witten eqn. solns. and total mass nonnegativity 2-74275
 expanding Universe, void enlargement, Einstein-de Sitter model, galaxies 2-117770
 extended Dirac particles and their spectra in curved phase space 2-79435
 field equations, coordinate-dependent 3+1 formulation 2-107186
 field equations, exact soln. 2-101261
 fields with internal degrees of freedom, tensor calculus generalisation 2-95146
 figures of equilibrium, inhomogeneous figures (Polish) 2-78932
 Finslerian generalisation of Riemannian geodesics for test-body motion 2-101273
 five-dimensional relativity, inequivalence with Brans-Dicke theory 2-112783
 four coincidence experiment FOCA-2 2-74289
 free fall universality, neutron gravity refractometry test 2-69081

general relativity continued

gamma metric, interior solns. 2-101257
 gas dynamics, steady axisymm. flows 2-89589
 gauge fields, book 2-79297
 gauge gravitation theory, relativity and equivalence principle 2-63880
 gauge theory 2-107202
 gauge theory of gravitation, relativity and equivalence principles 2-58683
 generalised Lorentz group for transformations of coords. coupled with massive reference system 2-58668
 generalised theory of gravitation, field redefinition of string Lagrangian 2-95169
 geometrodynamics in multidimensional unified theory 2-95185
 globally hyperbolic space-times, black hole theory 2-89295
 globally non-causal space-times 2-95152
 Godel space-time, test particle motion, time travel 2-58665
 grading, particle scatt., relation between general relativity and quantum theory 2-58636
 gravitation, relativistic theories, equivalence 2-107209
 gravitation, relativity and equivalence principles, Treder-type tetrad theory 2-107206
 gravitational deflection of fast particles and light 2-84413
 gravitational energy, limiting behaviour 2-79439
 gravitational energy-momentum pseudotensors, finite region of space-time (Russian) 2-58670
 gravitational interaction from a relativistic viewpoint 2-101275
 gravitational physics, theory and expt. (book) 2-68979
 gravitational radiation, quadrupole formula rel. to neutron star fundamental mode damping time 2-106518
 gravitational radiation reaction from small-angle scatt. of slowly-moving compact bodies 2-84496
 gravitational repulsion in Schwarzschild field 2-95168
 gravitational theory generalisations, group covariance 2-112755
 gravitational waves, absorption by nearly Newtonian systems 2-95177
 H-space with cosmological constant 2-53617
 Hermitian theory, static symm. solns., generalisation to vacuum fields 2-69075
 hydromagnetic wave propagation and instability in anisotropic Universe 2-89131
 induced centrifugal force soln. of Einstein's eqns. 2-101265
 induced Kaluza type interactions (Chinese) 2-79804
 inequivalent metrics with equal spin coefficients 2-101254
 integer-spin radiation fields, isolated systems 2-74301
 interacting bodies, gravit. radiation, general relativistic prediction 2-89588
 interacting superposed EM shock plane waves, Einstein-Maxwell field eqn. soln. 2-107196
 inverse scattering techniques 2-63866
 irrotational perfect fluid, eqns. of state 2-89583
 isolated systems, asymptotic flatness at timelike infinity 2-74282
 Jaumann transport in relativistic continuum mechanics 2-53624
 junction conditions 2-79434
 Kaluza-Klein vacuum instability 2-53635
 Kerr geometry, gravitational perturbation eqns. 2-69061
 Kerr Newman metric for black hole and naked singularity, photon radial motion 2-63497
 Kerr solution of Einstein's empty field equations, elementary derivation 2-112751
 Kerr solutions, superposed, symm. axis props. 2-74284
 Kerr space-time, point charge, self-interaction 2-79445
 Killing tensors, rel. to eqn. of geodesic deviation 2-79431
 Komar's solution to factor ordering problem of constraint algebra 2-101260
 Lienard-Wiechert field, geometric description 2-63873
 light deflection by Sun, non-eclipse optical determ. 2-94591
 light propagation in Maxwell-like gravit. field 2-69067
 linear deformation problems for Ernst eqn. 2-95155
 linearised quadrupole waves and motion of test particles 2-101268
 local adiabatic stability, unified treatment for stationary axisymmetric perfect fluid configs. 2-78944
 local extensions in singular space-times 2-84485
 lunar laser ranging, general relativity fourth test 2-89607
 Lyttelton-Bondi Universe, static conformally flat cosmological soln. 2-112619
 Mach's principle and structure of dynamical theories 2-95164
 Mach principle in conformally flat space, integral formulation 2-101270
 manifestly covariant eqns. of motion for particle in external field 2-112758
 mathematical problems in theoretical physics, conf., Berlin, Germany (Aug., 1981) 2-94911
 measurement theory, space-time theories (Hungarian) 2-101264
 Mercury, perihelion motion, special relativity corrections, rel. to general relativity 2-58227
 meron and elliptic solutions in conformally flat space-time 2-101266
 metric affine variational principles, Riemannian constraint relaxation 2-58664
 metric tensor determ. from Riemann tensor, extension to electrovac fields 2-95149
 Minkowski world, in three dimens., boundary-value problem for minimum surface 2-69063
 multi-soliton solutions of Einstein equation, rel. to Tomimatsu-Sato metric 2-100728
 multiexponent Weyl metrics 2-74285
 N=2 supergravity solitons, Bogomolny bound for general relativity 2-53646
 n-massive charged particles, eqn. of motion 2-53602
 nearly rigid body, in relativistic gravit. field, torques 2-107183
 neutrino fields, space-time isometry effect 2-112756
 Newman-Penrose method in the theory of general relativity 2-101271
 non-abelian gauge fields, space-time symmetries 2-74592
 non-self-dual nonlinear gravitons derived from complex space-times 2-107216
 non-static EM field in general relativity 2-107178
 nonAbelian test body, spinning, classical eqn. of motion 2-95172
 nonrepelling vacuum space-times, conformal properties 2-107187
 nonspacelike curves, length, causality conditions 2-53603
 numerical relativity, appl. to astrophysical problems 2-100727
 numerical solns. to Einstein eqns., problems 2-115777
 object construction from ordinary matter and initial conditions 2-63865
 orbit selection for the Stanford Relativity Gyroscope experiment, error analysis 2-84511
 parametrised field theories: conditional symmetries 2-112759

general relativity continued

- partially self-similar spacetimes and fluid motions, appl. to Bianchi-type cosmologies 2-100730
 perfect fluid, isentropic motions, linear soln. in general relativity 2-79432
 perfect fluid solutions, Buchdahl transform, generalisation 2-79442
 photon behaviour and Einstein ghost waves 2-107195
 photon rest mass estimate 2-79436
 Planck length, conceptual understanding 2-107191
 point-source idealisation in chemical field theories, mech. energy losses from EM radiation reactions 2-84489
 point-source idealisation in classical field theories, EM radiation damping 2-84488
 positive energy theorem, Witten's proof 2-74271
 postlinear approximation, eqns. of motion for pointlike objects 2-53605
 postNewtonian gravity, radiating system, near-zone expansion, nonanalytic terms, matching 2-69072
 pre-atlas manifolds and coordinate-free general relativity 2-53608
 projective relativity, unified field theory 2-112773
 PSR 1913+16 (pulsar+compact star) general relativity test and gravit. radiation evidence 2-63498
 quantised scalar field, initial behaviour rel. to pair creation in isotropic closed and open universes 2-101109
 quantum optics, gravit. wave detect., general-relativity, NATO advanced study institute report 2-75546
 quantum theory of gravitation 2-95200
 quasi-local mass and ang. momentum 2-79438
 $R+Q^2$ theories, ghost-free, tachyon-free, with torsion, Birkhoff theorem 2-89596
 radiating anisotropy spheres evolution 2-84493
 radiating fluid sphere, late stages of naked singularity collapse 2-112770
 radiation gauges in general relativity 2-69060
 radiative transfer, 14-moment approx. 2-84085
 Reimann-Cartan geometry, Gauss-Bonnet type identity 2-53627
 relativistic classical mechanics and canonical formalism 2-79347
 relativistically interacting particles, Hamiltonian, role of constraints and Poincare operator 2-112752
 Riemann curvature, tensor calculus, black holes, review 2-63774
 Riemann spaces, relativistic wave eqn. compatibility 2-63863
 Riemannian space, isometry group determination 2-107188
 Riemannian space-time, extended bodies moving along geodesics 2-63870
 Riemannian variation for quasi-constant curvature (Italian) 2-112749
 rotating charged dust in general relativity 2-53626
 rotating neutron stars, modelling using exact solns. of Einstein's eqns. 2-58375
 rotating space-time homogeneous cosmologies, null geodesics behaviour 2-63724
 scalar fields, spherically symm., with traceless energy-momentum tensor, static solns. 2-74287
 scalar particle topological mass generation in Clifford-Klein-Robertson-Walker spacetimes 2-112760
 scalar plane waves 2-101259
 schiff's conjecture on gravitation 2-112761
 Schwarzschild space-time, point charge self-force determ. (French) 2-107177
 second postNewtonian approximation, force law for two-body problem 2-107184
 self-dual Euclidean Einstein spaces, Killing vectors 2-95154
 self-dual Kerr-Schild metrics and null Maxwell fields 2-95157
 self-gravitating anisotropic fluids, Einstein eqn. solns. 2-79446
 semiclassical expanding discrete space-times 2-112754
 simultaneity, inconsistencies in relativity 2-53618
 singularities, Cauchy horizons and extensions of a large class of Einstein-Maxwell spacetimes 2-95193
 sixteen dimensional Noether supercurrents in indefinite metric quantum gravity 2-58680
 small-angle scattering, solns. with radiation reaction 2-101611
 solar gravity effect on radio wave propag. between Viking on Mars and Earth 2-94592
 space-time admitting vector field 2-95158
 space-time theory of gravitation from quantum mechanics 2-112787
 space-times with spherically symmetric hypersurfaces, Einstein eqn. solns. 2-58663
 spherically symmetric space time, class I conditions 2-107182
 spin-2, conformally invariant energy-momentum tensor 2-79433
 spinning test particles in curved space-time with torsion, Lagrangian formulation 2-95166
 spinor sources in cosmology 2-95156
 spiral galaxies, inertial frames determined from rot. laws 2-94582
 spontaneous symmetry breaking in noninertial frames and curved space-time 2-74279
 stars, linear model, space-time continuum 2-84089
 static gravitational fields, mass-energy eqn. 2-79430
 stationary vacuum fields with conformally flat three space 2-53620
 strong equivalence principle violation by atomic and gravit. clocks 2-69058
 Sun internal rotation and gravit. quadrupole moment, implications for general relativity 2-100862
 super-luminal communication in EPR expts. 2-89606
 symplectic structure 2-107180
 Taub-NUT like cosmologies 2-117832
 test at quantum mech. level, parity and time-reversal noninvariance using neutron interference 2-84814
 test particle in gravitating source four-dimens. space time, formal third integral of motion construction 2-79170
 tilted EM Bianchi type III cosmology, exact soln. 2-106970
 tilted EM Bianchi type V_{10} cosmological model, Einstein-Maxwell eqns. integration 2-106971
 time-dependent, Bianchi II, rotating Universe 2-63726
 timelike, null and spatial infinity, unified formulation 2-53611
 timelike infinity 2-53610
 Tolman-Wyman equation in general relativity 2-74278
 two spinning pointlike particles, gravitational interaction 2-95148
 two-body problem, relativistic case, phys. distinction between normalised solns. 2-84492
 two-body stationary system, gravit. spin-spin repulsion 2-63869
 two-point mass system, conservation laws in general relativity (French) 2-84484
 type D solutions, with null group orbits of local isometries, 7-parameter soln. contractions 2-101262
 unified conservation law 2-107210
 unified field theory in projective theory of relativity 2-95192

general relativity continued

- unified field theory of gravitation, symmetric affine connection 2-95184
 uniformly accelerated reference frame and twin paradox 2-53457
 unifying physical theory, derivation from quantum theory 2-112786
 Universe, adiabatic perturbations growth rate, closed form. expressions 2-112613
 Universe, age and density, general relativistic fluid models 2-79260
 Universe expansion from analytic eqn. of state from state. bootstrap model 2-94876
 vacuum and electrovac field eqns., R-separable solns. 2-95151
 vacuum viscosity description of quantum processes in the early Universe 2-106981
 vacuum with oscillatory collapse, world lines, light cones 2-69062
 Vaidya radiation metric, generalisation, Einstein eqns. soln. 2-58674
 variational formulation, 'Palatini method' origin 2-84432
 variational principle 2-101253
 Weyl to Ricci focusing transition in a weak field approx. 2-74273
 Whitehead-Heisenberg ontology, mind, matter, quantum theory, relativity, interrelationships 2-58585
 Yang-Mills field, algebraic interpretation 2-107211
 Yang-Mills plane wave vs. plane symmetry 2-74602
 Yang-Mills theory, maximum four-dimens., post Newtonian approx. 2-74305
 Yang-Mills theory in a multiply connected three space 2-95207
 H spectrum gravitational perturbation 2-95167

generator coordinate method

- see also nuclear structure theory*
 Bohr-Mottelson model and interacting boson model equivalence 2-84977
 collective Hamiltonian in generator coordinate method, numerical procedure 2-84978
 heavy ion collisions, relative translational motion, generator coordinate method, collective motion (Chinese) 2-80036
 many-body systems, decaying states, variational approach, generator coord. method 2-74238
 nuclear collective motions, generator coordinate method 2-74719
 nuclei with few valence nucleons, interacting boson approx. 2-84973
 pseudo-bound wavefunctions 2-95941
⁸Be nuclear cluster structure and α - α elastic scatt. unified study 2-95948
¹²C(¹²C,¹²C), microscopic investigation in framework of generator coordinate method 2-74770
¹⁴C+¹⁶C resonance, generator coordinate method anal. 2-101861
^AC(α , α), A=40, 42, 44, 48, elastic scatt. microscopic study, within generator coord. method framework 2-54412
⁴He(α , α), 15 MeV, generator coordinate amplitude approximations from statistical regulations 2-113381
⁶He_W microscopic GCM study, di- α clusters 2-79967
²⁸Si(²⁸Si,²⁸Si), resonant struct. in elastic scatt., generator coordinate method anal. 2-101864

generators, acoustic *see acoustic generators*generators, electric *see electric generators*

geochemistry

- see also Earth structure; geology*
 E Africa, igneous rocks comp., rel. to lithospheric thinning assoc. with continental rifting 2-106078
 African ore deposit location rel. to subcrustal stress field 2-73505
 Aleutian arc, tholeiitic and calc-alkaline magmatism patterns 2-100331
 alkali basalt suite petrogenesis, role of apatite 2-111900
 Central America volcanic front, lava petrogenesis model 2-62932
 Andes, intra-crustal melting indicated by isotope geochem. study 2-68313
 Appalachian region hydrocarbon deposits 2-100337
 aqueous electrolyte chem. thermodynamics at high press. and temp. 2-78598
 Arabian Sea fluoride bromide and iodide comp. 2-111967
 Arabian Sea shales near India, geochem. and thermoluminesc. studies 2-73504
 Archæan gneisses at Hebron, Labrador, Rb-Sr isotope study 2-117262
 Archæan volcanoes of Abitibi Belt, Ontario and Quebec, form, comp. and development 2-100340
 Archæozoic mantle chem. composition 2-73497
 Ascension Island, S. Atlantic, volcanic rock isotope composition 2-106019
 N Atlantic basaltic magma, hydromagmaphile elements and mantle implications 2-117265
 N Atlantic mid-ocean ridge, He isotope variations and mantle heterogeneity 2-62914
 N Atlantic ocean basin and continental margin, geology, geophysics, geochemistry and resources 2-58035
 atmosphere and ocean degassing model based on geochem. evidence 2-100562
 atmospheric CO₂ conc. and climate regulation, Gaia hypothesis or geochemistry 2-112085
 E Australia, 'hot-spot' like trace due to intraplate extension 2-73527
 W Australia, petroleum deposits in Babbagoola Beds, Officer Basin 2-58009
 basalt from mid ocean ridges, genesis 2-78648
 basaltic rocks weathering, determ. using thermoluminesc. 2-62953
 basalts from seafloor, evidence for mantle major element heterogeneity 2-62915
 calc-alkaline andesite of upper mantle origin, Itinome-gata, Japan 2-68303
 calc-alkaline magma systems, mixing, volatiles effect 2-88832
 Caledonian calc-alkaline volcanic arc (Scotland), Nd and Sr isotopes 2-62916
 cation hydrolysis thermodynamics, review 2-68304
 E China volcanic rocks, element and Sr isotope distrib. 2-83778
 Chinese rivers, major ion chemistry rel. to erosion 2-100409
 Columbia River flood basalts, USA, chem. and isotope composition 2-62919
 conference on high temp. and press. solns., chemistry, Karlskoga, Sweden (Sept. 1979) 2-58523
 continental crust, chemical evolution rel. to xenoliths mag. props. and long wavelength mag. anomalies sources 2-100370
 core and lower mantle chemical composition 2-68318
 Cortlandt complex, New York, USA, geochem. study of petrogenesis 2-83779
 cosmochemical model (Russian) 2-68319
 Costa Rica Rift, Sr and O isotopes of Pacific basalts 2-106016
 Cretaceous-Tertiary boundary event due to comet impact in USSR 2-62959

geochemistry continued

- Cretaceous-Tertiary boundary Ir abundance anomaly in New Mexico, USA 2-62930
 crust growth since Archean, geochemical constraints 2-106030
 crust-mantle boundary, heat flow obs. restricting composition transition (Russian) 2-106028
 Deccan Trap flood basalt origin, isotope geochem. study 2-106017
 Diamant-Burgos volcanic system in SW Martinique, magma mixing, quartz bearing basalts (French) 2-111905
 Drake Passage seawater, $^{143}\text{Nd}/^{144}\text{Nd}$ composition 2-106146
 East Pacific Rise, sediment chemistry and sedimentation 2-83805
 Galapagos Rift, S origin and hydrothermal sulphide geothermometry 2-106095
 geological samples, non volatile siderophile/lithophile elements determ. method 2-117492
 glendonite precursor identified as $\text{CaCO}_3 \cdot 6\text{H}_2\text{O}$ 2-106096
 gravitational differentiation of mantle, convection, effect of solar activity rel. to Earth diurnal rot. vars. 2-111834
 groundwater reverse chemical osmosis and origin of brines 2-111973
 groundwaters in deep USA aquifers having high O_2 concs. 2-100410
 Honolulu Volcanics, geochem., petrology and mantle composition 2-106011
 hot springs in northern Gunma Prefecture, chemical composition (Japanese) 2-117372
 hydrothermal systems He isotope origins 2-88823
 isotopic heterogeneity evolution in a convecting mantle 2-117257
 Kilauea volcano, Hawaii, S isotopes of basalts and volcanic glass 2-88822
 Kuril Islands, vars. in temp. and chemistry of thermal waters as precursor of Shikotan earthquake, (1978 December 7) 2-73480
 Ladakh Himalayas, geology and tectonics 2-117259
 Lake Erie, comp. of discharges from natural gas drilling operation 2-111595
 lakes within Mount St. Helens blast zone, chemical changes resulting from eruption 2-88929
 Lappajarvi meteorite crater, Finland, geochemistry of impact melt and basement rocks 2-106119
 orogenic litholite massif geochem. and upper mantle history 2-106036
 Loihi, Hawaii, active submarine volcano, hydrothermal deposits, geology and chemistry 2-100344
 Lough Neagh, Northern Ireland, anthropogenic changes in sedimentary flux of Mg, Cr, Ni, Cu, Zn, Hg, Pb, and P 2-105609
 Magela Creek, N.Territory, Australia, natural trace metal concs. 2-88930
 magma chambers, layered convection and crystal layers in multicomponent systems 2-106116
 mantle, permeability controlled partial melting 2-68317
 mantle chemical evolution due to multiple scale convection 2-78609
 mantle ferromagnesian silicate composition, model 2-78603
 mantle fragments in high velocity eruptions, metasomatic introduction of volatile bearing minerals before melting 2-73506
 mantle properties from oceanic expansion domain hygromagmaphile elements anal. by neutron activation 2-117266
 marine sedimentation and ocean chem. after breakup of Pangaea 2-62951
 methane hydrate, acoustic vel. from Brillouin spectra obs. 2-109909
 mid-ocean ridge magma chamber geochemical model 2-106020
 midocean ridge sulphide hydrothermal activity (French) 2-73540
 mineral paragenesis temp. determin. by explosion seismology method 2-62927
 mineralisation processes; CO_2 evolution from soil, correl. with temp. variation 2-68339
 Mississippian felsic metavolcanic rocks in Pelly Mountains, SE Yukon Territory, geochemistry rel. to tectonic significance 2-78649
 Mono Lake, California, chemistry of elevated concs. of actinides 2-94408
 Mono Lake, California, radionuclides concs. 2-94407
 MORB composition and origin, laboratory rock melt study 2-117267
 Mount Meager geothermal area, B.C., Canada, hydrogeology and geothermometry 2-111896
 Mt. St. Helens, ash U and Th decay series nuclide concs. 2-106050
 New Hebrides island arc, basalt geochem. and origin 2-117258
 ocean chemistry, consequences of warm saline bottom water in ancient ocean 2-68374
 mid-ocean ridge basalt Pb, Nd and Sr isotope ratios 2-106010
 oceanic crust hydrothermal circulation 2-63010
 oceans, isotopic palaeo-oceanography of Caribbean and E Pacific rel. to Late Neogene Panama uplift 2-111968
 ophiolitic volcanogenic sulphide deposits, evidence from Pb isotopic comp. in Troodos Complex, Cyprus 2-62925
 N Pacific, water column ^{10}Be profile, use for radioactive dating 2-78701
 NE Pacific Ocean, Co origin and distrib. 2-78700
 E Pacific Rise, chemistry of hot springs 2-78712
 Early Precambrian oceans, sulphate reduction determ. from S isotope anal. 2-63097
 radionuclides conc. in sediments, influence of mixing and compaction 2-58089
 rare earth elements, marine geochemical cycle anal. from depth distrib. in seawater 2-63003
 world rivers, transport of C, N and P, review 2-106148
 San Andreas fault area, Rn and CO_2 variations in groundwater 2-100300
 seawater chemical composition (U, K, Rb, Cs) alteration due to hydrothermal circulation 2-68386
 sediments, organic matter chem. changes in compacting sediment 2-63009
 Setouchi volcanic belt, Japan 2-117261
 Setouchi volcanic belt, SW Japan, andesite origin 2-117260
 soil, trace-element conc. in soils contributing to atmos. aerosol 2-62912
 spatiole role in mantle enrichment processes 2-111900
 superheavy elements in monazite, X-ray spectrochem. anal. 2-83436
 Tama River, chemical study, water temperature, pH value, and redox potential determ. (Japanese) 2-117371
 thermal springs of Bath, England, geochemistry, hydrogeology and origin 2-100407
 tholeiite geochemistry of Moroccan Early Mesozoic area 2-68312
 tholeiitic basalts from Gulf of California, Mexico, chemical analys. and mag. props. 2-106098
 Transbaikalian Jurassic extrusive/subvolcanic rock, rare element distrib., geochemical significance 2-83785
 N Vietnam, Sn ore deposits 2-78613
 Walvis Ridge basalts, isotope geochemistry rel. to mantle source 2-106015

geochemistry continued

- Au, Pd, Ir, abundances in litholites and mantle precious metal implications 2-62918
 ^{10}Be deposition rate in oceans, evidence for constancy from Mn crusts 2-111920
 CO_2 , anthropogenic, distrib. in Atlantic and Southern Oceans 2-88910
 Fe-Ni-S system, compressibility and elec. cond. at core conditions 2-58022
 FeO high-pressure polymorphism at Earth core conditions 2-88821
 FeTiO₃ spinel, natural, oxidation-reduction reactions, electron microscopy 2-72986
 ^3H , natural production in permeable rocks rel. to groundwater ^3H contents 2-100381
 Nd isotope characts. of granite batholiths of S.E. Australia 2-62917
 Nd isotope geochemistry of oceanic basalts and mantle evolution 2-73551
 Pb removal from groundwater into rock matrix, radiogenic Pb isotope study 2-83858
 Pb retention by zircon in granite at elevated temp. and press. 2-93976
 ^{210}Pb distribution in sediments, influence of radon diffusion 2-58012
 ^{222}Rn transport through fractured rock 2-88828
 S isotopes in E Siberian iron ore deposits 2-78614
 S-containing gases in volcanic eruptions, obs. of COS and CS₂ from Mount St. Helens 2-78623
 Sm and Nd isotope ratio determination method using laboratory standard solutions 2-63253
 Sm/Nd ratio determination method using laboratory standard solutions 2-63253
 Sn ore deposits of N Vietnam 2-78613
 Sr isotope geochemistry of oceanic basalts and mantle evolution 2-73551
 ^{96}Te in molybdenite rel. to solar neutrino flux 2-89227
 Th isotope geochemistry of basalt, genesis and mantle struct. 2-111902
 Ti isotope ratios of lunar, terrestrial and meteorite samples 2-84113
 U deposits in United States, aerial radiometric survey obs. 2-73503
 Xe hydrate, acoustic vel. from Brillouin spectra obs. 2-109909

geochronology

- see also radioactive dating
 E Africa, igneous rocks ages rel. to lithospheric thinning assoc. with continental rifting 2-106078
 Archaean gneisses at Hebron, Labrador, Rb-Sr isotope study 2-117262
 Ascension Island, S. Atlantic, volcanic rock isotope composition 2-106019
 E Asia, evolution of major strike-slip faults (French) 2-111909
 Bitek Formation, northern Kazakhstan, USSR, palaeomag. and geochronology 2-105935
 Boston Basin, United States, Precambrian age, microfossil age evidence 2-100335
 British geomagnetic secular var. record for Holocene times, detransformation 2-105914
 S Brittany, France, U-Pb geochronology of crust origin 2-106018
 Brunhes-Matuyama magnetic reversal, dating at 790000 yr BP by marine-astronomical correls. 2-94277
 Buckingham area of Quebec, Canada, Cambro-Proterozoic volcanism 2-88816
 California Sierra Nevada, origin of ophiolite belt 2-73502
 Caracut dike system, New Brunswick, Canada, palaeomag. study 2-88728
 Caucasus Mountains, palaeomag. investigations of Palaeozoic rocks rel. to tectonic history 2-117195
 Ceduna Terrace, off South Australia, submarine valleys discovery, origin and age 2-117287
 continental heat flow, age depend. 2-106013
 Cortlandt complex, New York, emplacement history and tectonic significance 2-100377
 S Denison Trough, Queensland, stratigraphic units mapping from seismic survey (1978 to 1979) 2-117302
 East Eifel, Germany, Quaternary volcanoes, palaeomagnetic dating 2-106052
 Fife Hills, Enderby Land, Antarctica, crust age and form. from granulite facies rocks dating 2-106034
 fission track age estimation method 2-73722
 fission track dating, calibration guide 2-106340
 fission-track dating, age error estimation 2-111898
 Gamitagama greenstone belt, southern Superior Province, precise U-Pb zircon ages 2-94316
 Gazli district, USSR, chronology of crustal development rel. to seismotectonic conditions of earthquake occurrence 2-117233
 geomagnetic dipole variations, anal. for past 50000 years 2-111858
 Greece, recent crustal block movements from Holocene shorelines in Crete and Antikythera 2-94349
 Grenville anorthosites of French River area, Ontario, remanence components rel. to radiometric ages 2-94273
 Hadar Formation (Ethiopia), 1.2 Myr record of ^{18}O and ^{13}C changes in late Pliocene Rift Lake 2-68338
 Hadar Formation volcanic units, Ethiopia, K/Ar ages 2-62922
 Hartland stock, Maine, mineral ages determ. 2-78647
 Hellenic sedimentary arc, chronology of tectonic rot. from palaeomagnetic meas. of Mio-Pliocene series 2-94278
 Isle of Ischia, Gulf of Naples, <33000 yr K-Ar dating of volcano-tectonic horst 2-111903
 Isle of Mull, Scotland, Lateglacial and Early Flandrian Landscape changes chronology 2-73550
 Kant's thoughts on the ageing of the Earth 2-89515
 Kashmir intermontane basin development chronology 2-100362
 Kuznetsk area, Volga Heights, USSR, age of granitic complexes 2-78610
 N Labrador Shelf, glacial chronology and sediment depositional environments 2-78640
 Laidlaw Volcanics, SE Australia, geochronology and stratigraphy 2-88818
 Lake Turkana, Kenya, palaeoclimate determination from gastropod shell $^{18}\text{O}/^{16}\text{O}$ ratios 2-83967
 SW Maine, USA, age of intrusive rocks 2-111893
 mantle under oceanic islands, age from igneous rock $^3\text{He}/^4\text{He}$ systematics 2-78605
 marine hydrothermal vent sulphide deposits, radioactive dating obs. (French) 2-100366
 meteorite, terrestrial age of estimation using thermoluminescence data 2-84100
 minerals, fission track temp. age theory 2-73508
 minerals, fusing with continuous laser for $^{40}\text{Ar}/^{39}\text{Ar}$ dating 2-63119

geochronology continued

- Nanga-Parbat region, Pakistan, Quaternary uplift, fission track evidence 2-100380
 Nehru glacier, Kashmir, radiometric age of snout ice 2-88923
 Neogene Lake Alsek, SW Yukon Territory, history and chronology 2-78707
 New Zealand, Quaternary terraces, uplift rates and speleothem dates 2-100361
 Newfoundland, Botwood-Mt. Peyton region paleomag. and geochronology 2-88817
 Nordlinger Ries crater, bedrock age and impact breccia temp. history 2-106121
 North America lake sediment dating, use of geomag. secular var. type curves 2-100325
 Nova Scotia continental margin, sedimentary basin stratigraphy rel. to rifted margins models 2-106071
 obsidian artifacts, from SE Anatolia, fission-track dating 2-111897
 ocean floor depth-age relation, comparison of discrete and continuous intrusion models for plates thermal struct. 2-106023
 oceanography, chronology of warm saline bottom water in ancient ocean 2-68374
 oceans, isotopic palaeo-oceanography of Caribbean and E Pacific rel. to Late Neogene Panama uplift 2-111968
 Ontario, Sr isotopic evidence for upper mantle long lived heterogeneities 2-100333
 paleoclimates of NE France since 140000 yr BP, ^{14}C -pollen study 2-73675
 Pliocene-Pleistocene boundary age constraints 2-94329
 radionuclides conc. in sediments, influence of mixing and compaction 2-58089
 Random Formation, SE Newfoundland, age and relation to bounding formations 2-73549
 rifted continental margins models, sedimentary basin stratigraphy and comparison with Nova Scotian margin 2-106071
 rock, Zr isotopic composition, implications for ^{92}Nb as solar system chronometer 2-84116
 Sahara Desert, geochronology of desertification in Great Sand Sea and Selima Sand Sheet 2-117269
 salt diapirs of continental margin of N Kenya and S Somalia, Early Jurassic age 2-78653
 Sardinia, chronology of Oligo-Miocene rift rel. to early history of W Mediterranean Basin 2-106079
 E Savant Lake-Crow Lake metavolcanic-metasedimentary belt, NW Ontario, U-Pb zircon ages 2-94317
 Schofield Reservoir, Utah, USA, lake sediments; ^{210}Pb dating, sedimentation rate 2-58087
 sediment age determination method based on Th^{230} content 2-117494
 sphene sample from pegmatite, fission track temp. ages meas. 2-73721
 Spitsbergen and Arctic Quaternary glacio-isostatic events 2-100363
 Surat Basin, Australia, sedimentary cycles rel. to global changes of sea level 2-117301
 Tahoe-Tioga interglaciation, Sawmill Canyon, Sierra Nevada, USA, intermixed basalt flow dating 2-78830
 thermal springs of Bath, England, groundwater circulation and residence time 2-100407
 S Tibet, $^{40}\text{Ar}/^{39}\text{Ar}$ dating of trans-Himalayan magmatism 2-94330
 Timor region, crustal relations to mid-Pliocene to Recent continent-island arc collision 2-117276
 Middle Tertiary time scale by K-Ar and Ar isotope dating 2-62921
 Tudor Gabbro, Ontario, $^{40}\text{Ar}/^{39}\text{Ar}$ incremental heating studies rel. to N America Proterozoic polar wander path 2-106022
 Winona Basin off Vancouver Island, history of sedimentation rel. to struct. and tectonics 2-94361
 Wisconsin bog and Lake Michigan core samples 2-83741
 woods, petrified, geological age assessment by ESR 2-62920
 SE Yukon Territory, Rb-Sr age of Mississippian felsic metavolcanic rocks rel. to geological setting and tectonic significance 2-78649
 $^{39}\text{Ar}/^{39}\text{Ar}$ laser probe dating of terrestrial rocks 2-89020
 $^{40}\text{Ar}/^{39}\text{Ar}$ spectral method of geological dating 2-83786
 ^{10}Be dating, evidence for constancy of oceanic ^{10}Be deposition rate from Mn crusts 2-111920
 ^{10}Be , ^{14}C ratio in geological samples, radiometric dating 2-112155
 CaCO_3 , ^{210}Po , radiation effects, EPR obs., rel. to paleodose determ. 2-78652
 ^{210}Pb distribution in sediments, influence of radon diffusion 2-58012
 Sm and Nd isotope ratio determination method using laboratory standard solutions 2-63253
 Sm, Nd ratio determination method using laboratory standard solutions 2-63253

geodesy

see also gravity

- Africa, gravity anomalies from satellite tracking obs. 2-88721
 Central America, gravity and mag. anomalies rel. to tectonic struct. 2-100237
 Antarctica, ice thickness and geodetic meas., maps 2-111981
 South Atlantic, gravity anomalies from satellite tracking obs. 2-88721
 Atlantic-African geoid high explained by Mesozoic position of Pangea 2-83795
 atmospheric pressure changes inducing gravity variations 2-117181
 automatically recorded meas. data, interactive processing system (German) 2-89054
 Baikal-Patom highlands, USSR, local gravity anomalies 2-105898
 block adjustment with independent variables, elimination of systematic errors 2-78523
 book designed for graduate students 2-79296
 boundary value problem, soln. of continuous and discrete problems (Russian) 2-100194
 Canada's National Gravity Data Base, organisation and management 2-106322
 cathometer applied to checking geodetic instruments 2-94533
 Central Sakhalin Fault, USSR, crust near-surface area deform. from geodetic obs. 2-111912
 China, geodetic data rel. to neotectonic stress 2-62944
 N China, geodetic data rel. to occurrence of major earthquakes in groups 2-94304
 coordinates redundant transform. method (German) 2-94540
 crust deformation associated with seismic activity strain from geodetic geodetic results 2-78859
 crust movement monitoring by satellite methods 2-68592
 crustal deformation measurement, comparison of tiltmeters 2-112166

geodesy continued

- crustal strain from triangulation data using simultaneous reduction method 2-73423
 data management standardisation 2-57960
 data transformations, linear Gauss-Markov model (German) 2-68238
 databases in Poland 2-57965
 digital image pattern recognition appl., Defense Mapping Agency overview 2-94518
 displacement of surface monuments: horizontal motion 2-58030
 Doppler geodetic point positioning database at DMA 2-57961
 Doppler laser network longitude orientation determ. (Chinese) 2-112151
 Earth density models, gravity/pot. parameters in geodetic reference system and stratified heterogeneous spheroid 2-105894
 Earth gravitational potential, topography and isostatic compensation, degree variances 2-105883
 Earth oblateness, perturbations to subsatellite three-dimensional motion 2-78940
 Earth surface, quasi-static strains and tilts due to faulting in layered half-space with viscoelastic layer 2-100205
 earthquake prediction and geodesy, review in book 2-94919
 earthquake prediction method based on ocean crust level changes 2-88802
 ellipsoid of revolution, gravit. pot. expressed in harmonics second and lower degree terms (Japanese) 2-83956
 equivalence in inverse problem of gravity anomalies 2-62882
 fault displacement surveying, variance anal. of underdetermined problem 2-111835
 flattening of primaevial Earth (German) 2-100199
 geodetic latitude of a point in space, closed form solution 2-112304
 geoid, precise definition and implementation and related problems 2-68239
 geoid calculations, use of gravimetry (German) 2-68236
 geoid construction from gravity accel. data: inverse problem theory 2-73420
 geoid determination, research in Austria (German) 2-105899
 geoid height anomalies over 2-D models of Earth struct. 2-73418
 geometrical interpretation of ideal body problems 2-68234
 geostationary satellites, visual obs. rel. to subsatellite position determ. 2-106476
 global free air gravity anomalies rel. to continents and ocean floor struct. 2-57956
 GPS appl. to mapping, charting and geodesy 2-78881
 gravimetric data management at Bureau Gravimetric International (BGI), software 2-106321
 gravitational potential harmonic coeffs. 2-73416
 gravity anomaly due to 3-D body, calc. 2-105897
 gravity depth variation in Earth, gravit. const. calc., ellipticity effect 2-73422
 gravity field anomaly quantitative interpretation 2-105890
 gravity field changes due to coastal seawater pile-up 2-117187
 gravity field of a non-homogeneous spherical planet 2-68231
 3-D gravity field of buried objects by complex analysis method 2-117185
 gravity survey prospecting method for hydrocarbon contact surface 2-117485
 Helmert blocking, top-down strategy 2-57957
 horizontal capacitive pendulum for meas. of Earth tides 2-78854
 Imperial Valley, California, tectonic displacement since 1934 AD 2-100203
 Indian Ocean, gravity anomalies from satellite tracking obs. 2-88721
 Indonesian region, altimetric gravimetric geoid 2-100190
 inertial survey systems 2-83953
 inertial survey systems with gravimetric aiding 2-83954
 isostatic geoid anomalies on a sphere, theory 2-100202
 Italy, gravity field and crust model 2-88716
 W Kentucky, vertical fault displacement from levelling data 2-68324
 Kentucky-Tennessee, USA, model of anomalous crust struct. 2-83780
 Kozo-Matsuda fault, seismic activity, assoc. gravity survey and tilt meas. (Japanese) 2-83734
 Kuril Islands, Earth surface deform. and inclination var. as precursor of Shikotan earthquake, (1978 December 7) 2-73480
 Lagoos laser range data, outliers removal/detect., appl. to observatory sites relative motion 2-100191
 levelling database implementation 2-57964
 levelling geokinetic networks data, processing methods 2-106344
 levelling rod calibration procedures 2-78855
 linear boundary value problem, general formulation 2-105888
 Long Valley caldera, California, caldera floor uplift rel. to magmatic resurgence and Mammoth Lakes earthquakes 2-106064
 lunar laser ranging from geodetic-geodynamic determ. (German) 2-89021
 marine geoid topography and uncharted seamount detection using satellite altimetry 2-100583
 Mendocino Fracture Zone, geoid height/crust age relation 2-100359
 metre defined on speed of light, and geodetic application (German) 2-74379
 network adjustment algorithms for large systems 2-57959
 network and photogrammetric block adjustment, reordering algorithm 2-57958
 network equation system, large sparse matrices direct soln. method 2-78535
 networks, two dimens. homogeneous isotropic, relative Cartesian coords. (German) 2-94271
 oceanic gravity and bathymetry, freq. response functions 2-100166
 oceanic trench geoid anomalies 2-78627
 Odawara tiltmeter borehole near Kozu-Matsuda fault, leveling survey (Japanese) 2-83733
 Oregon-Washington coastal ranges, landward tilting 2-100201
 Orroal-Yarragadee intersite distance from Lagoos laser ranging 2-100192
 NE Pacific, geoid anomalies and isostasy of fracture zones 2-68329
 Papua New Guinea, crustal motion from geodetic meas. 2-100351
 Peter I Range, USSR, ground motion from geodetic/seismic data 2-106073
 Philippine Sea, satellite altimetric geoid 2-105893
 planar geodetic covariance functions, review 2-57954
 plate tectonic movement derived from geodetic measurements, theory 2-88715
 polar and equatorial flattenings, effect on lunar librations 2-106566
 Popsat geodetic satellite, earthquake research appl. 2-117482
 programming methodology based on data abstraction 2-106323
 satellite Doppler translocation technique for relative coords. between stations (Chinese) 2-112152

geodesy continued

- satellite measurements contributions (*German*) 2-68237
- satellite resonant orbits for 29, 30 and 31 order geopotential harmonics 2-73421
- satellite-to-satellite ranging for gravity field harmonics, theory 2-88714
- SEASAT orbit ephemerides and global gravity model 2-89034
- SEASAT radar altimeter obs. off Bermuda for height calibration 2-89026
- singularities and related inverse problem, assoc. gravity field 2-111842
- Soufriere Volcano, St.Vincent, magma chamber rel. to crust tilt obs. 2-106063
- space coordinates transformation to geodetic latitude, longitude and ellipsoidal height (*German*) 2-94272
- strain measurements in South Africa, obs. of coseismic and other short-term strain changes 2-105957
- surveyors and geodesists curricula data management 2-57962
- Tadzhikistan, USSR, crustal deform. as long-term forerunner of series of strong earthquakes 2-117234
- Tangshan, China, anomalous land uplift and aseismic creep before 1976 earthquake 2-94307
- Tangshan earthquake, 1976 July 28, residual tilt field and tilt steps spatial distrib. (*Chinese*) 2-100256
- terrain correction method for gravity and mag. survey data 2-117186
- tides in solid Earth 2-78524
- tides in solid Earth obs. at South Pole 2-100204
- time and frequency in satellite geodesy 2-88724
- transformation of networks using least squares adjustment 2-78522
- unbiased free net adjustment 2-78521
- VLBI arc method, astrometric and geodetic appls. 2-58265
- wave number domain anal. of geopotential fields 2-100200
- Yellowstone Park, USA, vertical crustal motion since 1923 AD 2-88856

geodetics see geodesy**geolectricity see terrestrial electricity****geography**

- Landsat geographic data 2-63110
- marginal seas, size and configuration rel. to warm saline bottom water in ancient ocean 2-68374
- meteorite falls on Earth's surface, depend. of relative rates on geographic latit. 2-89209
- seismic zones of Priamur'e and Primor'e regions of far Eastern USSR, map 2-58002
- suspended sediment concentration in coastal waters, digital Landsat MSS data use for patterns determ. 2-73695

geology**see also geomorphology; rocks; topography (Earth)**

- E Africa, discovery of salt diapirs bordering continental margin of N Kenya and S Somalia 2-78653
- African ore deposit location rel. to subcrustal stress field 2-73505
- S Alaska, Denali fault motion and accretionary development 2-94344
- E Central Alaska, terranes and suture zones 2-94321
- Alberta, geology of Rocky Mountains disturbed region rel. to geothermal gradients in Hinton area 2-94315
- Aleutian arc, tholeiitic and calc-alkaline magmatism patterns 2-100331
- alkali basalt suite petrogenesis, role of apatite 2-111900
- Allahabad region, India, geoelectrical soundings rel. to aquifers and sub-surface geology 2-111862
- amber, powdered, NMR study of C site chemistry 2-106112
- Central America volcanic front, lava petrogenesis model 2-62932
- amphiboles and other hydrous pyroxenes, mineralogy book 2-84401
- anatexis and accompanying metamorphism in folded belts, numerical model 2-73517
- Andes, intra-crustal melting indicated by isotope geochem. study 2-68313
- Appalachian crust struct. and tectonic history 2-78774
- Appalachian region hydrocarbon deposits 2-100337
- aqueous electrolyte chem. thermodynamics at high press. and temp. 2-78598
- Arabian Sea shales near India, geochem. and thermoluminesc. studies 2-73504
- Archaean crust thickness of S.India, greenstone granite belt 2-88833
- Archaean gneisses at Hebron, Labrador, Rb-Sr isotope study 2-117262
- Archaean mantle structure, evidence from komatiites 2-106021
- Archaean volcanoes of Abitibi Belt, Ontario and Quebec, form, comp. and development 2-100340
- Arctic Ocean basin and continental margins (book) 2-53440
- Arctic-Alaska, Mid-Palaeozoic motion, geological anal. 2-106077
- Armenian porphyrites, thermomag. remanence rel. to geomag. field strength in Late Jurassic 2-117196
- Ascension Island, S. Atlantic, volcanic rock isotope composition 2-106019
- E Asia, evolution of major strike-slip faults (*French*) 2-111909
- N Atlantic mid-ocean ridge, He isotope variations and mantle heterogeneity 2-62914
- N Atlantic ocean basin and continental margin, geology, geophysics, geochemistry and resources 2-58035
- Atlantic Ocean Holocene sediment map 2-117292
- atmosphere and ocean degassing model based on geochem. evidence 2-100562
- E Australia, 'hot-spot' like trace due to intraplate extension 2-73527
- NW Australia, crustal comp. and metamorphic grade of Precambrian terrains from seismic refr. data 2-117255
- W Australia, petroleum deposits in Babbagoola Beds, Officer Basin 2-58009
- SE Australia, struct. geol. of Palaeozoic subduction complex 2-106031
- Bangui magnetic anomaly, geological origin 2-57971
- Barbados Ridge complex, bathymetric and seismic survey rel. to interpretation of accretionary wedge 2-94355
- basalt genesis and mantle structure studied through Th-isotopic geochemistry 2-111902
- basalts from seafloor, evidence for mantle major element heterogeneity 2-62915
- Beni Bousera, Rif, Morocco, geology of peridotite aniform 2-73514
- Blue Ridge of Virginia, USA, tectonic origin and geology 2-73492
- boudinage stresses as estimate of palaeo-stress and -strains 2-106089
- Britanny, Hercynian regional deformation 2-73536
- S Brittany, France, U-Pb chronology of crust origin 2-106018
- Buckingham area of Quebec, Canada, Cambro-Proterozoic volcanism 2-88816
- calc-alkaline andesite of upper mantle origin, Itinome-gata, Japan 2-68303
- geology continued**
- Caledonian calc-alkaline volcanic arc (Scotland), Nd and Sr isotopes 2-62916
- W California, exotic terrains, collision evidence 2-78630
- California Sierra Nevada, origin of ophiolite belt 2-73502
- Caraquet dike system, New Brunswick, Canada, palaeomag. study 2-88728
- Caucasus Mountains, palaeomag. investigations of Palaeozoic rocks rel. to tectonic history 2-117195
- Cedros Island, Mexico, tectonic setting of blueschists and melanges 2-88819
- SW China, Cainozoic crustal deformation (*Chinese*) 2-68323
- China, geological data rel. to neotectonic stress 2-62944
- chlorides (NaCl, CsCl, AgCl), compressibility and Moelwyn-Hughes parameters at high-press. 2-58040
- chrome diopside, deformation by mechanical twinning process 2-100372
- clay sediments in ocean, Jurassic-Quaternary sedimentation environments 2-62949
- coal mine overburden in New Mexico, USA, sonic logging study 2-78891
- coalification process and estimation of geothermal history 2-88839
- Coast Plutonic Complex, BC, Canada, geologic and tectonic history 2-94325
- Cobar area, New South Wales, Australia, aeromag. survey of mineral deposits 2-57968
- Colorado Plateau crustal hydration constraints from crust xenoliths Vp meas. 2-78596
- Columbia River basalts, magma evolution and eruptions 2-83784
- Columbia River flood basalts, USA, chem. and isotope composition 2-62919
- conf., July 1980, Paris, France 2-58533
- conference on sedimentary basin evolution of London, England (June 1981) 2-74156
- continental margin sedimentary rock layer accumulation process 2-117268
- cordierite, high-press. phase transition 2-106104
- Cortlandt complex, New York, emplacement history and tectonic significance 2-100377
- Cortlandt complex, New York, USA, geochem. study of petrogenesis 2-83779
- Costa Rica Rift, Sr and O isotopes of Pacific basalts 2-106016
- Costa Rica Rift, water circulation and heat transfer in oceanic crust 2-88866
- Cretaceous-Tertiary boundary, Ir content of red clay rel. to traces of cosmic catastrophe (*Russian*) 2-83820
- Cretaceous-Tertiary boundary event, and extinction of marine plankton 2-94368
- Cretaceous-Tertiary boundary event due to comet impact in USSR 2-62959
- Cretaceous-Tertiary boundary Ir abundance anomaly in New Mexico, USA 2-62930
- crust stress meas. by borehole wall fracture obs. method 2-111894
- Damara orogenic belt, SW Africa, crustal elev. cond. struct. 2-88733
- Deccan Trap flood basalt origin, isotope geochem. study 2-106017
- degassing of Earth, effects of Earth tides (*Russian*) 2-83737
- S Denison Trough, Queensland, results of seismic survey (1978 to 1979) 2-117302
- depositional sequences and lithological facies determ. from seismic section anal. (*Rumanian*) 2-117503
- Dharwar greenstone-gneiss-granite terrain, gravity interpretation and geological implications 2-78534
- Diamant-Burgos volcanic system in SW Martinique, magma mixing, quartz bearing basalts (*French*) 2-111905
- diamond, garnet inclusions and state of Earth's upper mantle 2-62929
- digital interactive image processing system, design and implementation of DIBIAS system 2-117510
- dip determinations in photogeology 2-89049
- discrimination of geological features, construction of self-correcting system for geophysical data integrated interpretation 2-73689
- Dnieper-Donets palaeorift, crust. struct. and tectonics (*Russian*) 2-106026
- Early Proterozoic Cape Smith fold belt, New Quebec, transect and geology 2-111914
- Earth sciences, encyclopedia 2-84393
- earth sciences computer appls. conf. Syracuse, NJ, USA (Oct. 1979) 2-58192
- East Pacific Rise, seismic refl. obs. of lava flow layer 2-78602
- central England, deep seismic refl. profile over Caledonian granite 2-88805
- fault opening and resulting slip due to fluid injection for heat extraction 2-58017
- fault tectonics regions, distortion of magnetotelluric sounding curves 2-117197
- faults in Lake Baikal-Nyukzha River area, classification and tectonics 2-58042
- Florida contrib. of phosphate rocks to high concs. of ²²⁶Ra and ²²²Rn in W Florida coastal waters 2-78704
- France, tectonic map (*French*) 2-100353
- French Alps, strain analysis of cover thrust zone 2-106092
- Friuli area, Italy, nappe detachment zone rel. to space-time evolution of 1977-1980 seismicity 2-117222
- gabbroic dykelets setting in ophiolitic complex by hydraulic fracturing 2-62955
- Gamitagama greenstone belt, southern Superior Province, precise U-Pb zircon ages 2-94316
- Gander Zone, Newfoundland, crust. struct. from gravity and geomag. anomalies 2-111895
- Garm region, USSR, seismic jointing, erosion patterns and Earth crust stress-strain state 2-73474
- Gazli district, USSR, geology rel. to seismotectonic conditions of earthquake occurrence 2-117233
- glendonite precursor identified as CaCO₃·6H₂O 2-106096
- Goconda allochthon, Nevada, USA, geology and tectonic origin 2-94323
- Gorringe Bank, oceanic crust+mantle, active in situ disaggregation, analogy with ophiolitic massifs 2-88831
- gravity anomalies due to horizontal slab like bodies with lateral density var., Fourier spectrum interpretation 2-111841
- Greece, geology of mid-Triassic volcanic rocks 2-88844
- SE Greenland, palaeomag. of Tertiary dykes (and tectonic implications) 2-73432
- Guinea coastal marginal plateau, geology and bathymetry (*Russian*) 2-88829

geology continued

- Hadar Formation (Ethiopia), 1.2 Myr record of ^{18}O and ^{13}C changes in late Pliocene Rift Lake 2-68338
- haematite diagenetic growth in pelagic limestones, rock magnetism study 2-68311
- Hamersley Basin, NW Australia, banded Fe formations rel. to isostasy and struct. of lower crust and upper mantle 2-117256
- Hartland stock, Maine, mineral ages determ. 2-78647
- hedenbergite, deformation by mechanical twinning process 2-100372
- Hellenic arc and Sea of Crete, fault systems geometry rel. to synthesis of tectonic development 2-94352
- NW Himalaya, Middle Palaeozoic-Cenozoic geology and tectonic evolution 2-83802
- Hinnoy, Norway, geology of Caledonian deformation 2-78617
- Hong Kong, geological factors influencing seismicity 2-68292
- Honolulu Volcanics, geochem., petrology and mantle composition 2-106011
- Hudson Bay, mag. anomalies regional patterns and structural provinces 2-100209
- igneous intrusions layering, study of layered convection and crystal layers in multicomponent systems 2-106116
- India, geomag. anomalies and regional geology along 18°N parallel 2-111864
- Middle Indus Valley, N.Pakistan, geology rel. to gravity profile 2-117180
- Isle of Ischia, Gulf of Naples, <33000 yr K-Ar dating of volcano-tectonic horst 2-111903
- Kilauea volcano, Hawaii, S isotopes of basalts and volcanic glass 2-88822
- kimberlite pipe occurrence rel. to geomag. anomalies at Panna, India 2-62884
- S Kitakami region (Japan), tectonic origin of allochthonous blocks 2-94341
- Klamath Mts., California, ophiolite accretion history 2-94347
- Klamath Mts., California, USA, accretionary subduction complex 2-94324
- Kurohime volcano, Japan, petrological evidence for magma mixing 2-58024
- Kuznetsk area, Volga Heights, USSR, age of granitic complexes 2-78610
- N Labrador Shelf, sedimentary units rel. to glacial chronology and depositional environments 2-78640
- Ladakh Himalayas, geology and tectonics 2-117259
- Laidlaw Volcanics, SE Australia, geochronology and stratigraphy 2-88818
- Lake Baikal region, intrusive dykes rel. to local anomalies in heat flux distrib. 2-73500
- lamprophyric magma spherulitic crystallisation and ocelli origin 2-88874
- Lappajarvi meteorite crater, Finland, geochemistry of impact melt and basement rocks 2-106119
- Lhasa block, Tibet, positron during Late Cretaceous from geological evidence 2-83794
- orogenic therzolute massif geochem. and upper mantle history 2-106036
- Loihi, Hawaii, active submarine volcano, hydrothermal deposits, geology and chemistry 2-100344
- Long Valley caldera, California, magma reservoir reinflation rel. to Mammoth Lakes earthquakes 2-106064
- magnetic ore bodies, determ. of parameters in complex field 2-58184
- SW Maine, USA, age of intrusive rocks 2-111893
- mantle rheology use of deformation maps in grain-size-stress space 2-106081
- marine hydrothermal vent sulphide deposits, radioactive dating obs. (French) 2-100366
- marine sediment diagenetic reactions, geochem. significance 2-62950
- Massif Central, France, spatial remote sensing and mining research (French) 2-68310
- E Mediterranean ridge, distrib. of folding and faulting of sediments from Sea-Beam obs. 2-100369
- E Mediterranean Sea, geological evidence concerning compressional tectonics 2-94354
- Mendip Hills, England, groundwater circulation in Carboniferous Limestone rel. to thermal springs of Bath 2-100407
- Late Mesozoic mass extinctions, asteroid impact theory 2-58055
- Mesozoides of NE USSR, magmatism zoning and evolution 2-106044
- microbeam analysis, conf., Vail, CO, USA (July 1981) 2-68961
- mid-ocean ridge hydrothermal circulation in fault zones 2-117288
- mid-ocean ridge magma chamber geochemical model 2-106020
- mid-ocean ridge sulphide hydrothermal activity (French) 2-73540
- mineral exploration, appl. of high spectral resolution airborne spectrometry 2-112157
- mineral paragenesis temp. determin. by explosion seismology method 2-62927
- mineralisation at mid-ocean ridges due to hydrothermal circulation 2-117288
- mineralogy and petrology, conf., July 1980, Paris 2-58524
- Mino terrane (central Japan), geology and palaeomag. study 2-88745
- Moesian microplate and Carpathian Balkan arch geodynamic relations (Rumanian) 2-117285
- Moine Thrust Zone, Scotland, structural anal. 2-83812
- MORB composition and origin, laboratory rock melt study 2-117267
- Mount Fisher area, British Columbia, superimposed low grade metamorphism, East Kootenay orogeny implications 2-88872
- Mount Fisher region, Canadian Rocky Mountains, folding and deformation, geology and tectonics 2-100379
- Mount Tolman, Washington State, porphyry Mo deposit recognition using artificial intelligence program 2-117501
- MSOIRM, FORTRAN program for mesonorm calc. in whole-rock analyses 2-117303
- Mt. Hood Volcano, Oregon, USA, aeromagnetic survey 2-88739
- Mt. St. Helens, heat flow, geological implications 2-100328
- Myoko volcano, Japan, petrological evidence for magma mixing 2-58024
- Nanga-Parbat region, Pakistan, Quaternary uplift, fission track evidence 2-100380
- New Hebrides island arc, basalt geochem. and origin 2-117258
- New Zealand, Quaternary terraces, uplift rates and speleothem dates 2-100361
- Newfoundland, seismic vel. struct. of Bay of Islands ophiolite 2-88314
- North Sea Viking Graben, discovery of granite batholith 2-68316
- SW Norwegian Caledonides, evolutionary model and tectonic setting 2-106115
- Nova Scotia continental margin, sedimentary basin stratigraphy rel. to rifted margins models 2-106071

geology continued

- nuclear microprobe meas. of F conc. profile, appl. in archaeology and geology 2-100572
- nuclear waste repository, appl. of spatial estimation techniques 2-116856
- mid-ocean ridge basalt Pb, Nd and Sr isotope ratios 2-106010
- oceanic crust hydrothermal circulation 2-63010
- olivine, 'spinel to β -phase' transition mechanism 2-73547
- olivine, grain boundary migration expts. 2-117299
- olivine-spinel phase transition at Earth mantle conditions 2-106105
- Ontario, implications of early Palaeohelikian remanence in Grenville anorthositic of French River area 2-94273
- ophiolite emplacement by plate collision 2-94326
- origin of life in Precambrian submarine hot springs 2-62958
- Ozernoe ore node, W Transbaikai, gravity field morphology and structural-metallogenic features 2-57955
- East Pacific Rise sediments, chem. variation due to hydrothermal activity 2-62947
- East Pacific Rise (21°N), crust struct. and sea-floor topography 2-62926
- palaeoclimate of Oligocene from Canadian pollen records 2-83937
- Palaeogene climates of NW Siberia 2-78831
- Palaeogene ocean circulation and climate, review 2-62993
- Pangaea breakup influences on ocean sediments and chemistry 2-62951
- Pannonian Depression sedimentary formations depositional processes and syndepositional structures (Rumanian) 2-117503
- Pelly Mountains, SE Yukon Territory, geological setting and tectonic significance of Mississippian felsic metavolcanic rocks 2-78649
- petrology, BUNDLS, FORTRAN IV program for Schreinemakers bundles 2-117304
- phosphorite sedimentation in Cretaceous and Cainozoic oceans 2-62948
- pinchout strata and adjoining boundaries, seismic model parameterisation 2-58004
- Pindos zone, Greece, landslides rel. to geology and tectonics 2-100382
- Pliocene-Pleistocene boundary age constraints 2-94329
- post-Precambrian tectonism of Delhi-Aravalli belt 2-88863
- Priamur'e and Primor'e regions of far Eastern USSR, geology rel. to seismic zones 2-58002
- Primor'e Territory, tectonic zoning from geological data 2-78632
- proterozoic, Early and Middle, supracrustal successions and tectonic settings 2-100376
- Proterozoic supercontinent configuration from palaeomag. data 2-88730
- Quebec Fault, redefinition near Atikokan, Ontario 2-78650
- radar remote sensing for rock-type discrimination 2-112170
- Random Formation, SE Newfoundland, age and relation to bounding formations 2-73549
- Red Sea crust, geology and topology (Russian) 2-83783
- Ryejanes Ridge, sonar study of midocean ridge struct. 2-62943
- Ridge Basin, California, magnetostratigraphy of sedimentary rocks 2-88731
- rifted continental margins models, sedimentary basin stratigraphy and comparison with Nova Scotian margin 2-106071
- rock hydraulic fracture near Earth surface, size limit 2-68336
- rock massifs failure (Polish) 2-83814
- Rockall Trough, Eocene volcanic ash deposits 2-117291
- E Sahara Desert, playa sediments and sand dunes in Great Sand Sea and Selima Sand Sheet 2-117269
- Sanglien Highlands, USSR, earthquake foci mechanisms and pleistoseist region struct. 2-111887
- Sardinia, geology of Oligo-Miocene rift rel. to early history of W Mediterranean Basin 2-106079
- E Savant Lake-Crow Lake metavolcanic-metasedimentary belt, NW Ontario, U-Pb zircon ages 2-94317
- Sea of Crete and Hellenic arc, fault systems geometry rel. to synthesis of tectonic development 2-94352
- seawater chemical composition (U, K, Rb, Cs) alteration due to hydrothermal circulation 2-68386
- sediment diagenesis, due to thermal expansion effects 2-117290
- seismic reflection prospecting computing 2-58193
- Setouchi volcanic belt, Japan 2-117261
- Setouchi volcanic belt, SW Japan, andesite origin 2-117260
- Shikha region, Transbaikai, Late/Middle Mesozoic structures, tectonic settings 2-111911
- W Siberia, prospects for natural gas hydrates in northern region 2-58041
- NW Siberia oil and gas stratigraphic traps, seismic refl. prospecting 2-78586
- sinusoidal curves fitting to partially exposed/eroded fold structures, method 2-112185
- Snake River Plain, Idaho, USA, new category of volcanism 2-88825
- Snake River Plain, Idaho, USA, seismic vol. and crust struct. 2-88795
- NE Sonora, Mexico, geology and seismicity in epicentral area of 1887 earthquake 2-88815
- South Lake Igneous Complex, Newfoundland, marginal basin-island arc assoc. 2-88873
- Southern Cape Conductive Belt (S.Africa), geology and tectonic significance 2-78634
- spatite role in mantle enrichment processes 2-111900
- spectroscopic remote sensing, geological appls. 2-112156
- striations on pre-existing faults, calc. of responsible tectonic processes 2-73534
- Sudbury basin offsets, Ontario, Canada, palaeomag. of irruptive rocks 2-88744
- Surat Basin, Australia, sedimentary cycles rel. to global changes of sea level 2-117301
- Sydney Basin, S.E. Australia, magnetostratigraphy of Permian/Triassic 2-68254
- Syros, Greece, ductile thrust zone deformation 2-106093
- Taoyuan-Chupei, NW Taiwan, geology rel. to saline water invasion in coastal area 2-100402
- Tarim Basin, China, geological struct. and tectonic sequences (Chinese) 2-100378
- tectonic structures created by glaciers (Russian) 2-83819
- Tennant Creek Block, Northern Territory, Australia, reconnaissance of upper crustal seismic vels. 2-117223
- tholeiite geochemistry of Moroccan Early Mesozoic area 2-68312
- S Tibet, $^{40}\text{Ar}/^{39}\text{Ar}$ dating of trans-Himalayan magmatism 2-94330
- Timor region, crustal reactions to mid-Pliocene to Recent continent-island arc collision 2-117276
- Middle Triassic time scale by K-Ar and Ar isotope dating 2-62921
- Troodos Complex, Cyprus, Pb isotopic composition of ophiolitic volcanogenic sulphide deposits 2-62925
- Turkey, melange unit origin and tectonic setting 2-94327

geology continued

- SE Turkey, Upper Cretaceous plate rupture and leaky transcurrent fault ophiolites devel. 2-111916
 Tuva Barlyk ophiolitic complex, struct. and devel. model, tectonic role 2-83799
 ultramafic xenoliths, petrologic and geochem. evidence for crust origin 2-73507
 USSR, mineral resource exploration programme (*Russian*) 2-73509
 Variscan brittle tectonics of S Rhone valley, Gard faults dynamics, tertiary stress fields (*French*) 2-88851
 Variscan geology of S Brittany, significance of E-W lineation (*French*) 2-100348
 N Vietnam, Sn ore deposits 2-78613
 volcanic landforms of Earth and Moon, comparison 2-100778
 Voznesenskii ore region, Primor'e, crust approx. by mass of material points 2-100338
 W Greenland, metamorphism of 3800 M yr. supracrustal rocks 2-88820
 West Siberian Plate, pre Jurassic basement struct., features from areal seismic sounding 2-78592
 White Hills Peridotite, Newfoundland, tectonic struct. related to thrusting of ophiolitic complex 2-94365
 Yellowstone caldera area, USA, seismic vel. struct. 2-88826
 Zelezná Studnicka seismic station, Czechoslovakia, geology and microseismic noise 2-83760
 Zeya breach valley at Tukuringa-Soktakhan Ridges juncture, block tectonics and pebble petrography 2-83800
 Au, Pd, Ir, abundances in theralites and mantle precious metal implications 2-62918
 Nd isotope characts. of granite batholiths of S.E. Australia 2-62917
 Pb retention by zircon in granite at elevated temp. and press. 2-93976
²²²Rn transport through fractured rock 2-88828
 U deposits in United States, aerial radiometric survey obs. 2-73503

geomagnetic storms *see* **magnetic storms****geomagnetic variations**

- see also micropulsations*
 1976 March-April, related solar, cosmic ray and interplanetary disturbances 2-58214
 A_p index rel. to solar coronal radio emission (cycle 20) 2-106657
 activity associated with interplanetary mag. field var. 2-84057
 activity causes at Hale sector boundaries 2-100696
 activity prediction by interplanetary spacecraft, solar wind magnetic field (*Japanese*) 2-73444
 annual wave of geomagnetic activity 2-94564
 anomalies of variable geomag. field at surface of Earth 2-111853
 anomalous field variations at Indian equatorial stations 2-62889
 Antarctica, 1960-75 secular var. 2-111861
 atmospheric weak cyclones movement effects (*Russian*) 2-105919
 SE Australia, Early Palaeozoic polar wander 2-68255
 SE Australia, secular field var. from 1000 yrs BP from lake sediments 2-105904
 bay disturbances in EM field, annual variation 2-83742
 British geomagnetic secular var. record for Holocene times, detransformation 2-105914
 W Canada, secular variations (31000 to 19500 years BP) 2-117191
 N China, secular change in 1960 to 1977 period (*Chinese*) 2-73424
 climate change prediction based on secular variation records 2-83936
 conference on Earth core at London, England (January, 1982) 2-101120
 cosmic ray intensity diurnal anisotropy, spectral exponent (β) on geomag. disturbed days 2-68577
 cosmic ray intensity diurnal anisotropy, spectral exponent vars. on mag. quiet days 2-68578
 dynamo theory, MHD oscils. in rot. spherical shell 2-62885
 electromagnetic interference fringes method for prospecting 2-73705
 EM field separation into mag. and elec. interior and exterior components 2-111867
 EM field transfer functions var. with time 2-78541
 EM fields variations induced by synoptic scale oceanic movements 2-112133
 EM response functions, time depend., effect of stress field time var. 2-78539
 estimation of spatial gradient daily variations meas. by magnetometer arrays 2-68519
 Europe, identification of 60-year geomag. field vars. 2-111849
 field distortion determination, method for effects due to oceans and continents 2-73700
 field reversals rel. to heat flow 2-78604
 flux reversals, dynamo theories, multivibratory dissipative structure 2-100249
 Garm polygon, USSR, relationship, between geomag. vars. and hydrologic regime 2-73481
 Harang discontinuity and plasmopause boundary changes 2-106409
 indexes, effect of solar wind high velocity streams 2-73435
 NW India, elec. cond. struct. and geomag. induction in crust 2-73433
 Indian sub-continent, long-period geomag. vars. rel. to Earth EM induction 2-111865
 indices coupling function with solar wind parameters 2-112264
 intensity variations in China between 500 BC and 1900 AD 2-73443
 ionosphere, model predictions of mag. perturbations observed by Magsat in dawn-dusk orbit 2-100631
 ionosphere, TRIAD mag. data rel. to correl. between Birkeland current densities and interplanetary quantities 2-100663
 ionosphere omega bands, eastward drifting, assoc. current system and mag. disturbance field 2-100645
 ionospheric technique for modeling mag. perturbations produced by field-aligned current systems 2-100632
 Iran, apparent polar wander since Late Precambrian 2-68258
 late Jurassic, geomag. field strength 2-117196
 middle Jurassic pole positions 2-105905
 line spectrum of geomag. vars. at Dourbes, Belgium, results from Fourier anal. 2-105901
 lunar daily geomag. variations, seasonal change 2-68260
 lunar eclipses preceding geomag. activity changes 2-63177
 lunar semi-monthly variations at Chinese coastal sites (*Chinese*) 2-68240
 lunar tidal harmonics in geomag. data, estimation of errors 2-105915
 magnetic intensity rel. to surface air temp., inverse correlation 2-78544
 magnetosphere substorms, relation between geomag. activity and solar wind vel. and density 2-112227
 magnetotelluric observatory observations, at Nagycenk, Hungary 2-78536
 MAGSAT obs. indicating duskside meridional elec. current 2-100628
 Mesozoic and Cainozoic polar wander curve for N America 2-73440

geomagnetic variations continued

- Micosat-2 discharge expts. 2-68594
 ocean currents inducing atmos. mag. fields 2-111852
 Palaeozoic geomag. field reversals 2-68257
 polar magnetic disturbances and magnetosphere field aligned currents 2-117532
 reference geomagnetic times characterizing Earth entry into solar corpuscular stream 2-106471
 reversals, hydromagnetic α -dynamo, appl. 2-78543
 reversals of geomag. field 2-105921
 reverse geomagnetic disturbance inside auroral oval, effect of northward interplanetary mag. field 2-112293
 secular acceleration rate, worldwide character of 1969-1970 impulse 2-105929
 secular variation, analytical extension to core surface rel. to geomag. dynamo 2-111850
 secular variation, effect on estimates of accuracy of geomag. field approximations 2-111851
 secular variation model involving monopoles on Earth's core 2-88736
 secular variation model involving outer core convection 2-100243
 secular variation of palaeofield and current loop model 2-117192
 secular variation since 8000 BC Australian lake sediment record 2-68248
 secular variations in geomagnetic dipole, anal. for past 50000 years 2-111858
 secular variations of long-period 2-105930
 secular variations of medium-freq., morphology 2-111855
 secular variations predicted with stochastic model 2-117193
 solar activity rel. to Earth EM field vars., mechanism for Earth diurnal rot. rate vars. 2-111834
 solar wind parameters relation to northern high-latitude currents and variations 2-94565
 spread-F, mid and low latitude, depend. on geomag. activity 2-106407
 Sq(H) causes on abnormal quiet days 2-68550
 Sq(H) phase variability on normal quiet days in equatorial electrojet region 2-117516
 Sq currents, quiet and active year behaviour 2-105924
 Sq focus latitude during sunspot minimum 2-68551
 Sq variations obs. over N.America during 1965 AD 2-62888
 step-like change in field of 1970 AD, of internal origin 2-73442
 surface variations due to interplanetary shocks from flares of near zone 2-73434
 N Taiwan, seismicity rel. to geomag. variations 2-94296
 Tertiary apparent polar wander path for Gondwanaland 2-68325
 transient terrestrial elec. field due to geomagnetic variations 2-68246
 Triassic and Upper Palaeozoic excursions and reversals seen in Argentinian rocks 2-68259
 turbopause height and temp. in polar region, depend. of geomag. and solar activity 2-73734
- geomagnetism**
see also geomagnetic variations; magnetic storms
 aeromagnetic surveying for mineral deposits in presence of surface noise 2-57968
 Africa, mag. anomalies and tectonic features correl. 2-100234
 South America, gravity and mag. anomalies rel. to tectonic struct. 2-100237
 northeastern S America, mag. anomalies of aulacogens 2-100238
 analytical extension of main geomag. field and secular vars. to core surface, rel. to geomag. dynamo 2-111850
 anomalies, effect of country rock magnetisation 2-111922
 anomalies associated with volcanoes, earthquakes and similar tectonically active regions 2-78540
 anomalies due to 2-dimens. dike and vertical step models, relation figures 2-100210
 anomalies of variable geomag. field at surface of Earth 2-111853
 anomaly due to 2-D arbitrary anisotropic object (including demagnetization) 2-62886
 anomaly maps of northern high latitudes, Magsat data 2-100229
 anomaly of long tabular bodies, rapid evaluation nomograms 2-105932
 Antarctica and Southern Ocean, Magsat magnetic anomalies 2-100230
 Arctic Ocean, aeromagnetic anomalies and tectonic evolution 2-62890
 Asia, mag. anomalies, rel. to tectonic struct. 2-100233
 SW Atlantic, bottom topography and mag. anomalies (*Russian*) 2-62945
 eastern Central Atlantic, geomag. anomalies (*Russian*) 2-88742
 central Atlantic Ocean, magnetic model of Earth crust 2-73438
 N Atlantic ocean basin and continental margin, mag. profile and trans-Atlantic Geotraverse 2-58035
 auroral oval geomagnetic field, effect of northward interplanetary mag. field 2-112293
 Australia-Antarctica sea, sea-floor spreading anomalies 2-68241
 Azores-Biscay Rise, struct. and origin of crust 2-88855
 Baikalian rift deep sounding in near zone by EM field induction 2-105934
 Bangui magnetic anomaly, geological origin 2-57971
 borehole magnetometry method for locating magnetised prism 2-58145
 Brunhes-Matuyama magnetic reversal, dating at 790000 yr BP by marine-astronomical corals. 2-94277
 buried magnetic dipole location from mag. field vector anal. 2-73706
 buried vertical magnetic dipole field formation 2-78551
 Campi Flegrei geothermal area, Italy, crust struct. study 2-73493
 Canada, magnetic charts from Magsat data 2-100220
 E China, mag. anomalies and crust magnetisation 2-100239
 N Cocos plate, tectonic evolution from geomag. data 2-88859
 conference, April 1982, Cardiff, Wales 2-63736
 conference of EM induction in Earth and Moon at Istanbul, Turkey (August 1980) 2-74148
 continental magnetic, gravity and thermal fields correl. 2-105916
 core, geomagnetic dynamo driven by gravity 2-58021
 core convection responsible for secular geomag. variation 2-100243
 core magnetic field, spherical harmonic representation problem 2-100225
 Crone pulse EM system, response of layered Earth 2-73429
 crust induction, meas. techniques and instruments for land and sea obs. 2-78869
 crustal anomaly mapping accuracy of MAGSAT satellite 2-100231
 depth estimates from geomag. data, EULDPH, computer assisted method 2-73697
 direct problem solution for certain classes of mass distrib. 2-111836
 dynamo effect, mechanism (*Czechy*) 2-62883
 dynamo nonlinear oscillations 2-105918
 dynamo theory, MHD oscils. in rot. spherical shell 2-62885

geomagnetism continued

- dynamo theory, role of flux ejection dynamo effect in convective core 2-100722
- earthquake precursors, mag. field anomalies rel. to physico-rheological model for Tangshan earthquake 2-94308
- earthquake prediction and geomagnetism, review in book 2-94919
- eccentric dipole coordinates, for Magsat data presentation and anal. of external current effects 2-100661
- EM fields variations induced by synoptic scale oceanic movements 2-112133
- EM induction, sign convention for quadrature Parkinson arrows 2-111866
- EM induction in inhomogeneous spherical Earth model 2-105922
- EM prospecting, effect of EM coupling between parallel lines on uniform Earth 2-73439
- EM sounding, finite-difference simulations and appl. to telluric fields in two dimensions 2-88732
- EM sounding of one dimensional medium, inverse problem soln. method 2-106348
- field gradient analysis, use for vertical conductivity struct. sounding 2-68529
- field produced by rectangular loop source of current over two layered Earth 2-68242
- Gander Zone, Newfoundland, crust. struct. from gravity and geomag. anomalies 2-111895
- Gani, India, pulsed EM anomalies over conductors 2-68493
- Gauss coeffs., frozen-flux upper limits from Magsat data 2-100224
- geological prospecting, spectral characts. of mag. field over buried struct. 2-63115
- global EM response, improved estimates 2-78545
- global remanent magnetisation of crust, detection by MAGSAT satellite 2-100240
- Gulf of Aden, axial magnetic anomaly and Curie. temp. isotherm 2-94276
- gyromagnetic dynamo problem, perturbation theory anal. (Russian) 2-63242
- harmonic analysis for use in local and regional areas 2-73441
- harmonic splines for geomagnetic modelling 2-105927
- high-latitude disturbance fields, corotating component evidence 2-112247
- horizontal loop EM measurements, interpretation using permeable sphere model 2-105911
- Hudson Bay, mag. anomalies regional patterns and structural provinces 2-100209
- hydromagnetic α -dynamo, geomagnetic reversal appl. 2-78543
- hydrothermal system, above resist. pattern determ. using controlled source audiomagnetotellurics 2-73698
- India, geomag. anomalies and regional geology along 18°N parallel 2-111864
- NW Indian Ocean, rock magnetic nature of geomag. anomaly zones 2-117298
- Indian Ocean anomaly off W Australia modelled by buried dipole 2-100235
- Indian Ocean mag. anomaly mapping using MAGSAT 2-100231
- Indian sub-continent, anal. of EM induction by long period geomag. vars. 2-111865
- induced polarity method with mag. reception, mag. field vector constituents 2-112183
- induction logging of inclined anisotropic beds 2-57976
- ionosphere, electron content at mag. equator 2-106385
- ionosphere, inhomogeneity spectrum of polar electron along geomag. field at high latitudes 2-58199
- ionosphere, secondary cosmic ray electrons motion in geomag. field rel. to contrib. to albedo flux 2-112277
- ionosphere, TRIAD mag. data rel. to correl. between Birkeland current densities and interplanetary quantities 2-100663
- isoparametric well logging, high freq. induction, vertical characts. 2-100603
- Ivrea Zone, Italy, mag. anomaly due to deep rock magnetisation 2-100241
- Japan area mag. anomalies and crust magnetisation 2-100239
- late Jurassic, geomag. field strength 2-117196
- Karnataka, India, airborne EM signatures of different conductor groups, statistical anal. 2-83746
- Kentucky-Tennessee, USA, model of anomalous crust struct. 2-83780
- kimberlite pipe occurrence rel. to geomag. anomalies at Panna, India 2-62884
- Kula plate (N.Pacific), Late Cretaceous tectonics and mag. lineations 2-68326
- local dipole sources in global field model 2-100235
- local EM induction, direct and inverse problems soln. methods 2-78871
- long wavelength magnetic anomaly source requirements, rel. to crustal xenoliths mag. props. 2-100370
- Macquarie Island, seafloor spreading mag. anomalies 2-57973
- magnetic field observations on DE-A and -B 2-58208
- magnetic survey data interpretation, method of stable localisation of features of potential fields 2-117484
- magnetosphere, resonance oscills. of mag. lines of force rel. to micropulsations 2-112229
- magnetosphere, suprarural region ion propag. and interactions along field lines 2-73788
- magnetosphere, transverse mag. field gradient rel. to nonadiabatic regions in dipole mag. field 2-112226
- magnetosphere clefts, geomag. field rel. to diaphragming of cosmic ray particles stream 2-112228
- magnetosphere convection, role of flux tubes, review 2-112261
- magnetosphere whistler ducts, mag. and elec. fields, models (Chinese) 2-84015
- magnetotail magnetic field intensity, effect on polar cap convection-interplanetary mag. field relation 2-73789
- magnetotelluric anomaly of elec. cond. inhomogeneity, data anal. method 2-78547
- magnetotelluric data interpretation, improved algorithm 2-100590
- magnetotelluric data presentation, use of Bostik transform 2-83745
- magnetotelluric field above cross sections containing high resist. screens 2-57977
- magnetotelluric impedance tensor, eigenstate formulation 2-111846
- magnetotelluric impedance tensor, random and bias errors 2-83744
- magnetotelluric observational techniques and equipment for land use 2-78870
- magnetotelluric response on vertically homogeneous Earth with cond. varying exponentially with depth 2-73430

geomagnetism continued

- magnetotelluric sounding, probable model for impedance estimation in horizontally homogeneous media 2-111848
- magnetotelluric sounding curves, distortion in regions of fault tectonics 2-117197
- Magsat field model, high latitude disturbance evaluation 2-100633
- Magsat mission 2-100699
- Magsat scalar anomalies rel. to geological and tectonic structures 2-100228
- mantle-core interface topographic coupling, mag. field effects, Earth rot. var. 2-68235
- marine EM sounding, EM wave field for three-layer geoelectric section 2-111847
- marine magnetic anomalies, mag. props. of tholeiitic basalts from Gulf of California, Mexico 2-106098
- Mediterranean Sea, sea floor magnetometry survey 2-83807
- Mt. Hood Volcano, Oregon, USA, aeromagnetic survey 2-88739
- n-layer media, surface magnetotelluric field (Croatian) 2-83747
- North America, regional gravity and magnetic anomaly correlations 2-78526
- North Sea Viking Graben, discovery of granite batholith 2-68316
- nuclear spins in Earth's mag. field, obs. apparatus 2-107042
- ocean currents inducing atmos. mag. fields 2-111852
- ocean internal wave mag. induction spectra, model 2-58066
- ore bodies, determ. of parameters in complex field 2-58184
- ore prospecting, inversion problem 2-78862
- NW Pacific, mag. anomalies and crust magnetisation 2-100239
- SW Pacific marginal basins, geomag. anomalies and tectonics 2-100244
- Pahang, Malaysia, mag. survey of one deposits 2-100217
- Pannonian basin, crustal conducting layer and asthenosphere depth 2-106037
- West Philippine Basin, tectonic evolution 2-73532
- plasma confinement by geomag. field, mapping from obs. of near-Earth UV environment 2-117513
- Pliocene field intensity from Bulgarian basalts 2-105920
- polar magnetic perturbations, Magsat obs. of transverse and parallel components 2-100634
- pole strength from Magsat and magnetic determ. of core radius 2-100223
- precipitating electrons flux distrib., effects of geomag. field 2-83988
- proton magnetometer precession signal processing, channel optimisation 2-112165
- quadrupole parameters, calc. by direct analytic method 2-68249
- Queen Charlotte Islands, EM induction, analogue model 2-78546
- reduction of 3-D geomag. and gravity data to a plane from an arbitrary surface (Chinese) 2-68498
- regional strikes determination from magnetotelluric impedance tensor and tipper 2-100579
- reversals of geomag. field 2-105921
- E Russia, mag. anomalies and crust magnetisation 2-100239
- satellite mapping technique for anomalous crust fields 2-100582
- satellite remote sensing of Earth magnetic field 2-73731
- scalar magnetic anomaly map from Magsat data 2-100226
- Scotland, regional induction 3-dimens. thin sheet model 2-100247
- sea-floor spreading mag. lineations, model of pattern quality 2-88737
- secular variation of paleoefield and current loop model 2-117192
- secular variations in geomagnetic dipole, anal. for past 50000 years 2-111858
- seismic waves at seafloor inducing EM fields 2-100313
- seismomagnetic effect, numerical fault model 2-100319
- self-exciting dynamo, generalised Cowling theorem 2-76034
- solar eclipse effects over China, analysis of five events 2-100248
- spherical harmonic anal. in presence of high harmonics 2-68261
- spherical harmonic expansions, truncation level sensitivity 2-100222
- spherical harmonic model to degree and order 23, power spectrum 2-100221
- spherical harmonic representations of geomag. field, effect of mag. perturbations produced by field-aligned current systems 2-100632
- Stormer's problem, variational eqns. (French) 2-75501
- survey from POGO and MAGSAT, correl. with airborne data, effects of gravity field uncertainties 2-73437
- Taupo Volcanic Zone, New Zealand, geophys. study 2-100342
- tectonomagnetism, implications of relation between geomag. vars. and hydrologic regime in Garm polygon 2-73481
- terrain correction method for gravity and mag. survey data 2-117186
- thermal current role in magnetic fields 2-73436
- total intensity of geomagnetic field, estimates of accuracy of various field approximations 2-111851
- transient EM fields, asymptotic solns. 2-73425
- transient EM method, calcs. using Gaver-Stehfest inverse Laplace transform method 2-73426
- two dimensional magnetic structures, interpretation procedures using Hilbert transforms 2-78865
- two-dimensional problems, direct, soln. 2-105891
- United States, crust mag. anomalies, MAGSAT data 2-100582
- United States, large-scale mag. anomaly map 2-100236
- United States, regional mag. anomalies 2-100232
- vector magnetic anomaly map from Magsat data 2-100227
- VLF EM response of perfectly conducting half-plane in layered half-space 2-105907
- voltage fluctuations induced in transatlantic cable 2-100242
- wave number domain anal. of anomalous fields due to subsurface struct. 2-100200
- Wilkes fracture zone, bathymetry and geomag. leading to struct. and tectonic implications 2-58018

geometrical optics

- aperture and far-field distributions expressed by the Debye integral representation of focused fields 2-102711
- aplanatism, higher order 2-75535
- applied optics, conf., Rochester, NY, USA (May 1982) 2-112647
- automatic ray-surface intersection method 2-90800
- blackbody radiation, ellipsoid paradox, geometric optical resolution 2-107284
- Bragg optics of a logarithmic spiral surface 2-76234
- broadened penumbra caustics 2-102722
- caustic surface tangent ray density formula 2-114181
- caustics from reflected light rays for dynamic problems of running cracks 2-103123
- characteristic function determination, order doubling 2-102713
- coherent approach to optical engineering 2-108993

geometrical optics continued

- Czerny-Turner grating monochromator, slit width choice 2-55310
 diffraction gratings, ray tracing, sign convention on order numbers for computer program 2-55314
 Dirichlet problem, geometrical optics approx. convergence of first term 2-96833
 distributed index expression by way of power series expansion 2-75523
 encircled energy for systems with centrally obscured circular pupils 2-81049
 energy losses in illumination of distant aperture of different shape 2-108785
 extinction by aerosol clouds of nonspherical particles 2-114189
 far-field caustics, law of reflection, catastrophe theory 2-65153
 fibre helical rays, generalised ray tracing 2-70495
 fibre location determination in silicone coatings, light scatt. model 2-65362
 fibres, graded-index, circularly polarised modal skew rays 2-109057
 finite-size image isochronism 2-102738
 first-order optics, canonical operator representation, lossless systems 2-60009
 flow optical probe for high-temp. local void fraction determ., 2D ray tracing simulation 2-55676
 focal spot dimensions of quasiparallel ray bundles 2-102717
 Gaussian beam, three-dimens., incident on Kirchhoff half-screen, boundary-diff. wave asymptotic representation 2-59994
 Gaussian beams, summation for high freq. wave field calc. 2-55066
 Gaussian brackets and Gaussian consts. 2-102714
 Gaussian laser beam, focal shift and effective Fresnel number concept 2-86018
 glass plate, circular loaded, effect on parallel beam struct. 2-75662
 graded-index fibre refr. index profile optimisation 2-75685
 graded-index media, anamorphic, ray tracing 2-75524
 graded-index media, ray tracing 2-60020
 graded-index multimode fibres, measured and predicted bandwidth comparison 2-75706
 gradient index optics, conf., Honolulu, HI, USA (May 1981) 2-58521
 holographic imaging systems two- and three-element, chromatic connection 2-70519
 holographic systems, vector ray tracing computer anal., comment and reply 2-60036
 image assessment methods, introductory survey 2-114199
 laser laboratory, geometrical optical concepts 2-108895
 laser resonators with reflecting axicons, wavefront aberrations 2-75604
 lateral EM wave propag. along flat boundaries between dielec. media, penumbra caustics 2-85871
 lenses, modular optical design, book 2-89470
 light transmission optics, book 2-112672
 linear system, optical pulse propag., pulse area 2-70501
 media with nonhomogeneous indices of refr., ray tracing anal. 2-114182
 mirror and reflective prism optical system, computer calc. of vector triad 2-109001
 moiré topography projection type, fringe formula 2-96824
 MTF calculation with HP-85, HP-9845 computers 2-114200
 Nijboer expression calc. using wave and geometric-optic aberrations (*German*) 2-90822
 non-imaging transformers, ideal, new class 2-108996
 nonadiabatic scatt. problems, generalisation of geometric optical series approach 2-69038
 nonperfect crystals, curved X-ray trajectory determ., dynamical theory 2-103558
 open resonators, diff. losses, geometric approach 2-55219
 paraxial ray calc. for image glare coeff. determ. 2-90811
 Pechan prism designed to transmit a conical ray bundle, construction calc. 2-70655
 phase dielectric gratings, flash effect, diff. efficiency calc. 2-109030
 planar optical waveguide lens design 2-86069
 polygon image formation by refr. optics, EM diff. theory 2-55082
 quartz tube, inside to outside dia. ratio meas. technique using forward scatt. light field (*Chinese*) 2-63970
 ray tracing in gradient-index media 2-90797
 reflection from randomly orientated convex particles with rough surfaces, geometric optics calc. 2-80900
 reflectors and immersion lenses for diffuse radiation detectors 2-60210
 selfoc-rod lenses, chromatic aberration anal. (*Chinese*) 2-102727
 simple medium, rot. motion, vortex, EM radiation, geometric optic formulation 2-109336
 single-mode fibre components, coupling efficiency of optics 2-102928
 sky input horn for a far-infrared interferometer 2-75655
 speckle patterns of weak diffusers, off-axis aberration effect 2-55070
 spherical primary mirror with aspheric corrector plates located near focus, optimum soln. 2-65332
 spot radii, RMS, evaluation by ray tracing 2-65159
 statistical ray opt. 2-90796
 telescope, ground, phase detector wave-front sensing and correction, different wavelength effects 2-78837
 toric surface, common relations for skew ray calc. 2-70493
 toric surface coaxial optical system, ray array calc. (*Spanish*) 2-85887
 trajectory elongation on paths with localised refr. index inhomogeneities of air 2-106277
 turbulence-meter signals, statistical characts., linear approx. 2-114193
 two-beam self-diffraction, coupled-wave theory 2-80912
 unstable resonator with aspherical mirrors 2-108995
 wave transmission in a dioptr. microlocal parametric definition (*French*) 2-79375
 wave transmission problem, microlocal parametrics in elliptic and mixed regions (*French*) 2-79376
 waveguide diffraction gratings, specially shaped, optical props. 2-65343
 zoom lens with built-in range extender, paraxial anal., modular construction 2-89840
 zoom lenses, four-component, mech. compensated, paraxial anal. 2-89834
 Nd:YAG laser cavity, ray tracing program, flashlamp pumping uniformity rel. to component damage 2-55215

geometry

see also space time configurations

- classical dissipative systems, vector fields generating invariants 2-112692
 coagulation-fragmentation equation, geometric interpretation 2-63812
 differential geometry, fiber bundles and physical theories 2-69332
 geodetic data transformations, adjustments in geometry and gravity space (*German*) 2-68238

geometry continued

- geometric quantisation, rel. to discrete series unitary irreducible representations of semisimple Lie groups 2-64236
 geometrodynamics in multidimensional unified theory 2-95185
 H-space with cosmological constant 2-53617
 Hamiltonian system, perturbation theory in noncanonical coordinates 2-74203
 Lie admissible algebras, geometry 2-74624
 mathematical physics principles, book 2-53445
 quantum physics structure, derivation of relativity 2-112786
 Reimann-Cartan geometry, Gauss-Bonnet type identity 2-53627
 Riemannian variation for quasi-constant curvature (*Italian*) 2-112749
 semisimple Lie groups, principal and supplementary series unitary irreducible representation, geom. quantisation 2-64237
 static monopole and geodesics 2-58997
 structure of quantum mechanics 2-112726
 super-Poincaré algebra, central charges, geom. origin 2-69369
 unified geometric theory of electromagnetic and gravitational interactions 2-101282
 valleys and fall lines on Riemannian manifold 2-74202
 Weyl geometry, length integrability, field eqns., cosmology 2-58673

geomorphology

see also topography (Earth)

- beach swash oscillations 2-58033
 beach topography (complex), sedimental transport models 2-58032
 Bocono fault (W.Venezuela), Holocene and Quaternary displacements 2-88865
 cliff damage, earthquake ground motion effects (*Japanese*) 2-94288
 craters, formation from 10 ton explosive events, slumping and ejecta sliding 2-73554
 earthquake prediction, use of abnormal strain response and deformation due to rain 2-68296
 frost penetration into ground, heat balance calc. 2-88921
 Garm region, USSR, seismic jointing, erosion patterns and Earth crust stress-strain state 2-73474
 Great Barrier Reef, seismology showing old erosional surfaces 2-58043
 inland cliffs, toppling failure at Ben Lomond, Tasmania 2-83817
 Isle of Mull, Scotland, Lateglacial and Early Flandrian Landscape changes chronology 2-73550
 Lake Agassiz, Manitoba, relict ice scour marks and late phases 2-100383
 landscape evolution, review 2-111927
 meteorite crater formation, TOODY-WONDY calcs. 2-78654
 Neoglacial Lake Alesek, SW Yukon Territory, geomorphology rel. to recent history 2-78707
 Pecos River, Texas, Holocene and present flood record from archaeological/geomorphological evidence 2-78705
 Pindos zone, Greece, landslides rel. to geology and tectonics 2-100382
 Priamur'e and Primor'e regions of far Eastern USSR, geomorphology rel. to seismic zones 2-58002
 recessional moraines beneath Lake Superior, seismic refl. study and relation to regional deglaciation 2-94405
 river channel cross-sectional asymmetry, model 2-83852
 river meander downstream migration process 2-58054
 river valley topography model 2-73595
 sand bar growth, resonant interaction with incident waves 2-62946
 snow avalanche runout zones in Colorado, USA 2-83816
 tectonic features formed through glacial action (*Russian*) 2-83819
 Virginia barrier islands shoreline irregularity and features 2-78663
 volcanic landforms of Earth and Moon, comparison 2-100778

geons see gravitons

geophones see seismometers

geophysical aspects of cosmic rays

- diurnal anisotropy of cosmic ray intensity, spectral exponent vars. on mag. quiet days 2-68578
 diurnal anisotropy of cosmic rays, spectral exponent (β) on geomag. disturbed days 2-68577
 electron lateral distribution age parameter depend. on shower size 2-68579
 energetic nuclear fragments from cosmic-ray nuclei, anomalous behaviour 2-64426
 extensive air showers, delayed energetic events 2-100683
 gamma-rays with $E > 40$ MeV, quasi-periodic vars. in upper atmosphere 2-89092
 ground level energy spectrum, 0 to 4 MeV 2-63197
 hadron cascade propagation, diagram method for kinetic eqns. soln. 2-106329
 hadron interactions at 2500 m above sea level 2-106457
 hadrons energy spectrum at sea level 2-84051
 low ionosphere variations, determ. using Forbush effects 2-100677
 low-energy particles in upper and middle atm., interaction model 2-73813
 magnetosphere interaction, diaphragming of particle stream entering magnetospheric clefts 2-112228
 magnetosphere poles, penetration by solar cosmic ray protons and α particles 2-84016
 muon horizontal flux, energy spectra measured with spark calorimeter and mag. spectrometer 2-106459
 penumbra of cosmic rays, trajectory parameterization theory 2-100678
 penumbral charact. at Cairo's latitude 2-89090
 propagation in atmosphere in light of scaling deviations 2-106447
 sea level muon spectra, zenith angles, derivation from cosmic ray spectrum 2-68582
 secondary component intensity time-depend. behaviour in mag. storm 20 August 1979 (*Russian*) 2-73807
 secondary cosmic rays in ionosphere props. of excessive radiation from Kosmos-721 data 2-112276
 secondary electrons, relative contrib. of electrons produced at different heights to albedo flux 2-112277
 solar activity influence on solar cosmic rays 2-117541
 solar protons in high-latit. magnetosphere, spectral characts. at initial anisotropic stage of propag. 2-112225
 tri-diurnal wave, seasonal variation over 1961-1971 solar cycle 2-68576
¹⁰Be, constancy of oceanic deposition rate in Mn crusts 2-111920

geophysical equipment

- see also atmospheric measuring apparatus; data loggers; geophysical prospecting; geophysical techniques; meteorological instruments; oceanographic equipment; seismometers
 airborne spectroradiometer system, appl. to high spectral resolution remote sensing 2-112157
 Argos system for data collection and location by satellite 2-112153

geophysical equipment continued

- ASP, Automated Seismic Processor for microearthquake networks 2-89013
 bore-hole strain meter for meas. of seismic waves and Earth tides (Chinese) 2-73694
 coastal zone colour scanner on Nimbus 7, radiometric calibration 2-68494
 collimated light beam propagation in layers of ice and snow 2-106161
 data acquisition, modular memory subsystems, geophys. instrumentation package 2-100574
 digital data storage on videocassette system 2-58128
 digital image processing of remotely sensed phenomena, DIBIAS system use 2-117511
 digital interactive image processing system, design and implementation of DIBIAS system 2-117510
 downhole logging, high-temp. electronic components and cct. designs 2-100605
 drag cables for marine seismic exploration, comparison of solid and kerosene filled types 2-81174
 dual spectroradiometer system for measuring spectral reflectances 2-106120
 electric sounding equipment using continuous current method (Italian) 2-88726
 explosion seismic sounding, mag. tape recording system (Chinese) 2-83752
 fission track dating using solid state nuclear track detector 2-59636
 focal plane development for terrestrial resource obs. 2-112162
 geodetic instruments checking using cathetometer 2-94533
 geoelectric analogue laboratory model used to study elec. sounding problems 2-78857
 geologic materials, laboratory meas. of ultralow permeability 2-106364
 geological samples, apparatus for meas. thermal properties at pressures to 0.2 GPa and temp. to 750K 2-84620
 glacier ice air bubble CO₂ conc. measurement technique 2-117481
 global phase-stable radiointerferometric systems 2-117600
 gyrotheodolites test rig 2-95425
 horizontal capacitance pendulum for meas. of Earth tides 2-78854
 ice pressure sensor embedded type, elastostatic anal. 2-63142
 imaging interferometer sounder for remote sensing, design considerations for programmable signal processor 2-112160
 interferometer imaging sounder for remote sensing, optical system design 2-112159
 magnetostatic variometer parameters computing, primary transducer stability assurance 2-58863
 magnetotelluric observational techniques and equipment for land use 2-78870
 mm-wave radiometric target signatures at frequencies up to 150 GHz, black body radiation meas. 2-58191
 multispectral mapper, appl. of imaging spectroscopy to Earth resources mapping 2-112158
 nuclear microprobe meas. of F conc. profile, appl. in archaeology and geology 2-100572
 nuclear spins in Earth's mag. field, obs. apparatus 2-107042
 optical tele-detection instrumentation, atmospheric effects and signal evaluation (French) 2-94524
 photogrammetric stereo restoration system, Aviolyt AC 1/Aviotab TA 2 from Wild (French) 2-68503
 piezometer system for wetland research 2-78890
 proton magnetometer precession signal processing, channel optimisation 2-112165
 proton magnetometer sensors 2-83970
 remote sensing multispectral sensor using two dimens. solid state imaging arrays, system design 2-73555
 scintillation detection units for nuclear-physical investigations in deep boreholes 2-113835
 seismic source for P, SV and SH waves in crystalline rock 2-68508
 seismic source of axially symmetric waves, model 2-58003
 seismometer arrays use 2-78584
 shear modulus measurement apparatus for mantle conditions 2-105985
 shock wave apparatus for studying minerals at high pressure and impact phenomena on planetary surfaces 2-78852
 sonic well logging equipment for study of coal mine overburdens 2-78891
 spectral photometer for remote exploration (German) 2-107380
 spectrally agile staring sensor system, design studies 2-112161
 spectrometer, portable, for Earth surface reflectance meas. at 340 to 2500 nm 2-112143
 superconducting magnetometer arrangement for kimberlite pipe prospecting 2-106370
 superconducting modulation-amplification-demodulation amplifier for weak sonic and infrasonic radio signals 2-89052
 telemetry network of Hungarian seismic stations 2-78850
 telescope, double Gaussian, satellite Earth observation for land appls. (French) 2-94521
 Thematic Mapper on Landsat-D satellite, spectral band registration overview 2-112302
 thermograph with thermistors for geodynamic observations (Rumanian) 2-117504
 tsunami recorders at Enoshima and Izu-Oshima tsunami observatories (Japanese) 2-83957
 UOSAT, magnetometer and associated electronics 2-117499
 US monitoring consolidometer for soil testing 2-94517
 Vibroseis, design of vibrator built by Conoco Inc. 2-58142
 VIBROSEIS for travel-time monitoring 2-68272
 well logging dipmeters electronic systems, high-temp. component selection 2-89055

geophysical prospecting*see also minerals*

- acoustic logging, formulation and soln. of problem for direct transverse and longit. waves 2-58185
 aeromagnetic surveying for mineral deposits in presence of surface noise 2-57968
 Albuquerque basin, Rio Grande rift, New Mexico, basin deposits thickness from gravity obs. 2-111833
 Baikelian rift deep sounding in near zone by EM field induction 2-105934
 borehole gravimeter survey, effect of dipping beds 2-73417
 borehole magnetometer method for locating magnetised prism 2-58145
 borehole radiofrequency sounding method 2-100581
 borehole rock properties from acoustic modes of propag. 2-111873
 buried magnetic dipole location from mag. field vector anal. 2-73706

geophysical prospecting continued

- buried vertical magnetic dipole field formation 2-78551
 coal, ash content determ., γ -ray backscatt. spectral method 2-58136
 coal seam ash content determination by elec. and gamma-ray logging 2-63116
 common depth point method applied to W Siberian Plate 2-88810
 conductivity variation with depth, use of geomag. field gradient anal. 2-68529
 conference on exploration geophysics at Los Angeles, USA (October 1981) 2-79271
 Crone pulse EM system, response of layered Earth 2-73429
 depth estimates from geomag. data, EULDPH, computer assisted method 2-73697
 depth of investigation constraints for gradient arrays over homogeneous isotropic half-space 2-111845
 dielectric borehole logging, appl. of EM wave propag. in fluid saturated porous rock 2-78656
 direct problem solution of gravimetry and magnetometry for certain classes of mass distrib. 2-111836
 Earth resources mapping via imaging spectroscopy, multispectral mapper concept 2-112158
 electric field induced in layered media by arbitrary source 2-68250
 electric profiling of layered Earth, direct inversion algorithm 2-58144
 electric profiling using dipole array, calc. of apparent resistivity curves 2-63117
 electric sounding by apparent resist. method, book 2-107027
 electric sounding method, inversion of resistivity data with intrinsic noise 2-63135
 electric sounding of ore bodies by Turam method 2-100218
 electromagnetic interference fringes method appl. 2-73705
 EM (VLF) sounding of buried inclined conducting half plane 2-105931
 EM prospecting, effect of EM coupling between parallel lines on uniform Earth 2-73439
 EM response of arbitrarily shaped 3-D conductor in layered media 2-68251
 EM sounding for subsurfaces struct., inverse problem 2-105903
 EM sounding of buried disc struct., theory 2-78549
 EM sounding of ground using circular loop, transient response 2-58154
 European Association of Exploration Geophysicists, 44th meeting, Cannes, France, (1982 June 8 to 11) 2-89465
 Galeota basin near Trinidad, field appraisal using three dimens. seismic surveys 2-78563
 gamma-ray spectra airborne surveying 2-89017
 Gani, India, pulsed EM anomalies over conductors 2-68493
 geoelectrical cavity prospecting, boundary integral approach 2-58137
 geoelectrical sounding for aquifers, appl. to Gangetic alluvium of Allahabad region, India 2-111862
 geological mapping and exploration, appl. of spectroscopic remote sensing 2-112156
 geomagnetic anomaly due to 2-D arbitrary anisotropic object (including demagnetization) 2-62886
 geomagnetic sounding, determ. of parameters of magnetised objects in complex field 2-58184
 geothermal sounding, comparison of methods of estimating static formation temperature from well logs 2-100326
 gravity and geomag. anomalous field over buried struct., spectral characts. 2-63115
 gravity anomalies interpretation, use of multipole expansion 2-83958
 gravity anomaly interpretation (equivalence in inverse problem) 2-62882
 gravity anomaly inverse problem, numerical solution 2-58147
 gravity due to homogeneous revolutional compartments, in Gaussian divergence approach 2-83736
 gravity survey prospecting method for hydrocarbon contact surface 2-117485
 Gulf of Cadiz, gas discovery and sedimentology, use of seismic refl. 2-68507
 Gulf of Thailand, gas, field devel. with three dimens. seismic methods 2-78562
 homogeneous geological objects, location, use of gravity anomalies 2-58187
 horizontal loop EM measurements, interpretation using permeable sphere model 2-105911
 hydrothermal system, above resist. pattern determ. using controlled source audiomagnetotellurics 2-73698
 induced polarization method for ore prospecting (German) 2-106345
 induction logging, high order geometrical factors (Chinese) 2-105902
 induction logging of inclined anisotropic beds 2-57976
 induction transducer, remote control and calibration of receive-amplifying channel (Russian) 2-100595
 inverse geophysical problem, heuristic algorithm soln. 2-100573
 isoparametric well logging, high freq. induction, vertical characts. 2-100603
 Karnataka, India, airborne EM signatures of different conductor groups, statistical anal. 2-83746
 kimberlite pipe occurrence rel. to geomag. anomalies at Panna, India 2-62884
 kimberlite pipe prospecting using superconductor magnetometry 2-106370
 magnetic field produced by rectangular loop source of current over two layered Earth 2-86242
 magnetic ore prospecting, inversion problem 2-78862
 magnetotelluric field above cross sections containing high resist. screens 2-57977
 magnetotelluric impedance tensor, random and bias errors 2-83744
 magnetotelluric response on vertically homogeneous Earth with cond. varying exponentially with depth 2-73430
 magnetotelluric sounding curves, distortion in regions of fault tectonics 2-117197
 magnetotelluric sounding method for deep fracture studies 2-117486
 Mailaram copper mines, Andhra Pradesh, India, subsurface gravity meas. and density mapping 2-105886
 Massif Central, France, spatial remote sensing and mining research (French) 2-68310
 mineral deposit recognition, appl. of artificial intelligence program 2-117501
 mineral exploration, appl. of high spectral resolution airborne spectrometry 2-112157
 minerals, U-bearing veins and inclusion, U-content calc. 2-68523
 modelling of EM systems, local inhomogeneities detection at sea (Russian) 2-100594
 oil and gas prospecting by seismic refl. method, review 2-105978

geophysical prospecting continued

- oil exploration, appl. of high spectral resolution airborne spectrometry 2-112157
 Pahang, Malaysia, mag. survey of one deposits 2-100217
 potential field geophysical studies, harmonic anal., reconciliation of discrete and integral transforms 2-78655
 Raniganj Coalfield, India, coal seam anal., use of elec. resist. methods 2-68243
 reduction of 3-D geomag. and gravity data to a plane from an arbitrary surface (*Chinese*) 2-68498
 reflection seismogram deconvolution, stacking and migration techniques 2-63144
 reflection seismology for oil and gas exploration, appl. of state variable technology 2-117506
 remote sensing from Landsat-D satellite, spectral band registration by Thematic Mapper 2-112302
 resistivity logging, fundamental problem integral transform soln. 2-100212
 resistivity sounding, bipole-dipole field difference technique 2-100580
 SEG 35th Midwestern meeting (Oklahoma City, March 1982) 2-101114
 seismic data processing algorithms with rapid convergence 2-58143
 seismic exploration, model of seismic source of axially symmetric waves 2-58003
 seismic exploration, parameterisation of model of seismic medium containing pinchout strata and adjoining boundaries 2-58004
 seismic exploration systems vertical resolving power quantification 2-111871
 seismic migration methods using wave field extrapolation techniques 2-57985
 seismic multiwave exploration, dev. of transverse wave method 2-58186
 seismic profiling methods and applications, conf., Dec. 1980, Trieste, Italy 2-101111
 seismic reflection prospecting computing 2-58193
 seismic reflection prospecting technique for Rub Al-Khali desert 2-112164
 seismic reflection sounding for absorpt. and Q factor props. (*Russian*) 2-105965
 seismic reflection sounding method for thin layered media (*Russian*) 2-105964
 seismic reflection sounding using both S- and P-waves 2-88808
 seismic refraction method theory for vertical and steep boundaries (*Russian*) 2-105966
 seismic refraction profiling with low-vel. zone refl. in shadows 2-117231
 seismic shear waves, potential in prospecting 2-105952
 seismic sounding, computed waveforms in transversely isotropic media 2-88776
 seismic sounding, dip-moveout and reflector point dispersal 2-100296
 seismic sounding, encoded sweep technique for Vibroseis 2-89011
 seismic sounding, frequency domain mapping approximation of moveout filters with appls. 2-100295
 seismic sounding, interpretative lessons from three-dimensional seismic modelling 2-88777
 seismic sounding, inversion of normal incidence seismograms 2-88775
 seismic sounding, possibilities and limitations of phase unwrapping 2-100294
 seismic sounding, time-to-depth migration using wavefront curvature 2-100293
 seismic source wavelet deconvolution within Backus Gilbert inverse theory 2-111870
 seismology, system for automatic testing of PROGRESS digital stations (*Russian*) 2-94535
 NW Siberia oil and gas stratigraphic traps, seismic refl. prospecting 2-78586
 Siberian Platform, seismic refl. sounding method for oil deposits 2-88809
 sounding data interpretation, method of stable localisation of features of potential fields 2-117484
 three dimensional buried conductivity anomaly, response of perturbation and induction arrows 2-73427
 transient EM fields, asymptotic solns. 2-73425
 transient EM method, calcs. using Gaver-Stehfest inverse Laplace transform method 2-73426
 U exploration, α -track technique principles 2-68525
 uranium ores prospecting, extraction and prospecting (*French*) 2-58140
 USSR, mineral resource exploration programme (*Russian*) 2-73509
 Vibroseis, design of vibrator built by Conoco Inc. 2-58142
 wave tilt of ground wave radiowave propagation at vertical discontinuity 2-58155
 well logging by pulsed metrons, stochastic theory 2-63103
 well logging dipmeters electronic systems, high-temp. component selection 2-89055
 wireline logging of boreholes, present techniques 2-89018
 Th content in mineral ore by fission track technique 2-83976
 U deposits in United States, aerial radiometric survey obs. 2-73503
 U deposits in volcanotectonic depressions, classification scheme 2-63140
 U exploration in sandstone areas, track-etch method data interpretation 2-68526
 U ore exploration by ^{222}Rn release 2-73725

geophysical techniques

- see also *atmospheric techniques; hydrological techniques; ionospheric techniques; oceanographic techniques*
 14 MeV neutron activation anal. in geological materials (*Chinese*) 2-63108
 γ -rays multiply scattered in various media, spectra transform. 2-58175
 acoustic logging, formulation and soln. of problem for direct transverse and longit. waves 2-58185
 airborne video image processing 2-63131
 algorithm for magnetotelluric and direct current data interpretation 2-100590
 balloon atmospheric mosaic meas., phenomenology and band selection 2-117477
 basaltic rocks, weathering stages determ. using thermoluminescence 2-62953
 bore-hole strain meter for meas. of seismic waves and Earth tides (*Chinese*) 2-73694
 borehole magnetometry method for locating magnetised prism 2-58145
 borehole radiofrequency sounding method 2-100581
 borehole temperature logging to very high precision 2-88834
 boundary method for elastic wave diffraction, SH wave scattering appl. 2-88764
 buried magnetic dipole location from mag. field vector anal. 2-73706

geophysical techniques continued

- cartographic 3-D display of remote sensing data (computer graphics) 2-94536
 cartography, grid cell size rel. to errors in maps produced by computerised map processing 2-111837
 cartography, user approach to map classification accuracy 2-112140
 chondritic meteorites, fission tracks and search for siderophile superheavy elements 2-68686
 coal seam ash content determination by elec. and gamma-ray logging 2-63116
 composition of geological samples, non volatile siderophile/lithophile elements determ. 2-117492
 conductivity anomaly elec. profiling, inverse problem theory 2-106368
 conductivity variation with depth, use of geomag. field gradient anal. 2-68529
 conductivity-temperature-depth systems, digitizing methods and error anal. 2-73704
 continental crust, struct. probing by seismic refl. profiling and drilling 2-100336
 crust deformation associated with seismic activity strain from geodetic geometric results 2-78859
 crust induction, meas. techniques and instruments for land and sea obs. 2-78869
 crust movement monitoring by satellite methods 2-68592
 crust strain determination from triangulation data using simultaneous reduction method 2-73423
 crust stress meas. by borehole wall fracture obs. method 2-111894
 crustal deformation measurement, comparison of tiltmeters 2-112166
 crustal heat flow, method of construction of isotherms 2-58010
 data analysis, graphical methods for investigating fit to Fisher distrib. 2-68509
 data rounding using BASIC subroutine 2-78851
 depositional sequences and lithological facies determ. from seismic section anal. (*Rumanian*) 2-117503
 depth estimates from geomag. data, EULDPH, computer assisted method 2-73697
 digital image intensity surfaces, topographic classification 2-117512
 digital image pattern recognition appl., Defense Mapping Agency overview 2-94518
 dip determinations in photogeology 2-89049
 Doppler laser network longitude orientation determ. (*Chinese*) 2-112151
 Earth resources mapping via imaging spectroscopy, multispectral mapper concept 2-112158
 Earth surface reflectance meas. at 340 to 2500 nm, portable field spectrometer 2-112143
 earthquake analysis, statistical model for prediction of quasi-realistic strong ground motion 2-100316
 earthquake fault solns., by single station data method 2-100262
 earthquake focal mechanism computation from local SV and P wave data 2-68500
 earthquake hypocentre location of local earthquakes, effect of crack anisotropy 2-68288
 earthquake local magnitude estimation using strong motion data 2-100276
 earthquake magnitude scales and magnitude measurement, review 2-62895
 earthquake prediction, anal. of precursors of Shikotan earthquake, Kuril Islands, (1978 December 7) 2-73480
 earthquake prediction, anal. of premonitory pattern of earthquakes in N Greece 2-62910
 earthquake prediction, anomalous land uplift and aseismic creep before 1976 Tangshan earthquake 2-94307
 earthquake prediction, current research, book 2-94919
 earthquake prediction, expl. studies and finite element anal. of seismicity of N China Plain 2-94305
 earthquake prediction, implications of long-term changes in teleseismic p-wave residuals at New Zealand stations 2-94302
 earthquake prediction, implications of relation between geomag. vars. and hydrologic regime in Garm polygon 2-73481
 earthquake prediction, long-term, in Hellenic trench-arc system, forecast of seismic hazard 2-94309
 earthquake prediction, modelling of interactions between Earth tides and earthquakes rel. to aftershock sequence in Pyrenees 2-88752
 earthquake prediction, regularity patterns and seismic potential zones in Mediterranean region 2-94300
 earthquake prediction, workshop, Canberra, Australia (1979 December 13 to 14) 2-89442
 earthquake prediction, worldwide text of three long-term premonitory seismicity patterns 2-94303
 earthquake prediction in N China, implications of occurrence of major earthquakes in groups 2-94304
 earthquake prediction method based on ocean crust level changes 2-88802
 earthquake research using Popsat geodetic satellite 2-117482
 earthquake strong motion signal processing 2-89016
 earthquakes prediction, appl. of foreshock sequence of Haicheng, China, earthquake and earthquake swarm 2-94306
 earthquakes strong ground motions, statistical characterisation using power spectral density function 2-88757
 electric profiling of layered Earth, direct inversion algorithm 2-58144
 electric profiling using dipole array, calc. of apparent resistivity curves 2-63117
 electric sounding by apparent resist. method, book 2-107027
 electric sounding equipment using continuous current method (*Italian*) 2-88726
 electric sounding method, inversion of resistivity data with intrinsic noise 2-63135
 electric sounding of ore bodies by Turam method 2-100218
 electrical cond. of crust estimated by obs. of geomag. daily variat ions 2-68519
 electrical impedance estimation in horizontally homogeneous media, probable model 2-111848
 electrical sounding, fast automatic solution of inverse resistivity problem 2-111863
 electrical sounding, surface polarisation fields for two-dimensional bodies of infinite conductivity 2-117194
 elemental anal. using neutron-capture γ -ray spectroscopy 2-67777
 EM (VLF) sounding of buried inclined conducting half plane 2-105931
 EM induction inverse problem for crust elec. cond. struct. 2-117190
 EM induction inverse problem for elec. cond. struct. of crust 2-117189

geophysical techniques continued

- EM response of arbitrarily shaped 3-D conductor in layered media 2-68251
- EM sounding, finite-difference simulations and appl. to telluric fields in two dimensions 2-88732
- EM sounding for subsurfaces struct., inverse problem 2-105903
- EM sounding of buried disc struct., theory 2-78549
- EM sounding of ground using circular loop, transient response 2-58154
- EM sounding of one dimensional medium, inverse problem soln. method 2-106348
- EM wave sounding of subsurface struct. 2-111857
- European Association of Exploration Geophysicists, 44th meeting, Cannes, France, (1982 June 8 to 11) 2-89465
- explosion seismology, iterative technique and joint epicenter determ. technique for events in western Soviet Union 2-88749
- fast neutron analysis of geologic materials 2-57668
- field induction sounding method, multibedded geoelectric section apparent resistance determ. 2-105933
- FILE-IB aircraft flight test program [Earth observation] 2-73730
- fission track age estimation method 2-73722
- fission track dating, calibration guide 2-106340
- fission track dating, current status and problems 2-73719
- fission track dating appl. to Plio-Pleistocene 2-73723
- fission track dating problems and solns. 2-73724
- free oscillations in laterally heterogeneous body, normal modes determ. by iterative method 2-73701
- gamma-ray spectra airborne surveying 2-89017
- GDSN data, broad-band deconvolution 2-78867
- generalised nonlinear inverse problems solved by least squares criterion 2-106365
- geodesy, coordinates redundant transform. method (*German*) 2-94540
- geodesy, soln. of continuous and discrete boundary value problems (*Russian*) 2-100194
- geodetic data transformations, adjustments in geometry and gravity space (*German*) 2-68238
- geodetic inertial survey systems 2-83953
- geodetic inertial survey systems with gradiometric aiding 2-83954
- geodetic levelling rod calibration procedures 2-78855
- geodynamic parameters determ., appl. of specialised complex using three very long baseline interferometers (*Russian*) 2-100737
- geoelectric analogue laboratory model used to study elec. sounding problems 2-78857
- geoid, precise definition and implementation and related problems 2-68239
- geological features discrimination, construction of self-correcting system for geophysical data integrated interpretation 2-73689
- geological mapping and exploration, appl. of spectroscopic remote sensing 2-112156
- geological remote sensing, thermal inertia mapping 2-73728
- geomagnetic anomaly due to 2-D arbitrary anisotropic object (including demagnetization) 2-62886
- geomagnetic data lunar analysis, estimation of errors 2-105915
- geomagnetic field distortion determination, method for effects due to oceans and continents 2-73700
- geomagnetic sounding, determ. of parameters of magnetised objects in complex field 2-58184
- geopotential field (gravity and mag.) terrain correction method 2-117186
- geopotential fields, geometrical interpretation of ideal body problems 2-68234
- geothermal sounding, comparison of methods of estimating static formation temperature from well logs 2-100326
- glacier ice air bubble CO₂ conc. measurement technique 2-117481
- global remanent magnetisation of crust, detection by MAGSAT satellite 2-100240
- GPS appl. to mapping, charting and geodesy 2-78881
- gravimetric data analysis methods, appl. to Bureinsky Massif struct. 2-106041
- gravimetric direct 3-D problem solution method 2-117185
- gravimetry, direct and inverse problems, soln. methods for hyperbolic dome 2-100601
- gravitational potential of ellipsoid of revolution, use of ellipsoidal harmonic expansions series (*Japanese*) 2-83956
- gravity and geomag. anomalous field over buried struct., spectral characts. 2-63115
- gravity anomalies, cumulated, source numbers determ. methods, comparative study (*Rumanian*) 2-117502
- gravity anomalies due to horizontal slab like bodies with lateral density var., Fourier spectrum interpretation 2-111841
- gravity anomalies interpretation, appl. of equivalent mass redistribs. in inverse gravity problem 2-117182
- gravity anomalies interpretation, use of multipole expansion 2-83958
- gravity anomalies of buried discs and cylinders 2-88725
- gravity anomaly interpretation (equivalence in inverse problem) 2-62882
- gravity anomaly inverse problem, numerical solution 2-58147
- gravity sounding, anal. of gravimetric inversion problem 2-68230
- gravity sounding, soln. of direct problem of gravimetry for special classes of mass distrib. 2-117184
- gravity spherical harmonics from satellite-to-satellite ranging data 2-88714
- gravity survey prospecting method for hydrocarbon contact surface 2-117485
- ground accel. meas. using EM seismometer 2-94519
- ground motions in near field, use of accelerograms recursive filter method 2-68537
- Haskell fault model, displacement field determ. method 2-117201
- heat flow through shallow sea sediments, meas. system 2-89053
- hydrothermal system, above resist. pattern determ. using controlled source audiomagnetotellurics 2-73698
- hypocentre determ. from seismic wave obs. of explosions off Hokoku, Japan (*Japanese*) 2-94313
- image processing applied to gravity and topography 2-94520
- imaging spectroscopy, conf., Los Angeles, CA, USA (Feb. 1981) 2-106998
- induced polarity method with mag. reception, mag. field vector constituents 2-112183
- IR imaging, background spatial radiance variations obs. 2-117476
- IR pushbroom imagery acquisition and processing 2-117475
- IR technology appl., conf., San Diego, CA, USA (Aug. 1981) 2-112643
- Lageos laser range data, outliers removal/detect., appl. to observatory sites relative motion 2-100191

geophysical techniques continued

- lake sediment acoustic profiling using magnitude and phase anal. 2-112169
- LANDSAT based operational land remote sensing satellite program 2-73560
- Landsat geographic data 2-63110
- Landsat MSS and RBV imagery, geometrie. correction techniques 2-78659
- laser Raman spectroscopic anal., appl. to Mount St. Helens ash from 1980 May 18 eruption 2-100343
- levelling geokinetic networks data, processing methods 2-106344
- local EM induction, direct and inverse problems soln. methods 2-78871
- lower semi-space approximation by point masses in region with widespread magnetism 2-100338
- magnetic anomaly mapping accuracy of MAGSAT satellite 2-100231
- magnetic anomaly mapping using satellites 2-100582
- magnetic anomaly of long tubular bodies, rapid evaluation nomograms 2-105932
- magnetic ore prospecting, inversion problem, model depend. method 2-78862
- magnetic two dimensional structures, interpretation procedures using Hilbert transforms 2-78865
- magnetite in natural materials, grain size determ., use of mag. methods 2-106341
- magnetometer high-press. cell for obs. of rocks subject to large stresses 2-68518
- magnetotelluric and magneto-variational sounding of crust inhomogeneities 2-117483
- magnetotelluric anomaly of elec. cond. inhomogeneity, data anal. method 2-78547
- magnetotelluric models using improved rock elec. property data 2-88727
- magnetotelluric observational techniques and equipment for land use 2-78870
- magnetotelluric observatory observations, at Nagycenk, Hungary 2-78536
- magnetotelluric sounding curves, distortion in regions of fault tectonics 2-117197
- magnetotelluric sounding method for deep fracture studies 2-117486
- mantle properties from oceanic expansion domain hygromagmaphile elements anal. by neutron activation 2-117266
- mantle temp. determination by anal. of diamonds with garnet inclusions 2-62929
- map accuracy test reporting, user's view 2-111838
- map and drawing conversion to digital form by raster scanning 2-94499
- map construction using digital computer bicubic spline interpolation method 2-78853
- marine EM sounding, EM wave field for three-layer geoelectric section 2-111847
- meteorite, terrestrial age of estimation using thermoluminescence data 2-84100
- microwave radiometry of the Earth's surface with a cryogenic 90 GHz receiver (*German*) 2-83966
- mineral deposit recognition, appl. of artificial intelligence program 2-117501
- minerals, fusing with continuous laser for ⁴⁰Ar/³⁹Ar dating 2-63119
- Mossbauer spectroscopy, application in mineralogy, soil science, ceramics 2-53905
- neutron activation analysis on meteorite, lunar and terrestrial samples, appl. 2-57667
- oil and gas prospecting by seismic refl. method, review 2-105978
- orthophoto technique in high mountains, appl. to glacier maps and topographic mapping (*German*) 2-106123
- palaeomagnetic data analysis method, for inclination data 2-73431
- palaeomagnetism, linearity spectrum anal. technique for multi-component magnetisations 2-105913
- permafrost and annual freeze-up in Alaska studied by remote sensing 2-112171
- phase vel. estimation for microtremors (*Japanese*) 2-94314
- photogrammetry, close range, orientation problem of stereo pairs rel. to construction of models 2-111840
- photogrammetry, combination of terrestrial and aerial methods 2-78528
- photogrammetry, mensuration tests using digital images 2-111839
- pressure density measurements fitting to finite strain eqn. of state, least squares method 2-73544
- principal components selection method for which geophysical signal is greater than noise 2-106332
- prompt gamma activation of environmental and terrestrial samples 2-57669
- prospecting, appl. of electromagnetic interference fringes method 2-73705
- prospecting by wave tilt of ground wave radiowave propagation at vertical discontinuity 2-58155
- prospecting for homogeneous geological objects, stable method using gravity anomalies 2-58187
- proton magnetometer precession signal processing, channel optimisation 2-112165
- pulse problems, differential transform method 2-73696
- radar remote sensing, angle of incidence considerations 2-111926
- radar remote sensing, scatt. from randomly absorbing layers 2-58049
- radioactive mineral detection using CR-39 α -particle autoradiographs 2-68524
- radioactive waste disposal site methods for meas. of hydrologic characts. 2-78873
- radioactivity measurement, laboratory instruments and methods 2-80348
- radioactivity measurement by thermoluminescence dosimetry method 2-80349
- radionuclide and gamma-radiation detection methods 2-80405
- reconnaissance frame photography analytical techniques 2-78660
- reduction of 3-D geomag. and gravity data to a plane from an arbitrary surface (*Chinese*) 2-68498
- reflection seismology for oil and gas exploration, appl. of state variable technology 2-117506
- refraction seismology, airgun-OBS seismic refraction profiling expt. off Sanriku coast 2-117225
- regional stress tensor determ. from single phase fault populations 2-78625
- regional strikes determination from magnetotelluric impedance tensor and tipper 2-100579
- remote sensing, appl. of high spectral resolution airborne IR spectrometry 2-112157
- remote sensing, appl. to variability of surface temp. in central Californian agricultural fields 2-111928

geophysical techniques continued

- remote sensing, design considerations for programmable signal processor for imaging interferometer sounder 2-112160
- remote sensing, design studies for spectrally agile staring sensor system 2-112161
- remote sensing, obs. of California Desert Conservation Area rel. to resource inventory techniques 2-111608
- remote sensing, optical system design of interferometer imaging sounder for temp. meas. 2-112159
- remote sensing by satellite, cloud detector system to prevent recording of unusable data 2-83818
- remote sensing by thematic mapping atmos. optics effect 2-111924
- remote sensing from Landsat-D satellite, spectral band registration by Thematic Mapper 2-112302
- remote sensing image storage and retrieval by BIRP computer system 2-112139
- remote sensing multispectral and multitemporal image processing 2-58053
- remote sensing of Earth magnetic field from satellite 2-73731
- remote sensing thematic mapper design specifications 2-111925
- remote sensing, techniques for field meas. of Earth surface reflectance 2-112142
- resistivity sounding, bipole-dipole field difference technique 2-100580
- resistivity soundings with errors equivalent models determ. method 2-68244
- resonant lumped geopotential coeffs., comparison methods review 2-94509
- rock permeability meas., transient method, parametric analyses 2-58160
- rock piezomagnetic effects represented using Preisach diagram 2-106099
- rock-type discrimination remote sensing by radar 2-112170
- rocks, in-situ fracture mapping using geotomography and brine tracers 2-74798
- rocks elastic properties, anisotropy parameters determ. according to materials from nonlongitudinal obs. 2-106114
- sandstones, thermal conductivity determ. by variable state approach 2-106342
- satellite Doppler translocation technique for relative coords. between stations (*Chinese*) 2-112152
- satellite remote sensing, effect of subpixel-sized cloud on target discrimination 2-106307
- satellite remote sensing, vicarious satellite calibration in solar spectral range via calculated radiances 2-112297
- SEASAT radar altimeter obs. off Bermuda for height calibration 2-89026
- Seasat radar scatterometer, calibration by obs. of Amazon rain forest 2-58148
- SEASAT remote sensing synthetic aperture radar data reduction 2-112138
- sediment age determination method based on Th^{230} content 2-117494
- sediment Pb and Cd conc. determination by at. absorpt. spectrometry method 2-68536
- seismic, complex body wave inversion, numerical method 2-89015
- seismic 3-D raytracing 2-78866
- seismic boundary velocities used to find crystalline basement composition 2-106347
- seismic common reference point method, efficiency (*Hungarian*) 2-94534
- seismic complex waves, sampling methods 2-78566
- seismic data analysis by multichannel appraisal deconvolution method 2-73463
- seismic data processing, use of max. entropy with χ^2 constraint as stacking technique 2-73702
- seismic data processing algorithms with rapid convergence 2-58143
- seismic data processing by microearthquake networks for teleseismic P-waves (*Japanese*) 2-94510
- seismic data telemetering, collection, processing and storage system 2-106324
- seismic discrimination between earthquakes and nuclear explosions 2-117472
- seismic energy source (non-explosive) coupling to ground 2-111876
- seismic events identification and interpretation, use of surface wave polarisation anal. 2-100567
- seismic exploration, inverse kinematic problem for seismic head waves at curvilinear refracting boundary 2-105992
- seismic exploration, model of seismic source of axially symmetric waves 2-58003
- seismic exploration, parameterisation of model of seismic medium containing pinchout strata and adjoining boundaries 2-58004
- seismic local magnitude determination from near-field accelerograms (*Japanese*) 2-94542
- seismic modeling in the domain of intercept time and ray parameter 2-78579
- seismic multiwave exploration, dev. of transverse wave method 2-58186
- seismic non-stationary data analysis and prediction (*Japanese*) 2-94541
- seismic P, SV and Rayleigh waves diffraction, effect of surface topography 2-117471
- seismic P-wave first motion data sorting method 2-89014
- seismic polarisation method using earthquakes 2-112167
- seismic profile identification, parameter estimation appl. 2-117505
- seismic profiling by CDP method, traveltime curve theory 2-106002
- seismic PS converted wave recognition using polarization filtration (*Chinese*) 2-105939
- seismic refl. profiling by controlled directed reception method 2-106000
- seismic refl. sounding of layered media, determination of attenuation 2-111878
- seismic refl. sounding of marine sediments by isochrone method 2-117249
- seismic reflection, appl. to gas discovery and sedimentology, use of seismic refl. 2-68507
- seismic reflection profiling method, signal summation and amplifier arrangement 2-117495
- seismic reflection prospecting technique for Rub Al-Khali desert 2-112164
- seismic reflection records, wave field anal., decomposition approach 2-100578
- seismic reflection sounding for absorpt. and Q factor props. (*Russian*) 2-105965
- seismic reflection sounding method for thin layered media (*Russian*) 2-105964
- seismic reflection sounding of layered media, use of Marchenko inversion 2-73469
- seismic reflection sounding using both S- and P-waves 2-88808

geophysical techniques continued

- seismic refraction data inversion, wave field continuation appl. 2-58159
- seismic refraction method theory for vertical and steep boundaries (*Russian*) 2-105966
- seismic refraction profiling, filter theory for normalisation of seismogram data 2-88789
- seismic refraction profiling with low-vel. zone refl. in shadows 2-117231
- seismic remote sensing, topological approach 2-117229
- seismic resolution improvement 2-83975
- seismic sounding, computed waveforms in transversely isotropic media 2-88776
- seismic sounding, dip-moveout and reflector point dispersal 2-100296
- seismic sounding, encoded sweep technique for Vibroseis 2-89011
- seismic sounding, frequency domain mapping approximation of moveout filters with appls. 2-100295
- seismic sounding, inversion of normal incidence seismograms 2-88775
- seismic sounding, possibilities and limitations of phase unwrapping 2-100294
- seismic sounding, time-to-depth migration using wavefront curvature 2-100293
- seismic sounding by multiple common depth point method 2-106369
- seismic sounding for crack distrib. in rocks 2-100265
- seismic sounding using acoustic source, max. likelihood stacking method 2-57993
- seismic sources identification, earthquake or underground explosion, conference, Oslo, Norway (1980 September 8 to 18) 2-89460
- seismic synthesis, Rayleigh wave seismograms from multi-dimensional simulations of underground explosions 2-88747
- seismic toroidal modes of simple laterally heterogeneous sphere 2-117470
- seismic velocities information anal. with information retrieval system 2-106367
- seismic wave propagation, method of Richardson extrapolation in ray problem 2-73476
- seismic wave velocities calculation method in gas saturated periodic microstructures 2-100604
- seismic waves in coal seams, recompressing model and technique 2-111875
- seismic waves meas. of intersection phase and group vels. and Q-factor using Wiener filtering 2-88748
- seismograms interpretation, FORTRAN program 2-100306
- seismograph stations in Hungary, sensitivity and detection thresholds 2-78858
- seismological observatory site at Gharian, Egypt, seismic noise obs. 2-62893
- seismology, appl. of improved version of Alsop's method to calc. of Rayleigh wave transmission through vertical contact 2-117237
- seismology, Cagniard de-Hoop method for Haskell type vertical fault 2-105956
- seismology, optimal estimation of scalar seismic moment 2-105958
- seismology common depth point, method using high-speed algorithm 2-105995
- SENZ method accuracy during survey of Siberian platform struct. 2-100602
- sinusoidal curves fitting to partially exposed/eroded fold structures, method 2-112185
- snow, remote sensing by microwave radiometry 2-58152
- snow cover classification by microwave radiometry method 2-58153
- snow cover global distrib. measurement by satellite radiometry 2-58189
- snow-covered Earth surfaces, microwave emission characts., satellite radiometry 2-58190
- soil moisture content meas. by microwave radiometry method 2-58149
- soil moisture determination, use of C-band radar 2-106122
- soil moisture determination by microwave radiometry (permittivity formulae) 2-58150
- soil moisture remote sensing by radar, land surface roughness effects 2-58151
- soil surveys, digital overlay of cartographic information on Landsat MSS data 2-112141
- sonic well logging equipment for study of coal mine overburdens 2-78891
- sounding data interpretation, method of stable localisation of features of potential fields 2-117484
- SPOT remote sensing satellite system, mission objectives and appl. 2-73561
- strain determination from deformed ellipsoids, initial fabric role 2-83977
- subduction zone calibration 2-68307
- subsurface fracture zone properties, use of vertical seismic profiling 2-63118
- superconducting magnetometer arrangement for kimberlite pipe prospecting 2-106370
- superheavy elements in monazite, X-ray spectrochem. anal. 2-83436
- surface albedo determ. from satellite imagery 2-63120
- surface temp. in numerical models, EFR-method 2-100576
- synthetic aperture radar imagery, method for pixel location 2-111923
- telemetry network of Hungarian seismic stations 2-78850
- teleseismic relocation of thrust zone events 2-68307
- terrain classification using Landsat multitemp. imagery method 2-78661
- thermal emissivity measurement using imaging radiometer 2-94538
- thermal inertia meter for meas. of rock and soil props. 2-94537
- three-dimensional seismic modelling, interpretative lessons 2-88777
- time series analysis of sequential paleomag. data 2-78542
- U exploration, α -track technique principles 2-68525
- vegetation cover remote sensing by microwave radiometry, peculiarities 2-58045
- vertical gravity gradient method, field results and interpretation in British Columbia, Canada 2-100195
- vertical seismic profiles, use in seismic exploration 2-100292
- vertical seismic profiling methods, numerical simulations 2-100591
- very long baseline interferometry (*Japanese*) 2-89166
- volcanic hazard maps, computer-assisted mapping of pyroclastic surges 2-117271
- wave fields for multidimensional media taking absorpt. and sphericity into account 2-78888
- well logging by pulsed neutrons, stochastic theory 2-63103
- wireline logging of boreholes, present techniques 2-89018
- X-ray fluorescence for Sr and Rb determ. in magmatic rocks and sediments 2-83972
- $^{39}\text{Ar}/^{40}\text{Ar}$ laser probe dating of terrestrial rocks 2-89020
- B mapping in minerals and rocks using CR-39 polycarbonate plastic detector 2-68522
- ^{10}Be dating, evidence for constancy of oceanic ^{10}Be deposition rate from Mn crusts 2-111920

geophysical techniques continued

- $\text{CaCO}_3^{210}\text{Po}$, radiation effects, EPR obs., rel. to paleodose determ. 2-78652
 Rn transport in Earth, U exploration and earthquake prediction 2-73725
 Sm and Nd isotope ratio determination method using laboratory standard solutions 2-63253
 Sm/Nd ratio determination method using laboratory standard solutions 2-63253
 Th content in mineral ore by fission track technique 2-83976
 Th-U fission radiography for geological materials 2-112154
 U, determination in rocks by γ -spectrometry 2-54504
 U exploration in sandstone areas, track-etch method data interpretation 2-68526
 U rocks, simultaneous U, Ra determ. using scintillation detectors (Chinese) 2-63109

geophysics

- see also Earth; erosion; geochronology; geodesy; geology; geomagnetism; geophysical aspects of cosmic rays; geophysical techniques; hydrology; meteorology; oceanography; radiation belts; rocks; seismology; solar-terrestrial relationships; space research; terrestrial atmosphere; time and latitude; upper atmosphere*
 advances, vol.23 (1981), book 2-84391
 Alfred Wegener (1880-1930), biographical account on 100th birthday and 50th anniversary of death 2-63789
 American Geophysical Union 1982 spring meeting at Philadelphia, United States (May to June 1982) 2-89436
 annual review of Earth and planetary sciences, 1982, book 2-89473
 cometary impacts on Earth, geophysical and biological effects 2-101149
 conference, April 1982, Cardiff, Wales 2-63736
 conference on Earth geophysics and geochemistry in London, Canada (September 1979) 2-101117
 data series analysis, significance tests (German) 2-106343
 Earth sciences, encyclopedia 2-84393
 episodic geophysical history, theory of galactic spiral arms, comets and terrestrial catastrophism 2-79039
 European Association of Exploration Geophysicists, 44th meeting, Cannes, France, (1982 June 8 to 11) 2-89465
 Hellenic arc and trench, international symposium, Athens, Greece, (1981 April 8 to 10) 2-89443
 linear filter coefficients accuracy determined by iteration of least squares method 2-78567
 Lithosphere program (Russian) 2-83948
 marine science related activities, lists of annotated acronyms and abbreviations (book) 2-74178
 potential field geophysical studies, harmonic anal., reconciliation of discrete and integral transforms 2-78655
 rotating fluids 2-94498
 thermal convection in slowly rotating, weakly magnetic fluid shells 2-103170

geophysics computing

- see also computerised instrumentation*
 air pollution meas., online DP techniques (Italian) 2-67905
 air pollution monitoring, dilute NO concentration determ. using tunable laser 2-93971
 algorithm for magnetotelluric and direct current data interpretation 2-100590
 ASP, Automated Seismic Processor for microearthquake networks 2-89013
 atmosphere aerosol optical characterisation using computer programs 2-73686
 atmospheric temperature determ. using satellite data and interactive computer graphics 2-63106
 atmospheric temperature forecasting in Northern Hemisphere, use of automatic group analogue scheme 2-100598
 automatic processing system of meteorological radar data in real time using the ASVT-M-3000 computer (Russian) 2-58174
 bed load grain size grain size distribution model in FORTRAN IV 2-117366
 BUNDLS, FORTRAN IV program for Schreinemaker bundles 2-117304
 Canada's National Gravity Data Base, organisation and management 2-106322
 cartographic 3-D display of remote sensing data (computer graphics) 2-94536
 cartography, grid cell size rel. to errors in maps produced by computerised map processing 2-111837
 continental drift film-show made using computer graphic technique 2-68331
 continents movements, computer graphics simulation 2-73717
 data acquisition, modular memory subsystems, geophys. instrumentation package 2-100574
 data rounding using BASIC subroutine 2-78851
 Dynamic Explorer spacecraft ground operations systems 2-58225
 Dynamics Explorer Science Data Processing System 2-58130
 Earth rotation parameters determ., astrometric system 2-58261
 earth sciences computer appls. conf. Syracuse, NJ, USA (Oct. 1979) 2-58192
 earthquake focal mechanism determ. using P-wave first motion, computer program 2-78561
 electrical sounding, fast automatic solution of inverse resistivity problem 2-111863
 environmental science methods book 2-101150
 FILE-IB aircraft flight test program [Earth observation] 2-73730
 geodesy, automatically recorded meas. data, interactive processing system (German) 2-89054
 geodesy data, Helmer blocking, top-down strategy 2-57957
 geodetic network adjustment algorithms for large systems 2-57959
 geological features discrimination, construction of self-correcting system for geophysical data integrated interpretation 2-73689
 geomagnetic sounding, determ. of parameters of magnetised objects in complex field 2-58184
 geotectonic network and photogrammetric block adjustment, reordering algorithm 2-57958
 graphics, colour display appls. 2-83974
 gravimetric data management at Bureau Gravimetrique International (BGI), software 2-106321
 HF sky-wave field strengths and max. usable freqs., calc. using programmable pocket calculator (German) 2-78912
 magnetotelluric techniques for land, use of microprocessors/microcomputers 2-78870

geophysics computing continued

- map and drawing conversion to digital form by raster scanning 2-94499
 map construction using digital computer bicubic spline interpolation method 2-78853
 meteorological satellites, on-line processing of high resolu. imagery 2-117467
 meteorological shipboard automated instrument system and computing subroutines (Russian) 2-63129
 Meteosat data integrated processing, cloud-top height maps 2-78750
 Meteosat-1 imagery, navigation and deformation modelling 2-68506
 mineral deposit recognition, appl. of artificial intelligence program 2-117501
 mm waves experiments, data acquisition and processing system (Japanese) 2-58129
 MSONRM, FORTRAN program for mesonorm calc. in whole-rock analyses 2-117303
 multichannel seismic data processing software 2-100593
 open channel beds, prediction program in FORTRAN IV 2-114899
 plate tectonic evolution of NE.Pacific, computer graphic pseudomovie 2-68327
 programming methodology based on data abstraction 2-106323
 propagating rift theory, illustration using computer graphics 2-62941
 remote sensing, design considerations for programmable signal processor for imaging interferometer sounder 2-112160
 remote sensing image storage and retrieval by BIRP computer system 2-112139
 river valley topography model 2-73595
 satellite climatology, ICL distributed array processor appls. 2-100575
 seismic data automatic processing in Japan Meteorological Agency (Japanese) 2-94282
 seismic data deconvolution, algorithm for ICL DAP 2-100283
 seismic data telemetering and processing system at Japan Meteorological Agency (Japanese) 2-94283
 seismic diffraction migration, calc. on ICL distributed array processor 2-100282
 seismic reflected/refracted waves, kinematic interpretation programs, use of optimisation method 2-100321
 seismic reflection prospecting computing 2-58193
 seismic velocities information anal. with information retrieval system 2-106367
 seismic wave arrival times, automatic meas. and appl. to on-line processing system (Japanese) 2-83756
 seismic wave-equation migration in the presence of lateral velocity variations, algorithm 2-105945
 seismograms interpretation using, operator-machine interactive method, computer system development 2-100306
 tides in Gulf of Carpentaria, numerical simulation 2-83847
 volcanic hazard maps, computer-assisted mapping of pyroclastic surges 2-117271
 water resources, stochastic modelling, pipeline processing on AP120B 2-111971
 WAVES: a FORTRAN IV program on the stochastic simulation of waves in the coastal environment 2-117310
 weather forecasting, computer systems in use 2-94433
 weather forecasting, model optimisation for CRAY-1 and CYBER 205 computers 2-100435
 weather forecasting data collection and processing, limitations and future trends 2-73625
 weather forecasting using supercomputers 2-73618
 wind scatterometer sensor for vector meas. over ocean, computer performance simulation program 2-117509
 YETI, hydrological model for snowmelt simulation 2-73609
- geopotential** *see geodesy*
- geothermal power**
 alternative energy exploitation, Hawaii 2-67818
 aquifer thermal energy storage system 2-116854
 Austrian national economy, significance of unconventional energy sources (German) 2-73045
 classification of geothermal source types and location of geothermal stations (Dutch) 2-78606
 conceptual design of a high temperature hot water central heating system 2-116779
 convection in bounded geothermal reservoir, during hot-water reinjection 2-83451
 developments in Pacific Coast Region of USA 2-105534
 economic viability in comparison to other energy sources (Dutch) 2-105532
 energy extraction from magma bodies 2-73520
 energy sources, new and renewable, information sources, book 2-58564
 federal geothermal drilling and completion technology development programme plan 2-93869
 future availability and economics prospects review (French) 2-57673
 future potential and state-of-the-art 2-78183
 geopressured-geothermal reservoir production modelling requirements 2-83454
 heat pumps application and utilisation aspects in Rumania (Rumanian) 2-78236
 heat pumps utilising low temp. secondary energy resources or geothermal energy for space heating (Rumanian) 2-78238
 Iceland, low-temp. geothermal energy 2-83452
 Kenya's Olkaria power station with installed capacity up to 45 MW 2-67819
 liquid desiccant system optimisation for low grade solar/geothermal dehumidification and cooling 2-88406
 magma Energy Research Project, USA 2-93871
 market share in western United States calc. 2-67820
 molten rocks, thermal energy extraction future energy resource 2-93870
 optical transition from oil to alternative fuels 2-73047
 power stations, overview of various types, economics 2-105533
 present state and future trends 2-73064
 regenerative energy sources—potential and limits (German) 2-73046
 renewable sources of energy for electricity 2-88400
 reservoir, penny-shaped, in Earth's crust, stability 2-116777
 reservoir, rock-brine interactions 2-67821
 scale deposition, effects of Magnus force 2-83455
 seawater desalination plant using low grade geothermal heat 2-93868
 single family house heating methods intermediate study results (Finnish) 2-93936
 state-of-the-art of recovery process models 2-83453
 UK geothermal potential preliminary assessment, report 2-62457

geothermal power stations

- conferences on geothermal power stations, San Diego, CA, USA (June 1981) 2-58551
 developments in Pacific Coast Region of USA 2-105534
 earth heat—the energy underfoot 2-78184
 future potential and state-of-the-art 2-78183
 Kenya's Olkaria power station with installed capacity up to 45 MW 2-67819
 management model for extraction from geothermal field 2-116778
 materials research for highly corrosive environment 2-116776
 overview of various types, economics 2-105533
²²²Rn, releases from the Geysers geothermal power plant 2-57750

germanate glasses

- formation compositions, two-phase glass separation 2-91810
 near IR absorption of H_2O - GeO_2 group vibr. bands 2-99125
 silicogermanate gradient glasses, ion exchange diffusion from molten salts, refractive index change 2-111487
 single-component, struct. in glass transition region, temp. depend. 2-103656
 viscosity, temp. depend. at const. struct. temp. 2-104047
 B_2O_3 - Fe_2O_3 - PbO - GeO_2 glass, Fe valence states, comp. dependence, Mossbauer and mag. study 2-104317
 BaGe_2O_7 - Al_2O_3 - CaF_2 - MgF_2 - Eu^{3+} , spectral-luminescence, IR and Raman study 2-72553
 Cd-Ge-As glass system, aligned crystallisation, heat transport and interface kinetics 2-71365
 GeO_2 - B_2O_3 - SiO_2 fibre composition and radiation hardness 2-114438
 GeO_2 - B_2O_3 - SiO_2 -Ce fibre composition and radiation hardness 2-114438
 GeO_2 - Bi_2O_3 - TiO_2 glass formation, optical appl. 2-77847
 GeO_2 - P_2O_5 - SiO_2 fibre composition and radiation hardness 2-114438
 GeO_2 - P_2O_5 - SiO_2 -Ce fibre composition and radiation hardness 2-114438
 GeO_2 - SiO_2 glasses from gels to increase oxidation resist. of porous Si-containing ceramics 2-77797
 GeO_2 - ZnO - K_2O glass cladding for 940 cm^{-1} CO_2 laser transmitting hollow-core fibre waveguide 2-102946
 Ge_2O_3 - P_2O_5 -doped silica graded-index optical fibres fabrication by profile-control technique 2-55865
 K_2O - GeO_2 glass struct., EXAFS and X-ray diff. study 2-91792
 Li_2O - GeO_2 glass struct., EXAFS and X-ray diff. study 2-91792
 $\text{NaAl}(\text{Si}_2\text{Ge}_2)\text{O}_8$ feldspars, ideal mixing of Si and Ge, calorimetric study 2-115414
 Na_2O - B_2O_3 - GeO_2 - SiO_2 system glass, microstruct. evolution 2-91795
 Na_2O - GeO_2 glass struct., EXAFS and X-ray diff. study 2-91792
 Na_2O - K_2O - GeO_2 glass, DC conductivity, mixed-alkali effect 2-82010
 PbO - GeO_2 binary glass systems, fracture toughness and crack tip flow mechanism 2-105282
 Se-Ge-As chalcogenide glasses, microhardness 2-57446
 SiO_2 - GeO_2 optical fibres, refr. index dispersion 2-81107
 SiO_2 - GeO_2 -core step-index multimode fibres, OH-absorption 2-114455
 SiO_2 - GeO_2 glass fibre optical waveguide, stimulated Raman scatt. characts. 2-70607
 SiO_2 - GeO_2 optical fibre, drawing depend. transmission loss meas. 2-65383

germanium

see also nuclei with

- (111) surface, electronic struct., photoemission meas. 2-66609
 ambipolar diffusion of high density electrons and holes 2-110367
 amorphous, effective charges 2-86568
 amorphous, evaporated, struct. study by neutron diff. 2-86566
 amorphous, laser irradiated, struct. change features 2-76493
 amorphous, Mossbauer study 2-99004
 amorphous, phonon spectra 2-56138
 amorphous, random network struct., neutron amorphography 2-91791
 amorphous film, crystallisation boundary dynamics in CW laser irradi. 2-81680
 amorphous film, elec. cond., hopping model, electron-phonon coupling 2-77054
 amorphous film, explosive crystallisation, temp. and thickness effects 2-65860
 amorphous film, low-energy excitations, sp. ht. meas., 0.08 to 2.5K 2-71662
 amorphous films, time-resolved TEM of pulsed crystn. 2-82167
 amorphous solar selective absorber, medium temp. 2-93945
 atom + $\text{H}^+(\pi^+)(\pi^-)$, K-shell excitation and ionis. by relativistic projectiles, channelling obs. 2-59920
 atomic step height on clean vicinal faces 2-86997
 atoms, inner-shell ionisation by ultra relativistic electron impact, density effect search 2-70426
 avalanche photodiode, detectors for digital optical fibre systems in 1.2 to 1.55 μm range 2-55352
 avalanche photodiodes for long wavelength optical fibre systems, review 2-81117
 band struct., nonlocal pseudopot. calc. 2-110245
 band structure, tight binding calc. 2-66443
 bicrystal, tilt type, symmetrical deform., exptl. confirm. of model 2-71469
 bolometers, low temp., for spectroscopy, sensitive in 1 to 50 μm region 2-101462
 carrier conc. effect based devices, sensitivity increase 2-87430
 channelling of pions and protons, 0-250 GeV/c, ang. distrib. 2-109871
 charge carrier drag study (Russian) 2-71983
 chemical transport, water desorption and absorption on quartz glass ampoules (German) 2-93440
 chemical transport with H_2O , transport rate depend. on solid phase comp. (German) 2-111039
 chemisorption on GaAs (110), surface defect states 2-56659
 chemisorption on GaAs (110), UPS and work function studies 2-110412
 cleaved surface, charge carrier minimal motion (Russian) 2-72046
 cohesion, polymorphic transition, elastic and dielec. props. 2-60919
 Corbino surface shape, magnetocand. 2-115794
 core effective potentials, ab initio calcs. 2-70140
 crystal, axially channelled 250 GeV/c positive particles ang. distrib. 2-66093
 CVD, numerical models applied to Ge transport by GeI_4 , GeI_2 2-97956
 Debye-Waller factors 2-98235
 deep impurity photoionisation, electron-phonon interactions, photoconductivity study 2-61520
 deep metal-related centres obs. by capacitance spectroscopy 2-92523
 deep metal-related centres obs. by DLTS 2-87186
 germanium continued
 defect annealing, electron induced, stimulated by 'additional lighting' (Russian) 2-103825
 detector materials, radiation effects 2-80392
 detector suitability for imaging appl. 2-59598
 detector telescopes, appls., radiation damage, annealing 2-80391
 detectors, status and problems 2-90365
 dielectric matrix, exchange-correlation functional, local density formalism 2-76956
 diffraction grating, high-density laser-induced transient plasma, picosecond dynamics 2-77628
 diffusion coefficient in Si and SiO_2 , SIMS study 2-115465
 dislocation mobility, gliding direction inversion effects (Russian) 2-82032
 dislocation nucleation, point defect condensation model 2-71450
 dispersive and refractive index meas. using diode lasers 2-112958
 distribution function and negative differential cond. calcs. at heavy hole cyclotron reson. 2-115797
 donor-bound excitons, fine struct. splittings 2-82246
 donor-bound multiexciton complexes, density-functional method 2-82245
 double crystal monochromator, performance and appl. in energy region 800-4500 eV 2-84758
 dumbbell shaped struct., current oscills., neg. resist., elec. double layer 2-92635
 electric-dipole transitions in intervalley multiplets 2-115708
 electron bombardment, point defect generation, nonequilib. carrier lifetime study 2-56036
 electron heating time in HF field, effect on diffusion 2-87291
 electron irradi., displaced atom profiles, positron annihilation study 2-110972
 electron mobility, Markovian soln. 2-110366
 electron photoemission during X-ray diff. 2-105050
 electron-hole drop evaporation by laser heating (Russian) 2-104256
 electron-hole drop kinetics and decay in microwave field, hot carriers 2-92480
 electron-hole droplet condensation, phonon-wind effect 2-82249
 electron-hole liq., phase separation into two components 2-56447
 electron-hole liq., surface struct. and surface tension, rel. to bulk props. 2-66455
 electron-hole liquid, binary, phase separation, surface struct. role 2-71882
 electron-hole liquid phonon spectroscopy 2-115667
 electron-phonon scatt. matrix and absorption coeff. 2-103923
 electronic bands, critical points in first Brillouin zone 2-56435
 energy and stress depend. hole masses 2-66426
 epitaxial film on Si(100), RF sputter deposition, struct. and elec. meas. 2-66386
 epitaxial growth from Ge-In solution, radiation effects (Russian) 2-76869
 epitaxial growth on Ag (111) film on mica substrate, RHEED study 2-93429
 epitaxial layers, LPE growth in γ -radiation field, struct. and electrophysical parameters 2-115599
 evaporation, spitting-free high rate e-gun, use of graphite crucible 2-93426
 exciton and electron-hole liq. luminescence, elec. cond. 2-77578
 exciton thermodynamics 2-71881
 extrinsic plasma, oscillator freq., uniaxial deformation effects 2-115799
 Faraday rot., nonreson. interband transitions, expt. and Kramers-Kronig anal. 2-57065
 field emission cathodes, flicker noise 2-93385
 film, amorphous, electron beam annealing in TEM 2-71503
 film, deposition by DC and RF double cathode sputtering (Japanese) 2-62065
 film, laser induced crystn. 2-61316
 film, laser-crystallised, crystallite morphology and defect struct.; TEM and SEM study 2-66402
 focusing of high-frequency dispersive phonons 2-61093
 free-carrier electroabsorpt. in intervalley scatt. 2-116153
 galvanomagnetocombinational elements, fluctuation processes 2-87351
 gamma irradi., defect levels, DLTS study 2-76980
 gamma irradiated, use of thermal annealing for radiation hardening 2-56032
 gamma-ray induced defects, thermal and electrical stability 2-92033
 gamma-ray spectrometer system using closed-cycle cryogenic refrigerator, performance study 2-70030
 n-Ge:As, photoconductivity at photon energy less than impurity ionization energy 2-77121
 high pressure struct. phase transition, X-ray diff. study using synchrotron radiation 2-103975
 high purity, detectors, correl. between DLTS meas. and performance 2-70060
 high-purity coaxial detectors, pulse shape and risetime distrib. calc. 2-70055
 high-purity crystals, H conc. and distrib. 2-70051
 high-purity single crystals, C content and distrib. 2-70052
 hole capture by charged acceptors 2-115779
 hot hole cyclotron resonance (Russian) 2-82720
 hot plasma generation by intense 2.7 μm laser pulse interaction 2-66582
 impurity band conduction, static and modulated uniaxial constraint effects 2-56575
 impurity detection, low levels of O meas. by Li precipitation technique 2-61012
 impurity scatt. in quantising mag. fields 2-115792
 interaction cross section with low energy neutrons 2-59446
 interband Faraday and Kerr effects 2-72463
 interferometer, Fabry-Perot, heated by laser radiation, thermal hysteresis 2-53829
 internal friction meas. in intrinsic and n-type crysts. 2-81890
 internal friction of dislocationless and growth-dislocation containing crystals, amplitude depend. meas. 2-92109
 internal strain in diamond struct. elements, survey of theoretical approaches 2-61087
 internal strain tensor, bond-bending parameter, X-ray study 2-91864
 ion beam deposition, epitaxial growth 2-116388
 ion implant activation using multiple-scan electron beam annealing 2-56040
 IR study of indirect exciton Zeeman effect 2-67053
 IR study of laser generated carriers 2-110859
 IR window materials for CO_2 laser, absorpt. coeffs., photoacoustic spectroscopy 2-70633
 laminar emission camera 2-73324
 laser induced damage threshold meas., absorption calorimetry 2-60146
 laser pulse interaction, 2.7 μm 2-77627

germanium continued

- laser pulse transmission at various thicknesses 2-77104
 laser windows, thermal runaway 2-81004
 laser-induced periodic surface damage and radiation remnants 2-98154
 lattice consts. and bulk moduli, self-consistent pseudopot. calc. 2-109741
 lattice dynamics, Grüneisen coeffs., pseudopot. calc. 2-98226
 long wavelength IR radiation generation by hot holes (*Russian*) 2-82857
 low freq. cond., due to variable range hopping, expt. vs. theory 2-66557
 luminescence of electron-hole drops, hysteresis, exciton gas-liquid transition 2-82895
 magnetic Γ_8 subbands, Luttinger method perturbation theory calc. 2-56436
 magnetoresistance influence on high mag. field Van der Pauw expts. 2-104396
 many-valley semicond., hot electrons in quantising mag. field 2-56622
 material properties relevant to modern semiconductor elements (*German*) 2-98533
 materials with $Z_1=23$ -30, electronic stopping cross section for 30-300 keV protons 2-66086
 MBE growth on GaAs (100), interface morphology, RHEED study 2-56386
 melting point, press. depend., Lindeman law calc. 2-56165
 melting point, press. derivatives 2-61117
 melting temp., vol. depend., Debye model 2-86825
 Mossbauer isomer shifts calc. for ^{73}Ge 67.03 and 13.3 keV transitions 2-72392
 muonium and positronium impurities, spatial dispersion influence, variational calc. 2-115257
 n-type, dielectric relaxation time effect on measured energy relax. time 2-87667
 n-type, electron and γ -ray bombarded, defect accumulation kinetics, intensity dependence meas. 2-115295
 n-type, electron pulsed bombardment, defect formation obs. 2-115294
 n-type, energy loss process for nonequilibrium hot carriers 2-92641
 n-type, far IR obs. of D⁺ band 2-67035
 n-type, magnetophonon reson. obs. 2-98672
 n-type, S-type current-voltage charact. in crossed heating elec. and quantising mag. fields 2-115795
 n-type, thermal cond. meas. under strong uniaxial elastic deformation 2-61222
 neutron irradiated, deep level transient spectroscopy 2-115695
 nonlinear light absorpt., energy relax. mechanisms 2-114357
 nonlinear screening of negative point charges 2-82261
 nonuniform Lorentz force effect on electron-hole plasma density 2-87314
 nuclear stopping regime, evidence for insulator-metal effect on Z_1 range oscils. 2-103869
 optical absorpt., photoacoustic spectra study, window material appl. 2-61855
 optical erosion of single crystals due to CO₂ laser pulses 2-87303
 optical surface and bulk absorption at 10.6 μm 2-70631
 oxidation at high press. 2-116569
 p-n junction diode, minority carrier lifetime variation with injection level 2-66627
 p-n junction diodes, use as cryogenic temp. sensors 2-58821
 p-type, light induced changes in hole distrib. functions and nonlinear photon drag current 2-61515
 p-type, negative differential mobility of holes, Monte Carlo study 2-77078
 p-type, optical transitions between light- and heavy-hole bands and drag effect 2-116138
 p-type, streaming motion and population inversion of hot carriers, crossed elec. and mag. fields 2-98668
 p-type, strongly doped, anomalous magnetoresistance (*Russian*) 2-82377
 phonon focusing of dispersive phonons 2-115371
 photoacoustic IR spectroscopy 2-99108
 photodetector for linearly polarised radiation direct analysis 2-107387
 photoelectric effect associated with excited acceptor states 2-104431
 photoelectron spin depolarisation during photoemission due to paramag. Gd atoms 2-111029
 photogalvanic piezomagnetic effect (*Russian*) 2-82401
 photovoltaic effect due to EM wave heating, expt. study (*Russian*) 2-77123
 plastically deformed, phonon scatt. 2-92133
 plates, surface treatment effect on X-ray diffraction, struct. 2-86514
 polarisation-dependent photocond. and surface photocurrent 2-115821
 positron lifetimes, systematic study 2-57207
 proton dechannelling, lattice thermal vibrs. effect 2-109872
 pulsed-laser-annealed, stimulated surface polarization wave scatt. and grating formation, time resolved meas. 2-114359
 quenched, presence of shallow acceptors from far IR photocond. spectra 2-104302
 radiation defects, light sensitivity and space orientation, IR spectra study 2-87826
 radiation detector, low-energy background formation, role of edge dead zones 2-108272
 Raman phonon press. depend. 2-67054
 ranges of 0.3-2 MeV H⁺ and 0.7-2 MeV H₂⁺ ions 2-76547
 recombination mechanisms, photoconductivity and IR absorption 2-115780
 refractive index measurement of ten Ge samples, 8 to 14 μm 2-57036
 selective absorber surfaces 2-88477
 self-consistent pseudopotential calculation, for electronic struct. 2-71859
 shallow acceptor energy levels, ij -type coupling theory 2-104311
 solubility in liq. In, γ -ray effects, expt. study 2-115423
 strain confined electron-hole liquid, density variations and compressibility 2-110262
 streaming, gauss-ampere characts. of dissipative current 2-115769
 surface, {111}, atomic struct. and reactions with deposited Al 2-86991
 surface, {100}, atomic struct., CNDO calc. 2-61270
 surface, {111}, adsorbed Cl(i)(Te) for cryst. and amorphous Ge, surface EXAFS study 2-110977
 surface, {111}, Cl chemisorpt., charge density self-consistent-extended Huckel calc. 2-66344
 surface, {111}, clean and adsorbed H, electron states, angular resolved UPS study 2-110414
 surface, {111}, n-inversion layers, subband energy struct., effective mass approx. 2-110489
 surface, adsorpt. of H, electrophysical props. 2-76833
 surface, electron capture, Thomas-Fermi approx. 2-61547
 surface, high index, struct., order-disorder transitions, LEED study 2-71786

germanium continued

- surface, struct. and electron states 2-98395
 surface {100}, alkali metal adsorption, surface cond. and interface states, EELS study 2-92716
 surface {111}, cleaved in superhigh vacuum, low temp. LEED surface struct. study 2-98406
 surface covered with Na, K or Cs, in submonolayer range, EELS obs. 2-72585
 surface damage effect on IR optical performance, 8-12 μm spectral region 2-105347
 surface formation processes for HCl gas phase etching 2-99570
 surface layer struct., external photoeffect under X-ray diff. conditions 2-98402
 surface oxidation, modification by Al adatoms, UPS study 2-67576
 surface oxide thin film, carrier photoinjection 2-92699
 surface prep. by selective chem. etching 2-83254
 surface states and the analytic properties of Bloch waves in the tight-binding approximation 2-56656
 surface topography, self-ion bombardment effects, 30 to 500 keV 2-71516
 surface topography of HCl gas phase etched Ge 2-98400
 surface unit cell cleaved at 4K, (1 \times 1) struct., LEED study 2-110118
 textured optical storage medium, microstructure, reflective spots 2-65321
 textured surface, optical storage medium, reflectance changes 2-81038
 thermal cond., phonon scatt. processes at low temps. 2-56275
 thermal conductivity at low temp. 2-76759
 thin film growth by laser induced CVD 2-77752
 three-phonon processes, resonance effects in thermal cond. 2-81913
 Tokamak discharges, transitions in $n=2$ ground state configurations 2-86479
 tribolayers, formed by frictional contact in liq. He 2-62234
 uniaxially compressed, low-density electron-hole liquid (*Russian*) 2-61370
 uniaxially stressed, electron-hole liquid props. 2-104259
 uniaxially stressed, free carrier absorpt. spectra (*Russian*) 2-87818
 uniaxially stressed, plasma reson. of electron-hole drops, IR study 2-104861
 X-ray diff., multiwave Pendellosung fringes of (200) forbidden reflection (*Russian*) 2-60839
 X-ray forbidden refls., spectral depend. 2-60838
 X-ray photoemission and refl. near K absorpt. edge 2-72607
 Al_{0.1}Ga_{0.9}As:Ge, acceptor states, photoluminesc. study 2-104931
 p-Al_{0.1}Ga_{0.9}As:Ge, LPE grown, photolum. spectrum 2-57143
 As₂Se₃/Ge, chalcogenide glasses, carrier mobility, transient photocurrent spectra study 2-72024
 CdS-Ge interface, X-ray photoemission spectra of band discontinuities 2-82447
 Fe₂O₃/Ge, solid solubility, elec. and photoelectric behaviour 2-61146
 Ga_{1-x}Al_xAs:Si, Ge, LPE growth and doping, elec. and photolum. props. 2-116393
 GaAs:Ce VPE layers, impurity characterisation, photoluminesc. study 2-93264
 GaAs:Ge, doping by vapour phase epitaxy, carrier Hall mobility (*French*) 2-98129
 GaAs:Ge, MBE grown, deep levels and photoluminesc. MBE As₂/As₄ flux ratio effects 2-99341
 GaAs:Ge, N superlattice alloy, impurity sheet doped, band struct. 2-110242
 GaAs:Ge, neutron transmutation doped, elec. props., metal-nonmetal transition 2-87284
 GaAs:Ge crystal, doping profiles, atomic absorpt. spectra meas. 2-109823
 p-GaAs:Ge LPE layer, electron diffusion length determ. by EBIC method 2-56736
 GaAs-Si-Ge split spectrum triple solar cell system, design and performance 2-83477
 Ga_{1-x}In_xAs:Ge LPE layers, doping profiles, atomic absorpt. spectra meas. 2-109823
 p-Ge, IR obs. of light hole accumulation (*Russian*) 2-57098
 p-Ge, negative magnetoresistance obs. (*Russian*) 2-56617
 Ge thin film thermometers, for use at low temps., characts. 2-74412
 Ge:¹¹⁹Sn, impurity atom vibrs., adiabatic bond-charge model 2-81917
 Ge:Al, vol. diffusion of Al, SIMS invest. (*German*) 2-66274
 Ge:As, bound-exciton luminesc. polarisation in longit. mag. field 2-87864
 Ge:As, donor ground state, diamag. and Zeeman shifts, four-wave mixing spectroscopy 2-99096
 Ge:As:Ga, heavily doped by neutron doping, fundamental optical absorpt. edge profile 2-93145
 Ge:As(P), luminescence study of nonequilibrium charge carriers (*Russian*) 2-104945
 n-Ge:As(Sb), 1.5 MeV electron irradi., defect levels, DLTS study 2-92508
 n-Ge:As(Sb), heavily doped, press. effects on magnetoconductivity (*Russian*) 2-56619
 Ge:Au, hopping cond. after γ -ray neutron, and electron irradi. 2-115758
 Ge:Au, Sb, compensated and illum., low temp. Hall mobility of electrons 2-77096
 Ge:B, Al, Ga, residual acceptor impurity distrib., photothermal ionisation spectroscopy study 2-81807
 Ge:B, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
 p-Ge:B(Al)(Ga), impurity states, oscillator strengths, quadrupole moments 2-104303
 Ge:Cl, amorphous, ion implanted, gap-states, elec. cond. study 2-76987
 Ge:Co, Mossbauer study of implanted ⁵⁷Co below full amorphisation limit 2-77441
 Ge:Cu, γ -ray irradi., Cu atom activation and concentration 2-115704
 Ge:Cu, in-diffusion and annealing 2-98337
 Ge:Cu, quenched, Cu related shallow acceptor, hole density temp. depend. study 2-92509
 Ge:Cu p-n junction, reversed biased, Cu²⁺ centres mobility, DLTS study 2-98336
 Ge:Fe, ion implantation study by conversion electron Mossbauer spectroscopy 2-77427
 Ge:H, {111} surface, electronic struct., photoemission meas. 2-66609
 Ge:H, interaction of H with point defects, under ⁶⁰Co gamma-irrad. 2-115279
 Ge:H, positive test charge, pot. map 2-56479
 Ge:H, vacancy vibrational behaviour, renormalisation group method 2-81918
 Ge:H amorphous film, AC losses and elec. cond., polarons 2-77055
 Ge:He⁺(Ar⁺), ion implantation, surface recombination kinetics meas. 2-66031

germanium continued

- Ge:In, impurity diffusion, SIMS invest. (*German*) 2-82031
 Ge:In(Sb), laser induced enhanced solubility, elec. and Rutherford back-scatt. study 2-115416
 Ge:Nd(Gd)(Tb)(Ho)(Tm)(Er), deep level impurity states, DLTS study 2-56477
 Ge:Ni(Au), photoelectromotive force, carrier density 2-87339
 Ge:P, ion implanted, elec. props. 2-77089
 Ge:P, phonon drag thermoelectric power and thermal cond., boundary scatt. effects 2-82388
 Ge:P(Sb), impurity states fine struct., photoconductivity study 2-87190
 Ge:Pb, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
 Ge:S, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
 Ge:Sb, Au, cleaved in He, surface Frenkel defects, elec. cond. study 2-115224
 n-Ge:Sb, Au, compensated, Sb ionization energy 2-76985
 n-Ge:Sb, compensated by fast neutron irradiation, activated elec. cond. 2-115762
 Ge:Sb, D⁺ states, electronic struct. and binding energies 2-82280
 n-Ge:Sb, defect cluster form. and shaping after high-energy particle irradiation 2-76535
 Ge:Sb, low-temp. cond., evidence for localisation effects 2-77057
 Ge:Sb, photo-excited acoustic phonons 2-98225
 Ge:Sb, temp.-depend. cond. 2-110353
 Ge:Sb, uniaxially compressed, biexciton-impurity complexes (*Russian*) 2-82242
 Ge:Sb(Ar)(P), US attenuation by shallow donors in mag. field 2-56649
 Ge:Si, ion implanted, rad. damage, X-ray rocking curve study 2-66075
 Ge:Si, solid solubility, diffusion, decomposition, X-ray diffraction study 2-66232
 Ge:Sn, cordency and compression effects on isomer shift of impurities 2-56989
 Ge:Zn, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
 Ge/Ni, monolayer metal coverage, interface electronic struct., XPS study 2-82455
 Ge/Pd, monolayer metal coverage, interface electronic struct., XPS study 2-82455
 Ge-⁴He interface, transient heat transfer and onset of film boiling 2-115482
 Ge-Ag, interface electron struct., XPS study 2-82422
 Ge-Au interface, epd. formation, valence band and cone level UPS study 2-110175
 Ge-GaAs, (110) and (111), MBE grown, interface morphology, RHEED study 2-98470
 Ge-GaAs (100) heterojunction, MBE growth, surface processes, LEED and photoemission study 2-110203
 Ge-GaAs (110) heterostructures, electronic props. and chem. comp., low-energy EELS study 2-93339
 Ge-GaAs (110) interface, amorphous and cryst. films, electronic struct., XPS study 2-110456
 Ge-GaAs (110) interface electron states, polarisation dependent UPS study 2-110455
 Ge-GaAs heterojunction, work function, interface state effect (*French*) 2-61559
 Ge-GaAs interface, two-dimens. electron states, light scatt. study 2-110885
 Ge-GeO₂, charge carrier transport in dielectric, photo-injection method obs. 2-104493
 Ge-GeO₂ systems, direct obs. of atomic struct. of interfaces 2-97871
 Ge-GeS interface struct., LEED, HEED and Auger spectra study 2-71809
 Ge-Si (111) epitaxial system, interface struct., high energy ion scatt. study 2-76840
 Ge-ZnS multilayer narrow-band interf. filters 2-70663
 Ge+Cu⁺, K-shell vacancy prod. study 2-108694
 Ge(Li) coaxial detectors arrangement for Compton linear polarimeter 2-90395
⁶⁹Ge, quadrupole interaction in Tl, temp. depend., TDPAD meas. 2-82752
 Ge(111)-Ag interface, chem. reaction, synchrotron radiation photoemission study 2-61212
 Ge[111]2×8 reconstructed semicond., Te and I adsorbate struct. 2-66360
 I adsorption, SEXAFS studies 2-83417
 InP:Ge, ion implanted, annealing behaviour obs. 2-98135
 InP-Ge interface, X-ray photoemission spectra of band discontinuities 2-82447
 InSb:Ge, deep levels in band gap, photocond. study 2-115706
 InSb:Ge, gamma-ray, electron and proton beam irradiation, defect annealing, elec. props. (*Russian*) 2-103817
 In₂Se₃:Ge crystal growth and IR transmission, optical filter appl. (*Russian*) 2-114413
 PbTe:Ge, donor and acceptor props., elec. and thermal cond. meas. 2-66480
 Sb_{1/2}Bi_{1/2}Se_{0.575}Te_{0.825}Se_{0.15}:Ge, solid soln., effects on thermoelectric props. 2-82385
 Si, paramagnetic susceptibility obs., dislocations effect 2-56823
 Si, shock loaded, phase transitions obs. 2-56186
 Si:Ge, atomic mixing effects on high fluence 40 keV Ge⁺ implantation 2-76466
 Si:Ge, ion implantation, high fluence, contrib. of atomic mixing, theoretical and exptl. study 2-98131
 Si:Ge, Ne ion beam induced atomic distrib. of implanted range profiles 2-56002
 SiO₂:Ge optical fibres, graded index and polymer clad, γ-ray effect on strength 2-86114
 SiO₂:Ge, recombinative luminescence (*Russian*) 2-61962
 YIG:Ge, magnetocrystalline anisotropy of Fe²⁺ at zero temp. 2-56848
 YIG:Ge garnets, rapid diffusion processes 2-71719
 YIG:Tm,Ca,Ge,Ne layers, ionimplanted, annealing effects on cryst. and mag. props. 2-77333
 ZnS:Ge⁺, photosensitive EPR, g-factors and hyperfine interaction 2-77369
 ZnSe-Ge heterojunction interface, nature of band discontinuities 2-104463
 ZnSe-Ge(110) heterojunction band discontinuities, XPS study 2-111024

germanium alloys

see also Ge-Si alloys

- Volcoloy, antiferromagnetic Invar type alloy in Mn-Ge system (*Japanese*) 2-77291
 Ag-Ge, amorphous film, struct., elec. and optical props. 2-82483
 Ag-Ge, rapidly quenched alloys, superconducting investigation (*Chinese*) 2-61672
 Al-Ge, dilute, Matthiessen's rule deviation at high temp. 2-115729
 Al-Ge (4 wt.%), superplastic deform. mechanism 2-83190
 Al-Ge-Sn, liq. alloy, thermodynamic props., EMF meas. 2-104031
 Al-Mg-Si(Ge), age-hardening precipitates, microanal. 2-93513
 Al-Si-Ge, amorphous, superconducting transition (*Chinese*) 2-104520
 Au-Ge metastable phase form. by ion mixing 2-76754
 AuGe/GaAs, ohmic contacts, interface struct., SIMS study 2-82150
 AuGeNi ohmic contacts to MBE grown GaAs epitaxial layers, charact. 2-66637
 AuGeNi-InP contact, electron microscopy investig. 2-66379
 CdTe-Ge system, phase diagram, determ. by DTA and X-ray diffraction (*Japanese*) 2-105122
 Co-Ge liq. alloys, liq. struct. and elec. cond. (*Russian*) 2-91761
 Co-Ge liquid alloys, thermodynamic excess props. determ. by mass spectrometry 2-98306
 Co₂Ni_{1-x}MnGe, cryst. and mag. struct. 2-104581
 Co₂Ni_{1-x}MnGe, hexagonal, mag. props. 2-56835
 α-Cu-Ge, electronic struct., piezoref. study 2-57052
 Cu-Ge, Fermi surface, density of electron states, positron annihilation study (*German*) 2-104231
 Cu-Ge, Fermi surface of Hume-Rothery phases, positron annihilation study 2-61335
 Cu-Ge, heavy ion-irradiation, vacancy loop form. 2-103863
 Cu-Ge, low dose fission neutron irradiation, damage 2-103829
 Cu-Ge (8.7 at.%), shock-loaded, deformation, twinning, time depend. and assoc. strengthening 2-88138
 Cu-Ge alloys, EXAFS associated with K-absorption discontinuity 2-99220
 Cu-Ge liq. alloy, activities of oxygen 2-66258
 Fe₂₀B₁₅Si₅-Ge, amorphous, Curie temp. and crystn. behaviour 2-87496
 FeGe₂, canted antiferromag., magnetisation meas. (*Russian*) 2-98907
 Gd-Ge, mag. props., interband mixing effect (*Ukrainian*) 2-77261
 Ge-As solid soln., dissociation, total diffuse X-ray scatt. meas. 2-65927
 Ge-In solutions, epitaxial growth of Ge, radiation effects (*Russian*) 2-76869
 Ge-Sn system, electronic theory for binding forces and phase diagrams (*Japanese*) 2-72672
 InGe, percolating supercond., upper crit. field 2-77243
 Li-Ge alloys, thermodynamic studies, appl. to negative electrodes for molten salt batteries 2-76709
 Li-Ge liq. alloys, ⁷Li Knight shift meas. 2-93030
 f-Mn₂-Ge, mag. phase transitions, magnetisation and entropy study 2-98876
 Mn₂Ge, triangular spin config. and weak ferromag., polarised neutron diffraction study 2-77269
 MoGe, amorphous, EXAFS studies 2-93327
 Nb-Ge film, DC magnetron sputtering and supercond. props. meas. 2-72097
 Nb-Ge films, supercond. and struct. props. rel. to sputtering conditions (*Russian*) 2-104522
 Nb-Ge sputtered films, supercond. transition temp., nonuniformity within film 2-92800
 Nb₂(AlGe), supercond., ultimate crit. current density (*Chinese*) 2-110556
 Nb₂Al_{0.5}Ge_{0.5}, electrical resistivity, temp. depend. 2-61442
 Nb₂(Al_{1-x}Ge_x), A15 superconductor, prep. from transformation from liq. quenched BCC phase 2-98777
 Nb₂Ge bulk metastable alloys, containerless undercooling and solidification 2-57340
 Nb₂Ge, electrical resistivity, temp. depend. 2-61442
 Nb₂Ge film, EXAFS study, superconducting props. 2-99225
 Nb₂Ge film, supercond., conc. depend. of T_c 2-92809
 Nb₂Ge film, supercond. fraction determ. using SAW 2-104541
 Nb₂Ge films, critical mag. field temp. depend. (*Russian*) 2-61673
 Nb₂Ge, for fusion reactor magnets, ion and neutron damage studies 2-110549
 Nb₂Ge, heat capacity meas. using adiabatic calorimetry method 2-115430
 Nb₂Ge microbridges, fabrication and I-V characteristics meas. 2-61663
 Nb₂Ge RF sputtered films, surface struct., rel. to supercond. transition temp. 2-61264
 Nb₂Ge, supercond. props. study by electron tunnelling 2-110545
 Nb₂Ge superconductor, neutron radiation damage 2-80185
 Nd₂Ge, mag. transition temp., mag. ordering effects on elec. and thermal props. 2-87507
 Ni-Ge, radiation-induced segregation, defect prod. rate effect 2-92055
 Ni₂Ge, d.c. sputtered, quenching effect on metastable compd. 2-93544
 NiIn₂Si(Ge)₂, mixtures, phase diagram invest. 2-67303
 Pd-Ge, glassy and cryst., electronic struct., AES and XPS study 2-82213
 Pd-Ge, liq., thermodynamic props. rel. to bonding and short-range order 2-91756
 Pd₂Ge, metallic glass, crystn. kinetics 2-81682
 Pd₈₀Ge₂₀, amorphous and crystalline, near-edge and EXAFS studies 2-93325
 Pt-Ge, liq., thermodynamic props. rel. to bonding and short-range order 2-91756
 Re₂Ge, chimney-ladder structs., formed by high-temp. and pressure treatment 2-88022
 Tb₂Ge, mag. ordering and struct., incommensurate phase transition, neutron diffraction study 2-115977
 Ti-Nb-Si-Ge foil, struct. and supercond. props. (*Russian*) 2-92818
 V₂Ge, electronic struct., X-ray study (*Russian*) 2-110235
 V₂Ge, Raman scatt., phonon linewidth and mag. susceptibility 2-57090
 V₂Ge, supercond., energy gap determ. from heat capacity meas. 2-110532
 W-Al-Ge system, ternary cpds. existence and struct. 2-57333

germanium compounds

see also germanium alloys

- chalcogenides films, optical consts. and photo-optical changes, absorption edge 2-93301
 chalcogenides, low temp. sp. heat anal. using Debye temp. 2-71661
 chalcogenides, mechanochemical synthesis, explosions (*German*) 2-62053
 germanes, IR spectra, stretching freq., anharmonicities, and dissociation energies 2-80588

germanium compounds continued

- pyrogermanates, struct., IR and Raman vibr. spectroscopy 2-87759
 Al-GeS, work function determ. method 2-61553
 Al₂O₃-GeO₂-NaO, ionic conductor, elec. props. and struct. 2-110030
 As-Ge-Si glass, refr. index meas. in IR range using modified GS-5 goniometer (Czech) 2-58887
 As-Se-Ge glass, γ -irrad., hardness meas., Ge constant effects 2-56080
 As₂Se-GeSe-SnSe, glass, Sn valence states, Mossbauer, optical and electron spectroscopy study 2-71935
 BaGeAl₆(Ga₄)O₁₂, cryst. struct., X-ray and electron diff. study 2-81760
 Bi₂O₃-GeO₂, melt, solubility of Pt 2-71652
 Bi₂Te₃-Sb₂Te₃-GeTe-PbTe system alloys, thermo-EMF, elec. and thermal cond., thermoelec. efficiency 2-56626
 CaO-Ga₂O₃-GeO₂ system, phase form. 2-111150
 Cd-Ge-As glass system, aligned crystallisation, heat transport and interface kinetics 2-71365
 Cd-Sb-Ge system, DTA, microstruct. and microhardness 2-105130
 Fe-garnet films, hard-stripe domains, investig. 2-104673
 (GaAs)_x-Ge_x single-crystal metastable alloys, growth and optical props. 2-116360
 GaAsSe, struct. images in high resolution electron microscopy study 2-65965
 (Ge, Sn)-Se system, glass form. and vibr. props. 2-86578
 Ge halides, pseudo exact force const. calc. 2-54985
 Ge-As-Se glass, ion beam deposited, use as optical coating 1 to 16 μ m laser damage 2-65324
 Ge-As-Se glass, optical fibres, plastic clad 2-65385
 Ge-GeO₂, charge carrier transport in dielectric, photo-injection method obs. 2-104493
 Ge-GeO₂ systems, direct obs. of atomic struct. of interfaces 2-97871
 Ge-GeS interface struct., LEED, HEED and Auger spectra study 2-71809
 Ge-In(Mn)-Te, X-ray investigation of GeTe-based solid solutions 2-109756
 Ge-P-S glass: Mn²⁺, ESR study 2-104694
 Ge-S, amorphous, effective electron correlation energy, EPR study 2-110271
 Ge-S glasses, local order, ESR study 2-65865
 Ge-Se, amorphous, EXAFS spectrometer and detector system 2-116299
 Ge-Se, amorphous, valence and inner shells, XPS study 2-116332
 Ge-Se(-Te), amorphous and cryst., electronic struct., density of states, pseudopotential methods 2-61345
 Ge-Se(S)(-As) amorphous films, obliquely deposited, Urbach tail, photoinduced changes 2-93309
 GeAs, I, chem. vapour transport, thermodynamics and kinetics 2-97949
 GeAs, room temp. long wavelength refl. spectra 2-110831
 GeBr, He(I) photoelectron spectroscopy, HF Slater LCAO calcs. 2-108624
 GeBr, mol. struct., electron diff. 2-90702
 GeCl₃, He(I) photoelectron spectroscopy, HF Slater LCAO calcs. 2-108624
 GeCl₄, liq., central Lorentzian in depolarised Rayleigh spectra 2-80629
 GeCl₄, solubility of HCl, Henry's law, total press. meas. 2-92214
 GeF, mol. force consts., bond lengths, pot. energy functions, electronegativity anal. 2-75463
 GeF₃, UV photoelectron spectrum, HF Slater quantum chemical calcs. 2-102530
 GeH⁺, rot. anal., visible spectra 2-85678
 GeH₃, geometries and HFS consts., ab initio calcs. 2-70136
 GeH₆, internal rot., barrier height CNDO (German) 2-85554
 GeH₂Cl, Coriolis interaction, vibr.-rot., IR obs. 2-90549
 GeH₂Cl, rovibr. anal. of ν_6 rocking fundamental and hot bands near 600 cm⁻¹ 2-90509
 GeH₄(GeD₄), stretching overtone bonds, local mode model 2-80574
 (GeH₃)₂S, config., IR and Raman spectra anal. 2-113990
 GeI₂-RbI (CsI) system, cryst. structs., DTA and X-ray diff. study (French) 2-109766
 GeO, E Σ^+ - Σ^+ system, vac. UV spectra, isotope shifts 2-96494
 GeO, low lying electronic states, vibrational numbering determ. from isotope shifts 2-64850
 GeO₂, glassy, minimum optical losses 2-110891
 GeO₂ in fibre light-guide bundles, photometric radial distrib. control 2-91053
 GeO₂, vitreous, dielec. relax. and losses, elec. cond. 2-99032
 GeO₂, vitreous, near IR absorption of H₂O, OH group vibr. bands 2-99125
 GeO₂, vitreous, vibr. selection rules in Raman and IR spectra 2-57082
 GeO₂-Sb glass optical fibre prepared by vapour-phase axial deposition 2-81088
 GeO₂-Zn(Mg), X-irrad., hole centre ESR study 2-87592
 GeO₂-BiO_{1.5}-TiO_{0.5}, formation compositions, two-phase glass separation 2-91810
 GeO₂-SiO film, electroformed MIM struct., elec. cond., temp. effects obs. 2-72074
 GeO₂-SiO₂, optical fibre, drawing depend. transmission loss meas. 2-65383
 GeO₂-P₂O₅-doped silica graded-index optical fibres fabrication by profile-control technique 2-55865
 (GeO)₂Ga₂S₃, cryst. struct. determ. (French) 2-91886
 Ge_{1-x}Pb_x solid soln., physicochem. investig. 2-104008
 GeS, core level line widths, XPS study 2-57263
 GeS, electroreflectance spectra meas., 1.6 to 3 eV 2-87742
 GeS, electroreflectance spectra, changes under ion bombardment 2-82876
 GeS, negative photoconductivity 2-110402
 GeS, relaxation curve of cryst.-vapour system using BCF theory 2-91846
 GeS₂ glass, phonon spectra 2-56138
 GeS₂, glassy and cryst., pressure-optical studies, network topology analysis 2-67021
 GeS₂, polarised far IR transmission spectra meas., lattice structure 2-82836
 GeS₄ chalcogenide glass, As and S centred paramag. species, ESR data 2-61765
 Ge_{1-x}S_x chalcogenide glass, optical gap 2-110802
 GeS₂(Ge₂Se₃), glassy, photoluminesc. obs. 2-61973
 GeS₂Se_{1-x} solid solns., single cryst. lattice refl. spectra 2-72495
 Ge₄₀-Sb₅₀ chalcogenide glass, optical gap 2-110802
 GeSe amorphous thin layers electronic characs. modification by junction metal azides incorporation (German) 2-92631
 GeSe, core level line widths, XPS study 2-57263
 p-GeSe, layered cryst., photocond., polarised light study (Russian) 2-77124

germanium compounds continued

- GeSe single crystal growth from vapour, phenomenological description 2-91840
 GeSe₂ amorphous film, optical bistability obs. 2-102853
 GeSe₂ amorphous film, struct. changes due to laser irradiation and thermal treatment 2-86579
 GeSe₂ films, amorphous, laser induced optical anisotropy 2-93313
 GeSe₂ glass, reversible quasicrystn., Raman scatt. study 2-81685
 GeSe₂ glass, thin films, and crystals, thermal quenching of photoluminesc. 2-87848
 GeSe₂, optical props., visible spectra study 2-67073
 GeSe₂-Ag, amorphous, XPS study 2-57249
 GeSe₂-Ag system, Ag sensitisation kinetics and diffusion 2-115589
 GeSe₂-As₂Se₃, glass point, activation energy of elec. cond. calc. 2-76312
 Ge_{0.1}Se_{0.85}In(Cu)(Fe) glasses, photoluminesc. and excitation spectra 2-93263
 Ge_{0.25}Se_{0.75} amorphous inorganic resist film, ion and electron beam induced struct. changes, TEM study 2-115588
 Ge₂Se₃-x glasses, photocond. and recomb. processes 2-77112
 Ge₂Se₃-xAg amorphous films, Ag photodoping, XPS study 2-57245
 Ge₂Se₃-xIn(Fe)(Cu), glassy, photoconductivity 2-56634
 GeSeTe, chalcogenide glasses, carrier mobility, transient photocurrent spectra study 2-72024
 GeSe₂Te_{2-2x} chalcogenide glasses, broken chemical order, X-ray and DTA study 2-103638
 Ge₂Se₂Te₄, glassy, piezoelec. effects, expt. study 2-57021
 (Ge_{0.99}Sn_{0.01})₂Se₂ glass, broken chem. order, Mossbauer study 2-81687
 GeS_x glass, photoinduced EPR meas., dangling bonds role 2-56932
 (GeTe)_{0.94}Bi_{0.05}Cu_{0.01}, ionic transport of Cu and thermo EMF 2-104068
 GeTe, acoustic emission during polymorphic transitions 2-109972
 GeTe, cubic and rhombohedral, band struct. 2-92468
 GeTe, elastic props., room temp. 2-81872
 GeTe, fundamental energy gap calc. 2-92458
 α -(γ)-GeTe, hole effective mass, plasma reflectivity study 2-56428
 GeTe, intervalley Jahn-Teller effect and polymorphic ferroelectric transitions 2-87208
 GeTe, magnetic susceptibility change at ferroelec. phase transition 2-77260
 GeTe solid solutions, polymorphic phase transitions kinetics, elec. cond. and Hall coeff. study 2-86851
 GeT_{1-x}Cr_x(Mn)(Fe)(Ni)(Co), solid solutions, thermoelectric props. 2-98680
 GeTe-Co₂Ge, eutectics, microstructure and mech. props. meas., thermocouples appl. 2-86890
 GeTe-FeGe₂, phase diagram, eutectic composition 2-111154
 Ge₁₅Te₈₂ amorphous film, diffusion of Au, nucl. backscatt. anal. (French) 2-104069
 Ge₁₅Te₈₂Sb₃ glass, hopping cond. at low temp., Ge effects 2-61460
 Ge₁₅Te₈₂Sb₃S₂ glassy, piezoelec. effects, xpt. study 2-57021
 Ge₂N₄GaAs, interface polar exciton, variational calc. (Russian) 2-76940
 (Pb_{0.5}Sn_{0.5})₂Te, dielectric props., defects influence 2-93101
 Pb_{1-x}Ge_xSe, optical and elec. props. (Russian) 2-57048
 Pb_{1-x}Ge_xTe, band edge struct. transform. due to ferroelectric transition 2-92456
 Pb_{1-x}Ge_xTe, C_{3v}-phase, band struct. 2-92467
 Pb_{1-x}Ge_xTe, coupled phase transitions, sp. ht. meas. 2-98277
 Pb_{1-x}Ge_xTe narrow band gap ferroelec. semicond., photostimulated phase transition shift 2-110789
 Pb_{1-x}Ge_xTe p-n junction diode, capacitance, press. induced phase transition 2-72055
 Pb_{1-x}Ge_xTe, phonon and elec. resist. anomalies at displacive phase transition 2-98653
 Pb_{1-x}Ge_xTe thin film structures, growth by MBE 2-92393
 p-Pb_{1-x}Ge_xTe, velocity of sound quantum oscils. 2-92114
 PbS-GeS-GeS₂ chalcogenide glass, struct. and photoelectronic props., DTA and SEM study 2-92681
 Se-Ge, vitrification capacity estimation from phase diagram 2-86570
 Se-Ge-As glass, microstruct., fracture surface study by SEM 2-91796
 Se-Ge-As glass melt, solubility of He 2-98292
 Se₇₀Ge₂₅ films, obliquely deposited, ion-induced physical and optical densification 2-61042
 Si-Ge solid solns. elastic consts., compression effects 2-76562
 SiO₂-GeO₂-P₂O₅ fibres, radiation damage, thermoluminesc. anal. 2-114435
 SmTmCaGe garnet (100) films, Neel walls and line transitions 2-110614
 Sn-GeS, work function determ. method 2-61553
 Ti_{1-x}Ge_xS₂ system, phase equilibria, DTA, X-ray diff. and hardness study 2-66171
 YSmLuCaGeG:Ne(H), ion implanted bubble garnet film, mag. and cryst. props. 2-82644
 YbS(Se)-GeS₂(Se₂) reaction and phase diagrams 2-105131
 ZnGeP₂, intrinsic defect effect on elec. props. 2-61481
 ZnGeP₂, press. depend. of pseudodirect gaps 2-87141

getters

- see also vacuum techniques
 Inconel 600, mechanically polished and sand- and bead-blasted, thermal outgassing props. 2-110161
 ISX, Ti gettering experience 2-80215
 PDX getter pump system, design and test results 2-80339
 TMX modular gettering system 2-80340
 Cr gettering, comparison with Ti gettering for fusion reactors 2-79600
 Fe:N, ion implanted, temp. stimulated outgassing 2-111205
 GaAs, bulk Bridgman crystals, O related gettering of Si during growth 2-61005
 GaAs, semiinsulating, Cr gettering by Ne ion implantation, elec. activation of implanted Si 2-55993
 GaP:Cu, ion damaged, depth profiling of gettered Cu, SIMS study 2-98150
 III-V semiconductors, ion beam gettering, review 2-115310
 Si, back-surface damage regions, gettering of mobile O, defect stability, annealing and water vapour effect 2-56255
 Si, back-surface damage regions, gettering of mobile O, defect stability, O diffusion 2-56256
 Si, Czochralski crystals, intrinsic gettering study 2-76430
 Si, Czochralski grown crystals, microdefects and their appl. as gettering sites 2-91992
 Si, gettering of stacking faults and heavy metal impurities, appl. to semiconductor device and IC manuf. (Russian) 2-66019
 Si, ion beam gettering, review 2-115310

getters continued

- Si-O, diffusion and gettering studies by Cs/SIMS 2-104071
 T₂, liq. and solid acetylene getters 2-84638
 Ti gettering, comparison with Cr gettering for fusion reactors 2-79600
 Zr-Al, H₂, D₂ and T₂ solubility meas., getter appl. 2-86878
 Zr-Al alloy, compatibility in Tokamak, impurity adsorption on getters 2-69851

GFRP see glass fibre reinforced plastics

giant pulsations (earth) see micropulsations

giant resonances see nuclear collective states and giant resonances

giant stars

see also supergiant stars

- 0921-63, eclipsing halo X-ray binary, orbit, model and photometric/spectral obs. 2-84266
 2A 0526-328, X-ray cataclysmic variable, rotating white dwarf+subluminous red giant model 2-112506
 AGB stars in Magellanic Cloud seen as red variables, M giants or supergiants 2-117672
 λ Andromedae, RS CVn-like star, UV and optical spectrum obs. rel. to atmospheric inhomogeneities 2-58347
 Z Andromedae, UBVRJHKLMN photometry of symbiotic star 2-117686
 angular diameter measurements, two-colour lunar occultation obs. 2-79079
 R Aquarii, binary long period variable, model involving companion photosphere under circumstellar shell 2-58350
 R Aquarii, eclipsing symbiotic star, light curve, 1933 to 1981 and orbital period 2-100942
 R Aquarii, symbiotic star, discovery and photometry of elongated extension of stellar image 2-117685
 R Aquarii, symbiotic star, jet and assoc. radio source nature, obs. 2-94732
 R Aquarii and jet, supercritical accretion and nova outburst 2-100956
 e Aquilae, orbital parameters from spectroscopic/photometric data 2-94789
 AR / Pavonis, eclipsing binary, secondary giant and system nature, UBVR photometry during 1980 eclipse 2-100991
 asymptotic giant branch evolution, constraints from $\Delta Y/\Delta Z$ ratio and galaxies chemical evolution 2-74107
 asymptotic giant branch star, core C-burning model 2-58337
 asymptotic giant branch stars, evolution, mass loss, nucleosynthesis and convection 2-106708
 asymptotic giant branch stars, low mass evolution core, processes and dredge up 2-117668
 asymptotic giant branch stars of small core mass, C brought to surface by semiconvection 2-106699
 α Aurigae (Capella), X-ray spectrum obs. rel. to coronal struct. and UV emission 2-112485
 binary stars, late-type component detect. from space and ground-based spectrophotometry 2-100898
 binary stars with luminous cool primaries and hot companions, BVRI obs. 2-100985
 α Bootis, search for oscills., visible spectral obs. 2-68755
 α Bootis (Arcturus), anal. of spectroscopic determ. of stellar mass 2-68769
 α Bootis (Arcturus), temp. from model atmospheres 2-73973
 VY Canis Majoris, main line OH masers, VLBI obs. 2-63419
 Y Canum Venaticorum, semiregular variable, photometric obs., (1980 to 1981) 2-100946
 RS Canum Venaticorum stars and related objects, coordinated radio and H α survey 2-112503
 SX Cassiopeiae, Be+giant stars, eclipsing, spectral classification and continuum radiation origin, obs. 2-84263
 SV Centauri, interacting early-type contact binary, orbit elements and dimensions 2-100979
 UY Centauri, SC star, composition using model atm. and curve of growth 2-63412
 o Ceti, long period variable, diameter, TiO in atm. effects, visible obs. 2-63433
 o Ceti (Mira), 1965-1980 spectral line weakening 2-63429
 circumstellar shells, laboratory simulation of chemical evolution 2-106831
 circumstellar shells, obs. of new cyanoacetylene sources 2-68736
 FK Comae Berenicens, coalescing binary, mass transfer, H α obs. and anal. 2-117675
 compact clusters, theory for far-red objects in galactic centre 2-117759
 cool high polarisation stars, circumstellar dust extinction and luminosity 2-94858
 cool stars, chemical element abundance determ. from synthetic spectra of model atmospheres (Russian) 2-78970
 cool stars, mass loss spectral diagnosis 2-68743
 V460 Cygni, C star, determ. of ¹²C/¹³C and C/O ratios 2-63421
 CI Cygni, eclipsing symbiotic star; visual and photographic light curves, (1967 to 1981) 2-100949
 χ Cygni, Mira variable, time series IR spectroscopy 2-58348
 ϕ Cygni, spectroscopic binary, mass, orbit and luminosity, speckle interferometric obs. 2-79149
 CI Cygni, symbiotic star, H vars. and near IR spectrum 2-68789
 CI Cygni, symbiotic star, IR excess, UBVRJHKLMN obs. 2-106753
 CH Cygni, symbiotic star, spectroscopic and photometric behaviour in (1981) (Russian) 2-112470
 CH Cygni, UV spectrum during 1977-80 outburst 2-63436
 α Cygni (Deneb), generalized Compton effect in spectra 2-106696
 density functions for giant and dwarf stars in Milky Way field HD 95540, results from RGU photometry 2-58328
 diameter determ. by photometric obs. during lunar occultation (Japanese) 2-68627
 29 Draconis, probable new RS Canum Venaticorum star, BV photometry and light var. characs. 2-58405
 DK Draconis, RS CVn star, starspot evidence from photometric obs. 2-112487
 AG Draconis, symbiotic star nature 2-106739
 energy loss, light pseudoscalar particle role 2-84086
 evolution of red giant stars rel. to origin of planetary nebulae 2-68878
 evolved red giant, He layer source, flares leading to nebula ejection, planetary nebula form 2-63565
 extreme C stars, circumstellar dust shells morphology from optical spectropolarimetry 2-112447
 globular cluster giants used to determine Galaxy outer halo abundance 2-63269

giant stars continued

- globular cluster two dimensional classification from giant branches and metallicities 2-58415
 globular clusters metallicity scale from theoretical giant branches construction 2-112514
 HD 112127, K-type giant, Li abundance, model atm. anal., visible obs. 2-79088
 HD 122563, metal-poor giant star, thirteen-colour photometry rel. to N abundance and Rayleigh scatt. 2-73975
 HD 136905, new RS Canum Venaticorum variable star, spectroscopic and photometric obs. 2-58407
 HD 185151, RS CVn star, chromospheric activity from visible obs. 2-100975
 HD 199178 (FK Comae star), polarisation var. with rot. due to mag. active region 2-94731
 HD 227586, comparison star to V453 Cygni, variability due to close companions effects 2-63535
 HD 26337, new RS Canum Venaticorum variable star, spectroscopic and photometric obs. 2-58406
 HD 32918 and 36705, FK Comae stars identification, rot. broadening and spectra 2-100952
 HD 33708, binary star orbit 2-106805
 HD 65227, new short period Cepheid of very small amplitude, photometric obs. 2-63446
 HD 81410, new RS Canum Venaticorum binary star, BV photometry and orbital elements 2-79168
 HDE 283809, B-type star in direction of Taurus dark cloud, red giant companion model for IR excess (Russian) 2-112444
 HR 1883, spectroscopic binary, primary giant, orbit and mass 2-63528
 HR 2577, Be+giant stars, mass and orbit determ. 2-63532
 HR 4006 (G3.5 III), spectroscopic binary star, radial vel. orbit 2-106815
 HR diagram boundary between late type stars with/without high temp. outer atm. 2-89229
 Hyades K-type giant stars, ang. momentum history 2-63397
 hybrid atmosphere stars, red giants with double circumstellar lines 2-79092
 IC 4651 open cluster giants, reddening, distance and composition, DDO obs. 2-63543
 intermediate mass stars, mass loss effects 2-68772
 IRC+10216, C star, acetylene in shell, abundance from IR spectra 2-112458
 IRC+10216 (CW Leonis), circumstellar molecular emission and mass loss rate 2-68928
 IRC+10216 (CW Leonis), molecular line obs. 2-63435
 IRC+10²216, circumstellar shell NH₃ inversion lines, SHF obs. 2-63428
 IRC+10²216 (CW Leonis), HC₃N detection in cool C star 2-58369
 IRC 10216, shell CN abundance from EHF obs. 2-89326
 IR 10216 (=CW Leonis), shell 30 micron feature obs. 2-100937
 IRS 7, 12, 19, galactic centre red giant sources, 2 μ m spectra obs. 2-101091
 late type, density function in Centaurus region 2-63375
 late type, Mg emission variability interpretation with chromosphere and corona, UV obs. 2-68754
 late type, outer atmospheres nature and spectral features, UV obs. 2-84227
 late type, rapid mass loss onset, mag. field effects 2-79095
 late type, UV excess and Li content, model 2-58342
 late type giant stars, chromospheric Ca II and He lines, photoelectric measures 2-89250
 late type stars, spectral line asymmetries and convective velocities 2-68729
 LB 3459 O-type subdwarf eclipsing binary form. from mass exchange in first giant phase 2-63504
 e Leonis (HD 84441), IAU radial-velocity standard, search for radial vel. vars. 2-106713
 CW Leonis (IRC+10216), rot. temps. of cyanodiacetylene 2-63559
 CW Leonis (IRC 10216), circumstellar shell molecular abundance 2-63706
 LMC evolution from globular cluster motion, colour and comp., giants anal. 2-112547
 LMC Mira variables, pulsational props., JHK photometry/obs. 2-63455
 long-period variable stars, mass loss rates theory 2-94748
 long-period variables, theoretical growth rates, periods and pulsation const. 2-106715
 in M31, distrib. of Population II giants rel. to optical warp of galactic disc 2-68887
 M3 globular cluster, subgiant and horizontal branch sequences, widths and metallicity determ. 2-79173
 M5 and M71, globular clusters, giant stars HR diagram positron and mass loss, obs. 2-100999
 M-type giant stars, ang. dias. by lunar occultation technique 2-79078
 M-type giants and supergiants, radiative transfer in dust shells 2-89247
 M-type H α emission stars, discoveries on southern red-sensitive objective-prism plates 2-100761
 M-type stars, Li abundance determ. from visible obs. 2-84225
 Magellanic Cloud globular cluster extended giant branches, age from photometric anal. 2-89322
 in Magellanic Clouds globular clusters, late-type stellar content from IR and visual obs. 2-58414
 magnetic structure is cool giant stars, obs. of chromospheric and transit on region emission 2-89261
 mass loss from evolved stars, obs. of 17 stars in CO (2-1) line 2-58320
 Melotte 66, open cluster, chem. comp. from red giant model atm. and spectra 2-89316
 metal deficient red giants, C and N abundances 2-84233
 metal deficient stars, classification properties within Vilnius Geneva system 2-73955
 Mira, giant+white dwarf, components UV spectra, obs. 2-84252
 Mira variables, shell expansion vel. rel. to period and 1 μ m intensity var. 2-106729
 Mira variables in southern hemisphere, objective-prism discoveries 2-79077
 SY Muscae, symbiotic star, JHK magnitudes, (1982 February 4) 2-63450
 SY Muscae, symbiotic star brightening interpretation, UV spectra/continuum obs. 2-89270
 NGC 2243, open cluster, chem. comp. from red giant model atm. and spectra 2-89316
 in NGC 6752, globular cluster, origin of C and N vars. 2-68839
 O3 type stars, membership and spectrum 2-58343

giant stars continued

- OH 104.9+2.4 and 127.8-0.0, MERLIN obs. of OH/IR star shells 2-106740
 old red giants in Sculptor group of galaxies 2-58332
 RS Ophiuchi, recurrent nova; new brightening, visual magnitude obs., (1982 June 22 to July 21) 2-94754
 Pal 14 globular cluster giant branch colour magnitude relation 2-89315
 AR Pavonis, symbiotic eclipsing binary, UV spectrum during eclipse egress, obs. 2-73996
 γ Persei, spectroscopic possible eclipsing binary, orbit, mass, luminosity, speckle interferometry, obs. 2-79149
 AX Persei, symbiotic star, orbital period from light curve anal. 2-63461
 photosphere motion and circumstellar region gas motion, CO IR obs. 2-68771
 TX Piscium, C star, determ. of $^{12}\text{C}/^{13}\text{C}$ and C/O ratios 2-63421
 planetary nebulae progenitors, role of randomly emerging mag. flux in driving stellar winds 2-89335
 RX Puppis, symbiotic star, spectra anal. and circumstellar shell activity, UV obs. 2-89266
 red giant, population II, evolution, effects of mass loss 2-68750
 red giant envelope, planet accretion and transform. to low mass star, cataclysmic binary form. 2-112454
 red giant model atmospheres, results for C-enriched models 2-112426
 red giant stars, colour index-effective temp. calibration comparison with C stars 2-73969
 red giant stars, temp. classification from MK types based on TiO band strengths 2-94722
 red giant stars at galactic centre, JHK photometry 2-106707
 red giant stars evolution, stable numerical computation methods 2-100912
 red giant variable stars in 47 Tucanae, photometric obs. 2-79125
 red giants, molecules column densities, appl. to bands identification 2-100927
 red giants, winds and late evolution 2-100915
 red giants evolution to planetary nebulae, evidence from spectra 2-94711
 red giants in galactic bulge toward NGC 6522, luminosity and color-magnitude diagram 2-100924
 red giants in galactic clusters, radii and masses, UBVRi obs. 2-63399
 red giants in LMC globular cluster NGC 1806, distrib. 2-106824
 Red Rectangle, possible protoplanetary nebula, near-IR spectrum rel. to late-type component 2-106840
 red variable stars, catalogue of positions (*Russian*) 2-73986
 S and MS-type stars, discoveries on southern red-sensitive objective-prism plates 2-100761
 U Sagittae, Algol system mass transfer and subgiant radius var., uvbyl obs. 2-74027
 HM Sagittae, symbiotic star, parameters of dust shell and late-type star from IR obs. (*Russian*) 2-63465
 semiregular variable stars, short period, different type of maser star 2-63420
 solar neighbourhood giants, TiO band strength rel. to metal rich globular clusters 2-94720
 subgiant CH stars, s-process abundances, C/O ratios and evolutionary status 2-112451
 symbiotic star nature 2-106739
 symbiotic stars, main sequence star accreting from red giant scenario 2-84077
 symbiotic stars, props. of hot accreting white dwarfs in quasi-static approximation 2-106691
 symbiotic stars, UV spectra model atm. anal., companion nature and spectrum origin 2-68773
 α Tauri, ang. diameter and limb darkening from occultation obs. 2-100918
 20 Tauri, He weak star, abundance from model atm. anal. 2-73997
 in 47 Tucanae, origin of C and N vars. 2-68839
 UBVRi photometry of late-type stars 2-79090
 new variable stars in direction of Sagittarius bright cloud B, astrometric and photometric catalogue 2-112348
 visual binaries with late type giant primaries, uvby β photometry rel. to models/isochrones 2-100978
 Ba stars, spectral classification, visible obs. 2-63400
 C star in SMC globular cluster Lindsay 102, discovery and spectrum 2-63430
 C star shells, inverse greenhouse effect of dust/molecules 2-89280
 C stars, 3 μm absorpt. anal. circumstellar emission, IR spectra/photometry obs. 2-73974
 C stars, ang. dias. by lunar occultation technique 2-79078
 C stars, chromosphere nature from UV spectral obs. 2-100936
 C stars, circumstellar shells development rel. to optical obscuration and IR emission 2-94735
 C stars, cool, spectra, colours and HR diagram anal. 2-73969
 C stars, correl. with Ba stars 2-63400
 C stars, discoveries on southern red-sensitive objective-prism plates 2-100761
 C stars, IR excess and shell dust 2-112471
 C stars, model atmospheres 2-112426
 C stars, models of grain forming atm. and mass outflow 2-89267
 C stars, UV radiation intensity, visible obs. 2-58339
 C stars in Carina dwarf spheroidal galaxy, spectra and photometry rel. to galaxy age 2-68774
 C stars in Draco dwarf spheroidal galaxy, spectra and photometry 2-68723
 C stars scarcity brighter than $M_{\text{bol}} = -6.5$ in Magellanic Clouds, theory 2-117672
 FeO in late-type stars, unsuccessful search for J=5-4 transition 2-74045
 He star of 1 M_{\odot} , evolution in struct. and luminosity to white dwarf stage 2-68785
 OH Type II southern maser sources, IR counterparts 2-79243
 OH/IR maser stars, type II, search for IR counterparts, luminosities, IR obs. 2-58349
 OH-IR stars near galactic centre, appl. to delineation of Galaxy central bar struct. 2-63640
 TiO band strengths in cluster giants, model atmospheres 2-100998

Gibbs free energy see free energy

Gibbs function see free energy

Ginzburg-Landau theory

- A15 superconductors, atomic disorder rel. to superconductivity 2-56769
 Abiskosov vortex state near upper crit. field, Ginzburg-Landau theory 2-66726

Ginzburg-Landau theory continued

- Anderson model, extended periodic, coexistent ferromagnetism and supercond. 2-92811
 critical dynamics, operator expansions 2-101365
 critical Ginzburg-Landau param., Fermi surface anisotropy effect 2-104533
 Ising ferromagnet, dipolar, phase transitions with spontaneous modulation 2-104646
 Josephson effects, scattering model from Ginzburg-Landau eqns. 2-56795
 nematic liquid cryst., light scattering at uniaxial-biaxial transition 2-92197
 normal metal in contact with supercond., proximity effect 2-115953
 organic conductors and superconductors, review 2-115734
 quasi-one-dimensional superconductors, interchain coupling homogeneous coupling and cross linking 2-56752
 small- κ superconductors, energy gap and vortex creation energy 2-72126
 spin glass modelling with random Ginzburg-Landau functionals 2-66845
 superconducting alloys, Ginzburg-Landau functional calc. 2-92815
 superconducting corrugated film in transverse mag. field, vortex struct., upper crit. field increase, crit. currents (*Russian*) 2-56805
 superconducting cylinder, thin-walled, effect of impurities on mag. field penetration 2-110533
 superconducting microbridge, crit. current hysteresis, theory 2-72119
 superconducting phase transition, type I to type II, thermodynamic theory 2-82524
 superconducting ring struct., higher order crit. fields, nonlinear Ginzburg-Landau eqns. 2-77242
 superconducting thin film, penetration depth, expt., temp. depend. calc. 2-61650
 superconducting transition and electronic current in crystal containing screw dislocation (*Russian*) 2-66704
 superconducting transition temp. Ginzburg-Landau theory, Ising approx. 2-115943
 superconducting two-loop networks, mag. phase diagram 2-72111
 superconductivity for relativistic electrons 2-110529
 tunnel junctions, tunnelling, pair field susceptibility 2-98821
 type II superconductors, thermodynamic potentials 2-104552
 weakly ferromagnetic materials, inhomogeneous, mag. props. 2-77253
 Λ , impurity scatt. time, critical current density 2-82548
 ^3He , superfluid A-phase, boundary effects on helical textures 2-110076
 $^3\text{He-A}$, rotating, vortex lines, analytic and singular, order parameters and energies 2-56289
 NaHg₄, superconducting, Ginzburg-Landau parameter 2-87445
 Nb₃Ge films, critical mag. field temp. depend. (*Russian*) 2-61673
 NbSe₂, anomalous flux entry 2-87462

glaciology

- ice hydrate inclusions in fresh ice core from Dye-3, Greenland 2-100408
 Alaska permafrost and annual freeze-up studied by remote sensing 2-112171
 Antarctic Ice Sheet 2-88917
 Antarctic Ice Sheet model 2-88922
 Antarctica, ice movement and ice ablation rel. to discoveries of meteorites (*German*) 2-94662
 Antarctica, ice thickness and geodetic meas., maps 2-111981
 Antarctica (Dome C), snow accumulation and isotope composition 2-117368
 Antarctica and Southern Ocean, conf., Dec. 1979, Canberra, Australia 2-112648
 Antarctica ice core air bubble CO₂ conc. obs. 2-117481
 Chile, southern lake district, Pleistocene glaciation 2-78844
 climate model of ice ages involving ice latent heat 2-100538
 continental ice sheets melting rel. to sea level rise 2-83845
 dynamics of glaciers and large ice masses 2-100412
 East Antarctic ice sheet creep instability and surging lead to ice age initiation 2-63080
 flow law for polycryst. glacier ice 2-58094
 global meltwater spike from deglaciation, assessment 2-94395
 Greenland ice sheet, air bubble CO₂ conc. obs. 2-117481
 Hokkaido, Japan, Ice Age snow ablation due to climate change (*Japanese*) 2-94404
 early Holocene moraine in Enchantment Lakes Basin, North Cascade Range, Washington, regional significance 2-94406
 Huascarán col. N Peru mono-pulse radar soundings of ice 2-106152
 ice age glacial cycles, simple ice sheet model 2-63081
 ice age model with cryographic forcing and Earth rot. dynamics 2-63008
 ice pressure sensor embedded type, elastostatic anal. 2-63142
 ice sheets coupling with oceans, role in climate dynamics 2-58115
 ice shelf balances 2-106150
 Kylan Lake, Minnesota, Late Wisconsin climatic history from glacial and vegetational data 2-78845
 N Labrador Shelf, glacial chronology and sediment depositional environments 2-78640
 Lake Agassiz, Manitoba, relict ice scour marks and late phases 2-100383
 Late Palaeozoic gondwana glaciation in Oman 2-112134
 Laurentide ice sheet dynamics 2-88920
 Lowell Glacier, SW Yukon Territory, advances rel. to history of Neoglac. Lake Alsek 2-78707
 Meserve Glacier, Antarctica, crustally derived chem. species of local origin 2-83889
 Nehru glacier, Kashmir, radiometric age of snout ice 2-88923
 Peyto Glacier Basin, Alberta, operational net shortwave radiation model 2-94409
 polar ice caps, effects on global climate in two-dimensional energy balance model (*Chinese*) 2-88999
 pressure sensor, inclusion factors 2-63141
 Quelccaya Ice Cap, S Peru, mono-pulse radar soundings of ice 2-106152
 recessional moraines beneath Lake Superior, seismic refl. study and relation to regional deglaciation 2-94405
 W Siberia, glaciology rel. to natural gas hydrates in northern region 2-58041
 snow and ice research trends 2-63004
 South Pole, surface heat balance study 2-117422
 Spitsbergen and Arctic Quaternary glacio-isostatic events 2-100363
 subglacial lakes of Antarctica (*Russian*) 2-68396
 surface and seasonal wave motion on glaciers 2-100403
 Sweden, glaciation as cause of high rock stresses 2-106035
 tectonic structures and geomorphological structures formed by glaciers (*Russian*) 2-83819
 CO₂ content of glacier ice air bubbles, meas. method 2-117481

glass

for semiconductor glasses see amorphous semiconductors and chalcogenide glasses
 see also aluminosilicate glasses; amorphous semiconductors; borate glasses; chalcogenide glasses; germanate glasses; glass fibre reinforced plastics; glass fibres; glass industry; glass-metal seals; optical glasses; phosphate glasses; phosphosilicate glasses; vitreous state; vitrification
 alkali lead silicate, water content influence on viscosity, T_g , thermal expansion and hardness 2-93632
 alkali metal, mixed, structural features 2-71370
 alkali metal cation characteristic vibr. 2-57077
 alkali metal niobates, prep. using glass-ceramic methods 2-67279
 alkali silicate glasses, mixed alkali effect in phase separation 2-86882
 Auger signal decay due to Na desorp. and diffusion, theory 2-77634
 beads, US velocity meas. 2-114486
 bottles, anal. of symmetric fracture mirrors 2-67489
 breaking stress meas., implications for structural design 2-57570
 cellular, strength limiting defect detection by dielectric meas. 2-105392
 ceramic, fatigue anal. brittle materials using indentation flaws 2-83211
 ceramic glaze, CuO-doped, Pb^{2+} release, effects of alkaline substitution and addition of trivalent ions 2-77955
 ceramics, matrix composite with dispersed crystalline or glass particles, indentation hardness (Japanese) 2-67509
 ceramics, ramp-wave generation 2-71566
 chemical comp. rel. to struct. and phys. props. 2-91803
 coated by Sn and organic long chain molcs., chemical bond nature, Mossbauer spectra 2-99009
 commercial, microstruct. and rel. to workability 2-91804
 composite, porous glass, microcrack fusion dynamics obs. by acoustic emission 2-62337
 container glass, optical props. 2-61858
 cordierite based crystallised glass, damage resistance of fortified surfaces 2-111339
 crack initiation, acid-enhanced 2-77911
 defects, gauge invariance, homotopy theory 2-86577
 defects, transverse relax. time, sound vel. study 2-103654
 dielectric glasses, sp. ht. time depend. 2-115432
 dissolution of Na and Si, press. depend., nuclear waste disposal 2-104001
 electrode, with ionic and ionic-electronic conducting layers 2-105491
 epoxy resin-glass adhesion 2-78066
 flat, adhesion to polyvinylbutyral films, measured by shear and exfoliation methods 2-57590
 flat, coated, optical props. 2-61850
 flat, laminarity, effect of stirring glass melt 2-57325
 flat, optical props. 2-61857
 float, X-ray mirror reflectivities from 3.8 to 50 keV 2-84755
 float glass, effect of 5% hematite on devitrification behaviour, Mossbauer and X-ray study 2-109686
 fluorescence, anomalous homogeneous linewidths 2-57167
 fluoride glass: Co^{2+} (Ni^{2+}), ESR study (Chinese) 2-110622
 fluoride glass: Cr^{3+} (Mo^{3+}), ESR study (Chinese) 2-110621
 fluorohafnate glass, comparative study of vibrational charact. with fluorozirconate glass 2-57076
 fluorozirconate glass, comparative study of vibrational charact. with fluorohafnate glass 2-57076
 fracture under static load 2-99523
 fused, passivation characts., rel. to avalanche breakdown characts. of diode structs. 2-57501
 glass: Gd^{3+} , EPR with $g \approx 6.0$, reinterpretation 2-110636
 glass-ceramic, 14 MeV neutron irradiation effects 2-85208
 hemispherical shells, load-carrying capacity, shape imperfections influence 2-111253
 inorganic, vacuum durability, isotherm 2-72843
 inorganic glasses, Fe^{3+} and Mn^{2+} doped, glass transition, EPR obs. 2-92995
 interdiffusion of alkali and hydronium ions, partial ionisation 2-86947
 internal friction background, migration model 2-88124
 line defects and tunnelling modes 2-55852
 matrix composite with dispersed crystalline or glass particles, indentation hardness (Japanese) 2-67509
 matrix for radioactive waste disposal, surface effects on leaching 2-93649
 matrix particulate composites, micromechanics approach to indentation hardness 2-57364
 melting, by direct induction heating in ceramic container 2-59472
 melts, elec. resistivity calc. 2-56229
 mica reinforced cellular soda-lime glass composite, fabrication, mica dehydration effect 2-93485
 microballoons, coating technique using acoustic levitation 2-85244
 microballoons, D-T content, X-ray counting method 2-85242
 microsphere, Pt:O coating; DT induced disruption 2-115594
 microstrength meas. 2-93743
 microstructure, electron microscopy studies 2-91797
 microstructure, surface and bulk, conf., University Park, PA, USA (July 1981) 2-89438
 microstructure rel. to processing and props., review 2-91802
 Mossbauer studies of crystallisation, glass transition and struct. relaxation in nonmetallic glasses 2-104752
 multiphase microstruct., STEM and EELS anal. 2-91798
 NMR studies of struct. of nonmetallic glasses, review 2-104713
 non-Newtonian viscous flow obs. 2-92247
 nondispersive relax. processes 2-115148
 nonresonant EM and US absorpt., quantum theory 2-98205
 nuclear methods of analysis, conf., Balatonfured, Hungary (Aug. 1981) 2-101112
 obsidian artifacts fission track dating 2-73720
 optical bulk breakdown, statistical props. 2-104813
 optical properties, conf., Florence, Italy (April 1982) 2-58531
 oxide, metallic and semicond. glasses, local struct. theory and expt. data review 2-103631
 oxide glass and slightly nitrated glass melts, viscosity temp. relation 2-56238
 phase separated and stretched, anisotropy of second phase distrib. 2-57413
 polarisable doped ion diffusion behaviour during ion-exchange process 2-76738
 polymer glass, Case II diffusion theory 2-92253
 preparation from gels, conf., Padova, Italy (Oct. 1981) 2-74151
 PVC glass, vitrified at elevated press., nonequil. processes, conform. and enthalpic changes 2-86873
 quartz, static load effect on mech. relax. processes 2-62156
 quartz glass, absorption characteristics for γ -ray dosimetry 2-96322

glass continued

quasiparticle and defect theory, applicability 2-103660
 radiophotoluminescence dosimeter, absorbed dose comparison calc. by EGS code and kerma 2-96318
 radiophotoluminescent glasses, use in dosimetry of ^{252}Cf neutrons and γ -rays (Russian) 2-88668
 random network struct., neutron amorphography 2-91791
 random scatt. field polarisation struct. (Russian) 2-102718
 recombination luminescence, luminescence centres 2-87831
 saline leaching, ion bombardment enhancement 2-74811
 self-localisation of electron pairs in mobility gap of covalent glass, thermodynamic anal. 2-110306
 sheet, annealing, device for temp. meas. in elec. furnaces 2-53769
 sheet, fracture probability, estimated from strength of small specimens 2-72928
 shell, cylindrical, carrying capacity prediction from NDT under external press. 2-57573
 shell, sectional, with dismantable joint, strength and damage content 2-105431
 shell, spherical, breaking external hydrostatic press. prediction 2-97457
 Shirasu volcanic glass-CaO-MgO system, glass form. composition range, props. (Japanese) 2-88049
 silica, crack blunting in water and silicic acid soln. 2-111276
 silicate, commercial, glass, relation of K_{IC} to median crack indentation load in Vickers indentation (Japanese) 2-67508
 silicate float glass, ultracold neutrons, specular refl. coeff. (Russian) 2-115105
 silicate glass: Nd^{3+} , radiative and nonradiative props. 2-61951
 silicate glass, interdiffusion of alkali and hydronium ions, partial ionisation 2-86946
 silicate glass, prep. from colloidal gels by sintering 2-72663
 silicate glass, solid state nuclear track detectors for fission fragments, detection efficiencies 2-70075
 silicate glass, thermally stimulated currents and alkali-ion motion 2-57012
 silicate glasses, destruction by laser beam and compressive stress (Russian) 2-99562
 silicate glasses, Raman spectra, curve fitting 2-116161
 silicate glasses, ultimate strength rel. to other mech. and thermal characts. 2-88177
 single-component, struct. in glass transition region, temp. depend. 2-103656
 soda glass, thermal diffusivity of flat plate specimen 2-71742
 soda glass detectors, ^{252}Cf fission fragment tracks development, etching conditions study 2-70085
 soda glass nuclear track detectors, etchant development 2-70086
 soda lime, surface crack obs. with scanning acoustic microscope 2-57552
 soda lime glass detectors, etched track profiles, SEM studies 2-70091
 soda-glass detector, mag. field effects on fission track recording characts. 2-70087
 soda-lime in $AgNO_3$ melt, low-loss multimode opt. waveguides appl. 2-86106
 sol-gel method and prep. from melt, comparison 2-77791
 sorption of water vapour 2-110147
 spinodal decomp., stochastic theory of scatt., struct. and autocorrel. function 2-92211
 steel-glass, point contact at heavy load, elastohydrodynamic lubrication 2-91339
 strengthening, by combined etching and ion exchange 2-72860
 structural relaxation calc. when no thermomechanical simplicity 2-103663
 structure, contrib. of W.H. Zachariassen 2-91787
 structure, quest for conceptual model 2-55861
 structure and diffusion, mol. dynamics calc. 2-91789
 structure modelling, triangle r_{fcs} , extended Zachariassen schematics 2-91788
 substrate, factors affecting film formation (Russian) 2-67586
 substrate, with thin electroconducting oxide layers, electrochemical etching (Polish) 2-88248
 surface region, H, Na, Al conc. profile meas. by reson. nucl. reactions 2-99720
 surfaces, ion beam effects, XPS study 2-99252
 surfaces, review 2-92318
 tensile strength, determ. by radial compression methods 2-67698
 toughened, residual stress meas. using magnetophotelasticity 2-109257
 track detectors, low energy ion implantation, chem. reactivity 2-70089
 track detectors for nuclear reactor flux meas. 2-69769
 track recorder, energy resolution improvement 2-70084
 unified model of kinetic treatments of glass transition and viscoelastic props. 2-66221
 Vycor, porous, low temp. thermal cond. 2-56270
 waste disposal glass, fracture surface energy, temp. effect 2-54495
 window, elec. cond. relaxation, rel. to viscosity in glass-transition interval 2-71988
 windows, double- and triple-layer, computation of sound transmission loss 2-70762
 X-ray microprobe analysis, limits of resolution and detectability, energy dispersive system 2-88393
 Al-glass composite, prep. and mech. props. 2-57319
 AlF_3 - YF_3 - GdF_3 - CaF_2 - SrF_2 - BaF_2 - NaF_6 - PF_6 (AsF_6) glass, optical and thermal props. 2-115145
 Al_2O_3 - CaO melt, solidification and vitrification 2-72686
 BaF_2 - MnF_2 - RF_3 ($R = Dy, Ho, Er, Tm, Yb, Lu, Y$), glass form., quenching, IR study (French) 2-91808
 BaF_2 - ThF_4 - ZnF_2 - YbF_3 glasses, stabilization and IR transmission, DTA study 2-97929
 BeF_2 - NdF_3 based glasses, absorpt. and emission spectra of Nd^{3+} , at. struct. computer simulation 2-57149
 Ca-Si- Al_2O_3 -N system, study of Ca-Si- SiO_2 -AlN section (French) 2-57339
 Ca(NO_3)- KNO_3 glasses, low temp. thermal props. rel. to glass transition temp. water doping effect 2-56271
 Ca(NO_3)- KNO_3 glasses, sp. ht. and glass transition temp. charges upon doping 2-81979
 CaO-MgO- SiO_2 -(TiO₂) diopside glasses, nucleation kinetics, small-angle X-ray scatt. study 2-115141
 CaO- SiO_2 -MnO melt, viscosity and IR spectra obs. 2-61184
 Fe doped, impurity clustering, relax. Mossbauer studies 2-104753
 FeSiO₂-MnSiO₂, metasilicate glass, crystn. high-resolution EM 2-97936
 HfF₃- BaF_2 - LaF_3 -(ThF_4) glasses, polarised Raman scatt. study 2-57086
 KNO₃, polyvyst., prep. using glass-ceramic methods 2-67279
 K₂O- SiO_2 glasses, conc. fluctuations and ionic cond. props. 2-92261
 K₂O- SiO_2 -TiO₂ glass, photoelectron spectra (Japanese) 2-87954

glass continued

- K₂SO₄-Na₂SO₄-ZnSO₄ glass, struct., X-ray diffr. study 2-97933
 K₂SO₄-ZnSO₄-Cu²⁺(Mn²⁺), glass, dopant site symmetry, ESR study 2-98947
 Li₂O-K₂O-SiO₂ glass microstruct., laser scatt., small angle X-ray scatt. and TEM 2-91799
 Li₂O-Na₂O-SiO₂, static load effect on mech. relax. processes 2-62156
 Li₂O-Na₂O-SiO₂ glass, polarisation and cond. mechanism 2-87656
 Li₂O-Na₂O-SiO₂ system, immiscibility isotherm 2-86882
 Li₂O-Na₂O-2SiO₂ glasses, thermally stimulated currents 2-104391
 Li₂O-SiO₂ glass, phase separation, Raman spectroscopy study 2-92212
 Li₂O-SiO₂ glasses, conc. fluctuations and ionic cond. props. 2-92261
 Li₂O-SiO₂ system, corrosion behaviour in water, ESCA obs. 2-93656
 Li₂O-2SiO₂ glass, polarization activation energy evaluation from TSD currents 2-99024
 Mg-Si-O-N glass, dissolution kinetics of β -Si₃N₄ 2-88071
 MgSiO₃-MnSiO₃, metasilicate glass, crystn. high-resolution EM 2-97936
 Na₂O-CaO-SiO₂ glass microstruct., laser scatt., small angle X-ray scatt. and TEM 2-91799
 Na₂O-CaO thermally toughened and untoughened, crack initiations at microindentations 2-105285
 Na₂O-CaO-SiO₂, chemically toughened, crack evolution in Vickers indentation 2-88169
 Na₂O-CaO-SiO₂, proof testing in heptane 2-111280
 Na₂O-CaO-SiO₂, scored glass, fracture toughness 2-83208
 Na₂O-CaO-SiO₂ glass, test pieces with controlled flaws, uniaxial and biaxial strength comparison 2-57414
 Na₂O-CaO-SiO₂ glass, irradi., failure, micromechanical model (*Russian*) 2-77947
 Na₂O-CaO-SiO₂ glass, bonding props., XPS study 2-93367
 Na₂O-CaO-SiO₂ glass, leaching characs., surface roughness and surface area effects 2-93650
 Na₂O-CaO-SiO₂ glass, electron bombardment, Na atom prod. absence XPS study 2-98160
 Na₂O-CaO-SiO₂ glass melts, oxidation state and O activity 2-92233
 Na₂O-CaO-SiO₂ glass rods, fatigue props., Vickers indentation flaws 2-99544
 Na₂O-CaO-SiO₂ glass:Cu,Cr,Er, energy transfer from Cu and Cr to Er 2-99176
 Na₂O-CaO-SiO₂ system, water content influence on viscosity, T_g, thermal expansion and hardness 2-93632
 Na₂O-CaO-SiO₂:UO₂²⁺ glass, energy levels, absorpt. and fluoresc. study 2-77565
 Na₂O-Fe₂O₃-SiO₂, surface dealkalisation, role of iron oxides 2-73016
 Na₂O-FeO-SiO₂ simulated waste glass, chem. durability, press. effects and surface layer form. 2-93651
 Na₂O-K₂O-SiO₂ system, immiscibility isotherm 2-86882
 Na₂O-Li₂O-SiO₂, energetics, from acoustic meas. 2-71590
 Na₂O-M₂O₃-SiO₂ (M=Ga, In, Sc, Y, La), glass transition temp., relation to glass comp. 2-66219
 Na₂O-PbO-SiO₂:Fe³⁺ glass, spectroscopic behaviour of Fe³⁺ 2-77554
 Na₂O-SiO₂, energetics, from acoustic meas. 2-71590
 Na₂O-SiO₂, mech. props., finite element method calcs. 2-111232
 Na₂O-SiO₂, soda glass detector, fission fragment tracks, efficiency calibration and etchant temp. effect 2-96390
 Na₂O-SiO₂ and Na₂O-CaO-SiO₂ systems, corrosion behaviour in water, ESCA obs. 2-93656
 Na₂O-SiO₂ gels prep. for gel-glass process, action of atmospheric agents 2-76317
 Na₂O-SiO₂ glass, abrasive wear, scale effect 2-67563
 Na₂O-SiO₂ glass, phase separation, Raman spectroscopy study 2-92212
 Na₂O-SiO₂ glasses, conc. fluctuations and ionic cond. props. 2-92261
 Na₂O-SiO₂-TiO₂ glass, photoelectron spectra (*Japanese*) 2-87954
 Na₂O-SiO₂ glass, dynamic fatigue study using small scale indentation flaws 2-88186
 Na₂O-3SiO₂ glass, HF-H₂O impregnated, elec. cond. 2-86925
 Na₂O-2SiO₂ glass, Fe³⁺ coordination number 2-97931
 Na₂O-3SiO₂ glass, water content effect on transport 2-56246
 Na₂O-3SiO₂ glass, water content effect on chemical durability 2-77962
 Na₂SO₄-K₂SO₄-ZnSO₄ glass, reorientation, IR band-shape anal. 2-67065
 Na₂Si₂O₅, CC Na self-diffusion, correl. factors calc. 2-110036
 Nd³⁺:BiCl₃ glass, stimulated emission cross-sections meas. 2-90899
 Nd³⁺:oxide (halide) glasses, stimulated emission cross-sections meas. 2-90899
 PbF₂-GaF₃-ZnF₂(MnF₂):Er³⁺, fluoride glasses, optical transition probabilities, Judd-Ofelt method 2-61960
 PbO-SiO₂, effect of P₂O₅ on crystallisation 2-109683
 PbO-SiO₂ glass, structural relaxation calc. when no thermorheological simplicity 2-103663
 PbO-SiO₂, IR polishing process 2-67584
 PbO-SiO₂, reduced surface layers, slow-electron spectroscopic study 2-105017
 PbO-SiO₂ (40 wt.%) glass, Narayanaswamy struct. relaxation model, expt. check 2-103659
 PbO-SiO₂ binary glass systems, fracture toughness and crack tip flow mechanism 2-105282
 PbO-SiO₂ glass, crystn. kinetics, 500° to 725°C 2-86574
 PbO-SiO₂ glass, electron and gamma irradiated, charge trapping and release 2-57013
 PbO-SiO₂ glass, reduced surface layers, struct., resist. and electron emission props. 2-105016
 PbO-SiO₂ glasses, leaching mechanism in acid soln. 2-93646
 PbO-SiO₂ system, glass and cryst. phase struct., XPS study 2-87943
 (PbO)_m-SiO₂ glass, M=1, 2, 4, struct. and devitrification, ²⁹Si NMR study 2-110655
 Rb₂O-SiO₂ glasses, conc. fluctuations and ionic cond. props. 2-92261
 ScF₃-BaF₂-YF₃(ThF₄)(NaF), glass, phys. props. (*French*) 2-91809
 ScF₃-ThF₄-YF₃ glass, phys. props. (*French*) 2-91809
 SeO₂-TeO₂-M₂O_m (M₂O_m=V₂O₅, MoO₃, Nb₂O₅, Sb₂O₃, La₂O₃), glass formation at high pressure 2-86576
 SeO₂-V₂O₅-MoO₃ glass, formation at high pressure 2-86576
 SiO₂ based matrix for solid state storage of radioactive Kr 2-54494
 SiO₂, commercial glass, critical load for median crack initiation in Vickers indentation 2-111279
 SiO₂ glass, OH ion distrib. profile, laser absorpt. meas. 2-61932
 SiO₂ glass, phonon spectra 2-56138
 SiO₂ glass, sol-gel process prep. 2-77792
 SiO₂ glass, thermodynamic, struct. and dynamical props., mol. dynamics study 2-76321
 SiO₂ glass film, CVD, step coverage 2-98475

glass continued

- SiO₂ glasses prep. by sol-gel process 2-77795
 SiO₂-based glass ceramics, neutron irradiation effects 2-85209
 SiO₂-CaO-Na₂O glass surfaces, interdiffusion of H⁺ and alkali ions, elec. resist. study 2-110034
 SiO₂-Li₂O-Li₂SO₄ struct. and prep., elec. cond. study 2-65870
 SiO₂-Na₂O (Li₂O)(K₂O) glasses, X-ray irradi.-induced defects, ESR study 2-98960
 SiO₂-Na₂O-CaO-BaO(ZnO) glasses, microindentation hardness 2-93582
 SiO₂-Na₂O-CaO-MgO-R₂O₃ (R=rare earth) glass struct., diff. methods anal. 2-55859
 SiO₂-Na₂O-CoO-V₂O₅ glass, Co²⁺ spin-lattice relax. by V⁴⁺ EPR study 2-72335
 SiO₂-PbO-Bi₂O₃ glass, surface cond. meas. 2-87363
 SiO₂-TiO₂, X-ray spectral study of chem. bond character 2-105007
 SiO₂-TiO₂ gels and glasses, mixed bonds, spectrosc. obs. 2-76314
 SiO₂-TiO₂ glasses prep. by sol-gel process 2-77795
 ThF₄-BaF₂-MnF₂, spin glasses, AC susceptibility, local anisotropy 2-92876
 TiO₂-SiO₂, ramp-wave generation 2-71566
 TiO₂-SiO₂ gel prep. to obtain high homogeneity glasses by low temp. synthesis 2-77796
 YIG phase containing glass ceramics, prep. and mag. characs. 2-67278
 ZnCl₂:Co²⁺, absorption spectra of Co²⁺ meas. at solid-liquid transformation 2-104924
 ZnF₂-BaF₂-DyF₃(HoF₃), spin glasses, AC susceptibility, local anisotropy 2-92876
 ZnO-containing glass, X-ray microprobe analysis, limits of resolution and detectability, energy dispersive system 2-88393
 ZrF₄-BaF₂-LaF₃(ThF₄) glasses, polarised Raman scatt. study 2-57086
 ZrF₄-BaF₂-(BaCl₂), glasses, mixed cond. as function of temp. 2-115832
 ZrF₄-ThF₄-YF₃(LuF₃)(ScF₃)(AlF₃), glass forming area, thermal expansion and UV absorption edge (*French*) 2-115146
- glass fibre reinforced plastics**
 chopped strand mat glass reinforced polyester resin, long term strength in water 2-116587
 cloth fibre reinforced plastic, random loading, fatigue life, stress amplitude evaluation (*Japanese*) 2-57466
 dynamic mechanical testing appl. 2-78023
 electrical insulation material, liq. medium influence on strength and deform. props. 2-99576
 epoxide matrix, cylindrical shells, deform. and fracture under internal pulse load 2-83225
 epoxide-phenolic varnish with glass cloth reinforcement, ultimate resist. under proportional deformation, conditions 2-62211
 epoxy matrix, E and S type fibres manufactured by drawing in different environments, loss of load transfer, direct comparison 2-88131
 epoxy matrix, elec. props. effect of water absorpt. 2-67573
 epoxy matrix, fracture behaviour 2-72809
 epoxy matrix, fracture energy maps, hygrothermal ageing effects 2-57449
 epoxy matrix, fracture toughness of short fibre composites in modes II and III 2-67484
 epoxy matrix, fully and partially loaded, rate sensitive tensile impact props., test system 2-67684
 epoxy matrix, laminate, failure under dynamic torsional loading 2-88194
 epoxy matrix, laminates, ballistically impacted, delamination-crack propag. 2-83207
 epoxy matrix, magnet coil insulating materials, irradiation studies 2-80181
 epoxy matrix, short fibres, matrix effect on fracture toughness 2-62205
 epoxy matrix, var. in acoustic emission 2-72916
 epoxy matrix laminate, AE energy anal. of damage 2-62291
 epoxy resin matrix, destruction obs. by mechanoluminesc. 2-88145
 epoxy resin matrix, gripping and end reinforcement, stress anal. 2-55440
 epoxy-phenolic, long-cycle fatigue under soft and stiff load 2-83224
 fatigue life, random loading (*Japanese*) 2-72813
 fluorocarbon resins, glass fibre reinforced 2-72665
 graphite/glass fibre reinforced composites, hybrid effects in bending stiffness 2-88132
 graphite/glass fibres in plastic resin matrix, strong, stiff and thermally stable 2-62096
 hereditary-elastic reinforced plastic, short beam bending 2-55443
 interface strength, temp. depend. (*Japanese*) 2-57419
 laminates, in-plane stiffness and strength props. 2-67409
 laminates, nondestructive inspection 2-67672
 mechanical properties, low temp. 2-77864
 nondestructive US testing technique using echo signals 2-67674
 orthogonally reinforced, fracture anisotropy under low-cycle loading 2-116539
 photo-orthotropic elasticity for stress analysis 2-103128
 plate, multipurpose optimisation 2-60426
 polyester matrix, dynamic fracture toughness (*Japanese*) 2-111284
 polyester matrix, long term strength in dil. H₂SO₄ 2-88196
 polyester resin, water sorption and mech. props. 2-116522
 polyester resin matrix, flexural stress relaxation (*Japanese*) 2-111219
 polyester resin matrix, water and H₂SO₄ influence, determ. by radioactive tracer technique (*German*) 2-67593
 polyester resin sheet moulding cpd. matrix, imperfection monitoring by NDT 2-78042
 polyethyleneterephthalate matrix, plates struct. invest. 2-62217
 polyurethane transparent matrix, glass rod pull out problem 2-97467
 rubber matrix, short glass fibres, failure surfaces, SEM study 2-67499
 shear crack propag., acoustic emission monitoring 2-88317
 sheet moulding compounds, fracture behaviour, influence of constituents on mech. props. 2-67481
 sheet moulding compounds, fracture behaviour under tensile load 2-67480
 shell, cylindrical, supporting power under axial compression, prep. influence 2-60476
 shell, cylindrical, triple-layer, dynamic stability 2-114710
 shell, three-layer fibreglass base, axisymmetrically heated, stability loss 2-60436
 strength anisotropy 2-67357
 stress corrosion cracking, design considerations 2-116564
 styrene-acrylonitrile thermoplastic melts, glass fibre filled, flow behaviour (*German*) 2-70887
 terephthalate-polyester filled resin matrix 2-116497
 textolite, organic/glass fibre reinforced hybrid, strength anisotropy 2-67357

glass fibres

see also *fibre optics; optical fibres*

- bending strength meas. using transverse bend method 2-105263
composite, glass fibre reinforced cement, strength assessment of aged fibres 2-99513
E-glass fibres, struct. sensitive meas. rel. to prep. conditions 2-93484
fluoride glass optical fibre, low loss, build-in casting prep. 2-60266
IR waveguide materials, vitreous materials exam. for suitability 2-91050
multilayer cylindrical struct. for fibres, optical fibres and cables, thermoelectric stress 2-65396
optical fibres, long high-strength with low loss, modified CVD fabrication 2-91096
optical fibres, long length, failure prediction based on proof testing 2-97242
optical soliton amplification and reshaping 2-97210
radioactive labelling with ^{99m}Tc 2-117086
reinforced cement, dimensional stability 2-67725
splicing method 2-97237
strength distrib., degree of expt. self effect on flaws (*Japanese*) 2-57420
strength of single fibres in water, E-type glass 2-83263
substrate, deposition of conducting Co film, growth rate rel. to substrate temp. 2-111055
suspensions, viscosity 2-65555
vacuum durability, isotherm 2-72843
 Al_2O_3 -doped silica-based optical fibres, VAD fabrication 2-114476
As-S chalcogenide glass fibres, optical transmission loss spectra, IR region 2-57075
 GeO_2 -Sb fibre prep. by vapour-phase axial deposition 2-81088
 $\text{Li}_2\text{O-P}_2\text{O}_5$ glass fibres, mech. props. and struct. aspects rel. to drawing process 2-93608
Nd:glass fibre laser, lasing kinetics in periodic giant pulse regime 2-114289
Nd:glass fibre lasers, generation kinetics 2-96959
 SiO_2 glass fibres, sol-gel process prep. from silicon tetrachloride 2-77793
 $\text{SiO}_2/\text{GeO}_2$ -core step-index multimode fibres, OH-absorption 2-114455

glass formation see *vitrification***glass industry**

- IR polishing process for PbO-SiO_2 glass articles 2-67584
optical glass, industrial high-speed stirring method development for founding in ceramic containers 2-75738

glass-metal seals

- instrument sight glass mounting using VITEF-1 sealant 2-70717
 $\text{CaO-Al}_2\text{O}_3$ glass t seals for high temp. integrated thermionic cets. 2-84635
 $\text{Li}_2\text{O-ZnO-SiO}_2$ glass ceramic tube t seals for high temp. integrated thermionic cets. 2-84635
Mo-cup/quartz seals for lamps and lasers 2-79596

glass transition (glasses)

see also *vitrification*

- absorption spectra of Co^{2+} meas. at solid-liquid transformation 2-104924
chalcogenide glass, induced transitions, one-dimens. model, temp. softening (*Russian*) 2-61143
chalcogenide glasses and amorphous semicond., at. defects, review 2-65869
characterisation, dimensionless parameter, first-order kinetics 2-66220
chlorobenzene/cis-decalin mixtures, mol. rot. in glassy, amorphous, and cryst. phases, NMR and DSC study 2-103630
continuous cooling approx. 2-55855
dibutyl phthalate, liq. glass transition, diffusion, EPR study 2-104704
1,2-difluorotetrachloroethane, Brillouin scatt. in glass transition region 2-61915
fluorophosphate glass: Co^{2+} , absorption spectra of Co^{2+} meas. at solid-liquid transformation 2-104924
glassy state struct. calcs. 2-97935
glycerol, glassy, NMR hole burning slow mol. rot. study 2-104722
graphite- SbCl_5 intercalation cpd., stage-2, commensurate-to-glass phase transition, electron microscopy study 2-110004
inorganic glasses, Fe^{3+} and Mn^{2+} doped, glass transition, EPR obs. 2-92995
melts, glass transition temp. and flow behaviour, conc. effects 2-71683
metallic glasses, diffusion rates of Au 2-104057
metallic glasses, plastic deform. near glass transition, amorphous soap bubble raft model 2-98391
metallic glasses, thermal transform., composition effects, DSC obs. 2-81962
Mossbauer studies of crystallisation, glass transition and struct. relaxation in nonmetallic glasses 2-104752
quasiparticle and defect theory, applicability 2-103660
Se-Sn-As system, chalcogenide glasses, glass transition temp., mech. and elastic props. 2-109687
silicate glass, water content influence on viscosity, T_g , thermal expansion and hardness 2-93632
silicate glasses, ultimate strength rel. to other mech. and thermal characts. 2-88177
single-component, struct. in glass transition region, temp. depend. 2-103656
soft-core system, free volumes, liquidlike clusters, liq.-glass transitions 2-86871
structure and diffusion, mol. dynamics calc. 2-91789
thermal lens formation by radiation at softening temperature (*Ukrainian*) 2-114672
unified model of kinetic treatments of glass transition and viscoelastic props. 2-66221
window glass, elec. cond. relaxation, rel. to viscosity in glass-transition interval 2-71988
 $\text{AgI-Ag}_2\text{B}_2\text{O}_7$ vitreous electrolytes, struct. and ion dynamics 2-61197
 $\text{AlF}_3\text{-YF}_3\text{-GdF}_3\text{-CaF}_2\text{-SrF}_2\text{-BaF}_2\text{-NaF}_6\text{-PF}_6(\text{AsF}_6)$ glass, optical and thermal props. 2-115145
 Al_2O_3 , shock loaded ceramic, glass transition 2-71647
As- Se_2 -As- Te_2 -AsSe-AsTe, As Se_2 -S, glass point, activation energy of elec. cond. calc. 2-76312
B- O_3 glasses and melts, microstruct., X-ray scatt. study 2-91794
CC AsSe, glassy state, high temp. thermal capacity, 300-600K 2-71665
 $\text{Ca}(\text{NO}_3)_2\text{-KNO}_3$ glasses, low temp. thermal props. rel. to glass transition temp., water doping effect 2-56271
 $\text{Ca}(\text{NO}_3)_2\text{-KNO}_3$ glasses, sp. ht. and glass transition temp. charges upon doping 2-91799
 $2\text{CaO.K}_2\text{O.xFe}_2\text{O}_3.(5-x)\text{P}_2\text{O}_5$ glass, elec. cond., temp. depend. anomaly 2-56580
 $\text{Cu}_{60}\text{Zr}_{40}$, amorphous, initial quench effect on thermal behaviour 2-91813

glass transition (glasses) continued

- FeSiC metallic glass, creep and homogeneous plastic flow 2-105257
 $\text{GeO}_2\text{-Bi}_2\text{O}_3\text{-Ti}_2\text{O}_5$ glass formation, optical appl. 2-77847
 $\text{GeSe}_2\text{-As}_2\text{Se}_3$ glass, glass point, activation energy of elec. cond. calc. 2-76312
 $(\text{KBr})_0(\text{KCN})_{100}$, permittivity, glass transition 2-72402
 $(\text{KBr})_{1-x}(\text{KCN})_x$, orientational freezing freq. depend. 2-71382
 $\text{K}_2\text{O-B}_2\text{O}_3\text{-SiO}_2$ glass, temp. derivative of elec. resist. near transition temp. 2-76730
 $\text{Li}_2\text{O-LiCl-B}_2\text{O}_3$ system glasses, struct., glass transition and density meas. 2-91793
 MgO , shock loaded ceramic, glass transition 2-71647
 $\text{Na}_2\text{O-B}_2\text{O}_3\text{-SiO}_2$ glass form. kinetics, from alkoxides in soln. 2-76316
 $\text{Na}_2\text{O-B}_2\text{O}_3\text{-SiO}_2\text{-Nb}_2\text{O}_5$ glass, glass props., Nb_2O_5 influence 2-71648
 $\text{Na}_2\text{O-M}_2\text{O}_3\text{-SiO}_2$ ($\text{M}=\text{Ga, In, Sc, Y, La}$), glass transition temp., relation to glass comp. 2-66219
 $\text{Na}_2\text{SO}_4\text{-K}_2\text{SO}_4\text{-ZnSO}_4$ glass, reorientation, IR band-shape anal. 2-67065
 $\text{PbO-B}_2\text{O}_3$ glasses, microstruct. characts. by phys. prop. meas. 2-91800
 PbO-SiO_2 (40 wt.%) glass, Narayanaswamy struct. relaxation model, expt. check 2-103659
 PbTiO_3 , amorphous ferroelec. time depend. dielec. const. during annealing 2-109676
 $\text{Pd}_{48}\text{Ni}_{132}\text{P}_{20}$ metallic glass, struct. relaxation mechanism 2-55856
 $\text{Rb}_1\text{-(NH}_4)_2\text{H}_2\text{PO}_4$, mixed crystals, competing structural orderings and transitions to glass 2-56192
Sb-Zn, amorphous, form. and crystn. 2-76322
 $\text{ScF}_3\text{-BaF}_2\text{-YF}_3(\text{ThF}_4)(\text{NaF})$, glass, phys. props. (*French*) 2-91809
 $\text{ScF}_3\text{-ThF}_4\text{-YF}_3$, glass, phys. props. (*French*) 2-91809
 SiO_2 glass, thermodynamic, struct. and dynamical props., mol. dynamics study 2-76321
 $\text{SiO}_2\text{-B}_2\text{O}_3$ system, glass form. by gel process from metal alkoxides 2-88048
 $\text{SiO}_2\text{-Li}_2\text{O-Li}_2\text{SO}_4$, struct. and prep., elec. cond. study 2-65870

glass transition (polymers)

- amorphous, PVT relations, T_g and mol. parameters, glassy and melt states 2-115388
aromatic copolymers containing rigid binaphthyl units, mech. and thermal props. 2-67452
butadiene-styrene block copolymers, strain-strength props. under uniaxial stretching (*Russian*) 2-67466
composition-dependent glass-transition temperatures and copolymers 2-103994
elastomer-filler interaction, filler effect on viscosity 2-57390
entropy of polymer chains on square and cubic lattices, lower bounds calc. 2-110013
epoxy binders, strain-strength props. above glass transition temp. 2-83186
epoxy film, Fourier transform IR spectra using heated ATR, for T_g determ. 2-116167
homogeneous interpenetrating polymer networks, thermal and rheological props. 2-55452
inhomogeneous dissipative structure using variational principle of nonequil. thermodynamics 2-61142
latex particles, static and dynamic light scatt. behaviour of regularly branched chains 2-93819
lignins, amorphous, X-ray diffractograms, temp. depend. 2-76327
low-molecular cpds. in polymers, translational and rot. diffusion coeffs., rel. to glass transition temps. (*Russian*) 2-76723
methacrylic and epoxy networks, thermal and rheological props. 2-55452
nonequilibrium behaviour of polymer glasses, review 2-60892
nonequilibrium properties of polymer glasses, conf., Las Vegas, USA (Aug. 1980) 2-58535
nylon 6/inorganic salt fiber, struct. and dynamic mech. behaviour, drawing effect 2-109695
oligomer-polymer composites, phase struct. and props. during curing (*Russian*) 2-111135
oriented flexible polymers, glass transition (*Russian*) 2-66225
partially cured, glass transition temp. as nonequil. parameter, effect on dynamic mech. response 2-66224
PET films, physical ageing in glassy polymer, IR spectra 2-103667
PMMA, low temp. glass transition temps., Brillouin scatt. obs. 2-61140
PMMA, microdeformations in glass transition region, electron microscopic study 2-109887
poly(bisphenol-A carbonate), effects of thermal history, crystallinity and solvent on transitions and relaxs. 2-86872
poly(di-cyclo-octyl itaconate), sub-glass transition events detection using differential scanning calorimetry 2-92200
poly(ethylene terephthalate-co-p-oxybenzoate), phase transitions 2-98279
poly-n-butyl methacrylate, laser light scatt. obs. in glass transition regime 2-67070
1,2-polybutadiene characterisation above glass transition temp. 2-72774
1,2-polybutadiene viscofluid, strength characterisation in uniaxial extension 2-72829
polyester resin, styrene-crosslinked unsaturated, dynamic mech. relax., styrene ring substituents effect 2-109989
polyester/chlorinated PVC blends, miscibility study by calorimetric glass transition temp. meas. 2-92219
polyether-polyurethane zwitterionomers, phys. props. and phase segregation 2-67451
polyethylene, chlorinated, as impact modifier for PVC, mech. and dielec. relax. obs. 2-81692
polyethylene, effect of neutron irradiation on glass transition temp. 2-76678
polyethylene, linear, amorphous, annealing effects in films 2-72726
polyethylenes, linear and branched, β -transition anal. by C-13 NMR 2-98886
polyethyleneterephthalate fibres, undrawn, crystn., effect of mech. stress 2-65874
polymer, glassy, approach to thermodynamic equil., improved calorimetric procedure 2-89717
polymer, high-performance, adhesive fracture energy, fracture mech. approach, T_g and relax. processes depend. 2-11403
polyolefin-polystyrene blends, thermomech. anal. 2-77801
polystyrene, atactic, multistage ultradrawing by solid-state coextrusion 2-72725
polystyrene, high-pressure CO_2 effects on T_g and mech. props., plasticisation effect 2-115413
polystyrene, microdeformations in glass transition region, electron microscopic studies 2-109887
polystyrene derivatives, amorphous, X-ray diffractograms, temp. depend. 2-76327

glass transition (polymers) continued

- polystyrene film, anionically polymerised, refractive index rel. to glass transition 2—87730
- polystyrene film, atactic, effect of thermal history on gas transport 2—92275
- polystyrene isothermal enthalpy, vitrification press. and cooling rate effects 2—110014
- polystyrene near glass transition under high press., photon correl. spectroscopy, light scatt. relax. function 2—104895
- polystyrene-poly(2,6-dimethyl-1,4-phenylene ether) blends, glassy and melt states, PVT props., comp. depend. 2—115386
- polyurethane acrylate, UV-cured coatings on opt. fibres, sub- T_g annealing, correl. with microbending loss of fibre 2—60251
- polyurethane acrylates, UV curable, phys. props. rel. to chem. struct. 2—86581
- polyvinyl acetate, nonequil. annealing behaviour, water sorption and glass transition, dielec. and thermal meas. 2—66223
- PTFE, phase transitions, positron lifetime study 2—104988
- PVC, glassy, vitrified at elevated press., nonequil. processes 2—66222
- PVC, plasticised, stress relaxation behaviour 2—88122
- PVC glass, vitrified at elevated press., nonequil. processes, conform. and enthalpic changes 2—86873
- PVC-BaCl₂, DC elec. cond. and glass transition temp. meas. 2—98639
- rod-like molecules, dynamics, appl. to glass transitions 2—61141
- rubber, siloxane polymer based, Rayleigh scatt. of Mossbauer γ -rays 2—104772
- statistical mechanical theory of glass transition 2—71649
- styrene-hydroxystyrene copolymers, glass transition, effect of water (Japanese) 2—109990
- unified model of kinetic treatments of glass transition and viscoelastic props. 2—66221

glasses see *glass***glassy state** see *vitreous state***glide, dislocation** see *slip***globular star clusters**

- age from Oosterhoff period shifts in field RR Lyrae stars 2—58412
- AM-4, intergalactic globular cluster discovery 2—74041
- ω Centauri, photometric obs. of dwarf cepheid (NJJ 79) 2—79109
- compositions from visible spectra obs. 2—101000
- distribution of red and blue stars, and ellipticity 2—74038
- dynamic evolution of clusters with massive central black hole, stellar dynamics and galactic tides 2—63540
- ellipticity-age relation in LMC 2—74040
- energy dissipation and heating due to binary stars formation and hardening 2—94797
- evolution, effect of binary stars formation and hardening 2—94798
- extended X-ray emission due to cluster wind interaction with galactic halo, obs. 2—58502
- formation, role of massive neutrinos 2—58512
- Fornax dwarf spheroidal galaxy globular clusters multiaperture JHK photometry 2—101065
- in galaxies, specific cluster freq. rel. to galaxy mergers 2—106921
- giant stars used to determine Galaxy outer halo abundance 2—63269
- gravitational radiation bursts from active galactic nuclei and globular clusters, characts. 2—106504
- halo chemical properties and ages 2—112445
- BL Hercules stars in globular clusters, investigation of period changes 2—79101
- interstellar spectral lines in NGC 5128 clusters 2—117731
- IR dust emission 2—74039
- Lindsay 102, SMC globular cluster with C star member, BV photometry rel. to age 2—63430
- LMC evolution from globular cluster motion, colour and comp., giants anal. 2—112547
- low mass stars evolution, effects of mass loss 2—68750
- M15, RR Lyrae stars 24, 28 and 43, light curve anal. (Chinese) 2—112517
- M28 (NGC 6626), catalogue of variable stars 2—94626
- in M31, globular cluster optical polarization meas., magnetic fields 2—63547
- in M31, search using BV obs. 2—63642
- in M31 (Andromeda Nebula), photoelectric UVB photometry of globular clusters (Russian) 2—112520
- M31 globular clusters, dynamics and metallicity, visible obs. 2—106825
- in M33, catalogue and obs. of star cluster system 2—106556
- M3 subgiant and horizontal branch sequences, widths and metallicity from visible obs. 2—79173
- M55, M71, CN distrib. obs. 2—63542
- M5 and M71, giant stars HR diagram position and mass loss, obs. 2—100999
- M71, metal abundance from photometry and spectra 2—68840
- Magellanic Clouds, extended giant branches, age from photometric anal. 2—89322
- mass segregation and horizontal branch stars distrib., UBVR_I obs. 2—74038
- master list of nonstellar optical astronomical objects 2—58563
- metal rich clusters correl. with giant stars TiO band strengths in solar neighbourhood 2—94720
- metal-rich clusters, TiO band strengths in giants, model atmospheres 2—100998
- metallicity scale from theoretical giant branches construction 2—112514
- NGC 1806 in LMC, struct. 2—106824
- NGC 288 field, M-type dwarfs, BV photometry of faint red stars at S Galactic Pole 2—106709
- NGC 3201, CN distrib. obs. 2—63542
- NGC 4565 and 891, edge on spiral galaxies, search for globular clusters 2—79202
- NGC 6397, core optical struct. from BV obs. 2—89321
- NGC 6397, O-type subdwarf ROB 162, UV spectrum 2—63406
- NGC 6397 and 6752, main sequence luminosity function and mass segregation 2—101001
- NGC 6752, origin of C and N vars. 2—68839
- NGC 6864, variable stars anal. 2—74035
- NGC 7006, anomalous globular cluster, IR colour-magnitude diagram and spectra rel. to second parameter 2—68843
- old blue clusters in Magellanic Clouds 2—84286
- Pal 13, halo globular cluster, metal abundance from RR Lyrae stars spectra 2—106822
- Pal 14, distance and colour magnitude diagram 2—89315

globular star clusters continued

- Palomar 14, outer halo globular cluster, structural characts. from star counts 2—106828
 - Population II X-ray sources, trapped line radiation 2—106957
 - radio sources near clusters, no associations at 2.7 and 5 GHz 2—100997
 - red giant stars, C and N abundances compared with metal-deficient halo red giants 2—84233
 - research developments, review 2—84290
 - Small Magellanic Cloud clusters, radii and structural parameters from star counts 2—101051
 - spherical stellar system, two-component model 2—106820
 - spherically symmetric collisionless stellar systems, stellar dynamics and models, stability anal. 2—106830
 - star formation and chemical enrichment, role of H II regions 2—106834
 - system age from Oosterhoff period groups 2—58411
 - 47 Tucanae, anticorrelation of C and N on horizontal branch 2—63541
 - 47 Tucanae, equidensitometry and photometry 2—74038
 - 47 Tucanae, main sequence luminosity function and mass segregation from star counts 2—101001
 - 47 Tucanae, main sequence N variations, implications from stellar struct. theory 2—112515
 - 47 Tucanae, origin of C and N vars. 2—68839
 - 47 Tucanae, photometry of red variable stars 2—79125
 - two dimensional classification from giant branches and metallicities 2—58415
 - Vlasov simulation for stellar systems dynamics in infinite homogeneous case 2—74103
 - C and N abundances, influence on evolution of low mass main sequence stars 2—106679
- glossaries**
- computerised tomography terminology 2—62756
 - optical waveguide communications 2—89487
- glow discharge lamps** see *discharge lamps*
- glow discharge microphones** see *microphones*
- glow discharges**
- anode glows in glow discharges 2—71277
 - arc prevention 2—97818
 - biased deposition systems, phys. processes in substrate dark space 2—57308
 - corona discharges, interferometric meas. of gas temp. 2—65785
 - current lacing on electrodes, numerical investig. 2—109618
 - DC discharges on moist surface, model for voltage drops 2—103552
 - diffusion plasma columns in coaxial cylindrical glow discharge tube, environment chambers appl. 2—103476
 - dye vapors, cataphoresis and dissociation in DC glow discharge positive column 2—91692
 - electric lasers, pulsed, glow discharge stability 2—90879
 - electrode design allowing for polarisation and space charge effects 2—91709
 - electron gun emitting a beam into a medium pressure gas 2—107450
 - etching and gas-surface chemistry, ion enhanced, review 2—111517
 - externally sustained, instability after external ionising agent pulse, theory 2—109624
 - gas temperature, in positive column, swarm anal. using transport eqns. 2—55803
 - hollow cathode lamps, optogalvanic signals induced by at. emission sources 2—71269
 - interaction between adjacent positive glow corona 2—103515
 - low-pressure He discharge fast electron energy distrib. function 2—115081
 - macroscopic model, effective field concept 2—103540
 - metal vapour hollow cathode discharge lasers, coil hollow cathode design 2—55199
 - methyl thiocyanide, produced by glow discharges, thermal props. (German) 2—56227
 - molecular ions in glow discharges, microwave spectroscopy 2—75244
 - multistep avalanche chamber, multiplicity detector using glow discharge memory 2—70046
 - negative glow, kinetic theory 2—60826
 - oxide growth on Si layers appl. 2—103539
 - planar magnetron characteristics at high power input rel. to film deposition 2—57291
 - plasma bubble domains obs. and mag. bubble analogue, appls. 2—91685
 - positive column, generation mechanism and HF noise current 2—103538
 - positive glow corona effects on stainless steel points, in room air 2—103511
 - positive glow corona point-plane gap, dual-patch regime stabilisation 2—103510
 - pulsed glow discharges in laser excitation and breakdown 2—81601
 - RF sputtering discharge characteristics and power supply coupling conditions 2—57290
 - self-sustaining, in gas flow, elec. field map 2—81591
 - stability, math. model 2—103486
 - stationary plasmas, selfconsistent calc. of H₂ plasma parameters 2—65691
 - surface topography and flaw detection using elec. discharge imaging as NDT 2—72933
 - transient plasmas, H₂ plasma parameters, selfconsistent calc. 2—65692
 - tunnel magnetron characteristics and discharge diagnostics w.r.t. deposition and surface treatment 2—55806
 - Ar longitudinal flow, ionisation wave instabilities in DC discharge rel. to laser parameters 2—97819
 - Ar-Hg mixtures, glow discharge plasma, electron kinetic investigations, transport processes 2—115061
 - Ar⁺+H₂O, reaction rate consts. and branching ratios, kinetic energy depend. 2—93788
 - C film support, surface activation for biological electron microscopy 2—117172
 - CO₂ high power waveguide TE laser, preionised 2—96992
 - CO₂ TEA laser, preionizing spark arrays, comparison of transverse and linear geometries 2—55111
 - CDII segmented hollow cathode lasers 2—114251
 - D₂ glow discharge, high-voltage, impurity effects and neutron tube appl., theory 2—113788
 - H glow discharge, TEA CO₂ laser interactions, spectroscopic aspects 2—97812
 - He glow discharge, AC Stark effect on 4713 Å line 2—85589
 - He glow discharge, excitation const. determ. for He⁺S level 2—71274
 - He-Cd⁺ hollow-cathode laser, high-voltage 2—86001
 - He-Ne intra-cavity laser alignment (Chinese) 2—65274
 - He-Ne laser in hollow cathode discharge, output power 2—96899

glow discharges continued

- He⁺+H₂O, reaction rate const. and branching ratios, kinetic energy depend. 2-93788
 Hg, vapour, laser scattering diagnostics 2-97784
 N₂, glow discharge, low press., electron conc. radial distrib. by optical method 2-71283
 N₂, high power UV preionised TE lasers, ultraminiature and travelling wave 2-96992
 N₂, self-maintained, heating, Joule power distrib. 2-76229
 NO, vibr.-vibr. pumped population distrib. in DC glow discharge 2-70392
 Ne discharge tube, local dependence of emissive line intensities obs. 2-103537
 Ne hollow-cathode discharge, population inversion obs. using optogalvanic effect 2-85596
 Ne⁺+H₂O, reaction rate const. and branching ratios, kinetic energy depend. 2-93788
 SF₆, positive glow pulses and sparks in 1 cm point-to-point gaps 2-103521
 Si, amorphous film solar cell fabrication by RF reactive sputtering and RF glow discharges (*Japanese*) 2-88455
 Si amorphous films, localised state investigation using field effect technique 2-104509
 Si:H amorphous film, glow discharge deposition, plasma spectroscopy 2-115605
 SiH₄ in low press. hot cathode glow discharges optical emission spectroscopy in visible and near UV region 2-71072
 U hollow cathode discharge and atlas, optogalvanic effect for pulsed laser wavelength calibration 2-71270
 U hollow-cathode discharge, optogalvanic effect, mechanistic study 2-91696

GO calculations

see also *GTO calculations*

- diatomic molecules, bonding within local spin density approx. 2-113873
 double zeta pseudopotentials, pseudo-FSGO calcs. 2-102371
 ethylene, double zeta pseudopotentials, pseudo-FSGO calcs. 2-102371
 replicated Gaussian primitives contraction coeff. determ. 2-54759
 transition metals, second row, optimised Gaussian basis set calcs. 2-108359
 trimethylenemethane derivatives, excitation energies calcs. 2-108410
 BeH₃, geometry, dipole moments, pseudopotentials, FSGO calcs. 2-102372
 Br₂²⁺, ab initio interaction polarisability and pair pot. 2-75179
 H₂O, double zeta pseudopotentials, pseudo-FSGO calcs. 2-102371
 Hg-, Cd-, Te, electronic struct., localised orbital calc. 2-87139
 KBr, ab initio interaction polarisability and pair pot. 2-75179
 Kr, crystal, band struct., Gaussian OPW calc. 2-61349
 Li⁺-X (X=O²⁻, OH⁻, OH₂, N³⁻, NH₂⁻, NH₃) isoelectronic series, geometric struct. and stability, FSGO calcs. 2-80442
 Li-, geometry, dipole moments, pseudopotentials, FSGO calcs. 2-102372
 LiBr, ab initio interaction polarisability and pair pot. 2-75179
 LiH, ab initio SCF and CI studies, FSGO calcs., HF function determ. 2-102397
 LiH, geometry, dipole moments, pseudopotentials, FSGO calcs. 2-102372
 NaBr, ab initio interaction polarisability and pair pot. 2-75179
 Xe, crystal, band struct., Gaussian OPW calc. 2-61349

gold

see also *nuclei with*

- (011) crystal in deviated Bragg condition, electron microscopy, petal and horseshoe shaped contrasts 2-71394
 (110) surface, transversal polar. vector in LEED 2-91732
 (111) surface, light-induced magnetisation, PES study 2-67185
 alpha particle stopping cross section at energies below 3 MeV 2-66085
 anodic corrosion obs. in conc. chloride solns. 2-93673
 atom, electron impact K shell ionisation cross section, plane wave Born approx. 2-80821
 atom, gamma ray incoherent scatt. at 662 keV 2-80543
 atom, transversely pol. electrons scatt., Röntgenbremsstrahlung emission asymmetry 2-85585
 atom sticking coeff. on MgO(001) meas. with torsion microbalance 2-66374
 atoms, inner-shell ionisation by ultra relativistic electron impact, density effect search 2-70426
 atoms, Rayleigh scatt. of photons in vicinity of K-absorpt. edge 2-54787
 Auger electrons, and photoelectrons, accurate determ. of energies 2-82964
 bicryst. film, ion implanted with Cr(Co)(Pb)(Au), struct., TEM study 2-92418
 bicrystal, struct. of large-angle Σ=13 [001] twist grain boundary 2-71470
 bicrystals, grain boundary struct. width, var. with misorientation angle and boundary plane 2-76460
 bremsstrahlung excited Auger electron spectra 2-105035
 convoy electron production by 1.85 MeV/u highly ionised ions traversing polycryst. so lids and axial channels 2-57227
 creep rate meas., cathodic polarisation effects 2-93563
 cyclotron masses and many-body effects, relativistic APW calc. 2-56426
 cyclotron masses anisotropy 2-98964
 Debye-Waller factor calcs. 2-103932
 diffusion in amorphous Ge₁₈Te₈₂ film, nucl. backscatt. anal. (*French*) 2-104069
 diffusion in Si, expt. study 2-104061
 diffusion in Si, kick-out mechanism, numerical soln. 2-66288
 diffusion in SnO₂ thin-film gas sensors, improved performance 2-64009
 diffusion rates in NiZr₂ metallic glass 2-71726
 discontinuous film, carrier mobility 2-82479
 discontinuous films, non-ohmic conductance meas. 2-82480
 discontinuous films on glass substrates, elec. cond. temp. depend. meas. 2-82481
 discontinuous thin film, I-V characs., adsorption effects 2-110499
 electrode, interface with electrolyte, effect of adsorbed water, work function and pot. of zero charge meas. 2-61557
 electrode, monocryst., adsorpt. of diethyl ether, admittance and reflectance meas. (*French*) 2-76810
 electrodeposited films, inclusions, direct obs. by TEM 2-92389
 electrolytic contacts for pAl_{0.5}Ga_{0.5}As-pGaAs-n-GaAs concentrator solar cell 2-93893
 electron channelling radiation and coherent bremsstrahlung 2-71531
 electron emission under heavy at. and mol. ion bombardment 2-77649
 electron irradiated, damage rates 2-66067
 gold continued
 electron spin polarisation in photoemission from (110) and (111) surfaces 2-105043
 electronic pressures in heavy-element materials, self consistent relativistic LMTO calcs. 2-92499
 electronic props., one parameter model pot. 2-61331
 electronic struct., non-muffin-tin and relativistic interaction effects 2-61341
 electroplating alternatives for Au in electronics and decorative industries alternatives in electronics and decorative industries 2-67665
 epitaxial clusters, struct. and shape 2-110183
 epitaxial film, short support free, residual resist. determ. from current-voltage curves (*German*) 2-72080
 epitaxial growth on Ag(111), ion scatt., Auger and LEED study 2-82160
 epitaxial layers, inner potential meas. 2-92725
 epitaxially evap. film, texture anal. and pole figure determ. using TEM (*German*) 2-111448
 fast secondary electron emission by X-ray irradi. 2-57262
 Fermi surface radius, Fourier expansion method 2-104230
 film, (111), vapour deposited, surface and inclined planar defect electron-microscope images 2-71844
 film, adsorption of water, work function and thermal desorption mass spectrometry study 2-98468
 film, condensed, lattice dynamics and substruct. (*Russian*) 2-92425
 film, epitaxial growth on pure and doped NaCl and KCl substrates 2-115621
 film, evaporated, tensile fracture, SEM and TEM obs. (*Japanese*) 2-115631
 film, exoelectron transfer through evaporated films (*Japanese*) 2-57275
 film, inelastic lifetime and spin-orbit coupling of cond. electrons, magneto-conductance study 2-110494
 film, IR surface plasmon attenuation coeffs. 2-110434
 film, magnetoresist., positive, and elec. resist. at low temp. 2-66661
 film, nonscalar 1/f cond. fluctuations 2-82413
 film, reduced electron density, elec. cond. study 2-82477
 film, sputtering yield of Ar⁺ and Ar²⁺ ions 2-67180
 film, surface roughness determ. from X-ray diffr. meas. 2-110180
 film, tensile fracture (*Japanese*) 2-82182
 film, tensile fracture mechanism, SEM study (*Japanese*) 2-92428
 film deposits, on Al(100) substrate, electronic struct. evolution 2-82443
 film electrolens, on CdTe cryst., characterization 2-87081
 film growth on amorphous C, Au cluster density time depend. calc. 2-92411
 film growth on amorphous C, Au clusters surface diffusion, computer simulation 2-92412
 film growth on NaCl, Au cluster mobility meas. to 123K 2-92409
 film on glass microballoons, thickness meas. using X-ray peak rationing in SEM 2-87119
 film on Pd(001), expt. evidence for nucleation of partial dislocations 2-71455
 films, high-angle tilt boundary faceting, electron microscopy study (*Russian*) 2-87093
 films, thermal cond. meas. 2-56728
 foil, elec. cond., 4.2 to 20K, Cl₂ annealing effect 2-104344
 foil, secondary electron emission coeff. under ion bombardment 2-11007
 gamma-rays Compton scatt. by L shell electrons 2-67140
 n-Ge:Au, photoconductivity at photon energy less than impurity ionization energy 2-77121
 geochemical abundances in lherzolites, implications for mantle precious metals 2-62918
 grating surface plasmon dispersion relations 2-98708
 He ion energy straggling, 0.25 to 0.75 MeV/a.m.u., backscatt. study 2-76550
 in-situ UHV high-resolution TEM surface study 2-98411
 insular film, electron emission obs. in microwave elec. field 2-93386
 intraband optical cond. relax. time, phonon contrib. 2-93143
 ion beam textured surfaces, quasi-liquid states 2-82984
 ion bombarded, damage profile, electron microscopy and computer simulation study 2-76531
 ion bombarded, secondary electron emission coeff. meas. 2-72591
 ion implantation of H⁺(D⁺), atomic displacements, residual resist. study 2-98121
 ion-electron emission depend. on projectile incidence angle 2-62031
 ionised projectiles traversing inert gases, polycrystalline solids and axial channels in Au, electron capture and loss 2-90661
 island films, discontinuous, morphology 2-71823
 island films, field emission and hot electron emission, energy distribution 2-77712
 isoelectronic series ionisation potentials, core polarisation, relax., and relativistic effects 2-113896
 K shell electron incoherent scatt. functions for 145 keV gamma rays 2-70209
 lattice dynamics, relativistic effects 2-103917
 liquid, mag. susceptibility calcs. 2-98843
 materials with Z₁=23-30, electronic stopping cross section for 30-300 keV protons 2-66086
 metal, ¹⁹⁹Au NMR calcs. 2-110678
 mirror, laser damage threshold depend. on wavelength, material, pulse length and prep. method. 2-60143
 molecule, binding energies, equilb. distances and vibr. calc. using density matrix method 2-114128
 monolayer, thickness meas., X-ray fluorescence anal. 2-69140
 monolayer on Si(111), surface passivation, LEED, Auger and photoemission anal. 2-83259
 muon implanted, blocking expts. with positrons from muon decay 2-81839
 muonic X-ray cascade, refilling rates 2-85847
 ohmic contact for p-CdTe using pulsed laser heating 2-115890
 optical constants meas. in soft X-ray range using transmission gratings 2-87726
 particles, dye coated, absorption and luminescence, extinction cross section, particle size effects 2-77580
 particles vacuum deposited onto AgBr films, habit 2-110194
 particles vacuum deposited onto AgBr films 2-110193
 photoemission studies of surface core-level shifts and their applications 2-87941
 point contacts, low freq. elec. fluctuations 2-110449
 point defect props. calcs. based on three-body interactions 2-91962
 poly-1-vinyl-1,2,4-triazole-Au boundary, charge carrier photoinjection 2-61587
 polycrystalline, low energy ion scatt. and neutralisation 2-77664

gold continued

- proton backscattering below 500 keV, energy depend. 2-116315
 proton scatt. energy losses, impact-parameter depend. meas. 2-76541
 protons in Be, Al, Ti, V, Fe, Co, Ni, Cu, Zn, Mo, Rh, Ag, Sn, Ta, Pt, Au, stopping power meas. 2-64820
 reconstructed (110) 1×2 surfaces, missing row model 2-86995
 resonant coherent excitation of B, C, N, O, F ions 2-76537
 ruptured, final separation, role of glide and twinning 2-83200
 secondary electron emission for H^+ , H_2^+ , H_3^+ , He^+ , HeH^+ bombardment 2-77650
 secondary electron spin polarisation meas., scatt. mech. study 2-116307
 self-diffusion rate, hydrostatic press. and temp. depend. 2-61194
 semiconductor-metal interfacial reaction at room temp. 2-56267
 single crystal film, electronic energy loss of H, D, He at 600 eV-15 keV 2-66087
 single vacancies, migration energy in stage III recovery 2-91956
 small particles vapour deposited onto AgBr, NaCl substrates, height determ. 2-98483
 sol particles, adsorbed citrate ions, surface enhanced Raman scatt. 2-116195
 spin-exchange collisions of electrons, secondary electron emission expt. 2-87922
 sputtering, atomic excitations, optical spectrometry study 2-77689
 sputtering by reactor neutrons, isotropic peculiarities (*Russian*) 2-62022
 sputtering from (111) crystal, ang. distrib., impact energy depend. 2-77652
 substrate for H_2 condensed layers, photoemission study 2-93374
 surface, (110), electron spin polarisation in photoemission calc. 2-57259
 surface, adsorbed O_2 , UPS, XPS and AES studies 2-76803
 surface, Cs adlayer structure, LEED study 2-115509
 surface (100), LEED diagram interpretation (*French*) 2-98397
 surface (100), quasidynamical LEED intensity analysis in the medium energy range 200-600 eV 2-98405
 surface (110), angle resolved low energy K^+ and Ar^+ ion scatt. 2-62033
 surface (110), reconstructed, He diff. calc. 2-116321
 surface (110), scanning tunnelling microscopy study 2-86987
 surface (111), spin polarised photoemission, band struct., workfunction effects 2-99301
 surface analysis, Auger electron spectroscopy, relative intensity meas. 2-62441
 surface profiles, autocovariance functions, electron microscope and microdensitometer study 2-76792
 surfaces, photoemission, electron spin polarisation, FCC interpolation scheme calc. 2-99302
 target, stopping power and effective charge of heavy ions 2-76543
 target bombarded by Te ions, sputtering from spike, nonlinear Boltzmann eqn. calc. 2-77654
 thin film, low loss surface imaging STEM studies 2-110181
 thin film, neutralisation of 50-230 keV H ions 2-11015
 thin film, nonlinear volt-ampere charact. (*Russian*) 2-104506
 thin film, size depend. cond., electron density and mean free path 2-110498
 thin film on sapphire substrate, surface phonon scatt. 2-82114
 thin films, diffusion and reactions 2-71702
 thin films, discontinuous, electrical cond. 2-72082
 thin target foils, electron impact, K-shell ionisation, bremsstrahlung and electron-electron bremsstrahlung 2-75404
 transparent cond. film, planar magnetron sputtering 2-105074
 vacancy clusters, athermal formation in cascades of atomic collision 2-56061
 Ag/Au epitaxial system, initial stages of growth, LEED study 2-92404
 Ag/Au epitaxial system, LEED spectra, influence of ion-core scatt. 2-86525
 AgBr/Au photographic grains, role of Au containing surface states, expt. study 2-74538
 Ag₂Se-Au thin film sandwich, polarised memory switching obs. 2-104468
 Al-Al₂O₃-Au struct., dielec. props. meas. at low freq. (*French*) 2-72075
 Al-Al₂O₃-Au tunnel junctions, electron energy loss function image in light emission 2-116267
 Al-Al₂O₃-Au tunnel structures, photon emission, expt. study 2-82471
 Au epitaxial film, elec. resistivity meas. 2-87416
¹⁹⁷Au:Sn, ¹¹⁹Sn impurity force const. changes, Mossbauer study 2-61098
 Au/Ag thin films, diffusion-induced grain boundary migration 2-71735
 Au/Al thin film diffusion couple, elastic props., SAW vel. study 2-82183
 Au/Co/Si thin film condensate, electrophys. props., heat treatment influence 2-104505
 Au/Co/SiO₂ thin film condensate, electrophys. props., heat treatment influence 2-104505
 Au/Cr/Au epitaxial metal film sandwiches, supercond. transition temp. 2-78440
 Au/Cu, thin films, diffusion-induced grain boundary migration 2-71735
 Au/n-CdTe Schottky diode, elec. props. meas. 2-77184
 Au/n-Si Schottky diode, elec. props., effect of regular surface relief 2-77158
 Au/Pt (001) and (111) interface struct., misfit dislocations, TEM study 2-76843
 Au/Si₂Te₄As₁₀Ge₁₀/Al₂O₃/Al structure, current-voltage charact. 2-61589
 Au/SiO₂-B₂O₃/Al thin film struct., elec. cond. and field electron emission, theoretical model (*French*) 2-72076
 Au-AG two-layer film, grain boundary diffusion investig. by elec. resist. method 2-76874
 Au-Ag composite granular films, optical transmittance 2-72570
 Au-Al₂O₃-Au(Al) tunnel junctions prod. by electron beam evaporated Al₂O₃ 2-115912
 Au-Al₂O₃(MgO) granular films, optical props., topological considerations 2-62002
 Au-amorphous Si-Al struct., tunnelling characteristics meas. 2-66657
 Au-β-PbF₂ thin film interface, XPS and elec. meas. 2-87080
 Au-CdS Schottky diode, $C^{-1}=f(V)$ charact., deep electron trap and interface states effect 2-115860
 Au-CdS Schottky structure, deep levels obs., anal. of admittance spectroscopy method 2-115701
 Au-electrolyte interface, surface states, electroreflectance study 2-92754
 Au-FeF₃-Au struct., FeF₃ film polarisation 2-61821
 Au-GaAs (110) interface, Schottky barrier, thermal effects, XPS and UPS study 2-110441
 Au-GaAs interface, solid state reactions, cryst. struct. and microstruct. correlation 2-115616
 Au-GaAs Schottky barrier solar cell, conversion efficiency 2-99793

gold continued

- Au-GaSe interface, Schottky barrier formation, UPS study 2-110443
 Au-InP interface, Schottky barrier formation, UPS study 2-110443
 Au-MgO cermet thin films, computered, reflectivity meas., percolation threshold and grain size effects 2-82942
 Au-n-GaAs_{1-x}Sb_x Schottky diode, barrier height 2-115854
 Au-oxide-n-GaAs MIS struct., barrier height meas. by internal photoemission technique 2-72063
 Au-phthalocyanine-Au struct., current-voltage characteristics with injecting and blocking contacts 2-72077
 Au-Si:H, amorphous semiconductors interface reactions and Schottky barrier formation, expt. study 2-110176
 Au-SiO₂ cermet film, Hall effect, electronic tunnelling near percolation limit 2-77202
 Au-SiO₂ MIS structures, quantum-mechanical image-force theory test 2-104494
 Au-SiO₂-n-Si structs. with oxide grown in RF plasma, I-V charact. calc., model 2-92775
 Au-SrTiO₃-SiO₂-Si struct., electron beam deposited, nonvolatile memory props. 2-72068
 Au-ZnS(Se) Schottky barrier contacts, exptl. study 2-72057
 Au+⁴He ions, L-subshell ionisation cross sections meas. 2-54942
 Au+Au ion collisions, threshold behavior of MO X-ray anisotropy spectra 2-59919
 Au+C⁺(N⁺), impact ionisation, L₁-subshell alignment 2-102605
 Au+H⁺, L-shell ionisation cross sections Dirac-Hartree-Slater calcs. 2-114093
 Au+H⁺, L-subshell ionisation, cross sections, X-ray spectra 2-54941
 Au+H⁺(H₂⁺)(H₃⁺)(He⁺)(HeH⁺), secondary electron emission yield meas. 2-77650
 Au+He⁺, M to L shell X-ray yields ratio 2-59592
 Au+heavy ions, convoy electron prod. 2-77647
 Au+O⁺, double-differential cross sections for delta-electrons 2-75401
 Au_L radiation lifetimes of excited nD_L(n=6-8) states 2-64921
 CdS(Se)-Al-Au interface, Schottky barrier modulation, soft XPS study 2-110442
 CdTe-Au, ohmic contact form. by pulsed laser heating 2-104483
 CdTe-Au electroless contacts, phys. props., Rutherford backscatt. and AES anal. 2-110168
 CdTi₂Te₂-Au, Hall coeff., thermo-EMF, cond. type, temp. depend., doping effects 2-56615
 Cu/Au double layers, thickness meas., X-ray fluorescence anal. 2-69140
 Cu-Au, ion beam mixing study by 300 keV Kr¹⁶⁺ bombardment 2-76514
 Fe:¹⁹⁷Au, elec. quadrupole interaction, NMR-ON meas. 2-116075
 n-GaAs:Au, impurity profile, electrochroming meas. 2-56001
 GaAs:Au, LEC grown, DLTS study 2-98572
 n-GaAs-Sn(Ag)(Al)(Au) MIS Schottky barriers, electron trapping in oxide layer 2-77196
 n-GaAs_{1-x}P_x/Au Schottky diodes, barrier height depend. on energy gap 2-61551
 p-GaP-Au, ion beam contacting by Be implantation 2-115889
 Ge:Au, hopping cond. after γ-ray neutron, and electron irradi. 2-115758
 Ge:Au, photoelectromotive force, carrier density 2-87339
 Ge:Au, Sb, compensated and illum., low temp. Hall mobility of electrons 2-77096
 Ge:Sb, Au, cleaved in He, surface Frenkel defects, elec. cond. study 2-115224
 n-Ge:Sb, Au, compensated, Sb ionization energy 2-76985
 Ge-Au interface cpd. formation, valence band and cone level UPS study 2-110175
 n-InP-Au Schottky contacts with increased barrier height due to oxide layer 2-77185
 InSe-Au Schottky barrier diode, elec. and optical props. 2-77157
 MgO:Au dislocation loops, decoration obs. 2-71452
 Pd-Au interface, low temp. alloying, AES study 2-71810
 Si (111)(2×1)-Au system, interface form., low energy EELS and AES study 2-104174
 Si:Au, acceptor level electron cross-section, DLTS study 2-115772
 Si:Au, Au diffusion and point defects, dark-field lattice phase imaging obs. technique 2-86527
 Si:Au, B, counterdoped, anal. of transient photocond. 2-66584
 Si:Au, cluster centres, EPR study 2-56923
 Si:Au, deep Au impurity centre, donor and acceptor levels 2-104306
 Si:Au, deep levels obs., anal. of admittance spectroscopy method 2-115701
 Si:Au, depth distrib. determ. using elastic backscatt. 2-77671
 Si:Au, gettering by Al at low temp., Rutherford backscatt. study 2-115264
 Si:Au, mid-gap level investigation by DLTS and transient capacitance meas. 2-104286
 Si:Au, mid-gap levels investigation by DLTS and transient capacitance meas. (*Chinese*) 2-66473
 Si:Au, minority carrier capture cross section meas. 2-66569
 Si:Au, n-type Czochralski, capture cross section of donor and acceptor states 2-98665
 Si:Au, props. of Au related acceptor level 2-71910
 Si:Au, thermal capture of acceptor deep level, Huang-Rhys factor 2-82276
 Si:Au n⁺-p junction, deep level and shallow impurity profile simultaneous meas. with C-V method (*Chinese*) 2-92505
 Si:Au p⁺-n diode, DLTS and C²-DLTS, analysis 2-56470
 Si:Au-SiO₂ MOS struct., Au related, interface states, quasi-static capacitance study 2-72069
 Si:P, Au, redistribution of Au impurities by P diffusion, theory 2-109822
 Si-Au interface, O₂ interaction, photoemission investig. 2-110474
 Ti/Pt/Au thin film circuits, conductive via processing utilising RF sputtering and electrodeposition 2-99338
 V₂O₅-P₂O₅/Au struct., contact limited conduction, work function effects 2-72056
 ZnSe:Au LPE layers, luminesc. spectra, acceptor levels 2-116250

gold alloys

see also gold compounds

- dilute, impurity d-bands and core level binding energy shifts 2-56482
 dilute alloys, elec. field gradients, defects, PAC meas. 2-93085
 Ag-Au, oxidized, plastic deform. effect on alloy-oxide layer, TEM study 2-110219
 Ag-Au, surface enhanced Raman effect, role of electron scatt. 2-61907
 Ag-Fe(16.8 wt.%), mag. double transition, Mossbauer study 2-87503
 Ag-Pd(Au) alloy, composition-modulated films, for studying stability and crit. phenomena in solid solns. 2-56402

gold alloys continued

- Ag-Zn-Au, disordering temp. changes under action of γ -irrad. (Russian) 2-61123
 AgAu, preferential sputtering 2-77681
 Au-Ag, oxide formation during corrosion in HNO_3 , electron microscopy study 2-72890
 Au-Ag, tilt grain boundaries with substitutional impurities, atomistic study 2-115247
 Au-Ag-Pd-Cu-Zn, dental white gold alloy, age hardening, X-ray, SEM and TEM study 2-67359
 Au-Al system, phase formation kinetics in diffusion zone under mutual diffusion conditions in elec. field (Russian) 2-92149
 Au-based solid solns. with group I to VB solutes, at. size and lattice parameters 2-109748
 Au-Cd (33 at.%), hexagonal type antiphase domain struct., lattice modulation, X-ray diffr. study 2-65924
 Au-Cd martensite, TEM lattice imaging study, twinning dislocations 2-71472
 Au-Cd(Sn)(Zn), dilute alloys, low-temp. specific heat calcs. 2-61165
 Au-Co, dil., mag. behaviour of Co impurities 2-115971
 Au-Co(V), dil. alloy, impurity optical absorpt. meas. 2-99160
 Au-Cu, ^{199}Au Mossbauer isomer shift calc. from electron capture lifetime meas. 2-93076
 Au-Cu, strain ageing, dynamic and static, strain depend. 2-67384
 Au-Cu, surface comp. ion scattering spectra study by Ar^+ and He^+ ion bombardment 2-71781
 Au-Cu alloy particles produced by Au and Cu smoke particles coalescence, electron microscopy study 2-93476
 Au-Cu long period ordered alloys, incommensurate statistical struct., high resolution electron microscopy 2-71397
 Au-Cu sputtered surface, AES, quantitative anal., backscattering correction factors 2-57221
 Au-Fe, dil., electron irradiated, damage rates 2-66067
 Au-Fe, dil., mag. impurity effects studied by tunnelling in supercond. proximity layers 2-61660
 Au-Fe, dilute, thermoelectric power meas. technique at low temp. (French) 2-101419
 Au-Fe, spin glass, anisotropy energy at $T < T_g$ transverse susceptibility study 2-66829
 Au-Fe, spin glass alloy, vol. and shape magnetostriction 2-104674
 Au-Fe spin glasses, at. short-range order, X-ray determ. 2-92941
 Au-Fe spin glasses, dynamics, muon spin relax. study 2-116106
 Au-Fe spin glasses, time and field depend. of magnetisation 2-72216
 Au-Fe_{1-x} spin glass, AC susceptibility, Mossbauer and anomalous Hall effect, mag. hysteresis, review 2-56866
 Au-Fe-Co system, permanent magnet material for ornamental applie. 2-56890
 Au-Ge metastable phase form. by ion mixing 2-76754
 Au-In, supercond., study at ultralow temps. 2-87438
 Au-Mn, structure, high resolution electron microscope and electron diffr. study of Au_xMn phase 2-86627
 Au-Mn alloys, thermodynamic anal. 2-99402
 Au-Mn spin glass, magnetisation saturation in high mag. fields, effect of RKKY interaction 2-82645
 Au-Mn system, periodic antiphase boundary structs. derived from DO_{22} struct. 2-81716
 Au-Mn system, two-dimensional antiphase struct., high voltage-high resolution electron microscopy 2-81970
 Au-Ni, core hole satellites in XPS 2-57260
 Au-Ni alloy, composition-modulated films, for studying stability and crit. phenomena in solid solns. 2-56402
 Au-Pd, dilute, impurity system electronic struct., pseudopot. study 2-98575
 Au-Si, electronic props. 2-98512
 Au-Si phase, interdiffusion form., surface struct. anal. by quantitative AES 2-67159
 Au-Zn, incommensurate two-dimens. antiphase struct., HVEM study 2-97995
 AuAl, Z 2-98790
 AuAl₃, optical props., elec. cond. 2-61861
 $(\text{Au}_{1-x}\text{Cu}_x)_2$ Mn spin glass alloys, low-field magnetoresist. 2-82323
 AuGe/GaAs, ohmic contacts, interface struct., SIMS study 2-82150
 AuGeNi ohmic contacts to MBE grown GaAs epitaxial layers, charact. 2-66637
 AuGeNi-InP contact, electron microscopy investig. 2-66379
 AuIn₃ film, O₂ and Ar plasma interaction, sheet resist. 2-77204
 Au₁₀In₃, cryst. struct. 2-97998
 Au₁₀Mg(Zn)(Cd), high resolution images by high-voltage electron microscopy 2-81636
 Au₁₀Mn, micro-texture study 2-61265
 Au₁₀Mn₂, antiphase struct., one-dimensional, high-voltage high-resolution electron microscopy study 2-60923
 Au₁₀Cr₁₀, superstructure, diffr. studies 2-86628
 Au₁₀Mn disordered alloy, short-range order and ferromag. props., X-ray diffr. study 2-97990
 Au₁₀Mn, random alloy, magnetisation calc. using short range order 2-116035
 AuNi, FCC struct., phase separation, phase diagram, cluster variation calc. 2-92220
 Au₁₀(Pb₁₀Sb₂₂), metallic glass spheres, prep. and surface characteristics 2-55851
 AuPd ultrathin wires, low temp. resist. rise, interaction effects 2-92566
 Au₁₀Pd₁₀ thin wires, Ag coated, elec. resist., length depend. 2-110325
 Au₁₀Si₁₀ liquid ^{199}Au diffusion coeff., shear cell meas. 2-81997
 AuTb dilute monocrystals, magnetostriction, ion-lattice coupling parameters 2-92985
 AuYb dilute monocrystals, magnetostriction, ion-lattice coupling parameters 2-92985
 AuZn, H phase, out of step period 2-71658
 Cd-Au, dil. liq., EMF and vapour press. values, equil. and second law of thermodynamics confirmation 2-81981
 Cr-Au film, vacuum deposited, partial press. and temp. effect on props. 2-76871
 Cu-Au, deviation from Matthiessen's rule 2-110327
 Cu-Au, dil., electron irradiated, solutes as nuclei for self-interstitial complexes 2-66061
 Cu-Au, dilute, Matthiessen's rule deviation at high temp. 2-115729
 Cu-Au, threshold sputtering effects, ion scatt. spectroscopy study 2-82982
 Cu-Au, X-ray diffuse scatt. and ordering energy (Russian) 2-77618

gold alloys continued

- Cu-Au system, L₁ struct., covalent contrib. to bond energy, order-disorder transitions 2-76359
 Cu-Mn-Au, spin glass, anisotropy energy at $T < T_g$ transverse susceptibility study 2-66829
 CuAu, fast neutron irradiated, defect production, resist. meas. (French) 2-76510
 CuAu II, modulated struct., antiphase domains, Fourier synthesis 2-81715
 CuAu, ordered alloy, mechanical props. meas. (Russian) 2-88091
 CuAu type ferromagnetic alloy, atomic ordering in mag. field, magnetoelectric energy role (Russian) 2-92983
 CuAu vacuum deposited films, mech. twinning 2-98492
 CuAu-I(II), vacuum deposited ordered thin films, mech. twinning obs. 2-82173
 Cu₂Au (111), surface state near Fermi level, photoelectron spectra 2-92712
 Cu₂Au, antiphase domain boundaries, electron diffr. study 2-115245
 Cu₂Au, Cu⁺ ion irradi., displacement cascade dimensions, TEM and computer simulation study 2-86759
 Cu₂Au, displacement cascade damage, produced by fusion-neutron irradi. 2-85224
 Cu₂Au, elec. cond. and long range order (Chinese) 2-104342
 Cu₂Au, electron irradi., dislocation loops, electron microscope study 2-76449
 Cu₂Au, fast neutron irradiated, defect production, resist. meas. (French) 2-76510
 Cu₂Au, Fermi surface, de Haas-van Alphen meas. 2-104229
 Cu₂Au, fusion neutron disordering 2-85219
 Cu₂Au, ordered, displacement cascade damage, TEM obs. 2-103861
 Cu₂Au, ordered alloys, fundamentals mechanisms of neutron damage 2-103830
 Cu₂Au, ordered and disordered, containing SiO₂ particles, critical shear stress, Orwan stress 2-86778
 CuAu, electron irradi., dislocation loops, electron microscope study 2-76449
 Eu-Au, surface segregation study using surface shifted core levels 2-105047
 Eu₁₀Au₂₀, amorphous, Mossbauer study 2-82757
 $(\text{Eu}_{1-x}\text{Yb}_x)_{10}\text{Au}_{20}$, amorphous, elec. field gradient at S-state ion, Mossbauer study 2-104761
 Eu₁₀Yb₁₀Au₂₀, amorphous, Mossbauer study 2-82757
 Fe₁₀Au₁₀-B₂₀, amorphous films, mag. and transport props. 2-72296
 Fe(Pd_{1-x}Au_x)₁₀, atomic ordering, quadrupole splitting in Mossbauer spectra 2-104783
 Gd₁₀Au₂₀, amorphous, elec. field gradient at S-state ion, Mossbauer study 2-104761
 Gd₁₀Au₂₀, amorphous, Mossbauer study 2-82757
 K, Rb_{1-x}Au_x, indirect small gap semiconductor, electronic props. 2-92473
 Nb₂Au, electrical resistivity, temp. depend. 2-61442
 Pb-Ag-Sn-Au solder, solidus and liquidus temp., Au addition effects, DTA study 2-93499
 Pb-Au, yield stress and resist., effect of composition and thermal treatment 2-83165
 Pb-In-AuO film for Josephson tunnel junction base electrode 2-98499
 PbInAu film, RF oxidation, oxide composition 2-76858
 Pd-Au-V solid soln., elec. props. (Russian) 2-92562
 Pd-Fe-Au solid soln., elec. props. (Russian) 2-92562
 Pd₁₀Au₁₀D₂, lattice location of implanted D 2-71488
 PdAuCr alloys, spin fluctuation effects, elec. resist. meas. 2-71958
 Pd₇Au₃Si₁₈ metallic glass, DSC, relax. and struct. change 2-65864
 Pt-In-Au, RF oxidation, XPS and ellipsometric study 2-57530
 Pt-Cu(Au), thermal and fast neutron irradi., Stage II recovery 2-103831
 Si-Au-Al, distrib. ratio of Al, zone refining with temp. gradient 2-71487
 TbAu₂, first order phase transition study 2-77262
 TiBe₂-Au, magnetisation meas. in low and high fields 2-56839
 Yb-Au, surface segregation study using surface shifted core levels 2-105047
- gold compounds**
 see also gold alloys
 Au complex, bipyridyl gold(III) chloro complex, vibr., Raman study 2-90558
 Au₁₁ cluster compound, STEM obs. 2-114146
 AuBr₄⁻, bond order from Raman intensity data 2-59962
 AuCl₄⁻, bond order from Raman intensity data 2-59962
 AuI, high press. Mossbauer study of ^{197}Au , electrical cond. 2-61794
 Au(III) complex, 1,10-phenanthroline-AuCl₃, vibr. props., IR and Raman obs. 2-54851
 Au(III) complex, bipyridyl-AuCl₃, vibr. props., IR and Raman obs. 2-54851
- goniometers**
 angular meas., industrial and laboratory appl. 2-89690
 axes position determination, Kikuchi lines appl. 2-91731
 crystal orientation for large single crystals. 2-97855
 magnetic Φ goniometer for Zeeman-split NQR 2-80657
 monolithic goniometer for pure rotation and fine orientation control 2-89877
 powder goniometer expt. on highly oriented powders, hk rod intensities distrib. 2-115095
 precision goniometer for fine adjustment in the nanoradian range 2-89862
 refractive index measurement of solids using modified GS-5 goniometer (Czech) 2-58887
 three coordinate goniometer, reflector modification (Russian) 2-97153
 transmission grating goniometer elements for synchrotron radiation facilities 2-84771
 ultra-high vacuum double axis goniometer for electron spectrometer 2-85467
 X-ray Weissenberg goniometer, low temp., with closed-cycle cooling to 28K 2-65804
- GP zones** see Guinier-Preston zones
- grain boundaries**
 for grain boundary diffusion, see diffusion in solids; for grain boundary segregation, see segregation
 see also bicrystals; subboundary structure; twin boundaries
 alloy, binary, FCC and BCC, electron irradi., rad. induced segregation at internal sinks 2-86731
 alloys, L₁ ordered, screw dislocation dissociation and core struct. in applied shear stress 2-76441

grain boundaries continued

- alloys, Li₁-ordered, screw dislocations, dissociation and core struct., computer simulation 2-76440
 American Vacuum Soc., conf., Anaheim, USA (Nov. 1981) 2-79275
 Astroloy, wrought, grain boundary void nucleation during high temp. creep 2-93575
 Astroloy, wrought, grain boundary voids nucleation in intergranular fatigue crack vicinity 2-93626
 bicrystal, tilt type, symmetrical deform., model and exptl. confirmation 2-71469
 bicrystals, anisotropic, stress conc. on grain boundary, finite element anal. 2-115577
 brass, 70/30, mechanism of ductile fracture tensile test (*Japanese*) 2-111282
 brass, diffusion-induced grain boundary migration 2-103783
 brass, grain boundary multiple special contacts (*Russian*) 2-115251
 brittle crack propagation, debonding of two linear chains of atoms 2-86787
 carbide directional γ/γ' eutectic, struct. defects after long-term strength tests (*Russian*) 2-98092
 cavity growth, by coupled surface and grain-boundary diffusion, numerical anal. 2-110048
 ceramic/ceramic (metal) systems, surfaces and interfaces, 17th Univ. Conf. (7th LBL/MMRD Int. Materials Symp.), Aug. 1980 2-94909
 ceramics, creep fracture in polycryst. containing small amount of liq. phase 2-83197
 ceramics, grain boundary films, TEM characterisation 2-71312
 computer mol. dynamics study, migration, sliding and annihilation, 2D solid 2-103781
 computer mole. dynamics study, coupled sliding and migration, 3D simulation 2-103780
 conduction electrons, interactions with dislocations and grain boundaries 2-87250
 corrosion, interfacial, effect of boundary struct. 2-93657
 creep, high-temp., pore growth and closure at inter-grain boundary (*Russian*) 2-6611
 creep fracture by void growth 2-77940
 crystals, two dimensional, defect motion and stress relaxation, shear modulus 2-61208
 cubic crystals, grain boundary dislocations, step heights 2-55980
 diffusion-induced grain boundary migration, morphology 2-109811
 diffusional creep, migration-assisted, grain boundary diffusion 2-92087
 dislocation vector systems, melting in two dims., Monte Carlo study 2-71620
 dislocations, extrinsic, spreading, yield stress depend. 2-66011
 dislocations, rectilinear, equilb. splitting theory, stacking fault energy (*Russian*) 2-65996
 embrittlement, decohesion theory 2-98194
 embrittlement, role of chem. bonding 2-56073
 FACSIMILE code for void swelling and creep calc. with vacancy loops 2-67468
 fatigue, low cycle, wedge-type creep damage 2-98195
 fatigue threshold criterion (*Japanese*) 2-109898
 FCC alloys, partial grain boundary dislocations, periodic arrays 2-91968
 FCC/BCC interfaces, grain boundaries, atomic simulation, O-lattice theory 2-92372
 ferroelectric ceramic, acoustic microscopy, imaging of flows, grain struct. and elastic props. 2-105410
 fusion reactor alloys, candidate, radiation-induced segregation 2-85227
 grain growth, resist. offered by dispersion of spherical particles 2-93486
 Hastelloy C-276, heterogeneous precipitates, electron microscopic anal. 2-99432
 hexagonal crystal, characterisation based on tables of coincidence lattice sites 2-98115
 ice, polycryst., tensile strength as function of grain size 2-105272
 Inconel 600, Cr depletion at grain boundaries, detection 2-60996
 intercrystallite crack development by diffusion mass transfer, kinetics 2-81289
 intergranular cracking, hydrogen-induced, dynamic model and impurity segregation effect 2-72832
 interphase boundaries theory, geometric parameters use 2-71808
 lattice model for general crystal-crystal boundaries and line defects 2-103778
 melting, 2-dimens., grain boundary theory 2-56164
 metallic thin films, polycryst., optical refl. and elec. resist., effect of grain boundary scatt. 2-99205
 metals, FCC, struct. of (001) twist boundaries, screw dislocations 2-91986
 metals, grain boundary struct. review 2-60997
 metals, grain boundary surface energy, electronic component, perturbation calc. 2-104467
 metals, oxide film growth, conditions for form. of new oxide 2-87090
 metals with BCC lattice, fracture after cooling, cold brittleness (*Russian*) 2-77902
 microstructural stability, geometrical aspects 2-105168
 Nimonic PE16, ion bombarded, damage struct. 2-109855
 Nimonic PE16, solution treated, grain boundary segregation during neutron irradi. 2-109844
 Ostwald ripening theory 2-83119
 photoelectrochemical cells, electrical power and H₂ generating, carrier recomb. at grain boundaries and liq. interfaces, chem. control 2-111573
 phthalocyanine thin films, cryst. defect orientations and growth mechanism 2-82151
 polycrystalline materials, grain misorientation determ. by electron microscopy 2-116630
 polycrystalline sample, grain growth with grain boundaries of different mobility (*Russian*) 2-115250
 polycrystals, grain struct., stress distrib. 2-88053
 powder compacts, sintering, one-component, dislocation-activated shrinkage rates (*German*) 2-93470
 quaternary, thin film growth, grain boundary struct., electron microscopy 2-81775
 reactor materials, cyclic loading influence on Li corrosion behaviour steel Cr-Mo 2-80172
 real crystals, equilb. distrib. of impurity atoms 2-66035
 semiconductor, polycryst., Seebeck effect, intergrain electron states 2-110375
 semiconductor, polycrystalline, photocond. spectral response, diffusion potentials at grain boundaries 2-92685
 semiconductor barrier structs., thermally activated carrier motion, charged impurity effect 2-115884

grain boundaries continued

- semiconductors, polycryst. struct. formation mechanism 2-66243
 semimetal films, polycrystalline, thermoelec. power 2-92794
 sintering, microstruct. development, grain and pore coarsening 2-93469
 sintering, microstruct. development, pore/grain boundary separation 2-93468
 sliding during creep, stress redistrib. 2-83185
 solar cells, polycryst. thin films, prep. and props., review 2-83488
 steel, 316 plates, effects of C and N on corrosion resist. to liq. Li 2-105370
 steel, 37KhN3(MF), fracture and mech. props. (*Russian*) 2-105288
 steel, alloy, high strength, H stress cracking, effect of P conc. 2-77938
 steel, alloy, interphase boundary migration, bowing mechanism 2-83129
 steel, austenitic, Ni-Cr-(Mn), P segregation during austenitisation, effect on cracking and embrittlement 2-57357
 steel, austenitic, stainless, annealing twins absence during radiation-induced recrystn. 2-105187
 steel, austenitic stainless, corrosion resistance, effect of high temp. low cycle fatigue 2-78018
 steel, austenitic stainless, Cr-Mn, low-Ni, intergranular Li penetration 2-111371
 steel, austenitic stainless, creep fracture model after neutron irradi. and He injection 2-88173
 steel, austenitic stainless, cyclic loading influence on Li corrosion behaviour 2-80172
 steel, austenitic stainless, cyclic strain hardening, during fatigue, elevated temps. 2-93530
 steel, austenitic stainless, diffusion of ⁵⁹Fe, lattice and grain boundary 2-104048
 steel, austenitic stainless, DIN 1.4970, He embrittlement, high temp. in-beam simulation 2-71519
 steel, austenitic stainless, fatigue fracture mode, effect of strain waveform (*Japanese*) 2-72814
 steel, austenitic stainless, grain boundary structure after annealing 2-67382
 steel, austenitic stainless, high temp. creep, mech. props., influence of C and N 2-105246
 steel, austenitic stainless, microcrack growth in grain boundaries, at the surface of smooth specimens in high temp. creep (*Japanese*) 2-111289
 steel, austenitic stainless, rapidly solidified, path A prime candidate alloy, neutron irradi., microstruct. 2-108112
 steel, austenitic stainless, sensitised, corrosion fatigue, crack growth and AE behaviour, SEM obs. (*Japanese*) 2-83281
 steel, austenitic stainless, surface hardening and microstruct. changes, influence of US vibr. 2-99538
 steel, austenitic stainless, type 316, long-temp. creep rupture properties, 550 to 700°C 2-99564
 steel, austenitic stainless 316, He embrittlement, microstruct. aspects 2-71518
 steel, austenitic stainless 316, radially solidified, B doped, pre-irrad. spatial distrib. and stability of boride particles 2-85211
 steel, austenitic stainless grain boundary multiple special contacts (*Russian*) 2-115251
 steel, C, ferrite grain growth, effect of cementite particles (*Polish*) 2-67282
 steel, C, grain boundary widmanstatten ferrite, angle with grain boundaries 2-81796
 steel, Cr, nitrided, microstruct. 2-105381
 steel, Cr-Mo, low C, tempering behaviour, effect of C content 2-77853
 steel, Cr-Mo, pressure vessel, autoradiography of H trapping rel. to hydrogen embrittlement (*French*) 2-62213
 steel, Cr-Mo, segregation of embrittling elements to prior austenite grain boundaries 2-93517
 steel, Cr-Mo, temper embrittlement, atom probe anal. 2-67471
 steel, Cr-Mo-V, high temp. ductility, compositional effects 2-111238
 steel, Cr-Mo-V, martensitic stainless, stress corrosion cracking susceptibility 2-78017
 steel, dispersion hardened, 12Kh1MF, grain boundary fracture under creep (*Russian*) 2-105287
 steel, eutectoid, thermomechanically treated, fatigue initiation study 2-77934
 steel, ferritic, monolayer grain boundary segregation using STEM-EDS X-ray microanal. 2-111412
 steel, high hardness, grain size effect on fracture toughness (*Japanese*) 2-77921
 steel, high-C, segregation of Si on austenite grain boundaries and austenite/carbide interfaces 2-105161
 steel, low alloy, grain boundary segregation and embrittling effect of P 2-62187
 steel, low alloy, high strength, cold metals, nature of acicular ferrite 2-67286
 steel, low alloy ESR, grain boundary sulphide precip. effect on hot ductility 2-67350
 steel, low C, decarburisation of subcrit. temps., resolidification of ferrite 2-72689
 steel, low C, deformed lath martensitic struct., recrystn. and form. of austenite 2-111195
 steel, low C, fatigue crack initiation and propag. in smooth specimens, microscopic study (*Japanese*) 2-93611
 steel, low-C, decarburisation in intercrit. temp. range, recrystn. of ferrite, grain boundary migration 2-99452
 steel, mild, diffusion bonding, in situ obs. using photoemission electron microscope 2-110177
 steel, Ni-Cr (30.30 wt.%), high temp. carburisation correl. with creep-rupture props. 2-62265
 steel, P grain boundary embrittlement, electronic model for alloying elements effect 2-105278
 steel, stainless, austenitic, grain boundary segregation of B, atom probe microanalysis 2-72701
 steel, stainless, creep rupture, correl. with environmentally controlled microstruct. 2-83222
 steel, stainless, powder metallurgical, struct. condition, effect of different sintering environments 2-67254
 steel, stainless, type-348, neutron irradiated, microstruct. and rel. to creep and hardening 2-105231
 steel, tempered, pseudo-intercrystalline brittleness mechanism 2-67502
 steel, V, hot deformed, isothermal austenite-ferrite transform, TEM study 2-111172
 steels, monolayer grain boundary segregations, detection using STEM-EDS X-ray microanal. 2-67351
 superplasticity, rate controlling deform. mechanisms, review 2-83183

grain boundaries continued

- surface topography development in SIMS anal. grain boundary struct. 2-98412
- TEM lattice image geometry of steps and dislocations 2-91734
- thermodynamic functions, lattice dynamics studies 2-92134
- thin films, diffusion-induced grain boundary migration 2-71735
- thin films, stress relax. and hillock growth 2-115627
- tilt boundaries with substitutional impurities, atomistic study 2-115247
- TTF-TCNQ films, struct. and props., substrate temp. effect 2-104205
- two-dimensional nonequilibrium structures, melting 2-115392
- Type 304, sensitised, low-temp., intergranular fracture and grain boundary chem. 2-105328
- vacancy-controlled grain boundary motion, theory 2-66010
- Ag bicrystal, struct. of large-angle $\Sigma=13$ [001] twist grain boundary 2-71470
- Ag₂O internal friction, neutron irradiation effect 2-81889
- Al alloy, precipitation hardened, pseudo-intercrystalline brittleness mechanism 2-67502
- Al bicrystals, fatigue cracks initiation along grain boundaries 2-72844
- Al, coincidence site lattice twist boundary energy, long-ranged pot. 2-81795
- Al, deformed single crystal, high-angle grain boundaries form. 2-86683
- Al, fusion neutron simulation study, comparison of electron and self-ion damage 2-85225
- Al, in-situ study of subboundary props. during creep, HVEM 2-71462
- Al, intercrystallite fracture obs. by high power US (Russian) 2-88160
- Al, irradiated with Al ions, pure and He doped 2-86747
- Al, isaxial bicrystals, fatigue crack initiation along primary slip bands in grain boundary affected region (Japanese) 2-105302
- Al, microstructural evolution during 600 MeV proton irradiation, He prod. rate effects 2-86746
- Al moving grain boundary double successive detachment from adsorbed impurity 2-115254
- Al, pure, cavities formation at and away from grain boundaries during 600 MeV proton irradiation 2-66078
- Al-Fe, dil. tilt boundary detachment from impurity 2-81798
- Al-Fe, moving grain boundary double successive detachment from adsorbed impurity 2-115254
- Al-Ge (4 wt.%), superplastic deform. mechanism 2-83190
- Al-Li alloys, cyclic and monotonic ductility, effect of slip distrib. 2-67419
- Al-Li-Cu-Zr-Cd system alloys, microstruct.-prop. rels. 2-111210
- Al-Mg (8wt.%), grain boundary segregation 2-88087
- Al-Mg/Al-Al-Mg composite, dislocation struct. and element diffusion resist. 2-82037
- Al-Mg-Zn-Cu, 7075-T7351, localised corrosion, environmental factors 2-67640
- Al-Mn, unhomogenized, recrystn. 2-83138
- Al-Ni-Co-Cu-Ti, Alnico 8 alloy, α - γ transformation, α , phase precipitation, coercive force study 2-91858
- Al-Zn (15-25 wt.%), grain boundary migration mechanism (French) 2-86684
- Al₂O₃, MgO doped, grain boundary meas. technique 2-109812
- α -Al₂O₃ sintering, voids and boundary migration, electron microscope study 2-113046
- Au, bicrystal, struct. of large-angle $\Sigma=13$ [001] twist grain boundary 2-71470
- Au bicrystals, grain boundary struct. width, var. with misorientation angle and boundary plane 2-76460
- Au films, high-angle tilt boundary faceting, electron microscopy study (Russian) 2-87093
- Au/Ag thin films, diffusion-induced grain boundary migration 2-71735
- Au-Ag two-layer film, grain boundary diffusion investig. by elec. resist. method 2-76874
- Au-Ag-Pd-Cu-Zn, dental white gold alloy, age hardening, X-ray, SEM and TEM study 2-67359
- Ba(Nb_{0.7}Ti_{0.3})_{1-x}Sn_{0.16-x}O₃, semicond. ceramics, space-charge-limited currents and dopant cond. influence, firing procedure effect (Russian) 2-56607
- BaPb_{0.7}Bi_{0.3}O₃ films, grain boundary Josephson junction network props. meas. 2-87452
- BaTiO₃, ferroelectric, domains and grain boundaries, SEM EBIC imaging technique 2-116132
- Bi film, elec. cond., grain boundaries effect 2-82491
- Cd, bicrystal, grain boundary sliding with and without slip (Japanese) 2-103782
- CdS, cryst. defects, high resolution TEM study 2-60991
- CdS polycrystalline film, photoconductivity meas. 2-66674
- CdSe polycrystalline thin film transistor, conductivity behaviour 2-56735
- Co-Fe (20 at.%), grain boundary precip., TEM, STEM, SEM and electron channelling study 2-72708
- (Co_{0.7}Fe_{0.3})₂V alloy, ordered, microstruct. 2-72719
- Cr transport through Cr₂O₃ scales, lattice diffusion 2-86926
- Cr transport through Cr₂O₃ scales, scale morphology change during high vacuum treatment 2-86927
- Cr-Rh-Zr dil. alloy, grain boundary relax., internal friction study (Russian) 2-93546
- Cu and alloy, low ductility failure and cavitation during grain boundary migration (Japanese) 2-105301
- Cu, coincidence site lattice twist boundary energy, long-ranged pot. 2-81795
- Cu, containing P, anodic dissolution in bright Cu plating electrolytes, kinetics and mechanisms 2-67664
- Cu, fatigue-induced grain boundary cavities, small angle neutron scatt. study 2-93581
- Cu, flow stress, strain and grain size depend. 2-57399
- Cu, grain boundary multiple special contacts (Russian) 2-115251
- Cu, intercrystallite fracture obs. by high power US (Russian) 2-88160
- Cu, recrystallisation, twin and grain boundary dislocation movement obs. 2-71474
- Cu/Ni bilayer system, interfacial diffusion coeffs. meas. during diffusion induced grain boundary migration 2-71739
- Cu/Ni ultradisperse layer system, cold homogenisation by mutual diffusion (Russian) 2-104076
- Cu/Sn bimetallic thin film, interdiffusion and intermetallic phase form. 2-115473
- Cu-Al-Ni β -phase shape memory alloys, intergranular fracture origin 2-72838
- Cu-Be (1.4 wt.%) alloy, discontinuous precip., secondary reaction 2-105149
- Cu-Be-Ni (2 wt.%, 0.30 wt.%), ageing characts. (Chinese) 2-62147

grain boundaries continued

- Cu-Bi (0.1 at.%), grain boundary embrittlement as function of boundary struct. 2-115246
- Cu-Cr, failure anal., impurity segregation, Auger spectra study 2-83205
- Cu-Ge (8.7 at.%), shock-loaded, deform. twinning, time depend. and assoc. strengthening 2-88138
- Cu-Ni, failure anal., impurity segregation, Auger spectra study 2-83205
- Cu-Ni, high temp. sputtering, ion-enhanced diffusion, grain boundary erosion (Japanese) 2-116317
- Cu-Ni-Mn, grain boundary reaction after ageing (Japanese) 2-77848
- Cu-Ni-Sn (10.8 wt.%), grain boundary reaction after ageing (Japanese) 2-77849
- Cu-Ni-Sn spinodal alloy, tensile props. improvements by two-phase heat treatment 2-116478
- Cu-Zn Al, martensitic, rapid solidification effects 2-111175
- Cu-Zn alloys, grain boundary migration, diffusion-induced 2-81794
- Cu-Zn-Al shape memory alloy, rapid solidification and assoc. effects 2-67322
- β -Cu-Zn-Sn (33.8, 3.1 wt.%), pseudoelectric polycryst., fatigue 2-67517
- CuZnAl, martensitic, high resolution electron microscopy of boundaries 2-71473
- Fe alloys, grain boundary segregation and embrittling effect of P 2-62187
- Fe, fracture mode and ductility on testing at cathodic potentials, P and S segregation effects 2-93679
- Fe, intercrystallite fracture obs. by high power US (Russian) 2-88160
- Fe, intergranular fracture, cathodic pots., effect of S and Sb 2-57469
- Fe, magnetic domain wall motion, wall-defect interactions, mag. meas. 2-116028
- Fe, pure, H₂ effect on deform. and fracture microprocess (Chinese) 2-62188
- Fe, pure, trapped H, thermal anal. 2-66290
- Fe-C, dil., primary recrystn. textures 2-57372
- Fe-Ni-Ti type N26T3 alloy, martensitic transform. in austenite 2-105145
- Fe-P, struct. change of grain boundaries due to P segregation 2-67349
- Fe-Sb-(Ni), ultra-high purity, interactive co-segregation of Sb and Ni at grain boundaries 2-93512
- Fe-Si [110] tilt boundaries and grain boundary dislocations TEM study 2-76461
- Fe-Si bicrystalline sample, magnetisation reversal dynamics 2-72259
- Fe-V-C, cold rolled, containing carbides, recrystallisation 2-83137
- Ga alumina, ionic and electronic cond. meas. 2-71703
- GaAs bicrystals, electron tunnelling through grain boundaries 2-66624
- GaAs, polycrystalline, scanning cathodolum. microscopy 2-71313
- GaAs:Cr, with grain boundaries, elec. props. (Russian) 2-71989
- GaP, grain boundaries, elec. and EBIC studies 2-115252
- Ge bicrystal, tilt type, symmetrical deform., exptl. confirm. of model 2-71469
- Hg_{1-x}Cd_xTe, recrystallised skin junctions, electron beam induced currents study 2-86895
- In alumina, ionic and electronic cond. meas. 2-71703
- In thin films, strength characts., struct. and temp. effect 2-76875
- n-InSb film, polycryst., intergranular barrier pot., temp. and field depend. 2-77208
- In₂-Sn₂O₃-Si solar cell, EBIC response anal. 2-88436
- Li ferrites, ordering mechanisms 2-57345
- LiTaO₃, large crystal, Czochralski grown, low angle tilt boundaries, edge dislocations and cracking 2-91843
- Mg, polycrystalline, grain boundary during high temp. deform. (Japanese) 2-55983
- Mg-Al (0.8 wt.%), high temp. deform., dynamic recrystn. and development of microstruct. 2-116455
- MgO, extrinsic secondary grain boundary dislocations 2-91980
- MgO, intrinsic secondary grain boundary screw dislocations, TEM study 2-91979
- Mo alloys, improvement of mech. props. in CTR gaseous environment 2-108106
- Mo, diffusion of ¹⁸⁵W, via grain boundaries and defects 2-71718
- Mo film on Si, ion beam induced interfacial reactions, TEM obs. 2-110050
- Mo, grain misorientation statistics meas. after recrystn. annealing (Russian) 2-93526
- Mo, ion implantation effect on microstruct., TEM obs. 2-71522
- Mo polycrystals, cold-worked, mechanism of work softening at elevated temp. 2-67375
- Mo, recrystallised foils, grain boundary migration in presence of Ni 2-83146
- Mo, self-ion implanted, in situ annealing 2-92011
- Mo sheet, SIMS analysis of oxygen on brittle fracture surface 2-99581
- Mo wire, rolling and flattening to ribbon, electrostimulated deform. role 2-116465
- MoS₂, 2H polytype, electron diffraction study of twist boundaries 2-76248
- NaCl bicrystals, microhardness 2-57454
- NaCl, deformed, dislocation motion 2-60987
- Nb, behaviour of H, optical microscopy, SEM and ion microprobe anal. 2-83130
- Nb bicrystals, grain boundary corrosion, correlation with grain boundary energy 2-88278
- Nb, diffusion of ¹⁸⁵W, via grain boundaries and defects 2-71718
- Ni alloy, heat-resisting, directional solidification, B influence on fine struct., diffusion and creep 2-67321
- Ni alloys, C/O gas bubble form., thermodynamic requirements 2-105116
- Ni and alloys, air embrittlement, role of S 2-99541
- Ni, fracture initiation and dynamic recrystn. during hot deform. 2-105317
- Ni, grain boundary segregation of S and Cl, high resolution scanning AES and SIMS obs. 2-93518
- Ni, high-temp. ductility, Sb, Sn, As and P addition effect, intergranular embrittlement 2-72839
- Ni, intercrystallite fracture obs. by high power US (Russian) 2-88160
- Ni, oxidation rate consts., grain boundary diffusion mechanism 2-78020
- Ni superalloy, intergranular fracture assoc. with heterogeneous deform. modes during low-cycle fatigue 2-72834
- Ni₃B, solid state track autoradiography study of B distrib. 2-92016
- Ni:Cr³⁺(Ni²⁺) oxidation, effect of implantation 2-88254
- Ni₃S, intergranular S segregation, SEM and AES study (French) 2-109998
- Ni-alloys, cast, grain boundary voids formation after cold-working and annealing 2-57375
- Ni-base superalloy, 718, sintered and heat treated, phase anal. 2-67290

grain boundaries continued

- Ni-base superalloy, Inconel 600, ultra-pure, H embrittlement, effect of C, P, Sn and Sb additions 2-67525
 Ni-base superalloy, powder consolidated, superplastic response, effect of heat treatment 2-93570
 Ni-base superalloys, deterioration of aluminate coating (*Chinese*) 2-62248
 Ni-base superalloys, P/M, fatigue crack initiation, effect of defects 2-67518
 Ni-Cr, oxidation and reduction, scanning Auger and XPS study 2-83278
 Ni-Cr-Nb-Mo-Al-Ti, heat-resistant, homogenisation effect on struct. and plasticity 2-62181
 Ni-Cu, Monel 400, liq. metal and H embrittlement, influence of grain boundary P conc. 2-77930
 Ni-Fe, ultrahigh vacuum deposition, magnetisation, resistivity and stress 2-82482
 Ni-Mn (5 wt.%), interaction of slip bands and grain boundaries 2-99494
 Ni-Si films, compositional change induced by Ar^{+} ion bombardment 2-86753
 NiO, diffusion of ^{57}Co along grain boundaries 2-76747
 NiO, relative energies of (011) tilt boundaries 2-55982
 Pb circular crystals, growth from melt, grain boundaries and solid-liq. interface normal orientation 2-87966
 Pb thin films, on substrate, low-temp. strain behaviour 2-110218
 Pb-In films, thermal cycling between room and liq. He temps., microstruct. changes 2-112114
 Pb-Sn, grain boundary diffusion 2-104074
 Pb-Sn alloys, effect of precipitation on positron annihilation 2-67144
 PbTe MIS structs., field effect studies, DC cond. and Hall effect 2-115895
 Pd-Ag two-layer polycryst. films, low temp. homogenization (*Russian*) 2-92289
 Si film on SiO_2 , zone recrystallized, elec. props. of line defects 2-66668
 Si, grain boundary density of states, photocapacitance meas. 2-87187
 Si, high resolution electron microscopy obs. of $\Sigma=27$ boundary 2-71468
 Si, polycrystalline, quasi-grain-boundary-free solar cell struct., elec. perform. 2-93904
 p-Si polycrystal, grain boundary photocurrent, diffusion length, recomb. speed 2-61482
 Si, polycrystalline, conduction mechanism, diffusion theory and extended state mobility model 2-92608
 Si, polycrystalline, grain boundaries, chem., compositional and elec. props. 2-76458
 Si, polycrystalline, grain boundary passivation by H_2 2-76459
 Si, polycrystalline, grain boundary recomb. vel. determ., laser spot technique for photoconductance meas. 2-77087
 Si, polycrystalline, grain boundary recombination rate determ. by scanned spot excitation methods 2-115774
 Si, polycrystalline under optical illum., phenomenological model of grain boundary trapping states 2-92653
 Si ribbons, defects, elec. characts. and crystallography, EBIC and HVEM study 2-66014
 Si solar cells, grain boundaries, SEM charge-collection images 2-66012
 Si thin films, D passivation of grain boundary dangling bonds 2-76478
 Si, zone-melting-recrystallised films on SiO_2 -coated Si substrate, subgrain boundaries effect on carrier transport 2-77207
 Si:As diffusion and impurity concentration profiles, Rutherford backscatt. study 2-82019
 Si:As(P), CVD film, elec. characts., grain size, effects of impurity conc. and heat treatment 2-82487
 Si:P, polycryst., grain boundary diffusion of P 2-92283
 Si/SiC system, interfacial energy and Si-C reaction rel. to sintering 2-55981
 Si-metal Schottky barriers, photovoltaic props. implications for grating solar cells 2-116828
 $Si_3Al_4N_4C_2$, new compound with wurtzite struct. 2-57321
 β -SiAlON solid soln. containing different amounts of amorphous grain boundary phase, TEM obs. 2-92223
 SiC, polycryst., containing excess Si, neutron irradiated, microstruct. study 2-71514
 SiC:Al, sintered and hot pressed, grain boundary segregation, STEM study 2-111180
 Si_3N_4 , SiC, SiAlON, sintered microstruct. and property charact. 2-57323
 Sn-Pb alloys, superplastic, superanelasticity 2-83147
 TaS₂, 2H polytype, electron diff. study of twist boundaries 2-76248
 Ti, internal friction, temp. depend. (*Russian*) 2-115351
 Ti-Al, helical dislocations by low temp. thermocycling, TEM study 2-115237
 Ti-Al (8.6 wt.%), dislocation pile-ups and tensile fracture, influence of grain size and age-hardening 2-105320
 Ti-Al-Sn-Zr-Mo (5.2,4.6 wt.%), low cycle fatigue crack nucleation, role of microstruct. 2-57470
 Ti-Al-Sn-Zr-Mo (6.2,4, 6 wt.%), low cycle fatigue, cyclic deform. behaviour 2-57471
 TiO₂, varistors, prep. and props. 2-57320
 UO₂, densification, fission-induced 2-76508
 UO₂, fission gas release, effect of irradiation-induced resolu. 2-107951
 V-C(Mo)(Nb)(Fe), neutron irradi., void form., effect of substitutional and interstitial elements 2-103849
 W bicrystals, grain boundary fracture 2-83198
 W, cold worked, grain boundary dislocations, topographic anal., field ion microscopy study 2-115242
 W, diffusion of ^{185}W , via grain boundaries and defects 2-71718
 W fibre reinforced Ni superalloy, high temp. composite, microstruct. stabilisation with ZrO₂ short fibres (*German*) 2-77781
 W, polycrystalline, deformed, grain growth during fast heating (*Russian*) 2-93542
 W powder, activated sintering mechanism, defective struct. influence 2-67253
 W, C, bulk and grain boundary diffusion of ^{14}C 2-82020
 Yb₂O₃, grain boundaries, interface crystallography (*French*) 2-86685
 Zn, impression creep and dislocation controlled plastic flow, high temp. study 2-88147
 Zn-Al, steady state creep near eutectoid transformation, microstructural anal. 2-77868
 Zn-Al eutectoid, superplastic, cavitation, effect of grain size 2-111231
 ZnO film, electronic props., defects, morphology and adsorp. depend. 2-104515
 ZnS, revealing of defects by chem. etching 2-115239
 ZnSe, melt-grown crystals, mech. props. during flexure, prep. conditions influence 2-57404

grain boundaries continued

- Zr-Sn (1.5-9 wt.%), ageing response, potential for precip. hardening 2-77846
 ZrO₂-Y₂O₃, partially stabilised, anal. using STEM 2-77827
 ZrO₂-Y₂O₃ ceramics, high-purity, effect of grain boundaries on cond. 2-71712
- grain boundary diffusion *see* diffusion in solids
- grain growth
- α -brasses grain growth 2-88106
 bronze-graphite antifriction material, sintered, struct. and mech. props. 2-67556
 dispersion of spherical particles, resist. to normal grain growth 2-93486
 ferritic, with low interstitial level, mech. and corrosion props. (*Italian*) 2-99563
 metallic thin film deposition methods using ion beam technology 2-57304
 morphological changes in equiaxed grain structures studied by computer simulation (*Japanese*) 2-55875
 polycrystalline sample, grain growth with grain boundaries of different mobility (*Russian*) 2-115250
 sintering, microstruct. development, grain and pore coarsening 2-93469
 steel, austenitic, stainless, annealing twins absence during radiation-induced recrystn. 2-105187
 steel, austenitic stainless, grain boundary structure after annealing 2-67382
 steel, austenitic stainless 316, rapidly solidified Al_2O_3 dispersion strengthened, microstruct., path A alloys 2-88094
 steel, C, ferrite grain growth, effect of cementite particles (*Polish*) 2-67282
 steel, C, plastic flow, elevated temps., effect of C content 2-67524
 steel, constructional, 42KhMFA, anomalous grain growth 2-105198
 steel, die, hardened with vanadium carbonitride, props. 2-111211
 steel, low C, sheets, microstruct. and recryst., influence of second phase particles (*French*) 2-93534
 steel, low-C, chem. capped, anomalous struct. layers form. 2-105185
 weld, grain growth diagrams 2-116422
 Zircaloy-4, recovery and recrystallisation (*French*) 2-62143
 Al, ion implanted, radiation damage and annealing studies 2-76532
 Al, recrystallised, grain vol. distrib. and grain growth, effect of prior cold work 2-99446
 Al-Cu thin films, large grain growth during recrystn. annealing, elec. resist. and TEM study 2-111203
 Al-Mn, unhomogenized, recrystn. 2-83138
 Al-Mn (1 wt.%) alloy, texture development during continuous grain growth 2-105186
 Al-Mn solid soln., precip. and recrystn., internal friction obs., fine-grained struct. (*French*) 2-77842
 Al_2O_3 , MgO doped, grain boundary meas. technique 2-109812
 Bi_2WO_6 ceramics, grain oriented, fabrication 2-77790
 CeO₂ gels for protective coatings, TEM exam. technique 2-105400
 Fe-Ni-Cr alloys, grain coarsening, influence of second phase particles 2-93511
 Fe-Si-B, mag. induction, effect of Sb and Sn during secondary recrystn. 2-83244
 Ge film, amorphous, electron beam annealing in TEM 2-71503
 KNbO₃, sintering characts. and dielec. props. 2-105108
 $La_{0.9}Sr_{0.04}CrO_3$ ceramic, sintering and dielectric props. 2-62094
 $Li_0.5Fe_2.5O_4$ for ferrimagnetic pastes, prep. and props., effect of additions of glass and Bi_2O_3 2-88034
 $Li_2O-Al_2O_3-SiO_2-TiO_2$ glass ceramics, cryst. props., grain growth, electron and X-ray study 2-66244
 Ni-Cr-Al-Y₂O₃, dispersion and precip. hardened superalloy, recrystn., influence of hot working 2-111196
 Ni-Mn (5 wt.%), interaction of slip bands and grain boundaries 2-99494
 Ni_{1-x}O, sintered, grain growth, influence of O₂ partial press. 2-116476
 Si film, on SiN layer, stripe shaped cryst. growth by scanning electron beam annealing 2-87092
 Si film, polycryst., grain growth under CW electron beam annealing, modified SEM study (*Japanese*) 2-115597
 Si film on Si_3N_4/SiO_2 double insulating layer, CW laser recrystallisation, bipolar transistor fabrication 2-82154
 Si, polycrystalline, grain growth mechanisms 2-115424
 Si, polycrystalline, growth on Mo(Ta)(W) and silicide formation 2-71817
 Si:B, polycrystalline, B⁺ ion implantation, heat treatment effects 2-103795
 Si:B, polycrystalline, on SiO_2 , elec. resist., CW laser and furnace annealing effects 2-61025
 Si_3N_4 -Y₂O₃, sintering behaviour and microstructural development 2-93480
 W, effects of foreign element additions on reduction of WO₃ (*German*) 2-105102
 W, polycrystalline, deformed, grain growth during fast heating (*Russian*) 2-93542
 WC, effects of trace impurities on W carburisation (*German*) 2-105113
 WC-Co (10%)-hardmetal, sintering, prep. and props. (*German*) 2-105114
 Zn-Al (22 wt.%), eutectoid, thermomech. treatment effect on superplasticity 2-105195
- grain refinement
- high strength, precipitation kinetics during discontinuous cooling (*French*) 2-99467
 metals, electrolytic deposition, pulse plating process 2-77762
 steel, Cr-Mo, low alloy, mech. props. improvement by cyclic heat treatment (*Korean*) 2-67387
 steel, low-alloy, low-pearlite, V addition effect on struct., phase comp., and mech. props. 2-72818
 steel, low-pearlite, rolling regime influence on strength and toughness props. 2-99545
 steel, stainless, EP810, fatigue at cryogenic temperatures 2-67547
 steel, vacuum-melted, strengthening using combined cyclic elec. heat treatment and thermomech. heat treatment 2-72711
 undercooled alloys, grain refinement obs. solute effects 2-62146
 Al-Ti-Be, grain refinement, Be-enhanced 2-83086
 Al-Zr alloys, microstruct. and mech. props., effect of plastic strain (*Korean*) 2-62172
 Ni-Sn system, grain refinement by discontinuous precip. (*German*) 2-99466
 Ti-base alloys, recrystn., struct. changes during thermal cycling 2-83140

grain size

- see also *grain growth*; *grain refinement*
 austenite, quantitative determ. of mechanisms proceeding during controlled rolling (*German*) 2-57376
 bicrystals, current-voltage characteristics, saturation region, bicrystal parameters determ. 2-61562
 α -brass based alloys, intercryst. internal adsorp. 2-61148
 ceramic polycrystals, struct. reliability, processing-depend. phenomenon 2-77908
 ceramic-like body, process design, prod. from recycled waste glass, microstruct. and devitrification 2-111127
 ceramics, thermoluminescence dating, grain size distrib. and beta dose-rate 2-100571
 creep behaviour, Class II, modified constitutive eqn. 2-71550
 creep strength, microstruct. depend. 2-77932
 dislocations, rectilinear, equilib. splitting theory, stacking fault energy (*Russian*) 2-65996
 fatigue crack closure, at near-threshold stress intensities, due to fracture surface morphology 2-76578
 fatigue crack propagation, short cracks, effect of microstruct. 2-57441
 fatigue-induced surface plasticity, meas. method 2-88306
 ferroelectric ceramic, acoustic microscopy, imaging of flows, grain struct. and elastic props. 2-105410
 granular materials, resistivity at zero temp. coeff. 2-66600
 Harper-Dorn creep, flow process 2-71540
 ice, polycryst., tensile strength as function of grain size 2-105272
 Inconel 600, Ni-base superalloy, corrosion behaviour in high temp. steam, effect of grain size 2-67615
 measurement with X-rays, SOL-X on-line NDT method 2-105394
 metal film, polycrystalline, elec. cond., effects of non-cubic grains (*French*) 2-92786
 metals, polycrystalline, plastic microstrain autocorel. functions and spectral densities 2-56071
 morphological changes in equiaxed grain structures studied by computer simulation (*Japanese*) 2-55875
 mullite powders, effect of explosive shock waves 2-98199
 polycrystal, grain size effect on work hardening 2-111200
 polycrystals, grain struct., stress distrib. 2-88053
 prime candidate alloys, path A, rapidly solidified, microstruct. 2-85210
 secondary recrystallization texture, influence of original diffuse texture and grain size (*Russian*) 2-62137
 semiconductors, polycryst. struct. formation mechanism 2-66243
 steel, 37KhN3(MF), fracture and mech. props. (*Russian*) 2-105288
 steel, alloy Charpy-V type specimens, fracture appearance, effect of notch root radius and austenitising temp. 2-99534
 steel, austenite precipitation, supercooled, after forced austenitization, kinetics (*Russian*) 2-93516
 steel, austenitic, a high-strength, fatigue limit, grain size and γ -phase stability influence 2-72822
 steel, austenitic cutting tool heat treatment, for austenite grain size meas. as hardness assessment method (*German*) 2-57476
 steel, austenitic sheet, NDT determ. of grain size by US backscattering 2-62328
 steel, austenitic stainless, H embrittlement (*French*) 2-105327
 steel, austenitic stainless, intergranular corrosion, struct. influence 2-72876
 steel, austenitic stainless 316, rapidly solidified, high Ti stabilised, mech. props. and struct., irradi. effects 2-72765
 steel, constructional, fine-grained austenite struct. formed in α - γ recrystn., stability (*Russian*) 2-67376
 steel, Cr-Mo, low alloy, mech. props. improvement by cyclic heat treatment (*Korean*) 2-67387
 steel, Cr-Mo-V, heat resistant, thermomech. fatigue, effect on struct. and mech. props. 2-116546
 steel, Cr-Mo-V, high temp. ductility, compositional effects 2-111238
 steel, ferritic stainless, 26 Cr-1Mo, substruct. influence on strength 2-111234
 steel, high hardness, grain size effect on fracture toughness (*Japanese*) 2-77921
 steel, high-speed, hydroextruded, austenitic grain size 2-111197
 steel, low alloy, struct. after controlled rolling, effect of austenitising temp. 2-72744
 steel, low alloy, struct. and props. after rolling, rel. to austenite transform. kinetics 2-72745
 steel, low C, ductile to brittle transition temp., microstruct. and US attenuation 2-88167
 steel, low C, fatigue crack initiation and propag. in smooth specimens, microscopic study (*Japanese*) 2-93611
 steel, low-alloy, rolling rolls quality, forging and heat treatment influence 2-67392
 steel, low-C, determ. of plastic surface energy 2-83178
 steel, mild, cold forming suitability 2-72718
 steel, Mn-Nb-V, low-pearlite, struct. and mech. props. after controlled rolling 2-57385
 steel, Ni, hot deformation, substruct. effect on austenite strength 2-72735
 steel, Ni-Co-Mo-(W)-Ti, maraging, props. after high-temp. treatment 2-67395
 steel, Ni-Cr-(Mo)-(V), relative hardenability and interaction effects of Mo and V 2-62131
 steel, Ni-Ti, austenitic, a high-strength, fatigue limit, grain size and γ -phase stability influence 2-72822
 steel, Si (3 wt.%), grain oriented, for transformers, mag. losses 2-72272
 steel, stainless, creep microstrains nonuniformity 2-111254
 steel, stainless, EP810, fatigue at cryogenic temperatures 2-67547
 steel, stainless, microduplex, grain size depend. and strain rate sensitivity and activation energy of high temp. deform. 2-105244
 steel, stainless, type 316, cast, creep, effect of thermal ageing and grain size 2-105196
 steel, stainless, Type 316, stress/strain relation, modified Hollomon eqn., grain size depend. 2-67453
 steel, structural, of various strengths, temp. and strain rate effect on yield strength 2-62163
 steel, structural, of various strengths, temp. and strain rate effect at tensile and elongation props. 2-62164
 steel, structural, toughening by preliminary thermomech. treatment, grain size red. (*Russian*) 2-62149
 steel, tempered, pseudo-intercrystalline brittleness mechanism 2-67502
 steel, V, continuously cooled, strengthening contrib. at peak hardening from precip. 2-72710
 steel U8 and automatic steel A40G, struct. superplasticity w.r.t. treatment conditions 2-57426

grain size continued

- thin film, low loss surface imaging STEM studies 2-110181
 Zircaloy, stress corrosion crack propag. in H_2 , effects of texture. and microstruct. 2-67638
 Zircaloy, unirradiated, stress corrosion crack propag. 2-83276
 AgBr emulsions, ionic thermocurrent meas., grain microcryst. struct. depend. 2-88383
 AgBr microcrystals, in gelatin layers, slow electron mobility, size effect 2-92661
 Al alloy, precipitation hardened, pseudo-intercrystalline brittleness mechanism 2-67502
 Al alloys, high strength, exfoliation corrosion, math. modelling 2-105362
 Al, commercial purity, microstruct. development during rolling 2-83136
 Al, conventionally and shock-wave-deformed, correlation between texture and substruct. 2-99445
 Al, defect structure, after low-temp. plastic deform. (*Russian*) 2-67444
 Al, Harper-Dorn creep, nature and origin 2-116491
 Al, in-situ study of subboundary props. during creep, HVEM 2-71462
 Al, recrystallised, grain vol. distrib. and grain growth, effect of prior cold work 2-99446
 Al, shear band form., effect of large deform. 2-67416
 Al, stress dependence of subgrain size 2-103765
 Al thin films, polycryst., correl. between struct. and elec. props. (*Russian*) 2-66663
 Al-C alloy, dispersion hardening, mech. alloying in attrition mill, struct. obs. 2-111113
 Al-Ge (4 wt.%), superplastic deform. mechanism 2-83190
 Al-Mg, microstruct. development during rolling 2-83136
 Al-Mg, recrystn. after cold rolling, optical and electron microscopy study 2-88098
 Al-Mn (1 wt.%) alloy, texture development during continuous grain growth 2-105186
 Al-Zn-Mg-Cu, recrystallised grain size, effect of heating rate 2-57371
 Al_2O_3 , effects of Cr_2O_3 additions on sintering and mech. props. 2-99375
 Al_2O_3 , grain size depend. of fracture energy 2-57457
 Al_2O_3 , sintered, variable microstruct., strength meas. (*French*) 2-88154
 Al_2O_3 , thermal expansion anisotropy, stress meas. 2-76713
 $\text{Al}_2\text{O}_3\text{-SiO}_2$, mullite form. kinetics, grain comp. and component activity effects 2-77786
 $\text{Al}_2\text{O}_3\text{-SiO}_2$ mixtures, impurity effect on mullite and kaolinite 2-116450
 $\text{Al}_2\text{O}_3\text{-ZrO}_2\text{-MgO}$, MgO and ZrO_2 effects on microstruct. and mech. props. 2-88038
 Au-MgO ceramic thin films, cosputtered, reflectivity meas., percolation threshold and grain size effects 2-82942
 B₂C, hot pressed, mech. props., effect of porosity and grain size 2-116543
 Cd-Ag, warm deform. and texture strengthening 2-111199
 CdS films, RF sputtered, struct. and elec. resist., deposition dependence meas. 2-105073
 CdSe polycrystalline thin film transistor, conductivity behaviour 2-56735
 $\text{CdSe-ZnS-Cu}_2\text{S}$ thin film solar cell with improved ternary cpd. layer 2-116821
 Cu, containing Al_2O_3 particles, yield point and strain hardening (*Russian*) 2-105226
 Cu, containing P, anodic dissolution in bright Cu plating electrolytes, kinetics and mechanisms 2-67664
 Cu, flow stress, strain and grain size depend. 2-57399
 Cu, flow stress in polycryst., grain size depend., texture hardening concept 2-72780
 Cu, polycrystalline, low temp. fatigue, grain size effect (*Japanese*) 2-77920
 Cu-Al-Si-Co (2.8, 1.8, 0.4 wt.%), fine grained, creep 2-105219
 Cu-Ni-Sn spinodal alloy, tensile props. improvements by two-phase heat treatment 2-116478
 Cu-Zn Al, martensitic, rapid solidification effects 2-111175
 Cu-Zn-Al shape memory alloy, rapid solidification and assoc. effects 2-67322
 Eu₂O₃, plasma sprayed, X-ray struct. investigs., plasma jet enthalpy effect 2-99577
 Fe, high purity mag. and magnetomechanical props., influence of grain size 2-87565
 Fe-Al-Si alloy, sputtered granules, characters, before and after annealing (*Russian*) 2-67368
 Fe-Cr-Ti-Mo-TiO₂, dispersion strengthened, void swelling in HVEM, influence of fabrication procedure 2-111189
 Fe-Ni, splat-quenched, martensitic transform., microstruct. and kinetics 2-57349
 Fe-Ni-Cr, Alloy 800, mechanical behaviour at 838K 2-77888
 Fe-Ni-Cr alloys, grain coarsening, influence of second phase particles 2-93511
 Fe-Si (3 wt.%), primary recrystn. grain size, influence on secondary crystn. and texture (*Russian*) 2-116458
 Fe-Si-Al, secondary recrystn. kinetics, Al influence (*Russian*) 2-93417
 Fe₄₀Ni₄₀P₁₀B₁₀, amorphous ferromag. alloys, anal. of coercivity 2-87538
 Ge, thin film growth by laser induced CVD 2-77752
 La₂O₃, hot pressing, accretive recrystallisation 2-77785
 Li₂O-Al₂O₃-SiO₂-TiO₂ glass ceramics, cryst. props., grain growth, electron and X-ray study 2-66244
 Li₂SO₄, elec. cond. in monoclinic phase 2-71710
 Mg-Li-Al-Cd, superplastic deform., effect on struct. and props. 2-62180
 MgF₂:CaF₂, recrystallisation pressing, struct. and strength 2-99524
 Mo film on Si, ion beam induced interfacial reactions, TEM obs. 2-110050
 Mo-Ti (0.5 wt.%), struct. changes under action of high temps. and long loads in various media 2-67456
 Mo-Ti and alloy TZM, void swelling behaviour under heavy ion bombard. 2-86744
 Nb₃(Al_{1-x}Ge_x), A15 superconductor, prep. from transformation from liq. quenched BCC phase 2-98777
 Nb₃Sn multifilamentary supercond. composites, fabrication and supercond. props. (*Chinese*) 2-110555
 Nb₃Sn-Ti, composite processed, Ti addition effect on supercond. props. 2-104555
 Ni electrodeposits, defect struct., TEM study 2-56387
 Ni-Al coevaporated films, hardness and grain size, optical and electron microscopy study 2-82184
 Ni-base superalloy, powder-formed, near-threshold crack growth, effects of grain size and microstruct. 2-93616
 Ni-Co galvanic coatings, struct., corrosion resist. and mech. props. 2-57540

grain size continued

- Ni-Cr-Al-Y₂O₃, dispersion and precip. hardened superalloy, recrystn., influence of hot working 2-111196
 Ni-Mn (5 wt.%), interaction of slip bands and grain boundaries 2-99494
 PLZT, chemically prepared powders, grain size of mixed oxides 2-72660
 Pb film, reducing grain size by use of nucleants 2-104188
 Pb superconducting film, interfaced with Formvar, influence of grain size on T_c 2-115933
 Pb-In-Au:O film for Josephson tunnel junction base electrode 2-98499
 Pb-Pd alloy polycrystalline films, grain size reduction by coevaporation 2-71815
 PblnAu film, RF oxidation, oxide composition 2-76858
 PbTiO₃, amorphous state and crystn. process, Raman scatt., SEM, and dielec. meas. 2-81677
 PbTiO₃ ceramics, grain-orientated, prep. by unidirectional solidification of melts 2-62118
 Si, amorphous film, laser induced controlled nucleation and growth process 2-56408
 Si film, polycryst., amorphized by Si ion implantation, solid phase epitaxial recrystn. 2-115581
 Si, multicryst., directionally solidified, fracture 2-81884
 Si, polycrystalline, growth on Mo(Ta)(W) and disilicide formation 2-71817
 Si, thin film growth by laser induced CVD 2-77752
 Si:As(P), CVD film, elec. charactrs., grain size, effects of impurity conc. and heat treatment 2-82487
 Si:C, polycrystn., C influence in resistivity and grain size 2-66547
 Si:P, polycrystalline, low press. CVD with in situ P doping 2-93438
 Si:P polycryst. film, in situ doped, CW laser annealing, grain size and elec. cond. meas. 2-98771
 Si-CdS(Zn,Cd,...S) heterojunction solar cell, elec. props. 2-115875
 SiC-AlN solid solutions, hot pressed, comp. and props. 2-88037
 Si₃N₄, reaction bonded, mech. props., creep and thermal shock behaviour, influence of microstruct. variables 2-116541
 Si₃N₄, reactive sputter-coated reaction-bonded 2-99336
 Sn, electro-plated coatings, grain size effect on whisker growth 2-115635
 Sn film, struct. rel. to elec. and optical props. 2-115623
 Sn-Pb, electro-plated coatings, grain size effect on whisker growth 2-115635
 Sn-Pb alloys, superplastic, superelasticity 2-83147
 α/β -Ti Mn alloys, low cycle fatigue life 2-105319
 Ti-Al (8.6 wt.%), dislocation pile-ups and tensile fracture, influence of grain size and age-hardening 2-105320
 Ti-Al-Mo (5.4 wt.%), fatigue and dislocation behaviour, effects of H 2-99520
 Ti-Al-Sn-Zr-Mo (5.2,4.6 wt.%), low cycle fatigue crack nucleation, role of microstruct. 2-57470
 Ti-Al-Sn-Zr-Mo (6.2,4, 6 wt.%), low cycle fatigue, cyclic deform. behaviour 2-57471
 Ti-Al-V-(Mo), low cycle fatigue, effect of stress-strain behaviour 2-57439
 UO₂ fuel, swollen, with nonuniform grain size, interconnected pores stability 2-93481
 W, effects of foreign element additions on reduction of WO₃ (German) 2-105102
 WC, effects of trace impurities on W carburisation (German) 2-105113
 WC-Co (25 wt.%), martensitic transform., transverse rupture strength 2-105289
 YIG, microstruct. and grain size, ferromagnetic resonance and ESR study 2-115425
 Y₂O₃, hot pressing, accretive recrystallisation 2-77785
 Zn-Al eutectoid, superplastic, cavitation, effect of grain size 2-111231
 ZnO thin films, RF sputtered, charact. by X-ray diffr. and SEM 2-115618
 ZrO₂, sputter deposited, microstruct. control 2-115619
 ZrO₂-CaO(Y₂O₃), sputter deposited, microstruct. control 2-115619
 ZrO₂-Y₂O₃ ceramics, high-purity, effect of grain boundaries on cond. 2-71712

grain structure *see crystal microstructure*

grain subboundaries *see subboundary structure*

gramophones

No entries

Granato-Lucke theory *see dislocation damping*

granular materials

see also granular structure

- composite thin film, granular, metal-insulator transition 2-66452
 flow under triaxial stress states, plasticity model 2-75858
 gravity flow of granular materials 2-103199
 plastic deformation, dilatant 2-65491
 small-particle superconductor, Monte Carlo simulation, disorder effects 2-82518
 Al, superconducting, mag. susceptibility meas., grain clustering near T_c 2-61651
 Al-rare earth alloy granules, resist to deform. 2-116412
 Al-transition metal alloy granules, resist to deform. 2-116412
 Al-Zn-Mg granules, resist to deform. 2-116412
 Au-Al₂O₃(MgO) granular films, optical props., topological considerations 2-62002
 C granular film, nonscalar 1/f cond. fluctuations 2-82413
 NbN highly granular films, supercond. props., laser thermal spectroscopy 2-72113

granular metallic thin films *see discontinuous metallic thin films*

granular structure

see also granular materials

- surface statistics of a granular aggregate 2-82192
 UO₂-PuO₂ pellets fabrication using granular technique, process parameter influence 2-85162

graph theory

see also trees (mathematics)

- benzoid hydrocarbons, individual Kekule valence structs., graph-theoretical approach 2-80486
 benzoid systems, individual Kekule valence structs., graph-theoretical approach to pseudodegenerate states 2-80487
 eigenvalue problem, influences from graph theory 2-63851
 hydrocarbons, Kekule structs., sextet polynomial, graph theoretical identity 2-90430
 industrial thermodynamic systems modelling and anal. using process graph model 2-107281

graph theory continued

- isolated word recognition, dynamic time warping, adaptive ordered graph search technique 2-97307
 Mayer cluster expansion, props. 2-101301
 Mayer graphs, Gaussian integral calc., starmesh transform, method 2-68999
 n-graphs, upper bounds, Holder inequality estimate 2-84576
 nonalternate hydrocarbons, individual Kekule valence structs., graph theoretical approach 2-80488
 nonbenzoid hydrocarbons, individual Kekule valence structs., graph theoretical approach 2-80488
 partition technique and molecular graph theory 2-80425
 sextet polynomial, graph theoretical identity 2-90430
 thermodynamic systems, pressure, virial coeff., overlap graph expansion 2-84575

graphic equipment, computer *see computer graphic equipment*

graphics, computer *see computer graphics*

graphite

- adsorbed Ar submonolayer, melting, synchrotron X-ray study 2-104153
 acceptor intercalate, stage 1 model, electronic struct., optical and energy loss props., LCAO calc. 2-61346
 adsorbed ³He and ⁴He, multilayer physisorption, mean-field theory 2-110152
 adsorbed He, statistical mechanics calcs. 2-104141
 adsorbed incommensurate monolayers of methane-d₄, melting transition, neutron diffr. lineshape anal. 2-66356
 adsorbed Kr, 2D commensurate solid, stabilization by Xe 2-61287
 adsorbed Kr overlayer, commensurate-incommensurate phase diagram, helical Potts model 2-82136
 adsorbed Kr submonolayers, EXAFS study 2-82139
 adsorbed methane, rot. diffusion, incoherent quasielastic neutron scatt. study 2-56352
 adsorption of Ar at high temp., Percus-Yevick approx. 2-98438
 adsorption of Fe(CO)₅ on (0001) surface; dynamical props., Mossbauer study 2-56342
 adsorption of gases, at high temps., Percus-Yevick eqn. 2-76832
 adsorption of Lennard-Jones gas, Monte Carlo method 2-66359
 adsorption/desorption of I, rel. to fission reactor coolant distrib. 2-80123
 anode structure with Mo wire cathode for high-power TE CO₂ laser 2-60107
 artificial, single crystal, magnetoresistor, higher waiting temp. 2-98671
 artificial graphite, thermal and elec. props. in temp. range 500-2800K 2-66304
 Auger electron APS, low energy electron contrib. 2-62024
 backscattering of low energy H ion, energy distrib. meas. 2-61713
 baffles, O₂ gettering during organometallic VPE AlGaAs growth 2-67220
 band struct., Fermi surface, KKR calc. 2-82228
 basal plane, adsorbed Ne orientational alignment 2-66361
 bonded solid film, effect of load area of contact and contact stress on wear mechanisms 2-88224
 boronated graphite, photoelectron spectra (Japanese) 2-83009
 bronze-graphite antifriction material, sintered, struct. and mech. props. 2-67556
 calorimeter as ⁶⁰Co γ -radiation absorbed dose standard 2-70006
 carbide-graphite composite materials, high temp. oxidation, heat treatment effect 2-72722
 composite materials, elastic modules difference phenomena 2-62157
 contact reactions with Ga-Ti(V)(Cr) melts, X-ray diffr. study 2-82085
 corrosion in gas-cooled reactors, by H₂O, O₂, CO₂, H₂, temp. depend. (German) 2-102025
 corrosion in HTR, calc. using REACT/THERMIX code (German) 2-102012
 current-conducting pastes based on polymer binders and fine Ag and graphite powders, prep. and electrophys. props. 2-99384
 diamagnetic suspension in const. mag. field 2-110609
 diamond conversion, transition metal lamellar compounds of graphite as catalysts 2-67330
 dust grains in interstellar medium, graphite grains and disordered C grains models 2-89345
 dynamic response of fusion reactor components with temperature-dependent properties 2-69838
 electron induced methane production in fusion reactor environment 2-69903
 electron momentum densities, Compton scattering in electron microscope study, EELS technique 2-67166
 electronic and struct. props., EELS and secondary electron emission study 2-110999
 electronic phase transition, resistance magnetoresistance study 2-87306
 electronic struct., correlation with isoelectronic molecules, c.f. with As and Se 2-54772
 epitaxial adsorption of ³He, fourth sound meas. 2-86971
 exfoliated, compressed and uncompressed, adsorpt. isotherms 2-87059
 exfoliated, thermopower, diffusion and phonon drag components 2-82389
 exoelectron emission, RF stimulated 2-11036
 felts, thermal cond. meas., for fusion blankets 2-69860
 fibres, carbide coating produced by liquid metal transfer agent method 2-88245
 fine-grained, oxidation effects on thermal expansion coeff. and thermal shock fracture initiation 2-77896
 first wall materials in fusion reactor, impurity ions sputtering yields 2-74921
 first wall materials vapourisation and melting in fusion devices 2-74919
 GMZ graphite, thermal cond., neutron irradi. induced changes 2-54510
 Grafoil, physisorbed Ne near monolayer completion, neutron diffr. and vapour press. study 2-98462
 graphite:D, implants thermal release, He-induced damage influence 2-76468
 graphite:F⁺, ion implanted, ¹⁹F NMR spectroscopy study 2-61773
 graphite, adsorbed O₂, monolayers, mag. props. 2-98850
 graphite-AsF₅, association reaction, thermodynamics and kinetics meas. 2-93775
 graphite-diamond dynamic phase transition due to shock wave propagation 2-71629
 Hall effect, trigonal warping, energy bands 2-87305
 Hall effect meas., trigonal warping of energy bands effects 2-87304
 He⁺ bombardment, microstruct. changes 2-76524
 highly oriented magnetoresist. at 77K and 4.2K 2-110370
 HTGR fuel element graphite, gasification as HEAD-END process (German) 2-80127

graphite continued

- HTR fuel elements, dry mechanical graphite separation process (*German*) 2-90239
- HTR spherical fuel elements, graphitic matrix materials (*German*) 2-90245
- intercalated, CKVV Auger lineshape, screening effects, cluster model 2-77635
- intercalated compounds, phase transitions (*Russian*) 2-86862
- intercalated $\text{NO}_3^- \text{X}^-$ ($\text{X} = \text{PF}_6^-$, SbF_6^-) salts, transport and optical props. 2-98645
- intercalated with alkali metals, discommensuration struct. of mass density waves, thermodynamic theory 2-98017
- intercalated with FeCl_3 , Mossbauer study of mag. props. 2-99012
- intercalation cmp. with FeCl_3 and NiCl_2^+ , low-temp. specific heat and mag. susceptibility 2-81974
- intercalation compound, C_{24}K , mass- and charge-density modulation, X-ray diff. study 2-81951
- intercalation compound, KC_8 , cryst. and band struct., Fermi surface, de Haas-van Alphen effect 2-82227
- intercalation compound, LiC_6 , band struct., self consistent extended muffin tin calc. 2-82229
- intercalation compound with Br, phonons, inelastic neutron scatt. study 2-56105
- intercalation compound with FeCl_2 , electron microscope imaging of various stages 2-71358
- intercalation compound with K, Rb, Cs, phonon branches, neutron spectra study 2-76618
- intercalation compound with K and Rb, Shubnikov-de Haas oscill. freqs., expt. meas. methods 2-82210
- intercalation compound with MnCl_2 , charge transfer and islands, X-ray diff. study 2-91932
- intercalation compound with SbCl_5 , stage-2, commensurate-to-glass phase transition, electron microscopy study 2-110004
- intercalation compounds, acceptor-type, pressure effect on electronic props. 2-56425
- intercalation compounds, $\text{C}_6\text{K(Rb)(Cs)}$, vibr. density of states 2-81909
- intercalation compounds, electrochemical appl. 2-57688
- intercalation compounds, electronic props., review 2-98518
- intercalation compounds, HNO_3 mol. orientation, nucl. reson. scatt. study 2-103724
- intercalation compounds, low dimensional conductor, review of phys. props. (*Japanese*) 2-82202
- intercalation compounds, phonon Raman spectroscopy 2-57087
- intercalation compounds, rod intensities distrib., powder goniometer expt. and simulated spectra calcs. 2-115095
- intercalation compounds, staged structures 2-109765
- intercalation compounds in electrode materials in batteries 2-57692
- intercalation compounds with alkali metals, σ -electron energy bands, secondary electron spectroscopy study 2-93337
- intercalation compounds with alkali metals, disordered, decorated-lattice struct. factors 2-81764
- intercalation compounds with AsF_6^- and SbF_6^- , ^{19}F NMR study 2-98976
- intercalation compounds with Br, sp. hts., 1.5 to 6 K 2-98305
- intercalation compounds with transition metal chlorides, mag. phases 2-56863
- intercalation cpbs., C_6Cs and C_6Li , Auger line shape, final state rule 2-105012
- intercalation cpd., $\text{KTI}_{1.5}\text{C}_x$ ($x=4, 8$), supercond. transition temp. and crit. field 2-92844
- intercalation cpd. with alkali atoms, orientation of discommensurations 2-103721
- intercalation cpd. with alkali metals, C KVV Auger line shape and X-ray emission 2-87920
- intercalation cpd. with Br_2 , struct. phase transitions, Raman scatt. study 2-86863
- intercalation cpd. with F, chem. synthesis by ion implantation, optical reflectivity 2-92006
- intercalation cpd. with FeCl_3 , low and high stage, mag. order, Mossbauer study 2-87642
- intercalation cpd. with FeCl_3 , reduction and Fischer-Tropsch reactions, Mossbauer study 2-116692
- intercalation cpds., C_{12}M ($\text{M}=\text{K}, \text{Rb}, \text{C}$), charge distrib. among graphite layers 2-56421
- INTOR, graphite moderated breeder blanket designs, neutronics anal. 2-80256
- ion implantation, ESR, NMR, IR and XPS study 2-92008
- ion implantation damage, impurity profile, Raman, Auger and electron microscopy study 2-81834
- irradiation-induced creep testing, computer-supervised data logger 2-69762
- K-shell near-threshold photoemission cross section, elastic peak and plasmon sideband, energy depend. 2-87950
- lamellar compounds with K and benzene, struct. and transformations 2-98069
- magnetisation in ultraquantum limit in fields up to 400 kOe 2-92861
- magneto-plasma wave propag. under high mag. fields 2-71172
- material for limiter, shield and injector plates 2-113739
- methane formation in hydrogen-implanted graphite and carbides, in fusion reactor 2-80216
- moderator bricks, radiolytic corrosion in commercial AGR, model 2-64484
- moderators, oxidation rate profile, MEDIC model validation 2-64486
- monolayer on Ir tape, adsorption of K 2-115569
- mosaic X-ray spectrometer without collimators 2-113086
- multilayer physisorption of ^3He , ^4He , mean-field theory 2-87050
- neutron irradiated, restoration of struct. and props. during thermal annealing 2-86733
- neutron irradiation, defect prod. and annealing behaviour 2-80189
- novae postoperative phase, shell 2200 Å graphite feature, var. in different models 2-63425
- nuclear, grade, particulate kinetics and equil. of Cs sorption and desorption 2-74796
- nuclear grade, dimensions, thermal expansion coeffs., neutron effects 2-64473
- orientation-dependent extended fine structure in electron-energy-loss spectra 2-77641
- phase transition, to diamond, penetration of liq. metals, high static press. 2-82082
- physisorbed monolayer of Kr, commensurate melting and commensurate-incommensurate transition, X-ray study 2-115548
- physisorbed N_2 , quadrupole bilayer orientational phases 2-92350

graphite continued

- physisorption kinetics of ^3He , mean field theory, compensation effect near monolayer coverage 2-87046
- poisoned with absorbers, neutron diffusion calc. 2-85118
- pore population balance eqn. 2-69744
- pyrolytic, H ion backscatt., energy and ang. depend. 2-69849
- pyrolytic, ^{133}Xe implanted, lattice location study by Mossbauer effect 2-55999
- pyrolytic, anomalies in magnetoacoustic attenuation 2-110405
- pyrolytic, H reactivity electron beam enhancement 2-74938
- pyrolytic, second order phase transition, magnetoacoustic study 2-115828
- pyrolytic, thermally scatt. radiation diff., X-ray and Mossbauer γ -ray diff. study 2-62014
- pyrolytic cryst., diff. pattern caused by thermal X-ray diffuse scatt. 2-81621
- pyrolytic targets, water-cooled, design and operation at LAMPF 2-108188
- reactor irradiated, diffuse X-ray and thermal neutron scatt. 2-71287
- reflectivity at 10.6 microns, laser heating effects 2-72442
- RY Sagittarii, R Coronae Borealis variable, graphite particles rel. to circumstellar extinction 2-106747
- segregation and S adsorption on Co surface 2-82121
- soft thermopower, 4.2 to 280 K, rel. to phonon drag, heat treatment temp. influence 2-77103
- solid-liquid-gas triple point, sublimation and boiling curve 2-61116
- stress-free, irradiation technology, at Petten HFR 2-69705
- submonolayer phases of He, Ar, Kr, Xe, density-functional theory 2-98444
- substrate, (0001), adsorbed carbon tetrachloride, appl. of Landau theory to 2D struct. phase transition 2-76802
- substrate, Pb crystallites, morphological change mechanisms during equil. shape establishment 2-91839
- surface, ^3He multilayer adsorption, Hartree-Fock theory 2-115533
- surface, (0001), clean and adsorbed K, LEED study 2-76791
- surface, adsorbed Ne layers, fluid-solid transition line, phase diagram, LEED study 2-66185
- surface, adsorbed Xe layer, bound state resonant scatt. of atoms 2-87935
- surface, electronic struct., ab initio atom cluster model 2-115641
- surface, H_2 adsorption, commensurate-incommensurate transition, LEED study 2-87064
- surface, monolayer coverage of O_2 , pattern recognition optimization prediction 2-98436
- surface, NO beam scatt., angular distrib., rot. state population fluoresc. study 2-105023
- surface (0001), atomic vibr., He atoms scatt. study 2-56324
- surface (0001), He atoms specular inelastic selective adsorpt. obs. 2-57235
- surface (0001), phase diagram of adsorbed methane layer, specific heat study 2-98248
- surface (0001) struct. determ. by LEED 2-82107
- synthetic, methods of mech. testing at 20°C, review 2-72898
- target, light ion bombardment, reflected particle energy distrib. 2-82995
- tetramethyltin intercalated graphite, low-temp. structural study by electron microscopy 2-76424
- TFR Tokamak limiter, thermal load during additional heating pulses and major plasma disruptions 2-65771
- thin layer covering Pt foil, Br₂ lobular scatt. 2-99269
- tiles brazed to water cooled Cu substrate, FED pumps limiter protective surface 2-74904
- unoccupied electronic states 2-115655
- $\text{Al-Al}_2\text{O}_3$ -graphite composite system, threshold switching characts. correl. with fracture path 2-105331
- Be-C-graphite- UC_2 reactor fuel material, enthalpy and sp. ht. meas. at 1980 K 2-115428
- C_6Cs , inhomogeneous liq., pair correl. function, temp. depend. 2-103588
- C_6K , inhomogeneous liq., pair correl. function, temp. depend. 2-103588
- C_6K intercalated cpd., Madelung energy studies 2-86616
- C_6K ($x=8.24$), stage and CESR line breadth, temp. depend. 2-87595
- C_6KH_{10} intercalation cpd., supercond. obs. 2-110519
- C_6KHg (RbHg), intercalate, superconductivity study 2-82512
- C_6KHg (RbHg), intercalate, superconductivity study 2-82512
- C_6Li intercalated cpd., Madelung energy studies 2-86616
- C_6Rb ($x=8.24$), stage and CESR line breadth, temp. depend. 2-87595
- Cr, C, diffusion layer form. 2-83289
- Fe, cast, graphite size and spacing effect on elastic const. 2-116481
- graphite-Fe, ion implantation study by conversion electron Mossbauer spectroscopy 2-77427
- KC_{12} intercalation cpd., Raman scatt. studies of folded shearing phonons 2-57088
- KC_x ($x=8, 24$) intercalation compounds valence and core-electronic excitations, EELS study 2-87167
- LiC_x , electron states, cluster model (*Chinese*) 2-66415
- TiB-Poco graphite, coating for fusion reactor first wall, characterisation by lattice constant meas. 2-74912
- TiC coated for Doublet III limiters, coating process evaluation and characterisation 2-74899
- $\text{V}_2\text{O}_5\text{-P}_2\text{O}_5$ /graphite struct., contact limited conduction, work function effects 2-72056

graphitisation

- diamond: Sb(N) , ion implanted, defects, elec. cond., EPR study 2-66027
- steel, transformer grade, C migration on ferrite surface during graphite centres form. 2-67378
- C, fibrous and particulate, catalytic graphitisation, process characts. and mechanism 2-78129
- Fe, Armo, C migration on ferrite surface during graphite centres form. 2-67378
- Fe-Si-C, melts, crystn. of primary graphite 2-72687
- SiC (6H), graphitisation by electron beam irradi., electron diff. study 2-76503

graphitising

- Fe, cast, graphite morphology in sintered swarf powder from nodular Fe (*Japanese*) 2-83060
- Fe, cast, thermodynamic stimulus to graphitisation, alloying elements influence, chilling action 2-105139
- Ni-C, sintered compacts, nodular graphite form. (*German*) 2-77845

graphs

- see also nomograms*
- data analysis, graphical methods for investigating fit to Fisher distrib. 2-68509
- metal deposition during electrolysis, quality prediction using current response graphs 2-99686

gratings (diffraction) *see* diffraction gratings

gratings (optical) *see* diffraction gratings

gratings (spectra) *see* diffraction gratings

gravimeters

- see also geodesy*
- base line for calibration of gravimeter for seismological purposes (*Chinese*) 2-58134
- direction-of-action meas. using concentrically rotating elements, theory (*Japanese*) 2-79618
- geodetic inertial survey systems with gradiometric aiding 2-83954
- horizontal capacitive pendulum for meas. of Earth tides 2-78854
- tensor gravity gradiometer employing superconducting circuits 2-83955

gravimetric instruments *see* gravimeters

gravimetry *see* density measurement; weighing

gravitation

- see also general relativity; gravitational collapse; gravitational lenses; gravitational red shift; gravitational waves; quantum field theory of gravitation; Schwarzschild metric; unified field theories*
- 18-dimensional gravitation, grand unification by Kaluza-Klein approach 2-79451
- Aharonov-Bohm effect analogue, globally stationary but locally static space-times 2-112784
- antimatter gravitational accel., expt. for meas. 2-79462
- Bernoulli-Laplace-Lenz vector, integrals and symmetry 2-107193
- Bianchi type-II cosmological models in Brans-Dicke theory 2-63725
- bibliography 2-84405
- bifocal formalism and energy-momentum problem of gravity field 2-79437
- bimetric Machian gravitation, Kepler laws 2-89598
- bipolar vacuum gravit. fields, new class 2-89599
- black hole formation and evaporation in insulated box 2-74290
- black hole in external gravit. field 2-106771
- black holes, charged rotating, vacuum polarisation near event horizon 2-112482
- black holes, definitions, area theorem 2-112768
- black holes, specific entropy and sign of energy 2-112320
- book 2-68979
- Brans-Dicke cosmology, modified, anisotropic homogeneous models 2-94871
- Brans-Dicke modified cosmology, Bianchi type-I solns. 2-117823
- Brans-Dicke theory, nonsingular cosmological models 2-112776
- Brans-Dicke theory, singular hypersurfaces 2-63876
- Brans-Dicke theory of gravitation, struct. considerations 2-95189
- Brans-Dicke theory, Kerr-like metric 2-63879
- charged particle bunch, gravit. expts., Schwarzschild space-time theory 2-63883
- charged particle proper energy, effect of gravitational field of charged black hole (*Russian*) 2-58251
- closed cosmological model, correspondence between Brans-Dicke theory and general relativity 2-74132
- conference, New Orleans, LA (May 1981) 2-112646
- conformal gravity, gauge formulation 2-53638
- conformal invariance and space-time torsion 2-89586
- conformal invariant theory, spontaneous symm. breaking 2-107208
- conformally invariant Brans-Dicke theory, mass spectrum 2-84500
- continuous creation theory, Brans-Dicke model adaptation 2-112616
- cosmology, anal. of galaxy density field and induced gravity field from redshifts survey 2-68881
- cosmology, effects of gravitation on entropy in expanding Universe 2-117836
- coupled gravitational and magnetic waves, propagation through magnetised plasma and dust 2-112767
- covariant chronogeometry predictions, macro-micro relationships in universe model 2-113180
- covariant theory in flat space-time, application to static spherically symmetric bodies 2-112778
- creeping Newtonian jet dynamics with gravity and surface tension, free-surface flows 2-91496
- cylinder, gravitational attraction, rel. to gravit. constant determ. 2-69082
- cylinder, hollow finite, internal gravit. field 2-89608
- de Broglie frequency, time transform., mass decrease in gravit. field 2-95179
- de Sitter constant vacuum soln., resultant theories 2-53604
- de Sitter model, singularity problem 2-101279
- deflection of fast particles and light 2-84413
- Dicke-Brans-Jordan cosmology, cosmological red shift time var. 2-117813
- early Universe, generalised theory of gravitation 2-89419
- Einstein's eqns., for spherically symmetric perfect fluid distrib., exact static soln. 2-95163
- Einstein's vacuum field eqns., general axially symmetric static soln. 2-95165
- Einstein vacuum field eqns., Nengebauer's $N=2$ soln., electrovac generalisation 2-95162
- Einstein-Cartan theory, static fluid solns. 2-79453
- Einstein-Cartan-Maxwell-Bianchi type II solutions 2-89594
- Einstein-Cartan-Sciama-Kibble theory of gravitation, Hamiltonian formulation 2-84498
- Einstein-Maxwell eqns., Weyl-conjugate metrics 2-101285
- Einstein-Maxwell equations, static soln. 2-79454
- Einstein-Maxwell generalised theory 2-89595
- energy content of gravitational field, energy-momentum density pseudo-tensor formalism 2-63862
- entropy-to-energy ratio for bounded systems, universal upper bound 2-107198
- Ernst eqns., with EM fields, similarity solns. 2-95159
- field equations in general relativity, exact soln. 2-101261
- first order canonical formulation, Einstein-Cartan-Sciama-Kibble theory application 2-112782
- flat space-time, gravit. instability 2-53630
- fluid, equilibrium sequences bifurcating from Maclaurin sequence 2-79448
- gauge action principles, twistor bundles 2-101284
- gauge approaches, differences, critical anal. 2-53634

gravitation continued

- gauge theory formulation, Poincare, de Sitter and conformal cases 2-53637
- general-relativity-with-higher-derivatives, horizon free cosmologies 2-95182
- generalized bimetric theory of gravitation (*Russian*) 2-79449
- gravitational field and field of nuclear forces, point source simultaneous soln. 2-64359
- GRAVSAT 2-106475
- group covariance generalisations 2-112755
- Guth cosmology, phase transitions, gravitational effects 2-106986
- inertial reference frames, gravitational forces, appl. to university courses 2-69006
- inverse square law validity, laboratory expts. 2-112799
- Jordan theory, stationary spherically symm. solns., black holes 2-84497
- Kerr field features produced from inhomogeneous figures of equilb. (*Polish*) 2-78932
- Kerr geometry, gravitational perturbation eqns. 2-69061
- Kerr-Newman space-time, Hawking evaporation of Dirac particles 2-79140
- light behaviour in spherically symm. aether field 2-79357
- light deflection by Sun, non-eclipse optical determ. 2-94591
- light deflection obs. during solar eclipses, correl. with ellipticity of solar corona 2-100880
- light propagation in Maxwell-like gravit. field 2-69067
- linear field eqns., Gaussian-like unit system 2-53616
- lore of large numbers, historical and background to Anthropic Principle 2-63793
- Moller tetrad theory, special case of Poincare gauge theory 2-112774
- nearly rigid body, in relativistic gravit. field, torques 2-107183
- new theory (*Russian*) 2-101280
- Newman-Penrose method in the theory of general relativity 2-101271
- Newton's Principia, Kepler's laws, universal gravitation 2-94970
- nonconservative theories, stress-energy conservation 2-79450
- nonmetric theories, dust condition, self-consistency 2-79452
- nonsymmetric theory, Cauchy problem consistency 2-63878
- Nordstrom's first theory of gravitation, cosmology 2-53456
- O_3 gravity hydrodynamics, stars, cosmological evolution 2-74294
- particle creation in asymptotically flat space-time containing shell-focusing singularities 2-106521
- photons and neutrinos, repulsive gravitational forces, appl. to primordial big-bang 2-106980
- Poincare invariant gravit. field, eqns. of motion for pointlike objects 2-53605
- point-source idealisation in chemical field theories, mech. energy losses from EM radiation reactions 2-84489
- point-source idealisation in classical field theories, EM radiation damping 2-84488
- projective relativity, unified field theory 2-112773
- protic monopoles and quantization of strong charge 2-69070
- quasistationary approximation scheme, application to model problem of slow-motion gravity 2-112777
- $R+R^2+Q^2$ theories, ghost-free, tachyon-free, with torsion, Birkhoff theorem 2-89596
- $R+R^2$ theory of gravity and Einstein-Cartan-Sciama-Kibble theory equivalence 2-107213
- relativistic linear stellar model, space-time continuum 2-84089
- relativistic theories, equivalence 2-107209
- relativity and equivalence principles, Treder-type tetrad theory 2-107206
- Robertson Walker Universe, dust filled, perturbation by point particles representing galaxies 2-117824
- Robertson-Walker universe, gravitational effects on phase transitions 2-112769
- rotating black hole, nonthermal emissions and phase transitions 2-74291
- scalar-tensor theory, spherically symm. vacuum field, exact solns. 2-101281
- Schiff's conjecture on gravitation 2-112761
- Schwarzschild space-time, vacuum polarisation by massive scalar field 2-117706
- Schwarzschild field, gravitational repulsion 2-95168
- Schwarzschild-like solns. to gravit. field eqns., time depend. embeddings 2-112779
- seismic source with volume change, gravitational effect 2-57998
- self-gravitating gas clouds, cooling, equilibrium states in external gravit. fields 2-58440
- self-gravitating incompressible fluid, dumb-bell equilibria, mass-shedding pear shape 2-95181
- semiclassical gravity, flat spacetime instability, quantised matter coupling 2-89603
- shell, rotating cylindrical, gravit. field 2-79443
- singularities, Cauchy horizons and extensions of a large class of Einstein-Maxwell spacetimes 2-95193
- space-time model from quantum mechanics 2-112787
- spin- $1/2$ particles in the presence of a Heavisidian field, rot. black hole and neutrinos 2-69069
- spinning particles, gravitational scatt., linear approx. 2-95183
- spinning test particles in curved space-time with torsion, Lagrangian formulation 2-95166
- spontaneous generation from quantum field, rel. to Second Law of Thermodynamics 2-53629
- static charged perfect fluid sphere, equilb. 2-106507
- static gravitational fields in general class of scalar-tensor theories 2-95187
- static spherically symmetric star, external mag. field in Rosen's bimetric gravitation theory 2-89143
- Sun, effect on Mars-Earth radiowave propag. 2-94592
- surface effects (*German*) 2-89140
- tensorial theory in the framework of special relativity 2-84501
- tetrad gravity fields, unification of fermions and gauge bosons 2-113118
- time-non-local conserved currents 2-95594
- torsion balance for gravitation and cosmology studies 2-53655
- torsion scale for meas. of small gravitational field gradients 2-74386
- translating drop in elec. field, heat and mass transfer 2-91428
- translation gauge theory, geometric struct. 2-95191
- Treder-type tetrad theories, linear approx. 2-107207
- unified gravitational and quantum-mechanical space-time structure and special relativity foundations 2-74296
- unitary field theory with gravo-electric induction (*German*) 2-79250
- universal gravitation law, discovery 2-94971
- Universe expansion, gravit. field creation of elementary particles 2-106973

gravitation continued

- Universe origin, expanding relativistic plasma, gravit. instability 2-63731
- vacuum viscosity description of quantum processes in the early Universe 2-106981
- vector theory, expt. tests 2-89597
- Weyl-Eddington action based gravitational theory 2-53636
- Weissenhoff fluids, spin-coeff. approach, Einstein-Cartan theory 2-107203

gravitational acceleration *see gravitation***gravitational collapse**

- see also black holes; cosmology*
- circumstellar shells mass brightness temperature and kinematic compression of Doppler width 2-58437
- cold neutrino degenerate dense matter, nuclei props., Thomas-Fermi model 2-117687
- cosmology, gravothermal aspects of evolution of stars and Universe 2-100726
- dense neutron matter metastability, phase transition to pion-condensed states 2-100970
- energy release mechanism in astrophysical objects 2-100733
- fragmentation on protostellar mass scale during dynamical collapse 2-84291
- galaxies evolution, violent relaxation collapse phase of symmetrical galaxies 2-106896
- galaxy clusters, dynamical evolution of non-point body clusters (*Russian*) 2-63688
- gaseous isothermal sphere, analytical soln. 2-106851
- giant planets formation, hydrodynamic collapse of gaseous envelope onto solid core 2-112358
- globular clusters with massive central black hole, stellar dynamics and galactic tides 2-63540
- interstellar accreting rotating isothermal clouds collapsing, envelope evolution 2-94802
- interstellar cloud fragmentation and collapse, protostar form. (*Polish*) 2-106879
- interstellar clouds, criteria for contraction and fragmentation rel. to star form. 2-100909
- interstellar clouds, isothermal, evolution under varying external pressure (*Russian*) 2-94813
- interstellar clouds, stability of simple polytropes against homologous contraction 2-68872
- interstellar dark clouds, collapse models 2-58418
- interstellar interstellar clouds gravitational collapse, hydrodynamics code 2-68862
- interstellar molecular clouds, gas dynamics of H II regions rel. to cloud collapse 2-79190
- interstellar rotating clouds, instability to fragmentation and star form., heuristic criterion 2-112524
- interstellar rotating gas clouds, collapse and fragmentation 2-63586
- Kerr-Newman dyon space-time, test particle motion 2-107205
- low-entropy adiabats for stellar collapse, Thomas-Fermi model 2-100961
- massive oscillators as cosmic energy sources 2-58241
- massive star collapse to neutron star and supernova, neutrino oscils. effects 2-74007
- massive stars collapse and supernovae induced by axion-like particles 2-117688
- metric outside rotating charged object in vector graviton field (*Chinese*) 2-84083
- nakedly singular collapse histories, bulk viscosity inclusion effect 2-100731
- neutrino bursts from collapsing stars, Homestake burst search results 2-89099
- neutrino interactions effect, Dirac formalism 2-74010
- neutron stars collapse to config. with pion condensate core 2-94765
- O₃ gravity hydrodynamics, stars, cosmological evolution 2-74294
- protogalaxy collapse to spiral galaxy 2-112568
- quark matter stability in neutron stars 2-117702
- radiating fluid sphere, late stages of naked singularity collapse 2-112770
- rotating stars collapse, appl. of numerical relativity 2-100727
- star formation, magnetic pressure effects 2-112434
- star of 15 M_⊙, inner core bounce and shock propag. 2-89234
- stars, axisymmetric nonrotating, general relativistic collapse, numerical calc. 2-106773
- stars, core collapse and adiabatic shock energetics 2-100900
- stars, gravothermal aspects of evolution of stars and Universe 2-100726
- static spherically symmetric star, external mag. field in Rosen's bimetric gravitation theory 2-89143
- stellar collapse, postshock neutrino transport and electron capture 2-106669
- stellar core collapse, eqn. of state rel. to abundance distrib. of heavy nuclides 2-106758
- stellar core collapse, exploding 10 M_⊙ star as model for Crab supernova 2-89285
- stellar core collapse, neutrino-induced ⁹Be prod. (*Russian*) 2-106686
- stellar core collapse, results from physics of hot dense matter 2-100966
- stellar degenerate Fe core collapse in supernova model 2-106688
- supernovae, gravitational collapse dynamics with Majorana neutrinos and lepton number violation 2-68800
- supernovae, neutron shell blocking of electron-capture during gravit. collapse 2-58323
- Tolmans collapsing dust problem, WKB approx. 2-58441

gravitational constant

- broken symmetry theories of gravity and implications for cosmology 2-84505
- depth variation in Earth, gravit. const. calc., ellipticity effect 2-73422
- Earth expansion due to decreasing value of G 2-88830
- large number hypothesis and the matter-dominated Universe 2-112621
- measurement employing electrostatic screening, charge induction by thermal radiation 2-112924
- scale covariant gravitation and primordial nucleosynthesis 2-89416
- time variation, laser cavity expt. determ. 2-112798
- time-variant G, effects in scale-covariant theory for large numbers hypothesis 2-112622
- variability and primordial nucleosynthesis 2-58507
- variable G and the strong equivalence principle 2-107227
- variable G in Brans-Dicke cosmology, stellar evolution 2-106683

gravitational experiments

- atomic clock appls. in tests of gravitation and relativity theories 2-63884
- back-action evading transducer for gravitational radiation antennae 2-112796

gravitational experiments continued

- free fall universality, neutron gravity refractometry test 2-69081
- G measurement employing electrostatic screening, charge induction by thermal radiation 2-112924
- gravitational field effects on a phase of EM wave 2-63886
- gravitational radiation, laser interferometry high precision detection 2-63888
- gravitational waves, optical cavity laser interferometry detection 2-63889
- harmonic oscillator with mass M=389 kg, meas. of Brownian noise 2-53654
- high stability clocks in space 2-79535
- interferometric gravitational wave detector, demands on laser parity 2-63887
- inverse square law of gravitation, expt. test 2-101296
- inverse square law validity, laboratory expts. 2-112799
- light deflection obs. during solar eclipses, correl. with ellipticity of solar corona 2-100880
- macroscopic rotors and gravitational effects 2-63885
- quantum gravity indirect evidence 2-53651
- quantum gravity indirect evidence 2-53652
- quantum meters threshold capabilities 2-69080
- quantum optics, gravit. wave detect., general relativity, NATO advanced study institute report 2-75546
- real-time analysis system for gravitational wave antenna 2-63871
- Sagnac effect gravit. radiation antenna 2-112795
- self-gravity acceleration and space-time flattening 2-101297
- three mode 50 kg gravitational antenna, Q-factor at liq. He temps. 2-79461
- time variation, laser cavity expt. determ. 2-112798
- toroidal gravitational wave detector, phase difference and sensitivity 2-95211
- torsion balance for gravitation and cosmology studies 2-53655
- Weber-type antenna, mechanical filter for suspension 2-53653
- Al detector for grav. waves, 440-day search 2-112797

gravitational lenses

- 2345+007, double quasar, identification as third gravitational lens 2-68924
- astrophysical uses of 2-117580
- detection, use of interfering delay signals, cepstral anal. (*Russian*) 2-68630
- extragalactic radiosources cosmological evolution, effect of gravit. lensing 2-89397
- observation probability estimate 2-89135
- Q1115+080, triple quasar, spheroidal gravit. lens model 2-112607
- Q 0957+561 A, B, UV spectra of double quasar, IUE obs. of variability 2-74123
- QSO 0957+561, short period var. detect. (*French*) 2-101088
- QSO amplification by condensed objects in galactic haloes 2-101089
- radio sources, possible meas. of time delay between gravit. images of expanding double sources 2-63691

gravitational radiation *see gravitational waves***gravitational red shift**

- see also cosmology*
- Doppler cancelling system, response to plane gravit. waves 2-95212

gravitational waves

- see also gravitons*
- absorption by nearly Newtonian systems 2-95177
- amplification by interaction with binary system, theory 2-101277
- antenna, real-time analysis system 2-63871
- axially symmetric gravitational two-body problem 2-95170
- axially symmetric gravitational two-body problem 2-95171
- back-action evading transducer for gravitational radiation antennae 2-112796
- Bianchi II cosmology, soliton gravit. waves, general framework 2-84495
- binary star, quasiperiodic, grav. radiation calc. 2-100989
- binary star orbital perturbations on passage of gravit. waves 2-68813
- binary stars, effects of gravit. radiation on evolution of highly compact systems 2-68812
- black holes accretion of spheroidal dust shells, gravitational radiation 2-117703
- C metrics, asymptotic flatness at spatial infinity 2-107200
- cataclysmic variables, minimum period, gravitational radiation and mass loss effects 2-106717
- detector, electrically resonant transducer for a gravitational wave antenna 2-89605
- detector, force measurement, quantum amplifier limits 2-84590
- Doppler cancelling system, response to plane gravit. waves 2-95212
- dwarf cataclysmic binary stars, effect of gravit. wave radiation on mass exchange and evolution (*Russian*) 2-106751
- Einstein's eqns., wave solns. anal. 2-101278
- expanding cosmologies, colliding gravit. waves 2-58519
- galaxies, gravitational radiation effect on secular stability 2-84317
- galaxies active nuclei, characts. of gravit. radiation bursts 2-106504
- general relativity, axially symmetric two-body problem, boundary conditions, time scales, quadrupole formula 2-95178
- general relativity, linearised quadrupole waves and motion of test particles 2-101268
- general relativity, radiating anisotropic spheres evolution 2-84493
- globular clusters, characts. of gravit. radiation bursts 2-106504
- inhomogeneous cosmology: gravitational radiation in Bianchi backgrounds 2-63719
- interacting bodies, gravit. radiation, general relativistic prediction 2-89588
- Kerr black hole, gravit. radiation theory 2-107201
- Kerr black hole, gravitational radiation induced by particle falling along Z-axis 2-79143
- laser interferometry high precision detection 2-63888
- left-flat plane waves as H spaces 2-101276
- low-temperature physics near OK, review 2-107330
- neutron star accretion, gravit. radiation transform to gamma ray burst (*Chinese*) 2-63708
- nonlinear gravitational waves in plasma, detector theory 2-74309
- numerical relativity, appl. to generation of gravit. waves 2-100727
- optical cavity laser interferometry detection 2-63889
- particle falling towards black hole, radiation emission 2-53621
- point-source idealisation in chemical field theories, mech. energy losses from EM radiation reactions 2-84489
- point-source idealisation in classical field theories, EM radiation damping 2-84488
- post-main sequence stars, gravit. wave emission 2-100904

gravitational waves continued

- post-Newtonian gravity, radiating system, near-zone expansion, nonanalytic terms, matching 2-69072
- PSR 1913+16 (pulsar+compact star) general relativity test and gravit. radiation evidence 2-63498
- PSR 1913+16 quasiperiodic binary system, grav. radiation calc. 2-100989
- pulsar timing noise and external disturbances, gravitational wave emission 2-58671
- quadrupole formula for gravit. radiation, rel. to neutron star fundamental mode damping time 2-106518
- quantum meters threshold capabilities 2-69080
- quantum optics, gravit. wave detect., general relativity, NATO advanced study institute report 2-75546
- radiation antennas, search for correl. between Rome and Maryland 2-84512
- radiation detection, quantum noise and quantum nondemolition meas. 2-95102
- radiation reaction from small-angle scatt. of slowly-moving compact bodies 2-84496
- radiation suppression from stars falling into black holes 2-89292
- Robertson-Walker Universes, gravit. radiation, gauge-invariant definition 2-69065
- Sagnac effect gravit. radiation antenna 2-112795
- scalar spherical waves expansion in gravit. field with quadrupole struct. second order approx. (*German*) 2-107199
- semi-relativistic treatment for particle thrust into black hole 2-53622
- slow motion expansion on Schwarzschild background, nonanalytic terms 2-69064
- Solar System stability in terms of gravit. guiding waves 2-84117
- stochastic cosmic background of gravit. radiation, contrib. to timing noise of pulsars 2-79249
- Sun, gravitational radiation generation 2-106645
- three mode 50 kg gravitational antenna, Q-factor at liq. He temps. 2-79461
- toroidal gravitational wave detector, phase difference and sensitivity 2-95211
- AI detector, 440-day search 2-112797

gravitons

- conformal supergravity, one loop beta function 2-107220
- detection using Sagnac effect gravit. radiation antenna 2-112795
- dynamically broken supergravity and hierarchy problem 2-107223
- generalised theory of gravitation, field redefinition of string Lagrangian 2-95169
- gravitino dominated Universe galaxy form. 2-112627
- high-derivative field theories, counting of states 2-107226
- multiregion kinematics of graviton-graviton interactions (*Russian*) 2-69078
- non-self-dual nonlinear gravitons derived from complex space-times 2-107216
- quantum gravity, graviton self-energy in general axial gauge 2-69076
- supersymmetric gauge theories, symmetry breaking mechanism 2-79760
- Treder-type tetrad theories, linear approx. 2-107207
- Universe, inflationary, graviton creation and grand unification scale 2-112628
- vector graviton field, metric outside rotating charged object (*Chinese*) 2-84083

gravity

see also *gravitation*

- 15th order geopotential coeffs. from 1972-05 B orbital inclination anal. 2-100702
- 15th order geopotential coeffs. from artificial satellite 1966-63 A orbit near 15th order reson. 2-100701
- r-mode oscillations in uniformly rotating stars, perturbations in gravit. pot. 2-84214
- Africa, gravity anomalies from satellite tracking obs. 2-88721
- SW Africa continental margin, isostasy and gravity anomalies 2-88857
- Albuquerque basin, Rio Grande rift, New Mexico, basin deposits thickness from gravity obs. 2-111833
- South America, gravity and mag. anomalies rel. to tectonic struct. 2-100237
- NE America continental margin, isostasy and gravity anomalies 2-88857
- anomalies, disturbing potential and Stokes' constants (*Russian*) 2-83732
- anomalies interpretation, use of multipole expansion 2-83958
- anomaly due to 3-D body, calc. 2-105897
- anomaly interpretation, soln. of direct problem of gravimetry for special classes of mass distrib. 2-117184
- South Atlantic, gravity anomalies from satellite tracking obs. 2-88721
- central Atlantic Ocean, Bouguer and mag. anomalies rel. to mag. model of Earth crust 2-73438
- N Atlantic ocean basin and continental margin, gravity profile and trans-Atlantic Geotraverse 2-58035
- atmospheric pressure changes inducing gravity variations 2-117181
- NW Australia, regional gravity studies rel. to lower crust and upper mantle struct. in Precambrian terrains 2-117256
- Azores-Biscay Rise, struct. and origin of crust 2-88855
- Baikal-Patom highlands, USSR, local gravity anomalies 2-105898
- bibliography 2-84405
- binary star components, forced oscillations, toroidal modes due to varying gravit. pot. 2-106786
- binary stars, convective auto-oscill. of stellar interiors 2-63520
- borehole gravimeter survey, effect of dipping beds 2-73417
- British Columbia, Canada, vertical gravity gradient method 2-100195
- Campi Flegrei geothermal area, Italy, crust struct. study 2-73493
- Canada, organisation and management of National Gravity Data Base 2-106322
- coastal seawater pile-up causing gravity field changes 2-117187
- continental magnetic, gravity and thermal fields correl. 2-105916
- Coral Sea/Lord Howe Rise continental margin, isostasy and gravity anomalies 2-88857
- Cottrell Observatory research and meas. 2-94268
- crustal gravity anomalies of buried discs and cylinders 2-88725
- cumulated anomalies, source numbers determ. methods, comparative study (*Rumanian*) 2-117502
- Darai escarpment, New Guinea, formal interpretation 2-105885
- dark clouds, dust grain segregation by gravit. settling 2-106843
- depth variation in Earth, gravit. const. calc., ellipticity effect 2-73422
- Dharwar greenstone-gneiss-granite terrain, gravity interpretation and geological implications 2-78534
- direct problem solution for certain classes of mass distrib. 2-111836
- disc gravitational potential 2-89116
- disturbing potential at Earth surface, soln. of continuous and discrete boundary value problems (*Russian*) 2-100194
- Doppler tracking standard acquisition system 2-58131
- drop, thermocapillary and buoyant flow in space laboratory 2-76779
- Earth, change in gravity field due to vertical displacement of Earth's surface 2-73419
- Earth, field uncertainties, effect on POGO and MAGSAT orbits and mag. field survey 2-73437
- Earth crust anomalies, effect on satellite geomag. data and orbit 2-73437
- Earth density models, gravity/pot. parameters in geodetic reference system and stratified heterogeneous spheroid 2-105894
- Earth gravitational potential, topography and isostatic compensation, degree variances 2-105883
- Earth gravity field anomaly quantitative interpretation 2-105890
- Earth gravity field elements, possible time vars. due to tectonic processes 2-117183
- Earth gravity model for SEASAT oceanographic satellite application 2-89034
- Earth magnetic field, dynamo effect, mechanism (*Czech*) 2-62883
- Earth model, comparison of degree of harmonic coeffs. 2-73416
- earthquake precursors, gravity vars. rel. to physico-rheological model for large Tangshan earthquake 2-94308
- earthquake premonitory gravity obs. problems 2-78555
- ellipsoid of revolution, gravit. pot. expressed in harmonics second and lower degree terms (*Japanese*) 2-83956
- equivalence in inverse problem of gravity anomalies 2-62882
- fault movements causing changes in gravity field (*Chinese*) 2-57950
- Fennoscandia anomalies interpretation in terms of mantle phase transitions and assoc. density jumps 2-111899
- free air gravity anomalies produced by surface loading relaxation 2-100357
- free convection flows under non-uniform gravity, integral method 2-91389
- Fukui Plain, local Bouguer anomaly correl. with Fukui earthquake (1948) hazard 2-68300
- Gander Zone, Newfoundland, crust. struct. from gravity and geomag. anomalies 2-111895
- geodetic data transformations, adjustments in geometry and gravity space (*German*) 2-68238
- geodetic gravity field due to non-homogeneity of spherical Earth 2-68231
- geodetic singularities and related inverse problem, assoc. gravity field 2-111842
- geoid construction from gravity accel. data: inverse problem theory 2-73420
- geoid height anomalies over 2-D models of Earth struct. 2-73418
- geological prospecting, spectral characts. of gravity over buried struct. 2-63115
- geopotential 15th order harmonics from resonant orbit anal. 2-57953
- geopotential 29, 30 and 31 order harmonics from reson. orbits 2-73421
- geopotential of buried objects by complex analysis method 2-117185
- geopotential spherical harmonics from satellite-to-satellite ranging data 2-88714
- global free air anomalies rel. to continents and ocean floor struct. 2-57956
- granular materials, flow, nonlinear constitutive model, appl. to gravity flow 2-97685
- gravimetric data analysis methods, appl. to Burenskiy Massif struct. 2-106041
- gravimetric data management at Bureau Gravimetric International (BGI), software 2-106321
- gravimetric inversion problem, multipole expansion series 2-68230
- gravimetry, direct and inverse problems, soln. methods for hyperbolic dome 2-100601
- GRAVSAT 2-106475
- guyots of Ogasawara Rise (W.Pacific) gravity anomalies study 2-88722
- Himalaya, plate tectonic model using new gravity and uplift data 2-88858
- homogeneous geological objects, location, use of gravity anomalies 2-58187
- homogeneous revolutionary compartments, gravity expression in Gaussian divergence approach 2-83736
- Indian Ocean, gravity anomalies from satellite tracking obs. 2-88721
- Indonesian region, altimetric gravimetric geoid 2-100190
- Middle Indus Valley, N.Pakistan, gravity profile 2-117180
- instability of flow through astrophysical porous medium 2-58237
- inverse problem of gravimetry, equivalent mass redistribs. and appl. to gravity anomalies interpretation 2-117182
- irregular changes in gravity and Earth's rotation, 1966 to 1981, correlated trends (*Russian*) 2-105896
- isostatic geoid anomalies on a sphere, theory 2-100202
- Italy, gravity field and crust model 2-88716
- Kane fracture zone (N. Atlantic), crust struct. and isostatic compensation 2-68315
- Kentucky-Tennessee, USA, model of anomalous crust struct. 2-83780
- Kozo-Matsuda fault, seismic activity, assoc. gravity survey and tilt meas. (*Japanese*) 2-83734
- Laurentia anomalies interpretation in terms of mantle phase transitions and assoc. density jumps 2-111899
- linear boundary value problem, general formulation 2-105888
- low-gravity fluid flows 2-97493
- Mahandi graben (Central India), gravity anomaly study 2-105895
- Mailaram copper mines, Andhra Pradesh, India, subsurface gravity meas. and density mapping 2-105886
- Mars, Antoniadi crater, compensation depth from gravity and topography anal. 2-112366
- Mars, gravity anomalies, topography and tectonics 2-106592
- Mars, Tharsis region and mass anomaly, gravity field 2-63291
- measurement from orbit, equipment self-gravity acceleration effects 2-101297
- Mendocino Fracture Zone, geoid height/crust age relation 2-100359
- mid-oceanic ridges, ocean bottom relief and gravity anomalies rel. to crustal struct. 2-117263
- Mongolia, crustal and tectonic struct. 2-88862
- Moon, tidally-induced couple due to oceans-beds friction, effect on lunar recession 2-84121
- Mount Etna, magma movements, gravimetric detect. 2-88849
- multifiltering, resolving power (*Hungarian*) 2-57952
- North America, regional gravity and magnetic anomaly correlations 2-78526

gravity continued

- North Sea Viking Graben, discovery of granite batholith 2-68316
 Nova Scotia continental margin, free air gravity anomaly rel. to rifted margins models 2-106071
 ocean tides, effect on gravity observations (*Chinese*) 2-83730
 oceanic gravity and bathymetry, freq. response functions 2-100196
 oceans tidal dissipation, secular effects on lunar orbit and Earth rot. 2-111843
 Ozernoe ore node, W Transbaikai, gravity field morphology and structural-metallogenic features 2-57955
 NE Pacific, geoid anomalies and isostasy of fracture zones 2-68329
 W. Pacific gravity anomalies, tectonics and crust struct. 2-88723
 Phobos gravitational field model 2-84136
 planar inverse problem of gravitational prospecting, numerical solution 2-58147
 planets, gravity causing solar wind convective motions 2-106467
 potential gradient zeros 2-105892
 programming methodology based on data abstraction 2-106323
 prospecting method for hydrocarbon contact surface 2-117485
 Red Sea crust and continental margins at 20°N 2-94328
 resonant lumped geopotential coeffs., comparison methods review 2-94509
 rifted continental margins models, free air gravity anomaly rel. to Nova Scotian margin 2-106071
 Salado Basin, Argentina, gravity anomalies and tectonic evolution 2-73414
 satellite measurements contributions (*German*) 2-68237
 sounding data interpretation, method of stable localisation of features of potential fields 2-117484
 Sun, internal rotation and gravit. quadrupole moment 2-100862
 surface effects (*German*) 2-89140
 surveying, use of gravimetry (*German*) 2-68236
 Taupo Volcanic Zone, New Zealand, geophysics study 2-100342
 terrain correction method for gravity and mag. survey data 2-117186
 Tibet Plateau, plate tectonic model using new gravity and uplift data 2-88858
 tides in solid Earth obs. at South Pole 2-100204
 Tonga-Kermadec trench, calc. of geoid height anomalies 2-73418
 trajectories, gravity perturbed, numerical integration 2-112308
 two-dimensional problems, direct, soln. 2-105891
 United States, image processing appl. 2-94520
 Uranus, rings, gravitational reson. and existence of sixth satellite 2-100827
 Venus, gravit. field mapping by Venus Orbiting Imaging Radar (VOIR) spacecraft 2-68596
 Vienna Basin, sediment thickness determ. by vertical deflections (*German*) 2-105900
 Vindhyan basin (Central India), gravity anomaly study 2-105895
 wave number domain anal. of geopotential fields 2-100200

gravity meters *see* **gravimeters****gravity waves**

- acoustogravity wave refraction in solar atmosphere 2-117659
 atmosphere, barotropic primitive eqns., computational stability 2-78818
 atmosphere, effect of waves on image of low Sun 2-100560
 atmosphere, normal mode initialisation rel. to gravity waves generation by quasi-geostrophic forcing 2-100473
 atmospheric waves in tropics, basic current latitudinal shear effect 2-63057
 Benjamin-Ono eqn. direct linearisation 2-107108
 Boussinesq fluid, inviscid, finite amplitude internal gravity waves, parametric instabilities 2-91470
 breaking surface waves, parametric solns. 2-109342
 damping, surface-active material effect 2-75979
 deep water, weakly nonlinear steady gravity-capillary waves 2-91473
 eclipse time absorption of radio waves, gravity wave effects 2-78893
 free surface flows and surface gravity waves, numerical methods 2-97579
 heating in atmosphere, enhanced energy flux 2-83911
 hydromagnetic planetary-gravity waves in vertically sheared zonal flow and zonal magnetic field 2-60668
 internal gravity wave incident on hyperbolic tangent shear layer, reflection props. 2-97574
 internal gravity waves in stratified shear flow, instabilities 2-114767
 ionosphere, Hines dispersion rel. test 2-106406
 long surface gravity waves, lateral wave theory, relevance to tsunami propagation. 2-73487
 magneto-acoustic-gravity oscillations 2-106514
 magnetogravity waves in solar atmosphere, interconversion theory and slow wave spectra 2-68717
 mean flow induced by internal gravity-wave packets, dissipative processes effect 2-55603
 mesopause, horizontal structure, gravity wave interpretation 2-100500
 mesosphere, gravity wave induced drag and diffusion in momentum budget 2-106373
 mesosphere, internal gravity waves saturation 2-106374
 nonlinear deep water gravity waves, bifurcation of random spectrum 2-91474
 nonlinear long wave eqn., inverse scatt. method appl. 2-65601
 ocean long waves, short-wave modulation, optical determ. 2-106352
 plane and axisymmetric, viscous spreading 2-109340
 rotating nonisothermal compressible stratified atmosphere, Alfvén wave propag. WKB approx. 2-109346
 solar atmosphere, appl. of magneto-acoustic-gravity mode theory 2-106515
 solar chromosphere, parametric generation of acoustic-gravity waves in isothermal atmosphere 2-68718
 steady 3-dimens. weakly nonlinear gravity waves in deep water 2-86293
 stratified fluid, gravity waves, nonlinear reflection at a critical level 2-55601
 stratified fluid, gravity waves, nonlinear reflection at critical level 2-55602
 stratosphere, equatorial beta plane model, equatorial Kelvin and mixed Rossby gravity waves 2-88980
 stratosphere equatorial wave mean flow interaction in equatorial beta plane model 2-88981
 submerged cylindrical duct, surface gravity wave radiation 2-114825
 Sun, atmosphere magnetogravity waves transformation to magnetosonic waves 2-106652
 lower thermosphere, effect of gravity waves on O+O₂ comp. 2-112187
 thermosphere, in-situ generated gravity waves as seeding mechanism for equatorial spread-F 2-112215
 gravity waves continued
 thermosphere, tidal, gravity and planetary waves, radar obs. over Budrio, Italy 2-100610
 thermosphere gravity wave generation by Bay of Bengal cyclone centres 2-117407
 thermosphere gravity wave propagation causing ionosphere electron content perturbations, assoc. TIDs 2-100638
 thermosphere wave and travelling ionospheric disturbances, review 2-106379
 upper atmosphere, dynamical cooling induced by dissipating internal gravity waves 2-73736
 viscous gravity currents, 2D and axisymmetric, over rigid horizontal surface, propag. 2-109341
 water, waves, wind generated, laminar boundary layer flow model, non-linear theory 2-114830
 water surface gravity waves, evolution, effect of long internal waves 2-70972
 water waves, wind-driven gravity-capillary waves, steady state distrib. 2-70970
 greasing *see* **lubrication**
Green's function methods
see also **CPA calculations**
 acoustic emission signal analysis, deconvolution appls. 2-62325
 acoustic streaming theory 2-114521
 alloys, disordered, alternative derivation of CPA, tight binding model (*Chinese*) 2-110221
 amorphous solids, electrical conductivity, CPA study (*Chinese*) 2-110315
 Anderson model, asymmetric, density of states 2-66406
 Anderson model, generalised, ground state energy and mag. susceptibility 2-56414
 Anderson two-dimensional localised system, magnetoconductance 2-110320
 anisotropic antiferromagnet in Ising limit 2-98900
 anisotropic Heisenberg ferromagnet, quantum inverse problem 2-87471
 antiferromagnetic superconductor, impurity and spin-fluctuation effects 2-82525
 aromatic systems, collective levels, Green's functions method 2-108333
 atom, Dicke model, transition probabilities, Green function method 2-64914
 atoms in hot partially ionised matter, statistical mechanics, 1-electron Green function 2-71081
 band structure, normalised wave functions, Green's function method (*Russian*) 2-115642
 baryon propagator, multicolour QCD, mesonic amplitudes 2-113230
 Bethe-Salpeter eqn. higher-order irreducible vertex parts, mol. appls. 2-80437
 bis(π -pentadienyl)dinickel, Koopmans' defects calcs. 2-75351
 Bose fluids, normal fluid density and 1-particle Green function 2-95232
 Bose system excitation spectrum and Babichenko model (*Chinese*) 2-95220
 charge carrier transport, small polaron Green's function, eqns. of motion method 2-71961
 classical dynamical systems, Green's functions 2-58601
 classical ferromagnetic chains, interacting boson approach 2-66859
 closed time path Green's function, Dyson eqn. and Ward-Takahashi identities 2-53919
 Cooper pairs, Green functions, appl. to B-phase of superfluid ³He (*Russian*) 2-56287
 core-hole Green's function, dispersion theory 2-82267
 correlated Cooper pairs, Green function eqns. 2-92816
 covalent crystal, dynamical aspects of correlation corrections 2-71895
 CPⁿ, Green functions 2-101587
 crystal, magnetically diluted, paramag. impurities, NMR line shape, exchange interaction effects 2-66930
 curved Riemann-Cartan background, quantised Dirac field, symmetry props., Green function 2-58991
 d-band metals, pseudo Green's function theory for dil. alloys 2-71901
 density of states, total and component, CPA and average t-matrix approx. 2-61326
 density of states on fractals, Green's function method calc. 2-107266
 desorption entropy, surface wave theory 2-56333
 dielec., sp. ht. and thermal cond. 2-86960
 dielectric optical waveguides with arbitrarily shaped cut-ends, guided mode refl., transmission and radiation 2-114428
 disordered chain derivation of Green function by integrating over commuting and anticommuting variables 2-61322
 disordered Fermi system, spin susceptibility (*Russian*) 2-56873
 disordered systems, 1D and 2D, electronic excited state transport and trapping 2-110316
 disordered systems, density of states, recursion method 2-115638
 divacancy random walk on FCC lattice, Markovian master eqn. formalism 2-71698
 doped semiconductors, diagonal and off-diagonal disorder 2-98521
 duality and Polyakov N-point Green's function for closed string 2-84878
 dyadic Green functions for time depend. wave eqn. 2-95034
 eddy current flow around cracks in thin plates, boundary integral method 2-55037
 elasticity, difference methods for elliptic partial differential equations with nonunique solutions 2-95012
 electric dyadic Green's function, singularities in source region 2-90761
 electron conductivity in random potential, supersymmetry in localisation theory (*Russian*) 2-58758
 electron Green function in Coulomb field, use of O(2,1) algebra 2-101632
 electron lattice, two dimensional, shear modulus calc., anharmonic effects 2-61378
 electron liquid, dynamic structure factor 2-82263
 electron mobility in dense gases, multiple scatt. process influence 2-103255
 electron states, Green's function calc., layer-by-layer KKR scheme 2-98523
 EM wave scattering, singularity of Green's function in integral eqns. 2-80880
 ethylene, force consts. developed from Green's function techniques 2-85619
 excitons, diamagnetic, polarisation vibr. interaction in strong mag. field 2-104261
 ferroelectric, displacive transformations, US attenuation study 2-56095
 ferroelectric crystals, electrooptic activity of crystals with H bonds, macroscopic theory (*Russian*) 2-61876

Green's function methods continued

- ferroelectrics, doped displacive, shear viscosity 2-115366
 ferromagnetic disordered alloy with s-f exchange, conduction electron life-time, composition depend. (*Russian*) 2-92572
 ferromagnetic semiconductor, broad band, density of states in vicinity of Curie point, Dyson eqn. soln. 2-66412
 ferromagnetism, electron, in narrow energy bands, extended Hubbard model (*Russian*) 2-61688
 few-body nuclei, exact ground states with and without three-body forces 2-59260
 Feynman integral for exponential interaction in 4-dimens. space-time 2-64225
 field theoretical methods in chemical physics, book 2-94932
 floating cylinder transient heaving motion, fluid-motion and rigid-body dynamics soln. 2-86206
 fluorites, anion Frenkel defects, entropy of formation, quasi-harmonic calc. 2-98074
 free energy of condensed media, Van der Waals forces. contrib. (*Russian*) 2-56222
 $g\delta^4$ theory, Green function in instanton field 2-107549
 gases, shear viscosity coeff., Green's function calc. method 2-86367
 gyromagnetic dynamo problem, perturbation theory anal. (*Russian*) 2-63242
 half-plane, Green's functions for transient thermoelastic contact problems 2-103116
 half-plane barrier, exact time depend. Green's function 2-101228
 Heisenberg model, free energy and Green's function, functional integration method 2-98835
 Heisenberg paramagnet, $S=1$, with easy-planar anisotropy, spin fluctuations 2-66764
 Heisenberg-Ising ferromagnet, with uniaxial anisotropy, Curie temp. calcs. 2-66806
 helically symmetric equilibrium plasma, MHD stability, Green's function method 2-109483
 hexagonal cryst. with overlayer, elastic surface waves anal. 2-56318
 higher Legendre transforms, relationship to Bethe-Salpeter kernels and r-field projectors 2-74595
 homogeneous resistive materials, pot. fluctuation meas., Green's function anal. of induced EMF between electrodes 2-58851
 Hubbard model, metal-insulator transition, Fermi surface, Green's function method 2-61360
 hydrogenic exciton levels, degenerate, perturbation calc. 2-71877
 III-V semiconductors, defect electronic struct., tight-binding calcs. 2-76978
 inhomogeneous scattering equations, variational principles 2-95142
 instantons in quark plasma, fermion zero modes (*Russian*) 2-59100
 intermediate valence compounds Kondo problem in nonlocal state (*Russian*) 2-61696
 intermediate valence systems, approx. diagrammatic summation 2-56524
 intermediate-valence impurity, f-level Green's function, excitation spectrum 2-76989
 internuclear cascade in homogeneous medium, Green's function of system of kinetic eqns. 2-85119
 inverse scattering inverse source theory 2-63860
 Ising model, in transverse field, linear decoupling approx. calcs. 2-66739
 Ising model, two-dimens., Green's functions 2-53996
 isotropic elastic media, low-temperature interface specific heat due to localized modes 2-76704
 isotropic solid films, Green functions and fluctuation spectra for thermal modes 2-98213
 isotropic solids, Green functions and fluctuation spectra for coupled acoustic-thermal modes 2-98212
 Knight shift, spin-orbit and many-body effects 2-72366
 lattice gauge theories with fermions on lattice, strong-coupling limit 2-101549
 layered ultra-thin coherent struct., electronic states (*Chinese*) 2-98519
 Legendre transformations and equations for Green's functions 2-53985
 liquid metals, electronic density of states, Green's function and perturbative calcs. 2-71854
 liquids, photoacoustic signal, freq. depend., theory 2-92110
 load transfer from elasticity rib to semi-infinite anisotropic shell 2-114658
 localised defect electronic struct. calc. method 2-115698
 Love wave generation under initial stress due to a momentary point source 2-109222
 Love wave propagation due to point source in isotropic elastic medium under initial stress 2-70860
 magnetic susceptibility of interacting electrons in solids, many-body theory 2-115962
 magnetically ordered crystals, phonon and spin wave hybridization (*Russian*) 2-77278
 magnetisation of uniaxial two-sublattice magnetic crystals, parametric Green's functions 2-116037
 many-particle physics in solid state theory, book 2-68981
 massive and massless Yang-Mills Lagrangians with quartic coupling of Faddeev-Popov ghosts 2-79773
 metal surface, randomly rough, elec. field enhancement, surface enhanced Raman scatt. 2-87790
 metallic point contact IR detectors, Green's function soln. to multiple image interactions 2-98728
 metals, liq., electrical conductivity, CPA study (*Chinese*) 2-110315
 metals, X-ray absorpt. edge spectra, Nozieres-de Dominicis theory, temp. effect 2-72578
 mixed valence compounds, Goldstone diagrammatic approach 2-61416
 mixed valence compounds, screening effects in core-level spectra 2-110309
 mixed valence cpds., magnetic susceptibility, periodic Anderson model 2-56818
 mixed valence system, dynamical susceptibility and neutron scatt. cross-section 2-56516
 multicomponent alloys, cluster effects 2-92436
 multiple scattering theory 2-80428
 multiple surface mol. motion, t-matrix approach 2-85614
 N-body Green's function, expansion using distorted field solns. 2-107128
 narrow band system, Hubbard sub-band struct., cohesive energy 2-66419
 neutron noise calculation, binary operators, Green's functions 2-85117
 non-Abelian gauge theory, path mean values 2-113147
 nonequilibrium processes, stat. theory, asymptotic behaviour of Green's functions and correlation functions 2-58694
 nonequilibrium statistical field theory, closed time path Green's function renormalisation 2-53918

Green's function methods continued

- nonlinear σ model as effective Lagrangian 2-95629
 nonlinear lattice relaxation by a regional virial theorem 2-56480
 nonlocal Bloch-Nordsieck model propagator, Green's function 2-59095
 nonrelativistic wave functions, rapid computation by Green's functions 2-112738
 nonviscous liquid, surface sp. ht., vibr. contrib. 2-56325
 nuclear matter, particle clustering and Mott transitions at finite temp. 2-74741
 nuclear reactor analysis, nodal Green's function method extension 2-90189
 nuclear transfer processes, diffractive theory, three-particle approach (*Russian*) 2-113434
 one dimensional CDW distorted solid, charge density fluctuations, dielec. function calc. 2-71893
 one-dimensional planar spin 1/2 ferromagnet, excitation spectrum 2-104602
 optical absorption in narrow energy bands in weak mag. fields (*Russian*) 2-61882
 optical fibres, perturbed, Green's-function anal. 2-109054
 ordered-disordered interface, electronic props. 2-115841
 oxo-compounds, unsaturated, ionisation, hole-mixing effects 2-59857
 phonon life-time calc. in amorphous solids 2-86821
 plane sound wave scatt. by vortex pair 2-86285
 plate, anisotropic, with a crack, fundamental solns. 2-65536
 polyacetylene, soliton excitations and polarons 2-115673
 Polyakov's bosonic string theory, regular classical solutions 2-101692
 Polyakov's quantised string theory, bosonic boundary terms 2-101693
 propagator for fermion field and quark confinement, spectral representation 2-101669
 QCD, renormalisation and CP violation 2-95754
 QCD, summation of nonleading logarithms 2-74645
 QED, locally gauge-invariant charged states 2-84835
 quantum boson fluid, ground-state wave function struct. 2-98362
 quasi-one-dimensional disordered systems, eigenvectors calcs. 2-82289
 quasi-one-dimensional electron-phonon system, first order calc. of phonon propagator 2-110267
 quasi-one-dimensional systems, cluster CPA approach 2-82195
 random chains, localisation and spectral singularities 2-104313
 rectangular parallelepiped with rigid-lubricated boundaries, forced vibr. response 2-65505
 Rochelle salt, ferroelec., dynamic study 2-56104
 rotating harmonic oscillators, continued fraction theory 2-95093
 rotors, phonon emission, quasiparticle gas relax. (*Russian*) 2-86967
 rough surface, coherent multiple scatt. 2-63828
 seismic waves meas. of intersection phase and group vels. and Q-factor using Wiener filtering 2-88748
 semiconductor, direct-gap, highly excited, optical dielec. function in moment-conserving approx. 2-57044
 semiconductor, group IV, lattice dynamics of substitutional $^{119}\text{m}\text{Sn}$, adiabatic bond-charge model 2-81917
 semiconductor exciton, diamagnetic, absorpt. spectra in strong mag. field, theoretical anal. (*Russian*) 2-76939
 semiconductors, band-to-band Auger recombination, Green's function formalism 2-115778
 semiconductors, deep levels, book 2-89491
 semiconductors, electronic struct. induced by short-ranged defects, calc. method 2-104296
 semiconductors, substitutional impurity vibr., Debye-Waller factors, Green's function calc. 2-56135
 simple-cubic tight-binding solid, vacancy-vacancy effective interaction in bulk and on surface 2-56008
 $\text{SnCl}_2(\text{H}_2\text{O})_2$ and deuterated form, isostructural phase transition, pseudospin model 2-76662
 spectral functions of solids, Padé approximants, tight binding calc. 2-61321
 spin glass alloys, transverse magnetoresistance study 2-77022
 stochastic particle acceleration in turbulent plasma 2-112822
 stratified fluid, waves on surface layer, asymptotic calcs. (*Russian*) 2-103184
 stratified medium, normal elastic wave propagation, Green's function calc. 2-65501
 superconductor-semimetal contact, influence of electron-phonon coupling 2-56799
 superconductors, pair breaking and charge relax. 2-61649
 surface electron states calcs. 2-104448
 tetrafluoromethane, ionisation, electron coincidence spectra, Green's function study 2-108622
 thermohydraulic problems, Green's function method appl. (*Russian*) 2-65447
 three-dimensional O(N) theories, vacuum stability 2-84840
 transfer-matrix Green function investig. of Si (111) and Si (100) surface states (*Chinese*) 2-110415
 transient EM field scattering appl. 2-96814
 trifluoromethane, ionisation, electron coincidence spectra, Green's function study 2-108622
 two dimensional electron system, random pot., localisation length, energy depend. 2-98563
 two-layer structure, scanning electron or laser beam irradi., temp. distrib. calc. 2-92027
 type-III superconductor, flux-time lattice, pinned, elastic Green's function 2-61674
 vacancy-isotopic substitutional impurity complex, lattice dynamics, Greens function formalism (*Russian*) 2-86819
 variational principles for reson. 2-95088
 vibration-impact systems, quasi-conservative, investigation by averaging method 2-114711
 Volterra analysis to weakly nonlinear EM field problems, appl. to whistler propag. 2-102685
 water waves, regular, radiation and diff. by body, Green function theory 2-86291
 waveguide, dielec.-slab, scatt. from immersed cylindrical inhomogeneities 2-75678
 WKBJ Green's function, appls. to acoustic propagation in horizontally stratified oceans 2-86158
 X-ray Bragg diffraction from a material of circular cross section, theory 2-97838
 X-ray incoherent dynamic diff. from randomly disordered crystals, mutual coherence formalism 2-76237
 AgCrS_2 , 2-D superionic conductor, hopping cond., Green function calc. 2-115449

Green's function methods continued

- ⁴⁰Ca(α,α), 31, 100 MeV, second-order imaginary optical pot. microscopic calc. 2-54418
 CdS, heavily doped, exciton absorption band broadening, Green's function calc. 2-77558
 Cu, localised defect electronic struct. calc. method 2-115698
 Eu chalcogenides, undoped ferromag., real spin 7/2, density of states and band edge shift 2-76885
 Fe, optical absorption anomaly (*Russian*) 2-61928
 FeCo, energy band struct. and optical props. due to order-disorder transition 2-82220
 FeF₂:Mn, localised magnon-pair modes 2-72182
 GaAs, electronic struct. induced by short-ranged defects, calc. method 2-104296
 GaAs, surface Tamm state energy spectrum, Green's function calc. (*Russian*) 2-77154
 GaAs:Zn(Cu), F- and C-centres, vibr. props., Green's function calc. 2-86811
 GaAs_{1-x}P_xO₂, electronic struct. induced by short-ranged defects, calc. method 2-104296
 GaP:O, point defect electron states, enfeebled O bonding and metastability 2-61351
 H-like atoms, Coulomb excitation, cross-section, bound-bound transition probability and energy loss study 2-113939
 HF, Auger energies, Green's function methods 2-102543
³He, liquid, zero sound damping, density response function, Green's function method 2-66316
 Hg_{1-x}Cd_xTe, bulk vacancy electron states, Slater-Koster Green's function calc. 2-87178
 KCl:NH₄⁺, localised modes, Green's function technique 2-56136
 K₂FeF₄, two-magnon Raman scatt., spin wave anal. 2-82865
 LiC₆, electron states, cluster model (*Chinese*) 2-66415
 LiH, correl. energy, pot. energy surface, Green's function Monte Carlo method 2-96468
 Mg, HCP, static lattice Green function, force model dependence and asymptotic props. 2-109934
 MgO film, IR spectra study of optical vibr. modes 2-67133
 Mo, electronic struct. of 3d and 4d impurities 2-110290
 N₂O⁺, photoelectron spectrum, vibronic struct., electron correl., strong non-Condon effects, Green's function calc. 2-96633
 Nb, Z 2-110290
 Se, amorphous, defect vibr., Green function-CPA calc. 2-98233
 Si, complex band struct., surface states, Green's function, eigenvalue method 2-82206
 Si, lattice response near vacancy, Green's function calc. 2-81905
 TiS, electronic charge density and bonding in NiAs-type solid 2-76921
 V-Ta, superconducting Tc, specific heat calcs. 2-115935
 VS, electronic charge density and bonding in NiAs-type solid 2-76921
 Zn, HCP, static lattice Green function, force model dependence and asymptotic props. 2-109934

grinding

- anthracene, photoluminesc., vibronic peaks, effect of grinding 2-104940
 benzophenone, photoluminesc., vibronic peaks, effect of grinding 2-104940
 crystals, grinding, damaged layer study 2-97245
 curved smooth surface 3D shape, high sensitivity moire topography for error meas. 2-69138
 cylindrical optics grinding and polishing, ZShP-350M machine modification 2-114480
 diamond grinding kinematics analysis on machines having free and positive upper member rot. 2-55367
 fine-diamond grinding of optical glass, friction and dispersal 2-97244
 geodesic lens fabrication techniques in LiNbO₃:Ti waveguides 2-75733
 homogeneous and heterogeneous materials, residual stress in near-surface region after grinding 2-105170
 laser rod holder during grinding and polishing 2-91094
 metal-cutting machines in the optical industry 2-109094
 optical component fine diamond grinding, tool employing organic binder 2-109093
 optical component fine grinding with diamond tool 2-70718
 optical component production line grinding and polishing equipment 2-97248
 optical surface computer-controlled grinding 2-55363
 phenanthrene, photoluminesc., vibronic peaks, effect of grinding 2-104940
 phthalic acid, photoluminesc., vibronic peaks, effect of grinding 2-104940
 pure rolling fatigue conditions, anal. of effect of microstruct. and internal stresses 2-57485
 steel, alloy, fatigue resistance after diamond and hexanite grinding 2-67543
 steel, C, ground and at layers, X-ray stress meas. (*Japanese*) 2-78012
 steel, high speed, unidirectionally deformed layers, ψ splitting and microscopic residual shear stress in X-ray stress meas. (*Japanese*) 2-78011
 steel, stainless 13 wt.% Cr hardened, surface working effect on fatigue strength and wear 2-111386
 WC-Co, sintered, surface struct. and strength after various forms of working 2-67458
 Al₂Mg(OH)₂(Si₄O₁₀)(Ca,Na)₄·4H₂O, bentonite, texture changes during vibr. grinding and after ageing (*Czech*) 2-88101
 Bi₂Te₃-Bi₂Se₃(Sb₂Te₃) thermocouple, surface treatment effect 2-110373
 Fe, unidirectionally deformed layers, ψ splitting and microscopic residual shear stress in X-ray stress meas. (*Japanese*) 2-78011
 γ FeOOH, mechanochemical reaction effects on struct. and surface, IR and X-ray anal. 2-116726
 Hg₂Cl₂, plasmatc etching, study of treated surface layer 2-111336
 Si₃N₄, hot pressed, grooved by single-point grinding, residual stresses 2-57455
 TaC single-crystal powders, morphology, hardness, and grinding ability 2-83230
 TiC single-crystal powders, morphology, hardness, and grinding ability 2-83230
 Y-Co amorphous powders, mech. grinding prep., struct. and mag. props. (*Russian*) 2-61742
 YCo, powders, ferromagnet and Mossbauer props., grinding effects (*Russian*) 2-87546

grinding mills see grinding

ground services, aerospace see ground support systems

ground support systems

- see also navigation; telemetering systems
 consolidated space operations centre 2-94574

ground support systems continued

- Dynamic Explorer spacecraft ground operations systems 2-58225
 GMS-2 geostationary meteorological satellite, USB Tracking, Telemetry and Command system (*Japanese*) 2-83965
- grounding see earthing
- groundwater
- Alberta, groundwater heating and transport rel. to geothermal gradients in Hinton area 2-94315
 Allahabad region, India, geoelectrical soundings of aquifers in Gangetic alluvium 2-111862
 aqueous electrolyte chem. thermodynamics at high press. and temp. 2-78598
 aquifer as nuclear waste repository, appl. of spatial estimation techniques 2-116856
 aquifer interblock transmissivity by comparison model method 2-117378
 aquifer saltwater encroachment, Bangkok, Thailand 2-117375
 cation hydrolysis thermodynamics, review 2-68304
 Cerro Prieto geothermal field, Mexico, conf., Oct. 1979, Mexicali, Mexico 2-62456
 Costa Rica Rift, water circulation and heat transfer in oceanic crust 2-88866
 deep saline groundwaters within the Canadian Shield, consequences for radwaste disposal 2-68400
 earthquake precursors, well-water levels rel. to physico-rheological model for Tangshan earthquake 2-94308
 Florida, groundwater flow contrib. to high concs. of ²²⁶Ra and ²²²Rn in W Florida coastal waters 2-78704
 flow, numerical anal. of transport phenomena, seawater intrusion example 2-106159
 flow, two dimensional saturated and unsaturated, finite element model (*German*) 2-73597
 flow in unconfined aquifer, response to artificial recharge 2-68398
 forecasting of groundwater table by statistical methods 2-111972
 fractured geothermal reservoir, cold water injection and thermal front 2-58090
 fractured rock, radionuclide transport from waste repository 2-64495
 Garm polygon, USSR, groundwater electrokinetic current system rel. to geomag. vars. 2-73481
 geological waste disposal, nuclide transport, groundwater buoyancy effects 2-64492
 geothermal and hydrothermal systems, book 2-89495
 geothermal field, management model for elec. power extraction 2-116778
 geothermal heat flow in closed sedimentary basins, water migration effects 2-88838
 geyser process, theory 2-73599
 Haicheng earthquake, China, precursor changes before 1975 quake (*Chinese*) 2-73454
 heterogeneous porous media, onset of thermohaline convection, groundwater 2-70943
 hot springs in northern Gunma Prefecture, chemical composition (*Japanese*) 2-117372
 hot water storage in aquifers, theory 2-93946
 hot water storage in Bonnauld, Jura aquifer 2-93947
 hydrothermal systems He isotope origins 2-88823
 isotope hydrology of shallow alluvial aquifer Han R. Valley, near Seoul 2-58092
 Kalihari Plateau, Botswana, groundwater resources assessment, Landsat data use 2-100405
 Krafla geothermal area, Iceland, groundwater flow obs. 2-73598
 Kuril Islands, water level oscils. as precursor of Shikotan earthquake, (1978 December 7) 2-73480
 lake sediment interstitial water motion due to density convection 2-117370
 layered aquifer-aquiclude system, dispersion model, simple numerical treatment 2-83862
 leaky aquifer numerical model 2-117376
 Lubiatowo region coastal zone, aperiodic sea level fluctuations effect on groundwater levels (*Polish*) 2-83860
 Mendip Hills, England, groundwater circulation in Carboniferous Limestone rel. to thermal springs of Bath 2-100407
 mid-ocean ridge hydrothermal circulation in fault zones 2-117288
 midocean ridge sulphide hydrothermal activity (*French*) 2-73540
 Mount Meager geothermal area, B.C., Canada, hydrogeology and geothermometry 2-111896
 movement due to arbitrary changes in water level 2-83851
 Mud Volcano, Yellowstone, USA, hydrothermal changes rel. to seismicity 2-88845
 natural gas hydrates of northern area of W Siberia, theoretical prospects 2-58041
 New Mexico, radioactive waste geological disposal site 2-74799
 oceanic crust hydrothermal circulation 2-63010
 E Pacific Rise, chemistry of hot springs 2-78712
 pollution of aquifer in Kent, England by salt from coal mine pump water 2-63005
 radioactive waste, geological disposal, actinide chain migration modelling 2-64496
 radioactive waste, geological repository, thermally induced fractures, radionuclide migration in groundwater 2-64516
 radioactivity flow, single well pulse experiment 2-102032
 reverse chemical osmosis and origin of brines 2-111973
 salt solution, infiltration into a swelling soil 2-111978
 San Andreas fault area, Rn and CO₂ variations in groundwater 2-100300
 sedimentary rocks, pure fluid, NMR, proton desorption rate 2-117297
 sensitivity analysis for transport of radionuclide in a groundwater flow system 2-93953
 soil moisture and heat transport theory 2-117374
 soil water flow and infiltration, theory 2-117373
 solute transport, nonlinear diffusion with barrier 2-83863
 solute transient transport in fractured porous media 2-117377
 Takaka Valley, New Zealand, groundwater flow 2-73604
 Taoyuan-Chupai, N.W. Taiwan, vertical elec. sounding rel. to saline water invasion in coastal area 2-100402
 The Geysers-Clear Lake geothermal field, California, steam saturation rel. to seismic wave vels. 2-88778
 Tibet Plateau, hydrothermal activity and geothermal regime (*Chinese*) 2-68305
 toxic substance contamination rel. to surface water 2-62512
 vapour-dominated geothermal reservoir, vertical equilb. 2-83859
 Waimea Plains, aquifers, New Zealand 2-73605

groundwater continued

- ¹³⁷Cs, particulate transport from buried high level waste 2-64540
³H contents rel. to flow patterns, implications of natural prod. of ³H in permeable rocks 2-100381
⁸⁷Kr, conc. meas. rel. to groundwater dating 2-105525
 O₂ at high-concs. in deep groundwater of USA 2-100410
¹⁸O/¹⁶O in Federal Republic of Germany (German) 2-106165
 Pb removal from groundwater into rock matrix, radiogenic Pb isotope study 2-83858
¹⁰⁶Ru migration in NTS aquifer 2-83525

group theoretical schemes

No entries

group theory

- see also Clebsch-Gordan coefficients; crystal symmetry; elementary particle theory; group theoretical schemes; Lie groups; renormalisation; SU_n theory
 (2+1)-dimensional Poincaré group, unitary irreps., classification 2-101529
 adsorbed layers, order-disorder transitions, phase diagrams, adsorption isotherms 2-98275
 antifluorite crystals, cubic, distorted, halogen NQR, group theoretical classification 2-82743
 bells, warble suppression and lifetime increase 2-75797
 broken symmetries in condensed matter systems, review 2-63955
 character table of D₈, C₈, and D_{4d} single and double groups, Tisza isomorphism 2-63756
 cluster variation calc. of configurational entropy, group theory appl. 2-104026
 collective nuclear motions, classical theory on symplectic manifold 2-107721
 complete sets of orthogonal character projectors for simply subducible groups 2-113159
 conformal spinor geometry, internal symmetry algebra 2-69362
 contracted representations, examples 2-69372
 covariant observable densities, in Hilbert space 2-63895
 D=5 supergravity aux. field problem, group theory anal. of Bianchi identities 2-74307
 deformation theory applied to quantization and group representations 2-101244
 derivations vanishing on s(infinity) 2-94975
 diagram approach to group algebraic methods 2-79398
 double Gel'fand states, explicit expressions, group theory 2-63846
 double trigonal group, Clebsch-Gordan coeff., Racah algebra 2-101194
 dynamical group SO(6), supercond. coexistence with charge density waves 2-92814
 elastic phase transitions, Landau theory appl. 2-98246
 Fermi fields, Galilei covariance and quasi-free representations 2-101522
 Feynman-Goldstone diagrams, permutation group classification 2-79402
 four-dimensional cube symmetry group, structure and representation 2-95263
 generating function of Gel'fand basis (French) 2-113177
 geometric quantisation, symmetry group 2-95091
 gravitation, internal Yang-Mills theory of Poincaré group 2-53633
 group theory application to phase transitions (Japanese) 2-101153
 hadron classification, U(6,6) ladder symm. scheme, asymptotic eqns. 2-101695
 Hilbert space, von Neumann algebra 2-95045
 hydrogenic system, homeomorphism with free-particle system 2-101231
 interacting boson model, U(15) subgroup chains s, d, g bosons interactions (Chinese) 2-54288
 Ising model on compact 2D lattice homogeneous under icosahedral group, exact partition function 2-69109
 isometry group determination for Riemannian space 2-107188
 Korteweg-deVries-Burgers generalised eqns., group analysis 2-53510
 Kubo-Martin-Schwinger condition, group duality 2-101199
 leptons, composite models, group theoretical search 2-89950
 liquid cryst. phase transitions, ordering and modulation of smectic layers, group theoretical anal. 2-66218
 liquid-solid transition, symmetry anal. 2-66186
 local current algebra, representations of group of diffeomorphisms 2-101608
 locally gauge-invariant four-fermion models on a lattice 2-107502
 Lorentz group, causality, Hermitian matrix proof 2-58608
 magnetic groups coredensation, character table 2-76357
 magnetic line groups 2-92870
 magnetic point groups, Molien generating functions, invariants and covariants 2-115167
 magnetic structure, Luttinger-Tisza method appl. to case of extended spin components 2-115979
 magnetic transitions and mag. symm., broken symmetries effects 2-66841
 magnetically ordered crystals, phonon and spin wave hybridization (Russian) 2-77278
 mathematical physics principles, book 2-53445
 Mie scattering into solid angles 2-114156
 molecules, vibrationally distorted, symm. group, theory 2-80560
 Mossbauer diffraction patterns, permittivity tensor, group-theoretical approach 2-77438
 multicomponent spin models with transitive symm. groups, Cayley trees for special cases 2-104562
 multicomponent spin models with transitive symm. groups, theory 2-104561
 N-body problem, symmetric group S_N, transformation coeffs. between standard and non-standard representation 2-101205
 nonequilibrium systems, symmetry breaking and pattern selection 2-63947
 nonlinear evolution equations, group representations 2-69323
 nonlinear group representations and applications to nonlinear equations 2-101605
 nuclear collective motions, quantum theory on symplectic manifold 2-107722
 O(4), subgroups determ., and Landau free energy expansion 2-66169
 one-dimensional disordered solid, localisation and resist., symm. group appl. 2-110299
 one-electron atoms, Coulomb symmetry breaking 2-74246
 open shell electron propagator theory, unitary group formulation 2-79388
 P-symmetry point groups as semidirect products 2-65902
 Poincaré group unitary irreducible rep. extension, QFT appl. 2-101574
 polymers, symmetry groups, electron energy bands, irreducible representations 2-109690

group theory continued

- polymorphic phase transitions, Woodward-Hoffmann orbital correl. diagrams 2-81952
 quantum mechanical semigroups, propagator, semiclassical approx., functional integral method 2-79420
 quantum mechanics, book 2-84404
 quarks, composite models, group theoretical search 2-89950
 quasi-linear evolution eqn., infinitely many Lie-Backlund symmetries 2-84434
 quasispin groups and their generalisations 2-95681
 reflection-rotation group orientations 2-95067
 regular Dirichlet partitions for two-dimensional similarity-symmetry groups 2-97970
 representation theory, permutation group quasistandard bases and unitary group Gelfand bases 2-53547
 representation theory for finite-groups, commuting operators method 2-53546
 representations in Liouville spaces and algebraic approach 2-63849
 SO_{2,N} covariant spinor wave equations, conformal covariance, imposition of cone condition 2-113119
 SO₄ conformal group, canonical realisation 2-74254
 solid solutions, substitutional, order-disorder transitions, review 2-98245
 space filling, nonperiodic central, with icosahedral symmetry, using 7 elementary cells 2-60908
 spinor electrodynamics, generalised commutation relations 2-79737
 spinors in negative dimensions 2-101601
 strongly positive semigroups and faithful invariant states 2-101197
 symmetric groups, representation theory, book 2-79341
 symmetric groups, S(n), number of representations and maximum dimens., calc. program 2-107554
 symmetry and broken symmetry in condensed matter physics, conf., Paris, France (Sept. 1980) 2-68966
 symmetry and spontaneous symm. breaking in physical states, review 2-64243
 symmetry group, representation spaces projections on Minkowski space 2-112730
 symmetry in condensed matter physics, review 2-66159
 symplectic group, Mickelsson lowering operators 2-53482
 tachyons, spin zero, wavefunction transforming as scalar field imaginary mass system, reduction 2-95591
 time-orthogonal unitary dilations and noncommutative Feynman-Kac formulae 2-53553
 two-dimensional integrable lattice system, Lorentz group (Russian) 2-53700
 two-electron atoms, Coulomb symmetry breaking 2-74246
 U(3) group, C-G series, general formula (Chinese) 2-54016
 unitary group irreducible representation for U(p+q)U(p)⊗(q) 2-95090
 unitary groups, irreducible representation basis (Russian) 2-64242
 unstable groups, in electronic model for hadrons 2-113250
 Z_{2K} cyclic group, fermion generation labeling in composite models, t mass 2-101688
¹Be, A=7, 8, spin-orbit coupling, Sp(2,R) basis model (Russian) 2-59223
 CdS, dipole selection rules, reflection spectra, group representation 2-93226
⁴He, superfluid, group representations, spectrum of states 2-98370
 KND, phase transitions, group theory anal. of symmetry reduction 2-81950
 La₂(MoO₄)₃, Raman and IR spectra, vibr. assignment 2-82850
- Grüneisen coefficient**
 alkali halides, Grüneisen parameter calc. 2-56144
 alkali halides, Grüneisen parameter vol. dependence and bulk modulus press. dependence calc. 2-109940
 alkali metal molten salts and binary mixtures, pseudo-Grüneisen parameters 2-98230
 anharmonic crystals, BBGKI eqn. soln. to fourth approx. in temp. 2-76632
 explosive, Grüneisen parameter meas. 2-76629
 fluorite type AB₂ crystals, cohesion and thermodynamical props., Debye temp., Grüneisen and force const. 2-61169
 heterogeneous media, thermoacoustic effect of radiation, Grüneisen parameter 2-103907
 hexagonal crystals, Grüneisen numbers 2-86164
 inert gas solids, lattice dynamics and thermodynamic props., zero point motion and three body effects 2-109941
 liquid, Grüneisen parameter and characteristic param. estimation 2-109877
 liquids, statistical thermodynamics approach to eqns. of state 2-76707
 metals, interionic interactions model, elastic const. and phonon spectra calc. 2-81711
 methane, solid, Raman spectra under high press., Grüneisen parameters 2-77502
 naphthalene d₈, compressibility temp. depend. 2-92085
 polyoxides, crosslinked, additive moduli, US meas., rel. to mol. struct. 2-109881
 polyethylene, thermal expansion, relationship to elasticity, Grüneisen coeff. 2-86912
 polymers, interchain sp. ht., calc. from thermo-acoustic data 2-92228
 polymers, interchain sp. ht. ratio and US absorpt., calc. from lattice Grüneisen coeff. 2-115382
 polypropylene, thermal expansion, relationship to elasticity, Grüneisen coeff. 2-86912
 quartz, thermal expansion, Grüneisen functions and static lattice props. 2-98313
 Stoner model, magnetovolume effects and Grüneisen parameters 2-56817
 tetrafluoro-methane and methane, temperature dependence of some acoustical and thermodynamical properties 2-98201
 Ag-Mn spin glass alloy, vol. and shape magnetostriction, effective Grüneisen parameter 2-104674
 AgCl-AgBr mixed cryst., interionic pot. and cryst. props. 2-65916
 Al, phonon freq. calcs. 2-86810
 Ar, liquid, hard sphere model calcs. of Grüneisen const. and Moelwyn-Hughes parameter 2-71327
 Au-Fe spin glass alloy, vol. and shape magnetostriction, effective Grüneisen parameter 2-104674
 BaTiO₃(100) surface, dynamic lattice characs., LEED study 2-115528
 Be, high press. α-β transition at T=0 2-71628
 CO₂, thermal expansion, X-ray diff. study, 5 to 195K (Russian) 2-81991
 CdGeAs₂, chalcopyrite, elastic behaviour, US wave vel. study 2-61052

Gruneisen coefficient continued

- CdTe- Se_x , sp. ht. and thermodynamic props. 2-81973
 CeAl₃, low temperature sp. ht., thermal expansion and Gruneisen parameter 2-66246
 CeAl₃, thermal dilatation and sp. heat at very low temp. 2-56213
 Cu-Mn spin glass alloy, vol. and shape magnetostriction, effective Gruneisen parameter 2-104674
 CuCl, thermal cond. and sp. ht., temp. and press. depend. 2-115478
 GaAs, thermal expansion coeff. calcs. 2-86911
 Ge, lattice dynamics, Gruneisen coeffs., pseudopot. calc. 2-98226
 Ge, melting temp., vol. depend., Debye model 2-86825
 Ge, Raman phonon press. depend. 2-67054
 Ge_{1-x}Si_x solid solns., mode Gruneisen parameter for long wave phonons, elastic consts. 2-109942
 Hg₂Cl₂(Br₂)(I₂), Raman study of soft modes at high press. 2-93202
 InP, thermal expansion coeff. calcs. 2-86911
 InS, Gruneisen mode parameters, structural phase transition, high press. Raman study 2-104889
 InSe, two-phonon absorpt. spectra, pol. and temp. depend. 2-57095
 LiO₂, uniaxial stress induced changes in Raman spectrum 2-110858
 LiYF₄ and LiY_{0.5}Tb_{0.5}F₄, elastic consts., hydrostatic press. derivatives 2-66104
 MX₂O₄ cpds., SnPb₂O₄, NiSb₂O₄, ZnSb₂O₄ and Pb₂O₄, struct. evolution, dilatation, vibr., rigidity (French) 2-91911
 Mg,Pb, third-order elastic consts. and low temp. limit of Gruneisen parameter, Axe shell model 2-76631
 N₂O, thermal expansion, X-ray diff. study, 100 to 182K (Russian) 2-81991
 Na, phonon dispersion and thermophysical props. 2-56118
 Na, thermodynamic props. from lattice and mol. dynamics, pseudopot. calc. 2-104028
 PdH₂(D₂), elastic moduli, optical phonon contrib. 2-115329
 Si, melting temp., vol. depend., Debye model 2-86825
 SiC-3C, Raman phonon press. depend. 2-67054
 SiC(3C), optical phonons and transverse effective charge, press. depend., Raman study 2-82860
 Ti-Al-V (6.4 wt.%), high temp. phase transformations and thermal and mechanical props. meas. 2-71625
 TiSe, thermal expansion meas. and sp. ht. and Gruneisen coeff. calc. 2-110019

GTO calculations

- see also *GO calculations*
 benzene, ring current model, CHF approx. 2-108368
 liquid metal, elec. cond., effective medium approx. 2-104338
 methyl radical, geometry, restricted and unrestricted Hartree-Fock calcs. 2-85541
 transition metal atoms, minimal-basis-adapted pseudopot. 2-113859
 F⁻, electron affinity, electron correl. SCF, GTO, CI calcs. 2-113895
 F⁻, dipole hyperpolarisability, HF, CI and GTO calcs. 2-70149
 Ne ionisation pot., electron correl. SCF, GTO, CI calcs. 2-113895

Gudden-Pohl effect see *electroluminescence***guided electromagnetic wave propagation**

- see also *guided light propagation; waveguides*
 conductor with eccentric external return, self-impedance limits 2-80869
 ionospheric waveguide channel, RF signals Doppler freq. shift 2-89070
 rotating linear media, relativistic electrodynamics, appl. to guided wave propag. (French) 2-70480
 TM waves in slab of uniaxially anisotropic plasma, ray optics description 2-86437
 waveguides, dielectric, inhomogeneous slab and cylindrical, with discontinuous permittivities, propag. modes 2-70482

guided light propagation

- see also *optical waveguides*
 dielectric optical waveguides with arbitrarily shaped cut-ends, guided mode refl., transmission and radiation 2-114428
 elliptical fibres, Gaussian light beam propag. 2-65387
 fibre, single-mode, Collett-Wolf equivalence theorem and pulse propag. 2-97211
 fibre lightguide with different shaped end faces, light distrib. anal., computer method 2-65386
 fibre waveguides, multimode, optical radiation transmission by sharp bends 2-114462
 fibres, multimode and single-mode, nonlinear propag., coupled-mode theory, envelope solitons and self-confinement 2-109055
 gas chromatograph/IR spectrometer, light pipe appl. 2-57651
 graded index multimode fibres, guided propag. characts. (French) 2-70686
 high bit rate communication systems using non-linear effects 2-102951
 multimode fibres characterisation, using selective excitation (French) 2-70690
 multimode optical fibres calc., Helmholtz scalar equation solution (German) 2-91056
 optical fibres, coherence of propagating laser beam 2-86116
 optical fibres, coherent radiation propag. nonlinearities 2-97221
 reflective coupling, rectangular, tapered, intensity transform. 2-81071
 thin-film multilayered waveguide with a buffer layer, propag. characts. 2-109038
 transmission optics, book 2-112672
 wave equation solution in graded-index opt. fibres, multiparabolic approximation technique 2-96842
 GaAs, optical bistability with guided waves, theory 2-97073
 InSb, optical bistability with guided waves, theory 2-97073
 LiNbO₃/Ti diffused waveguide integrated optic electrooptic modulator electrode anal. 2-55318
 Si, amorphous, photovoltaic detectors for guided-wave optics 2-64105

Guinier-Preston zones

- alloys, clustering and transport props., influence of short-range ordering 2-116558
 reversion of particles possessing sharp concentration gradients 2-105148
 steel, ferritic-austenitic Cr-Ni-Mn steel, aged, struct. stratification, neutron diff. study (Russian) 2-93541
 Al alloys 2219 and 7075, precipitation and dissolution kinetics, calorimetric study 2-83127
 Al-Ag (8.2 at.%), single crystals, dechannelling of fast ions by spherical GP zones 2-86762
 Al-Cu, aged, imaging by FIM 2-55885
 Al-Cu, ageing, microcalorimetric studies 2-99457
 Al-Cu (3 wt.%), pre-precipitates, microstruct. obs. using lattice imaging technique 2-111186

Guinier-Preston zones continued

- Al-Cu (4 wt.%), Guinier-Preston zones, high resolution image calc. 2-71434
 Al-Cu (4 wt.%), stacking fault energy change during ageing (Russian) 2-115256
 Al-Cu (4wt.%), GP zones at initial stages of ageing small-angle X-ray scatt. (Japanese) 2-83142
 Al-Cu-Mg (1.3,1.3 at.%), high temp. ageing, coherent precipitation obs. (Russian) 2-99429
 Al-Li-Mg system, Guinier-Preston zones, coarsening mechanism, SAXS study 2-62129
 Al-Mg (5, 10 wt.%), modulated struct. and Guinier-Preston zones 2-111184
 Al-Zn, ageing, microcalorimetric studies 2-99458
 Al-Zn (4 wt.%), GP zones, ageing and reversion, elec. resist. meas. (Japanese) 2-83143
 Al-Zn (6.8 wt.%) single crystals, dechannelling of fast ions by spherical GP zones 2-86762
 Al-Zn alloys, precip. sequence, X-ray scatt. and electron microscopy study (French) 2-116442
 Al-Zn-Mg, aged at 20, 80 and 120°C, decomp., quench conditions influence (French) 2-72743
 Al-Zn-Mg, isothermal ageing, O-180°C, after direct quench, mech. props. and microstruct. 2-93536
 Al-Zn-Mg, struct. and strength after duplex ageing 2-72727
 Al-Zn-Mg-Cu, precip., DSC study 2-99430
 Cu-Be, AE generated during tensile deform (Japanese) 2-105232
 Fe-V-Si-Mn-C, internal friction meas. (Russian) 2-88115
 Mg-Sm, supersaturated solid soln., precipitation study (Russian) 2-116443
 Ni-Al, thermal expansion of inclusions 2-61180
 Ni-Be (1at.%), radiation induced homogeneous precip., HVEM obs. 2-83124

Gunn devices

see also *Gunn diodes*

No entries

Gunn diodes

- accumulation layers, basic props. calc. 2-82369
 n-GaAs, Gunn domain quenching by external microwave elec. field 2-77106
 GaAs, high freq. limit 2-92676

Gunn effect

- see also *limited space charge accumulation; negative resistance effects*
 accumulation layers, basic props. calc. 2-82369
 aniline black, amorphous organic semicond., elec. cond., thermolec. and Gunn effects 2-71974
 semiconductor, Gunn instability near threshold, drift current and plasma field description 2-115768
 semiconductors, polar, negative diffusivity in transient regime, Monte Carlo calc. 2-56597
 transferred-electron semiconductor mesostructures for HF cond. 2-72054
 n-GaAs, Gunn domain quenching by external microwave elec. field 2-77106
 GaAs, Gunn effect, high freq. limit 2-92676

Gunn effect devices see *Gunn devices***Gunn oscillators**

- fibrous material, thickness independ. moisture meas. using Gunn oscillators (German) 2-74426
 superconduction stabilised oscillator as a frequency standard (German) 2-69123

guns, plasma see *plasma guns***gyration** see *rotation***gyromagnetic effect**

see also *gyromagnetic ratio; magnetic resonance*

No entries

gyromagnetic ratio

- see also *g-factor; magnetic resonance*
 proton gyromagnetic ratio determ. in weak magnetic field, Soviet research 2-80845
¹⁰⁷Cd, penetration effects in internal conversion process 2-95974
¹⁰⁷Δy, A=158, 164, high spin states EM props. 2-95917
²⁰⁹Hg, 2.102 MeV level, nuclear gyromagnetic ratio, spin parity, and lifetime meas. from ²⁰⁹Hg(t,p)²⁰⁹Hg 2-113364
²⁰⁹Hg spin gyromagnetic ratio of 3s proton 2-113364

gyroscopes

see also *navigation*

- conducting gyroscope rotor, nutation active damping 2-94997
 contact free gyroscope in vicinity of Earth's axis (Russian) 2-95362
 dynamically adjustable, under conditions of spatial motion of base 2-55409
 fibre gyroscope, heterodyne, with freq. output, rot. detect. 2-97208
 fibre gyroscope with inertial-navigation short-term sensitivity 2-109062
 fibre optic coherent interferometric sensors, optical FM appl. 2-91084
 fibre optic gyroscope, performance limitations due to end reflections and coherence 2-91083
 fibre optic gyroscopes, birefr. and polarisation effects 2-75690
 fibre optic Sagnac interferometer, freq. modulated heterodyne, for rot. rate detect. 2-81100
 fibre optic sensors, applications 2-75705
 fibre optic sensors, colloquium, London, England (May 1982) 2-89464
 fibre Sagnac gyroscope, intensity-induced nonreciprocity obs. 2-109063
 fibre-optic gyroscope sensitivity to environmental mag. fields 2-60249
 fibre-optic gyroscopes, optical Kerr effect compensation 2-91066
 gyroinertial measuring systems, reverse problems 2-63819
 gyrostat with elastic plates, steady-state motion stability in Newtonian central force field 2-55410
 gyrotheodolites test rig 2-95425
 laser gyro, limiting accuracy 2-75622
 mechanics of dilatational rigid body 2-53492
 multiple gyropower systems, props. 2-101397
 nutation synchronous motion of a free gyroscope with an annular damper (Chinese) 2-79346
 optical fibre gyroscope, heterodyne, using coherent source 2-91082
 optical fibre gyroscope for rotation sensing 2-60253
 optical fibre sensor technology, state of the art 2-81094
 optical gyros based on Sagnac effect, fundamental precision limit (Chinese) 2-60241
 orbit selection for the Stanford Relativity Gyroscope experiment, error analysis 2-84511

gyroscopes continued

- passive fibre optical gyroscope, low noise level obs. 2-97196
- ring laser gyro of arbitrary shape and rot. axis 2-94958
- ring-laser gyros, quantum noise in unlocked region 2-90943
- ring-laser gyroscopes, quantum noise, spectrum and signal mean beat freq. 2-86011
- ring-laser gyroscopes, quantum noise 2-86010
- travelling wave ring laser gyro, quantised angular momenta 2-94959
- two-rotor gyrocompass, natural oscillations damping, Newtonometer appl. (*Ukrainian*) 2-75846

H-centres

- alkali halides, colouring curves, computer simulation using heterogeneous nucl. model 2-91960
- alkali halides, radiative tunnelling transitions between defects, energies calc. 2-77587
- alkali halides, sputtering under ion bombardment 2-99240
- CaF₂:H, contribs. of H zero-point vibr. to F transferred hyperfine consts. nearest neighbour to H₂⁺ centre 2-76627
- KBr:Na, thermo- and photostimulated recomb. of defects, spectra studies 2-110959
- KCl, prod. and decay of hole centres, pulse radiolysis study 2-71444
- KCl:Br (Sr²⁺)(Ba²⁺), X-ray irradi., H₂ ntype defects, ESR study 2-110641
- KI, H-centre creation, exciton non-radiative decay (*Russian*) 2-103755
- KI, recombination luminescence of thermally stable H-centres (*Russian*) 2-104939
- NaCl, laser-induced primary defect form. role in optical breakdown 2-66057
- Si:H, F, amorphous, ODMR study 2-93065

H I regions

- 21 cm line survey of Small Magellanic Cloud, UHF obs. 2-58467
- in 0351+026 QSO, H I props. and vel., obs. 2-89400
- absorption and emission, use of radio interferometry 2-63258
- Barnard Loop Nebula, nearby nebulosities, H I features correl., visible obs. 2-58432
- bright galaxies with strong nuclear radio sources, H I distrib. and nature, UHF obs. 2-117785
- Cetus region high velocity clouds, UHF mapping in H I, obs. 2-101023
- Circinus X-1, H I column density from X-ray obs. during low state 2-112504
- Corona Austrina, gas and dust survey, UHF obs. 2-106877
- distribution in line of sight towards background extended radio sources, UHF obs. 2-89338
- elliptical galaxies with nuclear radiosources and optical emission lines, H I survey 2-112545
- Eridanus H I shell, mag. field meas. from radio obs. 2-106868
- extended H I envelopes around spiral galaxies NGC 2655 and 2715, obs. 2-89360
- galactic H I column densities and galaxy counts to interstellar reddening, accuracy and maps 2-106838
- galaxies, late-type, of low surface brightness, optical and H I study 2-94834
- galaxies, Zwicky magnitude scale rel. to blue luminosities and M_H/L_B ratios 2-68899
- Galaxy H I and continuum struct. comparison with other galaxies 2-63672
- Goldstein region, H I 21 cm obs. by RATAN-600 radio telescope using acousto-optical spectrometer 2-94607
- high velocity clouds properties 2-63604
- high velocity H I stream (Weaver jet) in galactic anticentre, obs. of assoc. colliding H I shells 2-106856
- IC 5146, emission nebula, obs. of nearby H I region and mol. cloud complex 2-74044
- IC 5146 (S125), emission nebula, atomic and ionised H obs. 2-74043
- intergalactic H I and tidal debris within groups of galaxies 2-63682
- in irregular galaxies, 21 cm obs. rel. to global props. 2-101054
- Khavtasi 141, interstellar dark cloud complex, optical extinction and H I content 2-68874
- kinematics and distribution in 1.5 kpc of galactic centre 2-63603
- line brightness temperature scale 2-63569
- line of sight density rel. to far UV background radiation 2-63573
- LkH 101, surrounding H I cloud, UHF obs. 2-79186
- local interstellar medium, COS-B gamma-ray meas. rel. to gas density and cosmic rays 2-74051
- local interstellar medium, H I densities from UV spectra of nearby white dwarfs 2-106690
- Lupus Loop SNR, assoc. H I, shell expansion and models 2-106862
- M16, H II, H I, mol. complex., IR sources near neutral inclusions, JHKL obs. 2-63589
- in M31, distribution and spiral arm delineation 2-73859
- in M31, H I gas distrib. and motions (*Japanese*) 2-68893
- in M31, results of high resolution 21 cm obs. 2-112559
- Magellanic Stream, mapping in 21 cm H I line, UHF obs. 2-63652
- Magellanic Stream, test particle simulation and model 2-63681
- Magellanic Stream region, detect. of diffuse emission region in Ha, obs. 2-58469
- Magellanic Stream structure and props. 2-63680
- in nearby galaxies, general and H I parameters, H I UHF obs. 2-63645
- NGC 3067, Sb III galaxy, evidence for nonluminous matter, visible/UHF obs. 2-79201
- in NGC 3359, barred spiral galaxy, H I kinematics and struct. 2-79206
- NGC 3992, barred spiral galaxy, disc mass from rot. vel. from H I UHF obs. 2-117741
- NGC 5905, NCG 5908, double spiral galaxy, H I obs. 2-68894
- NGC 7027 planetary nebulae, intervening H I used to determine distance 2-63570
- NGC 7591, late-type spiral galaxy in Pegasus I cluster, 21-cm VLA obs. 2-106890
- NGC 7814, edge-on spiral galaxy, H I obs. and surface photometry 2-89365
- in NGC 925, barred spiral, ionised gas vel. field, visible obs. 2-68896
- Orion Nebula H I cloud and CO cloud, mag. fields determ. UHF obs. 2-106869
- outer Galaxy, H I distrib. 2-106902
- Pegasus I cluster, galaxy counts and H I UHF obs. 2-89388
- Sa-type galaxies, global props. from H I obs. 2-89366
- Sagittarius A direction, Westerbork obs. of foreground interstellar H I absorpt. 2-89336
- Sharpless 308, ring nebula assoc. with Wolf-Rayet star, study of interstellar environment 2-68852

H I regions continued

- Small Magellanic Cloud H I distrib., UHF obs. 2-106916
 - SNR associated with radio loop II, mag. field meas. 2-106868
 - southern galactic hemisphere plane from H I survey anal. 2-63677
 - in spiral galaxies, H I and colour props. of spirals in nine clusters 2-79223
 - in spiral galaxies of Pegasus I cluster, H I content from 21 cm and optical survey 2-79205
 - stellar wind interactions leading to H II region formation 2-68752
 - supershells rel. to galactic structure (*Russian*) 2-74067
 - temperature categories, physical characts. 2-63602
 - UGC 12423, giant spiral galaxy in Pegasus I cluster, 21-cm VLA obs. 2-106890
 - very high velocity clouds, 21 cm obs. rel. to clouds collision with Milky Way in anticentre 2-74083
- H II regions**
- in AM 064-741, southern ring galaxy, rot. and expansion vels. of H II regions in ring 2-79216
 - Ara OBI, H166 α line obs. of diffuse ionised gas 2-106842
 - bright rims, Ha and forbidden N II and O III obs. (*French*) 2-106852
 - Carina Nebula, gas motion from Ca II and Na I lines obs. 2-68869
 - Carina Nebula, X-ray emission and assoc. early-type stars 2-84293
 - catalogue of model H II regions 2-68636
 - central luminous stars, wind interactions, spectral anal. and obs. 2-84213
 - chemical abundance gradients in Galaxy 2-63666
 - in clumpy irregular galaxies, star formation and chemical abundances 2-58446
 - in clumpy irregular galaxies search for assoc. interstellar CO 2-106920
 - compact radioresource H II regions survey SHF/EHF obs. 2-79237
 - compact region in galactic centre, theory for far-red objects 2-117759
 - NML Cygni, assoc. H II region and radioresource, spectrum and nature 2-74053
 - DEM 179, Wolf Rayet ring nebula in LMC 2-68779
 - diffuse nebulae in irregular galaxy NGC 6822, catalogue 2-106559
 - distribution as seen from Sun and in galactic plane 2-63596
 - distribution in M31, M33, M51 and NGC 2997, anal. 2-94618
 - 30 Doradus in LMC, WC stars detect. and luminosities, visible spectral obs. 2-58368
 - evolution of H₂O and OH maser sources 2-112541
 - exciting s.r. associated with maser sources 2-94807
 - extended galactic plane for IR sources, catalogue, IR obs. 2-63273
 - faint extended regions, UV surface brightness, contrib. of warm intercloud medium emission 2-89412
 - formaldehyde absorption towards galactic H II regions and mol. clouds, 4830 MHz obs. 2-112532
 - formation from stellar wind interaction with H I region 2-68752
 - G134.2+0.8, B0.5 star form. at shock front, SHF obs. 2-74046
 - G45.5+0.1, H II region complex and assoc. CB star cluster, CO mapping obs. 2-79179
 - galactic centre, discovery of high-velocity H II regions delineating bar struct. 2-63640
 - galactic centre, ionised gas clouds rel. to apparent variability of 'point' radio source (*Russian*) 2-101074
 - galactic centre near IR sources, CCD obs. 2-63592
 - galactic centre thermal radioemission 2-63697
 - in galaxies of high surface brightness, ionised gas clouds props. from spectrophotometry (*Russian*) 2-106925
 - gas dynamics of H II regions in collapsing massive molecular clouds, two-dimensional numerical calcs. 2-79190
 - IC 434, bright rims, Ha and forbidden N II and O III obs. (*French*) 2-106852
 - IC 5146, emission nebula, CO obs. of nearby mol. cloud complex 2-74044
 - IC 5146 (S125), emission nebula, atomic and ionised H obs. 2-74043
 - ionised gas, radioastronomical obs. 2-101028
 - far-IR sources in galactic plane, high resolution survey and nature of sources 2-58413
 - in irregular galaxies, optical spectra of H II regions rel. to global props. 2-101054
 - in irregular galaxies giving galaxy evolution and star form. histories 2-117743
 - LMC2, supergiant shell, dynamics and driving mechanism from spectral obs. 2-101014
 - in M101, element abundances and electron temperature from visible spectral obs. 2-68889
 - in M101, obs. of giant ringlike H II regions rel. to galaxy distance 2-68900
 - in M101 (NGC 5457), Sc I galaxy, UV obs. 2-74090
 - M16, bright rims, Ha and forbidden N II and O III obs. (*French*) 2-106852
 - M16, evolved H II region, high resolution far-IR obs. 2-63561
 - M16, H II, H I, mol. complex., IR sources near neutral inclusions, JHKL obs. 2-63589
 - M17, formaldehyde distribution at 4.8 GHz 2-106875
 - M17, optical linear polarisation map 2-112536
 - M17, protostellar dust shells evidence from heavily reddened early type stars, JHKL photometry 2-94805
 - M17 SW, J=4-3 HCN transition, IR obs. 2-63588
 - in M31, element abundance gradients from supernova remnants and H II regions 2-63618
 - M42, Orion Nebula, far IR polarimetry 2-112539
 - M42 and M43 (Orion nebula), obs. of forbidden O I, O II and O III lines 2-106878
 - Magellanic Cloud H II regions, H₂O maser detect., SHF obs. 2-79204
 - Magellanic Clouds, C abundance in H II regions, IUE obs. 2-58444
 - in Markarian 1066 and 744, masses 2-117750
 - in Markarian 8 and 325, clumpy irregular galaxies, clumpy nature as H II regions 2-63646
 - Markaryan 314 (NGC 7468), remarkable irregular galaxy, obs. of central giant H II regions 2-101042
 - molecular clouds near H II regions, J=2-1 CO line, EHF obs. 2-63584
 - Monoceros R2-IRS 3, molecular cloud source, speckle interferometry, IR obs. 2-63705
 - N159, H II region in LMC, search for H₂O maser emission 2-94852
 - N159A and N159, H II regions in LMC, excitation and extinction 2-106854
 - N51D, interstellar bubble in LMC containing HD 36402, UV absorpt. due to gas, obs. 2-79178
 - N70 in LMC possible origin from H I region stellar wind interaction 2-68752

H II regions continued

- N76B in SMC, protostar discovery, nature and IR obs. 2-100928
in NGC 1365, Seyfert like nucleus surrounded by H II regions, visible obs. 2-58470
NGC 1977, assoc. bright rim cloud, abundances/density/temp. from EHF/IR obs. 2-84300
NGC 2071 reflection nebula region, nearby molecular cloud, assoc. H II region and radio source 2-84298
NGC 3603, giant galactic H II region, distance 2-68864
in NGC 4303 (M61), search for H II regions, photometry obs. 2-84328
NGC 5253, E-SO galaxy, obs. of high-excitation optically obscured H II region in galactic nucleus 2-79217
NGC 604 in M33, WR stars and interstellar wind driven bubbles 2-74052
NGC 6193 region in Ara OB1, H166 α line obs. of diffuse ionized gas 2-106842
NGC 6334, IR photometry of ultracompact radio source 2-68866
NGC 6334 FIRS V, near-IR obs. 2-101007
NGC 6334 interstellar complex, struct. and dynamics of 3.5 pc diameter filamentary shell 2-112535
NGC 6334 star form. ridge, radio sources discovery and nature, SHF/UHF obs. 2-68857
in NGC 6503, spiral galaxy, catalogue 2-112560
in NGC 6744, spectrophotometry and abundances 2-58422
NGC 7528 complex, IR sources 1/2, assoc. visible stars extinction 2-79191
NGC 7538, H II region, assoc. mol. cloud, CN line emission and star form. 2-101008
NRAO 584, H II region, RATAN-600 obs. 2-117737
O-type stars surrounding H II regions, emission measures and radii 2-63563
OB associations, surrounding H II regions evolution dependence on initial ambient density 2-106859
OH 351.78-0.54, interstellar OH maser source, radio obs. of assoc. H II regions 2-112600
Orion B (NGC 2024), compact H II region, recomb. line and continuum map 2-101084
Orion Nebula, colour gradients and flux and morphology, UV obs. 2-68855
Orion Nebula, optical polarisation obs. 2-68873
Orion Nebula, photographic obs. of flare stars 2-73863
Orion Nebula, time var. of vel. struct. of SiO maser emission envelope 2-68875
Orion Nebula, UV absorpt. by highly ionised atoms, obs. 2-79183
Orion Nebula, X-ray sources optical counterparts 2-58430
Orion Nebulae Trapezium region, X-ray sources list and identification, obs. 2-74075
 ϵ Persei direction, line of sight struct., UV obs. 2-117716
photoelectric heating of H II regions, theory 2-63566
protostellar objects, excess line emission due to recombination line deviations in H II regions 2-89249
radio sources within 30' of Cepheus A catalogue and precise positions 2-106551
ring nebulae around Of stars PSS search (Russian) 2-73999
ring nebulae assoc. with Wolf-Rayet stars, obs. of NGC 3199, anon (MR 26), RCW 58 and (RCW 104) 2-68854
ring nebulae assoc. with Wolf-Rayet stars 2-68853
Rosette Nebula (NGC 2237-46), radio props. and UHF continuum obs. 2-89395
S235B, compact H II region, radio, IR and optical obs. 2-89332
Sagittarius B2, H II regions/mol. cloud, OH maser source, UHF obs. 2-74047
Sagittarius B2, radio source dynamical model 2-74118
Sagittarius-B2, mol. cloud, assoc. H II regions exciting stars nature 2-106941
in Seyfert galaxies, IR, optical and UV obs. of H line emission 2-74079
Sharpless 106, biconical H II region, surrounding mol. gas dynamics and model, EHF obs. 2-79180
Sharpless 106, bipolar H II region, internal motions from radial vels. meas. 2-74071
Sharpless 106, double lobed H II region, far IR map, obs. 2-101012
Sharpless 106, H II region, assoc. mol. cloud, CN line emission and star form. 2-101008
Sharpless 106 (AFGL 2584), star formation region, IR images 2-68724
Sharpless 106 molecular cloud, NH₃ mapping and H₂O maser detect., SHF obs. 2-101017
Sharpless 140-IRS 1, molecular cloud source, IR obs. 2-63705
Sharpless 308, ring nebula assoc. with Wolf-Rayet star, study of interstellar environment 2-68852
Sharpless 68, mol. cloud boundary, CO isotope selective photodestruction and abundance, obs. 2-68858
spectral line radiation line radiation press., effect on gas and dust 2-63232
Stromgren spheres produced by stars in massive gas clouds 2-106834
structure and excitation from IR emission line obs. 2-79181
time evolution of H II region excited by variable ionising source 2-106858
W3(OH), H II region OH maser sources, UHF obs. 2-74047
W49, giant H II region, obs. of new OH maser source (G43.2-0.1) (Russian) 2-106946
W49N, distrib. of $\pi_2 J = 3/2$ OH maser emission 2-79188
W51, H-O maser maps, obs. 2-68914
W51, H II region/mol. cloud, J=4-3 HCN transition obs. 2-63588
W51, nature and components, IR/SHF obs. 2-79227
W51A, far IR polarimetry 2-112539
C II, influence of low temp. dielectronic-like recomb. on C I radio recomb. lines 2-112314
H-O maser survey of galactic plane at 22 GHz 2-79189
He II recombination line survey 2-106833
NGC 281, bright rims, H α and forbidden N II and O III obs. (French) 2-106852
OH, IR line emission rel. to cooling of interstellar shocks and masers 2-106874

hadron classification schemes

- perturbative QCD coupling, large N behaviour 2-113218
QCD, hadron classification, meson mass scales (Russian) 2-74649
symmetries and quark aggregates as hadron constituents 2-107649
U(6,6) ladder symm. scheme, asymptotic eqns. 2-101695

hadron current

see also *current algebra*

- nuclear scattering of electrons and neutrinos, neutral weak currents, and processes relations (Ukrainian) 2-113463
QCD, nonperturbative power corrections calc. (Russian) 2-54079
two-baryon currents, quark shell model 2-84863

hadron decay

see also *baryon decay*; *meson decay*

- bag model, bag motion in hadron decay processes 2-64296
eletonic model for hadrons, decay, unified theory 2-113250
SU(2) \times SU(2) symmetry, current algebra sum rules saturation 2-69430
weak decays in SU(2) \times U(1) model 2-54141
 $\gamma p \rightarrow X$, 20 GeV/c charm particle lifetimes 2-79888

hadron-deuteron interactions

see also *hadron-deuteron scattering*; *hyperon-deuteron interactions*;

- meson-deuteron interactions*; *proton-deuteron interactions*
nd, 21.5 MeV, break-up quasi-free scatt. sensitivity to NN interaction 2-85041

hadron-deuteron scattering

see also *hadron-deuteron interactions*; *hyperon-deuteron scattering*;

- meson-deuteron scattering*; *proton-deuteron scattering*
Nd, effect of three-particle forces on total scattering cross section 2-113478
Nd, off shell sensitivity, wave functions, nucleon analysing power 2-59174
nd differential elastic cross-section meas. at 2 MeV 2-95862

hadron electroproduction

baryon prod. in quark jets, recombination mechanism 2-101745

- deep inelastic electroproduction, twist-4 contrib. QCD anal. 2-54168
multiple hadron prod., quark combinatorial anal., comparison with expt. data (Russian) 2-74662
perturbative QCD, conf., Tallahassee, FL, USA (March 81) 2-53409
QCD hard jets, average multiplicity, multiplicity fluctuations (Russian) 2-95772
single quark transition model for resonance electroproduction 2-101738
twist-4 effects, canonical operators, coeff. functions, proton constituents 2-95847
upsilon physics at CESR 2-59166
 $\Delta(1232)$, electroproduction, pol. e, P violation, in electroweak theories 2-74695
 $e^+e^- \rightarrow q\bar{q}$, ang. asymmetries and final state polarisation effects 2-69480
 $e^+e^- \rightarrow 2\pi^+\pi^-\pi^0$ hadrons, energy-energy correlations, structure functions 2-101749
 e^+e^- , 22, 34 GeV, hadronic annihilations, energy weighted ang. correl. anal. 2-101751
 e^+e^- , charged Higgs boson search methods using jet identification 2-101739
 e^+e^- , heavy particles detection and study through jet identification 2-54185
 e^+e^- , T prod. and decay study at CESR 2-79893
 $e^+e^- \rightarrow 3\pi^+\pi^-\pi^0$, 2^+ glueball effects 2-113237
 $e^+e^- \rightarrow 4$ jets, 33 GeV, acoplanarity and tripodity distrib., QCD effects 2-107674
 $e^+e^- \rightarrow ABX$, A,B=hadrons, back-to-back jets in QCD, comparison with expt. 2-54186
 $e^+e^- \rightarrow A+B+X$ where A and B are back to back jets, Fourier transform from b to k_T 2-64333
 e^+e^- annihilation, 29 GeV, D^{*+} prod. 2-101741
 e^+e^- annihilation, charged and neutral energy flow anal., QCD coupling constant determ. 2-95853
 e^+e^- annihilation, duality and energy averaging in pot. models 2-69478
 e^+e^- annihilation, exclusive heavy meson prod. in QCD perturbation theory 2-64334
 e^+e^- annihilation, expt. evidence of quarks and gluons, book contrib. 2-113233
 e^+e^- annihilation, general algorithm for jet event reconstruction, report 2-59168
 e^+e^- annihilation, gluino pair prod. 2-113284
 e^+e^- annihilation, hadronic multiplicities universality evidence and meaning 2-101660
 e^+e^- annihilation, hadronic multiplicity distrib. derivation from pp data 2-113285
 e^+e^- annihilation, hadronic events, inclusive γ and π^0 spectral meas. 2-113288
 e^+e^- annihilation, heavy quarks electroweak prod. 2-69477
 e^+e^- annihilation, high-transverse-momentum leptons from B mesons 2-54189
 e^+e^- annihilation, inclusive two-particle prod., nonleading Sudakov effects in QCD 2-54180
 e^+e^- annihilation, jet distrib., QCD effective coupling constant 2-54188
 e^+e^- annihilation, jet-initiating parton identification 2-79844
 e^+e^- annihilation, multijet events perturbative calc. 2-54183
 e^+e^- annihilation, multiple prod., hadron distrib. calc. and comparison with pp collisions 2-95874
 e^+e^- annihilation, partons and hadrons prod., quark and gluon jet models 2-54184
 e^+e^- annihilation, QCD expt. tests from gluon bremsstrahlung and T (9.46) decay 2-54093
 e^+e^- annihilation, single particle inclusive leptonproduction in QCD 2-101658
 e^+e^- annihilation, three-jet cross section, higher order corrections 2-54182
 e^+e^- annihilation, thrust distrib. and ψ bound states decay 2-101748
 e^+e^- annihilation in TRISTAN energy region, 1^+ toponium prod., initial-state radiative corrections 2-107672
 e^+e^- annihilation with hydrodynamic model 2-101752
 $e^+e^- \rightarrow D^{*+}X$, 10.4 GeV, inclusive charged prod. 2-101744
 $e^+e^- \rightarrow e^+\gamma$, 17.15 GeV, cross section meas. 2-79901
 $e^+e^- \rightarrow e^+\gamma(e^+e^-A_s)$, η and A_s radiative widths determ. 2-107665
 e^+e^- exclusive hadronic channels, weak neutral current and axial resonance signals 2-59165
 $e^+e^- \rightarrow e^+e^-e^+e^-$, differential and total cross section 2-54190
 $e^+e^- \rightarrow h$, PLUTO detector expts., review 2-79903
 $e^+e^- \rightarrow hX$, cut vertex formalism and higher-order QCD predictions 2-54181
 $e^+e^- \rightarrow hX$, hadron cluster production (Russian) 2-95857
 $e^+e^- \rightarrow hX$, P violation, QCD calc., cut vertex method 2-79898
 $e^+e^- \rightarrow$ hadrons, 12-36.7 GeV CM, total cross section meas. 2-95854
 $e^+e^- \rightarrow$ hadrons, 22, 34 GeV, annihilation event topology, coupling constant, QCD anal. 2-69475

hadron electroproduction continued

- e^+e^- —hadrons, 2.6-7.8 GeV, jet struct., related inclusive distrib. 2-113287
 e^+e^- —hadrons, 2.6—7.8 GeV, total cross sections, multiplicities, inclusive momentum distrib. 2-113286
 e^+e^- —hadrons, baryon-antibaryon production in quark and gluon jets 2-59122
 e^+e^- —hadrons, energy correl. meas. 2-101743
 e^+e^- —hadrons, evidence for QCD gluon emission 2-79894
 e^+e^- —hadrons, qq bound states, relativistic duality, relativistic and EM corrections 2-74698
 e^+e^- —hadrons, struct. investig. 2-54187
 e^+e^- —hadrons, triplicity D_3 for finding four-jet events 2-101750
 e^+e^- —jets, $k_{T7-31.6}$ GeV, jet measures, energy depend. 2-84905
 e^+e^- — $K_S^0 K^+ \pi^-$, 1.4-2.2 GeV, ϕ' obs. 2-74697
 e^+e^- — KX at $\Psi(4S)$ resonance, Ψ -BB and B-charged and neutral K 2-69453
 e^+e^- — $\Lambda_c \Lambda_c X$, direct electrons obs., Λ_c semileptonic decays 2-79872
 e^+e^- physics at PETRA, review 2-79856
 $e^+e^- \pi^+ \pi^- K^+ K^-$, 1.4-2.18 GeV, cross sections, isospin interference, $K^+ K^-$ dynamics 2-69476
 $e^+e^- \pi X$, higher twist contrib. from direct pion coupling, QCD interpretation 2-95859
 e^+e^- — $q\bar{q}g(g\bar{g})$, differential and total cross section 2-54190
 e^+e^- — $q\bar{q}g(q\bar{q}q)$, four-jet prod. cross section 2-101746
 e^+e^- — $q\bar{q}\pi$ process, P-odd effects (Russian) 2-59139
 e^+e^- — $\rho\pi(\rho\pi)(\phi\pi)(\phi\eta)$, 1.4-2.18 GeV, cross section meas. 2-84903
 e^+e^- —three jets, integer-charged quark model 2-101740
 e^+e^- — VX , vector mesons structure functions in QCD framework using relativistic quark model (Russian) 2-74699
 $e^+e^- X$, 12-36.7 GeV, inclusive charged particle prod., scale breaking 2-89972
 eN — eX , X includes ψ , T or other heavy resonance, differential cross section 2-113282
 eN — πX , enhancement due to pion condensation (Russian) 2-59343
 ep, ρ^0 mesons electroproduction cross section 2-54178
 ep — $e\pi\pi^+$, π^+ mesons electroproduction in $D_{13}(1520)$ and $F_{15}(1688)$ reson. region 2-79891
 ep — e^+e^-n , virtual photons in pion electroproduction 2-74758
 ep — $\pi^+ X$, inclusive single soft pion prod., moment sum rules 2-113281
 $\rho(1600)$ parameters, from $e^+e^- \rightarrow 4\pi^+$ width, current algebra calc. using $\pi\pi\pi\nu$ 2-74629

hadron-hadron interactions

- see also *baryon-baryon interactions; hadron-hadron scattering; meson-baryon interactions; meson-meson interactions*
 additive quark model, suitability for describing interactions 2-107624
 charged multiplicity distrib., rel. to pionisation mass 2-74705
 charm hadron prod. in hadronic collisions 2-107697
 charm. prod. cross section meas. 2-107694
 confinement and hadron-hadron interactions by general relativistic methods 2-95742
 cross sections and secondary Reggeons residues in quark-gluon model (Russian) 2-74660
 deep inelastic processes, mean associated multiplicities (Russian) 2-95848
 diffraction disoc. of hadrons in additive quark model (Russian) 2-74661
 diffraction dissociation processes, asymptotic behaviour at very high energies 2-101770
 Drell-Yan process, jet production, expt. results 2-107648
 dynamics vs. symmetrisation in hadron interferometry 2-53661
 electron-photon cascade, incident particle energy determ. error 2-101774
 generated particle average multiplicities (Russian) 2-79923
 gigantic γ -ray family events with $\Sigma E_{\gamma} \geq 1000$ TeV and hadronic interactions 2-63198
 hadron interactions in cosmic rays at energies above the accelerator range, reviews 2-113314
 hadronic collisions, forward-backward jets, QCD predictions, invariant mass spectra 2-95879
 hadronic inclusive meson prod., particle correl., recombination model from Kutl-Weisskopf struct. functions 2-95882
 hadronic multijet prod., hadron structure functions, S-matrix approach 2-95880
 hadronisation by colour bremsstrahlung 2-54097
 hard hadronic collisions, large p_T jets at small angles 2-64287
 heavy quark pair formation, theory 2-101665
 hN — X , meson cumulative prod., quark-parton model (Russian) 2-74700
 inclusive resonance spectra, constituent quark distributions and dual topological pomeron 2-54119
 jet interaction at 800 TeV, obs. aboard Concorde 2-95888
 jet production, expt. results 2-107648
 jet production 2-74717
 large p_T jet prod., multi-quark scatt. 2-107709
 lepton pair prod. process, kinematic anal. 2-95887
 mechanisms, review 2-74659
 multiparticle prod. in dual fragmentation models 2-107637
 multiparticle prod. models, quadjets, fireballs, annihilation relationship multiplicity sum rules 2-64342
 multiple hadron prod., quark combinatorial anal., comparison with expt. data (Russian) 2-74662
 multiplicity distribution model for hadron-nucleon interactions 2-101691
 multi-quark resonant states 2-54198
 open charm, hadroproduction, rel. to perturbative QCD 2-101663
 open charm hadronic prod. in perturbative QCD approach 2-107626
 perturbative QCD, conf., Tallahassee, FL, USA (March 81) 2-53409
 physics programme in IHEP U-70 proton synchrotron, status and outlook 2-113787
 production cross-sections, phenomenological constraints, KNO scaling 2-74712
 QCD subprocesses contrib. to hadronic high p_T prod. 2-64288
 quark potential model for light and heavy quark systems 2-54103
 semi-inclusive hard processes in QCD, eikonal corrections 2-101661
 soft multiparticle prod., DTU-parton model description 2-95784
 supersymmetric dynamics 2-84812
 $a_1 + a_1 \rightarrow \mu^+ + \mu^- + X$, general struct. of P-odd effects (Russian) 2-84815
 hh, high energy scatt., massive lepton pair prod. in perturbative QCD 2-54220
 hh—jet+X, hadron calorimeter reactions, nonleading QCD correction 2-64343
 hh— l^+l^- , Drell-Yan pairs, p_T effects in QCD 2-89944
 hh— $\mu^+ \mu^-$, 600 GeV, pair time distrib. at 40 m water equivalent 2-112289

hadron-hadron interactions continued

- hh— πX , high-energy, interference effects, multicluster model 2-101697
 hh— $W^+ \gamma X$, W ang. distrib., kinematics, quark subprocess 2-113306
 hN, exclusive descript. of multiple prod., inclusive spectra, scaling (Russian) 2-113311
 hN, multiparticle prod., three-component model 2-74668
 hN— X , grey prong distrib., reading particle cascade model 2-79918
 hN— X , leading hadron noncoherent interaction, optical model calc., gluon cloud loss (Russian) 2-64346
 hp— $\pi^+ \pi^- X$, particle ratios in quark cascade recombination model 2-54107
 Λ_c^+ and D prod. in hadronic collisions in valon model 2-107636
 N— X , high-energy multiplicity distrib., mixed two-component model 2-107710
 np—pn, 790 MeV, analysing power, spin transfer, charge exchange in OPE 2-64337
- hadron-hadron scattering**
 see also *baryon-baryon scattering; hadron-hadron interactions; meson-baryon scattering; meson-meson scattering*
 broken SU(3) symmetry from quark interchange, one boson exchange model 2-101651
 elastic processes, asymptotic behaviour at very high energies 2-101770
 elastic scattering amplitudes, Froissart bound saturation 2-113120
 high energy, meson cloud scalar eikonal model (Russian) 2-95873
 spin effects, energy depend., eikonal model (Russian) 2-64307
 hN—hN, inelastic screening corrections, constituent quark model (Russian) 2-95861
- hadron interactions** see *hadron-deuteron interactions; hadron-hadron interactions; lepton-hadron interactions; photon-hadron interactions*
- hadron leptonproduction**
 see also *baryon production; hadron electroproduction; meson production*
 charmed final states muoproduction, gluon attributes, overview 2-54094
 lepton-induced reactions, charm hadron prod. 2-107697
 single particle inclusive leptonproduction in QCD 2-101658
 e^+e^- , 14, 22, 34 GeV CM energy, charged pion prod. cross section meas. 2-84904
 e^+e^- — $QQ\bar{Q}\bar{Q}$, inclusive production of heavy quarkonia 2-101753
 γN — J/ψ , inelastic neutrino-production of J/ψ in QCD-based model 2-101736
 lh—hX, multiplicity, two-fireball model 2-74693
 lN, deep inelastic scatt., baryon prod. and diquark fragmentation 2-95852
 lN— $l'X$, deep inelastic leptonproduction, review, book contrib. 2-54172
 μN , inelastic muoproduction of J/ψ , ψ , T in QCD based model 2-101736
 μN , 1209 GeV, heavy neutral muon mass lower limit and bottom hadron prod. 2-95849
 μN , multimuo prod., review 2-79892
 μN — μX , X includes ψ , T or other heavy resonance, differential cross section 2-113282
 μ p— $\mu J/\psi X$, deep inelastic heavy reson. prod., azimuthal depend. 2-101737
 $\bar{\nu} N$ —hX, quark jets, transverse struct. 2-107656
 νp —hX, multiplicity, two-fireball model 2-74693
- hadron-nucleus reactions**
 see also *hadron-hadron interactions; hyperon-nucleus reactions; meson-nucleus reactions; nucleon-nucleus reactions*
 absorption cross-section anal., 7-400 GeV (Russian) 2-96012
 additive quark model for spin-orbit interaction 2-107642
 collision number, in additive quark model 2-96006
 cosmic ray hadron interactions at 2500 m above sea level 2-106457
 cosmic ray hadron reactions in ionisation calorimeters, albedo particles flux 2-106458
 electron photon cascades/ initiated by hadrons of large transverse momenta 2-106451
 high-energy hadrons, photons and leptons interactions with nuclei, quark-parton model 2-95796
 inelastic interactions, soft particle multiplicity distrib., Monte Carlo simulation 2-107856
 meson cumulative prod., quark-parton model (Russian) 2-74700
 multiparticle prod. in dual fragmentation models 2-107637
 space-time description based on DTU-parton model 2-95784
 total cross-sections, rel. to Glauber model 2-59345
 very high energy, grey particle distrib. from intranuclear cascade 2-107858
- hadron-nucleus scattering**
 see also *hadron-hadron scattering; hyperon-nucleus scattering; meson-nucleus scattering; nucleon-nucleus scattering*
 inelastic hadron scatt., isoscalar transition rates, implicit folding procedure 2-95968
 nuclear density distrib., review 2-59230
 nuclear density functional form influence 2-64380
- hadron photoproduction**
 see also *baryon photoproduction; meson photoproduction*
 gluon spin derivation from hadron jet photoproduction 2-84859
 $\gamma\gamma$, virtual annihilation to hadrons, perturbative QCD 2-89991
 $\gamma\gamma$ — $e^+e^- (\mu^+\mu^-) (h^+h^-)$, two body final states invariant mass > 2 GeV 2-107717
 $\gamma\gamma$ —hadrons, total cross section, Q^2 and energy depend. 2-54225
 $\gamma\gamma$ — $\pi\pi$, π -polarisability (Russian) 2-79926
 γN —DD, 40-150 GeV, D⁺ lifetime, electronic meas. 2-69454
- hadron production**
 see also *baryon production; hadron leptonproduction; hadron photoproduction; meson production*
 jet, mean charge, appl. to quark charge determ. (Russian) 2-95773
 multiple hadron prod., quark combinatorial anal., comparison with expt. data (Russian) 2-74662
 multiplicities, quark combinatorial anal. (Russian) 2-64300
 multiplicities universality in e^+e^- , pp, πp and γp collisions, evidence and meaning 2-101660
 multiplicity distribution model for hadron-nucleon interactions 2-101691
 NN, particle prod. at large transverse momentum 2-69498
 quark-parton picture of the cumulative production 2-95795
 transverse momenta distributions, in $\alpha\alpha$ and αp at 31.44 GeV 2-80022
 $e^+e^- \rightarrow \pi^0(K^0)(\bar{K}^0)(\Lambda)(\bar{\Lambda})X$, TASSO results 2-95860
 e^+e^- —annihilation, hadron multiplicity in jets (Russian) 2-54191
 μN , deep inelastic scatt., single hadron prod., Q^2 , x and W^2 depend. meas. 2-107669
 pN— X , cumulative rapidity gap-distrib., cluster characteristics in emulsion 2-89990

hadron production continued

- pp, 540 GeV, pseudorapidity distrib. and hadron charged multiplicity from SPS collider 2-107687
 pp, 62 GeV, associated hadronic prod. in μ -pair events, multiplicity 2-101777
 pp, 63 GeV CM, diquark fragmentation and comparison with νp , $\bar{\nu} p$ interactions 2-107712
 pp, multiple prod., hadron distrib. calc. and comparison with e^+e^- annihilation 2-95874
 Cu(p,h), 225 GeV/c, ang. and energy distrib. meas. of secondary hadron fluxes 2-107854

hadron scattering see *hadron-deuteron scattering; hadron-hadron scattering; lepton-hadron scattering; photon-hadron scattering*

hadronic atoms

see also *mesic atoms*

- exotic atoms, K-nucleus scatt. and hypernuclei, review 2-59416
 He, antiprotonic atom, rot. states and lifetime calc. 2-102672
 Li, antiprotonic atom, rot. states and lifetime calc. 2-102672
 p atom, antiproton nuclear absorpt. for studying multipion-nuclear interaction 2-90169

hadrons

see also *baryon resonances; baryons; hadron classification schemes; hadron current; hadron decay; meson resonances; mesons*

- cosmic ray cascade propagation, diagram method for kinetic eqns. soln. 2-106329
 critical props. study in degenerate quark gas model 2-84861
 early Universe, quark-hadron transition, QCD and effective interaction calcs. 2-84362
 electromagnetic mass differences in relativistic quark confining potential model 2-107660
 eleonic model for hadrons, decay, unified theory 2-113250
 exotic hadrons, mass sum rules from bag model 2-107640
 extensive air shower hadron component, charged to neutral ratio 2-106450
 extensive air showers, hadron and muon numbers determ., use of multi-group method 2-106330
 heavy multi-quark states, existence 2-74657
 highly penetrating hadrons made of heavy flavour quarks 2-59125
 inelastic diffraction, simple two-component model, hadron confinement, nuclear matter 2-59134
 nonselfadjoint systems, non-Euclidean and non-Desarguesian geometries 2-95054
 QCD, confinement and hadron problem 2-69406
 QCD, hadronic structure 2-79832
 statistical mechanics of quarks and hadrons, conf., Rielefeld, Germany (Aug. 1980) 2-53423
 SU(6) six-quark model 2-54143
 Yang-Mills gauge theory, pairing scheme in hadron structure 2-84862

haemodynamics

see also *blood*

- ambulatory blood pressure recordings, microcomputer anal. 2-83691
 aortic regurgitation, assessment by pulsed Doppler US 2-68091
 aortic root, human, fluid dynamic parameters during open heart surgery (Japanese) 2-62657
 apexcardiogram, left ventricular press. and wall stress: inter-relationships, dog expts. 2-83590
 apoplectic stroke, mathematical model 2-83541
 arterial baroreceptors, review (Japanese) 2-57832
 arterial haemodynamics including bifurcation influence, math. model, normal pulse pattern prediction 2-57835
 arterial haemodynamics including bifurcation influence, comparison with flow pattern noninvasive meas. 2-57836
 arterial modelling with the z-transform 2-88488
 arterial stenosis, on-line classification of severity by Doppler US signals anal. 2-117022
 arteries, great, vel. profiles visualisation 2-88673
 arteries, posterior communicating, math. model of flow 2-105735
 bifurcating tube, velocity profile 2-55651
 bifurcation, 90° meas. and calc. of laminar flow 2-105736
 biomedical fluid flow-rate sensor for meas. and control 2-62830
 blood flow velocity quantitative meas., double beam Doppler US method 2-100078
 blood vessel with stenosis, stationary flow model appl. 2-109414
 brain, regional blood flow determ. by ^{133}Xe -inhalation and γ -camera 2-62745
 brain, regional flow, non-invasive meas. using ^{133}Xe (German) 2-88648
 cardiac blood flow marker distrib., topographic display and quantitative anal. 2-117110
 cardiac haemodynamic values assessment from single-probe radioisotope dilution curves 2-100121
 cardiac output, automatic determ. using impedance plethysmography 2-57911
 cardiac output, technique for continuous meas. based on temp. variations 2-73388
 cardiac stroke volume meas., expt. evaluation of impedance and EM methods in dogs 2-117112
 cardiac stroke volume measurement by impedance cardiography 2-100136
 cardiac stroke volume rel. to pneumocardiogram, dog expts. 2-111721
 cardiac time varying parameters, unconstrained, sensitivity to errors in meas. afterload and preload 2-73386
 cardiac valve replacement, low profile bioprosthesis, hydraulic and haemodynamic studies 2-88696
 cardiology, diastole, deviation of observed from passive states 2-105732
 cardiovascular system, pulsatile mech. and math. model 2-117169
 cardiovascular reflexes during rest and exercise modified by gravitational stresses 2-62643
 cardiovascular signals, detect. of trends in long term recordings 2-111808
 carotid bifurcation model, human, laser Doppler anemometer meas. of steady flow 2-105729
 carotid bifurcation model, human, visualisation of steady flow 2-105728
 cerebral blood flow, local, in vivo mapping by Xe-enhanced CT 2-83651
 cerebral blood flow, regional, errors in determ. by Xe enhanced computerised tomography 2-62759
 cerebral blood flow, total and regional, quantitative non-invasive method for cerebrovascular disease 2-94200
 cerebral blood flow determ. using positron emission meas. of fluoromethane kinetics 2-62753
 cerebral blood flow during rest and cognitive activity, sex and handedness differences 2-116969

haemodynamics continued

- cerebral electrical impedance phethysmogram, effect of electrode size on blood flow contribs. 2-117119
 circulation, Hill's theory, Markov chain model 2-68040
 circulatory system, modular, mock, programmable electronic control unit 2-100188
 conference on bioengineering and microtechniques, Besancon, France (Apr. 82) 2-112638
 continuum theory of blood flow 2-68041
 coronary artery of intact, awake calves, press.-diameter relationships 2-57839
 coronary flow dynamics, effect of aortic stenosis, in vitro expts. 2-116975
 coronary venous blood flow, method for continuous monitoring 2-83692
 diathermy optimisation and cancer treatment using hot transfer principles 2-73198
 digital computer model of human circulator system, aerial combat appl. 2-116962
 Doppler ultrasound and its use in clinical meas., book 2-89494
 Doppler ultrasound monitoring of peripheral blood vessels 2-57880
 Doppler US arterial signals, appl. of CCD transversal filters for real-time spectral anal. 2-68093
 dynamic studies, practical appl. of deconvolution techniques 2-94189
 extracorporeal circulation device, flow through tubes (French) 2-94252
 flexible pipes, finite-element simulation of pulsatile flow, arterial disease appl. 2-105636
 flow, mean, meas. system 2-94227
 flow control device for extracorporeal circuits 2-57932
 flow measurement, electromag., theory 2-81414
 flow profile in human heart, US measurement and imaging method 2-62661
 foetus, human, Doppler US meas. of blood flow 2-83612
 functional imaging future in radionuclide studies 2-94190
 heart rate frequency modulation technique to increase LF content of cardiovascular signals 2-88703
 heart valves, fluid dynamics 2-100038
 HF jet ventilation, cardiac synchronised, haemodynamic effects in dogs 2-73294
 impulse propagation through junctions 2-68038
 indicator dilution theory for convective dispersion in laminar flow through straight tubes 2-73288
 indicator dilution using a fluoresc. indicator, circulation meas. technique 2-117044
 instrumentation development for haemodynamic meas. 2-78479
 intra-aortic balloon pumping, influence of vascular parameters on effectiveness, model study 2-117138
 Korotkov tone, infinite origin 2-83595
 left ventricular afterload parameters, automatic estimation procedure using a systemic vascular bed model 2-100149
 left ventricular contraction assessment, fluid dynamic model 2-100039
 left ventricular diastolic press.-vol. relationship, effect of normal pericardium, dog expts. 2-68032
 left ventricular function in right-heart-bypassed dogs, effect of positive end-expiratory press. 2-73274
 left ventricular haemodynamics and chamber dimensions, computer-graphic anal. 2-100148
 left ventricular heat production, hybrid device for meas. 2-99905
 left ventricular press.-vol. relationships, assessment using a computerised nonimaging nuclear probe 2-83653
 left ventricular pressure and derivatives resynthesis from harmonics, cardiac relax. parameters 2-88579
 magnetic tag technique, for flow meas., optimisation 2-83589
 microwave cancer therapy, blood flow effects on temp. distrib. from invasive antenna array 2-100087
 mitral valve insufficiency, expt. stimulated, myocardial mechs. 2-73295
 multiple branching network, steady and pulsatile flow distrib., physiological appls. 2-105731
 muscle blood flow, meas. method using radiolabelled microspheres, rat appl. 2-111822
 myocardial flow and metabolism, imaging using multitracer autoradiographic technique 2-88711
 NMR of circulating dog's blood 2-68210
 NMR rheotomography, feasibility and clinical pot. for blood flow anal. 2-68103
 orthostatic trial, passive, haemodynamic regulation (Russian) 2-62659
 oscillometric method for indirect meas. of press. in human finger, model expt. 2-68215
 oscillometric method for indirect meas. of press. in human finger, correl. study 2-68216
 plethysmographic venous exploration using a strain gauge, press.-vol. diagram (French) 2-117106
 precordial pressure, dynamic instrumentation for meas. 2-117103
 pressure, Dinapam non-invasive monitor, clinical evaluation in pre-term neonates 2-68178
 pressure monitors, automatic, noninvasive: analogue/manual adaptation of Dinapam (TM) 2-83672
 pressure transducer, quartz crystal (German) 2-88669
 pressure-volume relationship in circulatory elements 2-116963
 prosthetic aortic valves, flow situations and patterns (German) 2-57923
 prosthetic heart valves, flow-induced shear stress distrib. meas. 2-62836
 pulmonary arterial pressure monitoring in ambulatory patients, using portable recorder 2-117122
 pulmonary artery pressure monitoring using spectral analysis and Strand's algorithm 2-88678
 pulmonary blood flow 2-73292
 pulmonary circulation, realtime ECG-gated simultaneous beat-to-beat evaluation of haemodynamic parameters 2-88580
 pulsatile blood flow high-resolution meas. using optical fibre laser Doppler velocimeter 2-83704
 pulsatile flow in constructed axi-symmetric tubes, numerical simulation 2-81393
 pulse recording, analytical comparison of transcutaneous methods 2-62815
 pyroelectric sensor for the measurement of pressure and cardiac output (Spanish) 2-68179
 radionuclide angiocardigraphic approaches to shunt assessment, simulation-based sensitivity study 2-73317
 regional blood flow during physical stress, regulation mechanism and modelling (Russian) 2-62658
 regional tissue metabolism and blood flow, 3D quantitative meas. using ^{15}O and positron emission tomograph 2-94201

haemodynamics continued

- renal blood flow, determ. by math. interpretation of radionephrograms (*Russian*) 2-73316
 sacral region blood flow rate in rabbits, He-Ne laser influence (*Chinese*) 2-100056
 skeletal muscle, US effect on microvascular haemodynamics, rat expts. 2-68047
 slit catheter system, new diagnostic method for limb compartmental press. meas. 2-83693
 systolic blood press. meas. using sphygmomanometer, errors 2-89504
 thermomodulation technique for cardiac output meas. during artificial ventilation 2-73402
 thermodynamic model for the transport and exchange of bodies dissolved in blood (*French*) 2-73182
 thermoregulatory influences on common carotid blood flow in the dog 2-116950
 thrombosis, deep vein, periodic external compression as prophylaxis, numerical studies 2-105743
 thrombosis, deep vein, periodic external compression as prophylaxis, expts. 2-105744
 transients in blood circulation system, computer simulation 2-100022
 turbulence, US meas. by pulsed Doppler method employing freq. tracking, arterial disease appl. 2-100079
 turbulence in the canine ascending aorta, spectral anal. (*Japanese*) 2-57842
 turbulent stresses in the region of aortic and pulmonary valves 2-116976
 US Doppler vel. signals in normal subjects, comparison of methods of recording and anal. 2-117035
 US Doppler vel. waveform, estimation method 2-117036
 US pulsed Doppler blood flow meas., accuracy calcs. 2-111758
 velocity profiles in symmetrically branched tubes simulating the aortic bifurcation 2-57838
 vertebral artery, numerical anal. of blood flow 2-105749
 vessel obstructions, quantification using NMR 2-83624
 viscous liquid flow in bent tube undergoing deformation 2-60645
 Ge well counter for blood flow meas. by microsphere technique 2-62847
 HgI₂ gamma-radiation detectors development, appl. in nuclear medicine for blood flow meas. 2-73322

haemoglobin . see *proteins***hafnium**. see also *nuclei with*

- neutron effects, appl. for reactor control 2-80155
 powders, prep. process 2-111108
 reactor core control rod appls. 2-80096
 surface nitride films, Auger and X-ray charact. 2-92396
 Bi ion irradi., dislocation loops 2-86758

hafnium alloys. see also *hafnium compounds*

- Co-Fe-Cu-Hf-Sm, permanent magnet, microstruct., SEM study 2-92224
 Co-Hf sputtered amorphous film, struct., soft mag. props. and magnetotri-
 ction meas. 2-87534
 Cu-Al-Ti-Hf powder, sputtered, internal oxidation to produce dispersion
 strengthened Cu (*Russian*) 2-67238
 Fe-Al-Hf oxidation, Al₂O₃ scales with oxide dispersions, peg formation
 obs. 2-93670
 Fe-Cr-Al-Hf, corrosion scales, elevated-temp., erosion rate 2-67570
 Fe₈Hf₁₀, amorphous, mag., Mossbauer, and resist. study 2-72384
 Hb-Hf, dynamic strain aging, 20 to 900°C (*French*) 2-57377
 Hf-¹¹¹Cd, ¹¹¹Cd probe nuclei elec. field gradient temp. depend., TDPAC
 study 2-104326
 Hf-Co-Al, Laves phase, mag. susceptibility (*Russian*) 2-72142
 Hf-Cu-Al, Laves phase, mag. susceptibility (*Russian*) 2-72142
 Hf-Nb-Ga solid solns., mag. and X-ray struct. investig. (*Russian*)
 2-67292
 Hf-Nb-Si, amorphous, supercond. props. and microstruct. after induced
 crystn. 2-98785
 Hf-Ni-Al, Laves phase, mag. susceptibility (*Russian*) 2-72142
 Hf-Ti-Ga solid solns., mag. and X-ray struct. investig. (*Russian*) 2-67292
 Hf-V-Si, amorphous, supercond. props. and microstruct. after induced
 crystn. 2-98785
 Hf(Co_{1-x}Fe_x)₂, mag. ordering 2-98845
 Hf_{1-x}Ta_xFe₂, ferromagnetic-antiferromag. transition, magnetisation and
 Mossbauer study 2-87493
 Hf_{1-x}Ti_x(Mo₂W₂), high temp. equilb. struct. transformation 2-66177
 HfV₂Hf₄, Laves phase, H ordering, thermodynamic description 2-86629
 HfV₂Hf₄, low temp. phase, H-atom configuration, NMR study 2-72375
 Mo-Hf-C, powder metallurgical, props. 2-111228
 Mo-HfN (0.36 vol.%), texture changes during recrystn. annealing (*Rus-
 sian*) 2-93528
 Nb-Hf-Ti (10, 1 wt.%), hot isostatically pressed powder compact, creep
 2-116504
 Nb-Hf alloy, high temp. hardness changes (*Russian*) 2-72794
 Ni-Cr-Co-W-Al-Ti-Nb-Hf system, refractory as-cast alloy, phase comp.,
 struct. transforms. during high-temp. heating 2-99434
 Ni-Hf, surface oxidation, suppression during laser surface treatment
 2-83294
 Ni₃(Al, Hf), heat-resistant, dendritic segregation 2-72698
 Ta-Re(Mo)(Hf)(W)(Zr), athermal solid soln. hardening 2-99437
 Ta-W-Re(Mo)(Hf)(Nb), athermal solid soln. hardening 2-99437
 V₂(Hf,Zr) Laves phase composite superconductors, effect of strain on crit.
 parameters 2-82552
 V₂Hf, lattice stability in premartensitic temp. range (*Russian*) 2-97981
 V₂Hf, mag. props. near phase transition, susceptibility and spin-lattice
 relax. meas. (*Russian*) 2-61693
 V₂Hf superconducting Laves phase, cryst. struct. (*Russian*) 2-91871
 V₂(Hf,Zr), supercond., ultimate crit. current density (*Chinese*) 2-110556
 (Zr_{0.9}Hf_{0.1})Fe₂, hyperfine mag. field at ¹⁸¹Ta, radiation defects influence,
 TDPAC meas. 2-56986
 Zr_{1-x}Hf_xFe₂, isomer shift and quadrupolar interaction, Mossbauer study
 2-104778
 Zr_{1-x}Hf_x(Ti₂)Mo₂(W₂), high temp. equilb. struct. transformation
 2-66177
 Zr₂Hf_{1-x}V₂, struct. nonstable supercond. Laves phase, electron spectrum
 peculiarities (*Russian*) 2-66433

hafnium compounds. see also *hafnium alloys*

- eutectoid decomp. process influence on physico-chem. props. 2-99404
 garnet:Ho³⁺ - ¹I₂ laser transition at 2 μm 2-110892
 nitride films, on surface of Hf, Auger and X-ray charact. 2-92396
 HfC whiskers, growth by CVD (*Japanese*) 2-105057

hafnium compounds continued

- HfC, N_{1-x}, spectral reflectance, interband absorption and carrier density
 2-99152
 HfCl₄, gas, mol. struct. and force field, electron diffr. obs. 2-90696
 HfF₄ based highly transparent glasses, IR absorpt. meas. 2-60203
 HfF₄ based IR transparent glasses 2-97133
 HfF₄-BaF₂-LaF₃(ThF₄) glasses, polarised Raman scatt. study 2-57086
 HfH₂, FCC-FCF phase transition, electronic theory 2-71641
 HfN, CVD coatings, optical props., Kramers-Kronig anal. 2-87888
 HfN electric spark alloyed coatings on Mo and W 2-67657
 HfN, thermal and elec. cond. characts. rel. to electron energy spectrum
 2-71987
 HfNi₂Si₂, magnetic susceptibility and electrophys. props. (*Russian*)
 2-104575
 HfO₂, fine monoclinic power prep. by hydrothermal oxidation 2-88039
 HfO₂, interference coating, form. in vacuum, refr. index drift 2-114482
 HfO₂, temp. depend. of EFG, TDPAC study 2-93072
 HfO₂-CaO, phase equilb., 1600 to 2800°C 2-88069
 HfO₂-MgO, phase equilibria, 1670 to 3070K 2-72682
 HfO₂-MgO system, struct. and phase props. (*Ukrainian*) 2-57336
 HfO₂-MgO-Nb₂O₅(Ta₂O₅), ordered fluorite related phase 2-111159
 HfO₂-PrO_{1.5} system, eutectoid decomp. process influence on physico-chem.
 props. 2-99404
 HfO₂-R₂O₃, liquidus curves in region with high HfO₂ content 2-86842
 HfOS, vapour phase synthesis, X-ray characterisation 2-105058
 HfS₂, HfSe₂, struct. rel. to lubrication performance 2-109901
 HfS₂, lattice dynamical anisotropy, two phonon reson. Raman scatt. study
 2-98220
 Hf(SO₄)₂·Na₂SO₄·3H₂O, crystal struct. determ. 2-76398
 Hf(SO₄)₂·2Na₂SO₄·2H₂O, crystal struct. determ. 2-76397
 HfSe₂ intercalated with Li, elec. props. 2-66529
 HfSe₂, optical transitions, symm. depend., refl. spectra 2-57120
 HfSe₂, valence band, photoemission study 2-116333
 HfSiO₄, cryst. struct. refinement 2-115185
 HfSiO₄:Nd³⁺ (Yb³⁺), EPR study 2-72341
 HfSiO₄:V⁴⁺, ESR and absorpt. spectra 2-66902
 HfTe₂, optical transitions, symm. depend., refl. spectra 2-57120
 HfTe₂, low-dimensional metallic, giant resist. and X-ray diffr. anomalies
 2-87244
 HfTe₂, thermoelec. power and elec. resist., 7 to 380K 2-92571
 HfTe₂:Ar, low-dimensional cond., Hall effect and transverse magnetoresist.
 2-92663
 K₂HfF₆, phase transitions, TDPAC study 2-92181
 Pb(Hf_{1-x}Zr_x)_{1-x}Ti₂O₆, ferroelectric-antiferroelectric transition (*French*)
 2-99068

half adders . see *adders***half-lives (radioactive)** . see *radioactive decay periods***half wave rectification** . see *rectification***halides**

- . see also *compounds of individual elements, e.g. "tungsten compounds"*
 and *"organic compounds"*
 . see also *alkali metal halides; halogens*
 adsorbed monolayer of Ar, Kr and Xe, two-dimens. condensation, critical
 temp. 2-66350
 arcs, metal halide, additive densities estimation from self-reversed emission
 line contours 2-115084
 glasses, high refr. index, low Abbe number 2-91013
 ions, core binding energies from Dirac-Fock calcs. combined with atomic
 binding energies 2-58832
 layered halides intercalation with organic cpds., NQR investig. 2-110717
 mechanoluminescence of crystals 2-104975
 Ag halide photographic emulsions, homogeneous theoretical calcs. (*Rus-
 sian*) 2-74547
 AgCl photographic emulsions, luminescence flash of latent image centres
 (*Russian*) 2-53882

Hall constant . see *Hall effect***Hall effect**

- Al_{1-x}B_x^{VI} semiconducting cpds., nonstoichiometric, physicochem. props.
 2-104005
 amorphous superconductor, correlation between energy gap and Hall effect
 (*Chinese*) 2-104519
 ampere definition based on combined Josephson and quantised Hall expt.
 2-101376
 chloride salts in methylic alcohol and in water, dil. electrolytic solns., Hall
 effect (*French*) 2-56232
 defects, two-dimensional, appl. of Van der Pauw's method 2-115787
 disordered materials, incoherent field Hall current, and thermoelec. phe-
 nomena, integral representation 2-72011
 disordered solid, Hall effect calcs. using percolation theory model
 2-104334
 disordered system, two-component, topology below and above percolation
 threshold 2-66517
 disordered systems, percolation theory and transport coeffs. 2-66516
 double AC measurement method, appl. to MoTe₂ (*French*) 2-58846
 electron gas, two-dimensional, disordered interacting, magnetoresist. and
 Hall effect 2-61434
 epitaxial film, elec. cond. and Hall effect 2-115922
 Faraday-type combustion MHD generator, non-uniform Hall parameter
 effects on electrode voltage drop 2-76207
 ferromagnetic metallic film, spontaneous Hall coeff. 2-110331
 ferromagnetic thin films, planar Hall effect 2-64071
 GaAs-Al_xGa_{1-x}As heterojunctions, low temp. quantised Hall effect
 2-87381
 n-Ge:As, photoconductivity at photon energy less than impurity ionization
 energy 2-77121
 granular metal film, dielectric regime, Hall effect 2-82381
 graphite, Hall effect, trigonal warping, energy bands 2-87305
 graphite, Hall effect meas., trigonal warping of energy bands effects
 2-87304
 hopping Hall mobility; percolation theory 2-104333
 iodide salts in methylic alcohol and in water, dil. electrolytic solns., Hall
 effect (*French*) 2-56232
 liquid metals, spin-orbit coupling and Hall coeff. 2-66530
 low dimensional conductors, irradiation effects and role of disorder, review
 2-87233
 magneto-transport in the two dimensional Lorentz model 2-87211
 measurement method (*Japanese*) 2-101425
 metal film, Hall coeff., general expression 2-92781
 metal-insulator transition, localisation and correl. effects 2-115664

Hall effect continued

- MHD boundary layer on wedge, Hall and ion-slip currents effects 2-55673
 Mooij criterion and weak localization 2-87216
 MOSFET, quantum Hall effect, role of inversion layer geometry 2-61492
 multilayer heterojunctions, carrier conc. and mobility, calc. from Hall effect and hot electron data 2-56678
 nitride interstitial phases, thermal and elec. cond. characts. rel. to electron energy spectrum 2-71987
 noble metal-Co alloys, dil., mag. behaviour Co atoms 2-115971
 noble metal-rare earth alloys, dil., magnetotransport and EPR props. 2-104355
 one-body response formulas and generalised Boltzmann equations 2-53659
 quantised Hall effect and other macroscopic quantum phenomena in normal conductors 2-61445
 quantised two dimensional Hall cond. theory 2-98718
 rare earth-cobalt intermetallic, R₂Co type, elec. resist. accompanying metamag. phase transitions (*Russian*) 2-66820
 semiconducting plates, Hall field of current induced by HF mag. (*Rumanian*) 2-66573
 semiconductor, anomalous Hall effect, under uniaxial stress, theory 2-66575
 semiconductor, geometrical correction factor for rectangular Hall plate 2-104397
 semiconductor, magneto-Hall and magnetoresist. coeffs., mixed-carrier effects 2-82378
 semiconductor, magnetoresistance influence on high mag. field Van der Pauw expts. 2-104396
 semiconductor, streaming motion and population inversion of hot carriers, crossed elec. and mag. fields 2-98668
 semiconductor film, polycrystalline, Hall mobility interpretation 2-61630
 semiconductor material props. meas., tester prototype design (*Polish*) 2-99608
 semiconductor with layered inhomogeneity, anisotropy of galvanomag. effects (*Russian*) 2-61496
 semiconductors, hot carrier galvanomag. effects in high mag. fields, Boltzmann eqn. calc. 2-110371
 semiconductors, low resistance, automated equipment for meas. galvanomag. characts. in high electric fields 2-95397
 semiconductors, quantum transport in a non-parabolic band (*German*) 2-56612
 SOS, electrical transport props., thermoelectric power appl. (*French*) 2-61594
 SOS, laser annealed, electron Hall mobility and residual stresses, heat treatment effects, Raman study 2-98745
 SOS films, non-homogeneous elec. transport, galvanomag. expts., internal stress influence 2-115904
 SOS films, struct.-props. rels. associated with haze 2-91907
 SOS structures, Hall mobility and capacitance meas., internal stresses and pot. fluctuations influence 2-82470
 steady Couette flow, Hall effect 2-65655
 steady MHD Couette flow, effect of Coriolis force and Hall effect 2-86286
 temperature dependence measuring apparatus 2-112922
 thermodynamic derivation of the Hall effect current 2-104354
 thermosolubility instability of Hall plasma 2-86399
 (TMTSF)₂PF₆, high elec. field transport at low temps. 2-56616
 (TMTSF)₂PF₆, low temp. cond., Hall effect and magnetoresist., effect of radiation damage 2-87240
 (TMTSF)₂PF₆, magnetoresist. and Hall effect in semicond. phase 2-56620
 (TMTSF)₂PF₆, pure and radiation damaged, magnetotransport and non-linear effects 2-56555
 TMTSF-DMTCNQ, X-ray irradiat., elec. props. of stable metallic phase 2-87145
 TMTSF-PMTCNQ, weakly disordered, low temp. metallic phase, Hall effect 2-92591
 transfer resistance components for a stationary regime in mag. field (*Rumanian*) 2-115786
 two-dimensional disordered electron gas, magnetoresist. and Hall resist. calc. 2-77092
 two-dimensional disordered potential, quantised Hall conductance and current carrying extended edge states in mag. field 2-77201
 two-dimensional electron conductivity, Hall effect, random potentials 2-92557
 two-dimensional electron gas, Hall resist. meas., fine struct. const. determ. 2-58777
 two-dimensional electron gas, Hall resistance quantisation 2-104330
 two-dimensional electron localization and Coulomb interactions 2-61387
 two-dimensional electron structs., Coulomb correlations and the quantum Hall effect 2-82379
 two-dimensional electron systems, zero-resistance state and quantised Hall effect 2-61491
 two-dimensional high mag. field cond., quantum Hall effect 2-82380
 two-dimensional metal, quantum Hall effect, impurity and edge effects 2-61446
 two-dimensional periodic potential, quantised Hall conductance 2-104328
 two-dimensional system, quantized Hall cond., effect of Landau band struct. 2-61490
 two-dimensional systems, electronic props., conf., New London, NH, USA (Aug. 1981) 2-58536
 van der Pauw meas. technique, geometrical limitations 2-101412
 voltage meas. on plates with Hall electrodes 2-107344
 weakly disordered two-dimens. system, localisation and interaction effects 2-87213
 Al-Cu (4 wt.%), resistivity maximum during Guinier-Preston zone formation 2-82319
 Al_{1-x}Ga_xAs:Si(Sn), epitaxial films, doping effects on elec. props. 2-110502
 Al_{1-x}Ga_xAs/GaAs heterostructures, single and multiple period modulation and doped, I-V characts., suitability for FETs 2-56682
 Au-Fe, spin glass, AC susceptibility, Mossbauer and anomalous Hall effect, mag. hysteresis, review 2-56866
 Au-SiO₂ cermet film, Hall effect, electronic tunnelling near percolation limit 2-77202
 BaPbO₃-BaBiO₃ system, Hall EMF, elec. cond., and supercond., 2.5 to 300K 2-61645
 p-Bi:Sn, transverse magnetoresistance and Hall effect 2-77093

Hall effect continued

- Bi-Sn(Te), dilute alloys, anomalous magnetoresistivity in quantising mag. field 2-92664
 Bi_{1-x}Sb_x, semicond., valence band struct., elec. and thermal cond. study 2-87143
 Bi_{0.9}Sb_{0.1} thin film, band gap and intergrain barrier activation energies 2-72085
 Bi₂Se₃(Cd), transport props. and plasma resonance 2-98646
 Bi₂Se₃(Te)_{1-x}Sn_x, doping effect on transport and optical props. 2-92015
 Bi₂Te₃, dislocation-induced US absorpt. and elec. props. 2-92115
 C evaporated films, electron transport, semicond. and hole metal behaviour 2-61461
 CdGa_{1-x}Te_x(Ag) film, polycryst. and amorphous, elec. cond. and Hall effect meas. 2-82490
 Cd_{1-x}Hg_x, Se mixed cryst., Γ point band struct. parameter, elec. and thermomagnetic studies 2-76923
 Cd_{1-x}Hg_xTe crystal, size effect, Hall coeff. temp. depend. 2-115802
 Cd_{1-x}Hg_xTe, high quality epitaxial films, growth by sputter deposition, Hall coeff. meas. 2-116362
 p-Cd_{1-x}Hg_xTe, hole conc. routine characterisation, Hall coeff. and bulk cond. meas. 2-82351
 n-Cd_{1-x}Hg_xTe layers, MBE growth, struct. and elec. props. 2-99340
 Cd_{1-x}Hg_xTe, MBE growth 2-93433
 Cd_{1-x}Hg_xTe sputtered epitaxial layers, structural and elec. props. 2-92424
 Cd_{1-x}Hg_xTe, elec. behaviour of impurities, Hall effect and minority carrier lifetime meas. 2-77091
 Cd_{1-x}Pb_xS, film, growth kinetics, chem. deposition from aq. soln. 2-110190
 CDS, impurity content evaluation by Hall effect analysis 2-115789
 CDS polycrystalline film, photoconductivity meas. 2-66674
 CDS thin films, elec. props., In doping and Ag contact effects 2-66672
 CDS:In(Sb) film, vacuum evaporated, elec. and optical props. 2-61631
 CdSiF₆, Hall study of electrically active centres (*Russian*) 2-56623
 CdSiF₆, intrinsic defect effect on elec. props. 2-61481
 CdSnAs₂, melt-grown crystals, surface polarity effect on electrical props. 2-115852
 p-CdSnAs₂:Ga, transport coeffs., temp., field, and press. depend. 2-77061
 CdSnAs₂, melt-grown crystals, surface polarity effect on electrical props. 2-115852
 CdTe, bipolar photo-Hall effect and photocond. meas., defect model 2-115812
 p-CdTe, imperfection anal. by photoHall effect and bipolar photocond. meas. 2-77114
 CdTe, thermoelectric power, effects of bipolar photoconductors, photo-Hall effect meas. 2-87310
 CdTe-Cu(Ag) solid soln., supersaturated, carrier decay process kinetics 2-92649
 CdTe_{1-x}Te_xAu, Hall coeff., thermo-EMF, cond. type, temp. depend., doping effects 2-56615
 Cd_{1-x}Zn_xAs₂, Shubnikov de Haas oscils. 2-92673
 Co_{1-x}Si_x, amorphous sputtered films, anomalous Hall effect 2-71950
 Cu, electron-phonon effects, elec. and thermal resistivities, Hall effect 2-115728
 Cu-Co(Fe)(Mn) alloys, spin glass state form. investg. (*Russian*) 2-56875
 Cu-Fe(Mn) spin glass alloys, elec. resist., Hall effect, mag. susceptibility, and EPR meas. (*Russian*) 2-82602
 Cu-Mn, spin glass, AC susceptibility, Mossbauer and anomalous Hall effect, mag. hysteresis, review 2-56866
 Cu-SiO₂ granular films, elec. props., electron localisation in metallic regime 2-72081
 Cu_{2-x}BV_x, preparation by solid-phase mass transport, elec. props. 2-111066
 CuInTe₂, neutron irradiat., elec. props. and defect levels 2-71982
 CuInTe₂:Zn(Cd), elec. props., hole mobility and conc., annealing effects 2-87279
 Cu₂MnAl, Heusler alloy, elec. and mag. props. 2-110326
 Cu₂NiSn, Heusler alloy, elec. and mag. props. 2-110326
 Fe-Zr amorphous sputtered films, elec. and mag. props. 2-71948
 Fe_{1-x}Au_x, B₂ amorphous films, mag. and transport props. 2-72296
 γ-Fe_{23-x}Ni_xCr₁₈, transport and galvanomag. props. near crit. comp., 4.2 to 300K (*Russian*) 2-61444
 Fe_{0.34}TiSe₂, cryst. struct., elec., mag., and optical props. 2-81746
 (Ga,In)(As,P) microwave and optoelectronic heterostruct. growth using multibeam reactors, Hall mobilities 2-77747
 Ga, Nernst effect and Hall effect, quantum oscillations obs. 2-98628
 Ga_{1-x}Al_xAs, electron drift mobility calcs. 2-77084
 Ga_{1-x}Al_xAs, epitaxial layers, Hall mobility-drift mobility ratio, press. depend. 2-87431
 Ga_{1-x}Al_xAs, Hall electron mobility, scatt. parameters 2-115790
 Ga_{1-x}Al_xAs, MOCVD grown, elec. props. of Se and Zn 2-98774
 GaAs, bulk Bridgman crystals, O related gettering of Si during growth 2-61005
 GaAs, electrical defect, Hall effect, SIMS and mass spectra meas. 2-76984
 GaAs, grown by Bridgman method, props. 2-98675
 GaAs, high purity, grown by MBE, characterisation 2-56613
 n-GaAs, metal-semiconductor transition in strong mag. fields 2-92708
 GaAs, semi-insulating behaviour and thermal stability, stoichiometry effect 2-110348
 GaAs:C layers, elec. props., and electron microscopy 2-61628
 GaAs:Cr, charge transfer induced by press. 2-66484
 GaAs:Cr, horizontal Bridgman-grown for ion implantation, elec. characts. 2-115756
 GaAs:Cr, Se, hot implanted, effects of damage-impurity interaction on elec. props. 2-71990
 GaAs:Cr, Si, ion implanted, Hall effect, depth profiles (*Slovak*) 2-98669
 GaAs:Ge(Se), neutron transmutation doped, elec. props., metal-nonmetal transition 2-87284
 GaAs:Ge(Sn)(Se)(Zn), doping by vapour phase epitaxy, carrier Hall mobility (*French*) 2-98129
 GaAs:In, elec. cond., Hall effect and deep levels 2-115760
 GaAs:O, deep electron traps, elec. and optical props. 2-98585
 GaAs:Si, ion implanted, elec. props. and impurity distrib. 2-98141
 GaAs:Se, highly doped, MOCVD layers, Hall mobility rel. to growth temp. 2-93441
 GaAs:Se, ion implanted, carrier props. and photolum. meas. (*Korean*) 2-56585
 GaAs:Se*, ion implanted, transient annealing using graphite strip heater, elec. cond. study 2-82348

Hall effect continued

- GaAs:Si, highly doped, MOVPE grown, photolum., SIMS and Hall meas. 2-77568
 GaAs-Al_{1-x}Ga_xAs heterojunction, modulation doped, two-dimens. electron gas, intersubband scatt. obs. 2-110457
 GaAs-Al_{1-x}Ga_xAs heterojunction FET, 2-D electron gas, quantum galvanomagnetic props. 2-56686
 GaAs-Al_{1-x}Ga_xAs heterojunctions, zero-resistance state of two-dimensional electrons in a quantizing magnetic field 2-61570
 GaAs-AlGaAs heterojunction, two-dimensional magnetotransport in the extreme quantum limit 2-82376
 GaAsSb_{1-x}As LPE growth on InAs substrates 2-88010
 Ga_{0.4}In_{0.6}As high mobility thin epitaxial layers grown by MBE 2-115585
 Ga_{0.4}In_{0.6}As-InP heterojunction, 2D electron gas, quantum oscills., magnetoresistance study 2-110466
 Ga_{1-x}Mn_xSb solid solns., carrier scatt. mechanisms 2-56571
 GaP, heteroepitaxial MBE growth on Si (100), elec. props., heterojunction form. 2-57297
 GaSb:Te, Hall coeff. and L minima under hydrostatic press. 2-115793
 Ga_{1-x}Sn_xSe, solid solns., elec. cond., thermo-EMF and Hall coeff. meas. 2-87259
 Gd-Co uniaxial amorphous ferrimagnet, mag. states 2-110608
 GdCo amorphous film, compensation temp., substrate effects, Hall effect study 2-92974
 Gd_{0.8}Y_{0.2}Al_{0.6} mag. phase transitions, elec. resist., elastic const. and US attenuation study 2-116006
 Ge, cleaved surface, charge carrier minimal motion (*Russian*) 2-72046
 Ge epitaxial film on Si(100), RF sputter deposition, struct. and elec. meas. 2-66386
 p-Ge, impurity band conduction, static and modulated uniaxial constraint effects 2-56575
 Ge:As, Sb, compensated and illum., low temp. Hall mobility of electrons 2-77096
 Ge:In(Sb), laser induced enhanced solubility, elec. and Rutherford backscatt. study 2-115416
 Ge:P, ion implanted, elec. props. 2-77089
 n-Ge:Sb, compensated by fast neutron irradiation, activated elec. cond. 2-115762
 Ge-Si alloys, magnetoresistance and carrier mobility 2-56621
 GeTe solid solutions, polymorphic phase transitions kinetics, elec. cond. and Hall coeff. study 2-86851
 HfSe₂, intercalated with Li, elec. props. 2-66529
 HfTe_{0.8}Ar_{0.2}, low-dimensional cond., Hall effect and transverse magnetoresist. 2-92663
 HgCdTe, transport props. rel. to acceptor levels 2-92633
 n-Hg_{0.9}Cd_{0.1}Te, magnetotransport meas. in extreme mag. quantum limit 2-92669
 Hg_{0.95}Cd_{0.05}Te, Hall coeff. phase transition under hydrostatic press. 2-92674
 Hg_{1-x}Cd_xTe, conductivity-type conversion, annealing effects 2-87272
 Hg_{1-x}Cd_xTe, elec. cond., magnetoresist. and Hall effect, temp. depend. meas. 2-77049
 Hg_{1-x}Cd_xTe, photo-Hall meas. on laser-generated electron-hole plasmas 2-87323
 Hg_{1-x}Cd_xTe, photo-Hall meas. of high-density photoexcited electrons 2-92700
 Hg_{1-x}Cd_xTe, zero-gap semicond., cond. and Hall coeff., anomalous temp. depend. 2-115757
 Hg_{1-x}Cd_xTe-CdTe ion implanted epilayers, elec. and optical props. 2-115927
 Hg_{1-x}Cd_xTe-CdTe LPE layers, electron mobility near zero band-gap crossing 2-87426
 HgCr₂Se₄, Hall effect during ferromagnetic transition 2-110372
 HgCr₂Se₄, mag. semicond., elec. optical and mag. studies 2-87288
 Hg_{1-x}Fe_xTe crystal, Shubnikov-de Haas oscillation amplitude anomalies 2-77099
 Hg_{1-x}Mn_xTe (0<x<0.075), anomalous temp. depend. of resistivity and Hall coeff. at low temps. (*Russian*) 2-98637
 Hg_{1-x}Mn_xTe, spin glass transition and Hall coeff. anomalous temp. depend. (*Russian*) 2-82610
 HgTe, epitaxial growth by MOVPE process, props. 2-62071
 HgTe:Mg, conduction band struct., Hall effect and magnetoresist. study 2-115662
 Ho-Co uniaxial amorphous ferrimagnet, mag. states 2-110608
 In film with Fe surface impurities, mag. behaviour, Hall effect meas. 2-87557
 InAs:Cd,Te, donor-acceptor pair form., annealing, elec. cond. and Hall coeff. study 2-61404
 In_{0.5}Ga_{0.47}As:Be, Si, ion implanted, n⁺ layers, sheet resist., electron mobility and conc. 2-66022
 In_{0.5}Ga_{0.47}As-In_{0.48}Al_{0.52}As interface, MBE grown, two-dimens. electron gas 2-98730
 In_{0.5}Ga_{0.47}As-InP heterojunction, modulation doped, quantum Hall effect 2-110464
 In_{0.7}Ga_{0.3}As, lattice-mismatched MBE growth on InP 2-57296
 In_{0.9}Ga_{0.1}As system, alloy scatt., elec. cond. and Hall coeff. meas. 2-92627
 In_{1-x}Ga_xAs:P_{1-x} LPE system, alloy scattering mobility and energy gap evaluation by dielectric model 2-82485
 In_{1-x}Ga_xAs:P_{1-x} low field mobility and thermoelectric power, scatt. mechanisms 2-82362
 In-O₂ films, magnetoconductive effects, Anderson localisation 2-56740
 InP, electron irradi., defect form. and annealing 2-98159
 InP:Co, deep levels, elec. and optical meas. 2-76971
 n-InSb film, polycryst., intergrain barrier pot., temp. and field depend. 2-77208
 InSb, Hall effect, press. effects 2-104398
 n-InSb, low electron conc., electron Hall mobility at high press. 2-92672
 n-InSb, magnetotransport meas. in extreme mag. quantum limit 2-92669
 n-InSb, strong coupling between reson. state and cryst. lattice, Hall coeff. meas. 2-92531
 InSb, thermal acceptors influence on electrophys. props. during annealing 2-56577
 InSb:Bi solid soln., Bi donor level form., X-ray struct. study 2-115702
 InSb:Ge(Sn)(Co), gamma-ray, electron and proton beam irradi., defect annealing, elec. props. (*Russian*) 2-103817
 InSb-TiSb eutectic alloy, galvanomagnetic props. 2-104399
 In₂Te₃ thin films, growth and props. 2-71840
 LiAl_{0.75} semiconductor thin film, optical and Hall effect meas. 2-77209
 LiAl, Hall mobility of positive carrier 2-110330

Hall effect continued

- β -LiAl, positive carrier conc. rel. to Li vacancies, Hall effect and lattice parameters study 2-56552
 Mg-Zn, amorphous, electron transport props., comp. depend. 2-104339
 p-Mn_{0.9}Cd_{0.1}Te crystal, elec. cond., Hall effect and photocond. meas. 2-87263
 MoS₂ samples, transport phenomena, solid-gas interaction evidence 2-56590
 NbSe₃, Frohlich sliding mode mechanism 2-87231
 Ni film, with oblique mag. anisotropy, anomalous magnetisation loop 2-56897
 Ni-Zn ferrite, extraordinary Hall effect and carrier scatt. 2-82383
 Ni₂(Fe,Ti) alloys, electronic characs., anomalous Hall effect and Nerst-Ettingshausen effect study 2-61447
 Ni₂(Mn,Ti) alloys, electronic characs., anomalous Hall effect and Nerst-Ettingshausen effect study 2-61447
 Pb film with Fe surface impurities, mag. behaviour, Hall effect meas. 2-87557
 p-Pb_{1-x}Ge_xTe, velocity of sound quantum oscills. 2-92114
 PbSe_{0.98}Te_{0.02} 2-92796
 PbSe_{0.98}Te_{0.02}, localised deep defect states 2-92530
 n-Pb_{1-x}Sn_xSe, native defect energy levels, Hall study, 4.2 to 300K 2-92529
 Pb_{0.9}Sn_{0.1}Te film, struct. and elec. props., Ar⁺ bombard. and annealing effect 2-56731
 Pb_{0.78}Sn_{0.22}Te:In, photoferroelec. behaviour and Hall coeff., expt. study 2-87708
 Pb_{1-x}Sn_xTe (x=0.59 to 1), valence bonds energy separation, Hall coeff. meas. 2-72010
 Pb_{1-x}Sn_xTe films, ion implantation induced defect levels, Hall meas. 2-92528
 Pb_{1-x}Sn_xTe LPE layer, Hall and resistivity meas., impurity doping influence 2-92796
 p-Pb_{1-x}Sn_xTe, valence band struct., elec. props. (*Russian*) 2-87144
 Pb_{1-x}Sn_xTe:In epitaxial film, elec. and struct. props. 2-110506
 Pb_{1-x}Sn_xTe:In films, impurity electron-state, elec. cond. study 2-115705
 PbTe and PbTe-SnTe solid solns., Ga doping effect on electrophys. props., doping mechanism 2-56578
 n-PbTe epitaxial layers, ionised defect scatt. mobility 2-92671
 PbTe film, charge carrier conc. and mobility variations after deposition 2-66680
 PbTe, H⁺(Ag⁺)(Sn²⁺) ion-implanted, elec. props. 2-104377
 PbTe MIS structures, field effect studies, DC cond. and Hall effect 2-115895
 PbTe:H epitaxial film, elec. transport props., p-type to n-type conversion 2-66676
 PbTe:In, thermal cond., elec. cond., Hall and Seebeck coeffs. 2-115479
 PbTe:Sn(Ge), donor and acceptor props., elec. and thermal cond. meas. 2-66480
 p-PbTe:Ti epitaxial films, Hall mobility, doping effects 2-110509
 PbTe:Ti(Na), density of states in valence band, sp. ht. and Hall coeff. meas. 2-82515
 p-PbTe/mica/Ag struct., field effect study, Hall coeff. and mobility 2-110490
 Pd-Co(Fe)(Ni), anomalous Hall effect, cond. tensor (*Russian*) 2-77021
 Pd,MnIn(Sn), Heusler alloy, elec. and mag. props. 2-110326
 Pd,MnSn, elec. and mag. props. 2-66522
 Pr_{1-x}Al_x, singlet ground state system, Hall effect meas. and calc. 2-98625
 PtSb₂, narrow-gap semiconductor, elec. props. in DC and microwave fields 2-87313
 Sb-As, solid solutions, anisotropy of resistivity (*Russian*) 2-77090
 Sb₂Te₃, anisotropy in optical and elec. props. 2-56587
 Si (100) MOSFET, photoresponse of electron inversion layer, mag. field depend. 2-61518
 n-Si (100) MOSFET inversion layers, zeros of transverse magneto-resist. 2-66650
 Si (100) n-channel MOSFET, quantized Hall steps meas. at ppm level 2-61488
 p-Si, cond. and Hall mobility calc. for dopant densities of 10¹⁴ to 10¹⁸ cm⁻³ 2-98678
 Si, electron gas inertia, radioelectric effect 2-104415
 Si, gamma and proton radiation defects formation, dislocation effects, elec. cond. and Hall coeff. study 2-86729
 Si, glow discharge microcryst., thermoelec. power, Hall effect and density of states meas. 2-98674
 Si inversion layer, conductance, logarithmic corrections, localisation and interaction effects 2-61598
 Si inversion layer, two-dimens. electron gas, localisation and interaction effects 2-72071
 Si MOS inversion layers, Hall effect in strong mag. fields 2-61489
 Si, neutron transmutation doped, floating zone grown in H₂ and Ar, annealing behaviour (*Chinese*) 2-109820
 Si, polycrystalline, plasma sprayed, charge carrier mobility 2-72083
 Si, proton and γ -irrad., defect clusters, Hall effect study 2-115225
 Si, proton irradi., rearrangement of intrinsic defects during annealing, Hall coeff. meas. 2-109863
 n-Si, proton-irradiated, radiation defect clusters, struct. and props. 2-81833
 Si, slip line free, large-area multiple scan annealing with line focussed electron beam, elec. study 2-71505
 Si:As, doping during Pd/Si form. at low temp. 2-86698
 Si:B thin film, polycrystalline, elec. props., use as sensor (*German*) 2-87427
 p-Si:Fe, interstitial Fe and Fe-acceptor pairs, DLTS and Hall effect study 2-66476
 Si:Fe,B, Fe donor activity on heat treatment, elec., DLTS and EPR meas. 2-71911
 Si:Ga, float zone cryst., neutron irradi., X-centre formation, expt. study 2-98162
 Si:O donor centres, heat treatment effects, Hall meas. and ESR study 2-61401
 Si:P, As, Sb, ion implanted, multiphase electron beam annealed, impurity profiles 2-103803
 Si:P, ion implanted, distrib. profiles, elec. props. 2-103797
 Si:P, neutron transmutation doping, radiation defects, electrical activity, annealing 2-86738
 Si:P⁺(As⁻) layers, ion implanted, electron beam annealing, elec. props. 2-92039
 Si:Zn,Co, epitaxial layers, doping laws and electrophysical props. 2-66025
 Si-Al(Ga), refinement of boundaries of regions of homogeneity 2-111168

Hall effect continued

- Si-Au-Al, distrib. ratio of Al, zone refining with temp. gradient 2-71487
 Si-CaF₂-Si heteroepitaxial struct., prep. by vac. deposition and charact. 2-115612
 Si-Si_{1-x}Ge, epitaxial multilayer films, electron mobility enhancement 2-115921
 SiC (6H), vacancy deep levels traps, EPR, optical absorpt. and Hall effect study 2-56483
 Sm_{1-x}La_x(Yb)_{0.8}, valence instabilities and elec. props. 2-56595
 SmS collapsed phase, Hall effect and elec. resist., press. and temp. depend. 2-56625
 Sn, film with Fe surface impurities, mag. behaviour, Hall effect meas. 2-87557
 α-Sn, n-type, electron irradi., acceptor point defects, elec. resist., thermoelec. power and Hall effect study 2-61394
 Sn_{1-x}Cr_xTe degenerate mag. semiconductor, struct. transform.-induced mag. ordering 2-56852
 Sn_{1-x}Eu_xMo_{0.8}S_{0.8}, lattice instability, elec. study, supercond. props. 2-103979
 SnO₂ film, vapour deposition and elec. props. 2-71812
 SnO₂ ultrafine particle film, Hall effect meas. and elec. cond. model 2-87425
 SnO₂Sb thick films, spray deposited, elec. cond., Hall mobility and optical gap meas. 2-82415
 p-SnTe, MIS structure, field effect studies 2-104491
 SnTe:H epitaxial film, elec. cond. and Hall effect on H₂ desorption 2-115923
 p-SnTe:In epitaxial thin film, elec. transport props., In effect 2-104514
 SnTe:In film, field effect studies, In effect 2-77210
 TaS₂ intercalated with Li, elec. props. 2-66529
 TiS₂, elec. resist., T² temp. depend. 2-66550
 TiS₂ intercalated with Li, elec. props. 2-66529
 TiS₂, semicond., Hall coeff., elec. cond., electron-phonon scatt. 2-77041
 TiSe₂ intercalated with hydrazine, transport props. 2-98626
 TiSe₂, semimetal, elec. cond., high pressure phase transformation, Hall coeff. 2-77041
 TiSbSe₂-PbSe, phase diagram and physicochemical and electrophysical props. determ. 2-88067
 U_{1-x}Th_xSb, Kondo behaviour, ferromag. and antiferromag. behaviour, transport and mag. meas. 2-77032
 VSe₂ intercalated with Li, elec. props. 2-66529
 W-Al₂O₃ cermet film, Hall effect, electronic tunnelling near percolation limit 2-77202
 WO₃ films, reactively sputtered, electrical and optical props. 2-66673
 ZnGeP₂, intrinsic defect effect on elec. props. 2-61481
 ZnO film, electronic props., defects, morphology and adsorp. depend. 2-104515
 ZnO:Co nonstoichiometric single cryst., growth and elec. props. 2-77051
 ZnS, Hall photoelectric effect meas. 2-87317
 ZnS, intrinsic-defect hole conductivity, photoluminescence study 2-110927
 ZnS:Ag, photolum. and elec. props. study of Ag doping 2-110944
 ZnSe, carrier mobility, temp. depend., polaron effects, carrier scatt. mechanisms 2-66558
 ZnSe, Hall photoelectric effect meas. 2-87317
 ZrSe₂, elec. resist., T² temp. depend. 2-66550
 ZrSe₂ intercalated with Li, elec. props. 2-66529

Hall effect devices

microthermostat for a Hall detector 2-101391

Hall effect transducers

- biomedical Hall effect transducer for apexcardiography and sphygmography 2-117125
 magnetic field meas. for position control (German) 2-74403
 magnetoreactive effect analysis using equivalent circuit 2-84670
 planar, response to inhomogeneous mag. fields 2-64071
 reference Hall teslameter for the range of 0.01-10 T 2-53795
 teslameter testing installation 2-53796
 thermal stabilizer for a Hall detector 2-101392

Hall generators *see* Hall effect devices**halogens**

- see also* astatine; bromine; chlorine; fluorine; halides; iodine
 adsorption of halocarbon and halogens on solid surfaces, particularly Fe, review 2-82120
 alkene-halogen complexes studied by matrix isolation vibrational spectroscopy 2-70260
 anion+inert gas atom, elastic scatt. and electron detachment differential cross sections 2-90650
 lamp source for insertion loss meas. in multimode opt. fibres 2-97179
 liquid, thermodynamic props. calcs. using interaction site model 2-103593
 molecules, empirical pot. parameters 2-90643
 negative ions, interaction pots. and mobilities 2-91584

Hamidashi effect *see* ferroelectricity**hand hoists** *see* hoists**handling, materials** *see* materials handling**Hanle effect**

- atoms, forward laser light scatt. in mag. field, perturbation theory 2-96515
 atoms, modulated Hanle signals in partially coherent fields 2-70199
 far IR molecular laser, saturation param. and power enhancements, non-linear Hanle effect 2-60183
 optical Hanle effect, spectral charact. of signals 2-80740
 solar corona, theory of Hanle effect in coronal H I L α line 2-94697
 Ca, 5p⁴P⁰, level, Hanle effect and density depend. 2-113941
¹¹⁰Cd, Hanle effect for electron impact excitation 2-54809
 Ne, self-alignment of 5d₂-level, hollow cathode discharge 2-54810

hard soldering *see* brazing**hard-sphere fluids** *see* classical theories of fluid structure; liquid theory; quantum theories of fluid structure; statistical mechanics**hardening**

- see also* dispersion hardening; quench hardening; radiation hardening; solid solution hardening; surface hardening; work hardening
 alkali halide, divalent cation-doped, mech. strengthening and impurity precip. 2-88093
 creep, high temp., biaxial stress experiments, constitutive eqn. study 2-105264
 ductile single crystal, nonuniform and localised deform. anal. 2-81875
 fatigue evaluation under multiaxial loading, new approach 2-62225
 fatigue testing, sheet specimens with stress concentrators 2-116649

hardening continued

- metal balls, continuous inspection of hardening quality on prod. line 2-93698
 metals, amorphous, strain localisation, inhomogeneous flow 2-56069
 metals, cyclic straining, stress and strain relaxation (Czech) 2-115352
 metals, hardening curves analysis 2-11202
 metals, initially isotropic, strengthening law investigation 2-62134
 polypropylene, rubber toughened, creep kinetics, effect of rubber particles 2-67360
 polystyrene, tensile stress-strain behaviour in inert and gaseous environments 2-88130
 steel, alloy, roll, heat treatment influence on struct. and props. 2-67393
 steel, austenite precipitation, supercooled, after forced austenitization, kinetics (Russian) 2-93516
 steel, C, retarded fracture, H influence 2-67540
 steel, constructional, critical hardening rates and hardness calcs. 2-67390
 steel, Cr-Mo, high strength, thermomech. strengthening 2-77855
 steel, Cr-Ni-Mu (1.9, 0.85, 0.76 wt.%) original struct. and heating rate influence on props. after hardening from intercrit. range 2-72736
 steel, die, hardened with vanadium carbonitride, props. 2-11211
 steel, embrittlement after hardening, impurities influence 2-88192
 steel, low-alloy, embrittlement after hardening, impurities influence 2-88192
 steel, medium C, mech. props. in dynamic deform., struct. and ultrasonic vibr. influence 2-72772
 steel, Nb-V-N, low-alloy, hot forming simulation in multistage tensile test (German) 2-116468
 steel, Ni, low C, heat treatment and O₂ cutting influence on struct. and props. 2-72732
 steel, Ni-Mn-Mo, high-strength cast maraging, ageing influence on mech. props. 2-67397
 steel, rail, high-strength, hardenability, chem. comp. influence 2-72730
 steel, stainless, type-348, neutron irradiated, microstruct. and rel. to creep and hardening 2-105231
 steel, structural, high C, hardenability anal. 2-105197
 steel, structural, microplastic behaviour before fatigue softening 2-99478
 steel, vacuum-melted, strengthening using combined cyclic elec. heat treatment and thermomech. heat treatment 2-72711
 twinning interaction with slip 2-76489
 Zircaloy-4, O containing duplex, deform. behaviour 2-99501
 Al, cryst., tensile stress-strain relations, constitutive relations calcs. 2-67407
 Cu, creep under biaxial stress states, influence of prior cold work 2-67420
 Cu-Al (9.8-11 wt.%), dual-phase, struct.-prop. relationship, individual phases 2-77833
 Cu-Ge (8.7 at.%), shock-loaded, deform. twinning, time depend. and assoc. strengthening 2-88138
 Cu-Pd, ordering process during continuous process (Japanese) 2-77820
 α-Cu-Su-Al, anneal hardening (Korean) 2-116464
 CuAu, ordered alloy, mechanical props. meas. (Russian) 2-88091
 Fe-Mn-Si (30, 1 wt.%), single crystals, hardening due to pre-existing ε-martensite 2-116493
 Fe-Ni(Ti)(Ga)(Al)(Co)(Pt), flow stress at low temp., influence substitutional elements 2-105213
 HfO₂-MgO system, struct. and phase props. (Ukrainian) 2-57336
 Mo, creep, polycryst., substruct.-induced stability 2-93555
 Nb-HfN alloy, high temp. hardness changes (Russian) 2-72794
 Nb-ZrN alloy, high temp. hardness changes (Russian) 2-72794
 Ni single crystal, fatigued, plateau behaviour 2-115344
 Ni-Ti, close to equitatomic, hardening and shape memory effect 2-72737
 SiC, siliconised, strengthening and proof testing 2-88168
 SiC whisker reinforced Al-Li alloys, mech. props. and microstruct., effect of Li 2-111240
 Si₃N₄-Y₂O₃-SiO₂, strengthening by post-fabrication heat treatment 2-83131
 SiO₂-Al₂O₃-P₂O₅-Sb₂O₃ glasses, strengthened by ion exchange, stress relaxation 2-99471
 Ti alloys, hot deformation of high alloy VT22 alloy, dislocation struct. obs. (Russian) 2-116500
 Ti-Al-Sn-Zr-Mo (6.2, 4, 6 wt.%), low cycle fatigue, cyclic deform. behaviour 2-57471
 Ti-Al-Zr-V-Mo-B sheet, elastic props. anisotropy and texture hardening (Russian) 2-116502
 Ti-Ni, phase hardening during martensitic transformations (Russian) 2-93504
 Zn, cryst., tensile stress-strain relations, constitutive relations calcs. 2-67407

hardness*see also* abrasion; hardness testing

- Al₂-B^{VI} semiconducting cpds., nonstoichiometric, physicochem. props. 2-104005
 adamantane, cryst. perfection, slip and hardness, micro-indentation study 2-86781
 arc sprayed coatings, mech. props. and appl. 2-111347
 brittle solid, hysteresis in abrasive wear 2-67559
 bronze-graphite antifriction material, sintered, struct. and mech. props. 2-67556
 carbide films, sputtered, effect of ion implantation on props. 2-87120
 ceramics, strength rel. to hardness 2-111269
 cordierite based crystallised glass, damage resistance of fortified surfaces 2-111339
 cylinders, rough, compressed between smooth flat surfaces of hard blocks, deform. 2-109210
 electroplating alternatives for Au in electronics and decorative industries 2-67665
 ferrous materials, plasma-nitriding in N₂-H₂-CH₄ gas mixtures (German) 2-88292
 fibre reinforced composites, plasticity anal., elastic moduli, yield conditions, hardening rules and stress conc. factor derived 2-99510
 glass, matrix composite with dispersed crystalline or glass particles, indentation hardness (Japanese) 2-67509
 glass, microhardness 2-105335
 glass matrix particulate composites, micromechanics approach to indentation hardness 2-57364
 glass-ceramics, matrix composite with dispersed crystalline or glass particles, indentation hardness (Japanese) 2-67509
 gray cast Fe, cooling rate influence on eutectic cell struct. and mech. strength (Japanese) 2-62115

hardness continued

- grooving, controlled, force and energy meas., abrasive wear study 2-57488
 halide crystals, mechanoluminescence 2-104975
 indentation hardness, current development review 2-55522
 inorganic crystals, mechanoluminescence 2-104975
 ionic crystal, contact melting, external electrostatic field effect (*Russian*) 2-66182
 MANGALLOY, elinvar type alloys, nonferromag., characts. (*Japanese*) 2-77881
 metallic materials, statistical props. of mech. strength (*Japanese*) 2-99493
 metals, 14 MeV neutron irradiation, strengthening and microstruct. alterations, determ. by microhardness 2-103848
 metals, case-hardened layers, hardness and thickness monitoring 2-11415
 metals, ductile, abrasive wear (*German*) 2-83242
 metals, plastic, Brinell hardness rel. to mech. characts. 2-116635
 metals, thin sheets, cold rolling to foil 2-105188
 Meiglas 2826, Ni-Fe-base metallic glass, dynamically compacted, mech. props. 2-99527
 nonmetallic crystal surface energy estimation from hardness and solubility data 2-92336
 optical material finishing process investigation w.r.t. (*German*) 2-70713
 paint coatings on metals, protective properties, inhibitors influence 2-67655
 piezoceramic materials, multicomponent, highly efficient, with various degrees of ferroelec. hardness 2-72425
 polymer powders, compaction conditions on press. and density variations 2-72664
 polymers, friction coefficient eqn. 2-111327
 powders, compact strength, rel. to shear-normal stress curve obtained from uniaxial compression 2-116400
 pyroceramic cement, vitreocrystalline, struct. and mech. props. after heat treatment 2-72723
 α -quartz, Vickers microhardness anisotropy meas. 2-105311
 quartz single cryst., fracture toughness, room temp. (*Japanese*) 2-67507
 sapphire single cryst., fracture toughness, room temp. (*Japanese*) 2-67507
 Se-Sn-As system, chalcogenide glasses, glass transition temp., mech. and elastic props. 2-109687
 silicate, commercial, glass, relation of K_{Ic} to median crack indentation load in Vickers indentation (*Japanese*) 2-67508
 silicate glass, water content influence on viscosity, T_g , thermal expansion and hardness 2-93632
 silicate glasses, ultimate strength rel. to other mech. and thermal characts. 2-88177
 standard machines for hardness testing, precision and accuracy 2-78063
 steel, 12% Cr-heat resisting, hardness of creep-ruptured specimens, residual life prediction (*Japanese*) 2-62204
 steel, alloy, ageing effects 2-67405
 steel, alloy, coatings based on component nitrides obtained by plasma flow condensation in vacuum (*Russian*) 2-67219
 steel, alloy, high strength, H stress cracking, effect of P conc. 2-77938
 steel, alloy, physicomech. props., influence of surface-active substances during plastic deform. 2-83191
 steel, alloy, weld metal similar to X20 CrMoV121, heat treatment effect on phase transform. and mech. props. 2-62144
 steel, austenitic, cutting tool heat treatment, for austenite grain size meas. as hardness assessment method (*German*) 2-57476
 steel, austenitic stainless, annealed, subcrit. crack growth and instability, mechanism of initiation 2-57438
 steel, austenitic stainless, steady-state creep, effect of prior creep 2-105248
 steel, austenitic stainless, surface hardening and microstruct. changes, influence of US vibr. 2-99538
 steel, boriding, with high-freq. current heating 2-67644
 steel, C, impact wear of tool steel, surface topography 2-88225
 steel, C, Nb addition effect on tempering of undeformed lath martensite (*Japanese*) 2-57381
 steel, constructional, critical hardening rates and hardness calcs. 2-67390
 steel, Cr, martensitic-ferritic, struct. and props., sintering technology, influence 2-83193
 steel, Cr-Mo, low C, tempering behaviour, effect of C content 2-77853
 steel, Cr-Mo-V, heat resistant, thermomech. fatigue, effect on struct. and mech. props. 2-116546
 steel, Cr-Mo-V, high temp. ductility, compositional effects 2-111238
 steel, Cr-Mo-V, martensitic stainless, stress corrosion cracking susceptibility 2-78017
 steel, Cr-Mo-V martensitic stainless, weldments, transform. and tempering 2-88107
 steel, ferromagnetic components FITAN-2M instrument for hardness testing 2-57575
 steel, high C, spheroidised annealing effects on subsequent heat treatment 2-116470
 steel, high speed R6M3 and R6M5, mag. and elec. props. after heat treatment, NDT appl. 2-67404
 steel, high strength, intercritically rolled, dynamic mech. props. 2-88113
 steel, high-speed, effect of determ. under superplasticity conditions 2-62176
 steel, high-speed, powder prod. by pneumoacoustic atomisation, mech. characts. 2-67250
 steel, high-speed, struct. and props., Ce addition effect 2-111242
 Steel, Low C, weld zone crack resistivity (*Korean*) 2-57461
 steel, low-alloy, hardness and brittleness of nitrated case 2-62282
 steel, low-alloy, strengthening mechanism of NiAl precipitate (*Korean*) 2-116453
 steel, low-C, determ. of plastic surface energy 2-83178
 steel, low-C low-alloy, Si and Ni additions effect on mech. props. 2-105333
 steel, martensitic, Cr, precip. and decomp., DSC study (*Korean*) 2-62128
 steel, medium-C low-alloy En 24, intercritical treatments, duplex struct. 2-105189
 steel, mild, fatigue, deform. behaviour and dislocation struct. (*Japanese*) 2-72811
 steel, mild, ultimate strength and hardness, mech. props. from extreme values, reliability based design 2-99511
 steel, Mn, struct. and phase comp., tempering temp. influence 2-105199
 steel, Ni, low C, heat treatment and O_2 cutting influence on struct. and props. 2-72732
 steel, stainless, Ni-Cr-Mo-Nb-Al, precip.-hardening, struct. and props. after heat treatment 2-72728

hardness continued

- steel, structural, rolled, microhardness, influence of appl. tensile stress (*Japanese*) 2-105307
 steel, tensile, hot hardness and fatigue props. of type E36 in as-rolled condition (*French*) 2-62214
 steel, tool, high speed, S 6-5-2 (M2), Nb and C effects on struct. and tool life (*German*) 2-57360
 steel, tool, wear under boundary lubrication, effect of heat treatment 2-88206
 steel, transformation behaviour of synthetic weld heat-affected zone, Ni effects 2-72673
 steel, V, continuously cooled, strengthening contrib. at peak hardening from precip. 2-72710
 steel lath martensite, deformed and undeformed, tempering process, effect of Nb additions 2-99454
 steel wire, high-elasticity, rapid annealing for prod. lines in thermomech. treatment (*French*) 2-72742
 steel-TiC composite with 10R6M5 high-speed steel, high-density material, processing parameters, struct. and mech. characts. 2-67262
 steels, C, pressure vessel, ASTM A533-B, microhardness, temp. depend. 2-80121
 steels, ion-implanted, surface hardness and abrasive wear resist. 2-57490
 stomatopod smashing limb, calcified cuticle, comp. and struct. features 2-100025
 TGS and TGSe, Curie temp. determ. 2-67006
 transition metals and alloys, omega phase formation, effect on mech. props. 2-77806
 varnish coatings on metals, protective properties, inhibitors influence 2-67655
 Volcoloy, antiferromagnetic Invar type alloy in Mn-Ge system (*Japanese*) 2-77291
 Ag, optical films, mechanical props. 2-82191
 AgBr-AgCl, microhardness, theory 2-86785
 AgIn₂S₈, two-temp. synthesis, props. 2-77725
 Al alloy, extruded, creep damage 2-111227
 Al, optical films, mechanical props. 2-82191
 Al, shear band form., effect of large deform. 2-67416
 Al-BN plasma spray deposited composite coatings, props. 2-83231
 Al-C alloy, dispersion hardening, mech. alloying in attrition mill, struct. obs. 2-111113
 Al-Cu alloys, precip. hardening, sound wave vel. and US attenuation 2-88318
 Al-Cu-Mg, ageing, elec. cond. study using eddy current meas. 2-88230
 Al-Cu-Mg-Zn-Cr powder, effect of compression by high omnidirectional pressure on struct. and props. 2-72654
 Al-Fe-Mg (0.25, 0.11 wt.%) alloy, alternating periodic serrations in tensile curves 2-99497
 Al-glass composite, prep. and mech. props. 2-57319
 Al-Li-Mn(Zr)(Mg)(Cu), corrosion behaviour, correl. with microstruct. 2-88253
 Al-Mn extended solid soln., as-quenched, conc. depend. of hardness and lattice parameter 2-116518
 Al-Si-Ni-Mg-Cu, Ni, Mg, and Cu additions effect on tensile strength, hardness, abrasion and thermal expansion (*Korean*) 2-57418
 Al-Ti-Be, grain refinement, Be-enhanced 2-83086
 Al-Zn-Mg, isothermal ageing, 0-180°C, after direct quench, mech. props. and microstruct. 2-93536
 Al-Zn-Mg, microhardness with technical impurities, development during two-step ageing treatment 2-93537
 Al-Zn-Mg, struct. and strength after duplex ageing 2-72727
 Al₂O₃, sintered and fusion cast, and ruby and sapphire, fracture induced photon emission, appl. to fracture mechanics 2-93293
 Al₂SiO₅(F,OH), topaz, IR obs. of neutron irradi. crystals, hardness changes 2-61040
 As-Se-Ge glass, γ -irrad., hardness meas., Ge constant effects 2-56080
 BN, hardness load depend., structural state, fracture, cracks 2-83229
 BaF₂, impurity effects on lattice parameter, microhardness and refractive index 2-98140
 BaO-B₂O₃-SiO₂, liquid-phase separated, chem. stability and microhardness 2-105336
 Bi₂Te₃-based alloy, deform. and recrystn., influence of second phase particles Al₂O₃ and ZrO₂ 2-83170
 C, diamond-like, quasi-amorphous hard film deposition and characteris., review 2-57307
 C fibre reinforced Al, chopped fibres, prod. by powder metallurgy, dry wear (*Japanese*) 2-105344
 C:H amorphous thin films, hard, optical props. 2-99207
 Cd-Sb-Ge system, DTA, microstruct. and microhardness 2-105130
 Cd,Hg_{1-x}Te, brittle to plastic transition, microhardness and optical transmission meas. 2-86783
 Cd,Hg_{1-x}Te, microhardness 2-105294
 CdTe, brittle to plastic transition, microhardness and optical transmission meas. 2-86783
 Co-Ni (33wt.%), fatigue crack tip, plane strain distrib. 2-111261
 Co-Si-B with and without group IV-VIII transition metals, amorphous wire prod. by melt spinning into rotating water, mech. props. 2-105104
 Cr, electron beam evap. thin film, struct. and props. (*Korean*) 2-57301
 Cr, optical films, mechanical props. 2-82191
 Cr-Al₂O₃ electrodeposited composite coatings 2-116579
 Cr-Cu alloy film, mech. props., thickness depend. 2-115628
 Cu, Cu-Mn(Al)(Ni), neutron irradi., 14 MeV, damage development and hardening 2-109841
 Cu, radiation hardness, influence of neutron irradi. on yields stress 2-103846
 Cu, ultrasonic irradi., effect of neutron irradi. on mechanical props. (*Russian*) 2-76512
 Cu-Al (9.8-11 wt.%), dual-phase, struct.-prop. relationship, individual phases 2-77833
 Cu-Al (9.8-11 wt.%), dual-phase struct.-prop. relationship, alloy behaviour 2-77834
 Cu-Al-Mn alloys, influence of Mn on phase shifts (*French*) 2-99543
 Cu-Al-Ni, shape memory alloys, ageing effects 2-77852
 Cu-Be-Co (13.1, 0.2 at.%), rapid solidification effect on ageing (*Japanese*) 2-105137
 Cu-Ge (8.7 at.%), shock-loaded, deform. twinning, time depend. and assoc. strengthening 2-88138
 Cu-Ni alloys, friction and wear 2-88217
 Cu-Ni-Fe, superplasticity and form. of microduplex struct. (*Japanese*) 2-72769
 Cu-Ni-Mn, grain boundary reaction after ageing (*Japanese*) 2-77848

hardness continued

- Cu-Ni-Sn (10.8 wt.%), grain boundary reaction after ageing (*Japanese*) 2-77849
 Cu-Pb, microstruct., mech., elec., and mag. props., depend on synthesis conditions 2-56748
 Cu-Pd, ordering process during continuous process (*Japanese*) 2-77820
 Cu-Sn, martensitic transform., influence of β -phase holding (*Russian*) 2-67333
 β -Cu-Zn, quenched, elec. resist. and hardness recovery on annealing 2-92568
 Cu-Zn-Al, shape memory alloys, ageing effects 2-77852
 CuInSn, two-temp. synthesis, props. 2-77725
 Cu₆₀Zr₄₀, amorphous, elastic moduli, hardness and density 2-99472
 Er₂Si₂C₃, solubility of C and its effects on struct., X-ray and hardness study 2-109997
 Fe and Fe-Ni alloy, galvanic, microindentation hardness, deposition parameters influence (*Russian*) 2-67626
 Fe, cast, compacted-vermicular graphite, rel. between physico-mech. props. and numerical indexes 2-105337
 Fe, pure, splat-quenched, martensitic transform., microstruct. and kinetics 2-57348
 Fe-Al-Si alloy, sputtered granules, characters, before and after annealing (*Russian*) 2-67368
 Fe-B, amorphous, elastic moduli, hardness and density 2-99472
 Fe-B alloy, quenched from liq state, crystn., microstruct. and hardness 2-111166
 Fe-B layers, effects of annealing (*Korean*) 2-62150
 Fe-B-Cr(Co)(Ni), metallic glasses, cryst. behaviour 2-71368
 Fe-Cl-Cu, cast high strength, effect of Al-Cu additions (*Korean*) 2-67311
 Fe-Cr-Al alloys, rapidly quenched, microstructs., mech. props., elec. cond. 2-111332
 Fe-Cu, sintered, mech. props., effect of steam treatment and age-hardening 2-88097
 Fe-Mg, cast, nodular, mech. props. and cryst. struct., effect of heat treatment 2-83113
 Fe-Ni, splat-quenched, martensitic transform., microstruct. and kinetics 2-57349
 Fe-Ni-NbC, phase equilb., struct., mag. props. and hardness (*Russian*) 2-67291
 Fe-P alloys, fracture mode and toughness, C effects 2-57484
 Fe-P-C amorphous wires, prod. by in-rotating-water spinning, mech. props. 2-57317
 Fe-P-Ni(Mo), powder premixes, sintered props., effect of Cu 2-88026
 Fe-Si alloys, polycrystalline ribbon form, rapid quenching technique (*Japanese*) 2-116475
 Fe-Si-B amorphous wires, produced by in-rotating-water spinning method, mech. props. 2-111233
 Fe_{0.948}Mn_{0.052} system, Mossbauer and mag. studies 2-82761
 Fe₄₀Ni₆₀B₂₀, metallic glass, rel. between struct. relax. and sp. ht. 2-72750
 Fe₃₂Ni₆₈Cr₁₀P₂B₈, metallic glass, crystn., hardness and tensile deformation meas. 2-91784
 Fe₄₀Ni₆₀Mo₁₈, amorphous, elastic moduli, hardness and density 2-99472
 Ga-Se-Sb, phase diagrams, immiscibility of liq. phase, expt. study 2-71614
 Ga-Se-Sb₂Se₃, phase diagrams, immiscibility of liq. phase, expt. study 2-71614
 Hf, neutron irradi., dimens. stability, strength, hardness 2-80155
 HfF₄ based IR transparent glasses 2-97133
 Hg₂Cl₂, surface layer hardness, stress and etching behaviour, surface treatment effects 2-111335
 HgTe, brittle to plastic transition, microhardness and optical transmission meas. 2-86783
 K-In-Si, two-temp. synthesis, props. 2-77725
 K₂O-B₂O₃-Al₂O₃ glass, Al³⁺ with non-bridging O, density, refr. index and microhardness determ. 2-109684
 La-Ni system, phase equilb., microhardness meas. (*Ukrainian*) 2-77803
 Mg-Li-Y system, isothermal sections and mech. props. in Mg-rich region 2-111142
 MgF₂:CaF₂, recrystallisation pressing, struct. and strength 2-99524
 MgF₂(CaF₂)(BaF₂), optical films, mechanical props. 2-82191
 Mo coatings, high-hardness, vac-arc discharge plasma deposited, struct. 2-72871
 Mo, mechanical eqn. of state 2-83194
 Mo, neutron irradi., anneal hardening, influence of purity, cold work and alloying elements 2-103843
 Mo-Hf-C, powder metallurgical, props. 2-111228
 Mo-Ti (0.5 wt.%), struct. changes under action of high temps. and long loads in various media 2-67456
 Mo-Ti-Zr-C, powder metallurgical, props. 2-111228
 (NH₄)₂-K₂Al(SO₄)₂:12H₂O, mixed alum, microhardness 2-86784
 NaCl bicrystals, microhardness 2-57454
 NaCl crystals, vacancies and impurity dipoles effect on mech. props. 2-71543
 NaCl doped crystals, hardness anisotropy meas. 2-76579
 NaCl:Ca²⁺ (Pb²⁺) single cryst., microindentation and flow limit, doping effect (*Russian*) 2-71552
 NaCl:Ca²⁺ (Cd²⁺) (Ni²⁺) (Pb²⁺), microhardness and bulk density meas., precip. and impurity-dislocation interactions 2-115345
 Na₂O-CaO-SiO₂ glass, chemically toughened, crack evolution in Vickers indentation 2-88169
 Na₂O-SiO₂ glass, abrasive wear, scale effect 2-67563
 Na₂O-SiO₂ glasses, mech. props., finite element method calcs. 2-111232
 Nb-HfN alloy, high temp. hardness changes (*Russian*) 2-72794
 Nb-Zr-N, strengthened by ZrN precip., ageing characts. 2-83132
 Nb-ZrN alloy, high temp. hardness changes (*Russian*) 2-72794
 NbB₂, single crystals, high temp. hardness and slip systems 2-86674
 NbC coatings, appl. to hard-metal tools 2-72883
 NbC, single cryst., prep., struct. and mech. props. 2-98108
 Nb₃Sn tape used for superconducting transmission lines, O₂ content effects 2-92803
 Ni and Ni-C solid solutions, microhardness, effect of neutron irradi. 2-103847
 Ni, cold rolled, recovery and recrystallisation in magnetic fields 2-62142
 Ni, electroless deposits, heat treatment effects on physical props. 2-57384
 Ni, He⁺ ion irradi., microhardness, microstruct., and blistering 2-98168
 Ni-Al coevaporated films, hardness and grain size, optical and electron microscopy study 2-82184
 Ni-Al-Co(Cr)(Fe)(Mn)(Si) L₁2 cpds., melt quenching, improved mech. props. 2-116472

hardness continued

- Ni-BN plasma spray deposited composite coatings, props. 2-83231
 Ni-Co galvanic coatings, struct., corrosion resist. and mech. props. 2-57540
 Ni-Cr-BN plasma spray deposited composite coatings, props. 2-83231
 Ni-Cr-Co, monomic 90, He⁺ ion irradi., microhardness, microstruct., and blistering 2-98168
 Ni-Nb-Cr-Mn weld metals, struct. stability (*Slovak*) 2-116446
 Ni-P chemically formed coatings struct. and props. (*Russian*) 2-92400
 Ni-P-B coatings, heated in air, struct. and props. (*Russian*) 2-57382
 Ni-SiO₂ dispersion hardened alloy made by internal oxidation method, high temp. hardness (*Japanese*) 2-105303
 Ni-Ti (102wt.%), liquid quenched modulated struct. alloy, ageing (*Japanese*) 2-105193
 Ni-Ti sintered specimens pressed from powder mixture, phase comp., mech. and elec. props. 2-67248
 Ni-WC cermet, electrocodeposition and mech. props. 2-93462
 Ni-Zr-Co-Cr-Al-Ti powders, rapidly solidified, shock wave consolidation 2-62089
 PbO-B₂O₃ glasses, comp. depend. of fracture toughness, Vickers hardness and fracture surface energy 2-72793
 PbO-B₂O₃ phase separated glass, matrix composite with dispersed crystalline or glass particles, indentation hardness (*Japanese*) 2-67509
 PbO-ZnO-B₂O₃, critical load for median crack initiation in Vickers indentation 2-111279
 PbO-ZnO-B₂O₃ glass, relation of K_{IC} to median crack indentation load in Vickers indentation (*Japanese*) 2-67508
 Pd, hardness and topology changes on H₂ absorption-desorption cycling 2-93606
 Rh_{0.92}-B_{0.08} glasses, struct., mech. and elec. props. 2-103650
 Sb₂S₃-PbS glass, prep. and props. 2-71367
 Se-Ge-As chalcogenide glasses, microhardness 2-57446
 Si-Al(Ga), refinement of boundaries of regions of homogeneity 2-111168
 Si-Y-Al-O-N glasses, microhardness and elastic moduli 2-111278
 SiC 2H crystals, growth by hydrogen reduction of methyltrichlorosilane, Knoop microhardness 2-111038
 α -SiC (6H), Vickers microhardness anisotropy meas. 2-105311
 SiC/B fibre reinforced Ti alloys, heat-resistant, diffusion-affected interaction 2-88029
 SiC-AIN solid solutions, hot pressed, comp. and props. 2-88037
 Si₃N₄ α and β phases, Vickers microhardness anisotropy meas. 2-105311
 Si₃N₄, hot-pressed, mech. and elec. props. 2-67268
 Si₃N₄-refractory compound cutting tool ceramics, mech. props. 2-72842
 SiO₂, commercial glasses, critical load for median crack initiation in Vickers indentation 2-111279
 SiO₂-B₂O₃ system, glass form. by gel process from metal alkoxides 2-88048
 SiO₂-Na₂O-CaO-BaO(ZnO) glasses, microindentation hardness 2-93582
 Ta alloys, binary and ternary, athermal solid soln. hardening 2-99437
 TaB and TaB₂, low temp. CVD, hardness and corrosion resistance 2-83033
 TaB₂, single crystals, high temp. hardness and slip systems 2-86674
 TaC, single cryst., prep. and supercond. props. (*Japanese*) 2-92808
 TaC single-crystal powders, morphology, hardness, and grinding ability 2-83230
 Ti, cavitation erosion behaviour, nitriding effects 2-111331
 Ti-Al based alloys, precipitation of metastable phases, X-ray diff. and mech. props. meas. (*Russian*) 2-77825
 Ti-Al-Cr-Mo-V, mech. props., statistical anal. 2-72763
 Ti-Al-Mo-Zr, Cu coated, plastic deform. and diffusion annealing effect on props. 2-67645
 Ti-Al-V (6, 4 wt.%), cavitation erosion behaviour, nitriding effects 2-111331
 Ti-Al-V (6.4 wt.%), laser welded, microstruct. and mech. props. 2-77935
 Ti-Al-Zr-Mo-W system, equl. diagram, struct. and props., influence of Zr, Mo and W 2-57331
 Ti-base alloys, recrystn., struct. changes during thermal cycling 2-83140
 TiB₂ coatings, electrodeposited, sliding wear props. 2-62236
 TiB₂, low temp. CVD of corrosion 2-87999
 TiB₂-W(Mo)(Cr), sintering and props. 2-111109
 TiC CVD coating on cemented carbides, effects of exptl. parameters on preferred orientation 2-92397
 TiC coatings, appl. to hard-metal tools 2-72883
 TiC, densification during heating under high pressure 2-72662
 TiC, fused single-cryst., struct. and props., melting conditions influence 2-81779
 TiC single-crystal powders, morphology, hardness, and grinding ability 2-83230
 TiC-Al₂O₃ condensates, microhardness and microbrittleness 2-77904
 TiC-Ni, densification during heating under high pressure 2-72662
 TiC-W(Mo)(Cr)(Nb), sintering and props. 2-111109
 TiN-Al₂O₃ composites, hot pressed, props. rel. to TiN conc. 2-72753
 TiN-W(Mo)(Cr)(Ta)(Nb), sintering and props. 2-111109
 TiN, amorphous film, CVD on TiB₂ interlayer, Vickers microhardness 2-76854
 TiN-TiB₂ system reaction, polythermal cross-sections 2-105133
 Ti-Se-Te, vitrification, physicochemical props. 2-76313
 TiInTe, TiEuTe, reactions, microhardness and elec. cond. 2-111167
 Ti₂-GeS₂ system, phase equilibria, DTA, X-ray diff. and hardness study 2-66171
 TiSe-DySe, phase diagram, reaction in the system 2-88068
 Ti₂Te-Zn(Cd)Te, phase equilibria, degree of dissociation 2-72678
 UN, fission-damaged, phys. and mech. props. 2-113620
 UO₂ fuel pellets, fracture toughness, rel. to design specification 2-102078
 V, ion implanted, mech. props. study after neutron irradi. 2-71511
 V-Sn-Cu system, phase comp., stoichiometry and homogeneity, microstruct., X-ray and microhardness study 2-66172
 V-Ti, ion implanted, mech. props. study after neutron irradi. 2-71511
 VC coatings, appl. to hard-metal tools 2-72883
 W and W-Re alloy single crystals, microhardness anisotropy, Re conc. depend. (*Russian*) 2-67529
 W-Cu(Ag), powder metallurgy factors affecting elec. contact props. 2-116408
 WC, densification during heating under high pressure 2-72662
 WC-Ni, densification during heating under high pressure 2-72662
 WC-TiC-TaC binderless cemented carbides, effect of hot isostatic pressing 2-111120
 WC-TiC-TaC-NbC-Co cemented carbide, C content effects 2-77939
 Zn-Al, casting, mech. props. 2-62113
 Zr, deform., mech. eqn. of state and strengthening mechanisms 2-93556

hardness continued

- Zr-Sn (1.5-9 wt.%), ageing response, potential for precip. hardening 2-77846
ZrC coatings, appl. to hard-metal tools 2-72883

hardness testing

- acoustic method sensitivity 2-62348
alloys, hardness measurement during nitriding, meas. apparatus 2-72912
ceramic particle-PMMA composite, optimum strength 2-105280
crystals, instrument for individual dislocations prod. 2-93695
device for 20-300K 2-72905
device with depth meas. rel. to material geometry (*German*) 2-78048
diamond, hardness testing by microindentation method 2-116668
diamond composite, textile yarn guide applic. feasibility 2-72893
diamond pyramid shape effects (*German*) 2-72920
diamond-pyramid method, accuracy reassessment 2-67676
ferromagnetic components FITAN-2M instrument for hardness testing 2-57575
fusion material, irradi., time-depend. flow props. from indentation tests 2-88315
fusion material, microhardness test techniques for high energy neutron source expts. 2-88313
glass fibre reinforced polyester resins, water and H_2SO_4 influence, determ. by radioactive tracer technique (*German*) 2-67593
high-temperature strength materials, unit for microhardness investig. under high-temp. cyclic loading 2-99635
indentation hardness, current development review 2-55522
Josephson bridges, method for production using hardness tester 2-99615
magnetic method of hardened layer depth meas. of machine saw blades 2-11441
metal, criteria for meas. scales selection 2-111416
metallic substances dynamic method using digital recording and measurement instrumentation (*Spanish*) 2-57563
metals industries, US applications 2-62321
microscopic equipment, methods, appls. and related topics, list of publications 2-53449
monocrystals, plastic, microhardness meas., optimal conditions 2-116634
optical coatings, microhardness and scratch testing 2-81131
polyester resins, isophthalic acid type, water and H_2SO_4 influence, determ. by radioactive tracer technique (*German*) 2-67593
PVC, rigid, embrittlement by weathering, indentation testing 2-83310
rubber mixes and elastic products, mech. props. determ. using penetrometer (*German*) 2-67691
static, critical appraisal 2-93745
steel, hardness measurement during nitriding, meas. apparatus 2-72912
steel, hardness testing rel. to thermal contact resistance 2-67681
steel, SAE 1015, flow props., from hardness test, Luders strain 2-80117
steel, sized, Bauschinger effect in alternating plastic deform., elec. contact method and hardness meas. 2-57427
superhard materials, plasticity and strength investigations by microindentation method 2-116668
thermal contact res. meas. device for hardness testing 2-64024
ultramicrohardness tester in SEM and X-ray topography study of deformation zone 2-83339
Na₂O-CaO glass, thermally toughened and untoughened, crack initiations at microindentations 2-105285
Pb, irradi., time-depend. flow props. from indentation tests 2-88315
Pb_{1-x}Sn_xSe, microhardness meas., optimal conditions 2-116634

harmonic analysis

see also *waveform analysis*

- air temp. and solar radiation intensity, daily fluctuations 2-73693
distortion factor meter for characterization of nonlinearity of quasilinear systems (*Hungarian*) 2-74463
Earth gravitational potential, topography and isostatic compensation, degree variances 2-105883
Earth gravity potential, soln. of discrete and continuous boundary value problems rel. to spherical harmonic anal. (*Russian*) 2-100194
Fourier-Borel transform, generalized version 2-94976
geomagnetic field, spherical harmonic representation problem 2-100225
grain random array, harmonic anal., jitter model appls. 2-58936
Magsat data, spherical harmonic expansions, truncation level sensitivity 2-100222

harmonic generation

see also *optical harmonic generation*

- acoustic wave second harmonic generation in piezoelect. semiconductors 2-70741
extraordinary wave second harmonic generation in inhomogeneous plasma 2-71170
metals, EM second harmonic US generation 2-65425
metals, nonlinear cyclotron resonance theory, second harmonic generation 2-98965
piezoelectric semiconductors, effects of a strong acoustic wave in a piezoelectric semiconductor 2-61526
resistor, nonlinear, second and third harmonic generation in presence of a direct current 2-115741
Al₂O₃:Cr³⁺, second order microwave elec. field effects 2-66904
CsH₂AsO₄, ferroelec., nonlinear electromechanical parameters, second harmonic generation 2-104814
⁴He, superfluid, first-sound subharmonic generation, bifurcation universality 2-56281
KH₂PO₄, ferroelec., nonlinear electromechanical parameters, second harmonic generation 2-104814
Se, amorphous, nonlinear acoustical effects near glass forming temp. 2-66132

harmonic oscillators

- anharmonic oscillator, 1/N expansion 2-69034
anharmonic oscillator, asymptotic behaviour of spectrum 2-53586
anharmonic oscillator, asymptotic estimates in perturbation theory, functional integral struct. 2-53585
anharmonic oscillator, complex energy eigenvalues, semiclassical calcs. 2-84466
anharmonic oscillator, cubic, functional expansion appl. 2-63847
anharmonic oscillator, matrix elements, tunnelling contrib. 2-53579
anharmonic oscillator, mean displacement function 2-107147
anharmonic oscillator, O(N) invariant vector, large N expansion, local perturbation theory 2-79732
anharmonic oscillator, Schrodinger eqn., piecewise perturbation treatment 2-74265
anharmonic oscillator, undamped, memory function approach 2-79418
anharmonic oscillator eigenvalues 2-74250

harmonic oscillators continued

- anharmonic oscillators, classical and semiclassical coordinate probability distrib. function 2-70415
anharmonic oscillators, three-dimens., analytic WKB energy expressions 2-69042
anharmonic oscillators, two-coupled, Schrodinger operators 2-58654
anharmonic potentials, large-order perturbation calcs. 2-69039
anharmonic quadrupole oscillator bound states, eigenenergies and eigenfunctions 2-54281
Brownian noise meas. 2-53654
centrifugal pot., Klein-Gordon eqn. meson spectroscopy 2-107631
chaotic bands in Brusselator, bifurcation sequences 2-112821
charged oscillator in mag. field, relativistic model, and appl. 2-95096
charged simple harmonic oscillator, energy levels in Wheeler-Feynman absorber theory 2-63845
classical anharmonic single oscillators, statistical mech., extended variational method 2-101305
coherent state evolution for the quantum anharmonic oscillator 2-84475
conformal Kepler problem quantisation and appl. to H atom 2-95085
Coulomb matrix elements 2-53567
damped, Wigner distribution function, positive-definite, appls. 2-107231
damped oscillator, with quantum noise, canonicity 2-69040
dephasing in isolated one-dimensional quantum systems 2-89554
disordered harmonic chain, classical anal. 2-101160
dissipative quantum-mechanical system dynamics, complex pot. and Feynman integrals 2-95040
divergent perturbation, Pade approximants, generalised Euler transformation 2-101203
driven anharmonic oscillator, bistability and Feigenbaum bifurcations anal. 2-94995
electron spin, stochastic electrodynamics calc. 2-79471
enclosed system, linearly perturbed, hypervirial methodology 2-69036
exact quantum-mechanical states of a model atom in a uniform magnetic field and in a laser field 2-59951
Feynman path integral and Poisson processes with piecewise classical paths 2-53566
generalised anharmonic oscillator in D dimensions, variational approach 2-101235
generalised coherent states and uncertainty principle 2-95105
geometric quantisation, symmetry group 2-95091
geometric quantisation method using symmetry group structure 2-53572
Hamilton-Jacobi solutions, dissipative medium 2-107165
Hausdorff dimension for the quantum harmonic oscillator 2-74259
heat conduction, chain model, stochastic dynamics 2-70811
Heisenberg eqns. of motion in Caldirola-Montaldi procedure 2-58646
high symmetry anharmonic oscils., 1/N perturbation theory (*Russian*) 2-53591
hydrogenic system, homeomorphism with free-particle system 2-101231
hypervirial rels. for box pot. and harmonic oscillator models 2-63834
kinetic equation for quantum system interacting with phonon field 2-89575
Klein-Gordon equation, high-energy asymptotic expansion and Regge trajectories for even power pot. 2-95599
Lanczos and moment method comparison 2-101222
Lie algebras in particle physics, book 2-79298
Lie theory of extended groups, appls. 2-53498
mechanical harmonic oscillator immersed in a medium, frequency response 2-70864
minimum-uncertainty coherent states for time depend. systems 2-95106
model atom in mag. and laser field, harmonic oscil. soln. 2-96430
Morse oscillators, perturbed, hypervirial treatment 2-108665
nonobjective canonical transformation theory in mechanics, appl. to Coulomb problem 2-94992
noncanonical quantum theory, q Bose operators appl. 2-101214
nonlinear, dissipative effects on stochasticity 2-69047
nonlinear interaction, Fokker-Planck equation 2-107242
nonlinear oscillator, driven by random, periodic force, spectral anal., linearised theory 2-84469
normal modes, symmetry breaking, group theory 2-79407
nuclear matter, quasispin systems irreversible dynamics 2-69592
one dimensional, multiharmonic force effect on vibr. 2-79428
one-dimensional anharmonic oscillators, quasiclassical calc. (*Russian*) 2-63856
path integral Monte Carlo simulations 2-79406
perturbation at large order, conf. proceedings of international workshop (March 1981) 2-53412
perturbed, connections between perturbation theory and Van Vleck transformation 2-63837
phase space translations and inversions and Wigner functions 2-69054
polynomial-type eigenfunctions 2-95069
pulsating mass harmonic oscillator, exact soln. 2-69043
quantum dynamical semigroups, path integrals and stationary phase approx. 2-95230
quantum field acting as a heat bath 2-101224
quantum noise and quantum nondemolition meas. 2-95102
quantum thermal mixture, harmonic oscillator and thermal bath, stochastic description 2-63903
quark bag model 2-84865
quartic anharmonic oscillator in stochastic electrodynamics 2-95036
quartic oscillator, bounded anal. approximate expression for eigenvalues 2-53573
quasi-integrable Hamiltonian system, smooth prime integrals 2-58647
radial harmonic oscillator potential, semiclassical quantisation conditions 2-69049
relativistic harmonic oscillator, quantisation 2-95100
rotating harmonic oscillators, continued fraction theory 2-95093
rotating-harmonic-oscillator equation, 'comments on Flessas' paper 2-107168
spectrum generating algebra and closed form expression for r^k -radial Coulomb matrix elements 2-95041
symmetry group in Hamiltonian formalism 2-95084
symmetry transformation, first integrals 2-112689
three-dimensional anisotropic oscillator with dynamical SU(3) symm. 2-101217
three-particle relativistic harmonic dynamics in the constraint formalism 2-101163
time depend. Hartree approx. and harmonic oscillator model 2-54290
time dependent, soln. and propagator, general terms 2-63852
time dependent nonlinear oscillators, Noether's theorem, general Hamiltonian form 2-107164
time-dependent forced oscillators, invariants determ. 2-101232

harmonic oscillators continued

- time-dependent linear and quadratic potentials, propagators calc. using inverse Weierstrass transform 2-101216
- time-dependent quantal oscillators, linear invariants 2-95095
- U(N) one-dimensional chiral models, $N \rightarrow \infty$ limit study 2-84805
- (π^+ He), pion-induced fission study in model using harmonic oscillator cluster wave functions 2-80038
- ^4He , $A=3, 4$, form factors, multi-quark cluster effect 2-84948
- I_2 +inert gas atoms, vibr. energy transfer from highly excited anharmonic oscillators, quantum state and interaction pot. depend. 2-96697

harmonics

see also *harmonic analysis*

- pitch, and pitch salience, extraction algorithm from complex tonal signals 2-62635
- pitch, of complex signals, according to virtual-pitch theory; tests, examples and predictions 2-62634
- Fe-Si, grain-oriented and amorphous ribbon, power loss, mag. flux harmonics and domain motion meas. 2-82648

Hartmann lines see *Luder's bands***Hartree calculations** see *SCF calculations***Hartree-Fock approximation** see *HF calculations***Hartree-Fock calculations** see *HF calculations***Hasiguti relaxation** see *anelastic relaxation; dislocation damping***He** see *helium***headphones**

see also *earphones*

- monochrome electret headphone, characteristics calculation 2-114590

health effects of radiation see *biological effects of radiation***health hazards**

see also *biological effects of radiation*

- animal progeny, intake of radioisotopes through maternal milk (*Russian*) 2-83663
- chemical cycles and health risks of some toxic crustal nuclides 2-57766
- computer displays, review of research on impact on human visual system 2-73227
- corneas of working radiologists, fluorescent light intensities determ. 2-94109
- cutting tool carbonitriding in salt baths 2-67643
- electric power transmission plant, nature of exposure to LF elec. fields 2-83597
- environmental power frequency magnetic fields and suicide 2-83598
- eye, laser radiation permissible exposure normalisation 2-83661
- fission materials, hazard pot. anal. (*German*) 2-85152
- geological specimens containing natural radioactivity, radiological hazards to collectors 2-105808
- human exposure to EM fields, standards (*Japanese*) 2-116987
- lightning, effect of local geology on danger to human life (*Croatian*) 2-73617
- LIMCAL, food chain model, rad. exposure predictions from rad. waste 2-113762
- liquid fuels, coal-derived, potential health problems 2-67805
- low-level ionising radiation, hazards to humans 2-78398
- lung cancer risk, BEIR III estimates, failures and critique 2-68056
- Magnox fuel, irradiated, radiation exposure of the public from normal transport 2-105838
- mammography, somatic radiation risks of various techniques, permissible doses (*German*) 2-78420
- mean stochastic dose, rel. to risks from diagnostic radiology and nuclear medicine 2-88666
- methane eyesafe Raman laser, Nd:YAG based, cloud height ranging appls. 2-97058
- microwave safety standards, biological effects of low level RF energy 2-57850
- modular analogue isolator for signal isolation in nuclear power plants 2-85177
- neutron and gamma-ray doses at Hiroshima and Nagasaki 2-100127
- neutron irradiation, cancer risk at reduced irradiation levels 2-94102
- nuclear waste disposal facility, methodology for consequence anal. 2-107988
- nuclear waste management, scale considerations 2-102056
- occupational exposure to ionising radiation, low level, epidemiological methods for assessing risks, review 2-117146
- ocular tissues, laser radiation interaction mechanisms, human exposure limits implications 2-100059
- petroleum carcinogenic constituents determ., UV spectroscopy appl. 2-67912
- plant uptake of radionuclides, review 2-116855
- pneumatic tourniquets used in surgery, complications and improvements 2-88686
- radiation: risk and protection in manned space flight 2-62792
- radiation exposure and radiation risk to population (*German*) 2-111725
- radioactive discharges, evaluation of future detriment 2-102059
- radioisotopes in foodstuffs, ^{226}Ra and ^{210}Pb concs. 2-57909
- radiotherapy, exposure of technologists, sources of radiation 2-68116
- RF emission effects on human organism (*Spanish*) 2-68050
- RF surgery equipment, technical possibilities and hazards in use (*German*) 2-100153
- stack discharged radionuclides, ground level conc. depend. on averaging time 2-102275
- SW diathermy, exposure to operator and patient 2-68102
- UV exposures, occupational skin hazards 2-117000
- visual fatigue in display work, laser optometer expts. 2-88548
- CO exposure on commuter routes in Los Angeles 2-111597
- Rn flux measurement, Environmental Protection reg. 40 CFR 192, compliance achievability 2-57908
- ^{222}Rn , $A=220, 222$, and decay products in German dwellings: activity concs., dose calcs. and risk estimates 2-117097
- ^{222}Rn and daughters, indoor exposures, concentrations and standards 2-57906
- ^{222}Rn , meas., national needs, NBS role 2-57907
- ^{222}Rn , natural and technologically enhanced sources, health effects 2-57910

hearing

see also *biacoustics; ear; hearing aids; speech*

- acoustic invariance and the perception of place of articulation: a selective adaptation study 2-75792
- adaptation on auditory-nerve fibres, revised model 2-111692
- adaptation time constants, evoked pot. study in cats 2-62628

hearing continued

- aural auditory nerve, differential patterns of physiological masking 2-73251
- audiometer, computerised automatic apparatus 2-62708
- auditory adaptation, transient complex and pure tone pitch changes 2-62633
- auditory brainstem response binaural interactions, stimulus level and auditory track asymmetry 2-73260
- auditory filter shapes in forward masking as a function of level 2-73255
- auditory perception of radio-frequency electromagnetic fields 2-88553
- auditory signals, min. detectable duration for normal and hearing-impaired listeners 2-73258
- auditory thresholds, comparison of three adaptive psychophysical procedures 2-94070
- basilar membrane, nonlinear model, 2-tone interactions 2-68026
- basilar membrane, two-tone suppression response of nonlinear model 2-57830
- basilar membrane frequency-response functions, relationship to causality linearity, time-translation invariance and minimum-phase behaviour 2-83575
- basilar membrane vibration phases 2-83576
- binaural fusion task, performance of children 2-88557
- binaural interaction in auditory brainstem responses: theoretical and methodological considerations 2-73259
- binaural time/intensity trading 2-62636
- bone conduction thresholds, changes with vibrator contact area 2-94069
- brain, freq. mapping of auditory cortex 2-105707
- brainstem, derived acoustic responses by means of pure-tone masking 2-94076
- brainstem audiometry in neonates and children, reference values and characts. 2-73264
- brainstem auditory, visual and somatosensory evoked pots. in leukodystrophies 2-111698
- brainstem auditory evoked pot., human, click polarity inversion effects 2-73261
- brainstem auditory evoked pot., sources rel. to parameters bilateral asymmetry 2-73265
- brainstem auditory evoked pot., waveform anal. 2-94064
- brainstem auditory response to binaural delayed stimuli in man 2-73262
- brainstem auditory response to tone pips, results in normal and hearing-impaired subjects 2-116936
- brainstem auditory responses, scalp recorded, human, comparison with intracranially recorded auditory nerve pots. 2-94078
- brainstem auditory responses to pure tone stimuli, power spectral anal. 2-94077
- brainstem responses, distorted, digital inverse filtering 2-68184
- brainstem responses when masking with wide-band and high-pass filtered noise 2-68025
- cat auditory cortex responses to FM of tones 2-116931
- cochlea, acoustically evoked activity of single efferent neurons in guinea pig 2-111700
- cochlea, cat, basilar membrane tuning 2-78351
- cochlear hair-cell innervation in cats 2-111708
- conference on medical phys., Varenna, Italy (Jun.-Jul. 79) 2-89448
- conservation program, impact on occupational injuries 2-114549
- consonant discrimination comparison of Tadoma and frequency-amplitude spectral display 2-75794
- cortical magnetic fields, auditory evoked, influence of stimulus intensity 2-73266
- cross-language study of perception of the oral-nasal distinction 2-91168
- detectability of switching transients of bands of noise (*Japanese*) 2-94072
- dichotic identification, of complex sounds, absolute and relative ear advantages 2-62638
- dynamic orometer as aid to profoundly deaf in mastering speech reproduction patterns 2-78483
- ear dominance and sequential interactions, comments 2-78350
- echolocating bat, *Eptesicus fuscus*, low-frequency hearing sensitivity 2-111701
- electrocochleography, use of miniaturized needle electrode 2-111726
- elevated sound source, localisation by green tree frogs 2-116934
- event-related potentials to visual and auditory events in young infants 2-62600
- evoked cortical mag. fields in unshielded rooms (*German*) 2-111713
- evoked magnetic fields in human brain right hemisphere 2-94088
- evoked potential audiometry, fundamentals 2-117027
- evoked potentials, computing-routine for logarithmic display 2-83675
- evoked potentials, scalp distrib., overlapping sources and involvement of auditory cortex 2-111697
- evoked potentials, scalp distrib., evaluation of reference electrode sites 2-111696
- evoked potentials as indices of cerebral specialisation of function 2-62627
- evoked potentials from human midbrain, slow brain stem responses 2-111695
- evoked response, middle latency, distortion prod. by analogue filtering 2-94229
- FM sounds, psychoacoustical study of processing and detect. 2-111709
- fetus, human, method for controlled sound stimulation, heart rate response determ. 2-117029
- forward masking, contralateral and ipsilateral cueing 2-73254
- forward masking as a function of frequency, masker level, and signal delay 2-73256
- forward masking by enhanced components in harmonic complexes 2-94066
- frequency discrimination, at 1200 Hz in presence of high-freq. masking noise 2-62632
- frequency selectivity, for monaural and binaural hearing systems, probe-freq. procedure 2-62637
- frequency selectivity of monkey's auditory system 2-94068
- frequency-following potentials, human, lock-in anal. 2-62629
- frequency-following response, man, contributing generator 2-94079
- functional model of steady signal transform. in auditory analyser 2-100002
- guidelines for developing an effective hearing conservation program 2-114550
- guinea pig auditory cortex, augmentation of evoked potentials after exposure to intensive noise 2-116932
- hair cell model, nonlinear resistance, intro. 2-94073
- hair cell-primary auditory fibre complex model 2-73253
- high-frequency audition, investigation of validity 2-73252
- high-resolution subjective testing using a double-blind comparator 2-94071

hearing continued

human auditory system, special criteria for impulse noise 2-100044
 identification of synthesized /r-w/ continua for adult and child speakers 2-70781
 impulse noise and continuous noise anal., integrating sound level meter 2-100045
 inferior colliculus in man, sound evoked potentials 2-111693
 inner ear, dynamical motion, mathematical hydroelastic model 2-68022
 inner hair cell-tectorial membrane connect-disconnect and efferent control 2-100006
 inner hair cell-tectorial membrane impact, relation to sensitization and masking of HF tone burst by LF tone 2-83574
 intensity discrimination measures 2-111703
 intensity of noise, meas. method effects upon hearing damage evaluation (*German*) 2-109147
 intracochlear acoustic pressure: comparison between direct measurements and models (*French*) 2-97322
 LF hearing loss classification, high-pass masking 2-117030
 listening tests, subjective evaluation of sound quality 2-88554
 loudness balance, alternate binaural, response factors in choice of reference ear 2-73308
 low-frequency hearing threshold, case of missing 6 dB 2-62631
 mammalian superior colliculus, representation of auditory space 2-111707
 masker suppression 2-88552
 masking, temporal integration, and sensorineural hearing loss 2-88556
 masking of noise bursts by an adjacent vowel for hearing-impaired listeners 2-88558
 masking period patterns of frequency modulated tones of different frequency deviations 2-57827
 masseter EMG in man during sustained isometric contraction, effect of acoustic masking on silent period 2-62630
 master hearing aid, computer program for fitting aid to residual hearing characteristics of individual patients 2-111706
 mathematical modelling of hearing process, conf., Troy, NY, USA (July 1980) 2-89456
 MEG and EEG auditory responses to tone, click and white noise stimuli 2-111694
 melodic accent, experiments and model 2-91176
 mixed modulation tone detection 2-94062
 model of the auditory mechanism of localization of a tonal sound source in a horizontal plane 2-116935
 monaural and binaural speech perception in reverberation for listeners of various ages 2-75793
 multitone masking, new theory 2-111702
 music, timbre and richness perception and appreciation in rooms for music 2-114563
 musical octave discrimination: an experimental confirmation of the 'stretched' subjective octave 2-111704
 neural coding alteration due to noise induced hearing loss 2-105706
 neurobionic model of perception processes (*Russian*) 2-62608
 neurons, activity on exposure to sound clicks, cross-correl. anal. 2-68021
 noise meas. inside ear muffs, Knowles miniature microphone appl. 2-97324
 noise-induced hearing loss, rel. to temporal integration 2-116937
 normal hearing thresholds for clicks 2-100004
 off-frequency listening and masker uncertainty 2-111699
 orchestral sound, halls and timbre 2-68027
 outer hair cell, hydrodynamic model 2-73267
 perception of coloration in sound fields in relation to autocorrelation function 2-73250
 perception of vowels under dynamic change in formant freq. (*Japanese*) 2-94074
 perception sensitivity exp., stereo Hi-Fi balancing appl. (*Italian*) 2-88551
 periodicity detection, dichotic listening 2-73257
 phrase boundary, duration as a cue to perception 2-70780
 pitch, and pitch salience, extraction algorithm from complex tonal signals 2-62635
 pitch, of complex signals, according to virtual-pitch theory; tests, examples and predictions 2-62634
 pitch, practically perfect performance 2-60318
 pitch, terminology: use of 'practically perfect pitch' 2-60317
 pitch dominance region and ripple noise, peripheral weighting model test 2-111705
 pitch meas. in speech 2-91170
 pitch of complex tones, acoustical anal. 2-107070
 plasma Angiotensin II changes with noise exposure rel. to temporary threshold shift 2-111728
 post-masking pattern interaction for two masking sounds 2-57828
 protector, improved artificial head for meas. 2-86169
 protectors, performance 2-94216
 pulsation patterns and auditory tuning for narrow noise bands 2-78346
 recognition of musical key by musicians 2-97321
 roughness of frequency-modulated tones 2-78347
 schoolchildren and noise, 4 kHz dip, tone screening in 14391 children 2-68023
 selective attention, event-related pots., effects of frontal cortex lesions 2-94063
 sensorineural tinnitus, crit. masking bands 2-73263
 signal and masker uncertainty with noise maskers of varying duration, bandwidth, and center frequency 2-78348
 simultaneous tone-on-tone masking patterns, inverse freq. dependence 2-94067
 single-neuron labeling of cat auditory nerve 2-100011
 sound fields in rooms, interaural crosscorrelation and listening levels (*Japanese*) 2-91161
 speaker accent effect on performance of speaker-independent, isolated-word recogniser 2-91171
 speech, combination tones role in second effect of pitch shift perception 2-102981
 speech intelligibility, in noise: effect of fluency and hearing protector type 2-62639
 speech reception threshold meas., comparison between two methods 2-117032
 speech recognition, performance at loudness discomfort level 2-68024
 speech recognition by hearing-impaired listeners, effect of spectral shaping 2-78349
 SPL hearing meter for threshold meas. 2-68090
 subjectively-perceived frequency response in small and medium-sized rooms 2-109156

hearing continued

sung vowels inside and in front of mouth, pressure wave meas. (*German*) 2-102979
 synthesis-based recognition of continuous speech 2-70782
 threshold measurement by bone cond., contrib. to international standardisation 2-68225
 thresholds, comparison with rotation perception thresholds, variability and psychometric curves 2-68028
 tone-on-tone masking in subjects with normal hearing and with sensorineural hearing loss 2-88555
 tympanic membrane of human auditory system, transfer characts., elec. modelling 2-100001
 vowel duration, perceptual cue to postvocalic consonant voicing 2-70779
 vowel identification, orthographic, perceptual and acoustic aspects 2-70778

hearing aids
 cochlear prostheses, review of current status 2-57924
 induction loop systems, guidelines for dimensioning, hearing aid appl. 2-68197
 insertion gain meas. 2-117031
 IR hearing aid development 2-88646
 master hearing aid, computer program for fitting aid to residual hearing characteristics of individual patients 2-111706
 microelectronic visual and tactile devices to aid speech and understanding in the deaf 2-78489
 music sound reproduction for hard of hearing (*German*) 2-68194
 speech, relation to written text, synchronising device as lip reading aid for deaf 2-78484
 status and problems (*Japanese*) 2-100161

heart *see cardiology*

heat
see also heat transfer; heating; latent heat; specific heat; temperature; terrestrial heat; thermal variables measurement; thermodynamic properties; thermodynamics
 No entries

heat capacity *see specific heat*

heat conduction
see also thermal conductivity
 acceleration waves in thermoconducting fluids, relativistic theory 2-75823
 all-glass tubular solar thermal collectors evacuation and deterioration 2-105594
 bent plate heat conduction, analytical method 2-91209
 binary gaseous mixture, nonstationary state of heat and mass transfer processes 2-60536
 blast waves, internal heat transfer effect on struct. 2-70988
 body with random temp. distrib. at boundary thermal stresses (*Japanese*) 2-75825
 boundary value non-self-adjoint problem 2-91213
 bulky body heating by circular heat source heat elimination 2-60373
 butt welding, heat conduction problems, analogue simulation 2-55395
 Cauchy problem stabilisation, class of initial functions processing power growth (*Russian*) 2-70932
 composite material, heat conduction, air void distrib. (*Russian*) 2-82041
 convergence of difference schemes for non-linear heat conduction equation with moving boundary condition (*Chinese*) 2-109158
 crystallization boundary, discontinuity surface model, energy balance 2-86844
 dense fluids, shock wave effect, heat conduction, irreversible thermodynamic theory 2-86305
 dielectrics, interaction with EM and acoustic fields, heat cond. problems 2-109163
 dirty dielectrics, nonlocal heat conduction, longitudinal long-wave phonons (*Russian*) 2-92299
 doubly connected domains of complicated shape, nonlinear diffusion type problem 2-114606
 duct flow, wall conductance effect on heat diffusion 2-86339
 duhamel integral and the operational-structural method of solution in non-stationary heat-conduction problems for regions of complicated shape 2-60350
 elastic body, heat-conducting, surface waves 2-81278
 elastic half plane heat conduction problem 2-91214
 electrical conductors under variable load, temp. rise and distribution calc. (*German*) 2-103002
 electrically conducting body with semi-infinite cut, magnetothermoelastic field 2-55022
 equation for semibounded body, solution 2-91211
 exothermic materials, temp. distrib., crit. conditions and scaling, boundary conditions calcs. 2-97345
 exothermic materials, temp. distrib., crit. conditions and scaling, boundary conditions calcs. 2-97346
 fibrous layer, two-dimens. heat flow problem (*Ukrainian*) 2-81211
 finite difference solution of conduction problems in cylindrical coordinates 2-65446
 finite element method for transient heat conduction eqn., and principle of max. norm. (*Chinese*) 2-109157
 fission reactor fuel rods, gap conductance for arbitrary Knudsen number 2-74828
 fluid in finite slot heated from below, stability, wall radiation and cond. effects 2-109279
 frequency response of heat fluxmeters, influence of convection, conduction and radiation 2-53756
 geometrically inhomogeneous non-ideally conjugated thin-walled body, heat cond. (*Russian*) 2-65443
 ground collector/storage system, constant flow, heat transfer coefficient determ. 2-83507
 heat sources, temp. field distrib. 2-60357
 heterogeneous media, heat cond. problems, soln. by integral relations method 2-60348
 ice, fusion rate, heat transfer, finite element anal. 2-55407
 ignition heat evolution kinetic charact. determ. 2-99680
 infinite wedge, transient edge effect on heat cond. 2-65445
 internal problem, uniqueness and estimation of stability (*Russian*) 2-75955
 inverse boundary problems, soln. using Kalman's filter eqns. 2-109161
 inverse heat conductivity, controllable algorithm calcs. 2-102999
 inverse problem, inverse Laplace transform method 2-70812
 laminar incompressible flow, over solid plate with heat source, heat transfer in boundary layer 2-91442
 laser irradiation of materials, heat conductivity models (*German*) 2-86021

heat conduction continued

- linear 1-D heat cond. problem, soln. on basis of hyperbolic eqn. 2-60349
 localized thermal structure in medium with bulk heat absorption 2-60353
 LV indoor switchgear installations thermal problems (*Hungarian*) 2-91222
 molecular gas, heat conduction, electric and mag. field effects 2-86365
 multidimensional solidification, conduction shape factor calcs. 2-91212
 multivariable meas. and control strategies appl. 2-60355
 nonlinear boundary-value problem solving analytical methods 2-60354
 nonlinear hyperbolic heat conduction eqn., variational methods (*German*) 2-103001
 nonlinear two component media with vol. sources, nonstationary dissipative structs. 2-55396
 ocean bottom evolution, appl of heat cond. eqn. with moving heat source 2-73537
 one-dimensional transient heat conduction with temp.-dependent generation and conductivity 2-75824
 oscillator-chain model, stochastic dynamics 2-70811
 piecewise homogeneous bodies of complex shape, stationary heat conduction equations 2-91210
 plane slab of absorbing gray medium with simultaneous conduction and radiation heat transfer, cooling 2-109160
 plasmas with dissipative phenomena, mixture approach 2-71095
 plastic deformation, localisation by heat dissipation 2-70854
 plate, semitransparent, radiation-conduction heat exchange 2-102998
 porous half space, heated, transient heat and mass transfer, self-similar temp., press. and moisture distrib. 2-114603
 power reactors, filtering theory 2-108082
 pyroelectric IR sensors, normalised current sensitivity calc. (*German*) 2-79670
 quasi-variational approach to numerical soln. of heat cond. problems, parabolic time-space elements 2-60345
 rectangular plate, two-dimensional cond., temp. distrib. 2-55397
 reverse problems of heat conduction 2-114604
 rigid conductor, heat propag. hyperbolic model (*Italian*) 2-114601
 roof/wall with thermal trap, thermal performance prediction by heat transfer anal. 2-81210
 self-gravitating gas clouds, cooling, equilibrium states in external gravit. fields 2-58440
 semiinfinite strip and circular boundary, 2D heat cond. problem 2-97344
 semitransparent materials, numerical method for computing radiation-cond. heat transfer problems 2-114614
 shells, thin, separation method in thermoelasticity problems 2-114661
 slab, orthotropic elastic, containing plane flaw, thermal stresses 2-81231
 solar collector panels with optimal mass flow rate, temp. distribution computing 2-116849
 solar wind, numerical algorithm for unsteady thermally conductive coronal flow 2-112399
 splitting scheme for heat diffusion eqn. soln. in cylindrical coordinates 2-102996
 steady heat flow in semi-infinite strip of homogeneous metal 2-114600
 steady-state problems, direct analysis using counter-variational principle (*Russian*) 2-65444
 Stefan problems, math. formulation 2-70810
 stellar coronae, effect of heating on energy balance and conductive losses 2-112425
 still brine regenerator, solar-powered, design and performance 2-105588
 thermohydraulic problems, Green's function method appl. (*Russian*) 2-65447
 thermoplastic instability in simple shear, Fourier's heat transfer rule 2-114674
 thin semitransparent plate, radiative-conductive heat transfer, guided wave approx. calcs. 2-60352
 transient thermal anal., stability of mixed time integration schemes 2-97347
 two-component infinite plate with heat sources, thermoelasticity 2-114663
 two-dimensional bodies, numerical method for solving heat cond. problems 2-60346
 wave solutions of nonlinear heat conduction equation 2-60351
 wedge with moving heat source, temp. field (*Russian*) 2-70809

heat content *see* **enthalpy****heat convection** *see* **convection****heat dissipation** *see* **cooling****heat engines**

- dynamic isotope power systems, features and spacecraft applications 2-80165
 ferroelectric conversion of heat to electricity 2-93934
 Fluidyne, with oscillating liquid drive, pumping appl. 2-57721
 Harwell thermomechanical generator, small power source for offshore apps. 2-67872
 hybrid double-absorption cooling systems for solar power utilisation, anal. and design 2-78242
 internal combustion engine, optimisation of model engine 2-67880
 organic Rankine cycle heat engines, recent developments 2-67879
 Otto and Diesel engines efficiencies and applications comparison with methanol fuel cells 2-105587
 photocell heat engine solar power systems, concept, operation and performance 2-93941
 solar thermal energy subsystems, technology for the 80s 2-83513
 Stirling engine as power source, prospects 2-73137
 $Pb_{0.99}Nb_{0.02}(Zr_{0.68}Nb_{0.25}Ti_{0.07}Ta_{0.98}O_3)$, ferroelectric, direct heat to electrical energy conversion, pyroelectric meas. 2-67878

heat exchange *see* **heat transfer****heat exchangers***see also* **cooling towers**

- Beuken thermoelectric model, thermal systems apps. (*French*) 2-70805
 counter current heat exchanger with periodic inlet temps., performance anal. 2-114623
 counterflow, entropy generation 2-65451
 cylinder with low-freq. oscills., heat exchange, sonic field effects 2-109168
 double pipe heat exchanger, heat transfer superimposed pulsating flow effects (*German*) 2-97549
 finned heat exchanger tubes, natural frequency correction for stiffening 2-91297
 flow induced vibration in shell and tube heat exchangers 2-53755
 flow patterns and hydraulic losses in bent pipes, appl. to heat exchangers 2-81394
 folded-tube Al condenser for OTEC heat exchange, test results 2-88472

heat exchangers continued

- forced circulation solar water heating system transient analysis 2-83511
 gas turbine, open cycle, efficiency improvement and superiority of steam injection 2-81208
 helical tube heat exchangers, in-line and cross-flow, heat transfer 2-55558
 ion accelerators, water-cooled extraction grids, heat flux limitations 2-85408
 latent thermal energy storage units, heat exchange (*Japanese*) 2-105600
 liquid metal two-phase flow pattern, transverse mag. field effect, fusion reactor heat exchanger 2-80307
 low temperature for 3He - 4He dilution refrigerator 2-89726
 magnetic refrigerator, use of ferrofluid as heat-exchange fluid 2-79588
 modelling of dynamic properties of counterflow heat exchangers (*Polish*) 2-89706
 neutral beam calorimeters, heat exchanger concepts 2-84622
 nuclear steam generator tubes, vibration due to liq. and two phase flow 2-59492
 pulsating flow effect in heat exchangers 2-114913
 refrigerator-radiator devices, thermohydraulic characteristics 2-109169
 shell and tube exchangers, heat transfer 2-65454
 shell and tube type, multidimens. numerical modelling 2-112894
 Solar Coil Collector design using concept of heat exchanger effectiveness and transfer units 2-111591
 solar greenhouse heating using underground heat exchange system 2-116788
 solar receiver, bench model, hot tube to manifold ceramic joint, thermal stresses 2-67892
 step heat exchangers, practical model for design 2-84633
 thermal design of a heat exchanger employing laminar flow of particle suspensions 2-70822
 thermal regenerators, waste steam recirculation, matrix temp. control 2-65667
 tube bundles in transverse flow, vibrs. (*French*) 2-55666
 tubing, field performed eddy current exam., accuracy and repeatability 2-72932
 twisted flow, velocity and static pressure distributions experimental investigation 2-97658
 Vuilleumier heat pump for domestic space heating, evaluation 2-62494
 water-gas type, vibrations (*French*) 2-55402
 whirling instabilities in heat exchanger tube arrays 2-97261
 Cs droplets removal from Ar-Cs flowing mixt. in a closed-loop MHD generator 2-91518

heat flow *see* **heat transfer****heat insulation** *see* **thermal insulation****heat losses***see also* **thermal insulation**

- air/water heat pumps installation pro's and con's (*German*) 2-99822
 burned patients, use of IR radiation to reduce heat loss, phantom expts. 2-68100
 Cantonal Chemical Laboratory building structure and thermal behaviour anal. (*German*) 2-70818
 Cantonal Chemical Laboratory infra-red thermography for heat losses anal. (*German*) 2-70819
 domestic solar heating system optimum sizing procedures comparison 2-111589
 flat-plate solar collector thermal performance 2-62495
 four-pole cylindrical synchronous machine solid rotor temp. distribution measurement (*French*) 2-84628
 Fresnel lens-DGPC-concentrating solar cell-heat sink type solar module operational characts. (*Japanese*) 2-57703
 heat, receiving wall with heat storage, thermal insulation props. with variable weather 2-99823
 latent heat solar walls performance anal. using variable parameter test-cell 2-111587
 LV indoor switchgear installations thermal problems (*Hungarian*) 2-91222
 optimum glazing combination for solar space heating 2-83460
 parabolic trough concentrator for solar industrial process heat appl., technical and economic performance 2-111541
 photocell heat engine solar power systems, concept, operation and performance 2-93941
 plasma, magnetized, high energy electron component cooling 2-76084
 polyethylene terephthalate films infrared radiation properties, application as solar collector covers 2-67890
 residential building energy audit microprocessor package 2-57765
 selective coatings on passive solar energy storage walls, performance prediction 2-99833
 solar absorber convertors heat transfer coefficients, effect of leeward orientation, adiabatic framing surfaces and eaves 2-99834
 solar absorber-convensor performance prediction using simplified nonlinear mathematical model 2-99837
 solar collector optical characteristics anal., effect on collector efficiency 2-99827
 solar energy concentrators, V-trough, linear, natural convection heat transfer coefficients experimental determ. 2-57684
 solar pond mixing layer development interferometric study in laboratory simulation 2-83516
 solar power stations saturated steam generation heat transfer and thermal optimisation 2-116781
 solar refrigeration, thermal losses (*French*) 2-112908
 still brine regenerator, solar-powered, design and performance 2-105588
 Trombe wall collector, modified, heat losses anal. and reducing measures for domestic space heating 2-67888
 two-pass solar air heaters thermal performance anal. 2-78249

heat measurement *see* **thermal variables measurement****heat of adsorption**

- diamond, of H_2 , surface electronic struct., ab initio atom cluster model 2-115641
 graphite surface, 3He multilayer adsorption, Hartree-Fock theory 2-115533
 heterogeneous solid surfaces, low temp. gas adsorption, surface topography effects 2-104146
 molecule-surface impact, energy accommodation coeff., hard-cube model, multiple collisions role 2-99262
 quartz, of propane, influence of adsorbed water (*Japanese*) 2-61281
 solid-vacuum interface, thermodynamic equilb. rel. to vacuum deposition 2-61310
 water vapour-zeolite 13X system rates of solar energy storage and retrieval 2-78251

heat of adsorption continued

- β^{II} -Al₂O₃-Na₂O/(Na₂O-Li₂O)(Ag₂O), dehydration reactions, DTA and TGA study 2-78091
 Cu-Ni, surface (110), CO adsorption 2-56362
 Fe (111), N₂ adsorpt. kinetics meas. 2-56356
 Fe surfaces, (111) and (100), K promoted, N₂(N) adsorpt. meas. 2-56357
 KCl:Pb²⁺, (100) and (111) face crystal growth rates, Pb²⁺ effects (*Russian*) 2-65897
 SiO₂, non-porous, surface lyophobicity and heat of immersion in cyclohexane 2-62434

heat of combustion

- dl-lactide, thermodynamic props. and thermodynamics of polymerisation (*Russian*) 2-111510
 polylactide, thermodynamic props. (*Russian*) 2-111510
 tricyclo[4.4.0.0^{3,3'}]decane, electronic distrib. chemical effects, atomisation energy calcs. (*French*) 2-108730

heat of crystallisation

- amorphous thin films, pulsed energy beam crystn., struct. features 2-60888
 equilibrium fluids, crystn. and ordered struct. formation, mol. theory 2-56161
 Bi₂Te₃/CdCl₂(Te) crystal growth using directional crystallisation apparatus for growing complex solid solns. (*Russian*) 2-72609
 Se₉₉Bi₁₀₀, amorphous, crystn., elec. cond. meas. 2-55860
 a-Si, distortion energy distrib. in random network model 2-109678
 Zr_{1-x}Ni_x, amorphous, phase transforms., X-ray diffr., DSC, and TEM study 2-97934

heat of dissociation

- metal hydride systems, hysteresis, regular interstitial soln. approx. 2-56197
 metal hydrides, thermal solvus and plateau press. hysteresis relationships 2-73008
 β^{II} -Al₂O₃-Na₂O/(Na₂O-Li₂O)(Ag₂O), dehydration reactions, DTA and TGA study 2-78091
 Hg₂, vaporisation equilib., mass spectrometric obs. 2-103965

heat of formation

- acetates, protonated, struct. and fragmentations, MINDO/3 calcs., heats of form. 2-113889
 actinide metal carbides, extended regular soln. model appl. 2-105499
 alkali metal-alkaline earth alloys, disordered, heat of form., density functional pseudopot. formalism 2-104283
 alloy, formation, Miedema's theory, microscopic basis 2-91867
 alloys, BCC and FCC, heat of formation, comparison of pair pot. and thermochemical models 2-111506
 binary solids, dielec. const. and heat of form., ion depend. dielec. model 2-104796
 2,2'-bipyridyl-1S₂, complex, form. thermodynamics, visible and far IR obs. 2-108517
 complex stability, free energy of form., solvent effects 2-83405
 compound semiconductor film, phase transition triggered by laser irradi. 2-98500
 divalent-metal orthosilicates, M₂SiO₄, heat of form. and lattice energy 2-109739
 equilibrium fluids, crystn. and ordered struct. formation, mol. theory 2-56161
 hydrocarbon molecules, neutral and ionic, heat of form., MINDO/3 calcs. (*German*) 2-93809
 hydrocarbons and heteromolecules, heat of form. calc. by variation of overlap integral in IOC- ω technique 2-62425
 hydrogen bronze, enthalpy of formation, microcalorimetry study 2-93808
 δ -Li₂MoO₄, vaporisation and thermal stability 2-66191
 liquid metal alloys, simple model and rel. to Miedema's variables 2-116722
 metal hydride systems, hysteresis, regular interstitial soln. approx. 2-56197
 nitrides of group IIIA elements, thermodynamic props., at. no. depend., synthesis method selection 2-66259
 nucleation, two-dimensional, nucleus size dependence of interfacial tension calc. 2-65893
 nucleic acid complexes with Ag⁺ ions, thermodynamic characts. 2-99873
 organic compounds, ideal gas thermodynamic props., data tables 2-94922
 rare earth-thallium alloys, liq., thermodynamic characts., intermetallics form., liquidus behaviour 2-67293
 refractory mixed oxides, heat of formation 2-105495
 transition metal alloying, volume effects 2-116421
 transition metal alloys, Miedema's theory, microscopic basis 2-91866
 transition metal carbides, groups IVb and Vb, extended regular soln. model appl. 2-105499
 tricyclo[4.4.0.0^{3,3'}]decane, electronic distrib. chemical effects, atomisation energy calcs. (*French*) 2-108730
 trifluoriodomethane cation, electronic states multiphoton dissoc., photon-photoelectron coincidence study 2-65058
 Al-Ca, Gibbs energy and heat of form., solid electrolyte galvanic cell meas. 2-110011
 α -AlH₃, standard heat of formation meas. 2-67762
 AlSb film, phase transition triggered by laser irradi. 2-98500
 As₂O₃+Li₂O (Na₂O/CaO/BaO), heat of form. of arsenates meas. 2-88374
 Au-Mn alloys, thermodynamic anal. 2-99402
 Bi-Th alloys, cryst. struct. and heats of formation, X-ray and metallographic study 2-91873
 Ce-Sn system, phase struct. and heat of form. 2-109745
 Co-Zr, intermediate phases, heat of formation, direct reaction calorimetry study 2-99699
 Cr-binary alloys, liq. and solid., enthalpies of formation 2-61175
 Cs₂UF₆, thermochemical investigation, heat of form. 2-73006
 Fe-Mo system, phase diagram and thermodynamic props. 2-111137
 Fe-Ti, enthalpy of form., short-range order effect (*Russian*) 2-97982
 FeTa₂O₆, free energy of form. at 1470-1750K 2-111507
 Ga-In-Sb system, quantitative fit to liquidus surface and thermodynamic data, associated soln. model 2-111148
 H₂ production by water splitting, thermochemical cycles 2-57743
 H_{1.65}MoO₃, hydrogen bronze, enthalpy of formation, microcalorimetry study 2-93808
 HNC, heat of form. determ. by ion cyclotron double reson. spectroscopy 2-83403
 HNO⁺, prod. from NH₂OH, heat of form. 2-108642
 H_{1.5}V₂O₇, hydrogen bronze, enthalpy of formation, microcalorimetry study 2-93808

heat of formation continued

- In₂Te₃, evaporation meas., entropy and heat of formation calc. 2-86845
 K-Na melt, partial enthalpy of form. and heats of mixing 2-73005
 KCl₂Br_{1-x} crystals, Compton profile anal. 2-86730
 K₂UF₆, thermochemical investigation, heat of form. 2-73006
 LaC₈, identification and atomisation energies by high temp. mass spectrometry 2-67761
 LaC₈, identification and atomisation energies by high temp. mass spectrometry 2-67761
 LaGe₇₀, free energy, heat and entropy of form. determ., 940 to 1060K (*Ukrainian*) 2-56217
 Li-Ge alloys, thermodynamic studies, appl. to negative electrodes for molten salt batteries 2-76709
 Li-MoO₄, vaporisation and thermal stability 2-66191
 Mn-binary alloys, liq. and solid., enthalpies of formation 2-61175
 Mn-Si (25 to 37.5 at.% Si), phase comp. and thermodynamic props. 2-83094
 NOH⁺, prod. from NH₂OH, heat of form. 2-108642
 Na₂SO₃-NaHCO₃-H₂O system, thermodynamic relations and phase equilib. 2-83406
 Na₂UF₆, thermochemical investigation, heat of form. 2-73006
 Na₂UO₃, sp. ht., heats of soln. and form., thermodynamic functions 2-92229
 Na₂UO₄, sp. ht., heats of soln. and form., thermodynamic functions 2-92229
 Na₂U₂O₇, sp. ht., heats of soln. and form., thermodynamic functions 2-92229
 Nb-Al, heat of formation and high temp. phase diagram, Knudsen effusion study 2-105117
 NbO_{2+x}, vaporisation study by mass-spectrometric method 2-77810
 Ni (100), decomposition of methanol 2-83413
 Ni-Zn, thermodynamic data 2-111145
 NiAs, standard free energy of formation 2-83101
 NiBe, Ni₂Be₂₁, enthalpies of formation, soln. calorimetry 2-83402
 O+H₂S, supersonic O beam, heat of form., reactive scatt. study 2-83375
 Pd-Cd system, phase stability, struct. studies 2-99392
 Pd-Ge, liq., thermodynamic props. rel. to bonding and short-range order 2-91756
 Pt-Ge, liq., thermodynamic props. rel. to bonding and short-range order 2-91756
 Rb₂UF₆, thermochemical investigation, heat of form. 2-73006
 Ti-Si alloy, liq., enthalpy of form. 2-105127
 TmFe₂H₂, heat and entropy of formation and absorption, H₂ desorption isotherms 2-110012
 USb, Te_{1-x}, core level binding energies and heat of formation, UPS study 2-67193
 V Si alloy, liq., enthalpy of form. 2-105127
 Zr-Cu, crystalline and amorphous, enthalpy effects 2-61174
 ZrF₅, heat of form., mass spectrometric determ. 2-116719

heat of fusion

- aniline, o-, m- and p-halogen derivatives, thermodynamic studies of melting 2-103948
 arc metallisation, electrode heating efficiency and coeff. of material use (*Russian*) 2-67582
 atomic liquids, topological entropy and latent heat of fusion 2-71671
 CaCl₂·6H₂O heat storage system for off-peak energy supply and solar heating 2-83519
 cubic crystals, thermal potential, mechanical instability, and melting entropy 2-92165
 latent heat storage materials, effect of impurities on melting temp. heat of fusion and sp. ht. 2-62503
 liquid alloys, binary, thermodynamic props. with negative deviation of activities from Raoult's law (*Japanese*) 2-77804
 polytetrafluoroethylene, heat of fusion 2-98250
 CaO-Al₂O₃ system, phase diagram and thermodynamic props. 2-111147
 Fe-B metallic glasses, crystn., calc. and calorimetric meas. 2-71369
 H₂O-alkaline earth dichloride systems, solid-liq. equilib., diagrams (*French*) 2-76644
 PbO-SiO₂ glass, crystn. kinetics, 500° to 725°C 2-86574
 Pd-Ge, liq., thermodynamic props. rel. to bonding and short-range order 2-91756
 Pt-Ge, liq., thermodynamic props. rel. to bonding and short-range order 2-91756

heat of mixing

- alkali metal liq. alloys, heat and entropy of mixing, Gibbs-Bogolyubov variational technique 2-56221
 alloys, liq., entropy of mixing, excess vol. formation, hard sphere model 2-76684
 benzene-SbCl₃ activity coeffs., heats of mixing, excess functions 2-92202
 binary alloys, molten, surface tension, rel. to thermodynamic enthalpy and activities, eqns. 2-61260
 binary alloys and pure metals 2-115215
 dimethyl ether-trichloromethane vapour, enthalpy of mixing, assoc. model 2-86888
 III-V semiconductor based solid solutions, thermodynamic description 2-56194
 liquid alloys, binary, thermodynamic props. with negative deviation of activities from Raoult's law (*Japanese*) 2-77804
 liquids, free-vol., non-random mixing theory 2-66230
 methanol-LiBr(ZnBr₂)(LiBr-ZnBr₂), solvation, heat of mixing determ. 2-66238
 phase diagrams, ternary, computer calc. (*Korean*) 2-67289
 precision calorimeter for determining heats of solution and mixing (*German*) 2-79585
 Ag-Sb-Te, ternary system, enthalpy of mixing (*German*) 2-76693
 Al-B(C), interstitial solid solution, energy of mixing 2-92216
 Al-B(C) interstitial solns., interaction parameters anal. 2-98307
 CaO-SiO₂, thermodynamic treatments 2-61167
 Co-Ge liquid alloys, thermodynamic excess props. determ. by mass spectrometry 2-98306
 Co-Mn system, phase equilibrium for activity determ. 2-83096
 Cs-CsF(CsCl)(CsI), liq., enthalpies and entropies of mixing, calorimetry study 2-86877
 Cu-Sb alloys, solid, thermodynamic props. (*German*) 2-88059
 CuGa₂In₂Se₂, solid solns., phase diag., cryst. growth and dislocation struct. 2-86836
 Ga-In-Sb system, quantitative fit to liquidus surface and thermodynamic data, associated soln. model 2-111148
 H₂O-Ar vapour, enthalpy of mixing, assoc. model 2-86886
 H₂O-trichloromethane vapour, enthalpy of mixing, assoc. model 2-86887

heat of mixing continued

- Hg-Cd-Te phase diagram and thermodynamic props. anal. 2-88073
 Hg-Na liq., elec. and thermodynamic props., mag. susceptibility, compound form. effect 2-82314
 (InP), (InAs), solid soln., thermodynamic functions, entropy and enthalpy of mixing 2-86904
 K-Cs, liquid, thermodynamic calcs. 2-98308
 K-Na melt, partial enthalpy of form. and heats of mixing 2-73005
 Li-Pb, liquid, thermodynamic calcs. 2-98308
 Mg-B interstitial solns., interaction parameters anal. 2-98307
 (Na,K)AlSi₃O₈, albite-orthose vitreous system, enthalpy of mixing (French) 2-61147
 Na-Cs liquid alloys with atomic size mismatch, conc. fluctuation 2-81965
 Na-Ga(Cd), liquid, conc. fluctuations, press. effect, EMF meas. 2-91758
 Na-Hg, liquid, thermodynamic and struct. props., EMF meas. 2-81986
 Na-In, liq., elec. resist., and thermodynamic props., simultaneous meas. 2-82313
 Na-K, liquid, thermodynamic calcs. 2-98308
 Na-K liquid alloys with atomic size mismatch, conc. fluctuation 2-81965
 Na-Sn, liq., elec. resist., and thermodynamic props., simultaneous meas. 2-82313
 Na-Sn liq. alloys, thermodynamic props. 2-92234
 Y₂O₃-Nd₂O₃, solid solutions, determ. of mixing enthalpy 2-110002
 Zn-Sn-Se phase diagram and electronic props., LPE 2-116428

heat of reaction

- see also *heat of combustion; heat of dissociation; heat of formation*
 acetophenones, p-substituted, ionisation pot., PES, correl. with reactivity (French) 2-56629
 adhesive, dielect. monitoring of bonding process, correl. of dielec. props. with curing thermoset resin props. 2-111449
 2-cyclohexene-1-one, 3 substituted, ionisation pot., PES, correl. with reactivity (French) 2-96629
 dimethylsulphoxide, solution, dielectric study of mol. interactions 2-99016
 gas, enthalpy determ. in plasmachemical processes (German) 2-91578
 ion+molecule reaction, enthalpy changes involving H-D exchange, zero-point energy considerations 2-78077
 metal hydrides, thermal solvus and plateau press. hysteresis relationships 2-73008
 phospholipid bilayer membranes, hydration, free energy, enthalpy and entropy determ. 2-116685
 Al-SiO₂-F₂, fluor-topaz, thermodynamic props. 2-92226
 AsF₆-graphite (polyacetylene)(p-polyphenylene) association reaction, thermodynamics and kinetics meas. 2-93775
 CaO-CO₂-H₂O system, high press. differential anal. 2-93756
 Cu₂SbS₃-S, skinnerite, partial enthalpy of S, calorimetric determ. 2-78122
 H₂CN⁺-N₂ production from α -irrad. N₂+CH₄ mixture, Titan atm. appl. 2-100826
 KMnO₄, open thermodynamic system, thermolysis 2-110010
 PbO, fusibility diagram and p-T diagram 2-111149
 Pd₂Ge, metallic glass, crystn. kinetics 2-81682
 UF₆, UF₃, UF₄, gaseous equilibria, reaction enthalpies and entropies, bond dissociation energies 2-60709
 ZnO-based green phosphor, mechanism of formation in presence of ZnS 2-111508
 ZrF₄+F⁻, enthalpies of reaction, mass spectrometric determ. 2-116719
 ZrF₄+ZrF₃⁺, enthalpies of reaction, mass spectrometric determ. 2-116719

heat of solution

- alloys, metastable, prod. by ion implantation, solubility, characterisation 2-76687
 fluoride heterovalent solid soln. with unidirectional solubility, impurity energy of soln. 2-71651
 metal hydrides, thermal solvus and plateau press. hysteresis relationships 2-73008
 multicomponent regular, stat. thermodynamic eqns. 2-89647
 nonisothermal, nonadiabatic calorimeter, block thermostat (Polish) 2-95382
 oxide heterovalent solid soln. with unidirectional solubility, impurity energy of soln. 2-71651
 precision calorimeter for determining heats of solution and mixing (German) 2-79585
 semiconductors and metals, metastable alloy form. by ion implantation, impurity lattice location 2-115260
 ternary system, Kohler method rel. to subregular model 2-62103
 transition metals, solubility of H₂, surface effects, kinetic model 2-76836
 urea-alcohol aq. solns., interactions, excess enthalpies at 25°C 2-103587
 Al solubility process in SiC, Fermi level, thermodynamic anal. 2-109992
 Gd₂Ga₂O₇, solubility and enthalpy in PbO-B₂O₃-Fe₂O₃(Ga₂O₃) high temp. solvent 2-109991
 Mg-Si O-N glass, dissolution kinetics of β -Si₃N₄ 2-88071
 NaAl(SiGe)₃O₈ feldspars, glassy and cryst., ideal mixing of Si and Ge, calorimetric study 2-115414
 NaCl, aq. soln., enthalpy of dilution, 348.15 to 472.95K 2-57632
 NaUO₃, sp. ht., heats of soln. and form., thermodynamic functions 2-92229
 Na₂UO₄, sp. ht., heats of soln. and form., thermodynamic functions 2-92229
 Na₂U₂O₇, sp. ht., heats of soln. and form., thermodynamic functions 2-92229
 Pd-Mn-H soln., dil., thermodynamic props. 2-56195
 V-H-D system, isotope effects on thermodynamic functions (German) 2-110016
 VH₂(VD₂) film, press.-comp. isotherms, vibrating quartz microbalance meas. 2-98501
¹³⁵Xe solubility in liq. n-alkanes, temp. depend. and thermodynamic functions 2-109996
 YIG, solubility and enthalpy in PbO-B₂O₃-Fe₂O₃(Ga₂O₃) high temp. solvent 2-109991
 Y₂O₃-Nd₂O₃, solid solutions, determ. of mixing enthalpy 2-110002

heat of sublimation

- benzoic acid, enthalpy of sublimation and dimerisation in vapour phase 2-109966
 tricyclo[4.4.0.0^{3,8}]decane, electronic distrib. chemical effects, atomisation energy calcs. (French) 2-108730

heat of transformation

- see also *heat of crystallisation; heat of fusion; heat of sublimation; heat of vapourisation*

heat of transformation continued

- 4-n-alkoxyphenyl 4-nitrobenzoates, liq. cryst. props. 2-103602
 2-[4-n-alkylphenyl]-5-[4-n-alkoxyphenyl]-pyrimidines, calorimetric investigation 2-56172
 alloys, ordering transitions, thermodynamic theory (Russian) 2-92150
 cholesteryl arylbenzoates, mesomorphic props., effect of ang. linkage 2-103604
 cholesteryl n-alkanoates, cholesteric helix pitch behaviour at cholesteric-smectic A phase transition 2-103988
 cholesteryl oxycarboxylate derivatives, liq. cryst. props. 2-103603
 hexamethylbenzene, phase transition, thermal anomaly, heat capacity 2-86899
 p-n-hexyloxybenzylideneamino-p'-chlorobenzene, heat capacity and thermodynamic props. 2-98302
 p-n-hexyloxybenzylideneamino-p'-fluorobenzene, heat capacity and thermodynamic props. 2-98303
 mag. first-order transition, susceptibility and latent heat study 2-98880
 phospholipid bilayers, press. induced phase transitions, Landau phenomenological theory 2-83551
 phospholipid bilayers, press. induced phase transitions, Landau phenomenological theory 2-105669
 terephthalylidene-bis-[4-n-alkylanilines], liq. cryst., temp. and enthalpy of phase transition, calorimetric studies 2-92193
 thiourea-ferrocene channel inclusion cpd., phase transitions, sp. ht., dielec. and spectral study 2-56180
 AgBrO₃, phase transition temp. and enthalpy, DSC obs. 2-98261
 Ag₂-Cu₂I, polymorphic transition, enthalpy change, differential scanning calorimetry and X-ray diff. obs. 2-60914
 AgI, polymorphic transition, enthalpy change, differential scanning calorimetry and X-ray diff. obs. 2-60914
 Cr-Si, mag. first-order transition, susceptibility and latent heat study 2-98880
 Fe₂V₂O₄, semicond.-metal transition, IR spectra, elec. cond. and DTA study 2-87751
 H₂O-alkaline earth dichloride systems, solid-liq. equilib., diagrams (French) 2-76644
 K_{1-x}Zn_x-Al_{1-x}PO₄, ionic con. and cryst. struct., comp. dependence meas. 2-104053
 Ti₂GeS₃, heat of melting, phase equilibria 2-66171
 Ti₂GeS₃, heat of melting, phase equilibria 2-66171
 VH₂(VD₂) film, press.-comp. isotherms, vibrating quartz microbalance meas. 2-98501

heat of vapourisation

- actinide metal carbides, extended regular soln. model appl. 2-105499
 alkanes, connectivity indices, rel. to phys. props., molecular theory 2-81980
 multicomponent mixtures, prediction of latent heat of vaporisation 2-98253
 nitrides of group IIIA elements, thermodynamic props., at. no. depend., synthesis method selection 2-66259
 polar substances, vapour-liq. equilib., dipole hard sphere perturbation theory 2-66189
 transition metal carbides, groups IVb and Vb, extended regular soln. model appl. 2-105499
 CdIn₂S₄-In₂S₃ solid soln., vaporization chemistry and thermodynamics 2-116720
 Hg₂, vaporisation equilib., mass spectrometric obs. 2-103965
 Nb-Al, heat of formation and high temp. phase diagram, Knudsen effusion study 2-105117
 2UF₄+H₂=2UF₃+2HF, equilib. const., vapour press., entropy and heat of vaporisation 2-93773

heat of wetting see wetting**heat pipes**

- equilibrium two-phase heat pipe flows with variable flowrate 2-91516
 flat plate heat pipe solar panel, water heat appl. 2-62499
 pipe flow, heat source interference, thermally induced acoustic oscills. 2-75953
 pipe with closed capillary struct. 2-60374
 solar thermoelectric generator with paraboloid concentrator and heat pipe 2-73131
 space radiators design and off-design performance calc. 2-88471

heat pumps

- 18 kW heatpump installation for new building with ground heat source and warm water underfloor heating (Dutch) 2-105585
 absorption heat pumps, computer-aided design (German) 2-62486
 admin building heating by transformer station waste heat utilisation (German) 2-67875
 air to water, power consumption minimisation by microprocessor based control system 2-62492
 air-source, outdoor coils frosting and defrosting behaviour 2-62491
 air-to-water, house heating performance simulation using computer model 2-78239
 air/water, facilities and installation guidelines of microprocessor-controlled regulator (German) 2-67873
 air/water heat pumps installation pro's and con's (German) 2-99822
 application and utilisation aspects in Rumania (Rumanian) 2-78236
 automatic control system guided by computerised integrated heating control system for space heating (German) 2-93938
 Beuken thermoelectric model, thermal systems appls. (French) 2-70805
 Cantonal Chemical Laboratory integrated heat supply system component items (German) 2-73136
 Cantonal Chemical Laboratory integrated heat supply system operation and performance (German) 2-73135
 combined heat and power, energy savings in FDR (German) 2-73050
 combined heat pump-boiler system performance optimisation (Italian) 2-78241
 developments, review (French) 2-62488
 direct electric heating data in Scandinavian countries (German) 2-88466
 district heating utilising industrial waste heat (German) 2-111582
 electric air source, in single family homes, hourly power demand, Monte Carlo model 2-62493
 electroheat problems, Beuken thermoelectric model appls. (French) 2-70821
 energy balance preparation mathematical model for efficiency optimisation (German) 2-93937
 energy storage, two-level system (French) 2-62504
 energy-political aspects of the use of electric heat-pumps in Austria (German) 2-111580
 gas-supplied absorption heat pump, individual heating (French) 2-62489

heat pumps continued

- heat pump and heat system—operating experiences transformed into new equipment layout (*German*) 2—93939
 high power, various types for heat recovery systems (*Rumanian*) 2—78237
 housing installations (*French*) 2—62490
 industrial, energy saving (*German*) 2—111581
 industrial, high temp., gas engine driven, design, construction, and testing 2—116844
 low calorific value heat from renewable and non-renewable resources (*Czech*) 2—88467
 low temp. secondary energy resources or geothermal energy for space heating (*Rumanian*) 2—78238
 operating and investment cost minimisation mathematical model (*German*) 2—67877
 optimum thermal isolation for houses with heat-pump-systems—considered under economic aspects (*German*) 2—93940
 process water heating using heat pump utilising waste water as heat source (*German*) 2—88473
 rational energy use in Austria (*German*) 2—111579
 regenerative energy sources—state of the art and development of their applications (*German*) 2—88408
 residential space heating, Dutch national programme of energy research, low-temp. heat utilisation (*Dutch*) 2—116842
 sewage treatment plants energy consumption, absorption heat pump utilisation of energy yielded (*German*) 2—88410
 single family house heating methods intermediate study results (*Finnish*) 2—93936
 solar pilot test facility, in Belgium, design, construction and first operational experience 2—116850
 solar space heating options impact on electric power systems demand and supply capabilities 2—99767
 solar-assisted systems for space and domestic water heating in Canada, comparative study 2—67882
 space heating of all-electric bus depot with heat pumps for heat recovery (*German*) 2—67876
 thermoelectric, heat transfer from wide surface, energy parameters generalised equations 2—99818
 transformer waste heat recovery for heating buildings (*German*) 2—67874
 Vuilleumier heat pump for domestic space heating, evaluation 2—62494

heat radiation

- blast waves, internal heat transfer effect on struct. 2—70988
 Boltzmann equation, linear, Padé approximants, finite slab radiative heat flux const. calc. 2—86203
 cavity, one-dimens. model, stochasticity threshold 2—70828
 combustor flow modelling 2—75959
 configuration factors between disks and axisymmetric bodies 2—114616
 configuration factors for obliquely oriented finite length circular cylinders 2—70827
 critical radius for radial heat transfer, radiation, inclination and insulation opacity effects 2—114612
 dielectric slab, heating under EM illum. 2—109176
 Einstein space, static, thermal propagator 2—74292
 emissivities of surfaces for high temperature heat transfer (*Japanese*) 2—81993
 fluid in finite slot heated from below, stability, wall radiation and cond. effects 2—109279
 form factors for transfer between surfaces, numerical evaluation (*French*) 2—103007
 frequency response of heat fluxmeters, influence of convection, conduction and radiation 2—53756
 geometric mean transmittance and total absorptance for two dimens. systems 2—91223
 graphite fibre reinforced epoxy, thermal response under rapid heating 2—60361
 gravitational instability in presence of rot. and thermal radiation (*Italian*) 2—114961
 halfspace radiative equilb., surface cooling effect 2—81213
 heat transfer under radiation equilibrium in a rectangular channel 2—60653
 internal energy sources, radiative transfer formulation 2—75831
 inverse black body radiation analysis 2—103005
 IR thermography, exitance graphic interpretation as function of surface temp., emittance and background 2—55405
 isotropic turbulence in high temp. media, degeneration, radiation influence 2—114771
 laser breakdown mechanism in bombardment of water targets with CO₂ laser pulses 2—60367
 LV indoor switchgear installations thermal problems (*Hungarian*) 2—91222
 nonstationary integrodifferential radiation transfer eqn. soln. (*Russian*) 2—97357
 opaque materials, monochromatic directional reflectivity and emissivity determ. (*French*) 2—64045
 opaque materials, thermal radiation props., meas. methods (*French*) 2—65467
 planar medium, radiation heat transfer, scaling anisotropic scatt. 2—91224
 plane slab of absorbing gray medium with simultaneous conduction and radiation heat transfer, cooling 2—109160
 plane-parallel medium, radiative heat transfer 2—65458
 plate, semitransparent, radiation-conduction heat exchange 2—102998
 radiant energy transfer, teaching 2—63777
 radiant heat exchange between fluidised bed and surface 2—60364
 radiation laws in the vicinity of metallic boundaries 2—59991
 radiation transfer theory, appls. of general principle of invariance 2—114615
 rarefied media, two-phase, shock wave, relax. zone, radiation struct. 2—109421
 refrigerator-radiator devices, thermohydraulic characteristics 2—109169
 roof/wall with thermal trap, thermal performance prediction by heat transfer anal. 2—81210
 sea foam, electrodynamic description of densely packed dispersed systems, thermal radioemission 2—73019
 self-gravitating gas clouds, cooling, equilibrium states in external gravit. fields 2—58440
 semitransparent materials, numerical method for computing radiation-cond. heat transfer problems 2—114614
 semitransparent media, one dimens., internal heating effect on radiant heating 2—114611
 thermal cond. meas. by transient hot-wire technique, radiation absorpt. effect 2—70830

heat radiation continued

- thermal wave propagation in gas heated by instantaneous monochromatic radiation 2—60365
 thin semitransparent plate, radiative-conductive heat transfer, guided wave approx. calcs. 2—60352
 time dependent initial frame equation of radiative transfer in moving media to O(v/c) 2—97355
 transport eqns., approximate soln. 2—114613
 Wien displacement const., closed-form series 2—75830
 CO₂ and CO, nonequilibrated mol. gas, vibr.-rot. bands, IR radiation transfer and emissivity 2—114927
 Cu₂O, heating dynamics, O₂ partial pressure effect 2—65459
 H-He shock layer, radiating, convective heat flux, opaque admixture blowing effects 2—81358
 LiIO₃(LiNbO₃), thermal radiation upconversion, thermal noise effects, theory 2—81023
 NH₃ gas, selectively IR emitting, radiative cooling props., spectrophotometric study 2—103248

heat sinks

- low temperature heat sink for electrical leads in vacuum cryostat 2—79591
 solar thermoelectric generator, tert-butyl alcohol as heat sink substance 2—57729
 AlGaAs-GaAs laser, use of plated heat sink 2—55192

heat systems

- see also boilers; heating*
 Cantonal Chemical Laboratory building structure and thermal behaviour anal. (*German*) 2—70818
 Cantonal Chemical Laboratory integrated heat supply system component items (*German*) 2—73136
 combined heat pump-boiler system performance optimisation (*Italian*) 2—78241
 conceptual design of a high temperature hot water central heating system 2—116779
 domestic solar water heaters, test results 2—78186
 heat pump and heat system—operating experiences transformed into new equipment layout (*German*) 2—93939
 heat pumps, air-to-water, house heating performance simulation using computer model 2—78239
 parabolic trough solar collectors fluid control systems frequency response anal. 2—78254

heat transfer

- see also condensation; convection; cooling; evaporation; heat conduction; heat radiation; radiative transfer; thermal diffusivity*
 ablating surface, cooled with swirled-film, mass transfer 2—70925
 absorption type chillers, solar-powered, boiling experiments (*Japanese*) 2—116843
 adaptive grids appl. to fluid-flow problems with asymptotic solns. 2—91415
 aerocolloids, distribution of finite-amplitude disturbances 2—91134
 air, heat transfer from a yawed cylinder independence principle 2—55564
 air-plasma jet, heat exchange, transient processes 2—103473
 air-water interface, heat and momentum transfer 2—91523
 air-water system, flow in packed bed, heat transfer 2—109399
 air-water two phase flow, surface effect on droplet deposition 2—55647
 Al₂O₃ films on Al solar absorptance and thermal emittance computation 2—70639
 analogue ccts. for heat transfer instrumentation in transient tunnels, report 2—89715
 aqueous binary soln., solidification, heat and solute transport anal. in dendrite tip region 2—65470
 aqueous binary soln., solidification heat and solute transport anal. of basal plane region 2—65469
 artificial intelligence system called KNOWTRAN for solving heat transfer problems 2—109159
 atmosphere surface layer, streamwise heat flux budget meas. 2—100427
 benzene, tube boiling, heat transfer coeffs., critical heat flux 2—91419
 Beuken thermoelectric model, thermal systems appls. (*French*) 2—70805
 bibliography of Soviet works from 1980 to 1981 2—89501
 bibliography of Soviet works on heat and mass transfer 2—94938
 bibliography of Soviet works on heat and mass transfer 1979-81 2—63772
 binary gaseous mixture, nonstationary state of heat and mass transfer processes 2—60536
 black chrome selective solar coatings, industrial utilisation (*Portuguese*) 2—99830
 blunt body in vicinity of stagnation point, unsteady convective heat transfer (*Russian*) 2—55585
 boiling, in vertical slotted channels, effect of elec. field in heat exchange (*Russian*) 2—60531
 boiling heat transfer in narrow rectangular space, bubbles influence 2—109171
 boiling on finned surfaces, heat transfer 2—75837
 boiling outside tube bundle using high speed photography 2—70834
 boiling phenomena within a narrow gap 2—90262
 boundary layer, stratified, turbulent, heat-and-mass transfer (*Ukrainian*) 2—60530
 Bridgman-type crystal growth, thermal modelling, analytical one dimens. analysis 2—109715
 Bridgman-type crystal growth, thermal modelling, analytical two dimens. analysis 2—109716
 bubble condensation in immiscible liquid, noncondensable gases effects 2—114804
 buoyant plume heat transfer to unconfined ceiling 2—114802
 butane droplet, evaporative instability at the superheat limit 2—56167
 CANDU spent fuel repositories, temp. maxima, heat transfer study 2—90238
 channel flow, free surface, turbulence struct. and transport mechanism study 2—65646
 channels, triangular, heat exchange under liq. laminar flow (*Ukrainian*) 2—60529
 chemically reactive gas condensation on horizontal tube, heat and mass transfer in boundary layer 2—60672
 circular channel with laminar flow, heat transfer in initial segment 2—55573
 circular cylinder during quenching, transient temp. distrib. 2—109172
 circular jet with and without crossflow, impingement, local heat transfer 2—109380
 clinical hyperthermia trials: design principles and practice 2—62720
 cold oxide traps, solution of heat and mass transfer problem 2—60381

heat transfer continued

collector systems coupled to well mixed storage, transition time effects 2-99832
 combined convection in wavy-walled channel, skin friction, heat transfer rate and press. drop 2-114799
 combined convection stagnation heat transfer from an isothermal cylinder with internal sources or sinks 2-114800
 combustion wave stability, heat loss effects 2-60671
 composite superconductor, stability with respect to thermal disturbances, dimensional anal. 2-92848
 compressible laminar boundary layer, oscillations, heat transfer and skin friction 2-86258
 concrete slab, surface heated, heat and mass transfer, evaporation-recondensation mechanism 2-114621
 condensation on grooved surface, heat transfer 2-60383
 conducting liquid, vortical MHD flow, heat transfer 2-103167
 confined compressible reactive gas, thermal behaviour 2-89539
 contact interface of friction pair, heat flow distrib. and combined heat-mass transfer processes 2-60360
 container glass, optical props. 2-61858
 convective diffusion equation, asymptotic solutions, fluid flow, mass transfer and heat transfer 2-91455
 convective heat transfer, asymptotic solution (*German*) 2-81339
 cooled porous medium with curved boundary, heat transfer 2-55579
 corrugated duct heat transfer, press. drop, flow visualisation 2-114911
 Couette flow, heat transfer, surface roughness effects 2-60545
 CPA application, heat removal rate for medium with highly absorptive inclusions 2-65456
 critical heat flux density in open channel cooled with He II 2-103004
 critical heat flux expt. performed in high press. boiling water facility 2-70835
 cross-flow arrays of cylinders, heat transfer flow visualisation 2-65660
 cryogenic cooling, thermal props. and heat transfer coeffs. 2-89723
 cryogenic pipeline flow, cooling temp. profile 2-103166
 cryostats, heat exchange study and long-life cryostat dev. (*Ukrainian*) 2-112907
 crystal growth, from melt, temperature fields, calc. using heat flow potential 2-65896
 cup like cavity rotating about its own axis, heat transfer coeff. 2-109327
 cylinder, oscillating, in transverse flow of liquid, heat exchange (*Russian*) 2-55400
 cylinder, transitional and turbulence zones, heat exchange by streamline flow of air (*Russian*) 2-60540
 cylinder with low-freq. oscils., heat exchange, sonic field effects 2-109168
 Czochralski growth system, mech. instability effects on crystallisation rate 2-87965
 Czochralski growth system, melt temp. effects on crystallisation rate 2-87964
 dense fluids, mol. dynamics system, stationary nonequilibrium state prod., thermodynamics 2-70841
 desublimation problem in porous medium 2-70832
 diathermy optimisation and cancer treatment using hot transfer principles 2-73198
 dies used in pressure die casting process computer aided thermal design analysis 2-65455
 diffusion systems, Beuken hybrid simulation appl. 2-70807
 dimensional analysis model applic. to temp. control in rolling 2-99449
 disc, circular, residual stresses creation by heating, optimum control 2-91275
 disk, heat flow into half-space, separation of variables 2-70826
 double diffusive thermohaline system heated from below, multilayer model for mixing layer developments 2-109388
 double pipe heat exchanger, heat transfer superimposed pulsating flow effects (*German*) 2-97549
 doubly painted layer, radiative props. 2-90813
 duct flow, wall conductance effect on heat diffusion 2-86339
 duct flow, with separation at inlet, turbulent heat transfer 2-91441
 edge-defined film-fed growth, heat transfer effect on interface shape and solute segregation 2-97955
 electrical equipment, problems in design and construction of current input leads made of porous material 2-58835
 electrical simulation methods for solving heat transfer problems 2-70808
 electroheat problems, Beuken thermoelectric model appls. (*French*) 2-70821
 electronic equipment rectangular modules arrays, heat transfer and press. drop charact. 2-91219
 elliptic equation with mixed boundary conditions 2-81206
 elliptical cone, compressible laminar boundary layer, heat transfer coeff. 2-75927
 elliptical cylinder moving through plate, heat transfer, appl. to electron beam welding 2-70823
 energy stored in ground during daily solar cycle, calc. method 2-73153
 enthalpy method, evaluation for soln. of heat transfer problems 2-65471
 ethyl alcohol, laminar boundary layer, heat and mass exchange with vaporisation and combustion 2-60503
 evaporative heat transfer, press. drop and crit. heat flux in a small vertical tube with R-113 2-91426
 exchange with surroundings, meas. method, determ. of effective thermal resistance under transient state conditions (*French*) 2-97359
 exothermic materials, temp. distrib., crit. conditions and scaling, boundary conditions calcs. 2-97345
 exothermic materials, temp. distrib., crit. conditions and scaling, boundary conditions calcs. 2-97346
 explosion with radiant heat transfer, self-similar problem 2-81352
 film boiling heat transfer, low-quality and subcooled, high-temp. results 2-64609
 film condensation, steady and unsteady process on flat plate, vertical coin, horizontal pipe and a sphere (*German*) 2-115574
 flat plate, laminar flow and heat-transfer with approach flow and temp. distrib. 2-60500
 flat plate flow, drag and heat transfer with arbitrary viscosity temp. depend. 2-55572
 flat plate solar air heater transient anal. 2-83510
 flat solar water heater numerical model 2-99829
 flat-plate solar collector thermal performance 2-62495
 flat-plate solar collector with fluid undergoing phase change, anal. 2-111584
 flow, boiling in uniformly heated vertical tubes, critical heat flux, dimensionless groups 2-109405

heat transfer continued

flow, heat transfer and chemical reactions, simulation using computer code system 2-91571
 flow past periodic arrays of cylinders, heat transfer calc. 2-97537
 flow rate history for cooling and energy storage processes 2-97362
 fluid, boiling on surface of porous coating, capillary hysteresis (*Russian*) 2-60363
 fluid flow and heat transfer in vertically oriented cylindrical enclosure 2-114786
 fluid layer, convective, heat flux 2-70953
 fluid mechanics, basic research needs review 2-60518
 fluid-wall, coeff. determ. (*French*) 2-60544
 fluidised bed, heat transfer and hydrodynamics (*Russian*) 2-55586
 fluidised tubes, pilot-scale, heat transfer to horizontal tubes 2-65640
 fluids far from equilibrium, nonlinear reson. coupling of shear and heat fluctuations 2-114797
 forced circulation solar water heating system transient analysis 2-83511
 forced-convection heat transfer to boiling liquids 2-75840
 free bounding problems solution, Stefan problem 2-70820
 free liquid jet and its influence on direct contact heat transfer, hydrodynamics 2-97607
 free stream turbulence, stagnation point heat transfer 2-103159
 free-molecular gas stream, reflection by concave surface, heat transfer calc. 2-60579
 freely expanding gas jet, thermal effect on flat plate 2-86314
 freestream turbulence, boundary layer struct. on circular cylinder 2-91407
 freezing round pipes in crossflow through a porous medium, heat transfer 2-71014
 Freon, film and transient boiling, effect of porous coatings on heat exchange 2-60535
 Freon 113, flow boiling system, dryout heat flux and entrained drop size 2-91512
 fusion reactor, CC Li blanket, heat flow, thermoelectric MHD effect 2-85304
 gas flow, normal to finned and small tube banks, heat transfer 2-55578
 gas in planar, cylindrical and spherical geometry, self-similar solns. for nonadiabatic expansion 2-71061
 gas turbine, open cycle, efficiency improvement and superiority of steam injection 2-81208
 gas-liquid cocurrent flow in packed bed, heat transfer 2-109399
 gas-liquid systems, speed of sound effect on hydrodynamics and heat transfer 2-91514
 gas-solid reacting systems, heat and mass transfer, thermodynamic approach 2-65635
 gases, polyatomic, heat transfer, mag. field effect 2-81434
 gases with real vibr. spectra, mol. vibr. anharmonism, influence on internal energy flux (*Russian*) 2-81216
 generalised heat equation (*French*) 2-95292
 generalised spectral angular emission coefficients calc. of 3-D radiating systems with radiation characts. variation 2-60366
 geometrically inhomogeneous non-ideally conjugated thin-walled body, heat cond. (*Russian*) 2-65443
 geothermal power state-of-the-art of recovery process models 2-83453
 heat balance in a wall incorporating a thermoelectric cooling device 2-99820
 heat equation, exact control, basis functions 2-86201
 heat equation, Wiener's criterion, boundary point 2-114602
 heat equation with singular initial data, discretisation 2-95287
 heat exchange near a front point with stepwise variation of the stream temperature 2-60537
 heat exchangers, shell and tube arrangement, heat transfer 2-65454
 heat exchangers with twisted flow, velocity and static pressure distributions experimental investigation 2-97658
 heat pipe pipe with closed capillary struct. 2-60374
 heat transfer measurement thermoelectric printed circuit device (*French*) 2-64025
 heat-generating boiling pools, heat transfer from vertical at inclined boundaries 2-114803
 heated concrete, moisture and heat transfer, finite element program 2-69711
 Hele-Shaw boxes, heat transfer, stability holographic interferometry study 2-55677
 helical tube heat exchangers, in-line and cross-flow, heat transfer 2-55558
 n-heptadecane, heat source, melting, solidification, heat transfer, interface motion 2-55404
 heterogeneous media, linear heat eqn. soln. 2-109162
 n-hexane, laminar boundary layer, heat and mass exchange with vaporisation and combustion 2-60503
 high level waste management, heat transfer in storage and processing 2-74824
 high speed turbulent models at rough wall boundary layers 2-91403
 High Temperature Water for transport and distribution of heat 2-67871
 horizontal enclosure, flow and heat transfer, effect of horizontal and vertical temp. differences 2-97657
 horizontal storage tanks thermal stratification anal. using one-D numerical model 2-78259
 horizontally directed crystallisation, heat transfer processes (*Russian*) 2-67211
 hydrodynamics and heat transfer theory, similarity anal. and asymptotic models 2-75827
 ICF liquid metal first wall surfaces, gas dynamics and heat transfer 2-80242
 identification using Galerkin method 2-70824
 ill posed problem 2-91432
 incompressible flow, heat transfer, finite element computer anal. 2-55587
 incompressible flows, turbulence models 2-97534
 incompressible separated flow, laminar and turbulent boundary layers, heat, mass and momentum transfer (*German*) 2-81335
 incompressible turbulent flow over flat plate, boundary layers, heat transfer 2-55554
 incompressible wall turbulent boundary layer flow characts. and heat transfer meas. 2-75941
 Indian developments and appl., w.r.t. international status 2-81205
 inertial confinement fusion reaction systems, heat transfer 2-85258
 isooctane, tube boiling, heat transfer coeffs., critical heat flux 2-91419
 laminar boundary layer, porous medium, blowing, heat transfer, conjugation problem 2-60502
 laminar duct flow, heat and mass transfer with mist form. 2-109269

heat transfer continued

laminar film flow, mathematical model, heat and mass transfer in two-phase flow 2-97495
 laminar flow heat transfer on annular channel walls, phase transitions effects 2-71030
 laminar instability waves, control using new technique 2-75925
 laminar jet of liq. with initial segment, heat transfer during vapour condensation 2-60533
 laminar visco-elastic flow and heat transfer between two stationary uniformly porous discs of different permeability 2-91384
 laminar wavy film flow, condensation and evaporation, Nusselt theory 2-114832
 laminar-turbulent transition, active control 2-75930
 laminated polymer structures, heat protective, optimum design 2-91221
 latent heat thermal energy storage in horizontal cylindrical capsule, high Rayleigh no. calcs. 2-116853
 linear Extrap pinch, equilb. study 2-109580
 liquid and air flat-plate photovoltaic/thermal collector thermal and electrical performance anal. 2-78227
 liquid film type evaporator, downward flow, heat transfer coeff. meas. 2-70934
 liquid metal two-phase flow pattern, transverse mag. field effect, fusion reactor heat exchanger 2-80307
 liquid metals, solidification, thermal and hydrodynamic phenomena, mathematical model 2-115395
 liquids, boiling and cryogenic, acoustic cavitation and vapour bubble dynamics 2-55623
 liquids, critical superheating 2-92152
 living tissue thermal dosimetry and heat transfer 2-62564
 LOCA containment wall steam condensation, heat transfer coeffs. 2-64605
 local and regional hyperthermia, microwave/radiofrequency system clinical evaluation 2-62722
 long-term storage underground during summer for greenhouse heating in winter (*Japanese*) 2-116852
 Lorentz plasma, steady state nonlinear heat flow, numerical study 2-60733
 LWR fuel assembly model, press. drop and heat transfer study 2-90188
 magnetised liquid cylindrical layer break-up, viscosity and nonuniform heating effects 2-86281
 matched oscillations of thermal load and heat carrier flowrate 2-55575
 mechanistic theory for heat transfer between fluidised beds of large particles and immersed surfaces 2-114890
 metal droplets, undercooled, heat flow during solidification 2-56162
 metal heating by mobile heat sources (*Russian*) 2-65457
 MHD flow in a rotating channel 2-109312
 MHD flow through rectangular pipe with discontinuity in wall temps., heat transfer 2-114918
 MHD Hartmann flow, heat transfer 2-60669
 MHD oscillatory flow with heat transfer in a flat plate channel 2-76035
 micropolar fluids heated from blow, overstable motion possibility 2-65568
 microthermopolar fluids, Couette flow between parallel plates 2-97494
 microwave and radiofrequency applicators thermal effectiveness and safety evaluation 2-62718
 microwave bioeffects, heat transfer in surface-cooled objects subject to microwave heating 2-116885
 models, rectangular and cylindrical, with different heat transfer coeff. 2-114609
 moving condensation front, heat transfer in thermal oil processes 2-55557
 multiple void slabs, heat transfer by air 2-109165
 natural draught dry cooling towers finned tube arrangement effect on dimensions (*German*) 2-91218
 neutralizer gas cells, flow characts. and thermal accommodation, exptl. study 2-91546
 Newtonian fluid, high viscosity, in horizontal rectangular ducts, laminar heat transfer 2-109268
 non-Newtonian turbulent boundary layer, mass and heat transfer 2-75828
 noncircular passages, laminar and turbulent flow, heat transfer, calcs. 2-91553
 nonequilibrium fluid, heat and mass transport, entropy, relax. phenomenological eqns. 2-103011
 nonequilibrium junction effects, boundary conditions for charge and heat transfer eqns. (*Russian*) 2-61563
 nonhomogeneous fluids, numerical simulation of free surface thermally induced flows 2-74221
 nonlinear heat-up of a Boussinesq fluid in a circular cylinder 2-60546
 nonlinear media, heat transfer eqns., analytic solns. 2-60347
 nonreacting turbulent flow of jet in opposing stream, heat, mass and momentum transport meas. 2-65573
 nonstationary temp. fields, heat exchange coeff. changes (*Russian*) 2-65452
 nuclear reactor channel, cladding-cooling fluid boundary, heat transport calcs. 2-114789
 nuclear reactor pipe flow, response to wall-attached roughness element 2-108059
 nuclear reactor waste heat pipeline transportation over long distances using thermochemical closed cycle (*German*) 2-67846
 nucleate boiling, surface conditions effect 2-60382
 nucleate boiling mechanism, correl. of data on heat transfer and elementary characteristics 2-75842
 nucleate boiling on nonisothermal surfaces, stability of heat transfer 2-75839
 numerical method for simulation 2-95277
 ocean, heat exchange through sea surface rel. to mixed layer temp. and thickness 2-117308
 oil beds with nonuniform struct., temp. field 2-114759
 one dimensional heat transfer equation with and without phase change 2-97350
 open inclined surface solar regenerators, anal. for absorption coding applications by numerical and analytical models comparison 2-67889
 packed beds, flow and heat transfer anal. 2-55588
 parabolic potential theory 2-63940
 parabolic trough solar collectors fluid control systems frequency response anal. 2-78254
 particle diffusion and heat exchange in stagnant fluidised bed 2-103207
 passive solar heating systems for house, comparison 2-67884
 phase-change water heaters, solar-powered, for houses 2-67883
 pin fin arrays situated in oncoming longitudinal flow, thermal resistance, performance anal. 2-70813

heat transfer continued

pin-fin arrays exposed to novel airflow arrangement, heat transfer coeff. 2-70936
 planar body, initial stage of heating calcs. 2-102997
 plate, heat liberating, cond. problem soln., Biot number time depend. 2-103009
 plate, heat transfer in laminar boundary layer, temp. depend. physical props. effect (*German*) 2-114762
 plate, semiinfinite, thermally stressed state caused by moving heat source 2-97379
 plate with backward facing step, flow charact. of shock tunnel and heat transfer (*Japanese*) 2-55614
 plate with temp.-depend. heat source, temp. distrib. 2-109175
 polyacrylamide solns., turbulent pipe flow, pipe diameter effect on critical Weissenberg numbers 2-70996
 polyatomic gas flow in cylindrical tube, thermal transpiration and mechanocatalonic effect 2-76023
 polyatomic gases, motion of aerosol particles containing internal heat sources 2-114885
 polycarbonate sheet, rapidly cooled from melt, residual stresses and their relief by sectioning 2-57378
 polyethylene, linear, ultrahigh modulus, melting, superheating effects 2-103955
 polyethylene terephthalate films infrared radiation properties, application as solar collector covers 2-67890
 polymer melts, nonisothermal flow in narrow rectangular cavity 2-97656
 pool boiling heat transfer, meas. apparatus (*German*) 2-97547
 porous bodies, surface phenomena occurring due to heat and mass transfer processes 2-109315
 porous media, heat exchange effect on HF oscils. 2-103163
 power law fluids in flat gaps with various thermal wall conditions, laminar heat transfer 2-114785
 power law time independent fluids, thermohydraulics in corrugated tubes 2-91427
 power station boiler furnaces heat flux measurement devices 2-81212
 problem analysis by Beuken thermoelectric model and digital computer combined 2-70806
 pseudoturbulent bed of dispersed material, heat transfer 2-103165
 pulsating laminar flow in a pipe, heat transfer with const. wall temp. 2-91540
 pulsed thermal loading on Cu, heat transfer to He I and II 2-60358
 radiation heat transfer using mean photon path lengths 2-91424
 radioactive waste repository, regional heat transfer 2-64514
 rarefied gas between parallel plates, boundary conditions effect 2-97597
 rarefied gas flow between noncoaxial circular cylinders, thermal stress slip flow 2-86309
 refrigerant 12, forced convection boiling in uniformly heated vertical tubes, critical heat flux 2-70837
 refrigerants boiling on tubes covered with porous coatings, heat transfer 2-75838
 refrigerator, absorption diffusion type, for domestic use 2-73141
 refrigerator-radiator devices, thermohydraulic characteristics 2-109169
 respiratory heat transfer in cold water and during rewarming 2-88514
 reynolds-number dependence of the structure of a turbulent boundary layer 2-109301
 rod bundles near grid spacers, heat transfer augmentation, single-phase and dispersed flow 2-91440
 rotating slots and bends 2-55574
 rural solar collector utilising heat storage by sand/iron filings mixture, performance anal. 2-78246
 saline water, laminar buoyancy-driven flow near melting ice surface, transport meas. 2-70901
 saline water, laminar buoyancy-induced flows near melting ice surface 2-70900
 salt gradient stabilised shallow solar ponds, transient thermal behaviour 2-78257
 seawater, drag and heat transfer in thermal desalination 2-75958
 selective coatings on passive solar energy storage walls, performance prediction 2-99833
 separated flows, heat exchange, separation of vortices from heated surface (*Russian*) 2-55569
 shock wave propag., vaporisation heat and mass transfer 2-114849
 simultaneous melting-condensation on vertical wall anal. 2-91439
 skylight energy balance analysis procedure, for building illumination design 2-70825
 solar absorber converter with intermittent output, thermal performance testing and anal. 2-78250
 solar absorber converters heat transfer coefficients, effect of leeward orientation, adiabatic framing surfaces and eaves 2-99834
 solar absorber-converter performance prediction using simplified nonlinear mathematical model 2-99837
 Solar Coil Collector design using concept of heat exchanger effectiveness and transfer units 2-111591
 solar collector optical characteristics anal., effect on collector efficiency 2-99827
 solar collectors, air heating, plate-type, flow passage geometry optimisation 2-78253
 solar collectors, horizontal coaxial cylinders, heat transfer, thermal performance 2-83508
 solar energy absorbing chromophoric materials in heat transfer fluids, thermal and photochemical studies 2-99839
 solar energy concentrators, conical, portable, design and development 2-78189
 solar heating system, passive, aerodynamic resistance adjusted coefficient determ. 2-116846
 solar pond mixing layer development interferometric study in laboratory simulation 2-83516
 solar power stations saturated steam generation heat transfer and thermal optimisation 2-116781
 solar radiation distribution in natural waters under field conditions 2-78817
 solar receiver, bench model, hot tube to manifold ceramic joint, thermal stresses 2-67892
 solar space heating for single-storey building in Uzbek SSR, study 2-73145
 solar stills, temp. regime calc. 2-73144
 solar water heaters, comparative test 2-73142
 solar water heaters using standard steel panels, in Dagestan ASSR test results 2-73143
 solid-solid interface, thermal contact resist. 2-65453

heat transfer continued

solidification, unidirectional, axial temp. characteristics, numerical calc. 2-66181
 solidification interface shape from sinusoidal heating anal. 2-91522
 space heating by heat receiving wall with heat storage, thermal insulation props. with variable weather 2-99823
 spheres, single, in low Reynolds number flow, heat or mass transfer 2-65584
 stable salinity gradients, heated from below or cooled from above 2-65634
 stationary problem with strongly varying coefficients, numerical soln. 2-114605
 steady laminar flow through twisted square pipes, heat transfer 2-55581
 steady MHD Couette flow, effect of Coriolis force and Hall effect 2-86286
 steady transonic duct flow, aerodynamics interaction of heat transfer 2-70930
 steam, heat transfer in condensation on finely-finned horizontal tubes 2-91423
 steam condensation in a vertical tube, heat transfer coeff. 2-91422
 steam generator tubing, critical heat flux-induced temp. oscils., thermal modeling 2-70939
 steel ingot, hollow cylindrical continuously cast, solidifying, temp. distrib. analysis 2-67317
 Stefan problem, 2-phase, stability of smooth solutions (*Russian*) 2-75954
 Stefan problem, inverse problems of determining boundary regimes 2-114610
 Stefan problem, solution of nonlinear parabolic equation 2-60362
 Stefan problem, two-phase, inequality for coeff. σ of free boundary $s(t) = 2\sigma/\sqrt{t}$ of Neumann soln. 2-75829
 subcooled boiling in pipes, heat transfer and hydrodynamics 2-91420
 superconductive windings cooling by helium in various phase states, calculation fundamentals (*Slovak*) 2-69180
 supercritical once-through steam generator, variable pressure operation, two phase flow in furnace wall tube (*Japanese*) 2-86326
 superheated liq., vapour bubbles growth, heat transfer eqn. 2-109319
 supersonic jet entering conical cavity, gas heating and press. pulsations 2-70985
 supersonic laminar viscous flow past a cone, heat transfer, flow separation, vortices 2-109362
 swirled-film cooling of cylindrical channels 2-91416
 thermal boundary layer, diffusion controlled, mass and heat transfer 2-65577
 thermally stratified flow under unstable conditions, turbulence, ordered motion 2-109389
 thermally symmetric nonlinear solids, heat transfer 2-55401
 thermocapillary flows around hemispherical bubbles 2-102157
 thermocapillary flows in two-dimensional slots 2-109408
 thermoelastic waves in circular cylinder, dispersion and energy dissipation 2-102974
 thermoelectric heat pumps with heat transfer from wide surface, energy parameters generalised equations 2-99818
 thermohaline system, double-diffusive, mixed layer development 2-78260
 thermohydraulic characteristics of single rods with three-dimensional roughness 2-91430
 thick bodies, exposed to radiative-corrective heat transfer, generalised temp. response charts 2-55398
 three-phase packed and fluidised bed, heat transfer coeff. 2-71013
 time-dependent radiative transfer with automatic flux limiting 2-97356
 transfer of momentum, mass, and heat in bubble columns (*German*) 2-86278
 translating drop in elec. field, heat and mass transfer 2-91428
 transonic flows, heat and mass addition, similarity rules 2-103186
 transport processes and unit operations (book) 2-63767
 Trombe wall collector, modified, heat losses anal. and reducing measures for domestic space heating 2-67888
 tube banks; closely-packed oval, twisted, hydraulic drag and heat transfer (*Russian*) 2-60659
 tube banks, velocity fluctuations influence on heat transfer (*Russian*) 2-60541
 Tuesdell viscoelastic fluid, free convection flow in heated channel 2-114855
 turbulent air stream, liq. evaporation, heat and mass transfer 2-65586
 turbulent boundary layer, reactive material injection, combustion 2-114778
 turbulent boundary layers, molar momentum and heat transfer, universal relations 2-103164
 turbulent liquid jets, heat and mass transfer 2-71003
 turbulent non-equilibrium dispersed flow, boiling, heat transfer 2-55559
 two phase flow about surface located in rectangular channel, heat exchange 2-60627
 two-phase wet steam in evaporator tube, boiling crisis 2-91417
 unstably-stratified open-channel shear flow, turbulence struct., buoyancy effects 2-109305
 unsteady heat transfer in laminar non-Newtonian boundary layer over a wedge 2-81334
 unsteady incompressible boundary-layer flow over a rotating sphere 2-103143
 unsteady slow flows over a cooled flat plate 2-86277
 vapour bubbles in boiling liquid, growth and collapse 2-109396
 vapour filtration in dispersed media, heat and mass transfer eqns. 2-60640
 vapour flow condensation charact. in channels 2-91544
 vapour generating tubes, heat transfer under transcritical conditions 2-91418
 vapour-gas mix., heat and mass transfer on high-rate evaporation of liqs. 2-91421
 viscoelastic liquid in converging channel, laminar flow development and heat transfer 2-109413
 viscous fluid, flow between porous plates, heat transfer, MHD, Hall current effect 2-103216
 viscous fluid flow and heat transfer, phase transition effects 2-81337
 viscous inert and reactive fluids, flow in long tube, temp. discontinuity effects 2-60644
 Vuilleumier heat pump for domestic space heating, evaluation 2-62494
 wall-attached cylinder in crossflow, heat transfer, visualisation, appl. to fins 2-55580
 wall-to-atmosphere heat transfer meas., impulse sensors (*French*) 2-64026
 water, boiling, critical heat flux determ. 2-60538
 water, film and transient boiling, effect of porous coatings on heat exchange 2-60535

heat transfer continued

water, flow boiling heat transfer enhancement with polymer additives 2-55567
 water, hydrodynamically stable-flow in annuli, burnout at varying heat inputs 2-91541
 water, laminar boundary layers, heated, stability, minimum critical Reynolds number estimation 2-109272
 water heating system design for residential three storey building in Turkmen SSR 2-73140
 water thermohydraulics in corrugated tubes 2-91427
 welding, glazing, and heat treating, dimensional anal. of heat flow 2-109321
 wetting characteristics of contact line change of phase heat transfer, adsorpt. and capillary condensation 2-71772
 xylene, tube boiling, heat transfer coeffs., critical heat flux 2-91419
 Zircaloy-2 sphere, in the Ar and Ze, thermal accommodation coeffs. 2-74827
 Bi/liquid ^4He interface, transient heat transfer, light induced enhancement 2-92431
 Ge thin film thermometers, for use at low temps., characts. 2-74412
 H in pipes, film boiling, heat transfer in plug regime 2-60534
 H₂ production by water splitting, thermochemical cycles 2-57743
 H₂O, flowing, heat transfer in a horizontal tube at supercrit. press. (*Japanese*) 2-55577
 H₂O, supercritical pressure, heat transfer deterioration, flow direction and grooved surface effect (*Japanese*) 2-55576
 ^4He , liquid, superheating limits, homogeneous nucleation temp. 2-115481
 ^4He , superfluid, low-Reynolds number heat exchange drag 2-61228
 ^4He , superfluid, subcooled, time depend. heat transport 2-115483
 Hg, type I superconductor, supercooled and superheated metastable phases, average lifetime meas. (*Russian*) 2-115957
 Hg-Ar two phase heat transfer in vertical annulus under transverse mag. field 2-114873
 ^85Kr storage cylinder, adsorption, heat transfer 2-64694
 MgSO₄, decomp., kinetics, solar energy storage (*French*) 2-93948
 NH₃-H₂O absorption refrigeration cycles, solar operated, simulation, design and economics for building cooling 2-99835
 N₂O₄, in circular pipes, dissoc., heat transfer in turbulent flow 2-70918
 Ne liquid, critical superheating 2-92152
 Ni film-electrolyte system, transient processes initiation by IR laser pulse 2-82046
 Pb, type I superconductor (*Russian*) 2-115957
 Ta, surface transfer processes during arc plasma heating and oxidation, mag. field effect (*Russian*) 2-99594
 Ti alloys, high melting point, low temp. plasma interaction (*Russian*) 2-99595
 Xe, liq., nucleation near crit. point 2-71624
 YCrO₃-Cr, cermet, struct. and props. 2-60370

heat treatment
 see also annealing; normalising; quenching (thermal); spheroidizing; tempering; thermomagnetic treatment; thermomechanical treatment
 alloys, hardness measurement during nitriding, meas. apparatus 2-72912
 antireflection coating, double-layer, V-type, heat treatment influence on spectral performance at 1.06 μm 2-91023
 antireflection coatings V-type double layer, spectral performance, heat treatment effects 2-81062
 arc welding coated electrodes heat treatment conditions selection 2-93520
 carbide-graphite composite materials, high temp. oxidation, heat treatment effect 2-72722
 cellulose felt, metal-filled, high-porosity material prep., heat treatment and strength props. 2-99383
 cellulose hydrate, struct. transformations by heat treatment, AlCl₃ effects 2-109979
 CR-39 detector, ions track-profile and range, thermal pre-treatment effect on etching characts. 2-59632
 cutting tool carbonitriding in salt baths 2-67643
 diamond, micropowder, thermal ovaling, theoretical model 2-88018
 diamond, N aggregation kinetics 2-81809
 diamond micropowder, oxidation rate, dispersity effect 2-105440
 EBBA, melting and crystn. processes, thermal anal. 2-92198
 elasto-plastic layer bars, stability under irregular heating (*Russian*) 2-75859
 Elnivar, Fe-Mn-V-C, dispersion hardened, nonmag., mech. characts. 2-62132
 epoxy resin, amine cured, thermal modification, thermal and mech. obs. 2-111206
 glass fibre reinforced plastics, interface strength, temp. depend. (*Japanese*) 2-57419
 glass thin films, sol/gel prep. and characterisation, SIMS study 2-82093
 glazing, and heat treating, dimensional anal. of heat flow 2-109321
 metal processing with gas transport CO₂ laser, cutting and heat treating 2-116611
 metallic components under high stress, surface thermal treatment by laser radiation (*Rumanian*) 2-99600
 metallic layer contact system, diffusion-induced boundary migration during heating 2-86952
 nylon-12, oriented, mech. anisotropy, H bonding effects 2-105209
 oxide films, interference-coloured, formed by heat treatment of high-Fe glass 2-116290
 phosphosilicate glass film, H₂O absorpt. and densification 2-115630
 polyacetylene, cis-trans isomerisation on doping and heat treatment, MINDO/3 calc. 2-93791
 polyvinyl alcohol, vibr. spectra, effects of simultaneous UV irradi. and heating 2-57121
 Pyralin, pyrolysed, elec. conduction 2-61470
 pyroceramic cement, vitreocrystalline, struct. and mech. props. after heat treatment 2-72723
 semiconductors, thermal effects 2-103746
 β' -Sialon, density, microstruct. and strength, heating rate effects 2-116467
 α -Sialon, stability at high temps. 2-83145
 SOS, laser annealed, electron Hall mobility and residual stresses, heat treatment effects, Raman study 2-98745
 stainless steel, SUS 304, Ti-coated surface, Auger anal. (*Japanese*) 2-92320
 steel, 12% Cr-heat resisting, hardness of creep-ruptured specimens, residual life prediction (*Japanese*) 2-62204
 steel, alloy, heat treatment into lower bainite, C distrib., alloying elements influence (*Russian*) 2-67389
 steel, austenitic, Cr-Mn 2-82109

heat treatment continued

- steel, austenitic, Ni-Cr(Mn), P segregation during austenitisation, effect on cracking and embrittlement 2-57357
- steel, austenitic, Ni-Mo, strength increase by γ - α - γ transition cycles during slow heating (*Russian*) 2-105225
- steel, austenitic cutting tool heat treatment, for austenite grain size meas. as hardness assessment method (*German*) 2-57476
- steel, austenitic stainless, intergranular corrosion, struct. influence 2-72876
- steel, austenitic stainless, multiple heat treatment effect on sensitization (*Japanese*) 2-105194
- steel, austenitic stainless, sensitisation, controlled purity alloys 2-116600
- steel, austenitic stainless, type 304, low-temp. sensitisation in BWR welds 2-80119
- steel, austenitic stainless 304, crack initiation in constant extension rate tests in pure water 2-77985
- steel, boriding, with high-freq. current heating 2-67644
- steel, carburised and nitrided cases, struct. criteria for quality eval. 2-62280
- steel, case hardened, fracture behaviour evaluation by means of fracture mechanics values (*German*) 2-83204
- steel, case hardened depth, depend. on carburisation duration 2-62281
- steel, constructional, fine-grained austenite struct. formed in α - γ recrystn., stability (*Russian*) 2-67376
- steel, Cr-Mo, low alloy, heat resistance at 500°C in Na, NaOH admixture effect 2-67459
- steel, Cr-Mo, low alloy, mech. props. improvement by cyclic heat treatment (*Korean*) 2-67387
- steel, Cr-Mo, surface segregation of impurities (*Czech*) 2-116447
- steel, Cr-Ni (13, 6 wt.%), contrib. to the optimisation of heat treatment (*Czech*) 2-67388
- steel, Cr-Ni-Mo-Mn, Mo distrib. during long-term holding between 554 and 654°C (*French*) 2-72700
- steel, dynamic fracture parameter determ. 2-105291
- steel, fatigue crack propagation, intrinsic material scatter 2-93591
- steel, hardness measurement during nitriding, meas. apparatus 2-72912
- steel, high hardness, grain size effect on fracture toughness (*Japanese*) 2-77921
- steel, high speed R6M3 and R6M5, mag. and elec. props. after heat treatment, NDT appl. 2-67404
- steel, high-speed, effect of determ. under superplasticity conditions 2-62176
- steel, low C, austenitization kinetics in intercrit. temp. interval, effect on struct. and props. (*Russian*) 2-62148
- steel, low-alloy, hardness and brittleness of nitrided case 2-62282
- steel, low-alloy, rolling rolls quality, forging and heat treatment influence 2-67392
- steel, low-pearlite with Nb and V, strengthening phase precip. during hot deform. 2-62133
- steel, maraging, Ni and Cr effect on thermal stresses and relax. capability, thermal welding simulation (*Russian*) 2-67386
- steel, medium C, cavitation resist. of Cr diffusion coatings 2-72872
- steel, Mn-Si(Nb), low alloy, heat treated, $M_{23}C_6$ type carbides form. 2-116469
- steel, Ni-Co-Mo, maraging, biphasic struct., low-cycle impact fatigue strength 2-67530
- steel, nitriding processes control, thermodynamic calcs. 2-67642
- steel, plasma-induced nitrided and carburised layers, technological importance 2-57543
- steel, stainless, cast 13%Cr, QLT treatment effect on toughness (*Japanese*) 2-77914
- steel, stainless, maraging, susceptibility to warm embrittlement 2-67531
- steel, stainless, Ni-Cr-Mo-Nb-Al, precip.-hardening, struct. and props. after heat treatment 2-72728
- steel, stainless, rapid solidification 2-83106
- steel, stainless, SUS 304 (*Japanese*) 2-67635
- steel, stress-relieved SAW metal, Nb microalloyed, mech. props. and microstruct. 2-105192
- steel, tool, wear under boundary lubrication, effect of heat treatment 2-88206
- steel cold-drawn boron treated, rapid heat treatment effect on microstruct. and tensile props. 2-116466
- steel-Al deformation welds, fracture toughness testing 2-67483
- steels, AISI 302, 304, 316, 347, C-precipitation influence on low temp. impact strength, corrosion, austenite stability 2-57508
- undercooled alloys, grain refinement obs. solute effects 2-62146
- Volcoloy, antiferromagnetic Invar type alloy in Mn-Ge system (*Japanese*) 2-77291
- Ag colloid, form. on float glass surface by heat treatment, optical props. 2-92398
- Ag₂VO₄, superionic conductor, heat of transport 2-92262
- Al alloy 7075, dislocation transport of H, rel. to hydrogen embrittlement 2-83220
- Al alloys, high strength, exfoliation corrosion, math. modelling 2-105362
- Al magnetron sputtered film overlaid with plasma SiN film, trapped Ar induced deformation 2-82155
- Al₂O₃, defect trapping of implanted D 2-92020
- Al-alloys, Mossbauer study of Fe impurities 2-56997
- Al-Li-Mg, Mg effect on Young's modulus 2-57391
- Al-Mg based alloys, surface corrosion during heat treatment 2-99598
- Al-Si (Mg)(Zn), thermal cycling influence on alloying elements soln. 2-72738
- Al-transition metal nitride (carbide) films, interfacial reactions, expt. study 2-56368
- Al₂O₃ fibre, prep. and changes of microstruct. by heat treatment (*Japanese*) 2-116417
- Al₂O₃ fibre reinforced Al, work of fracture, effect of isothermal exposure and thermal cycling 2-57472
- Al₂O₃-SiO₂-Fe₂O₃, heat treated, Fe valence-coordination state, Mossbauer study 2-103662
- As₂S₃ amorphous film, struct. changes due to laser irradiation and thermal treatment 2-86579
- As₂S₃, evaporated layer, photoselective solubility rel. to heat treatment (*Russian*) 2-64141
- B fibre reinforced Al, work of fracture, effect of isothermal exposure and thermal cycling 2-57472
- BaO-B₂O₃-SiO₂, liquid-phase separated, chem. stability and microhardness 2-105336
- BaTiO₃ semiconductive ceramics, positive temp. coeff. of resist. under reduced atm. 2-87270

heat treatment continued

- Bi, thin film, as grown, lattice distortion energy spectra, thickness depend. 2-87415
- Bi thin film, resistivity and energy gap variation with film thickness 2-92791
- C fibre reinforced Al-Si, TiC barrier coating effect on reaction between components 2-99373
- C fibre reinforced phenol resin composites, Young's modulus, repeated heat cycles effect 2-83154
- C fibre surfaces, XPS and heat treatment effects 2-99296
- C, fibrous and particulate, catalytic graphitisation, process characts. and mechanism 2-78129
- C, soft, thermopower, 4.2 to 280K, rel. to phonon drag, heat treatment temp. influence 2-77103
- C stripper foils, laser treated, prep. and tests 2-108174
- CaF₂, fluoride, thermoluminescence rel. to pretreatment history 2-72566
- Ca₂La(NH₄)₂Si₂P(V, As)₂O₂₆, solid phase synthesis, apatite struct. 2-111067
- CdGa₂Te₄, amorphous film, structural ordering, effect of group I metal impurities 2-87114
- CdS, Se_{1-x} thin film, growth on CdS substrate by solid-state diffusion, composition control 2-71813
- CeCu₂Si₂, superconductivity 2-66691
- Co-Fe-Cu-Hf-Sm, permanent magnet, microstruct., SEM study 2-92224
- Co-Fe-Cu-Zr-Sm-(Ti), permanent magnet, microstruct., SEM study 2-92224
- Co-Ga, mag. and struct. props., Mossbauer study 2-116097
- Co-P amorphous alloys, contraction during struct. relax., heat treatment effects 2-71674
- Co-Cu single cryst., magneto specific heat capacity, superparamagnetic clusters 2-92944
- Cu-Sn(100) surface struct., LEED obs. (*Japanese*) 2-115511
- CuCl in glassy matrix, growth kinetics of microcrystals obs. 2-103661
- CuFe₂O₄ ferrite, elec. cond. mechanism, phase transformation, heat treatment effects 2-71981
- CuInSe₂, spray pyrolysis and heat treatment, for photovoltaic appl. 2-71843
- CuInSe₂/Fe, EPR study, thermal treatment effects 2-98945
- Cu₂S-CdS heterojunction solar cell, Cu diffusion effects, theoretic anal. 2-73115
- Cu₂S-Zn₂Cd_{1-x}S film struct., Cd and Zn cross diffusion, AES, ESCA and atomic absorpt. spectra study 2-66299
- Cu₂-S thin films, oxidation-reduction effects on optical absorption, application in solar cells 2-82941
- Cu₂Zr₄₀ metallic glass, bend testing, heat treatment effect on mech. props. 2-88322
- Fe acicular particles, mag. props. and morphology, heat treatment effects 2-77328
- Fe, cast, cavitation resist. of Cr diffusion coatings 2-72872
- Fe, grey cast, local electric arc remelting for generation of wear resistant layers 2-111363
- Fe, nitriding processes control, thermodynamic calcs. 2-67642
- Fe:N, ion implanted, temp. stimulated outgassing 2-11205
- Fe-Al (12 wt.%), high permeability mechanism, soft mag. props. 2-82654
- Fe-B (19.1 wt.%), amorphous, structural transitions under thermomagnetic treatment (*Russian*) 2-61130
- Fe-Cr based alloys, damping capacity, mag. field, heat treatment and cold working effects 2-57393
- Fe-Cr-Co permanent magnets, mag. props. and Mossbauer effect 2-72282
- Fe-Mn alloy, ϵ - α + β transform. on heating 2-105142
- Fe-Ni Invar alloys, FCC, linear expansion coeff. control by heat treatment (*Russian*) 2-61177
- Fe-Ni-Co (54, 28.5, 17.5 wt.%), struct. transforms. of FCC phases on heating 2-62121
- Fe-Si, grain orientated elec. steel, decarburization rate related to surface oxidation, math. model 2-83284
- Fe-X-C (X=Ti, V, Nb, W, Cr, Mo), C activity, influence of alloying additions (*German*) 2-93491
- Fe₄₀Ni₄₀B₂₀, metallic glass, short-range ordering during structural relax. 2-71359
- Fe₃Ni₁₆Cr₁₄P₁₂B₆, Metglas, heat treatment effect on internal friction 2-62151
- Fe₄₀Ni₄₀Si₁₄ (P₁₄)B₆ metallic glass, positron annihilation, electron irradi. and heat treatment effects 2-104992
- GaAs, heat treated in H₂-Ar₂, surface thermal decomposition, Ar₂ partial press. effects 2-62246
- GaAs, seminsulating, Cr gettering by Ne ion implantation, elec. activation of implanted Si 2-55993
- GaAs substrate for MBE, thermal removal of surface C 2-116572
- GaAs₂Te, Cu contamination during heat treatment, photolum. study 2-91993
- GaP:N LED degradation, surface corrosion 2-116559
- GeO₂-SiO₂ glasses from gels to increase oxidation resist. of porous Si-containing ceramics 2-77797
- GeSe₂ amorphous film, struct. changes due to laser irradiation and thermal treatment 2-86579
- In-Sn-Cu system, dispersion-hardening pastes, phase comp. 2-111143
- Ir film on n-Si, silicide form., AES study 2-86951
- LiNbO₃, single crystal, optical uniformity, expt. study 2-86065
- Li₂O-SiO₂ glass, phase separation, Raman spectroscopy study 2-92212
- LiTi₂O₄ supercond. film, prep. and props. 2-115940
- (Mg,Fe)₂SiO₄, atomic C depth profiling meas. 2-99721
- Mg-Li-Al-Cd, superplastic deform., effect on struct. and props. 2-62180
- Mg₂Al₂Si₂O₁₀TiO₂, changes in spectral props. at initial stages of crystn. 2-72529
- Mg,Mn₂Fe₂O₄, Mossbauer study 2-104782
- MgO, atomic C depth profiling meas. 2-99721
- MgO-Fe₂O₃, solid-phase interaction, ESR investig. 2-87579
- Mo and alloy TZM, ductile-brittle transition, low cycle fatigue effects 2-72807
- Mo, interaction with molten Cu 2-72873
- MoO₃-Al₂O₃, catalyst, struct. of uncrystallised Mo compounds 2-65862
- MoO₃-Al₂O₃ system, reaction and degree of cryst., effect of prep. conditions 2-67206
- Na₂O-B₂O₃-CeO₂.3Nb₂O₅-(Al₂O₃) porous glass ceramic 2-77811
- Na₂O-Fe₂O₃-Al₂O₃-SiO₂ glass with decorative cryst. surface film, synthesis 2-67275
- Na₂O-Fe₂O₃-SiO₂, glass, surface dealcalisation, role of iron oxides 2-73016
- Na₂O-SiO₂ glass, phase separation, Raman spectroscopy study 2-92212

heat treatment continued

- Na₂O-SiO₂-B₂O₃ glass, phase separation, Raman spectroscopy study 2-92212
- Nb, mech. props. and struct., influence of long high-temp. holds 2-88114
- Nb-W, mech. props. and struct., influence of long high-temp. holds 2-88114
- Nb-W-Mo-Zr-Re, deform. and fracture, alloying and heat treatment influence 2-111252
- Nb-Zr (1 wt.%) alloy, fatigue failure in various struct. states 2-99547
- Ni, electroless deposits, heat treatment effects on physical props. 2-57384
- Ni films and coatings, porosity and internal stresses, annealing and thermal cycling effects (*Russian*) 2-76870
- Ni superalloy, creep life, effect of room temp. restrain and subsequent heat treatment 2-72833
- Ni superalloys, NIM80A, NIM90, NIM105, IN738, IN939, long-term growth of γ particles 2-105153
- (Ni)-Co-Cr-Al-Y coatings, on IN-100 and Udimet 520 superalloys, microstruct. stability 2-99462
- Ni-Cr₃C₂ electroless composite coatings for wear resistant applcs., prep. and characs. 2-67666
- Ni-Cr-Nb-Mo-Al-Ti, heat-resistant, homogenisation effect on struct. and plasticity 2-62181
- Ni-Mo steel, phase transitions during heating and strengthening (*Russian*) 2-116438
- Ni-P chemically formed coatings struct. and props. (*Russian*) 2-92400
- Ni-P-B coatings, heated in air, struct. and props. (*Russian*) 2-57382
- Ni-SiO₂ dispersion hardened alloy made by internal oxidation method, high temp. hardness (*Japanese*) 2-105303
- Ni-W, directionally crystallised eutectic, crystallographic struct., electron microscopy study (*Russian*) 2-91870
- NiCr thin films, sequential heat treatment effect on resist. and TCR 2-110496
- Ni₃Cu_{1-x}Fe_xO₄ spinel ferrite, influence of Ni²⁺ ions on distrib. of Mg²⁺ ions, magnetisation meas. 2-60938
- Ni₃Mg_{1-x}Fe_xO₄ spinel ferrite, influence of Ni²⁺ ions on distrib. of Mg²⁺ ions, magnetisation meas. 2-60938
- Pb₂O₃-SiO₂ glass passivation layers, cracks and Al corrosion 2-88234
- Pb-In films, thermal cycling between room and liq. He temps., microstruct. changes 2-111214
- PbO-V₂O₅ equimolar system, new phases 2-93496
- Pb₃Sn₉Te, amorphous-cryst. films, optical and elec. props. 2-104373
- PbTe, frozen cond. study (*Russian*) 2-56739
- Pd crystallites, wetting phenomena, alternating heating in O₂ and H₂ 2-86974
- Pd/a-Si:H Schottky barriers, heat treatment effect 2-77183
- Pt growth, on Rh, and evolution of interface under thermal treatment 2-82152
- Rh film on n-Si, silicide form., AES study 2-86951
- Se, amorphous film, photocond. stabilisation and evolution, thermal history effects (*French*) 2-72030
- Si, Czochralski grown, thermally induced microdefects, nucleation and growth obs. 2-57379
- Si Czochralski wafers, heat treated, brittle and ductile, fracture and yield stresses meas. 2-92091
- n-Si, heat treated, γ -irradiated, photoelec. props. 2-77120
- Si, heat treated wafers, metal decorated haze microdefects, TEM and energy dispersive X-ray anal. 2-91946
- Si, heat treatment centres, g-values 2-66918
- Si, self ion implanted, residual lattice disorder after pulsed laser irradi. 2-76494
- Si solar cell, flat-spot power loss phenomenon at low temp. and low intensity 2-116819
- Si, with C impurity, β -SiC particles segregation mechanism and kinetics 2-57354
- Si:As(P), CVD film, elec. characs., grain size, effects of impurity conc. and heat treatment 2-82487
- Si:B, polycrystalline, B⁺ ion implantation, heat treatment effects 2-103795
- Si:B(P)As, supersaturated, ion implanted and laser annealed, heat treatment effects 2-92000
- Si:C, O, reactor neutron irradi. effect on C impurities 2-109839
- Si:H P amorphous glow discharge thin films, elec. props., heat treatment and P ion implantation effects 2-61467
- Si:Li, neutron transmutation doped, heat treatment effects 2-115304
- Si:O, induced recombination centres, struct. and formation kinetics, expt. study 2-86707
- Si:O, O precip., IR absorpt. and TEM study 2-92208
- Si:O donor centres, heat treatment effects, Hall meas. and ESR study 2-61401
- Si:P, As, Sb, ion implanted, multiphase electron beam annealed, impurity profiles 2-103803
- Si:P, radiation doped, recombinational props. and elec. cond., thermal treatment effect (*Russian*) 2-71995
- Si/Pd-W(Pd-Si)(Pt-W)(Pt-Si), shallow silicide contact of high Schottky barrier formation, expt. study 2-66622
- Si₃N₄, reactive sputter-coated reaction-bonded 2-99336
- Si₃N₄-Y₂O₃ (6 wt.%), density, microstruct. and strength, heating rate effects 2-116467
- Si₃N₄-Y₂O₃-SiO₂, strengthening by post-fabrication heat treatment 2-83131
- SiO₂ and SiO₂-TiO₂ glasses prep. by sol-gel process 2-77795
- SiO₂ gels, surface characs., effect of inclusion of polyglycol 4000 2-78143
- SiO₂ interface degradation and minority carrier lifetime effects of laser beam processing 2-61609
- SiO₂, vitreous, large block, elastic props., nonuniform distrib. 2-103898
- SiO₂-Al₂O₃-P₂O₅-Sb₂O₃ glasses, strengthened by ion exchange, stress relaxation 2-99471
- SiO₂-B₂O₃-Na₂O microporous glass, swelling in water rel. to heat treatment 2-111209
- SmCo₅, sintered permanent magnets, fine struct. and mag. props. (*Russian*) 2-104664
- SmCo₇, mag. props., effect of heat treatment and addition of Fe, Mn, V and Sn (*German*) 2-67575
- Sn/Fe interface form., chem. interdiffusion, Mossbauer study 2-104171
- SnSb thin films, obliquely vacuum-deposited, elec. cond., defect density and struct. 2-66662
- Sr₂La(Nd)₂Si₂(P, V, As)₂O₂₆, solid phase synthesis, apatite struct. 2-110167
- SrO-BaO-Al₂O₃-TiO₂-SiO₂ system, crystallised-glass materials, isomorphous substitutions, X-ray diff. study 2-71615

heat treatment continued

- Ti, structural transformations, thermal treatment influence (*French*) 2-72694
- β -Ti-Mn(V)(Mo-V), magnetic susceptibility variation with ageing rel. to microstruct. changes 2-83247
- TiN film, Cu diffusion 2-98502
- TiO₂, electrophys. and photoelectrochem. props., uncontrolled impurities effects (*Russian*) 2-93799
- TiO₂-Pt ceramics, heat treated, elec. rectification obs. due to PETi, lamellar microstruct. 2-115748
- V₂O₅, evaporated thin film, electrochromism (*Japanese*) 2-62000
- W, high-purity, prep. scheme 2-105105
- W, polycrystalline, deformed, grain growth during fast heating (*Russian*) 2-93542
- W-O system, phase struct., X-ray diff. and electron microscopy study 2-60952
- WC-Co (25 wt.%), martensitic transform., transverse rupture strength 2-105289
- Y(Co,M), (M=Ni, Cu, Al, Ti, V, Cr, Mn, Fe), metastable character, decomposition behaviour, precipitation 2-67342
- Zn-Al alloys, thermal cycling effect across eutectoid transformation temp. on superplasticity 2-67440
- ZnO, RF, sputtered film, heat treatment effects on elec. and optical props. 2-72087
- ZnSe, exciton-impurity complexes, photoluminesc. spectra study 2-72552
- ZrO₂, highly dispersed powder, hydrothermal modification 2-99461
- ZrSiO₄ glaze, crystn. kinetics, particle disperseness depend. 2-103658
- heated cathodes *see thermionic cathodes*
- heating
- see also electric heating; induction heating; plasma heating; refractories; space heating*
- arc metallisation, electrode heating efficiency and coeff. of material use (*Russian*) 2-67582
- cometary atmospheres, photochemical heating theory 2-112389
- domestic solar water heating system, collector sizing, computer simulation 2-116848
- W equatorial Indian Ocean, diurnal heating 2-83841
- natural-circulation solar-energy stimulated systems for heating water, review 2-11583
- process water heating using heat pump utilising waste water as heat source (*German*) 2-88473
- solar chromosphere, effects of flare XUV radiation on energy and ionisation balance 2-79059
- solar chromosphere heating, role of parametric generation of acoustic-gravity waves 2-68718
- solar corona, hydrodynamic stability of closed structs. and response to heating perturbations 2-58307
- solar corona, implications for mag. field related heating of active region coronal evolution 2-106638
- solar energy use in thermal and combined heat and power plants (*Rumanian*) 2-73071
- solar industrial process heat plants without storage, design, analysis and optimisation 2-105591
- stellar atmospheres, shock heating theory and appl. to stellar coronae 2-89239
- stellar chromospheres, heating when mag. fields are present 2-63366
- stellar coronae, contrib. of mechanical heating to energy balance 2-112424
- stellar coronae, effect of heating on energy balance 2-112425
- stellar winds, thermally sustained, heating mechanism rel. to struct. 2-63367
- Universe, primordial gas heating by background radiation in presence of heavy elements 2-101046
- wind power plant, thermal energy storage (*German*) 2-62502
- Cu₂O, heating dynamics, O₂ partial pressure effect 2-63459
- H II regions, photoelectric heating 2-63566
- heating, buildings *see space heating*
- heating elements
- see also electric heating*
- high-power, high-freq. coaxial feedthrough for pressure vessels 2-64059
- refractory materials plasma-arc spraying onto preformed cores used as furnace heating elements (*French*) 2-62078
- heavily doped semiconductor materials *see heavily doped semiconductors*
- heavily doped semiconductors
- see also degenerate semiconductors; superconducting semiconductors*
- band tailing, deep fluctuation levels 2-76972
- energy gap narrowing determ., minority carrier recomb. as function of doping conc. 2-92645
- energy loss process for nonequilib. hot carriers 2-92641
- Fermi-sea recoil effects in XPS, one dimensional model 2-87951
- ferroelectric semiconductor, highly doped and compensated, model, anomalous photovoltage 2-110384
- impurity ion screening 2-104278
- impurity-band density of states, numerical results 2-71913
- layered inhomogeneity type, anisotropy of galvanomag. effects (*Russian*) 2-61496
- Al_{0.9}Ga_{0.1}As, compositionally graded, electron drift vel., time-resolved optical refl. meas. 2-115771
- CdS, heavily doped, exciton absorption band broadening, Green's function calc. 2-77558
- CdS:In film, heavily doped, elec. transport props. 2-72090
- p-GaAs, coupled LO phonon-plasmon modes and forbidden TO modes, Raman scatt. study 2-57101
- n-GaAs, electronic heat capacity 2-56207
- GaAs, heavily doped, electron pulsed annealed, elec. quality meas. 2-98161
- n-GaAs, heavily doped, Fermi energy and screening length 2-66410
- GaAs:Cr, semi-insulating, impurity modes, far-IR Fourier transform spectroscopy obs. 2-116214
- GaAs:Si, disordered, optical detection of multiple trapping relax. 2-72005
- GaAs:Si, heavily doped, electron scatt. 2-92652
- GaAs:Si, highly doped, MOVPE grown, photolum., SIMS and Hall meas. 2-77568
- GaAs:Te, MBE grown, elec. cond. and photoluminesc. props. meas. 2-56734
- GaAs:Zn, Zn diffusional doping, open-tube method 2-104060
- GaP p⁺-n junctions, highly doped, injection symmetry 2-115868
- p-Ge, strongly doped, anomalous magnetoresistance (*Russian*) 2-82377
- Ge:As/Ga, heavily doped by neutron doping, fundamental optical absorpt. edge profile 2-93145

heavily doped semiconductors continued

- n-Ge:As(Sb), heavily doped, press. effects on magnetoconductivity (*Russian*) 2-56619
 InGaAsP relationship between struct. and props. 2-71486
 InP relationship between struct. and props. 2-71486
 NiO-Mn₂O₃, CuO doped, NTC thermistor material, CuO impurity influence on elec. props. 2-66545
 Si, band gap narrowing calc. 2-115649
 n-Si, electronic struct. and photoluminesc. spectra 2-104290
 n-Si, heavily doped, electron light scatt., theory 2-110880
 Si, heavily doped, recombination mechanisms 2-98666
 p-Si, heavily doped 2-56609
 Si, heavily implantation with BF₂⁺ (BCl₂⁺) and carrier density meas. 2-81803
 Si, ion implanted wafers, high dose rate, laser annealing effects, TEM, backscatt. and channelling obs. 2-56019
 Si surface, high dose N⁺ ion implanted layer (*Chinese*) 2-91997
 Si:As films, heavily doped, thermally and laser annealed, elec. props. 2-115924
 Si:As(P), implanted and laser annealed, electronic states, IR optical props. 2-57112
 Si:Ga, heavily doped, free electron zero-phonon transition, luminescence 2-61954
 a-Si:H,B(P) IR absorption spectra, effects of annealing 2-99156
 Si:P, heavily doped, as amorphous antiferromagnet 2-77283
 Si:P, highly doped, metal-insulator transition, optical and precursive props. 2-72038
 Si:P films, heavily doped, thermally and laser annealed, elec. props. 2-115924
 SnO₂ films As solar-transmitting heat-reflecting coatings 2-105565
 Sn:B(P), heavily doped, defect formation under electron irradi. 2-103822
 ZnO, heavily doped, band gap narrowing, optical transmission study 2-104250

Heaviside layer see *E-region***heavy ion excited X-ray emission** see *ion microprobe analysis***heavy ion-nucleus reactions**

- for inelastic heavy ion-nucleus scattering, see "heavy ion-nucleus scattering"
 A=180-209, (^{6,7}Li, xn), 55-124 MeV, K X-ray multiplicity, collective struct. 2-69595
 angular momentum and energy transfer, theoretical model 2-59382
 anisotropic three-fluid model 2-85094
 anomalous nuclear effects, local colour symmetry of QCD 2-113209
 anomalous nuclei, nonstatic metastable σ - τ phase 2-96030
 barrier-penetration model for heavy-ion fusion 2-96040
 capture cross section in the surface friction model 2-54426
 CC²⁰⁹Bi(¹⁸⁴Kr,X), proximity pot., nucleon current, energy dissipation, mass diffusion 2-113549
 central high energy nuclear collisions, pion prod. model 2-74771
 chaotic fragmentation of nuclei 2-113531
 characteristic resonances and the limits to fusion in light heavy-ion systems 2-107901
 charge equilibrium, preequilibrium light particle emission and projectile splitting 2-113547
 collective nuclear variables, inertial parameters from Feynman path integrals, HI collisions, fission 2-113333
 collective transport theory 2-113544
 composite particle prod., entropy and hadrochemical composition 2-54349
 compound nucleus, from direct reaction, fission product ang. distrib. (*Russian*) 2-101876
 compound nucleus form., superheavy element prod. (*Russian*) 2-101927
 conference, Saclay, France (May 1982) 2-112650
 conference, Varena, Italy (July, 1979) 2-84383
 Coulomb effects in nuclear collisions, relativistic field theory model 2-54438
 Coulomb excitation and Coulomb fission expts., nuclear forces exclusion 2-59397
 Coulomb pot. between spherical heavy ions 2-59226
 cross section transformations in reactions with three outgoing fragments 2-107877
 deep inelastic collisions, charge transfer, zero point oscillation (*Chinese*) 2-54440
 deep inelastic collisions, quantum and statistical fluctuation effects (*Russian*) 2-90157
 deep inelastic collisions, statistical fluctuations, expt. evidence and theoretical implications 2-85093
 deep inelastic heavy ion reactions, polarisation anal. (*Russian*) 2-59402
 deep inelastic reactions, total energy and γ -ray multiplicity, statistical fluctuation effect 2-96043
 deeply inelastic collisions, coherent and stochastic effects, collective dynamics fluctuations 2-59392
 deformed nuclei, spin alignment by Coulomb excitatn, $q_c(\theta)$ approx. 2-90044
 density isomer efforts, phase transitions, shock-wave model 2-59385
 dissipative collision, local equilibration effects 2-107889
 dissipative collisions, quantum dynamical semigroup theory 2-113560
 dissipative deep inelastic collisions, fragment ang. momentum correlation coeff. (*Chinese*) 2-96038
 dissipative heavy-ion collisions 2-113545
 dynamical and thermodynamical equilibrium limit, role of rotational degrees of freedom 2-113548
 dynamics of 10-100 MeV/nucleon, unidimens. gas-dynamic model 2-90130
 dynamics of heavy-ion collisions, conf., Hvar, Yugoslavia (May 1981) 2-84379
 energetic nuclear fragments from cosmic-ray nuclei, anomalous behaviour 2-64426
 energetic reactions, deuteron prod., entropy deduction, effective binding forces 2-80032
 energy dissipation, single particle shell struct. effects, statistical model 2-59391
 evaporation barriers for ⁴He indicate very extended forms for many emitting nuclei 2-90159
 exactly central heavy ion collisions by nuclear hydrodynamics, comments 2-90152
 explosion-evaporation model for fragment production in medium-energy nuclear collisions 2-96032
 fast fission, deep inelastic reactions, compound nucleus form., in dynamic macroscopic model 2-96034

heavy ion-nucleus reactions continued

- fast fission phenomenon, dynamical model 2-85090
 fast fission phenomenon 2-113532
 fast light particle formation direct mechanism 2-54442
 fermion nonequilibrium momentum distrib. relaxation 2-59320
 finite fermion system equilibration, low energy heavy ion reactions, transport eqn. 2-64428
 fragment emission in relativistic heavy-ion reactions 2-96044
 fusion, entrance channel mass asymmetry effect 2-54463
 fusion, excitation functions, Swiatecki dynamic model anal. 2-107891
 fusion, review 2-85082
 fusion, review 2-85111
 fusion cross section, frictionless formula, nucl. structure effects 2-107879
 fusion cross section energy depend., algebraic theory 2-54464
 fusion cross-section from modified SOD method 2-107880
 fusion of very heavy nuclei 2-113533
 heavy ion collisions, hydrodynamical model eqns. (*Russian*) 2-90038
 high energy collisions, light fragment prod., kinetic theory calcs. 2-90148
 high energy collisions, particle prod., chem. equilibrium and quasiregiodic hypothesis 2-90076
 high-energy heavy-ion collision dynamics, nucl. matter eqn. of state 2-113386
 high-energy nuclei collisions, phase transition to quark matter, expt. signatures 2-69593
 high-spin isomerism near A=75 and 100, ns feeding times 2-84941
 high-spin states in nuclei and heavy-ion collisions 2-84944
 hot nuclear matter phase stability, balance eqns., relativistic HI reaction appl. 2-54294
 incomplete fusion and fragmentation 2-85089
 incomplete nucl. fusion 2-113546
 intermediate energy heavy-ion collisions, light particle correl. 2-113535
 intranuclear cascade model, review 2-113455
 ion-ion potential, energy depend. from Negele realistic NN interaction 2-69674
 isovector mode inelastic excitation, microscopic form factors, giant dipole resonances 2-59232
 light particle emission 2-85092
 mass and charge fragmentation, quantum-mechanical treatment 2-85088
 mass asymmetric heavy-ion systems, spin-depolarising modes equilibrium treatment 2-74769
 mass asymmetry, relaxation for fusion 2-113525
 mass asymmetry in fusion and fission processes induced in heavy ion reactions (*Rumanian*) 2-90155
 mechanisms, from fragment spin pol. 2-80027
 multiple Coulomb excitation, in classic S-matrix theory 2-96029
 multiple prod. process study in balloon borne cosmic ray expt. 2-112285
 neck formation in entrance channel, classical dynamical model 2-101928
 neutron evaporation from highly excited nuclei 2-113456
 nuclear fission dynamics and collective phenomena, symposium, Bad Honnef, Germany (Oct. 1981) 2-112657
 nuclear fluid dynaics, TDHF approx., heavy ion low-l fusion window 2-69631
 nuclear fluid dynamics and TDHF 2-101872
 nuclear fragmentation theory, Schrodinger eqn. with time depend. mass parameter 2-54342
 nuclear matter, self-consistent eqn. of state 2-59277
 nuclear structure and heavy-ion fusion 2-64447
 nuclear structure inferred from heavy ion Coulomb excitation in Interacting Boson model 2-69576
 nucleus+nucleus interaction, particle generation mean multiplicity, independent collision model 2-69616
 nucleus-nucleus collisions at medium energies 2-113530
 nucleus-nucleus proximity imaginary pot. from 2-body effective interaction 2-59394
 partial coherence 2-90133
 partial coherence in heavy-ion reactions 2-101936
 particle emission, linear and ang. momentum transfer in studying reaction mechanism 2-113534
 particle prod. at large transverse momentum 2-69498
 phase-space evolution of two heavy ions relative motion, numerical studies 2-113564
 pion prod. and absorpt. in nuclei, conf., Bloomington, IN, USA (Oct. 1981) 2-79266
 pion production above 100 TeV, rel. to cosmic ray air shower interpretation 2-74718
 pionic degrees of freedom behaviour in nuclear matter, microscopical theory (*Russian*) 2-90037
 pionic fusion reactions, coherent pion prod. 2-80044
 polarisation in heavy ion reactions, review, book contrib. 2-54351
 polarisation studies, review 2-53436
 potentials in heavy-ion collisions 2-85087
 projectile fragmentation, intermediate energies, Coulomb final state interaction, charge effect 2-90149
 projectile fragmentation reactions, review 2-113542
 projectile like (N,Z) values on dinuclear liquid drop surface, discrete random walk evolution 2-90134
 prompt fast nucleon emission, nucleon Fermi motion, TDHF theory 2-90129
 proton and pion emission in phenomenological model 2-95983
 proton inclusive cross-section, at high energy, mass number depend. 2-107896
 random walk model in two dims. 2-74773
 relative traslational motion, generator coordinate method, collective motion (*Chinese*) 2-80036
 relativistic, equilibrium attainment, statistical model 2-80024
 relativistic central nuclear collisions, inclusive proton prod., precritical scatt. effect 2-74772
 relativistic collisions, charact. time for strange quarks chem. equilibration in QCD 2-85075
 relativistic collisions, exotic shape isomer products, density and lifetime 2-107887
 relativistic collisions, non-equilibrium thermodynamic approach 2-107882
 relativistic collisions, nucl. disintegration 2-113541
 relativistic collisions for nuclear matter obs. (*German*) 2-107886
 relativistic composite particle emission, chemical equilibrium model 2-96027
 relativistic heavy ion collisions, review 2-59387
 relativistic heavy ion collisions, thermodynamic model for deuteron prod. 2-54432
 relativistic heavy ion fragments interaction cross section meas. using plastic track detectors 2-64424

heavy ion-nucleus reactions continued

- relativistic heavy ion physics expts. review 2-85095
 relativistic heavy ion reactions, review 2-59388
 relativistic heavy-ion collisions, cluster approach to intranuclear cascade 2-101922
 relativistic heavy-ion collisions, isobars and isobaric analogue states 2-59313
 relativistic heavy-ion collisions, projectile fragments, anomalous mean free paths interpretation 2-101921
 relativistic interactions at large momentum transfers 2-113248
 relativistic nuclear fluid coupled to classical field, hydrodynamical eqns. derivation 2-54293
 relativistic peripheral collision, momentum distrib., knocked out nucleon 2-96033
 relaxation studies in fermion systems: nonlinear and finite size effects 2-85020
 resonance formation, entrance channel depend. 2-101944
 resonance structure in symmetric light heavy ion fusion cross sections 2-107827
 resonances in heavy ion collisions, review 2-101931
 resonances in heavy ion reactions, conference, Bad Honnef, Germany (Oct., 1981) 2-101127
 resonances in heavy-ion collisions, expt. status 2-85085
 resonances in heavy-ion reactions, schematic-model predictions comparison 2-85086
 review 2-107878
 rotating nuclei, equilibrium shapes and fission barriers with macroscopic two-centre model 2-90180
 Schrodinger time evolution in truncated subspace, nonlinear approx. 2-90128
 scission point stretch model 2-74781
 sequential three-body reaction, heavy-ion-light-particle angular correlations 2-113527
 simultaneous excitations in nucleus-nucleus interaction potential 2-69677
 solar flares, synthesis of elements as source of flare gamma-ray emission 2-68719
 solid state nuclear track detectors appl. to heavy ion reaction studies 2-64423
 soliton soln. for hydrodynamics eqns. of nucleus-nucleus collisions near speed of sound 2-107840
 spin and isospin fluctuations and depend. on dinuclear complex shape 2-64420
 spin-orbit potential, single folding method calc. 2-59386
 strange particle production in heavy ion collisions, hadrochemical model anal. 2-64383
 strange particle production in the hadrochemical model 2-113529
 structural similarity of nuclear molecules 2-107907
 summer school on nuclear phys., Mikoljki, Poland (Sept. 1980) 2-63732
 TDHF anal., computer calc. 2-96025
 time-dependent HF, present status 2-113383
 time-dependent HF calcs. 2-84984
 transfer reactions, energy spectra, ang. distrib. and polarisation anal., semiclassical theory 2-54423
 transfer reactions as quantum many-body systems probe 2-54242
 two body collisions, effect on heavy ion dynamics, TDMF time relaxation method 2-59390
 e^+e^- pair production, Bethe-Maximon-Davis theory (Russian) 2-64440
 $(^{16}\text{O}, \text{He})$, 75, 175, 2000 MeV/A, multiplicity, breakup mechanism, He spectra, event-by-event study 2-96031
 $^{74}\text{Ni}(X)$, $X = \text{p}, \text{d}, \text{t}, \alpha$, 171-215 MeV, sub-barrier fusion differential cross section 2-59438
 $^{107}\text{Ag}(^{12}\text{C}, X)$, 55-110 MeV/N, high multiplicity reactions in AgBr nuclear emulsion, event by event analysis 2-113565
 ^{26}Al compound nuclei reson. props. for elastic, recoil and α -particle exit channels 2-54435
 $^{27}\text{Al}(^{12}\text{C}, X)$, quasielastic and deep inelastic reactions 2-96024
 $^{27}\text{Al}(^{14}\text{N}, \alpha)$, 115 MeV, final-state interaction and time information study by α - α correl. 2-101924
 $^{27}\text{Al}(^{16}\text{O}, X)$, $X = \text{p}, \text{d}, \text{t}, \alpha$, 140, 215, 310 MeV, differential cross section meas. 2-85076
 $^{27}\text{Al}(^{16}\text{O}, X\gamma)$, 100 MeV, deeply inelastic, fragment γ -ray deexcitation, spin alignment 2-69594
 $^{27}\text{Al}(^{20}\text{Ne}, X)$, 291 MeV, incomplete momentum transfer in heavy-ion fusion 2-96037
 $^{27}\text{Al}(^{32}\text{S}, X)$, deep inelastic collisions, spin transfer meas. 2-107883
 $^{27}\text{Al}(^{32}\text{S}, X)$, deep inelastic collisions, low-l waves contrib. meas. 2-101918
 $^{27}\text{Al}(^6\text{Li}, ^4\text{He})$, 34 MeV, microscopic DWBA anal. 2-90132
 (Ar, X) , 245, 275 MeV, on rare earths, deeply inelastic cross sections 2-80029
 $(^{40}\text{Ar}, X)$, 2 GeV/N, secondary particle behaviour, fragment mean free path 2-80034
 $(^{40}\text{Ar}, \alpha X)$, secondary α -particle interaction mean free path 2-90154
 (Ar, π^-) , 535 MeV, on $\text{Au} = 12-39$, strong Coulomb effects, doubly differential cross sections 2-69675
 $^{40}\text{Ar}(C, \pi^+)$, 533 MeV, pion prod. cross sections, spectator fragment Coulomb effects 2-69676
 $(\text{Au}(^{12}\text{C}, X)$, 30-84 MeV/u, linear momentum transfer determ. 2-85071
 $\text{Au}(C, \pi^-)$, 85 A MeV, subthreshold pion prod. cross section 2-59393
 $\text{Au}(\text{Cu}, X)$, 400 MeV, γ -multiplicities, ang. momentum transfer, collective modes 2-113392
 $\text{Au}(\text{Ne}, X)$, relativistic nuclear collisions, fission and deep spallation characts. 2-90135
 $^{197}\text{Au}(^{12}\text{C}, X)$, 3.0, 12.0 GeV, target fragment ang. distrib., 2-step vector model, intranuclear cascade 2-107895
 $^{197}\text{Au}(^{12}\text{C}, \text{an})$, 77 MeV, high-spin states in ^{205}At 2-59220
 $^{197}\text{Au}(^{12}\text{C}, \text{an})$, 72.5 MeV, ^{208}At excited compounds nucleus lifetime by axial blocking, levels 2-54317
 $^{197}\text{Au}(^{16}\text{O}, X)$, $X = \text{p}, \text{d}, \text{t}, \alpha$, 140, 215, 310 MeV, differential cross section meas. 2-85076
 $^{197}\text{Au}(^{20}\text{Ne}, X)$, 13 MeV/N, correlation between fission fragment and light charged-particles 2-113566
 $^{197}\text{Au}(^{20}\text{Ne}, X)$, 170.252 MeV, fragments charge and ang. distrib. 2-54434
 $^{197}\text{Au}(^{20}\text{Ne}, \text{f})$, 172 MeV, fission after incomplete fusion, correl. between fission fragments 2-113558
 $^{197}\text{Au}(^{20}\text{Ne}, \text{f})$, 252 MeV, ang. momentum, stat. equilib., sequential fission, very asymmetric systems 2-69689
 $^{197}\text{Au}(^{35}\text{Cl}, \text{f})$, fast fission, expt. study 2-107917
 $^{197}\text{Au}(^{40}\text{Ar}, X)$, 343 MeV, heavy fragment pairs, coincidence studies 2-113559

heavy ion-nucleus reactions continued

- $^{197}\text{Au}(^{40}\text{Ar}, X)$, energy equilib. in composite nuclei, correl. between evaporative ^1H , ^4He and fission 2-90139
 $^{197}\text{Au}(^6\text{Li}, X)$, ^{203}Pb level density effects on stat. calcs. for high spin fission 2-113335
 $^{10}\text{B} + ^{14}\text{N}$, ^{24}Mg resonance formation 2-101808
 $^{10}\text{B}(^{14}\text{N}, X)$, 86-180 MeV, fusion, direct and total cross sections, Hauser-Feshbach anal. 2-69692
 $^{10}\text{B}(^{17}\text{O}, X)$, 54-124 MeV, fusion cross sections, compound nucleus limitation effect 2-69691
 $^{90}\text{Be}(^{40}\text{Ar}, X)$, 11.4 GeV, product β -decay lifetimes 2-101846
 $^{90}\text{Be}(^7\text{Li}, ^3\text{He})$, differential cross section meas. (Russian) 2-54441
 $^{209}\text{Bi}(^{136}\text{Xe}, X)$, 940, 1130, 1422 MeV, ^{209}Bi , dissipative collisions, impact parameter influence on element distrib. 2-54436
 $^{209}\text{Bi}(^{40}\text{Ar}, X)$, 255 MeV, fragment spin alignment and misalignment 2-90153
 $^{79}\text{Br}(^{12}\text{C}, X)$, 55-110 MeV/N, high multiplicity reactions in AgBr nuclear emulsion event by event analysis 2-113565
 $^{81}\text{Br}(^7\text{Li}, \text{an})$, 19-32 MeV, ^{81}Br high spin states study 2-54428
 $C(^{40}\text{Ar}, \pi^-)$, cross section for pion prod. near CM vel. 2-59400
 $C(C, \alpha)$, nonlinear effects in pion prod. (Russian) 2-90116
 $C(C, \pi^-)$, 85 A MeV, subthreshold pion prod. cross section 2-59393
 $(^{12}\text{C}, X)$ on Cu, Ag, Au, Gd, Ta, U, 18.5 GeV, fragments recoil props. 2-54430
 $(^{12}\text{C}, X)$ on targets from C to Pb, 1.03 GeV, fragmentation, proton and pion emission 2-113537
 ^{12}C relativistic nuclei interaction with emulsions 2-101911
 $(^{12}\text{C}, X)$, 84 MeV/u, projectile and target fragments prod. study on heavy targets 2-113538
 $(^{12}\text{C}, X)$ on medium, heavy targets, 86 MeV/n, α -emitters prod., cross sections and dynamical props. 2-113540
 $(^{12}\text{C}, X)$ on U, Th, Au, Ni, 30-84 MeV/u, linear momentum transfer determ. 2-113539
 $^{12}\text{C} + ^{12}\text{C}$, ^{24}Mg resonance formation 2-101808
 $^{12}\text{C} + ^{12}\text{C}$ sub-Coulomb resonances on microscopic $^{12}\text{C} + ^{12}\text{C}$, α + ^{20}Ne , ^{24}Mg cluster basis 2-113440
 $^{12}\text{C} + ^{13}\text{C}$ resonance, multistep transfer of nucleons and the formation of molecular orbitals 2-107833
 $^{12}\text{C} + ^{14}\text{C}$ resonance struct. obs. 2-107904
 $^{12}\text{C} + ^{16}\text{O}$ quasimolecular resonance, total reaction cross section near Coulomb barrier 2-107903
 $^{12}\text{C}(^{10}\text{B}, X)$, fusion at sub-barrier energies, S-factor calc. 2-113577
 $^{12}\text{C}(^7\text{B}, X)$, 14-54 MeV, total and fusion cross sections, ang. momenta 2-90186
 $^{12}\text{C}(^7\text{B}, X)$, resonance search in Coulomb barrier region 2-101937
 $^{12}\text{C}(^{12}\text{C}, ^{12}\text{C})$, 2^+ excitation, spin alignment predictions of various models 2-90012
 $^{12}\text{C}(^{12}\text{C}, ^{12}\text{C})$, transition and reorientational pot. props. in folding model 2-107794
 $^{12}\text{C}(^{12}\text{C}, X)$, $^{12}\text{C} + ^{12}\text{C}$ strongly coupled collective excitations, contrib. to optical pot. 2-69628
 $^{12}\text{C}(^{12}\text{C}, X)$, 4.2-7 MeV, fusion cross section, resonance 2-101955
 $^{12}\text{C}(^{12}\text{C}, X)$, resonance formation and nucleon decay 2-101934
 $^{12}\text{C}(^{12}\text{C}, X)$, resonance search in Coulomb barrier region 2-101937
 $^{12}\text{C}(^{12}\text{C}, X)$, resonance search in elastic, inelastic and transfer channels 2-101938
 $^{12}\text{C}(^{12}\text{C}, \alpha)$, 32.6, 33.5 MeV, ^{20}Ne 4^+ yrast state g-factor, transient field precession meas. 2-59239
 $^{12}\text{C}(^{12}\text{C}, \alpha)^{20}\text{Ne}$, 15 MeV, ang. distrib., excitation energy, nonstatistical effects 2-96035
 $^{12}\text{C}(^{12}\text{C}, \alpha)^{20}\text{Ne}$, intermediate struct. resonance, spins and spectroscopy 2-101807
 $^{12}\text{C}(^{12}\text{C}, \text{p})$, 29.5-30.5 MeV, proton ang. distrib., ^{23}Na levels, prefusion emission 2-90151
 $^{12}\text{C}(^{15}\text{N}, \alpha)$, 9.51-17.33 MeV, multistep compound processes, importance to fusion 2-69671
 $^{12}\text{C}(^{16}\text{O}, X)$, 12-20 MeV CM, reson. in fusion cross section 2-59439
 $^{12}\text{C}(^{16}\text{O}, \alpha)$, gross struct. kinematics 2-101923
 $^{12}\text{C}(^{16}\text{O}, \alpha)$, search for $^{12}\text{C} + ^{16}\text{O}$ resonant states, correlation meas. 2-101943
 $^{12}\text{C}(^{16}\text{O}, \alpha)^{24}\text{Mg}$, resonant state excitation 2-101938
 $^{12}\text{C}(^{16}\text{O}, \alpha)^{24}\text{Mg}$, resonance state direct obs. 2-101939
 $^{12}\text{C}(^{16}\text{O}, \gamma)^{28}\text{Si}$, fusion resonance obs. 2-107902
 $^{12}\text{C}(^{20}\text{Ne}, X)$, 291 MeV, incomplete momentum transfer in heavy-ion fusion 2-96037
 $^{12}\text{C}(^{238}\text{U}, \text{f})$, projectile fission study in Makrofol detector 2-64445
 $^{12}\text{C}(^{238}\text{U}, X)$, deep-inelastic back-angle yields and orbiting 2-101925
 $^{12}\text{C}(^6\text{Li}, X)$, 9-36 MeV, entrance channel limitations to fusion cross sections 2-113576
 $^{12}\text{C}(^6\text{Li}, ^3\text{He})$, differential cross section meas. (Russian) 2-54441
 $^{12}\text{C}(\text{Li}, \text{d})$, 34 MeV, inclusive d spectra, ZRDWBA anal., d spectator model 2-90131
 $^{12}\text{C}(\text{Li}, \text{d})^{16}\text{O}(^0\text{O}^+, 6.05 \text{ MeV})$, cross-section, distorted wave Born approx. 2-80025
 $^{12}\text{C}(^7\text{Li}, ^3\text{He})$, differential cross section meas. (Russian) 2-54441
 $^{12}\text{C}(^8\text{Be}, X)$, $X = \text{p}, \text{d}, \text{t}, \alpha$, 5.9-15.4 MeV, cross section energy depend., reson. or fluctuations 2-90137
 $^{12}\text{C}(^8\text{Be}, X)$, resonance struct., excitation functions, critical anal. 2-101932
 $^{12}\text{C}(^{10}\text{B}, X)$, 14-48 MeV, total and fusion cross sections, ang. momenta 2-90186
 $^{12}\text{C}(^{12}\text{C}, X)$, 3.1-6.7 MeV, fusion cross sections 2-101955
 $^{12}\text{C}(^{12}\text{C}, X)$, $E_{\text{cm}} = 4-15.8 \text{ MeV}$, fusion cross section meas. 2-54465
 $^{12}\text{C}(^6\text{Li}, X)$, 9-36 MeV, entrance channel limitations to fusion cross sections 2-113576
 $^{12}\text{C}(^6\text{Li}, \text{t})^{16}\text{O}$, 24-26 MeV, direct and compound nuclear contrib. 2-54424
 $^{12}\text{C} + ^{14}\text{C}$ resonance struct. obs. 2-107904
 $^{12}\text{C} + ^{14}\text{C}$ resonance, generator coordinate method anal. 2-101861
 $^{12}\text{C}(^6\text{Li}, \text{d})^{14}\text{C}$, 34 MeV, d- α correl., ^{18}O positive parity rot. band 2-74725
 $\text{Ca}(\text{Ar}, X)$, 2 GeV/nucleon, high-energy γ -ray spectra, π^0 , η , Δ prod. 2-101919
 $\text{Ca}(\text{Ne}, X)$, 2 GeV/nucleon, high-energy γ -ray spectra, π^0 , η , Δ prod. 2-101919
 $^{40}\text{Ca}(^{12}\text{C}, \text{an})$, 38 MeV, γ - γ coincidence, ^{47}Cr states γ -decay 2-107731
 $^{40}\text{Ca}(^{18}\text{O}, X)$, $X = ^{17}\text{O}$, ^{19}F , spectroscopic factors, CC and DWBA anal. 2-113555
 $^{40}\text{Ca}(^{20}\text{Ne}, X)$, 291 MeV, incomplete momentum transfer in heavy-ion fusion 2-96037

heavy ion-nucleus reactions continued

- ⁴⁰Ca(⁴⁰Ar, X), jets of nuclear matter, fluid dynamical model calc. 2-64434
- ⁴⁰Ca(⁴⁰Ar, π^+), cross section for pion prod. near CM vel. 2-59400
- ⁴⁰Ca(⁴⁰Ca, X), matter, momentum and energy flow, Wigner transformation of TDHF 2-107884
- ⁴⁰Ca(⁴⁰Ca, X), total cross section predictions, geometric limit applicability 2-69678
- ⁴⁰Ca(⁶Li, X), X=p,d,t, ³He, α , 156 MeV, inclusive breakup, DWBA, coalescence model 2-101912
- ⁴⁸Ca(¹⁶O, X), 158.2 MeV, X=¹⁵N, ¹⁷O, Li-Al, nonfusion cross sections, DWBA anal. 2-113554
- ⁴⁸Ca(¹⁶O, X), 142 MeV, deep inelastic collisions, neutron, proton and alpha emission 2-59401
- ⁴⁸Ca(¹⁸O, ^{17,18}C), 112 MeV, ^{17,18}C mass excess and first excited state 2-107740
- ⁴⁸Ca(¹⁸O, ¹⁸C), ⁴⁸Ti, 100 MeV, double charge exchange reaction, ¹⁸C mass meas. 2-59399
- ⁴⁸Ca(⁴⁰Ca, X), 330 MeV, fusion cross section, absence of closed shell effect, comparison with ⁴⁸Ti(⁴⁰Ar, X) 2-69693
- ⁴⁸Cd(¹²C, 3n), A=110, 112, ^{119,121}Xe level structures and h_{1/2} bands anal. in IBF model 2-95898
- ¹⁴⁰Ce(¹²C, 5n), 96 MeV, ¹⁴⁷Gd 8.6 MeV, 560 ns high spin isomer decay, spin and transitions 2-90004
- Cl(Ar, π), nonlinear effects in pion prod. (Russian) 2-90116
- Cm(C, xn) No reaction, nuclear temp. estimation 2-113524
- ²⁴⁸Cm(⁴Ne, X), A=20,22, 115 and 116 MeV, heavy actinide prod. cross section 2-54433
- ²⁴⁸Cm(⁴O, X), A=16,18, 97 and 98 MeV, heavy actinides prod. cross section 2-54433
- (Cr, X), 332 MeV, on rare earths, deeply inelastic cross sections 2-80029
- Cs(¹⁶O, X), 16.5 MeV/N, ion transfer and fragmentation processes, hybrid streamer chamber appl. 2-102330
- (Cu, X), 401 MeV, on rare earths, deeply inelastic cross sections 2-80029
- Cu(¹²C, X), 86 MeV/A, products yields and recoil props. 2-96039
- Cu(²⁰Ne, X), 170,252 MeV, fragments charge and ang. distrib. 2-54434
- ⁶³Cu(¹²C, ¹³C), 45 MeV, inelastic scatt., core-excited states props. study 2-107890
- ⁶³Cu(¹⁶O, X), ⁷⁹Rb compound nucleus formation and deexcitation, fusion barrier, evaporation anal. 2-101913
- ⁶³Cu(¹⁹F, α 2n)⁷⁸Kr, 2⁺ states lifetime meas. 2-54309
- ⁶³Cu(¹⁹F, p2n)⁸¹Rb, EM transition strength in ⁸¹Rb 2-54305
- ⁶⁷Er(¹⁶O, 4n), A=164,166,168,80-105 MeV, high-spin yrast- and non-yrast bands in ^{178,179,180}Os 2-101789
- ¹⁶⁶Er(⁸⁴Kr, f), 12.4 MeV, ternary reaction proximity effects, fission 2-69683
- ¹⁶⁶Er(⁸⁶Kr, X), ang. momentum transfer at 6, 12 MeV/A, time depend. HF study 2-101914
- ¹⁷⁰Er(¹⁶O, ¹⁷O), 120 MeV, highly mixed 13/2⁺ states in ¹⁷¹Er, structure and decay 2-59219
- ¹⁷⁰Er(²⁰Si, X), ²⁰⁰Pb fission and evaporation competition, expt. and theory 2-101916
- F (Ne, X), 183 MeV/nucleon, negative pion prod. cross section meas. 2-85070
- F(Ne, X), subthreshold pions ang. distrib. meas. 2-80026
- ⁵⁶F relativistic ions-emulsion nuclei interaction at 100 GeV, secondary particle emission (Russian) 2-90156
- (Fe, X), 365 MeV, on rare earths, deeply inelastic cross sections 2-80029
- (Fe, X) in photoemulsion, multiple particle creation (Russian) 2-73812
- Fe(¹²C, X), 44 GeV, density isomer search from multiple delayed neutron emission (Russian) 2-107746
- Fe(²⁸Si, xpy), 80-99 MeV, ⁷⁴Rb, ⁸⁰Sr, ⁸¹Sr, high spin states, J⁺, γ -rays 2-69505
- (⁶He, X), 2 GeV/N, secondary particle behaviour, fragment mean free path 2-80034
- (⁶He, X), secondary α -particle interaction mean free path 2-90154
- ⁵⁶Fe fragmentation on CH₂, C and H targets, cross sections and charge changing 2-113522
- ⁵⁶Fe on steel target, 940 MeV/u, anomalous nucl. states, delayed γ decays 2-107888
- ⁵⁶Fe(¹³⁶Xe, X)⁴V, A=56, 57, neutron rich isotope production (Chinese) 2-107899
- ⁵⁶Fe(¹³⁶Xe, X)⁵⁴Ti, neutron rich isotope production (Chinese) 2-107899
- ⁵⁶Fe(¹³⁶Xe, X)⁵⁸Cr, neutron rich isotope production (Chinese) 2-107899
- ⁵⁶Fe(¹⁶O, 2p), 46 MeV, ⁷⁰Ge negative parity states, mean lifetimes, transitions 2-113412
- ⁷⁶Ge(¹²C, α 2n), ⁸²Kr recoil distance lifetime meas. 2-59290
- ⁷⁶Ge(¹²C, 4n γ), 48-60 MeV, ⁸⁸Sr high spin states study 2-54428
- ⁷⁶Ge(Li, 5n), 40-50 MeV, ⁷⁸Br high-spin states in-beam study 2-54234
- (Hl, X), 800 MeV/N, epitaxial data kinematic anal. 2-107881
- ¹H(Li, n) Be, intense MeV neutron prod. and cross sections 2-108200
- (³He, π^+) on ³He, ⁴He, ⁶Li, ¹⁰B, pion prod. in exclusive kinematical region 2-80004
- ³He(¹⁶O, p), 19.4 MeV, ¹⁸F low lying level lifetimes 2-113411
- ³He(¹⁶O, p), ¹⁸F, study of 1.701 MeV level lifetime 2-74732
- ¹⁹⁴Hg* compound nuclei, anomalous behaviour of evaporative H/He 2-113563
- ¹⁸⁵Ho(²⁰Ne, X), 292 MeV, energy and ang. correl. between neutrons and heavy ions 2-85091
- ¹⁸⁵Ho(⁵⁶Fe, X), 464 MeV, stochastic transfer and isobaric and isotopic distrib. 2-96036
- ¹⁸⁵Ho(⁵⁸Fe, X), 462 MeV, charge energy and ang. distrib. 2-54431
- I(¹⁶O, X), 16.5 MeV/N, ion transfer and fragmentation processes, hybrid streamer chamber appl. 2-102330
- K(Ar, π), nonlinear effects in pion prod. (Russian) 2-90116
- ¹³⁸La(¹B, 4n), 54 MeV, ¹³⁸Sm levels, transition probabilities, recoil distance lifetime meas., J⁺ 2-90049
- (⁶Li, d), antisymmetrised ⁶Li wave function and direct interaction, cluster model 2-64387
- (⁶Li, d) on ²⁶Mg, ²⁷Al, ²⁹Si, ³¹P, 36 MeV, cluster representation of ⁶Li and finite-range DWBA anal. 2-64439
- (⁶Li, X), 74.8-94.4 MeV, on A=181-208, fusion-fission, hot high spin nuclei decay 2-113334
- ⁶Li(¹²C, t)¹⁶O, 9.2-35.1 MeV, fusion reaction, cross section for evaporation residues 2-54424
- ⁶Li(¹⁶O, α), 24 MeV, ¹⁸F, T=0 level, J⁺=5⁺, lifetime limit, γ -decay 2-107726
- ⁶Li(¹Li, 2d)2 α , extended PWBA anal., clusters, double spectator pole 2-80030

heavy ion-nucleus reactions continued

- ⁶Li(⁶Li, ⁸B)*H, differential cross section meas. (Russian) 2-54441
- ¹⁷⁵Lu(¹⁸F, X), emission from ¹⁹⁴Hg compound nuclei, fission-evap. competition 2-90138
- ¹Mg(¹²C, X), 20-60 MeV, A=24, 26, total fusion cross section excitation functions 2-69690
- (²⁴Mg, X) on ¹²C, ²⁴Mg, ²⁶Mg, fusion and compound nuclei decay study 2-64435
- ²⁴Mg(¹²C, X), fusion and compound nuclei decay study 2-64435
- ²⁴Mg(¹²C, X), resonance search in Coulomb barrier region 2-101937
- ²⁴Mg(¹²C, α), 24-36 MeV, excitation curves and α mag. distrib. 2-69670
- ²⁴Mg(¹²C, α)³²Si, intermediate struct. search in ³⁶Ar 2-101946
- ²⁴Mg(¹⁶O, ¹²C)²⁸Si, excitation functions, intermediate struct. 2-96028
- ²⁴Mg(¹⁷O, ¹⁶O)²⁵Mg*, mol. single-particle excitations calc. using deformed pot. 2-64437
- ²⁵Mg(¹⁶O, ¹⁷O)²⁴Mg*, mol. single-particle excitations calc. using deformed pot. 2-64437
- ⁵⁵Mn(¹⁴N, 2p), 47 MeV, ⁶⁶Zn negative parity states, mean lifetimes, transitions 2-113412
- ¹Mo(¹Li, B), A=92, 94, 96, 98, 100, 90 MeV, two-proton pick-up reactions 2-54422
- ¹Mo(¹⁴C, ¹⁶O), A=92, 94, 96, 98, 100, 71 MeV, Zr 0⁺ state population 2-107894
- ⁹²Mo(⁵⁸Ni, X), ¹⁴⁷Tm direct and beta-delayed proton decay 2-69615
- ⁹²Mo(⁸⁶Kr, X), 380, 400 MeV, proton transfer in quasi-elastic and deep-inelastic reactions 2-113562
- ¹⁰⁰Mo(¹Li, X), 48 MeV, ¹⁰⁴Ru levels, high spin states, in-beam γ -spectroscopy 2-64350
- (¹⁴N, X), 100-400 MeV/N, secondary particle formation time, nonequilibrium processes (Russian) 2-107900
- (¹⁴N, X), on A=12, 14, fusion at sub-barrier energies, S-factor calc. 2-113577
- ¹⁴N(¹⁴N, α), 111 MeV, ²⁴Mg excitation spectrum, compound processes, comparison with ¹²C(¹⁶O, α) 2-64429
- ¹⁴N(¹⁸N, ⁸Be)²⁰Ne, high resolution excitation functions 2-101941
- ¹⁴N(¹⁸N, α)²⁴Mg, high resolution excitation functions 2-101941
- Na(Ne, X), 183 MeV/nucleon, negative pion prod. cross section meas. 2-85070
- Na(Ne, X), subthreshold pions ang. distrib. meas. 2-80026
- ⁹³Nb(¹N, α), 115 MeV, final-state interaction and time information study by α - α correl. 2-101924
- ⁹³Nb(¹N, X), 208 MeV, correl. between alpha particles and ejectiles 2-90142
- ⁹³Nb(¹⁴N, p), 95 MeV, spin polarisation of preequilibrium proton emission 2-113460
- Nd(¹²C, xn), 80-110 MeV, ¹⁵²⁻¹⁶¹Dy quasi-continuum γ -ray deexcitation, yrast states, stat. model anal. 2-79973
- ¹⁴⁶Nd(¹⁴N, 4n), ¹⁵⁶Ho aligned two quasiparticle bands, superbands 2-64353
- ¹⁴⁶Nd(¹⁵N, 4n), 74 MeV, ¹⁵⁷Ho, levels, J⁺, signature depend. transition rates above band crossing freq. 2-90048
- ¹⁴⁶Nd(²⁰Ne, X), 136 MeV, fusion reaction entry state pop. 2-113575
- (²⁰Ne, π^+), 280-480 MeV, on A=12-238, strong Coulomb effects, doubly differential cross sections 2-69675
- ²⁰Ne(¹²C, X), 11-33 MeV, A=20-30 reaction product excitation functions, fusion crit. ang. mtum. 2-69672
- ²⁰Ne(¹⁶O, ¹²C)²⁴Mg, excitation functions, statistical anal. 2-96026
- ²⁰Ne(¹⁶O, ²⁰Ne)¹⁶O, excitation functions, statistical anal. 2-96026
- ²⁰Ne(¹⁶O, X), 15-29 MeV CM, excitation function meas. using γ -ray techniques 2-90141
- ²⁰Ne(¹⁶O, ¹²C)²⁴Mg, E_{CM}=22.8, 38.6 MeV, reson. structure in excitation functions 2-85073
- ²⁰Ne(⁸Be, X), resonance search using deviation functions 2-101933
- ²⁰Ne(⁸C, π^+), 280, 482 MeV, pion prod. cross sections, spectator fragment Coulomb effects 2-69676
- Ni(¹²C, X), 30-84 MeV/u, linear momentum transfer determ. 2-85071
- Ni(¹⁰B, pn), 31 MeV, ⁶⁰Ge band struct., J⁺, transitions, branching, collective calcs. 2-69508
- ⁵⁸Ni(¹²C, 2p), 40 MeV, ⁶⁸Ge, 6⁺ and 7⁺ states, g-factors 2-113363
- ⁵⁸Ni(¹²C, γ), ⁵⁸Ge, capture reaction cross section 2-113561
- ⁵⁸Ni(¹⁶O, np), 40-55 MeV, ⁷²Br high spin states, J⁺, transitions 2-69507
- ⁵⁸Ni(⁴⁰Ca, X), ⁹⁵Pd 21/2⁺ spin gap isomer, beta delayed proton emission 2-90005
- ⁵⁸Ni(⁵⁸Ni, X) A=104-124 2-113354
- ⁵⁸Ni(¹²C, X), light-ion emission, beam energy depend. 2-90146
- ⁶⁰Ni(¹⁶O, ¹²C), 60 MeV, exact finite range DWBA descript., cross section ang. distrib. 2-85081
- ⁶²Ni(¹⁵Cl, X), 200, 215 MeV, fission and fusion excitation functions, meas. and stat. anal. 2-69684
- ⁶²Ni(³⁵Cl, X), 155-300 MeV, dynamic nucleus-nucleus interaction model, parameter scaling test 2-54439
- ⁶²Ni(⁵⁸Ni, X), 215-275 MeV, fusion excitation function 2-59441
- ⁶⁴Ni(¹Ni, X), A=58, 64, 171-215 MeV, sub-barrier fusion differential cross section 2-59438
- ⁶⁴Ni(Li, Zn), 14-18 MeV, ⁶⁹Ga excited states, bands, J⁺, mean lives, transitions 2-89998
- (¹⁶O, X), drifting hot spots in inclusive reactions, preequilibrium evolution 2-101869
- (¹⁶O, X), on A=12, 14, 16, fusion at sub-barrier energies, S-factor calc. 2-113577
- ¹⁶O-induced reactions, light ion emission, target-A depend. 2-101920
- ¹⁶O+¹²C resonance system, intermediate and fine struct. 2-101942
- ¹⁶O+¹⁴C, resonance struct. obs. 2-107904
- ¹⁶O+¹⁶O system, gross struct. study 2-101945
- ¹⁶O(¹²C, X), resonance formation and nucleon decay 2-101934
- ¹⁶O(¹²C, X), resonance search in Coulomb barrier region 2-101937
- ¹⁶O(¹²C, α)²⁴Mg*, resonance search using deviation functions 2-101933
- ¹⁶O(¹⁶O, X), deep inelastic collisions, spin transfer meas. 2-107883
- ¹⁶O(¹⁶O, X), density matrix approach to the complex heavy ion optical potential 2-113432
- ¹⁶O(¹⁶O, X), quasi-elastic and deep-inelastic rates calc. 2-113543
- ¹⁶O(¹⁶O, ¹²C), resonance struct., EFR-DWBA anal., band crossing model enhancement 2-54425
- ¹⁶O(¹⁶O, ¹²C)²⁰Ne, resonant struct., DWBA anal. 2-107906
- ¹⁶O(¹⁶O, X), complex heavy-ion optical pot., double-folding calc. 2-54421
- ¹⁶O(¹⁶O, X), matter, momentum and energy flow, Wigner transformation of TDHF 2-107884
- ¹⁶O(¹⁶O, α)³²Si, 8⁺ systematic resonance occurrence 2-107835
- ¹⁶O(¹⁶O, α)²⁸Si, resonance formation near Coulomb barrier 2-101935
- ¹⁶O(³²S, X), deep inelastic collisions, spin transfer meas. 2-107883

heavy ion-nucleus reactions continued

- ¹⁸⁰Cross (Nb, X), pre-equilibrium particle emission in TDHF approx., total cross section 2-69673
- ¹⁸⁰O(Li, ¹⁷Ne, 72 MeV, ang. distrib., DWBA anal., spectrosc. factors 2-107897
- Pb(Ar, X), 2 GeV/nucleon, high-energy γ -ray spectra, π^0 , η , Δ prod. 2-101919
- Pb(Ar, X), 800 MeV/nucleon, macroscopic nucleon-nucleon correl. caused by bounce-off process 2-90143
- Pb(¹²C, X), 44 GeV, density isomer search from multiple delayed neutron emission (*Russian*) 2-107746
- Pb(Ne, X), 183 MeV/nucleon, negative pion prod. cross section meas. 2-85070
- Pb(Ne, X), 2 GeV/nucleon, high-energy γ -ray spectra, π^0 , η , Δ prod. 2-101919
- (²⁰⁸Pb, X), on ²⁶Mg, ²⁷Al, ⁴⁸Ca, ⁵⁰Ti, ⁵²Cr, ⁵⁸Fe, ⁶⁴Ni, 5.2-8 MeV/nucleon, product analysis, fusion reaction dynamics 2-113574
- (²⁰⁸Pb, X) on ⁶⁴Ni, ⁴⁸Ca, fusion-fission, mol. capture, symmetric fragmentation 3D-TDHF calc. 2-96042
- ²⁰⁸Pb(¹²C, X), 84 MeV/u, cross-sections and forward-backward ratios study using CR-39 detector 2-64421
- ²⁰⁸Pb(¹²C, X), 187 MeV, ¹²C ions break-up into 3 α channel 2-54420
- ²⁰⁸Pb(²⁰⁸Pb, X), total cross section predictions, geometric limit applicability 2-69678
- ²⁰⁸Pb(⁴⁰Ca, X), total cross section predictions, geometric limit applicability 2-69678
- ²⁰⁸Pb(Li, ⁸Li), 52 MeV, CC ²⁰⁷Pb(h_{9/2})⁻¹ hole state, neutron orbital RMS radius, diff. cross section 2-89996
- ²⁰⁸Pd(Ar, ⁴⁰Ar), A=108, 110, Coulomb excitation, multiphonon vibr. states structure 2-64433
- ¹⁴¹Pr(³⁵Cl, X), 200, 215 MeV, fission and fusion excitation functions, meas. and stat. anal. 2-69684
- ¹⁴¹Pr(³⁵Cl, X), 155-300 MeV, dynamic nucleus-nucleus interaction model, parameter scaling test 2-54439
- ¹⁰³Rh(¹²C, 3n), 50 MeV, ¹¹²Sb 8⁺ isomer, quadrupole moment 2-107755
- ⁹⁶Ru(¹⁶O, C)Pd, Q values and Pd mass excess meas. 2-54247
- ⁹⁶Ru(³⁸Ni, X), ¹⁵¹Lu direct proton decay, half life, prod. cross section 2-69614
- ⁴⁵Sc(³⁴S, X), ⁷⁹Rb compound nucleus formation and deexcitation, fusion barrier, evaporation anal. 2-101913
- ⁸²Se(Li, xny), 25-36 MeV, ⁸⁵Rb high spin states, J⁺, yrast bands, transitions 2-69506
- ⁸²Se(Li, xny), 25-36 MeV, ⁸³Br high spin states, J⁺, yrast bands, transitions 2-69506
- ²⁸Si, A=29.30, compound nuclei reson. props. for elastic, recoil and α -particle exit channels 2-54435
- ²⁸Si(²⁸Si, X), A=28.30, fusion and compound nuclei decay study 2-64435
- (³Si, X), 100-400 MeV/N, secondary particle formation time, nonequilibrium processes (*Russian*) 2-107900
- (³Si, X) on ¹²C, ²⁴Mg, fusion and compound nuclei decay study 2-64435
- ²⁸Si(¹²C, X), fusion cross section-energy depend. by evaporation residue meas. 2-59440
- ²⁸Si(¹⁶F, X), spin-orbit potential, single folding method calc. 2-59386
- ²⁸Si(²⁸Si, X), 2.1 GeV/nucleon, subthreshold prod. of K⁺, p 2-80031
- Sm(¹⁷⁸O, xn), 80-84 MeV, ¹⁶⁵⁻¹⁶⁷Yb near yrast spectroscopy, levels, J⁺, quasineutron states 2-89997
- ¹⁴³Sm(¹²C, 3n), ¹⁵³Er high spin states study 2-69514
- ¹⁴³Sm(¹²C, X), 53-65 MeV, ¹⁵³Er high spin states and yrast isomerism, J⁺, T_{1/2} 2-89995
- ¹⁴³Sm(¹²C, X), 139.5-201 MeV, fusion reaction, Pt and Os isotopes detection and study 2-64431
- ¹⁴³Sm(⁴⁰Ar, X), emission from ¹⁹⁴Hg compound nuclei, fission-evap. competition 2-90138
- ¹⁴³Sm(⁴⁰Ar, X), energy equilib. in composite nuclei, correl. between evaporative 'H', 'He' and fission 2-90139
- ¹⁴³Sm(Li, X), 48 MeV, ¹⁵⁶Gd levels, high spin states, 'in-beam' γ -spectroscopy 2-64350
- Sn(¹²C, X), 118 MeV, Ba, Xe, moment of inertia from $\gamma\gamma$ correlations 2-59216
- Sn(¹²C, X), 44 GeV, density isomer search from multiple delayed neutron emission (*Russian*) 2-107746
- Sn(Li, 3n), ^{117,118,121}I high spin states, bands, J⁺, T_{1/2}, isomer g-factor 2-113337
- Sn(Li, 3n), ^{128,125,127}I high spin states, bands, J⁺, T_{1/2}, transitions 2-113336
- ¹¹⁹Sn(²⁸Si, xn), A=120, 124, fusion evaporation reaction, yrast isomers quadrupole moments in ^{144,147,149}Gd 2-74731
- ¹¹⁹Sn(³⁵Cl, X), 200, 215 MeV, fission and fusion excitation functions, meas. and stat. anal. 2-69684
- ¹¹⁹Sn(³⁵Cl, X), 155-300 MeV, dynamic nucleus-nucleus interaction model, parameter scaling test 2-54439
- ¹¹⁹Sn(⁴⁰Ar, X), energy equilib. in composite nuclei, correl. between evaporative 'H', 'He' and fission 2-90139
- ¹¹⁹Sn(¹²⁹Xe, f), 12.5 MeV, nonequilib. effects in sequential fission 2-69682
- ¹¹⁹Sn(¹²⁹Xe, f), 12.5 MeV, ternary reaction proximity effects, fission 2-69683
- ¹¹⁹Sn(¹⁶O, 4n), ¹³⁴Ce spectroscopy and mag. moments at backbending 2-101809
- ¹¹⁹Sn(¹⁶F, X), 104 MeV, direct α -particle emission cross section and ang. distrib. meas. 2-96041
- ¹¹⁹Sn(¹⁶O, X), 90, 105, 125 MeV, direct α -particle emission cross section and ang. distrib. meas. 2-96041
- ¹¹⁹Sn(²⁰Ne, X), 112, 156 MeV, direct α -particle emission cross section and ang. distrib. meas. 2-96041
- ¹¹⁹Sn(³²S, xn), Dy oblate nuclei continuum γ -ray linear polarisation, collective rotations 2-59322
- ¹¹⁹Sn(³⁴S, 4n) 145-165 MeV, ¹⁵⁴Dy high-spin levels, collective to aligned particle transfer 2-79937
- ⁸⁹Sr(¹²C, ¹³C), pickup, 80 MeV, ¹²C 2⁺ state spin alignment, γ -decay 2-69528
- ⁸⁹Sr(⁸⁶Kr, X), 380, 400 MeV, proton transfer in quasi-elastic and deep-inelastic reactions 2-113562
- Ta(¹²C, X), 4.2 GeV/N, π^- prod., angular and momentum characts. (*Russian*) 2-113518
- Ta(¹²C, X), 4.2 GeV/c, pion prod. characts. 2-85064
- Ta(¹³⁶Xe, X), 1150 MeV, X-ray spectra, giant dipole strength function 2-101859

heavy ion-nucleus reactions continued

- ¹⁸¹Ta(¹⁴N, 5n), 100 MeV, weakly deformed ¹⁹⁰Hg band crossings 2-95900
- ¹⁸¹Ta(¹⁵N, X), nucleon transfer to highly excited states, statistical behaviour 2-64432
- ¹⁸¹Ta(¹⁶⁵Ho, X), 1354 MeV, deep inelastic reactions, α -emission 2-64430
- ¹⁸¹Ta(¹⁹F, X), ²⁰⁰Pb fission and evaporation competition, expt. and theory 2-101916
- ¹⁸¹Ta(³⁵Cl, X), nucleon transfer to highly excited states, statistical behaviour 2-64432
- ¹³⁰Te(³²S, xn), Er prolate nuclei continuum γ -ray linear polarisation, collective rotations 2-59322
- ²¹²Tl(¹⁵N, X), nucleon transfer to highly excited states, statistical behaviour 2-64432
- ²¹²Tl(¹⁶O, X), nucleon transfer to highly excited states, statistical behaviour 2-64432
- ⁴Ti(¹²C, X), 36-56 MeV, A=46-50, absolute residue cross sections, evaporation anal. 2-59389
- ⁴⁸Ti(¹²C, X), 46 MeV, light medium systems formation and decay study 2-85083
- ⁴⁸Ti(⁴⁰Ar, X), 330 MeV, fusion cross section, absence of closed shell effect, comparison with ⁴⁸Ca(⁴⁰Ca, X) 2-69693
- ⁴⁸Ti(⁴⁰Ar, π^-), cross section for pion prod. near CM vel. 2-59400
- U(¹²C, X), 10 MeV/n obs. with U ions on SSNTD 2-101949
- U(¹²C, X), 30-84 MeV/u, linear momentum transfer determ. 2-85071
- U(¹⁶O, X), 10 MeV/n obs. with U ions on SSNTD 2-101949
- (²³⁸U, X) on ⁶⁴Ni, ⁴⁸Ca, fusion-fission, mol. capture, symmetric fragmentation 3D-TDHF calc. 2-96042
- ²³⁸U+²⁴⁸Cm collisions, actinide prod. cross-sections 2-64425
- ²³⁸U(¹²C, X), 30, 12.0 GeV, target fragment ang. distrib., 2-step vector model, intranuclear cascade 2-107895
- ²³⁸U(¹²C, f), fission product ang. distrib., long-lived time component (*Russian*) 2-59434
- ²³⁸U(²⁰⁸Pb, Xf), 1.768 GeV, damped reaction, fission-fragment spin correlations 2-54457
- ²³⁸U(²⁰Ne, X), 393 MeV/nucleon, coherent collective flow, vs. independent two-nucleon collisions 2-90144
- ²³⁸U(²⁰Ne, X), jets of nuclear matter, fluid dynamical model calc. 2-64434
- ²³⁸U(²⁰Ne, X), nuclear eqn. of state study 2-84988
- ²³⁸U(²⁰Ne, f), 252 MeV, ang. momentum, stat. equilib., sequential fission, very asymmetric systems 2-69689
- ²³⁸U(²³⁸U, X), heavy ion potential for ellipsoidally deformed nuclei, double folding model 2-113552
- ²³⁸U(⁴⁰Ar, X), ⁴He emission in fusion-like and inelastic reactions, expt. study 2-101929
- ²³⁸U(⁸⁴Kr, X), 12.5 MeV/u, four-pronged events obs. using mica SSNTD 2-64422
- ⁵¹V(¹²C, X), Li ions spectroscopic deformation effects, γ -emission study 2-101930
- W(²²Ne, f), fission product ang. distrib. long-lived component (*Russian*) 2-59434
- ¹⁸²W(¹²C, X), emission from ¹⁹⁴Hg compound nuclei, fission-evap. competition 2-90138
- (¹³⁵Xe, X), 9 MeV/N, ¹⁷⁹Yb, ^{181,182}Lu neutron rich isotope prod. 2-69609
- ¹⁷⁴Yb(¹⁶Ne, X), emission from ¹⁹⁴Hg compound nuclei, fission-evap. competition 2-90138
- ¹⁷⁴Yb(Li, 4n), 35-45 MeV, ¹⁷⁹Ta multiquasiparticle yrast states, isomers, J⁺, T_{1/2} 2-79933
- ⁶⁴Zn(¹²C, xnny), excited states study in ⁶⁸Ge, ⁶⁹Ge 2-54437
- ⁶⁶Zn(¹²C, 2n), ³⁹Kr, collective band structure to high spin and shape coexistence in ⁷⁹MeV 2-64351
- ⁷⁰Zn(¹⁶O, γ), 72 MeV, ⁶⁸Ni 2⁺ and O₂⁺ inversion, levels and transitions, mag. features 2-95922
- Zr(³⁸Ni, X), 233, 250 MeV, ¹⁴⁶Dy 150 ms 10⁺ isomer, half life and γ -transitions 2-90006
- ⁴Zr(¹²C, B), A=90, 92, 94, 90 MeV, two-proton pick-up reactions 2-54422
- ⁹⁶Zr(¹⁶O, x), x=p, d, t, α , 140, 215, 310 MeV, differential cross section meas. 2-85076
- ⁹⁶Zr(⁸⁴Kr, f), 12.4 MeV, ternary reaction proximity effects, fission 2-69683
- ⁹⁶Zr(⁸⁶Kr, X), 380, 400 MeV, proton transfer in quasi-elastic and deep-inelastic reactions 2-113562

heavy ion-nucleus scattering

- 20 MeV CM, spin-orbit interaction induced by projectile excitation 2-85072
- backward-angle cross-sections, energy depend., averaging effects 2-85080
- Coulomb absorpt., quantal theory 2-59381
- Coulomb excitation and Coulomb fission expts., nuclear forces exclusion 2-59397
- deformation factors, diffraction model, adiabatic approx., collective motions (*Russian*) 2-59403
- dissipative collisions, quantum dynamical semigroup theory 2-113560
- dynamical aspects of large angle scatt. 2-113556
- elastic and inelastic scatt., optical model and coupled-channel anal. 2-85077
- elastic scatt., barrier and internal wave contrib., quantum calc. 2-54427
- inelastic collisions, ang. distrib. anal. 2-69669
- internal and barrier wave contrib. for heavy ion elastic scatt. 2-107819
- isoscalar transition rates, implicit folding procedure 2-95968
- nucleon transfer contrib. to absorptive pot. 2-90140
- nucleus+nucleus collisions at energies of order 10¹² eV 2-80028
- nucleus+nucleus interactions, independent collisions model; at high energies 2-79988
- nucleus-nucleus proximity imaginary pot. from 2-body effective interaction 2-59394
- optical theorem and forward glory effects 2-90136
- parity dependent pto. and exchanged trajectories, diffracted trajectories 2-64419
- resonances in heavy-ion collisions, expt. status 2-85085
- resonant structures in cross section, mol. configurations theory 2-85084
- surprisal analysis of inclusive reactions 2-69644
- time-dependent HF calcs. 2-84984
- transport theory of coupled system with simultaneous relative motion, collective oscillations and single-particle excitations 2-59383
- ⁴¹⁰Pd(³²S, ³²S), 90-120 MeV, mag. moments by tilted-multifoil interaction 2-69532
- ²⁶Al compound nuclei reson. props. for elastic, recoil and α -particle exit channels 2-54435

heavy ion-nucleus scattering continued

- ¹⁶B,¹⁸B, A=10, 11, elastic and inelastic scatt., expt., optical model and DWBA calc. 2-10915
¹²C(¹²C, ¹²C), 300-400 keV, beam-foil interaction polarisation, quantum beats 2-69636
¹²C(¹⁵N, ¹⁵N), 300-400 keV, beam-foil interaction polarisation, quantum beats 2-69636
¹²C(²⁸Si, ²⁸Si), A=12, 13, 55-99 MeV, 180° elastic excitation function meas. 2-59396
¹²C(³²S, ³²S), A=12, 13, 55-99 MeV, 180° elastic excitation function meas. 2-59396
¹²C, ¹²C on targets from C to Pb, 1.03 GeV, elastic scatt. cross sections 2-113537
¹²C(¹²C, ¹²C), adiabatic coupling model, second order transitions 2-59384
¹²C(¹²C, ¹²C), E≤20 MeV/u, elastic and inelastic scatt., direct processes 2-113536
¹²C(¹²C, ¹²C), elastic and inelastic, γ-rays from quasimolecular ¹²C+¹²C resonances 2-69596
¹²C(¹²C, ¹²C), elastic ang. distrib., intermediate structure 2-85079
¹²C(¹²C, ¹²C), cross section calc. using breathing mode doorways 2-59398
¹²C(¹²C, ¹²C), spin alignment meas. in intermediate struct 2-107905
¹²C(¹²C, ¹²C), validity of adiabatic molecular orbital concept 2-107834
¹²C(¹²C, ¹²C), microscopic investigation in framework of generator coordinate method 2-74770
¹²C(¹²C, ¹²C), projector operator method for inelastic scatt. cross section calc. 2-59395
¹²C(¹³C, ¹³C), analysing power and cross section, parity depend. pot. model anal. 2-90145
¹²C(¹⁴C, ¹⁴C), intermediate struct. obs. 2-101940
¹²C(¹⁶O, ¹⁶O), elastic and inelastic scatt., 19.7 MeV reson. structure study 2-80035
¹²C(⁶Li, ⁶Li), 156 MeV, differential cross sections, optical model calcs. 2-113551
¹²C(⁶Li, ⁶Li), 156 MeV, differential cross section from double folding cluster model 2-90150
¹²C(⁶Li, ⁶Li), 30.6, 90 MeV, folding model appl., with Skyrme interaction (*Russian*) 2-90158
¹²C(⁶Li, ⁶Li), Watanabe pot., correction 2-113523
¹²C(⁶Li, ⁶Li), 63, 79 MeV, elastic and inelastic, single and mutual excitation, coupled channels calcs. 2-113528
¹⁴C(¹⁴C, ¹⁴C), intermediate struct. obs. 2-101940
¹⁴Ca(¹⁶O, ¹⁶O), 56 MeV, inelastic scatt. study 2-64438
¹⁴Ca(⁶Li, ⁶Li), 89 MeV, A=40, 48, ang. distrib., adiabatic α-cluster model anal. 2-107885
⁴⁰Ca(¹⁶O, ¹⁶O), 50 MeV, elastic scatt. cross section, interpretation by Regge formalism 2-113557
⁴⁰Ca(¹⁸O, ¹⁸O), 62 MeV, ang. distrib., coupled channels effects, DWBA anal. 2-113555
⁴⁰Ca(⁴⁰Ca, ⁴⁰Ca), 160 MeV, inelastic scatt., nuclear continuum study 2-69679
⁴⁰Ca(⁶Li, ⁶Li), 156 MeV, differential cross sections, optical model calcs. 2-113551
⁴⁰Ca(⁶Li, ⁶Li), 26-34 MeV, description using double folded or α+d cluster pots. 2-107893
⁴⁰Ca(⁶Li, ⁶Li), elastic scatt., cluster-folding model anal. 2-85068
⁴⁰Ca(⁶Li, ⁶Li), projectile breakup, microscopic coupled channels and α-d cluster anal. 2-113553
⁴⁰Ca(¹⁸O, ¹⁸O), 158.2 MeV, elastic and inelastic cross sections, optical and DWBA anal. 2-113554
⁶³Cu(¹²C, ¹²C), 45 MeV, inelastic scatt., core-excited states props. study 2-107890
¹⁵⁷Gd(⁴⁰Ar, ⁴⁰Ar), 147.2 MeV, interband transitions, state lifetimes 2-113413
¹³⁶Xe, ¹³⁶Xe, A=178, 180, isomeric trapping following Coulomb excitation of high spin states 2-85074
¹³⁶Xe, ¹³⁶Xe, A=178, 180, isomeric trapping following Coulomb excitation of high spin states 2-85074
¹⁶¹Ho(⁵⁶Fe, ⁵⁶Fe), 462 MeV, strong-absorption radius, cross section and grazing ang. momentum study 2-54431
⁶Li, ⁶Li, optical pot., Watanabe model 2-113430
⁶Li, ⁶Li, A=24-208, global optical model pots. 2-113550
⁶Li, ⁶Li, A=24-208, global optical model pots. 2-113550
⁶Mg(⁶Li, ⁶Li), 88 MeV, A=24, 26, elastic and inelastic, single and mutual excitation, coupled channels calcs. 2-113528
²⁴Mg(¹²C, ¹²C), 24-34 MeV CM, elastic and inelastic scatt., cross-section fluctuations 2-85078
²⁴Mg(¹⁶O, ¹⁶O), ²⁴Mg*, mol. single-particle excitations calc. using deformed pot. 2-64437
²⁴Mg(¹⁸O, ¹⁸O), ²⁴Mg*, mol. single-particle excitations calc. using deformed pot. 2-64437
²⁰Ne(¹⁶O, ¹⁶O), 15-29 MeV CM, excitation function meas. using γ-ray techniques 2-90141
⁵⁸Ni(¹⁸O, ¹⁸O), phase shifts, closed form and optical model anal. 2-113526
⁵⁸Ni(⁶Li, ⁶Li), 20 MeV CM, spin-orbit interaction induced by projectile excitation 2-85072
⁵⁸Ni(⁶Li, ⁶Li), Watanabe pot., correction 2-113523
⁵⁸Ni(⁶Li, ⁶Li), pol. ⁶Li 14-22 MeV, tensor anal. power, shape effect model test 2-85069
⁵⁸Ni(⁶Li, ⁶Li), spin-1/2 particles, elastic scatt., analysing powers calc. 2-101917
⁵⁸Ni(⁶Li, ⁶Li), spin-3/2 deformed projectile scatt., polarisation, complex folded potentials anal. 2-101875
⁶⁰Ni(¹⁶O, ¹⁶O), 45 MeV, exact finite range DWBA descript., cross section ang. distrib. 2-85081
⁶⁰Ni(²⁸Si, ²⁸Si), 140 MeV, mutual inelastic excitation, coupled channels anal. 2-101926
¹⁶O(¹⁵N, ¹⁵N), analysing power and cross section, parity depend. pot. model anal. 2-90145
¹⁶O(⁶Li, ⁶Li), Watanabe pot., correction 2-113523
¹⁶O(¹⁶O, ¹⁶O), 24-41 MeV CM, mutual inelastic scatt., excitation functions meas. 2-90147
¹⁸O(¹⁹F, ¹⁹F), analysing power and cross section, parity depend. pot. model anal. 2-90145
¹⁸Os(³²S, ³²S), A=186, 188, 80 MeV, mag. moment meas. 2-54261
²⁰⁸Pb(²⁶Mg, ²⁶Mg), 80-120 MeV, ²⁶Mg quadrupole moment and B(E2) as shell model test 2-69531
²⁰⁸Pb(⁶Li, ⁶Li), 156 MeV, differential cross sections, optical model calcs. 2-113551

heavy ion-nucleus scattering continued

- ²⁰⁸Pb(HI, HI), sub Coulomb elastic scatt., relativistic effects, polarisability, screening 2-64427
¹⁹⁴Pt(³⁵S, ³⁵S), A=194, 196, 80 MeV, mag. moment meas. 2-54261
¹⁰⁴Ru(²⁰⁸Pb, ²⁰⁸Pb), 4.6 MeV/u, levels, spin, J, B(E2) 2-95899
⁹¹Sr, A=29.30, compound nuclear reson. props. for elastic, recoil and α-particle exit channels 2-54435
²⁸Si(¹²C, ¹²C), back-angle scatt., ang. distrib. and excitation function calc. 2-64436
²⁸Si(¹⁶O, ¹⁶O), 50 MeV, phase shift anal., stat. fluctuations, backward and staggering effects 2-80033
²⁸Si(²⁸Si, ²⁸Si), 50-65 MeV, double resonance mechanism, microscopic study 2-74774
²⁸Si(²⁸Si, ²⁸Si), resonant struct. in elastic scatt., generator coordinate method anal. 2-101864
²⁸Si(⁶Li, ⁶Li), elastic scatt., cluster-folding model anal. 2-85068
²⁸Si(⁶Li, ⁶Li), projectile breakup, microscopic coupled channels and α-d cluster anal. 2-113553
²⁸Si(⁶Li, ⁶Li), Watanabe pot., correction 2-113523
²⁸Si(⁶Li, ⁶Li), elastic and inelastic scatt., optical model and coupled-channel anal. 2-85077
¹⁵⁰Sm(³²S, ³²S), 90-120 MeV, mag. moments by tilted-multifoil interaction 2-69532
⁸⁸Sr(¹²C, ¹²C), elastic and inelastic, 80 MeV, ¹²C 2+ state spin alignment, γ-decay 2-69528
²³²Th(²⁰⁸Pb, ²⁰⁸Pb), 5.3 MeV, high spin states struct., E2 matrix element 2-113328
²³⁴U(²⁰⁸Pb, ²⁰⁸Pb), 5.3 MeV, high spin states struct., E2 matrix element 2-113328
²³⁶U(²⁰⁸Pb, ²⁰⁸Pb), 5.3 MeV, high spin states struct., E2 matrix element 2-113328
²³⁸U(⁴⁰Ar, ⁴⁰Ar), 340 MeV, coupled channels and nuclear deexcitation 2-54429
⁵¹V(⁶Li, ⁶Li), Li ions spectroscopic deformation effects, γ-emission study 2-101930
⁶⁴Zn(¹²C, ¹²C), 54 MeV, exact finite range DWBA descript., cross section ang. distrib. 2-85081
⁹⁰Zr(⁶Li, ⁶Li), 156 MeV, differential cross sections, optical model calcs. 2-113551
- heavy leptons**
fractionally charged, abundance, cosmological implications 2-84360
fusion, catalytic, using heavy lepton injection 2-89514
gravitational decay in unified theories (*Russian*) 2-54228
massive neutrinos, cosmological, rel. to ang. fluctuations of temp. of microwave background (*Russian*) 2-63718
massive neutrinos in early universe, maximum density in intergalactic 'pancakes' (*Russian*) 2-95891
SU_L(2)×SU_R(2)×U_{B-L}(1) model, neutrino-production 2-113170
e⁺e⁻→e⁺e⁻γ, 0.64-1.40 GeV, heavy electron prod. cross-section (*Russian*) 2-89956
e⁺e⁻→μX search for charged Higgs, scalar τ, technicolor test 2-107675
e⁺e⁻→s_ss_s, 33-36.72 GeV CM, scalar lepton search with CELLO detector at PETRA 2-101699
e⁺e⁻→τ⁺τ⁻, charge asymm., weak interaction effects 2-54130
e⁺e⁻→μ⁺μ⁻γ, excited and stable heavy lepton prod. limits 2-64310
γ→bb decay induced by light quark mass difference 2-113270
(μ, π) and (μ, γ) invariant masses from decay of possible neutral heavy lepton 2-95834
μN, 1209 GeV, heavy neutral muon mass lower limit and bottom hadron prod. 2-95849
τ, flavour-changing decay, review 2-79877
τ, from e⁺e⁻ expts. with PLUTO detector 2-79903
τ, neutrinoless decay modes, expt. upper decays on branching fractions 2-95833
τ decay, Mark II results from SPEAR and PEP 2-79876
τ lepton decay and cross section for e⁺e⁻→τ⁺τ⁻ at 34.2 GeV CM 2-101698
τ→lν, l=e, μ, differential probability expressions 2-59147
τ→πν, current algebra appl. to p(1600) 2-74629
τ→three prongs, lifetime determ. 2-89963
τ→Kν, branching fraction determ. 2-79878
- heavy water**
adsorption on SrTiO₃ (100), EELS and UPS study 2-115537
ice film, erosion and mol. form. by electronic energy loss of fast ions 2-98171
IR absorption bands monitoring in atmosphere, Indian (Trombay) experience 2-111525
liq., sound absorpt. mechanism, thermodynamic theory 2-81894
liquid, pressure effects on struct. X-ray diff. study 2-81657
liquid-liquid phase diagrams, D isotope effects, review 2-66193
moderating effect on neutron flux meas., in foil activation method, Cd corrections 2-69996
molecule, anharmonic vibr. problem, soln. by var. method 2-113962
molecule, electron impact dissociation, OD excitation and polarisation anal. 2-102648
molecule, LF motions in low temp. matrices 2-75272
structure studied by neutron diff., press. effect 2-71323
thermodynamic properties in SI units 2-74179
thermodynamic props., eqns. of state, data tables 2-94920
vapour, absorption spectrum, 9160 to 9400 cm⁻¹ 2-54852
D anal. spectrometer and sample technique for enriched water samples 2-53852
D₂O+H⁺, recombination, Monte Carlo classical trajectory method 2-111481
H₂O-D₂O mixtures, neutron diffraction obs. at 25°C 2-109653
H₂O+D₂O→2HDO equilbr. const., by direct summation over rot. vibr. states 2-99663
H₂O⁺+D₂O isotope exchange reactions 2-78076
- HEED** see high energy electron diffraction
- height measurement**
metal small particles vapour deposited onto AgBr, NaCl substrates, height determ. 2-98483
oceanography, satellite altimetry rel. to precise definition and implementation of geoid 2-68239
self-calibrating meas. systems (*German*) 2-53726
- Heisenberg model**
amorphous ferromagnet with random anisotropy, mag. props. 2-61685
anisotropic Heisenberg chain, S^z=0 excited states 2-110559
anisotropic Heisenberg chain, solitons and spin complexes 2-72250
anisotropic Heisenberg ferromagnet, quantum inverse problem 2-87471

Heisenberg model continued

anisotropic Heisenberg magnet, cluster variational calc. 2-92954
 anisotropic Heisenberg spin glass, Parisi solutions 2-98902
 antiferromagnet, competing interactions, influence on spin system props. 2-77247
 antiferromagnet, FCC, with nearest-neighbour interactions, spin dynamics on fully occupied lattice 2-82581
 antiferromagnetic chain, alternating, excitation spectra 2-92955
 antiferromagnetic chain, ground state 2-72251
 antiferromagnetic chain, $S=1/2$, with competing interactions, spontaneous dimerisation 2-77318
 antiferromagnets, one-dimensional Heisenberg, with random exchange 2-66858
 antiferromagnets, quantum spin chain dynamics, sum rules 2-104567
 bis(methylammonium)copper tetrachloride, quasi-two-dimensional ferro-mag., proton spin-lattice relax. 2-61780
 classical, chain version of const. coupling theory 2-92945
 classical compressible Heisenberg chain, continuum limit 2-98834
 classical ferromagnetic chains, interacting boson approach 2-66859
 classical Ising-Heisenberg chain, instabilities 2-77308
 classical isotropic chain, spin dynamics, computer simulation 2-98899
 cubic Heisenberg ferromagnet, spin wave bound states 2-92891
 cyclohexanemmonium copper trichloride and tribromide, mag. behaviour 2-82614
 dilute ferromagnet with mag. moments dependent on local environment, mag. ordering calc. (Russian) 2-98833
 excited $S=0$ states in anisotropic antiferromagnetic Heisenberg Hamiltonian 2-66748
 ferromagnet, 1-D, thermodynamic props., static domain wall solitons, perturbation calc. 2-116022
 ferromagnet, dil. anisotropic, correl. lengths and transition temp., renormalisation group scaling methods 2-66863
 ferromagnet, magnons at the Curie temperature 2-66793
 ferromagnet, $O(4)$ symmetric two-dimens., anal. using rot. invariant auxiliary variables 2-104564
 ferromagnet, polarised neutron scatt. cross section calcs. 2-104584
 ferromagnet, quenched random site, mag. states with particular spin glass freezing 2-77252
 ferromagnet, $S=1/2$, Monte Carlo simulation 2-104566
 ferromagnet, semi-invariants of second-rank Racah operators 2-66746
 ferromagnet, semifinite, localized impurity states 2-66747
 ferromagnet, simple cubic, with uniaxial and Ising anisotropies, two-magnon bound states and resons. 2-56841
 ferromagnet, surface magnetisation profile and low energy spin polarised inelastic electron scatt. 2-104661
 ferromagnet, surface spin wave relax. due to scatt. by surface fluctuations (Russian) 2-98857
 ferromagnet, uniaxial, kink free energy calc. WKB approx. 2-79495
 ferromagnet, with single ion planar anisotropy, Dyson Maleev transform. 2-66743
 ferromagnetic chain, soliton magnetoelastic excitations 2-92887
 ferromagnetic Heisenberg chain, classical dynamics in mag. field 2-56811
 ferromagnetic Heisenberg chains, excitation spectrum 2-66741
 ferromagnetic system with biquadratic exchange interaction at low temp., spin wave theory 2-56813
 functional integration method for free energy and Green's function 2-98835
 ground state feature for isotropic Heisenberg spin Hamiltonian 2-110558
 Heisenberg antiferromagnetic spin $1/2$ chain, finite cell calcs. 2-104649
 Heisenberg ferromagnet, surface states, exactly soluble models 2-87357
 Heisenberg ferromagnetic chain, with easy-plane anisotropy, magnons, solitons and crit. field 2-110571
 Heisenberg spin-Peierls system in mag. field, commensurate and incommensurate states 2-92952
 Heisenberg-Ising ferromagnet, with uniaxial anisotropy, Curie temp. calcs. 2-66806
 Ising-Heisenberg chain at low temps., mag. excitations 2-115986
 Ising-Heisenberg ferromagnetic chain, excitation spectrum at zero field 2-82615
 isotropic spin chain, nonlinear Schrodinger eqn. linearisation 2-69098
 isotropic Heisenberg chain of arbitrary spins, picture of low-lying excitations 2-56815
 linear Heisenberg system, spin motions 2-87519
 linear large-N limit chain, branching path approach to $S=1/2$ case 2-72131
 localisation model, exact solution 2-98593
 localised electron magnetism rel. to paramag. wave function of completely itinerant electrons 2-115965
 magnet, $S=1$ two-sublattice uniaxial, spin wave interactions 2-110572
 magnetic restructure with antiferromagnetic exchange interaction at surface (Chinese) 2-98848
 Mattis-Heisenberg model, spin quantum number in ground state 2-77251
 monotonicity of the free energy in the stochastic Heisenberg model 2-53683
 nonlinear lattice relaxation by a regional virial theorem 2-56480
 $O(n)$ model, long range interactions, renormalisation group theory 2-66745
 one-dimensional ferromagnet, soliton wavenumber cut-off 2-110601
 one-dimensional Heisenberg antiferromagnet, antiferromag-spin Peierls state phase diagram calc. 2-87469
 one-dimensional Heisenberg ferromagnets with single site anisotropy, and nonlinear Schrodinger eqns., gauge equivalence 2-110560
 one-dimensional isotropic Heisenberg chain with arbitrary spin S , exact soln. 2-104565
 paramagnet, dynamics in high-temp. limit 2-72135
 paramagnet, $S=1$, with easy-planar anisotropy, spin fluctuations 2-66764
 paramagnetic thin film, reaction field approx. 2-87473
 poly(cobalt *n*-butylphosphinate), weak ferromagnetism and domain wall motion, susceptibility study 2-82570
 quantum antiferromagnetic spin waves near one dimension 2-77280
 quenched random site magnet with competitive exchange interactions, high temp. mag. states in simple cubic and BCC lattices 2-56816
 random ferro-antiferromagnet, Heisenberg-Mattis model dynamics 2-92953
 random spin systems, susceptibility matrix eigenvalue spectrum 2-110599
 rare earth alloys, amorphous, induced mag., singlet-singlet model 2-104560
 Schrodinger eqn., nonlinear, and anisotropic Heisenberg spin chain, Miura transformation technique 2-61886
 short-range interactions, numerical studies 2-66844

Heisenberg model continued

spin fluids, two-dimens., vortex dynamics, Heisenberg model 2-104094
 spin glass, exchange stiffness energy, area depend. 2-116025
 spin glass, magnetisation profiles 2-110600
 spin glass, Onsager anisotropies 2-104650
 spin glass, spin resonance frequencies 2-92889
 spin glasses, anisotropic-triad dynamics 2-56883
 spin glasses, magnetisation process, hysteresis loops, two spin cluster model anal. 2-56884
 spin glasses, mean field theory, recent developments 2-116015
 spin glasses, nature of ordering 2-66862
 spin system, quantum statistical Monte Carlo method 2-89613
 spin-1/2 Heisenberg XYZ model, Lax pair, Yang-Baxter relation, quantum inverse scatt. method 2-116023
 spin-1/2 anisotropic Heisenberg model, Migdal-Kadanoff renormalisation group approach 2-77317
 surfaces, order-disorder transitions 2-115549
 TCNQ salts, disordered, random exchange Heisenberg antiferromag. chain, spin dynamics 2-87501
 TCNQ salts, one-dimensional Heisenberg antiferromagnets, with random exchange 2-66858
 TMMC, one-magnon and two-magnon spectra in mag. field 2-98863
 two dimensional ferromagnetic Heisenberg model, Monte Carlo simulation 2-87520
 two-dimensional non-abelian spin models, vortex condensation 2-79765
 uniaxial Heisenberg ferromagnet, exact low temp. renormalisation and uniform mode damping 2-56814
 vector spin glasses, internal field distrib. 2-92946
 weakly ferromagnetic materials, inhomogeneous, mag. props. 2-77253
 xxz chains, excitation spectrum, magnons 2-104568
 XYZ spin chain, finite temp. excitations 2-116024
 Ag-Mn, dil., spin glass, temp. depend. of order parameter 2-72214
 Cu complex, $\text{CuCl}_2\cdot\text{TMSO}$, Heisenberg 1-D ferromag., single cryst. mag. studies 2-66802
 EuO(S) , static and dynamic props., appl. of correlation theory 2-66742
 EuO(S) , spin dynamics in paramag. state, method of moments 2-98839
 $\text{Eu}_2\text{Si}_2\text{S}_7$, dil. Heisenberg system, with competing interactions, mag. ordering 2-72212
 Fe, magnetism, fluctuating local band theory 2-82558
 Fe-Pd, dil. alloys, model of mag. behaviour 2-72198
 $\text{FeF}_2\cdot\text{Mn}$, localised magnon-pair modes 2-72182
 $\text{Fe}_{1-x}\text{V}_x$, disordered, spin wave dispersion relations 2-77279
 H atom, infinite chain, ground-state energy and mag. susceptibility, ab initio correlated calc. 2-80864
 K_2CuF_6 , two-dimens. ferromag., mag. susceptibility, X-Y anisotropy in Heisenberg system 2-116011
 K_2MnF_4 , quasi two dimensional Heisenberg antiferromag., mag. phase diagram 2-77300
 MgMn , hexagonal, spin glass behaviour 2-66861
 Mn spin systems, cooperative phenomena at low temps. 2-92956
 $\text{Mn}_{1-x}\text{Zn}_x\text{F}_2$, heat capacity meas. for $x<0.1$ 2-72210
 Ni, magnetism, fluctuating local band theory 2-82558
 $\text{Rb}_2\text{CuBr}_2\cdot 2\text{H}_2\text{O}$, spin dynamics study 2-66860
 $\text{Rb}_2\text{CuBr}_2\cdot 2\text{H}_2\text{O}$, three-dimensional Heisenberg ferromagnet, spin dynamics 2-98903
 RbNiF_3 , Heisenberg ferrimagnet, mag. susceptibility, optimal transformation method 2-77277

Heising modulation see *amplitude modulation*

helical dislocations see *screw dislocations*

helicity (elementary particles)

decay amplitude helicity suppression, relativistic quark models 2-54148
 deep inelastic polarised electroproduction with lower energy $\text{SU}(6)$ constraints 2-54170
 muo-production of neutrino pairs in nuclear Coulomb field and number of generations 2-101882
 neutrino helicity and induced pseudoscalar coupling from $^{12}\text{C}(\mu,\nu)^{12}\text{B}$ 2-101847
 neutrino mass, rel. to unified field theories and big bang cosmology 2-101627
 nucleon-nucleon elastic scatt. at large transverse momentum 2-54212
 polarised deep-inelastic scatt., total gluon helicity 2-54160
 pp-hyperon + X, large p_T , gluon helicity distrib. 2-59203
 superluminal EM fields polarisation 2-101520
 vector-meson diffractive photoproduction, polarisation characts. (Russian) 2-54175
 $e^+e^- \rightarrow q\bar{q}g$, ang. asymmetries and final state polarisation effects 2-69480
 e^+e^- collisions, polarised and unpolarised, 30-150 GeV, polarised baryon prod. in $\text{SU}(2)\times\text{U}(1)$ model 2-69479
 $e^+e^- \rightarrow q\bar{q}g(q\bar{q}g)$, four-jet prod. cross section 2-101746
 $K^+p \rightarrow \Lambda(\eta)\Lambda$, differential cross-section and polarisation study of Regge pole model 2-101766
 ν , from $^{12}\text{C}(\mu,\nu)^{12}\text{B}$, average and longitudinal recoil pol. meas. 2-107849
 ν , 15 MeV, total cross section, Coulomb effects on parity violation 2-54203
 $\pi^0 \rightarrow \Lambda\pi^0$, asymmetry parameter meas. 2-54152
 $\pi^0 \rightarrow l^+l^-$, charge and helicity asymms., Weinberg model calc. 2-107611

helicons

see also *solid-state plasma*

interaction of elastic waves and surface helicons in conducting solids 2-104410
 semiconductor, longitudinally magnetised, acoustohelicon wave excitation by laser beam modulation 2-66578
 semiconductor, magnetoactive, helicon wave filamentation instability 2-87311
 semiconductor helicon resonator, high freq. mag. fields, expt. and theoretical study 2-82393
 semiconductor plasma, magnetically active, surface helicons and Alfvén waves 2-104414
 semiconductor superlattices, collective excitations study 2-104473
 solid state plasma, magnetoviscosity, kinetic theory 2-92675
 $\text{Bi}_{1-x}\text{Sb}_x$, many-valley semicond., helicon propag. 2-115798
 $\text{Cd}_{0.1}\text{Hg}_{0.9}\text{Te}$, narrow-gap semicond., dielec. const. anomaly 2-93099
 Ge extrinsic plasma, oscillator freq., uniaxial deformation effects 2-115799
 $\text{Hg}_{1-x}\text{Mn}_x\text{Se}$, microwave and far IR magnetotransmission studies 2-98955
 InAs-GaSb superlattice, highly doped, effective mass, carrier density, helicon wave propag. determ. 2-56688

helicopters

- airfoil sections fluctuation pressures and rotor broadband noise (*French*) 2-75766
- nonuniform rotating blades, flexibly attached, torsional vibration analysis 2-91298

heliotron *see plasma devices***heliports** *see airports***helium**

- see also nuclei with*
- see also helium atoms; helium films; liquid helium; solid helium*
- 50-keV He⁺ beam in He gas cell, neutralisation efficiency meas. 2-89860
- abundance in field stars, Hyades and Coma cluster stars, variations interpretation 2-73961
- abundance in pregalactic era from obs. of Sc galaxy M101 2-68889
- abundance in universe, role of parity violation 2-73835
- adsorbed on graphite, statistical mechanics calcs. 2-104141
- adsorption kinetics on free-electron metal, polarization induced dissipation 2-98447
- adsorption of spin polarised atomic H, quasi-two dimensional character (*Russian*) 2-82073
- adsorption on graphite (0001), specular inelastic selective adsorpt. obs. 2-57235
- N Atlantic mid-ocean ridge, He isotope variations and mantle heterogeneity 2-62914
- auroral emission at 5876 angstroms from He atoms 2-112191
- bubbles, He-filled neutral density, stereo photography of 3D fluid motion in engine cylinder 2-60674
- bubbles in dual ion bombarded Type 304 stainless steel, crit. cavity sizes 2-109861
- bubbles in dual-ion bombarded Type 304 stainless steel, crit. cavity sizes 2-109860
- corona discharge, microscopic theory 2-60823
- cryostat, meas. beam method calibration of ionisation gauge 2-53779
- V380 Cygni, eclipsing binary, He abundance in atmosphere of primary rel. to evolutionary status 2-100977
- dense gas, electron transport theory 2-103256
- diffraction from GaAs (110), theoretical anal. using He-surface potentials 2-77685
- discharge, positive column at-state densities and electron densities 2-60816
- discharge, synchronized diagnostics of wave breakdown in long pipes 2-60814
- electron impact ionisation, low energy triple differential cross-section meas. 2-102642
- embrittlement of tritium charged stainless steel at ambient temp. 2-111312
- energy and tangential momentum accommodation coeff. of He adsorpt. on different vacuum flashed W surfaces 2-76805
- fission and fusion material, stainless steel, ion irradi. mode effects on void form. 2-86756
- fluid, transient hot wire thermal cond. apparatus 2-71060
- fusion material, ICFR, He interaction with displacement damage, rate theory applic. 2-85232
- fusion material, stainless steel, precip. and cavity form. during irradi. 2-86735
- fusion material, stainless steel, Types 304 and 316, dual ion bombarded, He partitioning to extended defects 2-86755
- fusion material, total He generation cross sections for fast neutrons 2-85231
- fusion material, void nucleation by gas atoms, He generation rate and conc. effect 2-86720
- fusion radiation damage simulation expt. on stainless steel, spectral modifications 2-85230
- gas, breakdown by CO₂ laser radiation near metal surfaces 2-97699
- gas, luminous layers in prebreakdown region at low press., Monte Carlo simulation 2-97702
- gas, optical quality of supersonic jets 2-55697
- gaseous, thermodynamic parameters in centrifugal force field 2-115434
- heater and controller for safe, rapid warming of helium Dewars 2-53774
- hollow cathode discharges, VUV study 2-97823
- hot plasma, line ion broadening and shift, quasistatic, adiabatic and impact calcs. 2-81445
- hydrothermal systems He isotope origins 2-88823
- impulse ratios of gaps in compressed gases 2-97820
- in intergalactic medium, photoionisation anal. of ionisation balance 2-94837
- ionising MHD shock waves evolution in He 2-103376
- ions, energy straggling in Al(Cu)(Au), 0.25 to 0.75 MeV/a.m.u., back-scatt. study 2-76550
- ions moving in electron gas, charge states 2-86920
- LB 3459, O-type subdwarf eclipsing binary, primary photosphere He depletion 2-63504
- leak detection in Tokamak vacuum system in D₂ atmos. 2-84640
- low-pressure He discharge fast electron energy distrib. function 2-115081
- mass-spectrometric analysis of hydrogen and helium isotopes 2-90297
- molecular cryst., excess electron bands, mol. tight-binding method 2-82204
- molecular cryst., hole bands, mol. tight-binding method 2-82203
- molecule, excited states, diagrammatic QDMBPT 2-108370
- molecule, pair polarisabilities, non-local contrib. 2-108657
- nuclei transverse oscills. in planar channels in Si 2-81863
- phonon-induced desorption from Nichrome, crit. cone 2-92349
- physorption on solid inert gases and SF₆, sorption energy determ. 2-87013
- plasma, CW optical discharge as hot steady-state UV light source 2-109474
- plasma, decay in curved mag. field with an inflection point 2-86460
- plasma, magnetically confined, equilib. ionisation dynamics 2-76167
- plasma, mirror confined, HF plugging, freq. depend. 2-86461
- plasma, withdrawal from Tokamak reactor, turbulent plasma blanket anal. (*Russian*) 2-60784
- plasma He⁺ distrib. from EUV nightglow obs. 2-78902
- plasma prod. using axicon focused laser 2-65741
- plasmadynamic recombination laser, population inversion 2-108852
- positron-gas cross-section measurements 2-75420
- primordial abundance, dwarf galaxy optical emission spectra 2-117828
- scattering from Cu(110), corrugation profile determ. 2-104455
- solubility in Se-Ge-As glass melt 2-98292
- submonolayer on graphite, density-functional theory 2-98444

helium continued

- Sun, spectral line breadth of 584 angstrom reson. line 2-68701
- superconductive windings cooling by helium in various phase states, calculation fundamentals (*Slovak*) 2-69180
- suppression of metal surface oxidation, during laser surface treatments 2-83294
- thermal desorption spectra from polycryst. Mo, surface relax. effects 2-115547
- two-phase channel flow, hydraulic charact. calcs. 2-103200
- Al-He thin film, He ion bombardment, TEM, SEM and α -particle back-scatt. study 2-115319
- Ar-He, spatial separation of components 2-88392
- Ar-He-O₂, ion implantation source, source gas composition and ion current spectrum, optimisation by gas mixing 2-69296
- CO-He, diffusion coeffs., viscosity meas. 2-114960
- CO₂-He gas, thermal cond. meas. 2-103250
- CO₂-N₂-He gas mixt., press. shift in atmospheric press. 2-96641
- CO₂-N₂-He laser, vibr.-temp. model for determ. populations of N₂ and CO₂ levels 2-85936
- D₂-He system, three-phase vapour-liquid-solid equilib. (*Russian*) 2-56157
- α -Fe-He, He precipitation at vacancies, computer simulation 2-86706
- H-He shock layer, radiating, convective heat flux, opaque admixture blowing effects 2-81358
- H₂-He system, shear viscosity SBE cross sections, close-coupled and coupled-state calcs. 2-81431
- HD-He system, depolarised Rayleigh scatt., multilevel description 2-80638
- 3He, adsorbed on thick Ne films, heat capacity 2-98442
- He discharge afterglow, high press., reaction kinetics theory 2-71281
- He flowing gas spark gaps, statistical breakdown times 2-91711
- He I D₃ line Stokes profiles used for solar prominence mag. field vector determ. 2-117612
- He I line emission and He abundance in eclipsing cataclysmic binary stars 2-89269
- He star of 1 M_⊙, evolution in struct. and luminosity to white dwarf stage 2-68785
- He-²²Ne laser, freq. stabilisation by intracavity polarisation spectroscopy of CH₄ 2-86007
- He-Ar, mixture, optical quality of supersonic jets 2-55697
- He-Ar, near-Lorentzian mixture, diffusion coeff. temp. depend. 2-86370
- He-Ar, quasi-Lorentzian mixture, thermal diffusion factor 2-86371
- He-Br, discharge, positive column at-state densities and electron densities 2-60816
- He-CO mixtures, pressure broadening coeff. for rot.-vibr. lines of J states 2-108472
- He-CO₂, dense gas, interdiffusion coeffs. meas., density depend. 2-103247
- He-Cd high power and long lifetime laser, monomode output (*Chinese*) 2-55184
- He-Cd laser, noise characteristic 2-70543
- He-Cd laser line at 4416 Å, effect of non-uniform mag. field 2-90876
- He-Cd lasers, electrophotography appl. 2-74536
- He-Cd mixture hollow cathode discharge, population density meas. 2-71284
- He-Cd⁺ hollow-cathode laser, high-voltage 2-86001
- He-Cd⁺ positive column laser discharge Cd(II) excited states, electron and Penning excitation rates 2-60817
- He-Cd⁺ transverse HF discharge laser, 441.6, 537.8 and 636.0 nm transitions 2-70544
- He-F₂ mixture low-temp. plasma, spectral characts. and electric parameters 2-81457
- He-H₂, interaction dipole polarisabilities, MC TDHF theory calcs. 2-96447
- He-He, interaction dipole polarisabilities, MC TDHF theory calcs. 2-96447
- He-Kr, near-Lorentzian mixture, diffusion coeff. temp. depend. 2-86370
- He-Kr, quasi-Lorentzian mixture, thermal diffusion factor 2-86371
- He-LiF system, neutral particle scatt. by exponential corrugated pot. 2-84483
- He-like ions, resonance line intensity in TFR Tokamak plasmas 2-55769
- He-metal vapour ion lasers with transverse RF discharge excitation 2-86002
- He-N, afterglow, Penning ionisation, charge transfer, kinetic model 2-96716
- He-N, nuclear-pumped laser medium, kinetics model development and testing 2-96880
- He-Ne, near-Lorentzian mixture, diffusion coeff. temp. depend. 2-86370
- He-Ne, quasi-Lorentzian mixture, thermal diffusion factor 2-86371
- He-Ne ¹²⁷I₂, stabilised lasers at 633 nm and 612 nm BIPM and IMGG intercomparison 2-102769
- He-Ne 0.633 μ m laser freq. stabilised to Ne saturated absorpt. (*Chinese*) 2-65202
- He-Ne dual cavity laser (*Chinese*) 2-60122
- He-Ne frequency locked laser, self-irrad. opto-galvanic effect 2-114336
- He-Ne internal mirror lasers, freq. stabilisation by flowing-water method 2-70594
- He-Ne internal mirror multimode laser, polarisation props. 2-60062
- He-Ne intra-cavity laser alignment (*Chinese*) 2-65274
- He-Ne intracavity laser using getter alloy ZrAl 16 (*Chinese*) 2-96972
- He-Ne laser, 0.63 μ m, stabilised without freq. deviation 2-60114
- He-Ne laser, 633 nm, ¹²⁷I₂, stabilised, power shifts for various mirror curvatures, report 2-97056
- He-Ne laser, 633-nm, ¹²⁷I₂, stabilised, freq. depend. on modulation amplitude and wall temp., report 2-75618
- He-Ne laser, influence of foreign atoms and mols. 2-96710
- He-Ne laser, intensity stabilisation by mag. field induced light polarisation 2-65264
- He-Ne laser in hollow cathode discharge, output power 2-96899
- He-Ne laser line, linewidth and profile meas. method using optogalvanic spectroscopy 2-70542
- He-Ne laser operation, microwave field influence 2-114243
- He-Ne laser power meas. in visible region, international intercomparison 2-102771
- He-Ne laser radiation nonlinearity orientation mechanism and self-focusing in nematic liquid cryst. mesophase 2-97127
- He-Ne laser stabilised with ¹²⁷I₂, nonlinear frequency shifts at 633 nm 2-102770
- He-Ne laser system, mag. induced mode locking investig. 2-80928
- He-Ne lasers, discharge noise investigation (*Chinese*) 2-65201
- He-Ne lasers, electrophotography appl. 2-74536

helium continued

- He-Ne lasers, freq. stabilised, tunable, multimode 2-86026
 He-Ne lasers, methane stabilised (3.39 μm) and I_2 stabilised (633 nm), international comparisons results 2-102772
 He-Ne lasers at 633 nm, $^{127}\text{I}_2$ stabilised, freq. shifts at low I_2 press. 2-96897
 He-Ne lasers with I_2 saturated absorption freq. stabilisation (Polish) 2-96978
 He-Ne lasing medium, resonant Faraday effect, maximum population inversion determ. 2-114238
 He-Ne long laser, tunable single mode operation 2-114239
 He-Ne methane freq. stabilised laser oscill. period for optical time scale 2-101379
 He-Ne multimode laser, radiation intensity fluctuations due to nonequidistant mode distrib. 2-55117
 He-Ne ring laser, internally loss modulated, mode locked travelling wave oscillations calc. 2-55227
 He-Ne ring laser, natural fluctuations of difference between opposite wave freqs. 2-10590
 He-Ne ring laser, secondary mode beat stabilisation 2-114236
 He-Ne single frequency stabilised laser 2-85994
 He-Ne single-mode laser output, bistable behaviour obs. in polarisation 2-97050
 He-Ne totally sealed-off long-lifetime laser, metal glass sealing (Chinese) 2-90924
 He-Ne two-mode modulated-parameter laser 2-114237
 He-Ne visible laser beam retroreflected through a turbulent atm., statistical props. 2-100561
 He-Ne visible laser transitions, unsaturated gain coeff. and saturation intensity determ. 2-114240
 He-Ne/ CH_4 ultrastable lasers based on saturable absorption effect (Polish) 2-55187
 He-Ne/ I_2 linear two-mode laser, high-contrast power resons. 2-114241
 He-Ne/methane ring laser, freq. stability 2-65278
 He-Ne/methane ring laser, nonlinear absorpt. line, resonant narrowing 2-90946
 He-Ne(Cd,Zn,Xe) lasers, noise, influence of the Penning process 2-114242
 He-Se ion laser, electron beam pumped, CW laser action on 15 Se II transitions 2-90874
 He-Se⁺ cathaphoretic lasers, origin of laser-output noise 2-96905
 He-Sr plasma laser, kinetic model of active medium 2-85947
 He-Xe, hollow cathode discharges, VUV study 2-78233
 He-Xe, near-Lorentzian mixture, diffusion coeff. temp. depend. 2-86370
 He-Xe, quasi-Lorentzian mixture, thermal diffusion factor 2-86371
 He-Xe 3.51 μm laser radiation scatt. 2-70597
 He-Xe high-gain single-mode laser, mode-pulling, mode-splitting and pulsing, 3.51 μm 2-55198
 He-Xe plasma recombination laser excited by 10.6 μm laser pulses 2-96898
 He-Zn laser, hollow cathode, with an additional command electrode 2-114248
 He+Li, quenching, excitation transfer processes, radiative coeff., collision rate coeff. 2-108418
 He⁺ + Ar, Z^2 scaling and electron screening effect 2-70150
 HeNe laser, hologram recording 2-96857
³He, 2-³S-5⁻P transition nonlinear UV-laser intermodulated fluoresc. spectroscopy 2-95487
³He and ⁴He, on graphite, multilayer physisorption, mean-field theory 2-87050
³He ion ranges in Fe, Cu, Zn, W, Bi, Co 2-66089
³He ions deposited energy losses at 40 MeV/n in Ar-methane gas layers 2-90417
³He, pair potentials, second virial coeff. calcs. (Russian) 2-71766
³He, physisorption kinetics on graphite, mean field theory, compensation effect near monolayer coverage 2-87046
³He/⁴He in igneous rocks on oceanic islands used for mantle age determ. 2-78605
³He⁺(³He⁺) ions, 1 MeV/atom, stopping power meas. in C 2-81854
³He-propane proportional detector for thermal neutrons 2-113822
⁴He, 2-³S-5⁻P transition nonlinear UV-laser intermodulated fluoresc. spectroscopy 2-95487
⁴He, pair potentials, second virial coeff. calcs. (Russian) 2-71766
⁴He μ ⁺ muonic ion, bound and quasi-bound levels calc. (French) 2-85841
 Mo-He, radiation damage during HVEM, He effects 2-103823
 Ne-He gas purification system for large flash chambers 2-64747
 Ni, diffusion of He 2-104063
 Ni-He, gas re-emission and surface structure due to implantation 2-76469
 Ni-He, ion implanted, damage profiles, swelling due to Ni ion irradi. 2-103805
 Ni-He, ion implanted, low temp. release of He 2-82118
 Ni-He⁺, D⁺, ion implanted, D trapping, ion beam anal. studies 2-81813
 Se-He, HF discharge, laser levels excitation 2-65786
 W-Ag-He, ion implanted, He precipitation at substitutional Ag atoms He desorption study 2-92218

helium, liquid see liquid helium

helium, solid see solid helium

helium-3 interactions see helium 3-nucleus reactions

helium 3-nucleus reactions

- for inelastic helium 3-nucleus scattering, see "helium 3-nucleus scattering"
 BOL measurement system for nuclear reaction investig. 2-59666
 CC¹²C(³He, π^+), 910 MeV, pion inclusive spectra, nuclear struct. effects 2-101900
 fast neutron prod., thermal moving source model breakdown 2-101902
 Al(³He,X), 10-40 MeV, excitation function meas. 2-59367
²⁷Al(³He, p)²⁹Si, pre-equilibrium contrib., spectral density, method 2-74753
²⁷Al(³He,X), 34.8 MeV, cross-sections, p, d, t and α ang. distrib., rel. to excitation model (Russian) 2-101904
²⁷Al(³He,d)²⁸Si, 130 MeV, proton stripping, DWBA analysis, ground state transitions 2-113454
²⁷Al(³He,d)²⁸Si, 35 MeV, ²⁸Si level structure study 2-54410
²⁷Al(³He,n), 15 MeV, ²⁸P excited states, transitions, ang. distrib., DWBA anal. 2-113367
²⁷Al(³He,p), coherence energy extraction from fluctuating excitation function 2-54346
⁹Be(³He,p)¹¹B, 13.6 MeV, proton polarisation and implications for time-reversal invariance 2-59378

helium 3-nucleus reactions continued

- ⁸¹Br(³He,t)⁸¹Kr, ⁸¹Kr ground state mass and solar neutrino problem 2-59227
⁵⁹Co(³He,X), 34.8 MeV, cross-sections, p, d, t and α ang. distrib., rel. to excitation model (Russian) 2-101904
¹⁶¹Dy(³He, α), ¹⁶⁰Dy aligned two quasiparticle bands, superbands 2-64353
¹H(³H,p)d, 69 MeV, break-up reaction mechanism study 2-101906
²He(³He, π^+), 910 MeV, pion inclusive spectra, nuclear struct. effects 2-101900
 (³He,t), 130, 170 MeV, A=12-90, giant dipole resonance isobaric analogue 2-69624
³He(³He, π^+)⁶Li, pionic fusion reaction mechanism study 2-80044
⁴He(³He, π^+)⁷Li, coherent pion prod. study and reaction mechanism test 2-108773
¹⁹³Ir(³He,d), 40 MeV, ¹⁹⁴Pt levels, spectroscopic factors, DWBA anal., supersymmetric coupling test 2-113366
⁶Li(³He, π^- X), 303 MeV/n, coherent π^- prod., cross sections, Weizsacker-Williams calc. 2-64416
⁷Li(³He, α d), 2.5 and 5.0 MeV, ⁶Li ¹³D, state excitation 2-84990
 Mg(³He,X), 10-40 MeV, excitation function meas. 2-59367
 Mg(³He,n), 13 MeV, ²⁶Si levels, J⁺ and transitions 2-69537
²⁷Mg(³He,X), X = p or α , 8.05-20.42 MeV, fluctuations due to statistical multistep compound emission 2-59375
⁹²Mo(³He, ²He)⁹³Mo, DWBA calcs. 2-59315
⁹²Mo(³He, α)⁹¹Mo, 25 MeV, f-p neutron-hole strength fragmentation in ⁹¹Mo 2-54409
⁹²Mo(³He,d)⁹³Tc, DWBA calcs. 2-59315
¹⁰⁰Mo(³He, 2n), 10-18 MeV, high spin collective excitation in ¹⁰¹Ru 2-54235
¹⁰⁰Mo(³He,p), 25 MeV, ¹⁰²Tc excited states, proton-neutron interaction study 2-54417
⁵⁸Ni(³He, α), 100-283 MeV, microscopic α -nucleus pot. cross sections 2-107872
¹⁷O(³He, α)¹⁶O, analysing power and cross section meas. 2-80023
²⁰⁸Pb(³He, α)²⁰⁷Pb, 283 MeV, neutron pick-up cross section, deep-lying hole strength 2-101903
²⁰⁸Pb(³He, α), 100-283 MeV, microscopic α -nucleus pot. cross sections 2-107872
⁹⁶Ru(³He, 2n), ⁹⁷Pd excited states study 2-69600
⁴⁶Sc(³He,d), 16 MeV, ⁴⁶Ti level struct., cross sections, spectroscopic strengths, DWBA anal. 2-59242
⁴Se(³He,pn), A=76.77, nat., excitation functions 2-74766
⁴Se(³He,n)Kr, A=76.77, nat., excitation functions 2-74766
³Si(³He,X), 10-40 MeV, excitation function meas. 2-59367
²⁸Si(³He, np), 9.5 MeV, T=1 isospin triplet states in ³⁰Si 2-95921
²⁸Si(³He,X), 52 MeV, quasi-free breakup, DWBA formalism 2-85009
²⁸Si(³He,d)²⁹P, 130 MeV, proton stripping, DWBA analysis, ground state transitions 2-113454
²⁸Si(³He,n), 13 MeV, ³⁰S levels, J⁺ and transitions 2-69537
²⁸Si(³He,n), 15 MeV, ³¹S excited states, transitions, ang. distrib., DWBA anal. 2-113367
¹⁴⁴Sm(³He,d), 240 MeV, transitions to high-lying p-states 2-79939
¹¹²Sn(³He,X), 34.8 MeV, cross-sections, p, d, t and α ang. distrib., rel. to excitation model (Russian) 2-101904
¹¹⁶Sn(³He, α)¹¹⁵Sn, 283 MeV, neutron pick-up cross section, deep-lying hole strength 2-101903
⁴Te(³He, α), A=124, 130, 70 MeV, Te neutron-hole strength distrib. 2-84936
⁴⁶Ti(³He, 2n), 22 MeV, γ - γ coincidence, ⁴⁷Ti states γ -decay 2-107731
⁹⁰Zr(³He, 3n), 33 MeV, Mo high spin states, level structure determination, J⁺, T_{1/2} shell model analysis 2-113327
⁹⁰Zr(³He, α), 100-283 MeV, microscopic α -nucleus pot. cross sections 2-107872
⁹⁰Zr(³He,t), 43.4 MeV, ⁹⁰Nb levels, J⁺, ang. distrib., DWBA anal. 2-107725

helium 3-nucleus scattering

- medium energy region, cross sections analysis, oscillation damping effect (Russian) 2-59379
 transmission coefficients for light projectiles 2-69621
¹C(³He,He), 40.9 MeV, differential cross section ang. distrib., optical model anal. 2-96021
 (³He,He), 130, 170 MeV, A=12-90, giant dipole resonance isobaric analogue 2-69624
⁶Li(³He,He), single channel resonating group calcs. 2-96009
⁵⁸Ni(³He,He), 130 MeV, ang. distrib., giant reson., optical and DWBA calc. 2-101909
¹⁶O(³He,He), 40.9 MeV, differential cross section ang. distrib., optical model anal. 2-96021
²⁰⁸Pb(³He,He), giant dipole reso. Coulomb excitation 2-54344

helium-3 scattering see helium 3-nucleus scattering

helium atoms

- 10830 A line in stars as measure of coronal emission in X-rays 2-117660
 antiprotonic atom, rot. states and lifetime calc. 2-102672
 beam scatt. from LiF corrugated surface, quasi-hard wall model 2-62040
 binding energies of He-like systems in mag. fields 2-75176
 Coulomb correlation in 2¹S, 2³S, 2¹P and 2³P states 2-59714
 dipole polarisabilities, MC TDHF theory calcs. 2-96447
 double photoionisation cross section, Altick function 2-75221
 elastic electron scatt., cross section data compilation 2-54964
 electron and positron forward elastic scatt. 2-70418
 electron Compton scatt., ejected electron cross-section, impulse profile calcs. 2-65095
 electron excitation rates for He I, calcs. 2-90718
 electron impact autoionisation, double and triple differential cross sections 2-96740
 electron impact excitation, ³P line radiation, polarisation fraction 2-96745
 electron impact excitation, cross sections, Coulomb-project Born approx. 2-90717
 electron impact excitation meas. at large scatt. angles 2-65093
 electron impact excitation of 2¹P state at low-energy 2-96737
 electron impact ionisation, cross sections, second Born approx. 2-85817
 electron impact ionisation, intermediate energy 2-90721
 electron impact ionisation, second Born treatment 2-80814
 electron impact ionisation, triple differential cross section meas. 2-54970
 electron impact ionisation, triple differential cross sections 2-85815
 electron scatt., free-free absorpt. coeff. of negative ion 2-59935
 electron scatt. at 30-400 eV, polarisation and absorpt. effect 2-90707
 electron scattering, complex optical pots., dispersion eqn. calcs. 2-80810
 energy level high precision meas. 2-59956

helium atoms continued

- energy levels and Lamb shift investig. 2-75208
excited state Doppler-free spectroscopy using colour centre laser and electron impact excitation 2-54792
fine structure of Rydberg states in intervals nF-nG, n=5,6 2-65107
glow discharge, AC Stark effect on 4713 Å line 2-85589
glow discharge, excitation const. determ. for He⁺S level 2-71274
ground state, HF energy, corrections to an incomplete basis set 2-108366
ground state, struct., exact 1-electron model 2-80445
ground state, use of rational functions as variational functions 2-80431
ground state, wave functions, variational marginal amplitudes 2-80414
ground state electronic extracule densities 2-80446
interaction with metal surface first-order theory, perturbation calc. 2-77672
interaction with substitutional Ne(Ar) in Mo or W, pair potentials 2-65065
ionic charge state distribution in solar energetic storm particle enhancement 2-94570
ions, 1 MeV, equil. mean charge calc. 2-96720
ions, backscattering from plasma-solid interactions 2-60758
ions, electron impact excitation, Coulomb-Born-Bely approx. 2-96742
ions in radiation belts in quiet conditions, pitch angle distrib. 2-106423
IR broad emission in galactic centre 2-117758
isoelectronic series, energy and transition probabilities correl. wavefunctions calcs. 2-113874
isoelectronic series, multicharged ions, self-ionisation states, intermediate-coupling approx. 2-75152
isoelectronic series, S state, eigenvalues of two-dimensional Schrödinger eqn. 2-54749
isotopic He surfaces, H-binding, long range model and scaling rels. 2-80413
metastable, refl. from solid surfaces 2-82979
methane-He, thermal diffusion meas., interaction parameters 2-102565
muonic, metastable state quenching, clustering 2-65115
muonic and pionic atom cascade, X-ray emission meas. 2-90744
muonic He, hyperfine struct. interaction meas. 2-70456
muonic He, hyperfine struct. interval and Zeeman effect 2-70452
muonic one-dimens., theory 2-79327
near-threshold electron impact ionisation cross sections 2-102639
neutral lines, electron impact broadening and shift, convergent calcs. 2-80823
O-type stars, He I and He II emission lines in near IR spectra 2-63416
oscillator strength distrib. near ionisation limit, Stark effect 2-108426
photoionisation, asymmetry parameter, photoemission obs. 2-102445
photoionised, final state symmetry for n=2 states determ. 2-54817
plasma discharge, electron beam excitation, population mixing rate consts. determ. 2-114969
polarisation intermodulated excitation (POLINEX) spectroscopy 2-59729
positron inelastic scatt., excitation and ionisation meas. 2-75440
positrons elastic scatt. studied using second order pot. model 2-65089
reflection from W (001) surface, calc. 2-69850
relativistic wave functions for non-penetrating Rydberg states 2-80510
Rydberg IR optogalvanic spectroscopy 2-59759
Rydberg states, optical pot. anal. 2-113901
S, P, D states, mass polarisation effect and oscill. strengths 2-59697
second order correl. energies, variational SCF calcs. 2-113860
stopping power of protons and alpha particles 2-70386
UV 2S to 5P transition fine and hyperfine struct. spectra, detected via associative ionisation 2-85831
variational method for three body problem 2-108336
wavefunction, quality assessment using quantum Monte Carlo method 2-80411
Wolf-Rayet stars, atmospheric He densities from IUE UV spectrophotometry 2-58360
Zeeman splitting of 5876 Å line 2-70184
As atoms, stopping power in He, Ne and N₂, recoil nuclei γ-ray emission study 2-102579
Cu-He interaction pot. determ. by atomic beam scatt. 2-99266
H⁺+N₂, N₂ energy loss spectrum 2-80799
He, antiprotonic, X-ray transitions, strong interaction effects 2-108743
He, Compton defects and asymmetries, electron impact spectra, Hartree-Slater calc. 2-90425
He, first-order interaction energy, intra-atomic correl. effects anal. 2-80769
He I 4471 Å overlapping line Stark profiles appl. to stars 2-68726
He I and isoelectronic sequence, Fock expansion for S-states, first terms (French) 2-54762
3p³P He I transition following tilted-foil excitation, alignment, orientation and optical polarisation parameters 2-70405
He II, Stark shifts relative to fine struct. centres of gravity 2-80532
He II abundance in intergalactic medium, photoionisation anal. of ionisation balance 2-94837
He II lines Stark broadening, ion-radiator dynamic effects 2-80536
He II Lyman α, solar O III EUV line photoexcitation 2-89213
He II recombination line survey in galactic H II regions 2-106833
He ions + He(N)(Ne)(Ar), charge exchange cross sections, oscillations, average equil. charge 2-85800
He isoelectronic series, optimal geometric approx., uncoupled HF calcs. 2-113868
He 1s2p ³P 2-102655
He⁺, double excited states 2-70156
He⁺, backscattering from Pb, Sn, Al targets, equil. charge state distrib. 2-54957
He⁺, electron elastic scatt., s-, p- and d-wave phase shifts 2-108709
He⁺, electron impact ionisation, triple differential cross sections 2-80817
He⁺ ion channelling in diamond at high depth resolution, backscattering spectra 2-66095
He⁺ ion-surface scatt. at grazing incidence, reson. coherent excitation, ang. depend. 2-77644
He⁺ ions backscattered energy spectra for GaP, (110) channelling study 2-66094
He⁺ ions electronic energy loss in single crystal Au films at 600 eV-15 keV 2-66087
He-He, intermol. forces calc., ab initio valence bond theory 2-80753
He-He(Li⁺), polarisabilities, oscil. strengths, interaction, coeffs. calcs. 2-80763
He-Li, intermol. forces calc., ab initio valence bond theory 2-80753
He-like atoms in strong mag. field, HF calcs. 2-102377
He-like ions, multiply charged, reson. photoabsorpt. characts. 2-113949
He-like ions, P^{1/2} transitions and lifetimes meas., X-ray and beam-foil time-of-flight spectra 2-113920

helium atoms continued

- He-like ions, spectrum, dipole and quadrupole moments in superstrong mag. field 2-113912
He-O(N), VUV discharge line source, excitation mechanism effect on linewidth parameters 2-108422
He⁺-D₂⁺, mass spectra obs. (Japanese) 2-113034
He⁺-He⁺(H), polarisabilities, oscill. strengths, interaction, coeffs. calcs. 2-80763
He⁺-Xe, charge transfer reaction, combined drift-tube and beam luminesc. study 2-99671
He⁺+H₂⁺, mass spectra obs. (Japanese) 2-113034
He⁺+¹B, aniline, collision induced vibr. relax. 2-70399
He+acetylene, excitational dissociation, optical emission from excited fragments 2-105470
He+Ar, cross sections, pot. energy curve 2-54939
He+Ar⁺, excitation cross sections, spectra, Landau-Zener model 2-96711
He+B⁺(C⁴⁺)(N⁴⁺)(O⁴⁺)(F⁴⁺)(Ne⁴⁺)(H-like)(He-like)(Li-like) ions, one-electron capture cross sections 2-96723
He+C⁶⁺(O⁸⁺), electron capture into selective state, energy spectra meas. 2-102608
He+CO, integral and differential cross sections, use of nondiagonal matrix Green functions 2-70383
He+CO, rot. energy transfer and anisotropic intermol. pots., ab initio calcs. and expt. 2-75387
He+CO, vibr. relax. rate coeff., ab initio calcs. 2-59906
He+CO total differential cross sections, space-fixed sudden approx. 2-80779
He+CO₂, collision induced IR absorpt., frame distortion mechanism 2-80590
He+CO₂, vibr.-rot. energy transfer, cross sections, rate consts. calcs. 2-96695
He+CO(HCl), polarisation transitions, cross sections, close-coupling study 2-80781
He+F⁺, electron detachment cross sections meas. 2-59927
He+F⁺(F⁹⁺), radiative electron capture processes, X-ray prod. cross sections 2-96725
He+H₂, van der Waals pot. hypersurfaces, bond dist. depend. 2-59882
He+H₂ inelastic scatt., time depend. perturbation theory 2-102590
He+H₂(D₂), collision spectrosc., triatomic mol. orbital promotion model 2-96691
He+H₂(N₂), relativistic correction to interaction coeffs. 2-75202
He+H⁺, electron detachment, cross section plane wave form approx. 2-114094
He+H⁺(D⁺), electron detachment cross sections meas. 2-59927
He+H⁺, charge transfer collision, elec. dipole moment 2-54958
He+H⁺, electron capture cross sections, second Born approx. 2-114103
He+H⁺, He excitation, Glauber cross sections 2-80800
He+H⁺, differential scattering at E_{cm}≤0.5 eV, orbiting struct. meas. 2-80801
He+H⁺(D⁺), electron capture probabilities 2-102609
He+He, low energy scatt., ⁴He, bound state 2-88349
He+He, simultaneous excitation to 2P state, cross sections 2-85779
He+He⁺ collisions, quasimolecular states, calc. using diabatic MO basis set 2-70384
He+I₂, vibr. relax., Morse type pots., quantum mechanical study 2-80787
He+I₂(B^π), rotationally inelastic transitions, rate consts., laser induced fluoresc. 2-85786
He+K, 4p ²P_{3/2}-7s ²S_{1/2} transition, effect of collisions 2-59732
He+K, electronic and nuclear spin relax., hyperfine interaction 2-96688
He+K, excited states, transition cross sections, fluoresc. obs. 2-75408
He+Kr⁺(Xe⁺)(I⁺)(N₂⁺), electronic and vibronic transitions, translational energy spectroscopy 2-54935
He+Li, Li 3S-3P transition relax. spanning short term impact regime to the long term asymptotic regime 2-59915
He+Li, mol. autoions, electron spectra 2-102582
He+LiCl-LiHe⁺+Cl⁺e, chemical exchanges, mechanism, cross-section determ. 2-57604
He+Li*, Li fine struct. transitions, rate coeff. 2-54938
He+N₂, Penning ionis., intermediate Rydberg states obs. 2-65082
He+NH₃, energy corrected scaling theory, further development and appl. 2-102585
He+NO, rot. and spin-orbit transitions, IR-UV double reson. 2-75382
He+Na, collision-induced coherence in four wave light mixing 2-59902
He+Na, hyperfine components broadening 2-113913
He+Ne⁴⁺, Kα X-ray lines, electron capture rate coeff. determ. 2-65072
He+Ne⁴⁺, excited projectile states prod., photon emission cross sections 2-75413
He+O₂, vibr. relax., ab initio quantum mech. calcs. 2-59905
He+OCS, OCS linewidth and lineshift, unitary S-matrix theory 2-102537
he+p-H₂, rovibr. excitation calcs. 2-75383
He+Rb, excitation transfer, atomic fluoresc., two-photon absorpt., quenching 2-70389
He+Rb, impact broadening and shift of nS and nD levels 2-102581
He⁺+Al, pulsed beam time of flight technique for studying ion-atom scatt. 2-77670
He⁺+Ar, excitation cross sections, spectra, Landau-Zener model 2-96711
He⁺+Au, secondary electron emission yield meas. 2-79650
He⁺+C foil, convoy electrons dwell-time depend. 2-59922
He⁺+C foil, zero degree electron emission, energy spectra and dwell time depend. 2-75389
He⁺+C-foil, HeI 3d¹D alignment, depend. on ion current density 2-75395
He⁺+C-foil(Au), quantum beat study 2-75396
He⁺+Dy(W)(Au)(Pb)(U), M to L shell X-ray yields ratio 2-59592
He⁺+H, close coupling calcs., electron transfer cross sections 2-80805
He⁺+H₂, vibr. excitation, differential cross-sections meas. 2-75384
He⁺+H₂O, reaction rate consts. and branching ratios, kinetic energy depend. 2-93788
He⁺+H₂(D₂), collision spectrosc., triatomic mol. orbital promotion model 2-96691
He⁺+H⁺ 2-54955
He⁺+H⁺(He²⁺), excitation, charge transfer, ionisation, emission cross section meas. 2-114090
He⁺+He, scatt. cross sections meas., charge transfer cross section meas. 2-75410
He⁺+He*, charge transfer cross sections 2-96682

helium atoms continued

- He⁺+N₂ charge transfer collisions, N₂⁺(B²Σ_u⁺) state vibr. populati on 2-70411
 He⁺+Ne, density matrix of the I 3p determ. 2-96712
 He⁺+C foil, convoy electrons dwell-time depend. 2-59922
 He²⁺+Ar, L-shell impact ionisation, coupled state calcs. 2-102598
 He²⁺+Ar, transfer ionisation in slow collisions 2-59926
 He⁺+H, electron capture investigated at impact velocities 0.3 and 1.4 au 2-114074
 He²⁺+H, electron ejection, single differential and total scatt. cross-sections calcs. 2-59921
 He⁺+H, one and half centred calcs. of ionisation and charge transfer 2-54955
 He²⁺+H-like ions, charge transfer cross sections, Coulomb projected Born approx. 2-90687
 He⁺+He, charge exchange, time-dependent HF theory appl. 2-90658
 He⁺+He⁺, excitation, charge transfer, ionisation, emission cross section meas. 2-114090
 He⁺+Li, electron capture and ionisation cross sections calcs. 2-54956
 He⁺+Li, electron transfer, single and double, cross-sections 2-65086
 He²⁺+Li collisions, absolute cross sections for one electron capture into excited projectile states 2-59929
 He₂, determ. of ground state pot. from expt. by use of reliable pot. model 2-59881
 HeI, term energies, electrostatic intervals, semiclassical formulation 2-85517
 He, 1'S-2'S transition, two-photon transition probability calc. 2-113952
 HeI, nucl. relax. in weak inhomogeneous mag. field (*French*) 2-70170
 He, primordial abundances, cosmology and neutrino physics, review 2-84356
 He adsorption on graphite, Hartree-Fock theory 2-115533
 He, gaseous, nucl. polarisation by laser optical pumping (*French*) 2-102439
 He ion+Al(Y), inner shell ionisation cross sections, projectile charge depend. 2-70387
 He⁺, stored ions, microwave spectra, motional side band resonances obs. 2-90470
 He+N₂O, N₂O vibr. relax., shock tube study 2-90666
 He ions multiple scatt. in Al₂O₃ thin films, ang. distrib. anal. 2-67170
 He⁺, impact on Ni surface, at 0.5 to 1.8 MeV 2-82993
 He⁺ ions mid-channel flux in Al-I crystal, depth and ang. depend. 2-66096
 He-alkali metal plasmas, He and free electron mag. reson. signal separation 2-113915
 He+Au(Bi), L-subshell ionisation cross sections meas. 2-54942
 He+H excitation cross section for high and moderate n values 2-80797
 He+N₂O, N₂O vibr. relax., shock tube study 2-90666
 He+Ne(Ar), K-shell ionisation and capture differential cross sections, scaling props. 2-96706
 He+ph₂, transition between rot. states, phase modulated semiclassical sudden approx. 2-70378
 He*, multiphoton ionisation, reson. effects 2-96522
 He*+HCl, H polarisation and ionisation 2-70439
 He⁺(2S) ions, electric field quenching, radiation polarisation 2-114029
 He(2S) atoms, meas. of spin polarization of an optically pumped ensemble 2-113946
 He⁺ ion scatt. from solid surfaces, neutralisation effects 2-77663
 LiH-He, translational-rotational energy transfer, classical formalism 2-90665

helium compounds

- HeH⁺ 2 MeV beam, internuclear separation distrib., ion-source depend. 2-75459
 HeH⁺, dynamic dipole polarisability 2-59966
 HeH⁺, molecular dissociation in thin foils, optical obs. 2-54934
 HeH⁺+Au, secondary electron emission yield meas. 2-77650
 HeH⁺+foil, beam foil level excitation, foil thickness depend. 2-75390
 HeH₂(A₁), electronic states, multiconfigurational coupled-cluster theory 2-80416
 HeNe⁺, spin splitting, spin-orbit coupling, SCF calcs. 2-96442
 HeNe⁺, spin-orbit coupling consts., ab initio calc. using universal even tempered basis set of exponential functions 2-96415
 HeXe, multiphoton vibr. spectra, model calcs. 2-96668

helium films

- adsorbed on solid Ne, two dims. electrons, electron mobility meas. 2-61246
 superfluid, dipole complexes (*Russian*) 2-56293
 superfluid, vortex-boundary interactions 2-82066
 superfluid thin film, electron spectrum (*Russian*) 2-61248
 superfluid unsaturated film, vortex pinning 2-56295
 surface, self-trapped electron, temp. depend. effective mass 2-76776
 surface electron localisation, UHF EM absorpt. study (*Russian*) 2-56294
 surface two-dims. electron, polaronic aspects, path integral formalism 2-61245
 He₄, superfluid transition, SAW and phonon echo study 2-61243
 He adsorbed layers, on Grafoil, melting, neutron scatt. study 2-71763
 He film, superfluidity and Bose excitations 2-56290
 He physisorbed on Cu-Ni (40 wt.%), desorpt. kinetics, prefactors and compensation effect 2-98458
 He adsorbed film on graphite substrate, superfluid transition, colorimetric study rel. to third sound meas. 2-104108
 He, adsorbed on pyrolytic graphite, third-sound vel. and superfluid onset 2-61242
 He adsorbed on SiO₂, isotherm, US attenuation phonon echo meas. 2-104107
 He, desorption kinetic meas. 2-71761
 He, epitaxial adsorption on graphite, fourth sound meas. 2-86971
 He film, adsorption of spin polarised H, surface phonon 2-82075
 He film, US method for superfluidity studies 2-61227
 He film with adsorbed spin polarised atomic H, spin relax. 2-82067
 He, sound velocity superfluid, 2D and 3D 2-98363
 He, superfluid, adsorbed film, density profile calc. 2-104109
 He, superfluid, temp. gradient in presence of superflow 2-115486
 He, superfluid, two dims. electron system, electron dipoles-vortex pair interactions, theoretical anal. 2-61247
 He superfluid film, Korteweg-de Vries solitons 2-71762
 He superfluid film, third sound and thermal cond. 2-56279
 He superfluid film, with layer of spin polarised H, third sound 2-82077
 He, superfluid film-vapour interface, local equilib. condition 2-98364
 He superfluid films, vortices, finite freq. nonlinear effects, Debye-Huckel approx. 2-66313

helium films continued

- He superfluid thin films, vortex dynamics 2-56282
 He, surface electrons, localisation energy and effective mass, path integral formalism 2-61244
 He-Ge interface, transient heat transfer and onset of film boiling 2-115482
 helium nuclei *see* nuclei with mass number 1 to 5; nuclei with mass number 6 to 19
 Hellman-Feynman theorem *see* quantum theory
 Helmholtz free energy *see* free energy
 Hertzsprung-Russell diagram *see* stellar evolution
 heterodyne detection *see* demodulation
 heuristic programming
 see also artificial intelligence
 human perception processes, neurobionic model (*Russian*) 2-62608
 h.f. amplifiers *see* high-frequency amplifiers
 HF calculations
 see also Alpha calculations
 A=158, 160, 172, g-factors of high spin states in cranked HFB 2-69533
 A=224 to 260, even nuclei static props., HF+BCS calcs. 2-54291
 A=229 to 241, odd nuclei spectroscopic props., rotor plus quasiparticle approx. 2-54292
 A=40-208, charge distributions and single particle states, calc. methods 2-69526
 A=62-86, E2 transition strengths systematics 2-69603
 actinide nuclei, rotational props. in cranked Hartree-Fock-Bogoliubov model 2-79928
 alkali halides, electronic structure study 2-110248
 alkali halides, hydrogen centres, interatomic pot., vibr. modes, and diffusion, pseudopot. cluster calc. 2-65992
 alkali single valence-electron cpds., core polarisation, pseudopots. calc. 2-90458
 alkaline earth atoms, core and valence excited states, electronic relaxation influence 2-90447
 analogue state proton and neutron radii, isospin projected HF description 2-107743
 Anderson coupled two-impurity system, Hartree-Fock staggered ground states 2-56489
 Anderson model, extended periodic, coexistent ferromagnetism and supercond. 2-92811
 aromatic cpds., induced moments, polarisabilities and second hyperpolarisabilities, CNDO calcs. 2-108403
 atomic collisions, pair-potential calcs. 2-65069
 atomic energies, HF, Z⁻¹ and N^{-1/3} expansions 2-70123
 atomic potential calc., simplified Thomas-Fermi-Dirac eqn. 2-80478
 atoms, closed shell, radial electron density moments and X-ray scatt. factors 2-75184
 atoms and ions with valence config. (nd)¹⁰ where n=3 and 4, multipole polarisability and shielding factors 2-85836
 backbending, cranked HFB field, instability 2-74724
 benzene, molecular polarisability, ab initio HF calcs. 2-90449
 benzene, ring current model, CHF approx. 2-108368
 bis (π-terphenyl)nickel clusters, electron correl. and HF instability, INDO MO calcs. 2-96460
 Bose gas, weakly interacting, density distrib. in external pot. 2-53660
 boson matter, abnormal occupation 2-54295
 carbon tetrachloride, Cl L-edge absorpt. spectra, HF calcs. 2-102464
 CC₂Br₂(¹²⁹Xr,X), proximity pot., nucleon current, energy dissipation, mass diffusion 2-113549
 classical ferromagnetic chains, interacting boson approach 2-66859
 coherent and incoherent at. photon scatt. factors meas. using radioactive γ-ray sources 2-64907
 collective nuclear phenomena, quasi-classical approach, excitations, cluster condensation 2-113320
 collisional time-depend. HF dynamics, interference effects lifetime 2-107786
 Compton profiles, profile analysis using plane wave approx., non-impulse effects 2-108655
 coupled stereo-irregular chains, local antiferromagnetic ordering 2-116013
 covalent crystal, dynamical aspects of correlation corrections 2-71895
 cranked HFB approx., particle pairs, backbending 2-54285
 crystal orbital calcs., error anal. 2-92433
 cyclobutane-d₀(d₄), vibr. geometry, force consts., ab initio HF calcs. 2-108349
 cyclopropane, struct. and vibr. anal. ab initio HF calcs. 2-59688
 cyclopropyl radical, struct. and vibr. anal. ab initio HF calcs. 2-59688
 decamethylferrocene, equilib. geometry, Hartree-Fock model, LCAO SCF calcs. 2-108374
 density functional theory from HF densities, appl. to H through to Ar calcs. 2-108406
 diatomic molecules, restricted and multiconfiguration HF eqns. soln. 2-108332
 diatomic molecules, vibrational smearing of deform. density, Hartree-Fock-Slater SCF calc. 2-80559
 diatomic systems, HF Slater wave functions calc. 2-96441
 1,1-dichlorocyclopropane, rot. consts., mol. struct., HF calcs., electron diff. obs. 2-108364
 dichlorodifluoromethane, Cl L-edge absorpt. spectra, HF calcs. 2-102464
 dimethyl diselenide, torsional barrier heights, MO calcs. 2-102375
 electron gas, one-dimensional, Hartree-Fock approx. 2-66463
 electron gas, pairing and general spin orbitals 2-82253
 electron gas in mag. field, distrib. function 2-87163
 electron liquid, dynamic structure factor 2-82263
 ethyl radical, conformational preference, ab initio UHF fragment interaction anal. 2-113876
 ethylene, unrestricted HF instabilities in nuclear spin spin coupling calcs., MNDO calcs. 2-85553
 ethylidene, struct., mol. rearrangement, MINDO and UHF calcs. 2-85547
 exchange potential for medium energy electron diff. calc. 2-103565
 ferrocene, equilib. geometry, Hartree-Fock model, LCAO SCF calcs. 2-108374
 formaldehyde, molecular polarisability, ab initio HF calcs. 2-90449
 formic acid, cis-trans isomerism, HF and MRCF calcs. 2-96436
 generalised perturbed Hartree-Fock theory, selective summation 2-80473
 glyoxime, mol. struct., ab initio HF STO-3G calc. 2-96431
 graphite, He, He multilayer physisorption, mean-field theory 2-87050

HF calculations continued

- graphite surface, ^3He multilayer adsorption, Hartree-Fock theory 2-115533
- Hamiltonian lattice gauge theories, gauge-invariant variational methods 2-95627
- Hartree-Fock-Bogoliubov, cranked, wave functions, exact ang. momentum projection calc. 2-101823
- Hartree-Fock-Pauli approx. with Gaspar potential, appl. to atomic and ionic spectra 2-80515
- heavy ion reactions, prompt fast nucleon emission, nucleon Fermi motion, TDHF theory 2-90129
- heavy-ion collision dynamics, conf., Hvar, Yugoslavia (May 1981) 2-84379
- heavy-ion collisions, light particle emission 2-85092
- heavy-ion collisions, TDHF anal., computer calc. 2-96025
- heavy-ion reactions, time-dependent HF calcs. 2-84984
- high angular momenta nuclei, behaviour, in cranked HFB model 2-79929
- high density nuclear matter, relativistic Hartree-Fock description, phase transition 2-64366
- high-spin states, pairing corrs., HFB-BCS approach 2-101787
- homonuclear diatomic mol., Hartree-Fock and CI calcs. 2-108394
- intermediate valence systems, elec. resist., phonon contrib. 2-56541
- internal conversion coeffs., electron exchange effect calcs. 2-90490
- intrinsic RPA HF state, approximate ang. momentum projection 2-74738
- ionic crystals, lattice distortion due to isovalent impurities 2-61002
- isoscalar giant monopole and quadrupole resonances, semiclassical description 2-113436
- itinerant ferromagnets, random, percolation limit, mean field scaling relations 2-66756
- large amplitude vibrations, path integral approach adiabaticity, quantised adiabatic TDHF 2-69504
- level crossings, master eqn. 2-54348
- low-energy collective and single-particle excitations 2-107787
- magic nuclei, muonic conversion, microscopic description (*Russian*) 2-90745
- methane, approx. HF wave functions, reduced local energy criterion 2-80452
- methane dication, struct., stability, pot.-curve, HF calcs. 2-85535
- methyl dication, struct., stability, pot.-curve, HF calcs. 2-85535
- methyl magnesium chloride, Grignard reagent, struct., vibr. freqs., ab initio calcs. 2-108449
- methyl radical, geometry, restricted and unrestricted Hartree-Fock calcs. 2-85541
- methylene, excited singlet state, pot. energy hypersurface, CI-SCF-HF calcs. 2-96469
- methylene-dication, struct., stability, pot.-curve, HF calcs. 2-85535
- mixed valence semiconductors, elec. resist. 2-56574
- mixed valence system with two mag. configurations, mag. props. 2-56810
- molecular system, nth harmonic determ., HF matrix eqn. (*French*) 2-80433
- molecular system, with spatial point symm., unrestricted HF solns., instabilities, classification, interconnection 2-71578
- molecular system, with spatial point symm., unrestricted HF solns., instability, interconnection classification 2-80467
- molecules, bond-order matrix, physical prop. calcs. 2-113851
- molecules, dipole polarisabilities, mol. moments, HF approx. 2-108351
- molecules, integral HF eqns. soln. by method of MO LCAO in momentum space 2-90426
- molecules and mol. ions, spin-orbit coupling consts., ab initio calc. using universal even tempered basis set of exponential functions 2-96415
- MSXALPHA program, adaptation ACQI for numerical atomic orbitals data 2-54767
- MSXALPHA program, modification to accommodate twenty-six asymmetry point groups 2-54768
- multivalley semiconductors, multiexciton complexes bound to donors 2-82247
- Newton-Raphson eqns., MCSCF calcs. 2-108345
- nuclear collective motions, generator coordinate method 2-74719
- nuclear collective motions, semiclassical theory, variational derivation 2-84970
- nuclear fluid dynaics, TDHF approx., heavy ion low-I fusion window 2-69631
- nuclear fluid dynamics, giant multipole reson. as elastic vibrs. 2-85019
- nuclear fluid dynamics and TDHF 2-101872
- nuclear matter, particle clustering and Mott transitions at finite temp. 2-74741
- nuclear matter, thermal Hartree-Fock in the thermodynamic limit: statistical approach 2-90039
- nuclear matter, thermal properties, lattice density waves at finite temp., cluster disappearance 2-113387
- nuclear pairing field, path integral approach 2-54276
- nuclear radius calc. in droplet model 2-54249
- nuclei, geometric $\text{SO}(3) \times \text{D}$ model 2-101826
- nuclei with $N=Z$, HFS method parameters calc. in relativistic model (*Russian*) 2-90032
- open-shell molecular systems, construction of effective Hamiltonian, unrestricted HF orbital appl. 2-64847
- organic cpds., ground state reactions, HF MO theory 2-116687
- pairing and general spin orbitals 2-82558
- polyacetylene, Peierls system model, equivalence to HF model on virtual equidistant lattice 2-79496
- polyacetylene chains, ab initio HF calcs. using Christoffersen basis set 2-70457
- polyatomics, intramolecular dynamics, TDHF 2-113955
- polyenes, infinite, RHF singlet ground state instabilities, PPP calcs. 2-102392
- polyglycidyl methacrylate (PGMA), negative electron resist., γ -irrad., ESR study and INDO UHF MO calc. 2-93010
- polymers, coupled stereo-irregular chains, local antiferromagnetic ordering 2-116013
- polystyrene, negative electron resist., γ -irrad., ESR study and INDO UHF MO calc. 2-93010
- potential energy gradient derivation for arbitrary electronic wave function 2-80761
- potential energy hypersurfaces, HF and multiconfigurational SCF soln., CI gradient techniques 2-96469
- propylene, struct., mol. rearrangement, MINDO and UHF calcs. 2-85547
- quadratic response functions within the time-dependent Hartree-Fock approximation 2-96429

HF calculations continued

- randomly disordered systems, elec. cond., CPA study for various percolation models 2-56539
- rare-earth nuclei with quadrupole-plus-pairing interactions, equilibrium deformations 2-95908
- relativistic Hartree-Fock theory 2-75199
- relativistic nuclear fluid coupled to classical field, hydrodynamical eqns. derivation 2-54293
- ring π systems, covalent states, UHF wave functions 2-102362
- Roothaan approach in thermodynamic limit 2-59273
- roothaan-Hartree-Fock atomic wave functions Slater basis-set expansions for $Z=55-92$ 2-68976
- rotational spectra, deformed HF calcs., ang. momentum constraint 2-79930
- SCF convergence rates in HF and Xalpha methods 2-70133
- semiconductor, bixcitons and intermediate-binding excitons 2-56448
- semiconductor, direct-gap, highly excited, optical dielec. function in moment-conserving approx. 2-57044
- semiconductor, impurity doped, electron correlations effect 2-115682
- semiconductors, doped, impurity states, conc.-fluctuation model 2-110293
- simple molecules, mag. susceptibility, chemical shift, HFC 2-54984
- Skyrme interaction and light nuclei spectra 2-59258
- spherical nuclei, self-consistent semiclassical calcs. using partial resummation method 2-107785
- spin extended, new calc. method 2-80440
- superconductors, anisotropic, SDW state coexistence, energy gap struct. and nonmag. impurity effects calc. 2-87443
- supernovae, Type II, equations of state, HF calcs. 2-112472
- symmetry preserving Hartree-Fock-Bogoliubov theory, variational eqns. soln. 2-95950
- TDHF, collective operators and paths, geometrical derivation 2-59272
- tetraiodoethylene, He(I) photoelectron spectra, relativistic effects calcs. 2-96632
- tetraiodomethane, He(I) photoelectron spectrum, relativistic effects 2-96631
- tetrathiafulvalene, electronic structure calc. using ab initio HF Slater procedure, photoemission spectra 2-64863
- theoretical chemistry, conf., Colorado, USA (June 1981) 2-107002
- time depend. Hartree approx. and harmonic oscillator model 2-54290
- time-dependent HF, present status 2-113383
- (TMTSF) $_2\text{PF}_6$, organic supercond., possibility of coexistence of SDW and supercond. 2-56759
- total mol. energy, HF-SCF calcs. 2-102373
- transition metal oxides, electron energy loss study of K near-edge fine struct. of O 2-104248
- transition metals, BCC and FCC, mag. phase diagram at zero temp. 2-66817
- transitions metal atoms, Sternheimer antishielding functions, Hartree-Fock estimates 2-82304
- two body collisions, effect on heavy ion dynamics, TDMF time relaxation method 2-59390
- unrestricted HF instabilities in nuclear spin spin coupling calcs., MNDO calcs. 2-85553
- vinylguanidium ion, ab initio MF-SCF-MO calcs. 2-113865
- X-Y planar model, perturbative anal. 2-77254
- (d,p), effective interactions, DWBA theory appl. 2-96019
- (γ, π) on ^6Li , ^{12}C , ^{24}Mg , ^{28}Si , ^{40}Ca (*Russian*) 2-90089
- (π, π^0), pion charge exchange and transition densities to isobaric analogue states 2-85107
- Ag, Ar multilayer physisorption, mean-field theory 2-87050
- Ag isoelectronic series ionisation potentials, core polarisation, relax., and relativistic effects 2-113896
- AgF(Cl)(Br), electronic struct. calcs. 2-110249
- Al (111), chemisorption of Li, O, and Na, cluster model 2-66363
- Al, surface, (100), O_2 adsorpt., ab initio unrestricted HF calc. 2-76835
- ^{27}Al , spectroscopic quadrupole moments from muonic X-rays 2-59238
- Ar and Ar ions, doubly excited states, energy levels, HF calcs. 2-75160
- Au, alpha particle stopping cross section at energies below 3 MeV 2-66085
- Au isoelectronic series ionisation potentials, core polarisation, relax., and relativistic effects 2-113896
- $\text{Au} + \text{H}^+$, L-shell ionisation cross sections Dirac-Hartree-Slater calcs. 2-114093
- B, self-consistent field equations based on the variation principle using the square of the Hamiltonian 2-75182
- BH_4^+ , nucl. spin-spin coupling tensors calcs. 2-108361
- BO, open-shell orbital optimization, coupled perturbed HF and quadratically, convergent SCF calcs. 2-54773
- Ba, $4d^{10}$ subshell photoionisation cross section 2-70204
- Ba II, J-dependent isotope shift in the $5d^2\text{D}_2$ doublet 2-80540
- Ba^{2+} , $4d^{10}$ subshell photoionisation cross section 2-70204
- Be atom, idempotent density matrices from X-ray diff. struct. factors 2-54752
- Be, electron momentum distrib., Compton profiles, Hartree-Fock calc. 2-92447
- Be, electronic and struct. props., HF ab initio calc. 2-82218
- Be, ground state, HF energy, corrections to an incomplete basis set 2-108366
- Be isoelectronic series, optimal geometric approx., uncoupled HF calcs. 2-113868
- Be, metallic, core expansion calcs. 2-81709
- Be, self-consistent field equations based on the variation principle using the square of the Hamiltonian 2-75182
- Be, X-ray spectrum near Raman band, electronic struct. calc. 2-72577
- BeF_3^- , B, and A, states, electronic splitting 2-85532
- C, self-consistent field equations based on the variation principle using the square of the Hamiltonian 2-75182
- CH_2^+ struct., stability, pot.-curve, HF calcs. 2-85535
- CI, term energies and oscill. strengths, Thomas-Fermi Hartree Fock calcs. 2-80459
- (CO) $_n^m$, SCF minimal basis set calcs., HF instabilities 2-80470
- CO_2 , differential and total photoionisation cross sections calc. using frozen core HF final state wave functions 2-108644
- ^{40}Ca , ^{44}Ca , low-lying collective excitation contrib. to nuclear density 2-95893
- ^{40}Ca (^{44}Ca), matter, momentum and energy flow, Wigner transformation of TDHF 2-107884
- ^{43}Ca , hyperfine structure anal. of $4s4p$ configuration and nucl. quadrupole moment 2-114124
- ClF $_3$, electronic struct. and bonding, reaction energy, extensive RHF ab initio calcs. 2-96433

HF calculations continued

- ClF(ClF), electronic struct., CNDO/2 and INDO calcs. 2-102389
 Cr IV, energy levels and ionisation energy 2-80468
 Cr, incommensurate spin density wave, phase and amplitude fluctuations, RPA calc. 2-98565
 Cs, excited 4d atomic, control of 4f wavefunction collapse 2-70155
 Cu, alpha particle stopping cross section at energies below 3 MeV 2-66085
 Cu clusters, inadequacy of symmetry restricted HF theory in determ. s- and d-like ionisation pots. 2-102668
 Cu isoelectronic series ionisation potentials, core polarisation, relax., and relativistic effects 2-113896
⁴Er, A=146, 168, yrast line from number projected cranked HFB calcs. 2-113324
¹⁶⁶Er(⁸⁶Kr,X), ang. momentum transfer at 6, 12 MeV/A, time depend. HF study 2-101914
 Eu, screening ratios, pseudo-relativistic Hartree-Fock calcs. 2-75200
 F⁻ aqueous ion, intermol. nuclear spin-spin coupling and scalar relax., quantum and statistical mech. calcs. 2-90641
 F⁻, dipole hyperpolarisability, HF, CI and GTO calcs. 2-70149
 F⁻, dipole polarisability, electron correl. effects, MBPT CHF calc. 2-113893
 F₃, electronic struct., CNDO/2 and INDO calcs. 2-102389
 F₂Cl, electronic struct., CNDO/2 and INDO calcs. 2-102389
 FH₂, ground state, near Hartree-Fock calcs. 2-80460
 FI isoelectronic sequence, 2sⁿ2pⁿ-2sⁿ⁻¹2pⁿ⁺¹ intersystem transitions 2-80530
 FSCN, He(I) photoelectron spectra, valence ionisation energies, HF Slater calcs. 2-80728
 Fe complex, [FeF₆]³⁻, superhyperfine interactions, Hartree-Fock-Roothaan calc. 2-87210
 Fe complex, trans([η⁵-C₅H₅)Fe(CO)₂], instability, HF function, INDO calcs. 2-64880
 Fe²⁺, transition probability, dielectronic recombination rate coeffs., HF calcs. 2-108679
 Fe-Cr alloys, existence of spin glass region 2-66830
 Fe₂, electronic band structure, ab initio HF and CI calcs. 2-108400
 GaI and GaII, 13-500 eV electron impact excitation, autoionising transitions, ejected electron spectrum 2-75211
 Ge, donor-bound excitons, fine struct. splittings 2-82246
 GeCl₂ and GeBr₂, He(I) photoelectron spectroscopy, HF Slater LCAO calcs. 2-108624
 GeF₂, UV photoelectron spectrum, HF Slater quantum chemical calcs. 2-102530
 H, infinite metallic chain, correlation energy, perturbation theory calc. 2-97985
 H, metallic, structure and screening at high press. 2-76961
 H, positron scattering, field theory, in Fock-Tani representation 2-85808
 H+H₂, pot. energy surface, near Hartree-Fock calc. 2-59891
 H+H₂, reaction, pot. hypersurfaces calc. by unrestricted Moller-Plesset perturbation theory 2-93753
 H₂, dipole polarisabilities, MC TDHF theory calcs. 2-96447
 H₂, ground state, HF energy, corrections to an incomplete basis set 2-108366
 H₂, intermolecular forces via hybrid HF SCF plus damped dispersion energy calcs., spherical model 2-70372
 H₂, molecular, structure and screening at high press. 2-76961
 H₂, molecular polarisability, ab initio HF calcs. 2-90449
 H₂, surface enhanced Raman intensities, Hartree-Fock calcs. 2-80626
 H₂-H₂, interaction dipole polarisabilities, MC TDHF theory calcs. 2-96447
 H₂O, approx. HF wave functions, reduced local energy criterion 2-80452
 H₂O dissociation, pot. hypersurfaces calc. by unrestricted Moller-Plesset perturbation theory 2-93753
 H₂O, ground state, HF energy, corrections to an incomplete basis set 2-108366
 H₂O, molecular polarisability, ab initio HF calcs. 2-90449
 (H₂O)₂, H bonds, vibr. intensity, ab initio calcs. 2-85528
 (H₂O)₂-Li⁺, vibr. intensity, ab initio calcs. 2-85528
 (H₂O)₃, geometry, energetics and elec. props. 2-113878
 (H₂O)₄, geometry, energetics and elec. props. 2-113878
 He, dipole polarisabilities, MC TDHF theory calcs. 2-96447
 He, ground state, HF energy, corrections to an incomplete basis set 2-108366
 He isoelectronic series, optimal geometric approx., uncoupled HF calcs. 2-113868
 He-H₂, interaction dipole polarisabilities, MC TDHF theory calcs. 2-96447
 He-He, interaction dipole polarisabilities, MC TDHF theory calcs. 2-96447
 He-like atoms in strong mag. field, HF calcs. 2-102377
 He²⁺+He, charge exchange, time-dependent HF theory appl. 2-90658
 Hg, electron coincidence spectra, momentum distrib. calc. using relativistic and nonrelativistic HF wavefunctions 2-85738
 KCl:Ga⁰(In⁺), hyperfine const., relativistic many body calc. 2-104327
 KF(Cl)(Br), Mossbauer isomer shift of ⁴⁰K⁺ 2-56993
 Kr, BCC-FCC allotropy, F-bands and metallisation 2-56185
 Kr, crystal, band struct., Gaussian OPW calc. 2-61349
 Kr III, beam-foil level lifetimes 2-96511
 La II, HFS in low even configurations, interpretation 2-59955
 Li atom, idempotent density matrices from X-ray diff. struct. factors 2-54752
 Li isoelectronic series, ionisation pots., transition freqs., perturbation theory, HF method 2-113937
 Li⁺, ⁶Li⁺ excitation energies, coordinate rotated TDHF calcs. 2-102383
 Li-Lewis base complex, struct. and props., ab initio unrestricted HF MO calcs. 2-75172
 Li₂, ground state, HF energy, corrections to an incomplete basis set 2-108366
 LiH, ab initio SCF and CI studies, FSGO calcs., HF function determ. 2-102397
 LiH, dipole moment, polarisabilities, electric field gradients and nuclear screening, bond length depend. 2-54763
 LiH, ground state, HF energy, corrections to an incomplete basis set 2-108366
²⁵Mg, spectroscopic quadrupole moments from muonic X-rays 2-59238
 Mn complex, [MnF₆]³⁻, superhyperfine interactions, Hartree-Fock-Roothaan calc. 2-87210
 NH₃⁺, nucl. spin-spin coupling tensors calcs. 2-108361
 NH₃⁺, nucl. spin-spin coupling tensors calcs. 2-108361

HF calculations continued

- NO, open-shell orbital optimization, coupled perturbed HF and quadratically, convergent SCF calcs. 2-54773
 N₂O₂, struct., ab initio restricted HF SCF MO calcs. 2-59685
 NaF, core excitons, atomic energy calcs. 2-110259
 NaF, core excitons, Na L_{II,III} edge 2-110258
 NbH₃, Jahn-Teller resonance states, electron-phonon interaction, HF calc. 2-82302
 Nb₂Sn(Ga)(Al)(Ir)(Pt)(Au), A15 struct. cpds., quadrupole interactions, cluster model interpretation 2-66510
²⁰Ne, configuration mixing calc. with basis states using HF method 2-54264
²⁰Ne, configuration mixing calculations with basis states obtained from constrained variational methods 2-59215
 Ni, adsorption of N₂, HF cluster model calc. 2-56334
 Ni clusters, inadequacy of symmetry restricted HF theory in determ. s- and d-like ionisation pots. 2-102668
 NiO, anion-anion interionic pot., covalency influence 2-54782
 O₂, open-shell orbital optimization, coupled perturbed HF and quadratically, convergent SCF calcs. 2-54773
 OI, isoelectronic sequence, 2sⁿ2pⁿ-2sⁿ⁻¹2pⁿ⁺¹ intersystem transitions 2-80530
¹⁶O 3-dimens. calc., Hartree-Fock iteration techniques 2-69590
¹⁶O 4p-4h states, effective interactions, deformation clustering, HF calc. 2-69503
¹⁶O(¹⁶O,X), matter, momentum and energy flow, Wigner transformation of TDHF 2-107884
¹⁶O(⁹³Nb,X), pre-equilibrium particle emission in TDHF approx., total cross section 2-69673
 PH₂⁺, nuclear spin coupling anisotropy, spin-orbit effects ab initio calcs. 2-96596
 PH₃, excited states, photodissociation, ab initio HF and CI calcs. 2-85561
 PH₃, nuclear spin coupling anisotropy, spin-orbit effects ab initio calcs. 2-96596
 PH₄⁺, nuclear spin coupling anisotropy, spin-orbit effects ab initio calcs. 2-96596
 (²⁰⁸Pb,X) on ⁶⁴Ni, ⁴⁸Ca, fusion-fission, mol. capture, symmetric fragmentation 3D-TDHF calc. 2-96042
 Pd₂Fe and Pd₃FeH₃, electronic struct. and mag. props. in ordered and disordered phases 2-76917
 Pr, double-vacancy excitations in L atomic levels, X-ray absorpt. spectra 2-70168
 S XII, electron collisional excitation, radiative lifetimes, energy level calcs. 2-108723
 (SN), chain, ab initio struct. calcs. 2-104282
 Se, reflectivity anisotropy anomalies 2-61862
 Se, trigonal, monoclinic and amorphous, Compton profiles and autocorrelation functions, HF and OPW calc. 2-87892
 Se(CN)₂, HeI valence PES, broken symm. effects 2-90627
 Si, axial channelling radiation from MeV electrons 2-81846
 Si, donor-bound excitons, fine struct. splittings 2-82246
 SiFe, local electronic struct., molecular cluster method based on HF approx. 2-92533
 Si(100), electronic correlation and buckling props. calc. 2-110421
 Sm, double-vacancy excitations in L atomic levels, X-ray absorpt. spectra 2-70168
⁴⁸Sm, A=144-154 even isotopes, charge and transition densities in interacting boson model 2-95911
 TaH₃, Jahn-Teller resonance states, electron-phonon interaction, HF calc. 2-82302
 Ti, ³F energy separation, correlation and HF calcs. 2-54776
 U+H⁺, L-shell ionisation cross sections Dirac-Hartree-Slater calcs. 2-114093
 UO(²³⁸U,X) on ⁶⁴Ni, ⁴⁸Ca, fusion-fission, mol. capture, symmetric fragmentation 3D-TDHF calc. 2-96042
 VH₃, Jahn-Teller resonance states, electron-phonon interaction, HF calc. 2-82302
 V₂Sn(Ga)(Al)(Ir)(Pt)(Au), A15 struct. cpds., quadrupole interactions, cluster model interpretation 2-66510
 W (110), adsorption of α-CO, singlet-triplet interplay in charge transfer relax. process 2-105045
 Xe, crystal, band struct., Gaussian OPW calc. 2-61349
 ZnFOH cryst., ¹⁹F nuclei mag. shielding 2-92549
 ZnF₂.4H₂O cryst., ¹⁹F nuclei mag. shielding 2-92549

hierarchical systems

see also multivariable systems

- energy conversion systems, modelling by means of hierarchical decomposition of large dynamic linear programming problems 2-73091
 heart, mathematical model of contractile activity and energy metabolism [Russian] 2-62546

high-energy cosmic ray interactions

- 5 TeV particles interactions with light materials 2-106456
 air shower subcore TeV interactions high-p_T scaling test 2-84055
 antiprotons at sub-GeV energies, secondary production 2-58212
 Centauro event, superfluorescent like decay of coherently excited fireball 2-117551
 comparison with accelerator expt. results 2-112288
 EAS, cascade max. depth, from muon meas. 2-100681
 EAS, double-cored, large p_T subshower, fine anal. 2-112282
 EAS high energy hadrons, charged to neutral ratio meas. 2-112286
 EAS meas. via atm. fluoresc. 2-112280
 elongation rate theorem for cosmic-ray showers 2-89096
 extensive air showers, delayed energetic events 2-100683
 extensive air showers multicolour events 2-106451
 fireball concept 2-84930
 hadron interactions in cosmic rays at energies above the accelerator range, reviews 2-113314
 hadron interactions with nuclei at 2500 m above sea level 2-106457
 hadron showers in Pb, 100 TeV, instabilities of particles responsible for anomalies in absorption 2-85507
 hadron-nucleus reactions in ionisation calorimeters, albedo particles flux 2-106458
 hadronic interactions and gigantic γ-ray family events with ΣE_γ≥1000 TeV 2-63198
 interstellar gas collisions model. obs. to obs. of p 2-117535
 jet interaction at 800 TeV, obs. aboard Concorde 2-95888
 low p_T physics from cosmic rays, review 2-112287

high-energy cosmic ray interactions continued

- maximum depth fluctuations, for showers prod. by 1.5×10^{17} eV particles 2-100682
 multiple prod. process study in balloon borne cosmic ray expt. 2-112285
 neutron multiplicity frequencies, differential energy spectrum for 10-4000 MeV, 4-1000 GeV 2-117543
 non-pion multiple prod. of hadrons in Chacaltaya emulsion chamber expts. 2-112283
 nuclear interactions and primary cosmic-ray components around 10^{15} eV, γ -ray families cluster anal. 2-100687
 nucleus+nucleus collisions at energies of order 10^{13} eV 2-80028
 particle phenomenology at ultrahigh energies, review 2-117550
 particle physics development, cosmic-ray expts. role 2-68996
 primary composition of cosmic rays near 10^{17} eV 2-84050
 quark matter formation by heavy nuclear primaries, cosmic-ray anomalies explanation 2-63199
 ultrahigh energy cross section from air shower longit. development study 2-112284
 ultrahigh-energy EM cascades development in water and Pb including LPM effect 2-73809
 e^+e^- direct pair prod. at 100-2000 GeV/nucleon (*Russian*) 2-59204
 $h^+h^- \mu^+\mu^-$, 600 GeV, pair time distrib. at 40 m water equivalent 2-112289
 NN \rightarrow A π X; 100 TeV, rel. to cosmic ray air shower interpretation 2-74718
 pN \rightarrow μ X, tests for heavy weak bosons and cosmic antimatter 2-100688
 pN (NN), inclusive γ -ray and charged-meson prod. study at greater than 10 TeV 2-73811
 pp \rightarrow X, 540 GeV, γ prod., Centauro-like event search 2-101783
 (Fe,X) in photoemulsion, multiple particle creation (*Russian*) 2-73812
 Fe, fragmentation cross section on H 2-113522
 Fe(p,X), in cosmic rays, partial inelasticity coeff. (*Russian*) 2-117552
 Fe(π ,X), in cosmic rays, partial inelasticity coeff. (*Russian*) 2-117552

high energy electron diffraction

- see also reflection high energy electron diffraction
 structure factor information, from higher-order Laue zone intensities 2-76253
 surface structure, HEED anal., theory 2-82108
 Gd martensitic transformation on tribophysical pulverisation, HEED study 2-93506
 Ge-GeS interface struct., LEED, HEED and Auger spectra study 2-71809
 Nb-Ta single cryst. superlattices, MBE growth, HEED study 2-82166

high-energy nuclear reactions and scattering see nuclear reactions and scattering**high field effects**

- see also Gunn effect; hot carriers; impact ionisation; limited space charge accumulation; Poole-Frenkel effect; Schottky effect; Zener effect
 disordered semiconductors, strong-field hopping cond., directed percolation theory 2-77073
 Kapton polyimide film, elec. cond. at high elec. fields 2-71707
 Kapton polyimide film, photocond. at high elec. fields 2-98694
 liquid-metal-NH₃ solns., current-voltage drop charact., nonlinearity origin 2-115767
 many valley semicond., non-equilibrium electrons, natural oscils. and current, elec. field depend. 2-61475
 MNOS structure, nonstationary cond. in region of strong elec. fields 2-87405
 noncrystalline materials, thermal ionisation of Coulomb centres in strong elec. fields 2-71992
 p-n junction, thermo-EMF appearance due to carrier heating by unidirectional elec. field 2-77175
 polymethylmethacrylate, elec. field induced damage, space charge, light scatt. study 2-87672
 polystyrene, elec. field induced damage, space charge, light scatt. study 2-87672
 propylene carbonate, high field conduction, electrostatic generator appl. 2-98320
 quantum transport eqns. appl. to case of electrons scatt. by dil. reson. impurities 2-110318
 semiconductor, high resistivity, injection props. of semicond.-semicond. contacts, space-charge-limited current 2-61579
 semiconductor, intra-collisional field effect, analytic results 2-110360
 semiconductor, streaming motion and population inversion of hot carriers, crossed elec. and mag. fields 2-98668
 semiconductor, wide-band, optic phonon flux amplification by strong elec. field 2-61097
 semiconductor diode, single-injection current, traps lying above Fermi level, elec. cond. at high fields 2-56601
 semiconductor field effect measurement, apparatus used 2-66563
 semiconductors, inhomogeneous anisotropic, current-voltage characts. 2-92629
 TCNQ salt, quinolinium(TCNQ)₂, conductivity, freq. and temp. depend. 2-92593
 (TMTSF)₂PF₆, high elec. field transport at low temps. 2-56616
 (TMTSF)₂PF₆, magnetoresist. and Hall effect in semicond. phase 2-56620
 Bi whiskers, I-V curves at 4.2K (*Russian*) 2-56576
 Cu, electric field domains at low temp. (*Russian*) 2-110321
 GaAs, electron drift velocities, high field temp. depend. 2-56598
 GaAs, electron drift velocity meas. at high elec. fields 2-66567
 GaAs, electron drift velocity meas. using variable frequency microwave time-of-flight technique 2-98664
 GaAs field effect transistors, ballistic electron motion 2-98658
 p-GaAs, MBE grown, impurity characterization by far-IR photoconductivity in high mag. fields 2-66565
 GaAs, n⁺-n⁺ Schottky device, ballistic and quasiballistic electron spectroscopy, numerical simulation 2-56669
 GaAsCr₂O₃, electron lifetime meas., photocond. and high field meas. 2-92655
 GaAs-oxide interface electronic struct. 2-87409
 p-GaAs, single crystal, mechanical and electrical strength (*Russian*) 2-92636
 p-GaSe, single crystal, mechanical and electrical strength (*Russian*) 2-92636
 p-Ge, negative differential mobility of holes, Monte Carlo study 2-77078
 Ge, streaming, gauss-ampere characts. of dissipative current 2-115769
 p-In_{0.51}Ga_{0.49}As epitaxial layers, minority carrier high field transport meas. 2-82493
 In_{0.48}Ga_{0.52}As, electron drift velocity meas. at high elec. fields 2-66567

high field effects continued

- p-In_{0.51}Ga_{0.49}As film, high field transport characts. of minority electrons 2-98699
 n-InSb film, polycryst., intergrain barrier pot., temp. and field depend. 2-77208
 InSb-NiSb, low-freq. voltage instability (*Russian*) 2-56606
 NbSe₃, CDW cond., field and freq. depend. 2-56559
 NbSe₃, current oscils. and stability of CDW motion 2-104356
 PbS, high field resistivity meas., phonon scatt. 2-104387
 Si, hot hole diffusion and mobility, thermal noise and cond. meas. 2-56604
 a-Si:H RF sputtered films, elec. props. rel. to threshold and memory switching appls. 2-87347
 Si:p, multivalued Sasaki effect, I-V characts., current saturation 2-56605
 Si-B compounds, high elec. field effect 2-92639
 Si-SiO₂, MOS inversion layer high field electron vel., time of flight technique 2-56704
 Si₃N₄, thin films, elec. cond. and breakdown props. 2-87435
 Si₃N₄ thin films, thermal ionisation of Coulomb centres in strong elec. fields 2-71992
 SiO₂ films, thermally nitrided, MOS characts. 2-61590
 SiO₂, ultra-thin films, high-field generation of electron traps and charge trapping 2-66682
 SnTe:In film, field effect studies, In effect 2-77210

high-frequency amplifiers

- see also microwave amplifiers; radiofrequency amplifiers
 1.5 MW high-freq. amplifier for ICRH of fusion plasma 2-85387

high-frequency discharges

- chloroform, RF etching of Si surface in MOS (*Russian*) 2-61592
 electrodes of high freq. bipolar discharges in air, electrical macroparameters and energy balance 2-72988
 laser technology, prospects for using high-freq. capacitive discharges 2-65241
 microwave discharges produced by a surfatron in capillary tubes 2-103543
 partial-discharge meas. in presence of high-frequency ripple 2-89743
 positive column, generation mechanism and HF noise current 2-103538
 RF breakdown in transverse mag. field, expt. study 2-76223
 RF excited plasma, drift-wave turbulence, wavenumber and freq. spectra estimation by fixed probe pairs, theory 2-91671
 CO supersonically flowing gasdynamically cooled CW laser, microwave excitation 2-96994
 He-Pl₁, microwave discharge, PI vibr. anal. 2-113966
 N-He(Ar) VUV discharge line source, excitation mechanism effect on linewidth parameters 2-108422
 N₂, microwave slit pulsed discharge 2-65787
 N₂, molecular vibration levels population, plasma neutrals temp. meas. in microwave discharge, CARS 2-114006
 O-He(Ar) VUV discharge line source, excitation mechanism effect on linewidth parameters 2-108422
 Se-He, HF discharge, laser levels excitation 2-65786
 SiO₂, HF plasma discharge, chemical etching, IR spectroscopy study 2-65772
 Xe, RF discharge columns in narrow tubes, striae obs. 2-103477

high-frequency effects

- see also helicons; hot carriers; skin effect; solid-state plasma
 10 kHz flux-controlled magnetic core loss tester 2-74473
 Anderson lattice, electrical cond., freq. depend. 2-56629
 ferroelectrics, paraelectric phase in homogeneous, intense VHF field 2-99067
 high-resistivity semiconductors, microwave power absorpt. in space-charge region 2-115801
 III-V semiconductors, microwave irradiat., hot carrier mobility, phonon accumulation effects 2-66566
 metals, current rectification effect, anomalous skin effect (*Russian*) 2-82391
 metals, direct generation of ultrasound by EM radiation 2-104409
 metals, quantum EM excitations 2-104408
 minority carrier transient diffusion in high freq. elec. field 2-104413
 polar semiconductors, high frequency electron scattering rate, Drude Zener theory 2-66581
 polyacetylene:I, microwave harmonic mixing in metallic regime 2-104412
 semiconductor, compensated, impedance and photoresponse characts. under carrier heating conditions 2-77117
 semiconductor, heavily doped, energy loss process for nonequilib. hot carriers 2-92641
 semiconductor, high freq. conductivity, free carrier absorption and electron-phonon interactions 2-115804
 semiconductor, surface 2D plasma conductivity tensor components, direct meas. method 2-115850
 semiconductor films with negative differential cond., EM wave propag. 2-98686
 semiconductor multilayer structure, high freq. props. with quasiballistic electron motion 2-115803
 semiconductors, microwave cond., velocity autocovariance and hot carrier noise calcs. 2-104404
 semiconductors with negative differential mobility, amplification of longitudinal electron-density waves in presence of space charge 2-77105
 superionic conductors, modulated, hopping cond. 2-71709
 superlattice semiconductors, Stark-cyclotron-phonon reson. 2-77107
 system kinetics in strong alternating fields, semiconductor electron gas, electron Cooper pairs 2-56773
 TCNQ salt, (MeI-NEt-Bz)⁺(TCNQ)₂⁻, elec. anomalies at 3.3×10^{10} Hz 2-61449
 TCNQ salt, quinolinium(TCNQ)₂, conductivity, freq. and temp. depend. 2-92593
 TMTSF-ReO₃, metal-insulator transition 2-71867
 (TMTSF)₂FSO₃, change in Se network dimensionality from mol. and cryst. struct. 2-55960
 (TMTSF)₂PF₆, dynamical response of SDW mode 2-61456
 Ar, solid and liquid, hot electron thermalisation following subnanosec. pulse irradi. 2-72015
 Bi, quantum EM excitations 2-104408
 (Eu,Tm,Y,Ca)₃(Fe,Ge)₂O₁₂ thin film system, domain boundaries (*Russian*) 2-77338
 GaAs, electron drift velocities, high field temp. depend. 2-56598
 n-GaAs, Gunn domain quenching by external microwave elec. field 2-77106
 GaAs, Gunn effect, high freq. limit 2-92676
 Ge, electron heating time in HF field, effect on diffusion 2-87291

high-frequency effects continued

- Kr, solid and liquid, hot electron thermalisation following subnanosec. pulse irradiation 2-72015
 Nb, low resist. supercond. contacts, static and HF props., microwave and Josephson radiation 2-104548
 NbSe₃, microwave harmonic mixing 2-104411
 PbSb₂, narrow-gap semiconductor, elec. props. in DC and microwave fields 2-87313
 Si, electron gas inertia, radioelectric effect 2-104415
 Si, electron heating time in HF field, effect on diffusion 2-87291
 Si, microwave cond., velocity autocovariance and hot carrier noise calcs. 2-104404
 Xe, solid and liquid, hot electron thermalisation following subnanosec. pulse irradiation 2-72015

high-frequency electronic transport *see high-frequency effects***high-frequency heating** *see radiofrequency heating***high-frequency transmission line measurement**

- optical fibre cable fault location using modified reflectometry techniques 2-64097

high level languages

- Doublet III operator generated command language for computer control 2-80225

high-pass filters

- IR high-pass filter with high contrast 2-97159

high power amplifiers *see power amplifiers***high-pressure effects in solids**

- see also high-pressure solid-state phase transformations; piezo-optical effects*

- AC calorimetry, of solids at high hydrostatic pressures 2-66128
 chlorides (NaCl, CsCl, AgCl), compressibility and Moelwyn-Hughes parameters at high-pressure 2-58040
 crack interaction with dislocation pile-up (*Russian*) 2-92023
 diamond, penetration of liq. metals 2-82082
 dimethyl ammonium in tetrachloride, layered cpd., elastic and thermal props. 2-81873
 disk target, laser generated shock waves, one- and two-dimensional hydrocode calcs. 2-76589
 dynamic fracture parameter determ. 2-105291
 effective viscosity at high strain rate 2-83157
 electrical resistivity at high temp. and press. of rocks and minerals 2-106111
 explosive, Gruneisen parameter meas. 2-76629
 explosive, shocked, vibronic relaxation, press. depend. 2-76605
 ferrites, spinel-type, hyperfine mag. field, press. effect 2-104780
 fluorite struct. crystals, third and second order elastic consts. and press. derivatives calc. 2-76561
 glass, dissolution of Na and Si, press. depend., nuclear waste disposal 2-104001
 glass-ceramics, ramp-wave generation 2-71566
 homopolymers, physico-mech. props. under high press. and shear strain (*Russian*) 2-67467
 III-V semiconductors, high pressure phases, pseudopotential calcs. 2-103723
 insulators, press. depend. of thermal cond. 2-98355
 itinerant ferromagnet, press. depend. of mag. props. 2-87502
 magnetic order-disorder first order transitions, high press. effects (*Russian*) 2-87492
 metal, pressure treatment, thermoplasticity, math. modelling (*Russian*) 2-72720
 methane, solid, isotope effect in phase diagram, proton NMR expt. 2-56964
 naphthalene d₈, compressibility temp. depend. 2-92085
 PbS, superconductivity, cond. under high press. 2-66702
 PET crystallisation, press. effect 2-109692
 polyacetylene, optical absorpt. spectra, press. depend. meas. 2-77521
 polystyrene, high-pressure CO₂ effects on T_g and mech. props., plasticisation effect 2-115413
 quartz, shock compression measurements at pressures >1 TPa 2-76590
 quasi one-dimensional organic systems, high press. and low temp. elec. resistivity studies 2-87242
 symposium, Bad Honnef, Germany (Aug. 1981) 2-74162
 tetrachloromethane high-pressure, solid, lattice dynamics 2-71593
 tetracontane, high press. intermediate phase, optical microscopy and Raman study 2-86838
 TGS, ferroelec. transition, polarisation relax. time, high press. Brillouin scatt. study 2-87802
 (TMTSF)₂ReO₄, press. depend. of metal-insulator transition and supercond. transition 2-56753
 (TMTSF)₂X family of organic superconductors, survey of low dimensional phenomena 2-56751
 (TMTTF)₂X family of organic charge transfer salts, supercond. obs. 2-56756
 transition metal alloys, electrical resistance, pressure dependence meas. for amorphous and cryst. alloys 2-77020
 transition metal compounds, melting point, p-T phase diagram at high press. of H 2-71618
 trisarcosine calcium chloride, deuterated, dielec. props., temp. and press. depend. meas. 2-99071
 trisarcosine calcium chloride, ferroelec., dielec. loss tangent, hydrostatic press. effects meas. 2-116115
 US attenuation meas. in solids under hydrostatic pressure 2-81896
 X-ray crystallography, at high pressures, 1933-1980: a bibliography 2-63771
 zinc blende narrow gap semiconds., pressure spectroscopy of localized levels 2-92526
 Ag, self-diffusion rate, hydrostatic press. and temp. depend. 2-61194
 Al, Hugoniot elastic limit of 2024 specimen, impact expt. 2-93565
 Al, isothermal compression to 10 GPa at 673K 2-66107
 Al, quasi-elastic high press. waves 2-71557
 Al, shock compression measurements at pressures >1 TPa 2-76590
 Al₃Ga_{1-x}As heterostructure lasers, visible 300K operation, high press. measurements 2-114300
 Au, self-diffusion rate, hydrostatic press. and temp. depend. 2-61194
 AuI, high press. Mossbauer study of ¹⁹⁷Au, electrical cond. 2-61794
 BN, pyrolytic, high press. and high temp. effect 2-105167
 B₂O₃-Na₂O-PbO(CdO) glasses, press. induced struct. changes, ESR study 2-110637
 Bi, elec. resist., charge carrier scatt. under high hydrostatic press. 2-56588

high-pressure effects in solids continued

- Bi₂Te₃, thermoelec. props., elec. resist. and phase transitions meas. up to 9 GPa hydrostatic press. 2-87309
 CeCu₂Si₂, high press. superconducting transition (*Russian*) 2-82511
 CeCu₂Si₂, mixed valence state, elec. resist., mag. field and press. effects 2-110329
 Ce_{1-x}Mo_xS₈, mag. susceptibility and elec. cond. under high press. 2-66789
 Co amorphous alloys, Curie temp. and mag. thermal expansion, press.-depend. meas. 2-72323
 Cr-Ga, effect of press. on Neel temp. 2-72202
 Cs₂AgAuCl₆, high press. Mossbauer study of ¹⁹⁷Au, electrical cond. 2-61794
 Cs₂AuCl₆, high press. Mossbauer study of ¹⁹⁷Au, electrical cond. 2-61794
 CsCdF₃, fluorovortskites, 3rd and 4th order elastic consts. 2-98181
 CsI, elec. cond. behind shock wave front, semicond. props., liq. and solid phases 2-77065
 Cu, equation of state calc. 2-71603
 Cu, quasi-elastic high press. waves 2-71557
 Cu spherical shells, stability loss under external press. 2-116542
 Cu-Al, impedance-match experiments using high intensity lasers 2-76588
 Cu-Mn, manganin, elec. resist. meas. to 100 kbar, press. gauge appl. 2-89735
 Eu intermetallics, hyperfine field, press. depend. 2-92550
 Eu intermetallics, hyperfine field, press. depend. 2-92551
 Eu_{1-x}Mo_x(S_{1-x}Se_x)₈, press.-induced non-bulk supercond. 2-110521
 EuMo₅S₈, impurity phase supercond. under press., magnetisation meas. 2-92807
 EuMo₅S₈, valence of Eu under high press. 2-82553
 Fe, shock compression measurements at pressures >1 TPa 2-76590
 Fe, solubility of H₂, enhanced dissolution under press. and stabilisation of γ phase 2-86876
 Fe-Cr-B amorphous Invar alloy, Curie temp. and high field susceptibility, press. effects 2-72322
 Fe-Ni-P-B based metallic glasses, Mossbauer study under press. 2-72385
 Fe-Rh, mag. transitions press. depend. and bulk modulus, s-d exchange model (*Russian*) 2-92902
 Fe-Si (2.9 wt. %), slip geometry, hydrostatic press. effects, expt. study (*Russian*) 2-116499
 Fe₂B, high-pressure, Mossbauer study 2-56994
 Fe(III) compounds, pressure-induced spin state transition, ligand field theory 2-82300
 FeNb₅Se₁₀, metal-insulator and CDW transitions correlation, elec. cond. press. depend. study 2-77133
 (Fe_{0.25}Ni_{0.75})₂B, high-pressure, Mossbauer study 2-56994
 Fe₃₂Ni₁₆Cr₁₄P₁₂P₆, amorphous, Mossbauer study under press. 2-72385
 Fe₄₀Ni₄₀P₁₄B₆, amorphous, press. distrib. under compression to 250 kbar, fluorescence study 2-83171
 Fe₂P, pressure-induced metamag. states, magnetisation study 2-110583
 Fe₂SnMoS₈, influence of press. on T_c (*Russian*) 2-56763
 GaAs, defect energy level press. depend. 2-104295
 GaAs whiskers, elec. cond., hydrostatic press. influence 2-77064
 GaAs:Cr, charge transfer induced by press. 2-66484
 GaAs-Al_{0.1}Ga_{0.9}As quantum well heterostructure lasers, band struct., high press. effects 2-85971
 GaS, elastic props. under high pressure, by Brillouin scattering 2-72517
 GaSb, reverse-biased tunnel diode, temp. coeff. of tensor sensitivity 2-87374
 GaSb:Te, Kondo effect obs. under high press. 2-61459
 Ge, oxidation at high press. 2-116569
 n-Ge:As(Sb), heavily doped, press. effects on magnetoconductivity (*Russian*) 2-56619
 H, metallic, structure and screening at high press. 2-76961
 Hg_{0.836}Cd_{0.164}Te, Hall coeff. phase transition under hydrostatic press. 2-92674
 HgMo₆S₈, high press. superconducting phase, cryst. struct., critical field (*Russian*) 2-56762
 HgTe(Se), elec. props. at very high press. 2-82412
 InSb, band struct. calcs., hydrostatic press. effects 2-92457
 n-InSb, far IR studies of bound and free carriers as function of hydrostatic press. 2-93238
 InSb, Hall effect, press. effects 2-104398
 n-InSb, low electron conc., electron Hall mobility at high press. 2-92672
 Ir₇₈Y₂₂, eutectics, strain-induced softening and high-pressure, expts. 2-56090
 KAl(SO₄)₂·12H₂O·Cr³⁺, SO₄²⁻ dynamics, ESR at high press. 2-77363
 KBr:In(Tl), pressure induced absorpt. spectra changes 2-93235
 KCl, press. effect on dislocation mobility 2-60986
 KCr(SO₄)₂·12H₂O·Cr³⁺, SO₄²⁻ dynamics, ESR at high press. 2-77363
 KI:In(Tl), pressure induced absorpt. spectra changes 2-93235
 K₂Pt(CN)₄Br_{0.3}·3D₂O, under press., metal-semiconductor transition 2-76929
 La_{100-x}Al_x, amorphous, supercond. transition temp. press. depend. 2-115932
 La₂LiFeO₆, high-pressure stabilisation and physical props. of Fe(V) 2-66791
 La_{1-x}Pr_x, intermediate valence materials, press. expts. 2-56502
 LiH, solid, elec. cond., H₂ press. effect 2-66598
 LiI₂, uniaxial stress induced changes in Raman spectrum 2-110858
 Li₂SO₄, elec. cond. in monoclinic phase 2-71710
 (Mg,Fe)SiO₃ olivines, single cryst. spectra, 5000-40000 cm⁻¹, up to 200 kbar 2-93214
 MgF₂:CaF₂, recrystallisation pressing, struct. and strength 2-99524
 Mg_{0.6}Fe_{0.4}O, eqn. of state at Earth mantle press. 2-78645
 MgO-Al₂O₃, transparent ceramic, coprecipitation followed by calcination 2-99379
 Mo, shock compression measurements at pressures >1 TPa 2-76590
 (NH₄)₂BeF₄, ferroelec., US study under hydrostatic high press. 2-115362
 NaCl, equation of state, lattice const. and bulk modulus, SCF calc. 2-71604
 NaCl:Ti(In), luminescence obs. at high press. 2-72533
 (Nb,Pb)(Zr,Ti,Zn)O₃ piezoceramic, influence of static compression on props. 2-72426
 NdCo₂H₂, ferromag., magnetisation, H₂ press. and comp. depend. meas. 2-82642
 NiSiF₆·6H₂O, mag. prop. anomalies (*Russian*) 2-82597
 α,β-O₂, magnetisation under high press. 2-66760
 P, black, high press. and temp. cryst. growth and elec. resist. meas. 2-92619

high-pressure effects in solids continued

- PbMo₆S₈, high press. superconducting phase, cryst. struct., critical field (Russian) 2-56762
 Pb_{1-x}Sn_xTe:In, band struct. at high In conc., elec. cond. press. depend. study 2-82230
 Pr, valence transition under press. 2-56502
 Pr₂S₂Gd, ferromagnet, dil. Gd moments, press. depend., magnetisation 2-72195
 Pr₂Ti₂Gd, ferromagnet, dil. Gd moments, press. depend., magnetisation 2-72195
 RbCdF₃, fluoperovskites, 3rd and 4th order elastic consts. 2-98181
 RbCeF₃, fluoperovskites, 3rd and 4th order elastic consts. 2-98181
 ReO₃, press. induced Fermi surface changes 2-76901
 Si-Fe(V)(Ti)(Mn), deep levels under hydrostatic press., isothermal capacitance study 2-66477
 SmS collapsed phase, Hall effect and elec. resist., press. and temp. depend. 2-56625
 SmS, mixed valence cpd., quasi-insulating to Fermi liq. regime change under press. 2-56518
 SmS(Se), intermediate valence materials, press. expts. 2-56502
 Sn₂Eu_{2-x}Mo₆S₈, supercond. props. under high press. and high mag. field 2-110551
 Sn₂Eu_{2-x}Mo₆S₈, mag. field induced superconductivity 2-77224
 (Sn_{1-x}Eu_x)₂Mo₆S₈, superconductivity, press. effect 2-104531
 SnMo₆S₈, high press. superconducting phase, cryst. struct., critical field (Russian) 2-56762
 (TMTSF)_x, family of organic charge transfer salts, supercond. obs. 2-56756
 TaS₃, monoclinic, press. depend. on CDW transitions 2-87241
 Te, anisotropic semicond., band shapes, effect of relativistic operators 2-92459
 Ti alloys, texture and plasticity, under hydrostatic press., deform. conditions influence (Russian) 2-116501
 TiC₂O₃ and TiC₂O₃H_m, oxygen-rich, electric explosion, phase comp. of products 2-88358
 TiO₂-SiO₂ glass, ramp-wave generation 2-71566
 TiCdF₃, fluoperovskites, 3rd and 4th order elastic consts. 2-98181
 TmSe, mixed valence cpd., high press. neutron and X-ray diffr. studies 2-56509
 TmSe, pressure-induced valence transition, X-ray diffr. study 2-82233
 TmSe, stoichiometry, press. effects, lattice parameter, resistivity 2-56203
 α-U, atomic displacements incommensurable CDW 2-103691
 UC, density, lattice parameters and elec. resist. up to 100 kbar 2-76387
 V₂Si, pressure induced electronic changes 2-82513
 Xe, solid, optical absorpt. at high press. 2-93225
 Xe, solid, optical absorpt. edge at very high press., rel. to metallisation 2-110244
 Xe, solid, optical props. under very high press. 2-87731
 ZnGeP₂, press. depend. of pseudodirect gaps 2-87141
⁶⁷ZnS, Mossbauer spectrum under high press. 2-61802
 ZnS:Cr³⁺, cubic, ESR spectrum, press. influence 2-66909
 ZnSe, Raman intensity press. depend. 2-93182
 Zr-H, melting point, p-T phase diagram at high press. of H 2-71618

high-pressure phenomena and effects

- see also high-pressure effects in solids
 d-camphor, carbonyl stretching mode, Raman and IR spectra, high press. and temp. effects 2-67057
 CBOOA, liq. cryst., p-T phase behaviour, optical microscopy at high press. 2-60881
 CBOOA-80CB mixtures, liq. cryst., p-T phase behaviour, optical microscopy at high press. 2-60881
 cholesteryl hexanoate, phase transitions, high press. study 2-71642
 cholesteryl pentanoate, phase transitions, high press. study 2-71642
 COC, smectic A-cholesteric transition, press. induced tritritical behaviour, expt. study 2-115409
 COC optically determ. transitions at high pressure 2-76669
 conference on high temp. and press. solns., chemistry, Karlskoga, Sweden (Sept. 1979) 2-58523
 di-alkoxyazoxybenzenes, homologous series, nematic phase, high-press. thermodynamic meas. 2-71342
 di-ethyl-p-azoxybenzoate, liq. cryst. phase transitions, high press. effects 2-76672
 diamond formation, from glassy C under high pressure and temp. conditions 2-99363
 EXAFS spectroscopy, conference, Boston, MA, USA (Nov. 1979) 2-74160
 finite strain equation of state for high press. phases 2-73544
 graphite intercalation compounds, acceptor-type, pressure effect on electronic props. 2-56425
 heavy water, liq., pressure effects on struct. X-ray diffr. study 2-81657
 heavy water, structure studied by neutron diffr., press. effect 2-71323
 4-n-heptyloxyphenyl-4'-n-decyloxybenzoate, liq. cryst. phase transitions, high press. effects 2-76672
 hexatic B and crystal B phase, press. study 2-71644
 laser fusion target dynamics, time and space resolved radiography 2-74893
 liquid crystal orientational ordering at high press., NMR 2-89779
 liquids, high press. obs., strain, Eulerian representation 2-104791
 metals, high press. eqns. of state 2-61108
 metals at Earth core conditions, equation of state 2-117300
 methane, phase III, rot. tunnelling under pressure 2-110448
 4-nitrophenyl-4'-octyloxybenzoate, liq. cryst. phase transitions, high press. effects 2-76672
 NMR spectroscopy for study of liq. struct. 2-98990
 4-n-octyloxy-4'-cyanobiphenyl, liq. cryst., p-T phase behaviour, optical microscopy at high press. 2-60881
 4'-n-octyloxy-4-cyanobiphenyl, piezothermal studies in vicinity of smectic A-nematic transition 2-61133
 4-n-pentyloxyphenyl-4'-n-decyloxybenzoate, liq. cryst. phase transitions, high press. effects 2-76672
 phospholipid bilayers, press. induced phase transitions, Landau phenomenological theory 2-105669
 plasma column, HF high press., diagnostics meas. by microwave reflectometer 2-79791
 polyethylene, extended chain single cryst. growth rate and morphology, optical microscopy study 2-91838
 polyethylene, molten, diffusion of linear hydrocarbons, hydrostatic press. effects 2-104041
 polypropylene, molten, diffusion of linear hydrocarbons, hydrostatic press. effects 2-104041

high-pressure phenomena and effects continued

- shock waves, laser driven, ultrahigh press., review 2-76587
 simple fluids, transport props. at low temps. and high press. 2-71691
 spark gap overvoltage breakdown probability 2-97828
 supercritical pressure, heat transfer deterioration, flow direction and grooved surface effect (Japanese) 2-55576
 transition elements, high press. eqns. of state 2-61108
 water, equation of state and elec. cond. in 100 GPa shock press. range 2-92143
 water, liq., pressure effects on struct. X-ray diffr. study 2-81657
 water, pure liq., vitrification by high press. jet freezing, X-ray diffr. study 2-103952
 water, thermal cond., high press. effects 2-56269
 CaO-CO₂-H₂O system, high press. differential anal. 2-93756
 Ge, melting point, press. derivatives 2-61117
 H₂, molecular, structure and screening at high press. 2-76961
 H₂O, flowing, heat transfer in a horizontal tube at supercrit. press. (Japanese) 2-55577
 H₂S, gas, equation of state meas. 2-71057
³He, liq., sp. ht. under press., 0.5-1.4K 2-61235
⁴He, liquid, pressurised, high freq. first sound meas. near lambda point 2-92303
 NH₃, equation of state and elec. cond. in 100 GPa shock press. range 2-92143
 Na-Ga(Cd), liquid, conc. fluctuations, press. effect, EMF meas. 2-91758
 Ni(100) surface, effects of Fe in reactivity 2-78135
 Si, melting point, press. derivatives 2-61117
 Si₃N₄, densification by high pressure hot-pressing 2-93477

high-pressure solid-state phase transformations

- alkali halides, press. induced polymorphic transition, hysteresis phenomena, theoretical study 2-109973
 t-butyl chloride, mol. cryst. high press. struct. phase transform., DSC study 2-71633
 chloranil, phase diagram under press., order parameter variations 2-109977
 chloranil, phase transition, soft mode behaviour, press. depend. Raman scatt. study 2-66205
 crystal phases, press. induced first-order phase transition, shift model 2-109950
 dimyristoyl phosphatidylcholine water dispersions, press. induced phase transitions, Raman spectra 2-82839
 ferroelectric crystals, phase transitions under press., NQR-NMR obs. 2-110692
 finite samples 2-71629
 graphite-diamond dynamic phase transition due to shock wave propagation 2-71629
 graphite-to-diamond conversion, transition metal lamellar compounds of graphite as catalysts 2-67330
 ice, high pressure phases, Raman spectra in stability region 2-87763
 III-V semiconductors, high pressure phases, pseudopotential calcs. 2-103723
 inorganic carbonyls and cyanides, high press. phase transitions, Raman study 2-76650
 methane, solid, Raman spectra under high press., Gruneisen parameters 2-77502
 Nylon 12, α form, formation from melt and quenched state under high press., DTA and X-ray study 2-72684
 olivine, 'spinel to β-phase' transition mechanism 2-73547
 olivine-spinel phase transformation in Earth upper mantle, martensitic transform, hypothesis 2-100373
 polyethylene, high-press. phase transition, thermodynamic anal. 2-76656
 quasi-one dimensional systems, fluctuation-driven phase transitions, spatial anisotropy effect on order 2-103944
 rare earth ethylsulphates, high press. phase transition mechanism 2-76666
 simple crystals, high-pressure transformations, structural considerations 2-66127
 steel, stainless, austenitic Cr-Ni, combined shock loading and high-speed deform. effects 2-99560
 steel, stainless, Type 304, shock-loaded, transform. mechanism and α'-martensite morphology 2-93509
 symposium on physics of solids under high press., Bad Honnef, Germany (Aug. 1981) 2-74162
 tetramethylammonium tetrachlorozincate-d₂, press. induced ferroelec. 2-67004
 tetramethylanion copper bromide, ferroelec., phase transitions, high press. effects, permittivity study 2-99069
 thiourea, modulated struct., phase diagrams, commensurate-incommensurate transition, neutron diffr. study 2-66180
 thiourea, phase transition under high press., SHG, pyroelec., and Raman scatt. meas. 2-66202
 transition metals and alloys, group IVB, α-ω transform. crystallography 2-91860
 s-triazine, high pressure elastic phase transition, neutron diffr. study 2-66210
 TTF-TCNQ, neutron scatt. study of commensurability effects under high press. 2-86858
 X-ray crystallography, at high pressures, 1933-1980: a bibliography 2-63771
 Ag₂O, high-press. induced phase transition 2-92180
 Al, high press. struct. phase transitions, first principles total energy calcs. 2-66207
 AlN, phase transition and shock compression 2-71627
 Al₂O₃, shock loaded ceramic, glass transition 2-71647
 Am, phase transitions under press., cryst. struct., X-ray diffr. study 2-92192
 BN with C impurity, ESR signals after high-temp. shock compression, reverse phase transitions, paramag. centres form. 2-56931
 BP, phase transition and shock compression 2-71627
 Ba, pressure induced superconductivity 2-56764
 Be, high press. α-β transition at T=0 2-71628
 Bi, high pressure transition, meas. by manganin press. gauge 2-89735
 Bi₂Te₃, thermoelec. props., elec. resist. and phase transitions meas. up to 9 GPa hydrostatic press. 2-87309
 BiVO₄, ferro-to paraelastic transition at high-press. and temp. 2-98274
 CdGeAs₂, chalcopyrite, elastic behaviour, US wave vel. study 2-61052
 Cds, shock induced defects and transition 2-71555
 CoSiF₆·6H₂O, uniaxial press. effect on struct. phase transition, mag. anisotropy study 2-66196

high-pressure solid-state phase transformations continued

- Cr-Fe, antiferromagnetic, high press. phase diagram, neutron scatt. study 2-116000
 CsBi(MoO₄)₂, phase transition, uniaxial press. effects, permittivity study 2-109982
 CuCl, solid-state phase transitions under hydrostatic press. up to 12.8 GPa 2-109969
 Cu₂O, high-pressure induced phase transition 2-92180
 CuPt(48.1 wt.%), press. induced variation of order-disorder transition (*Russian*) 2-56187
 D₂-ortho molecular under press., rot-libration transition 2-61127
 EuSe, magnetic transition, press. induced 2-87504
 FeS, polymorphism at high temps. and press., X-ray diffr. study 2-97976
 GaP, shock induced phase transition 2-71626
 Ge, high pressure struct. phase transition, X-ray diffr. study using synchrotron radiation 2-103975
 Ge, shock loaded, phase transitions obs. 2-56186
 H₂, solid, likelihood of high press. phase involving (H₂)₂ complexes, lattice energy calc. 2-76769
 HfO₂, cryst., phase transition under press., NQR investig. 2-110694
 Hg₂Cl₂(Br₂)₂, Raman study of soft modes at high press. 2-93202
 HgTe, press. induced semicond.-metal transitions, energy band struct. 2-82234
 I, solid, metallic press. induced phase, elec. cond., thermoelectric power 2-92570
 I₂, high-pressure phase transition obs. using diamond-anvil device 2-56173
 I₂, solid, cryst. struct., pressure effects 2-115176
 InS, Grüneisen mode parameters, structural phase transition, high press. Raman study 2-104889
 InSb, polymorphic transition meas. at low temp. and high press. 2-109981
 InSe, press. induced nonlayer struct., X-ray diffr. study 2-103713
 Ir, eqn. of state and volume compression under high press., $\alpha \rightarrow \epsilon$ transition 2-115385
 KAl(SO₄)₂·12H₂O:Cr³⁺, SO₄²⁻ dynamics, ESR at high press. 2-77363
 KCl, press. induced polymorphic transition, hysteresis phenomena, theoretical study 2-109973
 KCr(SO₄)₂·12H₂O:Cr³⁺, SO₄²⁻ dynamics, ESR at high press. 2-77363
 KIO₃, cryst., phase transition under press., NQR investig. 2-110694
 KMnF₃, uniaxially stressed, phase diagrams, sp. ht. meas. 2-56177
 K₂SeO₄, incommensurate phase transition, uniaxial stress depend., Raman scatt. study 2-71638
 Kr, FCC-SCC allotropy, F-bands and metallisation 2-56185
 (Mg,Fc)₂Al₂SiO₄ in H₂O, cordierite, high press. phase transition 2-92172
 Mg, high press. struct. phase transitions, first principles total energy calcs. 2-66207
 MgF₂, phase transitions in shock-compressed samples, X-ray study 2-76667
 Mg₂GeO₄, olivine-spinel phase transform., rel. to martensitic transform. of olivine in Earth's mantle 2-100373
 MgO, shock loaded ceramic, glass transition 2-71647
 MnF₂, pressure-induced phase transition sequence 2-66208
 MnO₂, phase transitions in shock-compressed samples, X-ray study 2-76667
 Na, high press. struct. phase transitions, first principles total energy calcs. 2-66207
 Nb-Ti alloy, phase comp., hydraulic extrusion process parameters influence 2-57330
 Nb₆I₁₉, amorphous, crystn. under high press. and form. of Al₅ phase 2-86572
 Ni₂SiO₄, olivine-spinel phase transition at Earth mantle conditions 2-106105
 Pb₂AlNbO₆, prep., polymorphic transition from pyrochlore to perovskite struct. 2-77787
 Pb_{1-x}Ge_xTe, p-n junction diode, capacitance, press. induced phase transition 2-72055
 Pb₂MnTaO₆, prep., polymorphic transition from pyrochlore to perovskite struct. 2-77787
 Se₈, high-pressure phase transition obs. using diamond-anvil device 2-56173
 Se, high pressure phase transition 2-81953
 SeO₂-TeO₂-MoO₃ (M₂O₃=V₂O₅, MoO₃, Nb₂O₅, Sb₂O₃, La₂O₃), glass formation at high pressure 2-86576
 SeO₂-V₂O₅-MoO₃, glass formation at high pressure 2-86576
 Si, shock loaded, phase transitions obs. 2-56186
 Si, shock loaded, struct. transition, dynamic yielding and shear strength reduction obs. 2-86792
 Si-Ge solid solns., pressure-induced covalent-metallic phase transition, pseudopot. calc. 2-87149
 SiO₂, fused, shock temp. determ. by radiance intensity meas. 2-86793
 SmS, press. induced change of valence, phonon coupling, extended Falicov-Kimball model 2-56183
 SmS, pressure-induced elastic softening, elastic const. meas. 2-92075
 Sn, high pressure transition, meas. by manganin press. gauge 2-89735
 SnO₂, phase transitions in shock-compressed samples, X-ray study 2-76667
 Sr, pressure induced superconductivity 2-56764
 SrTiO₃, crossover exponent and struct. phase diagram, sp. ht. meas. 2-76665
 Ti, $\alpha \rightarrow \omega$ phase transform., press. induced, kinetics 2-56174
 Ti, two-wave shock wave configuration obs. (*Russian*) 2-61065
 Ti-Al-V (6.4 wt.%), high temp. phase transformations and thermal and mechanical props. meas. 2-71625
 Ti-V, $\beta \rightarrow \omega$ transform under press., stacking soliton model for diffuse omega phase 2-71639
 TiO₂, phase transitions in shock-compressed samples, X-ray study 2-76667
 TiS₂, semicond., Hall coeff., elec. cond., electron-phonon scatt. 2-77041
 TiSe₂, semimetal, elec. cond., high pressure phase transformation, Hall coeff. 2-77041
 (Ti_{1-x}V_x)₂O₃, semimetallic, elastic moduli, press. depend., slow shear mode softening near x=0.04 2-81874
 UO₂, high pressure behaviour, X-ray powder diffr. study 2-56178
 V₂Hf(V₂D), B- α transition, press. effects meas. 2-98269
 Xe, BCC-FCC allotropy, F-bands and metallisation 2-56185
 ZnS(Se), shock induced phase transition stresses 2-98200
 Zn-Mo (2 at.%), pressurised, diffuse streaking accompanying $\alpha \rightarrow \omega$ transform. 2-67324

high-pressure techniques

- apparatus for 50000 ton press, 200 cm³ working volume 2-53780
 ballistics, Rafael Terminal Ballistics Laboratory—facility and capability, review 2-75909
 Boeing Shock Physics Laboratory, review 2-74447
 coupling device for quick high-pressure connections to 100 MPa 2-79606
 diamond anvil and high pressure experiments (*Japanese*) 2-84657
 diamond anvil under stress, CAD study 2-112917
 diamond-anvil device for high-pressure phase transitions obs. in I₂, S₈ 2-56173
 electric gun, 100 kV, 78 kJ, high press. eqn. of state appl. 2-74456
 explosive, aquarium test, shock press. anal. 2-74442
 explosive detonation press. meas. by aquarium technique, charge diameter effect 2-74443
 Fabry-Perot interferometer, five-pass, Brillouin scattering meas. under high press. (*Japanese*) 2-64104
 Fourier transform IR spectroscopy, beam condenser-microscope system for high press. studies and general microsampling 2-113006
 generating high pressure of gas, appl. to research in magnetism (*Japanese*) 2-89736
 geological samples, apparatus for meas. thermal properties at pressures to 0.2 GPa and temp. to 750K 2-84620
 high-power, high-freq. coaxial feedthrough for pressure vessels 2-64059
 hybridized dead-weight piston gauge up to 1 GPa 2-84659
 impact facilities at the Ernst-Mach-Institute, review 2-75910
 impact physics facilities at the University of Dayton Research Institute 2-75908
 isotropic compression, one-dimens. impact expt., finite difference simulation 2-69195
 ISL shock wave facilities, review 2-74452
 laser-generated shock waves, appl. to equations of state, Lawrence Livermore National Laboratories facilities, review 2-75620
 Lawrence Livermore National Laboratory single-stage 101 mm gun 2-74454
 light scattering cell, high press., adapted to density meas. 2-74388
 light-gas gun, two-stage, at Lawrence Livermore Nat. Lab. 2-74444
 magnetic fluid circulation pump 2-107339
 magnetisation meas. at high press. 4.2 to 300K 2-58859
 magnetometer high-pressure cell for obs. of rocks subject to large stresses 2-68518
 microoptic double beam system for reflectance and absorption measurements at high pressure 2-79649
 NSWCO/WO light gas gun and explosive facility, shock wave expts. appl. 2-74451
 opposed anvil high pressure apparatus, massive support principle 2-84658
 optical high-pressure cells, stress distrib. in cylindrical windows 2-101435
 optical pyrometry, technique at high shock press. 2-69171
 piezoelectric pressure sensor calibration, for high pressures (*German*) 2-79556
 plate impact at Brown University, review 2-74450
 Pomeranchuk cell, cooling device, "He-cycling" ³He-⁴He dilution refrigerator 2-64047
 Poulter Laboratory of SRI International, shock wave facilities, review 2-74448
 quartz, shocked, thermodynamic props. of cryst. and fused quartz determ. from radiation emission 2-69193
 rail gun for eqn. of state research 2-74455
 Sandia 25-meter compressed helium/air gun, shock wave expt. appl. 2-74449
 shock Hugoniot expts. using exploding foil electric gun 2-69190
 shock induced decomposition of high explosives, expt. techniques 2-74453
 shock wave apparatus for studying minerals at high pressure and impact phenomena on planetary surfaces 2-78852
 shock wave equations of state, railgun accelerators appl. 2-69191
 shock wave experiments using explosives and light-gas gun facilities 2-74446
 shock wave expts., two-stage light-gas gun appl. 2-69192
 shock wave facilities at Tokyo Institute of Technology, review 2-74457
 shock wave facilities for high-pressure experiments at Tohoku University 2-74458
 Shock Wave Physics Group (M-6) at Ancho Canyon, review 2-74445
 shock-compression temperature rise determined from resistivity of embedded metal foils 2-69196
 shocked compressed liquids, time-resolved spectroscopy 2-69266
 shocked translucent materials, temp. meas. by time-resolved IR radiometry 2-69227
 sintering furnace, operating at high press. and temp., C+N₂ interaction 2-105097
 solutions, Raman spectra using high temp. high press. furnace technique 2-89820
 stopped-flow apparatus for study of fast reactions in solution 2-101440
 thermal resistance meas. of thin brittle samples under high pressure 2-79572
 UV-autoclave for high-pressure photochemistry 2-79605
 water, isotropic compression, one-dimens. finite difference calc. 2-69194
 water, thermal cond., high press effects 2-56269
 Cu-Mn, manganin, elec. resist. meas. to 100 kbar, press. gauge appl. 2-89735
 Ge, oxidation at high press. 2-116569
 He gas high-pressure cell for X-ray powder diffraction studies 2-79725

high-temperature phenomena and effects

- see also refractories
 adsorption of gases on cryst. solids, Percus-Yevick theory 2-76831
 air, high temperature, sp. ht. and isotropic exponent, analytical expressions 2-97696
 t-butyl cyanide, high temp. disordered phase, struct. determ. by neutron scatt. method 2-109779
 conference on high temp. and press. solns., chemistry, Karlskoga, Sweden (Sept. 1979) 2-58523
 corrosion resistance high temperature coatings, Si role 2-116586
 diamond formation, from glassy C under high pressure and temp. conditions 2-99363
 electrical resistivity at high temp. and press. of rocks and minerals 2-106111
 gases, monatomic and diatomic, sp. ht. and isotropic exponent, analytical expressions 2-97695
 graphite, artificial, thermal and elec. props. in temp. range 500-2800K 2-66304
 graphite, high temp. Ar adsorpt., Percus-Yevick approx. 2-98438
 polyvinylidene fluoride, ferroelec. hysteresis at high temp. 2-116125

high-temperature phenomena and effects continued

- PVC, conf., Cleveland, OH, USA (Aug. 1980) 2-74153
 PVC, high-temp. struct. changes, X-ray diffractometer investig. 2-76652
 steel cylinder, impact deformation meas. at high temp. 2-83172
 Al cylinder, impact deformation meas. at high temp. 2-83172
 BN, pyrolytic, high press. and high temp. effect 2-105167
 Co, molten, thermal expansion up to 600K above melting 2-66260
 Cu cylinder, impact deformation meas. at high temp. 2-83172
 Cu, fracture and deformation props. meas. at elevated temperatures (*Russian*) 2-88158
 Cu, molten, thermal expansion up to 600K above melting 2-66260
 Fe, fracture and deformation props. meas. at elevated temperatures (*Russian*) 2-88158
 Fe, molten, thermal expansion up to 600K above melting 2-66260
 FeS, polymorphism at high temps. and press., X-ray diff. study 2-97976
 H₂ ignition when injected into high temperature oxidiser experimental study 2-99847
 MgO crystal, elec. breakdown at high temp. 2-77450
 Mo, electrical resistivity meas., 1500 to 2650K, SRM 781 specimens 2-71946
 Mo-Ti-Zr (0.5, 0.08 wt.%), dispersion-strengthened, activation energy meas. for creep 2-67426
 Nb-Al, heat of formation and high temp. phase diagram, Knudsen effusion study 2-105117
 Ni, molten, thermal expansion up to 600K above melting 2-66260
 NiO microcrystal, IR spectra obs. at high temp. 2-61902
 P, black, high press. and temp. cryst. growth and elec. resist. meas. 2-92619
 Si, optical absorpt. coeff., 1.6 to 4.7 eV, meas. at high temp. 2-99146
 Ta cylinder, impact deformation meas. at high temp. 2-83172
 Ti, diffusion of O₂, high temp. interaction, diffusive kinetics under nonstationary heating (*Russian*) 2-98342
 Ti-Al-V (6.4 wt.%), high temp. phase transformations and thermal and mechanical props. meas. 2-71625
 U cylinder, impact deformation meas. at high temp. 2-83172
 Xe, liq., shock compression to 130 GPa 2-66130

high-temperature techniques

- see also *pyrometers; refractories*
 apparatus for 50000 ton press, 200 cm³ working volume 2-53780
 cryostat design for position annihilation research at -195-+800°C 2-107329
 discrete vaporisation system in standard VUP-4 instrument 2-116361
 electrophysical characs. meas. for dielectrics, new apparatus 2-101411
 furnace transient temp. fields meas., using heat flux sensor with thermocouples (*German*) 2-64041
 holographic interferometry meas. of axisymm. flame temps., refr. effects 2-69170
 HVEM, high-temp. in-situ expt., instrumentation appl. to materials science 2-64169
 melting point meas. of oxides in different atms. using solar furnace 2-58830
 MI-1201 mass spectrometer ion source for temps. of 400 to 1400K 2-95516
 microhardness test unit for high-temp. strength materials under high-temp. cyclic loading 2-99635
 NMR broad-band spectrometer, high-temp. attachment for up to 1100°C 2-69216
 optical-electronic pyrometric system, liquidus curves of HfO₂-R₂O₃ meas. 2-86842
 polyacrylonitrile, solns., rheological investig. using high temp. viscometer (*German*) 2-70888
 single pulse shock tube, high-temp. processes investig. (*German*) 2-60569
 solutions, Raman spectra using high temp. high press. furnace technique 2-89820
 thermal chamber for spectral investigations 2-101438
 vacuum differential thermal analysis apparatus for use up to 1000°C 2-69178
 viscometer, high-temperature modification for rheological investig. of polymer solns. (*German*) 2-70888
 X-ray camera for single cryst. studies at high temps. under controlled atmosphere 2-65803
 Li-Al/FeS high temp. battery calorimeter 2-58827

high vacuum gauges see *vacuum gauges***high-voltage engineering**

- see also *high-voltage techniques*
 5 kV vacuum feedthrough connector with low capacitance and microphony 2-75122
 ASDEX neutral injectors, damping element in high voltage circuits 2-74944
 breakdown strength obs. and statistical evaluation 2-99037
 electron beam pumped excimer laser system with HV pulsed power supply 2-90939
 electrostatic modelling of electron-beam-generator/vacuum-diode interface 2-95389
 insulation, perfluorocarbon gas dielectrics fragmentation under low energy electron impact 2-103272
 polyethylene, elec. cond. and space charge phenomena at high elec. fields (*German*) 2-87292
 TFTR multistage ignition crowbar development 2-69949

high-voltage techniques

- 100 kV subnanosecond direct voltage monitors 2-95334
 600 kV Marx module for high-density Z-pinch experiment 2-90415
 insulators in vacuum, surface elec. strength, influence of electrode area (*Polish*) 2-76212
 Particle Beam Fusion Accelerator (PBFA-I), HV modular interconnecting and operating systems 2-90326
 pulsed power bibliography 2-94940

history

- aether, theories, historical review 2-58606
 Alfred Wegener, contribs. to physics of atmosphere 2-63790
 Alfred Wegener (1880-1930), biographical account on 100th birthday and 50th anniversary of death 2-63789
 Arabic science, natural history including background, geology, mineralogy, botany and zoology (*Japanese*) 2-112681
 astronomical records 2-53474
 astronomy, lore of large numbers and historical background to Athropic Principle 2-63793
 bone growth stimulation by elec. or mag. fields, historical development (*German*) 2-100081

history continued

- α Canis, Majoris B (Sirius B), still little-known white dwarf, history of research (*French*) 2-73972
 climate in historical times and influences on human society, book 2-68987
 colour vision defects, historical review of 1st 4 decades of 20th century (*Italian*) 2-53477
 diamond turning fabrication for laser design appls., review 2-81132
 Egyptian chronology, proposed revision related to prehistoric cometary impacts 2-101149
 electron microscopy of surfaces and catalysts, image resolution 2-94973
 film industry in Quebec, Canada, historical perspective 2-79700
 financial incentives in USA for energy production stimulation, historical perspective 2-73075
 fluid mechanics research in Bangalore in the 1950s and 1960s 2-79337
 Galilean satellites, anal. of early eclipse obs. 2-79011
 Galileo, biographical notes, math. claims and contribs. to scientific rationalisation (*Italian*) 2-68994
 general relativity, variational formulation, 'Palatini method' origin 2-84432
 Hanford reactor, account of ¹³⁵Xe fission product poisoning 2-63797
 hyperfine structure, Pauli's 1924 note 2-79320
 International Commission on Radiological Protection (ICRP), history and present role 2-69998
 ionising radiation detection and meas., short history 2-75131
 IR detection history, first detectors of thermal radiation 2-79336
 IR detection history, the first thermographs 2-107074
 Kant's thoughts on the ageing of the Earth 2-89515
 lightwave communications, atmospheric transmissions, photophone to optical fibres 2-89516
 Maxwell, contrib. to mol. physics and statistical methods 2-112682
 Maxwell's 'Treatise on electricity and magnetism' 2-112683
 metrology, evolution from pre-history to present day (*French*) 2-74191
 motion pictures, supporting role of sound 2-109132
 Neoglacial Lake Alesek, SW Yukon Territory, history and chronology 2-78707
 Newton's Principia, Kepler's laws, universal gravitation 2-94970
 Newton's Principia and inverse-square orbits 2-94969
 Newton and the wave theory of light 2-53478
 nuclear and particle physics, Segre's personal history, book contrib. 2-53475
 optical beam phase conjugation by stimulated backscatt. 2-70621
 optical glass integral antireflective surfaces, historical development 2-60202
 optical phase conjugation, historical perspective, nonlinear interactions and appls. 2-70612
 particle physics development, cosmic-ray and quantum field theory role 2-68996
 Periodic Comet Halley, apparitions AD 1986 to 2647 BC 2-106625
 photographic sound recording, early glass discs 2-69279
 physics in Michoacan State, Mexico from 1531 to 1981 2-94972
 Pierre Curie and the role of symmetry in physical laws 2-84429
 radioactivity applications, historical survey (*German*) 2-84431
 radioastronomy, progress, discoveries and prospects after fifty years (*French*) 2-68995
 seismicity of N.Africa, earthquake at Jijeli, Algeria, (1856 August 22) 2-117220
 solar motion, research by Mayer, Herschel and Prevost 2-53476
 Soviet radiobiology 1966-80, review of developments (*Russian*) 2-74190
 spin kinematics prehistory, Darboux's theory 2-112680
 telephony adoption of self-induction, 1886-9 AD 2-112679
 universal gravitation law, discovery 2-94971
 ventilation and ventilators, historical review 2-117135
 X ray research at NBS 1913-1964 2-79338

HIXE see *ion microprobe analysis; X-ray chemical analysis***HMO calculations**

- alkali metal clusters, binding energy, cryst. growth, HMD method 2-115158
 annulenes, with/without bond alternating aromaticity, HMO approx. 2-85558
 1,3-benzodioxole radical cations, hyperfine splitting const., ESR, MO calcs., correl. with reactivity (*German*) 2-102511
 thiophenes, electrophilic bromination, charge density-activation energy correlation, Huckel LCAO calc. 2-54771
 transition metal surfaces, work function, polarisation model, Huckel LCAO MO calc. 2-115858
 Co(II) complex, ⁵⁷N, N'-ethylenebis(acetylacetonatiminato)Co(II) EPR/ENDOR and semiempirical calcs. study 2-116089
 Li, atomic cluster, binding energy 2-108758
 Si, neutral divacancy, EPR spectrum, extended Huckel calc. 2-91957
 Si:H(F), amorphous, dangling bond ESR, effect of H or F, Huckel mol. orbital calc. 2-56933
 SiO₂, E' centres, Huckel calc. of ¹⁷O, ²⁹Si and ¹H hyperfine splitting 2-76975

H₃O⁺ see *hydroxonium ion***hobby computing** see *personal computing***bodoscopes** see *cosmic ray apparatus***hoisting equipment** see *hoists***hoisting machinery** see *hoists***hoists**see also *materials handling*

- flaw detection in mine hoist transportation systems 2-78064

hole mobility see *carrier mobility***hole theory of liquids** see *liquid theory***hole traps**see also *electron traps*

- sec-butyl chloride, γ-irrad., long-range hole transfer, Franck-Condon factors 2-82272
 carrier diffusion and trap controlled drift, non-equilibrium transport regime 2-61427
 9,10-diphenylanthracene, hole mobility, trap controlled 2-71976
 disordered materials with traps, drift and diffusion, quasi-equilib. transport regime 2-61426
 disordered solids, self-trapping of carrier pairs, negative effective correlation energy (*Russian*) 2-82374
 drift and diffusion in materials with traps, transient current and transient time characs. anal. 2-61428
 electrophotographic plate, residual voltage, carrier trapping and release parameters 2-110280

hole traps continued

- insulators, carrier traps characterisation using transient injection currents 2-82365
 insulators, elec. breakdown by one-carrier impact ionisation 2-110768
 many-valley semiconductors, compensated, Auger processes involving bound carriers, theory (*Russian*) 2-115785
 molecular cryst., off-diagonal trapping from deep traps 2-72004
 MOS capacitors, X-ray irradi. effects, deep traps 2-77194
 naphthalene:anthracene crystals, delayed fluorescence, triplet exciton traps effect (*French*) 2-77576
 α -phenazine single crystals, pulsed dye laser induced photocond. 2-104422
 phthalocyanines, EPR study of paramagnetism 2-82697
 poly-1-vinyl-1,2,4-triazole, trapping centres, TSC, thermally stimulated discharge and SCL cond. meas. 2-87298
 α -polyvinylidene fluoride, X-ray induced current transients, carrier traps 2-110338
 semiconductors, thermal filling effects in capacitance expts. on deep levels 2-66481
 thermally stimulated capacitance, differential meas. technique 2-115773
 thermoluminescence isothermal decay, trapping parameters 2-61989
 β -zinc phthalocyanine, bulk trapping states, ohmic and SCL currents meas. 2-98662
 Al-Si₃N₄-SiO₂-Si MNOS struct., charge trapping, oxide thickness effects, capacitance and internal photoelec. effect study 2-98751
 Al₂O₃ anodic films, elec. breakdown characts., 4.2 to 354K 2-110769
 CaF₂ fluoride, thermoluminescence rel. to pretreatment history 2-72566
 n-Cd₂Hg_{1-x}Te, photoconductivity relax. study 2-104426
 CdS, hot wall epitaxial growth, elec. props. 2-93430
 CdS/Cu₂S thin film solar cells, trapped holes depth depend., photocapacitance study 2-93905
 CdS-Cu₂S heterojunction, electron and hole traps, deep level transient spectroscopy 2-115873
 p-CdTe, annealed in various atmospheres, carrier traps, TSC study 2-66478
 CdTe, bipolar photo-Hall effect and photocond. meas., defect model 2-115812
 CdTe, hot wall epitaxial growth, elec. props. 2-93430
 p-CdTe, imperfection anal. by photoHall effect and bipolar photocond. meas. 2-77114
 EuGa₂S₄ semicond., injection and thermoactivation currents, trapping 2-87278
 n-GaAs epitaxial layer on semi-insulating GaAs:Cr, IR irradi., current ionisation due to deep level photoionisation 2-66626
 GaAs LEC semi-insulating crystals, appearance of negative peak in photo-induced transient spectroscopy 2-104312
 GaAs:Ag(Au), LEC grown, DLTS study 2-98572
 GaAs:Cr, Si implanted, thermally annealed, semi-insulating, deep levels 2-76966
 GaP, thin film struct., electron beam irradi., current characteristics meas. 2-56738
 Ge, gamma irradi., defect levels, DLTS study 2-76980
 Ge, gamma-ray induced defects, thermal and electrical stability 2-92033
 Ge, hole capture by charged acceptors 2-115779
 InP:Co, deep levels, elec. and optical meas. 2-76971
 InP:Fe(Cr), semi-insulating, photoinduced current transient spectroscopy 2-92646
 InSb:Si, p-n junction diodes, hole traps, DLTS study 2-110452
 MgAl₂O₄ spinel, γ - and X-irradi., defect trap levels TSC and thermoluminescence study 2-56608
 Se:Cl(K)(Rb), amorphous, carrier generation and EPR studies, dopant effects 2-77083
 Si, Czochralski wafers, effects of crystal defects on deep levels, TEM and DLTS obs. 2-92507
 Si, hole capture by charged acceptors 2-115779
 Si, polycrystalline under optical illum., phenomenological model of grain boundary trapping states 2-92653
 Si:Au, minority carrier capture cross section meas. 2-66569
 Si:Au, n-type Czochralski, capture cross section of donor and acceptor states 2-98665
 Si:B, point defects, negative-U props., expt. study 2-71918
 Si:B, trap levels, DLTS study 2-56472
 Si:H, amorphous, Schottky diode spectral response, gap states effect 2-87753
 Si:H, implanted, radiation defects study by DLTS 2-92522
 Si:H amorphous plasma deposited film, photoluminescence, sub-band gap excitation 2-87856
 Si:H amorphous sputtered thin film, carrier propagation, trapping and mobility 2-87283
 Si:O, electron irradi., carrier removal and recombination by interstitial complexes 2-115781
 Si:Pt, minority carrier capture cross section meas. 2-66569
 Si:Zn, Cr(Fe)(Mn)(V), donor-acceptor complexes, DLTS and TSC meas. (*German*) 2-98579
 Si-SiO₂ electron irradi., carrier fluctuations and trapping, capacitance study 2-115898
 Si-SiO₂ interface, electron irradi., trapped charge sites, XPS study 2-77140
 n-Si-SiO₂ MOS structure, interface minority carrier traps, optical DLTS study 2-77186
 Si-SiO₂ system, photoinjection, carrier trapping 2-77198
 SiO, ion bombardment induced electronic states (*Japanese*) 2-93345
 SiO₂, thermally stimulated hole current 2-104392
 V₂O₅-P₂O₅/Au(Al) (graphite) struct., contact limited conduction, work function effects 2-72056
 Xe crystal, self-trapping of excitons and holes (*Russian*) 2-98552
 p-ZnTe, deep level transient spectroscopy of hole trap 2-115693

hollow cathodes see cathodes**holmium**

- see also nuclei with
 coupled spin system in external field, zero energy mode 2-92548
 EXAFS and chem. shifts meas. 2-99224
 first order phase transition study 2-77262
 magnetic structure of Ho single cryst. containing ^{166m}Ho, low temp. nucl. orientation 2-56984
 magneto-optical reson. and complex refractive index, polarimetric study 2-72466
 muonic X-ray cascade, refilling rates 2-85847
 particles, cryst. struct. and mag. props. 2-77330
 phonon dispersion calc., model with 3-body forces 2-61089
 SXAPS meas. 2-110982

holmium continued

- BaF₂:Ho³⁺ single cryst., fluoresc. and excitation spectra 2-61943
 BaFe₂O₇:Ho, dopant effects on mag. props. 2-92968
 CaWO₄:Ho³⁺, NMR study of EM and sound energy absorpt. (*Russian*) 2-61778
 CsMgI₂:Ho³⁺ thermoluminescence and energy storage 2-99198
 Gd₂Ga₂O₇:Ho³⁺, cascade generation of Ho³⁺ ions, solid laser appl. 2-85975
 Ge:Ho, deep level impurity states, DLTS study 2-56477
 Ho³⁺ doped oxide and fluoride glasses as potential laser materials 2-90903
 Ho:YLF lasers, pump technique comparison 2-96958
 Ho³⁺:LiYF₄, high-efficiency deep-red laser (750 nm), pumped by doubled Nd:YAG laser 2-60087
¹⁶⁵Ho, hyperfine structure meas. in metastable states 2-113903
 Kd(WO₄)₂:Ho³⁺, 2- μ m stimulated emission 2-104915
 KLu(WO₄)₂:Ho³⁺, 2- μ m stimulated emission 2-104915
 KY(WO₄)₂:Ho³⁺, 2- μ m stimulated emission 2-104915
 LaNbO₄:Ho³⁺, 2- μ m stimulated emission 2-104915
 LiYF₄:Ho³⁺, Er³⁺ multireq. and cascade prod. of induced emission, delayed induced afterglow from Ho³⁺ 2-87819
 Lu₂Al₂O₇:Ho³⁺, 2- μ m stimulated emission 2-104915
 YAlO₃:Ho³⁺, 2- μ m stimulated emission 2-104915
 Y₂O₃:Ho³⁺ optical absorpt. and fluoresc. spectra, crystal field anal. 2-72525

holmium alloys

- Ag-Ho, dilute alloys, magnetostriction, free energy calc., single ion Hamiltonian 2-92987
 Ho-Co uniaxial amorphous ferrimagnet, mag. states 2-110608
 Ho-Ni, SXAPS meas. 2-110982
 Ho-Ni-Al, isothermal sections at 800°C, X-ray analysis (*Ukrainian*) 2-77802
 HoAl₂, conduction electron polarisation temp. depend., neutron diffr. study 2-72146
 HoAl₂, quadrupole interaction at ¹¹¹Cd probe 2-116100
 HoCo₂, anomalous hyperfine field and orbital moment 2-56973
 HoCo₂, vol. depend. of first order mag. transition temp. 2-98881
 HoCo₂, magnetisation reorientation, neutron diffr. and Mossbauer study 2-72148
 HoCo₂, magnetic anisotropy 2-72190
 HoCo₂-Fe₂, Laves phase cpds. and their hydrides, mag. behaviour 2-56855
 HoCo₂(Fe_{1-x}), magnetic excitations study 2-110573
 HoCo₂(Ni_{1-x}), mol. moments rapid changes, magnetisation and spin-echo NMR study 2-72167
 HoCu₂, magnetisation, elec. cond., thermopower, paramagnetic-antiferromag. transition 2-77327
 Ho_{1-x}Er_xRh₂B₄, superconductivity and magnetism 2-72098
 Ho₂Fe₁₇, magnetic anisotropy 2-72190
 Ho₂Ga₂Co₂, cryst. struct. study 2-115180
 Ho₂Lu₂Rh₂B₄, superconductivity and mag. props., μ SR meas. 2-72101
 HoMn₂, cubic and hexagonal, site magnetisation, neutron diffr. study 2-72145
 HoNi, magnetisation easy direction, temp. depend., mag. torque study 2-72166
 HoNi₂, mag. excitations, inelastic neutron scatt. study 2-72154
 Ho(Rh_{1-x}Ir_x)₂B₄, mag. struct., superconducting T_c 2-104585
 Ho₅₀Tb₅₀, anomalous AC susceptibility near ferromagnetic to spiral transition 2-98856
 Ho_{1-x}Y_xCo₂, Curie temp., magnetisation and NMR, Co local environment effect 2-116071
 MoAlGa, mag. props. study 2-72141
 Tb-Ho, critical field anomalies and anisotropy 2-98878
 Tb-Ho, paramagnetic, deviations from Curie-Weiss law 2-56825

holmium compounds

see also holmium alloys

- EXAFS and chem. shifts meas. 2-99224
 Al₂O₃-Ho₂O₃-SiO₂, amorphous, EPR, optically detected EPR, and MCD meas., spin glass props. 2-56924
 CaF₂:HoF₃, cryst. growth from melt, laser props. 2-105063
 Er_{1-x}Ho_xRh₂B₄, direct evidence for first order phase transition at lower crit. temp. 2-61639
 HoB₄, mag. struct. and phase diagram, neutron diffr. study 2-72152
 HoCl₃·6H₂O:Gd³⁺, cryst. field parameters, spin Hamiltonians, polarisability tensors 2-87206
 HoCl₃·6H₂O:Gd³⁺, spin-Hamiltonian parameter superposition model anal. 2-98600
 Ho₂Cu₂O₈, cryst. struct. data 2-81757
 Ho_{0.5}Dy_{0.5}FeO₃, magnetoelasticity near mag. transitions (*Russian*) 2-98925
 HoF₃-BaF₂-MnF₂, glass form., quenching, IR study (*French*) 2-91808
 HoFeO₃, Raman scatt. from mag. excitations 2-77528
 Ho₂Ga₂, mag. props., struct., anal. 2-66763
 Ho(GaMn)₂O₄, cryst. struct. 2-60945
 HoI₂, mag. umbrella struct., neutron diffr. study 2-77267
 Ho(TrRh_{1-x})₂B₄, mag. order and supercond. props. 2-82661
 HoMo₂S₂, coexistence of ferromagnetism and superconductivity 2-72105
 HoMo₂S₂ type magnetic superconductors, mag. field effect and supercurrent 2-104529
 HoNbO₄, cryst. struct. refinement 2-103726
 Ho₂, solubility in (Bi₂O₃+V₂O₅)-SiO₂ flux, thermogravimetric obs., applic. to R₂SiO₂ single cryst. growth 2-105059
 Ho₂O₃, cubic, lattice and binding energies 2-60916
 Ho₂O₃, isothermal elec. cond. anomaly 2-92624
 Ho₂O₃-BeO, phase equilibrium study 2-66168
 Ho₂O₃-SiO₂ system, solid state equil. rels. in temp. range 1100-1600°C 2-88070
 (2)Ho₂O₃·(3)SiO₂, lattice constants 2-88070
 HoP, biaxial mag. structs. 2-104580
 HoRhSi, cryst. struct. and mag. props. 2-55946
 HoVO₄, Van Vleck enhanced nucl. antiferromag., collective excitations, effective nucl. Hamiltonian 2-61680
 HoVO₄, Van Vleck paramag., ⁵¹V NMR line shift, temp. depend. meas. 2-116074
 Rb₂NaHoF₆, struct. phase transition study 2-98273
 ZnF₂-BaF₂-HoF₃, spin glasses, AC susceptibility, local anisotropy 2-92876

holographic gratings

- aberration corrected holographic gratings for flat field imaging spectroscopy 2-109026

holographic gratings continued

- blazed holographic grating form. 2-96855
- cascade lens, diff. efficiency, bandpass and spurious beam rejection anal. 2-108831
- corrected concave gratings, stigmatic point construction 2-70522
- dichromated gelatin, absorpt. and refr. index modulations 2-70520
- dichromated gelatin, effective hologram recording with pulsed laser radiation 2-108830
- dichromated gelatin hololens for simplified colour image processing system 2-108796
- fibre-optic high bandwidth multichannel link utilising wavelength multiplexing 2-97186
- holographic optical elements in partially coherent light, behaviour and appls. 2-85913
- imaging systems two- and three-element, chromatic connection 2-70519
- integrated optics, planar holographic lenses, fabrication from shaped Bragg gratings from circular fringe patterns 2-65412
- limiting diffraction efficiency of three-dimensional amplitude holograms 2-55096
- local optical correction system, beam control concept 2-102835
- monochromators, props. using concave holographic diff. grating, collimated illumination 2-60222
- multichannel grazing-incidence spectrometer (SPRED) for plasma impurity diagnosis 2-91663
- nonconventional optical systems and the brightness theorem 2-90799
- null method for measuring diffraction angle 2-70664
- partitioned holographic optical elements, cylindrical lens prod. 2-75542
- phase-volume grating in $\text{Bi}_{12}\text{SiO}_{20}$ photorefr. crystals, collinear Bragg diff. 2-97080
- plane grating production optical schematics 2-70526
- polarised plane EM wave diff. by vector holograms 2-108834
- polarised plane EM wave diffraction by phase holograms in coupled-wave approx. 2-108833
- pulsed laser wavefront correction using hologram components 2-85911
- scanning polychromator with concave diffraction grating 2-109025
- surface diffraction efficiency uniformity improvement 2-75544
- thin-film lasers with two-dimens. periodic structs. 2-96988
- toroidal grazing incidence monochromator for ACO storage ring beam line 2-86081
- transmission grating goniometer elements for synchrotron radiation facilities 2-84771
- two-beam self-diffraction, coupled-wave theory 2-80912
- UV-visible spectrophotometers, holographic gratings and microprocessors appl. (French) 2-64125
- volume gratings, anomalous absorpt., modal approach 2-65191
- volume holographic recordings in $\text{Bi}_{12}\text{SiO}_{20}$, polarisation characts. 2-102751
- volume phase holography, material characts. of bleached photographic emulsions 2-65187
- wave-front converter efficiency 2-85909
- X-ray diffraction gratings for synchrotron radiation spectroscopy, fabrication method 2-101506
- X-ray gratings production using synchrotron radiation 2-84768
- GaAs, submicron grating fabrication by holographic exposure 2-91036
- PLZT ceramic, holographic grating form by electro-optic effect 2-108826

holographic instruments

see also *holography*

- IBM 3687 Supermarket Scanner, holographic deflector disc 2-75539
- IR thin-film recording device, thermooptic method 2-85923
- memory device capacity, influence of aberrations caused by system misalignment 2-55095
- microscope, hologram interferometry, for IC checking 2-114219
- microscope, image plane holography appl. (Chinese) 2-90837
- polariscope, aspherical optical system for rotator 2-65183
- processor for associative information retrieval 2-70524
- real-time phase conjugate window for one-way optical field imaging through a distortion 2-97119
- scan linearity correction technique for laser optical scanning system 2-102746
- thermoplastic film camera for holographic recording of extended objects in industrial applications 2-90835
- thermoplastic recording for holographic camera, real-time interferometry (Japanese) 2-102745
- time multiplexed holographic two-beam scanner 2-85912

holographic interferometry

- 20 years after conception, applicational fields (Czech) 2-55089
- aberrant phase objects, thickness contours, holographic interferometry phase objects, aberrant, thickness contour visualisation, holographic interferometry 2-102743
- aerodynamic flow meas. appl. (French) 2-60042
- air beneath heated horizontal circular plate, convective heat transfer, holographic interferometry meas. 2-97536
- application to electric machine testing (Hungarian) 2-114216
- applied optics, conf., Rochester, NY, USA (May 1982) 2-112647
- automatic temperature mapping system based on holographic interferometry 2-95374
- Benard convection, flow visualisation using holographic interferometry 2-114948
- chlorotrifluoromethane gas/liq. crit. points, holographic interferometry 2-98251
- combined methods of holographic interferometry (Russian) 2-80913
- composite materials, NDT, review 2-62338
- contactless 3-dimens. meas. using holographic-interferometric triangulation (German) 2-55093
- crystal growth, appl. of holographic interferometry, review 2-87699
- deformation measurement problems, refl. holography appl. 2-103118
- deformed state examination, interference optical methods, survey 2-114745
- diffuse object surface displacement vector field meas. (Hungarian) 2-55090
- diffuse surface relief investigation using refl. holograms 2-65189
- digital phase-measurement system for real-time holographic interferometry 2-85916
- displacements, strains, contours and slopes of surfaces determ., holographic moire method 2-86241
- double-exposure holographic interferometry in the Fourier plane 2-114220
- double-sided holographic interferometric technique for surface displacement determ. 2-85910

holographic interferometry continued

- dynamic holographic photoelasticity, synchronisation problems 2-65546
- electron, Aharonov-Bohm effect appl. 2-74262
- electron holographic obs. of mag. fields microscopic distribution 2-101428
- flame, axisymmetric, temp. distrib. meas. by holographic interferometry, refr. effects 2-69170
- Fresnel-type hologram, interferometry (Russian) 2-70529
- fringe interpolation by two-reference-beam holographic interferometry, hologram misalignment sensitivity reduction 2-102750
- gas flow patterns in horizontal epitaxial reactor cells observed by interference holography 2-70907
- heterodyne holographic interferometry, gas mixture conc. and temp. meas. appls. 2-80910
- ICF target characterisation by holographic interferometry 2-85250
- in-plane and out-of-plane motion separation in holographic interferometry 2-55088
- in-plane displacement extraction from sandwich holograms using speckle photography 2-108829
- interference immunity of holographic interferometry 2-60046
- introduction to and appls. of this young science 2-80917
- length measurement, by means of laser (German) 2-95319
- lens centering on an axis of rot. by speckle photography (French) 2-102901
- liquid, laser-produced bubble collapse, shock waves, shadowgrams and holographic interferometric study 2-91521
- liquid mixtures, diffusion coeff., holographic interferometric meas. technique 2-98319
- metrology with $\text{Bi}_{12}\text{SiO}_{20}$ crystals, real-time 2-85914
- microdeformations testing using holographic correction method 2-58784
- microscope, hologram interferometry, for IC checking 2-114219
- moire in real time 2-90838
- nuclear reactor components, sandwich hologram interferometry use for NDT 2-93732
- object point measurement in holographic-interferometric deform. anal., interferometric instead of geometric meas. 2-55094
- perspective corrections for deform. meas. by holographic interferometry 2-96859
- photoelastic holography for stress field visualisation, review of techniques 2-86246
- photoholographic device, interferograms of current sheet with 60-ns interval 2-85921
- plasma, frequency conversion of radiation, holographic interferometry 2-65768
- plate deformation measurement using double exposure holographic interferometry (Chinese) 2-97474
- polariscope, aspherical optical system for rotator 2-65183
- proteins, electrophoretic mobility, holographic interferometric obs. 2-78512
- pulse stress measurement of controlled fusion set by single-beam light holography 2-81298
- real-time double-exposure holographic interferometry in four-wave mixing with photorefr. $\text{Bi}_{12}\text{GeO}_{20}$ cryst. 2-114214
- reassessment of appls. 2-108827
- rotating structure analysis using image derotated hologram interferometry and moire techniques 2-86243
- rotational-shearing interferogram interpretation for testing optical surface nonaxisymm. errors 2-108832
- sandwich holography for painting diagnostics 2-80911
- semiconductor and insulating crystals testing, homogeneity in refractive index meas. methods standardisation 2-96862
- sensitivity, improvement methods (Rumanian) 2-84696
- skin surface vibrations of singer, double-pulse holographic interferometry meas. 2-57882
- speckle interferograms, of displaced and deformed objects, interpretation 2-80919
- speckle interferometry for measuring small rotation 2-94962
- stress analysis by holographic interferometry and strain-gauge technology (German) 2-97481
- stress visualisation using interferometric holography (Spanish) 2-86238
- stress wave and crack propag. problems, holographic interferometry appl. 2-86242
- TEM, appl. to ferromagnetic domain mapping 2-113070
- temperature distribts., holographic interferometry study 2-79660
- thermoplastic recording for holographic camera, real-time interferometry (Japanese) 2-102745
- time average holographic interferometry in Fourier plane for high amplitude vibration analysis 2-114221
- time-dependent phenomena obs. using partial exposure method (German) 2-81303
- transparent media, holographic interferometry using light scatt. by embedded test objects 2-102741
- Twyman-Green holographic interferometer, parabolic mirror testing appls. 2-102742
- tyres, NDT using double exposure laser interferometry, vac. and increased press. (Chinese) 2-96854
- tyres, NDT using holographic interferometry, interferometer and detect. sensitivity (Chinese) 2-96853
- vibration proof holographic interferometer, phase object obs. appls. 2-90841
- vibromotor annular motion converters, holographic interferometry of wave processes 2-58812
- visualization of three-dimensional ultrasonic wave fronts using holographic interferometry 2-81167
- $\text{Bi}_2\text{Se}_3/\text{Cd}(\text{In})$ monocrystals, struct. non-homogeneity visualisation 2-115216
- ^4He , solid, interface with liq. ^4He and ^3He - ^4He solns., equilb. props. 2-115489
- KH_2PO_4 crystal, forced resonance acoustic vibrs. (Russian) 2-103909
- O_2 , thermal conductivity in dissociation region, meas. by holographic interferometry 2-103251

holographic storage

- 20 years after conception, applicational fields (Czech) 2-55089
- hologram memory device capacity, influence of aberrations caused by system misalignment 2-55095
- new class of materials for holography in the infrared 2-75538
- planar waveguide-optical fibre system for holographic memory devices 2-65192
- reassessment of appls. 2-108827
- recording, colour centre conversion intensity depend. 2-90842

holographic storage continued

- Bi_2SiO_5 IR quenching of photocond. and holographic data storage 2-87335
 PLZT electrooptic ceramic one-dimens. controlled transparency utilizing transverse effect, crosstalk 2-55323
 PLZT page composer production for holographic memory (Hungarian) 2-55091

holography

see also *acoustic holography; computer-generated holography; holographic gratings; holographic instruments; holographic interferometry; holographic storage; microwave holography*

- 20 years after conception, applicational fields (Czech) 2-55089
 acoustooptic correlator with an offset recording plane of the holographic filter 2-114408
 amplitude spatial-frequency filters, design, optical and digital holographic methods (Russian) 2-86074
 aspherical surface testing systems, tolerance and optimisation calc. 2-70525
 astigmatic rainbow holography, diff.-limited recording scheme 2-75543
 BEBC, holographic techniques appl. 2-108299
 benzophenone, in PMMA soln., photochemical reaction, holography study 2-83399
 biomedical sciences, optics appls., conf., Graz, Austria (Sept. 1981) 2-107021
 Brownian particle motion, RMS vel., holographic determ. (Russian) 2-75545
 bubble chamber, scanning and measuring high energy interaction holograms 2-108295
 bubble chamber holograms scanning and measuring device 2-108296
 bubble chamber holography, recording arrangement 2-108291
 bubble chambers, holographic imaging technique 2-108292
 bubble chambers, measuring device for holograms 2-108298
 cameras for fast cycling bubble chambers 2-108278
 cascade lens, diff. efficiency, bandpass and spurious beam rejection anal. 2-108831
 cavitation nuclei meas. using optical techniques 2-65621
 CERN rapid-cycling bubble chamber, practical aspects of holography 2-108289
 cinematography, panoramogram photography of outdoor scenes (Russian) 2-69286
 classical and iterative holographic principles, object reconstruction from projections (French) 2-60041
 cloud droplet observation by airborne holographic method 2-83951
 colour hologram pulsed recording, use of higher stimulated Raman scatt. components 2-90981
 colour images, selection of laser emission wavelengths (Russian) 2-80914
 colour reflection hologram recording, diff. efficiency (Russian) 2-60049
 colour-coded character-recognition expt. with wavelength-triplexed refl.-type holographic filters 2-75536
 complex amplitude addition and subtraction by holographic Fourier transform., coherence and misalignment influence 2-65190
 composite hologram recording and reconstruction 2-102753
 computer processing of holograms 2-108839
 cubic nonlinearity medium, efficiency in four-wave interaction, hologram recording 2-86054
 cylindrical ampule contaminant detection using far-field holography 2-102740
 cylindrical Bragg holograms, optical information processing and storage appls. 2-102747
 cylindrical hologram of 360° field of view 2-108823
 cylindrical holographic stereogram, appl. to 3-D dynamic motion anal. of human body 2-105872
 depolarisation influence on brightness of reconstructed image (Russian) 2-70528
 dichromated gelatin, effective hologram recording with pulsed laser radiation 2-108830
 dichromated gelatin hololens for simplified colour-image processing system 2-108796
 diffraction efficiency and approximate bandwidth in thick holograms 2-53459
 diffuse-object holograms in dichromated gelatin 2-114213
 Doppler dynamic hologram, optical phase conjugation, theory 2-85922
 dust, high-velocity, holographic image subtraction using a Pockel's cell 2-96863
 dye saturable absorbers, real time holography through triplet state absorpt. 2-86060
 dynamic, photorefractive materials phase conjugation appl. 2-65312
 dynamic holography methods for wavefront inversion 2-114380
 education and training, experiments evaluating holograms in professional communication 2-63788
 electro-optic cryst., photorefractive effect, holographic study (German) 2-57057
 electron microscopical holography, photographic process nonlinearity effects (German) 2-95555
 electron microscopy, conference, Kyoto, Japan (May 1981) 2-68953
 evanescent wave holograms, polarisation props. 2-65186
 far-field holography, object shape, fringe visibility and resolution 2-75541
 ferroelectrics, optical bistability, hysteresis, four-wave inversion of wavefront 2-81030
 ferromagnetic thin film, micromag. struct., electron holography technique 2-92981
 four-wave mixing and phase conjugation, nonlinear model exact soln. 2-97120
 Fourier holograms, volumetric phase, transparency image regeneration and spatial filtering (Russian) 2-70518
 Fourier transform hologram linear recording using pseudorandom diffuser 2-70516
 freon bubble chamber, holographed charmed candidates 2-108282
 freon bubble chamber, holographic techniques 2-108280
 Fresnel-type hologram, interferometry (Russian) 2-70529
 gated holograms recording using two-photon photochemistry 2-60037
 gelatin, dichromated film, optical characs. during holographic recording, latent image stage (Russian) 2-102754
 H rapid-cycling bubble chamber HOLEBC, holographic instrumentation 2-108283
 HOBC, heavy liq. holographic bubble chamber 2-108279
 HOLBEC, bubble chamber with classical optics 2-108285
 HOLEBC, rapid cycling bubble chamber, holography 2-108284
 HOLEBC and RCBC, future program of charm physics with EHS appls. 2-108286

holography continued

- HOLMES project for scanning and measuring HOBC bubble chamber holograms 2-108297
 holocinematography, high speed, with multiply cavity-dumped Ar ion laser 2-96860
 holocinematography, high-speed with acoustooptic light deflection 2-70523
 image analysis system, for holographic droplet spectra (Chinese) 2-70517
 image deformation in space 2-60038
 image formation of objects inside a chamber 2-90840
 image plane holograms with scatt. props., reconstruction, Fourier filtering 2-102748
 image plane holography appl. in holographic microscope (Chinese) 2-90837
 image recorded through scatt. layer in partially coherent light, contrast enhancement 2-114218
 image restoration using an unconstrained single deblurring filter 2-108828
 image subtraction, real-time, in four-wave mixing with photorefr. Bi_2GeO_5 cryst. 2-102752
 image-deblurring filter 2-65340
 imaging systems two- and three-element, chromatic connection 2-70519
 imaging with quadratic detect., filtering props. 2-65188
 in-line holography with interference filters as Fourier processors 2-85915
 inverse filters, holographically realised, for image processing 2-65181
 inverse source problem and holography 2-60040
 laser with dynamic holographic intracavity distortion correction 2-97004
 lenses, aberration-free, efficient, design in presence of construction-reconstruction wavelength shift 2-60039
 lenses, on-axis, higher diff. orders 2-114395
 lenses, planar, for integrated optics, fabrication from shaped Bragg gratings from circular fringe patterns 2-65412
 limiting diffraction efficiency of three-dimensional amplitude holograms 2-55096
 long wavelength holograms, optical reconstruction using optimal reference wave 2-70521
 long-wave hologram image reconstruction by max. entropy method 2-96864
 low-gravity environment, interferometry and holography, materials processing in space expts. 2-70515
 maps, hologram synthesis from 2-D transparencies 2-114211
 matched-filter correlator, real-time, screen-aided, multiple-image storage appls. 2-114215
 matching spatial filtering using a reflection-type volume hologram 2-102906
 medium nonlinearity effect, Kozma model modification 2-75537
 memories, random phase mask efficiency 2-85920
 metal, strain meas. by optical correlation method 2-105393
 microscopic equipment, methods, appls. and related topics, list of publications 2-53449
 multiplex hologram image blur 2-85917
 multiplex hologram representations of space-variant optical systems using ground-glass encoded reference beams 2-65182
 multiplex holography, random phase diffusers, correl. props. 2-65338
 Nd:YAG laser for holography 2-108931
 new class of materials for holography in the infrared 2-75538
 off-axis image field holograms, object phase, simple reconstruction device for interferometric detection 2-114223
 optical elements in partially coherent light, behaviour and appls. 2-85913
 optical iteration method for solving Fredholm integral eqns. of the first kind 2-80918
 organic dye rigid solns. for transient optical recording, photochromic props. 2-80916
 parameter extraction by holographic filtering 2-90818
 particle detection techniques, bubble chamber holography 2-70065
 particles, semitransparent, spherical, illum. with coherent light, holographic imaging 2-102739
 phase conjugation and Strehl ratio, deformable mirror adaptive optic systems 2-108824
 photoelastic holography for stress field visualisation, review of techniques 2-86246
 photonics and holography 2-108836
 photonics applied to nucl. physics workshop, Strasbourg, France, Nov. 1981 2-107018
 phototropic valves, opening by standing light wave 2-75637
 photovoltaic const. determination by holography technique 2-110392
 plane holograms, diff. efficiency calcs. for speckle-inhomogeneous object field 2-55097
 polarised plane EM wave diff. by vector holograms 2-108834
 polarised plane EM wave diffraction by phase holograms in coupled-wave approx. 2-108833
 power density meter for holography 2-95434
 pulsed laser wavefront correction using hologram components 2-85911
 rainbow holograms, space frequency bandwidth (Chinese) 2-96852
 rapid cycling bubble chamber, holographic method tests 2-108290
 rapid-cycling bubble chamber, Scotchlite holography test 2-108281
 reassessment of appls. 2-108827
 recognition system modelling 2-70527
 recording, colour centre conversion intensity depend. 2-90842
 ruby laser, double pulse Q-switched TEM₀₀, for holography, SHG in KD_2PO_4 2-114337
 sinusoidal object differentiation using holographic filter 2-108807
 solar concentrator, hologram design 2-111538
 solar energy concentrators, holocentrators development 2-111540
 spatial image transmission by holographic modulation (Russian) 2-80909
 spectral characs. meas. in holographic recording (Bulgarian) 2-96856
 stimulated scattering, phase conjugation and image reconstruction, holographic model 2-90991
 streamer chamber, holographic recording appl. 2-108300
 streamer chambers, particle tracks holography through high density wire grids 2-70043
 synthetic hologram recording using a numerically controlled optical recorder (Czech) 2-96861
 thermoplastic film camera for holographic recording 2-108838
 thin rhombic plate, flexural stiffness determ., optical holography meas. 2-55521
 three-dimensional pattern, intensity wave imaging props., mode theory 2-65194
 transverse and longit. resolution, nucl. instrumentation appls. 2-108837
 turbulent medium effect on quality of holographic vision 2-90845
 two-beam self-diffraction, coupled-wave theory 2-80912

holography continued

- two-photon holographic recording with CW lasers in 750-1100 nm range 2-60045
- unbleached reflection holograms, chars. 2-65185
- unitary transform realisation, holographic method for obtaining single mask (*Chinese*) 2-108825
- vector ray tracing computer anal. of holographic systems, comment and reply 2-60036
- velocity vector, optimisation of parameters of instrument for meas. tangential components 2-60047
- volume, theoretical research at Oxford, review 2-85924
- volume holograms, filtering props. 2-102744
- volume holograms, Raman-Nath diff. corrections 2-102749
- volume holographic cylindrical lens for plane to cylindrical wave conversion, two dims. soln. 2-55092
- volume holographic high sensitivity recording using dichromated gelatin 2-90843
- volume holographic high sensitivity recording using dichromated gelatin 2-90844
- volume holographic recordings in $\text{Bi}_{12}\text{SiO}_{20}$, polarisation chars. 2-102751
- wave-front converter efficiency 2-85909
- white-light reconstruction holography improved with astigmatism (*Chinese*) 2-65184
- Ag halide photographic material, wavefront phase modulation in bleached holographic emulsion 2-85918
- $\text{Bi}_{12}\text{GeO}_{20}$, four-wave mixing, phase conjugate wavefront generation, refl. hologram 2-60174
- $\text{Bi}_{12}\text{GeO}_{20}$ photorefractive crystals, phase-conjugate wavefront reflectivity, spatial-freq. depend. 2-90992
- $\text{Bi}_{12}\text{GeO}_{20}$, transient energy transfer between writing beams during hologram form. 2-60043
- HeNe laser, hologram recording 2-96857
- $\text{KNbO}_3:\text{Fe}^{2+}$, vol. phase hologram form., coherent light amplification, optical phase conjugation 2-65311
- N_2 laser design for holographic and interferometric appls. 2-114315
- PLTZ ferroelec. ceramic, laser beam amplification by dynamic holography 2-108835
- $\text{Sr}_{1-x}\text{Ba}_x\text{Nb}_2\text{O}_6$, use in amplifying CW phase conjugate mirror 2-75632
- $(\text{Sr},\text{Ba})_{1-x}(\text{Y},\text{Nb})_x\text{O}_6$, cerium-doped, as holographic recording medium (*Russian*) 2-60035

homopolar generators

- railgun energy stores and systems 2-96333
- shockwave, disc-type, with gas-pressure supported rotor for pulse power supply systems 2-64642
- shockwave, for power supply to thermonuclear installations 2-64641

homopolymers *see polymers***hopping conduction**

- AC conductivity below threshold, random walks on bond percolation clusters 2-87212
- activation energies from conductivity-temperature measurements 2-56581
- amorphous semiconductors, AC conductivity, freq. depend. loss, review 2-115747
- chalcogenide glasses, AC conduction, temp. depend. 2-98649
- chalcogenide glasses, elec. transport props. 2-72345
- commensurate one-dimensional conductor, interchain electron hopping influence 2-66539
- correlation functions of particles hopping on a chain 2-82330
- disordered 1-D chain, hopping cond. between localised centres, metal-insulator transition 2-77009
- disordered 1-D chain, low freq. hopping cond., coherent medium approx., master eqn. 2-77010
- disordered media, macroscopic props., conf., New York, USA (June '81) 2-94915
- disordered semiconductors, strong-field hopping cond., directed percolation theory 2-77073
- disordered solids, hopping transport, diffusion temp. depend. 2-82355
- disordered systems, hopping cond., current relax., effective medium method 2-82344
- disordered systems, low freq., cond. due to variable range hopping, expt. vs. theory 2-66557
- dispersive hopping transport with spatial disorder, Monte Carlo simulation 2-66515
- hopping Hall mobility; percolation theory 2-104333
- insulating materials hopping conduction, Poole-Frenkel effect, carrier mobility 2-71991
- insulators, numerical anal. of electronic conduction using hopping model 2-110340
- inversion layers, hopping cond. in two-dimensional impurity band 2-104464
- ionic transient space-charge distribution, numerical anal. by hopping model 2-110027
- isotropic heterogeneous system, conductivity, mathematical simulation 2-107265
- layer cryst., open Fermi surface, electron hopping, nonmonotonic polarisation near Lifshitz transition 2-82343
- lead phthalocyanine, thin film, one-dimensional elec. cond. and dynamic switching obs. 2-72086
- microscopic hopping and continuum diffusion in vicinity of a defect 2-71696
- mixed valence compounds, local density of states, real space renormalisation of Anderson chain, alloy approx. 2-66414
- molecular cryst., excitons and carriers, band and hopping diffusion, electron-phonon coupling effects 2-56572
- nonresonance subbarrier tunnelling, hopping cond. (*Russian*) 2-104329
- one-dimensional bond-percolation model, AC hopping cond., effect of periodic boundary conditions 2-61430
- one-dimensional disordered system, electron localisation and hopping cond., review 2-98594
- one-dimensional disordered systems, diffusion model response functions 2-79510
- one-dimensional percolation model, AC cond., effect of periodic boundary conditions 2-61429
- one-dimensional percolation model, hopping transport 2-61431
- one-dimensional random chains, hopping cond. 2-82736
- perylene-chloranil complex, dielec. props., hopping cond. 2-72417
- phonon assisted hopping, generalised master eqn. approach 2-92602
- trans-polyacetylene: 1, film, elect. cond. and IR absorpt. 2-71969
- polyacetylene: Br, amorphous film, elec. and optical props. 2-110511

hopping conduction continued

- polyacetylene, doped, elec. cond. mechanism, IR absorption and reflection spectra study 2-77520
- polyacetylene, I doped, three-dimens. variable range hopping obs. 2-92620
- polyacetylene, lightly doped, electron hopping in soliton band 2-82361
- polyacrylonitrile, electropolymerised film, photoemission and meta-emission spectrosc. 2-93380
- polyacrylonitrile film, pyrolyzed, elec. cond., IR spectra study 2-77219
- polyethylene film, numerical anal. of SCL cond. with consideration of diffusion and elec. field at electrode 2-110358
- quasi-one-dimensional disordered systems, absence of statistical fluctuations 2-61432
- random one-dimensional hopping systems, quasi-localisation effects 2-87234
- random one-dimensional systems, correlation effect on low-freq. behavior 2-58755
- random systems, wave propag. and transport problems, hopping cond. 2-66520
- randomly disordered systems, elec. cond., CPA study for various percolation models 2-56539
- rare earth tungstates, mixed cond. 2-72035
- semiconductor, direct current, effective medium theory 2-82360
- semiconductor, hopping conduction in an arbitrary magnetic field 2-92665
- semiconductors, correlation effects on hopping cond. and magnetoresistance 2-87265
- semiconductors, doped, impurity states, conc.-fluctuation model 2-110293
- semiconductors, hopping cond., resistance network model, Monte Carlo calc. (*Russian*) 2-82347
- TCNQ salt, polyvinylcarbazole-TCNQ charge transfer complex, AC cond. meas. 2-115737
- TTF-TCNQ thin film, one-dimensional elec. cond. and dynamic switching obs. 2-72086
- $50\text{P}_2\text{O}_5 + \text{FeO}_{40-x} + (\text{V}_2\text{O}_5)_x$, phosphate glass, XANES study of V 2-87904
- AgCrS_3 , 2-D superionic conductor, hopping cond., Green function calc. 2-115449
- AgHgl_4 solid electrolyte, attempt freq. for ion hopping, Raman spectra 2-116176
- $\beta\text{-AgI}$, phonon spectra, hopping kinetics, IR spectra study 2-76616
- AgTiSe_2 , semicond., solid and liq. states, dielec. relax. and AC cond. 2-110754
- Al-AlN-Al, ion plated thin film capacitor, dielec. and AC cond. props., annealing effects 2-61825
- $\text{Al}_2\text{O}_3/\text{Al}$, variable range hopping conductivity 2-66546
- $\text{Al}(\text{OH})_3$ layers in Al electrolytic capacitors, dielectric props. and elec. cond. meas. 2-104809
- C amorphous, thin layers, 2D-, 3D hopping conduction (*French*) 2-92604
- C film, hopping conduction, graphical data interpretation 2-82497
- $2\text{CaO} \cdot \text{K}_2\text{O} \cdot \text{Fe}_2\text{O}_3 \cdot (5-x)\text{P}_2\text{O}_5$ glass, elec. cond., temp. depend. anomaly 2-56580
- CaV_2O_7 , H, Fermi glass, ESR, elec. and mag. meas. 2-72352
- CuFe_2O_4 ferrite, elec. cond. mechanism, phase transformation, heat treatment effects 2-71981
- Cu_2Hgl_4 solid electrolyte, attempt. freq. for ion hopping, Raman spectra 2-116176
- FeF_3 film, elec. cond. meas., charge transfer between localised states mechanism 2-82503
- $\text{FeO} \cdot \text{V}_2\text{O}_5 \cdot \text{P}_2\text{O}_5$ glasses, internal friction and elec. cond., interpret. w.r.t. valency state of V ions 2-92606
- GaAs, electron irradi., elec. props. and defect annealing 2-104379
- Ge amorphous film, elec. cond., hopping model, electron-phonon coupling 2-77054
- p-Ge, negative magnetoresistance obs. (*Russian*) 2-56617
- Ge: Au, hopping cond. after γ -ray neutron, and electron irradi. 2-115758
- Ge: Cl, amorphous, ion implanted, gap-states, elec. cond. study 2-76987
- Ge: H amorphous film, AC losses and elec. cond., polarons 2-77055
- n-Ge: Sb, compensated by fast neutron irradi., activated elec. cond. 2-115762
- $\text{Ge}_{1-x}\text{Te}_x\text{S}_2\text{Sb}_2$ glass, hopping cond. at low temp., Ge effects 2-61460
- n-InSb, hopping cond. below 1K in mag. field 2-98673
- $\text{LaIr}_2\text{O}_{11}$, semicond., elec. and paramag. props., Mossbauer resonance (*French*) 2-92614
- N_2 , liquefied, hopping transport mech. of excess electrons, optical studies 2-104447
- NiF_2 film, elec. cond. meas., charge transfer between localised states mechanism 2-82503
- NiF_2 film, granular, elec. cond. and dielec. polarisation meas. 2-72094
- NiO , spin dependent charge carrier transport, 150 to 400°C 2-87269
- Si, amorphous, hopping cond., ion implantation 2-56592
- Si, amorphous, ion irradi., hopping cond., prep. condition effects 2-92605
- Si, inversion layers, logarithmic and power law corrections 2-72064
- Si: B, electron irradi., B interstitial, capacitance bridge meas. 2-56034
- Si: H, amorphous film, magnetoresistance study 2-92790
- Si: N, amorphous CVD film, elec. cond., field effect and gap state density meas. 2-87193
- p-Si-CdSe junction, sputter deposited, elec. props. 2-98736
- Si-Ge-B amorphous film, glow discharge deposited, elec. cond., optical absorpt. and EPR study 2-71965
- a-SiC: H films, elec. cond., 130 to 350K, hydrogenation effect 2-71986
- $(\text{Si}_{1-x}\text{Fe}_x)_2(\text{Fe}_{1-x}\text{Fe}_x)_2\text{O}_6(\text{OH})_2$, cronstedite, thermally-activated charge transfer, electron hopping, Mossbauer spectra 2-66561
- SrTeO_3 , ferroelec., elec. cond., freq. and temp. depend. meas. (*Russian*) 2-77066
- $\text{TlGaS}_2(\text{Se}_2)$, layer semicond., hopping cond., freq. compensation effect 2-104381
- $\text{TlInS}_2(\text{Se}_2)$, layer semicond., hopping cond., freq. compensation effect 2-104381
- $\text{V}_2\text{O}_5 \cdot \text{B}_2\text{O}_3 \cdot \text{P}_2\text{O}_5$ glasses, electronic cond. and dielec. relax. rel. to struct. 2-61471
- $\text{ZnS} \cdot \text{Mn}, \text{Cu}, \text{Cl}$ DC electrolum. films, field enhanced changes in comp. and struct. 2-116263
- $\text{ZnS} \cdot \text{Mn}, \text{Cu}, \text{Cl}$, amorphous and cryst. electrolum. film, elec. cond. props. meas. 2-87429
- ZnSe, mag. and elec. props., effect of disorder 2-82356

- horology** see *time measurement*
- hospital administration** see *medical administrative data processing*
- hot carrier conduction** see *hot carriers*
- hot carriers**
- p-benzoquinone complexes, H bonding, thermal electron transfer investig. 2-77072
- chlorobenzoquinone complexes, H bonding, thermal electron transfer investig. 2-77072
- degenerate semiconductor, hot electron inelastic scatt. by opt. phonons, Fermi surface shape, theoretical anal. (Russian) 2-61477
- electron transport theory, intracollisional field effect, gauge treatment 2-58752
- III-V semiconductors, microwave irradiat., hot carrier mobility, phonon accumulation effects 2-66566
- junction effects, nonequilibrium, boundary conditions for charge and heat transfer eqns. (Russian) 2-61563
- many valley semicond., non-equilibrium electrons, natural oscils. and current, elec. field depend. 2-61475
- many-valley semiconductor, conductivity, phonon inequilibrium effect in an EM heating field 2-82342
- metal, hot electron inelastic scatt. by opt. phonons, Fermi surface shape, theoretical anal. (Russian) 2-61477
- metal, transient Nernst-Ettingshausen effect of hot electrons (Russian) 2-115732
- multilayer heterojunctions, carrier conc. and mobility, calc. from Hall effect and hot electron data 2-56678
- one-dimensional semiconductors, electron mobility, hot electron effects, and polarons 2-92611
- p-n junction, elec. oscill. generation due to hot carrier injection 2-115880
- p-n junction, thermo-EMF appearance due to carrier heating by unidirectional elec. field 2-77175
- p-n junctions, thermoelec. EMF of hot carriers, lattice heating effects, theoretical anal. 2-61581
- semiconductor, compensated, impedance and photoresponse characts. under carrier heating conditions 2-77117
- semiconductor, heavily doped, energy loss process for nonequilibrium hot carriers 2-92641
- semiconductor, hot electrons, lowest Landau level, distrib. functions, I-V characts. and neg. differential conductance 2-61476
- semiconductor, intra-collisional field effect, analytic results 2-110360
- semiconductor, Kane, strong EM wave propag. under electron and phonon heating 2-82368
- semiconductor, magnetoresistance, size effect under conditions of mutual drag of heated electrons and phonons 2-61493
- semiconductor, nonequilibrium current carrier spectrum, relationship to carrier temp. after pulse photoexcitation 2-66590
- semiconductor, streaming motion and population inversion of hot carriers, crossed elec. and mag. fields 2-98668
- semiconductor buried heterostructure, lasers, optically pumped, picosecond carrier dynamics meas. 2-90884
- semiconductor mesostructure dielectrics 2-61473
- semiconductor runaway electrons, heating and cooling, effect of inelastic scatt. on mobility (Russian) 2-82346
- semiconductor superlattice formation by standing laser wave and const. elec. field (Russian) 2-105010
- semiconductors, cubic, hot electron scatt. by neutral acceptors, energy and momentum relaxation time calc. 2-82370
- semiconductors, fluctuation instability in case of negative differential cond. 2-87290
- semiconductors, galvanomagnetic and thermomagnetic phenomena in strong mag. field, hot electron-phonon mutual drag effects (Russian) 2-77101
- semiconductors, hot carrier galvanomag. effects in high mag. fields, Boltzmann eqn. calc. 2-110371
- semiconductors, hot carrier noise 2-87352
- semiconductors, hot electrons, self scatt., Monte Carlo simulation 2-56603
- semiconductors, microwave cond., velocity autocovariance and hot carrier noise calcs. 2-104404
- semiconductors, polar, hot carrier energy loss, electron-hole plasma screening 2-110357
- solar energy convertor, hot carrier, Carnot efficiency 2-83475
- static drift domain, fluctuation instability conditions (Russian) 2-104389
- two-dimensional systems, electronic props., conf., New London, NH, USA (Aug. 1981) 2-58536
- wave excitation by inhomogeneous EM wave, linear approx. (Russian) 2-61478
- Ar, liquid and solid, electron dynamics meas. (Russian) 2-71993
- Ar, solid and liquid, hot electron thermalisation following subnanosec. pulse irradiat. 2-72015
- Bi, magnetoplasma wave cross-modulation (Russian) 2-56627
- CdCr₂Se₄, hot carrier influence on Raman spectra (Russian) 2-72498
- GaAs, bulk, main electron trap, effect of elec. field and current injection 2-72009
- e-GaAs, hot carrier, picosecond absorpt. spectroscopy 2-92640
- n-GaAs, hot electrons, inertial props., Monte Carlo calc. 2-56628
- GaAs, hot photoexcited electrons, theoretical study 2-82367
- GaAs, hot photogenerated carriers, slow picosecond kinetics 2-61517
- GaAs hot-electron diffusion const., Monte Carlo calc. 2-98656
- GaAs, hot-electron plasma, excitation of electrostatic oscillations, calc. 2-66580
- n-GaAs, magnetoresist. of hot electrons at 77K 2-61495
- GaAs, microwave freq. noise, electron heating conditions 2-104446
- GaAs:Zn, cd, hot photoluminescence spectrum and polarisation 2-82894
- GaAs-Al_{1-x}Ga_xAs modulation doped heterostruct., 2D electron gas transport props. meas. 2-98739
- GaAs-Al_{1-x}Ga_xAs heterostructure, cyclotron and plasmon emission from two-dimens. electrons 2-61770
- p-GaP-electrolyte junctions, hot electron injection, Mott Schottky plots 2-92744
- p-Ge, distrib. function and negative differential cond. calcs. at heavy hole cyclotron reson. 2-115797
- Ge, electron heating time in HF field, effect on diffusion 2-87291
- Ge, electron-hole drop evaporation by laser heating (Russian) 2-104256
- Ge, electron-hole drop kinetics and decay in microwave field, hot carriers 2-92480
- Ge, hot hole cyclotron resonance (Russian) 2-82720
- Ge, hot plasma generation by intense 2.7 μ m laser pulse interaction 2-66582
- Ge, laser pulse interaction, 2.7 μ m 2-77627
- hot carriers continued**
- Ge, long wavelength IR radiation generation by hot holes (Russian) 2-82857
- n-Ge, many-valley semicond., hot electrons in quantising mag. field 2-56622
- Ge, streaming, gauss-ampere characts. of dissipative current 2-115769
- Ge_{1-x}Si_x, carrier heating by elec. field, effect of electron irradiat. 2-77076
- HgCr₂Se₄, hot carrier influence on Raman spectra (Russian) 2-72498
- p-In_{0.53}Ga_{0.47}As, hot-carrier relax. 2-57141
- In_{0.53}Ga_{0.47}As-InP photoconductive detector, pulse dispersion and preheating effects 2-115765
- InGaAsP-InP BH laser, 1.3 μ m, hole-burning at high energy tails in spontaneous emission spectra 2-75569
- InP, hot-electron diffusion const., Monte Carlo calc. 2-98656
- InSb:Cr, hot electron thermo-EMF 2-104402
- Kr, solid and liquid, hot electron thermalisation following subnanosec. pulse irradiat. 2-72015
- PbTe, frozen cond. study (Russian) 2-56739
- Si, carrier and lattice temps. induced by picosecond laser pulses 2-67155
- Si, electron heating time in HF field, effect on diffusion 2-87291
- n-Si, hot electron 1/f noise 2-72040
- Si, hot hole diffusion and mobility, thermal noise and cond. meas. 2-56604
- Si, microwave cond., velocity autocovariance and hot carrier noise calcs. 2-104404
- Si, monolithic hot electron structures, current transport meas. 2-82371
- Si:H, amorphous solar cells, hot carrier effects on collection efficiency 2-67852
- Si-SiO₂, MOSFET inversion layer, energy loss of warm electrons, Shubnikov-de Haas study 2-56703
- Si-SiO₂, interface, slow and fast states induced by hot electrons, expt. study 2-87395
- Si-SiO₂, interfaces, electron trapping, injection mode dependent phenomena 2-66655
- Si-SiO₂, MOS inversion layer high field electron vel., time of flight technique 2-56704
- SiO₂, electron mobility, hot electrons electronic breakdown, Monte Carlo study 2-61474
- Xe, liquid and solid, electron dynamics meas. (Russian) 2-71993
- hot cathode tubes** see *thermionic tubes*
- hot cathodes** see *thermionic cathodes*
- hot electrons** see *hot carriers*
- hot pressing**
- alkali metal niobates, prep. using glass-ceramic methods 2-67279
- ceramic material, type MT-60, hot forming (Russian) 2-62092
- ceria-yttria high-density ceramics, preparation 2-88036
- fibre reinforced metal matrix composites, hot pressing pressure calc. 2-72656
- luminescent materials, prep. by recrystallisation pressing 2-83054
- metallic glass-metal matrix composite, fabrication feasibility using vac. hot pressing 2-99372
- α -Sialon, stability at high temps. 2-83145
- spherical powders, densification, influence of increasing particle coordination 2-116398
- steel, austenitic stainless, powder, hot ductility effect of Pb and Bi 2-88129
- steel, high speed, prods. produced by powder metallurgy 2-77776
- steel stainless, dense powder metallurgical, prod. methods and mech. props. 2-99371
- superalloys, hot isostatic pressing 2-83061
- turbine blades life extension, mechanical and metallurgical aspects 2-99369
- Al alloy, isothermal pressing, automated control, adaptive system (Russian) 2-72720
- AlN polycryst. ceramic formation, mech. props. (Japanese) 2-88044
- AlN:Cr, sintered, dielec. losses, lattice defect types (French) 2-77448
- Al₂O₃, hot pressed, fracture stress reflecting spots 2-88172
- β Al₂O₃-Na₂O, densification kinetics 2-62095
- B fibre reinforced Al, fracture and strength characts., chemical action effect (Russian) 2-72795
- B fibre reinforced Al alloy, hot pressing pressure calc. 2-72656
- B fibre reinforced Al and Al-Cu-Mg-Mn, hot pressing, reaction between fibres and matrix 2-83068
- B₂C, hot pressed, mech. props., effect of porosity and grain size 2-116543
- B₂O₃-SiO₂ glass prep. by hot pressing of gels 2-76309
- BaAl₂Ti₆O₁₆-CaTiO₃-CaZrTi₂O₇ ceramic, devel. and testing as high level nuclear waste form 2-107956
- BaTiO₃, hot pressed ceramics, internal stresses, Curie temp. 2-88017
- Fe-Cr-Al alloy, wrought, prep. and characts. 2-67249
- K(Nb,Ta)O₃, ceramic, solid solutions, temp., conc. and freq. depend. of dielectric constant 2-111124
- KNbO₃, hot pressed ceramics, internal stresses, Curie temp. 2-88017
- KNbO₃, polycryst., prep. using glass-ceramic methods 2-67279
- La₂O₃-Si₃N₄ accretive recrystallisation 2-77785
- Mo powder, fine, sintering 2-116413
- (Na,Li)NbO₃, hot pressed ceramics, internal stresses, Curie temp. 2-88017
- Nb-Hf-Ti (10, 1 wt.%), hot isostatically pressed powder compact, creep 2-116504
- Ni alloy, granular heat resistant, struct. form. 2-105175
- Ni-Cr-Co, Mar M002, cast superalloy, creep and fracture, effect of hot isostatic pressing 2-88184
- Ni_{1-x}Al_x sintered, grain growth, influence of O₂ partial press. 2-116476
- PLZT-Pb(Zn_{1/3}Nb_{2/3})O₃ piezoelec. ceramics, electromech. props. 2-87696
- Pb_{1-x}(La_{0.5}Li_{0.5})(Zr_{0.7}Ti_{0.3})O₃ transparent ceramic, SHG excited by Q-switched Nd³⁺ glass laser 2-81024
- Pb(Zr,Ti)O₃ composition piezoelectric ceramic preparation and props. 2-88030
- Pb(Zr,Ti)O₃ piezoelectric ceramics fabrication by explosion compression molding 2-99381
- Pb(Zr_{1/3}Nb_{2/3})O₃-Pb(Sn_{1/3}Nb_{2/3})O₃-PbTiO₃-PbZrO₃ hot pressed ceramics, piezoelec. props. 2-87695
- β -Si-Al-O-N ceramics, translucent, effect of impurities and hot pressing temp. 2-57495
- Si_{6-x}Al_{3-x}O_{8-x}N_{8-x}, hot-pressed β -sialon, fracture strength and Weibull distrib. 2-93631
- SiC:Al, sintered and hot pressed, grain boundary segregation, STEM study 2-111180

hot pressing continued

- SiC-AlN solid solutions, hot pressed, comp. and props. 2-88037
 Si₃N₄ ceramic, prep., props. and appls., book contrib. 2-116420
 Si₃N₄, densification by high pressure hot-pressing 2-93477
 Si₃N₄, fabrication by hot isostatic pressing 2-83070
 Si₃N₄, hot pressed, acoustic charact. of mech. props. (*Japanese*) 2-67511
 Si₃N₄, hot pressed, grooved by single-point grinding, residual stresses 2-57455
 Si₃N₄, hot pressed, intergranular phase, refinement of elemental composition 2-111158
 Si₃N₄, hot-pressed, mech. and dielec. props. 2-67268
 Si₃N₄, hot-pressed at high press., temp. depend. of stress intensity factor 2-83212
 Si₃N₄, oxidised, hot pressed, microstruct. and subcritical crack growth 2-116530
 Si₃N₄, SiC, hot pressed or reaction-bonded, effect of laser radiation 2-83174
 Si₃N₄, sintered, hot isostatic pressing, effect on mech. props. (*Japanese*) 2-67266
 Si₃N₄-MgO (1 and 5 wt.%), hot pressed, passive and active oxidation 2-111340
 Ti-Al-Sn-Zr-Mo prealloyed spherical powders, consolidation 2-77777
 TiN, fabrication by hot isostatic pressing 2-83075
 TiN-Al₂O₃ composites, hot pressed, props. rel. to TiN conc. 2-72753
 UO₂, densification, fission-induced 2-76508
 UO₂, fuel pellets, low-density, fabrication tests 2-93479
 W powder, fine, sintering 2-116413
 WC-Co VK6 hard metal, optimum conditions for hot pressing, characts. 2-67247
 WC-TiC-TaC binderless cemented carbides, effect of hot isostatic pressing 2-111120
 WSe₂ photoelectrodes, polycryst., photoelectrochem. cell appls. 2-57716
 WSi₄ compounds, chem. bonding, XPES and X-ray emission study 2-91862
 Y₂O₃S, accretive recrystallisation 2-77785

hot rolling

- steel, A572, hot rolled, const. and variable amplitude fatigue and fracture at 25 and -45°C 2-93597
 steel, austenitic, rolling in anomalous-plasticity temp. range 2-99464
 steel, C, plates rolled from continuously cast slabs and mold cast ingots, corrosion 2-77986
 steel, high strength, intercritically rolled, dynamic mech. props. 2-88113
 steel, hot rolled, fatigue crack prop. beyond general yield 2-116554
 steel, hot rolling theories, statistical evaluation 2-105205
 steel, low alloy, mech. props., struct. and failure, influence of controlled rolling 2-72831
 steel, low alloy, rheological props. of ShKh15 2-72778
 steel, low alloy, struct. after controlled rolling, effect of austenitising temp. 2-72744
 steel, low alloy, struct. and props. after rolling, rel. to austenite transform. kinetics 2-72745
 steel, low C, sheets, microstruct. and recryst., influence of second phase particles (*French*) 2-93534
 steel, low C sheets, Mn and N effect on recrystallisation texture (*Japanese*) 2-105181
 steel, low-pearlite, rolling regime influence on strength and toughness props. 2-99545
 steel, low-pearlite with Nb and V, strengthening phase precip. during hot deform. 2-62133
 steel, Mn-Nb-V, low-pearlite, struct. and mech. props. after controlled rolling 2-57385
 steel, Ni-Co-Mo-(W)-Ti, maraging, props. after high-temp. treatment 2-67395
 steel, temper rolling metallurgical and mech. phenomena (*French*) 2-93545
 steel, V, hot deformed, isothermal austenite-ferrite transform, TEM study 2-111172
 steel types 1018, 1020, thermo-plastic shear instability 2-72757
 steel U8 and automatic steel A40G, struct. superplasticity w.r.t. treatment conditions 2-57426
 Al, roll coatings formed during hot rolling with different material rolls 2-111385
 Al-Al₃Ni, chill-cast, directionally solidified, effect of hot-rolling 2-83141
 Cd-Ag, warm deform. and texture strengthening 2-111199
 Cu-Al (10.1 wt.%), bronze, cast, characterisation using X-ray diffr. and microscopy (*French*) 2-88104
 Ti alloy VT3-1, fracture toughness, struct. and hot rolling temp. influence 2-105324
 Ti-Al-Sn-Zr-Mo prealloyed spherical powders, consolidation 2-77777

hot shortness *see* **brittleness****hot strength** *see* **tensile strength****hot working**

- see also* **hot rolling**
 bronze, Al, recovery and recrystn. during hot deform. 2-105202
 metals, shear bands, occurrence during isothermal hot forging 2-57383
 steel, C-Mn, hot ductility, effect of non-metallic inclusions 2-83196
 steel, constructional, 42KhMFA, anomalous grain growth 2-105198
 steel, Mn-Cr-Mo-Nb, austenitic, heat resisting, props. and microstruct. (*Korean*) 2-57534
 steel, supercooled austenite, decomp. products morphology changes during continuous cooling, HTMT influence 2-105159
 superalloys, gas turbine hot section components fabrication, using advanced forming methods 2-93475
 Fe, cast, hot-worked high-strength, kinetics of isothermal breakdown of austenite 2-105140
 Fe-Cr-Al alloy, wrought, prep. and characts. 2-67249
 Ni, fracture initiation and dynamic recrystn. during hot deform. 2-105317
 Ni-Cr-Al-Y₂O₃, dispersion and precip. hardened superalloy, recrystn., influence of hot working 2-111196
 Ni-Cr-Fe-(Mo), long-life fatigue test results 2-62226
 Sn-Pb eutectic, superplastic behaviour in as-worked state 2-67442
 Ti alloys, hot deformation of high alloy VT22 alloy, dislocation struct. obs. (*Russian*) 2-116500
 Ti alloys, pseudo- α , optimum heat treatment selection 2-105200
 α -Ti-Al-Mn, optimum heat treatment selection 2-105200
 α -Ti-Zr-Mo-V, optimum heat treatment selection 2-105200

household appliances *see* **domestic appliances****Hubbard model**

- Anderson-Hubbard model elementary excitations, Bose excitations in paramagnetic media 2-61694
 antiferromagnetic phase in Hubbard model 2-110561
 antiferromagnetic polarisation around local moments in the Hubbard model 2-72129
 Bethe Ansatz model of magnetism 2-66744
 chain, Bethe-Ansatz solution failure 2-84558
 diamond (111), (1 \times 1) struct., strongly correlated surface state band model 2-110418
 dimer in random pot., microscopic theory 2-104216
 electrical resistivity of narrow band, electron-electron scatt. contrib. 2-92554
 electron ferromagnetism in narrow energy bands, extended Hubbard model (*Russian*) 2-61688
 electron gas, spin-charge coupling, spin Hamiltonians, phenomenological model 2-82555
 electronic excitations in solids, Mor-Zwanzig SCF calcs., appl. to Hubbard model 2-115681
 extended Hubbard model Wigner crystallised ground state, stability anal. 2-92490
 ground state phase diagram, of extended Hubbard model with Ising-like exchange parameters 2-98836
 Hubbard model, metal-insulator transition, Fermi surface, Green's function method 2-61360
 hubbard model with strong correlation; the equivalent hamiltonian: (*Russian*) 2-92437
 Kondo lattice, one dimensional, renormalisation group study 2-56830
 lattice Fermi gas, one-dimens. weakly nonideal, ground state 2-63932
 local moments in the Hubbard model 2-82606
 localised electron magnetism rel. to paramag. wave function of completely itinerant electrons 2-115965
 mag. and electronic Peierls transition, intersite-dependent transfer 2-66542
 metals, interatomic correls. of valence electrons, Hubbard model 2-110274
 mixed valence compounds, local density of states, real space renormalisation of Anderson chain, alloy approx. 2-66414
 narrow band system, Hubbard sub-band struct., cohesive energy 2-66419
 narrow energy bands, opt. absorpt. in weak mag. fields (*Russian*) 2-61882
 one dimension, exact results for hybridized, correlated bands 2-56523
 one-dimensional, charge density fluctuations, spatial correlations, strong interaction limit (*Russian*) 2-87472
 one-dimensional, continuum 'spin-wave' spectrum 2-56842
 one-dimensional systems, exact solns., review (*Japanese*) 2-82554
 ordered systems, localisation, correl. induced metal-insulator transition, Hubbard model 2-71875
 phase transitions in the Hubbard model for a half filled band 2-87146
 polaron density of states of hole in narrow band of alternate lattice of fermions 2-98557
 polyacetylene, bond alternation, electronic correl. effects 2-56455
 semiconductor, dislocation electron energy spectrum, Hubbard correlations 2-104309
 symmetry properties for class of Hubbard models 2-87124
 TCNQ salt, NMP-TCNQ, mag. Mott insulator-metal transition, Hubbard model, mag. props. 2-76926
 TCNQ stack, electronic struct. depend. on-electronic charge, Hubbard model 2-71863
 TCNQ stack, numerical approach to band structure 2-98537
 (TMTST), X (X=PF₆, AsF₆, ClO₄, etc.), semimetallic SDW state 2-115736
 transition adatoms on transition metals, and of simple chemisorption theory 2-92346
 transition metal cpds., intraatomic Coulomb repulsion, ferromag.-paramag. transition 2-115966
 transition metals, ferromag., chemisorption of H, self-consistent model 2-115554
 transition metals, surface mag. moments and electronic struct., Hubbard model 2-115980
 Co,Ni_{1-x}S₂, phase diagram in Ni-rich region, Hubbard model 2-66816
 GaAs impurity subsystem, metal-insulator transition (*Russian*) 2-71872
 Ni_{1-x}Cu_xS₂, phase diagram in Ni-rich region, Hubbard model 2-66816
 NiS₂-Se₂, phase diagram in Ni-rich region, Hubbard model 2-66816
 Si:P, specific heat, effects of electron and impurity correlations 2-104016
 Si(111), (1 \times 1) struct., strongly correlated surface state band model 2-110418

Hubble model *see* **cosmology****Huckel molecular orbital calculations** *see* **HMO calculations****hue** *see* **colour****Hugoniot diagrams** *see* **equations of state****human factors**

- see also* **biocybernetics**; **man-machine systems**
 atmosphere precipitation along Pacific coast of North America, variability and impact on society 2-73616
 BWR plant control room design 2-102257
 nuclear power station man-machine interfaces (*Japanese*) 2-74858
 remote visual displays for nuclear maintenance tasks, optimisation methodology 2-54535
 visual scene perception in manual control 2-94052

human-machine systems *see* **man-machine systems****human relations** *see* **social and behavioural sciences****humidity**

- see also* **atmospheric humidity**; **hygrometers**
 air, evaporation-humidified, ion context, elec. cond. meas. 2-86377
 bone, human compact, creep under various specimen storage and test conditions 2-94099
 glass fibre-reinforced cement composites, weather influence on creep 2-105228
 hygroscopic particle mean diameters as functions of relative humidity and integration limits 2-116729
 AlGaAs-GaAs solar cells, high efficiency and humidity resistant 2-88450
 ZnO ferrites, humidity and resistivity 2-87276
 SiO₂ thin films, effects of humidity on stress 2-92427
 SiO₂ solid state gas sensors, humidity effects on H₂S detection 2-64010
 WO₃, amorphous film, elec. cond., humidity depend. and meas. (*Japanese*) 2-112914

humidity control

liquid desiccant system optimisation for low grade solar/geothermal dehumidification and cooling 2-88406

humidity measurement

see also *hygrometers*

Aquamax II, humidity measurement using an integrated circuit (German) 2-53776

atmosphere humidity remote sensing, appl. of meteorological lidar developments 2-106335

detectors for atmospheric humidity measurement, thermal equilibrium (French) 2-95388

digital air-humidity measurement ccts. (German) 2-112163

hygrometers and psychrometers survey, w.r.t. users' requirements (German) 2-74427

hygrometry, IR gas analyser, technique in temp. range from -30°C to $+180^{\circ}\text{C}$ 2-79593

Lyman-alpha hygrometer 2-64056

micro-climatic measurements in power stations for optimizing protection against corrosion. (German) 2-93665

multichannel ventilated psychrometer-type hygrometric system using a microcomputer 2-58837

physico-chemical magnitudes, metrological assurance (Rumanian) 2-74381

polymer based capacitive hygrometer (French) 2-63128

psychrometric tables, draft proposal for novel system 2-73714

sensors for measurement of humidity in gases (French) 2-89732

sensors technological developments due to electronic advancements, 'Valvo' range (German) 2-53747

thin-film capacitance humidity sensor, fabrication using planar MOS technology 2-64054

two-wave humidity analysers based on controlled radiation sources (Russian) 2-64055

WO₃, amorphous film, elec. cond., humidity depend. and meas. (Japanese) 2-112914

h.v. engineering see *high-voltage engineering***hybrid computer methods** see *hybrid simulation***hybrid computers**

microcomputer-based hybrid processor using two optical processors 2-91026

hybrid integrated circuits

see also *flip-chip devices*; *microwave integrated circuits*

city gas detector using thick film hybrid IC sensors and single-chip microcomputer 2-95356

direct-coupled optical pulse generator hybrid IC for fibre-optic testing 2-97250

electronic registration equipment in CAMAC standard, review 2-64813

fibre-optic transmitter/receiver modules, mounting and bonding of optical components 2-97234

Ta-Ni thin film sensor system, temp. and strain meas. appl. (German) 2-64018

Ti/Pt/Au thin film circuits, conductive via processing utilising RF sputtering and electrodeposition 2-99338

hybrid reactors

blankets sustained by exogeneous neutrons, flux spectrum extremisation criteria 2-113746

capital costs versus fuel prod. rate trade off comp. to fast reactor 2-113724

commercial Tokamak hybrid reactor, Th-fuelled packed fluidised bed blanket design 2-85394

fissile fuel breeding in DT hybrid reactors 2-80347

fissile material breeding in fusion reactors 2-54533

fission-fusion hybrid blanket simulation in a fission test reactor 2-69992

fission-fusion system, long term fuel dynamics, doubling and half-life times 2-113748

fission-fusion systems, component parameters and system parameters 2-113744

fission-suppressed helium-cooled blanket for the TMHR 2-69987

fuel cycles for fusion development 2-85393

fuel flow dynamics 2-54661

fusion-fission fuel factory, book contrib. 2-75053

fusion-fission hybrid symbiont, performance rel. to other nuclear energy systems 2-75071

fusion-fission hybrids, CODAC, TIMOC, ORIGEN calc. model, breeding, fuel 2-113747

hybrid fusion, introduction 2-102270

lanthanide blankets, neutron multiplication calc. 2-54643

LOTUS facility, neutron anal. for hybrid and fusion blanket configurations 2-113745

molten salt technology for fusion fuel factory applications 2-69989

role of fusion hybrids for fissile fuel production in future power generation systems 2-102261

spallation-fission symbionts, power gain calc. 2-108136

status report on the fusion breeder 2-69984

tandem mirror fusion, fissile breeder, blanket engineering 2-85392

tandem mirror hybrid, fission-suppressed gas-cooled blanket 2-85395

Tandem Mirror Hybrid one zone beryllium blanket concept 2-69988

Tandem Mirror Hybrid Reactor, Be neutron multiplier feasibility 2-69990

Tandem Mirror Hybrid Reactor, design study, computer codes 2-69985

Tandem Mirror Hybrid Reactor, safety design 2-69991

thermal cyclic stresses on first wall and blanket 2-85302

two-phase molten salt blanket concept for the TMHR 2-69986

H production in fusion-fission hybrids 2-69884

hybrid simulation

BWR power plant dynamics simulation using hybrid computer system 2-102187

electroheat problems, Beuken thermoelectric model appls. (French) 2-70821

heat diffusion systems, Beuken hybrid simulation appl. 2-70807

heat transfer problem analysis by Beuken thermoelectric model and digital computer combined 2-70806

hydrated electrons see *solvated electrons***hydraulic amplifiers**

No entries

hydraulic turbines

blade shape optimisation 2-79373

flow condition determ. in labyrinth seal (German) 2-55672

hydroacoustics see *underwater sound***hydrodynamics**

see also *jets*; *liquid waves*; *viscosity of liquids*

accretion flow, X-ray heated, stability and time depend. 2-117575

accretion flow, X-ray heated, steady flow region 2-117574

accretion flows in astrophysics, vortex funnels theory 2-58233

active galactic nuclei jet-like struct., form. and gas flow 2-94842

adamantane-d, in dilute n-alkane solns., rot. relax., mol. quasi-hydrodynamic free space descriptions 2-76268

adiabatic two-phase flow in VK-50 reactor core riser (Russian) 2-74891

adsorbed systems, low-friction, linear- and nonlinear hydrodynamics 2-110149

air bubble rising axially in a tube, viscoelastic effect 2-55644

area rule for integral quantities 2-84446

binary systems, X-ray induced winds, hydrodynamics models 2-94700

black hole, orbiting vorticity free rings, metric 2-68807

black hole accretion flows with ang. momentum 2-63699

black holes, optically thick accretion, critical points 2-89293

bubble and packed bubble columns, with downcomers, hydrodynamic and mass transfer characs. 2-109394

bubbly liquid motion, hydrodynamic effects in shock wave propag. 2-60611

charged two-component fluid in equilb., nonlinear hydrodynamic fluctuation theory 2-103581

chemically reactive systems, hydrodynamic eqns. 2-81403

chromohydrodynamics, gauge-invariant Poisson brackets 2-95606

coastal waters, buoyant surface plume hydrodynamics, model 2-94399

compressible non-Newtonian fluid, transient 2-D problem of hydrodynamics, numerical soln. 2-60585

condensed matter phases, hydrodynamic modes anal. 2-66158

cosmic gas dynamics, comparative study of computational methods 2-94617

cosmic ray shocks, struct. 2-106431

creeping flow about a spherical particle, theory 2-103139

diphenyl polymer, dil. solns., behaviour in turbulent flow conditions, Thoms effect (Russian) 2-76001

disc galaxies, gaseous spiral arms produced by oval distortions 2-63647

disc galaxies, stability and masses 2-84329

disc galaxies, tidal interactions 2-89373

disc galaxies spiral struct., density wave theory 2-63660

disc galaxy, gaseous response to bar-like distortions 2-63662

discrete formulation, convergence, tail shortening 2-81311

disk galaxies, simulation of merging and remnants 2-112549

drag of flat plate in slip flow, bivariational calcs. 2-75917

Earth mantle chemico-convection hydrodynamics model 2-106029

electrical equipment, problems in design and construction of current input leads made of porous material 2-58835

equatorial beta-plane low wavenumber instability 2-112032

expanding Newtonian cosmology, correlation dynamics, exact eqn. derivation 2-112612

expanding universe, radiation hydrodynamics of H plasma below 10^6K 2-106974

figures of equilibrium, lateral oscill. modes, appl. to stellar pulsations 2-106523

fjord circulation, simple model of interaction with coastal circulation 2-83828

flow field induced by oscill. disc in semi-infinite viscous fluid with surfactant surface film 2-114878

flow through astrophysical porous medium, gravit. instability 2-58237

fluid-structure interactions in model test system, perturbation analysis 2-91307

fluids far from equilibrium, nonlinear reson. coupling of shear and heat fluctuations 2-114797

friction matrix for two spherical particles with hydrodynamic interaction 2-103140

galaxies, barred, spiral struct., generating mechanism 2-63649

galaxies, spiral, density wave theory, resonant stars at corotation 2-79212

galaxies, spiral density waves generation by bars in differentially rotating discs 2-101044

galaxies inhomogeneous axisymmetric stellar system, stability 2-63636

galaxies warp excitation, fluid model of disk-halo interaction 2-63236

galaxy protoclusters, nonlinear growth of density perturbations in expanding collisionless medium 2-101045

galaxy spiral structures, plasmas and density wave theory 2-63684

gas dynamics on galactic scales, numerical simulation 2-100729

gas flow round galaxies, dynamics 2-94824

gas-liquid systems, speed of sound effect on hydrodynamics and heat transfer 2-91514

giant molecular clouds, collisionally supported, implications for spiral galactic struct. and massive star form. 2-112523

giant molecular clouds form. through Parker Jeans instability 2-68845

giant planets formation, hydrodynamic collapse of gaseous envelope onto solid core 2-112358

Green Bay, Lake Michigan, numerical models and obs. of water motion 2-106160

Hamiltonian systems, integrable, canonical coords. 2-74261

hydroreactive propulsion system of variable form, efficiency (Russian) 2-81411

incompressible fluid two dimens. flow hydrodynamic eqns. struct., integral invariance 2-109326

intergalactic matter, formation of elliptical and spiral galaxies in rotating haloes 2-101068

interstellar accreting rotating isothermal clouds collapsing, envelope evolution 2-94802

interstellar cloud medium motion behind large scale galactic shocks 2-58417

interstellar clouds, isothermal, evolution under varying external pressure (Russian) 2-94813

interstellar clouds, stability of simple polytropes against homologous contraction 2-68872

interstellar clouds cores, implications for dynamics of NH₃ obs. 2-106857

interstellar clouds fragmentation, use of finite difference and particle methods 2-63241

interstellar dark clouds, collapse models 2-58418

interstellar isothermal clouds gravitational collapse, hydrodynamics code 2-68862

interstellar rotating clouds, instability to fragmentation and star form., heuristic criterion 2-112524

interstellar rotating gas clouds, collapse and fragmentation 2-63586

interstellar turbulent clouds, struct. and characs. 2-58433

hydrodynamics continued

Kelvin Helmholtz instabilities in supersonic flow with shear layers, astro-physical appl. 2-58249
kinetic theory in astrophysics and cosmology 2-89132
Kuroshio-Oyashio confluence zone latitude, numerical study 2-117309
lakes, reservoirs and cooling ponds, dynamics 2-100413
liquid metal ion sources, hydrodynamics 2-59578
liquid metals, solidification, thermal and hydrodynamic phenomena, mathematical model 2-115395
liquids composed of nonspherical mols., hydrodynamic eqns. 2-81312
local adiabatic stability for stationary axisymmetric perfect fluid configs. in general relativity 2-78944
lubrication, hydrodynamic theory 2-55517
magnetised white dwarfs, time depend. accretion, shock height oscils., hydrodynamic solns. 2-94773
massive objects, rotating fluid discs., struct. and stability, Newtonian formalism 2-100906
mathematical methods in hydrodynamical systems, conf., La Jolla, California, USA (Dec. 1981) 2-112637
mode coupling theory of hydrodynamics and steady-state systems 2-95016
molecular beam supersonic expansions from slit source nozzle, characterisation 2-70377
molecular cloud inhomogeneity, interaction with ionisation/shock fronts, 2-dimens. radiation hydrodynamic calc. 2-117721
molecular gas vibrational energy relaxation processes, hydrodynamics effect 2-70401
non-Newtonian liquid hydrodynamics, soln. forms for linearised eqns. (Ukrainian) 2-103191
nonhomogeneous fluids, numerical simulation of free surface thermally induced flows 2-74221
nonlinear hydrodynamics, around equilib., rel. to continuum theories 2-95018
nonlinear hydrodynamics, multiplicative stress-strain fluctuations 2-95017
nonlinear Langevin equation, high freq. power spectra 2-95019
nonlinear shear instabilities in an infinite slab, appl. to radiogalaxy NGC 1265 beam 2-112316
ocean, current directions rel. to deep advective transport of lithogenic particles in Panama Basin 2-94396
ocean mixed layer, dynamical processes rel. to temp. and thickness in sea area south of Japan 2-117308
ocean vertical velocity profile, determ. from induced EM field profile 2-112133
Orion B (NGC 2024), compact H II region, ionised gas dynamics from recomb. line and continuum map 2-101084
N Pacific Ocean, low-freq. eddy kinetic energy spectrum in deep western North Pacific 2-106142
Parker instability in self gravitating gas layer 2-68605
particle assemblages hydrodynamics at intermediate Reynolds number, cylindrical cell model 2-91393
planetary nebulae with close binary nuclei, corrections to ang. momentum loss 2-89259
polymer gels, diffusion of solutes 2-92249
polymeric liq., hydrodynamical eqns. obeying entropy principle 2-91377
profile, thin deformable, transient aerohydrodynamic characts. (Russian) 2-81428
protogalaxies gas cloud collisions, hydrodynamical simulation 2-112550
protostellar disks formation from rot. gas cloud accretion, hydrodynamic aspects 2-73959
pulsating flow bounded by wall, shear stresses determ. on surface 2-97659
radiative fluids, transient and transport coeffs., astrophys. appl. 2-94588
radiative hydrodynamics, 14-moment approx. 2-84085
radiogalaxies, collimated beam formation driven by high energy particles from nucleus, hydrodynamics and MHD 2-106942
radiogalaxies, supersonic expanding jets, helical and pinching instability 2-89392
rigid cavity, fluid filled, action of internal acoustic shock waves emitted by variable boundary surface 2-91305
rotating hydromagnetic flow between concentric cylinders, current induced instabilities 2-70912
Saturn and satellites formation, hydrodynamic theory 2-94637
self-diffusion as an example for the hydrodynamic limit 2-95288
shell, cylindrical, nonlinear response to transient acoustic wave 2-91308
solar active region, photosphere magnetic features hydrodynamics and electrodynamic interactions 2-73932
solar chromospheric spicules, hydrodynamic simulations rel. to absence over plagues and great length under coronal holes 2-100876
solar corona, energetics of steady-state flows 2-100858
solar corona, hydrodynamic stability of closed structs. and response to heating perturbations 2-58307
solar differential rotation, axisymmetric hydrodynamic model 2-106661
solar granulation numerical simulation, hydrodynamic and radiative transfer eqns. 2-68695
solar wind, flow lines geometry rel. to plasma characts. at Earth orbit 2-112413
sound wave-vorticity wave resonant interaction in shear flows 2-70743
spindal decomposition in linear regime, hydrodynamic fluctuation theory 2-71653
spiral galaxies, structural features, spiral density waves prod. 2-117775
spiral galaxies with finite disc thickness, asymptotic soln. and general eigenvalue problem general condition 2-89371
spiral galaxies with finite disc thickness, three-dimens. asymptotic density-pot. relation 2-89370
spiral galaxy with finite disc thickness, modal theory 2-89369
spouts in a bed of silica powder associated with fluidization by outgassing of adsorbed water 2-114892
stability criterion for many-parameter equilibrium families 2-89133
stars, thick accretion discs, self similar supercritical models 2-63360
statistical, topological charge in fluid mechanics, dynamical invariant 2-60498
stellar accretion effects on evolution hydrodynamical anal. 2-68751
stellar atmospheres, irreversible thermodynamics in radiating fluid 2-112428
stellar atmospheres, penetration and circulation currents in irradiated binary star atmospheres 2-112433
stellar atmospheres, theory of thermally sustained winds 2-63367
stellar evolution, stable numerical computation methods for hydrodynamic stages 2-100912
stellar mass loss rate determined by photosphere conditions, hydrodynamics anal. 2-79076

hydrodynamics continued

stellar pulsation problem, effect of turbulent viscosity on local theories of time-dependent convection 2-89240
stellar winds, flow pattern rel. to model for bipolar nebulae 2-74074
stochastic self-propagating star form., effect on galactic struct. and evolution 2-106909
strong shock wave in stellar envelopes, law of motion 2-100899
styrene-acrylonitrile copolymer solns., hydrodynamic characts. and light scatt. (Russian) 2-108756
subcooled boiling in pipes, heat transfer and hydrodynamics 2-91420
Sun, rotating spherical shell compressible convection, viscosity, cond., boundary conditions, zone depth effects 2-63239
superfluid liquid mixture, dissipative hydrodynamic eqns. (Russian) 2-66317
supernova ejecta interaction with interstellar matter, self similar soln. 2-94803
supernovae, explosion hydrodynamics 2-63485
surface water waves over variable depth bottom, three dimens. eqns. approx. 2-65605
suspensions, stationary spheres in incompressible fluid, linear hydrodynamics 2-81390
swept up massive shell, axisymmetric hypersonic MHD flow, time depend. eqns. system 2-84074
thermal fluctuations in the presence of two dissipative steady-state currents 2-65561
torus, axisymmetric motion at low Reynolds number, drag meas. 2-109334
travelling waves superposition in circular Couette system 2-70973
two dimensional fluid, vortex theory, Navier-Stokes eqns. 2-97486
Universe, adiabatic perturbations growth rate, closed form. expressions 2-112613
vane, vibr., method for thrust created determ. (Russian) 2-81409
vapour flow condensation charact. in channels 2-91544
water droplet drag in accel. and decel. flow 2-65666
wave-propulsive agent, method of calc. (Russian) 2-81348
weather forecasting, short term hydrodynamic scheme 2-100515
H II regions in collapsing massive molecular clouds, gas dynamics 2-79190
H, spin polarised, hydrodynamic modes 2-82076
³He, superfluid, broken relative symm. and hydrodynamics 2-110082
⁴He, superfluid, nonlinear hydrodynamics and one fluid theory 2-82048
⁴He, superfluid, vortex motion near solid boundary protuberance (Russian) 2-56278

hydroelectric power stations

see also dams; hydraulic turbines; pumped-storage power stations; tidal power stations; water supply; wave power generation
alternative routes to steel based on hydrogen from cheap hydroelectric power 2-73165
integration with wind energy, USA 2-78179
Marchtrenk power station on the River Traun-geology, ground water, ecology (German) 2-105606
North America, effect of precip. variability along Pacific coast on hydroelectric power generation 2-73616
River, Coa hydroelectric power potential and development (Portuguese) 2-67814
South American water power resources exploitation 2-57677
surge towers/corrosion control of Mingchaursk hydroelectric power plant (Russian) 2-88268
Swedish hydroelectric power program development, influence of oil crisis and nuclear power program restraint (Slovak) 2-88404

hydrogen

see also nuclei with
see also deuterium; hydrogen ions; hydrogen neutral atoms; hydrogen neutral molecules; protons; solid hydrogen; tritium
absorption and desorption by LaNi₅, ⁶¹Ni Mossbauer meas. of Ni microprecipitates 2-66953
absorption and desorption on Ti, rel. to neutron irradi. 2-76817
absorption by RCo_{2-x}Fe_x (R=Ho, Er), effect on mag. behaviour 2-56855
absorption in Armo Fe, influence on electrochem. props. 2-67651
absorption in Pd and Pd-Ag alloy, preliminary impregnation influence on mech. props. 2-99554
absorption in steel, impregnation behaviour and embrittlement resist., microplastic deform. influence 2-99552
absorption in steel, influence on low-cycle fatigue 2-99553
absorption induced surface segregation on Pd₂Zr_{1-x}, 2-56345
absorption on GdCu₂, mag. and crystallographic props., Mossbauer effect 2-82758
absorption-desorption cycling on Pd, hardness and topology changes 2-93606
adsorbed layer on Pd and Fe, order-disorder transitions, phase diagrams 2-98275
adsorbed on diamond (111), H termination, EELS study 2-110145
adsorbed on diamond (111), photoemission and photon-stimulated ion desorpt. study 2-110144
adsorbed on GaAs(110), electronic struct. calc. 2-110422
adsorbed on Ge, influence on surface cond. (Russian) 2-72047
adsorbed on Ge (111), electron states, angular resolved UPS study 2-110414
adsorbed on metal surface, diffusion coeffs., FEM 2-115555
adsorbed on Mo with Cs monolayer, negative H ion production by sputtering 2-99253
adsorbed on Ni (110), vibr. modes, EELS study 2-76797
adsorbed on Pd(100), correlation between photoemission and photon stimulated desorption 2-92351
adsorbed on Pd (100), phase diagrams for a square lattice with two- and three-body interactions 2-115556
adsorbed on Pt (111), water form. with coadsorbed O, XPS and temp. programmed reaction obs. 2-83411
adsorbed on Si(001), 2X1 and 1X1 structs., inelastic LEED study 2-92710
adsorbed on Si(100), stimulated H⁺ desorption correlation with localised state 2-115551
adsorbed on Si (111), departure from stable SiH₃ phase 2-76838
adsorbed on W(001), desorption kinetics and surface restructuring 2-7025
adsorbed on W(001), phase suppression by steps 2-98409
adsorbed on W (100), induced surface reconstruction, polarised LEED study 2-56308
adsorbed on W (110), angle resolved UPS and EELS study 2-92360

hydrogen continued

- adsorbed on W (111), ang. resolved photoemission meas. and LCAO calc. 2-83008
 adsorption, on oxidised and non-oxidised WC 2-104147
 adsorption kinetics on Ni, surface struct. effects, Auger, LEED and work function meas. 2-87066
 adsorption on Au discontinuous thin films, effects on I-V characts. 2-110499
 adsorption on Fe(110), pair interaction energy, embedded cluster formalism 2-92356
 adsorption on FeTi₃, storage props., XPS, Mossbauer and metallographic study 2-92347
 adsorption on Ge surface, electrophysical props. 2-76833
 adsorption on graphite, commensurate-incommensurate transition, LEED study 2-87064
 adsorption on Ir(110), thermal desorpt. mass spectrometry study 2-87062
 adsorption on Ir (100), work function changes, field emission study 2-87047
 adsorption on nonreconstructed Pt (110) surface 2-115515
 adsorption on Si(111) and (100), UPS study 2-116338
 adsorption on SiO₂ supported Pd catalyst, IR study 2-82129
 adsorption on TiN(100), surface state, photoemission study 2-77705
 adsorption on W(001), transition to incommensurate reconstruction 2-56313
 alloy steel, hydrogenated, type 40 KH, H interaction with defects during microplastic deform. 2-105261
 upper atmosphere, H atom escape due to charge exchange collisions 2-63152
 atom in high laser fields, space translation method validity using dipole approx. 2-96448
 atom problem in stochastic electrodynamics, stochastic process nonrecurrence 2-74236
 atomic, adsorbed on solid H₂, adsorption temp. depend. 2-82074
 Brillouin scattering, of fluid and solid, meas. under high press. by fabry-Perot interferometer (*Japanese*) 2-64104
 bubble, nuclei effect on inception of bubble and sheet cavitation on axisymmetric bodies 2-60591
 C-H(D), ion-implanted impurity retention, release and isotope exchange 2-69848
 chemisorbed layer on Fe(110), phase transitions, phase diagram, LEED study 2-98276
 chemisorbed on Fe, EELS vibrational spectrum 2-61286
 chemisorbed on GaAs, surface optical phonon obs. 2-115550
 chemisorbed on GaP, surface optical phonon obs. 2-115550
 chemisorbed on GaP(As) (110), pseudopot. calc. 2-110423
 chemisorbed on InP, surface optical phonon obs. 2-115550
 chemisorbed on Li, localized spin-orbital theory 2-56339
 chemisorbed on Ni, surface vibr. spectroscopy 2-87033
 chemisorbed on Ni (100) and (111), binding props., effective medium theory calc. 2-82137
 chemisorbed on Si (111), vacancy and chemisorptive bond elec. struct. 2-82417
 chemisorbed on W(Ta), 4f core electron binding energy shifts, XPS study 2-105041
 chemisorbed on W surface, photoemission study (*French*) 2-105052
 chemisorption and absorpt. induced surface segregation on alloys 2-56345
 chemisorption on densely packed Mo, W, Re and Ir surfaces 2-115559
 chemisorption on diamond, electronic struct., ab initio atom cluster model 2-115641
 chemisorption on ferromag. transition metals, self-consistent model 2-115554
 chemisorption on LiF (001) surface atop an anion vacancy 2-61279
 chemisorption on MgO (001), ab initio SCF calc. 2-104158
 chemisorption on Pt (111), surface motion effect, quasi-classical trajectory study 2-66346
 chemisorption on Raney Ni, incoherent neutron inelastic scatt. 2-104142
 chemisorption on Si (111) 7×7 surface, electronic struct., DV-XX cluster calc. 2-66613
 chemisorption on W(110), effect on LEED fine struct. 2-81635
 chemisorption on W (110), effect on LEED fine struct. (*French*) 2-104122
 cluster ions, prod. in supersonic nozzle, mol. weight distrib. 2-70470
 coadsorption with CO on Fe(100) 2-56363
 coadsorption with CO on Ni(100), electron spectroscopy study 2-76827
 coadsorption with CO on Ru(001), work function, XPS, UPS and thermal desorption study 2-71805
 coadsorption with methane, ethane or propane on Pt thin film, surface pot. meas. 2-92353
 coating on Si (112), surface struct., LEED study 2-71784
 concentration and distrib. in high-purity Ge crystals 2-70051
 concentration profiles, three-dimens., in solids, quantitative meas. 2-115266
 condensed layers on Cu and Au, photoemission study 2-93374
 cryogenic storage for Space Shuttle 2-79587
 cryosorption pumping, with the ZDB-150 type cryopump, cooled by 2-stage closed cycle refrigerator 2-74434
 desorption, isothermal, from Pd-SiO₂-Si struct. 2-110135
 desorption from Cu(100) and Cu(111), fast vel. distrib. 2-98446
 desorption from diamond (110), electronic struct. transformation, EELS study 2-56658
 desorption from ni surface, angle resolved flash technique 2-71801
 desorption from W, electron stimulated, quantum effects 2-76801
 detection using Pd-InP Schottky diode sensors 2-89700
 dielectric recovery time of small pressurized spark gaps 2-103544
 diffusion and solubility in Cu, electrochem. determ. (*Japanese*) 2-76743
 diffusion and solubility in pure large-grain Al 2-71725
 diffusion and superstruct. in β -VH_{0.59}, PMR spin-lattice and spin-spin relax. and Fourier transformed spectra study 2-82739
 diffusion in a-Si films, ESR study 2-115469
 diffusion in dil. Ni and FCC Co alloys, mag. aftereffect meas. 2-82027
 diffusion in dispersed Ni catalyst, low-temp. transfer from surface to bulk 2-56252
 diffusion in high-purity α -Fe, intrinsic diffusivity 2-110042
 diffusion in KCl(Br):OH⁻ 2-61206
 diffusion in metals, isotope effects, theory 2-98341
 diffusion in Nb and Ta, N interstitials effect 2-104067
 diffusion in Ni, grain boundary mechanism, electrochem. and ion microprobe obs. 2-92284
 diffusion in Ti, temp. depend., high-temp. synthesis of hydrides 2-111112
 diffusivity in liquid Fe-base ternary system 2-115443

hydrogen continued

- diffusivity meas. in Pd based solid solns. 2-104058
 discharge, laser action obs. at 3.767 μ m 2-55118
 discharge, low density, potential step development, laser resonance scatt. study 2-91687
 electromigration of H isotopes in Ta, quantum characts. (*Russian*) 2-92293
 emanation from Negoro fault, Median Tectonic Line, correl. with fault movement 2-106094
 ferromagnets, theory of H chemisorption 2-78136
 film boiling, heat transfer in plug regime 2-60534
 flame, molecular emission cavity anal., spectral studies 2-99675
 gas, higher stimulated Raman scatt. component generation, parametric processes 2-90981
 gas, higher-Stokes-order Raman conversion of XeCl laser 2-60161
 gas, Raman freq. down-conversion of XeCl laser 2-97117
 gas, Raman shifting of long pulse length XeF^{*} laser radiation 2-97115
 gas, stimulated Raman scatt., higher component generation, role of parametric effects 2-97113
 gas mixture, thermal conduct. meas. 2-86372
 gas time projection chamber development and performance 2-96379
 gas turbine/steam turbine combined cycle using liquefied hydrogen as fuel, performance anal. 2-73164
 glow discharge, TEA CO₂ laser interactions, spectroscopic aspects 2-97812
 H isotope exchange, depth resolved meas. 2-69847
 heating, of Pd crystallites, wetting phenomena 2-86974
 ignition when injected into high temperature oxidiser experimental study 2-99847
 impregnation in austenitic stainless steel during friction in H₂SO₄, influence on wear 2-67555
 isotope distribution equilibrium in Pd/H₂-H₂O system, Pd use in isotope separation 2-111509
 isotope purification system based on Pd-Ag alloy membrane for fusion reactors 2-69897
 isotope separation, temp. swing process using VH 2-80830
 laser, mid IR operation obs. 2-96901
 liquid, equation of state, appl. to models of major planets 2-73878
 liquid, gaseous cavitation prediction, two-phase flow analogy 2-60590
 liquid, heat deposition meas. in ZING-P⁺ pulsed spallation neutron source 2-102028
 liquid, Hugoniot diagram meas. up to 10 GPa 2-71605
 liquid, IR spectrum, rot. double transitions 2-87755
 liquid, moderator, power densities in spallation neutron source environments 2-102027
 maser, atomic clock time scale, China 2-79538
 maser, extremely small, prototype 2-90859
 maser, NASA NR model characts. 2-80924
 maser time keeping performance comparison with Cs standard, using passive H maser 2-107309
 maser with state-mixed beam 2-90856
 masers, comparison between frequency stability of active and passive types 2-58796
 masers, low temp., using liquid He coated walls 2-60056
 masers, passive, use as frequency standards 2-58795
 masers, Shanghai Observatory maser developments 2-80925
 mass-spectrometric analysis of hydrogen and helium isotopes 2-90297
 metal-H system, FCC and BCC, energy and wave functions of interstitial H 2-109787
 metallic, asymptotic freedom, cusp theorem 2-82255
 metallic, liquid, transport, props. calcs. 2-56292
 metals, H impurity electronic struct., μ SR studies, review 2-99014
 meteorite C, H and N isotopes: in carbonaceous chondrites 2-68684
 meteorites, H₂, C and N₂ concs. and isotopes in carbonaceous chondrites 2-68683
 misch metal-Ni-Si alloys, H absorpt.-desorpt. characts. 2-87024
 multiplateau absorption isotherms, chem. pot. 2-92348
 neutral beam, high power, characterisation by Doppler spectroscopy 2-74573
 neutral beam injection, lower hybrid wave heating in JIPP T II torus 2-103401
 neutral kinetic theory in bounded plasma slab with inhomogeneous temp. and density profile 2-91595
 ocean H₂ composition in coastal inlet 2-68388
 passivation of γ -induced point defects in Si:P cryst. 2-103758
 passivation of GaAs bulk donor defect 2-87173
 penetration through Cu, sorption parameters estimation (*Russian*) 2-87075
 permeability of stainless steel, protective coatings influence 2-67652
 permeation in Cr-Mo steel, plastic deform. influence 2-71728
 permeation through Pd alloy membrane, impurity effects 2-110044
 permeation through reactor steel, corrosion scale effects (*German*) 2-90242
 permeation through steel, surface oxides and tempering treatments influence 2-93680
 photoelectrochemical cells, electrical power and H₂ generating, carrier recomb. at grain boundaries and liq. interfaces, chem. control 2-111573
 physisorption on solid inert gases and SF₆, sorption energy determ. 2-87013
 plasma, 2-97752
 plasma, eqn. of state, atom-atom interactions effect 2-76072
 plasma, impurity atom binding energies and bound-free transition matrix elements 2-71233
 plasma, oscillator strengths, photoionisation cross sections emission spectra 2-103449
 plasma, population inversion between the recombining ground and first excited states 2-71074
 plasma, relativistic electron beam interactions, instability excitation, floating double probe meas. 2-115020
 plasma, spectral lines, plasma polarisation shift, interaction model 2-81576
 plasma, Stark broadening, relax. theory 2-76196
 plasma production using steady state linear machine 2-55795
 plasma striations, laser induced phase locking 2-60754
 plasma, two-component, charge density fluctuations dynamics 2-55703
 plasma-jets, energetical props. (*German*) 2-115054
 plasmas, recombining, optically thin and thick, population inversion and threshold condition for laser oscil., report 2-103285
 polypyrrole-Si:H contacts, Schottky barrier formation 2-92727
 positron-gas cross-section measurements 2-75420
 Raman lasers, pure rotational 2-97118

hydrogen continued

- relativistic electron beam injection 2-71193
retention in refractories, isotope exchange, trap activation model 2-69846
RF-ion source beam, ion species 2-103466
secondary ions desorbed by fission fragments, energy spectra, time-of-flight method 2-99243
Si:H, amorphous oxidised films, valence band spectra 2-104300
solid H pellet interaction in L-2 stellator (*Russian*) 2-76170
solidification temp., effect of Ne and ⁴He impurities (*Russian*) 2-56157
solubility, in transition metals, effects on field evaporation and field ion microscopic imaging (*German*) 2-103569
solubility and behaviour in TiNi melts in vac. induction melting and remelting 2-105106
solubility in Cu-Al(Si)(Sn)(Ga) solid solutions, thermodynamic props. (*Russian*) 2-92207
solubility in Fe, enhanced dissolution under press. and stabilisation of γ phase 2-86876
solubility in transition metals, surface effects, kinetic model 2-76836
solubility in V film, press.-comp. isotherms, vibrating quartz microbalance meas. 2-98501
solubility in Zr-Al meas., getter appl. 2-86878
sorption, in $\text{ScFe}_2\text{H}_{3.4}$, $\text{ScCo}_2\text{H}_{3.4}$ and $\text{ScNi}_2\text{H}_{3.4}$, thermal stability 2-87014
spectra and quasars in Seyfert galaxies, model of emitting regions 2-63701
spectrochemical analysis of H_2 in Ti alloys, with aid of computer 2-83435
spin polarised adsorbed on ⁴He film, surface polaron 2-82075
spin polarised atomic adsorbed on He surface, quasi-two dimensional character (*Russian*) 2-82073
stabilised, atomic, adsorbed on superfluid He, surface spin relax. 2-104116
state-selected beam low temp. H_2 maser, recent progress 2-58797
Stokes shift, Raman conversion of XeCl laser radiation 2-60154
surface segregation on Si (111) by photon stimulated desorption at Si K edge 2-110154
thermal desorption from Ir(100) and (110), field emission thermal desorption study 2-92352
thermotransport in V, Nb and Te 2-82029
thyrratron, metastable species form. 2-54936
time projection chamber development and performance 2-70036
trapping, detraping and re-emission from fusion first walls 2-109584
trapping, generalised anal. 2-56239
trapping, irreversible, anal. 2-56240
use of hydrogen in dual-fuel engines 2-57671
VLG-11 masers, long term performance 2-90858
Z-pinch discharge, afterglow, degree of ionisation 2-81562
 $\alpha\text{-Al}_2\text{O}_3\text{H}$, H donors, mixed conductivity study 2-82274
Au-Si:H, amorphous semiconductors interface reactions and Schottky barrier formation, expt. study 2-110176
a-Bi:H, ESR study, annealing effects on signal intensity and linewidth 2-87591
a-Bi:H films, elec. and supercond. props. (*Russian*) 2-82506
C:H, amorphous, sidebands in luminesc. spectra 2-67111
C:H, amorphous glow discharge film, photoluminescence and ESR spin density 2-93244
C:H amorphous thin films, hard, optical props. 2-99207
C+H reactivity electron beam enhancement, in pyrolytic graphite 2-74938
CaF₂:H, contrbs. of H zero-point vibr. to F transferred hyperfine const. nearest neighbour to H_2^+ centre 2-76627
CaV₂O₆:H, Fermi glass, ESR, elec. and mag. meas. 2-72352
Co-H(D), based alloy, mag. relax., isotope effects and diffusion 2-77382
Cu:H, spherical solid model 2-104294
D-H plasma, dispersion relation near two-ion hybrid reson. 2-65716
Fe, high purity single crystals, effect of H on mech. props. (*Japanese*) 2-77878
Fe:H, lattice dilation of Fe (*Japanese*) 2-56261
GaAs:H, amorphous, photoinduced midgap absorpt. 2-72528
GaAs_{1-x}Al_x:H, amorphous multiple quantum wells, impurity photoluminescence 2-104955
Ge:H, (111) surface, electronic struct., photoemission meas. 2-66609
Ge:H, amorphous, photoinduced midgap absorpt. 2-72528
Ge:H, interaction of H with point defects, under ⁶⁰Co gamma-irrad. 2-115279
Ge:H, positive test charge, pot. map 2-56479
Ge:H, vacancy vibrational behaviour, renormalisation group method 2-81918
Ge:H amorphous film, AC losses and elec. cond., polarons 2-77055
Ge-Si:H, amorphous sputtered alloys, elec., optical and struct. props. 2-98644
Ge₂Si_{2-x}:H, amorphous, photoluminescence, localised states, temp. depend. 2-87854
H⁺ ions reflection at cryst. surface, ionic charge states, expt. study 2-57234
H-Ar⁺ plasma, H broadened Lyman- β line, radiation motion effects 2-70188
H-D isotope exchange in Tokamaks, H recycling and impurities 2-71189
H-H₂, electron beam discharge plasma, vibr. excited states 2-109457
H-He shock layer, radiating, convective heat flux, opaque admixture blowing effects 2-81358
H-like ionic targets, stopping power, free-electron gas approx. 2-103280
H-T separation, cryogenic distillation column with feedback stream, simulation 2-90289
p-H₂, capillary const. and surface tension, 20 to 32K (*Russian*) 2-82081
H₂, dense gas, electron transport theory 2-103256
H₂, radiation enhanced permeation through stainless steel tubes 2-98345
H₂, rot. Raman intensity-correction factors due to vibr. anharmonicity, effect on temp. meas. 2-108531
o-H₂, rot. relax. time determ. 2-96701
H₂⁺-He, low-temp. target for use in electron beams 2-64731
H₂⁺-He, low-temp. target for use in electron beams 2-64731
H₂-H₂, interaction dipole polarisabilities, MC TDHF theory calcs. 2-96447
H₂-He system, shear viscosity SBE cross sections, close-coupled and coupled-state calcs. 2-81431
H₂-O₂, H₂ detection by Pd(Pt) MOS capacitor 2-112882
H₂+O₂, surface reaction kinetics on Pt(S) 2-116727
H₂, IS state, strong interaction shift and width 2-59976
HD-He system, depolarised Rayleigh scatt., multilevel description 2-80638

hydrogen continued

- He-H₂, interaction dipole polarisabilities, MC TDHF theory calcs. 2-96447
He-Xe, hollow cathode discharges, VUV study 2-97823
K:H, lattice relax. and crystallographic distortion around impurity 2-103914
KCl:H, I, relaxed excited state of atomic H centres, ODMR study 2-99000
Li:H, lattice relax. and crystallographic distortion around impurity 2-103914
Li₂N:D, H, Czochralski growth and doping method 2-111061
Mo:H, diffusion and permeability 2-82023
Mo:N:H, defect-gas impurity interactions, positron annihilation study 2-67142
Na:H, lattice relax. and crystallographic distortion around impurity 2-103914
Nb, relax. process caused by interstitial H 2-103930
Nb:H₂, ultra small angle X-ray and neutron scatt. 2-86521
Nb-H₂, fluctuation induced spinodal decomposition 2-66235
NbH_{0.89}, phase transitions, PMR spin-lattice relax. time temp. depend. study 2-110688
Ni-Cu-H solid soln., phase equilibria and magnetisation meas. (*Russian*) 2-98906
Ni-H(D) based alloy, mag. relax., isotope effects and diffusion 2-77382
PbTe:H epitaxial film, elec. transport props., p-type to n-type conversion 2-66676
Pd-H, mechanical and elec. props. recovery after phase transitions (*Russian*) 2-116460
Pd/n-Si Schottky diodes, H₂ gas induced DLTS signal, gas detector appl. 2-77178
Pd-H(D) based alloy, mag. relax., isotope effects and diffusion 2-77382
Pd-MOS structures, hydrogen sensitivity and long term behaviour 2-64008
Pd-Ti-H, H diffusion study 2-82024
Pd-V-H, H diffusion study 2-82024
Pd(100) surface, exposed to H⁺, electron stimulated desorption 2-76820
Pt, study of H₂ and CO coadsorption 2-92338
RbCl:H, I, relaxed excited state of atomic H centres, ODMR study 2-99000
SF₆-H₂ laser pumped by axially injected electron beam, characts. 2-114258
ScFe₂, hydrogenated, ⁵⁷Fe Mossbauer spectroscopy 2-72388
Si:F, H, amorphous, density of localised states, DLTS study 2-98591
Si:F, H amorphous films, photoelec., and optical props. Schottky barrier solar cell form. 2-83480
a-Si:F, H films, motional narrowing effects of NMR spectra 2-77395
Si:F,H,P films, critical vol. fraction of crystallinity for conductivity percolation 2-56379
Si:F,H amorphous films, solar cell form., film elec. and optical props. 2-83481
Si:H, amorphous, 1.4 eV luminescence lifetime distrib. 2-72540
Si:H, amorphous, DLTS response due to localized states 2-56492
Si:H, amorphous, dangling bond ESR, effect of H or F, Huckel mol. orbital calc. 2-56933
n-Si:H, amorphous, deep levels, electron capture cross section 2-76979
Si:H, amorphous, ESR study relation between defects and incorporated H (*Japanese*) 2-87588
Si:H, amorphous, elec. cond., effects of H₂O and NH₃ adsorbates, oxidation and light exposure 2-71984
Si:H, amorphous, electronic states and total energies 2-66429
Si:H, amorphous, electronic struct. by soft X-ray spectroscopy 2-104301
Si:H, amorphous, electronic states (*Japanese*) 2-115645
Si:H, amorphous, excitation wavelength depend. of luminesc. spectra 2-77586
Si:H, amorphous, field effect conductance, annealing and light induced changes meas. 2-98750
Si:H, amorphous, gap states distrib., modulated photocurrent phase-shift anal. 2-92534
Si:H, amorphous, gap-state absorpt. meas. 2-87827
Si:H, amorphous, H determ., IR absorption meas. (*Japanese*) 2-71490
Si:H, amorphous, H₂ evolution 2-66280
Si:H, amorphous, hole collection length, surface photovoltage study using liq. Schottky barrier 2-56631
Si:H, amorphous, homogeneous CVD prep. and struct., comp. and photocond. props. 2-87085
Si:H, amorphous, ODMR obs. of luminescence fatigue 2-104954
Si:H, amorphous, obs. of photoinduced changes in gap states bulk density 2-66472
Si:H, amorphous, order and disorder, curved space description 2-76311
Si:H, amorphous, photogeneration, geminate recombination model, expt. and theoretical study 2-87315
Si:H, amorphous, photoinduced midgap absorpt. 2-72528
Si:H, amorphous, photoluminescence fatigue and photo-annealing 2-110905
Si:H, amorphous, post-hydrogenated CVD Schottky diode solar cell 2-99796
Si:H, amorphous, RF glow discharge deposition rate, crossed elec. and mag. fields effect 2-93447
Si:H, amorphous, Schottky barrier and MOS structs., barrier heights, photoemission study 2-82465
Si:H, amorphous, Schottky diode spectral response, gap states effect 2-87753
Si:H, amorphous, spin-depend. recombination at dangling bonds 2-77424
Si:H, amorphous, sputtered, time-resolved photolum. spectra 2-77581
Si:H, amorphous, sputtered, time-of-flight and photoinduced mid-gap absorpt., dispersion 2-87432
Si:H, amorphous, sputtering and glow discharge prep., photoluminescence and midgap state density 2-87855
Si:H, amorphous, temp. depend. of room temp. ODMR signals 2-104749
Si:H, amorphous, time resolved photoluminescence, quenching and carrier mobility 2-104949
Si:H, amorphous, undoped, diffusion of holes 2-92651
Si:H, amorphous film, density of states, field effect determ. technique, annealing and illumination effects 2-61593
Si:H, amorphous film, density of gap states, space charge spectroscopy study 2-87181
Si:H, amorphous film, flow discharge deposited at 1 Torr, elec. and struct. props. meas. 2-87277
Si:H, amorphous film, interfacial electronic struct. and density of states 2-66601
n-Si:H, amorphous film, interaction with metal electrodes 2-87389

hydrogen continued

- n-Si:H, amorphous film, interaction with metal electrodes 2-87390
 Si:H, amorphous film, laser induced crystn. 2-55849
 Si:H, amorphous film, magnetoresistance study. 2-92790
 Si:H, amorphous film, optically induced pot. fluctuations, elec. cond. and thermopower study 2-77050
 Si:H, amorphous film, optical and elec. props. 2-82940
 Si:H, amorphous film, RF sputtered, H content, and config., photoconductivity, IR study 2-82397
 Si:H, amorphous film, RF planar-magnetron sputtering, IR and photoelec. props. (Japanese) 2-99332
 Si:H, amorphous film, reactive ion beam sputtering, optical props. 2-83041
 Si:H, amorphous film, tetrode RF sputtering and optical and elec. props. meas. 2-111072
 Si:H, amorphous film, vacuum evaporated, substitutional doping by ion implantation, elec. cond. and EPR study 2-55850
 Si:H, amorphous films, field effect density of states, annealing and light exposure effects 2-71850
 Si:H, amorphous glow discharge film, photocond. and Fermi level temp. depend., photoinduced changes obs. 2-115810
 Si:H, amorphous plasma deposited film, photocond. IR quenching and gap states, exp. study 2-87318
 Si:H, amorphous Schottky barrier solar cells; CVD prep., electronic props. 2-83484
 Si:H, amorphous Schottky diodes, capacitance-voltage characts. calc. 2-66667
 p-i-n-Si:H, amorphous solar cell struct., deep electron traps 2-56493
 Si:H, amorphous solar cells, hot carrier effects on collection efficiency 2-67852
 Si:H, amorphous solar cells, I-V characts., density of states, and depletion width 2-83483
 Si:H, amorphous sputtered film, dispersive transport, carrier mobility, photoconductivity study 2-82357
 Si:H, amorphous thin film, pure and hydrogenated, adsorbed O₂ layer, electronic struct., XPS and UPS study 2-57254
 Si:H, amorphous thin film solar cells, review 2-105568
 Si:H, As, amorphous film, optical absorption, doping and temp. depend. 2-82945
 a-Si:H, density of states determ., field effect method (Korean) 2-56419
 Si:H, dislocation donor and acceptor states (Russian) 2-92525
 a-Si:H, electronic props., CPA calc. 2-56430
 Si:H, F, amorphous, ODMR study 2-93065
 Si:H, FZ cryst., anomalous defect form. by H doping 2-71476
 a-Si:H, Ga(As), ion implanted, absorpt. and photocond. spectra 2-115820
 a-Si:H, glow discharge, oxidation investig., optical consts. determ. by ellipsometry meas. 2-116578
 Si:H, implanted, radiation defects study by DLTS 2-92522
 Si:H, impurity lattice location, ion channelling studies, review 2-71537
 Si:H, interaction between dislocations and H or O, elec. and luminesc. props. (Russian) 2-56487
 Si:H, ion implanted, metastable cond. and shallow donor conc. meas. 2-115764
 Si:H, N, amorphous film, elec. and photocond. variation with N doping 2-110339
 a-Si:H, N films, optical and elec. props., solid-state image pickup device appl. 2-82935
 a-Si:H, n-type, energy depend. of capture cross section at trap levels, determ. by isothermal capacitance transient spectroscopy 2-82273
 Si:H, N(Ga), amorphous film, ion implanted, photocond. and energy spectrum 2-92698
 a-Si:H, P, photoinduced absorpt. in picosec. range due to deep hole traps 2-72527
 a-Si:H, photoluminesc. emission broadening 2-110920
 a-Si:H, potential distribns. in Schottky and p-i-n structs. by capacitive techniques 2-92749
 a-Si:H, RF sputtered, elec. and EPR meas. 2-115791
 a-Si:H, reassessment of vibr. spectrum 2-57136
 Si:H, single cryst., floating zone growth in H₂ atmos., defects study (Chinese) 2-109796
 Si:H, three-dimensional H conc. profiles 2-115266
 a-Si:H, time resolved ODMR by frequency response spectroscopy 2-82745
 Si:H, vacancy vibrational behaviour, renormalisation group method 2-81918
 Si:H,As, amorphous RF sputtered film, pulsed laser annealing 2-86726
 Si:H,B, amorphous, ESR lineshape, g-factors, temp. depend. 2-77373
 Si:H,B, amorphous film, NMR study 2-110686
 a-Si:H,B(P) IR absorption spectra, effects of annealing 2-99156
 Si:H,F, amorphous film, NMR and ESR study 2-93003
 Si:H,N, amorphous, prep. from SiH₄-N₂-H₂ mixture and elec. resist. and IR absorpt. meas. 2-93444
 Si:H,O,N, amorphous, ESR of impurity associated defects 2-82699
 Si:H,P amorphous glow discharge thin films, elec. props., heat treatment and P ion implantation effects 2-61467
 Si:H amorphous, oxidation, UPS and Auger study 2-83260
 Si:H amorphous, photoconductivity spectrum 2-104430
 Si:H amorphous, photoluminescence, band gap fluctuation 2-98530
 Si:H amorphous film, DC sputtered, characterization by optical and nuclear methods 2-93308
 Si:H amorphous film, glow discharge deposited, refractive index, 95 to 723K (French) 2-62005
 Si:H amorphous film, glow discharge deposited, heterogeneities and surface effects 2-92420
 Si:H amorphous film, glow discharge deposition, plasma spectroscopy 2-115605
 Si:H amorphous film, growth by silane laser photodissociation, X-ray and IR spectra study 2-116375
 Si:H amorphous film, H conc. correlation with low freq. noise 2-92795
 Si:H amorphous film, multiple DC discharge growth, ellipsometric study 2-92422
 Si:H amorphous film prep., evaporation method 2-62069
 Si:H amorphous films, H₂ evolution 2-93950
 Si:H amorphous films for electrophotography, photosensitivity, glow discharge deposition and doping 2-107435
 Si:H amorphous glow discharge films, elec. and optical props., elec. and mag. field effects 2-82407
 Si:H amorphous layers, refractive index dispersion, dark m-lines method 2-82946
 Si:H amorphous MIS struct., Langmuir-Blodgett film 2-87410
 Si:H amorphous p-i-n solar cell, photocurrent, voltage depend. 2-78211

hydrogen continued

- Si:H amorphous p-i-n solar cell, expt. study 2-105569
 Si:H amorphous photoreceptor drum, RF glow discharge deposition, electrophotographic props. 2-107436
 Si:H amorphous plasma deposited film, photoluminescence, sub-band gap excitation 2-87856
 Si:H amorphous reactively sputtered film, H anal. by IR spectroscopy, nuclear reaction and SIMS 2-76857
 Si:H amorphous solar cell, photovoltaic performance, film props., plasma deposition optimisation 2-83446
 Si:H amorphous sputtered films struct. correlation with prep. cond., STEM study 2-66400
 Si:H amorphous sputtered film, microstruct. and H bonding environments 2-76847
 Si:H amorphous sputtered thin film, carrier propagation, trapping and mobility 2-82783
 Si:H amorphous tetrahedrally bonded, simple model of hydrogenation 2-56418
 Si:H amorphous thin film Schottky barrier diodes, diode characts., film props. 2-82430
 Si:H amorphous thin films, ion-plated, photoconductivity and optical band gap 2-87331
 a-Si:H and a-Si:H:F, dangling bond centres energy level, ODMR study 2-110732
 a-Si:H film, annealing effects on ESR, elec. and optical props. 2-66588
 a-Si:H film, elec. props. optimisation using cross field plasma deposition, photovoltaic device appls. 2-83038
 Si:H films, amorphous, dependence of gap on hydrogen content, photoluminesc. and IR spectra study (Chinese) 2-110903
 a-Si:H films, growth and characterisation 2-83031
 a-Si:H films, mol. H₂ presence, proton spin-lattice relax. time meas. 2-61786
 a-Si:H films, motional narrowing effects of NMR spectra 2-77395
 a-Si:H films, optical absorption and density of states in band gap 2-72571
 a-Si:H films, Raman scatt. under high press. 2-72505
 a-Si:H films, residual stress elimination 2-61317
 a-Si:H films, SAW attenuation, paramag. defects, IR, ESR and SEM studies 2-110123
 Si:H microcrystalline glow discharge films, phys. props., substrate bias effect 2-87109
 Si:H n⁺-i-n⁺ struct., amorphous, threshold switching 2-82410
 a-Si:H n-i-p large area solar cells conversion efficiency anal. 2-83471
 a-Si:H n-i-p solar cells, built-in potential determ. 2-93903
 a-Si:H p-i-n high efficiency solar cell using SnO₂/glass substrate 2-93902
 a-Si:H p-i-n solar cell, window effects of a-Si:H layer 2-83472
 a-Si:H RF sputtered films, elec. props. rel. to threshold and memory switching appls. 2-87347
 Si:H₂, neutron irradi., defect states from IR absorpt. (Chinese) 2-110279
 Si:O,H,F, amorphous, photoluminescence, localised states, temp. depend. 2-87854
 Si-sapphire SOS, heteroepitaxial, hydrogenation induced improvement in electronic props. 2-66669
 a-Si:C:H, window material for a-Si solar cells 2-67861
 a-Si:C:H films, elec. cond., 130 to 350K, hydrogenation effect 2-71986
 a-Si:C:H layer, window effect in p-i-n a-Si solar cell 2-83472
 Si:C:H-Si:H amorphous heterojunction solar cell, high efficiency (Japanese) 2-116825
 Si_{1-x}C_x amorphous film, NMR and IR spectra study 2-77389
 Si_{1-x}C_xH, amorphous glow discharge films, ESR, IR and optical study 2-56934
 Si,C_{1-x}H, amorphous films, reactively sputtered in propane, photoinduced optical changes obs. 2-60179
 Si₂Ge_{1-x}H, amorphous, photoinduced midgap absorpt. 2-72528
 Si₃N₄H, amorphous plasma deposited film, AES and EELS study 2-71816
 Si₃N₄H, plasma deposited, H content 2-103801
 Si₃N₄H CVD film, chem. bonding changes and elec. effects 2-115930
 Si₃N₄H films, H conc., N-H absorption cross section, nuclear recoil method 2-71491
 SiO:H, porous antireflection coating for solar cells 2-75659
 SiO:H-Mg condensed vapours, IR spectra, appl. to O-rich stars 2-94703
 SiyC_{1-y}H, amorphous, photoinduced midgap absorpt. 2-72528
 Ti+H₂, self-propag. high-temp reaction, hydride synthesis 2-111112
 TiB₂+H reactivity electron beam enhancement 2-74938
 TiC(H,D), ion-implanted impurity retention, release and isotope exchange 2-69848
 TiC+H reactivity electron beam enhancement 2-74938
 TiO₂H electrodes, SIMS and AES anal. 2-57655
 V, hydrogen permeation, surface impurity layer effects 2-85241
 V, low temp. internal friction peaks, effects of deform. temp., orientation and H 2-72752
 V-H₂, ultra small angle X-ray and neutron scatt. 2-86521
 YSmLuCaGeIG:H, ion implanted bubble garnet film, mag. and cryst. props. 2-82644
 ZrMn₂-Fe,H, C14 struct., mag. props., H absorpt. effects 2-98853
 ZrNiH₂, interstitial site occupation of H atoms 2-86664

hydrogen bonds

- acetanilide and π electrons of arenes; N-H ... π type H-bond form., strengths 2-113986
 acetylene-HF (HCl), H-bonded complex, geometry and energy, ab. initio MO calcs. 2-113861
 adenine-thymine base pair, double H-bonding, CNDO/S calcs., molecular orbital correls. and orbital energy shifts 2-96452
 adenine-thymine base pair, triplet excited electronic states, intermol. H-bonds, charge transfer, CNDO calcs. 2-102602
 L-alanine crystal, Raman spectroscopic temp. study of NH₃⁺ torsional motion rel. to H-bonding 2-87779
 alcohol-water mixtures, H-bonding, ab initio MO calcs. 2-80469
 alcohols, Fourier transform far-IR matrix isolation spectra, vibr. freqs. of H bonded system 2-113978
 cis-amide uracil, and derivatives, sensitivity of amide V band to H bonding 2-90632
 amides, out-of-plane hydrogen bonded N-H group, temp. depend. band width 2-80736
 amides, solid, H-bonded, γ (N-H) mode width, temp. depend. 2-72492
 cis-3-aminocyclohexane, OH stretching and H bonds, CNDO/2 calcs. 2-70147

hydrogen bonds continued

- 2-aminoethanethiol, rot. isomerism and consts., H bonds, microwave obs. 2-75248
- ammonium hydrogen oxalate hemihydrate, transition to ferroelastic monoclinic phase, struct. study 2-92191
- anhydrous, H bonds in metastable forms, spectrosc. investig. 2-57078
- anthraquinone derivatives, radiationless deactivation and picosec. fluoresc. lifetimes 2-114028
- aqueous solution, magnetic field effects on photon transfer in hydrogen-bond systems (*Ukrainian*) 2-104037
- 2-arylamino-1,2-diarylethanephosphoric acid esters, stereochemistry, PMR study 2-114019
- benzenes, nitro-substituted, IR attenuated total reflection spectra 2-104866
- benzoic acid, crystal structure determ. by X-ray and neutron diffraction 2-60969
- p-benzoquinone complexes, H bonding, thermal electron transfer investig. 2-77072
- 3-benzoylamino propionic acid esters, H-bond form., steric effects, IR spectra, geometries and energies calc. 2-96552
- binary solutions, IR bandshapes and dispersion 2-96639
- biopolymer, proton-C distance meas. as mean of simultaneous determ. of donor and acceptor moieties, H-bonds 2-85707
- bis(trimethylammonium)hexachlorotellurate(IV), cryst. struct. 2-76415
- carbotetrachloride-arenes mixtures, N-H ... π type H-bond form., strengths 2-113986
- chloral hemiacetals, ^{35}Cl NQR 2-70277
- chlorobenzoquinone complexes, H bonding, thermal electron transfer investig. 2-77072
- 2-chloroethanethiol, rot. isomerism and consts., microwave obs. 2-75248
- compounds with intramol H-bonds with large proton polarisability, ^1H NMR spectra, solvent effect 2-102503
- cyanogen-HF(HCl), H-bonded complex, dissociation energies, ab initio SCF MO calcs. 2-64859
- cis-cyclohexane-1, 3-diol, OH stretching and H bonds, CNDO/2 calcs. 2-70147
- cyclopentanol- d_4 -(d_5), solid and liq., IR spectra 2-99135
- cyclopropane-HF(HCl), H bonding, ab initio SCF-MO calcs. 2-96432
- 2'-deoxy-2'-fluorocytidine, crystal struct. determ. from 3-D X-ray data 2-91940
- 1,4 diazabicyclo [2,2,2] octane-phenol (thiourea), H-bonded complexes, ^{14}N NQR study 2-108561
- beta-dicarbonyls, H bonding and proton migration, ^1H and ^{13}C NMR chem. shift, obs. 2-80680
- diforbamate, H bonds, IR and Raman study 2-54850
- dimers, H-bonded, ^1H and ^{14}N quadrupolar coupling consts., SCF MO calcs. 2-96449
- dimethyl ether-trichloromethane vapour, enthalpy of mixing, assoc. model 2-86888
- 3-dimethyl-amino-1-phenyl-2-propene-1-one, struct., H-bonds, dipole moments 2-114131
- β -dimethylaminopropiophenone, struct., H-bonds, dipole moments 2-114131
- diol salts, intramol. H bonds, IR continuum and NMR obs. 2-59799
- diphenyl disulphide derivatives, intramol. H bonding effects on conformation 2-75309
- diphenyl sulphide derivatives, intramol. H bonding effects on conformation 2-75309
- diphenylarsenous acid, cryst. and mol. struct. 2-103740
- DNA, H bond lifetime, nonradiative transition prob. study (*Russian*) 2-62552
- enniatin B, ionophoric antibiotic, mol. and cryst. struct., X-ray diff. study 2-67939
- ethanol, H complexes, vibr. anharmonic anal. IR spectra 2-108460
- ethanols trapped in low temp. matrices, far-IR studies 2-75273
- ethene-HF, config., interaction energy, ab initio SCF calcs. 2-113863
- ethene-HF, H-bonded pi complex, matrix isolated, vibr., IR obs. 2-90536
- ethylene-HF (HCl), H-bonded complex, geometry and energy, ab initio MO calcs. 2-113861
- febarbamate, H bonds, IR and Raman study 2-54850
- ferroelectric crystals, electrooptic activity of crystals with H bonds, macroscopic theory (*Russian*) 2-61876
- ferroelectrics, hydrogen bonded, electron spin-lattice relax., impurity dynamics 2-87577
- 3-fluoro-1-propanol, microwave spectra, rot., conformational study, weakness of O-H...F hydrogen bond 2-85639
- fluoroacetones gas-phase basicities, additivity of F substituent effects 2-78082
- fluoroalcohol-base complexes, IR studies in gas phase, CCl_4 soln. and Ar matrix 2-80597
- fluoroethanols trapped in low temp. matrices, far-IR studies 2-75273
- fluoromethane-DCI(DBr) complexes in liq. Ar and Kr solns., spectral and energy parameters 900-4000 cm^{-1} 2-59802
- fluoromethane-HCl(HBr) complexes in liq. Ar and Kr solns., spectral and energy parameters 900-4000 cm^{-1} 2-59802
- α -D-galactopyranose, H-bond system, theoretical determ. 2-98049
- glass, near IR absorption of H_2O , OH group vibr. bands 2-99125
- glycolic acid, struct., microwave spectrosc. investig. 2-96545
- 2-(2'-hydroxy-5'-methylphenyl)-benzotriazole, solns., excited state relax., fluoresc. lifetimes 2-85727
- ice, amorphous and cryst. state, electronic struct., X-ray emission study 2-87907
- ice, lattice parameters, Raman and X-ray study 2-104872
- ice Ih, Raman spectrum, OH stretching region, vibr. anal., anharmonic pot. energy functions 2-104867
- intermolecular interactions computation for H-bonded systems, intermol. interactions computations using charge transfer energy contrib. expansion 2-102563
- isopropanol- d_4 -HX complex, effect of H bonds on mol. vibr. (*French*) 2-85612
- isotope effect in H-bonded crystals, tunnelling effect 2-77459
- magnesium formate monoclinic and orthorhombic forms, struct. and thermal stability, X-ray diff. and IR spectra obs. (*French*) 2-60939
- methanol, H complexes, vibr. anharmonic anal. IR spectra 2-108460
- methanol, liq., struct., thermodynamic props. and H-bonds, pressure effect, intermolecular interactions 2-71326
- methanol- d_4 polymer, H-bonds, underdamped anharmonic stochastic oscill., IR obs. 2-85646
- methanol-water (organic solvent) mixtures 2-96579
- methyl phenyl sulphide derivatives, intramol. H bonding effects on conformation 2-75309

hydrogen bonds continued

- 4-methyl-7-oxocyclohexanone, H bonded complexes, luminesc. and laser radiation 2-108871
- N-methylacetamide-lactams, H bonding, IR obs. 2-83544
- methylalcohol liq., H-bonds, X-ray diff. study 2-103591
- methylammonium aluminium alum, X-ray and neutron diffraction study 2-60959
- molecules, $^{2\text{D}}$ quadrupole coupling, ab initio SCF calcs. 2-80655
- mononucleotide solutions, ^{31}P NMR, chem. shift (*French*) 2-75315
- $\text{N,N}'$ -di-n-hexyladipamide, a model for nylon 6,6 2-76323
- α -naphthol, IR vibr. spectrum and hydrogen bonding 2-110865
- nitrate, solvation by HNO_3 , IR spectra 2-73007
- 4-nitrobenzoic acid-phenolate, H-bonded complex, ^1H transfer, PMR and IR obs. 2-80602
- p-nitrophenol-donor systems, proton transfer and H-bonds, spectroscopic studies 2-70370
- nylon-12, oriented, mech. anisotropy, H bonding effects 2-105209
- organic substances, H-bonds in polymorphic modifications 2-97988
- oxo-2-pyrimidinone chloride, cryst. and aq. soln., IR and Raman spectra (*French*) 2-77533
- peroxylaminodisulphonate radical, rot. dynamics in alcohol solvents, EPR study 2-77374
- phenobarbital, H bonds, IR and Raman study 2-54850
- phenol- d_6 (d_7), isotope effects, H bonds, line shifts, vibr. spectra 2-64952
- phenols, H bonded, dispersed fluoresc. spectra in supersonic free jet 2-108610
- polyamide liquid crystals, thermotropic, and analogous small mol. diamides 2-103609
- polycrystalline p-hydroxybenzaldehyde, dielectric absorption in low-ultralow frequency region, protons dynamical behaviour along chain of H bond (*Japanese*) 2-116108
- propan-1-ol, H complexes, vibr. anharmonic anal. IR spectra 2-108460
- 1,3-propanediol, gas phase electron diff., mol. struct., H-bonds 2-96734
- pyridinium N-oxide perchlorates, acetonitrile soln., H bonds, UV obs. 2-80645
- 2-pyrimidone, cryst. and aq. soln., IR and Raman spectra (*French*) 2-77533
- shellac, cohesive energy density 2-76686
- slag, Fe-making, diffusion of water and H-bonding species 2-104072
- $\text{SnCl}_4 \cdot (\text{H}_2\text{O})_2$, and deuterated form, isostructural phase transition, pseudospin model 2-76662
- sodium phthalate, cryst. struct. 2-103741
- solutions, associated, equilib. const., enthalpy and entropy of association 2-67760
- squaric acid, low dimensional H bonded material, neutron and Raman spectroscopic studies 2-93199
- squaric acid, protonic ordering, strain effect 2-76664
- succinimide cryst., mol. reorientation and H bonding, PMR study 2-82726
- symmetric OHO bonds, comparison between predicted and meas. structural parameters 2-85835
- tetrabamate, H bonds, IR and Raman study 2-54850
- thiabenzazole homologues, fluoresc., solvent effects 2-59840
- 2-thiapyridone, isotope effects, H-bond IR obs. 2-108488
- trichloromethane, IR and Raman vibr. spectra in low temp. matrices 2-80599
- trifluoromethane, IR and Raman vibr. spectra in low temp. matrices 2-80599
- trypsin, conformational fluctuations of protein mol. 2-73185
- uracil tautomerism, mol. relax. effect 2-102661
- urea derivatives containing halophenyl group, intramol. NH-Cl H-bond 2-90422
- ureas, trisubstituted, containing chlorophenyl groups, IR spectra, conformational anal. 2-90544
- water, magnetic field effects on photon transfer in hydrogen-bond systems (*Ukrainian*) 2-104037
- water, supercooled, Raman spectra, H-bonds 2-61890
- xenon clathrate hydrate, struct. 1, far-IR spectrum and X-ray diff. 2-110843
- Ag $_2$ IF $_3$ ·H $_2$ O, cryst. struct., XPS, X-ray and neutron diff. study 2-76389
- Ag $_2$ F $_3$ ·2.5H $_2$ O, cryst. struct. 2-65929
- Al $_2$ O $_3$, stretching vibrs. of unperturbed and H-bonded OH and OD groups, appearance regions 2-116188
- (CN_2) $_2$ ·[M(CO) $_2$] $_2$ ·4H $_2$ O, M=Ce, Th, cryst., vibr., IR study 2-77512
- CO $_2$ ·HCl, ab initio SCF MO study, H-bond energies 2-54766
- CO $_2$ ·HF, ab initio SCF MO study, H-bond energies 2-54766
- Ca $_2$ Al $_2$ (OH) $_2$, IR spectra, H-bonds 2-96570
- CaSO $_4$ ·2H $_2$ O, gypsum, cryst. struct., neutron diff. refinement 2-65931
- CaScSi $_2$ O $_8$ (OH), cascandite, cryst. struct., X-ray diff. study 2-98009
- Cd(BrO $_3$) $_2$ ·2H $_2$ O, cryst. struct., X-ray diff. study 2-60933
- Cd $_2$ KCl $_4$ ·4H $_2$ O, cryst. struct., X-ray diff. study, least squares refinement (*French*) 2-81740
- Ce $_2$ (SO $_4$) $_3$ ·5(H $_2$ D) $_2$ O, crystal synthesis and struct., X-ray, Raman spectra and thermal anal. 2-67205
- Co complex, di(p-nitrobenzoate)tetraquocobalt(II) dihydrate, cryst. and mol. struct. 2-98032
- Cs $_2$ D $_2$ PO $_4$, quasi-one-dimens, H-bonded ferroelec., phase diagram, anisotropic compressible Ising model 2-87709
- CsH $_2$ (SeO $_3$) $_2$, ^{75}Se high resolution NMR 2-61779
- Cu(NO $_3$) $_2$ ·2.5H $_2$ O, cryst. struct. PMR and DMR study 2-81717
- 2'-deoxy-2'-fluorouridine, crystal struct. determ. from 3-D X-ray data 2-91940
- Fe(100) with adsorbed H $_2$ O, bonding and electron energy loss spectra 2-87030
- H $^+$ solvation by methanol and diethyl ether, SCF calcs. 2-62379
- H-bonded chain, proton transport, solitonic mechanism 2-110028
- HClN-HCl complex, H-bonds, rot. spectrum and mol. props. 2-59790
- HCl-acetonitrile (olefin) complexes, H-bonds, underdamped anharmonic stochastic oscill., IR obs. 2-85646
- HClO $_4$, anhydrous, H bonds in metastable forms, spectrosc. investig. 2-57078
- HClO $_4$ ·2H $_2$ O, IR and Raman spectra of glassy and liq. states (*French*) 2-87776
- HF·CO $_2$ (N $_2$ O), Ar matrix isolated, librational motion, IR obs. 2-64971
- HF·NN (OC), equilib. struct., pot. energy surfaces, H-bonds 2-102656
- HNO, photochem. complexation in low temp. matrices, IR obs. 2-67737
- HNb $_2$ I $_4$, H bonding, interstitial, calcs. 2-80472
- H $_2$ O, supercooled, mol. vibr., H bond enthalpy, Raman obs. 2-110839
- H $_2$ O-Ar vapour, enthalpy of mixing, assoc. model 2-86886
- H $_2$ O-trichloromethane vapour, enthalpy of mixing, assoc. model 2-86887

hydrogen bonds continued

- (H₂O)₂, environmental effects, self-consistent reaction field, CNDO/INDO calcs. 2-108384
 (H₂O)₂, H-bonds, vibr. intensity, ab initio calcs. 2-85528
 H₂O...HF, H-bonded heterodimer, conformation, pot. energy function, from microwave rot. spectra 2-75253
 H-SHF, struct., H bond stereochemistry, spectrosc. obs. 2-102499
 H-TiNbO₅, localisation of H, cryst. struct., neutron powder diffr. obs. 2-60937
 Hg₂AlF₆, 2H₂O, cryst. struct. determ. 2-55894
 HgHPO₄, cryst. struct., Patterson method 2-55898
 K₂Fe(CN)₆·3H₂O, vibrational spectrum and water of crystn. sublattice struct. in ferroelec. phase 2-72506
 K₂Pt(CN)₆·Br_{0.3}·2H₂O, H₂O mol. motion, PMR spin-lattice relax. study 2-93043
 La₂(SO₄)₃·9(H₂O), O single cryst., polarized Raman spectra, external vibr. modes, temp. effect (*French*) 2-72491
 LiD₂(SeO₃)₂, ferroelec., cryst. struct., neutron diffr. study 2-81733
 (Mg_{0.38}Fe_{0.08})₂Fe_{0.54}Al_{0.14}(Si_{3.66}Al_{0.34})O₁₀(OH)₈, lizardite, cryst. struct., polymorphism 2-98008
 Mg(NCS)₂·4H₂O, cryst. struct. determ. 2-76408
 MgNaO₄·7H₂O, cryst. struct. determ. 2-55907
 Mg·P₂O₅·2H₂O, synthetic, X-ray cryst. struct. determ. 2-55900
 MgS₂·6H₂O, cryst. struct. determ. 2-91893
 NH₃-O bonds, neighbouring monovalent metal cation effects 2-80450
 NH₃, formation of H-bonds, temp. effect, pion capture method study 2-65109
 (NH₄)₂Al(SO₄)₂·12H₂O, X-ray and neutron diffraction study 2-60959
 (NH₄)₂P₂O₇·2Te(OH)₆·2H₂O, cryst. struct. 2-60944
 NH₄SO₄, internal modes, normal coordinate anal., Raman study 2-116178
 (NH₄)₂TiF₆, cryst. struct., hydrogen bonds 2-91891
 (NH₄)₂[Pt(OH)₄], cryst. struct., least squares refinement, X-ray diffr. study (*German*) 2-81730
 Na₂As₂S₈·8D₂O, H-bonds, neutron diffr., X-ray diffr. and vibr. spectroscopic studies 2-55933
 Na₂PO₃S₂·12H₂O, disorder in cryst. struct. 2-65938
 Na₂[BO₃(OH)], cryst. struct. determ. 2-76381
 Na₂[Co(NCS)₄]·8H₂O, cryst. struct. 2-65933
 Na₄[M(CO)₄]·12H₂O, M=Cr, Th, cryst. vibr., IR study 2-77512
 Nb₄Cl₁₁, H bonding, interstitial, calcs. 2-80472
 Ni complex, Ni₂ en EDTA·4H₂O, cryst. struct. 2-98031
 PD alloys, dil., correlation between band struct. and hydride formation 2-98516
 Pd complex, bis(en)palladium(II) dichlorobis(en) palladium(IV) tetraperchlorate, cryst. struct. 2-65940
 Ru (001), adsorption of water, IR study 2-67060
 SCO...HCl, ab initio SCF MO study, H-bond energies 2-54766
 SCO...HF, ab initio SCF MO study, H-bond energies 2-54766
 Si:H amorphous sputtered film, microstruct. and H bonding environments 2-76847
 SiO₂, fused, diffusion of water and H-bonding species 2-104072
 SrNaPO₃·9H₂O, cryst. struct. X-ray diffr. study, full matrix least squares technique 2-81721
 VOAsO₄·nH₂O, layered structure, interaction between [VOXO]₂⁺ layers 2-71421
 VOPO₄·nH₂O, layered structure, interaction between [VOXO]₂⁺ layers 2-71421
 Zn(CIO₄)₂·6H₂O·Mn²⁺, EPR study of phase transition 2-81946

hydrogen compounds

- see also deuterium compounds; hydroxonium ion; ice; steam; tritium compounds; water
 automobile engine using hydrogen storage technology, mixture formation and combustion 2-83443
 ethene-HF, H-bonded pi complex, matrix isolated, vibr., IR obs. 2-90536
 (H₂Si₂Al₂O₄)₂⁻, zeolite model systems, nonempirical SCF MO studies 2-70142
 halide laser analysis 2-114254
 (HCl)₂, geometry, force consts., moments, ab initio SCF calcs. 2-80454
 HF chemical lasers ignited by CO₂-laser irradiation of SF₆-H₂, S₂F₁₀-H₂ mixtures 2-96936
 hydride ion+NO(CO), geometries and heat of reaction, MNDO calcs. 2-93778
 hydrogen halide mols., empirical pot. parameters 2-90643
 hydronium ions+hydroxide ion, neutralisation reaction, isotope effects, polarisation model study 2-72978
 isotope separation with UH₃, UD₃, and UH₃D_{1.5} 2-96122
 liquid crystal camera for IR HCN laser mode examination 2-70595
 metal hydrides, thermal, solvus and plateau press. hysteresis relationships 2-73008
 polyacetylene:H₂IrCl₆·6H₂O, dopant site effect on elec. cond. 2-87285
 ternary mixture of H/D/T compounds, CO₂ laser isotope separation 2-62412
 thermochemical H₂ cycles utilising ZnSO₄ decomposition 2-73160
 H³⁵Cl+H³⁷Cl, vibr.-vibr. energy exchange process, multiquantum transitions 2-70398
 H³⁵Cl+H⁷¹Br, vibr.-vibr. energy exchange process, multiquantum transitions 2-70398
 H⁷⁹Br+H³⁵Cl, vibr.-vibr. energy exchange process, multiquantum transitions 2-70398
 H₂ production via thermal decomposition of H₂S, separation by pressure swing adsorption 2-73161
 H₂ recovery from H₂S with metals or metal sulphides 2-73162
 H₂/F₂ photoinitiated laser, performance characs. with O₂ inhibitor 2-108866
 H₂BNH₂, ¹¹B, ¹⁰B and ¹⁴N nucl. quadrupole double reson. 2-80669
 HBS, D isotope effects, equilib. struct., force fields, IR obs. 2-80622
 HBr, angular distrib. param., mol. effects, PES using synchrotron radiation 2-70332
 HBr, dissociative electron attachment, H⁻ form., nonadiabatic transitions 2-85781
 HBr, valence orbitals, electron momentum distrib. and binding energies 2-102533
 HBr⁺, intramolecular dynamics, PES obs. 2-75353
 HBr+CO, vibr. relax., rate consts., fluoresc. intensity meas. 2-108689
 HC₂BSiO₄, quadrupole lines dipolar transition, ¹¹B NMR study 2-110658
 H₂CH⁺-N₂ production, appl. to Titan atmosphere (*French*) 2-100816
 HCN (HNC), ground states, freq. optimised pot. energy functions 2-90644
 HCN, anharmonic force fields, ab initio calcs. 2-75174

hydrogen compounds continued

- HCN, band struct., neighbour strand interactions, self-consistent electrostatic field calcs. 2-92440
 HCN, C-state, photofragment fluoresc. spectrum 2-85754
 HCN CW laser, submillimeter wavelength meas. 2-102811
 HCN CW sub-MM laser output characs. based on temp. props. of electrons and gases 2-96922
 HCN, dipole moment and excited vibr. state, sub-Doppler IR mol. beam spectroscopy 2-75256
 HCN, dipole polarisabilities, mol. moments, HF approx. 2-108351
 HCN, excited vibr. states, direct overtone spectra, classical chaos and quantum simplicity 2-108536
 HCN gas, elect. reson. obs. 2-70313
 HCN, highly excited, struct., force const., dissoci. energies, mol. pot. 2-96676
 HCN hyperfine anomalies in cold dark clouds from EHF obs. 2-94812
 HCN in Jupiter and Saturn atm., IR obs. 2-58298
 HCN in NGC 6334 N, M17 SW, W51 and DR 21(OH), mol. clouds, far IR obs. 2-63588
 HCN in Orion A cloud, spectral data interpretation 2-106870
 HCN, integrated IR absorpt. bands intensities 2-70246
 HCN, isotope effects, dipole moments, vibr., SCF, MRD-CI calcs. 2-85563
 HCN, matrix isolated in Ar, intermolecular vibrs., far-IR obs. 2-113973
 HCN ν_7 R(16) transition investigation using sub-Doppler excited mol. energy transfer spectroscopy 2-54988
 HCN⁺, saturated absorpt., Doppler-free IR-acoustic spectroscopy using colour centre lasers 2-58916
 HCN, stretching vibr. states, ab initio pot. energy functions, electron correl. effect 2-85765
 HCN, traveling wave sub-Doppler excited, energy transfer spectroscopy, line profile anal. 2-70220
 HCN, VUV absorpt. spectra 2-96592
 HCN⁺, intramolecular dynamics, PES obs. 2-75353
 H¹³C¹⁵N, spin-spin coupling consts., magnitude and sign determ. 2-65008
 HCN-CW laser, effect of oxygen 2-85937
 HCN-HCl complex, H-bonds, rot. spectrum and mol. props. 2-59790
 (HCN)₂, ²H and ¹⁴N quadrupolar coupling consts., SCF MO calcs. 2-96449
 HCN(HNC), one-electron bases for electron correl. methods 2-80498
 HCN₂, pot.-functions, equilib. functions, ab initio MO calcs. 2-90441
 HCN...HF, ²H and ¹⁴N quadrupolar coupling consts., SCF MO calcs. 2-96449
 HCO A state, predissoc., laser optogalvanic study, rot. quantum number, Coriolis interaction 2-80743
 HCO⁺ in dense molecular clouds, ionization state 2-63574
 HCO⁺, microwave spectra, struct. 2-54835
 HCO⁺/DCO⁺ abundance ratio in dense interstellar clouds, temp. depend. 2-94806
 HCP, ground states, freq. optimised pot. energy functions 2-90644
 HCP⁺, electron impact excited A² Σ^+ →X² Σ^+ emission spectra 2-80640
 HCS⁺, microwave spectra, struct. 2-54835
 HCSI-HSIC, struct. and relative stability 2-64876
 HCSI⁺-HSIC⁺, struct. and relative stability 2-64876
 HCl and DCl in CCl₄, IR spectra, solute-solvent interactions 2-102478
 HCl, band struct., neighbour strand interactions, self-consistent electrostatic field calcs. 2-92440
 HCl, chemisorpt. on Pb(110), ionic adlayer form. 2-105501
 HCl, corrosion of Al alloys, influence of anions 2-67630
 HCl, electron scatt., nuclear excited Feshbach reson. 2-90708
 HCl, electronic spectrum assignment, ab initio CI calcs. 2-70211
 HCl, electronic struct. and photodissoc. 2-102376
 HCl, ground state dissociative electron attachment rate meas. 2-65097
 HCl, high-density fluid, vibr. energy relax. 150 to 345K 2-80786
 HCl in Ar, broadening of rot. lines, phonon coupling effect 2-102540
 HCl in Ar matrices, IR spectra, vibr., proton affinities 2-80608
 HCl, in ethylene-glycol-water mixtures, thermodynamics, EMF meas. 2-98309
 HCl in liquid Ar, local interactions, spectroscopic demonstration, cryosystems 2-70248
 HCl isolated in solid Ar, molecular dynamics calcs. 2-102465
 HCl, L₁-III emission spectra, many-electron effects 2-90568
 HCl, latitudinal concentration variability above 11.5 km 2-78756
 HCl, liq., dielectric const. and relax., computer simulation 2-66972
 HCl, low lying resonance, CI calcs. 2-97909
 HCl, optoacoustic meas. of specific absorpt. coeffs. at DF laser wavelengths 2-112116
 HCl, photoionisation cross sections, UPS obs. 2-65055
 HCl, solubility in GeCl₄, Henry's law, total press. meas. 2-92214
 HCl, solubility in SiCl₄, 450K and 1.7 MPa 2-56198
 HCl, vibr. excitation by slow electrons, antibounded intermediate state (*Russian*) 2-85827
 HCl, vibr. transitions, rot. line strengths, quantum mechanical operators 2-75139
 HCl, vibrational excitation in electron beam excited Ar-HCl mixture, expt. study 2-96747
 HCl, vibronic transitions and photoionis., photoelectron spectrosc. obs. 2-108626
 HCl, X² Σ^+ state, pot. energy function calcs. 2-114065
 HCl⁺, ground state, charge exchange reactions, rate coeffs., selected ion flow study 2-88341
 HCl⁺, rot. spectrum, laser mag. reson. 2-80688
 H³⁵Cl, phys. adsorp. on cryst. Ar, theory 2-92341
 HCl-acetonitrile (olefin) complexes, H-bonds, underdamped anharmonic stochastic oscill., IR obs. 2-85646
 HCl-cyanogen, H-bonded complex, dissoci. energies, ab initio SCF MO calcs. 2-64859
 HCl-DCl isotopic pairs, dipole moment and polarisability, deuterium isotope effects 2-90735
 HCl-H₂O 2:1 mixture, defect echant for GaSb single cryst. 2-91972
 HCl-Xe(Ar), far IR spectra, temp. depend., intermol. pot. well depths 2-102473
 HCl+Ar, energy transfer, vibr. and translational energies effects 2-102588
 HCl+Ar, vibr. and rot. relax., quasiclassical trajectories on model pot. energy surfaces 2-90673
 HCl+CO₂(N₂O), vibr. relax. studied using IR chemiluminesc. method, quenching probabilities 2-72969
 HCl+CO(NO)(O₂), vibr. relax., rate consts., fluoresc. intensity meas. 2-108689

hydrogen compounds continued

- HCl+Ca(P_1), reactivity, atomic reagent approach geometry effect, chemiluminescence 2-111476
 HCl+D, reaction kinetics, infinite-order-sudden method 2-88348
 HCl+D reaction, abstraction vs. exchange study 2-83357
 HCl+He, polarisation transitions, cross sections, close-coupling study 2-80781
 HCl+quencher molecules, vibr. relax. rate const. meas., dipole and dispersion interactions 2-70397
 HCl+Xe(P_2), XeCl form., vibr. enhancements, rate const. determ., fluorescence, 2-72966
 HCl(HBr)-fluoromethane complexes in liq. Ar and Kr solns., spectral and energy parameters 900-4000 cm^{-1} 2-59802
 HClO₂, anhydrous, H-bonds in metastable forms, spectrosc. investig. 2-57078
 HClO₂·2H₂O, IR and Raman spectra of glassy and liq. states (French) 2-87776
 HD compressed by Ar, rotation and rot.-vibr. Raman spectra, collisional effects 2-108526
 HD, liquid, homogeneous nucleation temp. meas. 2-104095
 HD, liquid, surface tension temp. depend., quantum effects 2-56302
 HD, rot. and vibr. consts., photoionisation photoelectron obs. 2-96634
 HD, rotationally inelastic scatt. from cryst. surface, bound level resonances calc. 2-67175
 HD, surface scatt. on Pt (111), rot. mediated selective adsorption calcs. 2-87012
 HD⁺, asymmetry of electron distrib. calc. 2-59693
 HD+F⁺(Cl⁻), reactive scatt. 2-88345
 HD+N₂O, N₂O vibr. relax., shock tube study 2-90666
 HD₂⁺+foil, beam foil level excitation, foil thickness depend. 2-75390
 HDO, ion collisions, Coriolis transition and impact parameter Born theory, perturbative treatment 2-65071
 HD¹⁶O, ground state, rot. consts., IR obs. 2-75265
 HF, Auger energies, Green's function methods 2-102543
 HF, band struct., neighbour strand interactions, self-consistent electrostatic field calcs. 2-92440
 HF, Bethe-Salpeter eqn., mol. appls. 2-80437
 HF, Bonding energetics, total and kinetic energies, relation to H₂ and F₂ 2-59963
 HF CW chemical lasers, medium induced phase aberrations 2-102784
 HF CW subsonic chemical laser, 120 W power output, design and performance characts. 2-96985
 HF chemical laser, high initiated, surface-spark UV flash initiation 2-65252
 HF chemical laser initiated by 308 nm radiation from an XeCl excimer laser 2-114261
 HF, continuous wave chemical laser with chain excitation mechanism, ring model 2-55137
 HF, dipole moment and excited vibr. state, sub-Doppler IR mol. beam spectroscopy 2-75256
 HF, dipole polarisabilities, mol. moments, HF approx. 2-108351
 HF doping of polyacetylene, ¹³C NMR study 2-76473
 HF, elastic field effect, IR multiple photon absorpt. 2-85759
 HF, in intense laser field, classical and quantum mech. calcs. 2-102544
 HF, latitudinal concentration variability above 11.5 km 2-78756
 HF, mol. mag. props., electron cor. effects 2-108398
 HF, multiphoton dissociation, time independent quantum mechanical theory 2-102556
 HF, multiphoton excitation in intense laser and static electric fields, quantum dynamics, Floquet theory 2-108652
 HF, multipole moments and polarisabilities, CI and perturbation theory methods 2-75192
 HF, NMR spin-spin coupling, ab initio calc. 2-102495
 HF, nonideal associated vapour, thermodynamic anal. 2-86374
 HF oligomers, IR absorbance, band attribution 2-85648
 HF, pot. energy curve, Rydberg-valence mixing, spectra, ab initio CI calcs. 2-54777
 HF pulse chemical laser initiated by Blumlein discharge (Chinese) 2-65209
 HF rot. lasers, V-R multiquantum energy transfer by CO (CO₂) 2-102785
 HF, rotationally inelastic scatt. from LiF (001) 2-67174
 HF simple pulsed laser for optical expts. 2-55181
 HF/DF recirculating laser, high-repetition-rate 2-65255
 HF-CO₂ (N₂O), Ar matrix isolated, librational motion, IR obs. 2-64971
 HF-Cl₂, struct., hyperfine consts., mol. beam elec. reson. 2-108553
 HF-cyanogen, H-bonded complex, dissc. energies, ab initio SCF MO calcs. 2-64859
 HF-DF chemical laser, rotational nonequilibrium analysis 2-80941
 HF-NN (OC), equilib. struct., pot. energy surfaces, H-bonds 2-102656
 HF+Ar, energy transfer, Monte Carlo quasiclassical trajectory study, vibr.-rot. states 2-96684
 HF+Ba(Sr), state to state reaction dynamics studied using laser induced fluoresc. 2-105458
 HF+HF, vibr. relax. studied by 3-D quasiclassical trajectories and cross correl. method 2-59909
 (HF)_n, n=2-6 cluster, IR vibr. predissoc. spectroscopy 2-59989
 HI, photodissociation, H Lyman- α line by fluoresc. Doppler obs. 2-54800
 HI, valence orbitals, electron momentum distrib. and binding energies 2-102533
 HI, visible and UV spectra, electronic struct. 2-85681
 HI⁺, time of flight mass spectrometric obs. 2-59971
 HI-dimethyl ether, mol. interactions in N₂ matrices, IR and Raman spectra 2-96567
 H₂I⁺, time of flight mass spectrometric obs. 2-59971
 HIO₃, cryst., phase transition under press., NQR investig. 2-110694
 HIO₃ crystal, α -phase, NQR spectra, hydrostatic pressure effect 2-93049
 H₁₆MoO₃, hydrogen bronze, enthalpy of formation, microcalorimetry study 2-93808
 H₂MgO₃ solid state struct., H attachment study 2-98014
 HN₂⁺, microwave spectra, struct. 2-54835
 HN₃, dissociation process, ab initio study 2-88355
 HN₃, rotational spectra from ab initio calcs. 2-59682
 HNC, heat of form. determ. by ion cyclotron double reson. spectroscopy 2-83403
 HNC, vibr. rot. emission spectrum near 3 μm 2-80839
 HNC, vibr.-rot. IR emission spectrum 2-80620
 HNCO, Coriolis-induced rot. struct. in IR spectrum 2-80593
 HNCO, dissociation process, ab initio study 2-88355
 HNF₂, vertical ionisation pot. calc. by perturbation corrections to Koopmans' theorem 2-54987

hydrogen compounds continued

- HNO electronic spectrum, mag. field and time-resolved study 2-75342
 HNO, geometry, force consts., test of new SCF method 2-108367
 HNO, photochem. complexation in low temp. matrices, IR obs. 2-67737
 HNO⁺, prod. from NH₂OH, heat of form. 2-108642
 HNO⁺, vibronic and rot. struct., visible spectrum, ab initio study 2-85677
 HNO₂, rotational isomers, ab initio mol. orbital calc. 2-75177
 HNO₂, atm. determ. using diffusion denuder with filter pack 2-93968
 HNO₂, atmos. chem. composition obs. in stratosphere 2-83890
 HNO₂, atmospheric, determ. of total amount above Mont-Louis (French) 2-112129
 HNO₂, in atmosphere, meas. during stratospheric warming at 54°N in February (1979) 2-100456
 HNO₂, latitudinal concentration variability above 11.5 km 2-78756
 HNO₂, relative permittivity in dinitrogen tetroxide (Russian) 2-57009
 HNO₂+HO, reaction rates, flash photolysis and reson. fluoresc. 2-105460
 HNO₂+OH, chem. reaction rate const. temp. depend. 2-78794
 HNO₂+OH, rate consts., product distrib. discharge flow EPR study 2-99657
 H₂NO, protonated and deprotonated ions, ligand in complexes, SINDO/1 calcs. 2-85548
 HNO₂(-d₁) internal rot., IR spectrum 2-75460
 H₂NOH, protonated and deprotonated ions, ligand in complexes, SINDO/1 calcs. 2-85548
 HNSO, force field, vibr. freq., ab initio CI and basis set calcs. 2-75195
 H₂NSO₂, solid, mol. reorientation, NMR spin-lattice relax. 2-72368
 HNB₄111, H bonding, interstitial, calcs. 2-80472
 HNB₃O₃, cubic perovskite, ion exchange prep. from LiNbO₃, characterisation 2-60953
 HNB₃O₃·xH₂O, proton conductor, charact. 2-104054
 HO+HNO₂(H₂O₂), reaction rates, flash photolysis and reson. fluoresc. 2-105460
 HO₂, mm and submillimeter spectrum, effect of unpaired electron spin and nuclear hyperfine interactions 2-108483
 HO₂, photodissoc. at 193 and 248 nm, O(¹D) obs., quenching rates 2-72999
 HO₂, radical, thermal prod. by alkoxy radical + O₂ reaction 2-62384
 HO₂+Cl, rate const. and branching ratio, temp. depend. 2-105459
 H₂O, adsorption on Au discontinuous thin film, effects on I-V characts. 2-110499
 H₂O maser survey of galactic plane at 22 GHz 2-79189
 H₂O mixing ratio in mesosphere from 22 GHz water vapour absorption 2-63046
 H₂O superbroadening spectrum, 5300 Å, using focused picosecond pulses (Chinese) 2-96584
 H₂O₂, atmospheric chemistry 2-78791
 H₂O₂, cis- and trans-barrier calc. using perturbative configuration interaction method 2-102399
 H₂O₂, lone-pair interactions, internal rot., pot. energy curves 2-64894
 H₂O₂, ν_2 (b) band, IR spectra, band model anal. 2-75266
 H₂O₂+Cl₂, singlet O₂ generation reaction, evaluation of amines as bases 2-78080
 H₂O₂+HO, reaction rates, flash photolysis and reson. fluoresc. 2-105460
 H₂O₂ struct., bonding, IR matrix isolation spectra 2-96560
 H₂O₂+D₂O isotope exchange reactions 2-78076
 H₂O₂+H₂O⁺, reactive collision, energy distrib. functions calcs. 2-105476
 H₂O₂⁺+OH⁻, reactive collisions, energy distrib. functions calcs. 2-105476
 HOC⁺, microwave spectra obs. 2-70235
 HONO, in N₂ and Ar matrices, IR laser photoisomerisation study 2-111471
 H₂O...HF, H-bonded heterodimer, conformation, pot. energy function, from microwave rot. spectra 2-75253
 H₂O₈(CO)₁₀R (R=organic moiety), metal mol. clusters, UV photoelectron spectra 2-65124
 HPF⁺, electronic struct., geometry and charge distrib. calcs. 2-59705
 HPO₃, hydrated microdrop, normal-super liq. transform., SEM study 2-98258
 H₂PO₄⁻+Mg²⁺(Be²⁺)(Na⁺)(Li⁺) interactions, ab initio SCF study, model of cation binding to nucleic acid 2-88344
 H₂PO₄, diamag. susceptibility, ³¹P NMR 2-108576
 H₂PO₄ electrolyte, for electropolishing single-phase Cu-Al 2-116617
 H₂PO₄, polarisation model appls. 2-60861
 H₂P₂O₇, polarisation model appls. 2-60861
 HS⁻, hydrated, mixed electrostatic quantum chem. approach MO calcs. 2-85530
 H₂S, adsorpt. on MoS₂, binding energies 2-105500
 H₂S, bond length and angle, ab initio calcs., uniform basis sets 2-80451
 H₂S detection by SnO₂ solid state gas detection humidity effects 2-64010
 H₂S, dipole polarisability, Kerr effect, temp. depend. 2-102514
 H₂S, gas, equation of state meas. 2-71057
 H₂S, ground-level daily variations in France 2-83872
 H₂S, Lyman emission spectra, many-electron effects 2-90568
 H₂S, PES following multiphoton ionisation 2-85737
 H₂S, photofragmentation mechanism studied by multiphoton ionisation photoelectron spectroscopy 2-111500
 H₂S, polarisability variation, D-isotope effect, rot. Raman and Rayleigh scatt. study 2-75292
 H₂S, role in corrosion and H₂ embrittlement of steel 2-77996
 H₂S, rot. Raman spectra and principal optical polarisabilities (French) 2-75290
 H₂S, sulphidation of Fe, ESCA obs. 2-111027
 H₂S⁺+S⁻+H₂, metastable reaction, mechanism, product energy distrib., mass spectra anal. 2-57597
 H₂S⁺, zero-field splitting of ² Π mol. states, ab initio multi-config. wave-function calcs. 2-96464
 H₂S+HCl⁺, charge exchange reactions, rate coeffs., selected ion flow study 2-88341
 H₂S+O, supersonic O beam, heat of form., reactive scatt. study 2-83375
 H₂S+O, translational energy threshold functions 2-72953
 (H₂S)₂, geometry and relative stabilities, exchange interactions effects 2-59883
 H₂S₂, lone-pair interactions, internal rot., pot. energy curves 2-64894
 H₂S₂HF, struct., H bond stereochemistry, spectrosc. obs. 2-102499
 HSO radical, Stark shift, fluoresc., electric dipole moment determ. 2-85713
 H₂SO₄, aerosol, IR laser backscatter spectra, appl. to atm. 2-65166

hydrogen compounds continued

- H_2SO_4 evaporation from particles in stratosphere aerosol layer, effect on stratosphere S budget 2-112046
 H_2SO_4 , pollution over St. Louis (1977-8) 2-93959
 H_2SO_4 , struct. and torsional modes, ab initio calcs. 2-70134
 $\text{HSbO}_3 \cdot x\text{H}_2\text{O}$, proton conductor, charact. 2-104054
 H_2Se , anharmonic vibr. problem, soln. by var. method 2-113962
 $(\text{H}_2\text{Si}_2\text{AlO}_4)_x$, zeolite model systems, nonempirical SCF MO studies 2-70142
 $\text{H}_2\text{Si}^{19}\text{Br}$, rovibr. anal. of ν_6 fundamental near 630 cm^{-1} 2-90508
 HSiF , form., struct. and matrix isolated IR spectrum 2-108493
 H_2SiF , force consts., rot.-vibr. anal., IR obs. 2-64973
 H_2SiO_4 , zeolite model systems, nonempirical SCF MO studies 2-70142
 HSiOH , form., matrix isolation IR spectra, isotope effects 2-108492
 H_2SiSi and its isomers, stability and bonding, generalised valence bond pot. study, SCF MO calc. 2-64884
 $\text{H}_2\text{SnCl}_6 \cdot 10\text{H}_2\text{O}$, cryst. struct. study (German) 2-76373
 HT , liquid, homogeneous nucleation temp. meas. 2-104095
 HT , liquid, surface tension temp. depend., quantum effects 2-56302
 HTaO_3 , cubic perovskite, ion exchange prep. from LiTaO_3 , characterisation 2-60953
 H_2TaO_6 , defect pyrochlores, cryst. struct., neutron diff. study 2-60950
 $\text{HTaO}_3 \cdot x\text{H}_2\text{O}$, proton conductor, charact. 2-104054
 HTaWO_6 , defect pyrochlores, cryst. struct., neutron diff. study 2-60950
 $\text{HTaWO}_6 \cdot \text{H}_2\text{O}$, defect pyrochlores, cryst. struct., neutron diff. study 2-60950
 HTiNbO_3 , localisation of H, cryst. struct., neutron powder diff. obs. 2-60937
 $\text{HUO}_2\text{PO}_4 \cdot 4\text{H}_2\text{O}$, hydrogen gas sensor using electrochemical concentration cell 2-112888
 $\text{H}_2\text{V}_2\text{O}_5$, hydrogen bronze, enthalpy of formation, microcalorimetry study 2-93808
 H_2WO_3 , hydrogen bronze, enthalpy of formation, microcalorimetry study 2-93808
 $\text{H}_2\text{W}_{12}\text{P}_{40}$ and $\text{H}_2\text{MO}_{12}\text{P}_{40}$, elec. cond. of hydrated cpds., and mixed crystals. 2-56584
 HeH^+ formation and destruction in plasma appl. to planetary nebulae and dense clouds 2-78943
 $\text{He}^+ + \text{HCl}$, H polarisation and ionisation 2-70439
 $\text{Hg}(\text{ClO}_4)_2 \cdot \text{HClO}_4 \cdot \text{H}_2\text{O}$, vibr., IR and Raman study (Russian) 2-87801
 $\text{LiO}^+ \cdot \text{HIO}_3 \cdot \text{LiOH} \cdot \text{H}_2\text{O}$, phase equilibria, microscopic obs. 2-86599
 Mn^{2+} -citric acid- H_2SO_4 - KBrO_3 , chemical system bifurcation diagrams 2-72957
 Mn^{2+} -malic acid- H_2SO_4 - KBrO_3 , chemical system bifurcation diagrams 2-72957
 NHO_3 , air pollution of Los Angeles, USA 2-105624
 NHP-HPN , struct. and relative stability 2-64876
 OH pure rotational laser, pumping mechanism anal. 2-96932
 $\text{OH} + \text{HNO}_3 \rightarrow \text{NO}_3 + \text{H}_2\text{O}$, atmospheric reaction channel study (French) 2-88931
 Pu(IV) complex formation, with SO_3 ions, spent fuel extraction appl. 2-64548

hydrogen distribution see *hydrogen economy***hydrogen economy**

- alternative routes to steel based on hydrogen from cheap hydroelectric power 2-73165
 assessment for long term energy systems in Japan 2-73159
 automobile engine using hydrogen storage technology, mixture formation and combustion 2-83443
 bipolar cell for advanced alkaline water electrolysis 2-99849
 catalytic gasification of residual pitch and fluid coke from tar sands bitumen upgrading process for hydrogen and fuel gas production (Japanese) 2-57737
 catalytic thermal decomposition of H_2SO_4 and production of HBr by the reaction of SO_2 with Br_2 and H_2O 2-57740
 continuous microbial production of hydrogen gas 2-83520
 convective-diffusive type catalytic burner using a Pt catalyst supported on inert porous materials for H_2 combustion 2-73163
 cooperative international liquid hydrogen automotive progress report 2-73166
 Daimler-Benz hydride vehicle project 2-57742
 electric power storage in metal hydride system (German) 2-62508
 electricity generation from hydrogen, costs and efficiencies (German) 2-73168
 electrolyte for water electrolysis, optimal structure study 2-71715
 electrolytic H, potential role in Canada 2-93951
 ferrous metals, adsorbed and absorbed H_2 characts. 2-71791
 flash carbonisation of coal to produce synthesis gas and low-sulphur char 2-99748
 fusion reactor, HYFIRE, high temp. water electrolysis appl. 2-88417
 gas bubble behaviour and ohmic potential drop during water electrolysis 2-72989
 gas bubble behaviour during water electrolysis 2-99685
 gas turbine/steam turbine combined cycle using liquefied hydrogen as fuel, performance anal. 2-73164
 H_2 production by alkaline electrolysis of water, research progress from 1976-1980 (French) 2-105604
 high temperature fuel and steam electrolysis cells using proton conductive solid electrolytes 2-105554
 hydrogen as fuel gas 2-57738
 hydrogen by water electrolysis as basis for small scale ammonia production—a comparison with hydrocarbon based technologies 2-57741
 ignition when injected into high temperature oxidiser experimental study 2-99847
 large-scale production plants, future development (German) 2-62506
 low overvoltage electrocatalysts for hydrogen evolving electrodes 2-73011
 metal hydrides, energy conversion systems, props. and appls. 2-111594
 methane flowing into cold plasma, chemical behaviour, H-production (French) 2-91555
 Mg production process economics projection and impacts on cost of magnesium hydrides 2-73158
 photoelectrochemical generation by surface modification of p-type Si semiconductor photocathodes 2-73167
 pressurised hydrogen gas transport and storage in a hydrogen economy (German) 2-93949
 production by immobilised cells, light dependent dissimilation of organic substances, investigation 2-57739
 production by water splitting, thermochemical cycles 2-57743
 production of H_2 , CO_2 radiolysis potential 2-99844
 S/I thermochemical water splitting cycle studies 2-99845

hydrogen economy continued

- solar energy storage as H_2 via water electrolysis, system design and evaluation 2-83523
 solar H_2 production using two-step-thermochemical cycles 2-83522
 solar photoelectrochemical cells, generation of H and electricity, interfacial oxide layer mechanisms 2-105576
 solid polymer electrolyte water electrolysis 2-73157
 SOPHOCLE photovoltaic concentrator generator producing energy for water electrolysis cell 2-99795
 space flight appl. developments 2-83524
 storage capacity of Mg, synthesis and study of reversible hydrides based on Mg rich alloys of La, Ce and mischmetal (French) 2-78261
 storage materials: properties and possibilities 2-67894
 sulphur-iodine thermochemical water-splitting cycle bench scale testing preliminary results 2-73156
 thermochemical H_2 cycles utilising ZnSO_4 decomposition 2-73160
 transition metal complex photo-chem. for H_2 production from solar energy 2-62507
 water electrolysis, electrocatalysts and separators for use in KOH and LiOH solutions 2-62407
 water electrolysis cell, alkaline, development and parametric testing 2-73169
 CaNi_5 alloy long-term test and stability for H_2 storage application 2-105601
 CaNi_5 , H_2 and D_2 desorpt. isotherms meas., H_2 storage appl. 2-105506
 H_2 catalytic combustion, advantages and disadvantages of using catalytic heater 2-99850
 H_2 catalytic combustion, fundamental conditions for burner design 2-99749
 H_2 photoevolution and waste water treatment by agar-entrapped cells of *Rhodospseudomonas palustris* and *Rhodospirillum rubrum* 2-99821
 H_2 production by thermochemical decomposition of water using bench scale plant employing Mark-13 process 2-83521
 H_2 production by water electrolysis using off-peak nuclear power, economics (French) 2-105603
 H_2 production from coal, storage facilities and techniques (French) 2-105605
 H_2 production via thermal decomposition of H_2S , separation by pressure swing adsorption 2-73161
 H_2 recovery from H_2S with metals or metal sulphides 2-73162
 H_2 transmitting system, batch-type, using metal hydrides 2-99851
 H_2 utilisation as fuel, technical-economic potentialities for steel production 2-83444
 H_2O electrolysis in alkaline media at intermediate temp. 2-99848
 LaNi_5 hydriding, kinetic model and rate eqns. 2-57608
 $\text{Mg}_2\text{Ni}_{1-x}\text{Be}_x$ alloys H_2 absorption by beryllium substitution, pressure-composition isotherms 2-105602
 Ni-Cr stainless steels corrosion resistance in thermochemical cycle of hydrogen production using concentrated sulphuric acid 2-72863
 Ni- H_2 battery technology development and stations for spacecraft applications 2-83468
 Pd-H, mechanical and elec. props. recovery after phase transitions (Russian) 2-116460
 SO_2 depolarised electrolysis for H_2 production, development status 2-99846
 Si-H, amorphous, H_2 evolution 2-66280
 Si-H amorphous films, H_2 evolution 2-93950
 ThNiAl, absorption of H_2 , thermodynamic and struct. study 2-56196
 UMaI ($\text{M} = \text{Ni}, \text{Co}, \text{Mn}$), absorption of H_2 , thermodynamic and struct. study 2-56196
- hydrogen embrittlement**
 creep fracture, intergranular, aggressive environments 2-83201
 fracture zone position examination 2-99551
 Hastelloy alloy G, roles of ordering and impurity segregation as H-assisted crack propag. 2-57481
 Hastelloy C-276 and G, Ni-base stainless alloys, H transport rel. to H embrittlement 2-99539
 intergranular cracking, dynamic model and impurity segregation effect 2-72832
 metal fasteners, ductility monitoring during production 2-62370
 metals, corrosion cracking, physicochem. aspects 2-88284
 rare earth-Si-Fe alloys, self-poisoning, X-ray diff. and electron microscopy invest. (Chinese) 2-62249
 sheet, multiaxial loading conditions, punch-stretch testing, fracture limit diagram 2-88323
 steel, 1020, hydrogen damage obs. 2-57480
 steel, alloy, crack initiation, effect of H source 2-57474
 steel, alloy, fracture behaviour, effects of comp. variations and ageing treatments in air and H_2 2-67522
 steel, alloy, high strength, H stress cracking, effect of P conc. 2-77938
 steel, alloy, quenched and tempered, fracture, effect of H_2 2-67527
 steel, austenitic, influence of gaseous corrosion environment subcritical crack growth 2-83285
 steel, austenitic stainless, crack tips prod. by SCC and hydrogen embrittlement, HVEM obs. 2-77978
 steel, austenitic stainless, H embrittlement (French) 2-105327
 steel, austenitic stainless, mechanical hysteresis in low-cycle fatigue, electrolytic H influence 2-88289
 steel, austenitic stainless, phase transform, H-related 2-111298
 steel, C, Cd plated, ductility, surface layers H content influence 2-67538
 steel, C, H-trapping phenomena 2-98288
 steel, C, pearlitic, H cracking 2-105321
 steel, C, retarded fracture, H influence 2-67540
 steel, C, type Ck 35, hydrogen embrittlement detection by AE 2-62192
 steel, CC H embrittlement and permeability in H_2S media, quaternary ammonium salts influence 2-67541
 steel, corrosion and H_2 embrittlement, role of H_2S 2-77996
 steel, Cr type, H impregnation behaviour and embrittlement resist., microplastic defor. influence 2-99552
 steel, Cr-Mo, H stress cracking, enhanced resist., role of Mo 2-99537
 steel, Cr-Mo, high strength, delayed fracture strength, influence of residual stress due to surface treatment (Japanese) 2-72810
 steel, Cr-Mo, pressure vessel, autoradiography of H trapping rel. to hydrogen embrittlement (French) 2-62213
 steel, Cr-Mo type, plastic defor. influence on H transport 2-71728
 steel, Cr-Ni type, low-cycle fatigue, combined influence of external H atm. and preliminary H impregnation 2-99553
 steel, embrittlement, role of H 2-67537
 steel, embrittlement after hardening, impurities influence 2-88192

hydrogen embrittlement continued

steel, embrittlement susceptibility by H₂S eval. using delayed fracture test, procedures comparison (*French*) 2-78053

steel, ferritic, eqn. of state for methane in modelling H attack 2-57473

steel, ferritic stainless, mechanical hysteresis in low-cycle fatigue, electro-ytic H influence 2-88289

steel, H-induced delayed cracking of type III specimens 2-116596

steel, high strength, crack growth rate rel. to H₂ supply under sustained and cyclic loads (*Japanese*) 2-67636

steel, high strength, delayed fracture crack growth, macroscopic and microscopic processes 2-72845

steel, high-strength, cracking in NaCl soln., role of H 2-88285

steel, high-strength, time delayed surface plastic zone growth in H environment 2-72890

steel, low alloy, Ni effect on hydrogen stress cracking resistance, review 2-116598

steel, low-alloy, embrittlement after hardening, impurities influence 2-88192

steel, low-alloy, H embrittlement in long-term strength tests 2-67539

steel, martensitic stainless HT-9, hydrogen compatibility, effect on fracture and ductility 2-72766

steel, Ni-Cr, stress corrosion cracking in NaCl soln. near lower temper martensite embrittlement range 2-83264

steel, reinforcing, corrosion cracking, role of H 2-67653

steel, rotor grade, caustic SCC mechanism 2-111379

steel, spheroidized type 1090, permeation, trapping and damage by hydrogen 2-116602

steel, stainless, austenitic, hydrogen induced α' -martensite form., TEM obs. of microcracks 2-99512

steel, stainless, high-strength, delayed fracture, fractographic investig. 2-111308

steel, stainless, martensitic, ferritic and duplex, stress corrosion cracking, review 2-72862

steel, stainless, powder metallurgical, struct. condition, effect of different sintering environments 2-67254

steel, stainless, type 316L, cathodically H charged, martensitic transitions at crack tip 2-111313

steel, stainless 304, hydrogen damage obs. 2-57480

steel, surface chem. kinetic model 2-105334

steels, development of knowledge about hydrogen embrittlement (*French*) 2-99542

surface treatment for performance and property improvement conf., NY, USA (July 1979) 2-94914

time delayed surface plastic zone growth in H environment, artifact interpret. comment 2-72881

time delayed surface plastic zone growth in H environment, surface artifact interpret. 2-72880

transition metal cluster chemistry and implications for hydrogen embrittlement, alloy behaviour and metal catalysts 2-91832

transition metals and alloys, magnetic and structural transformations, H influence 2-67329

Zircaloy-4, reaction in steam-H₂ mixture at high temp. 2-83274

Al alloy 7075, dislocation transport of H, rel. to hydrogen embrittlement 2-83220

Al alloy 7075, T6-RR temper treatment eval. w.r.t. SCC resistance 2-72879

Al-Cu-Mg (4.5, 1.5 wt.%), alloy 2124, H embrittlement 2-57468

Al-Zn-Mg-Cu (6.2, 2.5, 1.7 wt.%), fatigue crack growth, micromechanisms 2-105273

CaNi₂ alloy, gaseous atmosphere effect on exoelectron emission from H cracked surfaces (*Japanese*) 2-77713

Cd coatings on Fe, H absorption during electrodeposition and H charging 2-77993

Fe, corrosion cracking, role of H 2-67653

Fe, embrittlement, role of H 2-67537

Fe, fracture mode and ductility on testing at cathodic potentials, P and S segregation effects 2-93679

Fe, H adsorption at cracks with account of interaction energy term 2-72841

Fe, pure, H₂ effect on deform. and fracture microprocess (*Chinese*) 2-62188

Fe, pure, trapped H, thermal anal. 2-66290

Fe-base fcc stainless alloys, surface wave studies of H damage incubation time 2-111296

Fe-Si, corrosion cracking, role of H 2-67653

Fe₁₇Ni₃₀Cr₁₄P₁₂B₄, metallic glass, hydrogen embrittlement 2-116599

H microprint technique, for H evolution obs. 2-57572

Nb, H adsorption at cracks with account of interaction energy term 2-72841

Nb, Pd and Ni coated, hardening and fracture initiation, H₂ absorption-desorption effects (*Japanese*) 2-57458

Ni, grain boundary diffusion of H, electrochem. and ion microprobe obs. 2-92284

Ni, solid soln. strengthening and softening, effect of H 2-105173

Ni-base fcc stainless alloys, surface wave studies of H damage incubation time 2-111296

Ni-base superalloy, Inconel 600, ultra-pure, H embrittlement, effect of C, P, Sn and Sb additions 2-67525

Ni-Cu, Monel 400, liq. metal and H embrittlement, influence of grain boundary P conc. 2-77930

Pd and Pd-Ag alloy, preliminary H impregnation influence on mech. props. 2-99554

Pd, H adsorption at cracks with account of interaction energy term 2-72841

Pd single crystal, struct. changes under H-phase hardening 2-77822

Sn coatings on Fe, H absorption during electrodeposition and H charging 2-77993

Ta-W (10 wt.%) single crystals, hydrogen embrittlement, 77K-290K temp. range (*Japanese*) 2-67549

Ti, hydriding in H plasma, embrittlement, sorption, rel. to contamination 2-74935

Ti-Al-Mo and Ti-Al-V-Sn-Zr, static strength, gas absorpt. influence 2-88152

Ti-Al-Sn-Zr-Mo-Si (6, 2, 4, 2, 0.1 wt.%), H₂ effect on fatigue crack growth 2-72806

Zr alloys, hydrogen charged, subcrit. crack nucleation and propag., acoustic emission obs. 2-72936

Zr-Al alloy, compatibility in Tokamak, H embrittlement 2-69851

Zr-Nb (2.5 wt.%), metallographic obs. of hydride morphology at H₂ induced crack tip 2-88174

hydrogen energy see hydrogen economy**hydrogen ion activity see pH****hydrogen ion concentration see pH****hydrogen ions**

absorption spectra, charge exchange, photodissoc. 2-54833

backscattering from plasma-solid interactions 2-60758

C H⁺ + H collisions, one electron two centre symmetric systems, differential cross sections 2-59928

Coulomb explosion, measurement on the extended range of the wake 2-57594

diatomic interactions in momentum space 2-85769

evolution from Fe under const. heating rate 2-93361

H-like heavy ions, polarisation of vac. in spectra 2-85611

hydrogenic ions in mag. fields, scaling laws for photoionisation cross section, stellar appl. 2-63240

longitudinal range distrib. in Si 2-64821

moving in electron gas, charge states 2-86920

photoelectron ang. distrib., rotationally resolved 2-80723

photoionisation, two-electron, threshold behaviour 2-80552

polarised ion sources, ground state at beam stage, review 2-75077

polarised ion sources, ground state at beam stage 2-75077

potential energy function for Σ_u^+ shape reson. state at SCF level 2-70374

range distrib. in Ni, target crystallinity effects 2-66092

solar flares, energetic electrons transport in fully ionised H plasmas 2-106493

thin film, neutralisation of 50-230 keV H ions 2-110115

H⁺ + Pb, ionisation, anisotropy of Pb L₃ subshell X-ray emission line 2-75407

Al thin film, neutralisation of 50-230 keV H ions 2-110115

C thin film, neutralisation of 50-230 keV H ions 2-110115

Cs, backscattering of thermal H atoms, H⁺ production 2-82987

Cs, thin film, neutralisation of 50-230 keV H ions 2-110115

F-H⁺ simultaneous decoupling in triple reson. ¹³C NMR 2-80659

H⁺, backscattering from Mo, stainless steel and graphite 2-69849

H⁺ beam emittance measurements for the Penning and the asymmetric, grooved magnetron surface-plasma sources 2-64160

H⁺, ground-state energy determ. Feshbach-Rubinov method 2-75156

H⁺, high-lying doubly excited states props. 2-64892

H⁺, intense unpolarised negative ion sources 2-75082

H⁺, Lamb-shift polarised ion sources, review 2-75075

H⁺, Lamb-shift polarised ion sources improvements, working group summary 2-75076

H⁺ polarised ion prod., progress on ionisation stage 2-75080

H⁺ polarised ion prod. using optical pumping 2-75083

H⁺ polarised ion source design and performance 2-90333

H⁺ relativistic beams kinematics 2-70447

H⁺, two-electron photodetachment, H⁺ threshold yield 2-75443

H⁺, backscattering from Mo, stainless steel and graphite 2-69849

H⁺ distribution model for high latitude ionosphere and plasmasphere 2-106408

H⁺, electron stimulated desorption from Nb (110) and O-contaminated Nb (100) and Ta (110) 2-110153

H⁺, H₂⁺ and H₃⁺ ions passing through C foils, Balmer emission yields meas. 2-114089

H⁺ high energy particles in Earth's magnetosphere 2-73794

H⁺ impurity ion sputtering of fusion reactor materials, depend. on incident angle 2-74922

H⁺ ions electronic energy loss in single crystal Au films at 600 eV-15-keV 2-66087

H⁺ neutralised beam propag. undeflectedly across a mag. field, polarisation elec. field obs. 2-80891

H⁺ solvation by methanol and diethyl ether, SCF calcs. 2-62379

H⁺ transfer reactions, gas-phase, energy barriers and wells 2-62386

H-like ions, scaled collision strengths for $\Delta n \geq 1$ transitions (for $n \leq 5$) 2-108716

H-like ions, spectrum, dipole and quadrupole moments in superstrong mag. field 2-113912

H⁺-Cs, plasma, charge exchange, population inversion, laser characts. 2-108861

H⁺-ranges at H⁺-range straggling calc., 1-1000 keV 2-76544

H⁺ + H⁺, asymptotic behavior of charge exchange cross sections (*Russian*) 2-85804

H⁺ + He, electron detachment, cross section plane wave form approx. 2-114094

H⁺ + He, electron detachment cross sections meas. 2-59927

H⁺ + ¹³C, K-shell ionisation accompanying nuclear scatt. 2-65081

H⁺ + ⁸⁹Sr, K-shell ionisation probability meas. 2-114092

H⁺ + Ag, double-differential cross sections for delta-electrons 2-75401

H⁺ + Al¹⁰⁺, stopping power, generalised oscillator strength formulation 2-114080

H⁺ + Al(C) foil, inner shell ionisation by ion bombardment 2-75391

H⁺ + Al(Y), inner shell ionisation cross sections, projectile charge depend. 2-70387

H⁺ + alkaline earth ions, electron capture, model pot. calcs. 2-75414

H⁺ + Ar, electrons ejected from K shell, energy distrib. 2-70406

H⁺ + Ar, L-shell impact ionisation, coupled state calcs. 2-102598

H⁺ + Au, secondary electron emission yield meas. 2-77650

H⁺ + Au(Dy), L-subshell ionisation, cross sections, X-ray spectra 2-54941

H⁺ + Au(U), L-shell ionisation cross sections Dirac-Hartree-Slater calcs. 2-114093

H⁺ + C (methane), K shell ionisation, electron capture, cross section meas. 2-54940

H⁺ + C foil, convoy electrons dwell-time depend. 2-59922

H⁺ + C foil, zero degree electron emission, energy spectra and dwell time depend. 2-75389

H⁺ + CO(NO)(N₂), small angle vibr. excitation 2-85801

H⁺ + Cs(Rb)(K)(Na), single electron capture, attenuation cross sections meas. 2-114077

H⁺ + D₂ - HD + D⁺ reactions, drift tube investig. in relative energy range 0.04 to 0.3 eV 2-57606

H⁺ + F⁺, polarisation pots. and three body induction effects calc. from perturbation theory 2-108676

H⁺ + foil, beam foil level excitation, foil thickness depend. 2-75390

H⁺ + Ge, K-shell excitation and ionis. by relativistic projectiles, channeling obs. 2-59920

H⁺ + H, Coulomb interaction, time-depend. Schrodinger eqn. soln. 2-85772

H⁺ + H, elastic scatt. at 15 to 200 keV 2-108672

hydrogen ions continued

- H^+ + H, electron capture at high energies, continuum distorted wave and second Brinkman-Kramers approx. 2-96718
 H^+ + H, electron capture differential cross section 2-65085
 H^+ + H, electron ejection, single differential and total scatt. cross-sections calcs. 2-59921
 H^+ + H, electron excitation and charge transfer, 1-20 keV 2-96692
 H^+ + H, total cross sections for bombarding energies of 1 to 50 keV 2-114073
 H^+ + H excitation cross section for high and moderate n values 2-80797
 H^+ + H scattering appl. of soln. of time depend. Schrodinger eqn. with trajectory method 2-54944
 H^+ + H_2 , Balmer alpha emission 2-75375
 H^+ + H_2 , isotope exchanges, reactive cross-sections and rate coeffs. calcs. 2-93789
 H^+ + $H(D)$, charge transfer collisions within energy range 0.1-150 eV 2-90659
 H^+ + $H(He^+)$, close coupling calcs., electron transfer cross sections 2-80805
 H^+ + $H(1s)$, charge exchange, three-centre atomic expansion method 2-85803
 H^+ + He, charge transfer collision, elec. dipole moment 2-54958
 H^+ + He, electron capture cross sections, second Born approx. 2-114103
 H^+ + He, He excitation, Glauber cross sections 2-80800
 H^+ + He differential scattering at $E_{cm} \leq 0.5$ eV, orbiting struct. meas. 2-80801
 H^+ + He^+ , excitation, charge transfer, ionisation, emission cross section meas. 2-114090
 H^+ + He^+ 2-54955
 H^+ + $He(Ne)(Ar)$, electron capture probabilities 2-102609
 H^+ + hydrocarbons, electron capture, cross-section additivity failure 2-102612
 H^+ + Li, electron capture and ionisation cross sections calcs. 2-54956
 H^+ + Mg, H^- form., ang. distrib., differential cross sections meas. 2-96722
 H^+ + N, interconversion reactions, appl. to auroral protons interaction with thermosphere 2-100611
 H^+ + NO(CO), geometries and heat of reaction, MNDO calcs. 2-93778
 H^+ + Na, electron capture collisions 2-102615
 H^+ + Ne, K shell ionisation, electron capture, cross section meas. 2-54940
 H^+ + Rb, double K-shell ionisation, single photon emission probability 2-85794
 H^+ + Si^+ , charge transfer ionisation at thermal energies, reaction rates 2-59923
 H^+ + Ti(Cr)(Co)(Ni)(Cu)(Zn), K-shell X-ray prod. cross section meas. in energy range 300-2400 keV 2-90492
 H_2^+ , B state, Morse pot., eigenvalue determ. 2-54914
 H_2^+ , beam, interuclear separation distrib., ion-source depend. 2-75459
 $2-MeV H_2^+$ beam, UV-laser photofragmentation 2-54902
 H_2^+ dissociation by C foils, interatomic separation and relative vel. distrib. calc. 2-75370
 H_2^+ , electronic states, Coulomb potential with many fixed centres, Sturmian methods (French) 2-64865
 H_2^+ , energy and props. in mag. field 2-59695
 H_2^+ , energy values in superstrong mag. field, adiabatic approx. 2-59724
 H_2^+ , ground state, pot.-curve, covalent bond anal. 2-102414
 H_2^+ , ground-state energy calc. in strong mag. field (Russian) 2-53594
 H_2^+ , ion, mol. struct., scatt. theory calc., convergence props. 2-54751
 H_2^+ , traversing ultra-thin C foils, cluster effect in energy loss 2-81855
 H_2^+ , traversing ultra-thin C foils, mol. states at 12.5 and 25 keV/amu 2-81856
 H_2^+ + He^{++} , single focusing mass spectrometer with large incident and exit angles (Japanese) 2-113034
 H_2^+ , foil, beam foil level excitation, foil thickness depend. 2-75390
 H_2^+ + Al(C) foil, inner shell ionisation by ion bombardment 2-75391
 H_2^+ + Ar, Z^2 scaling and electron screening effect 2-70150
 H_2^+ + Au, secondary electron emission yield meas. 2-77650
 H_2^+ + C foil, convoy electrons dwell-time depend. 2-59922
 H_2^+ + C foil, zero degree electron emission, energy spectra and dwell time depend. 2-75389
 H_2^+ + H, electron ejection cross section, projectiles ionisation importance 2-75400
 H_2^+ + H_2 , Balmer alpha emission 2-75375
 H_2^+ + metal atoms, electron capture transitions 2-102603
 H_2^+ + $N_2(CO)(O_2)$, H^+ and charge transfer, collision energy and ion vibr. excitation 2-102604
 H_2^+ , beam, interuclear separation distrib., ion-source depend. 2-75459
 H_2^+ , dissociation detection by low pressure gas detectors 2-57595
 H_2^+ , IR spectra at dissociation limit 2-64975
 H_2^+ , IR vibr. spectrum 2-59803
 H_2^+ , ion-molecule reactions, rate consts., mass spectrometric study 2-72962
 H_2^+ , ions, 2.9 MeV, dissociation products, struct. 2-54979
 H_2^+ + Au, secondary electron emission yield meas. 2-77650
 H_2^+ + C foil, convoy electrons dwell-time depend. 2-59922
 H_2^+ + C foil, zero degree electron emission, energy spectra and dwell time depend. 2-75389
 H_2^+ + D_2 \rightarrow HD_2^+ + H_2 , reaction dynamics, reactant vibr. excitation effect on product energy and angle distrib. 2-62388
 H_2^+ + foil, beam foil level excitation, foil thickness depend. 2-75390
 H_2^+ + H_2 , Balmer alpha emission 2-75375
 H_2^+ , clusters, even- and odd-numbered, ab initio SCF and SD-CI calcs. 2-108759
 HD^+ , vibr. rot. spectroscopy 2-80840
 $H^+(H^-)$ atomic-beam polarised ion sources, ionisation stage 2-75079
 $H^+(H^-)$ ions, 0.4 MeV/atom, stopping power meas. in C 2-81854
 $H^+(H_2^+)(H_3^+)$, stopping power for solid N_2 2-66088
 H^+ + Ne(Ar), K-shell ionisation and capture differential cross sections, scaling props. 2-96706
 M^+ + N, excited state charge-exchange cross sections, ODMR 2-102611
 Mo adsorption of H on Cs monolayer, negative H ion production by sputtering 2-92553
 Na^+ + H^- , polarised proton and N^- source, target optical orientation (Russian) 2-102311
 Ni, K-shell ionisation by protons, deuterons and alpha particles at low projectile energies 2-102632
 $SiO_2:H$, H, fused, implanted ions trapping and release 2-76467
 $SiO_2:H$, fused, implanted ions trapping and release 2-76467
 $SiO_2-CaO-Na_2O$ glass surfaces, interdiffusion of H^+ and alkali ions, elec. resist. study 2-110034

hydrogen neutral atoms

- 0125+628, point source in SNR G127+40.5, H I absorpt. spectra 2-106945
 adsorbed on Ni (100) and (111), vibr. freq. calcs. 2-98422
 adsorption and interaction with Cu stepped surfaces, pairwise-additive model 2-56349
 adsorption on metal surface, electronic damping of adsorbate vibrations 2-104135
 asymptotic behavior of charge exchange cross sections (Russian) 2-85804
 atomic, spin polarised, ballistic heat pulses to 200 mK 2-82078
 atomic beam, Doppler shifted emission spectra, appl. to plasma diagnostics 2-80520
 average value evaluation 2-84422
 Balmer α emission from He-rich stars 2-79096
 Balmer α line profile in β Lyrae, image isocore obs. (1974-5) 2-106806
 Balmer α -line, collinear laser spectroscopy, metrological appl. 2-95485
 Balmer emission yields for excited hydrogen atoms produced by H^+ , H_2^+ , and H_3^+ ions passing through thin carbon foils 2-114089
 Balmer line formation in envelopes of YY Orionis stars, spectral line form. with multi-level H I atom 2-89260
 Balmer-alpha line emission and atom energy in ion-source discharge 2-70190
 Be type stars, H_n profile catalogue (French) 2-58362
 binding to isotopic He surfaces, long-range model and scaling rels. 2-80413
 bounded atom, hypervirial-perturbational treatment 2-95087
 chemisorbed on W(110), photoemission and electron stimulated desorption study 2-87049
 chemisorption, on Be(0001), mixed basis set calcs. 2-110138
 chemisorption on Cu, small cluster model and embedding theory based on orbital localization 2-61291
 Cherenkov line radiation and emission line spectra calc., quasar radiation appl. 2-68927
 cold H atom beam source using microwave discharge 2-107449
 FK Comae Berenices, coalescing binary, mass transfer, $H\alpha$ obs. and anal. 2-117675
 comets H I atmospheres, solar $L\alpha$ radiation scatt. (Russian) 2-73906
 conformal Kepler problem quantisation appl. 2-95085
 critical positron mass, lower bound for binding 2-75474
 diffusion coefficient in dilute gas, meas. method, adsorption effect 2-60708
 diffusion in W (110), tunnelling 2-82030
 effective meson-atom interaction pot. (Russian) 2-54993
 electron and positron elastic scatt., first order correction to Glauber approx. 2-75436
 electron and positron forward elastic scatt. 2-70418
 electron dispersion relations 2-59934
 electron elastic scatt., 2-75428
 electron elastic scatt., intermediate energies, optical pot. calcs. 2-75430
 electron elastic scatt., s-, p- and d-wave phase shifts 2-108709
 electron elastic scatt., spin-exchange effects meas. 2-85809
 electron elastic scatt. and impact excitation cross sections calcs. 2-90710
 electron elastic scatt. by metastable 2s state 2-102629
 electron impact, laser modification of exchange scatt. 2-102626
 electron impact 1s-nf excitation, Glauber cross-sections calcs. 2-90716
 electron impact 2S excitation, 54.4 and 100 eV cross-section calc. method 2-85820
 electron impact excitation, orientation, alignment, scatt. amplitudes, Fano-Macek parameters 2-114111
 electron impact excitation of 2P state, electron-photon angular correl. meas. 2-114115
 electron impact excitation of $n=2$ level 2-54965
 electron impact ionisation, break-up process, Coulomb eikonal amplitude 2-114113
 electron impact ionisation, second Born treatment 2-80814
 electron impact ionisation calc. 2-102633
 electron impact K shell ionisation cross section, plane wave Born approx. 2-80821
 electron or positron impact excitation, second order eikonal cross sections 2-85814
 electron scatt. amplitude, multiple pole coeffs. 2-90706
 electron scatt. in laser field 2-102634
 electron scattering, momentum space approach, ab initio calcs. 2-108704
 electron scattering calcs. at energies between 13.6 and 60 eV including $n=3$ levels 2-96732
 escape from Venus atmosphere 2-84134
 excited state, from mol. dissociation, translational energy distrib. 2-70429
 excited state, Rayleigh-Schrodinger perturbation theory 2-108355
 film, spin polarised, fluctuation correl. and superfluidity (Russian) 2-82065
 fine structure by nonperturbative nondivergent method 2-54978
 frequency conversion involving Raman-like processes above ionisation threshold 2-86045
 galaxies, 21 cm line width depend. on Hubble type rel. to use as extragalactic distance indicator 2-63615
 galaxies, late-type, of low surface brightness, optical and H I study 2-94834
 galaxies, Zwicky magnitude scale rel. to blue luminosities and M_H/L_B ratios 2-68899
 geocorona, contrib. to near-Earth UV environment 2-117513
 Goldstein region, H I 21 cm obs. by RATAN-600 radio telescope using acousto-optical spectrometer 2-94607
 ground state, hyperfine splitting, rel. to quantum theory teaching 2-107040
 ground state eigenvalue, spline method numerical treatment 2-85522
 ground-state energy with polynomial perturbation 2-64864
 H I Lyman α profiles and limb darkening for Sun 2-84184
 heavily particle impact excitation, asymptotic total cross-section calcs. 2-90655
 high-flux beam production using helium-temp. beam source 2-101492
 higher energy level calcs. (Russian) 2-85569
 highly excited, adiabatic energy levels in high mag. fields, scaling laws 2-102407
 hydrogenic atoms, Rydberg states, ionisation rate in static electric fields 2-113928
 hydrogenic donors in mag. field, ground state electrical polarisability 2-64912
 hyperfine level selection in zero mag. field 2-96755
 hyperfine splittings, shift due to blackbody radiation 2-64910
 hypervirial perturbative treatment inside boxes with paraboloidal surfaces 2-58643

hydrogen neutral atoms continued

- induced transitions, role of damping and T invariance 2-64911
- infinite chain, ground-state energy and mag. susceptibility, ab initio correlated calc. 2-80864
- integral of motion in weak mag. field (*Russian*) 2-108338
- interstellar H I, anticentre high vel. stream (Weaver jet) and colliding H I shells obs. 2-106856
- local interstellar medium, H I densities from UV spectra of nearby white dwarfs 2-106690
- ionisation by bare ions with charges 1 to 6 in Glauber approx. 2-96724
- ionisation by weak external elec. field (*Russian*) 2-53594
- ionisation probability calc. based on quadratically integrable functions 2-70202
- in irregular galaxies, 21 cm obs. rel. to global props. 2-101054
- isoelectronic sequence, 2E1 and M1 radiative decay rates 2-102436
- isotope separation using multiple photodissoc. of dichlorofluoromethane 2-75447
- isotopes recovery and separation using U bed 2-90250
- Khavtasi 141, interstellar dark cloud complex, optical extinction and H I content 2-68874
- Kowalewski basis, quantum analogue 2-63855
- Lamb shift for $n=2$ (*Russian*) 2-96509
- Laporte's rule, expt. test, mixing of parity doublet 2-54804
- laser-modified angular distribution of Compton electrons 2-96739
- line intensity ratios in moving media 2-84084
- Lyman α , intergalactic absorption lines in close QSO pair spectra 2-84309
- Lyman α excitation in Jovian aurora, study of H₂ fluoresc. spectrum, 1200 to 1700 Å 2-63237
- Lyman continuum photon production rate in M33 galaxy 2-112556
- in magnetic field, semiclassical perturbation theory calcs. 2-59696
- magnetic field effect, energy levels, oscillator strengths, calc. on CRAY-1 computer 2-96483
- magnetic Lam shift, relativistic formula and its Z-dependence 2-70192
- metastable, Lamb shift and molecular moments means, spin polarised protons prod. 2-54778
- metastable atomic beam source by optical pumping 2-90743
- monolayer, electronic struct. calc. method 2-115844
- multiphoton ionisation in ultrashort laser fields 2-64941
- in NGC 3359, barred spiral galaxy, H I kinematics and struct. 2-79206
- NGC 5905, NGC 5908, double spiral galaxy, H I obs. 2-68894
- NGC 7814, edge-on spiral galaxy, H I obs. and surface photometry 2-89365
- one-dimensional, in infinite square well, theory 2-79328
- oscillator, four-dimens., wave function expansion 2-85516
- Overhauser effect for spin polarised atomic H in solid H₂ matrix 2-54878
- parity nonconservation detection using multiple cavity expts. 2-96760
- parity nonconservation expts. in RF cavities, theory 2-90725
- photodissociation of HI, Lyman- α line by fluoresc. Doppler obs. 2-54800
- photoelectric effect matrix element, nonrelativistic but high energy continuum state approx. 2-53464
- polarisation as a result of He⁺+HCl ionisation collisions 2-70439
- polarised atomic beam target 2-75085
- positron impact, charge transfer cross-sections calcs. 2-59946
- positron scatt., Fock-Tani representation 2-90712
- positron scatt., quadratic variational methods for calc. S-wave phase shifts 2-75425
- positron scatt., s-wave, positronium form. 2-75441
- positron scattering, field theory, in Fock-Tani representation 2-85808
- positrons elastic scatt. studied using second order pot. model 2-65089
- QED experiments test, review 2-69403
- quadratic Zeeman effect symmetry on Fock hypersphere 2-90476
- quantisation and instability rules for highly excited states (*Russian*) 2-102408
- quantum mechanical second virial coeff., effect of internal variables (*French*) 2-95224
- resonant two-photon transition rates 2-85610
- ring around NGC 628, Sc I galaxy 2-106887
- Rydberg IR optogalvanic spectroscopy 2-59759
- Rydberg series, quadratic Zeeman effect, Sturmiun functions appl. 2-80534
- s-wave, excited states, with $2\lambda r + 2\lambda^2 r^2$ perturbation pot. 2-70154
- Sa-type galaxies, global props. from H I obs. 2-89366
- Saturn atmosphere, H I prod. rel. to eddy mixing coeff. 2-112387
- semiclassical quantisation in crossed electric and mag. fields 2-79414
- spectrum gravitational perturbation 2-95167
- spectrum including Lamb shift effects, stochastic phase space formulation and non-potential interactions 2-95051
- spin electron polarization in absence of external mag. field (*Russian*) 2-96485
- spin polarised, decay kinetics, dipole-dipole interaction, Bose condensation region attainment 2-59887
- spin polarised, hydrodynamic modes 2-82076
- spin polarised, nucl. relax. anisotropy, two-dimens. model 2-71767
- spin polarised, on ⁴He superfluid film, third sound 2-82077
- spin polarised, quantum gas props. 2-110088
- spin polarised, recombination calorimetry at liq. He temps. 2-92307
- spin polarised, stabilisation 2-56298
- spin polarised, state-dependent recomb. and suppressed nucl. relax. 2-92306
- spin polarised, surface mag. relax. rates 2-82079
- spin polarised, weakly interacting, density distrib. in external pot. 2-53660
- spin polarised atomic, adsorbed on ⁴He film, spin relax. 2-82067
- spin-polarised H confinement and production 2-71770
- spin-polarized, confinement in azimuthal field, total and superfluid density profiles 2-66320
- in spiral galaxies, H I and colour props. of spirals in nine clusters 2-79223
- in spiral galaxies of Pegasus I cluster, H I content from 21 cm and optical survey 2-79205
- Stark broadening, exponential approx. 2-75215
- Stark effect, spherical, factorised wave function calc. 2-59743
- Stark effect, WKB soln. 2-113929
- Stark resonance, review 2-70185
- stellar envelopes, parameters of ionisation-dissociation shock waves (*Russian*) 2-73956
- Sun, quiescent prominences, H lines form. 2-84204
- superheavy atoms in interstellar medium, upper limit from γ Cassiopeiae UV spectrum 2-89343

hydrogen neutral atoms continued

- thyratron, metastable species form. 2-54936
- transport in H plasma, Boltzmann eqn. soln. 2-114981
- trapping sites in Ar and Ne matrices 2-69256
- two-photon transition probabilities and rel. radiation matter interaction problems, second-order eqn. appl. 2-108436
- vapour, large DC-electric-field-induced nonlinear optical susceptibility 2-102848
- warm gas at high galactic latitudes 2-106889
- Zeeman effect 2-80533
- Co:H, impurity electronic struct. and hyperfine fields 2-110292
- Cs, backscattering of thermal H atoms, H⁺ production 2-82987
- D/H ratio in Venus atmosphere, outgassing implications 2-100793
- Fe:H, impurity electronic struct. and hyperfine fields 2-110292
- H, electron scatt., Coulomb interaction, time-depend. Schrodinger eqn. soln. 2-85772
- H I in ϵ Persei line of sight, UV obs. 2-117716
- H I La line in solar corona, effect of hyperfine struct. on Hanle effect 2-94697
- H I line brightness temperature scale 2-63569
- H I Lyman α used to determine kinetic temps. in solar corona 2-63335
- H I optically thick lines in quiescent solar prominence 2-58311
- H⁰ component study in OH⁺ break-up in thin C foil 2-75371
- H-air flames, reson. multiphoton optogalvanic detect. of H 2-108435
- H-H(He⁺), polarisabilities, oscil. strengths, interaction, coeffs. calc. 2-80763
- H-like atom, energy shift, quadratic Stark effect theory 2-70178
- H-like ion+bare ion, electron capture cross section calcs. 2-90686
- H-like ions, excitation and ionisation mechanism, role of autoionising states 2-65684
- H-like ions+He, one-electron capture cross sections 2-96723
- H-like ions+He²⁺, charge transfer cross sections, Coulomb projected Born approx. 2-90687
- H+atom (ion), small angle scatt. theory 2-59896
- H+C₂H₂, reactive scatt. classical dynamics 2-72982
- H+C⁺, charge transfer, cross section calcs. 2-70412
- H+C⁺, charge transfer, at. orbital expansion calcs., curved-line trajectory obs. 2-75376
- H+C⁺, electron capture cross section, Landau-Zener formula 2-114101
- H+C⁺→H⁺+C⁵⁺, electron capture cross-section, perturbed stationary states calcs. 2-59930
- H+CO, dissociation in interstellar shock heated regions 2-68861
- H+Cl₂→HCl+Cl, kinetic isotope effect, pot. energy surface 2-57598
- H+Cl⁺(F⁻), associative detachment reaction 2-114075
- H+F₂, collinear reactions, semi-and quasi-classical probabilities calcs. 2-105473
- H+formaldehyde, rate const., pot. energy surface, transition state theory, ab initio CI calcs. 2-72980
- H+H₂, Balmer alpha emission 2-75375
- H+H₂, dynamical instability, external perturbations in laser fields 2-99666
- H+H₂, exchange reactions, cross section, impact parameter bands 2-111480
- H+H₂, kinetic field pot., Morse function, pot. energy surface 2-85770
- H+H₂, kinetic isotope effects, transition state theory, quantum calcs. 2-88347
- H+H₂, molecular dissociation, collision induced, cross sections, appl. to mol. clouds 2-90653
- H+H₂, quasiperiodic trajectories embedded in continuum, adiabatic anal. 2-111466
- H+H₂, reactive collisions, 3-dimens., reson. energies, semiclassical calcs. 2-111478
- H+H₂($\nu=0,1$), quasiclassical trajectory calcs. on H₂ pot. energy curve from force field data 2-102570
- H+H₂, pot. energy surface, near Hartree-Fock calc. 2-59891
- H+H₂, reaction, pot. hypersurfaces calc. by unrestricted Moller-Plesset perturbation theory 2-93753
- H+H₂⁺, electron ejection cross section; projectile ionisation importance 2-75400
- H+H₂O, reaction rate enhancement, quasiclassical trajectory study 2-88338
- H+H₂(I₂), exchange reactions, classical var. rate calcs. 2-105461
- H+H₂(MuH), collinear reactive scatt., reson. widths, quasiclassical model 2-93767
- H+H₂(N₂), relativistic correction to interaction coeffs. 2-75202
- H+H⁺, charge exchange, three-centre atomic expansion method 2-85803
- H+H⁺, Coulomb interaction, time-depend. Schrodinger eqn. soln. 2-85772
- H+H⁺, elastic scatt. at 15 to 200 keV 2-108672
- H+H⁺, electron excitation and charge transfer, 1-20 keV 2-96692
- H+H⁺, interconversion reactions, appl. to auroral protons interaction with thermosphere 2-100611
- H+H⁺, total cross sections for bombarding energies of 1 to 50 keV 2-114073
- H+H⁺ collisions, one electron two centre symmetric systems, differential cross sections 2-59928
- H+H⁺ scattering appl. of soln. of time depend. Schrodinger eqn. with trajectory method 2-54944
- H+H⁺(⁴He) excitation cross section for high and moderate n values 2-80797
- H+H⁺(He²⁺), electron ejection, single differential and total scatt. cross-sections calcs. 2-59921
- H+H+h ν →H₂⁺+h ν , recombination via free-to-bound Raman transitions 2-72984
- H+He²⁺(Li³⁺)(Be⁴⁺)(B⁵⁺), electron capture investigated at impact velocities 0.3 and 1.4 au 2-114074
- H+highly stripped ions, electron capture theories 2-54959
- H+Li³⁺, electron capture, mol. treatment, impact parameter approx. 2-85797
- H+Li³⁺, electron transfer collisions at low and intermediate energies 2-80804
- H+Li³⁺(Be⁴⁺), charge transfer cross sections, impact parameter approx. 2-59931
- H+Li³⁺(Be⁴⁺), low impact energy, charge transfer 2-114099
- H+negatively charged particles, excitation, ionisation 2-75378
- H+Ni(CO), geometries and heat of reaction, MNDO calcs. 2-93778
- H+O²⁺(O⁺), charge transfer rate consts. 2-102613
- H+O¹⁺, charge exchange, rot. coupling matrix, ab initio CI calcs. 2-85799

hydrogen neutral atoms continued

- H+XY and X+HY where X and Y are halogen atoms, semiempirical pot. energy surfaces 2-99644
 $H^+ + H$, electron capture at high energies, continuum distorted wave and second Brinkman-Kramers approx. 2-96718
 $H^+ + H$, electron capture differential cross section 2-65085
 $H^+ + N^{4+} (O^{4+}) (Ar^{4+})$, charge exchange, impact ionisation, cross section, crossed-beam expt. 2-114102
H110 α recombination lines in Sagittarius A-West, SHF obs. 2-112602
H α emission from polar auroras correl. with proton precipitation 2-106393
He lines in late type giant stars, chromospheric, photoelectric measures 2-89250
Hn α lines for $5 \leq n \leq 20$, chromosphere strengths from model calc. 2-112403
Hn α lines in plasma, quasi-static stark profile 2-102430
 $Li^{3+} + H$, charge exchange calcs. 2-102610
Ni:H, impurity electronic struct. and hyperfine fields 2-110292
T-H spin polarised matrix, variational theory of T=0K 2-71769

hydrogen neutral molecules

- adsorbed on model Li cluster, surface enhanced Raman intensities, Hartree-Fock calcs. 2-80626
adsorption on metal surface, electronic damping of adsorbate vibrations 2-104135
binding energy origin, Bohr orbit model and Ruedenberg's theory 2-84424
chemisorption on Cu(100), many-electron embedding theory 2-110139
circumstellar H $_2$, vibr. excitation by UV radiation rel. to interstellar CH $^+$ abundance 2-84296
coadsorption with CO and ZnO, vibr., IR study 2-115540
density in interstellar mol. cloud, spectrosc. obs. 2-112534
dipole polarisabilities, MC TDHF theory calcs. 2-96447
dipole polarisabilities, mol. moments, HF approx. 2-108351
discharge, H $_2$ vibr. population distrib. and negative ion conc. calc. 2-90501
dissociation on clean and contaminated Pd surfaces, UPS study 2-105510
dissociation product of OH $^+$, study of hydrogen neutral component 2-57592
doubly-excited states, correlated prolate-spheroidal wavefunction 2-54743
Egg Nebula, planetary nebula precursor, shock excitation of near IR H $_2$ emission lines 2-106840
elastic electron scatt., cross section data compilation 2-54964
electron (positron) impact, total cross-sections meas. 2-59937
electron elastic scatt., polarisation effects, cross sections, Glauber approx. 2-70419
electron elastic scatt. studied using modified Glauber approx. 2-108708
electron impact, parameter free nonadiabatic polarisation pot. 2-59948
electron impact, UV emissions, Werner- and Lyman-band system 2-70432
electron impact dissoci., at. translational energy distrib. 2-70429
electron inelastic scatt., high-energy, X-B and X-E transitions 2-102650
electron scatt., low energy, ab initio optical pot. appl., correl. and polarisation effects 2-75429
electron scatt. at low energies, model pot. approach 2-70376
electron scattering, energy unresolved differential cross-section calcs. 2-102623
electron thermalisation, relax. time 2-65098
emission from W51 NORTH, IR and H $_2$ O maser sources, IR obs. 2-79228
emission line intensity modelling in Becklin-Neugebauer Kleinmann-Low region 2-106865
empirical potential parameters determ. 2-90643
fluorescence, contribution to interstellar far UV background 2-63573
fluorescence spectrum (1200 to 1700 Å) due to electron impact 2-63237
Franck-Condon factors, appl. to photoelectron spectra 2-108623
galactic metallicity gradient, H $_2$ mass and cosmic ray distrib. 2-101062
ground state, HF energy, corrections to an incomplete basis set 2-108366
ground state electronic extracule densities 2-80446
intermolecular forces via hybrid HF SCF plus damped dispersion energy calcs., spherical model 2-70372
interstellar H $_2$, implications of COS-B gamma-ray meas. 2-74051
interstellar H $_2$, obs. in near IR spectroscopy of moderate luminosity IR sources OMC-2 IRS 3 and (IRS 4) 2-68851
interstellar H $_2$, rot. levels population by shock waves 2-58426
interstellar H $_2$ abundance, correl. with interstellar 4430 Å band strength 2-106847
intramolecular potential testing by shock compression of liq. H $_2$ 2-71605
line emission from Orion Molecular Cloud-1, model 2-106864
low energy electrons ionisation yield, statistical fluctuations 2-102594
mag. props., electron correl. effects 2-108398
magnetic shielding, dipole magnetisability tensor, LCAO-SCF calcs. 2-80464
metastable formation in thyratrons 2-90465
NGC 7027, planetary nebula, H $_2$ intrinsic Q(3)/S(1) line intensity ratio obs. 2-101019
one-dimensional molecule, δ -function interactions and wave functions 2-79317
Orion Molecular Cloud, high spectral and spatial resolution obs. of H $_2$ 12.28 μ m emission 2-63576
Orion Nebula, H $_2$ emission spectrum in near IR 2-112525
ortho and para, Raman scatt., effects of energy level degeneration (*Russian*) 2-54857
photoelectron ang. distrib., vibr. and rot. struct. 2-70337
physisorbed on flat surface, rotational excitation by low-energy electron scatt. 2-102651
polarisability, ab initio HF calcs. 2-90449
polarisability calcs. assuming additivity of atomic static polarisabilities and dispersion coefficients 2-85837
positron impact ionisation in presence of laser field 2-75442
positron scatt., low energy 2-75426
potential curve, electron exchange parameter effects, X $_n$ -SW calcs. 2-90450
predissociation of D $^1\Pi_u$ state near threshold 2-59873
quadrupole moments calculation 2-102432
quasi-bound and bound energy levels of H $_2$ H, matrix method calc. 2-75166
radiative transition probability meas. 2-114052
rotational S(2) and S(3) transitions, freq. and transition probabilities 2-80585
Rydberg state, Ne matrix isolated, vibr., UV obs. 2-108542
second order correl. energies, variational SCF calcs. 2-113860

hydrogen neutral molecules continued

- spin orbit coupling const. as function of internuclear distance, CI and STO calcs. 2-108401
stellar envelopes, parameters of ionisation-dissociation shock waves (*Russian*) 2-73956
stopping power of protons and alpha particles 2-70386
structure and screening at high press. 2-76961
thermal desorp. on Pt.TiO $_2$ 2-105502
three photon ionisation, quantum state specific detection 2-70353
thyratron, metastable species form. 2-54936
vibrational autoion., photoelectron spectrosc. obs. 2-90638
vibrational preionisation, multichannel quantum-defect theory 2-75359
vibrational smearing of deform. density, Hartree-Fock-Slater SCF calc. 2-80559
p $d\mu$ molecule, muonic molecular wave functions at small internuclear distances (*Russian*) 2-114138
Ar-H $_2$, second interaction virial coeffs. 2-80758
Ar-H $_2$ mixtures, H $^+$ transfer and isotopic exchange reactions 2-93785
 ^{75}As atoms, stopping power in He, Ne and N $_2$, recoil nuclei γ -ray emission study 2-102579
C $^+ + H_2$, radiative association reaction, rate coeff. reinvestigation 2-58235
D $^+ + H_2 \rightarrow HD + H^+$ reactions, drift tube investig. in relative energy range 0.04 to 0.3 eV 2-57606
H+He $^{2+}$, one and half centred calcs. of ionisation and charge transfer 2-54955
H $_2$, metallic and mol. rings, SCF and CI calcs. 2-108405
H $_2$, Σ_u^+ state, energy expectation values, semiclassical calcs. 2-59678
H $_2$, 2 μ m micron emission from NGC 2071, GL 961 and Cepheus A 2-89327
H $_2$, adsorption on ZnO, coverage induced IR freq. shifts 2-115539
H $_2$, chemisorption on FeO $_2$, IR study 2-82130
H $_2$, electron impact dissoci., H Balmer-alpha line emission and atom energy in ion-source discharge 2-70190
p-H $_2$, excited states, three-photon reson. ionisation 2-96667
H $_2$, gaseous, Dicke narrowing determ. by direct meas. of dephasing time 2-58919
H $_2$ in ϵ Persei line of sight, UV obs. 2-117716
H $_2$, in nematic solvents, 1H and 2H NMR meas., environmental effects 2-85699
H $_2$ in solid SiO $_2$ optical fibres, new Raman-gain medium 2-90861
H $_2$, intercalated in C $_6$ H $_6$, microvolt and millivolt molecular tunnelling spectroscopy by neutron scattering 2-71292
o-H $_2$ -p-H $_2$ conversion in Jovian planetary atmospheres 2-100782
n- and p-H $_2$, rot. and vibr. const., photoionisation photoelectron obs. 2-96634
H $_2$, v=1 emission, vel., reddening, and temp. structure in Orion molecular cloud 2-63550
H $_2$, v=1-0 S(1), (0), and 2-1 S(1) vibrationally excited lines in OMC 2-63552
H $_2$ -air flame with aspirated Na, spatially resolved optical Stark-modulation spectroscopic anal. 2-78109
H $_2$ -CO $_2$, use of space fixed expansion for fitting ang. depend. of ab initio rigid rotor pot. 2-108658
H $_2$ +Ar, vibr. relax. rate const., test of linear sum rule by trajectory calcs. 2-108687
H $_2$ +Ar, vibr.-rot.-translational energy transfer, state-to-state cross sections, Monte Carlo trajectory calcs. 2-90674
H $_2$ +Ar $^+$, energy depend., rate const. meas. 2-88346
H $_2$ +Ar $^+$, low energy charge transfer reactions, time-of-flight study 2-80803
H $_2$ +ArD $^+$, deuteron transfer reaction, rate coeff. 2-70409
H $_2$ +ArH $^+$, proton transfer reactions, rate coeffs. 2-70409
H $_2$ +B $^+(P) \rightarrow BH^+ + H$ 2-105454
H $_2$ +Be $^{8+} (B^{8+}) (C^{9+})$, electron capture, cross section meas. 2-102619
H $_2$ +C $_2$, reactions, temp. depend. 2-93765
H $_2$ +C $_2$, pot. energy surfaces, CEPA calcs. 2-93766
H $_2$ +C $^+(N^+)(O^+)$, atomic ground state, charge transfer cross sections 2-75417
H $_2$ +CO, on transition metal surfaces, heterogeneous catalysis 2-105507
H $_2$ +CO, rot. energy transfer and anisotropic intermol. pots., ab initio calcs. and expt. 2-75387
H $_2$ +CO, SCF pot. anal., dispersion energy 2-85571
H $_2$ +Ca, collisional relax., rate const. for quenching meas. by modulated laser induced fluoresc. technique 2-96680
H $_2$ +Cd(S 2P), quenching of Cd excited state, atomic fluoresc. obs. 2-80798
H $_2$ +Cl, semiempirical method of modelling pot. energy surfaces for generalised TST and appl. to kinetic isotope effects 2-62376
H $_2$ +D, activation energy, temp. depend. 2-62393
H $_2$ +ethynyl radical-H $_2$ +C $_2$ H $_2$ reaction rate const., ab initio determ. 2-83358
H $_2$ +F, collinear reactions, S-matrix propag. along Delves' radial coordinate 2-62382
H $_2$ +F, collinear reactive scatt., hyperspherical description 2-105467
H $_2$ +F, collinear reactive scatt. resons. 2-111469
H $_2$ +F, cross sections, opacity functions, quasiclassical trajectory calcs. 2-83362
H $_2$ +F (Cl $^-$), reactive scatt. 2-88345
H $_2$ +F(H), dynamical instability, external perturbations in laser fields 2-99666
H $_2$ +F(H), kinetic field pot., Morse function, pot. energy surface 2-85770
H $_2$ +Fe $^{6+}$, one-electron capture, cross section meas. 2-102618
H $_2$ +H, collinear reactive scatt., reson. widths, quasiclassical model 2-93767
H $_2$ +H, dissociation in interstellar shock heated regions 2-68861
H $_2$ +H, exchange reactions, classical var. rate calcs. 2-105461
H $_2$ +H, exchange reactions, cross section, impact parameter bands 2-111480
H $_2$ +H, molecular dissociation, collision induced, cross sections, appl. to mol. clouds 2-90653
H $_2$ +H, quasiclassical trajectory calcs. on H $_2$ pot. energy curve from force field data 2-102570
H $_2$ +H, quasiperiodic trajectories embedded in continuum, adiabatic anal. 2-111466
H $_2$ +H pot. energy surface, near Hartree-Fock calc. 2-59891
H $_2$ +H reaction, pot. hypersurfaces calc. by unrestricted Moller-Plesset perturbation theory 2-93753
H $_2$ +H $_2$, vibr. transitions, quantum mechanical and semiclassical probabilities 2-54926

hydrogen neutral molecules continued

- H₂+H⁺, isotope exchanges, reactive cross-sections and rate coeffs. calcs. 2-93789
- H₂+H⁺(H₂⁺)(H₂⁺), Balmer alpha emission 2-75375
- H₂+HCl⁺, charge exchange reactions, rate coeffs., selected ion flow study 2-88341
- H₂+H(F) reactive collisions, 3-dimens., reson. energies, semiclassical calcs. 2-111478
- H₂+H(He)(Ne)(Kr)(Xe), relativistic correction to interaction coeffs. 2-75202
- p-H₂+He, rovibr. excitation calcs. 2-75383
- PH₂+He, transition between rot. states, phase modulated semiclassical sudden approx. 2-70378
- H₂+He inelastic scatt., time depend. perturbation theory 2-102590
- H₂+He⁺, vibr. excitation, differential cross-sections meas. 2-75384
- H₂+He(He⁺), collision spectrosc., triatomic mol. orbital promotion model 2-96691
- H₂+He(Ne), van der Waals pot. hypersurfaces, bond dist. depend. 2-59882
- H₂+ion collisions, electron-capture and -loss cross section data compilation 2-79294
- H₂+Li⁺, electron loss cross-sections 2-54943
- H₂+Li⁺, diffusion cross sections, close coupling calcs. 2-75374
- H₂+methyl ion-d₀(-d₁)(-d₂)(-d₃), isotope exchanges and collisional assoc. 2-105462
- H₂+Mu(H), kinetic isotope effects, transition state theory, quantum calcs. 2-88347
- H₂+NO(CO), geometries and heat of reaction, MNDO calcs. 2-93778
- H₂+Na, pot. energy surfaces and nonadiabatic couplings calc. using eight config. diatomics-in-mol. formalism 2-102572
- H₂+Na⁺, electronic to vibr.-rot. and translational energy transfer process, ang. distrib. 2-85791
- H₂+O⁺, pot. energy surface, diatomics in mol. calcs. 2-105469
- H₂+O⁺, potential energy surfaces, diatomics-in-molecules approach 2-67744
- p-H₂+OH, interstellar rate coeffs. for rotational excitation 2-70400
- H₂+O⁺(D), vibr., rot. distrib., pot. energy surface, quasiclassical trajectory calcs. 2-83361
- H₂+O⁺(P), collinear exact quantum transmission coeff. correction to transition state theory 2-72976
- H₂+O⁺(P), pot. energy surfaces, quantum and quasiclassical reaction probabilities 2-72975
- H₂+Rb, fine struct. transitions meas. 2-54922
- H₂⁺+Ar, proton and charge transfer, coupling 2-102571
- (H₂), pot. surface and interaction between H₂ mol. at low temp., correl. effects 2-96484
- H₂, IR and visible electric emission spectra 2-113974
- H₂, mol. obs., props. 2-54832
- H₂, orbital stabilisation energy, semi-empirical MO calcs. 2-64881
- H₂, Rydberg spectra 2-75299
- H₂/H₂⁺, struct. changes, second order phase transition 2-75142
- H₂ systems, pot. energy surfaces, semiempirical calcs. 2-102566
- HD 2-85699
- HD, adsorpt. on ZnO, config. effects, IR spectrosc. obs. 2-61886
- HD, collision vibr. energy transfer, time domain photoacoustic relax. study 2-102587
- HD in ground vibr. state, rot. spectrum, dipole moment 2-85634
- HD+F, collinear reactive scatt. resons. 2-111469
- HD+methyl ion d₀(-d₁)(-d₂)(-d₃), isotope exchanges and collisional assoc. 2-105462
- HD(H₂)(TD), muonic mol., deexcitation rates calc. (Russian) 2-70455
- HD(Σ_g⁺), electronic states, multiconfigurational coupled-cluster theory 2-80416
- HT in air, prototype monitor design and performance 2-78272
- Pd-SiO₂/Na MOS device, H₂ induced flat-band voltage shift 2-61607

hydrogen power see hydrogen economy

hydrogen production see hydrogen economy

hydrogen storage see hydrogen economy

hydrogen transmission see hydrogen economy

hydrological techniques

- flood recurrence estimation method using river sediment records 2-78714
- geolectrical sounding for aquifers, appl. to Gangetic alluvium of Allahabad region, India 2-111862
- glacier ice air bubble CO₂ conc. measurement technique 2-117481
- groundwater dating, using ⁸¹Kr meas. at Alice accelerator facility 2-105525
- groundwater flow patterns determ. from ³H contents, implications of natural prod. of ³H in permeable rocks 2-100381
- groundwater table forecasting by statistical methods 2-111972
- ice pressure sensor embedded type, elastostatic anal. 2-63142
- isotope ratio measurement techniques and standards (¹⁸O,T,D) 2-73718
- lake evaporation estimated from climate data 2-117379
- lakes, current estimation modelling method (Japanese) 2-58091
- moisture gauging using neutrons, region of influence calc. 2-112913
- permafrost and annual freeze-up in Alaska, remote sensing applications 2-112171
- radioactive waste disposal site methods for meas. of hydrologic characs. 2-78873
- river runoff model incorporating radar data on rainfall 2-100411
- salinity of estuaries, remote sensing multispectral method 2-89051
- sea ice pressure meas. with embedded sensor, theory 2-63141
- sediment Pb and Cd conc. determination by at. absorpt. spectrometry method 2-68536
- snow, remote sensing by microwave radiometry 2-58152
- snow cover classification by microwave radiometry method 2-58153
- snow cover global distrib. measurement by satellite radiometry 2-58189
- snow water equiv. estimation, microwave radiometry 2-106336
- snow-covered Earth surfaces, microwave emission characs., satellite radiometry 2-58190
- soil moisture content meas. by microwave radiometry method 2-58149
- soil moisture determ. by conductor heat loss meas. (German) 2-68540
- soil moisture determination by microwave radiometry (permittivity formulae) 2-58150
- soil moisture from thermal IR meas. of vegetation temps. 2-106157
- soil moisture remote sensing by radar, land surface roughness effects 2-58151
- soil water diffusivity rel. to bulk density, estimation method 2-78889
- soil water sampling and subsurface meas., probe method 2-68535
- water sampler (automatic) for anal. of streams during storms 2-68499

hydrological techniques continued

- wind stress determination over lakes, inverse method using water-level fluctuations 2-106151
- U fission track determ. in water 2-67922
- hydrology
 - see also groundwater; lakes; rivers
 - Alaska permafrost and annual freeze-up studied by remote sensing 2-112171
 - Argos system for data collection and location by satellite 2-112153
 - bed load grain size grain size distribution model in FORTRAN IV 2-117366
 - Bihar wet and dry spells occurrence, importance for agriculture 2-68394
 - Bombay, SW monsoon precipitation patterns from 70 yrs pentad rainfall data 2-68391
 - NE Brazil drought, due to locally direct circulation forced by moist convection 2-78708
 - clay catchment in Yorkshire, England, evapotranspiration and water balance 2-106162
 - digital interactive image processing system, design and implementation of DIBIAS system 2-117510
 - drought forecasting, Yakima Valley 1977 case 2-74193
 - droughts, climatic aspects 2-106149
 - droughts and floods, statistical approach to historical records 2-100485
 - erosion and sediment yield from soil, laboratory expts. 2-83853
 - Ethiopia, implications of 1.2 Myr record of ¹⁸O and ¹³C changes in late Pliocene Rift Lake 2-68338
 - flood freq. robust models 2-94412
 - flood peaks, stochastic trigger model development 2-94413
 - flood peaks, stochastic trigger model for Goksu River, Turkey 2-94414
 - flood recurrence estimation method using river sediment records 2-78714
 - flooding, disaster management and damage assessment 2-107083
 - flooding in India, rel. to sunspot cycle 2-58116
 - floods, advance warning in Bay of Bengal region from radar meas. of rainfall 2-68439
 - floods and droughts, statistical approach to historical records 2-100485
 - frost penetration into ground, heat balance calc. 2-88921
 - Garm polygon, USSR, relationship, between geomag. vars. and hydrologic regime 2-73481
 - E Germany lowlands, runoff following snowmelt and rain (German) 2-117365
 - geyser process, theory 2-73599
 - groundwater flow, two dimensional saturated and unsaturated, finite element model (German) 2-73597
 - hot springs in India, search for correl. between Rn anomaly and local seismicity 2-111886
 - hydrometeorological institute in Czechoslovakia, regional telecommunication centre (Czech) 2-58127
 - NW India, low rainfall and drought conditions, climatological anal. 2-68392
 - Indian summer monsoon regime, drought foreshadowed by solar activity 2-68477
 - Israel, potential evaporation inland distribution 2-78746
 - NW Kashmir, India, snow cover density var. with temp. and date 2-68393
 - Kuril Islands, vars. in temp. and chemistry of thermal waters as precursor of Shikotan earthquake, (1978 December 7) 2-73480
 - landcover classification, NOAA-6 AVHRR digital data 2-106154
 - longitudinally compressed elastic plate influence on stream wave perturbation development 2-61258
 - meltdown from glacier basins, operational net shortwave radiation model 2-94409
 - New Zealand hydrology, role of ¹⁸O, D, T isotopes 2-73603
 - ocean floor hot spring, magma crystallization evidence 2-94363
 - Pecos River, Texas, Holocene and present flood record from archaeological/geomorphological evidence 2-78705
 - pond snow slush, unusual convection patterns 2-73596
 - Prairie Provinces, dust levels during severe droughts 2-94423
 - runoff model incorporating radar data on rainfall 2-100411
 - runoff rate due to melting snow, time lag study (Japanese) 2-94403
 - E Sahara Desert, geochronology of desertification in Great Sand Sea and Selima Sand Sheet 2-117269
 - sedimentary rocks, pure fluid, NMR, proton desorption rate 2-117297
 - sheetflood, sheetwash and sheetflow definitions 2-78706
 - snow, handbook of principles, processes, management and use 2-89472
 - snowmelt-runoff modelling 2-106153
 - Lake St. John, Quebec, Canada, temp., chemistry and water quality (French) 2-88916
 - statistical-dynamical climate model with a simple hydrology cycle 2-94483
 - stochastic predictions of cataclysmic events 2-111989
 - Subsaharan drought of early 1970s persistence 2-111980
 - summer dryness and climate, effect of increased atm. CO₂ 2-63076
 - thermal springs of Bath, England, geochemistry, hydrogeology and origin 2-100407
 - Washington, USA, late Wisconsin floods due to glacial lake 2-111982
 - water resources, stochastic modelling, pipeline processing on API20B 2-111971
 - Yamuna River, India, floods, rainfall and assoc. synoptic situations anal. 2-111979
 - Yangtze region, plum rains season abnormal precipitation (1163-1977) 2-78715
 - YETI, hydrological model for snowmelt simulation 2-73609
- hydromagnetic waves see magnetohydrodynamic waves
- hydromagnetics see magnetohydrodynamics
- hydrometers
 - see also density measurement
 - No entries
- hydrophones
 - see also sonar
 - discrete-structure transducers, analysis of performance characs. 2-70801
 - drag cables for marine seismic exploration, comparison of solid and kerosene filled types 2-81174
 - fibre optic sensors, applications 2-75705
 - fibre-optical hydrophone using multimode waveguide, based on Mach-Zehnder interferometer 2-81189
 - gradient, calibration using shake table 2-97331
 - liquid delay line oscillator, use in hydrophone 2-91131
 - medical US hydrophones, miniature, angular response 2-94132
 - nonlinearity meas., second order sensitivity 2-97340

hydrophones continued

- ocean acoustic propagation modelling and source characterisation by spectral density matrix eigenvectors 2-60283
piezoceramic hydrophone with liq., cryst. light modulator for hybrid fibre optic sensors 2-102930
piezoelectric, temp. stability and sensitivity meas. 2-81188
pop-up ocean bottom recorder for seismic refr. expts. 2-58165
pressure gradient hydrophones, calibration in a nondamped body of H₂O 2-81155
ship-towed linear hydrophone arrays, effective lengths for flow noise 2-70751
underwater electroacoustic meas. techniques and instrumentation 2-70792
US hydrophones, comparison of two calibration methods, medical diagnosis appl. 2-117037
US receiver, depend. of elec. output on orientation 2-70789
waterproofing of sonar hydrophones using elastomeric membranes 2-60280
wide frequency range miniature hydrophone for the measurement of pulse ultrasonic field 2-78476

hydropotometers *see* **photometers****hydrostatics**

- charged perfect fluid sphere, equilb. 2-106507

hydrothermal crystal growth *see* **crystal growth from solution****hydroxonium ion**

- aqueous acid solns., Raman spectrum 2-113996
H₃O⁺ + H₂O₂, reactive collision, energy distrib. functions calcs. 2-105476

hydroxyl group *see* **oxygen compounds****hygiene**

- see also* **medicine**

No entries

hygrometers

- see also* **humidity measurement**

- Aquamax II, humidity measurement using an integrated circuit (German) 2-53776
dew-point hygrometry, for total precipitable water 2-58163
IR astronomical site testing in Italy, diurnal data 2-83900
IR gas analysers technique in temp. range from -30°C to +180°C 2-79593
Lyman-alpha hygrometer for rapid humidity meas. 2-64056
multichannel ventilated psychrometer-type hygrometric system using a microcomputer 2-5883
optoelectronic transducer, LEDs based on heterojunctions 2-79594
polymer based capacitive hygrometer (French) 2-63128
portable water-vapour monitor, for day or night use 2-106543
psychrometric tables, draft proposal for novel system 2-73714
relative or equilibrium humidity meas., survey w.r.t. users' requirements (German) 2-74427
sensors for measurement of humidity in gases (French) 2-89732
two-wave humidity analysers based on controlled radiation sources (Russian) 2-64055

hyperfine field interactions (condensed matter)

- see also* **crystal hyperfine field interactions; nuclear screening**

- amorphous solids, electric field gradients, theory and expt. data review 2-104323
chalcogenide glasses: Mn²⁺, EPR study, HFS at $g \approx 4.3$ 2-110625
ferrie fluorides amorphous, ⁵⁷Fe nucl. quadrupole splittings distrib., struct. implications 2-77003
metallic glasses, hyperfine field distrib. and struct. 2-103643
metallic glasses, hyperfine fields, review 2-104324
Mossbauer spectra evaluation, Fourier method 2-104758
Mossbauer spectra evaluation using Fourier anal. 2-104766
polyacetylene, ENDOR spectrum meas. 2-77421
powders, nuclei with $I=3/2$, electric field gradient tensor, asymmetry parameter determ. from NQR spin echo 2-110709
rare earth garnets, RFeO₁₂, amorphous, struct. props., Mossbauer study 2-103625
As₂Te_{1-x} glasses, intrinsically broken 8-N coord. rule, ¹²⁹I Mossbauer study 2-81686
(CH)₃ undoped film, hyperfine coupling anisotropy, π electron character, ENDOR study 2-116092
Co-Gd amorphous films, struct. and mag. props., Mossbauer study (Russian) 2-77429
CoB amorphous alloys, hyperfine field, mag. anisotropy, domain walls, NMR study 2-104714
Co₂₀Fe₄Si₁₅B₁₀, amorphous, crystn., Mossbauer and X-ray diffr. study 2-103636
CoP amorphous alloy, hyperfine field, mag. anisotropy, domain walls, NMR study 2-104714
Eu₇₇Al₂₃, amorphous, elec. field gradient at S-state ion, Mossbauer study 2-104761
Eu₈₀Au₂₀ and Eu₈₀Yb₂₀Au₂₀, amorphous, Mossbauer study 2-82757
(Eu_{1-x}Yb_x)₈₀Au₂₀, amorphous, elec. field gradient at S-state ion, Mossbauer study 2-104761
Fe-B metallic glass ribbons, mag. hyperfine field distrib., Mossbauer study 2-104763
Fe-Ni-P-B based metallic glasses, Mossbauer study under press. 2-72385
Fe-P-C metallic glass ribbons, mag. hyperfine field distrib., Mossbauer study 2-104763
Fe₄Zr₂₆, amorphous, mag., Mossbauer, and resist. study 2-72384
Fe_{1-x}B_x amorphous, sputtered and liquid quenched, hyperfine field, Mossbauer study 2-104760
Fe_{1-x}B_x metallic glass, atomic struct., Mossbauer study 2-103639
Fe_{100-x}B_x metallic glasses, hyperfine fields and local environment 2-104320
Fe₂B_{100-x} amorphous, mag. hyperfine interactions, Mossbauer study 2-82764
Fe₂B_{100-x} amorphous, mag. ordering temp., hyperfine fields, Mossbauer study 2-104755
(Fe_{1-x}Co_x)₇₇B₂₃ and (Fe_{1-x}Co_x)₇₇Si₂₃B₂₆ glasses, ⁵⁷Fe substitution effects, Mossbauer study 2-110738
Fe₇₇Co₂₃B₁₀Si, metallic glass, atomic site environments, spin echo NMR study 2-72376
Fe₇₇Hf₂₃, amorphous, mag., Mossbauer, and resist. study 2-72384
(Fe_{1-x}Ni_x)₈₀B₂₀, amorphous hyperfine fields, magnetisation, Mossbauer study 2-104764
(Fe_{1-x}Ni_x)₈₀B₂₀, glass, mag. props. and crystn., Mossbauer study 2-104754
Fe₁₆Ni₆₂B₂₂Si₈, amorphous, struct. relax., Mossbauer study 2-72383

hyperfine field interactions (condensed matter) continued

- Fe₃₂Ni₃₆Cr₁₄P₁₂B₆, metallic glass, mag. hyperfine field distrib., Mossbauer study 2-87640
Fe₃₂Ni₃₆Cr₁₄P₁₂B₆, amorphous, Mossbauer study under press. 2-72385
Fe₄Ni₂Si₁₅B₁₃ amorphous spin glass, mag. props., Mossbauer effect meas. 2-104765
Fe₂O₃-TeO₂ glass, Mossbauer effect and elec. cond. meas. 2-87639
⁵⁷Fe, Mossbauer conversion electron spectra, electrostatic electron spectrometer appl. 2-96367
⁵⁷FeO₃, Mossbauer conversion electron spectra, electrostatic electron spectrometer appl. 2-96367
Gd₈₀Au₂₀, amorphous, elec. field gradient at S-state ion, Mossbauer study 2-104761
Gd₈₀Au₂₀, amorphous, Mossbauer study 2-82757
Si:H(F), amorphous, dangling bond ESR, effect of H or F, Huckel mol. orbital calc. 2-56933
Sn-O amorphous system, bonding struct. and lattice dynamics, Mossbauer study 2-104770
V³⁺ complexes, vanadyl esters and esterchlorides, quadrupole coupling consts., NQR and NMR study 2-66933
Y-Co amorphous powders, mech. grinding prep., struct. and mag. props. (Russian) 2-61742
YFe₂, amorphous, struct. relax., Mossbauer study 2-72383
YIG, amorphous, Mossbauer Zeeman spectrum, linewidth asymm. 2-110736
YIG, amorphous spermag., quadrupole energy shifts of ⁵⁷Fe Mossbauer lines 2-72386
Zr-Cu metallic glass, density of states and comp. short range order, NMR and mag. study 2-104726
Zr_{100-x}Fe_x, amorphous, hyperfine field distrib., spin coupling, Mossbauer study 2-104756

hyperfine field interactions in crystals *see* **crystal hyperfine field interactions****hyperfine structure, atomic** *see* **atomic hyperfine structure****hyperfine structure, molecular** *see* **molecular hyperfine structure****hyperfragments** *see* **hypernuclei****hypernuclei**

- additive quark model for spin-orbit interaction 2-107642
conference on mesons and light nuclei, Liblice, Czechoslovakia (June 1981) 2-58527
exotic atoms, K-nucleus scatt. and hypernuclei, review 2-59416
high energy physics and nuclear structure, conf., Versailles, France (July 1981) 2-53416
(K⁻ π) strangeness exchange, hypernuclear resonance excitation, p-shell struct. effect 2-59279
kaon-nucleus interactions and hypernuclei, review 2-54444
sigma hypernuclei, microscopic model 2-95953
simplified relativistic mean field approach for nuclei and hypernuclei 2-95954
spectroscopy techniques, Λ - and Σ -reactions, review 2-59278
 Λ well depth, p-state contrib. 2-107791
 Σ hypernuclei, potential in relativistic mean field approx. 2-59280
 Ξ hypernuclei, excited states, SU(3) theory (Chinese) 2-54299
⁹Be hypernuclei (Chinese) 2-54299
⁹Be_A production from (K⁻ π), continuum shell model calc. 2-59281
⁹Be_A and ⁹Be_A, charmed nuclei and hypernuclei, comparative study, interaction strengths 2-54298
¹²C hypernuclei, binding energy, SU(3) model (Chinese) 2-54299
¹²C_A production from (K⁻ π), continuum shell model calc. 2-59281
¹⁶O_A hypernucleus expt. observation from O(K⁻ π) 2-64367
⁴⁰Ca_A production from (K⁻ π), continuum shell model calc. 2-59281
³H_A, binding energy diff. to ³He_A (Chinese) 2-107792
³H_A, binding energy calc. 2-59229
³H_A binding energy, three body problem with finite range forces 2-113389
⁴H_A and ⁴He_A, lambda separation energy difference, tensor force effect 2-101832
⁶H_A, small angle cross sections, narrow Σ states, energy shifts from ⁶Li(K⁻ π) 2-64368
⁶H_A hypernucleus expt. observation from ⁶Li(K⁻ π) 2-64367
⁴He_A, $\Lambda=2$, 3, binding energy, few-particle eqns. (Russian) 2-59427
³He_A, binding energy, few-particle eqns. (Russian) 2-59427
³He_A, binding energy diff. to ³H_A (Chinese) 2-107792
⁴He_A and ⁴He_A, lambda separation energy difference, tensor force effect 2-101832
⁷He_A and ⁷He_A, charmed nuclei and hypernuclei, comparative study, interaction strengths 2-54298
⁶He_A, Λ - Λ interaction energy, one-boson exchange pots. 2-79968
⁶He_A, microscopic GCM study, di- α clusters 2-79967
¹⁶O_A production from (K⁻ π), continuum shell model calc. 2-59281
 Λ X_A \rightarrow Λ -X + p + l + $\bar{\nu}$, many-particle leptonic decays, energy and ang. distrib. (Russian) 2-90040

hyperon absorption

- No entries

hyperon capture

- see also* **hypernuclei**

- No entries

hyperon decay

- nonleptonic, gluon exchange contrib. 2-95828
polarised neutral and charged hyperons, semileptonic decays, EM corrections 2-69457
semileptonic, discrimination between pions and electrons 2-101716
semileptonic decay, evidence for SU(3) breaking in Cabibbo-type fits 2-69459
semileptonic decays, critical anal. 2-64323
weak EM decays, quark model 2-74685
 $\Lambda \rightarrow n\gamma$, CP violation induced by penguin diagrams, n electric dipole moment 2-54158
 $\Lambda \rightarrow N\pi$, strangeness-changing nonlepton decay 2-74648
 $\Lambda \rightarrow p\pi$, Cabibbo theory comparison, form factors, radiative corrections 2-113269
 $\Lambda \rightarrow X\pi$, obs. in e⁺e⁻ events 2-79872
 $\Lambda_s(\Lambda_s)$ semileptonic decays, lepton spectrum calc. in pp collisions 2-95886
 Λ_s^+ decays, hard and soft gluonic effects, Weinberg-Salam weak Hamiltonian 2-84893
 Λ_s^+ lifetime meas., review 2-79865
 $\nu p \rightarrow \Sigma^+ + \mu^-$, quasi-elastic prod. $\Sigma^+ + \mu^-$ mass difference 2-54134
 $\Omega \rightarrow AK^0(\bar{K}^0)$, nonleptonic decays in relativistic composite model with QCD effects 2-54149

hyperon decay continued

- Ω^- , nonleptonic decays in weak interaction model 2-59145
- $\Omega^- \rightarrow \Lambda K^-$, dimension-five effective operators calc. 2-74691
- $\Omega^- \rightarrow \Xi^- \gamma$, parity violating mode, penguin contribs. to QCD hamiltonian, Wilson coeffs. 2-79869
- pN, 400 GeV/c, charm prod., Λ_c^+ decay and prod. cross section 2-101779
- $\Sigma^- \rightarrow \text{neutrons}$, electron asymmetry and second-class currents 2-84891
- $\Sigma^- \rightarrow \Lambda e^- \bar{\nu}$, deviation from Cabibbo theory, symmetry breaking effects 2-64322
- $\Sigma^- \rightarrow \text{neutrons}$, pol. Σ^- , beta decay electron asymmetry 2-64321
- $\Sigma^- \rightarrow \text{neutrons}$, Cabibbo theory comparison, form factors, radiative corrections 2-113269
- $\Sigma^+ \rightarrow \text{protons}$, radiative decay, quark diagram anal., formulation 2-95845
- $\Sigma \rightarrow \Lambda e^- \bar{\nu}$, Λ polarisation and vector/axial vector form factor ratio 2-84892
- $\Xi^- \rightarrow \Lambda \pi^-$, α asymm. parameter 2-79874
- $\Xi^- \rightarrow \Lambda \pi^-$, α -parameter determ. 2-59146
- $\Xi^- \rightarrow \Lambda \pi^-$, branching ratio, rel. to $\Xi^- \rightarrow \pi \pi^-$ 2-79875
- $\Xi^- \rightarrow \Lambda \pi^-$, branching ratio, rel. to $\Xi^- \rightarrow \Lambda \pi^-$ 2-79875
- $\Xi^- \rightarrow \Sigma^- \gamma$, parity violating mode, penguin contribs. to QCD hamiltonian, Wilson coeffs. 2-79869
- $\Xi^0 \rightarrow \Lambda \pi^0$, asymmetry parameter meas. 2-54152

hyperon detection and measurement

No entries

hyperon-deuteron interactions

see also hyperon-deuteron scattering

No entries

hyperon-deuteron scattering

see also hyperon-deuteron interactions

Ad elastic scatt., three-particle variational calc. 2-101763

hyperon effects

No entries

hyperon interactions see hyperon-nucleon interactions; hyperon-nucleus reactions; kaon-hyperon interactions; lepton-hadron interactions; photon-hadron interactions; pion-hyperon interactions

hyperon magnetic moment

quark model and spectrum generating SU(3) fits of baryon mag. moments 2-113275

variable pressure bag model 2-113242

hyperon mass

No entries

hyperon-nucleon interactions

see also hyperon-nucleon scattering

No entries

hyperon-nucleon scattering

see also hyperon-nucleon interactions

No entries

hyperon-nucleus reactions

for inelastic hyperon-nucleus scattering, see "hyperon-nucleus scattering"

see also hyperon capture; hyperon-nucleon interactions

hypernuclear spectroscopy techniques, Λ - and Ξ -reactions, review 2-59278**hyperon-nucleus scattering**

see also hyperon-nucleon scattering

 $^2\text{H}(\Lambda, \Lambda)$ elastic scatt., three-particle variational calc. 2-101763 $^3\text{H}(\Lambda, \Lambda)$ elastic scattering theory with realistic two-body interactions 2-101855 $^4\text{H}(\Lambda, \Lambda)$, $\Lambda=2, 3$, low-energy, few-particle eqns. (Russian) 2-59427 $^3\text{He}(\Lambda, \Lambda)$, low-energy, few-particle eqns. (Russian) 2-59427**hyperon production**

heavy ion collisions, strange particle production in the hadrochemical model 2-113529

pp—hyperon+X, large p_T , gluon helicity distrib. 2-59203 $e^+e^- \rightarrow 2$ jets, $\Delta\Lambda$ pair prod., possible 5 GeV pseudoscalar meson weak decay 2-113283 e^+e^- annihilation, 1-10 GeV/c, inclusive $\Delta\Lambda$ prod. at PEP 2-79896 e^+e^- annihilation, inclusive p, \bar{p}, Λ and $\bar{\Lambda}$ prod. at PETRA 2-79895 $e^+e^- \rightarrow \Lambda_c^+ \Lambda_c^- X$, direct electrons obs., Λ_c semileptonic decays 2-79872 γN , charmed hadron inclusive photoproduction in VDM (Russian) 2-74694 γp , 20-70 GeV, hyperons and antihyperons inclusive photoproduction study 2-84901 γp , 25-70 GeV, Λ and $\bar{\Lambda}$ inclusive prod., KDM and quark fusion anal. 2-59159 $K^+ \Lambda$ production by the weak charged current, final state interaction effect 2-101637 $K^- p \rightarrow K^+ K^- (\Lambda/\Sigma^-)$, 18.5 GeV/c, high mass ϕ -like state 2-54214 $K^- p \rightarrow \Lambda(1520) \pi^0$, transversity amplitude anal. at 4.2 GeV 2-84912 $K^- p \rightarrow \Lambda \pi^-$, $\Sigma(1385)$, resonance parameters from decay mode 2-84913 $K^- p \rightarrow \Lambda \pi^- \pi^+$, 620 to 870 MeV, final state anal. 2-54211 $K^- p \rightarrow \pi^+ \Xi^- \Xi^0(1385)$, interference effects and kinematic reflections 2-84914 $K^+ p \rightarrow \Lambda_c^+ X$, 3.2 GeV/c, rel. to strange meson prod. 2-59200 $K^+ p \rightarrow \Xi^+ X$, 3.2 GeV/c, rel. to strange meson prod. 2-59200 $K^+ p \rightarrow \Xi^+ X$, 32 GeV, rel. to strange meson prod. 2-59200nN— $\Lambda_c^+ X$, 40 GeV, charmed baryon prod. cross section (Russian) 2-89986 $\nu p \rightarrow \Sigma^+ \mu^-$, quasi-elastic prod. $\Sigma^+ \mu^-$ mass difference 2-54134pN, 100 GeV, inclusive $\Lambda(1520)$ prod. in p-B interactions 2-95884pN, 400 GeV/c, charm prod., Λ_c^+ decay and prod. cross section 2-101779

pp, 7.3 GeV/c, absolute inclusive cross sections 2-69487

pp, Λ_c and Λ_b prod. and semileptonic decays, lepton spectrum calc. 2-95886pp, Λ^0, Λ^0 hyperon prod. combined model (Russian) 2-54223pp— $\Lambda X(\Lambda X)$, $s^{1/2}=63$ GeV, neutral strange particle prod. cross section 2-69500 $\pi p \rightarrow K^0(\Lambda_c^+) X$, 12-405 GeV/c, cross-section, multiplicity, energy depend. (Russian) 2-74710pp— $K^0(\Lambda_c^+) X$, 12-405 GeV/c, cross-section, multiplicity, energy depend. (Russian) 2-74710**hyperon resonances** Λ resonances, Bethe-Salpeter treatment under harmonic confinement 2-89935pp— $Y^{*+} X$, 147 GeV/c, x and t distrib. 2-74715 $\pi p \rightarrow Y^{*+} X$, 147 GeV/c, x and t distrib. 2-74715 $\Sigma(1385)$, resonance parameter from $\Delta\pi$ decay mode of $K^- p$ interaction 2-84913**hyperon resonances continued** $\Sigma(1940)$, elasticity in $K^- n \rightarrow k^- n$ system 2-84915 Σ resonances, Bethe-Salpeter treatment under harmonic confinement 2-89935 $\Sigma^*(1385)$, interference effects and kinematic reflections 2-84914

hyperon scattering see hyperon-nucleon scattering; hyperon-nucleus scattering; kaon-hyperon scattering; lepton-hadron scattering; photon-hadron scattering; pion-hyperon scattering

hyperon spin and parity

No entries

hyperons

see also hyperon resonances

electric dipole moment, review 2-69468

spin kinetic energy, intrinsic mass 2-95808

 Λ , effective mass in nuclear matter, Λ -N one boson exchange 2-79963 Ω^- , nonleptonic decays in weak interaction model 2-59145 Ω^- electric quadrupole moment from nonrelativistic quark models 2-84896pp— Λ , 540 GeV, strangeness prod. yields 2-101767**hypersonic flow**

aerodynamic tube, laser Doppler vel. meas. beam shifts due to turbulence (Russian) 2-114840

blunt-nosed body in nonuniform hypersonic gas stream, convective heating 2-86298

elliptical cone, compressible laminar boundary layer, heat transfer coeff. 2-75927

flat plate moving at high Mach numbers, unsteady boundary-layer induced pressures 2-81323

inviscid, over series of indented nosetips, numerical solution 2-97586

jet blown into hypersonic flow, separation zone characts. surface longit. angularity influence (Russian) 2-103188

laminar viscous flows past spinning cones at angle of attack 2-91482

nonequilibrium hypersonic multiphase flow, gas dynamics, appl. to lasers 2-76014

shapes travelling at 6.85 Mach number, large amplitude oscillatory motions, schlieren photography 2-114951

shock-layer flow numerical solution, laminar, transitional and/or turbulent speeds 2-86301

sphere, drag in supersonic and hypersonic transition regimes 2-70906

three-dimensional viscous flowfield computations in a streamline coordinate system 2-86300

hypersorption see sorption**hypertrons** see hypernuclei; tritons**hypervirial theorem** see quantum theory**hypochromism** see light absorption**hypothesis formation** see heuristic programming**hypothetical particles**

see also charm particles; heavy leptons; intermediate bosons; magnetic monopoles; quarks; tachyons

axion search in nuclear γ -transitions 2-59086

de Sitter Universe, massive spin 1/2 particle 2-58672

erons, particle sextet, spinless, with $B=2/3$ 2-95738

gluino mass in supersymm. theories 2-79782

gluino mass in supersymmetric theories 2-107552

gluino search in e^+e^- annihilation, quarkonium decays 2-79897

gluon gas, lattice results, grand potential for hot QCD 2-113228

gravitino dominated Universe galaxy form. 2-112627

Kalb-Ramond particles, massless, dynamical stability 2-101556

light pseudoscalar, role in stellar energy loss 2-84086

massive photinos, rel. to intergalactic UV radiation 2-79796

pseudoscalar glueball two-proton decay 2-54227

pure SU(2) lattice gauge theory, glueball masses, Monte Carlo method 2-69339

QCD, colour monopoles from fractional charges 2-59103

spin-3/2 leptons prod. and decay props., weak interaction processes 2-69441

supersymmetric scalar quark partners, mass constraints 2-101596

 e^+e^- annihilation, gluino pair prod. 2-113284 X^+ in superheavy H, in interstellar matter, search 2-89343**hysteresis**

see also coercive force; dielectric hysteresis; elastic hysteresis; magnetic hysteresis; remanence

alkali halides, press. induced polymorphic transition, hysteresis phenomena, theoretical study 2-109973

brittle solid, hysteresis in abrasive wear 2-67559

capillary, fluid boiling on surface of porous coating (Russian) 2-60363

light reflection coefficient hysteresis jump of nonlinear medium interface 2-82816

loop, anal. of loop shape 2-98186

loop, statistical theory 2-98185

loop, stress-dip expts. 2-98187

metal hydride systems, hysteresis, regular interstitial soln. approx. 2-56197

metal hydrides, thermal solvus and plateau press. hysteresis relationships 2-73008

metal-semiconductor phase transition materials, resolution capability of data carriers (Russian) 2-60028

optical bistability, absorptive, at microwave frequencies 2-114355

pseudo-elasticity, temp. and force criteria (Russian) 2-92081

superconducting microbridge, crit. current hysteresis, theory 2-72119

TTF-TCNQ, nonlinear model for hysteresis obs. in neutron scatt. 2-56182

TTF-TCNQ, nonlinearity and hysteresis, Landau theory for transverse sliding 2-86857

two-dimensional solid-state ferroelec. self-wave medium, nonlinear switching waves obs. 2-89546

type II superconductors, surface effects influence on hysteresis losses 2-61671

Ag₂Si, anomalies of acoustic attenuation and vel. at β - γ phase transition 2-109910Co₂Fe_{1-x}S, electrical resistance, time depend., α -phase transition (German) 2-92626Er_{1-x}Ho_xRh₂B₂, direct evidence for first order phase transition at lower crit. temp. 2-61639

KCl, press. induced polymorphic transition, hysteresis phenomena, theoretical study 2-109973

NbSe₂, CDW cond. onset, switching and hysteresis 2-110407

Ni single crystal, fatigued, plateau behaviour 2-115344

PbI₂ (6H), high press. Raman study 2-104864

hysteresis continued

- (Rb_{1-x}K_x)₂ZnCl₄, thermal hysteresis of modulation wavevector, X-ray study 2-109975
 Se-As alloy film, amorphous, capacitance changes during struct. relax. 2-91785

I-II-VI₃ semiconductors *see ternary semiconductors***I-III-VI₂ semiconductors** *see ternary semiconductors***IC** *see integrated circuits***IC engines** *see internal combustion engines***ice**

- see also glaciology; sea ice; snow*
 COMSTAR beacon appl. 2-106214
 air hydrate inclusions in fresh ice core from Dye-3, Greenland 2-100408
 Alaska permafrost and annual freeze-up studied by remote sensing 2-112171
 amorphous, effective charges 2-86568
 amorphous and cryst. state, electronic struct., X-ray emission study 2-87907
 Antarctica, ice movement and ice ablation rel. to discoveries of meteorites (German) 2-94662
 atmosphere, ice crystals form. and supercooled fog dissipation by artificial nucleation 2-100484
 Ceres, water ice existence evidence IR obs. 2-73888
 collimated light beam propagation in layers of ice and snow 2-106161
 columnar-grained, compressive strength, const. strain- and stress-rate 2-66106
 COMSTAR satellite propagation experiments, 19 and 28 GHz 2-94471
 crystal growth and evaporation from vapour phase, interface kinetics 2-97959
 crystal growth and evaporation from vapour phase, interface kinetics, meas. in water vapour environment 2-97960
 crystal growth and evaporation from vapour phase, interface kinetics, meas. under N₂ partial press. 2-97961
 crystal phase II and IX, translational and rot. vibrs., Raman study 2-93176
 crystals in low temp. electrolyte solns., controlled nucleation and quasi-ordered growth 2-60903
 dielectric properties meas. technique for low temps. (Japanese) 2-89746
 electron irradiation obs., of C film, in vicinity of ice 2-92044
 Erie ice cover duration and influence of Niagara R. ice boom 2-94482
 formation pattern in smooth muscle, freeze-substitution and isothermal freeze-fixation studies 2-83717
 frost penetration into ground, heat balance calc. 2-88921
 fusion rate, heat transfer, finite element anal. 2-55407
 glacier, flow law for polycryst. ice 2-58094
 glacier ice air bubble CO₂ conc. measurement technique 2-117481
 Great Lakes, effects of ice cover and atmospheric stability on evaporation 2-88919
 Greenland ice sheet cores, ²³⁹⁺²⁴⁰Pu/¹³⁷Cs and ²³⁹⁺²⁴⁰Pu/⁹⁰Sr as fallout records 2-69994
 hail forecasting, appl. of numerical model of cumulus cloud (Chinese) 2-88945
 hail stable isotope concs. described using cloud model 2-117416
 hailstone growth in storms, isotope and layer struct. study 2-117417
 hexagonal, heat cond. anisotropy, 0.5 to 20K 2-98356
 high pressure phases, Raman spectra in stability region 2-87763
 Hyperion, water ice bands detect. from near IR spectrophotometry 2-106606
 I_h single crystal, Raman scatt., Lorentzian central component 2-87795
 ice-NH₃-methane-(propane) mixture 3.4 μm feature, comparison with interstellar feature 2-84304
 Ih polycryst., Raman spectrum, OH stretching region, vibr. anal., anharmonic pot. energy functions 2-104867
 interstellar detection from IR obs. of mol. clouds 2-117727
 Lake Suwa, Japan, climate change and freezing dates 2-117438
 longitudinally compressed elastic plate influence on stream wave perturbation development 2-61258
 mechanical properties with allowance for structural props. 2-115349
 melted layer between vertical plates, convection onset 2-92159
 methane hydrate, acoustic vel. from Brillouin spectra obs. 2-109909
 morphology, X-ray precession photography of ice VI 2-86608
 North Pole, hydrocarbons in snow and ice 2-105628
 nucleating behaviour in MgAl₂(M=Rb, K, NH₄) 2-86829
 phase transition, VII to VIII, X-ray study 2-71630
 polar ice caps, effects on global climate in two-dimensional energy balance model (Chinese) 2-88999
 polycrystalline, tensile strength as function of grain size 2-105272
 research trends 2-63004
 riming, ice cryst. growth process 2-63070
 Saturn icy satellites, ice phase transitions as resurfacing mechanism 2-112382
 South Pole cores, microparticle deposition from 1450 to 1850 as natural background aerosol record 2-78814
 sputtering by fast heavy ions 2-99239
 substrate, reorientation during freezing of supercooled water droplets 2-92162
 surface transition layer 2-56412
 Sweden, glaciation as cause of high rock stresses 2-106035
 thermal diffusivity determ. of solid materials near melting point 2-115394
 thermodynamic equilibrium of water-ice system (French) 2-69115
 valence bands, UPS study 2-67190
 VII phase, lattice parameters, Raman and X-ray study 2-104872
 D₂O cubic ice, homogeneous nucleation and crystallisation in LiClD₂O electrolytic glass 2-81684
 D₂O ice crystal, light ion interaction 2-81842
 D₂O ice film, erosion and mol. form. by electronic energy loss of fast ions 2-98171
 PbI₂, ice nucleating behaviour in presence of soluble salts 2-71619
 Xe hydrate, acoustic vel. from Brillouin spectra obs. 2-109909

iconoscopes *see television camera tubes***identification**

- see also correlation methods; frequency response; modelling; parameter estimation; simulation; state estimation*
 heat transfer system, identification using Galerkin method 2-70824
 leg dynamics in torsion, human 2-105721
 reflection seismology for oil and gas exploration, appl. of state variable technology 2-117506

IETS *see tunnelling spectra; tunnelling spectroscopy***IXE** *see ion microprobe analysis; X-ray chemical analysis***i.g.f.e.t.** *see insulated gate field effect transistors***ignition***see also electric ignition*

- discharge ignition in transverse mag. field, time-depend. props. 2-81611
 electric discharge, ignition in crossed elec. and mag. fields (Russian) 2-60810
 heat evolution kinetic charact. determ. 2-99680
 CO oxidation, oscillations, glow, ignition, in closed gas-phase system 2-78110
 CS₂-O₂ mixtures, self-ignition, conditions, spectrosc. investig. 2-62402
 H₂ ignition when injected into high temperature oxidiser experimental study 2-99847

ignitrons *see mercury arc rectifiers***II-III-VI₂ semiconductors** *see ternary semiconductors***II-IV-V₂ semiconductors** *see ternary semiconductors***II-VI semiconductors**

- amphoteric exciton trapping by 3d impurities 2-76937
 bulk and epitaxial growth, impurity role 2-116347
 CdS, thin evaporated films, optical and elec. props. 2-61624
 CdS-Cu₂S solar cells preparation and anal. 2-78220
 CdTe light pipe modulator, for broadband space communications at 10 μm 2-81069
 cohesive energy, rel. to phonon frequencies of crystals 2-66150
 crystal growth, characterisation and device appls., conf., Durham, England (April 1982) 2-107003
 deep levels, junction space-charge techniques 2-110285
 effect of island sublayers of Ag 2-88005
 electronic Raman scattering from semiconductors, review (Japanese) 2-72508
 electronic surface states, review 2-110411
 excited states of bound excitons, photolum. and magnetooptical spectroscopy 2-116238
 film deposition, on mica 2-88005
 Hg_{0.7}Cd_{0.3}Te anodic oxidation 2-111344
 high frequency electron scattering rate, Drude Zener theory 2-66581
 impurities and imperfections, p-n junction formation (Japanese) 2-91950
 intrinsic defects, formation kinetics in coexistence with equil. vapour phase 2-86662
 light induced transient grating decay obs. 2-57043
 luminescence of deep transition metal centres 2-57152
 MBE growth and elec. characterisation 2-93431
 optical properties of 3d transition metals, physics of internal and charge transfer transitions 2-110286
 phase diagrams, ternary systems calc. 2-62102
 Schottky barrier contacts, metal-n-type, expl. study 2-72057
 spot size effects in picosecond luminescence experiments 2-104953
 surface properties of clean and adatom treated surfaces 2-110115
 thin films with thin film optical waveguides, optical consts. 2-82947
 Thomas-Fermi nonlinear dielec. screening 2-56459
 ZnSe-Li, p-type cond. 2-115925
 CdTe-CdS thin film photovoltaic cells, optical and elec. props. meas. 2-116824
 Au/n-CdTe Schottky diode, elec. props. meas. 2-77184
 Au-CdS Schottky structure, deep levels obs., anal. of admittance spectroscopy method 2-115701
 BaS phosphors, cryst., colour centres, stimulated IR spectra 2-104875
 C-CdS-metal, switching struct., with potential barrier, elec. characts. 2-87407
 CC CdTe high voltage photovoltaic cells composition and structure, modulated reflectance study 2-99786
 Cd Hg Te SPRITE—a TED infra-red detector for high performance thermal imaging systems 2-91090
 Cd-Hg-Te system, eutectic microstructures obs. 2-111155
 CdGa₂S₄ semiconductor, exciton states in optical spectra obs. 2-110890
 Cd(Hg)_{1-x}Se mixed cryst., Γ point band struct. parameter, elec. and thermomagnetic studies 2-76923
 Cd(Hg)_{1-x}Se, US attenuation and vel. meas. near zero-gap state 2-92118
 CdHgTe electronically scanned photovoltaic hybrid detector array for 8-14 μm band 2-64107
 CdHgTe IR detectors for scanned arrays, SPRITE detector 2-91089
 Cd_{0.1}Hg_{0.9}Te, narrow-gap semicond., dielec. const. anomaly 2-93099
 Cd_{0.1}Hg_{0.9}Te, anodic oxide layers, interface struct., SIMS-AES XPS investig. 2-104208
 Cd(Hg)_{1-x}Te (0≤x≤1) thin films, laser epitaxy and annealing (Russian) 2-105070
 Cd(Hg)_{1-x}Te and related materials, self-diffusion and impurity diffusion 2-110033
 Cd(Hg)_{1-x}Te, brittle to plastic transition, microhardness and optical transmission meas. 2-86783
 p-Cd(Hg)_{1-x}Te, characterisation of MBE grown layers 2-110198
 Cd(Hg)_{1-x}Te, compositional uniformity, directed crystn. from melt 2-76333
 Cd(Hg)_{1-x}Te, crystal, size effect, Hall coeff. temp. depend. 2-115802
 Cd(Hg)_{1-x}Te, growth by pressurised cast-recrystallise-anneal technique 2-111068
 Cd(Hg)_{1-x}Te, high quality epitaxial films, growth by sputter deposition 2-116362
 p-Cd(Hg)_{1-x}Te, hole conc. routine characterisation, Hall coeff. and bulk cond. meas. 2-82351
 Cd(Hg)_{1-x}Te, IR detector developments 2-107406
 n-Cd(Hg)_{1-x}Te, layers, MBE growth, struct. and elec. props. 2-99340
 Cd(Hg)_{1-x}Te, MBE growth 2-93433
 Cd(Hg)_{1-x}Te, mag. field induced Mott transition (Russian) 2-87147
 Cd(Hg)_{1-x}Te, mech. props. in four-point bending, lower yield stress 2-115336
 Cd(Hg)_{1-x}Te, narrow gap, absorption coeff. and optical band gap 2-116146
 n-Cd(Hg)_{1-x}Te, photoconductivity relax. study 2-104426
 Cd(Hg)_{1-x}Te, photoluminescence 2-93278
 Cd(Hg)_{1-x}Te, sputtered epitaxial layers, structural and elec. props. 2-92424
 Cd(Hg)_{1-x}Te, microhardness 2-105294
 Cd(Hg)_{1-x}Te, elec. behaviour of impurities, Hall effect and minority carrier lifetime meas. 2-77091
 CdS, nonlinear cryst. refractive index, temp. depend. 2-61856
 CdS, AC cond. inhomogeneities, acoustic meas. 2-77131
 CdS anodes, polycrystalline, photoetching by cysteine 2-99814
 CdS based power density meter for holography 2-95434

II-VI semiconductors continued

- CdS, biexcitons, luminescence assisted two-photon spectroscopy study 2-76933
 CdS, Brillouin scatt. study of stationary electro-acoustically amplified acoustic flux 2-77541
 CdS, colloidal, surface photochem., rel. to adsorbed methylviologen 2-83394
 CdS, cryst., bistability and hysteresis, phase conjugation by six-photon mixing 2-60176
 CdS, cryst. defects, high resolution TEM study 2-60991
 CdS crystal, group vel. of light meas. near exciton absorpt. bands, Rozhdestvenskii hook method 2-112875
 CdS crystals, effect of using variable rise-time optical pulses on acoustic domains, freq. spectra 2-82823
 CdS crystals, optical transmission modulation mechanisms caused by acoustic domains 2-82824
 CdS DRM-2 semiconductor sensor for use in clinical radiometry (Russian) 2-62738
 n-CdS, deep level transient spectroscopy of electron traps 2-115693
 CdS, defects lattice imaging by electron microscopy 2-65983
 CdS, dipole selection rules, reflection spectra, group representation 2-93226
 CdS direct-gap crystals, three-photon absorpt. 2-97079
 CdS, dispersive birefringent filter theory 2-109020
 CdS, dye-desensitised, photoconductive process 2-87332
 CdS, electro-acoustic current fluctuations 2-98702
 CdS, electro-acoustically active, AC and DC cond. 2-77128
 CdS, electron irradi., exciton reflection spectra and photo EMF, elec. field effects 2-82877
 CdS epitaxial layer preparation in $\text{Cd}(\text{CH}_3)_2\text{-(CH}_3)_2\text{S-H}_2$ system 2-87996
 CdS epitaxially grown layers, deep level transient spectroscopy of carrier traps 2-115692
 CdS, evaporation kinetics of thin crystals and films on vacuum annealing, comp. changes meas. 2-110157
 CdS, excited states of bound excitons, photolum. and magneto-optical spectroscopy 2-116238
 CdS, exciton luminescence and electron-hole plasma near acoustic instability 2-87865
 n-CdS, exciton refl. spectrum, inversion layer effect 2-116207
 CdS, excitonic polariton and excitonic mol. dispersion curves, two-photon Raman scatt. 2-87159
 CdS, excitons and polaritons in mag. field, theory and two-photon Raman scatt. study 2-104258
 CdS, F^+ centres and oxygen radicals, impurities effect 2-93006
 n-CdS, field-induced exchange stiffness and dispersion, spin-flip Raman spectra 2-93194
 CdS film, oriented, grown on glass and InP substrates by thermal decomposition of organometallic cpds. 2-67224
 CdS films, chemical bath deposited, elec. resist. increase obs. by laser annealing 2-98766
 CdS films, chemisorption of O_2 , XPS study 2-99292
 CdS films, RF sputtered, struct. and elec. resist., deposition dependence meas. 2-105073
 CdS films reactive DC sputtering on glass substrate in Ar and H_2S atmosphere 2-105072
 CdS, free exciton momentum relax. (Russian) 2-104257
 CdS, green electrolum. and photolum. study 2-72558
 CdS, heavily doped, exciton absorption band broadening, Green's function calc. 2-77558
 CdS, hot wall epitaxial growth, elec. props. 2-93430
 CdS, impurity content evaluation by Hall effect analysis 2-115789
 CdS, kinetic behaviour of O_2 radicals ESR and elec. meas. 2-87589
 CdS laser screen radiation characts. at 300K 2-70573
 CdS, lattice attenuation meas. by acoustic domains 2-98218
 CdS, luminescence study of cooperative defect behaviour (Russian) 2-87853
 p-CdS, metastable states, photoluminescence 2-104425
 CdS, modulation of refr. index during excitation on absorpt. edge 2-116142
 CdS, neg. photocapacitance and photoconductivity 2-104428
 CdS nonradiative processes and defects, obs. by acoustic spectroscopy 2-53446
 CdS, optically pumped semiconductor platelet lasers 2-65236
 CdS, optically pumped semiconductor platelet lasers, tunable CW laser action 2-114290
 n-CdS, photoanodic dissolution, rot. ring-disc electrode study 2-57500
 CdS photoelectrochem. cell, effect of sputtered RuO_2 overlayers on CdS electrode 2-111571
 CdS, photoluminescence, effects of polishing etchant composition 2-93271
 CdS, photoplastic, dislocation breakaway obs. 2-98110
 CdS, piezoelec., US luminesc., freq. depend. meas. 2-61994
 CdS, piezoelectric interaction of elastic waves with carriers 2-115827
 CdS, plastically deformed, light propag. obs., dislocations effect 2-67024
 CdS platelet laser, optically pumped 2-55191
 CdS, polarisation interference filters, narrow band and wide field-of-view 2-97160
 CdS, polishing induced phase transforms. of single crystals. for device applic. 2-72852
 CdS polycrystalline film, photoconductivity meas. 2-66674
 CdS powder particle perfection, fused CdCl_2 and Na_2S_x solvent effects 2-105066
 CdS, radiative transitions between exciton sub-bands 2-99155
 CdS, recharge-enhanced transforms. of donor-acceptor pairs and clusters 2-61390
 CdS, recomb. radiation spectra of electron-hole plasma 2-116255
 CdS, recrystallised, stacking faults 2-103784
 CdS, refl. spectrum, additional boundary conditions, linear response theory 2-77548
 CdS semiconductive single crystals, CdII line spectrum emission 2-82929
 CdS, single and bicryst. growth from vapour, polarity influence 2-57279
 CdS single crystal, electroacoustic interaction, nondegenerate, at sum and difference freqs., mechanism 2-92706
 CdS single crystal deep red emitters, as radiation-to-light converters for nucl. environments 2-113826
 CdS single crystals grown from vapour phase, impurities and hexagonal spiral pits 2-76342
 CdS sintered films, for CdS/CdTe solar cell 2-88016
 CdS solar cells, deep trap levels obs. by capacitance meas. 2-88431

II-VI semiconductors continued

- CdS, solid particles, excitons, luminesc. and Raman excitation study 2-77570
 CdS soln. growth using Te as solvent 2-93398
 CdS sprayed thin film, optical reflectance and transmittance 2-110969
 CdS, thermal neutron irradi., optical anisotropy of red luminesc. centres 2-93268
 CdS thin film, reflectivity spectra near excitonic transition 2-82878
 CdS thin film, single source evaporation, characterisation 2-83042
 CdS thin film, work function, surface pot., annealing effects (Russian) 2-87373
 CdS thin films, elec. props., In doping and Ag contact effects 2-66672
 CdS, thin films, inhomogeneity, optical transmission, refr. index 2-62001
 CdS thin films, radiative and nonradiative recomb. times 2-92789
 CdS, three-photon absorpt. coeffs. 2-65295
 CdS, two-photon magnetospectroscopy of A-exciton states 2-104260
 CdS, Wannier exciton ionised donor complex, excited states stability 2-92477
 CdS, Wannier-Mott excitons, wave functions and normal-incidence refl. 2-82244
 CdS, wavefront conjugation by degenerate four- and six-photon mixing 2-90994
 CdS, wavefront reversal during degenerate six-photon interaction 2-108966
 CdS, wurzite struct., donor electronic Raman scatt., band struct., perturbation calc. 2-82862
 CdS:Ag, Ag solid solubility meas. 2-56200
 CdS:Cu, Cl, sintered layers, absorpt. and photoluminescence spectra 2-110928
 CdS:Cu, electron irradi. prod. defects interaction with impurities, elec. and optical props. study 2-56035
 CdS:Cu, photochemically active IR centres, luminesc. and excitation spectra, polarisation characts. 2-61970
 CdS:Cu photoelectrochemical cells, energy conversion and storage 2-116841
 CdS:Hg crystal, optical absorpt. and luminesc. (Russian) 2-104841
 CdS:In film, heavily doped, elec. transport props. 2-72090
 CdS:In(Sb) film, vacuum evaporated, elec. and optical props. 2-61631
 CdS: Ni^{2+} , optical spectra, isotope splitting const. 2-57163
 CdS:O, grown from melt, O content, activation anal. 2-86702
 CdS:Te film, vacuum deposited, dark cond. and photocond. meas., doping effects 2-61623
 CdS:V(Cr)(Co)(Ni)(Cu), excited state lifetimes, 4 to 300K, luminesc. study 2-57162
 CdS/Cu₂S, anal. of dispersion in the measured capacitance 2-99808
 CdS/Cu₂S thin film solar cell, freq. depend. capacitance studies 2-88430
 CdS/Cu₂S thin film solar cells, trapped holes depth depend., photocapacitance study 2-93905
 CdS/Cu₂S solar cells, reactive sputtering, apparatus surface conditioning effects 2-83020
 n-CdS/n-InP/p-InP heteroepitaxial solar cell, growth and evaluation 2-88452
 CdS-Al-Au interface, Schottky barrier modulation, soft XPS study 2-110442
 CdS-Au Schottky diode, $\text{C}^{-2}=f(V)$ charact., deep electron trap and interface states effect 2-115860
 CdS-CdSe, struct. and phase comp. of precip. and films 2-110191
 CdS-CdSe films, impurity photocond. line spectra, donor mol. concept 2-115822
 CdS-Cu, interface form., Schottky barriers, interdiffusion and chem. processes, XPS study 2-77182
 CdS-Cu₂S heterojunction solar cell, Cu diffusion effects, theoretical anal. 2-73115
 CdS-Cu₂S heterojunction solar cells, Cd anodic sulphurization and RF sputtering, MIS struct. for interface state determ. 2-78229
 CdS-Cu₂S heterojunction solar cell, lateral photovoltaic effect 2-83470
 CdS-Cu₂S solar cell, physics of operation and performance 2-111553
 CdS-Cu₂S solar cell, photovoltaic props., cathodolum. spectrum 2-116823
 CdS-Cu₂S thin film solar cells, electron affinity difference 2-67858
 CdS-Cu₂S thin film solar cells, review 2-105568
 CdS-Cu₂S heterojunction, electron and hole traps, deep level transient spectroscopy 2-115873
 CdS-CuInSe₂ solar cell, interface formation, comp. and stability, XPS, EELS and AES study 2-111554
 CdS-CuS thin film heterojunction solar cell, fabrication 2-116833
 CdS-electrolyte contacts, surface-sensitive photoelectric effects 2-61585
 CdS-Ge interface, X-ray photoemission spectra of band discontinuities 2-82447
 CdS-InP RF sputtered solar cell, comparison with $\text{In}_{2-x}\text{Sn}_x\text{O}_3\text{-y-InP}$ cell 2-57714
 CdS-InP(CuInSe₂) solar cells with CdS window layer, high efficiency operation, review 2-105570
 CdS-Mg phthalocyanine heterojunction solar cells, photoelec. props. 2-83490
 CdS-Michlers ketone mixture binder layers, electrophotographic characts. 2-107433
 CdS-p-Si solar cell, single source evaporation prep. and efficiency meas. 2-116800
 CdS-ZnS, electroabsorption spectra, effective masses 2-77491
 CdS-ZnS(ZnSe)(ZnTe), acoustoelectric domains, Brillouin scatt. 2-82408
 CdS(Se), elliptical polarization of acoustic shear waves 2-109912
 CdSse, optically pumped semiconductor platelet lasers, tunable CW laser action 2-114290
 CdSse platelet laser, optically pumped 2-55191
 CdS(Se)/polysulphide photoelectrochem. cells, stability against photocorrosion, effect of added salts 2-57715
 $\text{CdS}_{0.4}\text{Se}_{0.6}$, coherent excitation of excitons, self-induced transparency 2-108972
 $\text{CdS}_{0.5}\text{Se}_{0.5}$, multikilovolt picosecond optoelectronic switching 2-56651
 $\text{CdS}_{0.5}\text{Se}_{0.5}$, picosecond photocond. for ultrafast optoelectronic switching 2-115807
 $\text{CdS}_{1-x}\text{Te}_x$, isoelectronic impurity-exciton interactions, visible spectra study 2-61395
 $\text{CdS}_{1-x}\text{Se}_x$, epitaxial layers grown by H_2 transport from elements, photolum. props. 2-99172
 $\text{CdS}_{1-x}\text{Se}_x$, mixed crystal photoconductive films for electrophotographic recording (German) 2-87342
 n-CdS, CdS_{1-x} electrodes in photoelectrochem. cells, photoluminesc. and electrochromic. props. meas. 2-93925
 CdS, Se_{1-x} , fluorescence line narrowing, localised exciton states, and spectral diffusion 2-82909

II-VI semiconductors continued

- CdS, Se_{1-x} , sprayed thin films, struct. props. and optical band gap 2-110199
- CdS, Se_{1-x} thin film, growth on CdS substrate by solid-state diffusion, composition control 2-71813
- CdS, Te_{1-x} , solid soln. films, vacuum deposited, condensation diagram and phase changes meas. 2-110208
- CdSe, absorpt. edge shift, EM wave polarisation effect (*Russian*) 2-104925
- n-CdSe, electrodeposited, Fermi level pinning, low-field electrolyte electrorefl. spectra 2-57059
- n-CdSe, etched and anodised electrochem. electrode, capacitance-voltage studies 2-66633
- CdSe, evaporation kinetics of thin crystals and films on vacuum annealing, comp. changes meas. 2-110157
- CdSe, excitonic luminesc. spectra, surface elec. field effect 2-82919
- CdSe, heteroepitaxial films, struct. charact. 2-92381
- CdSe, high density electron-hole plasma cooling 2-87312
- CdSe, ion implantation post-range defects, cathodoluminescence study 2-99196
- CdSe, laser evaporated neutral components, energy distrib. 2-67156
- CdSe, luminescence from electron-hole plasma 2-87868
- CdSe, modulation of refr. index during excitation on absorpt. edge 2-116142
- CdSe, optical absorpt. saturation near fundamental edge 2-114387
- CdSe, optically pumped semiconductor platelet lasers, tunable CW laser action 2-114290
- CdSe, phase spectra of refl. light in exciton reson. region 2-104911
- CdSe, photocond., struct. and defect levels 2-115811
- n-CdSe, photoelectrochem. determ. of minority carrier diffusion length 2-115777
- CdSe platelet laser, optically pumped 2-55191
- CdSe polycrystalline thin film transistor, conductivity behaviour 2-56735
- CdSe single crystal deep red emitters, as radiation-to-light converters for nucl. environments 2-113826
- CdSe soln. growth using Te as solvent 2-93398
- CdSe, spot size effects in picosecond luminescence experiments 2-104953
- CdSe, spray-pyrolysed thin film, photoelectrochem. solar cell performance meas. 2-93924
- CdSe sprayed films, struct., optical and photocond. props. 2-98698
- CdSe surface barrier devices, I-V characts. including recomb. effects 2-82459
- CdSe, temp. depend. of EFG, TDPAC study 2-93072
- CdSe thin film, electrophotical modulation parameters (*Russian*) 2-61874
- CdSe thin film, resist. modification during O_2 or CO thermal desorption (*French*) 2-98773
- CdSe:Cr thin film transistor, SIMS depth profiling, high spatial resolution 2-104207
- CdSe: Ni^{2+} , optical spectra, isotope splitting const. 2-57163
- CdSe-Al-Au interface, Schottky barrier modulation, soft XPS study 2-110442
- CdSe-As $_2$ Se $_3$, amorphous-crystalline heterojunction with built-in interface charge, steady-state transport props. 2-77170
- CdSe-As $_2$ Se $_3$, amorphous-cryst. heterojunction, interface charge, non-steady state transport 2-92736
- CdSe-electrolyte contacts, surface-sensitive photoelectric effects 2-61585
- CdSe-p $^+$ -n-Si tunnel junction solar cell photoanode props. meas. 2-88427
- CdSe-ZnS, phase diagram, DTA and X-ray phase anal. 2-72676
- CdSe-ZnSe-CdS, fusibility diagrams calc. 2-86843
- CdSe(CdSe $_{1-x}$ Te $_x$) electroplated layers, growth and photoelectrochem. solar cell appl. 2-105580
- CdSe $_{1-x}$ S $_x$ films, soln. grown, struct. and optical props. 2-56388
- n-CdSe $_{0.65}$ Te $_{0.35}$ photoelectrochemical solar cell, expt. study 2-105579
- n-CdSe $_{0.65}$ Te $_{0.35}$ photoelectrochemical solar cells, cell performance 2-111566
- CdSeTe $_{1-x}$ ($0 \leq x \leq 1$) thin films, laser epitaxy and annealing (*Russian*) 2-105070
- CdTe (110) surface, angle-resolved photoelectron spectroscopy, valence band struct. (*Japanese*) 2-116339
- CdTe (110) surface, kinematical anal. of LEED intensities (*Japanese*) 2-115512
- CdTe (110) vacuum cleaved surfaces, photoenhanced oxidation (*Japanese*) 2-116577
- CdTe, Ag diffused, degradation of elec. and optical props. 2-115751
- CdTe, angle resolved photoelectron spectroscopy of Cd cd core level (*Japanese*) 2-116340
- p-CdTe, annealed in various atmospheres, carrier traps, TSC study 2-66478
- CdTe, anomalous struct. in far IR spectrum 2-99109
- CdTe, band struct., nonlocal pseudopot. calc. 2-110245
- CdTe, bipolar photo-Hall effect and photocond. meas., defect model 2-115812
- CdTe, brittle to plastic transition, microhardness and optical transmission meas. 2-86783
- CdTe, bulk grown and epitaxial samples, minority carrier diffusion length 2-115776
- CdTe crystal covered with electroless Au film, characterization 2-87081
- CdTe, DLTS study of deep electron traps 2-92516
- n-CdTe, deep level transient spectroscopy of electron traps 2-115693
- CdTe, defect annealing, dynamic obs. at lattice resolution 2-91978
- CdTe, defect imaging using TEM 2-71460
- CdTe, defects evaluation using simple cathodolum. technique 2-77597
- CdTe, deposition by spray pyrolysis, for solar cell appl. 2-71828
- CdTe detectors, α -particle polarisation effects obs. 2-85497
- CdTe detectors at room temp., present status 2-90366
- n-CdTe, electron mobilities at low temps., theory 2-87253
- CdTe, epitaxial growth on PbTe, by close-spaced technique 2-88001
- CdTe epitaxial layers, charact. and annealing behaviour of deep levels 2-104288
- CdTe epitaxially grown layers, deep level transient spectroscopy of carrier traps 2-115692
- CdTe film, heteroepitaxial, MBE growth on InSb (001) 2-56374
- CdTe films, DC elec. props. Poole-Frenkel eqn. 2-110510
- CdTe films, large grained (111)-orientated, quasi-rheotaxy growth and solar cell appl. 2-105079
- CdTe, free excitons at room temp., photoelectrochemical study 2-115670
- CdTe, high resolution lattice imaging TEM study 2-76401
- CdTe, hot wall epitaxial growth, elec. props. 2-93430
- p-CdTe, imperfection anal. by photoHall effect and bipolar photocond. meas. 2-77114

II-VI semiconductors continued

- CdTe, irradiation produced secondary defects, effect of cryst. polarity 2-115291
- CdTe, LPE growth on CdS polar face from Cd soln. 2-57311
- CdTe, Li diffusion, internal elec. field effects in dissociative mechanism 2-115462
- CdTe, light scatt. by inhomogeneities, IR absorpt. and etching meas. 2-75543
- CdTe, MBE growth 2-93433
- CdTe, MBE growth and elec. characterisation 2-93431
- CdTe MSM and MISIM radiation detectors, elec. field intensity distrib. 2-77200
- CdTe, magnetoluminescence, electron and hole g-factors, Zeeman effect 2-99193
- CdTe, modified solvent evaporation cryst. growth and characterisation 2-111050
- CdTe modulator crystals, absorpt. coeff. meas. at $10.6 \mu\text{m}$ 2-116140
- CdTe, n- and p-type, photoelectrochem. determ. of minority carrier diffusion length 2-115777
- CdTe near-IR emitters as radiation-to-light converters for nucl. environments 2-113825
- CdTe, non-parabolic band effect on two-photon absorpt. 2-104910
- CdTe, obliquely deposited film, substructure, piezoelectric charge, high-voltage photo-emf 2-87433
- p-CdTe, ohmic contacts with Au or Cd_3P_2 layers by pulsed laser heating 2-115890
- CdTe, positron lifetimes, systematic study 2-57207
- CdTe, relaxation-case, photoconductivity 2-66589
- CdTe, shallow acceptors, photoluminesc. study 2-57172
- CdTe, single crystals, grown from vapour, X-ray topography study (*German*) 2-60993
- CdTe, thermoelectric power, effects of bipolar photoconductors, photo-Hall effect meas. 2-87310
- CdTe thin-film solar cells, status as emerging materials PV technologies 2-57712
- CdTe, two-photon absorption coeffs., band structure calcs. 2-65293
- CdTe, valence band, XPS and UPS studies 2-93369
- CdTe: ^{111}In , ion implanted, annealing 2-98126
- CdTe:Cl, electroabsorption spectra, effective masses 2-77491
- CdTe:Cu(Ag), acceptor levels, elec. and photoluminescence study 2-110296
- CdTe:Li, In, donor acceptor pairs, luminesc. excitation spectra 2-57154
- CdTe:Mn, bound exciton luminesc. spectra, giant spin splitting 2-93266
- CdTe:Mn, deep impurity centre spin relax., exciton interactions 2-61760
- CdTe:P, doped by ion implantation, cathodoluminesc. 2-67124
- CdTe-Au electroless contacts, phys. props., Rutherford backscatt. and AES anal. 2-110168
- CdTe-Au(Cd_3P_2), ohmic contact form. by pulsed laser heating 2-104483
- CdTe-Cu $_3$ S, p-n heterojunction phototransducers 2-104478
- CdTe-Cu(Ag) solid soln., supersaturated, carrier decay process kinetics 2-92649
- n-CdTe-electrolyte interfaces behaviour modification by surface etching 2-71177
- CdTe-metal interface, Schottky barrier form., XPS, UPS, AES, LEED, I-V and C-V meas. 2-115861
- CdTe-metal interfaces, Fermi level pinning 2-66618
- CdTe-TeO $_2$ epitaxial layer, interface struct., high resolution TEM study 2-56367
- (CdTe) $_{1-x}$ (ZnSe) $_x$ powders, photoacoustic spectroscopy meas. 2-92464
- n-CdTe:(In), deep levels, DLTS study 2-87176
- CdTe:Se $_x$, semiconductor cmpds., laser induced formation 2-115593
- CdTe:(110), surface atomic struct., LEED 2-76252
- Cd $_{1-x}$ Zn $_x$ S films, electron bombardment evaporation, visible absorpt. spectra meas. 2-72572
- Cd $_{1-x}$ Zn $_x$ S films evaporated by electron bombardment, struct. study 2-71834
- Cd $_{1-x}$ Zn $_x$ S mixed crystal photoconductive films for electrophotographic recording (*German*) 2-87342
- Cd $_{1-x}$ Zn $_x$ Cu $_x$ thin film solar cell with improved ternary cpd. layer 2-116821
- Cd $_x$ Zn $_{1-x}$ S chemically sprayed thin films for solar cells, carrier density depend. on Zn conc. 2-115928
- Cr,Te,Zn,Cd $_x$ S heterojunction photoelectronic converters with improved parameters 2-116807
- Cu $_x$ S-CdS heterojunctions, elec. and optical props. 2-99354
- Cu $_x$ S/Cd $_{1-x}$ Zn $_x$ S/CdS evaporated back-wall bifilm solar cells, growth and conversion efficiency meas. 2-105563
- Ga $_x$ layered compound, elastic consts. and compressibility 2-86773
- (Hg,Cd)Te, carrier lifetime rel. to wafer processing parameters 2-72001
- (Hg,Cd)Te, optical phase conjugation by degenerate and spin-resonant four-wave mixing 2-102879
- (Hg,Cd)Te, photochemical oxidation 2-111345
- n-(Hg,Cd)Te, degenerate, two-band Auger recombination lifetime 2-93336
- Hg-Cd-Te liquidus-solidus phase diagram, pair approx. 2-88074
- Hg $_{1-x}$ Cd $_x$ Se, band struct., interband magnetoabsorpt. meas. 2-77494
- Hg $_{1-x}$ Cd $_x$ Se, band structure peculiarities from interband magnetoabsorpt. 2-92466
- HgCdTe, CW degenerate four-wave mixing, large optical nonlinearities 2-108938
- HgCdTe detector for potential super-long (2-6 μm) wavelength fibre optics appls. 2-95468
- HgCdTe, electronic props., MIS IR devices 2-87295
- HgCdTe epitaxial layers, Shubnikov-de Haas effect (*French*) 2-61486
- HgCdTe, implantation induced damage, effects of implantation and annealing temps. 2-86695
- HgCdTe photoconductors, effect of diffusion and drift on generation-recombination noise 2-87324
- HgCdTe, physics and chemistry, workshop, Minneapolis, MN, USA (Oct. 1981) 2-89437
- HgCdTe, transport props. rel. to acceptor levels 2-92633
- Hg $_{0.9}$ Cd $_{0.1}$ Te, carrier lifetime meas. by population modulation spectroscopy 2-92658
- Hg $_{0.9}$ Cd $_{0.1}$ Te, photocond. props. 4.2 to 300K, recombination mechanisms (*French*) 2-61508
- Hg $_{0.9}$ Cd $_{0.1}$ Te-anodic oxide interface, photoelec. and field effect props. 2-87398
- Hg $_{0.795}$ Cd $_{0.205}$ Te IR detector, for large biasing fields, thermal noise 2-107399
- Hg $_{0.8}$ Cd $_{0.2}$ Te, anodic oxidation, electrochemical and XPS study 2-77964

II-VI semiconductors continued

- n-Hg_{0.8}Cd_{0.2}Te, magnetotransport meas. in extreme mag. quantum limit 2-92669
 Hg_{0.9}Cd_{0.1}Te, photoconductivity lifetime, recombination below 20K 2-92683
 Hg_{0.9}Cd_{0.1}Te, surface anodic oxide film composition, ion beam effects, XPS study 2-71832
 Hg_{0.8}Cd_{0.2}Te:B⁺(Al⁺), ion implantation, IR reflectivity study 2-116191
 Hg_{0.83}Cd_{0.164}Te, Hall coeff. phase transition under hydrostatic press. 2-92674
 Hg_{1-x}Cd_xTe, annealing and ion implantation damage, Rutherford back-scatt. and channelling study 2-86763
 Hg_{1-x}Cd_xTe, anodic oxidation mechanism, expt. study 2-72853
 Hg_{1-x}Cd_xTe, bandgap spin-orbit splitting resonance 2-115719
 Hg_{1-x}Cd_xTe, bulk vacancy electron states, tight binding calc. 2-87178
 Hg_{1-x}Cd_xTe, cleaved (110) surface room temp., evaporation stability, XPS and UPS study 2-87040
 Hg_{1-x}Cd_xTe, conductivity-type conversion, annealing effects 2-87272
 Hg_{1-x}Cd_xTe crystals, second phase investig. 2-92225
 Hg_{1-x}Cd_xTe, deep level defect traps, DLTS study 2-87175
 Hg_{1-x}Cd_xTe, defect energy levels, deep levels, chemical trends 2-87184
 Hg_{1-x}Cd_xTe, differentiation of low temp. recomb. processes, photocond. lifetimes meas. 2-115813
 Hg_{1-x}Cd_xTe, disordered, band struct., CPA calc. 2-87138
 Hg_{1-x}Cd_xTe, disordered complex bound struct., CPA calc. 2-87129
 Hg_{1-x}Cd_xTe, elec. cond., magnetoresist. and Hall effect, temp. depend. meas. 2-77049
 p-Hg_{1-x}Cd_xTe, electron irradi., carrier lifetime, annealing effects 2-56610
 n-Hg_{1-x}Cd_xTe, electron mobilities at low temps., theory 2-87253
 Hg_{1-x}Cd_xTe, electronic struct., localised orbital calc. 2-87139
 Hg_{1-x}Cd_xTe, electronic struct., UPS study and virtual cryst. breakdown 2-87942
 Hg_{1-x}Cd_xTe film growth by laser included evaporation and deposition 2-87989
 Hg_{1-x}Cd_xTe, impurity-to-band tunnelling 2-87179
 Hg_{1-x}Cd_xTe, isothermal epitaxial growth, elec. props. optimisation 2-93452
 n-Hg_{1-x}Cd_xTe, mag. freeze-out modification due to reson. levels 2-92670
 Hg_{1-x}Cd_xTe, magnetoresist. anomaly in extreme quantum limit, 1.4 to 4.2K 2-92668
 Hg_{1-x}Cd_xTe, metalorganic CVD epitaxial growth 2-88000
 Hg_{1-x}Cd_xTe, n-channel, 2D-subband 2-92465
 p-Hg_{1-x}Cd_xTe, narrow gap low carrier conc., elec. props. 2-77047
 Hg_{1-x}Cd_xTe native oxide reduction by CVD SiO₂ 2-115116
 p-Hg_{1-x}Cd_xTe, nonradiative recomb. at deep impurity levels 2-92527
 Hg_{1-x}Cd_xTe, photo-Hall meas. on laser-generated electron-hole plasmas 2-87323
 Hg_{1-x}Cd_xTe, photo-Hall meas. of high-density photoexcited electrons 2-92700
 Hg_{1-x}Cd_xTe, photoluminescence spectrum meas. 2-87844
 Hg_{1-x}Cd_xTe, plasma anodisation, MIS structure fabrication 2-57505
 Hg_{1-x}Cd_xTe, plasma anodised, interface study 2-104489
 Hg_{1-x}Cd_xTe, precipitation and phase stability 2-86879
 Hg_{1-x}Cd_xTe, quasi-local acceptor level spectrum 2-87188
 Hg_{1-x}Cd_xTe, recrystallised skin junctions, electron beam induced currents study 2-86895
 Hg_{1-x}Cd_xTe, resonant states, influence on optical props., three-band Koster-Slater model 2-56468
 Hg_{1-x}Cd_xTe, shallow and deep defect levels, alloy broadening, pseudopot. theory 2-87177
 Hg_{1-x}Cd_xTe, shallow donor binding energies, effect of band non-parabolicity 2-98581
 Hg_{1-x}Cd_xTe, solid soln., plasma reflectance spectra meas., effect of damaged surface layer 2-67064
 Hg_{1-x}Cd_xTe solid soln., phase diagram and thermodynamic props. anal. 2-88073
 Hg_{1-x}Cd_xTe, some props. of high-density electron-hole plasma 2-87296
 Hg_{1-x}Cd_xTe, surface and interface electronic props. derived from III-V cpds. theory 2-87355
 Hg_{1-x}Cd_xTe, surface electronic struct. and cation bonds, tight binding calc. and UPS study 2-110428
 Hg_{1-x}Cd_xTe, third-order optical susceptibility, four-wave mixing study 2-114354
 Hg_{1-x}Cd_xTe wafers, metallographic obs. of compositional inhomogeneities 2-114111
 Hg_{1-x}Cd_xTe, zero-gap semiconductor, cond. study 2-104380
 Hg_{1-x}Cd_xTe, zero-gap semicond., cond. and Hall coeff., anomalous temp. depend. 2-115757
 Hg_{1-x}Cd_xTe:B, ion implantation, elec. cond., annealing effects, SIMS study 2-66026
 Hg_{1-x}Cd_xTe:Mg, ion implanted, elec. and optical props. from IR refl. spectra 2-116218
 Hg_{1-x}Cd_xTe-CdTe ion implanted epilayers, elec. and optical props. 2-115927
 Hg_{1-x}Cd_xTe-CdTe LPE layers, electron mobility near zero band-gap crossing 2-87426
 Hg_{1-x}Cd_xTe-native oxide MIS struct., elec. props. meas. 2-87399
 HgS, sputter-deposited film, comp. determ. by electron microprobe anal. (Japanese) 2-92399
 HgS, Se_{1-x}, band struct., interband magnetoabsorpt. meas. 2-77494
 HgSe, 2-D surface electron states, tunnelling spectroscopy study 2-72044
 HgSe, band struct., interband magnetoabsorpt. meas. 2-77494
 HgSe, band structure peculiarities from interband magnetoabsorpt. 2-92466
 HgSe, elec. props. at very high press. 2-82412
 HgSe, far IR magnetotransmission, cyclotron and spin-flip resons. 2-57066
 HgSe, lattice dynamics, neutron scatt. study 2-98227
 HgSe, sublimation press. determ., 620 to 933K 2-81941
 n-HgSe-Al₂O₃-Pb junction, tunnelling spectroscopy study 2-92777
 HgSe, anodic oxidation and electrochem. surface treatment obs. 2-93641
 HgTe, brittle to plastic transition, microhardness and optical transmission meas. 2-86783
 HgTe, elec. props. at very high press. 2-82412
 HgTe, epitaxial growth by MOVPE process, props. 2-62071
 HgTe, high acceptor conc., cond. processes, multiple scatt. 2-98636
 HgTe, lattice dynamics, neutron scatt. study 2-98227
 HgTe, lattice thermal cond., three phonon scatt., SDV model 2-82042
 HgTe, magnetic Γ_8 subbands, Luttinger method perturbation theory calc. 2-56436

II-VI semiconductors continued

- HgTe, press. induced semicond.-metal transitions, energy band struct. 2-82234
 HgTe, stoichiometric deviation, X-ray diffr. investig. 2-104007
 n-HgTe, zero-gap semiconductor, carrier statistics 2-92623
 HgTe:Mg, conduction band struct., Hall effect and magnetoresist. study 2-115662
 HgTe-CdTe lattice matched Schottky barrier heterojunction, metal organic CUD epitaxial growth and elec. props. meas. 2-87366
 HgTe-CdTe superlattice, band structure, envelope-function approx. 2-104472
 HgTe(Se), lattice dynamics, rigid ion model, neutron scatt. study 2-86809
 LiNbO₃-CdSe multilayer struct. with periodic-array contacts, freq. doubling 2-92705
 PbTe:H epitaxial film, elec. transport props., p-type to n-type conversion 2-66676
 RuO₂-CdS Schottky barrier photovoltaic device 2-56633
 Si-CdS(Zn,Cd,...S) heterojunction solar cell, elec. props. 2-115875
 p-Si-CdSe junction, sputter deposited, elec. props. 2-98736
 n-Si-SnO₂-n-CdSe electrolyte tandem junction solar cells 2-105556
 SnO₂-ZnS(A)-Cu₂S-ZnS(A)-Al, A=Ag,Mn,Sm, thin film struct., electrolum., cathodolum. and photolum. meas. 2-87871
 Ti₂Te-Zn(Cd)Te, phase equilibria, degree of dissociation 2-72678
 ZnCdS:Mn²⁺, electrolum. and photolum. props. 2-57184
 Zn_{1-x}Cd_xS, single crystals, growth by I₂ transport, depend. of struct. on growth conditions 2-99309
 Zn_{1-x}Cd_xS:Ag phosphor layer on SiO₂ and Zn₂SiO₄:Mn particles 2-110952
 Zn_{1-x}Cd_xS, localised exciton states (Russian) 2-82243
 Zn_{1-x}Cd_xS-Cu₂S single crystal photovoltaic cell, optimum performance 2-116822
 Zn_{1-x}Cd_xS-Cu₂S structure, Cd and Zn cross diffusion, AES, ESCA and atomic absorpt. spectra study 2-66299
 ZnO (0001) surfaces, chem. etched, topography study 2-98401
 ZnO, diode-sputtered films, surface acoustic waves 2-104132
 ZnO, exciton refl. spectra, influence of ion implantation 2-67082
 ZnO, excitons and polaritons in mag. field, theory and two-photon Raman scatt. study 2-104258
 ZnO, excitons exhibiting spatial dispersion, refl. and transmission spectra, additional boundary conditions 2-57122
 ZnO film, c-axis orientation, energetic atom bombardment influence 2-98476
 ZnO film, electronic props., defects, morphology and adsorp. depend. 2-104515
 ZnO film, obtained by oxidation of ZnSe, for US transducers 2-86194
 ZnO film, preferred orientation controlled by RF sputtering 2-61314
 ZnO film, RF sputtered, cryst. orientation, X-ray diffr. and RHEED study 2-57286
 ZnO film, reactive planar magnetron sputtered, pressure and angle of incidence effects 2-56393
 ZnO films, reactive magnetron sputtering prep., transition from insulating to highly cond. state 2-83022
 ZnO films, substrate biased RF sputtering of semicond. and insulating films 2-111071
 ZnO, green cathodolum. and ESR spectra 2-116275
 ZnO, heavily doped, band gap narrowing, optical transmission study 2-104250
 ZnO, light scattering spectrum, thermal noise (Russian) 2-82872
 ZnO, mean-square dynamic displacements and X-ray characteristic temp. 2-66157
 ZnO on SiO₂ substrate, RF sputtering, TEM anal. 2-56410
 ZnO piezoelectric thin films, for SAW appls. 2-97338
 ZnO, RF, sputtered film, heat treatment effects on elec. and optical props. 2-72087
 ZnO RF sputtered films, carrier conc. of function of surface acceptor state density, gas sensor appl. 2-98772
 ZnO, refl. spectrum, magnetic boundary conditions, linear response theory 2-77548
 ZnO, single cryst., piezoelec. semicond., hydrothermal growth and charact. 2-77723
 ZnO soln. growth using Te as solvent 2-93398
 ZnO sputtered films, energy anal. of high-energy neutral atoms 2-87927
 ZnO, sputtered thin films, correlation between film quality and photoluminescence 2-87842
 ZnO surface, laser irradiated, neutral particle emission induced by high density electronic excitation 2-77629
 ZnO, surface, two-dimens. plasmon spectra, low energy EELS study 2-61544
 ZnO, surface (1010), localized and delocalized charge transfer during adsorp. 2-110425
 ZnO, surface exciton polariton, attenuated total refl. meas. 2-115666
 ZnO surfaces, decomp. of ethanol and acetaldehyde, thermal desorption and surface cond. meas. 2-105508
 ZnO surfaces, Madelung pots., effect on photoemission spectra and work functions 2-66342
 ZnO thin film, c-axis orientation and surface morphology, sputtering gas press. influence (Japanese) 2-92402
 ZnO thin films, bias sputtered, electrical and optical props. 2-104395
 ZnO thin films, c-axis oriented growth on Si, CVD method 2-62072
 ZnO thin films, RF sputtered, charact. by X-ray diffr. and SEM 2-115618
 ZnO, valence band struct. (Chinese) 2-92451
 ZnO varistor, influence of SiO₂ inclusions 2-66241
 ZnO varistor ceramics, thermal cond., intergranular phase and void effects 2-71744
 ZnO:Co nonstoichiometric single cryst., growth and elec. props. 2-77051
 ZnO:CoO, enhancement of elec. cond. by doping 2-98643
 ZnO:Cu, deep Cu centre, lattice distortion effects, SCF-LCAO cluster calc. 2-104297
 ZnO:Cu,Yb(Tm) phosphors, photo- and electro-luminesc. studies 2-110909
 ZnO:In(Ga), ESR and ODMR obs. of shallow donors 2-116061
 ZnO:Ni²⁺, optical spectra, isotope splitting const. 2-57163
 ZnO-Al₂O₃(SiO₂)(TiO₂), struct. and chem. comp. of transition region 2-76851
 ZnO-based green phosphor, mechanism of formation in presence of ZnS 2-111508
 ZnO-CuInSe, thin film solar cell, spray pyrolysis prep. 2-105566
 ZnO-metal contacts props. 2-61588

II-VI semiconductors continued

- ZnO-PVK photoreceptor, dye sensitisation for electrophotography 2-84729
 ZnO-polymer, photoreceptors, photosensitivity, photocurrent kinetics 2-61509
 ZnS, 2H to 3C solid state transform, X-ray diff. study 2-98272
 ZnS, crystals, powders, films, thermoluminesc., luminesc. temp. depend. and damping 2-77604
 ZnS, electron-hole drops, luminesc. and optical gain meas. 2-87847
 ZnS epitaxial growth on Wall and Cu, substrate ion planing effects 2-83048
 ZnS film, ultrahigh vacuum deposited and RF sputtered, optical consts. meas. 2-72573
 ZnS film on CdS substrate, laser film thickness modulation and small pattern generation 2-66396
 ZnS films, struct. and dislocation density, X-ray diff. study 2-104203
 ZnS, form of Cu₂S and Zn secondary phases, dislocation and stacking fault decoration 2-115240
 ZnS, Hall photoelectric effect meas. 2-87317
 ZnS, hexagonal, photoacoustic study of two-photon absorption 2-57040
 ZnS, high resolution in scanning cathodolumin. of edge emission 2-116274
 ZnS, intrinsic-defect hole conductivity, photoluminescence study 2-110927
 ZnS, lattice dynamics under hydrostatic press., Raman spectra 2-86805
 ZnS layers, TSC investigation of traps (*Russian*) 2-87659
 ZnS, mean-square dynamic displacements and X-ray characteristic temp. 2-66157
 ZnS, organometallic CVD of thin film single crystal layers at atmos. press. 2-116377
 ZnS, piezoelec., effect of mag. field on photovoltaic current and photocurrent 2-110385
 ZnS phosphor layer on Zn₂SiO₄:Mn particles, prep. and cathodoluminescence 2-110952
 ZnS phosphors, cryst., radiative recomb. centres, cathodolum. meas. 2-110955
 ZnS, photoluminesc. quenching by DC elec. field 2-110818
 ZnS, planar defects, luminescence study 2-82889
 ZnS, polishing induced phase transforms. of single crystals. for device applic. 2-72852
 ZnS polytype, stacking fault sequences, high resolution electron microscopy study (*Chinese*) 2-91987
 ZnS, radiative recombination of electron-hole drops and nonequilib. electron-hole plasma obs. 2-66459
 ZnS, revealing of defects by chem. etching 2-115239
 ZnS, single crystals, growth by I₂ transport, depend. of struct. on growth conditions 2-99309
 ZnS soln. growth using Te as solvent 2-93398
 ZnS, struct., twinning and thermal cond. 2-81744
 ZnS, undoped organometallic grown, shallow and deep centre photolum. and cathodolum. 2-116235
 ZnS, vacancy optically detected mag. resonance 2-77425
⁶⁷ZnS, Mossbauer spectrum under high press. 2-61802
 ZnS:Ag, photolum. and elec. props. study of Ag doping 2-110944
 ZnS:Ce, Li phosphors, luminesc. excitation and emission spectra 2-57155
 ZnS:Cu(Pb), Gudden-Pohl effect flash spectra depend. on elec. field 2-87817
 ZnS:Co(Ni), amphoteric exciton trapping by 3d impurities 2-76937
 ZnS:Cr³⁺, cubic, ESR spectrum, press. influence 2-66909
 ZnS:Cu, Al, photon-assisted tunnelling in the electroluminescence exciting process 2-110950
 ZnS:Cu, donor-acceptor recombination, ODMR study 2-99185
 ZnS:Cu, Eu, Cl, electron multiplication process, luminesc. kinetics study 2-67121
 ZnS:Cu, ODMR study of IR photolum. 2-93066
 ZnS:Cu, Sm(Eu)(Tm), electrolum. and photolum., quantum yield meas. 2-110943
 ZnS:Eu, influence of cryst. lattice field on Eu²⁺ emission spectra 2-87866
 ZnS:Fe, CVD polycrystalline films, incorporation of Fe impurities 2-116379
 ZnS:Ge³⁺(Sn³⁺), photosensitive EPR, g-factors and hyperfine interaction 2-77369
 ZnS:I, iodine transport grown, channelling and ionoluminesc. spectra study 2-56058
 ZnS:I cubic crystals, blue self-activated luminesc., N, P and Ag ion implementation effect 2-116237
 ZnS:Mg AC thin film electroluminescent devices, luminescence-voltage characts. 2-104967
 ZnS:Mn, Cu, Cl DC electrolum. films, field enhanced changes in comp. and struct. 2-116263
 ZnS:Mn, epitaxial layers grown organometallic CVD 2-116378
 ZnS:Mn, pulse excited, afterglow of Mn centres 2-110924
 ZnS:Mn, RF sputtered thin film, electroluminescence (*Japanese*) 2-61979
 ZnS:Mn,Cu,Cl, amorphous and cryst. electrolum. film, elec. cond. props. meas. 2-87429
 ZnS:Mn AC electrolum. thin film device, Mn²⁺ emission saturation 2-116265
 ZnS:Mn AC thin film electrolum. devices, UV irradi., current and light generation 2-116266
 ZnS:Mn electrolum. films grown by at. layer epitaxy, ageing process 2-116264
 ZnS:Mn film, sputter deposit, luminesc. and struct. props. variation with annealing 2-93287
 ZnS:Mn sputtered thin films, cathodoluminescence and struct. props. 2-110956
 ZnS:Mn thin films, physical and elec. characts. 2-61622
 ZnS:Mn-Cu,S p-n heterojunction DC electroluminesc. structs., degradation theory based on donor diffusion 2-57186
 ZnS:Mn²⁺, EPR spectrum, axial field parameter 2-66905
 ZnS:Mn²⁺, electrolum. and photolum. props. 2-57184
 ZnS:Ni²⁺, hexagonal and cubic, Zeeman effects on ⁶E-levels 2-115720
 ZnS:Ni²⁺, optical spectra, isotope splitting const. 2-57163
 ZnS:O, band gap variation due to dopant 2-76922
 ZnS:O, grown from melt, O content, activation anal. 2-86702
 ZnS:TaF₅, thin films, electroluminescence quenching obs. 2-99194
 ZnS:V(Cr)(Co)(Ni)(Cu), excited state lifetimes, 4 to 300K, luminesc. study 2-57162
 ZnS-Cu lumiphore, decay time determ. from photocount statistics 2-102755
 ZnS-Ge multilayer narrow-band interf. filters 2-70663

II-VI semiconductors continued

- ZnS, Se_{1-x} donor-A-centre pairs, ODMR and phosphoresc. study 2-56978
 ZnS,CdS_{1-x}:Ag(Yb)(Ni), phosphor, visible image formation from IR radiation 2-77563
 ZnS,O_{1-x}:Cu,Sn, phosphor, electrolum. 2-57182
 ZnS(Se), shock induced phase transition stresses 2-98200
 ZnS,Se_{1-x}, elec. and optical props., compositional disorder effects, photoluminescence and excitonic spectra 2-57171
 ZnS,Se_{1-x}, growth and doping by organometallic CVD 2-111087
 ZnS,Se_{1-x} solid solns., exciton states, effect of disorder 2-115671
 ZnS,Se_{1-x} thin film, high elec. cond. props. meas. and CVD prep. 2-98768
 Zn_{1-x}(S,Se)_{1-x} single crystals, vapour growth and stoichiometry control 2-93393
 ZnSe (110) surface, angle-resolved photoelectron spectroscopy, valence band struct. (*Japanese*) 2-116339
 ZnSe, angle resolved photoelectron spectroscopy of Zn 3d core level (*Japanese*) 2-116340
 ZnSe, band struct., nonlocal pseudopot. calc. 2-110245
 ZnSe, band structure, tight binding calc. 2-66443
 ZnSe, blue emission of cathodoluminesc. 2-77598
 ZnSe, bulk and epitaxial growth, impurity role 2-116347
 ZnSe, carrier mobility, temp. depend., polaron effects, carrier scatt. mechanisms 2-66558
 ZnSe crystal vapour phase growth, longit. stress during fabrication cooling time 2-91844
 ZnSe crystal with macroscopic inhomogeneities, SHG 2-114370
 ZnSe crystals, damage threshold, struct. defect. influence 2-61029
 ZnSe crystals, vol. defect influence on absorpt. at 10.6 μm wavelength 2-55284
 ZnSe crystals stoichiometry when obtained from melt 2-104006
 ZnSe cubic monocrystals, natural birefringence, cause (*French*) 2-82821
 n-ZnSe, deep level transient spectroscopy of electron traps 2-115693
 ZnSe direct-gap crystals, three-photon absorpt. 2-97079
 ZnSe, edge emission, collective phenomena, radiative recombination 2-77579
 ZnSe, electron-hole drops, luminesc. and optical gain meas. 2-87847
 ZnSe, epitaxial optical film, prod. by RF sputtering 2-116363
 ZnSe, exciton-impurity complexes, photoluminesc. spectra study 2-72552
 ZnSe, exciton-plasmon Mott transition 2-56443
 ZnSe Film, DC cond. mechanism and dielectric props. 2-104510
 a-ZnSe, film deposition, control and reproducibility 2-67217
 ZnSe film on GaAs, elec. props. and impurity profile 2-61014
 ZnSe grown by organometallic CVD on GaAs, blue cathodoluminesc. obs. at room temp. 2-104969
 ZnSe, Hall photoelectric effect meas. 2-87317
 ZnSe, heteroepitaxial, deep defects 2-92512
 ZnSe in Sn, LPE, phase diagram and electronic props. 2-116428
 ZnSe LEDs, effect of residual impurities 2-57183
 ZnSe, LPE, by temp. difference method 2-116394
 ZnSe, LPE grown, deep electron traps, TSC, photocapacitance and DLTS study 2-56466
 ZnSe, LPE growth on ZnS and ZnTe using Te and Te-Se as solvents 2-93398
 ZnSe, LPE heteroepitaxial growth of CuInSe₂ from In soln. 2-57310
 ZnSe, lattice dynamics under hydrostatic press., Raman spectra 2-86805
 ZnSe, light-induced refr. index dispersion in impurity absorpt. region 2-77480
 ZnSe, low temp. single crystal growth, chemical vapour transport 2-116348
 ZnSe MIS structures, blue electroluminescence and I-V characts 2-61982
 ZnSe, mag. and elec. props., effect of disorder 2-82356
 ZnSe, mean-square dynamic displacements and X-ray characteristic temp. 2-66157
 ZnSe, melt-grown crystals, mech. props. during flexure, prep. conditions influence 2-57404
 ZnSe, non-parabolic band effect on two-photon absorpt. 2-104910
 ZnSe, optical ceramic, synthesis and props. 2-111123
 ZnSe, organometallic CVD of thin film single crystal layers at atmos. press. 2-116377
 ZnSe, phase spectra of refl. light in exciton reson. region 2-104911
 ZnSe, phonon anomalies, Raman spectra study 2-98221
 ZnSe, phonon scatt. at impurity pairs, luminesc. excitation spectra 2-57177
 n-ZnSe, photoelectrochem. determ. of minority carrier diffusion length 2-115777
 ZnSe, polarity and inversion twins, high-resolution electron microscopy 2-109813
 ZnSe, radiative processes in electron-hole drops and exciton-exciton interaction 2-104961
 ZnSe, Raman intensity press. depend. 2-93182
 ZnSe, reson. electronic Raman scatt. and electronic structs. of bound exciton complex 2-67036
 ZnSe, self activated centre, excited states, polarisation spectroscopy study 2-110291
 ZnSe single crystal., photoluminesc. microcomputer-corrected spectrosc. meas. 2-58910
 ZnSe, single crystal., photoluminesc. spectra, Bi and Sb impurity effects 2-72541
 ZnSe soln. growth using Te, Se and As₂Se₃ as solvents 2-93398
 ZnSe, stimulated photoluminescence, lasing mechanism 2-99183
 ZnSe surface, reflectivity spectra near excitonic transition 2-82878
 ZnSe, thin film, prep. by photodissociation of organometallic gases 2-83036
 ZnSe thin films, selective area MBE, electrolum. device appl. 2-92387
 ZnSe, two-photon absorption coeffs., band structure calcs. 2-65293
 ZnSe, undoped organometallic grown, shallow and deep centre photolum. and cathodolum. 2-116235
 ZnSe, VPE grown film on GaAs, optoelectric props. control 2-116382
 ZnSe, vacancy defect excitations 2-98574
 ZnSe, Wannier-Mott excitons, wave functions and normal-incidence refl. 2-82244
 ZnSe, wavefront conjugation by degenerate four- and six-photon mixing 2-90994
 ZnSe, wavefront reversal during degenerate six-photon interaction 2-108966
 ZnSe, wide band semiconductor, two-photon and two-step transitions 2-108934

II-VI semiconductors continued

- ZnSe, Zn-annealed, deep levels and associated carrier recomb. processes 2-110289
 ZnSe:Ag(Au) LPE layers, luminesc. spectra, acceptor levels 2-116250
 ZnSe:Al, IR absorption and defects 2-87823
 ZnSe:Al, photoluminescence obs. 2-61971
 ZnSe:Co(Ni), amphoteric exciton trapping by 3d impurities 2-76937
 ZnSe:Cu, photoluminesc. bands, ODMR study 2-56979
 ZnSe:Cu₂Cl phosphor, activated, recombination centres, photoluminesc. study 2-87850
 ZnSe:Ga, MBE growth and elec. cond. and photoluminesc. props. meas., blue LED appl. 2-87986
 ZnSe:Ga (In), defect levels 2-115691
 ZnSe:Ga diffused single cryst., elec. props. and impurity profile 2-61014
 ZnSe:Li, donor-induced acceptor-pair splittings, excitation spectroscopy study 2-82906
 ZnSe:Mn, epitaxial layers grown organometallic CVD 2-116378
 ZnSe:Mn²⁺, Zeeman splitting of ⁴T₁, ⁴T₂, and ⁶E states, luminesc. study 2-57063
 ZnSe:Ni(Fe), near IR photolum. detect. 2-116236
 ZnSe:O, grown from melt, O content, activation anal. 2-86702
 ZnSe:Ti, p-type layer, elec. cond., photocurrent decay 2-115926
 ZnSe:CdSe thin film electrodes, photoelectrochem. performance meas. in aq. polysulphate electrolyte 2-78230
 ZnSe-CuGaTe₂ heterostruct., LPE growth of CuGaTe₂ from Bi soln. and elec. props. 2-62084
 ZnSe-GaAs heterojunction, photovoltaic props. meas. 2-73121
 ZnSe-GaAs(110) and ZnSe-Ge(110), heterojunction band discontinuities, XPS study 2-111024
 ZnSe-Ge heterojunction interface, nature of band discontinuities 2-104463
 ZnSe-Zn_{1-x}Cd_xTe heterojunction, photocond. spectral response, theory and expt. 2-98733
 ZnSe:(Al), growth and doping by organometallic CVD 2-111087
 ZnSe(Te), surface electronic state spectroscopy resonances 2-115842
 ZnTe, edge emission, collective phenomena, radiative recombination 2-77579
 ZnTe (110), elastic LEED, electron exchange effects and relativistic corrections 2-65815
 ZnTe (110) surface, angle-resolved photoelectron spectroscopy, valence band struct. (*Japanese*) 2-116339
 ZnTe (110) surface, kinematical anal. of LEED intensities (*Japanese*) 2-115512
 ZnTe, angle resolved photoelectron spectroscopy of Zn 3d core level (*Japanese*) 2-116340
 ZnTe, band structure, tight binding calc. 2-66443
 ZnTe, bound exciton time decay, radiative and nonradiative transition rate study 2-76932
 ZnTe, CVD epitaxial growth, closed tube method, transport rates, expt. and thermodynamic anal. 2-57306
 p-ZnTe, deep level transient spectroscopy of hole trap 2-115693
 ZnTe, electron-hole drops, luminesc. and optical gain meas. 2-87847
 ZnTe, excited electronic states, picosecond time-resolved photoelectron spectra study 2-111025
 ZnTe, excited states of bound excitons, photolum. and magneto-optical spectroscopy 2-116238
 ZnTe, exciton reflection, amplitude-phase spectra, Brewster effect 2-77551
 a-ZnTe, film deposition, control and reproducibility 2-67217
 ZnTe, film deposition on mica, effect of island sublayers of Ag 2-88005
 ZnTe, heteroepitaxial films, struct. charact. 2-92381
 ZnTe, ion implantation postgrowth defects and 1.59 eV luminescence origin, expt. study 2-99169
 ZnTe lattice dynamics under hydrostatic press., Raman spectra 2-86805
 ZnTe, luminesc. and lasing under laser excitation 2-77571
 ZnTe, O diffusion during laser annealing, photolum. obs. 2-115463
 p-ZnTe, photoelectrochem. determ. of minority carrier diffusion length 2-115777
 ZnTe, production of ohmic contacts 2-77180
 ZnTe, resonance Bose condensate creation with k=0, nonlinear exciton effects 2-115665
 ZnTe, S-shaped elec. cond. characteristics at low temp., expt. study 2-77074
 ZnTe, single cryst., nonlinear interaction of laser pulses 2-108977
 ZnTe:Cl, EPR study of deep Cl-associated centre 2-110642
 ZnTe:P, distance donor-acceptor pairs, luminescence decay 2-110941
 ZnTe:P, Li, magnetoluminescence, electron and hole g-factors, Zeeman effect 2-99193
 (ZnTe)_{1-x}(ZnSe)_x, powders, photoacoustic spectroscopy meas. 2-92464
 ZnTe(Se)(S), Raman scattering efficiencies for I⁻-phonons 2-57100

III-V semiconductors

- acceptor impurity diffusion, self-induced field-effects, theory 2-115466
 AlGaAs, optoelectronic integration in integrated optics, review 2-65410
 antimonides, phase diagrams 2-116427
 arsenides, MBE layers, composition, substrate temp. effect 2-87098
 Auger recomb. process, four-band Kane model 2-115782
 band to band transitions, lifetime and probabilities, minority carrier lifetime 2-93253
 carrier piezoelec. scatt. by dislocations, anisotropy effects 2-77033
 CC/p-GaP, energy loss process for nonequilibrium hot carriers 2-92641
 CCAI, Ga_{1-x}Sb_x LPE growth on (111)-B oriented GaSb 2-98495
 CCInP nonradiative processes and defects, obs. by acoustic spectroscopy 2-53446
 cohesive energy, rel. to phonon frequencies of crystals 2-66150
 deep states and defect reaction, role (*Japanese*) 2-92524
 defect electronic struct., tight-binding calcs. 2-76978
 dielectric constant, complex, of free carriers, quantum theory 2-110799
 diffusion of Zn, open tube method 2-92278
 diode lasers, 1.2 to 1.7 μ m, struct., operating principles and performance 2-102818
 dislocated, elec. cond. 2-104364
 dislocation deep levels, occupation statistics 2-104289
 dispersion of indirect excitons 2-92481
 epitaxial growth, appl. to compound semiconductor device technology 2-77741
 epitaxial layers, chem. interface width and struct., Auger meas. technique 2-87086
 Ga_{1-x}Al_xP, solid soln., variation of comp. gradient during LPE 2-83047
 GaAs:Cr wafers, EPR charact., etch-pit-density and X-ray double diffraction meas. (*Japanese*) 2-66907
 GaAs, nuclear polarisation front appearance during optical spin polarisation (*Russian*) 2-56953
 GaAs-Al_{1-x}Ga_xAs heterojunctions, low temp. quantised Hall effect 2-87381
 GaP, depth oscill. asymmetry for (110) channelling 2-66094
 heterostructures, effective-mass theory for electrons 2-110231
 high frequency electron scattering rate, Drude Zener theory 2-66581
 high pressure phases, pseudopotential calcs. 2-103723
 III-V polycrystalline semiconductor systems modelled by computing technique, phase diagrams (*Czech*) 2-83013
 III-V quaternary alloys, miscibility gaps 2-98287
 n-InP, DLTS study 2-76967
 interface with metal, Schottky barrier form. due to surface antisite defects 2-61556
 ion beam gettering, review 2-115310
 ionic, mag. susceptibility 2-56820
 laser, bistable, buried heterostruct. static and dynamic characts. 2-65231
 laser, ultra-short light pulse generation by Nd:YAG laser controlled opto-electronic switch (*Chinese*) 2-90959
 lasers, band-to-band Auger recombination, theory 2-96951
 lasers, rapid and gradual degradation, dangling bonds and antisite defects role, theory 2-114270
 LPE, contact phenomena between liq. phase and substrate during LPE 2-61305
 LPE, substrate orientation and surface morphology 2-67229
 luminescence of deep transition metal centres 2-57152
 material properties relevant to modern semiconductor elements (*German*) 2-98533
 microwave irradi., hot carrier mobility, phonon accumulation effects 2-66566
 MIS interfaces and appl., review (*Japanese*) 2-87400
 multinary III-V alloy semiconductor lasers, long wavelength, band-to-band Auger effect 2-55146
 optoelectronic devices, physics and technology, conf., Neue Muhle, Germany (April 1981) 2-112635
 phase diagrams, ternary systems calc. 2-62102
 photocathodes, photoelectron spectra, Monte Carlo simulations 2-67197
 photovoltaic materials, technology and future developments 2-78207
 platelet optical orientation, nondestructive determ. (*Czech*) 2-76358
 quaternary liquid phase, thermodynamic anal. of stability 2-71617
 quaternary solid solns., composition plane, unstable regions, regular soln. approx. 2-92205
 refractive index at energies below direct band edge 2-110800
 refractive index dispersion, single effective oscillator model 2-77468
 Schottky barrier contacts, metal-n-type, expt. study 2-72057
 Schottky barrier form. and MOS interface states, unified model 2-87372
 solid solutions, heteroepitaxial film crystallisation, orientation effects (*Russian*) 2-61302
 solid solutions based on III-V cpds., thermodynamic description 2-56194
 sphalerite crystals, antistructure defect form. kinetics and migration rel. to self-diffusion 2-104056
 surface passivation, hydrogenation/nitridisation mechanism 2-77961
 surface prep. by selective chem. etching 2-83254
 surfaces, struct. and surface states, review 2-98395
 ternary III-V heterostructures, formed by LPE, growth and dissolution kinetics, temp. programming effects 2-104187
 third order susceptibility of III-V semiconductors in the true continuum near the band edge 2-102852
 Thomas-Fermi nonlinear dielec. screening 2-56459
 transmission cathodoluminescence 2-87873
 Ag-GaAs (001), Ag MBE growth and interfacial diffusion, AES, LEED and SEM study 2-93432
 (Al,Ga)As DH lasers, reliability, substrate dislocation density and GaAs:Sb active layer effects 2-55193
 (Al,Ga)As lasers with Ga(As,Sb) active layers, device characts. 2-90890
 (Al,Ga)As/GaAs heterostruct., MBE grown, interface quality and electron mobility, substrate temp. effects 2-56385
 (Al,Ga)As/GaAs heterostruct., single and multiple period modulation doped, electron mobility meas. 2-56676
 (Al,Ga)As/GaAs heterostruct., electron mobility meas., AlAs mole fraction influence 2-56677
 Al-Ga-As, LPE film growth, interdiffusion coeff. of components in solns., temp. depend. 2-76717
 Al-GaAs and Al-Al_{1-x}Ga_xAs MBE contacts, Schottky barriers, stability props. meas. 2-98723
 Al-GaAs Schottky barriers, influence of interface composition 2-82432
 Al-GaAs(110) interface, possibility of adatom cluster formation 2-61555
 Al-InAlAs-InGaAs heterostructure, current transport 2-104486
 AlAs (110) surface, deep defect levels and Schottky barrier calc. 2-110413
 AlAs, band structure, tight binding calc. 2-66443
 AlAs interfaces, disloc. surface reactions 2-57250
 AlAs thin film, MBE growth, oxidation, XPS study 2-83257
 AlAs-Al_{1-x}Ga_xAs-GaAs superlattices, absorption meas. at high press. 2-82933
 AlAs-GaAs heterojunction laser with distributed Bragg mirror, CW operation at 50°C 2-85996
 AlAs-GaAs superlattice, Zn diffusion and disordering along its layers, expt. study 2-56253
 AlAs-GaAs superlattice, disorder by Si implantation 2-76465
 AlAs-GaAs superlattice, resonance impact ionisation states 2-92738
 AlAs-GaAs superlattices, exciton associated optical absorption spectra at 300K 2-104913
 (AlGa)As buried convex waveguide struct. laser with truncated convex active region 2-65258
 AlGaAs buried-heterojunction/broad-stripe laser diodes, microwave two-port cct. models 2-114285
 AlGaAs CHD-LOC laser diodes for optical fibre data transmission 2-55355
 AlGaAs CQL10 semiconductor laser for information readout 2-60102
 AlGaAs CSP, BH and TJS lasers, direct FM characts. 2-80960
 AlGaAs CW DH nearly single mode laser, intensity fluctuations in longitudinal modes 2-65224
 AlGaAs CW injection laser with external resonator, emitted radiation mode beats and fluctuations 2-65228
 AlGaAs crank structure high power TJS laser, 15 mW single mode CW operation at high temp. 2-80982
 AlGaAs DH laser, injection locked and resonant type modes, optical FM signal amplification 2-80959
 AlGaAs DH laser, short-term freq. stability 2-65256

III-V semiconductors continued

- AlGaAs DH laser diodes aged under pulsed operating conditions, degradation behaviour 2-80966
- AlGaAs DH lasers, narrow stripe, gain-guided, proton-bombarded, LPE grown, far field asymm. 2-108877
- AlGaAs DH undoped injection lasers, anal. of longitudinal mode behavior 2-65229
- AlGaAs external grating loaded lasers, oscill. centre freq. tuning, quantum FM noise, direct freq. modulation characts. 2-85961
- AlGaAs injection lasers, acoustooptic modulation resonances 2-55226
- AlGaAs inverted strip buried heterostructure lasers 2-114302
- AlGaAs large optical cavity BH window laser, fabrication and props. 2-96967
- AlGaAs laser, freq. stabilisation to H₂O vapour absorpt. line 2-60129
- AlGaAs laser amplifier, Fabry-Perot cavity type, noise characts. 2-80958
- AlGaAs laser diode, spontaneous and stimulated emission, picosecond meas. 2-65216
- AlGaAs laser diode, multipurpose (Danish) 2-70565
- AlGaAs laser diode (German) 2-90927
- AlGaAs lasers, frequency stabilization based on H₂O and Rb-D₂ lines 2-65267
- AlGaAs lasers, high injection region luminesc. decay and injected carrier lifetime 2-85962
- AlGaAs lasers with micro-cleaved mirrors suitable for monolithic integration 2-65259
- AlGaAs narrow stripe proton isolated DH lasers for optical communication, HF intensity noise behaviour during accel. life testing 2-65223
- AlGaAs, organometallic VPE growth, O₂ gettering by graphite and SiC baffles 2-67220
- AlGaAs, semiconductor lasers, progress review 2-55156
- (AlGa)As strip BH lasers prepared by hybrid crystal growth 2-80951
- AlGaAs travelling-wave-type semiconductor laser, polarisation characts., gain sensitivity 2-75572
- AlGaAs, undoped, MOCVD growth and charact. 2-98497
- AlGaAs/GaAs terrestrial concentrator solar cell array, 1 kWp, performance 2-88451
- AlGaAs-GaAs, tunnel heterojunction, MBE growth and elec. props., multigap cascade solar cell interconnect appl. 2-57701
- AlGaAs-GaAs heterostructure, modulation doped, reson. light scatt. in strong mag. fields 2-61921
- AlGaAs-GaAs injection laser with external dispersive cavity, bistable operation and spectral tuning 2-70566
- AlGaAs-GaAs laser, use of plated heat sink 2-55192
- AlGaAs-GaAs solar cells, high efficiency and humidity resistant 2-88450
- AlGaAs-GaAs superlattice avalanche photodiode, multilayer detector for low noise apps. 2-53841
- AlGaAs-GaAs zigzag mesastructure heterostruct. injection laser, radiative characts. 2-55154
- Al_{0.35}Ga_{0.65}As:Si MBE layer, donor activation energy determ. from elec. transport props. meas. 2-98769
- Al_{0.35}Ga_{0.65}As-GaAs heterostruct., modulation doped, photocond. effects 2-56679
- p-Al_{0.7}Ga_{0.3}As-p-GaAs-n-GaAs solar cell, minority carrier diffusion length modification 2-92644
- p-Al_{0.7}Ga_{0.3}As-p-GaAs-n-GaAs, concentrator solar cell, temp. and intensity behaviour 2-93892
- p-Al_{0.7}Ga_{0.3}As-p-GaAs-n-GaAs, concentrator solar cell, LPE growth with electrolytic contacts 2-93893
- Al_{1-x}Ga_xAs laser, single-mode picosecond pulse generation by injection locking 2-90949
- Al_{1-x}Ga_xAs oxide-defined, narrow-stripe, large-optical-cavity laser, thermal waveguiding obs. 2-97001
- Al_{1-x}Ga_xAs terraced-heterostruct. large optical cavity diode laser, LPE growth and high-power CW single-mode operation 2-114298
- Al_{1-x}Ga_xAs-GaAs concentrator solar cell with high conc. ratio and no forced cooling 2-93898
- Al_{1-x}Ga_xAs-GaAs heterojunction CCD, quantum efficiency, heterojunction spike effects 2-87376
- Al_{1-x}Ga_xAs, MBE layers, spin polarised photoelectron emission meas. 2-93365
- Al_{1-x}Ga_{1-x}As, metalorganic VPE grown, residual shallow acceptors, photoluminescence study 2-93245
- Al_{1-x}Ga_{1-x}As BH high quantum efficiency low threshold microcleaved laser fabrication 2-96976
- Al_{1-x}Ga_{1-x}As, composition control and superlattice fabrication by pulsed MBE 2-99342
- Al_{1-x}Ga_{1-x}As, compositionally graded, electron drift vel., time-resolved optical refl. meas. 2-115771
- Al_{1-x}Ga_{1-x}As epitaxial films with variable composition gradient, production 2-87115
- Al_{1-x}Ga_{1-x}As epitaxial film, homogeneous, high resistivity, synthesis 2-116397
- Al_{1-x}Ga_{1-x}As epitaxial layers, MBE growth, substrate temp. influence on morphology 2-76853
- Al_{1-x}Ga_{1-x}As epitaxial layer, graded band gap, dopant impurity effects on carrier lifetime, dislocation density and internal stresses (Russian) 2-77215
- Al_{1-x}Ga_{1-x}As epitaxial solid soln., graded band-gap, photolum. (Russian) 2-104965
- Al_{1-x}Ga_{1-x}As, growth of variance epitaxial layers, by isothermal mixing of melts 2-88009
- Al_{1-x}Ga_{1-x}As, T-X-junction position, effect of alternating exial press. meas. 2-66449
- Al_{1-x}Ga_{1-x}As heteroepitaxial struct., graded-index, current controlled thickness composition profile 2-88013
- Al_{1-x}Ga_{1-x}As heterostructure lasers, visible 300K operation, high press. measurements 2-114300
- Al_{1-x}Ga_{1-x}As, LPE short-time growth, anal. 2-61306
- Al_{1-x}Ga_{1-x}As laser, longitudinal mode self-stabilisation 2-96950
- Al_{1-x}Ga_{1-x}As MOCVD quantum well heterostruct. laser, visible operation 2-114268
- Al_{1-x}Ga_{1-x}As multielectrode rib waveguides, electrooptic polarisation modulation 2-65345
- Al_{1-x}Ga_{1-x}As multielectrode rib waveguides, electrooptic polarisation modulation 2-81065
- Al_{1-x}Ga_{1-x}As p-n junction, double injection, electroluminescence 2-61981
- Al_{1-x}Ga_{1-x}As proton-isolated narrow stripe visible laser grown by MOCVD 2-80984
- Al_{1-x}Ga_{1-x}As, pulse beam technique for composition control of MBE 2-83027
- Al_{1-x}Ga_{1-x}As solar cell, two-element cascade cell design 2-93913

III-V semiconductors continued

- Al_{1-x}Ga_{1-x}As solid soln., electroliq. epitaxy distinctive features 2-88012
- Al_{1-x}Ga_{1-x}As:C(Si)(Ge)(Be)(Mg)(Zn), acceptor states, photoluminesc. study 2-104931
- p-Al_{1-x}Ga_{1-x}As:Ge, LPE grown, photolum. spectrum 2-57143
- Al_{1-x}Ga_{1-x}As:Mg²⁺, ion implantation study, rel. to elec. activation 2-86692
- Al_{1-x}Ga_{1-x}As:Si MBE layers, deep electron traps, annealing characts. DLTS study 2-98589
- Al_{1-x}Ga_{1-x}As:Si(Sn), epitaxial films, doping effects on elec. props. 2-110502
- n-Al_{1-x}Ga_{1-x}As:Te solid soln. LPE layers, carrier diffusion length, conc. depend., 77-300K (Russian) 2-56741
- Al_{1-x}Ga_{1-x}As/GaAs concentrator solar cells, organometallic, vapour phase epitaxial, fabrication and performance 2-93921
- Al_{1-x}Ga_{1-x}As/GaAs heterostructures, single and multiple period modulation and doped, I-V characts., suitability for FETs 2-56682
- Al_{1-x}Ga_{1-x}As/GaAs modulation-doped structs., transport props., rel. to Monte Carlo calcs. 2-98731
- p-Al_{1-x}Ga_{1-x}As/p-GaAs/n-GaAs concentrator solar cell, design without collection grid 2-93894
- p-Al_{1-x}Ga_{1-x}As/p-GaAs/n-GaAs/i-GaAs high volt.-low current solar cells, design 2-93895
- Al_{1-x}Ga_{1-x}As-GaAs DH long lifetime lasers (Chinese) 2-65270
- Al_{1-x}Ga_{1-x}As-GaAs heterostruct., modulation doped, MBE grown, carrier mobility, substrate temp. effect 2-61567
- Al_{1-x}Ga_{1-x}As-GaAs heterostructure grown by LPE, Auger electron spectra (Chinese) 2-66388
- Al_{1-x}Ga_{1-x}As-GaAs heterojunction, single period, mobility enhancement 2-77165
- Al_{1-x}Ga_{1-x}As-GaAs heterostruct. photovoltaic converters, fabrication by VPE 2-105562
- Al_{1-x}Ga_{1-x}As-GaAs heterojunction, single period modulation doped, normal and inverted, electron mobility, substrate temp. influence 2-115876
- Al_{1-x}Ga_{1-x}As-GaAs interface, extrinsic layer, photolum. study 2-115576
- Al_{1-x}Ga_{1-x}As-GaAs picosecond photodetectors, bias-free selectively doped 2-95466
- Al_{1-x}Ga_{1-x}As-GaAs superlattice, energy spectrum and zero energy gap condition calc. 2-77168
- Al_{1-x}Ga_{1-x}As DH laser, rake lines, influence of cooling rate and melt config. in LPE 2-77760
- AlGaAsSb-GaSb, multilayer avalanche photodiode low noise detector for 1.3 μm fibre optic systems 2-53833
- AlGaAsSb-GaSb long-wavelength detectors, 1.3 to 1.55 μm, for fibre optics 2-53840
- Al_{1-x}Ga_{1-x}As:Sb_{1-y}, LPE growth on (111)-B oriented GaSb 2-98495
- Al_{1-x}Ga_{1-x}As(100) epitaxial surface, photoemission study 2-93371
- Al_{1-x}Ga_{1-x}As(110) and GaAs(110)-Al adsorbed system, surface struct., LEED study 2-110120
- Al_{1-x-y}Ga_xIn_yAs, pseudopot. band struct., CPA calc. 2-115657
- (Al_{1-x-y}Ga_xIn_y)As lattice matched to InP substrate, MBE growth 2-105080
- AlGaInSb semiconductor system, LPE growth 2-83045
- Al_{1-x}Ga_{1-x}Sb-Al_{1-x}Ga_{1-x}Sb_{1-y} heterostructure LED, moisture transducer appl. 2-79594
- Al_{1-x}Ga_{1-x}As superlattice configuration entropy 2-56216
- Al_{0.48}In_{0.52}As, LPE growth lattice matched to InP 2-99355
- Al_{0.48}In_{0.52}As, MBE grown, Si doping and elec. props. meas. 2-92005
- AlInSb, localised impurity states, cond. band minima role 2-98576
- AlN epitaxial films, cathodoluminescence and optical absorption 2-99195
- AlN film, basal orientation, RF diode sputtering, low temp. growth 2-72623
- AlN piezoelectric thin films, for SAW apps. 2-97338
- AlN:Mn, luminesc. and EPR spectra 2-57174
- AlP, band structure, tight binding calc. 2-66443
- AlSb, electron-phonon interaction, phonon cond. 2-66152
- AlSb film, phase transition triggered by laser irradi. 2-98500
- AlSb film growth by laser annealing Al/Sb sandwich 2-92416
- AlSb, interband transition energies, spin-orbit effects, electroreflectance study 2-104849
- AlSb, MBE growth on GaSb(GaSb)(InAs) and RHEED characterisation 2-87087
- AlSb-GaSb-InAs, multiheterostructs., two dimens. quantum states and semimetal-semicond. transition, theoretical study 2-61575
- AlSbAs_{1-x}As_x, vacuum deposition, optical and transport props., impurity states 2-82498
- AlSb(As)(P), surface (110), bound and resonant surface states 2-110429
- Au-n-GaAs_{1-x}Sb_x, Schottky diode, barrier height 2-115854
- Au-oxide-n-GaAs MIS struct., barrier height meas. by internal photoemission technique 2-72063
- AuGeNi-InP contact, electron microscopy investig. 2-66379
- BN, electrical cond. meas., 700 to 1400°C 2-92618
- BN hexagonal film, low temp. deposition by CVD 2-71841
- CaAlAs BH laser and bipolar phototransistor, monolithic integration 2-55360
- CaGa:Cr, surface carrier conc., use of transverse electroreflectance 2-57058
- CdS, chlorinated, press. quenched, AC conductance and phase angle anomalies 2-82359
- (Ga, Al)As diode laser, single frequency CW, output power and temp. depend. of linewidth 2-75568
- (Ga,In)(As,P) microwave and optoelectronic heterostruct. growth using multibarrel reactors 2-77747
- (Ga,In)As, equilib. consts. derivation from LPE, VPE growth data, solid activity coeffs. determ. 2-98481
- Ga-Sb, phase diagrams, thermodynamic anal. (Russian) 2-93494
- GaAs, ion implanted, laser annealed, defect anal. 2-66053
- GaAs, ion implanted and annealed, defect conc. distrib. study 2-71923
- GaAlAs buried heterostruct. laser, monolithic integration with bipolar phototransistor 2-60259
- GaAlAs buried multiheterostructure laser 2-80983
- GaAlAs DH LEDs, recombination-induced deep level form., DLTS study 2-98588
- (GaAl)As DH lasers, long-lived, bonded with In, elimination of In solder deterioration 2-85988
- GaAlAs DH separated multilayer stripe geometry laser mode calcs. 2-85963
- GaAlAs DH shallow proton stripe geometry laser grown by MO-CVD 2-55206
- (GaAl)As DH visible lasers on p-GaAs substrate, reliable and mode-stabilised 2-55207

III-V semiconductors continued

- Ga(Al)As diode laser, linewidth broadening due to electron number fluctuations 2-60077
- GaAlAs double heterojunction sub-nanosec. laser (*Chinese*) 2-65245
- (GaAl)As gain guided lasers, analysis at threshold 2-75575
- (GaAl)As heterostructure laser formed by LPE, growth and dissolution kinetics, temp. programming effects 2-104187
- GaAlAs heterostructures on GaAs, simultaneous LPE method for multi-layer structures in multislice boat 2-111100
- GaAlAs laser operating at 0.83 μm , optical feedback-induced changes in output spectra 2-80957
- GaAlAs layers, localised transmutation doping by $^{27}\text{Al}(\text{p},\gamma)$ ^{28}Si reaction 2-103792
- GaAlAs, metalorganic CVD, electronic defect levels study 2-71922
- GaAlAs Schottky barrier restricted laser 2-96977
- (GaAl)As semiconductor diode lasers, linewidth charact. 2-65230
- GaAlAs semicylindrical Zn-diffused stripe laser diodes 2-114278
- GaAlAs short-cavity laser fabricated by wet chemical etching 2-114279
- GaAlAs single-mode laser, dynamic wavelength tuning 2-55144
- GaAlAs solar batteries with radiative cooling concentrating systems optimal parameters determ. 2-99785
- GaAlAs transverse junction stripe lasers for 20 Gbit/s optical time multiplexing 2-81118
- GaAlAs visible laser, V-channelled substrate inner stripe, stabilised mode operation 2-55183
- GaAlAs visible wavelength terraced-substrate lasers 2-55157
- GaAlAs:Zn, variable gap semicond., photon transport of carriers, photoluminescence study 2-116256
- GaAlAs/GaAs DH lasers, self-sustained pulsation characts. (*Chinese*) 2-108874
- GaAlAs-GaAs, channelled substrate narrow stripe laser, expt. characterisation 2-96982
- (GaAl)As-GaAs DH lasers, narrow oxide stripe, lateral current spreading and diffusion problem 2-80964
- GaAlAs-GaAs DH lasers, large-scale utilisation (*Czech*) 2-114284
- n-GaAlAs-GaAs heterojunction interface, MBE grown, 2-D electron gas, tangential magnetoresist. study 2-77162
- GaAlAs-GaAs MOCVD grown wavelength division solar cells, fabrication and characts. 2-105572
- GaAlAs-GaAs transverse DFB cavity laser, room temp. operation 2-102817
- GaAlAs-GaAs-AlAs passive etalon, optical bistability obs. 2-102859
- Ga_{0.35}Al_{0.27}CW room-temp. visible single quantum well diode laser grown by MOCVD 2-85960
- Ga_{0.95}Al_{0.15}As, growth by temp. gradient LPE with convective flow (*Chinese*) 2-111097
- Ga_{0.9}Al_{0.1}As, heterostructures, radiative recombination, efficiency and lifetimes 2-87833
- Ga_{1-x}Al_xAs, anharmonicity and disorder-induced effects, Raman study 2-57083
- Ga_{1-x}Al_xAs, electron drift mobility calcs. 2-77084
- Ga_{1-x}Al_xAs epitaxial layers and single crystals, anharmonicity and disorder-induced effects, Raman study 2-67052
- Ga_{1-x}Al_xAs, epitaxial layers, Hall mobility-drift mobility ratio, press. depend. 2-87431
- n-Ga_{1-x}Al_xAs for high sensitivity pressure sensors, resist. variation with press. 2-95338
- Ga_{1-x}Al_xAs, Hall electron mobility, scatt. parameters 2-115790
- Ga_{1-x}Al_xAs heterostructure diodes, laser irradi., electroluminescence emission 2-82926
- Ga_{1-x}Al_xAs LPE layers, dislocations config. TEM study (*Chinese*) 2-67670
- Ga_{1-x}Al_xAs LPE layer, refractive index, surface reflection meas., 1.96 eV 2-93296
- Ga_{1-x}Al_xAs laser, high CW output power, lateral grating array 2-96974
- Ga_{1-x}Al_xAs laser FET monolithic IC, very high freq. operation 2-96969
- Ga_{1-x}Al_xAs, MOCVD grown, elec. props. of Se and Zn 2-98774
- Ga_{1-x}Al_xAs, radiative decay rate exponential distrib. 2-77583
- Ga_{1-x}Al_xAs single quantum well visible laser, MOCVD grown, low threshold and high efficiency obs. 2-96971
- Ga_{1-x}Al_xAs variable-gap optical filter with a controlled pass band 2-75665
- Ga_{1-x}Al_xAs:Be-GaAs p-p-n solar cells, Be diffused doping and elec. props. meas. 2-105557
- Ga_{1-x}Al_xAs:Si, Ge, LPE growth and doping, elec. and photolum. props. 2-116393
- Ga_{1-x}Al_xAs:Si, LPE layers, photon recycling, photoluminescence study 2-82897
- Ga_{1-x}Al_xAs:Sn layers, electronic and γ -ray irradi., elec. cond., press. effects (*Russian*) 2-104512
- Ga_{1-x}Al_xAs:Zn, metalorganic CVD film, elec. cond. 2-56733
- Ga_{1-x}Al_xAs-GaAs double heterostruct., laser annealed, electrolum. device performance 2-55158
- Ga_{1-x}Al_xAs-GaAs isotopic heterojunction, compact analytic model (*French*) 2-104474
- Ga_{0.9}Al_{0.1}As, MBE grown, persistent photocond. centres, capacitance spectroscopy meas. 2-98688
- GaAlSb-GaSb photodetectors for the near infrared spectrum (*German*) 2-84704
- Ga_{1-x}Al_xSb, impact ionisation an alternative interpretation, comments 2-56600
- Ga_{1-x}Al_xSb, LPE layers, photolum. study, cond. band minimum determ. 2-98540
- n-Ga_{0.9}Al_{0.1}Sb-p-GaSb heterojunction, elec. and photoelec. characterization 2-98732
- GaAs, 1-D photoluminescence distrib. 2-77567
- GaAs (001), adsorbed Pb, electronic struct., angle-resolved photoemission study 2-110424
- GaAs (001), faceting, steps and reconstruction, theoretical model 2-92327
- GaAs (001)-2 \times 4 reconstructed surface band struct. 2-72042
- GaAs (110), adsorbed Al, surface structure, first-principles pseudopot. determ. 2-110143
- GaAs (110), adsorption state of Al, rel. to Schottky barrier form. 2-115546
- GaAs (110), chemisorbed H, pseudopot. calc. 2-110423
- GaAs (110), chemisorption of Ge, surface defect states 2-56659
- GaAs (110), chemisorption of Al (*Chinese*) 2-104139
- GaAs (110), chemisorption of Ge, UPS and work function studies 2-110412
- GaAs (110), formic acid adsorption EELS study 2-98454

III-V semiconductors continued

- GaAs (110) relaxed surface, angular resolved initial state spectra 2-87948
- GaAs (110) surface, struct. anal. at room temp. 2-82099
- GaAs {001}, epitaxial relationship with MBE grown Al and Ag layers 2-56396
- GaAs {001} substrate for Ag film, Auger lineshape variation during epitaxial growth 2-87916
- GaAs, ambipolar diffusion of high density electrons and holes 2-110367
- GaAs, amorphous and cryst., melting point, laser and electron beam annealing 2-109829
- GaAs and related cpds., conf. Oiso, Japan (Sept. 1981) 2-94906
- GaAs, anodic oxidation, island stage 2-111342
- GaAs anodic oxide film, struct. inhomogeneity 2-87096
- GaAs, band struct., nonlocal pseudopot. calc. 2-110245
- GaAs, band struct., photoemission with synchrotron radiation (*Japanese*) 2-93377
- GaAs, band structure, tight binding calc. 2-66443
- GaAs bicryst., electron tunnelling through grain boundaries 2-66624
- GaAs, bulk, main electron trap, effect of elec. field and current injection 2-72009
- GaAs, bulk Bridgman crystals, O related gettering of Si during growth 2-61005
- GaAs bulk crystals soln. grown by slow cooling, const. temp. steady-state processing macrosegregation 2-91845
- GaAs bulk laser, tunable picosecond pulse generation, two-photon absorpt. excitation 2-55164
- GaAs bulk laser, two-photon pumped synchronously mode-locked 2-114291
- GaAs, bulk semi-insulating, quenching effect of luminesc. 2-87862
- GaAs buried heterostructure layers, individually addressable, 50 μm spaced array 2-90918
- GaAs CCD 2-114416
- GaAs CVD, thermodynamic anal. of Ga/AsCl₃/H₂/inert gas system (*Chinese*) 2-111079
- GaAs CVD from trimethyl gallium-AsH₃ flowing vapour 2-116381
- GaAs CW DH laser diodes, superhigh differential quantum efficiency and strong self-sustained pulsation 2-80961
- GaAs CW lasers with inhomogeneous current injection, bistability and pulsations 2-108879
- GaAs, carrier drift and recombination instabilities due to nonlinear interactions, expt. study (*Russian*) 2-115784
- GaAs, carrier mobility, electron-electron scatt. effect 2-77040
- n-GaAs, chaotic motions in electrical avalanche breakdown caused by weak photoexcitation 2-110359
- GaAs, crystal growth-property relationships, Bridgman-type apparatus for study 2-86612
- GaAs cylindrical cryst., O₂ adsorpt., orientation depend. 2-110146
- GaAs, cylindrical sample, adsorpt. of O₂, orientation depend., AES meas. 2-115565
- GaAs, decomposition due to laser irradi. 2-93331
- GaAs, deep acceptor at 77 MeV, photoluminesc. study 2-57145
- GaAs, deep impurity profile, persistent photocurrent meas. technique 2-115267
- GaAs, deep level elec. field induced phonon assisted tunnel ionisation 2-71909
- GaAs, deep level transient spectroscopy using CAMAC components 2-101469
- GaAs, deep levels, optical matrix elements and cross sections, impurity superlattice model 2-56467
- GaAs, defect energy level press. depend. 2-104295
- GaAs, degenerate band, bound polaron energy, variational and perturbation calc. 2-115674
- GaAs, density of states of photoemitting bands, Kindig-Spicer method 2-56416
- GaAs, depth profiling in near surface region by low energy PIXE 2-99716
- GaAs detectors at room temp., present status 2-90366
- GaAs direct-gap crystals, three-photon absorpt. 2-97079
- GaAs dislocation-free crystal prod. by doping, necking procedure in LEC growth 2-76337
- GaAs, donor defect, H passivation 2-87173
- GaAs, doped superlattices, quasi-two-dimensional photoexcited carriers 2-110433
- GaAs, doped with conducting inclusions, negative geometric magnetoresistance (*Russian*) 2-104517
- GaAs double heterostructure laser diodes modulation (*German*) 2-80954
- GaAs, electrical defect, Hall effect, SIMS and mass spectra meas. 2-76984
- GaAs electrical surface props. determ. by thermo-optical acousto-electric voltage method 2-92720
- n-GaAs, electrochem. photovoltaic cell using I₃⁻/I⁻ redox couple in acetonitrile 2-111570
- p-GaAs electrochemical electrode, cathodic photocurrent meas., surface recombination and trapping effects 2-92746
- GaAs electrochemical solar cells, review 2-111574
- GaAs electron capture by multiphonon emission at A and B levels 2-61947
- GaAs, electron drift velocities, high field temp. depend. 2-56598
- GaAs, electron drift velocity meas. at high elec. fields 2-66567
- GaAs, electron drift velocity meas. using variable frequency microwave time-of-flight technique 2-98664
- GaAs, electron irradi., elec. props. and defect annealing 2-104379
- GaAs, electron irradi., luminescence of deep radiative centres obs. 2-57187
- GaAs, electron mobility, space charge and central-cell scatt. contribs. 2-104368
- GaAs, electron mobility, space charge and central cell scatt. contribs. 2-104369
- GaAs, electron transient response, Boltzmann eqn., Monte Carlo technique 2-61458
- GaAs, electron traps and deep levels 2-98583
- GaAs, electron-bombarded, IR absorpt. spectra, 'shadow' levels 2-72507
- GaAs, electronic bands, critical points in first Brillouin zone 2-56435
- GaAs, electronic density of states, cluster-Bethe-lattice approach 2-66413
- GaAs, electronic struct. induced by short-ranged defects, calc. method 2-104296
- GaAs, electrostatic effects of hydrogenic donor complexes on magneto-optical spectra 2-82279
- GaAs, epitaxial, electron mobility, temp. depend., impurity and phonon scatt. (*Russian*) 2-104513

III-V semiconductors continued

- n-GaAs, epitaxial, far IR photocond. saturation 2-87319
 n-GaAs, epitaxial film, magnetoresistance, electric field effect 2-77100
 GaAs, epitaxial film, residual donor impurity conc., photothermal ionization study 2-98148
 GaAs, epitaxial film growth on amorphous substrate, CLEFT process, TEM and cathodoluminescence study 2-77749
 GaAs epitaxial films, activated, photoemission, surface purity and perfection effect 2-72608
 n-GaAs epitaxial layer on semi-insulating GaAs:Cr, current limitation due to IR radiation obs. 2-66626
 GaAs, epitaxial layers, donors contaminants study far-IR photoconductivity method 2-56732
 GaAs epitaxial layers, MBE and LPE, luminesc. props. 2-72564
 GaAs, epitaxial layers, bixionics in quantum wells 2-92479
 GaAs, excitonic polariton-induced compensation of pulse broadening in optical fibers obs. 2-91047
 GaAs, far IR magneto-absorption, Zeeman effect, cyclotron resonance 2-99099
 GaAs field effect transistors, ballistic electron motion 2-98658
 GaAs film, amorphous, plasma deposition and characterisation 2-11094
 GaAs film, elec. cond., relaxation and lifetime behaviour, macroscopic aspects, theory 2-82492
 GaAs film, laser CVD deposition and characts. 2-82162
 GaAs, for ZnSe VPE film, optoelectronic props. control 2-116382
 GaAs, galvanostatic anodisation in methanodic KOH 2-88239
 GaAs, gamma-irradiated, near-intrinsic emission intensity, nontrivial annealing induced increase 2-93260
 GaAs, grown by Bridgman method, props. 2-98675
 n-GaAs, Gunn domain quenching by external microwave elec. field 2-77106
 GaAs, Gunn effect, high freq. limit 2-92676
 p-GaAs, heavily doped, coupled LO phonon-plasmon modes and forbidden TO modes, Raman scatt. study 2-57101
 n-GaAs, heavily doped, electronic heat capacity 2-56207
 GaAs, heavily doped, electron pulsed annealed, elec. quality meas. 2-98161
 n-GaAs, heavily doped, Fermi energy and screening length 2-66410
 GaAs, heterostructures, radiative recombination, efficiency and lifetimes 2-87833
 GaAs, high field transport and impact ionization, band struct. depend. 2-77070
 GaAs, high purity, electron-phonon coupling associated with BA and DA transitions (Chinese) 2-93239
 GaAs, high purity, grown by MBE, characterisation 2-56613
 GaAs, high purity OMCDVD grown using trimethyl and triethyl gallium sources, acceptor incorporation 2-99350
 GaAs, high resistivity, thickness dependence of photoacoustic spectra 2-79683
 n-GaAs, high-purity, epitaxial, H₂ passivation of deep donor centres obs. by DLTS 2-98570
 n-GaAs, hopping conduction in an arbitrary magnetic field 2-92665
 e-GaAs, hot carrier, picosecond absorpt. spectroscopy 2-92640
 n-GaAs, hot electrons, inertial props., Monte Carlo calc. 2-56628
 GaAs, hot photoexcited electrons, theoretical study 2-82367
 GaAs hot-electron diffusion const., Monte Carlo calc. 2-98656
 GaAs, hot-electron plasma, excitation of electrostatic oscillations, calc. 2-66580
 GaAs, hydrogenation/nitridisation passivation mechanism 2-77961
 GaAs, i-n heterostruct., low temp. diffusion, laser plasma pulse stimulated 2-56263
 GaAs IC, pulse annealing techniques optimisation 2-56693
 GaAs, IR absorption of 78 meV acceptor 2-77552
 GaAs, IR absorption props. at 10.6 μ m, photoacoustic spectroscopy (Chinese) 2-93230
 n-GaAs impact ionisation induced negative far IR photocond. 2-115805
 GaAs, impact ionization and high field transport, band struct. depend. 2-77069
 GaAs, implant activation using multiple-scan electron beam annealing 2-56040
 GaAs implantation annealing using incoherent light focused by elliptical mirrors 2-76490
 GaAs, impurity atoms and positron states, positron annihilation study 2-104996
 GaAs, impurity band transport in large mag. fields 2-61487
 n-GaAs, impurity scatt. in quantising mag. fields 2-115792
 GaAs impurity subsystem, metal-insulator transition (Russian) 2-71872
 GaAs, in situ etching using AlCl₃ in MOVPE 2-99348
 p-GaAs, inhomogeneously doped, IR plasma reflectivity, computer calc. 2-61885
 GaAs injection lasers, influence of waveguiding props. on longitudinal spectrum 2-96947
 GaAs interfaces, disloc. surface reactions 2-57250
 GaAs, ion implanted, excitation size determ. 2-87156
 GaAs, ion implanted, laser annealing, Fermi level pinning model, solar cell fabrication 2-56027
 GaAs, ion implanted, pulsed ruby laser annealing, SIMS and elec. obs. 2-56023
 GaAs, ion implanted, pulsed laser annealing, dopant profile redistrib. and surface melting duration 2-56024
 GaAs, ion implanted, range statistical parameter calcs. (Chinese) 2-109818
 GaAs, ion implanted, transient and furnace annealing behaviour 2-56022
 GaAs, ion implanted, Zn diffusion profiles meas. 2-92285
 GaAs, ion irradi., Frenkel defects and annealing 2-115316
 GaAs, ion-implanted, review of furnace annealing, thermal pulse annealing and laser annealing 2-67400
 GaAs, ion-plasma treatment influence on structural and recomb. characts. (Russian) 2-66079
 GaAs, LEC grown, effect of water content of B₂O₃ encapsulation on purity and stoichiometry 2-103674
 GaAs, LEC grown, photoluminescence, deep acceptor levels 2-99191
 GaAs, LEC grown semi-insulating, charact. for integrated circuit appl. 2-98654
 GaAs, LEC growth, donor impurities, photoluminescence evaluation 2-116230
 GaAs, LEC growth of homogeneous undoped semi-insulating crystals with in-situ melt purification 2-93408
 GaAs LEC semi-insulating crystals, appearance of negative peak in photo-induced transient spectroscopy 2-104312

III-V semiconductors continued

- GaAs LED, shallow-junction, surface-emitting, spectral tuning through gamma radiation 2-115287
 GaAs LPE layers, dislocations as growth step sources, rel. to interface struct. 2-115615
 GaAs LPE layers, high-purity residual photoluminesc. studies 2-99164
 GaAs, laser beam erosion, role of thermochemical effect 2-61028
 GaAs laser diode emission spectra in pulsed mag. fields up to 26 T 2-85970
 GaAs, lateral epitaxial CVD, growth on Ge-Si substrates with low dislocation density 2-116371
 GaAs layer growth on insulating substrates, ion beam deposition (Japanese) 2-116384
 GaAs layers, elec. field effect on growth, in GaAs-AlCl₃-H₂ system 2-57302
 p-GaAs, linear photogalvanic effect 2-110388
 GaAs, liquid encapsulated Czochralski growth, dislocation form. 2-81785
 GaAs, liquid encapsulated Kyropoulos growth method 2-99323
 GaAs, liquid encapsulated Czochralski, compensation mechanism, melt stoichiometry 2-111057
 GaAs, low-field mobility temp. depend. with optic phonon scatt., Monte Carlo calc. 2-104383
 GaAs, MBE, Mn incorporation behavior 2-104191
 p-GaAs MBE film, lightly doped, dynamic SIMS study 2-87097
 p-GaAs, MBE grown, impurity characterization by far-IR photoconductivity in high mag. fields 2-66565
 GaAs, MBE grown (100) autotaxial films and substrates, struct. and comp. and surfaces 2-56383
 GaAs MBE grown epitaxial layers, characts. of AuGeNi ohmic contacts 2-66637
 GaAs, MBE growth on Ge (100), interface morphology, RHEED study 2-56386
 GaAs MESFET, normally-off, deep levels, photoinduced current spectroscopy study 2-110281
 GaAs MESFETs, deep level impurities, effects on small signal and LF noise props. 2-95886
 GaAs MOCVD layers, low temp. growth at atm. pressure 2-93441
 GaAs MOS interface states, DLTS and photoionisation study 2-110488
 GaAs MOS struct., photoionisation cross-section and interface state threshold meas. 2-98759
 n-GaAs, magnetoresist. of hot electrons at 77K 2-61495
 GaAs mesostructure dielectrics 2-61473
 n-GaAs, metal-semiconductor transition in strong mag. fields 2-92708
 GaAs, metalised, volatile component loss and contact resistance during annealing 2-92753
 GaAs, metalorganic VPE layers, impurity redistribution, SIMS study 2-115582
 GaAs, microwave freq. noise, electron heating conditions 2-104446
 GaAs, minority carrier lifetime meas. using SEM with intensity modulated electron beam 2-87301
 GaAs, minority carrier lifetime and diffusion length, EBIC method in SEM 2-98667
 GaAs monolithic SAW device, new SAW modes obs. 2-104134
 GaAs monolithic solar cell array 2-88449
 GaAs n⁺-n⁺-n⁺ and n⁺-p⁺-n⁺ structs., near ballistic transport, intervalley scatt., and nonparabolic conduction band effects 2-92733
 GaAs, n⁺-n⁺-n⁺ Schottky device, ballistic and quasiballistic electron spectroscopy, numerical simulation 2-56669
 GaAs, n-i-p-i cryst., photoexcited electrons quantisation, photoluminesc. and light scatt. study 2-61576
 GaAs, n-i-p-i superlattices, electron-hole recomb. across tunable effective gap, photoluminesc. study 2-99182
 GaAs n-type Schottky barrier, deep level and shallow impurity profile simultaneous meas. with C-V method (Chinese) 2-92505
 GaAs NIPi superlattice, tunable optical absorpt. coeff. 2-77477
 GaAs near-IR emitters as radiation-to-light converters for nucl. environments 2-113825
 n-GaAs, negative far IR photocond. obs. in mag. field 2-98690
 GaAs nonlinear material, second-harmonic lasing in asymmetrical dielectric waveguides 2-108953
 GaAs nonradiative processes and defects, obs. by acoustic spectroscopy 2-53446
 GaAs ohmic contact, laser alloying 2-61024
 GaAs, one phonon density of states determ. by disorder-activated first-order Raman scatt. 2-66151
 GaAs, optical bistability with guided waves, theory 2-97073
 GaAs, optical detection of NMR, nuclear relax. near shallow donors 2-82747
 GaAs, oscillator strength and lifetime broadening of exciton polaritons 2-93141
 GaAs, oxide layer struct., diffuse X-ray scatt. study 2-71831
 GaAs, oxide removal from chemically etched surfaces, electron and X-ray diff. 2-116561
 GaAs, p⁺-n-n⁺ struct., forward I-V characts., photon generation effects 2-115882
 GaAs, p-n homojunction LEDs, emission spectra calc., ghost peak form. 2-61980
 GaAs p-n homojunction solar cell, minority carrier diffusion length modification 2-92644
 GaAs, photoacoustic IR spectroscopy 2-99108
 GaAs, photoacoustic spectra meas. 2-92117
 GaAs photoconductive detectors, thin film, ultrafast operation 2-101463
 n-GaAs, photocurrent determ. of hole diffusion lengths 2-82396
 GaAs photodiodes, thermometric characts. 2-101460
 GaAs, photoelectric memory effects, theoretical model 2-82394
 n-GaAs, photoelectrical fatigue obs. at cryogenic temps. (Russian) 2-77125
 GaAs photoelectrochem. cell, real time IR imaging appl. 2-58902
 GaAs, photoelectron spectra, Monte Carlo simulations 2-67197
 GaAs, photoexcited carriers, time-resolved diffusion profiles, nonlinear luminesc. study 2-116221
 GaAs, photoexcited electron system, far IR magnetoabsorpt. and cyclotron reson. study 2-87744
 GaAs, photogalvanic effects and photon drag 2-110391
 p-GaAs, photoluminescence, time resolved, by population mixing 2-57138
 GaAs, photoluminescence, elec. field effects, excitons and polaritons 2-99177
 GaAs, piezo-optical coeffs., dispersion dependences 2-116151
 GaAs, piezobirefringence dispersion due to strain-dependent lattice effects 2-67017
 GaAs, planar doped barrier design and growth by MBE 2-93425

III-V semiconductors continued

- GaAs, plasma etching, temp. and discharge freq. effects 2-83255
 GaAs, plasma etching by tetrachloromethane, kinetic study by nonperturbative optical techniques 2-116565
 GaAs polycrystalline, scanning cathodolum. microscopy 2-71313
 GaAs polycrystalline n-type film, hole diffusion lengths, lateral variation meas. technique 2-98770
 GaAs, positron annihilation at low temp. 2-62009
 GaAs, positron lifetimes, systematic study 2-57207
 GaAs, probability of cond. band-acceptor optical transitions 2-116254
 GaAs, proton irradi., damage distrib. and proton range, TEM study 2-76507
 GaAs, proton irradiated, profiles interpretation obtained by C(V) technique 2-98663
 GaAs, proton-bombarded, deep levels study 2-66474
 GaAs, quantum well, exciton resonance, hole burning 2-76934
 GaAs quantum well lasers, temp. depend. of threshold current calc. 2-75573
 p-GaAs, quantum wells, bound excitons, photoluminescence 2-104956
 GaAs, radiative recomb. and light absorpt., dislocations effect 2-104962
 GaAs, Raman spectrum, phonon modes, ion implantation and annealing effects 2-82833
 GaAs recombination-type semi-insulating material prep. for high power CO₂ laser windows (*Chinese*) 2-99317
 p-GaAs, reduction of fast surface states 2-66602
 GaAs, refractory ohmic contacts, laser and thermal anneal 2-87386
 GaAs, resonant Brillouin scatt. under uniaxial stress 2-77542
 GaAs SAW charge transport, monolithic delay line appl. 2-115522
 GaAs, SAW focusing effects 2-82112
 GaAs, SAW generation by photoexcitation, Brillouin spectra detected 2-98413
 GaAs, Schottky barrier form., MOS interface states 2-82428
 GaAs, Schottky barrier formation, defect states model 2-98722
 GaAs Schottky barrier solar cells, grain boundary recombination anal. 2-93907
 GaAs Schottky structures, surface defect model 2-98724
 GaAs Schottky-barrier cells, I-V characts. including recomb. effects 2-82459
 GaAs, selective epitaxial growth by liquid phase electroepitaxy 2-62082
 GaAs, semi insulating, electron/hole mobility relations 2-110352
 GaAs, semi-insulating, anti-Stokes luminesc. and deep centre EL2, expt. study 2-87830
 GaAs, semi-insulating, bulk growth by LEC 2-57283
 GaAs, semi-insulating, point defect chemistry, paramag. resonance technique review 2-93005
 GaAs, semi-insulating behaviour and thermal stability, stoichiometry effect 2-110348
 GaAs semi-insulating bulk crystal growth by Liquid Encapsulation Czochralski process, Ga inclusion minimization 2-67212
 GaAs, semi-insulating LEC, deep level nonuniformity distrib., photolum. spectroscopy 2-76964
 GaAs, semi-insulating props., compensation by deep levels 2-56465
 GaAs semi-insulating wafer, dislocation density and sheet resistance variations 2-109801
 GaAs, semiinsulating, Cr gettering by Ne ion implantation, elec. activation of implanted Si 2-55993
 GaAs, shallow donor binding energies, effect of band non-parabolicity 2-98581
 GaAs solar cells, formed by UV laser chem. doping 2-67853
 GaAs solar cells, research advances 2-105560
 GaAs sputtered films, substrate-epitaxial interface effect on C-V characts. of Schottky barriers 2-77156
 GaAs, sputtering, high resolution, using focused Ga⁺ beam 2-116327
 GaAs, step development during MBE growth, RHEED study 2-76860
 GaAs stripe injection lasers, regular integrated array 2-80998
 GaAs, struct. changes in high elec. field, X-ray diff. study 2-98043
 GaAs, submicron grating fabrication by holographic exposure 2-91036
 GaAs substrate, interdiffusion of metal films, book contrib. 2-61215
 GaAs substrate cleaning procedures, AES study 2-88237
 GaAs substrate for MBE, thermal removal of surface C 2-116572
 GaAs substrate for Ta₂O₅ film, thickness determ. by Monte Carlo method (*Chinese*) 2-110179
 GaAs substrate for ZnSe film, elec. props. and impurity profile 2-61014
 GaAs substrates, cryst., growth from melt (*German*) 2-57281
 GaAs substrates and GaAs-Al_xGa_{1-x}As DH epitaxial wafer, defects meas. by X-ray topography (*Chinese*) 2-67669
 GaAs surface, (110), Al chemisorpt., extended Huckel mol. orbital calc. 2-66345
 GaAs surface, (110), He atom diff., theoretical anal. using He-surface potentials 2-77685
 GaAs surface, electron state density, low energy electron reflection study (*Russian*) 2-87362
 GaAs surface (001), reconstructed, domain struct., RHEED evidence 2-98408
 GaAs, surface (100), reconstructed, atomic and electronic struct. 2-115518
 GaAs surface (110), O₂ adsorption, density of valence states, photoemission study 2-82142
 GaAs, surface (110), oxidation, low intensity laser radiation effect 2-111341
 GaAs surface (110), Sb overlayers, LEED/AES/XPS/TDS characterization 2-87060
 n-GaAs, surface (110), surface photovoltage meas. and Fermi level pinning 2-87364
 GaAs, surface comp., X-ray photoelectron spectroscopy and ellipsoid meas. (*Ukrainian*) 2-104124
 GaAs, surface composition and etching in Cl₂ ion beam 2-61262
 GaAs, surface donors and acceptors, Fermi energy as function of O₂ exposure 2-110426
 GaAs, surface layer struct., external photoeffect under X-ray diff. conditions 2-98402
 GaAs, surface oxide phase form. by H₂O or O₂ adsorpt., UPS, XPS and SIMS study 2-115544
 GaAs, surface oxide thin film, carrier photoinjection 2-92699
 n-GaAs, surface photovoltage meas. and Fermi level pinning, electron tunnelling through dipole layers 2-87392
 GaAs, surface reconstruction, buckling, ionicity and π -bonded chains 2-92337
 GaAs, surface ripples under picosecond laser illumination 2-81822
 GaAs surface state reduction by plasma growth of oxyfluorides 2-110427

III-V semiconductors continued

- GaAs, surface states, intrinsic unoccupied, bremsstrahlung isochromat spectroscopy study 2-98713
 GaAs, surface states and the analytic properties of Bloch waves in the tight-binding approximation 2-56656
 GaAs, surface Tamm state energy spectrum, Green's function calc. (*Russian*) 2-77154
 GaAs surface-barrier structs., reverse current and elec. breakdown 2-92755
 GaAs, thermal expansion coeff. calcs. 2-86911
 GaAs, thermally oxidised, Lloyd's mirror interference method for determ. of photoelastic index variation 2-64096
 GaAs, thermally oxidised, interface comp. studies using Auger depth profiling 2-78154
 GaAs thin film solar cells, review 2-105568
 GaAs thin layers, positron profiles and positron annihilation 2-87897
 GaAs, third order optical nonlinearity near exciton lines (*Chinese*) 2-99083
 GaAs, tunnel junctions for multigap cascade solar cells 2-57701
 GaAs, two-photon absorption coeffs., band structure calcs. 2-65293
 GaAs ultrafine semicond. wire, high electron mobility, theory 2-98655
 GaAs undoped epitaxial layers grown by CVD, residual impurity depend. on growth time 2-56404
 GaAs, undoped semi-insulating LEC grown, growth striation etching 2-76350
 GaAs unipolar structures with ultrathin triangular barriers, elec. props. 2-82445
 GaAs, VPE, interdiffusion coeffs. of growth components 2-56382
 GaAs VPE, transition region width between active and buffer layers (*Chinese*) 2-67222
 GaAs, VPE and Czochralski grown, pulsed Nd:YAG laser annealing of defects, implanted sample obs. 2-56026
 GaAs vapour-phase transport on V-shape grooved GaAs substrate 2-99347
 GaAs, velocity/field characteristic meas. using HF modulated solid-state laser diode 2-82350
 GaAs, Wannier-Mott excitons, wave functions and normal-incidence refl. 2-82244
 GaAs, whisker growth during MBE 2-76876
 GaAs whiskers, elec. cond., hydrostatic press. influence 2-77064
 GaAs with chemisorbed H, surface optical phonon obs. 2-115550
 GaAs:Ag(Au), LEC grown, DLTS study 2-98572
 GaAs:Al(P), ion implanted, radiation damage 2-115317
 n-GaAs:As, impurity profile, electroetching meas. 2-56001
 GaAs:B, electron irradiated, IR study of annealing 2-56033
 GaAs:B⁺ ion implanted, lattice damage profile, multi-layer anal., ellipsometry study 2-92059
 GaAs:B(Se), depth profiling using spectroscopic ellipsometry 2-79647
 GaAs:Be, MBE layers, photoluminescence, excitonic features 2-116229
 GaAs:Be, p-type doping in metalorganic VPE, hole conc. and cond. 2-105089
 GaAs:Be MBE layers, photoluminescence, bound exciton lines 2-116228
 GaAs:Be(Mg)(Zn)(Cd), ion channelling, electronic stopping power, SIMS study 2-103867
 GaAs:Be(Si), channelling depth distrib. as function of implant energy and fluence 2-98125
 GaAs:C, site of substitutional C impurity, Fourier transform IR absorption study 2-91991
 GaAs:C layers, elec. props., and electron microscopy 2-61628
 GaAs:C(Ge) VPE layers, impurity characterisation, photoluminesc. study 2-93264
 GaAs:Cr, APR spectra, illum. effect 2-66898
 GaAs:Cr, deep level optical spectroscopy 2-71902
 GaAs:Cr, deep level photoluminescence, vacancies and annealing 2-99190
 GaAs:Cr, defect centre struct. photocapacitance study 2-104305
 p-GaAs:Cr, EPR identification of Cr⁴⁺3d² using appl. uniaxial stress 2-110629
 GaAs:Cr, exciton and subband-gap absorption, quenching and enhancement, acoustoelectric volt. spectroscopy 2-82235
 GaAs:Cr, Fe liquid encapsulated Czochralski cryst., SIMS 2-115270
 GaAs:Cr, generation of paramagnetic defects, EPR study 2-66906
 GaAs:Cr, horizontal Bridgman-grown for ion implantation, elec. characts. 2-115756
 GaAs:Cr, impurity levels, elec. cond., IR spectra and photocond. study 2-56485
 GaAs:Cr, ion implanted, annealing, Cr redistrib., SIMS study 2-76484
 GaAs:Cr, ion implanted, postannealed material state 2-103793
 GaAs:Cr, O, ion implanted, Cr redistribution and Cr-defect-O interactions, SIMS and TEM study 2-98149
 GaAs:Cr, optical absorpt. spectroscopy on Cr-related defects 2-57129
 GaAs:Cr, phonon scatt., tunnelling parameter, thermal cond. study 2-61086
 GaAs:Cr, photoconductivity, instability, mixed cond. anal. 2-72026
 GaAs:Cr, photoluminescence, Cr diffusion 2-99184
 GaAs:Cr, Se, hot implanted, effects of damage-impurity interaction on elec. props. 2-71990
 GaAs:Cr, semi-insulating, EPR of extended defects 2-87590
 GaAs:Cr, semi-insulating, photoelectrochem. etching and defect characterisation 2-98072
 GaAs:Cr, semi-insulating, inhomogeneities, scanning leakage current meas. 2-109800
 GaAs:Cr, semi-insulating, impurity modes, far-IR Fourier transform spectroscopy obs. 2-116214
 GaAs:Cr, Si, damage and Si lattice location studies 2-76479
 GaAs:Cr, Si, ion implanted, AlN capped annealing, carrier profiles 2-66023
 GaAs:Cr, Si, ion implanted, Hall effect, depth profiles (*Slovak*) 2-98669
 GaAs:Cr, Si implanted, thermally annealed, semi-insulating, deep levels 2-76966
 GaAs:Cr, Sn, Cr and Sn migration obs. during open tube diffusion 2-98343
 GaAs:Cr, spin dependent carrier capture, ODMR study 2-98998
 GaAs:Cr, with grain boundaries, elec. props. (*Russian*) 2-71989
 GaAs:Cr₂O₃, electron lifetime meas., photocond. and high field meas. 2-92655
 GaAs:Cr₂Si⁺, ion implanted semi-insulating substrate, carrier conc. uniformities meas. 2-98134
 GaAs:Cr₂Si⁺, Se⁺, Mn, ion implanted, Mn redistribution after annealing, SIMS study 2-86699
 GaAs:Cr (Cr₂O₃), supersaturated soln., precipitation processes, TEM study 2-92203

III-V semiconductors continued

- GaAs:Cr relaxation semiconductors with thin-film contacts, props. 2-66636
- GaAs:Cr structures, semi-insulating, mag. field influence of the small signal impedance (*Slovak*) 2-61485
- GaAs:Cr surface states, two-beam transverse acoustoelec. spectroscopy study 2-82463
- GaAs:Cr²⁺, APR study 2-66897
- GaAs:Cr²⁺, deep levels, EPR spectra study 2-77365
- GaAs:Cr²⁺, EPR resonance parameter calcs. 2-104691
- GaAs:Cr²⁺, substitutional impurities, dynamic Jahn-Teller theory 2-76995
- GaAs:Cr²⁺, zero-phonon optical absorpt. lines, dynamic Jahn-Teller model 2-57130
- GaAs:Cr(Si), semi-insulating, incorporation of anomalously large amounts of Si 2-98133
- p-GaAs:Cu, electron irradi., photoluminescence 2-87851
- GaAs:Cu, luminescence, deep centres in bound exciton form. 2-104960
- GaAs:Cu, recombination radiation band, piezospectroscopic study 2-77588
- GaAs:Fe, Cr, LEC grown, impurity densities and Fe(Cr) redistrib. 2-98146
- GaAs:Fe, LCAO calcs. of photoionisation of deep centre 2-104304
- GaAs:Fe(O), ion implanted and electron irradi., deep levels and electron traps, annealing 2-98584
- GaAs:Ge, N superlattice alloy, impurity sheet doped, band struct. 2-110242
- GaAs:Ge crystal, doping profiles, atomic absorpt. spectra meas. 2-109823
- p-GaAs:Ge LPE layer, electron diffusion length determ. by EBIC method 2-56736
- GaAs:Ge(Se), neutron transmutation doped, elec. props., metal-nonmetal transition 2-87284
- GaAs:Ge(Sn)(Se)(Zn), doping by vapour phase epitaxy, carrier Hall mobility (*French*) 2-98129
- GaAs:H, amorphous, photoinduced midgap absorpt. 2-72528
- GaAs:In, crystals and films, elec. props., isovalent impurities effect 2-82286
- GaAs:In, elec. cond., Hall effect and deep levels 2-115760
- GaAs:Mg, organometallic-VPE growth, doping control 2-87991
- GaAs:Mg(Ca), MBE, doping behaviour 2-92386
- GaAs:Mg(Cr)(Mn)(Fe), epitaxial layers, impurity redistrib., SIMS study 2-98344
- GaAs:N, radiation damage and near edge optical props. 2-71523
- GaAs:O, deep electron traps, elec. and optical props. 2-98585
- GaAs:O, determ. of O by ²He activation anal. 2-98147
- GaAs:O, impurity levels and photocond., temp. depend. 2-115817
- GaAs:S, ion implanted, elec. props., ion energy depend. 2-71999
- GaAs:S, ion implanted, elec. carrier and atomic profiles correlation 2-72000
- GaAs:S, ion implanted, elec. props. and impurity distrib. 2-98141
- GaAs:S, MOCVD epitaxial layer, S donors, photothermal ionisation study 2-98569
- GaAs:S, S diffusion, vacancy reduction effects, theory 2-115464
- GaAs:S, VPE (*Chinese*) 2-93435
- GaAs:Sb, crystals and films, elec. props., isovalent impurities effect 2-82286
- GaAs:Sb, LPE, Sb distrib. 2-104182
- GaAs:Se, ion implanted, pulse diffused n⁺ layers form. using As₂Se₃ diffusion source 2-55998
- GaAs:Se, ion implanted, carrier props. and photolum. meas. (*Korean*) 2-56585
- GaAs:Se implanted, dose depend. of epitaxial regrowth 2-56378
- GaAs:Se implanted layer, low temp. annealing, Rutherford backscatt. channelling study 2-71818
- GaAs:Se⁺, ion implanted, transient annealing using graphite strip heater, elec. cond. study 2-82348
- GaAs:Se⁺, ion implanted, high temp. annealed, damage, defects and elec. props. 2-98097
- GaAs:Si, Ar, ⁴⁰Ar implant pretreatment, ²⁸Si implanted n layer, carrier mobility and activation efficiency 2-91995
- GaAs:Si, disordered, optical detection of multiple trapping relax. 2-72005
- GaAs:Si, donor states, photothermal ionisation spectra study 2-98767
- GaAs:Si, highly doped, MOVPE grown, photolum., SIMS and Hall meas. 2-77568
- GaAs:Si, interface struct. between Ga facet grown region and normal region (*Chinese*) 2-110167
- GaAs:Si, ion implantation, elec. props., for dual gate MESFET (*Chinese*) 2-109817
- GaAs:Si, ion implanted, surface polaritons, frustrated internal refl. spectra study 2-71886
- GaAs:Si, ion implanted rad. damage, X-ray rocking curve study 2-66075
- GaAs:Si, ion implanted and proton irradi., deep levels, laser beam annealing 2-98587
- GaAs:Si, ion-implanted, laser annealing effects 2-103811
- GaAs:Si, low dose implants, CW laser annealing 2-56028
- GaAs:Si, Sn epitaxial films, double doping effect on defects 2-76867
- GaAs:Si, study of encapsulation for annealing 2-77082
- GaAs:Si, thermally stimulated optical absorpt., impurity level spectroscopy 2-104292
- GaAs:Si epitaxial layers, multilevel doping using single AsCl₃/SiCl₄ doping source 2-55994
- GaAs:Si LPE layer, photolum. and carrier conc. (*Russian*) 2-99174
- GaAs:Si quantum well, degenerately doped, stimulated emission, luminescence 2-65215
- GaAs:Si-GaAs:Be n-i-p-i superlattice, tunable band gap, theory and expt. study 2-110458
- GaAs:Si(B)(O), unintentional and intentional doping 2-98132
- GaAs:Si(Be) artificial doping superlattices, MBE growth, elec. and optical props. 2-92735
- GaAs:Si(Cd), positron annihilation at low temp. 2-62009
- GaAs:Si(Sn), ion implanted, Raman spectra study 2-110837
- GaAs:Sn, ion implanted, surface accumulation after laser beam annealing, Rutherford backscattering study 2-61006
- GaAs:Sn, ion implanted, laser annealed, TEM study 2-66050
- GaAs:Sn, nucleation effects during MBE growth 2-76845
- GaAs:Sn, Te MBE layer, doping using SnTe source 2-92004
- GaAs:Sn LPE layer, deep level free-to-bound fluorescence line shapes 2-77564
- GaAs:Te, Cu contamination during heat treatment, photolum. study 2-91993
- GaAs:Te, defect struct. after Cd diffusion 2-103762

III-V semiconductors continued

- n-GaAs:Te, degree of electronic compensation, laser IR microscopy 2-67043
- GaAs:Te, implanted, laser annealed, metastable Te donor conc., expt. study 2-56025
- GaAs:Te, MBE grown, elec. cond. and photoluminesc. props. meas. 2-56734
- GaAs:V, photoluminesc., optical absorpt., and ESR study 2-82916
- GaAs:Zn, Cd, hot photoluminescence spectrum and polarisation 2-82894
- GaAs:Zn, ion implanted, depth distrib., annealing, SIMS and Rutherford backscattering obs. 2-56000
- GaAs:Zn, ion implanted, laser annealing, expt. study 2-61024
- GaAs:Zn, Zn diffusional doping, open-tube method 2-104060
- GaAs:Zn(Cu), F- and C-centres, vibr. props., Green's function calc. 2-86811
- GaAs/Al_{0.3}Ga_{0.7}As interface, MBE grain, deep levels obs. 2-56463
- GaAs/Ga_{1-x}Al_xAs solar cell fabrication using VPE, performance evaluation 2-73124
- GaAs/GaAlAs layers nonplanar structures fabrication, by metalorganic chemical vapour deposition 2-85958
- GaAs/GaAlAs W-shaped diffused stripe DH lasers grown by metal-organic CVD 2-65232
- GaAs/GaAsAl solar cells, technology, characts. (*Spanish*) 2-99799
- GaAs/Sb interface, elastic low-energy electron diff. 2-76842
- GaAs-(AlGa)As heterostructures, plasma dispersion in a layered electron gas 2-104276
- GaAs-(AlGa)As twin-mesa laser integrated with passive waveguide, controllable single mode operation 2-55209
- GaAs-Ag interface, formation, struct., electronic states 2-104485
- GaAs-Ag on GaAs (100), interface struct. and electronic props. meas. 2-110171
- GaAs-Al contact elec. and physical characts., GaAs surface comp. effect (*Ukrainian*) 2-104124
- GaAs-Al interface, far IR radiation generation by surface wave difference freq. mixing 2-55252
- GaAs-Al single crystal microjunctions by MBE 2-82456
- GaAs-Al struct., exciton dissociation and annihilation, photo-EMF study 2-82250
- GaAs-Al_{0.3}Ga_{0.64}As DH laser, temp. depend. of lasing characts. 2-80965
- GaAs-Al_{0.3}Gd_{0.7}As DH lasers, near field spectrum (*Chinese*) 2-65219
- GaAs-Al_{1-x}Ga_xAs heterojunction, modulation doped, two-dimens. electron gas, intersubband scatt. obs. 2-110457
- GaAs-Al_{1-x}Ga_xAs modulation doped heterostruct., 2D electron gas transport props. meas. 2-98739
- GaAs-Al_{1-x}Ga_{1-x}As heterojunction FET, 2-D electron gas, quantum galvanomagnetic props. 2-56686
- GaAs-Al_{1-x}Ga_{1-x}As heterojunction FET, 2-D electrons, far-infrared cyclotron resonance 2-56941
- GaAs-Al_{1-x}Ga_{1-x}As heterostructure, Hall resist. meas., fine struct. const. determ. 2-58777
- GaAs-Al_{1-x}Ga_{1-x}As heterojunctions, zero-resistance state of two-dimensional electrons in a quantizing magnetic field 2-61570
- GaAs-Al_{1-x}Ga_{1-x}As heterostructure, cyclotron and plasmon emission from two-dimens. electrons 2-61770
- GaAs-Al_{1-x}Ga_{1-x}As heterojunction, two-dimens. electron system, magnetophonon reson. obs. 2-98734
- GaAs-Al_{1-x}Ga_{1-x}As multilayer struct., electron-LO phonon modes, Raman scatt., theory 2-110825
- GaAs-Al_{1-x}Ga_{1-x}As quantum well struct., single particle and collective excitations temp. and incident light intensity depend. 2-61920
- GaAs-Al_{1-x}Ga_{1-x}As quantum well structs., extrinsic photoluminesc. 2-82912
- GaAs-Al_{1-x}Ga_{1-x}As solar cells with various types of concentrating systems 2-99788
- GaAs-Al_{1-x}Ga_{1-x}As stripe geometry heterolasers, power-current characts., bleaching effects 2-114283
- GaAs-Al_{1-x}Ga_{1-x}As:Si, heterojunction barriers, elec. transport and MBE growth 2-82448
- GaAs-Al_{1-x}Ga_{1-x}As-GaAs double heterojunction, p⁺-n-n⁺ diode, for high temp. electronic app. 2-77163
- GaAs-AlAs (001) superlattice, electronic band struct. 2-61572
- GaAs-AlAs p-n structs., voltage relax. and electrolum. intensity 2-92741
- GaAs-AlAs p-n structures, recombination current meas. at fivefold charge centres in space charge layer 2-82450
- GaAs-AlGaAs avalanche photodetector, single-carrier-type dominated impact ionisation 2-84701
- GaAs-AlGaAs diode laser coupled to external resonator of narrow spectral bandwidth, bistable operation 2-108881
- GaAs-AlGaAs heterojunctions, 2D-electron gas, f-factor enhancement, Shubnikov-de Haas oscils. 2-56685
- GaAs-AlGaAs heterojunction, zero-resistance state and quantised Hall effect 2-61491
- GaAs-AlGaAs heterojunctions and multiple quantum well heterostructs., doped, reson. inelastic light scatt. 2-61919
- GaAs-AlGaAs heterojunction, 2-D electron gas, cyclotron resonance of photoconductivity 2-66920
- GaAs-AlGaAs heterojunction, two-dimensional magnetotransport in the extreme quantum limit 2-82376
- GaAs-AlGaAs heterojunctions solar cells at high level of optical excitation 2-116832
- GaAs-AlGaAs heterostruct., mobility calc. of two-dimensional electron gas at 4.2 K 2-66628
- GaAs-AlGaAs heterostructures grown by MBE and their application to devices (*Japanese*) 2-87380
- GaAs-AlGaAs injection laser with double strip contact, waveguide props. of active region 2-85972
- GaAs-Au interface, solid state reactions, cryst. struct. and microstruct. correlation 2-115616
- GaAs-Au on GaAs (110) Schottky barrier, thermal effects, XPS and UPS study 2-110441
- GaAs-Cr_{0.5}N_{0.5}(Si₃N₄) interface polar exciton, variational calc. (*Russian*) 2-76940
- GaAs-Ga_{1-x}Al_xAs, quantum well struct., energy spectrum of donors, effective mass theory 2-56664
- GaAs-Ga_{1-x}Al_xAs, superlattices, mobility tensor (*French*) 2-104475
- GaAs-Ga_{1-x}Al_xAs DH laser, deep level luminescence spectra (*Chinese*) 2-65217
- GaAs-Ga_{1-x}Al_xAs double heterojunction laser, deep level luminesc. 2-102790
- GaAs-Ga_{1-x}Al_xAs multiquantum well struct., band edge absorpt. and gain spectra after short pulse excitation 2-62003

III-V semiconductors continued

- GaAs-Ga_{1-x}Al_xAs quantum well struct., donor states, effective mass approx. 2-110459
- GaAs-Ga_{1-x}Al_xAs superlattice etalon, room temp. excitonic optical bistability obs. 2-97074
- GaAs-Ga_{1-x}Al_xAs:H multiple quantum wells, impurity photoluminescence 2-104955
- GaAs-Ga_{1-x}Al_xAs_{1-y}P_y heterostructure lattice matching rel. to laser fabrication (*Chinese*) 2-66375
- GaAs-Ga_{1-x}In_x-P DH, interface recomb. and carrier confinement study 2-77605
- GaAs-GaAlAs curved rib waveguides, bending loss minimisation, ion beam milling fabrication 2-75676
- GaAs-GaAlAs DH injection laser, 200 Mb/s modulation expt. (*Chinese*) 2-55223
- GaAs-GaAlAs DH laser diode obs. (*Chinese*) 2-90887
- GaAs-GaAlAs graded refractive index separate confinement heterostructure laser grown by organometallic VPE 2-96975
- GaAs-GaAlAs low-threshold oxide stripe lasers grown by MOCVD 2-85959
- GaAs-GaAlAs multilayers, high field magneto-transport, spin splitting, g-factors 2-56684
- GaAs-GaAlAs multiple quantum well lasers grown by MO-CVD, far-field radiation patterns 2-114271
- GaAs-GaAlAs quantum wells, exciton binding energy 2-115668
- GaAs-GaAlAs superlattices, phonon-limited near equilib. transport 2-56680
- GaAs-GaAlAs superlattice, doped quantum wells, wave vector-freq. depend. dielec. const. 2-104279
- GaAs-GaAlAs-GaAs rectifying structures fabricated by metalorganic CVD composition grading 2-115871
- GaAs-GaAs_{0.2}P_{0.8} superlattice, strained layer, lattice mismatched, electronic struct., tight binding calc. 2-66631
- GaAs-III-III-V-VI semiconductor homogeneous solid solutions, physico-chemical props., transfer effects 2-87260
- GaAs-InAs(100) heterojunction, MBE grown, lattice disorder, Rutherford backscatt. and channelling study 2-110202
- GaAs-insulating film interface, MESFET struct., elec. and optical props. 2-110486
- n-GaAs-metal interfaces, physical characts. (*Chinese*) 2-66634
- GaAs-n-AlGaAs heterojunction, real-space transfer oscillator 2-66625
- GaAs-oxide interface electronic struct. 2-87409
- GaAs-oxide interface states, two-beam transverse acoustoelec. spectroscopy study 2-82463
- GaAs-Pd interface reactions, struct. characterisation by X-ray diff. 2-110172
- GaAs-Pd Schottky barrier diodes, electron irradi., piezoelec. phenomena, deep level effects 2-115893
- GaAs-Pt Schottky interface, effects of surface treatments 2-98743
- GaAs-Se(S), comparison of H₂S and H₂Se n-type doping by MOCVD 2-103800
- GaAs-Si₃N₄ interface quality improvement by surface treatment and annealing 2-110487
- n-GaAs-Sn(Ag)(Al)(Au) MIS Schottky barriers, electron trapping in oxide layer 2-77196
- GaAs-W(Ta)(Re)(Ir)(Mo), refractory contacts, interface reactions and Schottky barrier form. 2-110444
- GaAs-YIG layered struct., magnetostatic surface wave amplification 2-115988
- GaAs-ZnSe heterostructure, photosensitivity spectra and luminesc. 2-92691
- GaAs_{1-x} solid soln., photoluminesc. obs. for X<0.01 2-61972
- GaAs₂(Ge), MBE grown, deep levels and photoluminesc., MBE As₂/As₄ flux ratio effects 2-99341
- GaAsP, composition modulated, electron microscopy intensity distrib., moire fringe images 2-97873
- GaAsP, deep level studies on traps showing nonexponential kinetics 2-115689
- GaAs(P), optical props., ellipsometry meas. 2-57200
- GaAs_{0.2}P_{0.8}, resonant Raman scatt. 2-87754
- GaAs_{0.35}P_{0.65}N VPE LEDs, deep centre studies by photocapacitance method 2-56637
- GaAs_{0.6}P_{0.4}Te, electron trap spectrum obs. by DLTS and transient capacitance meas. 2-87302
- GaAs_{1-x}P_x epilayer, minority carrier lifetime and diffusion length, EBIC method in SEM 2-98667
- GaAs_{1-x}P_x, minority carrier lifetime meas. using SEM with intensity modulated electron beam 2-87301
- GaAs_{1-x}P_xN, temp. depend. of luminescence intensity 2-82930
- GaAs_{1-x}P_xO, point defect induced electronic struct., calc. method 2-76981
- GaAs_{1-x}P_xO₂, electronic struct. induced by short-ranged defects, calc. method 2-104296
- GaAs_{1-x}P_xTe(Si), donor states, impurity optical absorpt. spectra study 2-82287
- n-GaAs_{1-x}P_x/Au Schottky diodes, barrier height depend. on energy gap 2-61551
- GaAsP_{1-x}GaP strain-layer superlattice, MOCVD growth and photoluminesc. props. 2-98729
- GaAsP_{1-x}GaP strained-layer superlattice, electronic struct., tight-binding and effective mass models 2-110454
- GaAsP_{1-x}GaP strained-layer superlattice, MOCVD growth and photoluminesc. props. 2-110919
- GaAs_{1-x}Sb_x LPE layer, carrier mobility and photolum., composition depend. 2-77214
- GaAsSb_{1-x} LPE growth on InAs substrates 2-88010
- GaAs(110), adsorbed Al, surface struct., LEED study 2-110120
- GaAs(110), vacancies and adsorbed H, electronic struct. calc. 2-110422
- GaInAs epitaxial layer device type structures, defects 2-71461
- Ga_{0.47}In_{0.53}As, conduction band F-L separation, UPS study 2-61344
- Ga_{0.47}In_{0.53}As growth on InP substrates using metalorganic process, factors influencing growth 2-87099
- Ga_{0.47}In_{0.53}As high mobility thin epitaxial layers grown by MBE 2-115585
- Ga_{0.47}In_{0.53}As, MBE grown, Si doping and elec. props. meas. 2-92005
- n-Ga_{0.47}In_{0.53}As, quasi-Schottky barrier diode using fully depleted p⁺-Ga_{0.47}In_{0.53}As layer, MBE growth 2-56668
- Ga_{0.47}In_{0.53}As, VPE growth and charact. for microwave device appls. 2-83043
- p-Ga_{0.47}In_{0.53}As:Zn-SiO₂ MIS struct., interface states and field effects meas. 2-98758

III-V semiconductors continued

- Ga_{0.47}In_{0.53}As-Al_{0.48}In_{0.52}As modulation doped heterostruct., current transport meas. at moderate elec. fields 2-82446
- Ga_{0.47}In_{0.53}As-InP heterojunction, 2D electron gas, quantum oscills., magnetoresistance study 2-110466
- Ga_{0.47}In_{0.53}As-InP LP-MO CVD superlattices, two-dimensional electron gas props. 2-66629
- Ga_{1-x}In_xAs epitaxial layers, Raman spectra 2-82934
- Ga_{1-x}In_xAs majority carrier photodetectors with large gain-bandwidth products 2-95474
- Ga_{1-x}In_xAs:Ge LPE layers, doping profiles, atomic absorpt. spectra meas. 2-109823
- Ga_{1-x}In_xAs films, vapour growth from In/Ga alloy source, characterisation 2-99351
- (Ga_{1-x}In_x)₂As nonlinear adaptive optics approaches at 1.3 μ m 2-90997
- Ga_{1-x}In_xAs-GaAs n-n⁺ heterojunction, Schottky diode and photodetector appl. 2-115869
- GaInAsP epitaxial layer device type structures, defects 2-71461
- GaInAsP groove laser on semi-insulating InP using laterally diffused junction 2-75595
- GaInAsP laser with new gain guiding struct., transverse and longit. mode operation 2-102797
- GaInAsP low press. MOCVD growth, for microwave device and optoelectronic device appl. 2-98496
- GaInAsP low threshold current CW operation of multiple infill buried heterostruct. 1.3 μ m lasers 2-65247
- GaInAsP/InP 1.6 μ m BH laser, wavelength var. due to direct modulation 2-55225
- GaInAsP-InP 1.3 μ m DH, LPE (*Chinese*) 2-93449
- GaInAsP-InP 1.5 μ m DBR lasers with built-in optical waveguide, room temp. operation 2-75593
- GaInAsP-InP 1.55 μ m distributed Bragg reflector integrated laser directly coupled to external waveguide 2-60117
- GaInAsP-InP BH 1.5 μ m lasers fabricated by hybrid combination of LPE and VPE 2-60101
- GaInAsP-InP BH integrated laser with butt-jointed built-in DBR waveguide, 1.6 μ m CW operation 2-80987
- GaInAsP-InP buried heterostruct. laser fabrication 2-60095
- GaInAsP-InP DH lasers, combined dry and wet etching techniques to form planar (011) facets 2-60100
- GaInAsP-InP DH laser with monolithically integrated passive waveguide, LPE regrowth 2-60118
- GaInAsP-InP DH laser on semi-insulating InP substrate with terrace struct. 2-75591
- GaInAsP-InP DH lasers, MBE grown, 1.3 micron 2-114273
- GaInAsP-InP integrated twin guide DBR laser emitting at 1.55 μ m, low threshold current 2-60119
- GaInAsP-InP integrated optical devices, etched mirrors, grooves and surfaces using stop-etch crystal planes 2-60264
- GaInAsP-InP mesa lasers, low threshold 2-114272
- GaInAsP-InP surface emitting injection laser with short cavity length 2-75594
- Ga_{0.1}In_{0.9}As_{0.4}P_{0.6}, heterostructures, radiative recombination, efficiency and lifetimes 2-87833
- Ga_{1-x}In_xAs_{1-y}P_y LED, spontaneous emission efficiency and nonradiative recombination meas. at 1.58 μ m 2-116220
- Ga_{1-x}In_xAs_{1-y}P_y, epitaxial layer, charact. of electron-pumped lasers 2-75577
- Ga_{1-x}In_xAs_{1-y}P_y, effects of two longitudinal optical phonon modes on electron distrib. 2-82349
- Ga_{1-x}In_xAs_{1-y}P_y lasers, pressure dependence of threshold current 2-90889
- Ga_{1-x}In_xAs_{1-y}P_y lattice matched to InP, band struct., disorder bowing calc. 2-98541
- Ga_{1-x}In_xAs_{1-y}P_y VPE growth and charact. for microwave device appls. 2-83043
- Ga_{1-x}In_xP, LPE growth on GaAs (100) and (111)B, orientation dependence meas. 2-93450
- Ga_{1-x}In_xP:Be(Sn), MBE growth using Pb flux and elec. characterisation 2-87987
- Ga_{1-x}In_xP_{1-y}, internal strain determ. using Vegard's law 2-103709
- GaInPAs/InP heterostructure LED service life, 1.2-1.3 μ m range 2-60082
- GaInPAs-InP mesa stripe heterojunction lasers buried in InP or GaInPAs, radiation mode composition 2-60083
- GaInPAs/InP heterojunction lasers, service life, 1.2-1.3 μ m range 2-60082
- Ga_{1-x}In_xSb, voltage-current curves, scatt. effects, Monte Carlo calc. 2-104382
- GaN CVD growth on sapphire, growth kinetics and surface morphology meas. 2-111081
- GaN epitaxial layer, optimized growth conditions 2-66391
- GaN epilayers, highly excited, photolum. and gain spectroscopy 2-77561
- GaN, gas phase deposition by pyrolysis of Ga tri-iodide ammine, vel. front 2-72630
- GaN, heteroepitaxial layers, characterisation by Kossel effect technique 2-92380
- GaN heteroepitaxial layer, growth and doping kinetics, cathode luminesc., elec. props. 2-104185
- GaN-GaAs MIS capacitors, interface states characts., G-V, C-V and transient capacitance anal. 2-92776
- GaP (111), surface comp., atom probe FIM study 2-92326
- GaP, absorption coefficient, electron-phonon and hole-phonon interactions 2-67016
- GaP, band structure, tight binding calc. 2-66443
- GaP crystal with induced anisotropy, anisotropic Bragg diff. of light by ultrasound 2-61873
- GaP, Cu related 2.177 eV band exciton, photoluminesc. study 2-110917
- GaP, deep level elec. field induced phonon assisted tunnel ionisation 2-71909
- GaP, deep level studies on traps showing nonexponential kinetics 2-115689
- GaP donor states 2-104287
- GaP, donor-Ga vacancy complex form., electron trap behaviour 2-115688
- GaP, doped homoepitaxial layers, dislocations, TEM study 2-103773
- GaP, exciton electroabsorption spectrum, Schrodinger eqn. calc. 2-116154
- GaP film, ion beam sputter deposition, substrate heating effects, TEM and Rutherford backscatt. study 2-11073
- GaP first dynode photomultiplier tubes, probability and time distrib. of afterpulses 2-90376
- GaP, Frenkel core-exciton energy, environmental effects 2-87152

III-V semiconductors continued

- GaP, grain boundaries, elec. and EBIC studies 2-115252
 GaP, heteroepitaxial MBE growth on Si (100), elec. props., heterojunction form. 2-57297
 GaP, impurity atoms and positron states, positron annihilation study 2-104996
 GaP, indirect gap absorpt., invariants method appl. 2-77474
 GaP, ion irradi., Frenkel defects and annealing 2-115316
 GaP, Kossel line broadening near scratch 2-103566
 GaP LED, deep level, luminesc. study 2-110949
 GaP LEDs, LPE growth on LEC and synthesis solute diffusion substrates 2-111098
 GaP, large diameter single cryst., computer controlled LEC growth 2-99327
 GaP, lattice dynamics under hydrostatic pressure 2-98223
 GaP layer, lig. phase electroptaxial from limited and unlimited sources, growth kinetics 2-56380
 GaP, light emitting diodes, microcomputer-corrected spectrosc. meas. 2-58910
 GaP, MBE growth, P₂ beam source technique 2-57300
 GaP, metallised, volatile component loss and contact resistance during annealing 2-92753
 GaP, multiphoton absorption, intense field effects, theory 2-93133
 GaP, ODMR study of P_{0a} antisite defect 2-98573
 GaP ohmic contacts, laser annealed, for high temp. devices 2-56692
 GaP, oxide removal from chemically etched surfaces, electron and X-ray diffr. 2-116561
 GaP p⁺-n junctions, highly doped, injection symmetry 2-115868
 GaP p-n junction, LED, thermally stimulated noise 2-104444
 n-GaP photoelectrochemical electrode, stabilisation and surface recombination, expt. study 2-77176
 p-GaP, photoelectrode, photocurrent onset pot. and flatband pot., expt. study 2-62480
 GaP, piezo-optical coeffs., dispersion dependences 2-116151
 GaP, piezo-optical study of phonons 2-67023
 GaP polar-on-nonpolar MBE on Si(211), nucleation and growth, sublatice ordering 2-110204
 GaP, positron lifetimes, systematic study 2-57207
 GaP prism coupler investigation (*Chinese*) 2-97169
 GaP, proton irradi., elec. cond. and electron conc. meas. 2-77053
 GaP, Raman scattering efficiencies for T₁-phonons 2-57100
 GaP Schottky barrier, struct. model and elec. characteristics and AES study 2-110170
 GaP, shock induced phase transition 2-71626
 GaP, sp. ht., temp. depend., thermodynamic props. 2-86898
 GaP substrate, impurity outdiffusion by postgrowth annealing 2-115460
 GaP thin film, vacuum deposited, heteroepitaxial growth, struct., characterisation 2-87985
 GaP, thin film struct., electron beam irradi., current characteristics meas. 2-56738
 GaP, uniaxially stressed, free carrier absorpt. spectra (*Russian*) 2-87818
 GaP with chemisorbed H, surface optical phonon obs. 2-115550
 GaP:B, electron irradi., interstitials, IR study 2-103747
 GaP:B grown by LEC technique, IR absorpt. band, resonant and gap modes 2-99157
 GaP:Cr, optical absorpt. spectroscopy on Cr-related defects 2-57129
 GaP:Cu, ion damaged, depth profiling of gettered Cu, SIMS study 2-98150
 GaP:Cu, photoluminescence and impurity states 2-104947
 GaP:Cu, photoluminescence, excitons 2-116249
 GaP:D, electronic struct. and optical props. 2-92518
 GaP:Fe, LCAO calcs. of photoionisation of deep centre 2-104304
 GaP:Fe crystal, electron irradiated, IR absorpt. 2-61908
 GaP:Fe³⁺ tetrahedral paramag. complex, distortions effects, ESR study 2-110633
 GaP:Mg, LPE growth, minority carrier lifetime, photoluminescence study 2-82488
 GaP:N, luminescence spectra undulations 2-104950
 GaP:N, photoluminescence time decay temp. depend. 2-93258
 GaP:N, Te VPE layer, minority carrier lifetime, dislocations influence 2-115920
 GaP:N,Te, epitaxial layers, photoluminescence study 2-61968
 GaP:N epitaxial films, excitation transfer mechanism to NN_i complexes 2-77589
 GaP:N LED, yellow sideband radiation increases during ageing 2-116261
 GaP:N LED degradation, surface corrosion 2-116559
 GaP:Nd(Sm)(Eu)(Yb) epitaxial films, photoluminesc., effect of γ -irrad. 2-93267
 GaP:Ni, charge state of Ni²⁺, piezoabsorpt. and Zeeman meas. 2-99087
 GaP:O, impurity state of e symm. 2-110287
 GaP:O, point defect electron states, enfeebled O bonding and metastability 2-61351
 GaP:O, recombination radiation of exciton bound to Zn-O complex 2-104959
 GaP:S, homoepitaxial layers, influence of microdefects on dislocation generation 2-92377
 GaP:S LEC epitaxial layer, microdefects and dislocation generation, TEM study 2-115236
 GaP:V, photoluminesc., optical absorpt., and ESR study 2-82916
 GaP:Zn, density, plastic deform. effects, defect struct. 2-71545
 GaP:Zn, O, photoinduced Zn, O dissociation, photoluminescence 2-87859
 GaP:Zn,O, IR uponconversion obs., IR quantum counter appl. 2-70605
 GaP-AIP(100) superlattice band struct. 2-110460
 p-GaP-Au, ion beam contacting by Be implantation 2-115889
 n⁺GaP-i-Al_{0.1}Ga_{0.9}-As:Cr(Fe)-M structs., I-V characts. 2-104477
 GaP_{1-x}As_x, phonon line shape and disorder correl. 2-56127
 GaP_{1-x}As_x, filamentary crystals, strain meas. props. and piezoelectric effect (*Russian*) 2-66992
 GaP(110), chemisorbed H, pseudopot. calc. 2-110423
 GaP:Cr, impurity redistribution after implantation with Ga,As,O, SIMS and TEM study 2-115276
 GaS:O relaxation semiconductors with thin-film contacts, props. 2-66636
 GaSb (001) surface struct., ion scatt. spectroscopy study, time of flight energy anal. 2-76790
 GaSb, band structure, tight binding calc. 2-66443
 p-GaSb, conduction electron spin relax., 4.2 to 77K 2-93008
 GaSb, Czochralski growth of low dislocation density crystals, X-ray study 2-93407
 p-GaSb for ohmic contacts to p-type semiconductors 2-87387
 GaSb, melt-grown single cryst., defect etchant for dislocations and growth striations 2-91972

III-V semiconductors continued

- GaSb, native defects, MS-Xa calcs. 2-82270
 GaSb, positron lifetimes, systematic study 2-57207
 GaSb pulled crystals, twin-pits in facet regions 2-86668
 GaSb, reverse-biased tunnel diode, temp. coeff. of tensor sensitivity 2-87374
 GaSb, Schottky barrier form., MOS interface states 2-82428
 GaSb, Schottky barrier formation, defect states model 2-98722
 GaSb, single cryst. Czochralski growth, twinning, seed cryst. polarity effects 2-99319
 GaSb single crystals, Czochralski growth under reducing conditions 2-99321
 GaSb:Te, Hall coeff. and L minima under hydrostatic press. 2-115793
 GaSb:Te, Kondo effect obs. under high press. 2-61459
 GaSb:Te superlattices, MBE growth, photoluminescence 2-99188
 GaSb(InAs)-Ga_{1-x}In_xAs_{1-y}Sb_y heterostructure LED, moisture transducer appl. 2-79594
 GaSe:Sn, interference oscills. in temp., depend. of photocurrent and transmission 2-87329
 GaSe,Te_{1-x}Sn, interference oscills. in temp., depend. of photocurrent and transmission 2-87329
 GaSe,Te_{1-x}Sn single cryst., exciton and impurity electroabsorpt. 2-87741
 GaTe:Sn, interference oscills. in temp., depend. of photocurrent and transmission 2-87329
 Gap:N, N-N pair exciton spectra, J-J coupling and local field effects 2-82248
 Ge-GaAs, (110) and (111), MBE grown, interface morphology, RHEED study 2-98470
 Ge-GaAs (100) heterojunction, MBE growth, surface processes, LEED and photoemission study 2-110203
 Ge-GaAs (110) interface, amorphous and cryst. films, electronic struct., XPS study 2-110456
 Ge-GaAs (110) interface electron states, polarisation dependent UPS study 2-110455
 Ge-GaAs interface, two-dimens. electron states, light scatt. study 2-110885
 (In, Ga)(As, P) lasers at 1.3 μ m, anomalous effect of carriers on dielec. const. 2-102791
 In-As, activity coefficient, regular soln. approach and lattice model 2-93492
 In-Ga-As-P/InP system, improved LPE techniques for low threshold lasers at 1.55 μ m 2-99357
 In-Ga-Sb, phase diagrams, thermodynamic anal. (*Russian*) 2-93494
 In-P, activity coefficient, regular soln. approach and lattice model 2-93492
 In-Sb, phase diagrams, thermodynamic anal. (*Russian*) 2-93494
 p-In_{0.53}Ga_{0.47}As epitaxial layers, minority carrier high field transport meas. 2-82493
 InAs accumulation layer, subband populations in tipped mag. fields, Shubnikov-de Haas oscills. 2-56707
 InAs, band structure, tight binding calc. 2-66443
 InAs, donor impurities solubility, Fermi level position effect 2-61153
 n-InAs, effective g-value determ. by four-wave mixing spectroscopy 2-55260
 InAs, electron irradi., vacancies and defect states, positron annihilation study 2-116295
 InAs, far-IR dielec. response at room temp., dispersive Fourier transform spectroscopy, phonon freqs. 2-116165
 InAs, homogeneity regions, calc. 2-86892
 InAs, ion irradi., Frenkel defects and annealing 2-115316
 InAs, low-field mobility temp. depend. with optic phonon scatt., Monte Carlo calc. 2-104383
 InAs MIS diode, interface state distrib. determ., spectroscopic meas. method 2-66647
 InAs MOS interfaces, reson. inelastic light scatt. 2-61919
 InAs, positron lifetimes, systematic study 2-57207
 InAs, substrate, LPE of GaAs,Sb_{1-x} layers 2-88010
 InAs, surface, electron state density, low energy electron reflection study (*Russian*) 2-87362
 InAs, thermal oxidation, oxide film characterisation 2-111348
 InAs, two-photon optically pumped stimulated recomb. radiation in high mag. fields 2-93228
 n-InAs:Cd, ion implanted, photo-EMF, spectral response 2-92697
 InAs:Cd,Te, donor-acceptor pair form., annealing, elec. cond. and Hall coeff. study 2-61404
 InAs-AlAs solid soln., plasma edge reflectance, carrier density 2-82855
 InAs-GaAs, heterojunction band discontinuities, MBE growth, XPS study 2-77166
 InAs-GaSb, semimetallic superlattices, subband widths, cyclotron resonance and far infrared magnetotransmission study 2-56709
 InAs-GaSb heterojunction, self-consistent calcs. 2-110461
 InAs-GaSb multiheterojunction, double cyclotron resonance and interband transitions 2-61574
 InAs-GaSb quantum wells, exciton binding energy 2-115668
 InAs-GaSb superlattice, Shubnikov-de Haas oscills. under tilted mag. fields 2-56687
 InAs-GaSb superlattice, highly doped, effective mass, carrier density, helicon wave prop. determ. 2-56688
 InAs-GaSb superlattices, semimetallic, far IR magnetoabsorpt. 2-61881
 InAs-GaSb superlattices, ion dechannelling mechanism 2-66082
 InAs-GaSb superlattice, band structure, envelope-function approx. 2-104472
 InAs-GaSb superlattices, ion beam crystallography 2-116318
 InAs-II-III-V-VI semiconductor homogeneous solid solutions, physicochemical props., transfer effects 2-87260
 InAs-InAsBP heterostruct. grown by organometallic VPE 2-98498
 InAs_{1-x}Sb_yP_{1-y} epitaxial films, photoluminesc. and optical transmission 2-93303
 InGaAlAs-InGaAs, multilayer avalanche photodiode low noise detector for 1.3 μ m fibre optic systems 2-53833
 In_{1-x}Ga_xAl_{1-y}As_y lattice matched to InP, band-gap energy and electron effective mass, comp. depend. 2-115650
 InGaAlP DH layers, MBE growth on (100) GaAs substrates, laser appls. 2-104206
 InGaAlP on (100)GaAs, MBE growth 2-104189
 InGaAs MBE layers, energy gap calc. using Phillips Van Vechten dielec. model, photoluminesc. 2-61939
 InGaAs MIS diode, C-V characts., composition depend. 2-77188
 InGaAs, metalorganic VPE growth on InP substrate 2-61309

III-V semiconductors continued

- InGaAs, photodetectors, hydrogenation/nitridisation passivation mechanism 2-77961
 InGaAs:Te, VPE growth for photodetectors 2-11086
 InGaAs-InP avalanche photodiodes for long wavelength optical fibre systems, review 2-81117
 InGaAs-InP p⁺-n heterojunctions, fabrication and charact. 2-99362
 InGaAs-InP photodetectors for the near infrared spectrum (*German*) 2-84704
 In_{0.53}Ga_{0.47}As, Be⁺ ion implantation 2-55989
 In_{0.53}Ga_{0.47}As, electron drift velocity meas. at high elec. fields 2-66567
 p-In_{0.53}Ga_{0.47}As film, high field transport characts. of minority electrons 2-98699
 p-In_{0.53}Ga_{0.47}As, hole-carrier relax. 2-57141
 In_{0.53}Ga_{0.47}As integrated pin/FET photoreceiver, 1-1.7 μ m 2-74503
 In_{0.53}Ga_{0.47}As, LPE growth on structured InP substrates 2-105093
 In_{0.53}Ga_{0.47}As, lattice defects detection using selective photoetching 2-103763
 In_{0.53}Ga_{0.47}As surfaces (100), peroxide etch chemistry 2-111515
 In_{0.53}Ga_{0.47}As:Be, Si, ion implanted, n⁺ layers, sheet resist., electron mobility and conc. 2-66022
 In_{0.53}Ga_{0.47}As:Si, n-layer formation by Si implantation 2-92001
 In_{0.53}Ga_{0.47}As-InP heterostruct. avalanche photodiodes, deep levels 2-110284
 In_{0.53}Ga_{0.47}As-In_{0.48}Al_{0.52}As interface, MBE grown, two-dimens. electron gas 2-98730
 In_{0.53}Ga_{0.47}As-InP heterojunction, two-dimensional electron gas study 2-77161
 In_{0.53}Ga_{0.47}As-InP heterojunction, modulation doped, quantum Hall effect 2-110464
 In_{0.53}Ga_{0.47}As-InP photoconductive detector, pulse dispersion and preheating effects 2-115765
 In_{0.53}Ga_{0.47}As-InP undoped VPE layers, photoluminesc. meas. 2-99167
 In_{0.72}Ga_{0.28}As, lattice-mismatched MBE growth on InP 2-57296
 In_{0.91}As_{0.09}, concentrated, laser recrystn., solute redistribution, AES study 2-56014
 In_{0.91}As_{0.09}As system, alloy scatt., elec. cond. and Hall coeff. meas. 2-92627
 InGaAsP (E_g \geq 1.15 eV), layers, growth by LPE under P overpressure 2-67226
 InGaAsP (InGaAs) LPE layers, room temp. electron diffusion lengths 2-56730
 InGaAsP buried heterostruct. laser, elec. derivative characteristics and equivalent circuit model 2-65227
 InGaAsP DH lasers, shunt current and excess temp. sensitivity of I_{th} and η_{ex} 2-96948
 InGaAsP DH laser diodes, very short wavelength (621.4 nm) pulsed operation 2-108876
 InGaAsP DH RF-modulated diode laser, picosecond optical pulse generation 2-114277
 p-InGaAsP diode lasers, radiative and Auger recomb. rates meas. 2-102792
 InGaAsP heterostructure lasers coupled to InGaAsP waveguides, monolithic integration 2-55188
 InGaAsP injection laser, mode spectra and single-longitudinal-mode power depend. on cavity length 2-85968
 InGaAsP injection laser pulses, ps dispersionless transmission at min. chromatic dispersion wavelength in single-mode 27 km long fibre 2-114457
 InGaAsP LPE layers, melt-carry-over 2-98473
 InGaAsP LPE on InP, growth temp. and impurity doping effect on comp. 2-98482
 InGaAsP laser, optically pumped, tunable CW mode-locked action 2-65233
 InGaAsP lasers, Auger recomb. rate 2-114276
 InGaAsP lasers, interband Auger recomb. 2-80967
 InGaAsP low threshold channelled substrate buried crescent DH lasers for 1.55 μ m communication 2-102822
 InGaAsP MIS diode, C-V characts., composition depend. 2-77188
 InGaAsP on InP LPE for 1.3 micron high radiance IR LEDs and for photodiodes 2-111101
 InGaAsP, optical props. meas., angle of incidence reflectance spectroscopy appl. 2-53847
 InGaAsP, optically pumped semiconductor platelet lasers, tunable CW laser action 2-114290
 InGaAsP platelet laser, optically pumped 2-55191
 InGaAsP, refr. index at energies below direct band edge 2-110800
 InGaAsP relationship between struct. and props. 2-71486
 InGaAsP, semicond. laser for optical transmission appl. (*German*) 2-55151
 InGaAsP, semiconductor lasers, progress review 2-55156
 InGaAsP short-cavity injection lasers with one high-reflectivity mirror 2-114275
 InGaAsP sources and detectors for the 1.0-1.7 μ m wavelength range 2-95467
 InGaAsP tunable thin-film laser, Nd:YAG laser pumped, for high bandwidth fibre spectral meas. 2-65248
 InGaAsP:Zn(Cd), acceptor impurities, photoluminescence study 2-99189
 InGaAsP/GaAs superlattice struct., hydride VPE growth 2-99352
 InGaAsP/InGaP visible laser diodes, CW operation 2-99352
 InGaAsP/InP DFB lasers, 1.5 μ m range 2-102794
 InGaAsP/InP DH, nature of electron leakage 2-87377
 InGaAsP/InP DH, photolum. intensity 2-87881
 InGaAsP/InP DH laser diodes for 1.3 and 1.55 micron operation 2-55205
 InGaAsP/InP DH stripe geometry lasers using proton-defined LPE-grown wafers (*Chinese*) 2-65244
 InGaAsP/InP DH wafer, chem. etching characts. 2-88242
 InGaAsP/InP double heterostruct. lasers, aged, TEM obs. of dark defects 2-55143
 InGaAsP/InP double heterostructs. on InP, large area LPE growth 2-99358
 InGaAsP/InP dual-wavelength BH laser, expt. study 2-75590
 InGaAsP/InP high radiance IREDS with emission wavelength 1.3 micron and transmission rate 140 Mbit/s 2-109079
 InGaAsP/InP lasers, with chemically etched mirrors 2-75596
 InGaAsP/InP misfit dislocations, photoluminescence, TEM and etching study 2-98109
 InGaAsP-InP 1.3 μ m laser diodes, loss mechanism characterisation by acoustic and optical meas. 2-80947
 InGaAsP-InP 4 Gbit/s multiplexer and laser, 1.3 micron, direct modulation 2-114274

III-V semiconductors continued

- InGaAsP-InP BH distributed feedback laser, 280 Mbits/s single mode fibre transmission 2-60255
 InGaAsP-InP BH laser, 1.3 μ m, hole-burning at high energy tails in spontaneous emission spectra 2-75569
 InGaAsP-InP BH laser under high current operation, output power saturation 2-80953
 InGaAsP-InP buried heterostructure laser reliability, degradation modes 2-80946
 InGaAsP-InP DH laser structures, effective refr. index and first-order-mode cutoff conditions 2-75576
 InGaAsP-InP DH 1.3 μ m laser, temp. depend. of lasing characts. 2-80965
 InGaAsP-InP DH lasers, rapid degradation obs. due to (110) dark line defects 2-85985
 InGaAsP-InP DH 1.3 μ m laser, doping effects exam. by SEM and V-I characts. (*Chinese*) 2-90885
 InGaAsP-InP DH laser, accelerated facet degradation obs. in water 2-90893
 InGaAsP-InP DH LED, aged, dark defects 2-91974
 InGaAsP-InP DH lasers with inhomogeneous excitation, optical bistable-switching operation 2-102796
 InGaAsP-InP DH lasers, self-aligned structures 2-114281
 InGaAsP-InP dual-wavelength buried heterostruct. laser array emitting at 1.26 and 1.55 μ m 2-75592
 InGaAsP-InP heterostructure, luminescence method of determ. elastic stresses 2-104957
 InGaAsP-InP LEDs, prep. and props. of monolithically integrated lenses 2-114473
 InGaAsP-InP LPE grown wavelength division solar cells, fabrication and characts. 2-105572
 InGaAsP-InP laser, asymmetric longitudinal mode competition, mechanism 2-60076
 InGaAsP-InP laser, intensity noise under influence of reflection and modulation 2-80950
 InGaAsP-InP layers, catastrophic degradation, laser induced 2-61022
 InGaAsP-InP long-wavelength detectors, 1.3 to 1.55 μ m, for fibre optics 2-53840
 InGaAsP-InP single-mode buried waveguide structures grown on channelled (111)B InP substrates 2-114421
 InGaAsP-InP stripe geometry DH laser, bistability and differential gain characts. 2-80948
 InGaAsP-InP stripe geometry DH lasers, spatial hole burning, self-consistent soln. 2-90892
 InGaAsP-InP system, etch rates for material selective etching 2-72856
 InGaAsP-InP V-grooved substrate BH laser with smooth far field pattern and stable ageing characts. 2-80985
 InGaAsP-InP V-grooved substrate BH laser, fabrication by one-step epitaxy 2-80995
 InGaAsP-InP wavelength division solar cells, homojunction and heteroface struct. 2-83476
 In_{0.48}Ga_{0.52}As_{0.01}P_{0.99} lattice matched to GaAs, LPE from In melt rich in P, photoluminesc. obs. 2-88008
 In_{1-x}Ga_xAs_{1-y}P_y buried crescent laser, internal loss meas. at 1.3 μ m 2-114269
 In_{1-x}Ga_xAs_{1-y}P_y double carrier confinement heterojunction laser, high temp. stability operation 2-114299
 In_{1-x}Ga_xAs_{1-y}P_y epitaxial layer, X-ray rocking curve in symm. Bragg case 2-115584
 In_{1-x}Ga_xAs_{1-y}P_y, low temp. LPE on InP, immiscible domain 2-98494
 In_{1-x}Ga_xAs_{1-y}P_y solid solns., band gap, comp. depend. 2-92462
 In_{1-x}Ga_xAs_{1-y}P_y:Cd(Zn) LPE junction laser, SEM EBIC study 2-102821
 In_{1-x}Ga_xAs_{1-y}P_y-InP laser with grooved transverse junction, high-power single-mode operation 2-96970
 In_{1-x}Ga_xAs_{1-y}P_y-InP V-grooved substrate BH 1.3 μ m laser, aging tests 2-114303
 In_{1-x}Ga_xAs_{1-y}P_y-InP, etched mirror laser fabrication using HBr-acetic acid-Kr₂Cr₂O₇ etchant 2-114313
 In_{1-x}Ga_xAs_{1-y}P_y LPE system, alloy scattering mobility and energy gap evaluation by dielectric model 2-82485
 In_{1-x}Ga_xAs_{1-y}P_y LPE layer, energy gap and alloy scatt. mobility, meas. and dielec. model 2-98542
 In_{1-x}Ga_xAs_{1-y}P_y lasers and LEDs, Auger recombination 2-55160
 In_{1-x}Ga_xAs_{1-y}P_y laser, facet degradation and passivation, AES study 2-90920
 In_{1-x}Ga_xAs_{1-y}P_y low field mobility and thermoelectric power, scatt. mechanisms 2-82362
 In_{1-x}Ga_xAs_{1-y}InP LPE layers, strain anal. and optical props. meas. 2-66392
 In_{1-x}Ga_xAs_{1-y}P_y-GaAs_{1-z}P_z (100), LPE growth and pulsed room temp. laser operation 2-90926
 In_{1-x}Ga_xAs_{1-y}P_y antisite defects, deep levels, alloy composition depend. 2-110297
 In_{1-x}Ga_xAs_{1-y}P_y LPE layers, lattice matched to InP, comp. modulation, expt. study 2-87084
 In_{1-x}Ga_xAs_{1-y}P_y optical fibre components for 1.3 micron telecommunication (*French*) 2-97224
 p-In_{1-x}Ga_xAs_{1-y}P_y-Mn epitaxial layers, doping characts., elec. and luminesc. props. 2-76866
 In_{1-x}Ga_xAs_{1-y}P_y BH laser on mesa substrate, lasing props. meas. 2-114305
 InGaAsSb lasers, interband Auger recomb. 2-80967
 In_{1-x}Ga_xAs_{1-y}Sb solid soln. LPE growth, unstable comp. regions, regular soln. approx. 2-92204
 In_{1-x}Ga_xAs_{1-y}Sb quaternary system, pseudoquaternary phase diagram calc. 2-62104
 InGaP/GaAs superlattice struct. hydride VPE growth 2-99352
 In_{1-x}Ga_xP LPE growth on GaAs, composition self-modulation obs. 2-116395
 In_{1-x}Ga_xP:Te(Se)(Cd)(Zn)(Si)(O), epitaxial film, photo-, electro- and cathodoluminescence involving deep levels 2-116258
 In_{1-x}Ga_xP:Zn, photoluminesc., 0.6 < x < 1.0 2-57148
 In_{1-x}Ga_xP/Ga_{1-y}Al_yAs on GaAs, LPE growth 2-99361
 InGa_{1-x}P LPE layer, N conc. and In content, correlation 2-71819
 InGaPAs, calc. of miscibility gap with strictly regular solution approx. 2-86875
 InGaPAs/InP DHS lasers, selective chemical etchant 2-55201
 InGaPAs_{0.01}:Zn(Te)(Se) LPE layer on GaAs, doping effect on physical, elec. and optical props. 2-110501
 In_{1-x}Ga_xP_{1-y}As_y, high purity, LPE growth 2-93459

III-V semiconductors continued

- In_{1-x}Ga_xP_{1-y}As_y, optical props., ellipsometry meas. 2-57200
 In_{1-x}Ga_xP_{1-y}As_y-GaAs, reproducible LPE growth by P vapour control on substrate 2-38007
 In_{0.53}Gd_{0.47}As:Te degenerate LPE layers, electron mobility 2-61620
 InP (100), electron cond. in surface subbands 2-115846
 InP (100), laser induced order-disorder transition, LEED study 2-110117
 InP (100) MIS system, energy levels of n-channel accumulation layer 2-61541
 InP (110), elastic LEED, electron exchange effects and relativistic corrections 2-65815
 InP (110), elec. props., pseudopotential calcs. 2-66606
 InP (110), ion bombardment and etching effects, EELS and AES study 2-110099
 p-InP (111)A face, semiconductor interface charact. in photoelectrochem. solar cells 2-111552
 InP, (n, γ)-induced point defects, NMR study 2-98980
 InP, agitated gas flow technique for high press. synthesis (*Chinese*) 2-99320
 InP, annealing encapsulants, AES and SIMS study 2-116584
 InP, annealing encapsulants, photoluminesc. study 2-116585
 InP, anodic oxide layer, optical props. and H₂O absorpt. 2-57496
 InP, anodic oxide layer composition 2-67600
 InP, band structure, tight binding calc. 2-66443
 InP, conduction band deform. pot. const. estimation from temp. var. of drift mobility, comment 2-77058
 InP, conduction band deform. pot. const., estimation from temp. var. of drift mobility, reply to comment 2-77059
 n-InP, diffusion of ¹¹⁰Ag from vapour 2-86941
 InP, elec. props., positron annihilation radiation defects 2-115292
 InP electro-optic directional coupler switch, homojunction struct. 2-65405
 InP electro-optic directional coupler switch 2-75683
 n-InP, electron bombardment, defect states, DLTS study 2-87171
 InP, electron irradi., 200 to 300°C in HVEM, radiation damage 2-92040
 InP, electron irradi., defect form. and annealing 2-98159
 InP, electron irradi., dislocation loops, electron microscopy study (*French*) 2-103769
 InP, electron stimulated interaction with water vapour, Auger and EELS study 2-76786
 InP, etching in Br₂-CH₃OH system 2-75596
 InP, high purity, LPE growth 2-93459
 InP, high quality, MBE growth 2-116367
 n-InP, hopping conduction in an arbitrary magnetic field 2-92665
 InP, hot-electron diffusion const., Monte Carlo calc. 2-98656
 InP, impact ionization coeffs. for electrons and holes, photomultiplication meas. 2-61472
 InP, inclusions 2-71433
 InP, ion implantation profiles, theoretical and empirical distrib. 2-81811
 InP, ion implanted, laser annealing, Fermi level pinning model, solar cell fabrication 2-56027
 InP, ion irradi., Frenkel defects and annealing 2-115316
 InP, ionisation coeffs., avalanche photomultiplication and avalanche noise study 2-98700
 p-InP junctions, LPE grown, abnormalities in elec. and optical characts. 2-98738
 InP, LEC grown semi-insulating, effect of Fe content on thermal stability 2-97966
 InP, LPE, detection and prevention of S contamination 2-93458
 InP, LPE grown, surface morphology, doping impurities and cooling rates effects 2-92390
 InP, LPE growth on In_{0.53}Ga_{0.47}As (111)A without dissolution 2-77757
 InP LPE layers, dislocation density, intermittent growth procedures effects 2-116392
 InP LPE layers, melt-carry-over 2-98473
 InP, lattice defects detection using selective photoetching 2-103763
 InP layers, growth by LPE under P overpressure 2-67226
 InP, localised impurity states, cond. band minima role 2-98576
 InP low press. MOCVD growth, for microwave device and optoelectronic device appl. 2-98496
 p-InP, low resistance ohmic contacts using Au-Zn-Cr-Au metallisation 2-104482
 InP MIS diode, C-V characts., composition depend. 2-77188
 InP MIS Schottky diodes, plasma oxidation prep. and characts. 2-61591
 InP, MIS struct., electron subbands, magnetoelectronic oscills, cyclotron resonance and surface cond. meas. 2-56708
 InP MISFET, optically gated, high gain optical detector appl. 2-53835
 InP MOS interface states, DLTS and photoionisation study 2-110488
 InP MOS struct., photoionisation cross-section and interface state threshold meas. 2-98759
 InP monolithic SAW device, new SAW modes obs. 2-104134
 InP, open tube method of Zn diffusion 2-92278
 InP, optical props., ellipsometry meas. 2-57200
 InP optical Y-junctions and S-bends formed by single-mode rib waveguides 2-114422
 n-InP, oxidation using nitric acid, elec. props. of Au-oxide-n-InP structs. exam. 2-67581
 InP photoconductive detectors, high-speed, for UV and X-ray regions 2-112975
 InP, photoluminescence of synthesis-solute-diffusion and LEC grown cryst. 2-93259
 InP, plasma etching, temp. and discharge freq. effects 2-83255
 InP, plasma etching by tetrachloromethane, kinetic study by nonperturbative optical techniques 2-116565
 InP, positron lifetimes, systematic study 2-57207
 InP, Raman spectrum, phonon modes, ion implantation and annealing effects 2-82833
 n-InP, refractive index at 0.633 (1.15) μ m, carrier conc. depend., reflectivity meas. 2-93140
 InP relationship between struct. and props. 2-71486
 InP, SAW and surface skimming bulk waves obs. 2-92331
 InP, Schottky barrier form., MOS interface states 2-82428
 InP, Schottky barrier formation, defect states model 2-98722
 InP, Schottky contacts on chem. etched surfaces, chem. effects obs. 2-61550
 p-InP Schottky diodes, photoluminesc. dead layer 2-104932
 InP, semi-insulating single crystals, high quality, grown by automatic diameter control system 2-99326
 InP, shallow donor binding energies, effect of band non-parabolicity 2-98581
 InP, single crystals, dislocation free, cryst. growth by LEC technique 2-97965

III-V semiconductors continued

- InP, single crystals, liq. encapsulated Czochralski grown, photolum. and IR absorption 2-57144
 InP structured {100} substrate, fabrication by preferential etching for LPE growth 2-99571
 InP submicron layer, quasiballistic cond. at 77K, numerical study 2-61569
 InP substrate, interdiffusion of metal films, book contrib. 2-61215
 InP surface, prepared by various cleaning methods, anal. by AES 2-88389
 InP, surface composition and etching in Cl₂ ion beam 2-61262
 InP, surface defects and Fermi-level pinning 2-82431
 InP, surface donors and acceptors, Fermi energy as function of O₂ exposure 2-110426
 InP, surface etching kinetics of H plasma, Auger spectra study 2-93637
 p-InP surface modified photocathodes for photoelectrochem. cell 2-99813
 InP, thermal expansion coeff. calcs. 2-86911
 InP, thermal oxidation and props. of oxide film, IR and Raman data 2-72854
 InP, thermal oxidation and props. of oxide film, IR and electron diff. data 2-72855
 InP thin heteroepitaxial film on CdS, vapour growth 2-71833
 InP, transverse electric field effects on electron transport props. 2-98651
 InP, two-photon absorption coeffs., band structure calcs. 2-65293
 InP, use of HNO₃-HBr dislocation etchant 2-76445
 InP, Wannier-Mott excitons, wave functions and normal-incidence refl. 2-82244
 InP with chemisorbed H, surface optical phonon obs. 2-115550
 InP, Fe, APR study 2-66900
 InP³Be, ion implanted, migration during annealing, SIMS study 2-98143
 InP:Be, Zn, Cr, Se, doping profiles, SIMS anal. 2-103806
 InP:Be(Cd)(Si)(Ge)(Sn), ion implanted, annealing behaviour obs. 2-98135
 InP:Cd, diffusion profiles, p-n homojunction form. 2-110038
 InP:Cd, VPE growth and photolum. characterisation 2-88002
 InP:Co, deep levels, elec. and optical meas. 2-76971
 InP:Cr(Fe), impurity diffusion, carrier and impurity profiles 2-115467
 InP:Fe, Be⁺(He⁺) ion implanted, semi-insulating, photoluminesc. meas. 2-99168
 InP:Fe, deep level optical spectroscopy 2-61400
 InP:Fe, electron irradiated, EPR study 2-104690
 InP:Fe, semisolating, photocond. mechanism peculiarities (*Russian*) 2-104435
 InP:Fe(Cr), photocurrent instability, temp. depend. meas., temp. meas. system appl. 2-58824
 InP:Fe(Cr), semi-insulating, photoinduced current transient spectroscopy 2-92646
 InP:Fe(Cr), VPE layers, deep impurity levels DLTS and DLOS study 2-98590
 InP:Mg VPE layers, implanted and unimplanted, near-edge emission 2-57157
 InP:Mg(Si), implanted, impurity redistrib. during annealing, SIMS study 2-98144
 InP:Mn, impurity states electronic struct., ESR and optical absorpt. study 2-82285
 InP:Mn, single crystal Czochralski growth and props. 2-93406
 InP:Mn(Fe) and undoped, deep level photolum. study 2-104930
 InP:Sb, LEC single crystal growth, Sb dopant distrib. coeff. 2-93412
 InP:Te, VPE growth for photodetectors 2-111086
 InP:Yb, impurity electron state, ESR, photoluminescence and mag. susceptibility study 2-104307
 InP:Zn(C)(Mg) epitaxial layers, shallow acceptor excited states, luminesc. study 2-57156
 InP/(Ga,In)(As,P)/InP, optical fibre components for 1.3 micron telecommunication (*French*) 2-97224
 InP/InGaAsP double heterogeneous epitaxial wafers, stress induced defect migration 2-92287
 p-InP/n-InP/n-CdS heteroface solar cell, growth and evaluation 2-88452
 InP-Ag contacts, interface control by var. of concentration of free In, co-evaporation 2-66638
 n-InP-Al Schottky barrier, prep., photocurrent, I-V and C-V characts. study 2-61552
 InP-Al_{0.3}O_{0.7} anodic interface formation, enhancement MISFET appl. 2-82461
 n-InP-Au Schottky contacts with increased barrier height due to oxide layer 2-77185
 InP-Au(Ni)(Ag) interface, Schottky barrier formation, UPS study 2-110443
 InP-CdS RF sputtered solar cell, comparison with In_{2-x}Sn_xO_{3-y}-InP cell 2-57714
 InP-CdS solar cells with CdS window layer, high efficiency operation, review 2-105570
 InP-Ga_{0.47}In_{0.53}As-InP DH epitaxial layers, chem. interface width and struct., Auger meas. technique 2-87086
 InP-Ga_{1-x}In_xAs_{1-y}P_y heterostructure LED, moisture transducer appl. 2-79594
 InP-Ge interface, X-ray photoemission spectra of band discontinuities 2-82447
 InP-InGaAsP DH with 40% external luminesc. quantum efficiency 2-77591
 InP-InGaAsP planar heterostructure avalanche photodiodes, multiplication noise 2-56675
 InP-InGaAsP-InGaAs struct., LPE grown, lattice defects study 2-71454
 InP-InGaAsP-InP DH wafers, LPE grown, misfit dislocations 2-98096
 InP-metal interface, Fermi level pinning and chem. struct., XPS study 2-110475
 InP-oxidized film interfaces, phys. props. (*Chinese*) 2-92763
 InP₂P₃N₅ MIS devices with CVD P₃N₅ gate simulating film, elec. props. 2-99346
 InP-Si₃N₄ interface, I-V, C-V and MISFET characts., CVD, surface pot. var. 2-56710
 InP-SiO₂ interface, I-V, C-V and MISFET characts., CVD, surface pot. var. 2-56710
 InP-SiO₂ interface, plasma-enhanced CVD growth, XPS and TEM study 2-110169
 InP-SiO₂ MIS struct. and enhancement mode MISFET, expt. study 2-98760
 (InP)_{1-x}(InAs)_x solid soln., sp. ht., temp. depend., 5 to 160K 2-76705
 (InP)_{1-x}(InAs)_x solid soln., thermodynamic functions, entropy and enthalpy of mixing 2-86904

III-V semiconductors continued

- InSb (110), elastic LEED, electron exchange effects and relativistic corrections 2-65815
 InSb, (n, γ)-induced point defects, NMR study 2-98980
 n-InSb, acoustic and EM oscilla., multitransit generation in alternating elec. field 2-66593
 p-InSb, acoustoelectric effects, ultrasonic attenuation 2-77130
 n-InSb, acoustoelectric stationary domains, elec. field distrib., meas. and second mode model 2-77127
 InSb, anodic oxidation mechanism 2-67594
 InSb, Auger recombination rate during intense laser pulse, carrier density depend., reflectivity study 2-67158
 InSb, avalanche breakdown and elec. cond. 2-92638
 InSb, band struct., nonlocal pseudopot. calc. 2-110245
 InSb, band struct. calcs., hydrostatic press. effects 2-92457
 InSb, band struct. parameters, exciton magnetoabsorption study 2-115659
 InSb, band structure, tight binding calc. 2-66443
 InSb, CC two photon magnetoabsorption spectroscopy with CO₂ lasers, energy gap 2-87748
 InSb, carrier conc. effect based devices, sensitivity increase 2-87430
 InSb Corbino discs, S-type I-V characs. in mag. field 2-61494
 InSb direct-gap crystals, three-photon absorpt. 2-97079
 InSb, dislocated, elec. cond. 2-104364
 n-InSb, ESR, uniaxial stress enhanced 2-98940
 InSb, electron mobility, Monte Carlo calc. 2-92628
 InSb, electron photoemission during X-ray diff. 2-105050
 InSb, electron stimulated IR luminesc., HF modulation interferometric obs. 2-116271
 InSb, far IR cyclotron resonance under intrinsic photoexcitation, electron temp. 2-93013
 n-InSb, far IR studies of bound and free carriers as function of hydrostatic press. 2-93238
 p-InSb, field electron emission, current-voltage characts. 2-83011
 n-InSb film, polycryst., intergrain barrier pot., temp. and field depend. 2-77208
 n-InSb film, surface phonon amplification, non-parabolic band struct. effect 2-110126
 p-InSb, free and bound hole excitations, intraband transitions, magneto-optical studies 2-93165
 n-InSb, free carrier Faraday effect at subMM freq., static elec. field influence 2-99094
 n-InSb, free-carrier-induced optical nonlinearities, difference-freq. variation 2-65291
 InSb, Hall effect, press. effects 2-104398
 n-InSb, highly nonlinear interactions with picosecond CO₂ laser, electron-hole plasma generation 2-55244
 InSb, homogeneity regions, calc. 2-86892
 InSb, homogeneity region, intrinsic defect concs. 2-104004
 n-InSb, hopping cond. below 1K in mag. field 2-98673
 InSb, hot electrons, lowest Landau level, distrib. functions, I-V characs. and neg. differential conductance 2-61476
 InSb, hypersonic wave propag. in appl. mag. fields, suppression of non-linear effects 2-115829
 n-InSb, hypersound self-interaction in case of mag. freezeout of carriers 2-103905
 InSb IR detector evaluation at liq. N₂ and liq. He temps. 2-89152
 InSb, impact ionisation and quantum efficiency, time depend perturbation calc. 2-77075
 InSb, interband Landau absorption intensity 2-77497
 InSb, interband magneto-absorpt. saturation 2-77496
 p-InSb inversion layer, electron-phonon interaction, cyclotron resonance study 2-56939
 InSb, LPE regrowth by CW laser annealing, expt. study 2-56029
 InSb, Landau level nonlinear refr. 2-65292
 InSb layer oxidation study after ion implantation by backscattering and nuclear reaction 2-99567
 InSb liquid N₂ cooled IR position sensor 2-101459
 InSb, localised impurity states, cond. band minima role 2-98576
 n-InSb, low electron conc., electron Hall mobility at high press. 2-92672
 InSb low-noise photodetector preamplifier for IR astronomy 2-112333
 InSb MIS struct., tunnel charging of traps in oxide layer 2-115909
 InSb MIS structures with dielectrics prep. at low temps., charge instability mechanism 2-61601
 InSb MOS structure, interface characterization 2-87411
 InSb, magnetoresistance meas. for two-carrier state 2-92662
 InSb, magnetoresistance influence on high mag. field Van der Pauw expts. 2-104396
 n-InSb, magnetotransport meas. in extreme mag. quantum limit 2-92669
 InSb melt, suppression of thermal convection by transverse mag. field 2-86600
 InSb, n-channel, 2D-subband 2-92465
 InSb, narrow band gap, resonant impurity states in strong mag. field 2-66485
 InSb, neutron irradi., carrier density and mobility meas., disordered regions scatt. effects 2-61466
 InSb, nonlinear magneto-optics, CW CO laser pumped, interband magneto-absorption 2-93164
 InSb, nonlinear refractive index calcs. (Chinese) 2-104832
 n-InSb, nonparabolic, ultrathin films, electronic sp. ht., size quantisation effects 2-61163
 InSb, optical bistability with guided waves, theory 2-97073
 InSb, photo-excited acoustic phonons 2-98225
 InSb photoconductive detectors, cooled, effects of surface treatment on performance 2-84705
 InSb, photoelec. method of nonhomogeneity meas. 2-92679
 p-InSb, photoexcited electron system, spin relaxation 2-104706
 n-InSb, pinch effect meas. and calcs. 2-104405
 InSb, polymorphic transition meas. at low temp. and high press. 2-109981
 InSb, positron lifetimes, systematic study 2-57207
 InSb, pulled crystals, Czochralski growth, impurity distrib., US vibr. effects 2-116357
 n-InSb, quantum oscilla. in magnetoacoustic attenuation 2-77132
 p-InSb, radiation damage and recovery effects 2-66066
 InSb, residual impurities and inhomogeneities, galvanomagnetic meas. 2-10369
 n-InSb, solid plasma, Brillouin instability 2-104902
 n-InSb, strong coupling between reson. state and cryst. lattice, Hall coeff. meas. 2-92531

III-V semiconductors continued

- InSb, subband reson., nonparabolicity parallel excitation mechanism and doublet peak problem 2-61863
 InSb substrate, (001), for CdTe heteroepitaxial film MBE growth 2-56374
 InSb, surface, electron state density, low energy electron reflection study (Russian) 2-87362
 InSb, surface oxide thin film, carrier photoinjection 2-92699
 InSb, thermal acceptors influence on electrophys. props. during annealing 2-56577
 InSb thin parallel crystals, optical bistability and multi-stability 2-102860
 n-InSb, transverse breakdown study (Russian) 2-92642
 p-InSb, two-photon magnetoabsorpt. spectra, using CW CO₂ lasers 2-93166
 p-InSb, US relax. time, mag. field effects 2-56650
 n-InSb, US wave parametric instability 2-104436
 n-InSb, undoped, elec. props. nonuniformity, vol. distrib. 2-104366
 InSb, Wannier-Mott exciton at absorpt. edge, quasidegenerate state in strong mag. field, expt. study 2-61369
 InSb:Bi epitaxial layer, Bi distrib., temp. depend. 2-104183
 InSb:Bi solid soln., Bi donor level form., X-ray struct. study 2-115702
 InSb:Cr, hot electron thermo-EMF 2-104402
 InSb:Ga, lattice thermal cond., 0.35-3K 2-98353
 InSb:Ge(Cd)(Mn)(Zn)(Cr), deep levels in band gap, photocond. study 2-115706
 InSb:Ge(Sn)(Co), gamma-ray, electron and proton beam irradi., defect annealing, elec. props. (Russian) 2-103817
 InSb:Mg, implanted, ion current density and dose effect on radiation defects 2-76533
 InSb:Si, p-n junction diodes, hole traps, DLTS study 2-110452
 n-InSb-Al₂O₃-Al MOS struct., quantum size effects and negative resist. obs. 2-77187
 InSb-CdTe heterojunctions, photomemory effect 2-92693
 InSb-In₂GeTe, thermographic, X-ray and microscopic investigation 2-109995
 InSb-NiSb, low-freq. voltage instability (Russian) 2-56606
 InSb-TiSb eutectic alloy, galvanomagnetic props. 2-104399
 InSe, intercalated with Na⁺ and Ca²⁺ prep. and elec. props. 2-66549
 In₂-Sn₂O₃-GaAs:Be heterojunction solar cell, AES and EBIC evaluation 2-78214
 n-In₂-Sn₂O₃-InP photo and electroluminesc. diode 2-61571
 In₂-Sn₂O₃-InP solar cell, comparison with RF sputtered CdS-InP cell 2-57714
 n⁺-In₂-Sn₂O₃-yp-InP solar cell, electron trap characterisation by DLTS 2-92513
¹¹⁵In in InP single crystal, quadrupole moment from spin lattice relaxation 2-107754
 InAs, subband reson., nonparabolicity parallel excitation mechanism and doublet peak problem 2-61863
 Nb-GaAs structure, anodization and Rutherford backscatt. meas. 2-110184
 Pb_{0.8}Sn_{0.2}Te, intrinsic defects, mag. susceptibility study 2-115217
 Pd-InP Schottky diode H₂ sensors, sensitivity transient response and detection mechanism 2-89700
 Sb overlayers, on GaAs (110), struct. 2-76862
 SnTe-GaAs, heterojunction, open-circuit EMF meas. 2-87378
 T 2-109080
 TiSe, thermal expansion meas. and sp. ht. and Gruneisen coeff. calc. 2-110019
 V-GaAs structure, anodization and Rutherford backscatt. meas. 2-110184
 W-GaAs Schottky barrier, elec. props. and interface chem., XPS study 2-115853
 W-GaAs:Se⁺ Schottky barrier, high temp. elec. and interdiffusion stability meas. 2-87365
 ZnO piezoelectric thin films, for SAW devices 2-97339
 ZnSe-GaAs heterojunction, photovoltaic props. meas. 2-73121

III-VI semiconductors

- atomic interactions, chem. bond characts. 2-76919
 layered semiconductors, band struct. and electron-phonon interaction (Japanese) 2-82231
 As₂S₃-Ag, diffusion controlled sensitivity to illumination, image formation characts. 2-101484
 CdS, high resistivity, semi-insulating, thermoelectric props., influence of deep traps, TSC study 2-66577
 GaAs, bonding, charge density anal., X-ray diff. study 2-81710
 GaAs, photocond. at high optical excitation rates, struct. disorder effect 2-115818
 GaS, elastic props. under high pressure, by Brillouin scattering 2-72517
 GaS, layered, atomic vibr., Mossbauer study 2-110739
 p-GaAs, single crystal, mechanical and electrical strength (Russian) 2-92636
 GaS, uniaxially deformed, absorpt. and photoluminesc. spectra, energy bands 2-67081
 GaSe amorphous film, electroabsorpt. meas. 2-72456
 GaSe, elec. props., effect of gamma irradiation (Russian) 2-76498
 GaSe, high symm. layer cryst., interlayer force constants, linear chain model 2-71390
 GaSe, intercalated, low temp. reflection spectra and photoluminesc., exciton characts. (Russian) 2-67112
 GaSe, intercalated with Na⁺ and Ca²⁺, prep. and elec. props. 2-66549
 GaSe, layered compound, elastic consts. and compressibility 2-86773
 GaSe, layered semicond., oxidation, XPS and AES study 2-57502
 GaSe, photocond. near fundamental band edge 2-92692
 GaSe, region of existence of excitonic molecules (Russian) 2-76941
 p-GaSe, single crystal, mechanical and electrical strength (Russian) 2-92636
 GaSe single crystals, surface photo-EMF at high excitation levels 2-61522
 GaSe, struct. phase transition, exciton refl. and photoluminesc. spectra 2-103985
 GaSe, uniaxially deformed, absorpt. and photoluminesc. spectra, energy bands 2-67081
 GaSe:Ni(Fe)(Cr), luminescence spectra, absorption edge, struct. defects (Russian) 2-93273
 p-GaSe:Sn, dark current, anomalous temp. depend. 2-77063
 GaSe-anthracene (Na) intercalation cpds., ESR, photocond., and optical meas. 2-77367

III-VI semiconductor continued

- GaSe-Au(Ni)(Ag) interface, Schottky barrier formation, UPS study 2-110443
 GaSe-metal interfaces, Fermi level pinning, Schottky limit, photoelectron spectra study 2-56670
 GaSe-metal Schottky barriers, optical band rectification and photomemory 2-115892
 GaSe-Sn layer-barrier-structures, elec. props. (*Russian*) 2-77181
 GaSe-SnO₂ heterostructure, depth profile, XPS and AES study 2-61299
 GaSe-SnO₂/In₂O₃ heterojunction, near UV detector 2-53839
 GaSe_{1-x}S_x layered semiconductors, Brillouin scattering meas. using microprocessor-controlled Fabry-Perot interferometer 2-79655
 GaSe_{1-x}S_x polypolyte phase transition X-ray diff. obs. 2-60912
 GaTe, electrical and optical props. (*Russian*) 2-57189
 GaTe-Sn, strongly compensated, localised state cond., 77 to 289K 2-77079
 GeSe single crystal growth from vapour, phenomenological description 2-91840
 InS, Gruneisen mode parameters, structural phase transition, high press. Raman study 2-104889
 InSe, cryst. grown from melt, struct. transition, X-ray diff. study 2-55942
 InSe, cryst. struct. and Raman spectra 2-98036
 InSe, crystal growth and defect evaluation (*Japanese*) 2-87958
 InSe, cyclotron resonance of electrons bound at defects, internal accumulation layer formation 2-56944
 InSe, exciton selection rules in polarised reson. Raman scatt. by LO phonons 2-67034
 InSe, intraband light absorption, high nonequilib. carrier conc. induced by laser beam 2-87799
 InSe large single crystals grown from stoichiometric, non-stoichiometric melts 2-93411
 InSe, layered compound, elastic consts. and compressibility 2-86773
 InSe, layered semicond., photoluminesc. study 2-99170
 InSe, magnetoabsorption, A exciton study 2-82830
 InSe single crystals, surface photo-EMF at high excitation levels 2-61522
 InSe, stimulated photoluminescence 2-67113
 InSe, two-phonon absorpt. spectra, pol. and temp. depend. 2-57095
 InSe, uniaxially deformed, absorpt. and photoluminesc. spectra, energy bands 2-67081
 p-InSe:Zn, annealing behaviour, photoluminesc. study 2-92276
 InSe-anthracene intercalate, elec. props. (*Russian*) 2-77067
 InSe-Au Schottky barrier diode, elec. and optical props. 2-77157
 InSe-GaSe heterojunction, EMF with large temp. gradients 2-115870
 Sb-GaSe struct., γ -irrad. effect on photoelectric props. 2-61516
 n-SnO₂-p-GaTe heterojunction, electrical and optical props. (*Russian*) 2-57189
 TiInSe₂, Raman spectrum, first order, hydrostatic press. effect 2-87794
 TiS, Raman spectrum, first order, hydrostatic press. effect 2-87794
 TiSe, inelastic neutron scattering, selection rules (*Russian*) 2-92119
 TiSe, single crystal, photoelectrical props., influence of laser beam irradiation (*Russian*) 2-92680
 ZnO surfaces, ideal and relaxed, electronic struct. 2-56660
 ZnS film, electron beam evaporated, growth and struct., expt. study 2-111076

illumination see lighting**image amplifiers** see image intensifiers**image converters**

see also fluorescent screens; image intensifiers

- electron-optical converter system in pulsed mode of operation, OTF 2-109076
 electron-optical converters, resolution, fine-struct. grid influence 2-75716
 electrophotographic light-scanned image converter, thin-film device, image readout dynamics 2-107438
 matching observation parameters with converter, optimal correlation (*Russian*) 2-81116
 optoelectronic device nanosecond range processes study 2-64140
 plasma, doubly degenerate four-wave mixing, IR image conversion appl. 2-65728
 PRIZ image converter and its use in optical data processing systems 2-60230
 pulsed image-converter tube attachment for brightness meas. in IR range 2-95432

image iconoscopes see television camera tubes**image intensifiers**

- assessment of imaging systems, visible and IR, symposium, Reading, Berks., England (April 1981) 2-112639
 astronomical appls., conf. (Cambridge, MA, June 1981) 2-79270
 C-CD array detectors for imaging in VUV 2-114471
 C-CD detectors, electron bombarded, for VUV 2-114470
 cascade and channel plate image intensifiers, output pulse height distribution simulation 2-78345
 channeltron system for air shower core obs. 2-94613
 dye laser, longitudinal pumping for image intensification (*Russian*) 2-85953
 grid elimination during intensified fluoroscopy and photofluoro spot imaging 2-105830
 high-voltage electron microscopy, of beam-sensitive materials, image intensifier 2-64188
 microchannel plate intensifier for atm. emissions photometric imaging expt. 2-78872
 microchannel plate X-ray detector for synchrotron radiation 2-85475
 MTF definitions for image intensifier tubes 2-114469
 MTF of image transfer device, instrument for meas. 2-114474
 photoelectronic sensors, perturbing magnetic fields effects on performance 2-89812
 photofluorographic camera coupled with image intensifier, MTF meas., performance for clinical appl. 2-73346
 X-ray diagnostic set with image intensifier, electronic brightness stabiliser 2-78411
 X-ray image intensities, effects of optical feedback on characts. 2-58985
 Si vidicon detector, appl. to direct imaging and photometry 2-73846

image orthicons see television camera tubes**image processing** see picture processing**image sensors**

see also television camera tubes

- airborne reconnaissance, conf., San Diego, CA, USA (Aug. 1981) 2-74146

image sensors continued

- background optical suppression system sensor, predicted performance over spatially structured terrain 2-109075
 C-CD, eye movement measurement and meas. resolution 2-94156
 C-CD based image recording system, for TEM 2-113069
 C-CD image sensor and video digitiser for streamer chamber track digitisation 2-75103
 camera automatic focusing system using CCD grating with sensor array (*German*) 2-84723
 complete electro-optical system, end-to-end computer simulation, image quality extension 2-55349
 conference, imaging spectroscopy, Los Angeles, CA, USA (Feb. 1981) 2-106998
 electro-optical image quality summary measure improvement 2-108802
 electro-optical system performance operating in marine environments 2-117455
 electrophotographic image detector development, far and middle UV sensitive 2-117607
 electronic still-picture camera using CCD solid-state imager and mag. disc 2-107432
 focal plane development for terrestrial resource obs. 2-112162
 frame-transfer CCD electronic still-picture camera using magnetic bubble memory for digital recording 2-107431
 IR sensor, long wavelength, test facility, Al mirror design for large aperture precision collimator 2-102958
 limiting resolution of electro-optical devices, vars. due to atmospheric effects 2-117457
 mechanical testing, closed-loop, with optical sensor 2-105426
 multispectral sensor using two dims. solid state imaging arrays, system design, remote sensing appl. 2-73555
 photoconductor excess carrier transport props., focal plane processing, image degradation anal. 2-92686
 photoconductor transport props., effects of sampling length and finite device length 2-92687
 photodiode arrays for spectrometry using ultraviolet light 2-95488
 photoelectronic sensors, perturbing magnetic fields effects on performance 2-89812
 photoelectronic-digital radiology, image acquisition components and system design 2-105824
 semiconductor detector suitability for imaging appl. 2-59598
 smectic liquid cryst. imaging device based on photochem. reaction 2-99692
 solid state camera for low cost image processing 2-84731
 solid state imagers for astronomy, conf. (Cambridge, MA, June 1981) 2-79270
 solid-state imaging arrays, appls. in astronomy 2-78963
 SPRITE—a TED infra-red detector for high performance thermal imaging systems 2-91090
 streak image tube, subpicosecond, Photochron IV 2-89813
 TV ophthalmoscope for analysing images of retina and choroid 2-100174
 Al_{0.5}Ga_{0.5}As-GaAs heterojunction CCD, quantum efficiency, heterojunction spike effects 2-83736
 CdHgTe IR detectors for scanned arrays, SPRITE detector 2-91089
 Pd₂Si Schottky-barrier IR-CCD for short wave IR appls. at intermediate temps. 2-74501
 Si photodiode arrays, 1D and 2D self-scanning, imaging devices in electron microscopy 2-64190
 a-Si:H, N films, optical and elec. props., solid-state image pickup device appl. 2-82935
- image storage tubes**
 streak image tube, subpicosecond, Photochron IV 2-89813
 KD₂PO₄, Pockels effect, image storage tube appls. (*Czech*) 2-82826
 KH₂PO₄, Pockels effect, image storage tube appls. (*Czech*) 2-82826
 PLZT ceramic electroluminesc. material, image storage tube appls. (*Czech*) 2-82826
 ZnS:Mn electroluminesc. material, image storage tube appls. (*Czech*) 2-82826
- images, optical** see optical images
imaging, acoustic see acoustic imaging
imaging, infrared see infrared imaging
IMMA see ion microprobe analysis
immiscibility see solubility
impact (mechanical)
 see also ballistics; impact strength
 aluminosilicate glasses, devitrified, contact strength in impact, rel. to type of defectiveness 2-99557
 column under axial impact, dynamic buckling 2-81263
 cometary impacts on Earth, geophysical and biological effects 2-101149
 composite shell of revolution, linear-axisymmetric response 2-60454
 cylinder, clamped/free, hollow, circular, dynamic response to travelling torsion impact loads 2-65510
 ductile materials, modelling of low rel. erosion by spherical particles 2-86790
 Earth impact of Cretaceous-Tertiary extinction bolide 2-94497
 elastic half space, expression for press. produced under rigid circular punch by appl. of conc. load 2-97469
 Ernst Mach Institute, impact facilities, review 2-75910
 fibre reinforced composites, coated, raindrop impact, indirect damage 2-62229
 fragments produced by catastrophic impacts into basalt targets, rot., asteroid appl. 2-58287
 high speed photography techniques and appls. 2-101483
 human jumping, methods of impact absorpt. when landing 2-94095
 infinite elastic medium under impact load, dynamic stress intensity factors around for rectangular cracks 2-75902
 instrumented impact test machine 2-78029
 internal surface deformation meas. of thick-walled structural shells, optical method 2-55523
 laminated plates, dynamic contact problems, numerical simulation 2-114739
 liquid impact, on materials 2-60488
 liquid-solid impact, damage mechanism 2-97466
 metal, void nucleation, stress and temp. driven 2-76429
 metal targets, semi-infinite, penetration by deforming projectiles 2-89525
 metallic subsurface zones, characts. in sliding and impact wear 2-88208
 metals, brittleness transition temperature determination in impact strength testing, deform. criterion 2-116632
 metals, ductile, erosive wear, by particle-laden high rel. liq. jet 2-67567
 metals, fracture, method for fibrous content estimation 2-93703
 meteorite falls on Earth's surface, study of relative rates 2-89209

impact (mechanical) continued

- oblique hypervelocity impact, numerical modelling using two-dimens. phase strain models 2-70875
- photoelastic plane model subjected to an impact, stress determ. method 2-97477
- piezoceramic rod discharge in shock loading 2-82787
- plasticine, mechanics of impact at normal incidence between rods and plates 2-55515
- plate in impulsive mechanical loading, dynamic bending 2-65494
- plug forcing out of rigid-plastic obstacle by bullet (*Russian*) 2-81295
- PMMA tubes, liq. filled, fluid effects and response in transverse impact 2-114707
- polymeric materials, impact friction and wear 2-67564
- polymers, mech. props., influence of mol. wt. and mol. wt. distrib. 2-111306
- polypropylene, EPDM modified, struct.-property relations under tensile and impact tensile stress (*German*) 2-67533
- polypropylene co-polymer, injection moulded, effect of recycled plastic and compound additives on props. 2-99529
- quartz, single crystal, plastic deform., by indentation, at room temp., TEM 2-56070
- reverse ballistic expts., meas. problems 2-70878
- shadow moire contouring of impact craters 2-101384
- shock wave apparatus for studying minerals at high pressure and impact phenomena on planetary surfaces 2-78852
- shock wave equations of state, railgun accelerators appl. 2-69191
- slit, narrow, shear and normal impact loadings, stress modes 2-75886
- solid-solid impact, damage mechanism 2-97466
- steel, C, impact wear of tool steel, surface topography 2-88225
- steel, low C, crack resist. determ. in brittle crack propag. from impact bend test results 2-72908
- steel, low-alloy, crack resist. determ. in brittle crack propag. from impact bend test results 2-72908
- steel, mild, erosion by normal impingement of hard steel spheres 2-67553
- steel, structural, ductile-brittle transition temp. determ. 2-116631
- steel cylinder, impact deformation meas. at high temp. 2-83172
- steel hardened sphere oblique impact against ductile mild steel target 2-55472
- steel plate, impact by polymer bonded explosive, radiographic study 2-78107
- steel projectile, spherical, transverse impact on fluid-filled cylindrical tubes 2-103017
- steels, reproducible AE signatures by indentation 2-62324
- University of Dayton Research Institute, impact physics facilities, review 2-75908
- vibration-impact systems, quasi-conservative, investigation by averaging method 2-114711
- water, isentropic compression, one-dimens. finite difference calc. 2-69194
- water, isentropic compression, one-dimens. impact expt., finite difference simulation 2-69195
- work of plastic and elastic deformation during indenter indentation 2-81877
- Al cylinder, impact deformation meas. at high temp. 2-83172
- Al elastic exponential and conical shells, steel sphere impact, pulse transmission 2-55473
- Al, erosion by WC-Co sphere impingement at oblique incidence 2-111324
- Al plate, penetration process dynamics, exptl. and numerical study 2-70876
- Al, shock release in 10 GPa range 2-71558
- Al, symmetric rod impact technique for dynamic yield determination 2-69165
- Al tubes, liq. filled, fluid effects and response in transverse impact 2-114707
- Be, shock wave propagation at small impact stresses 2-71564
- Cu cylinder, impact deformation meas. at high temp. 2-83172
- Cu, erosion wear mechanism, solid particle, 90° impact 2-88209
- Cu, wear mechanism, obtained by repetitive impacts 2-88207
- Fe, erosion wear mechanism, solid particle, 90° impact 2-88209
- Ge, surface damage effect on IR optical performance, 8-12 μ m spectral region 2-105347
- MgO, mechanically treated powder, struct. under impact, X-ray and Mn^{2+} ESR study 2-93472
- Ta cylinder, impact deformation meas. at high temp. 2-83172
- Ti-Al, mech. props. and thermal stability, comp. depend. (*Russian*) 2-77874
- U cylinder, impact deformation meas. at high temp. 2-83172

impact avalanche transit-time diodes *see IMPATT diodes***impact ionisation**

- glass, optical bulk breakdown, statistical props. 2-104813
- heterostructures, multilayered, impact ionisation control by carrier spatial separation 2-92634
- insulators, elec. breakdown by one-carrier impact ionisation 2-110768
- MOS capacitor, flat band voltage shift during avalanche injection, modelling 2-56721
- MOS device, oxide and interface charge generation by electron injection 2-56718
- narrow gap semiconductor, internal photoeffects, quantum efficiency, model 2-104418
- p-n junction, diffused, breakdown voltage, conc. and junction depth relation 2-104471
- p-n junctions, abrupt, avalanche multiplication 2-82451
- p-n junctions subjected to overvoltage, avalanche breakdown 2-66632
- semiconductor model, current layers and filaments, impact ionisation induced instability 2-115766
- semiconductor recombination model, bistability and nonequilib. phase transitions, with impact ionisation of donors 2-61528
- semiconductors, S-shaped elec. cond. characteristics at low temp. 2-77074
- Al-SiO₂-Si capacitors, avalanche injected, positive charge effects on flat-band voltage shift meas. 2-87394
- AlAs-GaAs superlattice, resonance impact ionisation states 2-92738
- Al₂O₃ anodic films, elec. breakdown characs., 4.2 to 354K 2-110769
- Ga_{1-x}Al_xSb, impact ionisation an alternative interpretation, comments 2-56600
- GaAs, bulk, main electron trap, effect of elec. field and current injection 2-72009
- n-GaAs, chaotic motions in electrical avalanche breakdown caused by weak photoexcitation 2-110359

impact ionisation continued

- GaAs, high field transport and impact ionization, band struct. depend. 2-77070
- n-GaAs impact ionisation induced negative far IR photocond. 2-115805
- GaAs, impact ionization and high field transport, band struct. depend. 2-77069
- n-GaAs, negative far IR photocond. obs. in mag. field 2-98690
- GaAs, photoluminescence, elec. field effects, excitons and polaritons 2-99177
- GaAs surface-barrier structs., reverse current and elec. breakdown 2-92755
- GaAs-AlGaAs avalanche photodetector, single-carrier-type dominated impact ionisation 2-84701
- Hg_{1-x}Cd_xTe, bandgap spin-orbit splitting resonance, impact ionisation and recomb. processes 2-115719
- InP, impact ionization coeffs. for electrons and holes, photomultiplication meas. 2-61472
- InP, ionisation coeffs., avalanche photomultiplication and avalanche noise study 2-98700
- InSb, avalanche breakdown and elec. cond. 2-92638
- InSb, impact ionisation and quantum efficiency, time depend perturbation calc. 2-77075
- n-InSb, transverse breakdown study (*Russian*) 2-92642
- NaCl, tightly focused intense laser beam deform., multiphoton-polaron and avalanche breakdown models 2-66056
- Si diode, neutron transmission doped, avalanche breakdown 2-115887
- Si MOSFET, impact ionization at very low voltages 2-56602
- Si-SiO₂ interface, slow and fast states induced by hot electrons, expt. study 2-87395
- Si-SiO₂ MOS system, interface state generation 2-87408
- SiC p-n structure, defect-free, avalanche ionisation and breakdown 2-87383
- SiO₂ film, thermally grown on Si, elec. behaviour of H ions 2-61634
- SiO₂, trapping characs., avalanche injection 2-56611
- SiO₂-Si interface effects in avalanche injection of electrons 2-56719
- ZnTe, S-shaped elec. cond. characteristics at low temp., expt. study 2-77074

impact phenomena *see collision processes***impact strength**

- see also fracture toughness; notch strength*
- cantilever beam, brittle, fracture under lateral impact load 2-91348
- fibre reinforced plastic, impact fracture (*Japanese*) 2-57467
- flexiglas, shaped charge jet penetration, compressibility related effects 2-86794
- glass fibre reinforced epoxy, fully and partially loaded, rate sensitive tensile impact props., test system 2-67684
- glass fibre reinforced epoxy, laminates, ballistically impacted, delamination-crack propag. 2-83207
- glass fibre reinforced epoxy laminate, failure under dynamic torsional loading 2-88194
- glycerol, shaped charge jet penetration, compressibility related effects 2-86794
- graphite fibre reinforced epoxy, fully and partially loaded, rate sensitive tensile impact props., test system 2-67684
- Metglas ribbon reinforced epoxy, impact resist. 2-111270
- methanol, shaped charge jet penetration, compressibility related effects 2-86794
- microcomputer-based system for instrumented impact testing 2-78038
- paint coatings on metals, protective properties, inhibitors influence 2-67655
- plastics, impact strength increasing mechanism (*Russian*) 2-72846
- polycarbonate-copolyester miscible blends, mech. props. 2-72775
- polyethylene tubular film, cross-sections, effects of film forming conditions on strength (*Japanese*) 2-62173
- polymer blends, phys. and thermodynamic props., review 2-67450
- polypropylene copolymer, injection moulded, microstruct. effect on dynamic fatigue props. 2-57447
- polystyrene, high impact, synthetic rubber modified, Charpy impact (*Japanese*) 2-88182
- PVC, impact resistant rigid, microstruct. rel. to mech. props., additives influence (*German*) 2-62215
- shock loading, metallurgical effects, review 2-76585
- steel, 37KhN3(MF), fracture and mech. props. (*Russian*) 2-105288
- steel, 40KhN2MA, mechanical props. and struct., effect of austenitisation temp. and hot deform. (*Russian*) 2-77901
- steel, alloy, ageing effects 2-67405
- steel, austenitic ferritic, with low interstitial level, mech. and corrosion props. (*Italian*) 2-99563
- steel, austenitic stainless, strain limit at elevated temps., creep tests 2-105255
- steel, barothermomechanical treatment effect on struct. and temper embrittlement susceptibility 2-57386
- steel, Cr-Mo, low alloy, mech. props. improvement by cyclic heat treatment (*Korean*) 2-67387
- steel, ferritic-austenitic Cr-Ni-Mn steel, aged, struct. stratification, neutron diff. study (*Russian*) 2-93541
- steel, high-speed, powder prod. by pneumoacoustic atomisation, mech. characs. 2-67250
- steel, impact bending fatigue testing, evaluation of dynamic stress intensity factor (*Japanese*) 2-111285
- steel, low C, impact strength anisotropy, specimen width and notch tip radii influence 2-93592
- Steel, Low C, weld zone crack resistivity (*Korean*) 2-57461
- steel, low-alloy, mech. props., rare earth elements effect 2-72773
- steel, low-alloy, strengthening mechanism of NiAl precipitate (*Korean*) 2-116453
- steel, low-C, impact toughness, simultaneous influence of Ca and S 2-111311
- steel, low-C low-alloy, Si and Ni additions effect on mech. props. 2-105333
- steel, mild, shaped charge jet penetration, compressibility related effects 2-86794
- steel, Mn-Nb-V, low-pearlite, struct. and mech. props. after controlled rolling 2-57385
- steel, Ni, low C, heat treatment and O₂ cutting influence on struct. and props. 2-72732
- steel, Ni-Co-Mo, maraging, biphasic struct., low-cycle impact fatigue strength 2-67530
- steel, plain C, pearlitic, impact fatigue props. 2-88164

impact strength continued

- steel, type SA-516-70, ductile-brittle transition curve determ. by Charpy impact testing 2-67492
- steel stainless, dense powder metallurgical, prod. methods and mech. props. 2-69371
- steels, AISI 302, 304, 316, 347, C-precipitation influence on low temp. impact strength, corrosion, austenite stability 2-57508
- styrene-acrylonitrile copolymer, flake-filled, fracture mechanics (*Japanese*) 2-111291
- thermoplastics, relationship between Charpy and dart drop impact (*Japanese*) 2-88181
- thermoplastics, tensile impact resist., effect of weathering at different exposure angles 2-105309
- unidirectional fibre reinforced composites, fully and partially loaded, rate sensitive tensile impact props., test system 2-67684
- varnish coatings on metals, protective properties, inhibitors influence 2-67655
- Al alloys, impact bending fatigue testing, evaluation of dynamic stress intensity factor (*Japanese*) 2-111285
- B₂C, hot pressed, mech. props., effect of porosity and grain size 2-116543
- Be, impact response, hypervelocity, cratering 2-77894
- C fibre reinforced plastic disc, bursting and bulging 2-116520
- Cu fibre materials, sintered, high-porosity, physicomach. props. 2-83192
- α -Fe, rolled or hydroextruded, dislocation struct., brittleness and impact toughness meas. (*Russian*) 2-93560
- Fe-Mg, cast, nodular, mech. props. and cryst. struct., effect of heat treatment 2-83113
- Fe-P alloys, fracture mode and toughness, C effects 2-57484
- Ir-W-Th, DOP-26, Th-doped, weld metal grain struct. and mech. props. 2-99499
- Ni alloy, heat-resisting, EP-741P, fracture behaviour investig. by thermal microscopy, P/M alloys 2-67545
- Ni fibre materials, sintered, high-porosity, physicomach. props. 2-83192
- SiC yarn reinforced lithium aluminosilicate glass-ceramic, high strength and toughness 2-105298
- Ti, impact response, hypervelocity, cratering 2-77894
- Ti-Al-Cr-Mo-V, mech. props., statistical anal. 2-72763

IMPATT diodes

- GaAs, γ -ray irradi. effects on elec. and recombination props. 2-76501

impedance, acoustic *see acoustic impedance***impedance, electric** *see electric impedance***impedance, electric, measurement** *see electric impedance measurement***impedance, measurement, electric** *see electric impedance measurement***impedance matching**

- inhomogeneous matching layer with continuously changing acoustic impedance, impedance matching properties 2-109140
- RF sputtering discharge characteristics and power supply coupling conditions 2-57290

imperfections, crystal *see crystal defects***impermeability** *see permeability***impulse amplifiers** *see pulse amplifiers***impulse generators** *see pulse generators***impulse testing**

- air, oscillating lightning impulse voltage, breakdown behaviour of nonuniform electrode arrangements 2-97821
- diffusion-pump oil, Dow Corning type 704, vacuum flashover 2-91706
- impulse ratios of uniform and nonuniform field gaps in compressed gases 2-97820
- long air-gaps, long switching spark between electrode and ground (*Polish*) 2-76211
- low pressure spark gap Blumlein switch 2-91715
- polyethylene, low density films, prestressed, impulse breakdown strength 2-87670
- N-CCl₂F₂ mixtures, lightning and switching impulse breakdown in nonuniform elec. field 2-103551
- SF₆ insulation, impulse corona effects on subsequent breakdown 2-65790
- SF₆, oscillating lightning impulse voltage, breakdown behaviour of nonuniform electrode arrangements 2-97821

impulse voltages *see transients***impulse welding** *see resistance welding***impurities**

- for impurity vibrations *see "lattice localised modes" or "molecular vibrations in solids"*
- see also chemical analysis; crystal inclusions; crystal purification; diffusion in solids; impurity-defect interactions; impurity distribution; impurity electron states; interstitials; magnetic impurity interactions; phonon-impurity interactions; segregation; semiconductor doping*
- Al₅ superconductors, effect of impurities on thermodynamics 2-98802
- alkali halide:Ag(Cu), ligand relax., isotropic superhyperfine const. anal. 2-109816
- Anderson mixed valence impurity, static and dynamic susceptibility 2-76990
- antiferromagnet, nuclear spin relax. at ultralow temps. 2-72372
- benzophenone, doped, excitonic phosphorescence 2-110935
- charge density wave superconductors, impurity and fluctuation effects 2-82526
- commensurate-incommensurate transition with frozen impurities 2-103939
- conference, Linz, Austria (Sept. 1981) 2-89445
- crystal growth, impurity incorporation kinetics 2-86687
- crystal plate with step-like impurity atom distrib., surface relaxation 2-66337
- crystal with impurity Γ_8 term, Jahn-Teller states 2-71940
- crystallophosphors, effect of impurities on luminescent props. 2-82890
- defects, bound and unbound, pressure variation of Gibbs energy 2-98348
- diamond: Sn, cordency and compression effects on isomer shift of impurities 2-56989
- diamond:N₂, structural imperfection annealing, struct. 2-81766
- diamond, N aggregation kinetics 2-81809
- diamond, type Ia, N₂ detection at [100] platelets with EELS 2-103786
- diametric polar crystals, localised modes due to substitutional impurities 2-109932
- dielectric, solid, with at. or mol. impurities, adaptive optics approaches at 1.3 μ m 2-90997
- diffusion processes in semiinfinite electrically conducting media, contact phenomena influence 2-86921
- donor to acceptor energy transfer, arbitrary spatial distrib., high acceptor conc. (*Russian*) 2-82341

impurities continued

- donor-acceptor transfer, kinetic theory, polaron effect (*Russian*) 2-104271
- dry etching, recent trends for VLSI fabrication 2-116582
- EXAFS spectroscopy, conference, Boston, MA, USA (Nov. 1979) 2-74160
- ferroelectric phase transitions, Jahn-Teller impurities effect, soft mode contrib. 2-61843
- ferroelectrics, hydrogen bonded, electron spin-lattice relax., impurity dynamics 2-87577
- fibre optic materials, optical props. 2-60190
- fluoride heterovalent solid soln. with unidirectional solubility, impurity energy of soln. 2-71651
- Hastelloy alloy G, roles of ordering and impurity segregation as H-assisted crack propag. 2-57481
- II-VI semiconductors, impurities and imperfections (*Japanese*) 2-91950
- intrinsic molecules in bilayer membranes, lipid mediated interactions 2-83552
- ionic crystals, lattice distortion due to isovalent impurities 2-61002
- ionic crystals, negative-U centre form. due to multivalent impurities 2-61399
- IR fibre crystal materials, impurity effects 2-97130
- Ising model, two-dimensional, with impurity lattice bonds, two-point correl. function 2-89631
- latent heat storage materials, effect of impurities on melting temp. heat of fusion and sp. ht. 2-62503
- Laves phase, thermal stability, H sorption 2-87014
- metal layers, amorphous phase form. by mol. beam condensation, prep. and struct., review (*Russian*) 2-56381
- metals, FCC, dechannelling by defects and on lattice site location of H, review 2-66097
- metals, FCC, interstitial quantum tunnelling at low temp. 2-115468
- metals, impurity configurational fluctuations, scaling approach 2-56507
- metals, purity examination, by residual elec. resistivity method, review 2-116638
- microscopic hopping and continuum diffusion in vicinity of a defect 2-71696
- muon jump diffusion, depolarisation in presence of trapping impurities, stochastic model 2-92286
- Nafion polymer membranes, exchanged with Fe²⁺, Fe³⁺, and Eu³⁺, Mossbauer spectroscopy 2-97943
- nematic liq. cryst., impurity centres, order parameter distrib., Maier-Saupe model (*Russian*) 2-76307
- optically induced change in order parameter near second-order phase transition 2-103946
- organic energy conversion, ionised impurity induced photocarrier generation 2-99797
- organic glass, impurity dephasing by optical modes 2-86822
- oxide heterovalent solid soln. with unidirectional solubility, impurity energy of soln. 2-71651
- photogalvanic centres in crystals, models 2-110382
- polymers, impurity dephasing by optical modes 2-86822
- polyvinylcarbazole film, impurities and struct. effect on photolum. (*Russian*) 2-67092
- pseudospin-phonon system, isolated and isothermal susceptibilities 2-93120
- quartz, synthetic, defects, effect on vibr. characts. and resonator performance 2-99044
- random impurity electric dipole system, low temp. collective props., Ising model (*Russian*) 2-116136
- random mean spherical model, elec. resistivity, smeared phase transition, spin-electron interactions 2-77005
- reactor fuel pins behaviour, fuel impurity effect (*German*) 2-85151
- real crystals, equilib. distrib. of impurity atoms 2-66035
- refractory metals, hardmetals and special materials, trends, conf., Reutte, Austria (June 1981) 2-101115
- rhodamine 6G, ethanol soln., assoc., impurities effects. 2-105477
- semiconductor, Wannier-Stark ladder, impurity effects in strong elec. fields 2-76893
- semiconductor barrier structs., thermally activated carrier motion, charged impurity effect 2-115884
- semiconductor with impurity, exciton absorption spectra (*Russian*) 2-92485
- semiconductors, diamagnetism of two-electron deep impurity centres 2-104573
- semiconductors, heavily doped, impurity ion screening 2-104278
- semiconductors, impurity complex formation, theory 2-61017
- semiconductors, LCAO calcs. of photoionisation of deep centre 2-104304
- semiconductors, pulse laser and electron beam annealing, electron microscope characterisation 2-66051
- semiconductors, temperature depend. cyclotron resonance linewidth, influence of Landau level broadening 2-77378
- semiconductors, thin quantised filaments, charged impurities 2-103787
- semiconductors doped with 3d metals, light absorption perturbation theory 2-104828
- sink strengths, for high concs. of competing sinks 2-66038
- sintered solids, props. 2-116404
- solid electrolyte failure, electronic cond. increase, impurity effects 2-115837
- steel, austenitic stainless, refinement, for corrosion resist. improvement 2-72870
- steel, Cr-Mo, surface segregation of impurities (*Czech*) 2-116447
- steel, P grain boundary embrittlement, electronic model for alloying elements effect 2-105278
- steel, stainless, powder metallurgical, struct. condition, effect of different sintering environments 2-67254
- superconducting cylinder, thin-walled, effect of impurities on mag. field penetration 2-110533
- superconductor, mixed valence impurities effect on transition temp., sp.ht. discontinuity, and crit. field 2-61641
- superconductors, anisotropic, SDW state coexistence, energy gap struct. and nonmag. impurity effects calc. 2-87443
- superconductors, impure, crit. behaviour in 4-e dimensions 2-92823
- TCNQ salt, TSe-TCNQ, phase transitions and acceptor-stack doping 2-77134
- tetrabenz(o,a,c,d,j,m)perylene film, impurity controlled, crystn. rate, absorb. and fluorescence spectra study 2-56395
- tilt grain boundaries with substitutional impurities, atomistic study 2-115247
- transition metal cluster chemistry and implications for hydrogen embrittlement, alloy behaviour and metal catalysts 2-91832

impurities continued

- two-dimensional metal, quantum Hall effect, impurity and edge effects 2-61446
 wedge disclination anchoring by impurity atmosphere 2-76443
 Al, irradiated with Al ions, pure and He doped 2-86747
 Al-alloys, Mossbauer study of Fe impurities 2-56997
 Al-Cr dilute alloy, irradiat., self interstitial trap and clustering at impurities 2-76689
 Al-Mg-Mn-Zr-Ca-Ti, chem. comp. optimisation rel. to fracture toughness, Mn, Zr, Cr and Ti additions effect 2-77945
 Al-Zn-Mg, microhardness with technical impurities, development during two-step ageing treatment 2-93537
 Al_{1-x}Ga_xAs epitaxial layer, graded band gap, dopant impurity effects on carrier lifetime, dislocation density and internal stresses (*Russian*) 2-77215
 n-Al_{1-x}Ga_xAs:Te solid soln. LPE layers, carrier diffusion length, conc. depend., 77-300K (*Russian*) 2-56741
 AlN epitaxial films, cathodoluminescence and optical absorption 2-99195
 α -Al₂O₃, defect energetics, Mott-Littleton computational method 2-65987
 Al₂O₃, polymorphic transitions, influence of MgO and SiO₂ additives 2-111169
 α -Al₂O₃:Ni²⁺, US self-focusing 2-66134
 α -Al₂O₃:Y, isoelec. donor 2-98642
 Al₂O₃-SiO₂ mixtures, impurity effect on mullite and kaolinite 2-116450
 As₂Se₃:Au(Pt), vitreous, impurities location and valency, XPS and Mossbauer study 2-76320
 Au film, epitaxial growth on pure and doped NaCl and KCl substrates 2-115621
 BN with C impurity, ESR signals after high-temp. shock compression, reverse phase transitions, paramag. centres form. 2-56931
 BaF₂, impurity and interstitial clustering 2-86884
 BaF₂:La³⁺, thermal depolarisation studies 2-61817
 CO₂ TEA laser performance with high levels of O₂ contamination 2-102767
 CaCO₃, calcite, rhythmic crystn. in agar gel, impurity addition effect 2-55867
 CaF:Eu³⁺, annealing temp. and dopant conc., site selective spectroscopy, defect chemistry 2-104917
 CaF₂, impurity and interstitial clustering 2-86884
 CaF₂:La³⁺, thermal depolarisation studies 2-61817
 CaTiO₃, elec. cond., 800 to 1100°C, defect struct. 2-66554
 CdS, F⁻ centres and oxygen radicals, impurities effect 2-93006
 CdS single crystals grown from vapour phase, impurities and hexagonal spiral pits 2-76342
 CdTe, light scatt. by inhomogeneities, IR absorpt. and etching meas. 2-77543
 Ce_{0.7}La_{0.3}B₆, Kondo state, transport and mag. props. 2-56832
 Cs₃M₂Cl₅(Br₅) (M=Sb, Bi), doping effects, Mossbauer data and electronic props. 2-61007
 Cu, deuterium trapping by impurities 2-82007
 Cu²⁺ in defects obs. by channelling and perturbed $\gamma\gamma$ ang. correl. 2-81844
 Cu-C steel multilayer composite, dislocation density and diffusion processes study by thermo-EMF method 2-67381
 D₂, solidification temp., effect of Ne and ⁴He impurities (*Russian*) 2-56157
 Er,Pr_{1-x}Sb, impurity nearest-neighbour distances, EXAFS study 2-92957
 EuMo₆S₈, impurity phase supercond. under press., magnetisation meas. 2-92807
 Fe, lattice dilation of dissolved H₂ (*Japanese*) 2-56261
 Fe, oxidation at room temp., Al impurity effects 2-67632
 Fe phosphides in Fe powder, Mossbauer spectroscopy 2-116105
 Fe-Sb-Co(Mn)(V)(Ti), dil., impurity pair interactions, resist. and NMR meas. 2-82317
 Fe_{1-x}Co_xGe₂, 0≤x≤0.05, selective etching on dislocations 2-86669
 GaAs, doped with conducting inclusions, negative geometric magnetoresistance (*Russian*) 2-104517
 GaAs, impurity atoms and positron states, positron annihilation study 2-104996
 GaAs, LEC growth, donor impurities, photoluminescence evaluation 2-116230
 GaAs LPE layers, high-purity, residual impurity photoluminesc. studies 2-99164
 GaAs:C, site of substitutional C impurity, Fourier transform IR absorption study 2-91991
 GaAs:Cr, Fe liquid encapsulated Czochralski cryst., SIMS 2-115270
 GaAs:Te, Cu contamination during heat treatment, photolum. study 2-91993
 GaP, impurity atoms and positron states, positron annihilation study 2-104996
 GaP substrate, impurity outdiffusion by postgrowth annealing 2-115460
 GeSb, uniaxially compressed, bixcition-impurity complexes (*Russian*) 2-82242
 GeSn, cordency and compression effects on isomer shift of impurities 2-56989
 (GeTe)_{0.98}Bi_{0.02}Cu_{0.01}, ionic transport of Cu and thermo EMF 2-104068
 H₂, solid, creep at unsteady state, 1.8 to 12K (*Russian*) 2-56296
 H₂, solid, stability of impurity H atoms (*Russian*) 2-82069
 H₂, solidification temp., effect of Ne and ⁴He impurities (*Russian*) 2-56157
 He, liquid, liquid He, ESR spectra of trapped N atoms (*Russian*) 2-98934
³He-⁴He solid mixtures, dil., impurity interactions, press. depend. 2-71765
 HgCdTe, physics and chemistry, workshop, Minneapolis, MN, USA (Oct. 1981) 2-89437
 InP:Fe, semisolating, photocond. mechanism peculiarities (*Russian*) 2-104435
 InSb, residual impurities and inhomogeneities, galvanomagnetic meas. 2-110369
 KBr(l), cation size effect on ionic thermocurrents 2-72405
 KCl, γ -ray irradiat., impurity-vacancy dipoles, ionic cond. study 2-109790
 KCl:OH⁻ (Na⁺), heat capacity, 5 to 40K, effect of impurities 2-98301
 KCl:Pb²⁺, (100) and (111) face crystal growth rates, Pb²⁺ effects (*Russian*) 2-65897
 KCl-NaCl two-phase mixed cryst., etching obs. of impurity ion defects 2-55988
 KH₂PO₄:NH₄H₂PO₄, soft mode spectra and ferroelec. phase transition 2-57029
 La_{1-x-y}Ce_xY_y system, multiple supercond. transition temps. 2-98788

impurities continued

- LiF, cation size effect on ionic thermocurrents 2-72405
 LiF crystal, dielec. losses under deform. by conc. load 2-66984
 LiH, X-rayed at low temps., ESR studies of Mn²⁺ centre 2-98950
 α -Li₂O₃, doped, bulk photovoltaic effect and optically induced change of spontaneous polarisation 2-92694
 α -Li₂O₃, impurity distrib. in single crystal growth from soln. 2-71386
 MgO, cathodoluminesc. emission in SEM 2-110954
 MgO crystal, cathodolum., from dislocations, purity influence 2-77599
 Mo, yield point, neutron irradiat. and impurities effects, thermal activation anal. (*Russian*) 2-115333
 Mo:N,H, defect-gas impurity interactions, positron annihilation study 2-67142
 Mo-Zr, gaseous impurity effects on mech. props., interstitials role 2-57538
 MoSi₂, formation at Mo-Si interface, impurity effects 2-115580
 NaCl, cation size effect on ionic thermocurrents 2-72405
 NaCl:(Ca³⁺)(Sr²⁺), irradiated crystals, IR props. 2-99127
 NaCl:Ca²⁺ (Pb²⁺) single cryst., microindentation and flow limit, doping effect (*Russian*) 2-71552
 NaCl:Pb, Mn, excitation and emission spectra 2-104952
 NaCl-KCl crystals, Ca doped, etching studies of non-dislocation pits 2-76482
 Nb, electromigration of Nb-95 and Ta-182 (*French*) 2-71729
 Nb:H₂, ultra small angle X-ray and neutron scatt. 2-86521
 Nb-Ge film, DC magnetron sputtering and supercond. props. meas. 2-72097
 Nb-Ti, anelastic relax. due to Ti-H complexes, internal friction spectra 2-111222
 Nb-Zr, gaseous impurity effects on mech. props., interstitials role 2-57538
 Nb₃Al film, sputter deposited on SiO₂, AES anal. 2-92383
 NbC₂, single cryst., prep. struct. and mech. props. 2-98108
 Ni-base superalloy, Inconel 600, ultra-pure; H embrittlement, effect of C, P, Sn and Sb additions 2-67525
 NiO, occluded gases within microscopic cavities, Raman spectra and gas-phase chromatography 2-61013
 Pb-In(Sn)(Te), liq. dil., activity coeff. of O, impurities effect 2-99700
 Pb₂Ge₂O₇:Gd³⁺, elec. field effect and model of triclinic paramag. centres 2-65912
 (PbSe)_{1-x}(SnTe)_x, influence of In on props. 2-110238
 Pb(Zr,Ti)O₃, impurity doping effects 2-86689
 Pb-SiO₂:Na MOS device, H₂ induced flat-band voltage shift 2-61607
 Pt alloys, dilute, neutron irradiated, influence of impurities and radiation doping on defect production 2-76511
 Pt alloys, thermal and fast neutron irradiated, interstitial-impurity reactions during stage I 2-61041
 Pt, neutron irradiat., stage I recovery, effect of impurity atom size 2-103837
 Pt, thermal and fast neutron irradiat., Stage II recovery 2-103831
 Pt-Cu(Au), thermal and fast neutron irradiat., Stage II recovery 2-103831
 Rh, surface (111), oxidation, impurity effects, EELS and AES studies 2-111353
 SeCo₂H_{1.4}, Laves phase, thermal stability, H sorption effects of U and Ti doping 2-87014
 Si Czochralski grown crystals, microdefects, and their appl. as gettering sites 2-91992
 Si, Czochralski-grown, effect of oxide precipitates as minority-carrier lifetime 2-66568
 Si epitaxial layer, photoluminesc. anal. for characterisation of shallow impurities 2-93242
 Si, gettering of stacking faults and heavy metal impurities, appl. to semiconductor device and IC manuf. (*Russian*) 2-66019
 Si, heat treated wafers, metal decorated haze microdefects, TEM and energy dispersive X-ray anal. 2-91946
 Si, impurity defect struct. form. by ion implantation, amorphous and cryst. comparison 2-103790
 Si, precipitation of O, effect of C impurities 2-66240
 Si, Sb diffusion, anomalous conc. profiles due to local precipitation 2-76741
 Si:C, effect of C on elec. props. of devices, impurity-defect interaction investig. 2-91994
 Si:C, O, reactor neutron irradiat. effect on C impurities 2-109839
 Si:C, polycrystn., C influence in resistivity and grain size 2-66547
 Si:H,F, amorphous film, NMR and ESR study 2-93003
 Si:N, photoluminesc. anal. for characterisation of shallow impurities 2-93242
 Si:O, incorporation of O impurities in CVD 2-86700
 Si:O, induced recombination centres, struct. and formation kinetics, expt. study 2-86707
 Si:O, O diffusion and thermal donor formation, review 2-82021
 Si:P,B amorphous sputtered solar cell, dopant impurity effects 2-62475
 Si:P₂(P₁), multiple scatt. X α mol. cluster model of complex defects 2-76977
 Si:Sn, cordency and compression effects on isomer shift of impurities 2-56989
 β -Si-Al-O-N ceramics, translucent, effect of impurities and hot pressing temp. 2-57495
 Si-SiO₂, thermal oxide, γ -irradiat., defects and impurities, EPR study 2-98158
 SiC:B, Al epitaxial layers, lattice deformation and perfection, X-ray study 2-92406
 Si₃N₄, structure form. mechanism 2-103708
 Si₃N₄:H, amorphous plasma deposited film, AES and EELS study 2-71816
 SiO₂, anodised surface layers, SIMS study 2-105352
 SnO₂, substitutional impurities elec. activity 2-110345
 SnO₂:F,Sb film, spray coated, dopant effects on elec. cond. and optical absorpt. props. 2-72088
 SrF₂, impurity and interstitial clustering 2-86884
 SrF₂:La³⁺, thermal depolarisation studies 2-61817
 SrO with transition metal impurities, energy states 2-71903
 SrTiO₃, antiferrodistortive phase transition, impurity effect 2-82793
 Ta-Si Schottky barrier structures, effect of interfacial impurities 2-82435
 β -Ta₂O₅, defect struct., non-stoichiometry, thermogravimetry study 2-91953
 Ti, oxidation of C and S surface impurities 2-72882
 Ti-Al-Mo and Ti-Al-V-Sn-Zr, static strength, gas absorpt. influence 2-88152
 TiO₂, defect energetics, Mott-Littleton computational method 2-65987

impurities continued

- TiO₂, electrophys. and photoelectrochem. props., uncontrolled. impurities effects (*Russian*) 2-93799
 Ti³⁺ impurity luminescence, Jahn-Teller model 2-77582
 V, hydrogen permeation, surface impurity layer effects 2-85241
 V-H₂, ultra small angle X-ray and neutron scatt. 2-86521
 W, carburisation, effects of trace impurities (*German*) 2-105113
 W-Ni-Fe, sintering, effects of impurities (*German*) 2-105103
 WC-Co (10%) hardmetal, sintering, prep. and props. (*German*) 2-105114
 ZnS:Fe, CVD polycrystalline films, incorporation of Fe impurities 2-116379
 ZnSe LEDs, effect of residual impurities 2-57183
 ZnSe, single cryst., photoluminesc. spectra, Bi and Sb impurity effects 2-72541

impurity and defect absorption spectra of inorganic solids

- alkali chlorides: Cu, off-centre instability of Cu⁺ ions due to charge-transfer excitation 2-67085
 alkali halide crystal optical losses in middle IR band, influence of microinclusions 2-87800
 alkali halide crystals, spectral hole burning, localised vibrational modes in cryst. solids 2-104919
 alkali halide laser windows, photoacoustic spectroscopy of adsorbed surface impurities 2-60192
 alkali halides: BH₄⁻ (BD₄⁻), vibr. studies by IR and Raman spectra 2-82841
 alkali halides: FHF⁻, IR spectra 2-82843
 alkali halides: SbF₆⁻, IR spectra 2-82842
 alkali halides, F₂-centres, absorption splitting 2-57134
 alkali halides, F-centres absorption spectrum, surface polarisation effects, theoretical anal. 2-77556
 amorphous semiconductors, photoinduced midgap absorpt. 2-72528
 borate glass, dye mol. spectral probe, using photochemical hole burning 2-108974
 diamond: N, vacancy-related colour centres, spectroscopic study 2-98082
 diamond, electron-irradiated, annealed, 1450 cm⁻¹ IR absorption 2-110847
 diamond, GR1 centre, vibronic model, rel. to MCD spectrum 2-67087
 diamond, synthetic, anomaly in IR absorption spectrum 2-93236
 feldspars, X-ray irradi. defects, thermoluminesc. and optical absorpt. study 2-110958
 fluorophosphate glass: Co²⁺, absorption spectra of Co²⁺ meas. at solid-liquid transformation 2-104924
 II-VI semiconductors, optical props. of 3d transition metals 2-110286
 inert gas impurities in alkali hosts, absorption, emission and XPS line shapes, model calc. 2-116216
 laser window materials, IR wavelength modulation spectroscopy 2-60191
 MnCl₂:Co²⁺, IR absorpt. spectra 2-110897
 optical coating, small absorptions characterisation rel. to impurities 2-65165
 phenacetylene, fast neutron irradi., surface damage obs. 2-81830
 polyacetylene, f-sum rule for absorpt. spectra, solitons 2-87812
 α-quartz, ion irradi., surface polaritons, ATR study 2-57133
 quartz crystal growth in NaCl, KCl solns. and pure water, low temp. IR absorpt. 2-99316
 quartz point defects, acoustic loss, IR and magnetic resonance results 2-98084
 quartz resonators, high temp. resonance loss and IR characterisation 2-99137
 ruby cryst., additional absorpt. spectra irradi. with fast electrons and γ-rays (*Russian*) 2-82880
 semiconductors, deep impurity centre photoionisation for case of photon energy deficit, light absorption coeff. 2-61934
 semiconductors, neutron irradi., deep level transient spectroscopy 2-115695
 transition metal compounds, inner core excitation spectra, absorpt. spectra 2-72598
 AgBr:Rh³⁺, Raman spectroscopy study of Rh defect centre 2-99118
 α-Al₂O₃ cryst., additional absorpt. spectra irradi. with fast electrons and γ-rays (*Russian*) 2-82880
 Al₂O₃(Fe), temperature depend. of Fe acceptor level 2-110898
 Al₂SiO₅(F,OH)₂, topaz, IR obs. of neutron irradi. crystals, hardness changes 2-61040
 (As₂Se₃)₁₀₀-Ge, glass, elec. cond. and thermoelectric power, adiabatic pot. 2-92610
 Au-Co(V), dil. alloy, impurity optical absorpt. meas. 2-99160
 BaCl₂:Sn, absorpt. spectra of S²⁻-configuration Sn ion 2-77553
 Ba(ClO₄)₂·3H₂O, EPR and optical absorpt. of ClO₄⁻ 2-93012
 BeAl₂O₄:Cr³⁺, alexandrite, excited-state absorpt. in lasing wavelength region 2-85973
 Bi₂GeO₁₀:Cr, light induced charge transfer processes, optical absorption and EPR 2-99159
 Bi₂Si₂GeO₁₀, single crystal, optical descript. 2-110894
 Bi₂SiO₁₀:Cr, light induced charge transfer processes, optical absorption and EPR 2-99159
 Bi₂SiO₁₀:Nd³⁺, single crystals, energy level spectroscopic study 2-67110
 Bi₂SiO₁₀:Nd(Fe), edge absorpt. spectrum, optical heterogeneities, X-ray spectral microanalysis 2-67091
 Bi₂XO₁₀ (X=Ge, Si) energy levels in forbidden zone (*Russian*) 2-61930
 CaF₂:Eu³⁺, annealing temp. and dopant conc., site selective spectroscopy, defect chemistry 2-104917
 CaO:Eu³⁺(Er³⁺)(Pr³⁺), site selective spectroscopy, UV and fluorec. study 2-110895
 Ca₁₀(PO₄)₆F₂, fission track radiation damage, diffusion to surface, defect absorpt. study 2-99162
 CdF₂:Eu, defect chem., site selective spectrosc. obs. 2-104918
 CdF₂:Eu, localised impurity excited states degenerate with cond. band, absorpt., cond., thermoluminesc., and ESR study 2-56473
 CdGa₂S₄, semicond., localised states, impurity absorption and photocond. spectra 2-110298
 CdI₂:Ni²⁺(Co²⁺), phonon side bands in absorpt. spectra 2-99161
 Cd_{1-x}Mn_xSe, electric-dipole spin reson. of bound electronic states 2-110820
 CdP₂, wide band semiconductor, two-photon and two-step transitions 2-108934
 CdS, heavily doped, exciton absorption band broadening, Green's function calc. 2-77558
 CdS:Cu, electron irradi. prod. defects interaction with impurities, elec. and optical props. study 2-56035
 CdS(Se):Ni²⁺, optical spectra, isotope splitting const. 2-57163
 impurity and defect absorption spectra of inorganic solids continued
 CdS_{1-x}Se_x:Te, isoelectronic impurity-exciton interactions, visible spectra study 2-61395
 CdSe, absorpt. edge shift, EM wave polarisation effect (*Russian*) 2-104925
 CdTe, light scatt. by inhomogeneities, IR absorpt. and etching meas. 2-77543
 CdWO₄:Ni²⁺, electronic ligand-field spectrum meas. 2-72526
 CsBr(Cl):Ag⁺, far UV spectra, fluorescence and optical bleaching studies 2-110901
 Cs(ClBr):X-ray irradi., colloid form., optical props. 2-56030
 CsI:SO₄²⁻, cryst., SO₄²⁻ conc. and separation factors, spectrophotometric meas. 2-57132
 Cs₂NaErCl₆:Er³⁺, optical absorpt. spectra and crystal field anal. 2-82882
 Cs₂ZnCl₄:Ni(II), polarised electronic spectra at temps. between 300 and 10K 2-77557
 CuO-CaO-P₂O₅ glass, IR absorpt. spectra, CuI addition influence 2-116213
 Er³⁺ impurity ions in fluoride host lattices, optical props. 2-93276
 GaAs, bulk Bridgman crystals, O related gettering of Si during growth 2-61005
 GaAs, electron-bombarded, IR absorpt. spectra, 'shallow' levels 2-72507
 GaAs, grown by Bridgman method, props. 2-98675
 GaAs, IR absorption of 78 meV acceptor 2-77552
 GaAs, IR absorption props. at 10.6 μm, photoacoustic spectroscopy (*Chinese*) 2-93230
 GaAs, radiative recomb. and light absorpt., dislocations effect 2-104962
 GaAs:Bi, electron irradiated, IR study of annealing 2-56033
 GaAs:Cr, deep level optical spectroscopy 2-71902
 GaAs:Cr, exciton and subband-gap absorption, quenching and enhancement, acoustoelectric volt. spectroscopy 2-82235
 GaAs:Cr, impurity levels, elec. cond., IR spectra and photocond. study 2-56485
 GaAs:Cr, optical absorpt. spectroscopy on Cr-related defects 2-57129
 GaAs:Cr, semi-insulating, impurity modes, far-IR Fourier transform spectroscopy obs. 2-116214
 GaAs:Cr²⁺, zero-phonon optical absorpt. lines, dynamic Jahn-Teller model 2-57130
 GaAs:V, photoluminesc., optical absorpt., and ESR study 2-82916
 GaAs_{1-x}P_x:Te(Si), donor states, impurity optical absorpt. spectra study 2-82287
 GaP:Bi grown by LEC technique, IR absorpt. band, resonant and gap modes 2-99157
 GaP:Cr, optical absorpt. spectroscopy on Cr-related defects 2-57129
 GaP:D, electronic struct. and optical props. 2-92518
 GaP:V, photoluminesc., optical absorpt., and ESR study 2-82916
 Ga₂S₃, amorphous film, optical props. (*Russian*) 2-62007
 GaTe, electrical and optical props. (*Russian*) 2-57189
 GdAlO₃:Cr³⁺, optical props. meas. in paramag., antiferromag. phases 2-93275
 Gd₂Ga₂O₇:Nd crystals grown by Czochralski method, Nd effective distrib. coeff. 2-76481
 n-Ge, far IR obs. of D⁻ band 2-67035
 Ge, radiation defects, light sensitivity and space orientation, IR spectra study 2-87826
 HfSiO₄:V³⁺, ESR and absorpt. spectra 2-66902
 Hg_{1-x}Cd_xTe, resonant states, influence on optical props., three-band Koster-Slater model 2-56468
 Hg_{1-x}Cd_xTe:Mg, ion implanted, elec. and optical props. from IR refl. spectra 2-116218
 InP, single crystals, liq. encapsulated Czochralski grown, photolum. and IR absorption 2-57144
 InP:Mn, impurity states electronic struct., ESR and optical absorpt. study 2-82285
 In₂S₃, amorphous film, optical props. (*Russian*) 2-62007
 n-InSb, far IR studies of bound and free carriers as function of hydrostatic press. 2-93238
 KBr, Raman scatt. induced by V-centres 2-67037
 KBr:Eu, with Z-centres, narrowband IR luminesc. and absorpt. spectra obs. 2-116245
 KBr:In³⁺, band luminescence, two-photon spectroscopy 2-110939
 KBr:In(Tl), pressure induced absorpt. spectra changes 2-93235
 KBr:Na, thermo- and photostimulated recomb. of defects, spectra studies 2-110959
 KBr:Sn²⁺, colour centres, optical absorpt. line shapes, calc. 2-67089
 KBr:Sn²⁺, cryst., absorpt. spectrum, annealing effects 2-87821
 KBr:Ti³⁺, X-ray irradi. induced defects, optical and TSC meas. 2-81825
 KBr:Ti³⁺-type phosphors, quadratic Jahn-Teller effect in line shapes of A-emission and A-absorpt. bands 2-87825
 KCl, cryst., electron injection, role of space charge on F centre focus 2-65991
 KCl crystals, γ irradi. influence on absorpt. coeff. at CO₂ laser radiation wavelength 2-87828
 KCl:Ca(Sr)(Eu), with Z-centres, narrowband IR luminesc. and absorpt. spectra obs. 2-116245
 KCl:Eu, F-centre colouring 2-109791
 KCl:Eu²⁺, γ-irrad., optical, EPR, and ITC meas. 2-109831
 KCl:Pb, radiation kinetics during intense excitation in A absorpt. band 2-110932
 KCl:Pb²⁺ excited in A absorpt. band, time resolved spectra 2-104921
 KCl:PbCl₂:X-ray irradi. V_F centres, optical production, thermoluminesc., ESR and light absorption study 2-57194
 KCl:SO₄²⁻, cryst., SO₄²⁻ conc. and separation factors, spectrophotometric meas. 2-57132
 KCl:Sr, interstitial centres and thermoluminescence 2-72565
 KCl-KBr mixed cryst., colour centres, Mollwo-Ivey relationship 2-61933
 KClO₃, cryst., photolysis, defect form., absorpt. and ESR study 2-67757
 KClO₃:MnO₂, reson. Raman profile line shapes from optical absorpt. data 2-93233
 KLi(In)Ti, pressure induced absorpt. spectra changes 2-93235
 KLiNO₃, gap mode, half-width and freq. shift, IR absorpt. study 2-56134
 KLiOH⁺, electrochromism and paraelectric alignment 2-104848
 KLiSn²⁺, cryst. field effects, visible-UV study 2-72523
 KLiSn²⁺, spectral line shape, visible-UV study 2-72524
 KLiTi³⁺ crystal, optical absorption induced by intense laser radiation 2-87829
 KLi(Br)(Cl)NO₃, UV irradi., NO₃⁻ photochem. transformation obs. 2-93237
 KNO₃:NO₂⁻, absorpt., excitation and luminesc. spectra 2-72544

impurity and defect absorption spectra of inorganic solids continued

- LaCrO₃:Sr(Ti) perovskite, IR spectra assignments and interpret. 2-93231
 LaF₃:Gd³⁺, two-photon absorption in Gd³⁺ 2-57128
 LaF₃:Gd³⁺, two-photon absorption, Judd-Ofelt theory 2-61935
 LaF₃:Gd³⁺, two-photon absorption lines, selection rule violation, anisotropy and anomalous intensity 2-77555
 LaF₃:Pr³⁺, interaction strength of weakly coupled pairs measured by a two laser spectroscopy technique 2-82881
 β-La₂S₃:Nd, Ce, efficient energy transfer from band excitation to Nd³⁺ 2-67102
 LiF crystals, with colour centres, passive shutter appls., residual losses 2-81061
 LiF, laser action and spectra of M-centres 2-75580
 LiF:U, fluoresc. and MCD spectra 2-57160
 LiGaO₃:Cr³⁺, tetrahedral coordination, energy levels, absorpt. spectra 2-67088
 α-La₂O₃:Cr³⁺ luminescence and absorpt. spectra 2-82908
 α-LiO₂, impurity distrib. in single crystal growth from soln., impurity absorption obs. 2-71386
 LiKSO₄:Cr³⁺, optical absorpt. and EPR spectra 2-116212
 LiNaSO₄:Cr³⁺, optical absorpt. and EPR spectra 2-116212
 LiNbO₃, foreign cation incorporation, IR absorpt. investigation 2-116211
 LiNbO₃:Fe, cryst., absorpt. spectra, γ-ray effects (*Russian*) 2-93232
 Li₂O, neutron and γ-irrad., defect production, optical absorpt. study 2-86737
 Li₂O-P₂O₅:UO₂²⁺ glass, energy levels, absorpt. and fluoresc. study 2-77565
 LuPO₄:Nd³⁺(Eu³⁺)(Er³⁺), IR absorption spectra 2-87822
 LuPO₄:Pr³⁺(Nd³⁺), IR spectra, Zeeman effect and fluoresc. obs. 2-72522
 Mg₂Al₂Si₂O₁₀:TiO₂, changes in spectral props. at initial stages of crystn. 2-72529
 MgCl₂:Fe²⁺, Co²⁺, optical absorpt. spectra 2-93234
 MgCl₂:Fe²⁺(Co²⁺), optical absorpt. spectra 2-93234
 MgWO₄:Ni^{II}, electronic ligand-field spectrum meas. 2-72526
 NH₄MgPO₄:Ni²⁺·6H₂O, X- and γ-irrad. damage, EPR and absorpt. spectra study 2-57135
 NaCl crystals, γ irrad., influence on absorpt. coeff. at CO₂ laser radiation wavelength 2-87828
 NaCl:Mn, γ and X-ray irrad. charge compensation thermoluminescence and optical absorption spectra 2-61988
 NaCl:Pb²⁺, yield stress, solid soln. precip. and dissolution effects, IR absorpt. study 2-57366
 NaCl:Sm, thermolum. and optical absorption studies of Zi centres 2-72568
 NaCl:Sr, Pb²⁺, luminescence and absorpt. spectra 2-72547
 NaCl:Sr(Ca)(Cd), Pb, clustering processes, use of Pb²⁺ as optical probe 2-57131
 NaClO₄, cryst., photolysis, defect form., absorpt. and ESR study 2-67757
 NaF:Cu⁺, single cryst., UV absorpt. and fluoresc. study 2-67084
 NaF:Li, single crystal, stability of electronic colour centres 2-91958
 NaF:U, fluoresc. and MCD spectra 2-57160
 NaNO₂:NO₂, luminescence spectrum fine struct. 2-87841
 Na₂O-CaO-SiO₂:UO₂²⁺ glass, energy levels, absorpt. and fluoresc. study 2-77565
 Na₂O-PbO-SiO₂:Fe³⁺ glass, spectroscopic behaviour of Fe³⁺ 2-77554
 Ni²⁺ impurity ions in fluoride host lattices, optical props. 2-93276
 Os complex, (Os(bpy))₃²⁺, symmetry reduction in excited states, photo-selection data 2-93241
 Pb₂Ge₂O₁₁:Nd³⁺, cryst. growth and spectroscopic props. 2-99178
 Pb₂:Ga(In), exciton spectra, refl. and photoluminesc. spectra 2-67118
 Pb₂:Ni²⁺, phonon side bands in absorpt. spectra 2-99161
 PbO-SiO₂ glasses, nonlinear colouring and destruction under multiphoton absorpt. conditions 2-108933
 RbBr:Mg²⁺, optical absorption, thermolum. and emission studies 2-61986
 Rb₂CrCl₆:Mn²⁺, ionic ferromag., impurity induced absorpt. bands 2-110896
 RbI:Eu²⁺, thermoluminescence and optical absorpt., effect of γ-irrad. 2-57192
 Ru complexes, (Ru(bpy))₃²⁺, (Ru(bpy)(py))₂²⁺ and (Ru(phen))₃²⁺, symmetry reduction in excited states, photo-selection data 2-93241
 Si, electron irradiated, uniaxial stress anal. of 0.79 eV vibronic band 2-67019
 Si, film, amorphous, annealing behaviour of spin density and optical gap, effect of O contamination 2-87735
 Si, Fourier transform IR spectra obs. of temp. depend. of O impurity 2-116215
 Si, impurity scatt. within electron-hole liq., far IR and millimetre wave studies 2-99110
 Si, neutron irrad., electronic and vibr. spectra of defects 2-115299
 n-Si, neutron irrad., photoexcitation props. of IR active defects 2-115694
 Si:Al, neutron irrad., IR absorption by radiation defects 2-116217
 Si:B, IR absorption spectrum 2-77503
 Si:B, ion implanted, radiation damage production 2-61009
 Si:B(C), electron irrad. defect accumulation kinetics and point defect annihilation 2-98153
 Si:Co, Czochralski grown, donor form. by annealing at 700°C 2-110283
 Si:Ga, float zone cryst., neutron irrad., X-centre formation, expt. study 2-98162
 Si:Ga(In), impurity IR excited-state lines 2-82883
 Si:H, amorphous, gap-state absorpt. meas. 2-87827
 Si:H, amorphous, H determ., IR absorpt. meas. (*Japanese*) 2-71490
 a-Si:H, Ga(As), ion implanted, absorpt. and photocond. spectra 2-115820
 a-Si:H, P, photoinduced absorpt. in picosec. range due to deep hole traps 2-72527
 a-Si:H, reassessment of vibr. spectrum 2-57136
 a-Si:H:B(P) IR absorption spectra, effects of annealing 2-99156
 Si₃N₄, amorphous, prep. from SiH₄-N₂-H₂ mixture and elec. resist. and IR absorpt. meas. 2-93444
 a-Si:H film, annealing effects on ESR, elec. and optical props. 2-66588
 a-Si:H films, SAW attenuation, paramag. defects, IR, ESR and SEM studies 2-110123
 Si:H₂, neutron irrad., defect states from IR absorpt. (*Chinese*) 2-110279
 Si¹⁶N, low energy implantation, material composition, oxidation resist. and elec. characts. 2-86694
 Si₂O₃:C, Czochralski grown, O related donors, 700 to 800°C, expt. study 2-56469
 Si₂O₃:Mg influence of Mg on IR absorpt. and elec. cond. props. 2-87258
 Si:P, highly doped, metal-insulator transition, optical and precursive props. 2-72038

impurity and defect absorption spectra of inorganic solids continued

- Si:P, ion implanted, wavelength modulation spectrum 2-104916
 Si:S, impurity related defect centres, DLTS and optical absorpt. study 2-71919
 Si:Se, donor level photoionisation cross-sections, IR spectra and photocond. study 2-56484
 Si:Sm, IR absorpt. spectra, 1.8 μm absorpt. band, annealing effects 2-57137
 Si-Ge-B amorphous film, glow discharge deposited, elec. cond., optical absorpt. and EPR study 2-71965
 SiC (6H), vacancy deep levels traps, EPR, optical absorpt. and Hall effect study 2-56483
 SiC, electron irrad., band gap changes 2-92460
 Si₃-C₃ amorphous film, NMR and IR spectra study 2-77389
 Si₃-Ge₃, amorphous, optical props. and photoconductivity 2-104920
 SiO₂ glass, OH ion distrib. profile, laser absorpt. meas. 2-61932
 SiO₂ silica optical fibre waveguides, radiation damage at long wavelengths 2-55335
 SiO₂, vitreous, absorpt. band at 242 nm 2-104922
 SiO₂, vitreous, with small OH conc., absorpt. by 3D impurities, thermo-optical interferometric study 2-104923
 SiO₂:Al, vitreous, radiation colour centres, multiple nature, ESR and optical absorpt. study 2-72348
 SiO₂:F, vitreous silica optical fibre preform, Raman spectra anal. 2-65382
 n-SnO₂-p-GaTe heterojunction, electrical and optical props. (*Russian*) 2-57189
 SrCl₂:O₃²⁻, EPR and Raman spectroscopy investig. 2-56928
 SrTiO₃:Cr³⁺, photoelectronic and optical props. 2-82402
 ThBr₄:U⁴⁺, absolute oscil. strength determ. 2-61859
 ThBr₄:U⁴⁺, incommensurate, optical absorption spectrum, lineshape anal. 2-110899
 ThCl₄:Pa⁴⁺, absorpt. and emission spectra, spin-orbit and crystal field parameters 2-99158
 ThF₄ film, absorption coeff. caused by impurities 2-65165
 ThGeO₄:V⁴⁺, ESR and absorpt. spectra 2-66902
 ThSiO₄:V⁴⁺, ESR and absorpt. spectra 2-66902
 WO₃, amorphous film, colour centres, optical absorpt. and EPR study 2-66492
 WO₃:P₂O₅ glass, colour centres, optical absorpt. and EPR study 2-66492
 YAG:Cr³⁺, Czochralski grown, colour centres, optical absorption spectra study 2-91959
 YAG:Er³⁺, energy levels of Er³⁺, absorpt. and fluoresc. spectra 2-116252
 YAG:Nd, absorpt. and stimulated emission cross sections, nonreciprocity due to vibronic interactions 2-82879
 YAG:Nd crystals, radiation colour centres rel. to growth defects, absorpt. and luminesc. obs. 2-71445
 Y₂O₃:Ce³⁺(Sm³⁺)(Dy³⁺)(Yb³⁺), energy levels, cryst. field anal., fluoresc. and IR study 2-72534
 Y₂O₃:Pr³⁺(Tb³⁺)(Ho³⁺), optical absorpt. and fluoresc. spectra, crystal field anal. 2-72525
 YPO₄:Pr³⁺(Nd³⁺), IR spectra, Zeeman effect and fluoresc. obs. 2-72522
 ZnCl₂:Co²⁺, glass, absorption spectra of Co²⁺ meas. at solid-liquid transformation 2-104924
 ZnO(S):Ni²⁺, optical spectra, isotope splitting const. 2-57163
 ZnP₂, wide band semiconductor, two-photon and two-step transitions 2-108934
 ZnS:Fe, CVD polycrystalline films, incorporation of Fe impurities 2-116379
 ZnSe, wide band semiconductor, two-photon and two-step transitions 2-108934
 ZnSe:Al, IR absorption and defects 2-87823
 ZnWO₄:Ni^{II}, electronic ligand-field spectrum meas. 2-72526
 ZrSiO₄:V⁴⁺, ESR and absorpt. spectra 2-66902
- impurity and defect absorption spectra of solids**
 see also *impurity and defect absorption spectra of inorganic solids*
 Coulombic interaction of electrons in impurity centres, covalent attenuation and anisotropy 2-61392
 ethanol glass, dye mol. spectral probe, using photochemical hole burning 2-108974
 impurity band broadening in crystals with defects 2-67090
 1-indanone single cryst., Stark effect of lowest triplet states 2-104321
 inhomogeneous solids, distribution function for transition freqs., impurity spectra 2-110900
 insulating crystals, defects, conf., Riga, USSR (May 1981) 2-68967
 polyacetylene:AsF₆, soliton pinning mode. Fourier transform IR study 2-93175
 polyacetylene, lightly doped, optical absorpt. spectrum, nonsoliton theory 2-110887
 potassium hydrogen maleate:Cu²⁺, EPR and optical absorpt. spectra, spin Hamiltonian parameters 2-98948
 rhamnose single cryst., X-irrad. at 4K, absorpt. spectrum of trapped electrons 2-87824
 semiconductor, optical spectra of interacting donors, localised and delocalised characters 2-67086
 semiconductor films, quantized, light absorpt. by two-photon transitions in neutral deep impurity centres 2-77611
 semiconductors, optical absorption by bound excitons, exchange and spin-orbit effects 2-110263
 TCNQ salt, N-n-propylquinolinium(TCNQ); powders, pure and irrad., IR spectra 2-93189
 trans-polyacetylene, density of states, elec. cond., optical absorpt. and EELS calc. 2-77026
 two-well adiabatic pot. impurity centre, relax. and optical processes calc. 2-61931
 zero-phonon line profile in Mossbauer, optical spectra, theory 2-104784
- impurity clustering** see *segregation*
impurity-defect interactions
 see also *impurity-dislocation interactions; impurity-vacancy interactions*
 anelastic relax. of self-interstitial-solute atom complex 2-56082
 BCC metals, radiation damage, Mossbauer spectroscopy study 2-103808
 broadening of impurity bands in crystals with defects 2-67090
 charged particle propag. in crystalline solids, defect effects, review 2-81818
 film growth, ion bombard. implantation of impurity atoms, diffusion and defect interaction study 2-55997
 inhomogeneous solids, distribution function for transition freqs., impurity spectra 2-110900

impurity-defect interactions continued

- ionic crystals, point defect pair relax. modes, approx. solns. for three-shell model 2-61016
 metal, irradiated, recovery during second stage of annealing (*Russian*) 2-62138
 Al, plastically deformed, lattice defect trapped at In impurities, PAC study 2-92022
 Al:D, defect trapping of implanted D 2-92020
 Al-Co dil. alloys, damage rate and recovery meas. 2-76488
 Al-Fe, dil. tilt boundary detachment from impurity 2-81798
 Al-Mg(Fe), dil., electron irradi., self-interstitial-impurity complexes, internal friction study 2-56007
 CdS:Ag, Ag solid solubility meas. 2-56200
 CdS:Cu, electron irradi. prod. defects interaction with impurities, elec. and optical props. study 2-56035
 Cu-In, dil., electron irradi., self-interstitial-impurity complexes, internal friction study 2-56007
 Fe-Al(V)(Si), dilute alloy, electron irradi., impurity-interstitial trapping sites, mag. aftereffect spectra study 2-56895
 GaAs dislocation-free crystal prod. by doping, necking procedure in LEC growth 2-76337
 GaAs:Cr, O, ion implanted, Cr redistribution and Cr-defect-O interactions, SIMS and TEM study 2-98149
 GaAs:Cr, Se, hot implanted, effects of damage-impurity interaction on elec. props. 2-71990
 GaAs:In, crystals and films, elec. props., isovalent impurities effect 2-82286
 GaAs:Sb, crystals and films, elec. props., isovalent impurities effect 2-82286
 GaAs:Si, Sn epitaxial films, double doping effect on defects 2-76867
 n-GaAs(Sb), 1.5 MeV electron irradi., defect levels, DLTS study 2-92508
 Ge:Cu, quenched, Cu related shallow acceptor, hole density temp. depend. study 2-92509
 Hb-Hf, dynamic strain aging, 20 to 900°C (*French*) 2-57377
 Mo:He, radiation damage during HVEM, He effects 2-103823
 NaCl:Ca²⁺, low temp. soln. hardening due to lattice distortion around impurity-vacancy pairs 2-98077
 NaCl:Ca²⁺, MFP of dislocations, NMR study 2-109807
 Nb, hardening stages, irradi. with 14 MeV neutrons and 16 MeV protons 2-93521
 Ni:D⁺, ion implanted, impurity defect trapping, ion beam anal. studies 2-81812
 Ni:He⁺, D⁺, ion implanted, D trapping, ion beam anal. studies 2-81813
 Si, epitaxial stacking faults, elec. props., crystallographic struct., interaction with point defects 2-92379
 Si, neutron irradi., electronic and vibr. spectra of defects 2-115299
 Si:B, defect-impurity complexes, ion channelling study 2-71534
 Si:B, proton irradi., impurity distrib. and diffusion 2-61203
 Si:C, effect of C on elec. props. of devices, impurity-defect interaction investig. 2-91994

impurity-dislocation interactions

- see also dislocation locking; dislocation pinning
 K₂Cr₂O₇, growth morphology, by solvent evaporation method 2-91835
 oscillating kink-mobile point defect interaction and resulting internal friction, computer simulation (*Chinese*) 2-92106
 pinning of mobile dislocations by impurity atmospheres, nucleation mechanism, theory (*Russian*) 2-86666
 semiconductor, dislocation-bound Coulomb impurity center, energy levels calc. 2-104310
 steel, Cr-Mo type, plastic deform. influence on H transport 2-71728
 steel, low-C, plastic deform. features at elevated temps. 2-99503
 Al-Mg, dilute, dislocation pinning by impurity atmospheres, nucleation mechanism, theory (*Russian*) 2-86666
 Al-Mg, dislocation motion, impurity atmospheres and effective activation parameters, theory 2-115233
 α-Fe, C atmosphere near edge dislocation 2-115275
 Fe-C, high purity, softening and hardening, H-induced 2-88096
 He partitioning, low doses, trap theory 2-86715
 NaCl crystals, vacancies and impurity dipoles effect on mech. props. 2-71543
 NaCl:Ca²⁺(Cd²⁺)(Ni²⁺)(Pb²⁺), microhardness and bulk density meas., precip. and impurity-dislocation interactions 2-115345
 NaCl-KCl powder, thermoluminescence study of colour centre isothermal stability 2-72567
 Si:H(O), interaction between dislocations and H or O, elec. and luminesc. props. (*Russian*) 2-56487
 Si:O, O donor developed around dislocations, expt. study 2-92510
 V, low temp. internal friction peaks, effects of deform. temp., orientation and H 2-72752
 Zr:O, dislocation motion, impurity atmospheres and effective activation parameters, theory 2-115233

impurity distribution

- see also doping profiles; segregation
 alkali chlorides: Cu, off-centre instability of Cu⁺ ions due to charge-transfer excitation 2-67085
 alkali halide, divalent cation-doped, mech. strengthening and impurity precip. 2-88093
 alloy, dilute, oxidation, parabolic growth of nonuniformly doped oxides containing aliovalent impurities 2-72865
 C:H(D), ion-implanted impurity retention, release and isotope exchange 2-69848
 concentration depth profiling by sputter etching, theory 2-99282
 corundum, Cr impurity rel. to dislocation struct. 2-98095
 depth profiling, quantification in ion microprobe anal. 2-95530
 diamond, penetration of liq. metals, high static press. 2-82082
 glasses, Fe doped, impurity clustering, relax. Mossbauer studies 2-104753
 graphite, pyrolytic, ¹³⁵Xe implanted, lattice location study by Mossbauer effect 2-55999
 graphite ion implantation damage, impurity profile, Raman, Auger and electron microscopy study 2-81834
 II-VI semiconductors, film deposition on mica, effect of island sublayers of Ag 2-88005
 ion implantation, stopping power, SIMS study 2-56053
 ion implanted paramagnetic 2-76731
 LMFB, stainless steel fuel elements, carburisation profiles 2-54490
 low-Z impurities lattice location study by ion channelling 2-81843
 metal film on semiconductor, interactions, book contrib. 2-61213
 meteorites, Fe, ion microprobe mass anal. of Ni, Co, Ga and Cu distrib. 2-106637

impurity distribution continued

- microanalysis using charged particle accelerators, conf., Namur, Belgium (Sept. 1981) 2-94883
 MoN film, As ion implantation, stopping power, SIMS study 2-56053
 polyacetylene:1,2, conducting polymer, doping mech. 2-66028
 polymers, Fe doped, impurity clustering, relax. Mossbauer studies 2-104753
 polypropylene, crystallising, impurity diffusion rel. to annealing 2-104049
 semi-infinite media, radiation damage from identical particle scatt. 2-103810
 semiconductor crystal with thin disruptive layer, external photoeffect during Bragg diff. 2-105051
 semiconductor ion-implanted layer, SEM with secondary-electron collector 2-86998
 semiconductor junctions, spreading-resistance meas., effect of insulating edge near junctions (*Chinese*) 2-92732
 semiconductor-electrolyte contacts, impurity profile determ. in semiconductor, electrochem. C-V method (*Chinese*) 2-92745
 semiconductors, complementary error function approximations at least squares method 2-71724
 semiconductors, impurity complex formation, theory 2-61017
 semiconductors, impurity distrib., SIMS meas. technique, sensitivity and precision 2-95535
 semiconductors, impurity doping, isolation processing, high-energy electron bombardment (*Japanese*) 2-66029
 SIMS depth profiling, resolution, dynamic range and sensitivity 2-99280
 SOS structures, Hall mobility and capacitance meas., internal stresses and pot. fluctuations influence 2-82470
 stainless steel, U trace content determ. using solid-state track detectors 2-70113
 steel, Cr, type ASTM A533-B, fracture surfaces, solute segregation distrib., Auger anal. 2-80120
 steel, Cr-Mo, segregation of embrittling elements to prior austenite grain boundaries 2-93517
 steel, stainless, diffusion and trapping of D, SIMS study 2-76745
 AgBr:Rh³⁺, Raman spectroscopy study of Rh defect centre 2-99118
 AgI-RbI(KI), eutectic mixture, impurity behaviour during crystn. refining 2-110604
 Al anodic barrier films, direct obs. of ion implanted Xe marker layers 2-71481
 Al, vapour, reduction of impurities AlCl₃ purification 2-99308
 Al-Zn (45 wt.%), corrosion protection coating, SIMS study 2-93683
 AlB₂, gas behaviour in hot pressed specimens 2-64489
 AlCl₃, thorough purification, reduction of impurities in Al vapour 2-99308
 Al₂O₃, dense, steam-enhanced impurity segregation 2-111116
 β-B₂W₃, grown by electron-beam zone refining, distrib. patterns 2-76480
 BaF₂, impurity effects on lattice parameter, microhardness and refractive index 2-98140
 Bi₂Te₃:CdCl₂(Te) crystal growth using directional crystallisation apparatus for growing complex solid solns. (*Russian*) 2-72609
 C, H isotope exchange, depth resolved meas. 2-69847
 CaTiO₃:Ta, O nonstoichiometry, dopant conc. 2-86704
 CdCl₂:2.5H₂O, purification, by distillation and sublimation in vacuum 2-77720
 CdGa₂Te, amorphous film, structural ordering, effect of group I metal impurities 2-87114
 CdS epitaxial layer preparation in Cd(CH₃)₂(CH₃)₂S-H₂ system 2-87996
 CdS:O, grown from melt, O content, activation anal. 2-86702
 Cr, pyrolytic film, comp. and nature of impurities 2-82157
 CrCl₃, purification, by distillation and sublimation in vacuum 2-77720
 Cu-Mn (10 at %), spin glass, lattice location of Mn 2-71489
 Cu-Ni (40 at %) Ar⁺ irradi., subsurface composition modification depth profiling appis. 2-74932
 Cu-Ni alloy particles, Ni impurity distrib., mag. props. study 2-76485
 Fe:Fe, concentration depth profiling using nuclear reson. reactions 2-98139
 GaAs bulk crystals soln. grown by slow cooling, const. temp. steady-state processing macrosegregation 2-91845
 GaAs, depth profiling in near surface region by low energy PIXE 2-99716
 GaAs, epitaxial film, residual donor impurity conc., photothermal ionization study 2-98148
 GaAs, high purity, MBE grown, residual donor conc., photothermal ionisation spectroscopy study 2-66032
 p-GaAs MBE film, lightly doped, dynamic SIMS study 2-87097
 p-GaAs, MBE grown, impurity characterization by far-IR photoconductivity in high mag. fields 2-66565
 GaAs, metalorganic VPE layers, impurity redistribution, SIMS study 2-115582
 GaAs, seminsulating, Cr gettering by Ne ion implantation, elec. activation of implanted Si 2-55993
 GaAs undoped epitaxial layers grown by CVD, residual impurity depend. on growth time 2-56404
 n-GaAs:Au, impurity profile, electroetching meas. 2-56001
 GaAs:Cr, ion implanted, annealing, Cr redistrib., SIMS study 2-76484
 GaAs:Cr:Si⁺, Se⁺, Mn, ion implanted, Mn redistribution after annealing, SIMS study 2-86699
 GaAs:Mg(Cr)(Mn)(Fe), epitaxial layers, impurity redistrib., SIMS study 2-98344
 GaAs:O, determ. of O by ³He activation anal. 2-98147
 GaAs:Sb, LPE, Sb distrib. 2-104182
 GaP:Cu, ion damaged, depth profiling of gettered Cu, SIMS study 2-98150
 GaS:Cr, impurity redistribution after implantation with Ga,As,O, SIMS and TEM study 2-115276
 Gd:Ar film, ion implanted, impurity depth distrib. 2-110215
 Ge, low levels of O meas. by Li precipitation technique 2-61012
 Ge:B, Al, Ga, residual acceptor impurity distrib., photothermal ionisation spectroscopy study 2-81807
 Ge:In, impurity diffusion, SIMS invest. (*German*) 2-82031
³He ion ranges in Fe, Cu, Zn, W, Bi, Co 2-66089
 InP:Cr(Fe), impurity diffusion, carrier and impurity profiles 2-115467
 InSb, pulled crystals, Czochralski growth, impurity distrib., US vibr. effects 2-116357
 InSb, thermal acceptors influence on electrophys. props. during annealing 2-56577
 InSb:Bi epitaxial layer, Bi distrib., temp. depend. 2-104183
 InSb:Bi solid soln., Bi donor level form., X-ray struct. study 2-115702

impurity distribution continued

- In:Te₂Sn, elec. inactivity of Sn impurity atoms, Mossbauer and photoelectron spectra 2-115703
- Li particles, Na impurity distrib., ESR study 2-76485
- Li₂B₂O₅·5H₂O, growth and growth mechanism 2-97963
- LiNbO₃, foreign cation incorporation, IR absorpt. investigation 2-116211
- Li ion ranges in Fe, Cu, Zn, W, Bi, Co 2-66089
- Mo alloy weld, B impurity distrib. (Russian) 2-92017
- Mo:O delayed recrystn. during annealing, O effects, electron microscopy study (Russian) 2-88099
- Ni, range distrib. of deuterons, target crystallinity effects 2-66092
- Ni thin film, 40 keV Xe⁺ implanted, range profile and sputtering efficiency 2-66091
- Ni:B, solid state track autoradiography study of B distrib. 2-92016
- Ni:D⁺, ion implanted, impurity defect trapping, ion beam anal. studies 2-81812
- Ni:He, ion implanted, damage profiles, swelling due to Ni ion irradiation 2-103805
- Ni:He⁺, D⁺, ion implanted, D trapping, ion beam anal. studies 2-81813
- Ni-W-Co-Cr-Al-Nb-C eutectic CoTaC-741 alloy autoradiographic investigation, of Pm distrib. 2-105176
- PbMoO₄, formation of Pb³⁺, influence of foreign ions 2-115219
- n-PbTe, thermal diffusion of impurity atoms 2-66293
- Pd₉₃Au₇:D, lattice location of implanted D 2-71488
- Si, amorphous and crystalline, low energy range distrib. of ¹⁰B and ¹¹B 2-66090
- Si, amorphous film, laser crystallisation, rel. to density 2-56407
- Si, back-surface damage regions, gettering of mobile O, defect stability, O diffusion 2-56256
- Si, charged impurity conc., carrier mobility, electrorefraction study 2-115273
- Si, Czochralski growth, dynamic O equilib. in melts 2-60895
- Si, depth profiling in near surface region by low energy PIXE 2-99716
- Si p-n junction devices, impurity distrib. profiles of diffused layers determ. 2-115272
- Si, precipitation of O and intrinsic gettering 2-66239
- n-Si, proton-irradiated, radiation defect clusters, struct. and props. 2-81833
- Si ribbon, edge-defined film-fed growth, ambient-meniscus melt interactions associated with impurity transport 2-97950
- Si surface, high dose N⁺ ion implanted layer (Chinese) 2-91997
- Si thin polycryst. rod growth by pulling from melt on pedestal, impurity distrib. 2-76347
- Si:As, range distrib. and thermal annealing props. of low-energy implants 2-115258
- Si:As, substitutional impurity clustering, ion channelling study, review 2-71536
- Si:As diffusion and impurity concentration profiles, Rutherford backscatt. study 2-82019
- Si:Au, depth distrib. determ. using elastic backscatt. 2-77671
- Si:B, bulk and SOS struct., ion implanted, doping profile, thermal distribution, computer simulation 2-66033
- Si:B, proton irradiation, impurity distrib. and diffusion 2-61203
- Si:B, thermally evaporated, near-surface layer impurity distrib., photoluminesc. study 2-110902
- Si:B(As)(P), elemental distrib. anal., SIMS and neutron activation anal. 2-98151
- Si:Bi, ion implanted, impurity redistrib. after Nd laser pulse irradiation 2-115265
- Si:Bi, range profile, Rutherford backscattering and SIMS meas. 2-98138
- Si:Bi(As), scanning electron-beam annealing 2-103818
- Si:Co, impurity lattice location, Mossbauer study 2-103785
- Si:H, impurity lattice location, ion channelling studies, review 2-71537
- Si:In, range distrib. and thermal annealing props. of low-energy implants 2-115258
- Si:In amorphous layers, thermal redistrib. of In 2-56003
- Si:Ne, Ar, amorphous, ion implanted, localised defect states and impurity distrib., photocond. spectra study 2-61414
- Si:O, C, Czochralski grown, O related donors, 700 to 800°C, expt. study 2-56469
- Si:O, Czochralski grown, precipitated and total O conc., meas. technique 2-103802
- Si:P, ion implanted, distrib. profiles, elec. props. 2-103797
- Si:P, redistribution of heavy metal impurities, by P diffusion, theory 2-109822
- Si:Sb, laser epitaxy over buried layers 2-56406
- Si:Sb amorphous, sputter depth profiling, mass redistrib. by atomic mixing 2-82974
- Si:Zn,Co, epitaxial layers, doping laws and electrophysical props. 2-66025
- Si:Zn layers, ion implantation, damage annealing 2-103798
- Si:AlSi, Schottky barrier diodes, implanted P distrib., barrier height 2-82457
- Si-Au-Al, distrib. ratio of Al, zone refining with temp. gradient 2-71487
- Si-PtSi Schottky barrier diodes, implanted P distrib., barrier height 2-82457
- SiC:Al, implanted ion diffusion, profile anal. by STMS 2-109824
- SiC:P, epitaxial kinetics, solubility and polytyp 2-76850
- Si₃N₄:H, plasma deposited, H content 2-103801
- Si₃N₄:H films, H conc., N-H absorption cross section, nuclear recoil method 2-71491
- SiO₂, glass, OH ion distrib. profile, laser absorpt. meas. 2-61932
- SiO₂:Al, vitreous, radiation colour centres, multiple nature, ESR and optical absorpt. study 2-72348
- SiO₂:As, neutron activation anal. using coprecipitation method 2-98137
- SiO₂:B, glass, solid state track autoradiography study of B distrib. 2-92016
- SiO₂:B(Al)(Ga), variation of surface conc. with oxide content 2-82098
- SiO₂:P(Bi)(Pb), growth on Si, X-ray spectra 2-77960
- Sm:Ar film, ion implanted, impurity depth distrib. 2-110215
- SnTe, soln. of impurities, behaviour of group IV elements 2-71650
- Sr_{0.05}Pb_{0.95}(Li_{0.008}W_{0.012}Te_{0.46}Zr_{0.52})O₃, impurity distrib., props. 2-86701
- STiO₂:Ta, O non-stoichiometry, gravimetric anal. 2-98145
- steel, Al, US treatment effect on C redistrib. and austenitic-martensitic transform. (Russian) 2-67331
- TaSi₂, layers, coverage on Si/SiO₂, surface struct., ion-implant profiles surface anal. study 2-82094
- Ti:N, depth distrib. determ. using elastic backscatt. 2-77671
- Ti:C(H,D), ion-implanted impurity retention, release and isotope exchange 2-69848

impurity distribution continued

- TiC_{0.96}-TiO_{1.08}, physicochemical props., effect of combined oxygen 2-83072
- TiC_{0.51}N_{0.49}-TiO_{1.08}, physicochemical props., effect of combined oxygen 2-83072
- V-Zr-O:Li, phase equilibria, penetration of Li at 670K 2-72681
- ZnS:Cu:S single crystal, microbrittleness, impurity effects 2-83210
- ZnS:O, grown from melt, O content, activation anal. 2-86702
- ZnSe film on GaAs, elec. props. and impurity profile 2-61014
- ZnSe:Ga diffused single cryst., elec. props. and impurity profile 2-61014
- ZnSe:O, grown from melt, O content, activation anal. 2-86702
- ZrO₂:Y₂O₃, C impurity or surface of thermoionic cathode, Auger electron spectroscopy 2-110113
- impurity electron states**
see also A-centres; Anderson model; charge compensation; deep levels; electron traps; heavily doped semiconductors; impurity scattering; OH⁻ centres; U-centres; Z-centres
- Anderson coupled two-impurity system, Hartree-Fock staggered ground states 2-56489
- Anderson impurities, pair of interacting, Fermi liq. relations 2-56491
- Anderson model, spin and charge relax. in Schrieffer-Wolff limit 2-56415
- anisotropic crystals, perturbative-variational approach and appl. to impurity states 2-82275
- benzoylacetate-[EuO₆]⁻, chelate complex, electronic struct., Wolfsberg-Helmholtz calc. 2-87191
- binary alloys, alloy broadening of impurity electronic spectra 2-82278
- classical impurity band, density of states 2-110288
- Coulombic interaction of electrons in impurity centres, covalent attenuation and anisotropy 2-61392
- cubic metals, phase-shift anal. of impurity problem 2-61398
- d-band metals, pseudo Green's function theory for dil. alloys 2-71901
- defect levels 2-115691
- diamond:N, A₁-T₂ splitting, Jahn-Teller distortions, EHT calc. 2-82277
- diamond, impurity screening many-body effects 2-110295
- dielectric slab with taps, non-uniform illumination conditions, volt-amp characts. (Dutch) 2-61506
- diffusing ions, NMR relaxation by impurity centres, variational calc. 2-66945
- dispersive medium, coalescence of several photons into photon pair at impurity centres 2-61922
- excitation migration along activator centres, luminescence spectra 2-78332
- ferroelectric, charged impurity centre ionisation by polarisation reversal, luminescence 2-76986
- ferromagnetic semiconductors, electron-magnon impurity states in energetic spectrum 2-98578
- graphite, magnetisation in ultraquantum limit in fields up to 400 kOe 2-92861
- heavily doped semiconductors, impurity-band density of states, numerical results 2-71913
- Heisenberg ferromagnet, semifinite, localized impurity states 2-66747
- II-VI semiconductors, bulk and epitaxial growth, impurity role 2-116347
- II-VI semiconductors, optical props. of 3d transition metals 2-110286
- III-V semiconductors, role of deep states and defect reaction (Japanese) 2-92524
- III-V semiconductors, tight-binding calcs. 2-76978
- impurity-induced and exciton recomb., local centre participation 2-71907
- inversion layers, hopping cond. in two-dimensional impurity band 2-104464
- ionic crystals, negative-U centre form. due to multivalent impurities 2-61399
- Jahn-Teller impurity, noncentral, in crystals with inversion centre, vibronic interactions effect 2-56529
- Jahn-Teller impurity centres, quadratic interaction with ferroelec. soft host mode 2-93128
- Jahn-Teller interaction, renormalisation by force constants and impurity mass changes 2-92542
- linear chain of atoms, appl. of Hellmann-Feynman theorem to substitutional impurity study 2-76983
- many-valley semiconductors, compensated, Auger processes involving bound carriers, theory (Russian) 2-115785
- metal, impurity state, muffin-tin pot. for impurity, Friedel theory and Anderson model (Japanese) 2-82271
- metal, mixed-valent impurity, theory 2-115715
- metals, generalised impurities, thermodynamic scaling theory 2-56490
- metals, H impurity electronic struct., μ SR studies, review 2-99014
- molecular crystals, directionally deform., impurity states (Russian) 2-71917
- multivalley semiconductors, multiexciton complexes bound to donors 2-82247
- naphthalene:anthracene crysts., delayed fluorescence, triplet exciton traps effect (French) 2-77576
- narrow gap semiconductor, binding energy of charged impurity centres, effect of large lattice polarisability 2-92532
- nonlinear impurity electron-phonon oscils. excitation, Raman scatt. 2-77536
- nonradiative energy transport in case of negligible corrls. with impurity centre surroundings 2-67117
- one-dimensional acoustic polaron via deform. pot. under influence of Coulombic impurity 2-98555
- optical absorpt. and fluoresc. spectra, crystal field anal. 2-72525
- optical excitation trapping in diffusion limit, differential eqn. approach 2-82910
- photovoltaic effect for impurity donor-acceptor complex, theory (Russian) 2-77122
- polar semicond., electron-phonon coupling with donor-acceptor pair recomb. 2-103925
- polar semiconductor, donor states, electron lattice coupling effect 2-71915
- polyacetylene, lightly doped, optical absorpt. spectrum, nonsoliton theory 2-110887
- trans-polyacetylene, doped, impurity states 2-71905
- polyvinylcarbazole, nitrated, exciton migration and localisation on defect and impurity levels, luminesc. obs. (Ukrainian) 2-82896
- radiation quenching, energy transfer to randomly distributed acceptors in fast-migration limit 2-82915
- rare-earth impurities, near valence instability 2-61396
- semiconductor, deep level and shallow impurity profile simultaneous meas. with C-V method (Chinese) 2-92505

impurity electron states continued

- semiconductor, deep levels, position and capture cross section, thermally stimulated capacitance method 2-61402
- semiconductor, direct band gap, electronic Raman scatt. on donor levels, Coulomb interaction effects 2-57096
- semiconductor, dislocation-bound Coulomb impurity center, energy levels calc. 2-104310
- semiconductor, impurity doped, electron correlations effect 2-115682
- semiconductor, impurity screening in strong mag. fields and influence on transverse cond. 2-92667
- semiconductor, many-valley, single donor impurities, core excitons shallow-deep instability 2-82282
- semiconductor, many-valley, single-donor impurities and core excitons, real-space eqn. 2-82281
- semiconductor, optical spectra of interacting donors, localised and delocalised characters 2-67086
- semiconductor, polar, donor-acceptor pairs, electron-hole correlation effect, variational calc. 2-56475
- semiconductor, Thomas-Fermi eqn. for negative ion pot. 2-110294
- semiconductor, wurtzite type donor electronic Raman scatt., band struct. perturbation calc. 2-82862
- semiconductor films, quantized, two-photon interband absorption with participation of deep impurity centres 2-56476
- semiconductor Schottky barriers, space charge region, dynamic response, gap states 2-87182
- semiconductor thin film, impurity levels, strong mag. field effect 2-71906
- semiconductors, anisotropic, exciton-ionised donor complex energy, var. with anisotropy parameter and effective mass ratio 2-110261
- semiconductors, diamagnetism of two-electron deep impurity centres 2-104573
- semiconductors, donor-bound exciton complexes, variational calc. 2-61368
- semiconductors, doped, impurity band form., multiple scatt. calcs. 2-66482
- semiconductors, doped, impurity states, conc.-fluctuation model 2-110293
- semiconductors, doped, metal-insulator transition stress depend. 2-110252
- semiconductors, electronic Raman scatt., review (Japanese) 2-72508
- semiconductors, III-V and II-VI, Thomas-Fermi nonlinear dielec. screening 2-56459
- semiconductors, LCAO calcs. of photoionisation of deep centre 2-104304
- semiconductors, localised electron states energy spectra (Russian) 2-110278
- semiconductors, multi-exciton complexes, review 2-110264
- semiconductors, optical characterisation of deep energy levels 2-56478
- semiconductors, point defect induced electronic struct., calc. method 2-76981
- semiconductors, quantum processes, book 2-68982
- semiconductors, screening effects on D⁻ system 2-115699
- semiconductors, shallow acceptor energy levels, j-j-type coupling theory 2-104311
- semiconductors, thin quantised filaments, charged impurities 2-103787
- semiconductors doped with 3d metals, light absorption perturbation theory 2-104828
- semimagnetic semiconductors, acceptor states in mag. field 2-98582
- Si:H, amorphous oxidised films, valence band spectra 2-104300
- superlattice alloy, impurity sheet doped, band struct. 2-110242
- thermostimulated luminesc., phosphoresc., and photoluminesc., tunnelling pair recomb. theory 2-110911
- transition metals, electronic states of impurities of non-transition elements, Fano effect (Japanese) 2-71916
- transitional and noble metal impurity systems, dil., electronic struct., pseudopot. study 2-98575
- two-dimensional systems, electronic props., conf., New London, NH, USA (Aug. 1981) 2-58536
- two-particle equations in excitation transfer theory 2-104299
- vibronic reduction factors of Jahn-Teller impurity centres, determ. from Raman scatt., theory 2-93208
- vibronic spectra, hydrostatic and uniaxial press. effects 2-57050
- Wannier functions, model Hamiltonian 2-56474
- zinc blende narrow gap semicond., pressure spectroscopy of localized levels 2-92526
- Ag alloy, dilute, impurity d-bands and core level binding energy shifts 2-56482
- AgBr:Pb²⁺(Cd²⁺), photoresponse and photoelectron lifetime 2-56641
- AgCl:S, S centre, ENDOR study 2-93063
- AgGa(Se_{0.5}Te_{0.5})₂, crystal solid soln., impurity photocond. meas. 2-61521
- Al-Mn, muon localisation, impurity trapping effects 2-72396
- AlGaAs, undoped, MOCVD growth and charact. 2-98497
- Al_{0.35}Ga_{0.65}As:Si MBE layer, donor activation energy determ. from elec. transport props. meas. 2-98769
- Al_{1-x}Ga_xAs, metalorganic VPE grown, residual shallow acceptors, photoluminescence study 2-93245
- Al_{1-x}Ga_xAs:C(Si)(Ge)(Be)(Mg)(Zn), acceptor states, photoluminesc. study 2-104931
- p-Al_{1-x}Ga_xAs:Ge, LPE grown, photolum. spectrum 2-57143
- AlInSb, localised impurity states, cond. band minima role 2-98576
- Al₂O₃(Fe), temperature depend. of Fe acceptor level 2-110898
- Al₂O₃:Cr³⁺, single-ion-pair fluoresc. ratios and Anderson localisation 2-57176
- α -Al₂O₃:H, H donors, mixed conductivity study 2-82274
- AlSb, As_{1-x}Te_x, vacuum deposition, optical and transport props., impurity states 2-82498
- Al₂V clusters, cubo-octahedral, electronic struct. calc. 2-82269
- As₂S₃ and As₂S₅, optically induced localised states, photolum. and EPR 2-57164
- As₂Se₃:Ag(Cu), amorphous, XPS study 2-57249
- Au alloy, dilute, impurity d-bands and core level binding energy shifts 2-56482
- Au-Co(V), dil. alloy, impurity optical absorpt. meas. 2-99160
- BaCl₂:Sn, absorpt. spectra of S²⁻-configuration Sn ion 2-77553
- BaS:Bi phosphors, delocalisation of impurity-electron excitations 2-77574
- BaTiO₃:Y₂O₃(Nb₂O₅), elec. props., phase composition, valence state of cations 2-110347
- Bi_{1-x}GeO₂₀, sillenite-type non linear crystals, deep localised centres 2-110362
- Bi_{1-x}SiO₂₀, sillenite-type non linear crystals, deep localised centres 2-110362
- Bi_{1-x}SiO₂₀:Nd³⁺ single crystals, energy level spectroscopic study 2-67110
- Bi_{1-x}TiO₂₀, sillenite-type non linear crystals, deep localised centres 2-110362

impurity electron states continued

- CaWO₄:Ho³⁺, NMR study of EM and sound energy absorpt. (Russian) 2-61778
- CdBr₂:Cu⁺, impurity level and photoionisation processes, photocond. meas. 2-56638
- CdCl₂:Cu⁺, impurity level and photoionisation processes, photocond. meas. 2-56638
- CdF₂:Eu, localised impurity excited states degenerate with cond. band, absorpt., cond., thermoluminesc., and ESR study 2-56473
- CdGa₂S₄, semicond., localised states, impurity absorption and photocond. spectra 2-110298
- n-Cd,Hg_{1-x}Te, photoconductivity relax. study 2-104426
- Cd,Hg_{1-x}Te, elec. behaviour of impurities, Hall effect and minority carrier lifetime meas. 2-77091
- Cd_{1-x}Mn_xSe, electric-dipole spin reson. of bound electronic states 2-110820
- CdS, impurity content evaluation by Hall effect analysis 2-115789
- p-CdS, metastable states, photoluminescence 2-104425
- CdS, recharge-enhanced transforms. of donor-acceptor pairs and clusters 2-61390
- CdS, Wannier exciton ionised donor complex, excited states stability 2-92477
- CdS:Cu, photochemically active IR centres, luminesc. and excitation spectra, polarisation characts. 2-61970
- CdS:Cu,Cl, point defect luminescence anal. (Russian) 2-87869
- CdS:Te film, vacuum deposited, dark cond. and photocond. meas., doping effects 2-61623
- CdS:V(Cr)(Co)(Ni)(Cu), excited state lifetimes, 4 to 300K, luminesc. study 2-57162
- CdS-CdSe films, impurity photocond. line spectra, donor/mol. concept 2-115822
- CdS_{1-x}Se_xTe, isoelectronic impurity-exciton interactions, visible spectra study 2-61395
- CdTe, Ag diffused, degradation of elec. and optical props. 2-115751
- CdTe, shallow acceptors, photoluminesc. study 2-57172
- CdTe:Cu(Ag), acceptor levels, elec. and photoluminescence study 2-110296
- CdTe:Li, In, donor acceptor pairs, luminesc. excitation spectra 2-57154
- CdWO₄:Ni²⁺, electronic ligand-field spectrum meas. 2-72526
- Co:H, impurity electronic struct. and hyperfine fields 2-110292
- CsBr(Cl):Ag⁺, far UV spectra, fluorescence and optical bleaching studies 2-110901
- CsI:Na⁺, exciton-Na⁺ interactions, photoluminesc., ODMR and mag. circular pol. study 2-61366
- Cs₃M₂Cl₆(Br₆) (M=Sb, Bi), doping effects, Mossbauer data and electronic props. 2-61007
- Cs₂NaErCl₆:Er³⁺, optical absorpt. spectra and crystal field anal. 2-82882
- Cu alloy, dilute, impurity d-bands and core level binding energy shifts 2-56482
- Cu:H, spherical solid model 2-104294
- α -Cu-Zn(Ga)(Al)(Ge), electronic struct., piezoref. study 2-57052
- CuInSe₂, semicond., absorption coeff., impurity effects, IR spectra study 2-77475
- CuInS₂, photoluminescence, broad band emission, defect electron states 2-93249
- CuInSe₂, after annealing, elec. cond. study 2-66475
- CuInTe₂ single cryst., photocond. and electronic struct., impurity levels 2-115814
- Fe:H, impurity electronic struct. and hyperfine fields 2-110292
- Ga_{1-x}Al_xAs:Be-GaAs p-p-n solar cells, Be diffused doping and elec. props. meas. 2-105557
- GaAs, donor defect, H passivation 2-87173
- GaAs electrical surface props. determ. by thermo-optical acousto-electric voltage method 2-92720
- GaAs, electrostatic effects of hydrogenic donor complexes on magnetooptical spectra 2-82279
- n-GaAs, heavily doped, electronic heat capacity 2-56207
- GaAs, high purity, grown by MBE, characterisation 2-56613
- GaAs, high purity OMCD grown using trimethyl and triethyl gallium sources, acceptor incorporation 2-99350
- GaAs, impurity band transport in large mag. fields 2-61487
- GaAs, probability of cond. band-acceptor optical transitions 2-116254
- GaAs, semi-insulating behaviour and thermal stability, stoichiometry effect 2-110348
- GaAs, shallow donor binding energies, effect of band non-parabolicity 2-98581
- GaAs, surface donors and acceptors, Fermi energy as function of O₂ exposure 2-10426
- GaAs:C(Ge) VPE layers, impurity characterisation, photoluminesc. study 2-93264
- GaAs:Cr, charge transfer induced by press. 2-66484
- GaAs:Cr, defect centre struct. photocapacitance study 2-104305
- GaAs:Cr, exciton and subband-gap absorption, quenching and enhancement, acoustoelectric volt. spectroscopy 2-82235
- GaAs:Cr, impurity levels, elec. cond., IR spectra and photocond. study 2-56485
- GaAs:Cr, spin dependent carrier capture, ODMR study 2-98998
- GaAs:Cu, recombination radiation band, piezospectroscopic study 2-77588
- GaAs:Fe, LCAO calcs. of photoionisation of deep centre 2-104304
- GaAs:In, crystals and films, elec. props., isovalent impurities effect 2-82286
- GaAs:O, impurity levels and photocond., temp. depend. 2-115817
- GaAs:O, photoelectric memory effects, theoretical model 2-82394
- GaAs:S, MOCVD epitaxial layer, S donors, photothermal ionisation study 2-98569
- GaAs:Sb, crystals and films, elec. props., isovalent impurities effect 2-82286
- GaAs:Si, donor states, photothermal ionisation spectra study 2-98767
- GaAs:Si, ion implantation, elec. props., for dual gate MESFET (Chinese) 2-109817
- GaAs:Si, thermally stimulated optical absorpt., impurity level spectroscopy 2-104292
- GaAs:Te, Cu contamination during heat treatment, photolum. study 2-91993
- GaAs-Al_{1-x}Ga_xAs quantum well structs., extrinsic photoluminesc. 2-82912
- GaAs-Ga_{1-x}Al_xAs, quantum well struct., energy spectrum of donors, effective mass theory 2-56664

impurity electron states continued

- GaAs-Ga_{1-x}Al_xAs quantum well struct., donor states, effective mass approx. 2-110459
 GaAs-Ga_{1-x}Al_xAs:H multiple quantum wells, impurity photoluminescence 2-104955
 GaAs_{1-x}P_xO, point defect induced electronic struct., calc. method 2-76981
 GaAs_{1-x}P_xO₂, electronic struct. induced by short-ranged defects, calc. method 2-104296
 GaAs_{1-x}P_xTe(Si), donor states, impurity optical absorpt. spectra study 2-82287
 GaP donor states 2-104287
 GaP:Cu, photoluminescence and impurity states 2-104947
 GaP:D, electronic struct. and optical props. 2-92518
 GaP:Fe, LCAO calcs. of photoionisation of deep centre 2-104304
 GaP:Fe²⁺, tetrahedral paramag. complex, distortions effects, ESR study 2-110633
 GaP:O, impurity state of ϵ symm. 2-110287
 GaP:O, point defect electron states, enfeeblled O bonding and metastability 2-61351
 GaSb, native defects, MS-X α calcs. 2-82270
 GaSe, Te_{1-x}Sn single cryst., exciton and impurity electroabsorpt. 2-87741
 Ge, donor-bound excitons, fine struct. splittings 2-82246
 Ge, donor-bound multiexciton complexes, density-functional method 2-82245
 p-Ge, impurity band conduction, static and modulated uniaxial constraint effects 2-56575
 Ge, photodiode effect associated with excited acceptor states 2-104431
 Ge, quenched, presence of shallow acceptors from far IR photocond. spectra 2-104302
 Ge, shallow acceptor energy levels, jj-type coupling theory 2-104311
 Ge:As, donor ground state, diamag. and Zeeman shifts, four-wave mixing spectroscopy 2-99096
 Ge:As, Sb, compensated and illum., low temp. Hall mobility of electrons 2-77096
 Ge:B, Al, Ga, residual acceptor impurity distrib., photothermal ionisation spectroscopy study 2-81807
 Ge:B, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
 p-Ge:B(Al)(Ga), impurity states, oscillator strengths, quadrupole moments 2-104303
 Ge:Cu, γ -ray irradi., Cu atom activation and concentration 2-115704
 Ge:Cu, quenched, Cu related shallow acceptor, hole density temp. depend. study 2-92509
 Ge:H, interaction of H with point defects, under ⁶⁰Co gamma-irrad. 2-115279
 Ge:H, positive test charge, pot. map 2-56479
 Ge:Nd(Gd)(Tb)(Ho)(Tm)(Er), deep level impurity states, DLTS study 2-56477
 Ge:P(Sb), impurity states fine struct., photoconductivity study 2-87190
 Ge:Pb, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
 Ge:S, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
 n-Ge:Sb, Au, compensated, Sb ionization energy 2-76985
 Ge:Sb, D⁻ states, electronic struct. and binding energies 2-82280
 Ge:Zn, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
 GeO₂:Zn(Mg), X-irrad., hole centre ESR study 2-87592
 GeSe₂:Ag, amorphous, XPS study 2-57249
 HgCdTe, transport props. rel. to acceptor levels 2-92633
 Hg_{0.836}Cd_{0.164}Te, Hall coeff. phase transition under hydrostatic press. 2-92674
 Hg_{1-x}Cd_xTe, impurity-to-band tunnelling 2-87179
 n-Hg_{1-x}Cd_xTe, mag. freeze-out modification due to reson. levels 2-92670
 Hg_{1-x}Cd_xTe, photoluminescence spectrum meas. 2-87844
 Hg_{1-x}Cd_xTe, quasi-local acceptor level spectrum 2-87188
 Hg_{1-x}Cd_xTe, resonant states, influence on optical props., three-band Koster-Slater model 2-56468
 Hg_{1-x}Cd_xTe, shallow donor binding energies, effect of band non-parabolicity 2-98581
 Hg_{1-x}Cd_xTe:Mg, ion implanted, elec. and optical props. from IR refl. spectra 2-116218
 InAs:Cd, Te, donor-acceptor pair form., annealing, elec. cond. and Hall coeff. study 2-61404
 InP, localised impurity states, cond. band minima role 2-98576
 InP, shallow donor binding energies, effect of band non-parabolicity 2-98581
 InP, single crystals, liq. encapsulated Czochralski grown, photolum. and IR absorption 2-57144
 InP, surface donors and acceptors, Fermi energy as function of O₂ exposure 2-110426
 InP:Mg VPE layers, implanted and unimplanted, near-edge emission 2-57157
 InP:Mn, impurity states electronic struct., ESR and optical absorpt. study 2-82285
 InP:Yb, impurity electron state, ESR, photoluminescence and mag. susceptibility study 2-104307
 InP:Zn(C)(Mg) epitaxial layers, shallow acceptor excited states, luminesc. study 2-57156
 InSb, localised impurity states, cond. band minima role 2-98576
 InSb, narrow band gap, resonant impurity states in strong mag. field 2-66485
 InSb:Bi solid soln., Bi donor level form., X-ray struct. study 2-115702
 InSe, layered semicond., photoluminesc. study 2-99170
 In₇Te₃Sn, elec. inactivity of Sn impurity atoms, Mossbauer and photoelectron spectra 2-115703
 KBr:In(Tl), pressure induced absorpt. spectra changes 2-93235
 KCl:Ga, triplet excited states of Ga⁺, optical detection of ESR study 2-82749
 KI:In(Tl), pressure induced absorpt. spectra changes 2-93235
 KI:Sn²⁺, spectral line shape, visible-UV study 2-72524
 KI:Tl, decay and polarisation of luminesc. pulses in 336 nm emission band 2-77560
 KI:Tl⁺, A_X and A_T emissions double struct., photoluminescence study 2-77577
 K₂SnCl₆:Os(IV), power luminesc. spectra and electronic levels 2-77585
 La_{1-x}P_xO_{1-x/2}Nd_{x/2}, resonant fluoresc. line narrowing 2-104943
 LiCl:Cu⁺ (Ag⁺), luminesc. props. and impurity electronic struct. 2-57161

impurity electron states continued

- LiF:Mg²⁺, Ti, thermoluminescence sensitivity optimisation method 2-104972
 LiF:U, fluoresc. and MCD spectra 2-57160
 LiGaO₄:Cr³⁺, tetrahedral coordination, energy levels, absorpt. spectra 2-67088
 α -LiIO₃:Ni²⁺, impurity ground state level splitting, EPR study 2-56530
 LiLaPO₄:Ce³⁺(Eu³⁺)(Tb³⁺)(Bi³⁺), luminescence of broad band emitters, concentration quenching 2-77575
 LiNbO₃:Ni²⁺, impurity ground state level splitting, EPR study 2-56530
 MgCl₂:Fe²⁺, Co²⁺, optical absorpt. spectra 2-93234
 MgCl₂:Fe²⁺(Co²⁺), optical absorpt. spectra 2-93234
 MgO:Cr³⁺, nonradiative transitions and energy levels 2-72548
 MgO:Li, struct. and electronic props. of minute Li aggregates (*French*) 2-61391
 MgWO₄:Ni^{II}, electronic ligand-field spectrum meas. 2-72526
 Mo, electronic struct. of 3d and 4d impurities 2-110290
 NaAl₃(PO₄)₂(OH)₄, localised hole centres, paramagnetic defect EPR study 2-66919
 NaBr:Ti phosphors, pretreated, dimer centres 2-61937
 NaCl:Cu⁺, Cu⁺ electronic struct., multiple scatt. X_u method appl. to CuCl₅³⁻ cluster 2-87192
 NaCl:Cu⁺(Ag⁺), luminesc. props. and impurity electronic struct. 2-57161
 NaCl:Pb²⁺, luminescent centre symmetry, photoluminescence meas. 2-57168
 NaF:Ca²⁺, γ -ray irradi. F₂(1) centres, optical absorption spectra study 2-76976
 NaF:Ca²⁺, γ -ray irradi., colour centres and interstitials, luminesc. spectra 2-110960
 NaF:U, fluoresc. and MCD spectra 2-57160
 Nb, Z 2-110290
 Nd³⁺, phosphate glass, ⁴I_{9/2} state, Stark struct. meas. under selective laser excitation 2-87867
 Ni:H, impurity electronic struct. and hyperfine fields 2-110292
 NiO-Mn₂O₃, CuO doped, NTC thermistor material, CuO impurity influence on elec. props. 2-66545
 Pb_{1-x}Mn_xTe, influence of In and Ga on kinetic props. 2-87261
 (PbSe)_{1-x}(SnTe)_x, influence of In on props. 2-110238
 Pb_{1-x}Sn_xTe:Cd(Bi), narrow band gap semicond., galvanomag. and optical props., Cd solubility and diffusion (*Russian*) 2-92666
 Pb_{1-x}Sn_xTe:In, band struct. at high In conc., elec. cond. press. depend. study 2-82230
 Pb_{1-x}Sn_xTe:In films, impurity electron-state, elec. cond. study 2-115705
 PbTe, negative-U centre form. due to group II impurities 2-61399
 PbTe:Sn(Ge), donor and acceptor props., elec. and thermal cond. meas. 2-66480
 PbTe:Ti, impurity states and supercond. 2-104308
 PbTe:Ti(Na), density of states in valence band, sp. ht. and Hall coeff. meas. 2-82515
 Pd alloy, dilute, impurity d-bands and core level binding energy shifts 2-56482
 RbCl:Ga, triplet excited states of Ga⁺, optical detection of ESR study 2-82749
 Rb₂SnCl₆:Os(IV), power luminesc. spectra and electronic levels 2-77585
 Si (111) chemisorbed H, Cl, Ag, vacancy and chemisorptive bond elec. struct. 2-82417
 Si, charged impurity conc., carrier mobility, electroreflection study 2-115273
 Si, donor-bound excitons, fine struct. splittings 2-82246
 Si, donor-bound multiexciton complexes, density-functional method 2-82245
 Si, heat treatment centres, g-values 2-66918
 n-Si, heavily doped, electronic struct. and photoluminesc. spectra 2-104290
 Si, impurity scatt. within electron-hole liq., far IR and millimetre wave studies 2-99110
 Si, impurity screening many-body effects 2-110295
 Si, transition metal interstitials, impurity states, many electron effects, SCF X α cluster calc. 2-82283
 Si, transition metal interstitials, impurity levels, many electron effects, SCF X α cluster calc. 2-82284
 Si, vacancy and chemisorptive bond elec. struct. 2-82417
 Si:Au, acceptor level electron cross-section, DLTS study 2-115772
 Si:Au, cluster centres, EPR study 2-56923
 Si:Au, mid-gap levels investigation by DLTS and transient capacitance meas. (*Chinese*) 2-66473
 Si:Au, minority carrier capture cross section meas. 2-66569
 Si:Au, n-type Czochralski, capture cross section of donor and acceptor states 2-98665
 Si:Au, props. of Au related acceptor level 2-71910
 Si:Au, thermal capture of acceptor deep level, Huang-Rhys factor 2-82276
 Si:Au-SiO₂, MOS struct., Au related. interface states, quasi-static capacitance study 2-72069
 Si:B, point defects, negative-U props., expt. study 2-71918
 Si:B, strain-split two-level acceptor ground state, US relax. study 2-71592
 Si:B, trap levels, DLTS study 2-56472
 Si:B, Fe, quenched-in trap level at E_g+0.45 eV 2-104291
 Si:C/O, Czochralski grown, donor form. by annealing at 700°C 2-110283
 n-Si:Cr, donor levels, photocapacitance and photocond. spectra 2-115707
 Si:Cu, luminescence, excitons and impurity states 2-104946
 p-Si:Fe, interstitial Fe and Fe-acceptor pairs, DLTS and Hall effect study 2-66476
 Si:Fe, local electronic struct., molecular cluster method based on HF approx. 2-92533
 Si:Fe:B, Fe donor activity on heat treatment, elec., DLTS and EPR meas. 2-71911
 Si:Ga, float zone cryst., neutron irradi., X-centre formation, expt. study 2-98162
 Si:Ga(In), impurity IR excited state lines 2-82883
 n-Si:H, amorphous, deep levels, electron capture cross section 2-76979
 Si:H, amorphous, electronic struct. by soft X-ray spectroscopy 2-104301
 Si:H, amorphous, gap-state absorpt. meas. 2-87827
 Si:H, amorphous, sputtering and glow discharge prep., photoluminescence and midgap state density 2-87855
 p-i-n-Si:H, amorphous solar cell struct., deep electron traps 2-56493
 Si:H, ion implanted, metastable cond. and shallow donor conc. meas. 2-115764

impurity electron states continued

- Si:H(O), interaction between dislocations and H or O, elec. and luminesc. props. (*Russian*) 2-56487
 Si:H(PH₃), amorphous film, density of gap states, space charge spectroscopy study 2-87181
 Si:In, luminescence intensity enhancement by thermal treatment 2-57153
 Si:In, P, electron capture coeff. of neutral In and pair recomb., photoluminesc. spectra 2-77569
 Si:In, Li, In X-centre donor-acceptor pair photoluminescence 2-57139
 Si:Li, D⁻ states, electronic struct. and binding energies 2-82280
 Si:Mn, B_nMn²⁺B⁻ pairs, EPR study 2-110628
 α -Si:Mn²⁺, doping by ion implantation, dark cond. meas. 2-98128
 Si:N, deep levels meas. 2-92511
 Si:O, C, Czochralski grown, O related donors, 700 to 800°C, expt. study 2-56469
 Si:O, O donor developed around dislocations, expt. study 2-92510
 Si:O donor centres, heat treatment effects, Hall meas. and ESR study 2-61401
 Si:P, donor state line-broadening mechanisms, photoluminesc. study 2-99181
 Si:P(As)(Li), D⁻ centres, far IR photocond., uniaxial stress and mag. field effects meas. 2-98691
 Si:Pt, minority carrier capture cross section meas. 2-66569
 Si:S, impurity related defect centres, DLTS and optical absorpt. study 2-71919
 Si:S⁺(Se⁻)(Te⁺), impurity states, charge densities and wave functions 2-115700
 Si:S⁺(Se⁻)(Te⁺), multivalley spin splitting of 1s(T₂) states 2-77000
 Si:S(Se), deep levels, quantitative criterion 2-87183
 Si:Se, donor level photoionisation cross-sections, IR spectra and photocond. study 2-56484
 Si:Zn, Cr(Fe)(Mn)(V), donor-acceptor complexes, DLTS and TSC meas. (*German*) 2-98579
 Si:Zn, Co, epitaxial layers, doping laws and electrophysical props. 2-66025
 p-Si:Al, Fermi level, Fermi distrib. and activity coeff. calc. 2-92453
 n-Si:C(N), 6(H), impurity-vacancy pairs, EPR study 2-61766
 SiCl₂:Sn, electron-phonon interaction of impurity centres, photolum. and Jahn-Teller effect (*Russian*) 2-57179
 SiO₂, impurity and defect electron states, tight-binding model 2-82288
 Sm_{1-x}La_x(Yb_{1-x})B₂, valence instabilities and elec. props. 2-56595
 SmS_{1-x}O_x, local electronic struct. 2-56488
 n-SiO₂, substitutional impurities elec. activity 2-110345
 n-SnO₂-p-GaTe heterojunction, electrical and optical props. (*Russian*) 2-57189
 SrO with transition metal impurities, energy states 2-71903
 SrTiO₃:Cr³⁺, photoelectronic and optical props. 2-82402
 TbF₃, intrinsic fluorescence, energy transfer mechanisms 2-87839
 TiO₂:Cr(Fe), rutile pigments, EPR study 2-104695
 W, surface (110), NH₃ adsorpt. and decomposition, XPS study, core level binding energy interpretation using equiv. core approx. 2-115558
 YAG:Er³⁺, energy levels of Er³⁺, absorpt. and fluoresc. spectra 2-116252
 YAG:Er³⁺ fluoresc. spectra of Er³⁺, energy level diagram 2-67097
 Y₂O₃:Ce³⁺(Sm³⁺)(Dy³⁺)(Yb³⁺), energy levels, cryst. field anal., fluoresc. and IR study 2-72534
 ZnO:In(Ga), ESR and ODMR obs. of shallow donors 2-116061
 ZnS:Ce, Li phosphors, luminesc. excitation and emission spectra 2-57155
 ZnS:Cu, donor-acceptor recombination, ODMR study 2-99185
 ZnS:I cubic crystals, blue self-activated luminesc., N, P and Ag ion implementation effect 2-116237
 ZnS:Mn²⁺, hexagonal and cubic, Zeeman effects on ⁴E-levels 2-115720
 ZnS:V(Cr)(Co)(Ni)(Cu), excited state lifetimes, 4 to 300K, luminesc. study 2-57162
 ZnS_{1-x}Se_x, donor-A-centre pairs, ODMR and phosphoresc. study 2-56978
 ZnS(Se), Z 2-116235
 ZnSe, bulk and epitaxial growth, impurity role 2-116347
 ZnSe, exciton-impurity complexes, photoluminesc. spectra study 2-72552
 ZnSe, light-induced refr. index dispersion in impurity absorpt. region 2-77480
 ZnSe, phonon scatt. at impurity pairs, luminesc. excitation spectra 2-57177
 ZnSe, reson. electronic Raman scatt. and electronic structs. of bound exciton complex 2-67036
 ZnSe:Cu, photoluminesc. bands, ODMR study 2-56979
 ZnSe:Li, donor-induced acceptor-pair splittings, excitation spectroscopy study 2-82906
 ZnSe:Mn²⁺, Zeeman splitting of ⁴T₁, ⁴T₂, and ⁴E states, luminesc. study 2-57063
 ZnSe:Ni(Fe), near IR photolum. detect. 2-116236
 ZnTe:Cl, EPR study of deep Cl-associated centre 2-110642
 ZnWO₄:Ni²⁺, electronic ligand-field spectrum meas. 2-72526

impurity scattering

- used for carrier scattering by impurities
 see also Kondo effect
 anisotropic superconductors with variable density of states, normal impurities effect, generalised BCS theory 2-98795
 disordered system, 1-D, quasiparticle scatt. from impurities, density of states perturbation theory (*Russian*) 2-82200
 disordered systems, two-dimens., nonlinear and nonequilibrium props., conductivity 2-77008
 electron gas, 2-D, cyclotron resonance linewidth, impurity and phonon scatt. density matrix formulation 2-56942
 ferromagnetic disordered alloy with s-f exchange, conduction electron lifetime, composition depend. (*Russian*) 2-92572
 high field quantum transport eqns. appl. to case of electrons scatt. by dil. reson. impurities 2-110318
 metal, elec. resist., local phonon modes effect 2-82336
 metals, optical relax. time, freq. depend. calc. 2-66534
 mixed valence cpds., electrical resistivity, impurity contribs. 2-56544
 noncentrosymmetric media, spin polarised electron scatt. asymm. and photogalvanic effect mechanisms 2-104335
 normal metal point contacts, non-Ohm's law behaviour 2-87375
 one-dimensional charge transfer conductor, donor-acceptor inter-chain Coulomb scatt. 2-92595
 one-dimensional disordered system, Anderson localisation length and residual resist. 2-110302
 one-dimensional disordered system with Peierls transition, elec. cond. (*Russian*) 2-61451

impurity scattering continued

- one-dimensional system of interacting fermions, in random pot., cond. 2-66514
 semiconductor, disordered, transport props. theory 2-115742
 semiconductor, hot electrons, lowest Landau level, distrib. functions, I-V characs. and neg. differential conductance 2-61476
 semiconductor, impurity screening in strong mag. fields and influence on transverse cond. 2-92667
 semiconductor runaway electrons, heating and cooling, effect of inelastic scatt. on mobility (*Russian*) 2-82346
 semiconductors, Auger recombination, minority carrier lifetime, impurity and phonon scatt. effects 2-87299
 semiconductors, cubic, hot electron scatt. by neutral acceptors, energy and momentum relaxation time calc. 2-82370
 semiconductors, impurity central-cell potential, reson. carrier scatt., theory 2-115740
 semiconductors, quantum processes, book 2-68982
 semiconductors, quantum transport in a non-parabolic band (*German*) 2-56612
 SOS structures, Hall mobility and capacitance meas., internal stresses and pot. fluctuations influence 2-82470
 superconductors, pure and impure, transition temp. and gap anisotropy, linearised Eliashberg theory 2-92812
 ternary semicond., carrier scatt. mechanisms, Boltzmann eqn. calc. 2-115744
 two dimensional system, magnetotransport, electron-impurity, electron-phonon and electron-electron interactions, quantum theory 2-56542
 two-dimensional Anderson localisation in presence of param. impurities and spin-orbit scatt. 2-66490
 two-dimensional system, Anderson localization and supercond. transition temp. 2-61644
 Al, impurity scatt. time, critical current density 2-82548
 Bi thin films, magnetoresist. anomalies in quantum correction region (*Russian*) 2-66574
 CdTe, Te₂Au, Hall coeff., thermo-EMF, cond. type, temp. depend., doping effects 2-56615
 Cu, electron-phonon effects, elec. and thermal resistivities, Hall effect 2-115728
 Cu-Mn, dil., mag. impurity system, spin-resolved scatt., de Haas-van Alphen study 2-82563
 GaAs, carrier mobility, electron-electron scatt. effect 2-77040
 GaAs, epitaxial, electron mobility, temp. depend., impurity and phonon scatt. (*Russian*) 2-104513
 p-GaAs, heavily doped, coupled LO phonon-plasmon modes and forbidden TO modes, Raman scatt. study 2-57101
 GaAs, impurity central-cell potential, reson. carrier scatt., theory 2-115740
 n-GaAs, impurity scatt. in quantising mag. fields 2-115792
 GaAs:C layers, elec. props., and electron microscopy 2-61628
 n-Ge, impurity scatt. in quantising mag. fields 2-115792
 In_{1-x}Ga_xAs_{1-y}P_y, low field mobility and thermoelectric power, scatt. mechanisms 2-82362
 In₂O₃:Sn films, annealed, elec. resist. and defect model 2-66671
 InSb, electron mobility, Monte Carlo calc. 2-92628
 p-InSb, photoexcited electron system, spin relaxation 2-104706
 Mg film, with Fe submonolayer, mag. scatt. time meas. by weak localisation 2-92599
 MnSi, itinerant electron helicoidal mag., magnetisation and magnetoresistance 2-110605
 Ni-Zn ferrite, extraordinary Hall effect and carrier scatt 2-82383
 Si:In, elec. resist. and mobility, hole scatt. by impurities 2-115750
 Si(100) surface inversion layer, electron mobility, memory function and Boltzmann eqn. approaches 2-56699
 p-SnTe In epitaxial thin film, elec. transport props., In effect 2-104514
 W thin plates, adsorbed O₂ and Ag effects on conduction electron diff. and reflection (*Russian*) 2-71959
 W thin plates, adsorbed O₂ and Ag effects on conduction electron diff. and reflection (*Russian*) 2-82339
- impurity-vacancy interactions**
 alkali halides, Schottky defect formation entropy and vacancy pair formation enthalpy calc. 2-109786
 dielectric polarization and depolarization, photoinduced, impurity-vacancy dipole orientation 2-77446
 dipoles in 2-D lattice, Monte Carlo simulation on aggregation 2-115278
 FCC alloys, very dil., free enthalpy of impurity-vacancy binding 2-81814
 fluorite oxides, non-stoichiometric, anion transport props., dopant cation-vacancy complex effects 2-92268
 ion implanted with Xe⁺, Xe-defect configuration spatial anisotropy, ¹³³Xe TDPAC study 2-61044
 ionic crystals, Rayleigh light scatt. by point defects and complexes 2-99139
 isotopic substitutional impurity-vacancy complex, lattice dynamics Greens function formalism (*Russian*) 2-86819
 KI:Sn²⁺, polarised luminesc., nature of Sn²⁺-cation vacancy complex 2-57159
 oxides, non-stoichiometric doped, O⁻ ion cond. 2-92267
 photoinduced polarisation and depolarisation, theory 2-104799
 Ag, proton irradi., In-vacancy interaction, TDPAC study 2-56004
 AgCl:CdCl₂, point defects, hypernetted chain eqns. for lattice gas model, solns. 2-61015
 AgCl:Mn²⁺, dielec. relax., ionic thermocurrent method 2-99033
 Al-Fe, solid solns., secondary quenching defects features 2-62153
 CaF₂:O, X-irrad., O centre, EPR and ENDOR study 2-61764
 Cu, ion implanted with Xe⁺, Xe-defect configuration spatial anisotropy, ¹³³Xe TDPAC study 2-61044
 Cu:¹¹⁹In, (¹¹⁹Sb), Mossbauer study of impurity-vacancy interactions 2-86705
 Fe, impurity migration stimulated by generation and recombination of Frenkel pair 2-76749
 Fe, vacancy migration at 220K, HVEM obs. 2-81828
 α -Fe:Ce, electron irradi., vacancies and impurities, positron lifetime study 2-66065
 α -Fe:He, He precipitation at vacancies, computer simulation 2-86706
 Fe-Ti, dil. alloy, vacancy-impurity interaction, positron annihilation study 2-98152
 Ge:H, interaction of H with point defects, under ⁶⁰Co gamma-irrad. 2-115279
 p-InSe:Zn, annealing behaviour, photoluminesc. study 2-92276
 KBr:Sn²⁺, emission spectra 2-87845
 KBr:Sr, dielec. relax., impurity-conc. effects 2-104811

impurity-vacancy interactions continued

- KCl:Ca, dielec. relax., impurity-conc. effects 2-104811
 KCl:CrO₂²⁺, Ca²⁺, X-irrad., EPR and thermoluminesc. glow curves 2-56919
 KCl:Eu²⁺, impurity-vacancy complexes, conversion under γ -irrad. and F-band bleaching, ESR study 2-76499
 LiF:Mg, TLD-100, clustering and precip., dielec. loss study 2-92213
 LiF:Mg, TLD-100, thermoluminesc. meas., clustering and precip. effects 2-93291
 LiF:Ni(Co), dielec. relax., impurity-conc. effects 2-104811
 NaCl:Ca, aggregation phenomena during isothermal annealing 2-76486
 NaCl:Pb, dielec. relax., impurity-conc. effects 2-104811
 NaCl:Sr, X-irrad., thermoluminesc. study 2-57196
 Na₂N₂Mn²⁺, EPR study of cation vacancy-Mn²⁺ pairs 2-61752
 predeposition process and profile simulation Si:B 2-98136
 Si, 20 MeV proton bombard., radiation defect parameters 2-92056
 Si:B(C), electron irradi. defect accumulation kinetics and point defect annihilation 2-98153
 n-Si:C:N (6H), impurity-vacancy pairs, EPR study 2-61766
 SrCl₂:K, impurity-vacancy dipoles reorientation, thermally stimulated depolarisation currents study (*Russian*) 2-116112
 Ta₂O₅, elec. cond. 2-56582

incandescent lamps see filament lamps**inclusions in crystalline material** see crystal inclusions**inclusive reactions, elementary particle** see elementary particle inclusive interactions**independent particle model** see nuclear optical model; nuclear shell model**indeterminacy**

- density matrix and energy-time uncertainty 2-94953
 diffusion, position-momentum uncertainty rels. in stochastic mechanics 2-89628
 F-centres regularity argument from uncertainty principle 2-84423
 generalised coherent states and uncertainty principle 2-95105
 optical resolving power, rel. to uncertainty principle 2-89784
 particle interference, uncertainty principle-based theory 2-101213
 QED uncertainty relations 2-95729
 quantum gravity, determinism, time symm. 2-84502
 relativistic canonical commutation relations, time-energy uncertainty 2-79736
 wave packet approach, objectivity, Hilbert space 2-58640
 Wigner distribution function, positive-definite, appls. 2-107231

indexing

- Chemical Abstracts Condensates and Chemical and Pharmaceutical Bulletin keyword systems compared (1978-79) (*Japanese*) 2-68948

indicating devices see indicators**indicating instruments** see indicators**indicators**

- see also alarm systems; standing wave meters
 inductance of ferrite-core coils, direct-reading instrument 2-89744
 metallic substances hardness testing dynamic method using digital recording and measurement instrumentation (*Spanish*) 2-57563
 null element and instrument for measuring magnetic field using a sealed contact 2-79625
 state-of-charge indicators for Pb-acid batteries (*German*) 2-88420
 temperature-sensitive, surface temp. of moving objects, meas. (*German*) 2-53758
 wind speed and direction indicator, remote display, log scale 2-117473

indium

- see also nuclei with
 adatom desorption and film growth on Si (111), RHEED study 2-92367
 adsorbed C, oxidation kinetics 2-66373
 atom, np^{1/2,3/2} Rydberg series, dye laser study 2-114123
 atom, Rydberg states, electric field ionisation 2-102652
 core-hole lifetimes, electron spectra determ. 2-57256
 cyclotron masses and many-body effects, relativistic APW calc. 2-56426
 diffusion along Sn-Ge bicrystal phase boundary, α -phase wedge obs. (*Russian*) 2-98339
 electron emission during elastoplastic deform. (*Russian*) 2-57276
 filaments in chrysotile-asbestos matrix, heat capacity near supercond. transition 2-66254
 film, coated with phthalocyanine mols., luminesc. and transmittance meas. 2-85731
 film, discontinuous, supercond. transition temp., resistive meas. 2-92810
 film, overlaid on SrTiO_{3-x}, supercond. transition temp. 2-66693
 film, strength characs., struct. and temp. effect 2-76875
 film, supercond., localised resistive domains, model verification (*Russian*) 2-56806
 film with Fe surface impurities, mag. behaviour, Hall effect meas. 2-87557
 foil, neutron activation flux meas. Cd correction factors, in H₂O and D₂O 2-69996
 ion source, EHD type microfocus gun, for scanning ion microprobe 2-95539
 liquid, interatomic pair pot., combined WCA and RPA calc. 2-60857
 liquid, interference functions, radial atomic distrib. and elec. resist. 2-103595
 liquid, O diffusivity and thermodynamic props., influence of Cu and Ag solute additions 2-86907
 liquid, solubility of Ge, γ -ray effects, expt. study 2-115423
 liquid, structure factors, pseudopotential and WCA method 2-65844
 liquid metal embrittlement of C steel 4140 2-67477
 microclusters, inert gas condensation 2-103969
 muonic X-ray cascade, refilling rates 2-85847
 photoelectric cross-section at K edges 2-56639
 solid metal embrittlement of C steel 4140 2-67477
 steel, 4140, mechanism of crack initiation and propag. in In-induced embrittlement 2-111295
 superconducting bridges, current-voltage characs. 2-115955
 superconducting microbridges, two strongly coupled, effects of microwave radiation 2-110542
 thin film resist. thermometer for low temp. 2-112896
 thin film strips, crit. current, temp. depend. 2-104550
 US attenuation in supercond. and intermediate states 2-77229
 vacancy energy characs. from effective pair pots. (*Russian*) 2-60974
 vacuum evaporated submicron particulate monolayer form. beneath heated polymer surface 2-77740
 Ag-In melt, X-ray investigation, hard sphere model (*Russian*) 2-86541
 Al-In (0.02 at.%), mid-channel He ion flux, depth and ang. depend. 2-66096

indium continued

- As₂Se₃:In, chalcogenide glasses, carrier mobility, transient photocurrent spectra study 2-72024
 Bi₂Se₃:In, struct. non-homogeneities, holographic interferometric study 2-115216
 CdCr₂Se₄:In, Ag defect single cryst. growth, elec. and mag. characs., dopant influence 2-91842
 CdS:In film, heavily doped, elec. transport props. 2-72090
 CdS:In film, low resist., prep. by spray pyrolysis 2-71842
 CdS:In film, vacuum evaporated, elec. and optical props. 2-61631
 CdTe:¹¹¹In, ion implanted, annealing 2-98126
 n-CdTe:In, deep levels, DLTS study 2-87176
 CdTe:In, MBE growth, effects of doping on electron conc. and photolum. 2-76846
 CdTe:Li, In₂ donor acceptor pairs, luminesc. excitation spectra 2-57154
 CsMgI₂:In⁺, thermoluminescence and energy storage 2-99198
 Cu:¹⁰⁹In, Mossbauer study of impurity-vacancy interactions 2-86705
 GaAs:In, crystals and films, elec. props., isovalent impurities effect 2-82286
 GaAs:In, elec. cond., Hall effect and deep levels 2-115760
 Ge:In, impurity diffusion, SIMS invest. (*German*) 2-82031
 Ge:In, laser induced enhanced solubility, elec. and Rutherford backscatt. study 2-115416
 Ge_{0.1}Se_{0.95}:In glass, photoluminesc. and excitation spectra 2-93263
 Ge₂Se₇:In, glassy, photoconductivity 2-56634
 Ge₂Si_{1-x}:In, solid solubility, regular soln. model 2-61150
 Ge₂Si_{1-x}:In, photoluminescence, exciton recombination 2-78857
 In VI, spectrum obs. 200 to 450 Å, 4d⁹, 4d⁷ 5p config. levels 2-54793
 In/Sb co-adsorption layers, on W field emitter tips 2-62077
 In-CdS-C, switching struct., with potential barrier, elec. characs. 2-87407
 In-InBr₃, liq. state, mag. susceptibility meas. 2-92857
 In-InCl₃, liq. state, mag. susceptibility meas. 2-92857
 In+F₂, product form. rate, excited states, chemiluminescence obs. 2-83359
 In+O, reactions in Ar matrix, IR spectra of prods., vibr. 2-96564
¹¹¹In in W, vacancy trapping, TDPAC meas. 2-76487
¹¹¹In labelled platelets, PAC obs., labelling mechanism 2-78416
¹¹⁵In, 8p^{3/2} and 8p^{1/2} levels HFS meas. 2-96757
 Ir-GaAs, refractory contacts, interface reactions and Schottky barrier form. 2-110444
 KBr:In, photoconductivity, thermoluminescence and TSC 2-82404
 KBr:In, pressure induced absorpt. spectra changes 2-93235
 KBr:In⁺, band luminescence, two-photon spectroscopy 2-110939
 KCl:In, photoconductivity, thermoluminescence and TSC 2-82404
 KCl:In⁰, hyperfine consts., relativistic many body calc. 2-104327
 KI:In, photoconductivity, thermoluminescence and TSC 2-82404
 KI:In, photoluminescence, exciton-Tl⁺ and -In⁺ interactions (*Russian*) 2-104938
 KI:In, pressure induced absorpt. spectra changes 2-93235
 KI:In⁺, photoluminescence, quantum yield, ionisation of In and Tl (*Russian*) 2-104937
 NaCl:In, luminescence obs. at high press. 2-72533
 Nb-Pb Josephson junction, submicron, electron beam lithographic fabrication and crit. current density meas. 2-56796
 PbI₂:In, exciton spectra, refl. and photoluminesc. spectra 2-77118
 Pb_{1-x}Mn_xTe:In, influence of doping on kinetic props. 2-87261
 (PbSe)_{1-x}(SnTe)_x:In, influence of In on props. 2-110238
 Pb_{0.7}Sn_{0.3}Te:In, photoferroelec. behaviour and Hall coeff., expt. study 2-87708
 Pb_{1-x}Sn_xTe:In, band struct. at high In conc., elec. cond. press. depend. study 2-82230
 Pb_{1-x}Sn_xTe:In, dielec. phase, switching effects and I-V characs. under IR illumination 2-92688
 Pb_{1-x}Sn_xTe:In, photoluminesc. study 2-93279
 Pb_{1-x}Sn_xTe:In, semicond.-metal transitions, IR illumination induced dynamics 2-72036
 Pb_{1-x}Sn_xTe:In epitaxial film, photolum. 2-77590
 Pb_{1-x}Sn_xTe:In epitaxial film, elec. and struct. props. 2-110506
 Pb_{1-x}Sn_xTe:In films, impurity electron-state, elec. cond. study 2-115705
 Pb_{0.9}Sn_{0.1}Te:In, Fermi level stabilization by defects at low temp., mechanism 2-66487
 PbTe:In, thermal cond., elec. cond., Hall and Seebeck coeffs. 2-115479
 PbTe:Ti, In single cryst. p-n junction, tunnel cond. characs. 2-77174
 Si:Fe, In, photoluminescence lines, Fe-Ti complexes 2-104948
 Si:In, elec. resist. and mobility, hole scatt. by impurities 2-115750
 Si:In, impurity IR excited-state lines 2-82883
 Si:In, ion implanted, dopant redistrib. after flash lamp annealing, He⁺ backscatt. study 2-86936
 Si:In, ion implanted, laser annealed, convection and constitutional supercooling cells 2-66054
 Si:In, ion implanted, metastable supersaturated solid solns. formation during solid phase epitaxy 2-98283
 Si:In, laser annealed, all formation and interfacial instability, expt. study and perturbation theory 2-56012
 Si:In, Li, sharp line donor-acceptor pair recombination luminesc. 2-104928
 Si:In, luminescence intensity enhancement by thermal treatment 2-57153
 Si:In, P, electron capture coeff. of neutral In and pair recomb., photoluminesc. spectra 2-77569
 Si:In, range distrib. and thermal annealing props. of low-energy implants 2-115258
 Si:In, vibronic spectrum of U₂ isoelectronic centre 2-61953
 Si:In,Li, In X-centre donor-acceptor pair photoluminescence 2-57139
 Si:In amorphous layers, thermal redistrib. of In 2-56003
 SnO₂:In thin film homojunction, thermoelectric effect 2-110451
 p-SnTe:In epitaxial thin film, elec. transport props., in effect 2-104514
 SnTe:In film, field effect studies, in effect 2-77210
 ZnO:In, ESR and ODMR obs. of shallow donors 2-116061
 ZnO:In, ODMR and ENDOR study 2-82748
 ZnSe:In, defect levels 2-115691

indium alloys

- see also indium compounds
 phase transformations, phenomenological theory for In rich alloys 2-88076
 rare earth alloys, RInZn, lattice parameters and struct. characs., X-ray diff. study 2-91876
 AgIn dilute alloy, internal oxidation, TDPAC study 2-93080
 Au-In, supercond., study at ultralow temps. 2-87438
 AuIn₂ film, O₂ and Ar plasma interaction, sheet resist. 2-77204

indium alloys continued

- $\text{Au}_{10}\text{In}_{30}$, cryst. struct. 2-97998
 Bi-In melts, thermodynamic activities by Knudsen cell-mass spectrometry 2-67296
 Cd-In, liq., vapour press. and calorimetric meas. 2-67298
 $\text{CeAg}_{1-x}\text{In}_x$, cryst. field excitations 2-61419
 CeIn_3 mixed valence cpd., neutron diffr., props. on basis of interacting Kondo-like ions 2-56831
 CeIn_3 , reson. photoemission studies 2-57267
 CeInAg_2 , mag. struct., neutron diffr. study 2-82565
 $\text{CeIn}_{3-x}\text{Sn}_x$, valence fluctuation metals, Fermi liquidology and T/T_f scaling 2-56503
 Cs-In, phase diagram, cryst. struct., liquid immiscibility, X-ray diffr. study 2-66176
 Cu^{111}In , defects obs. by channelling and perturbed $\gamma\gamma$ ang. correl. 2-81844
 Cu-In, dil., electron irradi., self-interstitial-impurity complexes, internal friction study 2-56007
 Cu-In, low energy ion bombard. enhanced diffusion, segregation, and phase transforms. 2-82991
 Cu-In, NMR study 2-104724
 Cu_2MnIn film, struct., mag. and transport props. 2-60889
 Ga-In, liquid, interference functions, radial atomic distrib. and elec. resist. 2-103595
 Gd-In, charge transfer and isomer shift, ^{155}Gd Mossbauer spectra 2-104777
 Gd-In system, phase diagram study (Chinese) 2-111136
 Ge-In solutions, epitaxial growth of Ge, radiation effects (Russian) 2-76869
 In Bi, dil., US attenuation in supercond. and intermediate states 2-77229
 In-Bi alloys, US vel. and internal friction investigation 2-71585
 In-Cd(Tl), shape memory behaviour and FCC to FCT transform. 2-93502
 In-Cr dilute superconducting alloy, tunnelling, localised excited states 2-72122
 In-Cu(Ag), liq. binary system, O diffusivity and thermodynamic props. 2-86907
 In-Ga, FCT struct., supercond. transition temp., resistive meas. 2-56749
 In-Mn, ion beam induced precipitate dissolution, characterisation by supercond. transition temp. meas. 2-86740
 In-Mn alloys, dil., supercond., T_c depression produced by ion implantation 2-77221
 In-Pb, surface comp., ion sputtering effect, AES study 2-82985
 In-Sn, dil., US attenuation in supercond. and intermediate states 2-77229
 In-Sn-Cu system, dispersion-hardening pastes, phase comp. 2-111143
 In-Te, molten, liq. struct., X-ray diffr. study 2-115131
 In-Te liq. alloys, appl. of percolation theory and transport coeffs. 2-66516
 In-Tl, FCC to FCT transition, Landau theory appl. 2-98246
 InGaSn-Si, interface contact potential difference (Chinese) 2-92748
 InGe, percolating supercond., upper crit. field 2-77243
 $\text{In}_{0.7}\text{Sn}_{0.3}\text{O}_{1-x}\text{WO}_3\text{-LiAlF}_4\text{-LiIn}$ thin film overlayer, electrochromism 2-72569
 Ir-Fe dil. alloy, high field Mossbauer study 2-99001
 Ir-V film, contact reaction with Si 2-86950
 $\text{Ir}_{0.78}\text{V}_{0.22}$ eutectics, strain-induced softening and high-press. expts. 2-56090
 $\text{La}_{1-x}\text{Gd}_x\text{In}$, EPR study, mag. and superconducting props. (Russian) 2-93002
 Mg-In alloys, ordering energy, pseudopot. calc. 2-103687
 Na-In, liq., elec. resist., and thermodynamic props., simultaneous meas. 2-82313
 Na-In, liq. and solid, mag. susceptibility 2-82577
 Nb/Pb-In thin film Josephson junctions, tunnelling barrier struct., Auger and XPS study 2-115956
 Nb-In(Tl), phase diagram determ. using X-ray powder diffr. 2-67300
 Nd-In system, phase diagrams and lattice spacings of cpds. 2-111141
 Ni-Al-In, β' phase, void distrib., X-ray small angle scatt. and TEM 2-10541
 $\text{NiIn}_{1-x}\text{Si(Ge)}_x$ mixtures, phase diagram invest. 2-67303
 Pb-In, liq., dil., activity coeff. of O, impurities effect 2-99700
 Pb-In films, strain relax. meas. on Si substrates 2-82189
 Pb-In films, thermal cycling between room and liq. He temps., microstruct. changes 2-11214
 Pb-In supercond. alloys, pinning effect by dislocations (Japanese) 2-71467
 Pb-In-AuO film for Josephson tunnel junction base electrode 2-98499
 Pb-In-Pb-In-Pb double tunnel junction, inhomogeneous gap states 2-82539
 PbInAu film, RF oxidation, oxide composition 2-76858
 Pd-In-Se system, polythermal PdIn-PdSe cross-section investig. 2-57332
 Pd,MnIn(Sn), Heusler alloy, elec. and mag. props. 2-110326
 Pd,MnSn,In $_{1-x}$, ferromag. to antiferromag. transition, NMR study 2-104613
 Pn-In-Au, RF oxidation, XPS and ellipsometric study 2-57530
 PrIn_3 , singlet ground state system, Hall effect meas. and calc. 2-98625
 Sm-In system, phase diagrams and lattice spacings of cpds. 2-111141
 Sm-In system, phase equilibria, cryst. struct., DTA, X-ray and metallographic study 2-92156
 Sn-In, surface comp., ion sputtering effect, AES study 2-82985
 Ta-In(Tl), phase diagram determ. using X-ray powder diffr. 2-67300
 Tb-In system, phase diagrams and lattice spacings of cpds. 2-111141
 Zn solid/Zn-In(Bi)(Sn)(Pb) liquid, equil. struct. transitions of solid-liq. interface 2-93487

indium antimonide

- acoustic and EM oscills., multitransit generation in alternating elec. field 2-66593
 acoustoelectric stationary domains, elec. field distrib., meas. and second mode model 2-77127
 anodic oxidation mechanism 2-67594
 Auger recombination rate during intense laser pulse, carrier density depend., reflectivity study 2-67158
 avalanche breakdown and elec. cond. 2-92638
 band struct., nonlocal pseudopot. calc. 2-110245
 band struct. calcs., hydrostatic press. effects 2-92457
 band struct. parameters, exciton magnetoabsorption study 2-115659
 carrier conc. effect based devices, sensitivity increase 2-87430
 cleavage faces, decoration of steps 2-110114
 Corbino discs, S-type I-V characs. in mag. field 2-61494

indium antimonide continued

- cyclotron resonance, far IR under intrinsic photoexcitation, electron temp. 2-93013
 direct-gap crystals, three-photon absorpt. 2-97079
 dislocated, elec. cond. 2-104364
 dislocation deep levels, occupation statistics 2-104289
 double crystal monochromator, performance and appl. in energy region 800-4500 eV 2-84758
 electron Hall mobility at high press. in low electron conc. samples 2-92672
 electron mobility, Monte Carlo calc. 2-92628
 electron photoemission during X-ray diffr. 2-105050
 field electron emission, current-voltage characs. 2-83011
 film, surface phonon amplification, non-parabolic band struct. effect 2-110126
 Hall effect, press. effects 2-104398
 homogeneity region, intrinsic defect concs. 2-104004
 homogeneity regions, calc. 2-86892
 hot electrons, lowest Landau level, distrib. functions, I-V characs. and neg. differential conductance 2-61476
 hypersonic wave propag. in appl. mag. fields, suppression of nonlinear effects 2-115829
 hypersound self-interaction in case of mag. freezeout of carriers 2-103905
 impact ionisation and quantum efficiency, time depend perturbation calc. 2-77075
 interband Landau absorption intensity depend. 2-77497
 interband magneto-absorpt. saturation 2-77496
 inversion layer, electron-phonon interaction, cyclotron resonance study 2-56939
 IR detector evaluation at liq. N₂ and liq. He temps. 2-89152
 IR luminescence, electron stimulated, HF modulation interferometric obs. 2-116271
 IR position sensor, liquid N₂ cooled 2-101459
 Landau level nonlinear refr. 2-65292
 layer oxidation study after ion implantation by backscattering and nuclear reaction 2-99567
 localised impurity states, cond. band minima role 2-98576
 LPE regrowth by CW laser annealing, expt. study 2-56029
 magnetoresistance influence on high mag. field Van der Pauw expts. 2-104396
 magnetoresistance meas. for two-carrier state 2-92662
 magnetotransport meas. in extreme mag. quantum limit 2-92669
 melt, suppression of thermal convection by transverse mag. field 2-86600
 MIS structs., tunnel charging of traps in oxide layer 2-115909
 MIS structures with dielectrics prep. at low temps., charge instability mechanism 2-61601
 MOS structure, interface characterization 2-87411
 n-channel, 2D-subband 2-92465
 n-type, ESR, uniaxial stress enhanced 2-98940
 n-type, far IR studies of bound and free carriers as function of hydrostatic press. 2-93238
 n-type, free carrier Faraday effect at subMM freq., static elec. field influence 2-99094
 n-type, free-carrier-induced optical nonlinearities, difference-freq. variation 2-65291
 n-type, highly nonlinear interactions with picosecond CO₂ laser, electron-hole plasma generation 2-55244
 n-type, hopping cond. below 1K in mag. field 2-98673
 n-type, metallic, resistivity below 100 mK 2-87224
 n-type, microwave irradi., hot carrier mobility, phonon accumulation effects 2-66566
 n-type, nonparabolic, ultrathin films, electronic sp. ht., size quantisation effects 2-61163
 n-type, pinch effect meas. and calcs. 2-104405
 n-type, quantum oscils. in magnetoacoustic attenuation 2-77132
 n-type, solid plasma, Brillouin instability 2-104902
 n-type, strong coupling between reson. state and cryst. lattice, Hall coeff. meas. 2-92531
 n-type, transverse breakdown study (Russian) 2-92642
 n-type, two-photon magnetoabsorpt. spectra, using CW CO₂ lasers 2-93166
 n-type, undoped, elec. props. nonuniformity, vol. distrib. 2-104366
 n-type, US wave parametric instability 2-104436
 n-type film, polycryst., intergrain barrier pot., temp. and field depend. 2-77208
 narrow band gap, resonant impurity states in strong mag. field 2-66485
 neutron irradi., carrier density and mobility meas., disordered regions scatt. effects 2-61466
 nonlinear magneto-optics, CW CO laser pumped, interband magnetoabsorption 2-93164
 nonlinear refractive index calcs. (Chinese) 2-104832
 optical bistability and multi-stability in InSb thin parallel crystals 2-102860
 optical bistability with guided waves, theory 2-97073
 p-type, free and bound hole excitations, intraband transitions, magneto-optical studies 2-93165
 p-type, photoexcited electron system, spin relaxation 2-104706
 p-type, radiation damage and recovery effects 2-66066
 p-type, US relax. time, mag. field effects 2-56650
 p-type 2-77130
 photo-excited acoustic phonons 2-98225
 photoconductive detectors, cooled, effects of surface treatment on performance 2-84705
 photoelastic effect, electron contrib. 2-92703
 photoelectric method of nonhomogeneity meas. 2-92679
 point defects, (n γ)-induced, NMR study 2-98980
 polymorphic transition meas. at low temp. and high press. 2-109981
 positron lifetimes, systematic study 2-57207
 pulled crystals, Czochralski growth, impurity distrib., US vibr. effects 2-116357
 residual impurities and inhomogeneities, galvanomagnetic meas. 2-110369
 subband reson., nonparabolicity parallel excitation mechanism and doublet peak problem 2-61863
 substrate, (001), for CdTe heteroepitaxial film MBE growth 2-56374
 surface, electron state density, low energy electron reflection study (Russian) 2-87362
 surface (110), elastic LEED, electron exchange effects and relativistic corrections 2-65815
 surface oxide thin film, carrier photoinjection 2-92699

indium antimonide continued

- thermal acceptors influence on electrophys. props. during annealing 2-56577
- third order susceptibility of III-V semiconductors in the true continuum near the band edge 2-102852
- Wannier-Mott exciton at absorpt. edge, quasione dimens. state in strong mag. field, expt. study 2-61369
- Al-Al_{0.3}-n-InSb MOS struct., quantum size effects and negative resist. obs. 2-77187
- AlGaInSb semiconductor system, LPE growth 2-83045
- AlInSb, localised impurity states, cond. band minima role 2-98576
- Ga_{0.1}-In_{0.9}Sb, voltage-current curves, scatt. effects, Monte Carlo calc. 2-104382
- InAs_{1-x}Sb_xP_y epitaxial films, photoluminesc. and optical transmission 2-93303
- In_{1-x}Ga_xAs_{1-y}Sb_y solid soln., LPE growth, unstable comp. regions, regular soln. approx. 2-92204
- InSb:Bi epitaxial layer, Bi distrib., temp. depend. 2-104183
- InSb:Bi solid soln, Bi donor level form., X-ray struct. study 2-115702
- InSb:Cr, hot electron thermo-EMF 2-104402
- InSb:Ga, lattice thermal cond., 0.35-3K 2-98353
- InSb:Ge(Cd)(Mn)(Zn)(Cr), deep levels in band gap, photocond. study 2-115706
- InSb:Ge(Sn)(Co), gamma-ray, electron and proton beam irradi., defect annealing, elec. props. (*Russian*) 2-103817
- InSb:Mg, implanted, ion current density and dose effect on radiation defects 2-76533
- InSb:Si, p-n junction diodes, hole traps, DLTS study 2-110452
- InSb:Ti, cryst. growth and p-n junction form., zero cavity growth 2-82452
- InSb-CdTe heterojunctions, photomemory effect 2-92693
- InSb-In_{0.5}GeTe, thermographic, X-ray and microscopic investigation 2-109995
- InSb-InBi solid solns., grown by MBE, charact. 2-104190
- InSb-NiSb, low-freq. voltage instability (*Russian*) 2-56606
- InSb-TiSb eutectic alloy, galvanomagnetic props. 2-104399
- two photon magnetoabsorption spectroscopy with CO₂ lasers, energy gap 2-87748

indium compounds

see also *indium alloys; indium antimonide*

- CCInP nonradiative processes and defects, obs. by acoustic spectroscopy 2-53446
- chalcogenides, mechanochemical synthesis, explosions (*German*) 2-62053
- conductor-insulator-semiconductor organic solar cells, development, features and charact. 2-83499
- electronic struct., photoelectron spectroscopy studies 2-62051
- halides, valence band struct., XPS study 2-71865
- hot-electron diffusion const., Monte Carlo calc. 2-98656
- n-InP, DLTS study 2-76967
- polyacetylene:H₂IrCl₆.6H₂O, dopant size effect on elec. cond. 2-87285
- SAW and surface skimming bulk waves obs. 2-92331
- Ag₂Te-In₂Te₃ system, molten, elec. cond. and mag. susceptibility, temp. and comp. depend. 2-61465
- Al-InAlAs-InGaAs heterostructure, current transport 2-104486
- Al_{1-x}Ga_xIn_{1-y}As, pseudopot. band struct., CPA calc. 2-115657
- (Al,Ga)_{1-x}In_xAs lattice matched to InP substrate, MBE growth 2-105080
- Al_{0.48}In_{0.52}As, LPE growth lattice matched to InP 2-99355
- Al_{0.48}In_{0.52}As, MBE grown, Si doping and elec. props. meas. 2-92005
- Al_{0.48}In_{0.52}As-Ga_{0.49}In_{0.51}As modulation doped heterostruct., current transport meas. at moderate elec. fields 2-82446
- AuGeNi-InP contact, electron microscopy investig. 2-66379
- CdCr₂In₂S₄, dil. insulating system, mag. phase diagram 2-110591
- CdIn₂S₄-In₂S₃ solid soln., vaporization chemistry and thermodynamics 2-116720
- CdIn₂Se₄, photoluminescence spectra, radiative recombination 2-57165
- CoFe₂-In₂O₄, In³⁺ cation distrib., mag. props. 2-98868
- CuCr₂Se₄-In₂Se₃ solid soln. form., DTA and X-ray phase anal. 2-109993
- CuCr₂Se₄-InSe solid soln. form., DTA and X-ray phase anal. 2-109993
- CuGa_{1-x}In_xS₂ solid solns., growth and props. 2-83017
- CuInS₂, electron-beam induced effects, Auger spectroscopy study 2-103824
- CuInS₂ spinel, thermal expansion coeff., 28 to 685°C 2-104032
- CuInS₂(Se₂)(Te₂), mag. susceptibility, 4.2 to 300K 2-66761
- CuInSe₂, amorphous and crystalline, optical props. 2-87889
- CuInSe₂, spray pyrolysis and heat treatment, for photovoltaic appl. 2-71843
- CuInSe₂:Fe, EPR study, thermal treatment effects 2-98945
- CuIn₂Se₃, cryst. struct. determ. 2-86648
- CuInTe₂, electrical charact. 2-92648
- CuInTe₂, specific heat, Debye temp., entropy 2-92231
- CuInTe₂:Zn(Cd), elec. props., hole mobility and conc., annealing effects 2-87279
- FeFe₂-In₂O₄, In³⁺ cation distrib., mag. props. 2-98868
- (Ga,In)(As,P) microwave and optoelectronic heterostruct. growth using multibarrel reactors 2-77747
- (Ga,In)As, equilb. consts. derivation from LPE, VPE growth data, solid activity coeffs. determ. 2-98481
- Ga-In-Sb system, quantitative fit to liquidus surface and thermodynamic data, associated soln. model 2-111148
- GaAs-Ga_{1-x}In_xP DH, interface recomb. and carrier confinement study 2-77605
- GaAs-InAs(100) heterojunction, MBE grown, lattice disorder, Rutherford backscatt. and channelling study 2-110202
- GaInAs epitaxial layer device type structures, defects 2-71461
- Ga_{0.47}In_{0.53}As, conduction band T-L separation, UPS study 2-61344
- Ga_{0.47}In_{0.53}As growth on InP substrates using metalorganic process, factors influencing growth 2-87099
- Ga_{0.47}In_{0.53}As high mobility thin epitaxial layers grown by MBE 2-115585
- Ga_{0.47}In_{0.53}As, MBE grown, Si doping and elec. props. meas. 2-92005
- n-Ga_{0.47}In_{0.53}As, quasi-Schottky barrier diode using fully depleted p⁺-Ga_{0.47}In_{0.53}As layer, MBE growth 2-56668
- Ga_{0.47}In_{0.53}As, VPE growth and charact. for microwave device appls. 2-83043
- p-Ga_{0.47}In_{0.53}As:Zn-SiO₂ MIS struct., interface states and field effects meas. 2-98758
- Ga_{0.47}In_{0.53}As-Al_{0.49}In_{0.51}As modulation doped heterostruct., current transport meas. at moderate elec. fields 2-82446
- indium compounds continued**
- Ga_{0.47}In_{0.53}As-InP heterojunction, 2D electron gas, quantum oscills., magneto-resistance study 2-110466
- Ga_{0.47}In_{0.53}As-InP LP-MO CVD superlattices, two-dimensional electron gas props. 2-66629
- Ga_{1-x}In_xAs epitaxial layers, Raman spectra 2-82934
- Ga_{1-x}In_xAs majority carrier photodetectors with large gain-bandwidth products 2-95474
- Ga_{1-x}In_xAs:Ge LPE layers, doping profiles, atomic absorpt. spectra meas. 2-109823
- Ga_{1-x}In_xAs films, vapour growth from In/Ga alloy source, characterisation 2-99351
- (Ga,In)_{1-x}As nonlinear adaptive optics approaches at 1.3 μm 2-90997
- Ga_{1-x}In_xAs-GaAs n-n⁺ heterojunction, Schottky diode and photodetector appl. 2-115869
- GaInAsP epitaxial layer device type structures, defects 2-71461
- GaInAsP groove laser on semi-insulating InP using laterally diffused junction 2-75595
- GaInAsP laser with new gain guiding struct., transverse and longit. mode operation 2-102797
- GaInAsP low press. MOCVD growth, for microwave device and optoelectronic device appl. 2-98496
- GaInAsP low threshold current CW operation of multiple infil buried heterostruct., 1.3 μm lasers 2-65247
- GaInAsP/InP 1.6 μm BH laser, wavelength var. due to direct modulation 2-55225
- GaInAsP/InP laser, monolithic integration with InP MISFET, LPE growth 2-65242
- GaInAsP-InP 1.3 μm DH, LPE (*Chinese*) 2-93449
- GaInAsP-InP 1.5 μm DBR lasers with built-in optical waveguide, room temp. operation 2-75593
- GaInAsP-InP 1.55 μm distributed Bragg reflector integrated laser directly coupled to external waveguide 2-60117
- GaInAsP-InP BH 1.5 μm lasers fabricated by hybrid combination of LPE and VPE 2-60101
- GaInAsP-InP BH integrated laser with butt-jointed built-in DBR waveguide, 1.6 μm CW operation 2-80987
- GaInAsP-InP buried heterostruct. laser fabrication 2-60095
- GaInAsP-InP DH lasers, combined dry and wet etching techniques to form planar (011) facets 2-60100
- GaInAsP-InP DH laser with monolithically integrated passive waveguide, LPE regrowth 2-60118
- GaInAsP-InP DH laser on semi-insulating InP substrate with terrace struct. 2-75591
- GaInAsP-InP DH lasers, MBE grown, 1.3 micron 2-114273
- GaInAsP-InP integrated twin guide DBR laser emitting at 1.55 μm, low threshold current 2-60119
- GaInAsP-InP integrated optical devices, etched mirrors, grooves and surfaces using stop-etch crystal planes 2-60264
- GaInAsP-InP mesa lasers, low threshold 2-114272
- GaInAsP-InP surface emitting injection laser with short cavity length 2-75594
- Ga_{0.1}In_{0.7}As_{0.6}P_{0.36}, heterostructures, radiative recombination, efficiency and lifetimes 2-87833
- Ga_{1-x}In_xAs_{1-y}P_y LED, spontaneous emission efficiency and nonradiative recombination meas. at 1.58 μm 2-116220
- Ga_{1-x}In_xAs_{1-y}P_y effects of two longitudinal optical phonon modes on electron distrib. 2-82349
- Ga_{1-x}In_xAs_{1-y}P_y lasers, pressure dependence of threshold current 2-90889
- Ga_{1-x}In_xAs_{1-y}P_y lattice matched to InP, band struct., disorder bowing calc. 2-98541
- Ga_{1-x}In_xAs_{1-y}P_y, VPE growth and charact. for microwave device appls. 2-83043
- Ga_{1-x}In_x-P:Be(Sn), MBE growth using Pb flux and elec. characterisation 2-78987
- Ga_{1-x}In_xP_{1-y}, internal strain determ. using Vegard's law 2-103709
- GaInPAs/InP heterostructure LED service life, 1.2-1.3 μ range 2-60082
- GaInPAs-InP mesa stripe heterojunction lasers buried in InP or GaAlInPAs, radiation mode composition 2-60083
- GaInPAs/InP heterojunction lasers, service life, 1.2-1.3 μ range 2-60082
- GaSb(InAs)-Ga_{1-x}In_xAs_{1-y}Sb_{1-y} heterostructure LED, moisture transducer appl. 2-79594
- Ge-In(Mn)-Te, X-ray investigation of GeTe-based solid solutions 2-109756
- Ho(Ir,Rh,₂)₂B₂, mag. order and supercond. props. 2-82661
- (In,Ga)(As,P) lasers at 1.3 μm, anomalous effect of carriers on dielec. const. 2-102791
- In alumina, ionic and electronic cond. meas. 2-71703
- In-As, activity coefficient, regular soln. approach and lattice model 2-93492
- In-Fe-O system, equilb. phase diagram, solid soln. form., Mossbauer study (*French*) 2-86840
- In-Ga-As-P/InP system, improved LPE techniques for low threshold lasers at 1.55 μm 2-99357
- In-Ga-Sb, phase diagrams, thermodynamic anal. (*Russian*) 2-93494
- In-InBr₃, liq. state, mag. susceptibility meas. 2-92857
- In-InCl₃, liq. state, mag. susceptibility meas. 2-92857
- In-P, activity coefficient, regular soln. approach and lattice model 2-93492
- In-P solutions, evap. of P and vapour press. of P₂, influence of Sn and In 2-56168
- In-P-O phase diagram, condensed phase portion 2-99406
- In-Sb, phase diagrams, thermodynamic anal. (*Russian*) 2-93494
- In-Se, melt, elec. cond. and thermo-EMF, temp. depend. 2-87307
- In-Te, liquid, electrical cond. meas. 2-92612
- p-In_{0.53}Ga_{0.47}As epitaxial layers, minority carrier high field transport meas. 2-82493
- InAs accumulation layer, subband populations in tipped mag. fields, Shubnikov-de Haas oscills. 2-56707
- InAs, band structure, tight binding calc. 2-66443
- InAs, donor impurities solubility, Fermi level position effect 2-61153
- n-InAs, effective g-value determ. by four-wave mixing spectroscopy 2-55260
- InAs, electron irradi., vacancies and defect states, positron annihilation study 2-116295
- InAs, far-IR dielec. response at room temp., dispersive Fourier transform spectroscopy, phonon freqs. 2-116165
- InAs, homogeneity regions, calc. 2-86892
- InAs, ion irradi., Frenkel defects and annealing 2-115316

indium compounds continued

- InAs, low-field mobility temp. depend. with optic phonon scatt., Monte Carlo calc. 2-104383
- InAs MIS diode, interface state distrib. determ., spectroscopic meas. method 2-66647
- InAs MOS interfaces, reson. inelastic light scatt. 2-61919
- InAs, positron lifetimes, systematic study 2-57207
- InAs, substrate, LPE of GaAs, Sb_{1-x} layers 2-88010
- InAs, surface, electron state density, low energy electron reflection study (Russian) 2-87362
- InAs, thermal oxidation, oxide film characterisation 2-111348
- InAs, third order susceptibility of III-V semiconductors in the true continuum near the band edge 2-102852
- InAs, two-photon optically pumped stimulated recomb. radiation in high mag. fields 2-93228
- n-InAs: Cd, ion implanted, photo-EMF, spectral response 2-92697
- InAs: Cd, Te, donor-acceptor pair form., annealing, elec. cond. and Hall coeff. study 2-61404
- InAs-AlAs solid soln., plasma edge reflectance, carrier density 2-82855
- InAs-AlSb-GaSb, multiheterostructs., two dimens. quantum states and semi metal-semicond. transition, theoretical study 2-61575
- InAs-GaAs, heterojunction band discontinuities, MBE growth, XPS study 2-77166
- InAs-GaSb, semimetallic superlattices, subband widths, cyclotron resonance and far infrared magnetotransmission study 2-56709
- InAs-GaSb heterojunction, self-consistent calcs. 2-110461
- InAs-GaSb multiheterojunction, double cyclotron resonance and interband transitions 2-61574
- InAs-GaSb quantum wells, exciton binding energy 2-115668
- InAs-GaSb superlattice, Shubnikov-de Haas oscils. under tilted mag. fields 2-56687
- InAs-GaSb superlattice, highly doped, effective mass, carrier density, helicon wave propag. determ. 2-56688
- InAs-GaSb superlattices, semimetallic, far IR magnetoabsorpt. 2-61881
- InAs-GaSb superlattices, ion dechannelling mechanism 2-66082
- n-InAs-GaSb superlattice, cyclotron resonance and Shubnikov de Haas study 2-87131
- InAs-GaSb superlattice, band structure, envelope-function approx. 2-104472
- InAs-GaSb superlattices, ion beam crystallography 2-116318
- InAs-III-V-VI semiconductor homogeneous solid solutions, physicochemical props., transfer effects 2-87260
- InAs-InSbP heterostruct. grown by organometallic VPE 2-98498
- InAs_{1-x}Sb_xP epitaxial films, photoluminesc. and optical transmission 2-93303
- InBr, direct and indirect exciton spectra, absorption and reflection study 2-56446
- InBr, lattice dynamics, IR and Raman spectra 2-116194
- InBr₃, conc. soln., struct., X-ray diff. study 2-115127
- InBr₃ in aq. soln., far IR spectra 2-87760
- InCl, photolysis analysis using X-ray techniques (Russian) 2-74554
- InCl₃, conc. soln., struct., X-ray diff. study 2-115127
- InF, mol. force consts., bond lengths, pot. energy functions, electronegativity anal. 2-75463
- InF₃·3H₂O, solid phase hydrolysis, NMR study 2-72943
- InFe₂O₄, magnetite, solid soln. form, Mossbauer study (French) 2-86840
- InGaAlAs-InGaAs, multilayer avalanche photodiode low noise detector for 1.3 μ m fibre optic systems 2-53833
- In_{1-x}Ga_xAlAs lattice matched to InP, band-gap energy and electron effective mass, comp. depend. 2-115650
- InGaAlP DH layers, MBE growth on (100) GaAs substrates, laser appls. 2-104206
- InGaAlP on (100)GaAs, MBE growth 2-104189
- InGaAs MBE layers, energy gap calc. using Phillips Van Vechten dielec. model, photoluminesc. 2-61939
- InGaAs MIS diode, C-V characs., composition depend. 2-77188
- InGaAs, metalorganic VPE growth on InP substrate 2-61309
- InGaAs:Te, VPE growth for photodetectors 2-110806
- InGaAs-InP avalanche photodiodes for long wavelength optical fibre systems, review 2-81117
- InGaAs-InP p-n heterojunctions, fabrication and charact. 2-99362
- InGaAs-InP photodetectors for the near infrared spectrum (German) 2-84704
- In_{0.53}Ga_{0.47}As, Be⁺ ion implantation 2-55989
- In_{0.53}Ga_{0.47}As, electron drift velocity meas. at high elec. fields 2-66567
- p-In_{0.53}Ga_{0.47}As film, high field transport characs. of minority electrons 2-98699
- p-In_{0.53}Ga_{0.47}As, hot-carrier relax. 2-57141
- In_{0.53}Ga_{0.47}As integrated pin/FET photoreceiver, 1-1.7 μ m 2-74503
- In_{0.53}Ga_{0.47}As, LPE growth on structured InP substrates 2-105093
- In_{0.53}Ga_{0.47}As, lattice defects detection using selective photoetching 2-103763
- In_{0.53}Ga_{0.47}As surfaces (100), peroxide etch chemistry 2-111515
- In_{0.53}Ga_{0.47}As:Be, Si, ion implanted, n⁺ layers, sheet resist., electron mobility and conc. 2-66022
- In_{0.53}Ga_{0.47}As:Si, n-layer formation by Si implantation 2-92001
- In_{0.53}Ga_{0.47}As/InP heterostruct. avalanche photodiodes, deep levels 2-110284
- In_{0.53}Ga_{0.47}As-In_{0.48}Al_{0.52}As interface, MBE grown, two-dimens. electron gas 2-98730
- In_{0.53}Ga_{0.47}As-InP heterojunction, two-dimensional electron gas study 2-77161
- In_{0.53}Ga_{0.47}As-InP heterojunction, modulation doped, quantum Hall effect 2-110464
- In_{0.53}Ga_{0.47}As-InP photoconductive detector, pulse dispersion and preheating effects 2-115765
- In_{0.53}Ga_{0.47}As-InP undoped VPE layers, photoluminesc. meas. 2-99167
- In_{0.77}Ga_{0.23}As, lattice-mismatched MBE growth on InP 2-57296
- In_{0.9}Ga_{0.1}As, concentrated, laser recrystn., solute redistribution, AES study 2-56014
- In_{0.9}Ga_{0.1}As system, alloy scatt., elec. cond. and Hall coeff. meas. 2-92627
- InGaAsP (E_g \geq 1.15 eV) layers, growth by LPE under P overpressure 2-67226
- InGaAsP (InGaAs) LPE layers, room temp. electron diffusion lengths 2-56730
- InGaAsP buried heterostruct. laser, elec. derivative characteristics and equivalent circuit model 2-65227
- InGaAsP DH lasers, shunt current and excess temp. sensitivity of I_{th} and η_{ex} 2-96948

indium compounds continued

- InGaAsP DH laser diodes, very short wavelength (621.4 nm) pulsed operation 2-108876
- InGaAsP DH RF-modulated diode laser, picosecond optical pulse generation 2-114277
- p-InGaAsP diode lasers, radiative and Auger recomb. rates meas. 2-102792
- InGaAsP heterostructure lasers coupled to InGaAsP waveguides, monolithic integration 2-55188
- InGaAsP injection laser, mode spectra and single-longit.-mode power depend. on cavity length 2-85968
- InGaAsP injection laser pulses, ps dispersionless transmission at min. chromatic dispersion wavelength in single-mode 27 km long fibre 2-114457
- InGaAsP LPE layers, melt-carry-over 2-98473
- InGaAsP LPE on InP, growth temp. and impurity doping effect on comp. 2-98482
- InGaAsP laser, optically pumped, tunable CW mode-locked action 2-65233
- InGaAsP lasers, Auger recomb. rate 2-114276
- InGaAsP lasers, interband Auger recomb. 2-80967
- InGaAsP low threshold channelled substrate buried crescent DH lasers for 1.55 μ m communication 2-102822
- InGaAsP MIS diode, C-V characs., composition depend. 2-77188
- InGaAsP on InP LPE for 1.3 micron high radiance IR LEDs and for photodiodes 2-111101
- InGaAsP, optical props. meas., angle of incidence reflectance spectroscopy appl. 2-53847
- InGaAsP, optically pumped semiconductor platelet lasers, tunable CW laser action 2-114290
- InGaAsP platelet laser, optically pumped 2-55191
- InGaAsP, refr. index at energies below direct band edge 2-110800
- InGaAsP relationship between struct. and props. 2-71486
- InGaAsP, semicond. laser for optical transmission appl. (German) 2-55151
- InGaAsP, semiconductor lasers, progress review 2-55156
- InGaAsP short-cavity injection lasers with one high-reflectivity mirror 2-114275
- InGaAsP sources and detectors for the 1.0-1.7 μ m wavelength range 2-95467
- InGaAsP tunable thin-film laser, Nd:YAG laser pumped, for high bandwidth fibre spectral meas. 2-65248
- InGaAsP:Zn(Cd), acceptor impurities, photoluminescence study 2-99189
- InGaAsP/GaAs superlattice struct., hydride VPE growth 2-99352
- InGaAsP/InGaAsP visible laser diodes, CW operation 2-99352
- InGaAsP/InP DFB lasers, 1.5 μ m range 2-102794
- InGaAsP/InP DH, nature of electron leakage 2-87377
- InGaAsP/InP DH, photolum. intensity 2-87881
- InGaAsP/InP DH laser diodes for 1.3 and 1.55 micron operation 2-55205
- InGaAsP/InP DH stripe geometry lasers using proton-defined LPE-grown wafers (Chinese) 2-65244
- InGaAsP/InP DH wafer, chem. etching characs. 2-88242
- InGaAsP/InP double heterostruct. lasers, aged, TEM obs. of dark defects 2-55143
- InGaAsP/InP double heterostructs. on InP, large area LPE growth 2-99358
- InGaAsP/InP dual-wavelength BH laser, expt. study 2-75590
- InGaAsP/InP high radiance IREDS with emission wavelength 1.3 micron and transmission rate 140 Mbit/s 2-109079
- InGaAsP/InP lasers, with chemically etched mirrors 2-75596
- InGaAsP/InP misfit dislocations, photoluminescence, TEM and etching study 2-98109
- InGaAsP-InP 1.3 μ m laser diodes, loss mechanism characterisation by acoustic and optical meas. 2-80947
- InGaAsP-InP 4 Gbit/s multiplexer and laser, 1.3 micron, direct modulation 2-114274
- InGaAsP-InP BH distributed feedback laser, 280 Mbits/s single mode fibre transmission 2-60255
- InGaAsP-InP BH laser, 1.3 μ m, hole-burning at high energy tails in spontaneous emission spectra 2-75569
- InGaAsP-InP BH laser under high current operation, output power saturation 2-80953
- InGaAsP-InP buried heterostructure laser reliability, degradation modes 2-80946
- InGaAsP-InP DH laser structures, effective refr. index and first-order-mode cutoff conditions 2-75576
- InGaAsP-InP DH 1.3 μ m laser, temp. depend. of lasing characs. 2-80965
- InGaAsP-InP DH lasers, rapid degradation obs. due to (110) dark line defects 2-85985
- InGaAsP-InP DH 1.3 μ m laser, doping effects exam. by SEM and V-I characs. (Chinese) 2-90885
- InGaAsP-InP DH laser, accelerated facet degradation obs. in water 2-90893
- InGaAsP-InP DH LED, aged, dark defects 2-91974
- InGaAsP-InP DH lasers with inhomogeneous excitation, optical bistable-switching operation 2-102796
- InGaAsP-InP DH lasers, self-aligned structures 2-114281
- InGaAsP-InP dual-wavelength buried heterostruct. laser array emitting at 1.26 and 1.55 μ m 2-75592
- InGaAsP-InP heterostructure, luminescence method of determ. elastic stresses 2-104957
- InGaAsP-InP LEDs, prep. and props. of monolithically integrated lenses 2-114473
- InGaAsP-InP LPE grown wavelength division solar cells, fabrication and characs. 2-105572
- InGaAsP-InP laser, asymmetric longitudinal mode competition, mechanism 2-60076
- InGaAsP-InP laser, intensity noise under influence of reflection and modulation 2-80950
- InGaAsP-InP layers, catastrophic degradation, laser induced 2-61022
- InGaAsP-InP long-wavelength detectors, 1.3 to 1.55 μ m, for fibre optics 2-53840
- InGaAsP-InP single-mode buried waveguide structures grown on channelled [111]B InP substrates 2-114421
- InGaAsP-InP stripe geometry DH laser, bistability and differential gain characs. 2-80948
- InGaAsP-InP stripe geometry DH lasers, spatial hole burning, self-consistent soln. 2-90892
- InGaAsP-InP system, etch rates for material selective etching 2-72856

indium compounds continued

- InGaAsP-InP V-grooved substrate BH laser with smooth far field pattern and stable ageing characts. 2-80985
 InGaAsP-InP V-grooved substrate BH laser, fabrication by one-step epitaxy 2-80995
 InGaAsP-InP wavelength division solar cells, homojunction and heteroface struct. 2-83476
 $\text{In}_{0.48}\text{Ga}_{0.52}\text{As}_{0.01}\text{P}_{0.99}$ lattice matched to GaAs, LPE from In melt rich in P, photoluminesc. obs. 2-88008
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ buried crescent laser, internal loss meas. at 1.3 μm 2-114269
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ double carrier confinement heterojunction laser, high temp. stability operation 2-114299
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ epitaxial layer, X-ray rocking curve in symm. Bragg case 2-115584
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$, low temp. LPE on InP, immiscible domain 2-98494
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}$, solid solns., band gap, comp. depend. 2-92462
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ -Cd(Zn) LPE junction laser, SEM EBIC study 2-102821
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ -InP laser with grooved transverse junction, high-power single-mode operation 2-96970
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ -InP V-grooved substrate BH 1.3 μm laser, aging tests 2-114303
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ -InP, etched mirror laser fabrication using HBr-acetic acid- $\text{Kr}_2\text{Cr}_2\text{O}_7$ etchant 2-114313
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ LPE system, alloy scattering mobility and energy gap evaluation by dielectric model 2-82485
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ LPE layer, energy gap and alloy scatt. mobility, meas. and dielec. model 2-98542
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ lasers and LEDs, Auger recombination 2-55160
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ laser, facet degradation and passivation, AES study 2-90920
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$, low field mobility and thermoelectric power, scatt. mechanisms 2-82362
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ -InP LPE layers, strain anal. and optical props. meas. 2-66392
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ -GaAs $_{1-x}$ (100), LPE growth and pulsed room temp. laser operation 2-90926
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ antisite defects, deep levels, alloy composition depend. 2-110297
 $\text{In}_x\text{Ga}_{1-x}\text{As}_{1-y}\text{P}_y$ LPE layers, lattice matched to InP, comp. modulation, expt. study 2-87084
 $\text{p-InGa}_{1-x}\text{As}_x\text{P}_{1-y}\text{Mn}$ epitaxial layers, doping characts., elec. and luminesc. props. 2-76866
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ BH laser on mesa substrate, lasing props. meas. 2-114305
 InGaAsSb lasers, interband Auger recomb. 2-80967
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{Sb}_y$ quaternary system, pseudoquaternary phase diagram calc. 2-62104
 InGaP/GaAs superlattice struct. hydride VPE growth 2-99352
 $\text{In}_{1-x}\text{Ga}_x\text{P}$ LPE growth on GaAs, composition self-modulation obs. 2-116395
 $\text{In}_{1-x}\text{Ga}_x\text{P}$ mixed crystals, light scatt. by phonon polaritons 2-104891
 $\text{In}_{1-x}\text{Ga}_x\text{P}:\text{Te}(\text{Se})(\text{Cd})(\text{Zn})(\text{Si})(\text{O})$, epitaxial film, photo-, electro- and cathodoluminescence involving deep levels 2-116258
 $\text{In}_{1-x}\text{Ga}_x\text{P}:\text{Zn}$ photoluminesc., $0.6 < x < 1.0$ 2-57148
 $\text{In}_{1-x}\text{Ga}_x\text{P}/\text{Ga}_{1-y}\text{Al}_y\text{As}$ on GaAs, LPE growth 2-99361
 $\text{In}_{1-x}\text{Ga}_x\text{P}$ LPE layer, N conc. and In content, correlation 2-71819
 InGaPAs, calc. of miscibility gap with strictly regular solution approx. 2-86875
 InGaPAs/InP DHS lasers, selective chemical etchant 2-55201
 $\text{InGaPAs}_{0.01}\text{Te}(\text{Zn})(\text{Se})$ LPE layer on GaAs, doping effect on physical, elec. and optical props. 2-110501
 $\text{In}_{1-x}\text{Ga}_x\text{P}_{1-y}\text{As}_y$, high purity, LPE growth 2-93459
 $\text{In}_{1-x}\text{Ga}_x\text{P}_{1-y}\text{As}_y$, optical props., ellipsometry meas. 2-57200
 $\text{In}_{1-x}\text{Ga}_x\text{P}_{1-y}\text{As}_y$ -GaAs, reproducible LPE growth by P vapour control on substrate 2-88007
 $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}:\text{Te}$ degenerate LPE layers, electron mobility 2-61620
 In $_x$ lattice dynamics, IR and Raman spectra 2-116194
 $\text{In}_x\text{Mo}_x\text{S}_8$ superconductive props. 2-66689
 InN, thermodynamic props., at. no. depend., synthesis method selection 2-66259
 $\text{In}_x\text{NbM}_2(\text{M}=\text{S},\text{Se})$, elec. props. 2-87289
 In_2O_3 films, density of states anomalies, tunnelling study 2-110478
 In_2O_3 -(SnO $_2$) films, preparation, elec. and optical props., review 2-87428
 In_2O_3 film, weak localization, anomalous transport props. 2-61627
 In_2O_3 films, magnetoconductive effects, Anderson localisation 2-56740
 In_2O_3 : RF sputtered films, optical props. 2-57202
 In_2O_3 thin films, electron beam evaporated, elec. props. 2-98776
 In_2O_3 :Sn conducting layers, thermal vacuum deposition technique 2-105076
 In_2O_3 :Sn film, transparent conductive, prep. by pyrolysis method 2-111091
 In_2O_3 :Sn films, annealed, elec. resist. and defect model 2-66671
 $\text{In}_2\text{O}_3/\text{SnO}_2$ -GaSe heterojunction, near UV detector 2-53839
 In_2O_3 :As $_2\text{O}_3$ film on InAs, characterisation 2-111348
 In_2O_3 :SnO $_2$ /Si transparent conductor films/polycrystalline junction, appl. to solar cells 2-57711
 In_2O_3 :Sn, disordered conductor, transition to microscopic diffusion regime and dimensional crossover 2-77211
 In_2O_3 :Sn film, disordered, resistance, weak localisation and dimensional crossover 2-110497
 In_2O_3 :Sn films, reactive evaporation prep. and elec. resist. meas. 2-105088
 $\text{In}(\text{OH})_3\cdot\text{H}_2\text{O}$, AC proton conduction 2-115451
 $\text{In}_2\text{O}_3\cdot\text{ON}_2\cdot\text{F}_3$, cryst. struct. (French) 2-65934
 InP (100), electron cond. in surface subbands 2-115846
 InP (100), laser induced order-disorder transition, LEED study 2-110117
 InP (100) MIS system, energy levels of n-channel accumulation layer 2-61541
 InP (110), elastic LEED, electron exchange effects and relativistic corrections 2-65815
 InP (110), elec. props., pseudopotential calcs. 2-66606
 InP (110), ion bombardment and etching effects, EELS and AES study 2-110099
 p-InP (111)A face, semiconductor interface charact. in photoelectrochem. solar cells 2-111552
 InP, (n, γ)-induced point defects, NMR study 2-98980
 InP, agitated gas flow technique for high press. synthesis (Chinese) 2-99320
 InP, annealing encapsulants, AES and SIMS study 2-116584

indium compounds continued

- InP, annealing encapsulants, photoluminesc. study 2-116585
 InP, anodic oxide layer, optical props. and H $_2\text{O}$ absorpt. 2-57496
 InP, anodic oxide layer composition 2-67600
 InP, band structure, tight binding calc. 2-66443
 InP, conduction band deform. pot. const. estimation from temp. var. of drift mobility, comment 2-77058
 InP, conduction band deform. pot. const., estimation from temp. var. of drift mobility, reply to comment 2-77059
 n-InP, diffusion of ^{109}Ag from vapour 2-86941
 InP, dissoc. under vacuum, kinetics 2-116691
 InP, elec. props., positron annihilation radiation defects 2-115292
 InP electro-optic directional coupler switch, homojunction struct. 2-65405
 InP electro-optic directional coupler switch 2-75683
 n-InP, electron bombarded, defect states, DLTS study 2-87171
 InP, electron irradi., 200 to 300°C in HVEM, radiation damage 2-92040
 InP, electron irradi., defect form. and annealing 2-98159
 InP, electron irradi., dislocation loops, electron microscopy study (French) 2-103769
 InP, electron stimulated interaction with water vapour, Auger and EELS study 2-76786
 InP, etching in Br $_2$:CH $_3$ OH system 2-75596
 InP, high purity, LPE growth 2-93459
 InP, high quality, MBE growth 2-116367
 n-InP, hopping conduction in an arbitrary magnetic field 2-92665
 InP, impact ionization coeffs. for electrons and holes, photomultiplication meas. 2-61472
 InP, inclusions 2-71433
 InP, ion implantation profiles, theoretical and empirical distribts. 2-81811
 InP, ion implanted, laser annealing, Fermi level pinning model, solar cell fabrication 2-56027
 InP, ion irradi., Frenkel defects and annealing 2-115316
 InP, ionisation coeffs., avalanche photomultiplication and avalanche noise study 2-98700
 p-InP junctions, LPE grown, abnormalities in elec. and optical characts. 2-98738
 InP, LEC grown semi-insulating, effect of Fe content on thermal stability 2-97966
 InP, LPE grown, surface morphology, doping impurities and cooling rates effects 2-92390
 InP, LPE growth on $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}$ (111)A without dissolution 2-77757
 InP LPE layers, dislocation density, intermittent growth procedures effects 2-116392
 InP LPE layers, melt-carry-over 2-98473
 InP, lattice defects detection using selective photoetching 2-103763
 InP layers, growth by LPE under P overpressure 2-67226
 InP, localised impurity states, cond. band minima role 2-98576
 InP low press. MOCVD growth, for microwave device and optoelectric device appl. 2-98496
 p-InP , low resistance ohmic contacts using Au-Zn-Cr-Au metallisation 2-104482
 InP MIS diode, C-V characts., composition depend. 2-77188
 InP MIS Schottky barrier solar cells, instability obs. 2-88447
 InP MIS Schottky diodes, plasma oxidation prep. and characts. 2-61591
 InP, MIS struct., electron subbands, magnetoconductance oscils. cyclotron resonance and surface cond. meas. 2-56708
 InP MISFET, monolithic integration with GaInAsP/InP laser, LPE growth 2-65242
 InP MISFET, optically gated, high gain optical detector appl. 2-53835
 InP MOS interface states, DLTS and photoionisation study 2-110488
 InP MOS solar cells, high efficiency, by anodic oxidation processes 2-88448
 InP MOS struct., photoionisation cross-section and interface state threshold meas. 2-98759
 InP monolithic SAW device, new SAW modes obs. 2-104134
 InP, open tube method of Zn diffusion 2-92278
 InP, optical props., ellipsometry meas. 2-57200
 InP optical Y-junctions and S-bends formed by single-mode rib waveguides 2-114422
 n-InP, oxidation using nitric acid, elec. props. of Au-oxide-n-InP structs. exam. 2-67581
 InP photoconductive detectors, high-speed, for UV and X-ray regions 2-112975
 InP, photoluminescence of synthesis-solute-diffusion and LEC grown cryst. 2-93259
 InP, plasma etching, temp. and discharge freq. effects 2-83255
 InP, plasma etching by tetrachloromethane, kinetic study by nonperturbative optical techniques 2-116565
 InP, positron lifetimes, systematic study 2-57207
 InP, Raman spectrum, phonon modes, ion implantation and annealing effects 2-82833
 n-InP, refractive index at 0.633 (1.15) μm , carrier conc. depend., reflectivity meas. 2-93140
 InP relationship between struct. and props. 2-71486
 InP, Schottky barrier form., MOS interface states 2-82428
 InP, Schottky barrier formation, defect states model 2-98722
 InP, Schottky contacts on chem. etched surfaces, chem. effects obs. 2-61550
 p-InP Schottky diodes, photoluminesc. dead layer 2-104932
 InP, semi-insulating single crystals, high quality, grown by automatic diameter control system 2-99326
 InP, shallow donor binding energies, effect of band non-parabolicity 2-98581
 InP, single crystals, dislocation free, cryst. growth by LEC technique 2-97965
 InP, single crystals, liq. encapsulated Czochralski grown, photolum. and IR absorption 2-57144
 InP structured {100} substrate, fabrication by preferential etching for LPE growth 2-99571
 InP structured substrates for LPE growth of $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}$ 2-105093
 InP submicron layer, quasiballistic cond. at 77K, numerical study 2-61569
 InP substrate, interdiffusion of metal films, book contrib. 2-61215
 InP substrate for lattice-mismatched MBE growth of $\text{In}_{0.77}\text{Ga}_{0.23}\text{As}$ 2-57296
 InP surface, prepared by various cleaning methods, anal. by AES 2-88389
 InP, surface composition and etching in Cl $_2$ ion beam 2-61262
 InP, surface defects and Fermi-level pinning 2-82431
 InP, surface donors and acceptors, Fermi energy as function of O $_2$ exposure 2-110426

indium compounds continued

- InP, surface etching kinetics of H plasma, Auger spectra study 2-93637
 p-InP surface modified photocathodes for photoelectrochem. cell 2-99813
 InP, thermal expansion coeff. calcs. 2-86911
 InP, thermal oxidation and props. of oxide film, IR and Raman data 2-72854
 InP, thermal oxidation and props. of oxide film, IR and electron diff. data 2-72855
 InP thin heteroepitaxial film on CdS, vapour growth 2-71833
 InP, transverse electric field effects on electron transport props. 2-98651
 InP, two-photon absorption coeffs., band structure calcs. 2-65293
 InP, use of HNO_3 -HBr dislocation etchant 2-76445
 InP, Wannier-Mott excitons, wave functions and normal-incidence refl. 2-82244
 InP with chemisorbed H, surface optical phonon obs. 2-115550
 InP:Fe, APR study 2-66900
 InP:Be, ion implanted, migration during annealing, SIMS study 2-98143
 InP:Be, Zn, Cr, Se, doping profiles, SIMS anal. 2-103806
 InP:Be(C)(Si)(Ge)(Sn), ion implanted, annealing behaviour obs. 2-98135
 InP:Cd, diffusion profiles, p-n homojunction form. 2-110038
 InP:Cd, VPE growth and photolum. characterisation 2-88002
 InP:Co, deep levels, elec. and optical meas. 2-76971
 InP:Cr(Fe), impurity diffusion, carrier and impurity profiles 2-115467
 InP:Fe, Be⁺(He⁺) ion implanted, semi-insulating, photoluminesc. meas. 2-99168
 InP:Fe, deep level optical spectroscopy 2-61400
 InP:Fe, electron irradiated, EPR study 2-104690
 InP:Fe, semisulating, photocond. mechanism peculiarities (Russian) 2-104435
 InP:Fe(Cr), photocurrent instability, temp. depend. meas.; temp. meas. system appl. 2-58824
 InP:Fe(Cr), semi-insulating, photoinduced current transient spectroscopy 2-92646
 InP:Fe(Cr), VPE layers, deep impurity levels DLTS and DLOS study 2-98590
 InP:Mg VPE layers, implanted and unimplanted, near-edge emission 2-57157
 InP:Mg(Si), implanted, impurity redistrib. during annealing, SIMS study 2-98144
 InP:Mn, impurity states electronic struct., ESR and optical absorpt. study 2-82285
 InP:Mn, single crystal Czochralski growth and props. 2-93406
 InP:Mn(Fe) and undoped, deep level photolum. study 2-104930
 InP:Sb, LEC single crystal growth, Sb dopant distrib. coeff. 2-93412
 InP:Te, VPE growth for photodetectors 2-111086
 InP:Yb, impurity electron state, ESR, photoluminescence and mag. susceptibility study 2-104307
 InP:Zn(C)(Mg) epitaxial layers, shallow acceptor excited states, luminesc. study 2-57156
 InP/Al₂O₃ MOSFETS, CVD of Al₂O₃ dielec. layer 2-111090
 InP/InGaAsP double heterogeneous epitaxial wafers, stress induced defect migration 2-92287
 p-InP/n-InP/n-CdS heteroface solar cell, growth and evaluation 2-88452
 InP-Ag contacts, interface control by var. of concentration of free In, co-evaporation 2-66638
 n-InP-Al Schottky barrier, prep., photocurrent, I-V and C-V characts. study 2-61552
 InP-Al₂O₃ anodic interface formation, enhancement MISFET appl. 2-82461
 n-InP-Au Schottky contacts with increased barrier height due to oxide layer 2-77185
 InP-Au(Ni)(Ag) interface, Schottky barrier formation, UPS study 2-110443
 InP-CdS RF sputtered solar cell, comparison with In₂-Sn₂O₃-y-InP cell 2-57714
 InP-CdS solar cells with CdS window layer, high efficiency operation, review 2-105570
 InP-Ga_{0.47}In_{0.53}As-InP DH epitaxial layers, chem. interface width and struct., Auger meas. technique 2-87086
 InP-Ga_{1-x}As_x-yP_y heterostructure LED, moisture transducer appl. 2-79594
 InP-Ge interface, X-ray photoemission spectra of band discontinuities 2-82447
 InP-InGaAs n-p⁺ heterojunctions, fabrication and charact. 2-99362
 InP-InGaAsP DH with 40% external luminesc. quantum efficiency 2-77591
 InP-InGaAsP planar heterostructure avalanche photodiodes, multiplication noise 2-56675
 InP-InGaAsP-InGaAs struct., LPE grown, lattice defects study 2-71454
 InP-InGaAsP-InP DH wafer, LPE grown, misfit dislocations 2-98096
 InP-metal interface, Fermi level pinning and chem. struct., XPS study 2-110475
 InP-oxidized film interfaces, phys. props. (Chinese) 2-92763
 InP-P₃N₅ MIS devices with CVD P₃N₅ gate simulating film, elec. props. 2-99346
 InP-Si₃N₄ interface, I-V, C-V and MISFET characts., CVD, surface pot. var. 2-56710
 InP-SiO₂ interface, I-V, C-V and MISFET characts., CVD, surface pot. var. 2-56710
 InP-SiO₂ interface, plasma-enhanced CVD growth, XPS and TEM study 2-110169
 InP-SiO₂ MIS struct. and enhancement mode MISFET, expt. study 2-98760
 (InP)_{1-x}(InAs)_x solid soln., sp. ht., temp. depend., 5 to 160K 2-76705
 (InP)_{1-x}(InAs)_x solid soln., thermodynamic functions, entropy and enthalpy of mixing 2-86904
 InPO₄ film on InP, IR and Raman data 2-72854
 InPO₄ film on InP, IR and electron diff. data 2-72855
 In_{2/3}PSe₃, radiative transitions, hole diffusion length, photoelectrochemical study 2-92647
 InS, Grueneisen mode parameters, structural phase transition, high press. Raman study 2-104889
 InS, IR study of Davydov splitting 2-87796
 InS₂, amorphous film, optical props. (Russian) 2-62007
 InS₂, crystal growth from amorphous phase, electron-diffraction study (Russian) 2-92384
 β -In-S₂, two-temp. synthesis, props. 2-77725
 InSb, band structure, tight binding calc. 2-66443
 InSb low-noise photodetector preamplifier for IR astronomy 2-112333
 InSb-InBi solid solns., grown by MBE, charact. 2-104190
 In₂Sb₂O₁₂, cryst. struct. and dielec. props. 2-109755

indium compounds continued

- InSe, cryst. grown from melt, struct. transition, X-ray diff. study 2-55942
 InSe, cryst. struct. and Raman spectra 2-98036
 InSe, crystal growth and defect evaluation (Japanese) 2-87958
 InSe, cyclotron resonance of electrons bound at defects, internal accumulation layer formation 2-56944
 InSe, exciton selection rules in polarised reson. Raman scatt. by LO phonons 2-67034
 InSe, intercalated with Na⁺ and Ca²⁺ prep. and elec. props. 2-66549
 InSe, intraband light absorption, high nonequib. carrier conc. induced by laser beam 2-87799
 InSe large single crystals grown from stoichiometric, non-stoichiometric melts 2-93411
 InSe, layer compounds, electronic structs. and ionicity, bond orbital model 2-86613
 InSe, layered compound, elastic const. and compressibility 2-86773
 InSe, layered semicond., photoluminesc. study 2-99170
 InSe, magnetoabsorption, A exciton study 2-82830
 InSe, press. induced nonlayer struct., X-ray diff. study 2-103713
 InSe single crystals, surface photo-EMF at high excitation levels 2-61522
 InSe, stimulated photoluminescence 2-67113
 InSe, two-photon absorpt. spectra, pol. and temp. depend. 2-57095
 InSe, uniaxially deformed, absorpt. and photoluminesc. spectra, energy bands 2-67081
 p-InSe:Zn, annealing behaviour, photoluminesc. study 2-92276
 InSe-anthracene intercalate, elec. props. (Russian) 2-77067
 InSe-Au Schottky barrier diode, elec. and optical props. 2-77157
 InSe-GaSe heterojunction, EMF with large temp. gradients 2-115870
 In₂Se₃ crystal growth and IR transmission, optical filter appl. (Russian) 2-114413
 In₂Se₃, piezophotocconductivity spectra, carrier energy quantisation 2-104429
 In₂Se₃-x, polycryst. and amorphous, elec. cond., switching phenomena and struct. changes obs. 2-87349
 In₂-Sn₂O₃-y film, reactively electron beam evaporated, optical, IR and elec. cond. props. 2-57198
 In₂-Sn₂O₃-y coating on Kapton substrate, electron beam damage, Auger and secondary emission study 2-81826
 In₂-Sn₂O₃-y film, reactive electron beam evaporation prep. and elec. and optical props. 2-105078
 In₂-Sn₂O₃-y interface props., examination 2-66638
 In₂-Sn₂O₃-y transparent cond. films., prep. and props., review 2-105068
 In₂-Sn₂O₃-y transparent cond. film, planar magnetron sputtering 2-105074
 In₂-Sn₂O₃-y-GaAs:Be heterojunction solar cell, AES and EBIC evaluation 2-78214
 n-In₂-Sn₂O₃-y-InP photo and electroluminesc. diode 2-61571
 In₂-Sn₂O₃-y-InP solar cell, comparison with RF sputtered CdS-InP cell 2-57714
 In₂-Sn₂O₃-y-Si p-i-n solar cell, reactive sputtering fabrication 2-57698
 In₂-Sn₂O₃-y-WO₃-LiAlF₄-Lin thin film overlayer, electrochromism 2-72569
 In₂-Sn₂O₃-y-Si solar cell, EBIC response anal. 2-88436
 n-In₂-Sn₂O₃-y₂-InP solar cell, electron trap characterisation by DLTS 2-92513
 In₂Ta₂(M=S, Se), elec. props. 2-87289
 In₂Te₃, evaporation, 725-895K, mass spectroscopic investigation 2-86845
 In₂Te₃, liquid, Knight shift studies of cond. and struct. inhomogeneity 2-72362
 In₂Te₃, random defect semicond., electronic props. 2-115653
 In₂Te₃ thin films, growth and props. 2-71840
 In₂Te₃Sn, elec. inactivity of Sn impurity atoms, Mossbauer and photoelectron spectra 2-115703
 In₂WO₆, cryst. struct., relation to fluorite struct., X-ray diff. study 2-81726
¹¹⁵In in InP single crystal, quadrupole moment from spin lattice relaxation 2-107754
 InAs, subband reson., nonparabolicity parallel excitation mechanism and doublet peak problem 2-61863
 IrCl₆³⁻ electronic struct., relativistic calc. 2-102401
 IrO₂, optical props., 0.5 to 9.5 eV, electronic struct. 2-57125
 IrO₂, sputtered film, optical writing with laser beam 2-91008
 Na₂O-In₂O-SiO₂, glass transition-temp. relation to glass comp. 2-66219
 P₂O₅-In₂O₃ anodic layers grown on InP, composition 2-67600
 Pb/Bi/In oxide-Pb/Bi tunnel junction, quasiparticle mixer and other apps. 2-98812
 Pd-In Schottky diode H₂ sensors, sensitivity transient response and detection mechanism 2-89700
 Sb-Te-In, Krupkowski method for thermodynamic props. 2-76708
 Si-Se-In film, photo-induced memory effects obs. 2-56636
 SnO₂/In₂O₃-Si structure with tunnel-transparent insulating layer, elec., photoelec. and luminesc. props. 2-77159
 SnO₂/In₂O₃-SiO₂-nSi, role of tunnel-thin dielectrics 2-99787
 T 2-109080
 TiInS₂(Se₂), layer semicond., hopping cond., freq. compensation effect 2-104381
 TiInSe₂, Raman spectrum, first order, hydrostatic press. effect 2-87794
 ZnIn₂S₄, electron trap distrib., elec. cond. meas. 2-92520

INDO calculations

- 4-(9-anthryl)-N,N-dimethylaniline, intramol. charge transfer, INDO/S CI and PCIOLO calcs. 2-90688
 azomethane, rotation round double bond, multiconfig. SCF-INDO study 2-70141
 band structure, neighbour strand interactions, self-consistent electrostatic field calcs. 2-92440
 benzaldehyde, dipole moments and electronic charge distrib., INDO calc. 2-75185
 benzaldehyde, electronic transitions, frontier MOs, INDO/S-CI calcs. 2-108380
 1,3-benzodioxole radical cations, hyperfine splitting const., ESR, MO calcs., correl. with reactivity (German) 2-102511
 benzonitrile, electronic transitions, frontier MOs, INDO/S-CI calcs. 2-108380
 benzophenone, dipole moments and electronic charge distrib., INDO calc. 2-75185
 biphenyl molecules, constant relating total mol. energy to sum of valence eigenvalues, CNDO and INDO methods 2-75188
 bis(π -pentadienyl)nickel, Koopmans' defects calcs. 2-75351

INDO calculations continued

- bis (π -polyeryl)nickel clusters, electronic correl. and HF instability, INDO MO calcs. 2-96460
 carbonyls, excited states, electronic struct., INDO/2V_{N-1} pot. model appl. 2-59701
 conjugated compounds, CNDO and INDO method failure in conformational anal. 2-80481
 conjugated nonrigid mols., ground state conformations and barriers to internal rot., INDO SCF method appl. 2-108386
 CSF iterations, convergence methods, appl. to CNDO, INDO and STO-3G calcs. 2-64852
 1,2-difluoroethylene, rotation round double bond, multiconfig. SCF-INDO study 2-70141
 1,2-disocyanethane, conformation, vibr., INDO calcs., Raman and IR obs. 2-75274
 fluorene, electronic transitions, frontier MOs, INDO/S-CI calcs. 2-108380
 fluoroethylenes, solvent effect on spin coupling consts., FPT-INDO-solvation calcs. 2-113888
 formaldehyde, dipole moments and electronic charge distrib., INDO calc. 2-75185
 hydantoin, electronic struct. by UV photoelectron spectra and INDO/S calcs. 2-96636
 indene, electronic transitions, frontier MOs, INDO/S-CI calcs. 2-108380
 lactate dehydrogenase, active centre, CNDO/2, INDO and EHT calcs. 2-80854
 linear molecules, elec. field gradients, semi-empirical SCF MO calcs. 2-108387
 long chain molecules, intermol. interactions, PCIO and INDO calcs. 2-75186
 methanol, ¹J_{CH} coupling, dielectric const. depend., ¹³CNMR meas., calc. using FPT-INDO-Solvation method, internal rot. 2-96598
 methylamine, ¹J_{CH} coupling, dielectric const. depend., ¹³CNMR meas., calc. using FPT-INDO-Solvation method, internal rot. 2-96598
 1-methylhydantoin, electronic struct. by UV photoelectron spectra and INDO/S calcs. 2-96636
 mixed first and second row composition, struct. and relative stability 2-64876
 5-nitrofurans derivatives, radical anion electronic struct., EPR, electronic absorpt., and INDO calc. 2-96606
 oxalic acid, constant relating total mol. energy to sum of valence eigenvalues, CNDO and INDO methods 2-75188
 phenylacetylene, charge transfer states, two-photon obs., INDO/S calcs. 2-70366
 polyglycidyl methacrylate (PGMA), negative electron resist., γ -irrad., ESR study and INDO UHF MO calc. 2-93010
 polystyrene, negative electron resist., γ -irrad., ESR study and INDO UHF MO calc. 2-93010
 porphine, free base, isomer ground and excited state calcs. 2-113890
 propionic acid dimer, intermol. interactions, PCIO and INDO calcs. 2-75186
 quinoxaline molecules, AB₂(AH₂)(AH₂)(HAB₂) classes, geom. and electronic struct., INDO and CNDO calc. 2-102386
 quinoxaline molecules, hypothetical HAB, geom., electronic struct. and common props. 2-85551
 silabenzene, electronic states, INDO/S-CI calcs. 2-108382
 sirohydrochlorin, isomer ground and excited state calcs. 2-113890
 styrene, electronic transitions, frontier MOs, INDO/S-CI calcs. 2-108380
 syndones, photochromic, chemical struct. discussed using X-ray struct. data 2-90454
 tricarbo(norbornadiene)iron, grand and cationic hole states, struct., INDO MO study 2-108385
 urazole, electronic struct. by UV photoelectron spectra and INDO/S calcs. 2-96636
 vinyl formate radical, γ -CH formyl-H⁺ coupling, INDO-MO-SCF calcs. 2-90455
 B₂N₂H₂, photoelectron spectrum, theoretical models calcs. 2-80722
 B₂N₂H₂⁺ radical, photoelectron spectrum, theoretical models calcs. 2-80722
 BeH₂, electron relax., INDO calcs. (German) 2-85555
 Cl₂, struct., props., CNDO/2 and INDO calcs. 2-102388
 ClF₂, struct., props., CNDO/2 and INDO calcs. 2-102388
 ClF(ClClF), electronic struct., CNDO/2 and INDO calcs. 2-102389
 CoCl₂⁺, energy levels, INDO MO calcs. 2-85550
 Co(II) complex, N,N'-ethylenebis(acetylacetonatiminato)Co(II) EPR/ENDOR and semiempirical calcs. study 2-116089
 F₂, electronic struct., CNDO/2 and INDO calcs. 2-102389
 F₂Cl, electronic struct., CNDO/2 and INDO calcs. 2-102389
 Fe complex, trans(η^2 -C₂H₂)Fe(CO)₂, instability, HF function, INDO calcs. 2-64880
 Fe complex, trimethylenemethane iron carbonyl, Koopman's defects, Hamiltonian calcs. 2-80480
 H₂NO, protonated and deprotonated ions, ligand in complexes, SINDO/1 calcs. 2-85548
 H₂NOH, protonated and deprotonated ions, ligand in complexes, SINDO/1 calcs. 2-85548
 (H₂O)₂, environmental effects, self-consistent reaction field, CNDO/INDO calcs. 2-108384
 Li, solvated, far IR spectrum, INDO calcs. 2-108413
 Ni complex, bis(β -dithioketonato)Ni(II) ground and cationic hole states electronic struct., INDO calcs. 2-96461
 Pt complex, cis-diamino dichloro platinum(II) analogs, antitumour activity, INDO-SCF calcs. 2-80485

INDOR

- see also nuclear Overhauser effect*
 TINDOR triple resonance technique, sing determ. of long-range couplng const. 2-58870

induced anisotropy (magnetic)

- alloy, ferromag., cold rolling induced mag. anisotropy use for cryst. defect analysis (Russian) 2-67574
 ferromagnetic alloys, amorphous, kinetics of induced uniaxial mag. anisotropy rotation 2-87489
 film, ferromag., elastic strains in crystallite boundaries, segregated pt. defects effect on induced anisotropy (Russian) 2-66877
 metallic glasses, directional ordering study 2-87555
 rare earth garnet epitaxial films, induced mag. anisotropy 2-72308
 Co-Fe, induced mag. anisotropy, role of stacking faults, expt. study (Russian) 2-92897

induced anisotropy (magnetic) continued

- Co-Fe-Si-B amorphous ribbons, with induced mag. anisotropy, influence of applied tensile stress on power loss 2-82686
 Co₈₅Ni₁₀Fe₅Si₁₀B₁₀ amorphous, annealing effects and short range ordering 2-82588
 Co₈₅Ni₁₀Fe₅Si₁₀B₁₀ ribbons, domain pattern annealing effect 2-92978
 Fe-Si (3 wt.%) alloy, cold rolling induced mag. anisotropy use for cryst. defect analysis (Russian) 2-67574
 (Fe_{0.63}Co_{0.37})₇₅Si₁₅B₁₀ amorphous, zero-magnetostriction induced mag. anisotropy, formation kinetics meas. 2-72189
 (Fe_{1-x}Co_x)₉₀Zr₁₀ amorphous alloys, mag. induced anisotropy meas. 2-92896
 Fe₂₀M₈₀B₁₇ amorphous alloy, (M=transition metal), mag. and stress annealing 2-87554
 γ -Fe₂O₃, epitaxial growth induced anisotropy, expt. study 2-77287
 GdFe amorphous thin films, induced anisotropy and temp. effect on domain struct. 2-104609
 YIG:Pr³⁺, cryst. growth from melt, spontaneous magnetisation and mag. anisotropy meas. 2-77273

inductance

- metal-metal point contacts, resist. and kinetic inductance, electron-phonon effects (Russian) 2-98727

inductance measurement

- circuit elements having low Q-factor inductance, capacitance and resistance meas., impedance meter (Rumanian) 2-89738
 digital LCR measurement instrumentation 2-89742
 direct-reading instrument for ferrite-core coils meas. 2-89744
 units realisation, progress at NPL (India) 2-101375

induction, electromagnetic

see electromagnetism induction

induction heating

- see also electric furnaces*
 alloys, vacuum induction melting 2-69177
 glass melting in ceramic container 2-59472
 RF, for thermal wave imaging, thickness meas. of WC plasma coating on stainless steel plates 2-99613
 Fe, grey cast, local electric arc remelting for generation of wear resistant layers 2-111363

induction motors

- linear induction machines in heave mode, dynamic behaviour anal. using finite element and Fourier anal. 2-80871
 nonlinear magnetic field problems with complex current sources, finite element anal. 2-102686
 radially ventilated induction motors, noise reduction 2-109116
 single-sided linear induction motor with solid iron secondaries, reaction forces prediction using computer model 2-80872
 TEXT, motor generator installation and operation 2-69936
 windings with non-linear magnetisation characts., current shape anal. (Slovak) 2-56889
 Cu winding conductors, mechanical props. (Czech) 2-111230

inductor microphones

see microphones

inductors

- see also coils; transformers*
 loop systems, guidelines for dimensioning, hearing aid appl. 2-68197
 industrial atmospheres *see air pollution*
 industrial economics *see economics*
 industrial plants

- CO₂ monitoring in an air separation plant with the ULTRAMAT 3 gas analyzer 2-116764
 heat pumps, industrial, high temp., gas engine driven, design, construction, and testing 2-116844
 process water heating using heat pump utilising waste water as heat source (German) 2-88473
 solar industrial process heat plants without storage, design, analysis and optimisation 2-105591
 thermal oxidizers convert industrial waste into valuable energy 2-78194
 thermodynamic systems modelling and anal. using process graph model 2-107281
 H₂ and fuel gas production by catalytic gasification of residual pitch and fluid coke from tar sands bitumen upgrading process (Japanese) 2-57737

industrial property

- patents, UK laws and procedures 2-89519

industrial research management

see research and development management

industrial robots

- fission reactors, inspection and repair, robot appls. 2-108064
 nuclear power plants, appls. of robots (Japanese) 2-74860

industrial standards

see standards

inelastic electron tunnelling spectra

see tunnelling spectra

inelastic electron tunnelling spectroscopy

see tunnelling spectroscopy

inert anodes

see anodes

inert gas compounds

- see also argon compounds; helium compounds; krypton compounds; neon compounds; radon compounds; xenon compounds*
 halide closed loop Mistral laser, flow control 2-108901
 halide excimer lasers, 200 to 400 nm region laser development 2-108854
 halide lasers, freq. mixing in extreme UV 2-108956
 monohalides, mol. ground state spin-orbit splitting 2-102405

inert gases

- see also argon; helium; krypton; neon; radon; xenon*
 adsorbates, local work function determ. by photoemission 2-82436
 atom+alkali atom (ion) interaction, model pot. calcs. 2-102580
 atom+alkali halide molecules, dissociation, ionisation, momentum model 2-114098
 atom+Ar⁺, electron loss cross section meas. 2-102600
 atom+Cl⁺, electrons detachment energy distrib. 2-90684
 atom+CsF(CsCl)(KCl), rot. inelastic cross sections, long-range pots. 2-96699
 atom+diatomic molecule, vibr.-rot. relax. 2-70396
 atom+ground state atom(molecule), ionisation 2-90680
 atom+halogen anion, elastic scatt. and electron detachment differential cross sections 2-90650
 atom+Hg, interaction pot. determ. on basis of diffusion coeff. temp. depend. 2-108669
 atom+Na(Rb), inelastic scatt. theory, higher-order corrections to impulse approx. 2-54920
 atom-surface inelastic scatt. on metal surface, electron-hole pair excitation 2-77686
 atoms, quenching of Rb Rydberg levels, cross section meas. 2-102426

inert gases continued

- atoms, Sternheimer shielding-antishielding factor, nucl. quad. interactions 2-92547
- atoms, third-harmonic generation and multiphoton ionisation 2-70205
- atoms+I₂, vibr. energy transfer from highly excited anharmonic oscillators, quantum state and interaction pot. depend. 2-96697
- atoms+Kr⁺, charge transfer cross section meas. 2-102601
- atoms+Li, 3²D state quenching, product state specific obs. 2-80796
- atoms+Na, collision-induced line shifts 2-108681
- atoms and molecules, partial electron impact ionisation cross sections 2-90713
- atoms counting by resonance ionisation spectroscopy 2-64899
- atoms or ions+alkali metal atoms, thermal energy collisions, spectroscopic study (*German*) 2-114970
- collisional broadening of T transition Raman echo meas. 2-85574
- crystals, band struct., adiabatic separation of outer and inner electrons (*Russian*) 2-98514
- crystals, binding energy, zero isotherms, and elastic consts. from model attractive pot. (*Russian*) 2-55879
- crystals, repulsive hardness param. and ionic props. correl. 2-109732
- crystals, Salter vap. press. eqn., anharmonic effects 2-115381
- diatoms, polarisabilities, SCF computations, collision induced Raman spectra 2-70441
- diffusion coefficient of Br⁻, test of generalised Einstein relation 2-60704
- double differential ionisation cross-section under heavy charged particle bombardment 2-65681
- element and isotope abundances in meteorites (*Japanese*) 2-117635
- high-pressure gas targets for radionuclide prod., opt. obs. of intense particle beam influence 2-113794
- impurities in alkali hosts, absorption, emission and XPS line shapes, model calc. 2-116216
- ion beams, singly charged, metastable fraction meas. 2-89861
- ionised projectiles traversing inert gases, polycrystalline solids and axial channels in Au, electron capture and loss 2-90661
- isotopic thermal diffusion factor, temp. depend., determ. using cadmium calibration factor 2-86369
- metastable atom scatt. from solid surfaces 2-99261
- meteorites, inert gas in E-chondrites 2-63325
- meteoritic noble gases, sorption by sulphides and spinels rel. to origin of planetary gases 2-100846
- meteoritic noble gases trapping, role of sorption by (Fe,Cr)₃O₄ (chromite)+C 2-100845
- meteoritic noble gases trapping, role of sorption by Fe₃O₄ (magnetite)+C 2-100844
- MHD generator, discharges in inlet region 2-91681
- mixtures, interatomic pots. calcs. 2-90642
- monolayers on Ni (110) and Ga film, UPS meas. 2-57261
- physisorbed monolayer on graphite, orientational epitaxy of wall near commensurate-incommensurate phase transition 2-66355
- planets formation, rare gas retention by accreting planets in solar nebula 2-112353
- rare gas halide laser gain meas. 2-65204
- second dielec. virial coeffs. 2-104801
- secondary light emission by migrating electrons in weak elec. field 2-109453
- solid, physisorption of He, H₂, D₂ and Ne, sorption energy determ. 2-87013
- solid, unpaired forces and phonon dispersion 2-61091
- solids, lattice dynamics and thermodynamic props., zero point motion and three body effects 2-109941
- solids, molecular excitons, structured emission 2-76935
- target+U⁴⁺, highly charged inert gas recoil ion prod. 2-114097
- thin films, 0 to 15 eV electron transmission spectra, temp. and thickness depend. 2-110217
- virtual series and computer simulation at low densities 2-91573
- Ca in presence of inert gases, electric-quadrupole transitions, photoabsorpt. studies 2-90467

inertial navigation

- fibre gyroscope with inertial-navigation short-term sensitivity 2-109062
- geodetic inertial survey systems 2-83953
- geodetic inertial survey systems with gradiometric aiding 2-83954
- gravity gradiometry for improvement of inertial navigation 2-83955

inertial systems

- solar activity research using stabilised platform on Interkosmos (*Czech*) 2-63205

infinite series *see series (mathematics)***inflammability** *see combustion***information analysis centres** *see information centres***information centres**

- measurement quality assurance and accuracy, Rumanian Inst. of Metrol. review (*Rumanian*) 2-74377

information retrieval*see also information storage*

- Chemical Abstracts Condensates and Chemical and Pharmaceutical Bulletin keyword systems compared (1978-79) (*Japanese*) 2-68948
- holographic processor for associative information retrieval 2-70524
- remote sensing and planetary image storage and retrieval by BIRP computer system 2-112139

information retrieval systems

- automated directory listing retrieval system, based on connected letter strings recognition 2-60316
- Cambridge Connectivity Files, computer-aided generation 2-115205
- Doppler geodetic point positioning database at DMA 2-57961
- Earth tides database 2-57963
- geodetic data bases in Poland 2-57965
- gravimetric data management at Bureau Gravimetricque International (BGI), data evaluation and retrieval techniques 2-106321
- Landsat geographic data 2-63110
- levelling database implementation 2-57964
- Ohio River, water quality data, interactive data management system 2-58095
- powder diffraction, search-match system 2-86498
- remote sensing and planetary image storage and retrieval by BIRP computer system 2-112139

information science

- thin-film superconductivity, information flow study 2-68993

information services

- LWR fuel isotopic analyses, database 2-102079
- surveyors and geodesists curricula data management 2-57962

information storage*see also information retrieval*

- digital data storage on videocassette system 2-58128
- IAEA nuclear materials safeguards information system, development and function 2-74809

information storage systems *see information retrieval systems***information systems, management** *see management information systems***information theory**

- see also channel capacity; codes; correlation theory; decision theory and analysis; estimation theory; filtering and prediction theory; modulation; signal detection; signal processing; speech intelligibility*
- black holes, appl. to information transfer rate limits 2-94767
- cytoplasm, primitive motile system, information-thermodynamical model 2-99927
- information gain concept, probability nearness evaluation (*French*) 2-112684
- information thermodynamics, classical, partition function, higher order temps. 2-95293
- inverse problems theory, ill-posedness, regularisation and no. of degrees of freedom 2-75509
- isotropic turbulence spectrum, information theory approach 2-97515
- Jaynes' information theory approach to statistical mechanics 2-95217
- modulation noise in optical heterodyne receiver, approx. anal. 2-63095
- one-dimensional maps, symbolic dynamics, entropies finite precision, noise 2-95236
- radiographic image granularity, conditional entropy in bivariate entropy method 2-107286
- radiographic system, reliability evaluation by transmitted information 2-94168
- telemedicine, teleconferencing and education 2-53473

infrared astronomical observations

- 3 μ m emission features nature 2-89243
- active galaxies, two-colour diagram analysis from JHK obs. 2-89375
- 1862 Apollo, diameter and albedo, IR obs. 2-58288
- asteroids, IR (JHK) photometry 2-79000
- Be-stars, IR photometry of 46 bright southern objects 2-79107
- Becklin Neugebauer/Kleinmann Low region, 691 GHz CO line obs. 2-117724
- binary stars with luminous cool primaries and hot companions, BVRI obs. 2-100985
- 3C 345, quasar, far IR detect. and photometry 2-63702
- 3C 445, Paschen α flux and dust extinction 2-84338
- 3C radiogalaxies, JHK photometry and IR Hubble diagram 2-89398
- OY Carinae, dwarf nova, near IR light curves 2-112464
- Cassiopeia A, supernova remnant, search for hot dust 2-79184
- Centaurus A (NGC 5128) nucleus 2.2 μ m mapping 2-94840
- VW Cephei, W Ursae majoris star, 2.2 μ m light curve and epoch of primary minimum 2-106797
- Cepheus A, H₂ 2 micron emission obs. 2-89327
- Ceres, evidence for water of hydration in clay minerals, obs. 2-73888
- Comet Bowell (1980b), JHK photometry and total visual magnitude-stimates, (1982 May 25 to July 10) 2-94654
- CW 1103+254, AM Herculis star, visible and IR photometry and polarisation and spectroscopic obs. 2-94751
- V460 Cygni, C star, determ. of ¹²C/¹³C and C/O ratios 2-63421
- V1057 Cygni, FU Orionis star, IR photometric obs. rel. to origin of IR flux 2-89262
- χ Cygni, Mira variable, time series IR spectroscopy 2-58348
- V1016 Cygni, peculiar emission line star, visible and near IR spectral vars. 2-84241
- CI Cygni, symbiotic star, H vars. and near IR spectrum 2-68789
- DR 21(OH), molecular cloud/IR source, J=4-3 HCN obs. 2-63588
- dust clouds around pre and post main sequence stars, energy distrib. from IR photometry 2-94820
- 1E 2259+586, X-ray and optical posns. and IR pulsations 2-79164
- Egg Nebula (GL 2688), possible planetary nebula precursor, near IR spectroscopy 2-106840
- emission line galaxies, 8-13 micron obs. and nature 2-117742
- emission line stars, IR spectrophotometry 2-89342
- galactic centre, broad H emission 2-117758
- galactic centre, JHK photometry of faint red stars 2-106707
- galactic centre near IR sources; CCD obs. 2-63592
- galactic plane, high resolution far IR survey and nature of sources 2-58413
- galactic plane H II regions and mol. clouds, extended IR sources 2-63273
- galactic plane IR sources, far IR, CO and SHF obs., survey 2-68929
- galaxies, Tully-Fisher relation in blue and IR rel. to depend. on Hubble type 2-63615
- gamma ray burst source regions, IR scans 2-68932
- gamma-ray burst (1978 November 19) optical candidates, BV and near-IR photometry 2-94865
- giant stars, photosphere motion and circumstellar region gas motion, CD obs. 2-68771
- GL 961, H₂ 2 micron emission obs. 2-89327
- HD 44179 (Red Rectangle), 7.7 μ m feature obs. 2-74064
- AM Herculis, VRI photometry and circular polarisation during low state, (1982 March 6 to April 19) 2-74025
- HH100, photometric obs. of nearby variable IR source 2-94816
- Hyades, BVRI photometry of possible cluster members 2-106829
- Hyperion, surface comp. and radius from IR spectrophotometry 2-106606
- Iapetus, IR obs. of dark side 2-100823
- IC 5063 (PKS 2048-57), radio-emitting elliptical galaxy, discovery of very red nucleus from IR obs. 2-112565
- interstellar C, IR absorpt. lines obs. towards τ Ophiuchi 2-63558
- interstellar diffuse gas near Pleiades, spectroscopic study 2-58426
- interstellar medium, far-IR fine struct. lines interpret. review 2-94621
- interstellar NH₃, ice detect. in BN object and NGC 2264-IR 2-117717
- interstellar OH and H₂O masers, associated IR sources, JKL obs. 2-94807
- interstellar polarisation curves, meas. using simultaneous IR/optical polarimeter 2-106540
- IRC 10216 (=CW Leonis), shell 30 micron feature 2-100937
- IRS 1, 7, 12, 16, 19, galactic centre sources, 2 μ m spectra 2-101091
- IRS 7, galactic centre IR source, spectrum over 2.9 to 3.9 μ m waveband rel. to bacterial grains 2-84347
- Jupiter, atmosphere, HCN 2-58298
- Jupiter, atmosphere, PH₃, methane-d₁, and GeH₄ abundances, Voyager IRIS spectra 2-100810

infrared astronomical observations continued

- Jupiter, C/H ratio from Voyager IR spectra 2-89186
 Jupiter plasma torus, Fabry-Perot/CCD obs. of forbidden S II and S III emissions 2-112373
 Kleinmann-Low Nebula, CO J=17-16 transition detect. 2-84303
 BL Lacertae, flux and polarisation obs. and model 2-117745
 BL Lacertae objects, JHK photometry, power law continuum implications for dust and gas 2-89376
 BL Lacertae-type objects, IR polarimetry and photometry 2-89379
 late-type stars, ang. dias. by lunar occultation technique 2-79078
 RY Lupi, T Tauri star, optical and IR photometry rel. to cause of light variability 2-79098
 M16, evolved H II region, high resolution far-IR obs. 2-63561
 M16, H II, H I, mol. complex, IR sources near neutral inclusions, JHKL obs. 2-63589
 M17 SW, molecular cloud/H II region complex, J=4-3 HCN transition 2-63588
 M42, Orion Nebula, far IR polarimetry 2-112539
 M-type giant stars, ang. dias. by lunar occultation technique 2-79078
 Magellanic Clouds globular clusters, late-type stellar content from IR and visual obs. 2-58414
 Markarian Seyfert galaxies, IR photometry obs. 2-74084
 Mars, IR heterodyne spectroscopy 2-73858
 Mars, IR refl. spectra and chem. composition of surface 2-89181
 Mars, IR spectra and thermal emission models 2-58282
 Mars atmosphere, H₂O seasonal and global variations 2-89180
 molecular cloud IR sources, 2.2 and 3.8 micron obs. 2-89333
 molecular cloud polarised compact IR sources, search for ice absorpt. 2-117727
 Monoceros R2 IRS 3, molecular cloud triple struct. 2-94809
 Monoceros R2-IRS 3, molecular cloud source, speckle interferometry 2-63705
 SY Muscae, symbiotic star, JHKL magnitudes, (1982 February 4) 2-63450
 MWC 349, peculiar emission-line stars, near IR spectral vars. 2-84241
 NGC 1068, Seyfert galaxy nucleus, IR speckle interferometry obs. 2-84324
 NGC 1275, spectra nature and obs. 2-89355
 NGC 1977, assoc. bright rim cloud, abundances/density/temp. from EHF/IR obs. 2-84300
 NGC 2071, reflection nebula, H₂ 2 micron emission obs. 2-89327
 NGC 5253, E-SO galaxy, obs. of high-excitation optically obscured H II region in galactic nucleus 2-79217
 NGC 6334, H II region, IR photometry of ultracompact radio source 2-68866
 NGC 6334 FIRS V, near-IR obs. 2-101007
 NGC 6334 molecular cloud, eleven IR sources detect., nature 2-112531
 NGC 6334/I(NORTH), 400 μ m source detect., star form. region anal. 2-101018
 NGC 7006, anomalous globular cluster, IR colour-magnitude diagram and spectra rel. to second parameter 2-68843
 NGC 7027, planetary nebula, H₂ intrinsic Q(3)/S(1) line intensity ratio obs. 2-101019
 Nova Aquilae 1982, 10 μ m emission feature discovery and 2.3 to 20.0 m photometry 2-94750
 Nova Aquilae 1982, 10 μ m silicate emission feature obs. and photographic magnitudes 2-112461
 Nova Aquilae 1982, IR spectra features and visual mag. estimates 2-100950
 Nova Aquilae 1982, optical and IR magnitudes (1982 April 14) 2-68790
 O-type stars and related objects, near IR spectra 2-63416
 OH 351.78-0.54, interstellar OH maser source, radio and IR obs. 2-112600
 OMC, vibrationally excited H₂, motion and distrib. 2-63552
 OMC-1, H₂ emission, vel. reddening, and temp. structure 2-63550
 Orion MC-2 IRS 3 and IRS 4, moderately luminous IR sources, near IR spectroscopy 2-68851
 Orion Molecular Cloud, high spectral and spatial resolution obs. of H₂ 12.8 μ m emission 2-63576
 Orion Molecular Cloud, polarimetry of H₂ IR emission 2-106872
 Orion Nebula, H₂ emission spectrum in near IR 2-112525
 FU Orionis, far-IR obs. 2-100916
 Pegasus dwarf irregular galaxy, photometry of resolved stars 2-63617
 PG Persei (Algol), variable He I 10830 Å line obs. 2-112484
 β 1550+191, AM Herculis star, discovery of M-type dwarf component from spectrophotometry at red wavelengths 2-94755
 photopolarimeter for astronomical obs. 2-117604
 TX Piscium, C star, determ. of ¹²C/¹³C and C/O ratios 2-63421
 planetary nebulae, IR spectrophotometry of compact objects 2-89342
 protostar in SMC H II region N76B, nature and IR obs. 2-100928
 protostars, IR spectra and dust shell comp. 2-63395
 quasars, high redshift, Ly α /H α ratios obs. 2-94856
 quasars, spectral flux distribution in IR 2-79239
 quasars broad line forming regions, evidence for hot dust, IR obs. 2-89404
 radiogalaxies, spectral flux distributions and red shift estimates, IR photometry 2-94850
 RC 0050-2722, very low luminosity dwarf star, optical and near IR spectrophotometry 2-79097
 red giant variable stars in 47 Tucanae, photometric obs. 2-79125
 Red Rectangle (GL 915), possible planetary nebula precursor, near IR spectroscopy 2-106840
 red stars near dark cloud L1454, catalogue and VI photometry 2-106560
 S-type asteroids, undifferentiated, IR spectral evidence 2-89183
 HM Sagittae, peculiar emission-line star, visible and near IR spectral vars. 2-84241
 HM Sagittae, symbiotic star, IR and visual photometric obs. (Russian) 2-63465
 EY Sagittarii, supposed Cepheid variable, probably nonvariable from BVR-I, photometry 2-94739
 Sagittarius A, far IR obs., luminosity and dust density 2-101034
 Saturn, atmosphere, HCN 2-58298
 Saturn, atmosphere, rings and satellites, Voyager 2 obs. 2-84154
 Saturn, disk and rings, far IR brightness temp. 2-100821
 Seyfert I galaxies, mid-IR nuclear continua 2-79209
 Seyfert galaxies, IR polarimetry at 2.3 μ m for nine objects 2-63609
 Seyfert galaxies, two-colour diagram analysis from JHK obs. 2-89375
 Seyfert galaxies, type I, spectra nature and obs. 2-89355
 Sharpless 106, bipolar nebula, nature 2-68856
 Sharpless 106, double lobed H II region, far IR map 2-101012
 Sharpless 106 (AFGL 2584), star formation region, IR images 2-68724

infrared astronomical observations continued

- Sharpless 140-IRS 1, molecular cloud source, speckle interferometry 2-63705
 Sharpless 37 molecular cloud; radio and IR obs., energetics 2-63548
 solar Na I centre to limb lines, intensities 2-68700
 solar spectrum, equivalent widths of Fe I lines rel. to internally consistent scale of oscillator strengths 2-58247
 solar spectrum, oscillator strengths, radiative lifetimes and electronic transition moment of CN red system 2-106641
 star formation regions in galactic plane, identification from IR and radio obs. 2-112421
 stellar angular diameters, meas. from two-colour lunar occultation obs. 2-79079
 Sun, atlas of South Pole IR solar spectra 2-106647
 Sun, Co abundance determ. from Co I lines absolute oscillator strengths 2-112315
 Sun, coronal holes, 1975-80 magnetic meas. 2-100891
 Sun, H I spectroheliograms rel. to correl. of high latitude coronal holes with solar wind streams 2-100879
 supernova in NGC 1332, circumstellar dust shell form. and K-band magnitude 2-117690
 T Tauri, double star detect. and model, speckle interferometry obs. 2-74019
 T Tauri stars, optical and IR photometry rel. to charact. max. temp. in circumstellar dust 2-73964
 Taurus dark clouds, interstellar reddening law 2-106850
 Titan, brightness temperature from 415 μ m obs. 2-100815
 Uranus and ring system, 2 μ m obs. of stellar occultation, (1982 April 22) 2-68665
 Ursa Major Stream stars, IR search for assoc. fragmentation debris 2-106572
 γ Velorum, IR spectrum of Wolf-Rayet system 2-112467
 Venus, albedo in 0.2-4 μ m range, implications for atm. comp. 2-84129
 Venus, atmosphere, thermal periodicities, Pioneer Orbiter IR radiometer meas. 2-100791
 Venus, far IR airborne spectroscopy and spacecraft radiometry 2-100790
 Venus, haze at high-altitude indicated by far IR obs. 2-78993
 Venus atmosphere, aerosol component measured by Venera 11/12 descent vehicles, IR/visible obs. 2-68643
 Venus atmosphere, scattered solar radiation ang. distrib. 2-84130
 Venus atmosphere, Venera 13 and 14 spectrophotometry (Russian) 2-106581
 W3-IRS 5, double struct. from IR obs. 2-63704
 W3-IRS 5, molecular cloud source, speckle interferometry 2-63705
 W51, components props., and M-type anal., IR/SHF obs. 2-79227
 W51, H II region/mol. cloud, J=4-3 HCN transition obs. 2-63588
 W51 IRS 1, 20 μ m emission origin from heated dust 2-79227
 W51 NORTH, IR and H₂O maser sources, H₂ emission 2-79228
 W51A, far IR polarimetry 2-112539
 X-ray emitting QSOs, visual and IR photometry 2-106949
 X-ray narrow-line galaxies, mid-IR nuclear continua 2-79209
 Yunnan 1 m Cassegrain with 1-3 μ m photometer, preliminary obs. (Chinese) 2-84099
 C stars, 3 μ m absorpt. anal. circumstellar emission 2-73974
 C stars, ang. dias. by lunar occultation technique 2-79078
 C stars in Carina dwarf spheroidal galaxy, spectra and photometry rel. to galaxy age 2-68774
 C stars in Draco dwarf spheroidal galaxy, spectra and photometry 2-68723
 H 0139-68, AM Herculis star, optical and near-IR polarisation obs. 2-106803
 H II regions, structure and excitation from IR emission line obs. 2-79181
 NGC 634 N, molecular cloud, J=4-3 HCN 2-63588
 OH Type II southern maser sources, IR counterparts 2-79243
 OH/IR maser stars, type II, search for IR counterparts, luminosities 2-58349

infrared astronomy

see also *infrared sources (astronomical)*

- applications of IR technology, conf., San Diego, CA, USA (Aug. 1981) 2-112643
 cold nebulae IR excess, gas condensation 2-58434
 cooled grating spectrometer using cylindrical optics for astronomy 2-63252
 Cosmic Background Explorer (COBE) satellite, apl. to meas. of IR and microwave background radiation 2-106478
 cosmic background flux upper limits from M87 X-ray and γ -ray obs. 2-63714
 detectors for low-background astronomy, book 2-112668
 dust emission from globular clusters 2-74039
 ethylene in stars, IR heterodyne spectroscopy 2-68635
 evolution of Universe, stars and solar system, results from IR and X-ray astronomy 2-101103
 Fourier transform spectroscopy, slow scanning, bolometer-preamplifier for balloon-borne appls. 2-112334
 Galaxy central region 2-63668
 Galileo Mission, spectral mapping of Jupiter and Galilean satellites in near IR 2-112300
 grating spectrometer and Fabry-Perot interferometer for 1-5 μ m range 2-106536
 P/Halley, infrared sounding from flyby Venera Halley probes 2-63216
 heterodyne spectroscopy 2-73858
 imaging of stars using multiplex encoding techniques 2-63262
 imaging systems for spacecraft (Japanese) 2-89110
 infrared astronomy, scientific/military thrusts and instrumentation, conference, Washington, DC (1981 April 21 to 22) 2-84371
 integrated IR arrays: development and evaluation 2-117603
 IRAS (Dutch) 2-106474
 IRAS telescope, sunshield and baffle materials, reflectance 2-117597
 IRT on Spacelab 2, astrophysical objectives 2-63250
 Jet Propulsion Laboratory's Scientific Data Analysis System 2-63207
 microwave background in far IR, quadrupole anisotropy determ. 2-117801
 molecular spectroscopy using diode and combined diode-CO₂ lasers 2-63271
 novae, speed class and IR development 2-89283
 photometer for Yunnan 1 m Cassegrain telescope (Chinese) 2-84099
 polarimetry, appl. of simultaneous IR/optical polarimeter 2-106540
 satellite striated Au solar-shield material bidirectional reflectance distrib. function meas. 2-117559

infrared astronomy continued
 spectrometer for expts. with solar occultation using pyroelectric vidicon 2-95493
 spiral galaxies, IR form of Tully-Fisher relation rel. to mass and luminosity distrib. 2-58450
 star counting, IR method using Fourier deconvolution 2-73855
 telescope with stray-light rejection 2-117596
 telescopes, IR and millimetric, diffraction-limited field optics system throughput 2-84092
 variable IR emission of cosmic dust sources 2-63379
 CO, far-IR rotational emission 2-106495
 InSb detector, 32×32 CCD array, IR astronomy appls. 2-74502
 InSb IR detector evaluation at liq. N₂ and liq. He temps. 2-89152
 InSb low-noise photodetector preamplifier for IR astronomy 2-112333
 NH₃ in stars, IR heterodyne spectroscopy 2-68635

infrared communication see optical communication

infrared detectors

see also bolometers; photodetectors
 10.6 μ m short pulse detection (Rumanian) 2-84706
 airborne spectroradiometer system, appl. to high spectral resolution remote sensing 2-112157
 applications of IR technology, conf., San Diego, CA, USA (Aug. 1981) 2-112643
 book, IR and MM waves, systems and components 2-112668
 cooling, small split Stirling coolers 2-89730
 diamond, semiconducting, as ultrafast room temp. IR detector, time-resolved photocond. response 2-79675
 digital IR phasemeter using laser emission frequency conversion 2-112985
 double-layer detector consisting of pyroelec. and thin photocond. layer 2-107402
 far IR detectors, fast response capability, review (Japanese) 2-89811
 fibres, 0.8-12 μ m, conf., Los Angeles, CA, USA (Feb. 1981) 2-94887
 grinding workpiece temp. meas. with infrared radiation pyrometer using optical fibres (Japanese) 2-101404
 history of IR detection, first detectors of thermal radiation 2-79336
 history of IR detection, the first thermographs 2-107074
 integrated IR arrays, development and evaluation, astronomical appls. 2-117603
 liquid delay line oscillator, high temperature-dependent performance 2-109150
 metallic point contact IR detectors, Green's function soln. to multiple image interactions 2-98728
 Mteosat IR sensors, calibration techniques 2-94522
 nonlinear responsivity, simple technique for characterisation 2-53832
 photoconductive detector, charged-particle-induced noise suppression 2-107404
 photon bunching and photon-noise-limited performance 2-79671
 power and energy meter calibration for far IR/near MM wave spectral region 2-95470
 pushbroom imagery acquisition and processing 2-117475
 PVF₂ pyroelectric detector used for optical fibre attenuator calibration 2-86108
 pyroelectric, based on the use of TGS (triglycine sulphate) (German) 2-107401
 pyroelectric 2-112981
 pyroelectric detectors (German) 2-64109
 pyroelectric IR sensors, normalised current sensitivity calc. (German) 2-79670
 pyroelectric IR sensors, review (Japanese) 2-89810
 pyroelectric sensor, construction, performance and appl. 2-74414
 radiation shielding for uncooled detectors 2-58904
 radiometer, test chamber (Japanese) 2-79645
 receiver-amplifier circuit characts. of fast-scanning Fourier spectrometers 2-89833
 Sanyo IR detectors for surface temp. meas. (German) 2-74500
 satellite remote sensing technology development, Japanese Marine Observation Satellite program 2-73820
 Schottky-barrier point-contact zero-biased diodes for thermoelectric detection of 10 μ m radiation 2-89807
 semiconductor device physics, book 2-53437
 solid-state Shuttle-launched meteorological sensor 2-117478
 spectrally agile staring sensor system for remote sensing, design studies 2-112161
 spectrometer for expts. with solar occultation using pyroelectric vidicon 2-95493
 SPRITE—a TED infra-red detector for high performance thermal imaging systems 2-91090
 standard for IR radiation detector and radiometer, 220 to 900K range 2-53721
 subnanosecond pyroelectric infrared detector 2-112986
 target collimator system design and performance at Lockheed Sensor Test Facility (LSTF) 2-109010
 TGS type II detector based pyro-spectroscopic technique for high resolution IR absorpt. data using FIR laser 2-112977
 thermal viewer basic parameter, photographic recorder recording-spot size effect 2-53838
 thermistor bolometer using positive temp. coeff. ceramic element 2-107405
 thermometers, selection of portable instruments 2-79581
 thermopile, vacuum, for meas. very weak continuous radiant energy, based on Bi₂Te₃ thin films (French) 2-95473
 utility of infrared measurements programs 2-112978
 whisker structures for IR diodes at 10.6 μ m, EM effective length 2-95469
 zoom lens system design for target detect., 8 to 13 μ m 2-102903
 AlGaAs-GaAs superlattice avalanche photodiode, multilayer detector for low noise appls. 2-53841
 AlGaAsSb-GaSb long-wavelength detectors, 1.3 to 1.55 μ m, for fibre optics 2-53840
 Bi-Sb self-heated thermocouple for far IR detection 2-112974
 CdHgTe electronically scanned photovoltaic hybrid detector array for 8-14 μ m band 2-64107
 CdHgTe IR detectors for scanned arrays, SPRITE detector 2-91089
 Cd_{0.5}Hg_{0.5}Te IR detector developments 2-107406
 GaAlSb-GaSb photodetectors for the near infrared spectrum (German) 2-84704
 GaAs photoconductive detectors, thin film, ultrafast operation 2-101463
 GaP:ZnO, IR upconversion obs., IR quantum counter appl. 2-70605

infrared detectors continued

Ge avalanche photodiode, detectors for digital optical fibre systems in 1.2 to 1.55 μ m range 2-55352
 Ge PIN diode IR detectors, cct. for elimination of voltage spikes due to cosmic rays 2-84702
 HgCdTe detector for potential super-long (2-6 μ m) wavelength fibre optics appls. 2-95468
 HgCdTe, electronic props., MIS IR devices 2-87295
 HgCdTe photoconductors, effect of diffusion and drift on generation-recombination noise 2-87324
 Hg_{0.75}Cd_{0.25}Te IR detector, for large biasing fields, thermal noise 2-107399
 InGaAs-InP photodetectors for the near infrared spectrum (German) 2-84704
 In_{0.53}Ga_{0.47}As integrated pin/FET photoreceiver, 1-1.7 μ m 2-74503
 InGaAsP sources and detectors for the 1.0-1.7 μ m wavelength range 2-95467
 InGaAsP-InP long-wavelength detectors, 1.3 to 1.55 μ m, for fibre optics 2-53840
 InSb detector, 32×32 CCD array, IR astronomy appls. 2-74502
 InSb IR detector evaluation at liq. N₂ and liq. He temps. 2-89152
 InSb liquid N₂ cooled IR position sensor 2-101459
 InSb low-noise photodetector preamplifier for IR astronomy 2-112333
 LiTaO₃ pyroelectric infrared detector 2-84703
 LiTaO₃ substrate fabrication and characterization for pyroelectric sensors 2-87969
 Pb-Sn chalcogenide photodiodes, quantum efficiency and R₀A product, struct. effect 2-107403
 PbSe room temperature IR position sensor 2-101459
 PbSnTe, lifetime calcs. for Auger recomb. rel. to laser and IR detector performance 2-77081
 PbTiO₃ ferroelectric film for pyroelectric IR sensor fabrication on Si wafer 2-79668
 Pd₂Si Schottky-barrier IR-CCD for short wave IR appls. at intermediate temps. 2-74501
 Si IR detector arrays, line spread function, crosstalk, and modulation transfer function 2-89809

infrared imaging

aiming technique advancement, use of visible pulsating light 2-79582
 applications of IR technology, conf., San Diego, CA, USA (Aug. 1981) 2-112643
 assessment of imaging systems, visible and IR, symposium, Reading, Berks., England (April 1981) 2-112639
 balloon atmospheric mosaic meas., phenomenology and band selection 2-117477
 biomedical, TV monitor with electrochemical recording of thermograms, Soviet Ruby-3 model 2-62729
 Cantonal Chemical Laboratory infra-red thermography for heat losses anal. (German) 2-70819
 Common Module imaging spectral radiometer 2-109074
 composite materials, NDT, review 2-62338
 computerised thermal wave imaging techniques status and appl. 2-112895
 dynamic IR target design, thermal considerations 2-53754
 Earth background spatial radiance variations obs. using staring sensors 2-117476
 electro-optical image quality summary measure improvement 2-108802
 exitance graphic interpretation as function of surface temp., emittance and background, for IR thermography 2-55405
 focal plane imaging array at 119 μ m 2-112973
 history of IR detection, the first thermographs 2-107074
 holography, new class of materials 2-75538
 hyperthermia, local, using microwaves for therapy, expts. with various applicators 2-105761
 lenses for thermal imaging, optical evaluation 2-114401
 liquid crystal camera for IR HCN laser mode examination 2-70595
 long wavelength IR sensor, test facility, Al mirror design for large aperture precision collimator 2-102958
 luminescent screen frequency-contrast charact. reduction for IR imaging (Russian) 2-55350
 luminescent screens, contrast-frequency characts. for recording IR radiation 2-58883
 medical imaging techniques survey 2-78400
 metallic point contact IR detectors, Green's function soln. to multiple image interactions 2-98728
 microwave thermography, appl. to estimation of subcutaneous temp. profiles in human body 2-68105
 nuclear reactor components, nondestructive testing (French) 2-64606
 plasma, doubly degenerate four-wave mixing, IR image conversion appl. 2-65728
 plastics, nondestructive testing using thermography (French) 2-93725
 pulsed image-converter tube attachment for brightness meas. in IR range 2-95432
 pushbroom imagery acquisition and processing 2-117475
 radiance simulation and scene discrimination errors 2-79667
 real time imaging using n-GaAs photoelectrochem. cell 2-58902
 remote analysis from space, overview (Swedish) 2-100577
 resonant transmittance model for mm-wave propagation, IR modelling techniques appl. 2-112035
 roentgenothermographic correlations in unaltered breast (Russian) 2-62734
 sea-background IR imaging, cruciform spatial filter design and appl. 2-60034
 spacecraft, visible/IR imaging system (Japanese) 2-89110
 SPRITE—a TED infra-red detector for high performance thermal imaging systems 2-91090
 statistical modeling of scene variability 2-112980
 surface current distribution meas. 2-112979
 temperature detection limits derivation for thermal imagers under field conditions 2-79672
 temperature difference of FLIR, min. resolvable, four-bar pattern tilt effect 2-107321
 thermoelastic stress analysis technique using high-sensitivity IR camera 2-70884
 thermogram evaluation, differentiating circuit for determination of elapsed time (German) 2-79571
 thermography instruments, supplying calibrated temp. images (German) 2-69251
 thermotomography—a new method of obtaining images (Russian) 2-74561

infrared imaging continued

- thermoelectric applied to Benard-Marangoni convection 2-89805
 thermovisor, with highly stable reference level of radiation 2-112893
 thin liquid films, IR photography (*Russian*) 2-58954
 utility of infrared measurements programs 2-112978
 wax films usage as photographic recording medium 2-114393
 West Coast Expt. (March 1977) 2-100585
 CdHgTe IR detectors for scanned arrays, SPRITE detector 2-91089
 Cd_{0.8}Hg_{0.2}Te IR detector developments 2-107406
 InSb detector, 32x32 CCD array, IR astronomy appls. 2-74502

infrared-infrared double resonance *see* optical double resonance

infrared radiometers *see* radiometers

infrared sources

- cavity-dumped passive and synchronous hybrid mode locking for IR subpicosecond pulses 2-97020
 collimated calibration source, 1.2-6.0 μm 2-55288
 far IR CW laser generation using 2- and 3-photon interaction 2-60063
 far IR lasers, frequency control and modulation by Stark effect 2-60130
 fibres, 0.8-12 μm , conf., Los Angeles, CA, USA (Feb. 1981) 2-94887
 high power picosecond radiation generation by ultrafast optical switching 2-86063
 mica, emissive props. in 7 to 15 μm spectral region 2-91015
 W3-IRS 5, molecular cloud source, speckle interferometry, IR obs. 2-63705
 He-Ne/CH₄ ultrastable lasers based on saturable absorption effect (*Polish*) 2-55187
 InGaAsP sources and detectors for the 1.0-1.7 μm wavelength range 2-95467
 Pb-salt laser source for potential super-long (2-6 μm) wavelength fibre optics appls. 2-95468

infrared sources (astronomical)

- Z Andromedae, UBVRJHKLMN photometry of symbiotic star 2-117686
 Becklin-Neugebauer/Kleinmann-Low region, 691 GHz CO line obs. 2-117724
 Becklin-Neugebauer IR point source, model (*Russian*) 2-74070
 Becklin-Neugebauer Kleinmann-Low region, H₂, CO and OH line emission modelling 2-106865
 Becklin-Neugebauer object, NH₃ ice detect., IR obs. 2-117717
 bipolar nebulae, 3 μm emission features obs. 2-89243
 BN-like IR point sources, model of 9.8 μm silicate absorption band 2-101020
 3C 345, quasar, far IR detect. and photometry 2-63702
 VY Canis Majoris, main line OH masers, VLBI obs. 2-63419
 Centaurus A (NGC 5128) nucleus 2.2 μm mapping 2-94840
 circumstellar fragmentation debris near young stars, search near Ursa Major Stream stars 2-106572
 cool high polarisation stars, circumstellar dust extinction and luminosity 2-94858
 NML Cygni, assoc. H II region and radio-source, spectrum and nature 2-74053
 V1057 Cygni, FU Orionis star, IR photometric obs. rel. to origin of IR flux 2-89262
 V1016 Cygni, peculiar emission-line star, visible and near IR spectral vars. 2-84241
 V645 Cygni, possible biconical nebula, assoc. OH maser, UHF obs. 2-106855
 DR 21(OH), molecular cloud/IR source, J=4-3 HCN IR obs. 2-63588
 G43.2-0.1, type II OH/IR source, 1612 MHz obs. (*Russian*) 2-106946
 galactic centre near IR sources, CCD obs. 2-63592
 galactic nucleus, energy production, radio emission and IR sources 2-106928
 galactic nucleus, mass density, radio emission, IR sources and motions 2-117766
 galactic plane, high resolution far IR survey and nature of sources 2-58413
 galactic plane H II regions and mol. clouds, extended, catalogue, IR obs. 2-63273
 galactic plane sources, far IR, CO and SCF obs., survey 2-68929
 normal galaxies, models for far-IR emission 2-63619
 GL 2688 (Egg Nebula), possible planetary nebula precursor, near IR spectroscopy 2-106840
 GL 915 (Red Rectangle), possible planetary nebula precursor, near IR spectroscopy 2-106840
 GL 961, formyl ion (HCO⁺) J=4-3 transition obs. 2-89341
 GL 961, H₂ 2 micron emission obs. 2-89327
 HD 44179 (Red Rectangle), 7.7 μm feature obs. 2-74064
 HDE 283809, B-type star in direction of Taurus dark cloud origin of IR excess (*Russian*) 2-112444
 HH100, photometric obs. of nearby variable IR source 2-94816
 IC 5063 (PKS 2048-57), radio-emitting elliptical galaxy, discovery of very red nucleus from IR obs. 2-112565
 interstellar OH and H₂O masers, associated IR sources, JKL obs. 2-94807
 IRC+10216, C star, acetylene in shell, abundance from IR spectra 2-112458
 IRC+10216 (CW Leonis), circumstellar molecular emission and mass loss rate 2-68928
 IRC+10216 (CW Leonis), rot. temps. of cyanodiacetylene 2-63559
 IRC+10216, circumstellar shell NH₃ inversion lines, SHF obs. 2-63428
 IRC 10216, shell CN abundance from EHF obs. 2-89326
 IRC 10216 (=CW Leonis), shell 30 micron feature obs. 2-100937
 IRC 40091=LkH α 101, surrounding H I cloud, UHF obs. 2-79186
 IRS 1, 7, 12, 16, 19, galactic centre sources, 2 μm spectra obs. 2-101091
 IRS 7, galactic centre IR source, spectrum over 2.9 to 3.9 μm waveband rel. to bacterial grains 2-84347
 Kleinmann-Low Nebula mag. fields from OH maser UHF obs. 2-117726
 Kleinmann-Low Nebula, CO J=17-J=16 transition detect., IR obs. 2-84303
 Kleinmann-Low nebula, CO mapping, EHF obs. 2-89340
 Kleinmann-Low Nebula, NH₃ data interpretation 2-106866
 in L1454, interstellar dark cloud, catalogue of nearby redstars rel. to low-mass stars form. 2-106560
 CW Leonis (IRC 10216), circumstellar shell molecular abundance 2-63706
 M16, evolved H II region, high resolution far-IR obs. 2-63561
 M16, H II, H I, mol. complex, IR sources near neutral inclusions, JHKL obs. 2-63589
 M17 SW giant molecular cloud, IR sources and OB star form. 2-94808
 molecular cloud IR sources, 2.2 and 3.8 micron obs. 2-89333

infrared sources (astronomical) continued

- molecular cloud polarised compact IR sources, search for ice absorpt., IR obs. 2-117727
 Monoceros R2 IRS 3, molecular cloud triple struct., IR obs. 2-94809
 Monoceros R2-IRS 3, molecular cloud source, speckle interferometry, IR obs. 2-63705
 MWC 349, peculiar emission-line stars, near IR spectral vars. 2-84241
 NGC 2264-IR, NH₃ ice detection, IR obs. 2-117717
 NGC 5253, E-SO galaxy, obs. of high-excitation optically obscured H II region in galactic nucleus 2-79217
 NGC 6334, H II region, IR photometry of ultracompact radio source 2-68866
 NGC 6334 FIRS V, near-IR obs. 2-101007
 NGC 6334 molecular cloud, eleven IR sources detect., nature and obs. 2-112531
 NGC 6334/I(NORTH), 400 μm source detect., star form. region anal. 2-101018
 NGC 7528 H II complex, IR sources 1/2. assoc. visible stars extinction 2-79191
 Nova Aquilae 1982, 10 μm silicate emission feature obs. and photographic magnitudes 2-112461
 Nova Aquilae 1982, discovery of 10 μm feature due to circumstellar SiC grains emission 2-94750
 O-type and related stars, radio and IR emission from stellar winds and circumstellar shells 2-63415
 OH 104.9+2.4 and 127.8-0.0, MERLIN obs. of OH/IR star shells 2-106740
 OH 351.78-0.54, interstellar OH maser source, radio and IR obs. 2-112600
 OH/IR maser stars, type II, search for IR counterparts, luminosities, IR obs. 2-58349
 Orion MC-2 IRS 3 and IRS 4, moderately luminous IR sources, near IR spectroscopy 2-68851
 Orion Molecular Cloud, high spectral and spatial resolution obs. of H₂ 12.28 μm emission 2-63576
 Orion Molecular Cloud, polarimetry of H₂ IR emission 2-106872
 S235B, compact H II region, radio, IR and optical obs. 2-89332
 HM Sagittae, peculiar emission-line star, visible and near IR spectral vars. 2-84241
 Sagittarius A, far IR obs., luminosity and dust density 2-101034
 semiregular variable stars, short-period, with maser emission, IR colour indices 2-63420
 Seyfert galaxies, IR, optical and UV obs. of H line emission 2-74079
 Sharpless 106, bipolar nebula, photometry, polarimetry and spectrophotometric obs. 2-68856
 Sharpless 106 (AFGL 2584), star formation region, IR images 2-68724
 Sharpless 140-IRS 1, molecular cloud source, IR obs. 2-63705
 star formation regions in galactic plane, identification from IR and radio obs. 2-112421
 supernova in NGC 1332, circumstellar dust shell form. and K-band magnitude 2-117690
 W3-IRS 5, double struct. from IR obs. 2-63704
 W40, energy exchange in molecular cloud 2-101022
 W51 IRS 1, 20 μm emission origin from heated dust 2-79227
 W51 IRS 2, components props., and spectra anal., IR/SHF obs. 2-79227
 C stars, circumstellar shells development rel. to optical obscuration and IR emission 2-94735
 OH, interstellar, IR line emission rel. to cooling of interstellar shocks and masers 2-106874
 OH Type II southern maser sources, IR counterparts 2-79243
 OH/IR sources, VLBI maps of maser spots, model 2-106837

infrared spectra *see* infrared spectra of diatomic inorganic molecules; infrared spectra of inorganic solids; infrared spectra of organic molecules and substances; infrared spectra of polyatomic inorganic molecules; spectra of inorganic liquids and solutions

infrared spectra of diatomic inorganic molecules

- dipole moment and excited vibr. state, sub-Doppler IR mol. beam spectroscopy 2-75256
 dipole moments, polarisability, IR rot.-vibr. spectra, appl. to sorbed mols. 2-80601
 molecular spectroscopy, conf., Albena, Bulgaria, (Oct. 1980) 2-107020
 parametric analysis of infrared intensities 2-80606
 parametric model of the intensities in the infrared spectra 2-108520
 ArH⁺, IR spectra, vibr.-rot. bands and mol. consts., Dunham coeff. 2-64976
⁷⁹Br₂ in Ar and Kr matrices photochemical dynamics, IR spectra and relax. dynamics 2-102475
 C₂, A₁ state, vibr. levels radiative lifetimes, time resolved spectra obs. 2-63226
 C₂, interstellar, IR absorpt. lines obs. towards ζ Ophiuchi 2-63558
 CN radical in its ground state, vibr.-rot. transitions, IR laser spectrum, spin-rot. fine struct. 2-59800
 CN red system in solar spectrum, oscillator strengths, radiative lifetimes and electronic transition moment 2-106641
 CO, absorption band monitoring in atmosphere 2-111525
 CO adsorbed on Cu (100), IR spectra study 2-56359
 CO, adsorbed on Ni (111), energy loss intensities, role of electrodynamic interactions 2-62029
 CO, adsorbed on Pt (111), vibrational spectroscopy, EELS and IR 2-110125
 CO adsorbed on Pt(Ir)(Cu), flat and rough surfaces, IR spectrosc. 2-66352
 CO, adsorpt. on Pt, polarisation modulated IR refl.-absorpt. spectrosc. obs. 2-115541
 CO, adsorption on SiO₂ supported Pd catalyst, IR study 2-82129
 CO, coadsorption with H₂ on ZnO, vibr., IR study 2-115540
 CO, far-IR rotational emission 2-106495
 CO in solid N₂, high resolution laser spectroscopy, dipolar broadening effect on vibr. transitions 2-102535
 CO, isotopic mols. in solid α -CO, IR emission and absorpt. spectra 2-70238
 CO, line strengths, N₂ collisional broadening, IR obs. 2-75267
 CO, rot. anal., Fourier transform IR obs. 2-75261
 CO, shock heated, emission absorption technique for meas. vibrational temp. 2-64985
¹²C¹⁸O in solid N₂, IR transient antihole burning, spectral transfer 2-108978
 CO+H₂(He), rot. energy transfer and anisotropic intermol. pots., ab initio calcs. and expt. 2-75387
 CO₂, incoherent IR emission, amplification, coeff. determ. 2-65199

infrared spectra of diatomic inorganic molecules continued

- $^{12}\text{C}^{16}\text{O}_2$ spectroscopic constants of Fermi dyad $[10^0\nu_3, 02^0\nu_3]$ and laser sequence band transition wavenumbers 2-102479
 CaCl_2 optical spectra at sub-Doppler resolution 2-75257
 Cl_2 , liquid, interaction-induced IR absorpt., molecular dynamics investigation 2-102470
 ClO , fundamental band, isotope effects, IR obs. 2-75263
 Cu , cooled metal clusters, laser spectroscopy 2-108762
 CuO , IR $\text{Y}^{2+}\text{X}^{2-}$ transition, laser induced fluoresc., interpretation of X^{2-} ground state 2-64977
 D_2 , adsorption on ZnO , coverage induced IR freq. shifts 2-115539
 H_2 , adsorption on SiO_2 supported Pd catalyst, IR study 2-82129
 H_2 , adsorption on ZnO , coverage induced IR freq. shifts 2-115539
 H_2 , chemisorption on Fe_2O_3 , IR study 2-82130
 H_2 , coadsorption with CO on ZnO , vibr., IR study 2-115540
 H_2 , rotational S(2) and S(3) transitions, freq. and transition probabilities 2-80585
 H_2 , solid and liq. IR spectrum, rot. double transitions 2-87755
 HCN , matrix isolated in Ar, intermolecular vibr., far-IR obs. 2-113973
 HCl and DCl in CCl_4 , IR spectra, solute-solvent interactions 2-102478
 HCl in Ar, broadening of rot. lines, phonon coupling effect 2-102540
 HCl in Ar matrices, IR spectra, vibr., proton affinities 2-80608
 HCl in liquid Ar, local interactions, spectroscopic demonstration, cryosystems 2-70248
 HCl , optoacoustic meas. of specific absorpt. coeffs. at DF laser wavelengths 2-121116
 HD^+ , vibr. rot. spectroscopy 2-80840
 HF , elastic field effect, IR multiple photon absorpt. 2-85759
 HF oligomers, IR absorbance, band attribution 2-85648
 H_2 , new ion-pair state 2-114133
 I_2 , vapour, IR luminescence, spectral emission density, absorption spectra (Russian) 2-90553
 KCN , ab initio vibr.-rot. spectrum calcs. 2-90535
 N_2 , chemisorption on Fe_2O_3 , IR study 2-82130
 N_2 , Herman IR system obs. and formation kinetics study in pulsed-discharge apparatus 2-102472
 $^{14}\text{N}_2$ and $^{15}\text{N}_2$, $\text{B}^{12}\Sigma^- - \text{B}^{12}\Pi_g$ system, Fourier and IR emission spectrum, rot. anal. 2-108503
 NO , β and δ systems, IR band intensities and electronic transition moments calcs. 2-59715
 NO , chemisorption on Fe_2O_3 , IR study 2-82130
 NO , IR vibr.-rot. emission spectrum 2-108499
 NO , pressure-broadening coeff., computerized tunable diode laser spectrometry 2-108486
 NO , vibr.-vibr. pumped population distrib. in DC glow discharge 2-70392
 $\text{NO} + \text{NO}(\text{N}_2)(\text{SF}_6)(\text{CO})(\text{Ar})(\text{He})$, rot. and spin-orbit transitions, IR-UV double reson. 2-75382
 O_2 , chemisorption on Fe_2O_3 , IR study 2-82130
 O_2 , magnetic dipole IR atmospheric bands 2-96551
 O_2 , quadrupole transitions, tunable diode laser sensitivity spectroscopy 2-65103
 O_2 , spectral line parameters, atm. transmission functions calcs. 2-78841
 OD , far-IR laser mag. reson. spectra 2-75329
 OH atmospheric band system, line parameters 2-90629
 OH , far-IR laser mag. reson. spectra 2-75329
 OH for IR spectrum, freq., wavelength and line strength, astrophys. appl. 2-90528
 OH free radicals, collisional broadening of far-IR and microwave spectrum 2-96643
 OH , interstellar, IR line emission rel. to cooling of interstellar shocks and masers 2-106874
 Pt (111), adsorbed NO vibr. coupling, IR reflection absorption spectra 2-56329
 $^{121}\text{Sb}^{123}\text{Sb}$ mol. bands, RKR curves, Franck-Condon factors 2-64966
 SrF , optical spectra at sub-Doppler resolution 2-75257
 TeO , $\text{bO}^+ - \text{X}_1\text{O}^+$, X_2 IR emissions, chemiluminesc. studies 2-83388
 TeS , $\text{bO}^+ - \text{X}_1\text{O}^+$, X_2 IR emissions, chemiluminesc. studies 2-83388
 VO , rot. struct., spin-orbit coupling, Fourier transform IR obs. 2-75262
 ZrO , $\text{B}^{12}\Pi - \text{A}^1\Delta$ system, rot. and vibr. anal. 2-59794

infrared spectra of inorganic solids

- adsorbed atoms and mols. on metal surface, IR and EELS vibr. spectroscopy study 2-116162
alkali halide crystal optical losses in middle IR band, influence of microinclusions 2-87800
alkali halide laser windows, photoacoustic spectroscopy of adsorbed surface impurities 2-60192
alkali halides: BH_4^+ (BD_4^-), vibr. studies by IR and Raman spectra 2-82841
alkali halides: FHF^- , IR spectra 2-82843
alkali halides: SbF_6^- , IR spectra 2-82842
alkali halides, ion dynamics, anion-cation mirror symm. 2-81911
alkali metal (110) surface, adsorbate-induced surface states effect on optical props. 2-104452
alkali metal cpds., $\text{M}_2[\text{UO}_2(\text{MoO}_4)_2]$, ($\text{M} = \text{Na}, \text{K}, \text{Rb}$), solid-phase synthesis, composition determ. 2-72618
alkali metal glass, mixed, structural features 2-71370
alkaline earth orthosilicates, vibr., isotope shift, IR and Raman study 2-77507
amorphous materials, phonon spectra 2-56138
amorphous semiconductors, photoinduced midgap absorpt. 2-72528
amphiboles, calcic, Fe^{2+} identification in M4 site, extended Hückel method 2-91899
amphiboles, calcic, Fe^{2+} identification in M4 site, optical spectrum 2-93172
aragonite struct. cpds., CO_3^{2-} out-of-plane calcs., intermol. vibr. coupling 2-115377
aragonite struct. crystals, internal vibr., spectral intensities 2-76606
cobalt salicylate complex, mag. susceptibility, cond., thermal and chemical anal. 2-86639
diamond- N_2 , structural imperfection annealing, struct. 2-81766
diamond- N_2 , vacancy-related colour centres, spectroscopic study 2-98082
diamond, electron-irradiated, annealed, 1450 cm^{-1} IR absorption 2-110847
diamond, synthetic, anomaly in IR absorption spectrum 2-93236
dielectric thin films on metal surfaces, attenuation of absorptivity, IR spectroscopic meas. 2-110965
ellipsometry, LEED, and EELS study 2-61295
fluorindates, struct. modifications, IR and Raman investig. 2-87771

infrared spectra of inorganic solids continued

- fluorohafnate glass, comparative study of vibrational charact. with fluorozirconate glass 2-57076
fluorozirconate glass, comparative study of vibrational charact. with fluorohafnate glass 2-57076
glass, near IR absorption of H_2O , OH group vibr. bands 2-99125
glasses, alkali metal cation characteristic vibr. 2-57077
graphite intercalation compounds, electronic props., review 2-98518
hydrates, crystalline, IR stretching and bending bands of weakly bound water 2-72479
hydroxides, OH stretching vibr. freq., IR and Raman study 2-82846
ice, amorphous, effective charges 2-86568
ice, crystal phase II and IX, translational and rot. vibr., Raman study 2-93176
inorganic coating, Fourier transform IR spectra 2-77606
inorganic ions adsorbed on Ag and Ni, IR specular reflection spectra 2-116291
IR spectra and elec. cond. 2-110835
laser deposited thin polycrystalline films, stoichiometry and opt. props. 2-105090
laser window materials, IR wavelength modulation spectroscopy 2-60191
magnesium formate monoclinic and orthorhombic forms, struct. and thermal stability, X-ray diff. and IR spectra obs. (French) 2-60939
metal carbonyls, IR reflectance and Raman spectra, lattice modes 2-110851
metal clusters, IR absorption spectrum, dielec. and mag. susceptibility, Maxwell's eqns. 2-82863
metal complexes, metal-formylhydrazide, synthesis and characterisation 2-110848
metal surface, adsorbed molecules, enhanced IR absorption 2-87797
metal surface, oriented adsorption, selection rule, IR spectra 2-87065
metal-adsorbed mol. system, enhanced IR absorption and reflection spectra study 2-77527
metallic particles, IR radiation absorpt. (Russian) 2-104894
metallic thin films, polycryst., optical refl. and elec. resist., effect of grain boundary scatt. 2-99205
optical absorpt. and fluoresc. spectra, crystal field anal. 2-72525
orthovanadates $\text{KM}^+\text{Cr}_2(\text{VO}_4)_3$ where $\text{M} = \text{Cu}, \text{Ni}, \text{Co}$ or Mg , IR spectra, internal vibr. 2-99122
oxide films, reflectance spectroscopy 2-67135
pentacarbonyl bromides and decacarbonyls, IR reflectance and transmittance and Raman spectra 2-110852
perovskites, oxydic, ferroelec. transitions, IR and Raman spectra and dielec. const. data anal. 2-67008
phosphosilicate glass film, H_2O absorpt. and densification 2-115630
photoacoustic IR spectroscopy of some solids 2-99108
polyacetylene:Br, amorphous film, elec. and optical props. 2-110511
polynuclear uranyl fluoride complexes, luminesc. and vibr. spectra 2-99123
powders, clustered ionic spheres, IR absorpt. spectrum, size effects, dipolar approx. 2-61901
pyrogermanates, struct., IR and Raman vibr. spectroscopy 2-87759
pyrosilicates, struct., IR and Raman vibr. spectroscopy 2-87759
quartz, cryst., struct. phase transitions, neutron-induced, IR spectrosc. obs. 2-82868
 α -quartz, ion irradi., surface polaritons, ATR study 2-57133
quartz, polar vibr. at 129 and 265 cm^{-1} , temp. depend. (German) 2-93181
quartz crystal growth in NaCl, KCl solns. and pure water, low temp. IR absorption 2-99316
quartz point defects, acoustic loss, IR and magnetic resonance results 2-98084
quartz resonators, high temp. resonance loss and IR characterisation 2-99137
rare earth hydroxycarbonates, optical and struct. studies 2-116169
rare earth metal complex, elemental anal., NMR, IR, UV-visible study 2-110672
semiconducting transport oxide films, preparation, elec. and optical props., review 2-87428
semiconductor exciton, diamagnetic, absorpt. spectra in strong mag. field, theoretical anal. (Russian) 2-76939
semiconductor wafer, carrier concentration profile determination from light refl. spectrum in IR region 2-61484
semiconductors, photoacoustic meas. of nonlinear absorpt. 2-58920
 α -Sialon, stability at high temps. 2-83145
small metallic particles, quantum size effect in optical props. 2-87721
steel, unprotected, corrosion in inert-gas atmos. containing water vapour, O_2 , SO_2 , N_2 and CO_2 2-67616
superconductors, far IR laser thermal spectroscopy 2-98805
(TMTSF) $_2(2,5\text{-TCNQBr}_2)$, struct. and phys. props. 2-55961
(TMTSF) $_2\text{PF}_6$, metallic, IR and visible reflectance meas. 2-57092
transition metal complexes, M(hexamethylenetetramine) SO_4 , struct., mag. moments, IR study 2-77517
transition metal complexes with 4-cyanopyridine N-oxide, struct., vibr., mag. moments, IR study 2-77518
uranyl fluoride complexes, binuclear, vibr. and electronic spectra meas. 2-72488
zeolite, VSZ-4 crystals, hydrothermal growth and character. 2-99311
 $2\text{n}(\text{ClO}_4)_2 \cdot 6\text{H}_2\text{O}$, bending mode, hypochromic effect, IR study 2-99114
 $\text{trans}[(\text{NH}_3)_4(\text{CN})_2]^+$, vibr. fine struct. of polarised absorpt. band 2-72471
Ag, refl. at visible, IR wavelengths, wavelength and temp. depend. 2-67083
Ag-Ge, amorphous film, struct., elec. and optical props. 2-82483
 $\text{Ag}_3(\text{HN}_3\text{SO}_3)_2 \cdot \text{NH}_3 \cdot \text{H}_2\text{O}$, IR vibr. spectra 2-87766
 β -AgI, phonon spectra, hopping kinetics, IR spectra study 2-76616
 $\text{AgI} \cdot \text{Ag}_2\text{O}$, vitreous electrolytes, struct. and ion dynamics 2-61197
 AgInS_8 , two-temp. synthesis, props. 2-77725
 Ag_3SI superionic conductor, Ag ion dynamics, IR reflectivity study 2-61199
 $\text{Ag}_2\text{X}_2\text{O}_6$ ($\text{X} = \text{Ta}, \text{Nb}, \text{Sb}$), vibr., force fields, IR and Raman study, normal coordinate anal. (French) 2-110869
Al alloys, corrosion-preventing coatings, surface studies 2-83266
Al, refl. at visible, IR wavelengths, wavelength and temp. depend. 2-67083
Al salt solns., IR spectra 2-93169
Al-AlN-Al, ion plated thin film capacitor, dielec. and AC cond. props., annealing effects 2-61825
 $\text{Al}_{1-x}\text{Cr}_x(\text{PO}_3)_3$: Cr^{3+} tunable IR solid-state laser material, spectroscopic and laser props. 2-108884

infrared spectra of inorganic solids continued

- AlF₃-YF₃-GdF₃-CaF₂-SrF₂-BaF₂-NaF₆-PF₆-(AsF₆) glass, optical and thermal props. 2-115145
- Al₂O₃, far-IR absorption, 300-1500K, multiphonon processes 2-93174
- Al₂O₃, γ-δ-α order-disorder phase transitions, IR spectra 2-86856
- α-Al₂O₃, microcrystals, surface modes, IR study 2-93206
- Al₂O₃, stretching vibrs. of unperturbed and H-bonded OH and OD groups, appearance regions 2-116188
- γ-Al₂O₃, surface states, luminescence study 2-61955
- β-Al₂O₃-Ag₂O, far IR absorpt. 2-116190
- Al₂O₃-MgO, adsorpt. of acetone, IR obs., rel. to acid-base props. 2-96574
- 2Al₂O₃·CO₂·15H₂O, structural characteristics, X-ray, IR spectra, DTA and electron microscopy study (*Bulgarian*) 2-76385
- Al₂SiO₅(F,OH)₂, topaz, IR obs. of neutron irradi. crystals, hardness changes 2-61040
- As, amorphous, effective charges 2-86568
- As-S chalcogenide glass fibres, optical transmission loss spectra, IR region 2-57075
- As-Se, amorphous struct. far IR reflection spectra study 2-67029
- As₂S₃, optical fibre investigation for devices used to match planar and cylindrical waveguides 2-97216
- As₂S₃-Ag and As₂S₃-Ag systems, transmission spectra of interacting products (*Russian*) 2-62423
- As₂Se-GeSe-SnSe, glass, Sn valence states, Mossbauer, optical and electron spectroscopy study 2-71935
- As₂Se₃, glassy, pulse-induced microcosmic geminate excitons, thermal decay 2-61905
- (As₂Se₃)_{100-x}Ge_x, glass, elec. cond. and thermoelectric power, adiabatic pot. 2-92610
- Au-Co(V), dil. alloy, impurity optical absorpt. meas. 2-99160
- Au-MgO cermet thin films, computered, reflectivity meas., percolation threshold and grain size effects 2-82942
- BaF₂-MnF₂-RF₃ (R=Dy, Ho, Er, Tm, Yb, Lu, Y), glass form., quenching, IR study (*French*) 2-91808
- BaF₂-ThF₄-ZnF₂-YbF₃, glasses, stabilization and IR transmission, DTA study 2-97929
- BaGeO₃-Al₂O₃-CaF₂-MgF₂-Eu³⁺, glass, spectral-luminescence, IR and Raman study 2-72553
- BaMnF₄, submillimeter dielec. spectra, 85 to 300K 2-110744
- Ba₂(MnO₄)₂, lattice, factor group anal. 2-116196
- Ba₃P₂O₈·9H₂O, preparation and props. 2-72643
- BaS phosphors, cryst., colour centres, stimulated IR spectra 2-104875
- BaSe(BaSe), optic phonon IR reflection spectra and cryst. growth, expt. study 2-99117
- BaTiO₃, ferroelec. transition role of polar phonons in chemical bond, Fourier spectroscopy 2-57028
- BaTiO₃, ferroelec.-paralelec. transition, displacive-order-disorder crossover 2-104819
- BaTiO₃, thermoluminesc. and absorpt. spectra 2-93290
- BeAl₂O₆·Cr³⁺, alexandrite, ground state absorpt. determ. over tunable lasing region, 830 to 690 nm 2-60088
- BeSO₄·4H₂O, and BeSO₄·4D₂O, Raman and IR activity (*French*) 2-116184
- Bi₁₂(A^{III}_{11/12}B^{IV}_{1/2})₂O₂₀ (A=Fe, Co, Ga, B=P, As, V, Bi), sillenite struct., tetrahedral environment of cations A and B (*French*) 2-91913
- BiLu₂Fe₂O₁₂, garnet magneto-optical cryst., doped, near IR absorpt. reduction obs. 2-72473
- Bi₂S₃, thin film, semicond. liq. junction solar cell and chalcogenide props. 2-78212
- Bi₂Se₃, semicond., optical absorption spectra meas. 2-78212
- Bi₂Se₃(Te₃)-Sn, doping effect on transport and optical props. 2-92015
- Bi₁₂XO₂₀ (X=Ge, Si) energy levels in forbidden zone (*Russian*) 2-61930
- CO, oxidised, IR photoacoustic spectra, specular and diffuse refl. effects 2-110832
- (CN₃H₆)₂[M(CO₃)₂·4H₂O, M=Ce, Th, cryst., vibr., IR study 2-77512
- CO, cryst., two-phonon transitions, vibr., IR study 2-57069
- CO₂, solid, second-order IR absorpt. spectrum 2-67028
- CO₂, thin cryofilm, IR optical props. 2-87883
- CaCO₃, calcite, IR photoacoustic spectra, specular and diffuse refl. effects 2-110832
- CaCO₃, calcite, polariton hypercombination scatt. spectra, anharmonism effects (*Russian*) 2-56449
- CaF₂, surface-to-bulk optical absorpt., 1.3 μm laser rate calorimetry and photoacoustic meas. 2-58921
- Ca₂Mg_{1-x}Fe_{2x}Si_{2-x}O₇, crystalline phase anal. 2-71416
- Ca₂NiMg₂V₂O₁₂, ESR and optical absorpt. spectra of red V ions 2-110624
- CaS(CaSe), optic phonon IR reflection spectra and cryst. growth, expt. study 2-99117
- Ca_{10-x}Sr_x(PO₄)_{6-x}(VO₄)₂(OH)₂, struct., isotope effects, IR obs. 2-57104
- CaWO₄, IR spectra, vibr. excitation density of state functions 2-99106
- CdAs₂, vitreous, IR absorption spectra 2-110834
- CdGeAs₂(P₂), vitreous, IR absorption spectra 2-110834
- CdGe(As₂P₂)₂, vitreous, IR absorption spectra 2-110834
- Cd(II) complex, 2-aminobenzothiazole cadmium, conductometric, IR and Raman study 2-110867
- CdInAlS₄, single crystals, far-IR absorpt. spectra 2-99126
- Cd_{1-x}Mn_xSe, electric-dipole spin reson. of bound electronic states 2-110820
- Cd_{1-x}Mn_xTe, absorpt. edge temp. depend. 2-61903
- CdF₂, vitreous, IR absorption spectra 2-110834
- Cd₂P₂(As₂), far IR reflectivity meas. 2-93210
- CdS sprayed thin film, optical reflectance and transmittance 2-110969
- CdS-Cu, electron irradi. prod. defects interaction with impurities, elec. and optical props. study 2-56035
- CdSb, IR reflection spectra meas. 2-57108
- CdTc, anomalous struct. in far IR spectrum 2-99109
- CdTc, light scatt. by inhomogeneities, IR absorpt. and etching meas. 2-77543
- CdTcSe_{1-x}, semiconducting cmpds., laser induced formation 2-115593
- Cd₂X₂O₇ (X=Ta, Nb, Sb), vibr., force fields, IR and Raman study, normal coordinate anal. (*French*) 2-110869
- CeAsO₄, cryst. struct., IR and Raman vibr. spectra, X-ray diff. study 2-65957
- CeO₂, Reststrahlen spectra, transmission and reflection study dielectric constant 2-67049
- CePd₃, f-states, optical refl. study 2-77550
- CePd₃ mixed valence cpd., optical absorpt. signature near 20 meV 2-57111

infrared spectra of inorganic solids continued

- Co complex, 2-fluoro- and 4-fluoro-2-nitroaniline cobalt(II), mag. moments, IR and visible study 2-93203
- Co complexes, Co(II)-8-quinolines, dihydrates and adducts, IR absorpt. spectra 2-110866
- β-CoAl, optical absorpt. spectra meas. 2-82866
- CoAl₂O₄, IR transmission and reflection spectra 2-57074
- Co¹¹Co¹⁰O₄, IR transmission and reflection spectra 2-57074
- CoP₂(As₂)(Sb₂)₃, far IR reflection spectra meas. and dielec. function and lattice dynamics calc. 2-110855
- Cr oxide layers, reflectance spectroscopy 2-67136
- Cr, surface, rough, reflectance spectral selectivity meas. 2-67027
- α-Cr₂O₃, microcrystals, surface modes, IR study 2-93206
- Cr₂O₃ plasma sprayed, control of mech. props. using IR specular reflection 2-77607
- CSAl₂I₇, cryst., vibr., normal coord. anal. IR and Raman obs. 2-57102
- CSBr, surface phonon polariton, far IR dielec. const. determ. in restrahlenband, laser spectroscopy 2-99085
- CS₂PO₄, para, ferro, and antiferroelectric phases, vibr. Raman and IR study 2-77508
- CS₂La(N₃)₆, IR and Raman spectra, mag. susceptibility 2-87767
- CS₂NaErCl₆Er³⁺, optical absorpt. spectra and crystal field anal. 2-82882
- CS₂Nd(N₃)₆, IR and Raman spectra, mag. susceptibility 2-87767
- CS₂Nd(N₃)₇, IR and Raman spectra, mag. susceptibility 2-87767
- CS₂NpF₆, parametrisation of optical spectrum 2-99115
- CS₂NpO₂Cl₄, cryst., electronic struct., charge transfer transitions 2-82853
- CS₂NpO₂(NO₃)₃, cryst., electronic struct., charge transfer transitions 2-82853
- CSRP₂O₁₂ crystals (R≡ rare-earth ions), growth, struct., IR spectra 2-98023
- CS₂UO₂Cl₄, polarised IR absorpt. spectrum 2-104874
- Cu complex, 2-fluoro- and 4-fluoro-2-nitroaniline copper(II), mag. moments, IR and visible study 2-93203
- Cu complex, Cu(II)-1-(2-pyridylazo)-2-naphthol far-IR studies by metal isotope technique 2-110864
- Cu, refl. at visible, IR wavelengths, wavelength and temp. depend. 2-67083
- Cu-Zr metallic glass, sputtering prep. and props. 2-82948
- Cu₂CO_{3-x}O_x, props. of spinel prep. at low temps. and normal press. 2-55945
- CuIn/Se₂, semicond., absorption coeff., impurity effects, IR spectra study 2-77475
- CuInS₈, two-temp. synthesis, props. 2-77725
- CuInSe₂, single cryst., fundamental absorpt. band edge 2-77538
- CuInTe₂, two-phonon absorption spectra meas. 2-93197
- CuO-CaO-P₂O₅ glass, IR absorpt. spectra, Cd addition influence 2-116213
- Cu₂Te hexagonal, lattice vibrs. symmetry, single phonon IR absorpt. 2-115374
- DCIO₄, anhydrous, H bonds in metastable forms, spectrosc. investig. 2-57078
- Eu complex, β-diketonates:1,10-phenanthroline, IR and luminesc. spectra 2-113989
- Fe complexes, Fe(II, III)-N,N'-di(2-pyridyl) thiourea, Mossbauer and other spectroscopic studies 2-110735
- Fe-Co films, IR absorpt. props. meas., order-disorder phase transition effect (*Russian*) 2-93297
- FeF₃ thin films, localised electronic states, optical absorption study 2-82268
- Fe₂O₃, chemisorption of O₂, N₂, NO and H₂, IR study 2-82130
- α-Fe₂O₃, microcrystals, surface modes, IR study 2-93206
- α-Fe₂O₃, solid state conversion from α-FeOOH 2-56179
- Fe₂O₃, on steel and Fe surfaces, oxidation, IR and Raman spectroscopy study 2-116563
- FeOCl intercalates with Lewis base, Fourier transform IR obs. of struct. 2-116166
- α-FeOOH IR spectra, normal coord. anal. 2-87761
- γ FeOOH, mechanochemical reaction effects on struct. and surface, IR and X-ray anal. 2-116726
- Fe_{0.34}TiSe₂, cryst. struct., elec., mag., and optical props. 2-81746
- Fe₂V_{2-x}O₄, solid solution, IR spectra, elec. cond. and DTA study 2-87751
- GaAs, electron-bombarded, IR absorpt. spectra, 'shallow' levels 2-72507
- GaAs film, amorphous, plasma deposition and characterisation 2-111094
- GaAs, grown by Bridgman method, props. 2-98675
- GaAs, high purity, grown by MBE, characterisation 2-56613
- GaAs, IR absorption of 78 meV acceptor 2-77552
- GaAs, IR absorption props. at 10.6 μm, photoacoustic spectroscopy (*Chinese*) 2-93230
- p-GaAs, inhomogeneously doped, IR plasma reflectivity, computer calc. 2-61885
- GaAs, radiative recomb. and light absorpt., dislocations effect 2-104962
- GaAs:B, electron irradiated, IR study of annealing 2-56033
- GaAs:C, site of substitutional C impurity, Fourier transform IR absorption study 2-91991
- GaAs:Cr, impurity levels, elec. cond., IR spectra and photocond. study 2-56485
- GaAs:Cr, optical absorpt. spectroscopy on Cr-related defects 2-57129
- GaAs:Cr, semi-insulating, impurity modes, far-IR Fourier transform spectroscopy obs. 2-116214
- GaAs:Cr²⁺, zero-phonon optical absorpt. lines, dynamic Jahn-Teller model 2-57130
- GaAs:Si, ion implanted, surface polaritons, frustrated internal refl. spectra study 2-71886
- n-GaAs:Te, degree of electronic compensation, laser IR microscopy 2-67043
- GaAs:V, photoluminesc., optical absorpt., and ESR study 2-82916
- GaAs-(AlGa)As heterostructures, plasma dispersion in a layered electron gas 2-104276
- GaAs_{1-x}P_x:Te(Si), donor states, impurity optical absorpt. spectra study 2-82287
- [rGa(OH)₂]₆P₆O₁₀·12H₂O, preparation and props. 2-72643
- GaP:B, electron irradi., interstitials, IR study 2-103747
- GaP:B grown by LEC technique, IR absorpt. band, resonant and gap modes 2-99157
- GaP:Cr, optical absorpt. spectroscopy on Cr-related defects 2-57129
- GaP:Fe crystal, electron irradiated, IR absorpt. 2-61908
- GaP:V, photoluminesc., optical absorpt., and ESR study 2-82916
- Ga₂Se₃, IR spectra, radiation effects 2-57110

infrared spectra of inorganic solids continued

- Gd, magneto-optical props. in interband absorpt. region (*Russian*) 2-61877
- Gd₂(MoO₄)₃, permitt. dispersion, infrared refl. and spontaneous parametric scatt. by polaritons 2-104837
- Gd₂Ru₂O₇, IR spectra and elec. cond. 2-110835
- (Ge, Sn) Se system, glass form. and vibr. props. 2-86578
- Ge, amorphous, effective charges 2-86568
- Ge, amorphous, far-IR vibr. spectra using double-beam Fourier transform spectrometer 2-113003
- n-Ge, far IR obs. of D⁻ band 2-67035
- p-Ge, IR obs. of light hole accumulation (*Russian*) 2-57098
- Ge, IR study of indirect exciton Zeeman effect 2-67053
- Ge, IR study of laser generated carriers 2-110859
- Ge, interband Faraday and Kerr effects 2-72463
- Ge, long wavelength IR radiation generation by hot holes (*Russian*) 2-82857
- Ge, radiation defects, light sensitivity and space orientation, IR spectra study 2-87826
- Ge, recombination mechanisms, photoconductivity and IR absorption 2-115780
- Ge, uniaxially stressed, plasma reson. of electron-hole drops, IR study 2-104861
- Ge-Si alloy, far-IR vibr. spectra using double-beam Fourier transform spectrometer 2-113003
- Ge-Si:H, amorphous sputtered alloys, elec., optical and struct. props. 2-89644
- GeAs, room temp. long wavelength refl. spectra 2-110831
- GeO₂, glassy, minimum optical losses 2-110891
- GeO₂, vitreous, near IR absorption of H₂O, OH group vibr. bands 2-99125
- GeO₂, vitreous, vibr. selection rules in Raman and IR spectra 2-57082
- GeS₂, polarised far IR transmission spectra meas., lattice structure 2-82836
- GeS₂Se_{1-x}, solid solns., single cryst. lattice refl. spectra 2-72495
- α-(γ-Ge)Te, hole effective mass, plasma reflectivity study 2-56428
- H₂, IR spectrum, rot. double transitions 2-87755
- H₂, ordered solid, IR absorpt. spectra, theory 2-104112
- HClO₄, anhydrous, H bonds in metastable forms, spectrosc. investig. 2-57078
- HClO₄·2H₂O, IR and Raman spectra of glassy and liq. states (*French*) 2-87776
- HNbO₃·xH₂O, proton conductor, charact. 2-104054
- H₂O thin cryofilm, IR optical props. 2-87883
- HSbO₃·xH₂O, proton conductor, charact. 2-104054
- HTaO₃·xH₂O, proton conductor, charact. 2-104054
- HfC_{1-x}N_{1-x}, spectral reflectance, interband absorption and carrier density 2-99152
- HfF₄ based highly transparent glasses, IR absorpt. meas. 2-60203
- HfF₄ based IR transparent glasses 2-97133
- HfN, CVD coatings, optical props., Kramers-Kronig anal. 2-87888
- HfSe₂(Te₂), optical transitions, symm. depend., refl. spectra 2-57120
- Hg_{0.8}Cd_{0.2}Te:B⁺(Al³⁺), ion implantation, IR reflectivity study 2-116191
- Hg_{1-x}Cd_xTe, solid soln., plasma reflectance spectra meas., effect of damaged surface layer 2-67064
- Hg_{1-x}Cd_xTe:Mg, ion implanted, elec. and optical props. from IR refl. spectra 2-116218
- Hg_{1-x}Cd_xTe-CdTe ion implanted epilayers, elec. and optical props. 2-115927
- HgCrSe₄, mag. semicond., elec. optical and mag. studies 2-87288
- Hg_{1-x}Fe_xSe, zero gap mixed cryst., IR magnetoabsorption 2-99098
- Hg_{1-x}Fe_xTe, zero gap mixed cryst., IR magnetoabsorption 2-99098
- Hg(II) complex, 2-aminobenzothiazole mercury, conductometric, IR and Raman study 2-110867
- HgSe, far IR magnetotransmission, cyclotron and spin-flip resons. 2-57066
- InAs, far-IR dielec. response at room temp., dispersive Fourier transform spectroscopy, phonon freqs. 2-116165
- InAs-AlAs solid soln., plasma edge reflectance, carrier density 2-82855
- InAs-GaSb superlattice, highly doped, effective mass, carrier density, heli-con wave propag. determ. 2-56688
- InAs-GaSb superlattices, semimetallic, far IR magnetoabsorpt. 2-61881
- InAs_{1-x}Sb_xP_y epitaxial films, photoluminesc. and optical transmission 2-93303
- InBr(I), lattice dynamics, IR and Raman spectra 2-116194
- InGaAsP, optical props. meas., angle of incidence reflectance spectroscopy appl. 2-53847
- In_{1-x}Ga_xAs_{1-y}P_yInP LPE layers, strain anal. and optical props. meas. 2-66392
- In₂O₃-(SnO₂) films, preparation, elec. and optical props., review 2-87428
- InP, single crystals, liq. encapsulated Czochralski grown, photolum. and IR absorption 2-57144
- InP:Mn, impurity states electronic struct., ESR and optical absorpt. study 2-82285
- InPO₄ film on InP, IR and Raman data 2-72854
- InPO₄ film on InP, IR and electron diff. data 2-72855
- INS, IR study of Davydov splitting 2-87796
- β-In₂S₃, two-temp. synthesis, props. 2-77725
- INSb, electron stimulated IR luminesc., HF modulation interferometric obs. 2-116271
- n-InSb, far IR studies of bound and free carriers as function of hydrostatic press. 2-93238
- InSb, Wannier-Mott exciton at absorpt. edge, quasione dimens. state in strong mag. field, expt. study 2-61369
- InSb(As), subband reson., nonparabolicity parallel excitation mechanism and doublet peak problem 2-61863
- InSe, intraband light absorption, high nonequilib. carrier conc. induced by laser beam 2-87799
- InSe, two-phonon absorpt. spectra, pol. and temp. depend. 2-57095
- InSe, uniaxially deformed, absorpt. and photoluminesc. spectra, energy bands 2-67081
- In₂Se₃ crystal growth and IR transmission, optical filter appl. (*Russian*) 2-114413
- In_{2-x}Sn_{2x}O_{3-y} film, reactively electron beam evaporated, optical, IR and elec. cond. props. 2-57198
- IrO₂, optical props., 0.5 to 9.5 eV, electronic struct. 2-57125
- KAl₂Br₇, cryst., vibr., normal coord. anal. IR and Raman obs. 2-57102
- KBr:Ti³⁺, X-ray irradi. induced defects, optical and TSC meas. 2-81825
- K₂CdCl₆ crystal, vibr. spectra, factor group anal. 2-99107

infrared spectra of inorganic solids continued

- KCl crystals, γ irradi. influence on absorpt. coeff. at CO₂ laser radiation wavelength 2-87828
- KCl:Li, IR absorpt., lattice dynamics 2-104884
- K₂Eu(NH₂)₆, K₂Y(NH₂)₆ and K₂Yb(NH₂)₆, cryst. struct. and IR spectra, expt. determ. (*German*) 2-98022
- K₂Fe(CN)₆·K₄Fe(CN)₆, rehydration, IR and derivatography. studies 2-110833
- KI, far IR optical const. determ. by dispersive Fourier transform spectrometry 2-99112
- KI:NO₃, gap mode, half-width and freq. shift, IR absorpt. study 2-56134
- K₂MF₄ (M=Zn,Ni,Cu), optically active phonons, interionic pot. calc. and vibr. spectra 2-66148
- K₂MoO₄, optical refl. spectra, optical const. 2-87814
- K₂NaSe₂·Cr₂F₆Cr³⁺ tunable IR solid-state laser material, spectroscopic and laser props. 2-108884
- KNbO₃, ferroelec. transition role of polar phonons in chemical bond, Fourier spectroscopy 2-57028
- K⁺-K₂O·MgO·5Al₂O₃, ionic cond. and IR absorption spectra 2-92260
- K₂Pt(CnN)₄·1.5H₂O, electronic props. and Peierls transition, polarised refl. study 2-82858
- KSe(MoO₄)₂, ferroelastic, Raman and IR refl. spectra, 4 to 300K (*Russian*) 2-116170
- K₂TiF₆ crystal, vibr. spectra, factor group anal. 2-99107
- K₂Zn(SO₄)₂·6H₂O, IR and Raman spectra, phonon modes 2-87787
- KbCu₂Si₂ mixed valence cpd., optical absorpt. signature near 20 meV 2-57111
- LaAsO₄, cryst. struct., IR and Raman vibr. spectra, X-ray diff. study 2-65957
- LaCrO₃·Sr(Ti) perovskite, IR spectra assignments and interpret. 2-93231
- La₂(MoO₄)₃, Raman and IR spectra, vibr. assignment 2-82850
- La₂O₃, α-phase, normal coordinate anal. of Raman and IR vibrs. 2-87781
- La₂O₃, α-phase, normal coordinate anal. of Raman and IR vibrs. 2-87781
- La₂S₃, ceramic, opt. props., IR transparency and spectra 2-57080
- LiClO₄·3H₂O, IR stretching and bending bands of dil. HDO 2-72479
- Li₂·3H₂O, IR stretching and bending bands of dil. HDO 2-72479
- LiNH₂SO₄, ferroelectric phase transitions, elec. props., IR spectra 2-67000
- LiNbO₃, foreign cation incorporation 2-116211
- LiNbO₃:Eu³⁺, polarised optical absorption bands, splitting 2-82835
- LiNbO₃:Fe, cryst., absorpt. spectra, γ-ray effects (*Russian*) 2-93232
- LiNd(PO₃)₄, IR spectra 2-72469
- Li₂P₂S₆, synthesis, cryst. struct. and vibr. anal., X-ray diff. study (*French*) 2-103714
- LiTaO₃, ferroelec.-paraelec. transition, displacive-order-disorder crossover 2-104819
- LiTaO₃(LiNbO₃), ferroelec. transition, soft modes, IR reflection spectra study 2-67009
- LiYF₄:Nd³⁺, oscillator strengths and Nd³⁺ optical absorption lines 2-116175
- LuPO₄:Nd³⁺(Eu³⁺)(Er³⁺), 400 to 1200 cm⁻¹ 2-87822
- LuPO₄:P³⁺(Nd³⁺), IR spectra, Zeeman effect and fluoresc. obs. 2-72522
- Lu₂Ru₂O₇, IR spectra and elec. cond. 2-110835
- (Mg,Fe)SiO₃ olivines, single cryst. spectra, 5000-40000 cm⁻¹, up to 200 kbar 2-93214
- Mg₂Al₂Si₂O₁₀·TiO₂, changes in spectral props. at initial stages of crystn. 2-72529
- MgFe₂O₄, low temp. formation, characterisation 2-62093
- MgIn₂S₄, partially-inverse spinel, cryst. struct. and far IR absorpt. meas. 2-91906
- MgO, far-IR absorption, 300-1500K, multiphonon processes 2-93174
- MgO film, IR spectra study of optical vibr. modes 2-67133
- Mg₂Si₂O₇(OH)₄, electronic absorpt. spectra, crystal field parameters 2-104907
- MnFe₂O₄, IR transmission and reflection spectra 2-57074
- MnPS₃-Na⁺(K⁺)(Rb⁺)(Cs⁺) intercalated, IR and Raman vibr. study 2-87769
- MoS₂-metal Schottky barriers, photovoltaic effect and optical absorption 2-115862
- NH₃ thin cryofilm, IR optical props. 2-87883
- NH₄MgPO₄·Ni²⁺·6H₂O, X- and γ-irrad. damage, EPR and absorpt. spectra study 2-57135
- (NH₄)₂SO₄, IR photoacoustic spectra, specular and diffuse refl. effects 2-110832
- NaBO₂·CdO(CdBO₂), phase diagrams, DTA, X-ray phase anal. and IR spectra study 2-66174
- NaCd(HCO₃)₂, cryst. growth and struct. characterisation, etching, X-ray diff. and IR study 2-91920
- NaCl crystals, γ irradi. influence on absorpt. coeff. at CO₂ laser radiation wavelength 2-87828
- NaCl:(Ca²⁺)(S²⁻), irradiated crystals, IR props. 2-99127
- NaCl:PB²⁺, yield stress, solid soln. precip. and dissolution effects, IR absorpt. study 2-57366
- NaClO₄·H₂O, IR stretching and bending bands of dil. HDO 2-72479
- Na₂H₂(PMoO₄V₂O₁₀)·16H₂O, cryst. struct. and vibr. spectra 2-98030
- NaNO₂, lattice mode anharmonicity, order-disorder transition, IR spectra study 2-76614
- NaNO₃ single crystal, low-freq. reflectance spectrum temp. depend., phase transition, lattice mode parameters 2-99111
- NaNbO₃, zone-centre soft mode behaviour in cubic 2-56150
- Na₂O-SiO₂ gels prep. for gel-glass process, action of atmospheric agents 2-76317
- NaOD solution, interaction induced light scatt. spectra of amorphous solid and liq. 2-57113
- Na₂P₂Mo₂V₂O₁₀·15H₂O, cryst. struct. and vibr. spectra 2-98029
- Na₂SO₄·K₂SO₄·ZnSO₄, glass, reorientation, IR band-shape anal. 2-67065
- NaY zeolite, crystallisation 2-71385
- Na₂[M(CO₃)₂]·12H₂O, M=Ce, Th, cryst., vibr., IR study 2-77512
- NbN highly granular films, supercond. props., laser thermal spectroscopy 2-72113
- NbN thin film homogeneous supercond., IR transmission, scattering time effects 2-66713
- NbO₂, struct. transition, role of polar phonons Fourier spectroscopy 2-57028
- NdAsO₄, cryst. struct., IR and Raman vibr. spectra, X-ray diff. study 2-65957

infrared spectra of inorganic solids continued

- NdO₂, α -phase, normal coordinate anal. of Raman and IR vibrs. 2-87781
 (NdO₂)₂CO₃, type Ia and II, optical absorption spectra and electron diffraction patterns 2-116204
 Nd₂Ru₂O₇, IR spectra and elec. cond. 2-110835
 Ni and Ni-Cr (5 at.%), ferromag., optical props., temp. depend. (*Russian*) 2-61923
 Ni complex, 2-fluoro- and 4-fluoro-2-nitroaniline nickel(II), mag. moments, IR and visible study 2-93203
 Ni complexes, Ni(II)-8-quinolinates, dihydrates and adducts, IR absorpt. spectra 2-110866
 Ni on kieselguhr catalyst, IR photoacoustic spectra, specular and diffuse refl. effects 2-110832
 Ni surface, rough, reflectance spectral selectivity meas. 2-67027
 NiF₂ thin films, localised electron states, optical absorption study 2-82268
 Ni(II)Cd(II) and Ni(II)Hg(II) mixed complexes, chem. anal., spectra, EPR study 2-110630
 Ni_{0.88}Mn_{0.12}, optical cond. meas. 1 to 4.9 eV, rel. to electron struct. (*Russian*) 2-99147
 NiO microcrystal, IR spectra obs. at high temp. 2-61902
 NiPS₃, electronic states, reflectivity, optical absorpt., XPS 2-57246
 NiSi₂, reflectivity spectra meas., 0.05 to 4 eV 2-93198
 NpO₂Cl₂⁻, electronic struct., f-f transitions, spectrosc. obs. 2-82852
 NpO₂(NO₃)₂, electronic struct., f-f transitions, spectrosc. obs. 2-82852
 O:(NAG₂)₂, IR vibr. spectra 2-87766
 O:(NHAH), IR vibr. spectra 2-87766
 P₂O₅ glasses, Gd³⁺ doped, vibronic spectra comparison with Raman and IR spectra 2-72499
 P₂O₅-SnO₂-MgO(CaO)(SRO)(BaO), Mossbauer and IR spectra quadrupole splitting 2-104767
 PbF₂-GaF₃-ZnF₂(MnF₂):Er³⁺, fluoride glasses, optical transition probabilities, Judd-Ofelt method 2-61960
 PbO-V₂O₅, equimolar system, new phases 2-93496
 Pb₂O₄, vibr. spectrosc., force fields and bond rigidity (*French*) 2-67055
 PbSe_{1-x}Te_x film, IR absorption due to valence state-localised state transitions 2-77608
 p-p' Pb_{0.8}Sn_{0.2}Te LPE layer, IR plasma refl. spectra (*Chinese*) 2-93295
 Pb_{0.8}Sn_{0.2}Te solid soln. epitaxial films, absorpt. edge obs., 100 to 300K, band struct. model (*Russian*) 2-61913
 Pb_{1-x}Sn_xTe epitaxial films, additional long-wavelength absorpt. 2-77610
 Pb_{1-x}Sn_xTe LPE inhomogeneous layer, IR plasma reflection spectrum, vapour transport process 2-93314
 PbTe, electron-hole plasma, high density, time resolved spectrum 2-92678
 PbTe single cryst., IR absorpt., selection rules, group theoretical anal. (*Russian*) 2-61912
 PbTe-Pb_{1-x}Sn_xTe superlattices, prepared by hot wall epitaxy, optical props. 2-99208
 PbTe-Pb_{1-x}Sn_xTe, superlattice, interband optical absorpt. (*Japanese*) 2-116179
 Pd complex, near IR, IR transmission and unpolarised Raman spectra, vibr. anal. 2-104863
 Pd complex, one-dimens. semicond. reflectance, absorpt. and luminesc. study 2-61961
 Pd surface (100), CO adsorpt., IR reflection absorpt. study 2-98466
 PrAsO₄, cryst. struct., IR and Raman vibr. spectra, X-ray diffraction study 2-65957
 PrO₂, α -phase, normal coordinate anal. of Raman and IR vibrs. 2-87781
 Pt complex, one-dimens. semicond. reflectance, absorpt. and luminesc. study 2-61961
 Pt surface (111), adsorbed CO, vibrational spectroscopy, EELS and IR 2-110125
 PtSi, reflectivity spectra meas., 0.05 to 4 eV 2-93198
 Rb₂Eu(NH₂)₆, Rb₂Y(NH₂)₆, and Rb₂Yb(NH₂)₆, cryst. struct. and IR spectra, expt. determ. (*German*) 2-98022
 Rb₂ZnBr₄, incommensurate struct., far IR and Raman spectra meas. 2-104882
 Rb₂ZnCl₄, incommensurate ferroelec., far IR spectra study 2-116174
 Ru (001), adsorption of water, IR study 2-67060
 RuO₂, optical props., 0.5 to 9.5 eV, electronic struct. 2-57125
 SO₂(NH₂)₂, IR vibr. spectra 2-87766
³²S₂¹⁸F₆ solid isotropic mixture, IR spectra of dipole-active optical phonons 2-67063
 Sb₂O₃, vitreous, IR and Raman spectra, valence force field calcs. 2-72503
 Sb₂S₃-PbS glass, prep. and props. 2-71367
 SbSI, phonon spectrum, soft modes and order parameter near ferroelec. transition 2-103936
 SbSI, soft mode ion paraelec. phase, temp. depend. 2-109943
 SbSI, ferroelec. semicond., optical transitions, temp. depend. meas. near phase transitions 2-57109
 Sb₂Te₃, anisotropy in optical and elec. props. 2-56587
 Sb₂Te₃ single cryst. growth by hot wall epitaxy 2-93418
 Si (111) inversion layers, valley degeneracy and intersubband spectroscopy 2-61542
 Si, amorphous, effective charges 2-86568
 Si, amorphous, far-IR vibr. spectra using double-beam Fourier transform spectrometer 2-113003
 Si amorphous films, glow discharge and sputter deposited, optical band-gap, absorption coeff. meas. 2-71856
 Si, Czochralski crystals, intrinsic gettering study 2-76430
 Si, film, amorphous, annealing behaviour of spin density and optical gap, effect of O contamination 2-87735
 Si film, deposited in SiCl₄-H₂ RF discharge, struct. and optical props. 2-61313
 Si, formation of buried SiO₂ layers, optimisation of implantation conditions 2-61004
 Si, Fourier transform IR spectra obs. of temp. depend. of O impurity 2-116215
 Si, impurity scatt. within electron-hole liq., far IR and millimetre wave studies 2-99110
 Si, ion implanted, isothermal annealing, IR refl., refr. index, regrowth rates, and carrier profiles 2-110836
 Si, neutron and electron irradi., divacancy charge, IR study 2-76431
 Si, optical constants, reflectivity, ellipsometry study 2-82811
 Si, precipitation of O, effect of C impurities 2-66240
 Si, stacking fault morphology, annealing temp. effect 2-66021
 n-Si, uniaxially stressed, free carrier absorpt. 2-87736

infrared spectra of inorganic solids continued

- Si:Al, neutron irradi., IR absorption by radiation defects 2-116217
 Si:As(P), implanted and laser annealed, electronic states, IR optical props. 2-57112
 Si:B, IR absorption spectrum 2-77503
 Si:B(C), electron irradi., defect accumulation kinetics and point defect annihilation 2-98153
 Si:C, O, reactor neutron irradi., effect on C impurities 2-109839
 Si:C₀, Czochralski grown, donor form. by annealing at 700°C 2-110283
 a-Si:C and a-Si:C, B(P) films, cathodic deposition, charact. 2-88011
 Si:F, H amorphous films, photoelec., and optical props. Schottky barrier solar cell form. 2-83480
 Si:F,H amorphous films, solar cell form., film elec. and optical props. 2-83481
 a-Si:F and a-Si:F, B(P) films, cathodic deposition, charact. 2-88011
 Si:Ga, float zone cryst., neutron irradi., X-centre formation, expt. study 2-98162
 Si:Ga(In), impurity IR excited-state lines 2-82883
 Si:H, amorphous, H determ., IR absorption meas. (*Japanese*) 2-71490
 Si:H, amorphous, Schottky diode spectral response, gap states effect 2-87753
 Si:H, amorphous film, optical props. (*Korean*) 2-57201
 Si:H, amorphous film, optical and elec. props. 2-82940
 Si:H, amorphous film, RF sputtered, H content, and config., photoconductivity, IR study 2-82397
 Si:H, amorphous film, RF planar-magnetron sputtering, IR and photoelec. props. (*Japanese*) 2-99332
 Si:H, amorphous film, reactive ion beam sputtering, optical props. 2-83041
 a-Si:H, reassessment of vibr. spectrum 2-57136
 a-Si:H,B(P) IR absorption spectra, effects of annealing 2-99156
 Si:H,N, amorphous, prep. from SiH₄-N₂-H₂ mixture and elec. resist. and IR absorpt. meas. 2-93444
 Si:H amorphous film, DC sputtered, characterization by optical and nuclear methods 2-93308
 Si:H amorphous film, glow discharge deposited, H content and mech. stress 2-104210
 Si:H amorphous film, growth by silane laser photodissociation, X-ray and IR spectra study 2-116375
 Si:H amorphous film prep., evaporation method 2-62069
 Si:H amorphous reactively sputtered film, H anal. by IR spectroscopy, nuclear reaction and SIMS 2-76857
 Si:H amorphous solar cell, photovoltaic performance, film props., plasma deposition optimisation 2-83486
 Si:H amorphous sputtered film, microstruct. and H bonding environments 2-76847
 a-Si:H film, annealing effects on ESR, elec. and optical props. 2-66588
 Si:H films, amorphous, dependence of gap on hydrogen content, photoluminesc. and IR spectra study (*Chinese*) 2-110903
 a-Si:H films, SAW attenuation, paramag. defects, IR, ESR and SEM studies 2-110123
 Si:N, low energy implantation, material composition, oxidation resist. and elec. characts. 2-86694
 Si:O, C, Czochralski grown, O related donors, 700 to 800°C, expt. study 2-56469
 Si:O, Mg influence of Mg on IR absorpt. and elec. cond. props. 2-87258
 Si:O, Si-O-Si complex new absorpt. band 2-72496
 Si:P, highly doped, metal-insulator transition, optical and precursive props. 2-72038
 Si:P, ion implanted and annealed, IR reflectivity characterisation, physical model 2-77532
 Si:Se, donor level photoionisation cross-sections, IR spectra and photocond. study 2-56484
 Si:Sm, IR absorpt. spectra, 1.8 μ m absorpt. band, annealing effects 2-57137
 Si:Al, amorphous thin film, thermopower, elec. cond. and optical absorption 2-72079
 Si-F amorphous film, grown from SiF₂ disproportionation, F conc. determ. 2-92021
 Si-Ge-B amorphous film, glow discharge deposited, elec. cond., optical absorpt. and EPR study 2-71965
 SiC buried layer form. in Si, annealing, IR spectra study 2-103799
 SiC:H, amorphous film for a-Si solar cell, props. and struct. 2-104978
 Si_{1-x}C_x, amorphous film, NMR and IR spectra study 2-77389
 Si_{1-x}C_xH, amorphous glow discharge films, ESR, IR and optical study 2-56934
 Si₃C₂F₆ thin film, amorphous, prep. by reactive sputtering in tetrafluoromethane (*Japanese*) 2-115596
 Si₃N₄ films on Si, thickness meas. by IR absorption 2-112870
 SiO₂, adsorption, Si-H band as surface probe 2-82844
 SiO₂ and SiO₂-TiO₂ glasses prep. by sol-gel process 2-77795
 SiO₂ films, study using IR absorption techniques 2-93298
 SiO₂ films on Si, thickness meas. by IR absorption 2-112870
 SiO₂ gel to glass transform., Raman and IR spectra study 2-77506
 SiO₂ glass, OH ion distrib. profile, laser absorpt. meas. 2-61932
 SiO₂ laser-induced CVD 2-67221
 SiO₂ silica optical fibre waveguides, radiation damage at long wavelengths 2-55335
 SiO₂ vitreous, near IR absorption of H₂O, OH group vibr. bands 2-99125
 SiO₂ vitreous, with small OH conc., absorpt. by 3D impurities, thermo-optical interferometric study 2-104923
 SiO₂-P₂O₅, gels and glasses, mixed bonds, spectrosc. obs. 2-76314
 SiO₂-TiO₂ gels and glasses, mixed bonds, spectrosc. obs. 2-76314
 SiO₂ amorphous films, reactively sputtered, struct. and props., IR spectra study 2-66397
 SiO₂, LO-TO mode splittings and dynamic effective charges of O₂ 2-99204
 Si₃ON₂, covalent ceramic, vibr. assignment, IR absorption bands 2-87770
 Si₃O₂N₂ layers, synthesized by ion implantation, IR and elec. props. 2-99136
 SmB₆, mixed valence cpd., small energy gap, electron tunnelling and IR spectrum 2-56442
 Sn film, struct. rel. to elec. and optical props. 2-115623
 SnGeS₃, cryst., vibr. props., Raman and far-IR study 2-67030
 SnO₂ films, preparation, elec. and optical props., review 2-87428
 SnO₂ films, pyrolytic prep., optical selectivity and crystallisation 2-87887
 SnO₂:F(Sb:F) film, elec. resist. and optical absorpt. and reflection spectra meas. 2-66675
 Sn(Pb₂O₄), vibr. spectrosc., force fields and bond rigidity (*French*) 2-67055

infrared spectra of inorganic solids continued

- $\text{SnPb}(\text{Pb}_2\text{O}_3)_2$, vibr. spectrosc., force fields and bond rigidity (*French*) 2-67055
- SnS_2 , Se_2 , far IR reflectance spectra 2-87789
- $\text{Sr}_{10}(\text{PO}_4)_6 \cdot y(\text{AsO}_4)_2(\text{OH})_2$, cryst., anion migration, IR study 2-57106
- $\text{Sr}_{10}(\text{PO}_4)_6 \cdot y(\text{VO}_4)_2(\text{OH})_2$, cryst., anion migration, IR study 2-57106
- $\text{SrS}(\text{SrSe})$, optic phonon IR reflection spectra and cryst. growth, expt. study 2-99117
- $\text{SrSiO}_3\text{-GaGeO}_3$, solid solutions, phase reactions 2-72693
- SrTiO_3 , IR refl. and antistatitive transition 2-67058
- $\text{TaH}(\text{PO}_4)_2 \cdot 2\text{H}_2\text{O}$, layered struct., thermodecomposition 2-71420
- $\beta\text{-Ta}_2\text{O}_5$, vibr. spectra and X-ray diffr. obs. of cryst. struct. 2-98012
- $\text{ThCl}_4\text{-Pa}^{4+}$, absorpt. and emission spectra, spin-orbit and crystal field parameters 2-99158
- ThPd_3 , f-states, optical refl. study 2-77550
- TiN , CVD coatings, optical props., Kramers-Kronig anal. 2-87888
- TiN/C film, reactivity sputtered, optical consts. and spectral selectivity, IR reflectivity study 2-72445
- $\text{TiN}_x\text{-C}$, films, optical consts. and spectral sensitivity meas. 2-104980
- $\text{TiS}_2(\text{Se}_2)$, optical transitions, symm. depend., refl. spectra 2-57120
- $\text{TiGa}_2\text{In}_{1-x}\text{Se}_2\text{S}_{1-x-y}$ solid solns., IR light scat. study 2-110856
- TiGaSe_2 , order-disorder phase transition in surface layer 2-92190
- $\text{Ti}_2\text{X}_2\text{O}_7$ ($\text{X}=\text{Ta, Nb, Sb}$), vibr., force fields, IR and Raman study, normal coordinate anal. (*French*) 2-110869
- TiMSe , mixed valent cpd., dielec. response, anomalous features 2-56457
- $\text{UO}_2\text{WO}_4\text{-Na}_2(\text{K}_2)(\text{Rb}_2)(\text{Cs}_2)\text{WO}_4$, solid-phase synthesis, struct., IR and luminesc. spectra 2-87752
- UPd_3 , f-states, optical refl. study 2-77550
- VO_2 and VO_2/Al , IR absorpt. 2-104879
- V_2O_5 , electrochromic colouring, optical absorpt. and IR transmission spectra meas. 2-116156
- V_2Si , electron props. and permittivity, optical absorpt. spectra study (*Russian*) 2-93216
- V_2Si superconducting film, far IR laser thermal spectroscopy 2-98805
- WO_3 amorphous thin films, coloration mech. study 2-99206
- WO_3 films, reactively sputtered, electrical and optical props. 2-66673
- $\text{Y}_2\text{Al}_2\text{-Fe}_2\text{O}_3$ mag. circular dichroism and IR absorption spectra of $^6\text{A}_1\text{-}^6\text{E}$ transition 2-87749
- $\text{Y}_2\text{Ir}_2\text{O}_7$, IR spectra and elec. cond. 2-110835
- $\text{Y}_2\text{O}_3\text{-Ce}^{3+}(\text{Sm}^{3+})(\text{Dy}^{3+})(\text{Yb}^{3+})$, energy levels, cryst. field anal., fluoresc. and IR study 2-72534
- $\text{YPO}_4\text{-Pr}^{3+}(\text{Nd}^{3+})$, IR spectra, Zeeman effect and fluoresc. obs. 2-72522
- $\text{Yb}_2\text{O}_3\text{-S}$, α -phase, normal coordinate anal. of Raman and IR vibrs. 2-87781
- ZnFe_2O_4 , IR transmission and reflection spectra 2-57074
- $\text{Zn}(\text{II})$ complex, 2-aminobenzothiazole zinc, conductometric, IR and Raman study 2-110867
- ZnO , adsorpt. of HD, conf. effects, IR spectrosc. obs. 2-61886
- $\text{ZnO-B}_2\text{O}_3\text{-Li}_2\text{O-H}_2\text{O}$ system, crystallisation, characterisation by X-ray diffr. 2-103962
- $\alpha\text{-Zn}_3\text{P}_2$ film, optical band gap 2-62004
- ZnSe crystals, vol. defect influence on absorpt. at 10.6 μm wavelength 2-55284
- ZnSe/Al , IR absorption and defects 2-87823
- ZnWO_4 , cryst. growth and scintillation props. 2-57282
- $\text{ZrF}_4\text{-BaF}_2\text{-YbF}_3$ (GdF_3), fluoride glass, prep., optical and physical props. 2-102891
- ZrN , CVD coatings, optical props., Kramers-Kronig anal. 2-87888
- ZrS_2 , optical transitions, symm. depend., refl. spectra 2-57120

infrared spectra of organic molecules and substances

see also molecular rotation

- acetaldehyde, CH stretching freq., bond strengths, methyl group geometry 2-96565
- acetaldehyde free radicals in solid Ar, IR vibr. spectra prod. from F atom reaction 2-105453
- acetanilide and π electrons of arenes, N-H ... π type H-bond form., strengths 2-113986
- acetone, CH stretching freq., bond strengths, methyl group geometry 2-96565
- acetonitrile, crystals, vibr., phase transitions, Raman and Raman study 2-77513
- acetonitrile, liq., dynamics and interactions, microwave and far-IR study 2-82869
- acetonitrile, optical pumping, rot.-vibr. anal., far-IR obs. 2-54842
- acetyl chloride, CH stretching freq., bond strengths, methyl group geometry 2-96565
- acetyl fluoride, CH stretching freq., bond strengths, methyl group geometry 2-96565
- acetylene, crystals, vibr., phase transitions, Raman and Raman study 2-77513
- acetylene, high resolution Q-branches spectrum 2-108501
- acetylene, IR intensities, ab initio study, dipole moment derivatives 2-96553
- acetylene IR bands identification, appl. to IRC+10216 2-112458
- N-acetyloxypyrindinium salts, fragmentary exchange, reaction rates and mechanism, IR and NMR obs. 2-83372
- acrolein toxic industrial compound CO₂ laser absorpt. spectra 2-83536
- alanine (-d_3), CH stretching vibr. circular dichroism, localised MO calcs. 2-108448
- alanine (-d_3), CH stretching vibr. circular dichroism and fixed partial charge calcs. 2-108447
- alanine (-d_3), IR vibr. circular dichroism, vibr. anal. and Raman spectra 2-108446
- alkohols, Fourier transform far-IR matrix isolation spectra, vibr. freqs. of H bonded system 2-113978
- alkali halogenates, phonon spectra, NQR and vibr. spectra 2-93047
- n-alkane liquids, complex permittivity, far IR absorpt. spectra study 2-93098
- alkane radical cation, spectroscopic identification 2-80735
- alkanes, methyl C-H stretching vibr. bands, motional collapse 2-102485
- n-alkanes in phase II, IR spectra, interchain vibr. coupling 2-110842
- alkylene glycol terephthalate copolymers with mesogenic p-oxybenzoate units, thermal transitions 2-61139
- alkynes, interpretation and prediction of IR intensities using model based on electrooptical parameters 2-80613
- allene, integrated IR intensities, bond polar parameters 2-108496
- allylbenzene-(R)-3,7-dimethyl-7-octene copolymers, opt. active, chiroptical props., main chain-side group distance depend. 2-61867
- amides, solid, H-bonded, $\gamma(\text{N-H})$ mode width, temp. depend. 2-72492
- amine-HNO photochem. complexation in low temp. matrices, IR obs. 2-67737
- aminopyrazine, electronic and vibr. spectra, vibr. anal. 2-108491
- N-aminotriazolones, form. by hydrazine+hydrazonate derivatives, struct. IR obs. (*French*) 2-54846
- aniline, o-, m- and p-halogen derivatives, thermodynamic studies of melting 2-103948
- anilinium halides, torsional and librational modes, inelastic neutron scattering and Raman spectra 2-109923
- (anthracene), (picric acid), polarisability and absorpt. tensor orientatio 2-87810
- 1,4-antraquinone single cryst., polarised IR absorpt. and Raman spectra, oriented-gas model 2-93192
- aromatic silanes, polymerisation in RF plasmas 2-62399
- 2-aryl-1,2-dihydro (4H) thieno[2,3-c]benzo[c]pyrane-4-ones, IR and NM spectroscopic props. (*French*) 2-110863
- 2-arylamino-1,2-diarylethanephosphoric acid esters, stereochemistry, PM study 2-114019
- 4,5-arylimidazole, IR absorption bands 2-108506
- benzene, cryogenic soln., mol. aggregates, IR study 2-67031
- benzene, ground vibr. state, rot. consts., IR obs. 2-85663
- benzene, inactive vibr. recording in IR spectrum and Raman scat. using stimulated Raman scat. 2-108528
- benzene, integrated IR intensities, bond polar parameters 2-108496
- benzene, isotope and derivatives, vibrationally excited, visible and IR obs. 2-63769
- (benzene), clusters, IR vibr. predissoc. spectroscopy 2-59989
- (benzene), clusters, IR vibr. predissoc. spectroscopy 2-59989
- benzene radical anion, vibrational spectra and freq. shifts, IR and Raman 2-108455
- benzene-Br atom complex, matrix isolation IR and UV spectra 2-108455
- benzene- $\text{d}_0(\text{d}_2)$, local mode vibrs., spectra, model 2-59772
- benzene- $\text{d}_0(\text{d}_2)(\text{d}_3)(\text{d}_4)$, planar vibr., force field, IR obs. 2-85661
- benzene-hexa-n-octanoate, heat capacity and IR spectra, 13 to 39 μm 2-76696
- benzenes, halogenated, in decalin, dielectric and far IR study, γ -proct charact. 2-61892
- benzenes, nitro-substituted, IR attenuated total reflection spectra 2-104866
- benzophenones, substituted, CO stretching bands, substituent effects 2-75289
- benzoquinoline derivatives struct., mol. weight determ., IR and visible spectra 2-114125
- 3-benzoylaminopropionic acid esters, H-bond form., steric effects, IR spectra, geometries and energies calc. 2-96552
- 3-benzylidene-2,4-pentanediones, substituted, IR spectra, conformation 2-64983
- bi-(4,4-dimethyl-2,5-cyclohexadiene-1-ylidene), conformation, IR, Raman, UV and fluoresc. obs. (*German*) 2-75276
- biological material, IR spectroscopy over 2.9 to 3.9 μm waveband at astronomical implications 2-84347
- biphenyl dianion, vibrational spectra and freq. shifts, IR and Raman 2-108455
- 2,2'-bipyridine, lowest electronic states, two-photon excitation spectra 2-70237
- 2,2'-bipyridyl-1S₂ complex, form. thermodynamics, visible and far IR obs. 2-108517
- blood protein aqueous solns., Fourier transform IR spectra obs. 2-11680
- bromocyclohexane, vapour, solid and liq. phase, IR and Raman spectra 2-75271
- 3-bromothiophene, liq. and solid, vibr., Raman and IR study 2-93204
- bromotrifluoromethane, IR vibr. and rot. anal. of parallel overtones and combination bands 2-75465
- butanol+SnCl₄ complex form., vibr., IR absorpt. anal. NMR obs. 2-111486
- t-butyl benzene, derivative IR spectra meas. 2-64131
- cadmium arachidate in contact with rough metal surfaces, monolayers, surface IR and Raman vibr. spectra 2-96562
- d-camphor, carbonyl stretching mode, Raman and IR spectra, high pressure and temp. effects 2-67057
- carbon tetrachloride, liq., far IR absorpt. spectra, octupole induced dipole moment, functions 2-72472
- carbon tetrachloride, liq., optical and dielec. parameters meas. in 3 mm to 50 μm range 2-99084
- carbon tetrafluoride, liq., far IR absorpt. spectra, octupole induced dipole moment, functions 2-72472
- carbontetrachloride-arenes mixtures, N-H ... π type H-bond form., strengths 2-113986
- carboxylates, zinc, cadmium and lead, IR study 2-99121
- carboxymyoglobin, photodissociated, IR spectra at low temp., haeme iron behaviour 2-105657
- β -carotene-1, IR spectra, vibronic charge oscils. 2-116171
- cellulose hydrate, struct. transformations by heat treatment, AlCl₃ effects 2-109979
- chemically rel. mols. RCF, RCH and ROH, charge charge flux overlap model, IR intensities interpretation 2-80607
- chiral molecules, vibr. circular dichroism, mid-IR FT study 2-96609
- 3-chloro-1-(4-halophenyl)-1-propanone, IR spectra 2-99105
- 3-chloro-2-methylpropene, vibr. spectra, normal coordinate anal. and informational equilb. 2-114001
- 4-chloro-2-nitrotoluene, laser Raman and IR spectra, vibr. anal. 2-102482
- p-chloroacetophenone, IR spectrum and normal coord. anal. 2-108512
- p-chlorobenzyl cyanide, Raman and IR spectra, vibr. assignment 2-99103
- chlorocyclohexane, vapour, solid and liq. phase, IR and Raman spectra 2-75271
- chlorodifluoromethane in liq. Ar, IR and Raman spectra, vibr. anal., octone and combination bands 2-90546
- chloroethane-2-d₄, IR and Raman spectra, vibr. anal. 2-75285
- chloroethane-molecular beam, pulsed, optical study 2-80562
- chlorofluoromethane, force consts., vibr. rot., IR obs. 2-85658
- chloroform, ang. vel. control, functions obtained from far IR absorpt. and Raman band shape 2-110829
- chloromethane, IR absorpt. line intensity of ν_4 and $3\nu_6$ perturbed bands (*French*) 2-114046
- chlorophenylmethylbenzene, single cryst., vibr., IR study 2-57105
- p-chlorophenyl isocyanate, vibr. and electronic spectra, assignments 2-90534
- 6-chloropurine, IR absorpt. spectra obs. 2-54840
- 3-chlorothiophene, liq. and solid, vibr., Raman and IR study 2-93204

infrared spectra of organic molecules and substances continued

- chrysenes, vibr., IR and Raman obs. 2-64984
 coatings on steel, Fourier transform IR spectroscopy, coating chem. interaction and mol. struct. and orientation 2-116603
 collagen, solid state, far IR spectra 2-67954
 collagen-glyoxal complex, solid state, far IR spectra 2-67954
 18-crown-6-K₂C₂O₄, IR and Raman vibr. spectroscopy 2-75282
 18-crown-6-K₂Cr₂O₇, IR and Raman vibr. spectroscopy 2-75282
 18-crown-6-KMnO₄, IR and Raman vibr. spectroscopy 2-75282
 4-cyano-4'-octyloxy biphenyl, solid cryst. polymorphism 2-103738
 1-cyanoadamantane, plastic phase, internal modes, Raman study 2-99124
 N-(α -cyanobenzylidene)alkylamines, dipole moments, IR and PMR study 2-113983
 N-(α -cyanobenzylidene)anilines, dipole moments, IR and PMR study 2-113983
 cyanobutanone, IR multiphoton absorpt. 2-64969
 cyanogen, IR spectrum in region of bending fundamental ν_5 , rot. const. 2-85651
 cyanomethane, highly polar liquid, far IR absorpt. spectra, internal field correction 2-61899
 cyanomethanone, CH stretching freq., bond strengths, methyl group geometry 2-96565
 cyanopentadiene, molecular spectroscopy using diode and combined diode-CO₂ lasers 2-63271
 cyanopropyne, molecular spectroscopy using diode and combined diode-CO₂ lasers 2-63271
 cyclohexane, inactive vibr. recording in IR spectrum and Raman scatt. using stimulated Raman scatt. 2-108528
 cyclohexane, vapour, solid and liq. phase, IR and Raman study 2-75271
 cyclohexanol, solid, IR spectra study, 93 to 304K 2-61896
 cyclohexanols, axial tertiary, OH-rotamer distrib., struct. information from IR spectra 2-108514
 cyclopentanol-d₀(-d₁), solid and liq., IR spectra 2-99135
 cyclopropyldimethylborane, vibrational spectra and conformation 2-70257
 DCM, two-photon absorpt. cross-section meas. at 1.06 μ m 2-54908
 1-decane, solns., vibr., relax., bandwidths, IR and Raman obs. 2-64989
 di-potassium tartrate hemi-hydrate cryst., laser Raman and IR spectra 2-116181
 diacetylene, vibr. freq., pot. energy functions, IR intensities, SCF calcs. 2-113872
 3,5-diamino-1,2,4-dithiazolium salts, struct., vibr., IR obs. 2-108516
 4,5-diaminopyrimidine, IR vibr. spectra 2-54841
 diazoacetophenones, IR spectrosc., substituent effects 2-64982
 dibenzotitanium, struct., spectra, chem. props. 2-67045
 2,2-dibromobutane, liq., IR absorpt. spectra 2-75286
 2,2-dichloroacetaldehyde, vibr., IR obs. 2-108490
 dichlorodifluoromethane molecular beam, pulsed, optical study 2-80562
 dichloromethane, liq., far-IR absorpt. determ. by spot freq. meas. 2-77534
 2,6-dichloropyrazine, IR and Raman vibr. spectra 2-96558
 2,5-dichloropyridine, IR spectra, vibr. assignment 2-54839
 2,6-dichloropyridine, solid, vibr., Raman and IR study 2-61888
 3,3'-diethyl thiocarbocyanine iodide, picosecond time-resolved spectroscopic studies 2-96557
 difebarbamate, H bonds, IR and Raman study 2-54850
 p-difluorobenzene, selective vibr. excitation by stimulated emission pumping 2-85618
 difluoromethanal, vibr. spectra, triple resonances 2-108463
 difluoromethane, far IR laser obs., pump offset freqs., Doppler-free optoacoustic spectroscopy meas. 2-108857
 2,3-dihydropyran, gas phase, multiphoton IR absorpt. 2-64970
 2,3-dihydrothiophene, rot. const., IR and microwave obs. 2-70228
 1,4-dihydroxyanthraquinone-d₀(d₂), electronic states, vibr. Raman and IR study 2-57070
 diiodoethylarsine mols. conformations by vibr. spectroscopy 2-90727
 1,2-diisocyanatoethane, conformation, vibr., INDO calcs., Raman and IR obs. 2-75274
 1,4-dimethoxybutane, Raman and IR spectra, model cpds. of polyethers 2-70258
 1,5-dimethoxyheptane, Raman and IR spectra, model cpds. of polyethers 2-70258
 1,3-dimethoxypropane, Raman and IR spectra, model cpds. of polyethers 2-70258
 dimethyl ether-HI, mol. interactions in N₂ matrices, IR and Raman spectra 2-96567
 dimethyl formamides, Raman and IR spectra, vibr. freq. calc. using force field base ab initio calcs. 2-85650
 dimethyl mercury, laser photodissoc., methyl radical prod., vibr. and rot. excitation, IR emission studies 2-96653
 dimethyl sulphide, config., IR and Raman spectra anal. 2-113990
 dimethyl sulphoxide in complex compounds, coordination centres identification from IR bands 2-75279
 dimethylmalonic acid and its salts, Raman and IR spectra (French) 2-113997
 2,6-dimethylpyrazine, IR and Raman vibr. spectra 2-96558
 dimethylsulphite, conformational anal. IR obs. 2-75270
 diol salts, intramol. H bonds, IR continuum and NMR obs. 2-59799
 diphenyl sulphone, solid and liq., IR spectra obs. 2-57071
 N,N-diphenylthiourea, NMR and IR studies of solvent effect 2-75325
 dipicrylamine salts with organic and inorganic cations, prep. and mol. configurations 2-113987
 dipolar solutes in decalin soln., mean square torques, far-IR study 2-93178
 dipropenyl ether isomers, IR, Raman and ¹³C NMR spectra, vibr. coupling 2-96569
 1,3-disilacyclobutane, pot. energy surface, vibr., IR and Raman obs. 2-70252
 di-tetramethylammonium uranyl tetrabromide, vibr., luminescence, IR and Raman study 2-61895
 DODCl, two-photon absorpt. cross-section meas. at 1.06 μ m 2-54908
 enzymes, solid state, far IR spectra 2-67954
 epoxy polymer film, Fourier transform IR spectra using heated ATR for T_g determ. 2-116167
 ethane, collision induced adsorpt. in microwave and IR region 2-54838
 ethane, IR intensity anal. following zero and first order approx. 2-80625
 ethane(-d₂), IR intensities, electrooptical parameters 2-59795
 ethane-d₆, $\nu_9 + \nu_{10}$ parallel band, computer deconvoluted spectra 2-80569
 ethane-d₆, IR intensity anal. following zero and first order approx. 2-80625
 ethane-d, ν_7 c-type band, Coriolis interactions, IR obs. 2-90542
 ethanol, H complexes, vibr. anharmonic anal. IR spectra 2-108460

infrared spectra of organic molecules and substances continued

- ethanols trapped in low temp. matrices, far-IR studies 2-75273
 ethene-HF, H-bonded pi complex, matrix isolated, vibr., IR obs. 2-90536
 p-(p-ethoxyphenylazo)phenyl alkanoates homologous series, far-IR absorpt. spectra 2-104865
 ethyl acrylate toxic industrial compound CO₂ laser absorpt. spectra 2-83536
 ethyl chloride, ν_9 band, vibr.-rot. anal., diode laser spectroscopy, multiphoton dissoc. studies 2-85656
 ethyl cyanide, CH stretching freq., bond strengths, methyl group geometry 2-96565
 ethyl dithioacetate, IR, aman and reson. Raman spectra, normal coordinate anal. 2-64967
 ethyl fluoroacetate, chloroacetate, rot. isomerism obs. using cryostat for low temp. IR spectroscopy (Spanish) 2-84720
 ethyl haloacetates, IR carbonyl band and rot. isomerism 2-80610
 ethyl phenylpropiolates, p-substituent effect, IR and ¹³C chem. shift study 2-75283
 ethyl radical, IR spectrum assignment 2-70239
 ethyl trans-cinnamates, p-substituent effect, IR and ¹³C chem. shift study 2-75283
 ethylene, (¹²C¹³CH₄), rovibrational parameters, IR obs. 2-90543
 ethylene, adsorption on SiO₂ supported Pd catalyst, IR study 2-82129
 ethylene, adsorption on zeolite surface, IR study 2-82132
 ethylene, gas and liq. solns., rot. anal. IR obs. 2-96573
 ethylene, integrated IR intensities, bond polar parameters 2-108496
 ethylene in stars, IR heterodyne spectroscopy 2-68635
 ethylene ozonides, secondary, photolysis, pyrolysis and matrix IR spectra 2-113979
 ethylene-d₂, CH and CD stretching fundamentals, IR anal. 2-80618
 ethylene-d₄, inactive torsion vibr. rot.-vibr. anal., IR obs. 2-80621
 α,β -ethylenic ketones, conformations, substituent effects, NMR, IR study (French) 2-90582
 febarbamate, H bonds, IR and Raman study 2-54850
 fluoroalcohol-base complexes, IR studies in gas phase, CCl₄ soln. and Ar matrix 2-80597
 fluoroethanols trapped in low temp. matrices, far-IR studies 2-75273
 fluoroform, near IR spectrum 2-80612
 fluorohydrocarbons, C-H chromophore IR integrated, band strengths, group additivity rule 2-113984
 fluoror. ethane, matrix isolated, rot.-librational motion, IR obs. 2-90537
 fluoromethane, Stark-split components, reorientation and press. broadening of IR and microwave lines 2-70227
 fluoromethane vibr. spectra, triple resonances 2-108463
 fluoromethane-d₂, ν_2 and ν_3 bands, IR spectra 2-80623
 fluoromethane-DCI(DBr) complexes in liq. Ar and Kr solns., spectral and energy parameters 900-4000 cm⁻¹ 2-59802
 fluoromethane-HCl(HBr) complexes in liq. Ar and Kr solns., spectral and energy parameters 900-4000 cm⁻¹ 2-59802
 formaldehyde, vibr.-rotation transition, Stark spectroscopy by saturated absorption 2-90591
 formaldehyde-d₀(d₂), dipole moment, polymerisation effect, IR obs. 2-70241
 formaldehyde-NH₃ (acetonitrile), struct., vibr., IR obs. 2-75277
 formic acid, IR transitions, offset-locked CO₂ waveguide laser study 2-85652
 fulminic acid, rare gas matrix isolated, isomerisation, photolysis, IR and UV obs. 2-75264
 furan, phase transition, IR study 2-77509
 gramicidin A transmembrane channel orientation, vesicle IR dichroism study 2-93997
 heptamethine cyanine IR dyes, lifetime, photostability and chem. struct. 2-102884
 heterogeneous catalyst system in reaction conditions, IR emission spectra 2-111522
 hexadecane, oxidation reaction, gas chromatography-IR study 2-78085
 hexafluoroazomethane, struct., vibr., normal coordinate anal., electron diff., IR and Raman obs. 2-113981
 hexafluorobenzene, gas phase, multiphoton IR absorpt. 2-64970
 hexafluorobenzene, IR multiphoton absorpt. 2-64969
 hexafluorobut-2-ene-d₀(d₂), struct., vibr., normal coordinate anal., electron diff., IR and Raman obs. 2-113981
 hexafluoroethane, IR intensity anal. following zero and first order approx. 2-80625
 hexamethylenetetramine-Hg(NCS)₂, tetradentate behaviour, struct., IR obs. 2-75278
 hexaziridincyclotriphosphazene, solid state and aq. soln., Raman and IR studies 2-87772
 1-hexene, solns., vibr., relax., bandwidths, IR and Raman obs. 2-64989
 1-hexene in soln., IR and isotropic Raman spectra, vibr. and rot. relax. 2-80615
 HTAB adsorbed on Ag and Ni, IR specular reflection spectra 2-116291
 hydrazine-based rocket fuel toxic industrial compound CO₂ laser absorpt. spectra 2-83536
 hydrocarbons, IR intensities, C-H bond characterisation 2-80614
 hydrocarbons adsorbed on zeolites, IR spectra 2-111520
 2-hydroxycyclohexane, aq. soln.-and solid vibr., IR and Raman study 2-116177
 ice-NH₃-methane (propane) mixture 3.4 μ m feature, comparison with interstellar feature 2-84304
 indoles, substituted, UV and IR spectra 2-108548
 3-iodothiophene, liq. and solid, vibr., Raman and IR study 2-93204
 IR study, struct. (French) 2-90529
 kappa-casein, biopolymer, far-IR spectra 2-108749
 lanthanide shift reagents, IR spectra 2-75288
 liquids and liq. crystals, hindered mol. rot., IR spectra study 2-110875
 lithium formate crystal, light scatt. by polaritons in uncoupled two-particle states 2-82251
 manganese phthalocyanine, complexing ability, IR study 2-57612
 matrix isolation spectroscopy of organic molecules with 7-12 atoms 2-80594
 mercaptoacetaldehyde, cryst. and soln., mol. struct., PMR, Raman and IR study 2-93205
 mercaptoacetone, cryst. and soln., mol. struct., PMR, Raman and IR study 2-93205
 metal carbonyl compound LFe(CO)₄ where L is organophosphorous compounds, IR spectra, force const., mol. moment 2-80609
 metal complexes, metal-formylhydrazide, synthesis and characterisation 2-110848
 metal phthalocyanines-formic acid, complexing ability, VB and MO calcs., IR obs. 2-90551

infrared spectra of organic molecules and substances continued

- methane, 1100 to 1800 cm^{-1} , intensity measures and quantum assignments 2-102469
- methane, 2.3 μm region line parameters 2-96550
- methane, absorpt. band interpretation in 5500-6300 cm^{-1} 2-108507
- methane, absorption band monitoring in atmosphere 2-111525
- methane, IR absorpt. spectrum of $2\nu_2$ band 2-85655
- methane, liq., far IR absorpt. spectra, octupole induced dipole moment correl. functions 2-72472
- methane, vibr., ^{12}C and ^{13}C , IR obs. 2-90539
- methane, vibr. states, IR spectral line assignments and strengths 2-90540
- methane($-d_4$), IR intensities, electrooptical parameters 2-59795
- methane ($-d_4$), IR and Raman spectra, vibr. freq. and intensities, CNDO calc. 2-80632
- methanesulphonanilides, m- and p-substituted, conformers, substituent effects, IR obs. 2-90550
- methanol, H complexes, vibr. anharmonic anal. IR spectra 2-108460
- methanol(d_4 or d_4 -ammonia (d_3)), IR spectra, H-bond, Fermi resonance 2-72502
- methanol- $d_0(d_1)(d_2)$, adsorption on zeolite surface, IR study 2-82132
- methanol- d_3 , torsion levels, Fermi reson., internal rot., Doppler limited IR obs. 2-85660
- methanol- d_3 polymer, H-bonds, underdamped anharmonic stochastic oscill., IR obs. 2-85646
- methanol-triethylamine, IR spectra, H-bond, Fermi resonance 2-72502
- 3-methoxy benzonitriles, electronic and vibr. spectra and thermodynamic functions 2-75464
- p-methoxy benzyl alcohol, Raman and IR spectra, vibr. assignment 2-90533
- 11-(methoxycarbonyl)-cyclohept[azulenylium tetrafluoroborate, MCD and IR absorpt. spectra 2-75337
- N-2-methoxycarbonyl hydrazonates, form. by hydrazine+hydrazonate derivatives, struct., IR obs. (French) 2-54846
- methoxyfluorane, internal rot., vibr., microwave, IR and Raman obs. 2-75252
- methyl acetate, CH stretching freq., bond strengths, methyl group geometry 2-96565
- methyl acrylate, band contour assignment of IR spectrum, force field for vibr. (Spanish) 2-85665
- methyl acrylate, IR spectra and struct. 2-96568
- methyl alcohol, laser Stark saturation spectroscopy, IR transition assignments 2-90592
- methyl bromide, laser spectroscopy in ν_4 band at 930 cm^{-1} 2-54843
- methyl chloride, IR band study of $2\nu_2$, $\nu_2 + \nu_3$, $2\nu_3$, $0, 2\nu_3^{+2}$, $2\nu_3 + \nu_5$ and $4\nu_3$ reson. (French) 2-90532
- methyl dithioacetate, IR, aman and reson. Raman spectra, normal coordinate anal. 2-64967
- methyl fluoride, $^{12}\text{CH}_3\text{F}$, ν_2 and ν_3 fundamental vibr.-rot. bands, high resolution spectrum 2-96559
- methyl fluoride, IR sidebands meas. using tunable sideband laser 2-64978
- methyl germyl sulphide, config., IR and Raman spectra anal. 2-113990
- methyl iodide, photofragmentation dynamics, IR spectra, vibr. distrib. of methyl(ν_2) umbrella mode 2-73003
- methyl iodide in carbon disulphide soln., mol. dynamics and interactions, far IR and microwave spectra 2-80617
- methyl nitrite- $d_3(d_4)$, vibr., force consts., IR obs. 2-85659
- 4-methyl pyrimidine, IR and Raman vibr. spectra 2-108511
- methyl radical, umbrella mode, photofragment IR emission spectroscopy, vibr. progression and pot. parameters 2-72997
- methyl radicals, IR absorpt. detection, recombination rate, reaction with O_2 study 2-85647
- methyl symmetric stretching vibr. in simple mols., IR spectra, MO calcs. 2-96566
- methyl thiocyanide, produced by glow discharges, thermal props. (German) 2-56227
- methyl-phosphine (difluoro phosphine), force field calcs., IR obs. 2-64856
- methyl-phosphonic difluoride (-phosphine oxide), force field calcs., IR obs. 2-64856
- N-methylacetamide-lactams, H bonding, IR obs. 2-83544
- methylaniline, internal rot., far-IR spectrum 2-85653
- methylene chloride, in decalin, dielectric and far IR study, γ -process charact. 2-61892
- methylene chloride, liq., IR spectra, rot. diffusion, temp. depend., mol. dynamics simulation 2-57068
- methyleneimine, vibr.-rot., Coriolis interaction, IR obs. 2-75260
- methylmercury complexes of adenine, Raman and IR spectra 2-72504
- 2-methylpyrazine, IR and Raman vibr. spectra 2-96558
- N-methylpyridinium ion, on Ag electrode, IR and Raman surface enhanced spectrum 2-85667
- N-methylthiourea, NMR and IR studies of solvent effect 2-75325
- micro-organisms sealed in KBr discs, spectra, appl. to interstellar 3.4 μm feature 2-58429
- molecular spectroscopy, conf., Albena, Bulgaria, (Oct. 1980) 2-107020
- monomethyl fumarate and its Na salts, IR and Raman spectra, vibr. anal., struct., conjugative effects 2-90547
- α -naphthol, IR vibr. spectrum and hydrogen bonding 2-110865
- nematic liquid crystals, orientation in AC elec. field, IR absorpt. spectra 2-97908
- m-nitroaniline, electro-optic cryst., anharmonicity of vibr. 2-67044
- p-nitroaniline, solns. and cryst., Fermi resonance, IR study 2-57103
- 4-nitrobenzoic acid-phenolate, H-bonded complex, ^1H transfer, PMR and IR obs. 2-80602
- 5-nitrofurans derivatives, radical anion electronic struct., EPR, electronic absorpt., and INDO calc. 2-96606
- nitromethane, CH stretching IR and Raman spectra, internal rot. 2-80616
- nitrosoacetylene, struct. calc. by ab initio SCF and GVB calcs., consts. rel. to IR, microwave and visible spectra 2-59698
- 4-n-octadecylphenol Langmuir films on Cu, surface EM wave versus IR refl.-absorpt. spectroscopy 2-110964
- organic crystals, IR absorpt. bands, width and shape, effect of solid-liq. phase transition 2-110874
- organic gas phase negative ions, IR multiphoton photodetachment 2-85750
- organic ion radical semicond., trimerised, electron-mol. vibr. coupling 2-96536
- organobimetallic compounds, $(\text{SCN})_2\text{Ni}(\text{NCSHgR})_2$, synthesis, elemental anal., IR and electronic spectra, mag. susceptibility 2-96571

infrared spectra of organic molecules and substances continued

- organolead amines, vibr., isotope effects IR and Raman obs. (German) 2-54847
- organotin benzoates, synthesis, elemental anal., struct., IR obs. 2-110868
- organotin opds. and complexes, IR spectrosc. investig. 2-108505
- oxalyl chlorofluoride, cryst. and fluid states, vibr., conformation, Raman and IR study 2-75275
- oxazine 725, two-photon absorpt. cross-section meas. at 1.06 μm 2-54908
- oxide structures on surface of activated C 2-78128
- oxo-2-pyrimidinium chloride, cryst. and aq. soln., IR and Raman spectra (French) 2-77533
- oxo-hexa-acetato-tetraberyllium (II)- d_0 (d_{18}), vibr., Raman and IR obs. 2-54845
- oxo-hexa-acetato-tetrazine (II), vibr., Raman and IR obs. 2-54845
- oxo-hexa-formato-tetraberyllium (II), vibr., Raman and IR obs. 2-54845
- oxo-hexa-propionato-tetrazine (II), vibr., Raman and IR obs. 2-54845
- parachloroaniline, Fermi reson. in ND $_3$ stretching vibr. region 2-85666
- parametric analysis of infrared intensities 2-80606
- parametric model of the intensities in the infrared spectra 2-108520
- pentacene in benzoic acid, optical dephasing, optical absorpt. and picosecond photon echo expt. 2-70626
- pentachlorophenolamine complexes, dipole moments, IR and UV spectra, solvent and temp. effects 2-80589
- pentafluoroaniline, Fermi reson. in ND $_3$ stretching vibr. region 2-85666
- pentaziridocyclophosphazene (NPAZ_2) $_2\text{NSOAZ}$, ($\text{AZ}=\text{NC}_2\text{H}_4$), Raman and IR studies 2-114002
- 1-pentene, photo-induced isomerisation, Fourier transform IR spectroscopy obs. 2-116708
- peptides, functional group spectroscopy using Fourier transform IR absorbance subtraction 2-116882
- (perylene) $_2\text{AsF}_6$, PF_6 , polarisability and absorpt. tensor orientation 2-78710
- perylene red mols., vacuum deposited on Al_2O_3 , interface orientation, reflection absorpt. IR spectra study 2-76822
- perylene red vacuum deposited on Al, interface orientation, reflection absorption IR spectra 2-93299
- PET films, physical ageing in glassy polymer, IR spectra 2-103667
- phenobarbital, H bonds, IR and Raman study 2-54850
- photochemical systems, Fourier transform IR spectroscopy obs. 2-116708
- phthalic anhydride cryst., mixing of states and two-particle excitations (Russian) 2-104892
- phthalocyanine molecules, vacuum deposited on Al, interface orientation, reflection absorption IR spectra 2-93299
- phthalocyanine mols., vacuum deposited on Al_2O_3 , interface orientation, reflection absorpt. IR spectra study 2-76822
- 2-phthalonyl-4H-3, 1-benzoxazin-4-one, IR spectra, solvent effects, mol. struct. 2-54844
- st-PMMA, struct. changes on drawing, absorpt. and desorpt., solvent-induced crystallisation, IR spectra 2-109698
- polar molecules in inert gas matrices, far-IR Fourier transform spectroscopy obs. of mol. motion 2-113977
- polar molecules in solid inert gas matrices, mol. motion, far IR Fourier spectroscopy 2-93193
- poly(2,5-thiophenediyl): AsF_6 , prep., struct. and elec. cond., IR spectra study 2-76325
- poly(4,4'-biphenylene) film, elec. cond., IR absorption and reflection study 2-77218
- poly(acetylene), mol. struct. and elec. cond. 2-98609
- β -poly(L-adanine-ND), Fermi resonance of unperturbed ND stretching mode 2-70462
- poly(p-phenylene), IR spectra and electronic struct. 2-104886
- poly(tertiary butyl acrylate), laser-Raman spectrum and normal coord. anal. 2-86582
- poly(tetramethyleneterephthalate), solid state, Fourier transform IR study 2-76324
- poly-N-vinyl-3-methyl-2-pyrrolidones, opt. active, synthesis and characteris. 2-61866
- trans-polyacetylene: I_2 film, elect. cond. and IR absorpt. 2-71969
- polyacetylene: AsF_6 , soliton pinning model Fourier transform IR study 2-93175
- polyacetylene: $\text{MoCl}_5(\text{WCl}_6)$ films, phys. props., dopant effects 2-104880
- polyacetylene, acceptor and donor doping, IR and Raman spectra study 2-93184
- polyacetylene, AsF_6 doping, Fourier transform IR spectra study 2-93185
- polyacetylene, cis-trans isomerisation, IR, DSC, UPS, NMR, EPR and elec. cond. study 2-93792
- polyacetylene, doped, elec. cond. mechanism, IR absorption and reflection spectra study 2-77520
- cis-polyacetylene, doped, IR vibr. spectra, finite model 2-76891
- polyacetylene, far IR absorpt. spectrum below isometal-metal transition 2-77525
- polyacetylene, IR spectra, vibronic charge oscills. 2-116171
- polyacetylene, lightly doped, optical absorpt. spectrum, nonsoliton theory 2-110887
- polyacetylene, optical absorpt. spectra, press. depend. meas. 2-77521
- polyacetylene, p-doped, IR photoacoustic spectroscopy 2-72477
- polyacetylene, vibrational props., dynamical model 2-76607
- polyacetylene film, IR study of cis trans isomerisation 2-62398
- polyacrylonitrile film, pyrolyzed, elec. cond., IR spectra study 2-77219
- polyatomic mols., fundamental IR absorpt. bands, vibr.-rot. transition intensities 2-90548
- polyethylene, oriented high-density, O_2 - O_3 oxidation effect on low-temp. stress relax., IR spectra obs. (Russian) 2-67408
- polyethylene, solid and molten, rotational isomers distrib., IR spectra study 2-108753
- polyethylene mechanical degradation, free radicals and end groups from chain scission 2-90751
- polyethylene single cryst., chain folding, mixed-cryst. IR obs., effect of crystn. temp. 2-110850
- polyethylene terephthalate, amorphous, conform. changes during vol. recovery, Fourier transform IR spectra obs. 2-61906
- polyethylene terephthalate, semi-cryst., extrusion-drawn, multiple internal refl. IR obs. 2-67042
- polymers, glassy, mol. vibr., IR absorption spectra study 2-104890
- polymethylene, cryst. and amorphous, chains Fermi reson. and vibr. spectra 2-116172
- polynuclear uranyl fluoride complexes, luminesc. and vibr. spectra 2-99123
- polyoxymethylene cryst. conformational regularity, IR study 2-93200
- polyoxymethylene hexagonal cryst., IR and Raman vibr. spectra 2-77501

infrared spectra of organic molecules and substances continued

- polyphenylenes, doped conducting complexes, elec. cond. and optical props. 2-77043
- polyphenylenesulphides, doped conduction complexes, elec. cond. and optical props. 2-77043
- polypropylene, stretched film, time resolved IR study 2-116180
- polypropylene film, effect of high O₂ press. and temp. on ageing 2-116576
- polypropylene film, stretched, time-resolved Fourier transform IR spectra, stretching-relax. obs. 2-116287
- polypyrrole film, elec. cond., IR absorption and reflection study 2-77218
- polypyrrole film, neutral and oxidised, prep. and characterisation 2-81693
- polyvinyl-polypeptide block copolymers, polypeptide chain folding 2-91825
- potassium deuterium furan 2,5-dicarboxylate, cryst., vibr. spectra and H bonding (*French*) 2-67056
- potassium hydrogen furan 2,5-dicarboxylate, cryst., vibr. spectra and H bonding (*French*) 2-67056
- propan-1-ol, H complexes, vibr. anharmonic anal. IR spectra 2-108460
- protein adsorption, from sheep's blood, Fourier transform IR obs. 2-100015
- proteins, solid state, far IR spectra 2-67954
- PTFE films, macromol. orientation, IR investig. (*Russian*) 2-110873
- purple membrane of Halobacterium halobium, IR spectrum rel. to proton conduction mechanism 2-94003
- PVC, C black filled, polarised IR transmittance and elec. resist. study 2-99102
- PVC, glassy, vitrified at elevated press., nonequil. processes 2-66222
- PVC glass, vitrified at elevated press., nonequil. processes, conform. and enthalpic changes 2-86873
- pyrazine, cryogenic soln., mol. aggregates, IR study 2-67031
- pyrene in polar solvents, IR intensity enhancement induced by solute-solvent interaction 2-75287
- pyridine, highly polar liquid, far IR absorpt. spectra, internal field correction 2-61899
- pyridine-benzene soln., highly polar liquid, far IR absorpt. spectra, internal field correction 2-61899
- pyridinium salts, solns., IR spectra, Fermi reson. and ν_{NH} band struct. 2-64981
- pyridinium salts, solns., IR spectra, isotope shifts 2-64980
- 2-pyrimidone, cryst. and aq. soln., IR and Raman spectra (*French*) 2-77533
- pyrophosphates, crystalline and glassy, IR spectrum 2-72486
- 4(3H)-quinazolinones, IR spectra, solvent effects, mol. struct. 2-54844
- Raman and far IR spectra, vibr. bands assignment 2-72480
- rhodamine 560(590, 610, 640), two-photon absorpt. cross-section meas. at 1.06 μ m 2-54908
- trans-silbene, out-of-plane IR active vibrs. 2-77535
- sodium malononitrile, its derivatives and isotopomers, vibr. coupling 2-64968
- solid, gas, liq., cyclobutane-d₆(d₁), vibr., Raman and IR obs. 2-108487
- stearic acid Langmuir film adsorbed on Ag and Ni, IR specular reflection spectra 2-116291
- stressed polymers microstruct. changes, vibr. Fourier transform IR spectroscopy 2-93201
- styrene toxic industrial compound CO₂ laser absorpt. spectra 2-83536
- TCNQ salt, (MTPA) (TCNQ)₂, polarisability and absorpt. tensor orientation 2-87810
- TCNQ salt, Cs₂(TCNQ)₂, cryst., polarised IR reflection spectra meas. 2-93171
- TCNQ salt, Cu-TCNQ semicond. films, AES, XPS, and IR refl. study 2-93302
- TCNQ salt, HMTTF-TCNQF₄, separate donor and acceptor phase transitions, mag. susceptibility meas. 2-110565
- TCNQ salt, MTPP(TCNQ)₂, IR reflectivity 2-67051
- TCNQ salt, N-n-propylquinolinium(TCNQ)₂ powders, pure and irradi., IR spectra 2-93189
- TCNQ salts, Cs₂(TCNQ)₂, TTT(TCNQ)₂ and TEA(TCNQ)₂, specular refl. spectra, 4.2 to 300K 2-99128
- TCNQ salts, IR spectra 2-99103
- terephthalaldehyde, Raman and IR spectra 2-80624
- tetrabamate, H bonds, IR and Raman study 2-54850
- tetraethylammonium aluminium chloride, cryst., vibr., normal coord. anal. IR and Raman obs. 2-57102
- tetrafluoromethane, IR intensity anal. following zero and first order approx. 2-80625
- tetramethylammonium aluminium chloride, cryst., vibr., normal coord. anal. IR and Raman obs. 2-57102
- tetramethylammonium tetrachloro dimethylantimonates(V), low freq. IR and Raman spectra 2-72500
- tetramethylammonium tetrafluoro-dimethylantimonates, low freq. IR and Raman spectra 2-72500
- tetraphenylmethane, Raman and far IR spectra, vibr. bands assignment 2-72480
- 1,2,4-tetrazine, form. by hydrazine+imide derivatives, struct., IR obs. (*French*) 2-54846
- 2-thiapyridone, isotope effects, H-bond IR obs. 2-108488
- thioformaldehyde-d₀(d₂), matrix isolated form., vibr., IR obs. 2-96556
- thioureac-ferrocene channel inclusion cpd., phase transitions, sp. ht., dielec. and spectral study 2-56180
- thiureas, di- and tri-substituted, IR and Raman spectra, conformational anal. 2-90545
- (TMTSF)₂ClO₄, reflectance spectrum, 30 to 290K, band parameters 2-87815
- (TMTSF)₂X, X=ReO₄⁻, PF₆⁻, IR study of charge density waves 2-76951
- (TMTSF)₂X (X=PF₆⁻, ClO₄⁻), IR props. 2-93186
- (TMTSF)₂Z, IR study of electron-mol. vibr. interactions and phase transitions 2-93187
- (TMTTF)₂X, (X=BF₄⁻, ClO₄⁻, PF₆⁻), phase transition, IR study 2-99113
- (TMTTF)₂X, IR study of electron-mol. vibr. interactions and phase transitions 2-93187
- TMTTF-bromanil complex, phase transition, IR study 2-99113
- toluene, CH stretching IR and Raman spectra, effect of internal rot. of CHD₃ group 2-85654
- toluene, CH stretching IR and Raman spectra, internal rot. 2-80616
- toluene (d₃) (d₄) in solid crystalline phases, IR and Raman spectra, effect of internal rot. of CHD₃ group 2-80587

infrared spectra of organic molecules and substances continued

- toluene(d₃), IR and Raman spectra, asymmetric stretching vibr. of CH₃(D₃), torsional struct. anal. 2-70242
- tri(halovinyl)antimony, NMR and vibr. spectra (*German*) 2-65019
- tri(halovinyl)arsenic, NMR and vibr. spectra (*German*) 2-65019
- triarylimidazole, quinolinyl derivatives, IR absorption bands 2-108506
- tribromomethane, crystals, vibr., phase transitions, Raman and Raman study 2-77513
- 1,1,2-trichloro-3,3-difluoro-1-propene, vapour, liq. and cryst., vibr., IR and Raman study 2-108518
- trichloroacetamide, IR and Raman vibr. spectra and normal vibr. 2-80564
- trichloroethane, cyclohexane solns., refr. index, far-IR study 2-57072
- trichloroethylene toxic industrial compound CO₂ laser absorpt. spectra 2-83536
- trichloromethane, IR and Raman vibr. spectra in low temp. matrices 2-80599
- trifluoroiodomethane, fundamental and overtone IR spectra 2-108508
- trifluoroiodomethane, multiphoton excited, flash spectroscopy, UV and IR spectra, vibr. struct. 2-90538
- trifluoroiodomethane, quadrupole hyperfine struct. investigated by Lamb-Dip spectroscopy in 10 μ m region 2-108502
- trifluoromethane, IR and Raman vibr. spectra in low temp. matrices 2-80599
- trifluoromethyl anilines, CF₃ substitution effect on vibrs., far IR obs. 2-108519
- trifluoromethylgermanes(d₃), IR and Raman spectra, force consts., normal coordinate anal., bonds 2-70266
- trifluoropropene, high resolution IR spectrum, sequence struct. 2-108489
- 1,2,3-trimethylbenzene, derivative IR spectra meas. 2-64131
- trimethylphosphinegallium trichloride, cryst. vibr., force consts., IR and Raman study 2-77516
- trioxane, piezoelectric cryst., lattice modes, Raman and IR study 2-72478
- triphenylene, excited triplet state IR spectroscopy 2-80596
- 1-triphenylphosphazo-1-dimethyl-amino-2,2-dicyanoethylene, cryst. struct. and spectral study 2-98061
- trivinyllantimony, NMR and vibr. spectra (*German*) 2-65019
- trivinyllarsenic NMR and vibr. spectra (*German*) 2-65019
- TTF salts, highly conductive, temp. depend. of reflectance spectra 2-87786
- TTF-chloranil, neutral-ionic phase transition, IR and Raman studies 2-93188
- TTF-chloranil, vibronic effects in Raman and IR spectra 2-110862
- TTF-p-chloranil, neutral-to-ionic transition, optical refl. spectra study 2-110889
- TTF-TCNQ, far IR transmission spectra 2-116193
- TTF-TCNQ, low temp. IR studies 2-87783
- TTF-TCNQ, polarisability and absorpt. tensor orientation 2-87810
- TTF-TCNQ, temp. depend. of low energy IR modes 2-87784
- (urea), Cu₂O.3H₂O, cryst. struct. and IR spectrum 2-81773
- ureas, trisubstituted, containing chlorophenyl groups, IR spectra, conformational anal. 2-90544
- vinyl bromide toxic industrial compound CO₂ laser absorpt. spectra 2-83536
- vinyl cyanide, IR multiphoton dissoci., fragment internal energy, pulse intensity distrib. effect 2-108648
- vinylidene chloride toxic industrial compound CO₂ laser absorpt. spectra 2-83536
- vinylidene-fluoride-d₀(d₁)(d₂), IR intensity meas., polar tensors and effective charges 2-102476
- Wyoming subbituminous coals, liquefaction yields and product structure, analysis by Fourier transform infrared spectrometry 2-62448
- xenon clathrate hydrate, struct. 1, far-IR spectrum and X-ray diffraction 2-110843
- m-xylene, derivative IR spectra meas. 2-64131
- zinc formate dihydrate, librational modes of water, IR and Raman spectrosc. obs. 2-99101
- Ag⁺, pyridine, matrix reactions, vibr., IR spectra relationship to SERS 2-111470
- BCl₃, methanethiol, IR multiphoton dissoci. 2-70359
- CF radical, far-IR rot. spectrum 2-75255
- CH⁺, IR spectra near dissociation limit 2-64974
- C₂H₂ radical, rot. consts., excited states, IR obs. 2-64972
- CO adsorbed on Cu(Pd)(Ni)(Pt) (100), ordered structs., LEED, EELS, IR data 2-98456
- COF₂, IR fluoresc. from intermediate mode ν_4 , vibr. energy transfer 2-90616
- F⁻, methanol solvate, IR multiphoton dissoci. 2-85755
- H⁺ donor-acceptor system association, solvent effects on intermol. interaction (*French*) 2-111488
- HCl-acetonitrile (olefin) complexes, H-bonds, underdamped anharmonic stochastic oscill., IR obs. 2-85646
- POF₂, force field calcs., IR obs. 2-64856
- Pb(II)tetraphenylporphyrin, cation radical, optical and ESR spectra 2-80682
- TCNQ salts, based on azkapyrido-cyanides, highly conducting, synthesis and phys. props. 2-98633
- TiCl₄+organic O-containing cpds., complex form., mol. vibr., IR obs. 2-67747
- V complex, VO(IV)-quadridentate naphthalimine ligands, mag. and spectral props. 2-110849

infrared spectra of polyatomic inorganic molecules

- alkali metal antimonites, IR spectra isolated in N₂ matrix, bond angles estimation 2-80595
- alkali metal arsenites, IR spectra isolated in N₂ matrix, bond angles estimation 2-80595
- alkali metal phosphites, IR spectra isolated in N₂ matrix, bond angles estimation 2-80595
- arsines, IR spectra, stretching freq., anharmonicities, and dissociation energies 2-80588
- computational formulas for intensities of combination freqs. and overtones 2-96581
- germanes, IR spectra, stretching freq., anharmonicities, and dissociation energies 2-80588
- Hofmann type complexes of pyridine derivatives, IR and Raman spectra 2-85664
- hydroxyapatites, IR ν (OH) bands, temp. depend. 2-108465
- IR study, struct. (*French*) 2-90529
- molecular spectroscopy, conf., Albena, Bulgaria, (Oct. 1980) 2-107020

infrared spectra of polyatomic inorganic molecules continued

- $^{14}\text{NH}_2$, ^{14}NO , and ^{15}NO , submillimeter wave, diode laser, Fourier transform and grating spectra, vibr.-rot. anal. 2-108485
 nitrate, solvation by HNO_3 , IR spectra 2-73007
 parametric analysis of infrared intensities 2-80606
 parametric model of the intensities in the infrared spectra 2-108520
 phosphines, IR spectra, stretching freq., anharmonicities, and dissociation energies 2-80588
 polyatomic mols., fundamental IR absorpt. bands, vibr.-rot. transition intensities 2-90548
 reactions in Ar matrix, IR spectra of prods., vibr. 2-96564
 SF_6 , supercooled, high-resolution IR spectra obtained using injection laser based spectrometer 2-113972
 silanes, IR spectra, stretching freq., anharmonicities, and dissociation energies 2-80588
 ternary oxides, tetrahedral, trends in matrix isolated IR spectra 2-80598
 Ag (I) complex, 5-benzylthio-1,2,4-triazole, IR obs. 2-113991
 Ag_2O , nonsymm. mol., normal coord. anal. and IR spectrum 2-96563
 Au(III) complex, 1,10-phenanthroline-AuCl₃, vibr. props., IR and Raman obs. 2-54851
 Au(III) complex, bipyridyl-AuCl₃, vibr. props., IR and Raman obs. 2-54851
 BCl_3 , vibrational excited state relaxations, IR double resonance absorpt. investig. (Chinese) 2-75254
 BaMnO_4 , reson. Raman spectra of vibr. 2-85670
 $\text{Ba}(\text{MnO}_4)_2$, reson. Raman spectra of vibr. 2-85670
 $\text{Ba}_3(\text{MnO}_4)_8$, Raman spectra of vibr. 2-85670
 C_2N_2 , stretching vibrs., freq. and IR intensities, anharmonic pot. energy functions, geometry and rot. consts. 2-96554
 CO dimers, electron impact fragmentation, IR laser and mass spectrosc. anal. 2-59947
 CO₂, bands, rotational analysis near 4 μm 2-59793
 CO₂, collision-broadened linewidths and band intensities near 2600 cm^{-1} 2-59792
 CO₂ free jets, rot. energy distrib. FT IR emission spectrosc. obs. 2-108688
 CO₂, IR emission, self-trapping 2-75258
 CO₂, ν_2 band, absorpt. coeffs., spectral line broadening 2-85657
 CO₂, ν_2 band line mixing 2-90630
 CO₂, synthesis by ion implantation in SiO_2 films and lunar dust, IR anal. 2-92009
 CO₂, wave-number calibration tables, 500-900 cm^{-1} region 2-113971
 CO₂, weak absorpt. meas. using thermochemical method in laser molecular spectroscopy 2-113985
 $^{13}\text{C}^{18}\text{O}_2$, absorpt. spectrum at 2.8 μm , line positions 2-108504
 C_2O_5 , molecular spectroscopy using diode and combined diode-CO₂ lasers 2-63271
 $^{12}\text{C}^{18}\text{O}_2$, collisional line broadening, IR obs. 2-75268
 $^{13}\text{C}^{18}\text{O}_2$, high temperature, spectral meas. in 4.3 μm region 2-80584
 $^{13}\text{C}^{18}\text{O}^{18}\text{O}$, high temperature, spectral meas. in 4.3 μm region 2-80584
 Ca sulphides, IR matrix isolation spectra 2-75284
 $\text{Ca}_3\text{Al}_2(\text{O}_4\text{H}_4)_2$, IR spectra, H-bonds 2-96570
 Cd (II) complex, 5-benzylthio-1,2,4-triazole, IR obs. 2-113991
 Cd complex, 2-amino- and 2-ethylamino-1,3,4-thiadiazole complexes, IR and Raman obs. 2-54848
 Cd Z 2-75284
 CIBO, mol. consts., vibr.=rot., IR diode laser and microwave spectra 2-90541
 Co II halide-2TMPO complexes, IR spectra, band assignments 2-113988
 Cu (II) complex, 5-benzylthio-1,2,4-triazole, IR obs. 2-113991
 D₂-D₂ collision pairs, absorpt. spectra of IR fundamental band, overlap parameters 2-96561
 D₂O, absorption band monitoring in atmosphere 2-111525
 D₂O, adsorption on montmorillonite, hydration vibr., IR obs. 2-62426
 D₂O, optically pumped laser, wave interaction, for IR emission study 2-55128
 D₂O vapour, absorption spectrum, 9160 to 9400 cm^{-1} 2-54852
 Eu complex, β -diketonates:1,10-phenanthroline, IR and luminesc. spectra 2-113989
 F₂O, vibr. spectra, triple resonances 2-108463
 Fe complex, $\text{Fe}(\text{CH}_3\text{NO}_2)_2^{2-}$, isotope effects, struct., IR obs. 2-75269
 α -FeOOH IR spectra, normal coord. anal. 2-87761
 GeH_3Cl , Coriolis interaction, vibr.-rot., IR obs. 2-90549
 GeH_3Cl , rovibr. anal. of ν_6 rocking fundamental and hot bands near 600 cm^{-1} 2-90509
 $(\text{GeH}_3)_4\text{S}$, config., IR and Raman spectra anal. 2-113990
 H_2^+ , IR spectra at dissociation limit 2-64975
 H_2^+ , IR vibr. spectrum 2-59803
 HBS, D isotope effects, equilib. struct., force fields, IR obs. 2-80622
 HCN, dipole moment and excited vibr. state, sub-Doppler IR mol. beam spectroscopy 2-75256
 HCN, integrated IR absorpt. bands intensities 2-70246
 HCN, isotope effects, dipole moments, vibr., SCF, MRD-CI calcs. 2-85563
 HCN, saturated absorpt., Doppler-free IR-acoustic spectroscopy using colour centre lasers 2-58916
 HCl-Xe(Ar), far IR spectra, temp. depend., intermol. pot. well depths 2-102473
 H₂(D₂), IR and visible electric emission spectra 2-113974
 HDO in solid hydrates, Raman and IR intensity features of vibr. modes 2-108513
 HDO vapour, absorption spectrum, 9160 to 9400 cm^{-1} 2-54852
 HD¹⁸O, ground state, rot. consts., IR obs. 2-75265
 HF-CO₂ (N₂O), Ar matrix isolated, librational motion, IR obs. 2-64971
 (HF)_n, n=2-6 cluster, IR vibr. predissoc. spectroscopy 2-59989
 HNC, vibr. rot. emission spectrum near 3 μm 2-80839
 HNC, vibr.-rot. IR emission spectrum 2-80620
 HNCO, Coriolis-induced rot. struct. in IR spectrum 2-80593
 HNO, photochem. complexation in low temp. matrices, IR obs. 2-67737
 HNO₃(c-d), internal rot., IR spectrum 2-75460
 H₂O 2-90754
 (H₂O), atmospheric polymers, reson. absorpt. 2-73651
 H₂O, D₂O and HDO, rot.-vibr. spectra in 9160-9390 cm^{-1} region, rot. and centrifugal consts. 2-108497
 H₂O dissolved in some O₂ bases, IR spectroscopic props. 2-80605
 H₂O, IR absorpt. lines, intensities, broadening coeffs. and press. shifts 2-59801
 H₂O, IR spectra, computer plots of normal modes depending on time 2-80611
 H₂O, LF motions in low temp. matrices 2-75272

infrared spectra of polyatomic inorganic molecules continued

- H₂O, near IR absorpt. spectrum rel. to meteorological lidar developments 2-106335
 H₂O, vap., line parameters, IR tunable diode laser meas. 2-90530
 H₂O vapour, absorpt. spectra obs., AlGaAs laser freq. stabilisation appl. 2-60129
 H₂O vapour, absorption spectrum, 9160 to 9400 cm^{-1} 2-54852
 H₂O vapour absorpt. line shape, N₂ broadening, IR continuum absorpt., theory 2-80591
 H₂O, vapour absorpt. line shape, N₂ broadening, IR continuum absorpt., model 2-80592
 H₂O, wave-number calibration tables, 500-900 cm^{-1} region 2-113971
 H₂¹⁸O, self-broadening coeff. of lines belonging to 2 ν_2 , ν_1 and ν_3 bands, meas. and calc. 2-54897
 (H₂O)₂, H bonds, vibr. intensity, ab initio calcs. 2-85528
 H₂O, IR intensities, ab initio calculation, dipole moment derivatives 2-70243
 H₂O, ν_6 (b) band, IR spectra, band model anal. 2-75266
 (H₂O)₂-Li⁺, vibr. intensity, ab initio calcs. 2-85528
 H₂O₂, struct., bonding, IR matrix isolation spectra 2-96560
 HONO, in N₂ and Ar matrices, IR laser photoisomerisation study 2-114171
 H₂Si^{79,81}Br, rovibr. anal. of ν_6 fundamental near 630 cm^{-1} 2-90508
 HSiF, form., struct. and matrix isolated IR spectrum 2-108493
 H₂Si, force consts., rot.-vibr. anal., IR obs. 2-64973
 HSiOH, form., matrix isolation IR spectra, isotope effects 2-108492
 He+CO₂, collision induced IR absorpt., frame distortion mechanism 2-80590
 Hg (II) complex, 5-benzylthio-1,2,4-triazole, IR obs. 2-113991
 Hg complex, 2-amino- and 2-ethylamino-1,3,4-thiadiazole complexes, IR and Raman obs. 2-54848
 K₂MnO₄, reson. Raman spectra of vibr. 2-85670
 Mg sulphides, IR matrix isolation spectra 2-75284
 Mn complex, $\text{Mn}(\text{CH}_3\text{NO}_2)_2^{2-}$, isotope effects, struct., IR obs. 2-75269
 Mn(CO)₅, radical, CO matrix isolated, IR and visible obs. 2-80600
 NCO radical, rot. const., vibr. rot. band, laser mag. reson. obs. 2-75332
 NH₃, radical, IR spectra, ν_1 and ν_3 bands obs. by difference freq. laser spectroscopy 2-108498
 NH₃, far-IR spectroscopic line param. 2-70245
 NH₃, IR multiphoton absorpt. 2-64969
 NH₃, in stars, IR heterodyne spectroscopy 2-68635
 NH₃, molecular beam, pulsed, optical study 2-80562
 NH₃, molecular vibr. rot. states, high and very high resolution spectroscopy 2-80838
 NH₃, ν_2 band Doppler-free two-photon resons., optoacoustic detect. 2-96669
¹⁵NH₃ molecule, $\nu_2=1$ level spectroscopic constants 2-70247
¹⁵NH₃, vibr.-rot.-anal., IR obs. 2-75259
 NHD, rot. transitions, far-IR laser mag. reson. study 2-96605
 NHD, vibrational intensities, dichroism, Raman, IR spectra, orbital polarisability model 2-108451
 NO₂, IR laser mag. reson. obs. using CO₂ laser, high K vibr.-rot. transitions 2-108586
 NO₂, rot. anal. of 13200 and 13400 cm^{-1} bands by Fourier transform spectroscopy 2-113975
 NO₂, spin-rot. consts., transition moments, line-widths and intensities, IR obs. 2-85662
 N₂O, absolute wavenumbers between 1118 and 1343 cm^{-1} by IR Fourier transform spectroscopy 2-113976
 N₂O absorpt. lines for calibration of tunable IR lasers 2-74170
 N₂O, line interference in ν_2 rot.-vibr. band 2-64979
 N₂O, line shape, evolution in press. broadened IR spectra 2-80603
¹⁴N¹⁶O₂, ν_2 band N₂-broadened lines, width temp. depend. 2-90531
 NaOD solution, interaction induced light scatt. spectra of amorphous solid and liq. 2-57113
 Nd₂(SO₄)₃.8H₂O complexes in soln., optical absorpt. spectra 2-70270
²⁰NeH⁺ and ²²NeH⁺, IR spectra obs. with difference freq. laser 2-102474
 Ni complex, $\text{Ni}(\text{CH}_3\text{NO}_2)_2^{2-}$, isotope effects, struct., IR obs. 2-75269
 O₃, air-broadening coeffs. in 9 μm region 2-94496
 O₃, in atmosphere, air broadening coeffs. and line strengths in 9 μm region 2-106309
 O₃, pressure-broadening coeff., computerized tunable diode laser spectrometry 2-108486
 OCS, IR spectra, absorpt., overtone and combination bands meas. 2-108500
 OCS, vibr. band intensity in IR spectra, quantum and semiclassical theory 2-108454
 OCS, wave-number calibration tables, 500-900 cm^{-1} region 2-113971
 ONOF, vibr. pot. function and struct. by normal coordinate anal. 2-108495
 OVCl₃, matrix isolated and vapour phase, force consts., vibr. IR obs. 2-108515
 PF₅, the ν_2 band 2-85649
 PH₃, far-IR spectroscopic line param. 2-70245
 PO₂, force field calcs., IR obs. 2-64856
 PO₂F₂, local symmetric force field, IR and Raman 2-90559
 PSF₃, vibr. anal., Urey-Bradley and valence force fields, mol. consts. 2-113963
 Pb (II) complex, 5-benzylthio-1,2,4-triazole, IR obs. 2-113991
 Pt complexes, ethylene-Pt cpds., inelastic neutron scatt. and spectrosc. obs. 2-108682
 SF₆, clusters, vibr. predissociation, IR obs. 2-55005
 SF₆ cooled in free jet expansion from pulsed supersonic nozzle, multiphoton absorpt. characs. 2-96555
 SF₆, electric dipole moment function for IR-active modes, ab initio calcs. 2-108510
 SF₆, excitation and dissociation in IR laser field, spectral characs. 2-108639
 SF₆, IR spectrum binary combination bands, absolute intensities 2-108509
 SF₆, in liq. O₂, vibr., line shift widths and intensities, IR spectra 2-80604
 SF₆ in low temp. Xe matrix, preferred orientation, IR obs. 2-59798
 SF₆ isolated in Ar matrix, IR diode laser spectrum 2-70236
 SF₆, multiphoton absorpt. spectra at low temps. 2-75281
 SF₆, resonance excited vibr. spectrum, CARS method study (Russian) 2-70249
 SF₆, sub-Doppler resolution at 10 μm using sub-Doppler optoacoustic spectroscopy 2-107410
 SF₆, supercooled, ν_1 band, high-resolution IR laser spectroscopy 2-54853

infrared spectra of polystyomatic inorganic molecules continued

- SF_6 , two-photon Q branch reson., nonlinear IR obs. 2-102471
 $(\text{S}^{35}\text{NH})_2$ and $(\text{S}^{33}\text{ND})_2$, IR and Raman spectra, vibr. assignments and force consts. isotope shifts 2-59796
 SO_2 , absorption band monitoring in atmosphere 2-111525
 SO_2 , optically excited, fluoresc. induced by IR multiphoton excitation 2-70326
 $\text{SO}(\text{X}^2\Sigma^-)$, free radicals, $\nu=3\text{-O}$ vibr. overtone bands, IR obs. 2-102477
 SiCl_3OH , reaction product of UV photolysis in solid Ar, IR spectrum 2-88365
 SiF_4 , IR multiphoton absorpt. 2-64969
 SiH_4 plasma, elec. discharges IR absorpt. and emission obs. 2-71260
 $\text{SiHCl}_3 + \text{O}_2(\text{O}_3)$, UV photolysis in solid Ar, IR spectrum 2-88365
 SiH_3NCO , vibr. spectra and normal coord. anal. 2-96572
 $\text{SiH}_3\text{SiH}_3\text{CN}$, struct., vibr. assignment, microwave, IR and Raman spectra, normal coordinate anal. 2-59788
 Sr sulphides, IR matrix isolation spectra 2-75284
 UF_6 , ν_3 transition, 16 μm , vibr. anharmonicity consts. 2-108450
 UF_6 , photophysical and photochem. props. rel. to laser isotope separation 2-75452
 UF_6 , supercooled, high-resolution IR spectra obtained using injection laser based spectrometer 2-113972
 UF_6 , supercooled, ν_3 band, isotope shift, high-resolution IR laser spectroscopy 2-54853
 UO_2 complexes with Schiff bases, spectral props. 2-80586
 V complex, $\text{V}(\text{CH}_3\text{NO})_4^{2-}$, isotope effects, struct., IR obs. 2-75269
 WF_6 , supercooled, high-resolution IR spectra obtained using injection laser based spectrometer 2-113972
 WF_6 , supercooled, ν_3 band, isotope shift, high-resolution IR laser spectroscopy 2-54853
 Zn (II) complex, 5-benzylthio-1,2,4-triazole, IR obs. 2-113991
 Zn complex, 2-amino- and 2-ethylamino-1,3,4-thiadiazole complexes, IR and Raman obs. 2-54848
 Zn sulphides, IR matrix isolation spectra 2-75284
 ZnO , adsorption of CO_2 , effect on surface acidity, IR study 2-82131

infrared telescopes see telescopes**infrared transmitters** see infrared sources**infrasonic waves** see acoustic waves**initial value problems**

- Cauchy problem, in non-symm. gravitation theory, consistency 2-63878
 Cauchy problem stabilisation, class of initial functions processing power growth (Russian) 2-70932
 classical models, chiral field analogue, Cauchy problem soln. 2-95215
 diffusion, nonlinear, Barrenblatt-Pattile similarity soln., eigenvalues calc. 2-101357
 hard particle models, kinetic eqns., initial-value problem non-uniqueness 2-84515
 ideal incompressible nonhomogeneous liquid bounded by free surface, solvability of initial boundary value problem (Russian) 2-91375
 inviscid stability of plane Couette flow, convection of initially conc. vorticity, calcs. 2-114763
 Navier Stokes eqns. with heat conduction, initial value problem 2-114757
 nonlinear diffusion equation, large time soln. 2-74368
 nonlinear elasticity theory, general dynamic eqns., initial value problem 2-114664
 nonlinear vibrating string, characterisation of breakdown points 2-89524
 nonstationary fluid flow, polygonal path procedure (German) 2-101174
 perfect fluid, isentropic motions, linear soln. in general relativity, Cauchy problem 2-79432
 two-body problem, relativistic case, phys. distinction between normalised solns. 2-84492
 wave equations, boundary value problems 2-114495

injection lasers see semiconductor junction lasers**injury by radiation** see biological effects of radiation**inorganic insulators** see insulating materials**inorganic molecule configurations**

see also isomerism

- Se_3J , 2-71415
 $\text{BeF}_2/\text{BeF}_2^-$, struct. changes, second order phase transition 2-75142
 decamethylferrocene, equilib. geometry, Hartree-Fock model, LCAO SCF calcs. 2-108374
 di- and triatomic mol., geometry, force consts., test of new SCF method 2-108367
 ferrocene, equilib. geometry, Hartree-Fock model, LCAO SCF calcs. 2-108374
 Group IIB halide mol. complexes, struct. NQR obs. 2-85696
 $(\text{HCl})_2$, geometry, force consts., moments, ab initio SCF calcs. 2-80454
 inorganic ring systems, anticancer, dynamical conformational anal. using microcomputer system 2-73188
 isocyanates, equilib. struct. and force consts., MNDO calcs. 2-113883
 isoelectronic molecules and ions, equilib. geometries, inversion barriers and force const. calc. by MNDO method 2-70146
 isothiocyanates, equilib. struct. and force const., MNDO calcs. 2-113883
 mixed first and second row composition, struct. and relative stability 2-64876
 molecular ions, molecular struct., and interaction with matter, conference, Haifa, Israel (Jan. 1981) 2-53410
 transition metal carbene complexes, maximum overlap and minimum orbital energy conform. studies 2-108358
 transition metal carbene complexes, maximum overlap and minimum orbital energy conform. studies 2-108358
 triatomic ions, equilib. geometries and dissociations, mol. pseudopotential calcs. 2-75161
 AsN , $\text{a}^1\Pi$ and $\text{A}^1\Pi$ states of $(\sigma\pi^*)$ config., rot. anal. 2-96534
 AgO , nonsymm. mol., normal coord. anal. and IR spectrum 2-96563
 Al_2O_3 , electronic struct. and mol. topology, ab initio calcs. 2-54764
 Al_2O_3 , electronic struct. and mol. topology, ab initio calcs. 2-54764
 B_2 , energy differences using an accurate local density functional, spin-flip energies calc. using Xalpha approx. 2-70122
 $\text{BF}(\text{OH})_2$, conformations, stabilities, STO calcs. 2-113857
 $\text{BH}(\text{NH}_2)_2$, microwave spectra and mol. struct. 2-108475
 B_2O , electronic struct. and mol. topology, ab initio calcs. 2-54764
 B_2O_2 , electronic struct. and mol. topology, ab initio calcs. 2-54764
 BeAlF_3 , struct. and pot. energy surfaces, ab initio MO studies 2-54757
 BeF , bonding and consequent unusual progression of vibr. spacings, VB calcs. 2-80489
 BeF_2 , $^3\text{B}_2$ and $^3\text{A}_2$ states, electronic splitting 2-85532
 BeH_2 , geometry, dipole moments, pseudopotentials, FSGO calcs. 2-102372

inorganic molecule configurations continued

- C_2 , energy differences using an accurate local density functional, spin-flip energies calc. using Xalpha approx. 2-70122
 C_2^- , molecular ion structure study using charge-coupled imaging device 2-75458
 C_3 , neutral and ion mol., struct. determ. by Coulomb explosion 2-93795
 C_3^- , mol. struct. studied by Coulomb explosion after acceleration to 4.67 MeV 2-54980
 C_3^+ , mol. struct. studied by Coulomb explosion after acceleration to 4.67 MeV 2-54980
 CH , mol. struct. calcs. using ab initio effective spin-orbit operators 2-75168
 CN , $\text{A}^1\Pi$ and $\text{B}^2\Sigma^+$ states transition moments depend. on internuclear distance 2-85746
 CN^+ , molecular ion structure study using charge-coupled imaging device 2-75458
 CN^+ , struct. studied using charge coupled device 2-54981
 C_2N_2 , stretching vibr., freq. and IR intensities, anharmonic pot. energy functions, geometry and rot. consts. 2-96554
 $(\text{CO})^-$, SCF minimal basis set calcs., HF instabilities 2-80470
 CO , mol. struct. calcs. using ab initio effective spin-orbit operators 2-75168
 CO^+ , microwave spectra, struct. 2-54835
 CO^+ , mol. struct. calcs. using ab initio effective spin-orbit operators 2-75168
 CO_2 , structural parameters determ. by gas electron diffr., chemical binding effect 2-96730
 $\text{CO}_2/\text{CO}_2^-$, struct. changes, second order phase transition 2-75142
 C_2O^+ , isomers, bond lengths, ab initio SCF calcs. 2-113862
 CSCl_2 , mol. struct. determ. by gas phase electron diffr. 2-96763
 (Cl_2) , config., charge transfer contrib. calcs. 2-108363
 Cl_2 , struct., props., CNDO/2 and INDO calcs. 2-102388
 ClBO , mol. consts., vibr.=rot., IR diode laser and microwave spectra 2-90541
 ClF_2 , struct., props., CNDO/2 and INDO calcs. 2-102388
 Co complex, di(p-nitrobenzoate)tetraquocobalt(II) dihydrate, cryst. and mol. struct. 2-98032
 $(\text{CROCl})_4$, electronic struct., SCF-MS-Xalpha calc., EPR spectra, EHT calcs. 2-70144
 CsNO_2 , mol. struct. by gas phase electron diffr. 2-90705
 CsNO_3 , electron diffr. patterns, struct. 2-75435
 Cu (II) complex, bis(N-benzylpyridoxaliminato) copper (II), struct., ESR and X-ray obs. 2-54883
 Cu mol. stability, ab initio SCF mol. orbital calc. 2-102380
 Cu(II) diethyldithiocarbamate chelate, struct., XPS obs. 2-75355
 DI , visible and UV spectra, electronic struct. 2-85682
 EuCl_3 , solns., symmetry, MCD and visible obs. 2-108600
 FCN , excited vibr. states, rot. spectra, equilib. struct. 2-96543
 Fe complex, $\text{Fe}(\text{CH}_2\text{NO})_6^{2-}$, isotope effects, struct., IR obs. 2-75269
 GeBr_2 , mol. struct., electron diffr. 2-90702
 GeH_3 , geometries and HFS consts., ab initio calcs. 2-70136
 Ge_2H_6 , internal rot., barrier height CNDO (German) 2-85554
 $(\text{GeH}_3)_2\text{S}$, config., IR and Raman spectra 2-113990
 H_2^+ dissociation by C foils, interatomic separation and relative vel. distrib. calc. 2-75370
 H_3^+ ions, 2.9 MeV, dissociation products, struct. 2-54979
 H_3/H_3^+ , struct. changes, second order phase transition 2-75142
 HBS , D isotope effects, equilib. struct., force fields, IR obs. 2-80622
 HCN-HCl complex, H-bonds, rot. spectrum and mol. props. 2-59790
 HCNO , pot.-functions, equilib. functions, ab initio MO calcs. 2-90441
 HCO^+ , microwave spectra, struct. 2-54835
 HCS^+ , microwave spectra, struct. 2-54835
 HD , adsorpt. on ZnO , config. effects, IR spectrosc. obs. 2-61886
 HF-Cl_2 , struct., hyperfine consts., mol. beam elec. reson. 2-108553
 HF-NN (OC), equilib. struct., pot. energy surfaces, H-bonds 2-102656
 HI , visible and UV spectra, electronic struct. 2-85681
 HN_2^+ , microwave spectra, struct. 2-54835
 H_3NO , protonated and deprotonated ions, ligand in complexes, SINDO/1 calcs. 2-85548
 H_2NOH , protonated and deprotonated ions, ligand in complexes, SINDO/1 calcs. 2-85548
 $(\text{H}_2\text{O})_2$, geometry and relative stabilities, exchange interactions effects 2-59883
 $(\text{H}_2\text{O})_3$, geometry, energetics and elec. props. 2-113878
 $(\text{H}_2\text{O})_4$, geometry, energetics and elec. props. 2-113878
 H_2O_4 , struct., bonding, IR matrix isolation spectra 2-96560
 $\text{H}_2\text{O} \cdots \text{HF}$, H-bonded heterodimer, conformation, pot. energy function, from microwave rot. spectra 2-75253
 HPF^+ , electronic struct., geometry and charge distrib. calcs. 2-59705
 $(\text{H}_2\text{S})_2$, geometry and relative stabilities, exchange interactions effects 2-59883
 H_2SHF , struct., H bond stereochemistry, spectrosc. obs. 2-102499
 H_2SO_4 , struct. and torsional modes, ab initio calcs. 2-70134
 HSiF , form., struct. and matrix isolated IR spectrum 2-108493
 HeH^+ 2 MeV beam, internuclear separation distrib., ion-source depend. 2-75459
 HfCl_4 , gas, mol. struct. and force field, electron diffr. obs. 2-90696
 IF_7 , struct. vibr. assignment, and intramol. forces, pseudopot. SCF-MO studies 2-75171
 KCN , pot. energy surface, equilib. geometry electron correl., SCF calcs. 2-96467
 Li-Lewis base complexes, struct. and props., ab initio unrestricted HF MO calcs. 2-75172
 $\text{Li}^+ \cdots \text{X}$ ($\text{X}=\text{O}^{2-}$, OH^- , OH_2 , N^{3-} , NH_2^- , NH_3) isoelectronic series, geometric struct. and stability, FSGO calc. 2-80442
 Li_2 , geometry, dipole moments, pseudopotentials, FSGO calcs. 2-102372
 LiH , geometry, dipole moments, pseudopotentials, FSGO calcs. 2-102372
 MgAlF_3 , struct. and pot. energy surfaces, ab initio MO studies 2-54757
 Mn complex, $\text{Mn}(\text{CH}_2\text{NO})_6^{2-}$, isotope effects, struct., IR obs. 2-75269
 $\text{Mn}_2(\text{CO})_{10}$, cryst. struct., bonding, charge density 2-55901
 N_3 , Jahn-Teller distortion, struct., SCF and CI calcs. 2-108396
 NCO neutral and ion mol., struct. determ. by Coulomb explosion 2-93795
 NH_3 , adsorbed on Al(111) , clean and pre-covered, struct. and orientation 2-82122
 $\text{NH}_3/\text{NH}_3^+$, struct. changes, second order phase transition 2-75142
 N_2H_4 , mol. struct. studied by gas phase electron diffr. 2-90700
 $\text{NH}_2\text{BH}_2\text{CO}_2\text{H}$, and dimer, geometry, moments, pot., ab initio calcs. 2-85546
 N_2O_5 , struct., ab initio restricted HF SCF MO calcs. 2-59685

inorganic molecule configurations continued

- Na halide dimers, equilib. config. and dimerisation energies calc. 2-90726
 NaCN, pot. energy surface, equilib. geometry electron correl., SCF calcs. 2-96467
 NaH^+ , low lying interaction energies, pseudopot. mol. struct. calcs. 2-102615
 Ni complex, $\text{Ni}(\text{CH}_3\text{NO})_2^{2-}$, isotope effects, struct., IR obs. 2-75269
 NiBr_2 aq. soln., X-ray diff. investig. 2-90742
 NiC, electronic struct., ab initio GUB calcs. 2-85559
 OH, mol. struct. calcs. using ab initio effective spin-orbit operators 2-75168
 OH^+ molecular ion structure study using charge-coupled imaging device 2-75458
 ONOF, vibr. pot. function and vibr. struct. by normal coordinate anal. 2-108495
 P_2 , Jahn-Teller distortion, struct., SCF and CI calcs. 2-108396
 PF_5 , electronic struct., geometry and charge distrib. calcs. 2-59705
 PH_3 , electronic struct., geometry and charge distrib. calcs. 2-59705
 POF_2 , force field calcs., IR obs. 2-64856
 $\text{Pb}(\text{II})$ diethyldithiocarbamate chelate, struct., XPS obs. 2-75355
 pt complex, dihydroxy-ethylenediamine-malonatoplatinum, cryst. and mol. struct. (Chinese) 2-98010
 RbNO_2 , mol. struct. by gas phase electron diff. 2-90705
 ReOF_4 , mol. struct. in gas phase, electron diff. study 2-90728
 SF_6 , ground electronic state and geometry, ab initio LCAO MO SCF calcs. 2-102381
 SOBr_2 , mol. struct. by gas phase electron diff. study 2-114107
 SOF_4 , mol. struct., resolution of multiple model problem 2-90699
 Si:H amorphous sputtered film, microstruct. and H bonding environments 2-76847
 SiF_4 , struct., inversion barrier, CI, ab initio SCF calcs. 2-64885
 SiH, mol. struct. calcs. using ab initio effective spin-orbit operators 2-75168
 SiH₂, geometries and HFS consts., ab initio calcs. 2-70136
 SiH₂, internal rot., barrier height CNDOC (German) 2-85554
 SiH₂NCO, vibr. spectra and normal coord. anal. 2-96572
 SiO, mol. struct. calcs. using ab initio effective spin-orbit operators 2-75168
 Sn (II) diethyldithiocarbamate chelate, struct., XPS obs. 2-75355
 TiNO_2 , electron diff. patterns, struct. 2-75434
 TiNO_3 , struct. param. derived from O 1s ionisation pot., XPS 2-85743
 V complex, $\text{V}(\text{CH}_2\text{NO})_2^{2-}$, isotope effects, struct., IR obs. 2-75269
 $\text{V}(\text{CO})_6$, EPR spectra and mol. struct., Jahn Teller modes, hyperfine struct. anal. 2-70295
 XeF_6 , mol. level splitting, Longuet-Higgins groups 2-102415

inorganic molecule electronic structure see *molecular electronic states***insolubility** see *solubility***inspection**

- see also *quality control; reliability; testing*
 acoustic channel of separate probe with rotating-beam scanning, calc. 2-62347
 acoustic emission signal source co-ord. calc., errors 2-83329
 adhesive bonded multilayer joint detection and location of non-bonds, acoustic impedance method 2-83323
 automated US inspection of adhesive bonded struct. 2-78043
 ball bearing inspection for surface defects using optical scanner 2-62342
 composite materials, laboratory mock-up US inspection system 2-93727
 conducting cylinder surrounded by loop with excitation current of various wave forms, electromagnetic field, NDT appl. 2-65131
 dielectric NDT inspection, theoretical-game optimization 2-93738
 double layer scatterers, albedo charact. of bremsstrahlung 2-67708
 eddy current limitations 2-99638
 edge image correction in radiation inspection, physical and information aspects 2-116673
 electrically conductive single layer coatings, thickness inspection optimisation with laid-on eddy current transducers 2-89692
 ferromagnetic materials, magnetic phase transform. control using Barkhausen effect and hysteresis loop 2-116677
 fine-focus X-ray fluoroscopy 2-88297
 flaw type, position and dimension charact. by transit time locus curves of US inspection (German) 2-62335
 glass fibre reinforced plastic laminates, nondestructive inspection 2-67672
 high-frequency pulse flaw detector type DIV-1 2-111440
 high-pressure vessels, AE during hydrostatic testing 2-62349
 longitudinal eddy current transducer design for inspection of small bearing components 2-83336
 magnetic rubber inspection of inaccessible places of structures 2-111442
 magnetographic inspection of soundness, optimization 2-67714
 Magnox fuel elements manufacture for nuclear power stations, safety assurance 2-59481
 metal balls, continuous inspection of hardening quality on prod. line 2-93698
 metal shells with variable thickness and local inhomogeneities, multilayer, neutron absorption radiometric inspection 2-67707
 metallic objects, multiparameters inspection by eddy currents, numerical anal. of system of eqn. in nonlinear theory 2-67704
 metals, fatigue testing, ultrasonic inspection procedures 2-93711
 metals, purity examination, by residual elec. resistivity method, review 2-116638
 metals and alloys, surface roughness inspection for exoemission investigations, X-ray photoelectron spectroscopy study 2-57581
 multichannel scanning defectometric systems, complex information processing using computers 2-93741
 multidimensional signals in electromagnetic multiparameter NDT 2-62358
 multiparameter eddy current inspection, algorithms rel. to nonlinear theory 2-62360
 multiparameter eddy-current inspection, nonlinear theory fundamentals 2-62359
 NDT, nuclear power stations, review 2-67718
 nonmetallic materials, active thermal inspection 2-83338
 nucl. power plants, appls. of robots (Japanese) 2-74860
 nuclear facilities, inspection methods for safeguard systems 2-74805
 nuclear reactor pressure vessels, in-service inspection automation 2-102193
 optical fibres, OF 150 opt. fibre time-domain reflectometer, loss and distance meas. appl. 2-79650
 optoelectronic method of NDT, appl. of complex signals 2-62366
 penetrating radiation field shaping for inspection 2-116672

inspection continued

- photonutron attenuation function meas. from electron accelerator-defectoscope 2-67709
 polymers, state and development (German) 2-111419
 Proba type electromagnetic inspection instruments 2-62361
 pulsed magnetic inspection, effect of gap variation between transducer and specimens 2-62363
 PWR pressure vessel, ultrasonic inspection 2-102052
 PWR pressure vessels, role of NDT in integrity assurance 2-88298
 reinforcement bead of welded joint, tangential component of magnetic field 2-89756
 self- and mutual inductance of a shielded externally mounted feedthrough primary transducer with a conducting tube 2-53750
 signal processing circuits for eddy current transducers 2-67705
 sound level meters using standard sound source, instrum. error meas. method (Japanese) 2-102988
 spectrometric electron defectoscopy, defective layer detection in two layer product sample 2-116674
 spot-welded joints, magnetographic inspection of compensating interference from surface irreg. 2-83333
 steel, austenitic stainless, 316 and 347 weldments, US inspection of fatigue cracks 2-67671
 steel, austenitic stainless, volumetric inspection of moderately thick specimens by multifrequency eddy currents 2-62297
 steel, high speed R6M3 and R6M5, mag. and elec. props. after heat treatment, NDT appl. 2-67404
 steel, ingot prod., radioisotope inspection of technological process 2-62353
 steel, inspection of products with little variation in coercive force 2-93737
 steel, rolled sheet, mag. inspection method for mech. props. 2-62310
 steel, self tempering, selective electromagnetic inspection, physical fundamentals and operating principles 2-83334
 steel, self-tempering, selective electromagnetic inspection, equipment design, selection, testing 2-83335
 steel austenitic weld, mechanised in-service US inspection in nuclear plants 2-99620
 straight through eddy current transducer signals from cracks, cross-section shape effects 2-62362
 stress corrosion cracking, diagnosis (Japanese) 2-78009
 target size eval. of electron accelerator for photonutron inspection 2-62355
 thermal insulation materials, cemented joints inspection by neutron radiography 2-93697
 thermal-wave microscopy to image subsurface areas in semicond. manufacturing 2-75811
 thermoset plastic connector blocks, rapid proof testing system using AE 2-83317
 tightness inspection, determ. of time log of test systems 2-57579
 transducers for low frequency acoustic flaw detectors based on transverse piezoelectric effect 2-111435
 UIM-28 three-coordinate universal measuring instrument 2-95322
 US inspection, contactless methods and facilities, current status survey 2-62345
 weld, optimal parameter determ. for US inspection rel. to state of welding technology 2-62346
 welded joint, US inspection with data processing by minicomputer 2-93739
 X-ray inspection of nuclear fuel elements 2-74868
 X-ray inspection system, real-time, high-energy, development (Japanese) 2-78051
 SiC ceramic heat exchanger tubes, assessment of US method of NDT 2-93729
 WC-Co sintered carbides, quality inspection instrument 2-83337
- instability** see *stability*
- installation**
 see also *commissioning; computer installation*
 air/water heat pumps installation pro's and con's (German) 2-99822
 microprocessor-based heat pump regulator, capabilities and installation (German) 2-67873
- installation, computer** see *computer installation*
- instrumentation**
 see also *aerospace instrumentation; computerised instrumentation; digital instrumentation; digital readout; display instrumentation; nuclear instrumentation; physical instrumentation control*
 control and maintenance (Japanese) 2-89699
 electron microscopy, instrumentation today and tomorrow 2-64168
 future instrumentation: its effect on production and research 2-69164
 high-level waste repository sites, instrumentation reliability study 2-64472
 nuclear power station control room design, lessons of TMI accident 2-96221
 optical glass gauges fabrication, by abrasive cutting (German) 2-114478
 precision EM meas., conf., Boulder, CO, USA (June-July 1982) 2-101128
 Wehnelt modulation beam blanking, in SEM 2-64170
- instruments**
 see also *individual types of instruments, e.g. astronomical instruments, bridge instruments, optical instruments*
 electrical measuring instruments, required intervals between checks 2-95309
 literature of instrument science and technology, review 2-69163
- insulated gate field effect transistors**
 fabrication, sputter etch-oxidation process 2-88249
 MOS systems, reactive sputter etching of SiO_2 effect on elec. props. 2-115903
 MOSFET, Hall resist. meas., fine struct. const. determ. 2-58777
 MOSFET, n-channel, quantized Hall steps meas. at ppm level 2-61488
 MOSFET, photoresponse of electron inversion layer, mag. field depend. 2-61518
 MOSFET, quantum Hall effect, role of inversion layer geometry 2-61492
 MOSFET, zero-resistance state and quantised Hall effect 2-61491
 polar MOS, new magnetosensitive element, magnetoelastic characts. 2-64072
 semiconductor device physics, book 2-53437
 three dimensional transient finite element model of semiconductor transport eqns. 2-71962
 GaAs ultrafine semicond. wire, high electron mobility, theory 2-98655

insulating gate field effect transistors continued

p-Ga_{0.47}In_{0.53}As:Zn-SiO₂ MIS struct., interface states and field effects meas. 2-98758
InP MISFET, monolithic integration with GaInAsP/InP laser, LPE growth 2-65242
InP MISFET, optically gated, high gain optical detector appl. 2-53835
InP/Al₂O₃ MOSFETS, CVD of Al₂O₃ dielec. layer 2-111090
InP-Al₂O₃ anodic interface formation, enhancement MISFET appl. 2-82461
InP-SiO₂ MIS struct. and enhancement mode MISFET, expt. study 2-98760
n-Si (100) MOSFET inversion layers, zeros of transverse magneto-resist. 2-66650
poly-Si beam recrystallisation for IC fabrication, MOS FET characts. 2-111065
Si MOSFET, impact ionization at very low voltages 2-56602
Si MOSFET, magnetoresistance study 2-115900
Si MOSFET, tilted inversion layer, tunnelling 2-77193
Si MOSFET fabricated in electron beam recrystallised poly-Si film, characts. 2-87092
Si, polysilicon, thin film, CW laser-recrystallised material, for device manufacture 2-56409
Si, zone-melting-recrystallised films on SiO₂-coated Si substrate, subgrain boundaries effect on carrier transport 2-77207
Si-SiO₂ MOSFET inversion layer, energy loss of warm electrons, Shubnikov-de Haas study 2-56703
Si-SiO₂ MOSFETs, fabrication in laterally seeded epitaxial Si on SiO₂ 2-92756
SiO₂, NH₃ annealed films for thin-gate insulator in MOS structs. 2-92766

insulating coatings

see also varnish; waxes
polyethylene coated C-black, secondary ion mass spectroscopy 2-93843

insulating materials

see also asbestos; ceramics; composite insulating materials; dielectric materials; gaseous insulation; glass; insulating thin films; mica; organic insulating materials; thermal insulating materials
inorganic material insulated flexible triaxial cable for fast breeder reactor 2-69747
SCL conduction in semiconductors and insulators, interpretation in terms of traps 2-77071
TFTR coils, electrical insulation qualification tests 2-59533
thermal and electrical stresses, compatibility 2-110767
SmS, mixed valence cpd., quasi-insulating to Fermi liq. regime change under press. 2-56518

insulating materials, acoustic see noise abatement

insulating materials, thermal see thermal insulating materials

insulating oils

alkyldiphenylethane, DSC of dissolved H₂O in dielec. fluids 2-89718
dimethyl silicone liquid, DSC of dissolved H₂O in dielec. fluids 2-89718
inception field at point electrode on dielectric slab surface 2-104812

insulating thin films

see also dielectric thin films; electronic conduction in insulating thin films
Al₂O₃ films on Al solar absorbance and thermal emittance computation 2-70639
deposition technology, secondary passivation 2-62075
filamentary electric breakdown model 2-82782
insulating film, ionic space charge distrib. and polarisation 2-116120
ionic space-charge distrib. and polarisation 2-57018
Langmuir-Blodgett films, deposition techniques and technological appls. 2-71820
MoN film, As ion implantation, stopping power, SIMS study 2-56053
nonuniform, on solid substrate, ellipsometric parameters computation 2-62008
oxide film growth on Si, procedure and reaction kinetics, application in solar cells 2-99791
polypropylene evaporated films between Cu electrodes, I-V characts. and breakdown strength 2-110512
rare gas thin films, 0 to 15 eV electron transmission spectra, temp. and thickness depend. 2-110217
semiconductor substrates, conf., Erlangen, Germany (April 1981) 2-53429
transition metal silicide films, amorphous-cryst. transition, size effects, elec. cond. study 2-92407
Y_{3-x}La_xPbFe_{3-y}Ga_yO₁₂, epitaxial layers, interface anal. using SIMS 2-82171
AlN film deposition by reactive DC magnetron sputtering 2-110213
Al₂O₃ anodic film formation on InP, enhancement MISFET appl. 2-82461
Al₂O₃ anodic films, elec. breakdown characts., 4.2 to 354K 2-110769
Al₂O₃ anodic oxide film thickness determ. by electrolum. method 2-110961
Al₂O₃ film, electron beam evaporation prep., appl. to GaAs MOS diodes 2-62068
Al₂O₃ film growth, on Al acetylacetonate by thermal decomposition 2-87994
Al₂O₃ in MIMS struct., deep trapping levels, photoelec. spectrosc. obs. 2-82405
Al₂O₃-Na₂O-SiO₂ thin films, X-ray emission spectra, Al coordination 2-110985
BN film, low temp. double plasma MOCVD technique 2-99349
C amorphous, thin layers, 2D-, 3D hopping conduction (French) 2-92604
C, diamond-like hard films, deposition and characteris. 2-57307
C-film adsorbed on Ir, study by Auger electron spectroscopy and thermionic emission 2-66332
Cr oxides, thin film, differential reflectometry 2-101445
CuBr, optical constants and exciton spectrum (Russian) 2-67131
CuO, sputtered thin films, struct. and elec. props., O₂ pressure effects, X-ray study 2-72093
FeF₃ granular films, dielec. polarisation, AC cond. and TSC study 2-82774
FeO, film, iron carbonyl oxidative pyrolysis formation struct. and chem. comp., expt. study 2-56399
GaAs-insulating film interface, MESFET struct., elec. and optical props. 2-110486
In-O₂-As₂O₃ film on InAs, characterisation 2-111348
LiNbO₃ amorphous and polycryst. thin films, RF sputtering, struct., refractive index, X-ray study 2-72624
MgO film, IR spectra study of optical vibr. modes 2-67133

insulating thin films continued

Mo oxides, thin film, differential reflectometry 2-101445
NiF₂ film, granular, elec. cond. and dielec. polarisation meas. 2-72094
oxides, thin film, differential reflectometry 2-101445
P₂N₅ gate insulating film, CVD prep., dielec. props. and InP-P₂N₅ MIS device props. 2-99346
RuO₂ films, reactive sputtering and electronic struct., AES, photoemission and optical absorpt. study 2-82502
Si oxides, motive and thermal, UV reflectance study 2-104977
Si-SiO₂-electrolyte, SiO₂ thin films, conduct. and electroluminescence study (Russian) 2-87872
SiN plasma film on magnetron sputtered Al film trapped Ar induced deformation 2-82155
Si₃N₄ amorphous, prep. by ammonolysis of SiCl₄ 2-87995
Si₃N₄ CVD layers in MNOS struct., depth inhomogeneity, pot. distrib., effective resist. and etch rate exam. 2-92769
Si₃N₄ ceramic, prep., props. and appls., book contrib. 2-116420
Si₃N₄ film, CVD deposition and AC dielec. props. meas. 2-82783
Si₃N₄ film, CVD from SiH₂Cl₂-NH₃ in diffusion-controlled regime, mechanism model 2-111089
Si₃N₄ film, use in biomedical electrodes (Japanese) 2-62805
Si₃N₄ film in MNOS struct., stoichiometry variation rel. to memory traps 2-82163
Si₃N₄ film on Si, very high charge densities for inversion layer solar cells 2-61608
Si₃N₄ film stability, stoichiometry deviation effect 2-115632
Si₃N₄ films on Si, thickness meas. by IR absorption 2-112870
Si₃N₄ layers grown by plasma enhanced thermal nitridation 2-62076
Si₃N₄ MIM struct., electron beam induced leakage currents meas. 2-56744
Si₃N₄ MNOS struct., charge trapping, oxide thickness effects, capacitance and internal photoelec. effect study 2-98751
Si₃N₄ plasma deposited, characterisation by AES with N sputtering 2-110185
Si₃N₄ plasma deposition on Si, props. of thin layers (German) 2-57309
Si₃N₄ plasma enhanced CVD, microwave and RF N₂ activation methods 2-93442
Si₃N₄ thin films, backscattering anal. and nuclear reaction meas. (Chinese) 2-66389
Si₃N₄ thin films, comp. and electron stress effects, X-ray photoelectron spectra study 2-83001
Si₃N₄ thin films, thermal ionisation of Coulomb centres in strong elec. fields 2-71992
Si₃N₄-H, amorphous plasma deposited film, AES and EELS study 2-71816
Si₃N₄-H films, H conc., N-H absorption cross section, nuclear recoil method 2-71491
Si₃N₄/SiO₂ double insulating layer, CW laser recrystallisation of Si film for bipolar transistor fabrication 2-82154
SiO film, step coverage growth, computer calc. 2-82176
SiO₂ film, on Si (001) substrate, surface Brillouin scatt., strong interf. effects 2-72518
SiO₂ film, reaction with Al, AES and EELS study 2-98474
SiO₂ film, thermally grown on Si, elec. behaviour of H ions 2-61634
SiO₂ films, diffusion of oxidant meas., Si oxidation studies 2-88238
SiO₂ films, etching by impinging or substrate Si in ultra-high vacuum 2-67218
SiO₂ films, study using IR absorption techniques 2-93298
SiO₂ films, thermally nitrided, MOS characts. 2-61590
SiO₂ films on Si, dielec. breakdown, effect of plasma cleaning 2-61831
SiO₂ films on Si, thickness meas. by IR absorption 2-112870
SiO₂ glass film, CVD, step coverage 2-98475
SiO₂, NH₃ annealed films for thin-gate insulator in MOS structs. 2-92766
SiO₂, thermally grown layer, Cl implantation 2-61010
SiO₂ thin film, ion implantation CO₂ form., astrophysical implications 2-92009
SiO₂ thin films, effects of humidity on stress 2-92427
SiO₂ thin films, luminesc. study, interf. effects 2-104968
SiO₂ thin films, nonequilib. water permeation 2-92250
SiO₂-Si interface states and charge generation by electron tunnelling 2-56720
SiO, film, semi-insulating polycryst., optical absorpt., depend. on annealing conditions 2-61999
SiO, films, phase composition, TEM and EPR studies 2-98491
SiO_x, stress-strain curves and internal stresses, bulge and tensile tests 2-82190
Ta₂O₅ film on GaAs substrate, thickness determ. by Monte Carlo method (Chinese) 2-110179
W oxides, thin film, differential reflectometry 2-101445
WO₃ films, reactively sputtered, electrical and optical props. 2-66673
ZnO films, substrate biased RF sputtering of semicond. and insulating films 2-111071
ZrO₂ film on Si substrate, thickness determ. by Monte Carlo method (Chinese) 2-110179

insulation

see also cable insulation; electric breakdown; insulating coatings; insulating materials; insulators; machine insulation
3rd IEEE International Pulsed Power Conference, Albuquerque, NM, USA (June 1981) 2-89461
corona interaction with surfaces, review of physics 2-81599
induction flowmeter, insulating lining of transmitter (Polish) 2-91565
magnetically insulated electron flow, two-dimensional time-dependent theory 2-96819
Particle Beam Fusion Accelerator magnetically insulated transmission lines combined into disc feed 2-96309
power flow for vacuum insulated inductive loads 2-97830
thin-walled spherical piezoelectric receiving transducer with a controllable electrical load 2-114586

insulation, thermal see thermal insulation

insulation co-ordination

long switching spark between electrode and ground (Polish) 2-76211

insulation testing

PMMA, immersed in transformer oil, anomalous breakdown characts. under direct and impulse stresses 2-110766
polyethylene subjected to switching surges superimposed upon AC voltage, tree mechanisms obs. 2-99041
polyethylene treeing phenomena obs., effect of absorbed O₂ 2-99040
polymeric materials, acoustic emission associated with tree growth 2-110762

insulation testing continued

- polymers, quantitative method for determ. of resistance to surface discharges 2-109616
- uncured insulating layer thickness meas. by potentiometric micrometer 2-74469
- unistructure elastomer insulator for fusion plasma shutter 2-90304
- XLPE, steam cured, voltage and freq. dependence of bow-tie trees 2-110765

insulator-metal boundaries *see metal-insulator boundaries***insulator-semiconductor boundaries** *see semiconductor-insulator boundaries***insulators**

- i.e. insulating devices. For materials see insulating materials*
- see also bushings; insulation*
- 60 kV, 5 cm spark gap, effects on electrodes, insulators, and gas types of number of discharges 2-91714
- compressed gas, spatial and temporal predischarged development 2-103531
- electrostatic modelling of electron-beam-generator/vacuum-diode interface, using computer code PE2D 2-95389
- HV contaminated insulators physical surface processes (*German*) 2-86486
- HV semiconducting glazed insulators properties and behaviour (*Italian*) 2-77957
- magnetic interaction between local mag. moments 2-115996
- moisture condensation problems on inside surface 150 kV insulators, Beuken thermoelectric model appl. (*French*) 2-70821
- overhead power lines, meteorology of sea salt deposition 2-94463
- spark gap insulator surface damage, ellipsometry and SEM obs. 2-92330
- unistructure elastomer insulator for fusion plasma shutter 2-90304
- SF₆, flashover voltage dependence on tangential field strength of contaminated insulator surfaces 2-103532

insurance

- nuclear power stations, insurance pool engineering, and protection 2-108164

integral equations*see also integro-differential equations*

- 3 π final state interactions, simplified parametrisation 2-95697
- Abel's integral equation, derivative free inversion technique 2-96665
- Abel-type integral equations, nondestructive testing of optical-fibre preforms 2-55366
- acoustic and EM oscills, theory, integral eqn. methods for boundary-value problems (*German*) 2-101189
- aperture and far-field distributions expressed by the Debye integral representation of focused fields 2-102711
- boundary integral equation, formulations effectiveness for axisymmetric elastostatic problems 2-81240
- Boussinesq eqn. linearisation 2-112711
- Chandrasekhar H-function, method of moment and Newton approximants 2-117581
- charged particle motion, two series representations of the integral $\int_0^\pi \exp[-s(\psi+y\cos\psi-z\sin\psi)]d\psi$ 2-53703
- conductors, rectangular, surrounded by ferromag. material, current displacement anal., integral eqn. method (*Polish*) 2-75491
- crack problems, Macgregor-Westergaard complex potential numerical evaluation using natural quadrature formal 2-109230
- cracked elastic body, two-dimens. static problems, singular integral eqns. method 2-97455
- dielectric optical waveguides with arbitrarily shaped cut-ends, guided mode refl., transmission and radiation 2-114428
- diffusion equations, one-dimens., free boundary-value problem, nonlinear integral eqn. reduction 2-56243
- diquark fragmentation 2-95787
- Dirichlet problem solution via Fredholm integral eqns. 2-96793
- eddy current flow around cracks in thin plates, boundary integral method 2-55037
- eddy current problem, in ZD, hybrid finite element-boundary integral formulation 2-55036
- elastic composite layer, pressing rigid circular stamp problem, dual integral eqn. soln. 2-60390
- elastic isotropic body, flat toroidal crack, stress intensity factors 2-75904
- elastic potential on irregular surface in two or three dimens. space (*French*) 2-107097
- 2-D elastostatics, symmetric direct boundary integral equation method 2-81241
- electromagnetic field distribution in solid metallic structures near current-carrying finite-length bar conductors, three-dimensional analysis 2-80875
- EM wave, inhomogeneous slab scattering, integral eqn. approach, fast algorithm 2-114155
- EM wave scattering, singularity of Green's function in integral eqns. 2-80880
- EM wave scattering by arbitrarily shaped objects, numerical procedure using electric field integral eqn. 2-90776
- Faddeev equations treatment of elastic electron-H scatt. 2-75428
- floating cylinder transient heaving motion, fluid-motion and rigid-body dynamics soln. 2-86206
- foundations, nonlinear boundary conditions 2-60418
- Fredholm integral eqn., instability isolation 2-94978
- Fredholm integral equation soln. using optical iteration method 2-80918
- galaxies shapes, relation between true and apparent flattenings of elliptical galaxies 2-106900
- galaxy photometry, integral eqn. for deconvolution of brightness profile from seeing and appl. to (M32) 2-84320
- Hardy-Littlewood integral inequality, associated differential eqn. m-coeff. 2-58589
- heat and mass transfer processes numerical method for simulation 2-95277
- heat conduction equation for semibounded body, solution 2-91211
- Hermitian cubic boundary elements, for plane problems of fracture mechanics 2-81285
- homogeneous space, elastic piecewise, with spherical symm., non-steady-state radial vibrs. 2-55481
- liquid layer, pattern equilibria 2-89527
- liquid structure, integral equation calcs. using waterlike intermol. pots. 2-103572
- magnetic field synthesis, Fredholm integral eqn. regularisation technique 2-55014
- magnetostatic fields, integral and differential eqns. formulation, numerical solns. 2-55017
- magnetostatics, 3D problem, Fredholm integral eqn. 2-55012
- magnetostatics, boundary elements method 2-55007

integral equations continued

- MHD equilibrium equations with one ignorable coordinate, general integrals 2-58234
- MHD waves propag. in ionosphere, boundary conditions 2-112198
- mode coupling problems, new integral eqn. 2-63943
- molecular fluids, site-site equilib. correls., integral eqns. 2-103578
- motor vehicle passenger compartment, acoustic resonance anal., boundary-integral equation method 2-81161
- optical scattering from rough surfaces, integral eqn. perturbative method 2-57034
- optical slab waveguide, scattering and mode conversion 2-81079
- orthotropic shallow spherical shells, dynamic buckling 2-109211
- Pade approximants appl. book 2-79289
- plane anisotropic elastostatic boundary-value problems, singular integral eqns. soln. 2-114644
- plane elasticity, path-independent integral concept 2-109244
- plane elasticity crack problems, Bueckner singular integral eqn., numerical soln. methods 2-109229
- plane elasticity problem integral eqn. soln. by successive approx. 2-114656
- plane elastostatic problems with discontinuously prescribed boundary values, integral eqn. soln. 2-107095
- plate transient bending problem, boundary integral eqn. soln. (*French*) 2-109196
- plates, infinite, elastic plate vibrs. by boundary integral eqns. 2-81271
- polymer solution, drag reducing, boundary layer of a body of revolution 2-81365
- position annihilation curve deconvolution rel. to instrumental resolution function 2-57206
- potential field around a thin oblate body of revolution, uniform asymptotic solns. 2-91380
- precipitates, elastic interaction, integral eqn. approach 2-98293
- rectangular crack in half space under impact load, dynamic stress intensity factors 2-109250
- second spherical exponential integral for Eddington flux from circumstellar dust shells 2-100901
- shielding calculations, integral transport eqn., direct integration method 2-75061
- singularities treatment in 2-D domains using boundary integral equation method 2-89523
- skin effect in conductors, integral eqns. method of anal. 2-55038
- Somigliana identity on piecewise smooth surfaces 2-58617
- sound reflection, practical estimation of panel with reflection coefficient 2-91106
- sparsely populated media, coherent wave propag., Foldy-Twersky integral eqn. 2-65142
- static structural analysis, algorithms 2-114691
- Stokes' in WKB theory 2-95077
- stress intensity factor evaluation using combined integral-eqn. and finite-element method 2-107093
- strip, elastic, moving across rigid step, numerical soln. 2-109252
- terrestrial electricity, refined finite-difference simulations using local integral forms 2-88732
- theorem on A-proper mappings and appl. in multichannel scatt. theory 2-74630
- thermoviscoelastic solids, invariant integrals, crack tip fields 2-75853
- three-dimensional boundary layers, Le Foll integral extension 2-103185
- transient EM fields appl. 2-96814
- transonic flow, integral eqn. calcs. appls. 2-91481
- transonic flow, integral equation, supercritical solns., artificial viscosity appl. 2-55612
- two species diffusion in sphere 2-99428
- universal power-law tails for singularity-dominated strong fluctuations 2-107237
- vibration of circular crack in elastic layer under three-dimens. loading 2-55494
- volume gratings, anomalous absorpt., modal approach 2-65191
- wave scattering, single integral eqn. 2-95035
- Yvon-Born-Green function critical behaviour, dimensionality effects 2-53711
- ²H(n,n), scatt. amplitude, three-body problem, integral eqn. numerical soln. 2-90098

integral transforms *see transforms***integrated circuit manufacture***Used for commercial manufacture only*

- see also masks; photolithography*
- multi-chamber dry etching system for fabricating VLSI 2-69184

integrated circuit technology*See also under specific integrated circuit headings**see also semiconductor technology*

- bipolar integrated circuits, buried collector, laser beam annealing, characts. and isolation breakdown voltage 2-56015
- dry etching, recent trends for VLSI fabrication 2-116582
- electron beam lithography 2-74183
- electron-beam lithography, polystyrene high resolution electron beam negative resist with very narrow molecular weight distributions 2-70461
- ion-beam technology appls. 2-61008
- Langmuir-Blodgett films, deposition techniques and technological appls. 2-71820
- photoresist exposure instrumentation for XUV lithography at SURF-II 2-85436
- plasma sputtering, high rate, methods and appls. in microelectronics 2-116365
- PMMA film, ion-bombarded, high resolu. photomasks prep., LSI appls. 2-77799
- polymer films, plasma etch characts. rel. to struct. comp., electron resist appls. 2-62244
- reactive ion etching of Si oxides with NH₃ and trifluoromethane, role of N₂ in discharge 2-88241
- silicide epitaxial films Si substrates, characterisation by ion channelling and backscattering techniques 2-56403
- SOS, laser annealed, electron Hall mobility and residual stresses, heat treatment effects, Raman study 2-98745
- thin film bolometer, with high sensitivity and thermal loading capacity (*German*) 2-79578
- trilevel high resolution resist, film form. and directional etching 2-116574
- VSLI, and VHSIC materials development, SIMS anal. of thin surface layers and low kV ion implants 2-78156
- Al, porous, deposition techniques and heat transfer props. 2-87979

integrated circuit technology continued

- Al. reactive ion etching using SiCl_4 2-57531
- BeO film growth by reactive ionised cluster beam deposition technique, thin film device appls. 2-83039
- CC Si-Ni interface, Ni_2Si thermal formation, ion irradiation enhancement, VLSI appl. 2-56369
- GaAs:Cr, semi-insulating, photoelectrochem. etching and defect characterisation 2-98072
- GaAs:Cr, Si^{++} , ion implanted semi-insulating substrate, carrier conc. uniformities meas. 2-98134
- Mo, etching using carbon tetrachloride/ O_2 mixture gas 2-62273
- POCl_3 deposition, microdefects form. in IC masking oxide during unintentional P diffusion 2-71721
- poly-Si beam recrystallisation for IC fabrication 2-111065
- Si, gettering of stacking faults and heavy metal impurities, appl. to semiconductor device and IC manuf. (*Russian*) 2-66019
- Si n-p junction leakage behaviour, O precip. effects, double poly-Si gate FET DRAM technology 2-61568
- Si, reactive ion etching, contamination of blanket etched surfaces, MOS VLSI appls. 2-116568
- $\text{Si}/\text{WSi}_2(\text{MoSi}_2)$ -based composite electrodes for MOS-type capacitor structures, elec. props. 2-98752
- $\text{Si}_3\text{N}_4/\text{SiO}_2/\text{Si}_3\text{N}_4$ sandwich membranes, X-ray lithography masks, optically-transparent 2-87117
- SiO_2 films, thermally nitrided, MOS characts. 2-61590
- SiO_2 ultra-thin films, high-field generation of electron traps and charge trapping 2-66682

integrated circuit testing

- electron beam-acoustic microscope appls. to semiconductor characterisation and IC diagnosis 2-81173
- electron-beam induced current evaluation in SEM, stage with two independent probes 2-79719

integrated circuits

- see also hybrid integrated circuits; large scale integration; linear integrated circuits; masks; microwave integrated circuits; monolithic integrated circuits; substrates; thick film circuits; thin film circuits
- humidity measurement using an integrated circuit, Aquamax II (*German*) 2-53776
- microelectronics appls. in broadcasting, video and cinematography general discussion 2-69271

integrated control systems see centralised control**integrated logic circuits**

- field programmable logic arrays appl. in reactor safety and regulation systems 2-69764
- trigger system using two levels of field programmable logic arrays 2-70103

integrated memory circuits

- CMOS RAMs, LSI, radiation resistance for Jupiter radiation belt 2-68595
- MOS LSI static RAM, passivated, meas. of internal signal waveforms using stroboscopic SEM 2-58970

integrated optics

- see also fibre optics; optical films; optical modulation; optical waveguides; semiconductor junction lasers
- A/D, converter, electrooptic guided wave design, 4-bit 828 megasample/sec. 2-60260
- acousto-optic efficient wideband guided wave devices, new approach 2-75725
- anisotropic inhomogeneous optical waveguide, exact method for light propagation analysis 2-109040
- anisotropic media, beam propagation method extension 2-102955
- asymmetrical dielectric waveguides, second harmonic lasing 2-108953
- beam splitters formed in glass channel waveguides, variable weighting from mask dimensions 2-86134
- Bragg diffraction switches, electrooptic, in low cross-talk integrated-optics switching matrix 2-91093
- Bragg reflectors, coupled-beam anal. 2-60261
- conference, integrated and guided-wave optics, Pacific Grove, CA, USA (Jan. 1982) 2-58550
- corrugated grating structures in diffused waveguides, noncollinear Bragg diffraction 2-60237
- dielectric thin film waveguide, edge guidance verification 2-109034
- dielectric waveguide, surface waves, dimensionality transformation 2-114427
- diffused channel waveguide, numerical soln. 2-60234
- diffused waveguide, numerical method for refr. index profile reconstruction 2-97174
- diffused waveguide with a dielectric film, acoustooptic interaction 2-114425
- digitiser, picosecond digitiser, based on nonlinear integrated optics 2-81123
- direct-coupled optical pulse generator hybrid IC for fibre-optic testing 2-97250
- distributed-index planar microlens as optical tap array 2-75723
- electrooptic integrated optics spectrum analyzer, weighted discrete Fourier transform 2-55356
- electro-optic waveguide $\text{TE}(-)\text{TM}$ converter/wavelength filter, tunable 2-75722
- electrooptic A/D converter, 4-bit 275-MS/s 2-60231
- fabrication techniques for organic and amorphous materials, review 2-65408
- fabrication techniques for single cryst. materials, review 2-65409
- fibre-optic transmitter/receiver modules, mounting and bonding of optical components 2-97234
- film waveguide sandwiched by electrooptic and magneto-optic media, non-reciprocal phenomena 2-55359
- film waveguides obtained by RF sputtering, cathode-ray vaporisation, loss mechanisms, ion polishing improvement 2-75672
- Franz-Keldysh optical amplitude modulators fabricated on heteroepitaxial structures 2-81067
- frequency shifter for use in coherent detection systems 2-97236
- Fresnel lenses, graded-index, for integrated optics 2-86130
- geodesic components for guided wave optics 2-86137
- geodesic lenses printed in glass with ion-exchanged film waveguides 2-65406
- glass, planar waveguide fabrication by ion-assisted techniques 2-55331
- glass optical waveguide, fabrication by ion exchange, two-dimens. integrated optics appl. 2-65348
- glass sputtered film waveguides for integrated optics, scatt. pattern meas. 2-70671

integrated optics continued

- glass thin film optical waveguide, RF sputtered, fluctuation and scatt. props. 2-81078
- glass waveguides, out-of-plane scatt. 2-75520
- glass waveguides for integrated optics, buried single-mode type, fabrication 2-75734
- graded-index sphere lens with hemispherical rod cladding 2-102954
- GRIN planar waveguides, sinusoidally modulated, mode coupling, beam propagation method 2-102917
- guided-wave electronics (*Japanese*) 2-97235
- guided-wave electrooptic modulator, design and fabrication 2-109031
- guided-wave interferometer, high-speed, appl. 2-102957
- holographic grating formation, blazed 2-96855
- image transmission, modally allotted through homogeneous planar waveguides 2-75673
- in-diffused passive elements of integrated optics in ion-exchanged waveguides 2-86136
- injection laser, twin stripe, diffusion and waveguiding effects 2-55149
- integrated optoelectronic devices for faster and more reliable data transmission 2-81124
- interferometer using a planar optical micro-waveguide 2-79661
- IR prism coupling characterisation and optimisation via near-field m-line scanning 2-81070
- Langmuir-Blodgett films, deposition techniques and technological appls. 2-71820
- laser annealing of waveguides and integrated waveguide detect. for scatt. effects reduction 2-70710
- liquid crystal optical waveguide, transmission characteristics meas., 0.7 to 1.7 μm 2-75674
- Mach-Zehnder waveguide interferometer, picosecond sampling 2-60238
- magneto-optical 3 layer unidirectional TE-TM mode converter, film thickness and waveguide length effects calc. 2-55358
- masks, fabrication by Ar laser beam writing 2-75732
- microlens, distributed-index, planar 2-75721
- mid-IR range, integration and compaction of optical systems 2-81121
- modulator optical electrode design 2-55319
- molecular orientation measurement of Langmuir-Blodgett monolayers and thin polymer films; appl. 2-74508
- monolithic optical integration prospects 2-86132
- narrow gap semiconductors, nonlinear optics, optical bistability, optical transistor 2-90974
- nonlinear directional coupler, tunable 2-91041
- nonreciprocal three-layer waveguides, anal. of leaky modes, appl. to isolators 2-109036
- optical system with arbitrary oriented light-guiding elements 2-70708
- optoelectronic integration, semicond. materials, review 2-65410
- organic dye optical guided wave laser and directional coupling amplifier 2-85997
- periodic structures and coupled waveguides, synchronous freq. conversion, synchronism of coupled modes 2-108951
- phase dielectric gratings, flash effect, diffraction efficiency calc. 2-109030
- phase shifter and single-sideband modulator, integrated optical 2-70707
- photochromic glass planar waveguides, optically controlled 2-86102
- photodiode development and integrated optics component trends (*Japanese*) 2-70709
- photomask fabrication, integrated optics, step-and-repeat process 2-65420
- photosensitive gratings, fabrication on reflecting surfaces 2-65407
- planar dielectric waveguides, four-layer Si clad, mode coupling 2-70670
- planar holographic lenses, fabrication from shaped Bragg gratings from circular fringe patterns 2-65412
- planar optical waveguide lens design 2-86069
- planar optical waveguides, chirped grating lens design 2-114431
- planar waveguide-optical fibre system for holographic memory devices 2-65192
- polarization-selective lateral waveguiding in layered dielectric structures 2-86099
- polymer thin-film optical waveguides, ageing process, visible-UV study 2-109039
- prism storage device, space-time processes 2-81054
- quantum well heterostructure lasers, review 2-55159
- semiconductor interferometric laser, mode selection and tuning props. meas. 2-97000
- semiconductor interferometric laser, monolithically integrated cavity struct. 2-60127
- serrodyne optical frequency translator performance, phase modulator driven by sawtooth waveform 2-60232
- single-mode optical waveguide, charact. determ. by changing refractive index of adjacent medium 2-65358
- spatial light modulator, linear, total internal refl., optical information processing appls. 2-75669
- spatial-period division, deep-UV, using an excimer laser 2-109090
- spectral demultiplexer with a plate waveguide 2-114472
- spectrum analyser, folded-type, using butt-coupled chirped grating lenses 2-86133
- spectrum analyser, lensless 2-55357
- stacked planar optics for optical communications, planar micro-lens 2-65415
- star coupler, 1XN, single mode integrated optical 2-65414
- star coupler, integrated optical, 1XN single-mode 2-60258
- substrate-tube lithography for optical fibres 2-114477
- switch, polarisation independ., using a Gaussian taper function 2-75681
- symmetric dielectric slab waveguide, absorpt. (gain) consts. for orthogonal guided modes 2-109041
- tapers and Y-junctions, radiation loss and mode conversion calc. 2-86131
- temperature sensor based on array of waveguide interferometers 2-95373
- thin film optical frequency doubler using a grating coupler 2-97106
- thin film semiconductor waveguides, electrooptic modulation by stationary phase gratings 2-109045
- thin-film lasers with two-dimens. periodic structs. 2-96988
- thin-film optical waveguide, interf. of scattered modes 2-97173
- thin-film travelling-wave light modulator using light diffraction by acoustic wave 2-91039
- time-integrating correlator using guided-wave anisotropic acoustooptic Bragg diffraction and hybrid integration 2-60263
- topographical circuit problems (*German*) 2-75724
- tunable optical separators, using multilayered thin film optical waveguides controlled by SAWS, characts. 2-81125
- two-dimensional Walsh transforming device using integrated optic device 2-65413
- Walsh transforming device, two-dimens., using integrated optical circuit 2-86135

integrated optics continued

- waveguide, thin-film, multilayered, with a buffer layer, propag. characts. 2-109038
- waveguide 2X2 matrix switch using dielectric chip motion 2-86094
- waveguide fabrication, glass and $\text{LiNbO}_3(\text{TaO}_3)$, ion exchange and diffusion processes 2-65411
- waveguide Luneburg lenses, alternate technology proposal 2-55296
- waveguide theory, introduction, book 2-58573
- wavelength multi- and demultiplexers using chirped grating and ion-exchanged waveguide 2-91091
- Y-junctions and tapers, radiation loss and mode conversion calc. 2-86131
- AlGaAs heterojunction laser with distributed Bragg mirror, CW operation at 50°C 2-85996
- AlGaAs lasers with micro-cleaved mirrors suitable for monolithic integration 2-65259
- $\text{Al}_x\text{Ga}_{1-x}$ As multielectrode rib waveguides, electrooptic polarisation modulation 2-65345
- $\text{Al}_x\text{Ga}_{1-x}$ As multielectrode rib waveguides, electrooptic polarisation modulation 2-81065
- $\text{As}_2\text{S}_3\text{-SiO}_2$ graded-index fresnel lenses for integrated optics, electron-beam direct writing technique 2-86130
- $\text{Bi}_{12}\text{SiO}_{20}$ single-crystal film, LPE growth, optically activated planar optical switch appls. 2-116391
- CaAlAs BH laser and bipolar phototransistor, monolithic integration 2-55360
- GaAlAs buried heterostruct. laser, monolithic integration with bipolar phototransistor 2-60259
- $\text{Ga}_{1-x}\text{Al}_x$ As laser FET monolithic IC, very high freq. operation 2-96969
- GaAs buried heterostructure lasers, individually addressable, 50 μm spaced array 2-90918
- GaAs, optical bistability with guided waves, theory 2-97073
- GaAs stripe injection lasers, regular integrated array 2-80998
- GaAs, submicron grating fabrication by holographic exposure 2-91036
- GaAs, thermally oxidised, Lloyd's mirror interference method for determ. of photoelastic index variation 2-64096
- GaAs-(AlGa)As twin-mesa laser integrated with passive waveguide, controllable single mode operation 2-55209
- GaAs-GaAlAs curved rib waveguides, bending loss minimisation, ion beam milling fabrication 2-75676
- GaInAsP-InP 1.55 μm distributed Bragg reflector integrated laser directly coupled to external waveguide 2-60117
- GaInAsP-InP BH integrated laser with butt-jointed built-in DBR waveguide, 1.6 μm CW operation 2-80987
- GaInAsP-InP DH laser with monolithically integrated passive waveguide, LPE regrowth 2-60118
- GaInAsP-InP integrated twin guide DBR laser emitting at 1.55 μm , low threshold current 2-60119
- GaInAsP-InP integrated optical devices, etched mirrors, grooves and surfaces using spot-etch crystal planes 2-60264
- $\text{In}_{0.45}\text{Ga}_{0.47}\text{As}$ integrated pin/FET photoreceiver, 1-1.7 μm 2-74503
- InGaAsP heterostructure lasers coupled to InGaAsP waveguides, monolithic integration 2-55188
- InGaAsP-InP LEDs, prep. and props. of monolithically integrated lenses 2-114473
- InGaAsP-InP single-mode buried waveguide structures grown on channelled [111]B InP substrates 2-114421
- $\text{In}_1\text{-Ga}_x\text{As}_{1-x}\text{-P-InP}$, etched mirror laser fabrication using HBr-acetic acid- $\text{Kr}_2\text{Cr}_2\text{O}_7$ etchant 2-114313
- InP electro-optic directional coupler switch, homojunction struct. 2-65405
- InP electro-optic directional coupler switch 2-75683
- InP optical Y-junctions and S-bends formed by single-mode rib waveguides 2-114422
- InSb, optical bistability with guided waves, theory 2-97073
- LiNbO_3 crossed channel waveguide TIR switches, GHz bandwidth, 4X4 switching networks 2-75680
- LiNbO_3 integrated optical 2-114429
- LiNbO_3 , interference modulator based on multimode channel waveguide 2-70667
- LiNbO_3 , low-voltage electrooptic deflector 2-60223
- LiNbO_3 , oblique-cut microchannel spatial light modulator 2-97166
- LiNbO_3 , planar electro-optic beam splitter with a sawtooth electrode 2-114409
- LiNbO_3 , waveguide modulator, out-diffused, prism-coupled, fabrication and performance for long-term use at 632.8 nm 2-75670
- LiNbO_3 , waveguide modulators, space-charge effects 2-75684
- LiNbO_3 , x-cut, efficient waveguide Bragg deflection grating 2-102956
- $\text{LiNbO}_3\text{-Ti}$, strip waveguides fabricated by combined metal diffusion and ion implantation 2-75731
- $\text{LiNbO}_3\text{-Ti}$ channel waveguides, photoinduced polarisation conversion obs. 2-109043
- $\text{LiNbO}_3\text{-Ti}$ coupled channel waveguide electro-optic modulator 2-86093
- $\text{LiNbO}_3\text{-Ti}$ coupled channel waveguides, second harmonic generation obs. 2-86103
- $\text{LiNbO}_3\text{-Ti}$ diffused waveguide integrated optic electrooptic modulator electrode anal. 2-55318
- $\text{LiNbO}_3\text{-Ti}$ indiffused waveguide, integrated optics picosecond transient digitizer 2-60262
- $\text{LiNbO}_3\text{-Ti}$ integrated optical device fabrication, Ti oxidation process, $(\text{Ti}_x\text{Nb}_{1-x})_2\text{O}_5$ phase form. 2-75735
- $\text{LiNbO}_3\text{-Ti}$ intersecting waveguides, crosstalk characts., TE/TM mode splitter appl. 2-70668
- $\text{LiNbO}_3\text{-Ti}$ optical waveguide, acoustooptic interaction, wide-band, with mode conversion 2-91045
- $\text{LiNbO}_3\text{-Ti}$ thin-film Bragg electrooptic modulator 2-65344
- $\text{LiNbO}_3\text{-Ti}$ variable-period thin-film Bragg modulator 2-97168
- $\text{LiNbO}_3\text{-Ti}$ waveguides, geodesic lens fabrication techniques 2-75733
- Nb_2O_5 thin-film optical waveguide, CO_2 laser annealing for scatt. loss reduction 2-75677
- Si, amorphous, photovoltaic detectors for guided-wave optics 2-64105
- Si_3N_4 thin-film optical waveguide, CO_2 laser annealing for scatt. loss reduction 2-75677
- SiO_2 , multimode deposited waveguide, fabrication procedure, appl. to optical branching circuit 2-70669
- TaO_5 thin-film optical waveguide, CO_2 laser annealing for scatt. loss reduction 2-75677
- Ti-diffused optical waveguide, codirectional TE-TM mode conversion through acoustooptic interactions 2-65404

integrated plant control *see centralised control***integrating circuits**

- external generation of gate delays in boxcar integrator, deep level transient spectroscopy appl. 2-53792
- integrator, simple digital, and pulse counter 2-95384

integrating spheres *see photometry***integration**

- Bessel functions, integration, computer program, HANKEL 2-63804
- catastrophe, cuspid integral evaluation, Pearcey's integral appl. 2-63802
- celestial mechanics, integration consts. and mean elements for all planets (French) 2-78935
- celestial mechanics, numerical integration for Saturn ninth-satellite (Phoebe) (French) 2-79021
- conforming axisymmetric shell element 2-109216
- elastica-similarity solutions, folding processes 2-97381
- expanding sphere, generation of pressure and velocity field 2-114591
- exponential data, deviation detection using integration and difference plots 2-63956
- FASOR—a program for stress, buckling and vibration of shells of revolution 2-70855
- Grassman algebra integrals, theories with Fermi fields 2-53986
- integration using model partitioning, nuclear power system simulation appl. 2-102024
- large deformation static and dynamic finite element analysis of extensible cables 2-60442
- magnetostatics, 3D problem, Fredholm integral eqn., numerical integration 2-55012
- magnetostatics, iterative algorithm for volume integral method 2-102680
- Mayer graphs, Gaussian integral calc., starmesh transform. method 2-68999
- measurement facilities dynamic characts. computing, input and output signals integration 2-89649
- neutron transport eqns. 2-74788
- noncommutative integration theory 2-101196
- oscillatory infinite integrals, numerical evaluation by extrapolation 2-79364
- oscillatory systems, root parties and phase behaviour in slow-fluctuation technique 2-112693
- Periodic Comet Halley, orbital elements backward integration rel. to apparitions, AD 1986 to 2647 BC 2-106625
- plate deflection theory, numerical integration methods 2-91242
- random measurement errors summing, using convolution integral (Russian) 2-84588
- Schrodinger equation, numerical integration, finite difference methods 2-79409
- Schrodinger equation, numerical integration in finite difference schemes 2-79408
- shell, spherical, fluid filled, contact interaction with hard spherical base, asymptotic integration (Russian) 2-60487
- stationary phase method modification criticised 2-89543
- terrestrial electricity, refined finite-difference simulations using local integral forms 2-88732
- trajectories, gravity perturbed, numerical integration 2-112308
- transient large displacement calcs., error growth 2-101167
- tristimulus values calc. method using integration and interpolation 2-58878
- two species diffusion in sphere 2-99428

integro-differential equations

- see also Boltzmann equation; Fokker-Planck equation; Liouville equation; master equation; Vlasov equation*
- beam, planar curved, loaded by co-planar conc. forces, nonlinear elastic analysis 2-60407
- Benjamin-Ono eqn. direct linearisation 2-107108
- column, perfect viscoelastic, dynamic stability 2-81262
- confined compressible reactive gas, thermal behaviour 2-89539
- elastic contact problems, singular integro-differential eqns., approx. soln. 2-70877
- gas-driven fracture propagation 2-89541
- linearized BGK and neutron transport equations in finite domains 2-80049
- magnetostatics, coupled differential-integral eqn. formulation 2-55008
- molecular orientation at gas-liquid interface, for model fluids 2-115496
- moving phase boundaries with latent heat, calculations 2-69116
- nonlinear long wave eqn., inverse scatt. method appl. 2-65601
- nonstationary integrodifferential radiation transfer eqn. soln. (Russian) 2-97357
- parabolic potential theory 2-63940
- rarefied multicomponent ionised gas, collision processes, physico-probabilistic analogue model 2-55705
- strongly fluctuating field, second statistical moment calculation 2-114497
- thermorheology, generalised Lagrangian thermodynamics 2-79513
- viscoelastic rod, buckling (French) 2-70847
- viscoelasticity, asymptotic soln. of stochastic integro-differential eqns. with small parameters 2-109209
- viscous fluid non-steady state flow computational method 2-60572

intelligence, artificial *see artificial intelligence*intelligibility, speech *see speech intelligibility*intensification *see amplification***intensity measurement**

- see also acoustic intensity measurement*
- photodiode meter measuring weak-light fluxes and conversion into voltage signal 2-64086

interacting control systems *see multivariable control systems***interactive systems**

- see also interactive terminals; online operation*
- ambulatory ECG processing by general-purpose minicomputer 2-117101
- atmospheric temperature determ. using satellite data and interactive computer graphics 2-63106
- data management system for river water quality 2-58095
- geodesy, automatically recorded meas. data, interactive processing system (German) 2-89054
- gravimetric data management at Bureau Gravimetrique International (BGI), interactive graphics terminal 2-106321
- IMAGIC, interactive image anal. software system for electron micrographs 2-71301
- LINPOS, and interactive program for stellar line position measurement 2-94623
- natural language man-machine dialogue in TULIPS-2 artificial intelligence system 2-114562

interactive systems continued

- nuclear reactor systems, interactive safety assessment, computational techniques 2-113710
- Schrodinger eqn. study program 2-107072
- seismograms interpretation, FORTRAN program 2-100306
- underwater signal processing, high-speed programmable digital systems 2-63143

interactive terminals

see also *interactive systems*

- CYCLOPS distance tutorial system for Open Univ. using TV and telephone network 2-79335
- high energy physics, dual display system for multidimens. data anal. 2-54735

interatomic potentials see *potential energy functions***intercalation compounds**

- actinomycin and DNA binding sequence d(GpC), struct. of pseudo intercalated complex 2-73191
- alkali atoms intercalated in graphite, orientation of discommensurations 2-103721
- alkali metal-graphite, disordered, decorated-lattice struct. factors 2-81764
- conf., Trieste, Italy (July 1981) 2-74165
- conference, Linz, Austria (Sept. 1981) 2-89445
- DNA-drug interactions rel. to intercalation 2-116861
- graphite, C_xM ($M=K, Rb, Cs$), phonon branches, neutron spectra study 2-76618
- graphite, intercalated, CKVV Auger lineshape, screening effects, cluster model 2-77635
- graphite, intercalated with alkali metals, C KVV Auger line shape and X-ray emission 2-87920
- graphite, intercalated with $FeCl_3$, low and high stage, mag. order, Mossbauer study 2-87642
- graphite, rod intensities distrib., powder goniometer expt. and simulated spectra calcs. 2-115095
- graphite, staged struts. 2-109765
- graphite (0001), near-surface intercalated K, LEED study 2-76791
- graphite acceptor intercalate, stage 1 model, electronic struct., optical and energy loss props., LCAO calc. 2-61346
- graphite intercalated compounds, phase transitions (*Russian*) 2-86862
- graphite intercalated with alkali metals, discommensuration struct. of mass density waves, thermodynamic theory 2-98017
- graphite intercalated with Br, phonons, inelastic neutron scatt. study 2-56105
- graphite intercalated with F, chem. synthesis by ion implantation; optical reflectivity 2-92006
- graphite intercalated with $FeCl_3$, Mossbauer study of mag. props. 2-99012
- graphite intercalation compound with $FeCl_3$, electron microscope imaging of various stages 2-71358
- graphite intercalation compounds, acceptor-type, pressure effect on electronic props. 2-56425
- graphite intercalation compounds, $C_{12}M$ ($M=K, Rb, Cs$), charge distrib. among graphite layers 2-56421
- graphite intercalation compounds, electrochemical appl. 2-57688
- graphite intercalation compounds, electronic props., review 2-98518
- graphite intercalation compounds, low dimensional conductor, review of phys. props. (*Japanese*) 2-82202
- graphite intercalation compounds, phonon Raman spectroscopy 2-57087
- graphite intercalation compounds in electrode materials in batteries 2-57692
- graphite intercalation compounds with transition metal chlorides, mag. phases 2-56863
- graphite intercalation cpd. with $FeCl_3$, reduction and Fischer-Tropsch reactions, Mossbauer study 2-116692
- graphite intercalation cpds., C_6Cs and C_6Li , Auger line shape, final state rule 2-105012
- graphite intercalation cpds., HNO_3 mol. orientation, nucl. reson. scatt. study 2-103724
- graphite lamellar compounds with K and benzene, struct. and transformations 2-98069
- graphite-alkali metal, σ -electron energy bands, secondary electron spectroscopy study 2-93337
- graphite-Br₂, struct. phase transitions, Raman scatt. study 2-86863
- graphite-Br, sp. hts. 1.5 to 6 K 2-98305
- graphite- $NO_2^+X^-$ ($X^-=PF_6^-, SbF_6^-$) salts, transport and optical props. 2-98645
- graphite-SbCl₅, stage-2, commensurate-to-glass phase transition, electron microscopy study 2-110004
- halides, layered, intercalation with organic cpds., NQR investig. 2-110717
- lattice, cohesion, electrostatic effects, sandwich model 2-103689
- organic-inorganic intercalation cpds., low dimensional, photopolymerization 2-92584
- polyphenylene oxide, cond. and conformational anal., dopant intercalation model 2-77045
- polyphenylene sulphide, cond. and conformational anal., dopant intercalation model 2-77045
- (rare-earth)B₂C₃, elec. props. 2-87266
- semiconductor/dielectric layered crystals intercalated by organic mols. (*Russian*) 2-60966
- tetramethyltin intercalated graphite, low-temp. structural study by electron microscopy 2-76424
- transition metal dichalcogenides, layered, low dimensional conductors, phys. props., review (*Japanese*) 2-82335
- transition metal dichalcogenides and their intercalation cpds., supercond., review (*Japanese*) 2-82517
- transition metal intercalates, M,TaS_2 ($M=Fe, Mn, Ni$), X-ray core level photoemission, charge transfer effects 2-111023
- transition metal lamellar compounds of graphite as catalysts of graphite to diamond conversion 2-67330
- transition metal layered chalcogenophosphates, effect of bond ionicity on Li electrochemical intercalation 2-71392
- Ag,TaS₂, intercalation cpd., electron diff. investig. of superlattices, struct. and CDW 2-103720
- Ag,TaS₂, superlattices, electron diff. study 2-91931
- Ag,TiS₂, disordered stage II, c-axis parameters, X-ray study 2-109772
- AsF₆-graphite (polyacetylene)(p-polyphenylene) association reaction, thermodynamics and kinetics meas. 2-93775
- AsF₆-graphite intercalation cpd., ¹⁹F NMR study 2-98976
- C₂₄Cs, inhomogeneous liq., pair correl. function, temp. depend. 2-103588

intercalation compounds continued

- C₈Cs, vibr. density of states 2-81909
- C₁₂FeCl₃ (stage 2), low-temp. specific heat and mag. susceptibility 2-81974
- C₆FeCl₃ (stage 1), low-temp. specific heat and mag. susceptibility 2-81974
- C₂₄K, inhomogeneous liq., pair correl. function, temp. depend. 2-103588
- C₂₄K, mass- and charge-density modulation, X-ray diff. study 2-81951
- C₈K, cryst. dynamics and binding, inelastic neutron scatt. obs. 2-109736
- C₈K intercalated cpd., Madelung energy studies 2-86616
- C₈K, intercalation cpd., struct., dynamics, neutron diff. obs. 2-109763
- C₈K, vibr. density of states 2-81909
- C₈K ($x=8.24$), stage and CESR line breadth, temp. depend. 2-87595
- C₈KD_{2/3}, cryst. dynamics and binding, inelastic neutron scatt. obs. 2-109736
- C₈KD_{2/3}, intercalation cpd., struct., dynamics, neutron diff. obs. 2-109763
- C₈KD_{2/3}, intercalation cpd. formation kinetics, neutron diff. obs. 2-111484
- C₈KH_{0.19} intercalation cpd., supercond. obs. 2-110519
- C₈KH_{2/3}, cryst. dynamics and binding, inelastic neutron scatt. obs. 2-109736
- C₈KH_{2/3}, intercalation cpd., struct., dynamics, neutron diff. obs. 2-109763
- C₈KH_{2/3} intercalation cpd. formation kinetics, neutron diff. obs. 2-111484
- C₈KHg (RbHg), intercalate, superconductivity study 2-82512
- C₈KHg(RbHg), intercalate, superconductivity study 2-82512
- C₈Li intercalated cpd., Madelung energy studies 2-86616
- C_{11.3}NiCl_{2.13}, stage 2, low-temp. specific heat and mag. susceptibility 2-81974
- C₈Rb, vibr. density of states 2-81909
- C₈Rb ($x=8.24$), stage and CESR line breadth, temp. depend. 2-87595
- Cu (II) ions intercalated in alpha-and gamma-Zr(HPO₄)₂ compounds, X-ray induced photoreduction rates 2-93761
- FeOCl intercalates with Lewis base, Fourier transform IR obs. of struct. 2-116166
- FePS₃, layer phases, optical and mag. props., intercalation-induced modifications 2-82875
- Fe₃₄TiSe₂, cryst. struct., elec., mag., and optical props. 2-81746
- GaSe, intercalated, low temp. reflection spectra and photoluminesc., exciton characts. (*Russian*) 2-67112
- GaSe, intercalated with Na⁺ and Ca²⁺, prep. and elec. props. 2-66549
- GaSe-anthracene (Na), ESR, photocond., and optical meas. 2-77367
- In,NbM₂(M=Se,S), elec. props. 2-87289
- InSe, intercalated with Na⁺ and Ca²⁺ prep. and elec. props. 2-66549
- InSe-anthracene intercalate, elec. props. (*Russian*) 2-77067
- In,TaM₂(M=Se,S), elec. props. 2-87289
- K-TiS₂, ambient temp. cell using organic electrolyte 2-62468
- KCl₂₉ intercalation cpd., Raman scatt. studies of folded shearing phonons 2-57088
- KC₂₄, stage two intercalation compound, in-plane charge distribution, XPS study 2-62046
- KC₈, cryst. and band struct., Fermi surface, de Haas-van Alphen effect 2-82227
- KC₈, stage one intercalation compound, in-plane charge distribution, XPS study 2-62046
- KC_x ($x=4.5,8$), Shubnikov-de Haas oscill. freqs., expt. meas. methods 2-82210
- KC_x ($x=8,24$) intercalation compounds valence and core-electronic excitations, EELS study 2-87167
- K₂Mg₆(Si_{4-x}Al_x)₂O₂₀(OH)₄·4H₂O, water uptake, charge layer depend. 2-86617
- KTl_xC_x ($x=4,8$), supercond. transition temp. and crit. field 2-92844
- Li intercalated dichalcogenides, props. and electrode appls. 2-57691
- Li intercalation compounds with TiS₂, ZrSe₂, HfSe₂, TaS₂ and VSe₂, elec. props. 2-66529
- Li intercalation cpds., form., in situ X-ray diff. effects 2-65944
- LiC₆, band struct., self consistent extended muffin tin calc. 2-82229
- LiC₆, electron states, cluster model (*Chinese*) 2-66415
- LiC₆, intercalate, absolute spin susceptibility, paramagnetism 2-77259
- Li₂CrO₄ cathodes in Li/organic electrolyte batteries, props. 2-93889
- LiMoO₂, insertion cpd., cryst. struct., neutron powder diff. study 2-98024
- Li₂MoO₄ cathodes in Li/organic electrolyte batteries, props. 2-93889
- Li,TiS₂, elastic energy and staging 2-71391
- Li,TiS₂, elec. field gradient, anisotropic shift, tetrahedral site occupation and atomic motion NMR study 2-66943
- MnCl₂-graphite, charge transfer and islands, X-ray diff. study 2-91932
- MnPS₃-Na⁺(K⁺)(Rb⁺)(Cs⁺) intercalated, IR and Raman vibr. study 2-87769
- Na_{0.11}(H₂O)₂TaS₂ coinercalation cpd., cryst. struct., X-ray diff. study 2-91909
- NbS₂-2H and intercalated, Raman scatt. spectra 2-87792
- 2H-NbSe₂(TCNQ)_{0.95}, upper crit. field anisotropy and supercond. crit. field (*Russian*) 2-36801
- NiPS₃, layer phases, optical and mag. props., intercalation-induced modifications 2-82875
- PbI₂ with org. donor mols., charge transfer and luminesc. (*Russian*) 2-61975
- RbC₈ ($x=2.3,5.8$), Shubnikov-de Haas oscill. freqs., expt. meas. methods 2-82210
- (SbBr₃), electronic struct. and props. (*Japanese*) 2-66417
- SbF₆-graphite intercalation cpd., ¹⁹F NMR study 2-98976
- TaS₂ (2H), intercalation cpds., mag. susceptibility and band struct. 2-104251
- TaS₂-2H, intercalation cpd. with NaOH, supercond. transition temp. and charge transfer 2-92804
- TiS₂-Ag_{0.33}, superlattice melting study 2-103958
- TiSe₂, intercalated with hydrazine, transport props. 2-98626
- VS₂(Se₂), intercalated with transition metals, X-ray absorpt. spectra and electronic struct. 2-67150

interdiffusion see *diffusion***interface electron states**

- ceramic/ceramic (metal) systems, surfaces and interfaces, 17th Univ. Conf. (7th LBL/MMRD Int. Materials Symp.), Aug. 1980 2-94909
- diamond-metal interface, effect of electronic struct. of diamond surface on strength 2-82418
- disordered interfaces, supercond. transition temp. enhancement by local tunnelling states 2-87457

interface electron states continued

- exactly soluble models 2-87357
exciton at interface of two polar crystals, variational calc. (*Russian*) 2-76940
graded interface region, electronic struct., giant replicate cell approach 2-110447
heterostructures, reduced Hamiltonian method with evanescent states and transfer matrices 2-110462
III-V semiconductors, Schottky barrier form. and MOS interface states, unified model 2-87372
interface plasmons at boundary of two semi-infinite electron gases 2-104456
liquid He surface, low-dimensional electron systems (*Russian*) 2-98361
metal-ionic interface dipole energy theory 2-115891
metal-semiconductor contact, Schottky barrier heights rel. to interface states 2-98719
MIS solar cells, interface states effect on performance 2-99802
MNOS capacitors, determ. of energy density distribution and capture cross-section of interface states 2-66652
MOS capacitor, flat band voltage shift during avalanche injection, modelling 2-56721
MOS capacitor struct., interface state density deduced from DLTS and Terman meas. 2-98748
MOS interface states, EPR 2-61603
MOS struct., interface charge inhomogeneities, surface photovoltage meas. 2-15899
MOS structure, two-dimensional space-charge layer in a tilted magnetic field 2-82466
MOS structures, bulk generation lifetime distrib. and surface generation velocity determ. (*Chinese*) 2-66644
MOS structures, radiation damage by X-ray irradiation (*Chinese*) 2-66645
MOS systems, reactive sputter etching of SiO₂ effect on elec. props. 2-115903
narrow gap semiconductors, interfacial and surface energy bands 2-92719
null Faraday rotation, intraband and interband transitions 2-61500
ordered-disordered interface, electronic props. 2-115841
photoelectrochemical devices, charge transfer via interface states 2-88463
Schottky barriers, theoretical models, review 2-115894
semiconductor, modulated structs., MBE growth and electronic struct. 2-77167
semiconductor, polycryst., Seebeck effect, intergrain electron states 2-110375
semiconductor covered with thin film, work function, interface state effect (*French*) 2-61559
semiconductor electrochemistry, electron energy levels, review 2-110468
semiconductor electrode, relaxation effects of surface and interface states 2-61583
semiconductor native oxide form., atomic struct., interface electronic struct. 2-76788
semiconductor-insulator interface states, const. capacitance DLTS method 2-77141
semiconductor-insulator interface states, const. capacitance DLTS studies, review 2-110484
semiconductor-metal interfaces, chem. and electronic struct. 2-82458
silicide-Si interface electronic states and microstruct. 2-87412
solid-liquid interface, photoemission and photoexcitations as probes 2-83431
solid-liquid interfaces, spectroscopic techniques 2-82127
surface electron barrier, adsorbate screening effect, improved Thomas-Fermi calc. 2-115865
surface superlattices, lateral, transport and scatt., Monte Carlo calc. 2-104454
two-dimensional systems, electronic props., conf., New London, NH, USA (Aug. 1981) 2-58536
two-dimensional systems, electronic props., review 2-82467
Ag-electrolyte interface, surface states, electroreflectance study 2-92754
Ag-GaAs (100), interface struct. and electronic props. meas. 2-110171
Al-SiO₂-Si, MOS capacitor, electron irradi., interface state spectrum, gate bias effect, DLTS study 2-66640
Al-SiO₂-Si, MOS structure, surface state density determ. based on Hill-Coleman technique 2-77192
Al-SiO₂-Si system, hydrogenation of defects at the Si-SiO₂ interface 2-56373
Al-SiO₂-Si tunnel diode, metal deposition and oxide growth technology effect on electronic props. 2-56717
AlGaAs-GaAs heterostructure, modulation doped, reson. light scatt. in strong mag. fields 2-61921
Au-electrolyte interface, surface states, electroreflectance study 2-92754
Au-oxide-n-GaAs MIS struct., barrier height meas. by internal photoemission technique 2-72063
Au-Si, electronic props. 2-98512
Au-SiO₂-n-Si structs. with oxide grown in RF plasma, I-V characts. calc., model 2-92775
CdS-Au Schottky diode, C⁻²=f(V) charact., deep electron trap and interface states effect 2-115860
CdS-Ge interface, X-ray photoemission spectra of band discontinuities 2-82447
CdS-MIS struct. for interface state determ. in CdS-Cu₂S heterojunction solar cell 2-78229
n-CdSe, etched and anodised electrochem. electrode, capacitance-voltage studies 2-66633
Cu film on Ni (100), electronic and mag. struct., interface magnetisation 2-82695
GaAs, doped superlattices, quasi-two-dimensional photoexcited carriers 2-110433
n-GaAs epitaxial layer on semi-insulating GaAs:Cr, IR irradi., current ionisation due to deep level photoionisation 2-66626
GaAs MOS interface states, DLTS and photoionisation study 2-110488
GaAs MOS struct., photoionisation cross-section and interface state threshold meas. 2-98759
GaAs overlaid by Ag, surface and contact props. 2-92751
GaAs, Schottky barrier form., MOS interface states 2-82428
n-GaAs, surface (110), surface photovoltage meas. and Fermi level pinning 2-87364
n-GaAs, surface photovoltage meas. and Fermi level pinning, electron tunnelling through dipole layers 2-87392
GaAs-Ag interface, formation, struct., electronic states 2-104485
GaAs-Al_{0.5}Ga_{0.5}As quantum well struct., single particle and collective excitations temp. and incident light intensity depend. 2-61920

interface electron states continued

- GaAs-AlGaAs heterojunctions and multiple quantum well heterostructs., doped, reson. inelastic light scatt. 2-61919
GaAs-Cr_{0.5}N_{0.5}(Si₃N₄), interface polar exciton, variational calc. (*Russian*) 2-76940
GaAs-Ga interface formation, electronic props., photoemission LEED and Auger study 2-98744
GaAs-Ga_{1-x}Al_xAs, quantum well struct., energy spectrum of donors, effective mass theory 2-56664
GaAs-insulating film interface, MESFET struct., elec. and optical props. 2-110486
GaAs-oxide interface electronic struct. 2-87409
GaAs-oxide interface states, two-beam transverse acoustoelec. spectroscopy study 2-82463
GaAs-Si₃N₄ interface quality improvement by surface treatment and annealing 2-110487
p-Ga_{0.47}In_{0.53}As-Zn-SiO₂ MIS struct., interface states and field effects meas. 2-98758
GaIn-GaAs MIS capacitors, interface states characts., G-V, C-V and transient capacitance anal. 2-92776
GaP Schottky barrier, struct. model and elec. characteristics and AES study 2-110170
GaP-AlP(100) superlattice band struct. 2-110460
GaSb, Schottky barrier form., MOS interface states 2-82428
GaSe-metal interfaces, Fermi level pinning, Schottky limit, photoelectron spectra study 2-56670
Ge (100) alkali metal adsorption, surface cond. and interface states, EELS study 2-92716
Ge (111) surface covered with Na, K or Cs in submonolayer range, EELS obs. 2-72585
Ge/Ni, monolayer metal coverage, interface electronic struct., XPS study 2-82455
Ge/Pd, monolayer metal coverage, interface electronic struct., XPS study 2-82455
Ge-Ag, interface electron struct., XPS study 2-82422
Ge-GaAs (110) interface, amorphous and cryst. films, electronic struct., XPS study 2-110456
Ge-GaAs (110) interface electron states, polarisation dependent UPS study 2-110455
Ge-GaAs heterojunction, work function, interface state effect (*French*) 2-61559
³He-⁴He interface electrons, localisation energy and effective mass, path integral formalism 2-61244
³He-⁴He phase separation boundary, charged particle systems, collective aspects, theoretical anal. 2-61230
(Hg,Cd)Te, photochemical oxidation 2-111345
Hg_{1-x}Cd_xTe, plasma anodised, interface study 2-104489
Hg_{1-x}Cd_xTe, surface and interface electronic props. derived from III-V cpds. theory 2-87355
InAs MIS diode, interface state distrib. determ., spectroscopic meas. method 2-66647
InAs MOS interfaces, reson. inelastic light scatt. 2-61919
InAs, thermal oxidation, oxide film characterisation 2-111348
InAs-GaAs superlattices, semimetallic, far IR magnetooabsorp. 2-61881
In_{0.53}Ga_{0.47}As/InP heterostruct. avalanche photodiodes, deep levels 2-110284
p-InP (111)A face, semiconductor interface charact. in photoelectrochem. solar cells 2-111552
InP MOS interface states, DLTS and photoionisation study 2-110488
InP MOS struct., photoionisation cross-section and interface state threshold meas. 2-98759
InP, Schottky barrier form., MOS interface states 2-82428
InP-Al_{0.5}As, anodic interface formation, enhancement MISFET appl. 2-82461
InP-Ge interface, X-ray photoemission spectra of band discontinuities 2-82447
InP-metal interface, Fermi level pinning and chem. struct., XPS study 2-110475
InSb MOS structure, interface characterization 2-87411
PbTiO₃-Si, RF sputtered, ferroelec.-semicond. interface states, DLTS and capacitance study 2-98746
Pd-Nb system, band occupancies, correlation to chemisorption 2-82424
Pt-Si (100), PES study of interface states 2-77152
Se/polystyrene-hexylmethacrylate copolymer interface, charge transfer 2-56722
Si (111)(2×1)-Au system, interface form., low energy EELS and AES study 2-104174
Si MOS inversion layer, Anderson localization, neg. magnetoresist. 2-61597
Si p-n junction, graded dislocation, capacitance-voltage meas. 2-104293
Si, polycrystalline under optical illum., phenomenological model of grain boundary trapping states 2-92653
Si-Au-SiO₂ MOS struct., Au related, interface states, quasi-static capacitance study 2-72069
Si:H, amorphous film, interfacial electronic struct. and density of states 2-66601
Si-Cr interface morphology and electronic struct., photoemission and band struct. calcs. study 2-82460
Si-d metal interface, interface, O₂ interaction, photoemission investig. 2-110474
Si-MOS structures, interface-state density investigation 2-66653
Si-Ni(Cr) interface, chem. bonding and density of states, UPS and LCAO calc. 2-110476
Si-Pt, interface states, XPS study 2-82423
Si-Pt(Pd)(Ni) interface bonding, XPS study 2-110477
Si-SiGe/TiO₂/Pt tandem type amorphous solar cells, spectral response width, plasma anal. 2-83487
Si-SiO₂, interface-state generation during electron avalanche injection 2-82416
Si-SiO₂, MOS capacitance, surface pot. and surface states 2-72059
Si-SiO₂ interface, Au doped, chemical bond model for Au surface states 2-110480
Si-SiO₂ interface, elec. props., negative bias-temp. test influence 2-77190
Si-SiO₂ interface, electron irradi., trapped charge sites, XPS study 2-77140
Si-SiO₂ interface, Fowler-Nordheim tunnelling 2-82462
Si-SiO₂ interface, Si ion implantation, defects, deep levels, annealing, C-V characts. study 2-61403
Si-SiO₂ interface, slow and fast states induced by hot electrons, expt. study 2-87395
Si-SiO₂ interface electronic struct. 2-56711

interface electron states continued

- Si-SiO₂ interface in MOS struct. positive-state generation during Fowler-Nordheim tunnelling 2-77189
 Si-SiO₂ interface props. studied by constant capacitance DLTS method 2-61606
 Si-SiO₂ interface state density determ., single HF approx. 2-115906
 Si-SiO₂ interface states, H₂ anneal, stress behaviour 2-56712
 Si-SiO₂ interface states determ. by thermally-stimulated current method (*Chinese*) 2-66642
 Si-SiO₂ interface states, effect of trichloroethylene, C-V measurement techniques 2-72065
 Si-SiO₂ interface states, AC field effect study 2-115897
 Si-SiO₂ junction, interface electronic struct. 2-110485
 Si-SiO₂ MOS interface states, optical excitation by IR light 2-56714
 Si-SiO₂ MOS struct., interface charge inhomogeneities, surface photovoltaic meas. 2-115899
 Si-SiO₂ MOS struct. with PbTiO₃ layer, electronic props., laser annealing effect 2-82792
 n-Si-SiO₂ MOS structure, interface minority carrier traps, optical DLTS study 2-77186
 Si-SiO₂ MOS system, interface state generation 2-87408
 Si-SiO₂ photoelectrochemical solar cell performance, surface film effect 2-111568
 Si-SiO₂ structures, traps in transition region, TSCR study 2-98754
 Si-SiO₂ system, interface state generation by photoinjecting electrons from Al field plate 2-66603
 Si-silicide interfaces, electronic struct., review 2-115847
 Si-SiO₂ interface, localised intrinsic Si gap states 2-92714
 Si₃N₄ layer in NMOS struct., charge density distrib., surface states 2-92773
 SiO₂ interface degradation and minority carrier lifetime effects of laser beam processing 2-61609
 SiO₂ thermally grown thin films, electron trapping 2-66683
 SiO₂-Si interface effects in avalanche injection of electrons 2-56719
 SiO₂-Si interface states and charge generation by electron tunnelling 2-111720
 Si(111)-Ni interfaces and thin films, valence photoemission study 2-105044
 n-TiO₂-aqueous electrolyte interface, photoinduced and dark charge transfer obs. 2-92747
 TiO₂-Be electrodes physical props. anal. during photoassisted oxidation of water 2-73127
 V/Si interface, Schottky barrier formation 2-82433
 V₂O₅-P₂O₅ glass, metal-semicond.-metal struct., dielec. depolarisation currents and loss meas. (*Russian*) 2-61612
 ZnS:Mg AC thin film electroluminescent devices, luminescence-voltage characs. 2-104967
 ZnSe-GaAs(110) and ZnSe-Ge(110), heterojunction band discontinuities, XPS study 2-111024
 ZnSe-Ge heterojunction interface, nature of band discontinuities 2-104463

interface phenomena

see also adsorption; crystal surface and interface vibrations; interface structure; Kapitza resistance; semiconductor-electrolyte boundaries; surface phenomena

- adsorption effects at liquid-solid interfaces, Raman spectrosc. obs. 2-98428
 p-alkoxyazobenzene, expt. obs. of growth of mesophase in elec. field 2-55846
 alloys, precipitate coarsening, induced by point defect recombination under irradi. 2-83121
 alloys, solidification, primary dendrite arm spacing 2-105138
 BCC crystal-melt interface, mol. theory 2-92343
 bimaterial body, notched, out of plane shear 2-91243
 bimaterial incompressible body, plane strain interfacial fracture anal. 2-55498
 bimetallic interface, hydrodynamic plasma solutions, of Boltzmann equation 2-71896
 bimetallic interface, surface plasmons, non-existence of hydrodynamic soln. 2-72052
 binary Lennard-Jones fluid mixture, liquid-vapour interface, surface segregation and tension 2-115495
 binary mixtures boundary, surface film thickening 2-104213
 brittle crack propagation, debonding of two linear chains of atoms 2-86787
 butane, rapid evaporation at the superheat limit 2-109173
 ceramic/ceramic (metal) systems, surfaces and interfaces, 17th Univ. Conf. (7th LBL/MMRD Int. Materials Symp.), Aug. 1980 2-94909
 cohesion parameters applic. to wetting and adhesion, review 2-104119
 contact boundary mixing, stationary shock wave effects 2-60707
 convection, surface tension-driven at plane interface, linear perturbation anal. 2-61257
 crack propagation at material interfaces, crack profiles determ. 2-116627
 creep fracture, intergranular, aggressive environments 2-83201
 crystallization boundary, discontinuity surface model, energy balance 2-86844
 cyclohexane-aniline near crit. binary liq. mixture, short-ranged roughness on the near-critical liquid interface 2-56171
 Czochralski oxide melts, flow transitions 2-60899
 dense bubble swarm, interphase transport and velocity in homogeneous liq. and porous medium 2-114895
 diffuse interface, optical reflectivity 2-55063
 diffusion and segregation 2-104128
 diffusion parameters, asymptotic expansions (*Russian*) 2-92370
 diffusion width and boundary diffusion coeff., Fisher model, numerical soln. (*Russian*) 2-98349
 dispersant effectiveness test based on the drop-weight interfacial tension test method 2-67685
 distortions in two phase systems, surface dislocation description 2-92373
 drops, surface tension, statistical mech. theory 2-56304
 elastic props., US study 2-83340
 ferrite-semiconductor struct., cylindrical, azimuthal electron drag by magnetostatic waves 2-92730
 ferromagnet, magnetostatic interface waves 2-56845
 fibre reinforced composites, coated, raindrop impact, indirect damage 2-62229
 fibre reinforced composites, short unidirectional fibres, prediction of failure modes 2-66114
 film-vapour interface, local equilib. condition 2-98364

interface phenomena continued

- floatation of sphere and cylinders by pendant bubbles or liquid-liquid interfaces (*French*) 2-92308
 fluctuations and Ising model in random field 2-74362
 fluid interfaces, surface compositional elasticity and sorption parameters 2-76812
 fluid systems, with spin, boundary conditions, nonequilibrium thermodynamics 2-79517
 Gibbs adsorpt. eqn., appl. to interfacial 2-82123
 glass microstructure, surface and bulk, conf., University Park, PA, USA (July 1981) 2-89438
 heat-flow distribution and combined heat-mass transfer processes at the contact interface of a friction pair 2-60360
 III-V compounds, contact phenomena between liq. phase and substrate during LPE 2-61305
 insulating films on semiconductor substrates, 'conf.', Erlangen, Germany (April 1981) 2-53429
 inter-electrode gap region, electrophys. props. of liqs. determ. and influencing factors (*Russian*) 2-67753
 interfacial wave nonlinear self-modulation 2-86290
 interphase boundaries theory, geometric parameters use 2-71808
 intrinsic liquid-vapour interface, rel. to phase transition 2-115493
 isothermal phase transformation, planar interface instability 2-61110
 kinetic drumhead model 2-76877
 liquid-air interface in lubrication flows, boundary conditions 2-91493
 liquid-gas interface, nonlocal density functional theories 2-110091
 liquid-liquid interface, adsorbed species surface diffusion and convection, theory 2-98387
 liquid-liquid two-phase flows in annuli, capacitance method for determ. position and struct. of interface (*German*) 2-76052
 liquid-solid interface, viscosity effect 2-98392
 liquid-vapour interface, density profile, generalised van der Waals theories 2-92309
 liquid-vapour interface, surface tension, elastic moduli 2-56301
 mean square fluctuation, capillary waves 2-86978
 mechanical props., mech. marginal oscillator meas. method 2-56317
 metal droplets, undercooled, heat flow during solidification 2-56162
 metal film on semiconductor, interactions, book contrib. 2-61213
 metal-electrolyte interface, double layer, nonlocal electrostatic model 2-87369
 metal-metal interface, electron transmission coeff. 2-92731
 metal-metal interface interactions, similarity to metal-semiconductor interfaces 2-115578
 metal-semiconductor interface interaction studied by soft X-ray photoemission spectroscopy 2-110051
 metal-semiconductor interface interactions, similarity to metal-metal interfaces 2-115578
 microemulsions, crit. behaviour 2-57642
 microemulsions, statistical mech. of interfacial region 2-57640
 micromechanics, review 2-82188
 microstructural stability, geometrical aspects 2-105168
 MNOS structure, surface state density evaluation 2-61602
 molecular crystal surfaces, energy level bending 2-104449
 molecular orientation at gas-liquid interface, for model fluids 2-115496
 MOS device, oxide and interface charge generation by electron injection 2-56718
 naphthalene-Cu interface, viscosity and thickness of quasi-liquid layer during melting (*Russian*) 2-115396
 nitroethane+3-methylpentane mixt., thermally excited capillary waves, light scatt. spectroscopy 2-75982
 nonequilibrium junction effects, boundary conditions for charge and heat transfer eqns. (*Russian*) 2-61563
 nonequilibrium segregation coefficient, rel. to liq.-solid interface during recrystn., laser-annealing 2-71654
 particle stability, with recoil resoln. 2-67339
 photoelectrochemical cells, electrical power and H₂ generating, carrier recomb. at grain boundaries and liq. interfaces, chem. control 2-111573
 photoinsulator-airgap-dielectric system, surface charge calc., separation of surfaces in elec. field 2-87337
 planar lattice gas, phase separation, intrinsic interface profile 2-74364
 polymer-metal interface chem. interactions, correlation with adhesion 2-78132
 Potts model, three state, in 2D, interface props. 2-112828
 self-similar diffusional processes of phase transition, front instability 2-61118
 semiconductor interfaces, physics and chemistry, review 2-115874
 semiconductor-metal interfacial reaction at room temp. 2-56267
 solar energy conversion technologies, interface microstruct. and microchem., research needs 2-87078
 solar energy conversion technologies, interface needs and design requirements 2-88457
 solar energy conversion technologies, interface problems for quantum and thermal systems, review 2-88456
 solar energy conversion technologies, ion etching limitations for interface analysis, review 2-88413
 solar energy conversion technologies, solid-gas interface meas. techniques, review 2-87044
 solar energy conversion technologies, solid-gas interface reactions, research needs 2-88378
 solar energy conversion technologies, solid-liq. interface problems, review 2-87043
 solar energy conversion technologies, solid-liq. interface research needs 2-88464
 solar energy conversion technologies, solid-solid interface and diffusion, research needs 2-86948
 solar energy conversion technologies, solid-solid interface research needs, adhesion abrasion and polymer coatings 2-88247
 solar energy conversion technologies, surface analytical techniques, review 2-88412
 solar materials, research needs and opportunities, conf., Denver, USA (June-July 80) 2-84374
 solar materials, review 2-88458
 solid-liquid interface, Stefan problem with heat flux, exact soln. 2-92168
 solid-vacuum interface, thermodynamic equilib. rel. to vacuum deposition 2-61310
 solidification interface, two dims. shape, Cauchy integral method 2-92160
 solidification interface during continuous casting, Stefan problem 2-93497
 spatially dispersive media, boundary conditions 2-61561

interface phenomena continued

- steel, C, ferrite grain growth, effect of cementite particles (Polish) 2-67282
 steel, low alloy, fatigue failure at inclusions, influence of vacant lattice sites 2-83199
 steel, pearlitic eutectoid, phase interfaces and dislocations positron trapping 2-99619
 steel-inclusion boundary, interphase props. and degree of struct. refinement 2-72685
 subband physics with real interfaces, review 2-61610
 surface physics, conference, Varna, Bulgaria (Sept.-Oct. 1980) 2-89468
 triethanolamine, interfacial resistance to evaporation, under vacuum 2-61256
 UPS and Auger anal., combined apparatus for thin film and interface studies 2-11634
 void growth, effect of precip.-matrix interface sinks 2-86661
 water-oil (air) interfaces, phase transitions in monolayers 2-66324
 water/high-energy solid, adsorption of hydrocarbon, thermodynamics of displacement wetting 2-76780
 Zircaloy-2, beam oxidised, oxide/ α and α/β phase interface advance kinetics 2-66300
 Ag₂Se-Se-Au(Cr)(Ag)(Ag₂Se) thin film sandwich, polarised memory switching obs. 2-104468
 Al alloys, submicron powders, rapidly solidified, microstruct. 2-67313
 Al-Cu layer, evaporated, interface elec. resist. and Auger profiling 2-77160
 Al-GaAs(110) interface, possibility of adatom cluster formation 2-61555
 Al₂O₃ fibre reinforced Al, work of fracture, effect of isothermal exposure and thermal cycling 2-57472
 Al₂O₃ fibre reinforced Al-Mg, fabrication method 2-67259
 B fibre reinforced Al, work of fracture, effect of isothermal exposure and thermal cycling 2-57472
 Co-polybutadiene interface chemistry, ⁵⁷Co emission Mossbauer spectroscopy 2-87638
 Cu wire/cement interface, statistical anal. of decohesion rel. to fibre reinforced composite 2-67475
 Cu/Ni bilayer system, interfacial diffusion coeffs. meas. during diffusion induced grain boundary migration 2-71739
 CuPbM, (M=Ag, Ni, Sn, Sb), solid-liquid two-phase system, equilib. microstruct. and interface tensions (French) 2-61156
 *He solid-superfluid interface, roughening transition 2-82071
 Hg-solution interface, adsorpt. of poly-DL-alanine 2-71790
 Hg-solution interface, adsorpt. of α -naphthoic acid (α -naphthoate ion) 2-110159
 Mo film on Si, ion beam induced interfacial reactions, TEM obs. 2-110050
 Na₂, surface emission from liq. Na, laser diagnostics 2-70444
 NiO/Fe, solid-state displacement reaction at 1000°C 2-77805
 Pt-Si system, mechanisms and interfacial layers, book contrib. 2-61214
 Ru complexes, soln.-polymer film interfaces, outer sphere electron transfer kinetics 2-62385
 Si, stacking fault growth and shrinkage kinetics in oxidizing ambient containing a Cl cpd. 2-98117
 Si/SiC system, interfacial energy and Si+C reaction rel. to sintering 2-55981
 Si-d metal interface, interface, O₂ interaction, photoemission investig. 2-110474
 Si-metal interface, low temp. intermixing reactions 2-115579

interface structure

- ceramic/ceramic (metal) systems, surfaces and interfaces, 17th Univ. Conf. (7th LBL/MMRD Int. Materials Symp.), Aug. 1980 2-94909
 charged hard sphere-dipolar hard sphere mixture near charged wall, interfacial struct. 2-115498
 corrosion, interfacial, effect of boundary struct. 2-93657
 deformation by moving interfaces 2-77830
 diamond-metal interface, effect of electronic struct. of diamond surface on strength 2-82418
 diffusion couples, planar binary couples, growth kinetics, thin film and bulk cases 2-86943
 FCC crystal-liquid interface, thermodynamic and struct. props., molecular distrib. function anal. 2-56166
 FCC/BCC interfaces, grain boundaries, atomic simulation, O-lattice theory 2-92372
 filled epoxy resin, dynamic mech. props., effect of boiling water 2-88117
 fluid phase interface struct., theory 2-115492
 fluid-solid interfaces, wetting transitions 2-115501
 gas-liquid-solid contact region, struct. and stress 2-115500
 III-V semiconductor epitaxial layers, chem. interface width and struct., Auger meas. technique 2-87086
 interphase interface struct., theoretical study 2-71811
 liquid metal-solid interface, true contact area, expt. study 2-56328
 liquid metal-vapour interface struct., pseudoadatom theory, computer simulation 2-115497
 liquid-gas interface profile, generalised van der Waals theory 2-104118
 liquid-vapour interface, fluctuations round equilibrium, hydrodynamic theory 2-86977
 longitudinally compressed elastic plate influence on stream wave perturbation development 2-61258
 martensite-type interphase boundaries, differential dislocation density calc. 2-60980
 metal-oxide interface, edge-on TEM obs. 2-72889
 MIS and MIM multilayer thin film systems, interfacial reactions, AES study 2-92291
 misfit dislocations, theory 2-110166
 monolayers at air-water interface, elec. field effects 2-115538
 multilayer structure morphology, surface enhanced Raman scatt. 2-110478
 photoemission into electrolytes from metals, as solid state and interfacial physics technique, review 2-62041
 polymers, adsorbed at solid-soln. interface, config. investig. by small angle neutron scatt. and NMR 2-114140
 quartz crystal, growth history 2-93401
 semiconductor MBE films, interface microstruct. props. 2-87082
 semiconductor multilayer struct., interfacial relax., ion channelling study, review 2-71536
 semiconductor-metal interfaces, chem. and electronic struct. 2-82458
 silicide-Si interface electronic states and microstruct. 2-87412
 solar energy conversion technologies, interface microstruct. and microchem., research needs 2-87078

interface structure continued

- solar energy conversion technologies, ion etching limitations for interface analysis, review 2-88413
 solar energy conversion technologies, mech. integrity of solid-solid interface, review 2-87077
 solar energy conversion technologies, solid-gas interface meas. techniques, review 2-87044
 solar energy conversion technologies, solid-liq. interface problems, review 2-87043
 solar energy conversion technologies, solid-liq. interface research needs 2-88464
 solar energy conversion technologies, surface analytical techniques, review 2-88412
 solar materials, interfacial phenomena and features, review 2-88458
 solid-liquid interface, struct. and thermodynamics 2-115499
 solid-liquid interface, photoemission and photoexcitations as probes 2-83431
 solid-liquid interfaces, spectroscopic techniques 2-82127
 SOS epitaxial film, fault-free Si at Si-Al₂O₃ interface 2-115575
 steel, alloy, interphase boundary migration, bowing mechanism 2-83129
 steel, austenitic stainless, weld metal, carbide form. at 649°C 2-67345
 steel, dual-phase, deform. characs., effect of martensite vol. fraction 2-67443
 steel, low alloy, high strength, cold metals, nature of acicular ferrite 2-67286
 steel, Mn(Nb), intercrit. austenitisation, quantitative study 2-77854
 steel-Al deformation welds, fracture toughness testing 2-67483
 Y_{3-x}La_xPb_{2-3x}Fe_{2-3x}O₁₂, epitaxial layers, interface anal. using SIMS 2-82171
 Ag/(111)Ag, in-situ UHV high-resolution TEM surface study 2-98411
 Ag/(111)Pb, in-situ UHV high-resolution TEM surface study 2-98411
 Ag-GaAs (100), interface struct. and electronic props. meas. 2-110171
 Ag-Si (111), interface growth, intermixing, UPS study 2-110165
 AgF-LaF₃ reversible interface, Auger depth profiling and impedance study 2-71807
 Al-Ag-Al strip, pressure-welded, interdiffusion layer struct., ultramicrotomed thin section method 2-71738
 Al-Cu layer, evaporated, interface elec. resist. and Auger profiling 2-77160
 Al-GaAs Schottky barriers, influence of interface composition 2-82432
 Al-Mg/Al/Al-Mg composite, dislocation struct. and element diffusion resist. 2-82037
 Al-Si-Ti structure, use of Ti thin layers to retard reaction of Al with Si 2-71737
 Al-SiO₂-Si system, hydrogenation of defects at the Si-SiO₂ interface 2-56373
 Al-transition metal nitride (carbide) films, interfacial reactions, expt. study 2-56368
 AlAs-GaAs superlattice, Zn diffusion and disordering along its layers, expt. study 2-56253
 AlGa_{1-x}As-GaAs interface, extrinsic layer, photolum. study 2-115576
 AlSb, MBE growth on GaAs(GaSb)(InAs) and RHEED characterisation 2-87087
 Au electrode, interface with electrolyte, effect of adsorbed water, work function and pot. of zero charge meas. 2-61557
 Au/(111)Pb, in-situ UHV high-resolution TEM surface study 2-98411
 Au/Ag thin films, diffusion-induced grain boundary migration 2-71735
 Au/Cu, thin films, diffusion-induced grain boundary migration 2-71735
 Au/Pt (001) and (111) interface struct., misfit dislocations, TEM study 2-76843
 Au-Si:H, amorphous semiconductors interface reactions and Schottky barrier formation, expt. study 2-110176
 AuGe/GaAs, ohmic contacts, interface struct., SIMS study 2-82150
 Cd_{0.2}Hg_{0.8}Te, anodic oxide layers, interface struct., SIMS-AES XPS investig. 2-104208
 CdS-Cu, interface form., Schottky barriers, interdiffusion and chem. processes, XPS study 2-77182
 CdS-CuInSe₂ solar cell, interface formation, comp. and stability, XPS, EELS and AES study 2-111554
 CdTe-Au electroless contacts, phys. props., Rutherford backscatt. and AES anal. 2-110168
 n-CdTe-electrolyte interfaces behaviour modification by surface etching 2-71777
 CdTe-TeO₂ epitaxial layer, interface struct., high resolution TEM study 2-56367
 CoSi₂-Si interface, lattice imaging 2-115609
 Cu/Sn, bimetallic thin films, interfacial reaction kinetics 2-66298
 Cu-Ga (23.7 wt.%), migration kinetics of β - γ_m transformation interface 2-72691
 Cu₂-CdS photoconverters, electron microprobe analysis and degradation 2-73113
 Cu₂S, chalcocite, Cu vacancy ordering and transition to djurleite, TEM study 2-115222
 Fe, oxidation, high temp., stress effects, SEM obs. 2-99592
 Fe-Cu-Ni (2.2 at.%), e-Cu precip. on interphase boundaries, orientation relationships, electron microscopy study 2-72707
 Fe-Si/Zn, diffusion couples, periodic form. of FeSi bands 2-76755
 GaAs LPE layers, dislocations as growth step sources, rel. to interface struct. 2-115615
 GaAs, MBE growth on Ge (100), interface morphology, RHEED study 2-56386
 GaAs, thermally oxidised, interface comp. studies using Auger depth profiling 2-78154
 GaAs:Si, interface struct. between Ga facet grown region and normal region (Chinese) 2-110167
 GaAs/Sb interface, elastic low-energy electron diff. 2-76842
 GaAs-Ag interface, formation, struct., electronic states 2-104485
 GaAs-Au interface, solid state reactions, cryst. struct. and microstruct. correlation 2-115616
 GaAs-Ga_{1-x}Al_xAs_{1-y}P_y heterostructure lattice matching rel. to laser fabrication (Chinese) 2-66375
 GaAs-InAs(100) heterojunction, MBE grown, lattice disorder, Rutherford backscatt. and channelling study 2-110202
 GaAs-W(Ta)(Re)(Ir)(Mo), refractory contacts, interface reactions and Schottky barrier form. 2-110444
 GaP Schottky barrier, struct. model and elec. characteristics and AES study 2-110170
 GaSe-SnO₂ heterostructure, depth profile, XPS and AES study 2-61299
 Ge, (111)-stressed, binary electron-hole liq., phase separation, surface struct. role 2-71882

interface structure continued

- Ge, MBE growth on GaAs (100), interface morphology, RHEED study 2-56386
- Ge-Au interface cpd. formation, valence band and cone level UPS study 2-110175
- Ge-GaAs, (110) and (111), MBE grown, interface morphology, RHEED study 2-98470
- Ge-GaAs (100) heterojunction, MBE growth, surface processes, LEED and photoemission study 2-110203
- Ge-GeO₂ systems, direct obs. of atomic struct. of interfaces 2-97871
- Ge-GeS interface struct., LEED, HEED and Auger spectra study 2-71809
- Ge-Si (111) epitaxial system, interface struct., high energy ion scatt. study 2-76840
- InAs-GaSb superlattices, ion beam crystallography 2-116318
- InGaAsP/GaAs superlattice struct., hydride VPE growth 2-99352
- InGaP/GaAs superlattice struct. hydride VPE growth 2-99352
- InGaP_{0.01}Zn(Te)_{0.99} LPE layer on GaAs, doping effect on physical, elec. and optical props. 2-110501
- InP-Ga_{0.47}In_{0.53}As-InP DH epitaxial layers, chem. interface width and struct., Auger meas. technique 2-87086
- InP-metal interface, Fermi level pinning and chem. struct., XPS study 2-110475
- Li₂B₄O₇-5H₂O, growth and growth mechanism 2-97963
- Mo-Si (111) interface reactions, synchrotron UPS and AES studies 2-110173
- Mo-Si interface, MoSi₂ formation kinetics meas. during CW laser scanning 2-92025
- Ni-base eutectic superalloy, $\gamma/\gamma'-\alpha$, interfacial struct. 2-82149
- Ni-Cu misfit boundaries, grown-in dislocation generation during 3D nucleation and growth 2-103772
- Ni-Si, interfacial cpd. form. and electronic struct., photoemission and AES study 2-82036
- Ni-Si/Si interfaces, Schottky barrier height correlation with phase stoichiometry/structure 2-82434
- NiSi₂-Si interface, lattice imaging 2-115609
- Pb/(111)Ag, in-situ UHV high-resolution TEM surface study 2-98411
- Pb/(111)Au, in-situ UHV high-resolution TEM surface study 2-98411
- Pd-Au interface, low temp. alloying, AES study 2-71810
- Pd-GaAs interface reactions, struct. characterisation by X-ray diffr. 2-110172
- Pd-Si interfaces, X-ray study of domain struct. and stress in Pd₂Si films 2-115614
- Pd-Si/Si interfaces, Schottky barrier height correlation with phase stoichiometry/structure 2-82434
- Pd-Si(111) interface, ion beam crystallography study 2-115613
- Pd-Si interface anal. of high resolution electron microscope images 2-115611
- Si (111)(2×1)-Au system, interface form., low energy EELS and AES study 2-104174
- Si, dislocations and interface characterisation, high resolution TEM study 2-66005
- Si LPE layers, dislocations as growth step sources, rel. to interface struct. 2-115615
- Si p-n junction, ion implanted, CW laser annealed, elec. and struct. props. 2-115872
- Si/Pd-W(Pd-Si)(Pt-W)(Pt-Si), shallow silicide contact of high Schottky barrier formation, expt. study 2-66622
- Si/Si₃N₄, plasma enhanced thermally grown film, interface struct. and stoichiometry, backscattering-channelling study 2-56392
- Si-Co thin film reactions, Co₂Si and CoSi growth kinetics and thermal stability obs. 2-92290
- Si-Cr interface morphology and electronic struct., photoemission and band struct., calcs. study 2-82460
- Si-NiSi₂ interface, lattice imaging and defects 2-66378
- Si-Ni(Cr) interface, chem. bonding and density of states, UPS and LCAO calc. 2-110476
- Si-Pd-Si epitaxial interface, defect struct. 2-66381
- Si-Pd-Si interface, lattice imaging and defects 2-66378
- Si-Pd(Ag) on Si (111)7×7, struct. studies of Schottky barrier formation by surface EXAFS 2-110174
- Si-sapphire interface, high resolution TEM study 2-66380
- Si-Si₃N₄ interface anal. using spectroscopic ellipsometry 2-79647
- Si-Si₃N₄ interface, defect evolution, synchrotron X-ray topographic obs. 2-98471
- Si-SiO₂ interface, atomic roughness, oxidation parameters influence 2-56372
- Si-SiO₂ interface, atomic struct., ion backscatt. channelling study 2-104172
- Si-SiO₂ interface morphology 2-56371
- Si-SiO₂ systems, direct obs. of atomic struct. of interfaces 2-97871
- Si-Ti (Ni) interface, laser and electron beam irr., silicide form. 2-66377
- Si-W(Ta)(Mo), polycrystalline Si film growth and disilicide formation 2-71817
- SiC/B fibre reinforced Ti alloys, heat-resistant, diffusion-affected interaction 2-88029
- Si₃N₄ thin films, comp. and electron stress effects, X-ray photoelectron spectra study 2-83001
- Si₃N₄-GaAs interface, sputtered, ellipsometric study, optical props. 2-76841
- SiO₂ films, thermally nitrated, MOS characts. 2-61590
- SiO₂-InP interface, plasma-enhanced CVD growth, XPS and TEM study 2-110169
- Si(111)-Ag interface oxidation and struct., photoemission investig. 2-88380
- Ta₂O₅-Ta interface profile, Auger and sputter depth profiling study 2-104175
- Ti alloys, interface phase, identification from diffr. effects 2-76364
- W-GaAs Schottky barrier, elec. props. and interface chem., XPS study 2-115853
- Yb₂O₃, grain boundaries, interface crystallography (French) 2-86685
- Zn solid/Zn-In(Bi)(Sn)(Pb) liquid, equilib. transitions of solid-liquid interface 2-93487
- ZnO-Al₂O₃(SiO₂)(TiO₂), struct. and chem. comp. of transition region 2-76851

interface tension *see surface tension***interface vibrations** *see crystal surface and interface vibrations***interfaces, computer** *see computer interfaces***interfaces, mechanical** *see mechanical contact***interfacial energy** *see surface energy***interfacial tension** *see surface tension***interfacial waves** *see surface waves (fluid)***interference**

see also interference (signal); interference (wave)
metallic glasses, crystalline embryo model 2-97927

interference (signal)

see also crosstalk; electromagnetic interference; intersymbol interference
EM waves reflection by periodically stratified dielectrical medium, TV signal interference caused by tall buildings 2-70488
holographic interferometry, interference immunity 2-60046
voltage fluctuations induced in transatlantic cable, geomagnetic origin 2-100242

interference (wave)

see also acoustic wave interference; electromagnetic wave interference
diffraction pattern dislocations for continuous waves and pulses 2-101182
rain scatter interference dependence on polarisations and positions of terrestrial and Earth stations 2-94477

interference spectrometers

cryogenic Fourier transform spectrometer, balloon-borne, for atm. IR emission meas. 2-117474
echelle-interferometer Cassegrain spectrograph, appl. to astronomical spectroscopy 2-106534
Fabry-Perot photoelectric spectrometer for Doppler width (temp.) and shift (wind) determ. analytical description 2-83950
fast-scanning Fourier spectrometers, receiver-amplifier circuit characts. 2-89833
Fourier transform, accessories and attachments for capability enhancement 2-112992
Fourier transform, double-beam optically compensated, performance 2-113003
Fourier transform, far-IR, high-resolution, developments 2-113007
Fourier transform, IR, using cooled interferometer, appl. to emission spectra obs. of organic overlayers on refl. substrates 2-116225
Fourier transform IR, beam condenser-microscope system for high press. studies and general microsampling 2-113006
Fourier transform IR, for use at Cassegrain focus of astronomical telescope 2-117594
Fourier transform IR, vel. errors influence on optimal design 2-113010
Fourier transform IR emission polarisation microspectrophotometer for analysis of thin adsorbates 2-116746
Fourier transform IR spectroscopy detection in gas chromatography, interferometer stability, noise sources 2-116753
Fourier transform IR spectroscopy detection in gas chromatography/mass spectroscopy, instrument design and optimisation 2-116755
Fourier transform IR spectroscopy detection in gas chromatography/mass spectroscopy, small FTIR spectrometer system use 2-116756
IR photothermal beam deflection Fourier transform spectrometer 2-84718
Michelson interferometer, He-cooled, for far-IR astronomy on GIRL 2-117595
Michelson interferometer, reflectively scanned, performance characts. in Fourier transform spectroscopy 2-113008
Michelson interferometer spectrometer, calibration procedures 2-113009
multiple-beam selective interferometers, optical characts. 2-95461
polarising Martin-Puplett interferometric spectrometers for near and subMM spectra, book 2-112668
selective modulation interferometric spectrometer as tunable optical filter 2-109017
SISAM high-resolution spectroscopy 2-69264
twin-etalon scanning spectrometer, high-luminosity high-resolution, analytical description 2-53842
D anal. spectrometer and sample technique for enriched water samples 2-53852

interference spectroscopy

see also Fourier transform spectroscopy
astronomical interference spectroscopy, appl. of echelle-interferometer Cassegrain spectrograph 2-106534
Fabry-perot scanning interferometer for student meas. of spectral line splittings 2-79304
far-IR spectroscopy using PET-microcomputer-based Fourier transform and data acquisition system 2-95491

interference suppression

AC, LF, system for reducing, in vicinity of scanning electron microscope 2-74575
adaptive nulling technique for signal reception 2-97300
ECG ambulatory tape analysis, Concordia high speed system, design for noise immunity 2-94231
meteoric propagation of radio waves, chromometer scales comparison errors reduction 2-69146
optical fibre transmission (Japanese) 2-65397
seismic sounding, correl. noise suppression using encoded sweep technique for Vibroseis 2-89011
strain-gauge balance, dynamic interference compensation 2-58808
switchgear noise levels measurement and reduction measures (German) 2-65429
Ge PIN diode IR detectors, oct. for elimination of voltage spikes due to cosmic rays 2-84702

interferometers

see also acoustic wave interferometers; electromagnetic wave interferometers; interferometry
electron, mixed-type, theory 2-89873
electron interferometry, amplitude division, appl. to obs. ferromagnetic domain walls 2-89874

interferometry

see also acoustic wave interferometry; electromagnetic wave interferometry; holographic interferometry; interferometers
quantum mechanics test by neutron interferometers 2-95050

intergalactic matter

see also clusters of galaxies; galaxies
Abell 1560, 2356 and 2384, gas X-ray emission anal. and cluster evolution 2-101077
Abell 1763, X-ray galaxy cluster, intracluster gas density and cluster mass from X-ray meas. 2-68909
Abell 2069, X-ray cluster of galaxies, clumpy distrib. of galaxies and X-ray emission 2-68910
Abell 2241E and W, intra cluster medium in both clusters 2-94846
Abell 496, cooling intracluster gas, X-ray anal. 2-84336

intergalactic matter continued

- Abell 566, intracluster medium props. from radio and X-ray obs. 2-106934
 AM-4, intergalactic globular cluster discovery 2-74041
 clouds at large red shift, Lyman α absorption lines in quasars 2-117769
 cluster hot gas flow past galaxy, viscosity, turbulence and thermal cond. effects 2-58477
 clusters, gas struct. and origin from X-ray luminosity rel. to vel. dispersion 2-101079
 formation of elliptical and spiral galaxies in rotating haloes 2-101068
 galaxy clusters, halo, magnetic field distribution from X-ray and radio map anal. 2-58505
 galaxy interactions 2-112589
 galaxy protoclusters, nonlinear growth of density perturbations in expanding collisionless medium 2-101045
 gas flow interaction with galactic wind, numerical gas dynamics theory 2-100729
 gas flow round galaxies, dynamics 2-94824
 gas inflow, effects on chemical evolution of two-component galaxies 2-106897
 gas inflow into irregular galaxies, effect on chemical evolution 2-89363
 gas properties in cosmic voids (*Russian*) 2-68947
 hot plasma in closed Universe 2-84308
 intracluster gas, scatt. and polarisation of central radiogalaxy radio emission (*Russian*) 2-106923
 intracluster gas, X-ray surface brightness distrib. rel. to clusters substructure 2-106938
 intracluster gas in clusters containing classical double radio sources, X-ray emission obs. 2-58474
 intracluster gas rel. to radio galaxy evolution, 102.5 MHz obs. of X-ray clusters 2-112599
 LMC-SMC intercloud bridge region, H I gas distrib. 2-106916
 Magellanic Stream, dynamics rel. to three interacting galaxies model 2-68904
 Magellanic Stream, mapping in 21 cm H I line, UHF obs. 2-63652
 Magellanic Stream, test particle simulation and model 2-63681
 Magellanic Stream interaction with Ursa Minor dwarf galaxy and Draco system 2-68901
 Magellanic Stream region, detect. of diffuse emission region in H α , obs. 2-58469
 Magellanic Stream structure and props. 2-63680
 Magellanic Stream-Milky Way interaction, obs. of infalling clouds with very high vels. 2-74083
 magnetic fields and rotation in Euclidean cosmological models 2-58508
 massive neutrinos, emitted photons to ionise gas, possible UV detect. methods 2-11773
 massive photons, rel. to intergalactic UV radiation 2-79796
 NGC 3607 group of galaxies, hot intergalactic matter X-ray emission obs. 2-84335
 'pancake' structures in early Universe, max. density in clouds of heavy neutrinos (*Russian*) 2-95891
 primordial gas heating by background radiation in presence of heavy elements, effects on microwave background spectrum 2-101046
 protogalactic gas cloud collisions, induced star formation 2-112551
 protogalaxies gas cloud collisions, hydrodynamical simulation 2-112550
 QSOs at large redshift, spectral energy distrib., intervening clouds effects, visible obs. 2-68919
 radio sources, fluid dynamics of relativistic beams flowing through channels rel. to double sources evolution 2-84337
 radiogalaxy clouds interaction with intergalactic gas flow, wind instability theory (*Russian*) 2-106924
 shock waves from quasar collisions, rel. to triggering of galaxy form. 2-68902
 suprathermal grains producing EAS 2-84053
 Virgo cluster, intergalactic extinction of quasars rel. to isotropy of Hubble modulus (H_0) 2-79240
 Virgo cluster, intergalactic extinction of quasars rel. to isotropy of Hubble modulus (H_0) 2-79241
 void in Bootes, implications of redshift distrib. of Markarian galaxies 2-68898
 wind effect on corona 2-63679
 winds from galaxies in early evolution scenario 2-112577
 H I and tidal debris in galaxy groups 2-63682
 H I Lyman α absorption lines in close QSO pair spectra 2-84309
 H I outlying ring around NGC 628, Sc I galaxy 2-106887
 He ionisation balance in intergalactic medium, photoionisation anal. 2-94837

intermediate bosons

- Abelian gauge theory, spontaneously broken gauge invariance, massive vector mesons, Higgs bosons 2-84783
 axion mass, in CP-conserving method with extra U(1) chiral symm. 2-54012
 axion prod. in parton model 2-101674
 axion production in $T \rightarrow \gamma X_i$, upper limit 2-101723
 axion production in e^+e^- annihilation, possible expt. test (*Chinese*) 2-54192
 axion suppression in SU(9) theory, fermion mass changes 2-101628
 baryon asymmetry and nucleon decay in supersymmetric SU(5) GUT 2-101617
 Cabibbo mixing from 2nd generation Higgs bosons, spontaneously broken SU(2) \times U(1) \times U'(1) 2-89921
 coloured pseudo-Goldstone boson pair production at very high energies, hypercolour 2-101652
 composite quark-lepton model, generation, confinement and S^0 scalar mesons 2-79849
 composite SU(3) gauge bosons in nonAbelian theory 2-59129
 composite SU(5) gauge bosons and fermion condensation patterns 2-84817
 cosmology, axion models, Z(N) breaking, domain walls role 2-74133
 CP violation, mass matrix in Higgs-boson model 2-69387
 diffractive photoproduction cross section, QCD planar ladder diagram anal. 2-69426
 double charged Higgs bosons and lepton number violating processes 2-69388
 electroweak gauge boson effects in superconductors, P violation, neutral currents 2-59079
 far-acting arion, stable massless 0^{++} Goldstone particles (*Russian*) 2-101638
 gauge field theory, book 2-84399

intermediate bosons continued

- Goldstone boson's partners mass in supersymmetric gauge theory 2-79799
 grand unification, spontaneously broken continuous global symmetry 2-107592
 grand unified model with Bogolubov's symmetry breaking mechanism 2-79801
 grand unified theories, effective parameters and renormalisation group 2-84826
 heavy Higgs boson, decay into vector bosons, Weinberg model calc. 2-74644
 Higgs boson invisible decays to axions, majorons, neutrinos or light Higgs 2-59207
 Higgs boson phenomenology in standard SU(2) \times U(1) electroweak model 2-107572
 Higgs meson, neutral, production in e^+e^- collision, theoretical anal. (*Russian*) 2-74677
 Higgs mesons, grand unified theory 2-107579
 Higgs mesons, technicolour and effective technicolour equivalence 2-107578
 Higgs particle prod., nucleon intrinsic charm 2-79842
 Higgs physics expt. search 2-79787
 Higgs scalars, in SO(10) grand unified theory 2-107590
 in SU(2) $_L \times$ U(1) 2-54038
 intermediate vector bosons, mass and width corrections 2-107630
 Lagrangian field theory, invisible Goldstone bosons 2-95736
 lepton-nucleon scatt. and neutrino puzzle 2-54129
 light scalar particle limits (*Russian*) 2-101602
 long range arion field in RF band from massless Goldstone particles 2-113316
 Majoron emission by neutrinos in Gelmini-Roncadelli gauge model 2-54048
 mass in SU(2) $_L \times$ SU(2) $_R \times$ U(1) $_{B-L}$ electroweak gauge model 2-79813
 massive electrodynamics, gauge technique 2-107602
 massless composite fermion models, discrete chiral symmetries 2-113169
 maximal grand unification model based on SU(16), gauge hierarchies and baryon nonconservation 2-95713
 nonlinear σ model as effective Lagrangian 2-95629
 parity-violating nuclear force, parameters estimation using single Z-boson factorisation relations 2-79954
 pseudo-Goldstone technicolour bosons (*Russian*) 2-107623
 pseudoscalar boson, two-photon decay obs. 2-107664
 renormalisable model with Peccei-Quinn global symmetry, axion elimination by 't Hooft mechanism 2-95755
 review of 'New Physics' 2-54049
 rishon model, particles, hypercolour, intermediate bosons 2-113249
 Salam-Weinberg theory expt. verification 2-69396
 search for intermediate vector bosons 2-69404
 second massless axion in SU(3) $_C \times$ SU(2) $_L \times$ U(1) $_Y$ standard model 2-89926
 semileptonic processes mediated by W, O(α) corrections, large m_W , m_Z behaviour 2-59114
 SO(10)' effective technicolour model, CP violation and axions 2-84824
 SO(10) grand unified model, prospects for second neutral vector boson at low mass 2-95715
 SO(10) grand unified theory, intermediate mass scale through subgroup SU(3) \times SU(2) \times U(1) \times U(1) 2-84823
 SU(10) unified gauge theory, CP violation, axions 2-74636
 spin 1/2 fermion scatt., lowest order electroweak corrections, one loop amplitudes, decays, masses 2-59076
 SU(2) $_L \times$ (2) $_R \times$ U(1) $_{B-L}$ electroweak model, low-energy phenomenology and neutral weak-boson masses 2-69391
 SU(2) $_L \times$ U(1) spontaneously broken gauge theory structure 2-64249
 SU(2) $_R$ weak bosons, in SO(10) grand unified theory 2-107590
 SU(2) \times SU(2) $_L$ theory, strong bounds on weak couplings 2-95711
 SU(2) \times U(1) \times SU(2) $_L$ gauge model, weak gauge bosons above or straddling standard-model masses 2-64256
 SU(2) \times U(1) gauge models, permutation symmetries and fermion mass matrix 2-69392
 SU(2) \times U(1) Weinberg-Salam model, strongly interacting Higgs sector effects 2-64246
 SU(2) \otimes U(1) model, dynamical symmetry breaking and radiative correction to weak-isospin relation 2-95714
 SU(5) GUT, Higgs boson mass, neutral scalar current suppression with flavour change (*Russian*) 2-113194
 SU(5) GUT, Higgs particle 45-plot role, cosmological baryon to entropy ratio 2-113191
 SU(5) model, spontaneous CP breaking, natural flavour conservation and baryon asymmetry 2-64258
 superheavy gauge boson mass, symmetry breaking effects in grand unified theories 2-84818
 supersymmetric flavour unification model SU(11), invisible axion and proton decay 2-95726
 supersymmetric SU(5) model, naturally massless Higgs doublets 2-113184
 superweak CP violation and right-handed horizontal interactions in Weinberg-Salam theory 2-59073
 toponium decays, weak tbW coupling meas., neutral current coupling 2-79866
 weak boson mass spectra in extended gauge models SU(2) $_L \times$ U(1) \times G 2-107573
 weak boson substruct., weak neutral current mixing angle 2-54047
 weak current algebra, composite W bosons and weak interactions universality 2-101683
 Weinberg model, γ -Z mixing, effective charges, $a=-3$ gauge 2-74631
 Weinberg model with gravitational instability, Higgs boson mass, conformal invariance 2-89922
 $e^+e^- \rightarrow Z^0$ -hadrons, energy-energy correlations, structure functions 2-101749
 e^+e^- , Bhabha polarised scatt., multiboson electroweak gauge models 2-54132
 e^+e^- , charged Higgs boson search methods using jet identification 2-101739
 e^+e^- , charged Higgs or pseudo-Goldstone bosons detection and study through jet identification 2-54185
 e^+e^- annihilation, search for charged scalar particles pair 2-101747
 e^+e^- annihilation, sum rules, in electro-weak gauge theories, weak neutral boson prod. 2-54195
 e^+e^- collisions, creation of Z and Higgs bosons 2-107676
 $e^+e^- \rightarrow e^+e^-$, Bhabha scatt. around Z_0 pole 2-95811
 $e^+e^- \rightarrow \gamma Z$, neutral gauge boson self-couplings tests 2-59138

intermediate bosons continued

- $e^+e^- \rightarrow \mu^+\mu^-$ search for charged Higgs, scalar τ , technicolor test 2-107675
 $e^+e^- \rightarrow Z^0 \rightarrow W^+H^-$, Higgs sector struct. (*Russian*) 2-59088
 γW^0 mixing in composite weak boson models, confinement in quantum hadrodynamics 2-64267
 $\gamma N \rightarrow e^-e^+X(\mu^+\mu^-X)$, deep-inelastic photoproduction, broken colour symmetry effects 2-107668
hh, high energy scatt., massive lepton pair prod. in perturbative QCD 2-54220
hh $\rightarrow W^+X$, W ang. distrib., kinematics, quark subprocess 2-113306
 $J/\psi \rightarrow \gamma +$ axion, branching ratio, upper limit 2-54166
 $J/\psi \rightarrow \gamma a$, $a =$ axion, unambiguous test for axion 2-69470
 $K_L^0 \rightarrow \mu^+e^-$, charged boson mass bounds in Fritzsche-Mandelbaum composite model 2-113253
np $\rightarrow d +$ axion, search for axions at LWR, cross section 2-89976
 $\nu N \rightarrow \mu X$, tests for heavy weak bosons and cosmic antimatter 2-100688
 $\nu N \rightarrow \nu NX$, Higgs boson coupling const. (*Russian*) 2-95817
pp, collider energies, gauge vector boson pair prod. in SU(2) \times U(1) model 2-84928
pp, pseudoscalar meson flux, axions, ghosts, standard model chiral predictions test 2-89984
pp, W^+W^- , $W^2\gamma$ prod. in quark-antiquark annihilation 2-107702
pp, W's, W pairs and Higgs boson prod. cross-section for CERN UA1 expt. 2-107701
pp, Z and W bosons prod. 2-107700
pp collider physics, conf., Madison, WI, USA (Dec. 1981) 2-106992
pp collider physics 2-113313
pp(p) $\rightarrow Z^0$, lepton pair prod. asymmetries, Weinberg model calc. 2-107611
pp(pp) \rightarrow HX, associated prod., Weinberg model 2-84925
pp(pp) \rightarrow HX, neutral Higgs boson prod. cross section 2-69497
pp(pp) $\rightarrow Z^0X \rightarrow l^+l^-X$, scaling, nonleading QCD corrections 2-113305
pp $\rightarrow W^+X \rightarrow l^+X$, W bosons decay-lepton distrib. study 2-54221
 $\pi^- \rightarrow l^- + \bar{\nu}_l + a$, decay in axion presence (*Russian*) 2-69452
QQ $\rightarrow l^+l^- +$ Higgs boson or pseudo Goldstone boson, discrimination between technicolour and Higgs breaking 2-54139
T $\rightarrow \gamma a$, $a =$ axion, unambiguous test for axion 2-69470
W, Z bosons mass calc. (*Russian*) 2-74638
W boson condensation in mag. field, spontaneously broken symm. restoration (*Russian*) 2-59062
W/p mass ratio, empirical formula 2-69438
W-boson and hadron jet production in hadronic collisions (*Russian*) 2-89985
 W^+ , decay into doubly charged Higgs scalars, χ^{++} 2-95890
 $W^+ \rightarrow P^+ \gamma$, P=pseudoscalar meson, strong interaction effects 2-59155
 W^+ production in photon-lepton interactions 2-113262
Z boson mediation, neutral current processes, observables relationships 2-113206
Z \rightarrow Higgs boson, Higgs trigger in e^+e^- collisions 2-69502
Z $\rightarrow \gamma$ mixing in superconductors, P-violation from Josephson effect 2-59080
 Z^0 , decay into doubly charged Higgs scalars, χ^{++} 2-95890
 Z^0 , transverse momentum distrib., higher order QCD test 2-74650
 Z^0 boson production, photon-lepton collisions 2-113262
 Z^0 decay, exclusive heavy meson prod. in QCD perturbation theory, Z^0 width 2-64334
 $Z^0 \rightarrow l^+l^-$, charge and helicity asymms., Weinberg model calc. 2-107611
 $Z^0 \rightarrow P^0 \gamma$, P=pseudoscalar meson, strong interaction effects 2-59155
 $Z^0 \rightarrow W^+X^+$, test of weak boson self-coupling below W^+W^- threshold 2-84843
 e^+e^- Cu, axion search in monochromatic M1 transition 2-113393
 e^+e^- annihilations, 29 GeV, pointlike charged spin-0 particles, limits on prod. 2-101742
H-H oscillations, double proton decay and grand unified theories 2-89924

intermediate state

- charge carrier lateral focusing (*Russian*) 2-66718
type I superconductivity, current induced destruction role of one- and two-dimensional mixed state 2-61670
In and In-Sn(Bi), US attenuation in supercond. and intermediate states 2-77229
Pb, thermal resist. of normal/supercond. interphase boundary 2-77228
Sn, hollow, two-dimens. mixed state statics 2-98825

intermediate valence compounds *see mixed valence compounds***intermetallic compounds** *see alloys***intermodulation**

- distortion in sound channels in music recording, TV, cinematography appl. (*Russian*) 2-64155

intermodulation measurement

- No entries

intermolecular forces*see also Van der Waals forces*

- acetate ion, interaction with N^+ -containing mols., appl. to neurotransmitter binding 2-67928
acetonitrile, liq., dynamics and interactions, microwave and far-IR study 2-82869
p,p'-cyano-n-pentylbiphenyl/p-p'-dialkylazoxybenzenes, intermol. forces, dielec. meas. 2-76290
dibromomethane, Fermi resonance, intermolecular interactions, Raman obs. 2-64988
dichloromethane, Fermi resonance, intermolecular interactions, Raman obs. 2-64988
5-fluorouracil-adenine (guanine), pairing arrangement, mutagenic effect, iterative EHT calcs. 2-64883
formaldehyde, hydration, intermolecular interactions, SCF MO calcs. 2-85526
infinite range, rel. to Boltzmann eqn. 2-53702
interaction energies, transferable pot. function from quantum mechanical calcs. 2-108664
intermediate range separation, multipole moments, energy operators 2-54913
isopropanol- d_6 -HX complex, effect of H bonds on mol. vibr. (*French*) 2-58612
liquid crystals, dye-doped, electronic absorpt. spectra, intermol. interactions anisotropy effects 2-110886
pair polarisabilities, non-local contrib. 2-108657
propane- d_8 , Fermi resonance, intermolecular interactions, Raman obs. 2-64988
repulsion energy, rel. to viscosity of rarefied gas 2-80770

intermolecular forces continued

- ribonuclease A cryst., conformation, temp. depend., laser-Raman spectra and X-ray diffr. 2-73190
tertiary alcohols, rotamers, OH stretching freqs., solvent effects 2-54831
water, fluid, in space between two structureless walls, Monte Carlo calcs. 2-115128
H₂ intramolecular potential testing by shock compression of liq. H₂ 2-71605
HCl-acetonitrile (olefin) complexes, H-bonds, underdamped anharmonic stochastic oscill., IR obs. 2-85646
HF-CO₂ (N₂O), Ar matrix isolated, librational motion, IR obs. 2-64971
H₂¹⁶O, self-broadening coeff. of lines belonging to $2\nu_2$, ν_1 and ν_3 bands, meas. and calc. 2-54897
(H₂O)₂, geometry and relative stabilities, exchange interactions effects 2-59883
(H₂S)₂, geometry and relative stabilities, exchange interactions effects 2-59883
Li₂(Σ_g^+), excited state, ion-pair interaction effect on vibr. energy spectrum 2-80567
SO₂, electronic relax., collision induced, long range interaction mechanism 2-65079

intermolecular mechanics*see also association; intermolecular forces; kinetic theory of gases; liquid structure; liquid theory; Morse potential; potential energy functions*

- acetylene form. from CH fragments, intermol. forces calc., ab initio valence bond theory 2-80753
acetylene-HF (HCl), H-bonded complex, geometry and energy, ab initio MO calcs. 2-113861
n-alkene-n-alkyne mixtures, intermol. interactions, thermodynamic and optical props. (*German*) 2-85764
alkenes, free radical addition, charge transfer and spin transfer during chemical bond form., MO anal. 2-99646
B-DNA, interaction with Na⁺ and H₂O structural determ. 2-114141
benzene-n-dodecane, binary liq. mixtures, excess internal press. and intermol. interactions 2-71324
benzene-n-hexane, binary liq. mixtures, excess internal press. and intermol. interactions 2-71324
binary liquid mixtures, quadrupolar and dipolar elec. field effects 2-6-922
carbon tetrachloride-phenol (cresol), mol. interactions, US study 2-61067
chiral molecules consisting of two polycyclic chromophores, circular dichroism spectra, vibronic anal. 2-70310
coupled fragment MO method for interacting systems, rel. to frontier orbitals 2-59679
1,4 diazabicyclo [2,2,2] octane-phenol (thiourea), H-bonded complexes, ¹⁴N NQR study 2-108561
dimethyl ether-HI, mol. interactions in N₂ matrices, IR and Raman spectra 2-96567
electronic excitation energy, intermol. transfer and quenching 2-108663
ethanol, H complexes, vibr. anharmonic anal. IR spectra 2-108460
ethene-HF, configs., interaction energy, ab initio SCF calcs. 2-113863
ethyl bromide, liq., mol. rot. diffusion tensor determ., PMR study 2-114020
ethylene-HF (HCl), H-bonded complex, geometry and energy, ab initio MO calcs. 2-113861
hexafluorobenzene-benzene (mesitylene) mixtures, Raman linewidth study of mol. interactions 2-87780
N-hydroxy-2-naphthylamine with guanine and adenine, stacking interactions 2-105639
hydroxyl-carbonyl binary liquid mixtures, molecular interaction study using US meas. 2-71576
interacting systems, props., basis set superposition effects, dipole moments and polarisabilities 2-85768
intrinsic molecules in bilayer membranes, lipid mediated interactions 2-83552
isobutene + Na⁺ interaction, semiempirical ab initio calcs. 2-114064
long chain molecules, intermol. interactions, PCIO and INDO calcs. 2-75186
long-range interaction energy, multipole expansion, invariance props. 2-102564
methane dissolved in liquid freon, Raman spectrum, isotropic scatt. band profile, intermol. interactions effect 2-59809
methane-CO₂, thermal diffusion meas., interaction parameters 2-102565
methane-He, thermal diffusion meas., interaction parameters 2-102565
methanol, H complexes, vibr. anharmonic anal. IR spectra 2-108460
methanol, liq. struct., thermodynamic props. and H-bonds, pressure effect, intermolecular interactions 2-71326
methyl iodide in carbon disulphide soln., mol. dynamics and interactions, far IR and microwave spectra 2-80617
multicentre integral n-graphs, upper bounds, Holder inequality estimate 2-84576
2-naphthylamine metabolite with guanine and adenine, stacking interactions 2-105639
1- and 2-naphthylnitrenium ion with guanine and adenine, stacking interactions 2-105639
p-nitrophenol-donor systems, proton transfer and H-bonds, spectroscopic studies 2-70370
organic liquids, flow behaviour, modified Hildebrand eqn. appl. 2-81637
[2,2]paracyclophanes-electron acceptor, charge-transfer complex, solvent and struct. effects on stability and form. 2-108550
peptide-ion model complexes, charge transfer, induced polarisation 2-73183
perfluorocarbon, use in O₂ and CO₂ transport, STO-3G calcs. 2-88527
perturbative configuration interaction method, appl. to intermol. and intramol. calcs. 2-102399
phospholipids in inverted micelles, small mols. interactions, NMR spectra 2-99913
pi-systems, environmental effects, deltalike function basis calcs. (*German*) 2-108671
polyatomic mols. in soln., intermolecular relax., vibronic spectra kinetics 2-113960
polymers, interaction, perturbational approach 2-96675
propan-1-ol, H complexes, vibr. anharmonic anal. IR spectra 2-108460
propionic acid dimer, intermol. interactions, PCIO and INDO calcs. 2-75186
rhodopsin-GTP-binding proteins, interactions, kinetics and stoichiometric anal., light scatt. meas. 2-57771
short-range repulsions, first-order SCF theory 2-108662
simple liquids and mixtures, mol. theory, review 2-55821

intermolecular mechanics continued

- TCNQ-TTF complex, intermol. interactions, closed-shell MINDO/3 calcs. (German) 2-108389
 triethylamine- I_2 charge transfer complexes and ion pairs, stoichiometry, permittivity effects 2-114063
 water, dense, mol. interaction at high temp. 2-91746
 zeolite crystals, cluster models, CNDO/2 calcs. including their electrostatic field and its effect on interacting mols. 2-115717
 Ar, liq. mol. dynamics simulation, collision times and durations 2-71321
 CO, dipole oscillator strength distrib., sums and dispersion energy coeff. 2-70342
 CO₂, dipole oscillator strength distrib., sums and dispersion energy coeff. 2-70342
 CsF-Ar, total cross section and small angle differential cross section, semi-classical anal. 2-108659
 F⁻ aqueous ion, intermol. nuclear spin-spin coupling and scalar relax., quantum and statistical mech. calcs. 2-90641
 H-bonded systems, intermol. interactions computations using charge transfer energy contrib. expansion 2-102563
 H₂, intermolecular forces via hybrid HF SCF plus damped dispersion energy calcs., spherical model 2-70372
 H₂-H₂, interaction dipole polarisabilities, MC TDHF theory calcs. 2-96447
 (H₂)₂ pot. surface and interaction between H₂ mols. at low temp., correl. effects 2-96484
 HCN, matrix isolated in Ar, intermolecular vibr., far-IR obs. 2-113973
 HCl in liquid Ar, local interactions, spectroscopic demonstration, cryosystems 2-70248
 HF-NN (OC), equil. struct., pot. energy surfaces, H-bonds 2-102656
 He-He, intermol. forces calc., ab initio valence bond theory 2-80753
 He-Li, intermol. forces calc., ab initio valence bond theory 2-80753
 LiH, intermol. forces calc., ab initio valence bond theory 2-80753
 N₂ gas, rotational relaxation, classical dynamics 2-85790
 NH₃, liquid, empirical pot. for conformational, intermol. and solvation studies 2-91747

intermolecular vibrations *see* molecular rotational-vibrational energy transfer**intermolecular vibrations (molecular crystals)** *see* lattice dynamics of molecular crystals**internal combustion engines**

- automobile engine using hydrogen storage technology, mixture formation and combustion 2-83443
 fluid motion studies in engine cylinder, stereo photography of neutral density He-filled bubbles 2-60674
 heat pumps, industrial, high temp., gas engine driven, design, construction, and testing 2-116844
 optimisation of model engine 2-67880
 use of hydrogen in dual-fuel engines 2-57671
 using Raman spectroscopy (German) 2-81421

internal conversion

- see also* conversion electron spectra
 coefficient calculations, rel. to nuclear struct. models 2-84995
 computation method differences 2-84996
 electron meas. using dE/dn plus E-counter system 2-96370
 magic nuclei, muonic conversion, microscopic description (Russian) 2-90745
 ϵ - β^+ conversion, rel. to double β^+ decay (Russian) 2-107807
¹¹²Al, low-seniority shell-model structure 2-54233
¹¹⁷Ba, relativistic and Coulomb effects in internal Compton effects (Russian) 2-107808
¹⁰⁷Cd, penetration effects in internal conversion process 2-95974
¹⁰⁹Cd, 203 keV transition, K-shell conversion, penetration effects 2-101842
¹²¹Cd^m, decay study by γ -ray and conversion electron spectroscopy 2-54306
¹⁵³Er, high spin states study 2-69514
¹⁵²Eu internal conversion coeffs. ¹⁵²Sm, ¹⁵²Gd transitions 2-90052
¹⁵²Gd, γ -transitions, decay energy 2-90045
⁷⁶Ge, 5/2⁺ level at 192.5 keV, 32.5 keV transition 2-84956
¹⁸⁵Hg^m, ¹⁸⁵Hg^m decays, ICE spectrum 2-113414
¹¹³In, relativistic and Coulomb effects in internal Compton effects (Russian) 2-107808
¹²¹In, decay study by γ -ray and conversion electron spectroscopy 2-54306
¹³⁵La levels study by X-ray and conversion-electron spectroscopy (Russian) 2-64370
¹³⁷La, N=80 nucleus, medium-spin levels and 360 ns 1⁺=19/2⁻ isomer 2-54232
⁹⁰Nb^m decay rate obs. via E3 conversion electrons 2-54315
⁹⁰Nb^m, internal conversion ratios and probabilities of 30.75 keV transition 2-95972
¹⁸⁰Os, side bands props. study using in-beam spectroscopy method 2-54246
²⁰⁴Po, 15⁻ isomer mag. moment and Po internal mag. field in Ni 2-69534
¹²³Po 0⁺ α -emitting state half life, transition, levels, spins 2-59298
¹¹⁹Sb levels from ^{119m}Te decay, 153 and 270 keV transition characts. 2-107793
¹³⁹Sm^m, ¹³⁹Pm, decay props. study from γ -ray, β^+ and internal conversion electron spectroscopy 2-54324
¹⁴⁷Sm nuclear states characts. and diluting transitions props. (Russian) 2-64369
¹⁵⁵Sm, rotational-vibrational band structure 2-54231
¹¹⁸Sn, excited 0⁺ states and elec. monopole transitions 2-69605
¹¹⁹Sn, M4 transition, chem. variation, inner electron shells role (Russian) 2-95973
¹²⁵Te, internal conversion of 35 keV M1+E2 transition, nucl. struct. and chem. effects 2-101843
¹²⁵Te^m, M4 K-conversion coeff. meas. of 109.3 keV transition 2-69606
¹²⁵Tl, relativistic and Coulomb effects in internal Compton effects (Russian) 2-107808
²³⁵U^m, internal conversion, lifetime and spectra, laser irradi. effect 2-74746
²³⁶U lowest octupole bandhead, spin, conversion electron spectra from ²³⁵U(n, γ) 2-113346
¹²²Xe^m, ¹²²I^m, ¹²²Te, decay scheme and periods, energies, intensities of transitions 2-64373
⁹⁸Zr, excited 0⁺ levels study 2-59288

internal conversion in atoms *see* Auger effect**internal conversion in molecules** *see* nonradiative transitions**internal fields, crystal** *see* crystal field interactions**internal friction**

- see also* Bordoni effect; damping; Snoek effect; Zener relaxation
 alkali-halide, CC dislocation oscillatory motion, electrostatic field effect 2-71463
 alloy, ordered partially, internal friction and dynamical stability of superdislocations 2-71449
 automatic tracking of a resonance peak in the Marx gauge technique 2-65547
 BCC metals, impurity interstitials strain ordering and associated anelasticity, theory 2-98242
 BCC metals, random interstitials strain ordering and associated anelasticity, theory 2-98243
 Bordoni internal friction peak interpretation 2-81891
 Bordoni relaxation, internal friction due and microdeform. due to intrinsic props. of dislocation 2-77862
 dislocation-induced nonsteady internal friction, temp. depend. calc. 2-103900
 free decay measurement, corrections due to inhomogeneous strains 2-105210
 free decay measurement, corrections due to inhomogeneous strains 2-105211
 glasses, internal friction background, migration model 2-88124
 metals, FCC, internal friction, time evolution under irradi., peaking effect 2-98196
 metals, internal friction, and elastic characts. determ., installation for 4.2 to 1200K 2-67701
 oscillating kink-mobility point defect interaction and resulting internal friction, computer simulation (Chinese) 2-92106
 PMMA, nonoriented, static load effect on mech. relax. processes 2-62156
 polymer, glassy, deform. props. prediction using dislocation analogy 2-62183
 polystyrene powder, rheological studies on compaction (Japanese) 2-83077
 quartz glass, static load effect on mech. relax. processes 2-62156
 Snoek-Koster peak concept 2-66122
 Snoek-Koster peak in BCC metals, model 2-66124
 Snoek-Koster peaks BCC metals, phys. models, review 2-66123
 Snoek-Koster relaxation, core diffusion and unpinning, models analysis 2-66126
 Snoek-Koster relaxation, kink-pair-form. theory 2-66125
 steel, alloy, heat treatment into lower bainite, C distrib., alloying elements influence (Russian) 2-67389
 steel, low C, internal friction, cyclic loading effect 2-77865
 steel, low C, cyclic stress-strain curves and internal friction at US freqs. 2-111321
 steel, Si, grain orientated, magnetomech. damping and mag. domain struct. 2-56907
 steel, stainless, austenitic, cold worked and/or H charged, internal friction peaks 2-56086
 stress amplitude-dependent interval, US oscillations 2-71554
 surfaces, thin films and interfaces, mechanical props., mech. marginal oscillator meas. method 2-56317
 torsion pendulum meas. technique for intrinsic internal friction in solids 2-98197
 Young's modulus defects and internal friction due to dislocation motion anharmonism 2-115353
 Ag₃Mg, ordered and disordered, cold-worked, internal friction and shear modulus meas. 2-116484
 Ag₃O internal friction, neutron irradi. effect 2-81889
 Al, single cryst., microstruct. development by internal isothermal friction (French) 2-114487
 Al-Cu, θ' precipitates, coherency loss, dislocations, plastic deformation effects, internal friction study 2-71464
 Al-Cu (0.5 wt.%, 0.21 wt.%), cold-worked, low temp. internal friction peaks meas. 2-88125
 Al-Mg(Fe), dil., electron irradi., self-interstitial-impurity complexes, internal friction study 2-56007
 Al-Mn solid soln., precip. and recrystn., internal friction obs., fine-grained struct. (French) 2-77842
 B fibre, reinforced Al, dynamic elastic modulus with solid-state chem. interaction 2-83158
 Bi-Sb alloy single crystals 2-71539
 Bi-Te, dislocation-induced US absorpt. and elec. props. 2-92115
 CaO-FeO-P₂O₅ glass, internal friction meas. 2-92105
 Cd, elec. current effect on dislocation mobility 2-109808
 Co-Pt (50 at.%), shear modulus, magnetomech. effects 2-56908
 Cr, electron irradi., internal friction 2-56085
 Cr-Rh-Zr dil. alloy, grain boundary relax., internal friction study (Russian) 2-93546
 Cu composite, porous and filled, internal friction and effective elastic moduli 2-99476
 Cu, neutron and electron irradiations, initial damage rates study of internal friction 2-92046
 Cu, plastically deformed single crystals, dislocation anelasticity in kHz range (German) 2-86680
 Cu, single crystals, plastically deformed, dislocation anelasticity in kHz range (German) 2-83162
 Cu-Al, amplitude dependent internal friction and microplasticity (Japanese) 2-77859
 Cu-Al and Cu-Al-Ni(Zn)(Si), β -type alloys, internal friction amplitude dependence meas. (Russian) 2-99469
 Cu-Al-Ni; loaded; internal friction meas. (Russian) 2-88116
 Cu-In, dil., electron irradi., self-interstitial-impurity complexes, internal friction study 2-56007
 Cu-Zn, interdiffusion, ultrasound influence (Russian) 2-66302
 Fe, magnetic domain walls, dislocation struct. effects, magnetomech. damping study 2-56885
 Fe-Al(Cr), elastic modulus and internal friction, mag. field effect 2-116050
 Fe-Cr based alloys, damping capacity, mag. field, heat treatment and cold working effects 2-57393
 Fe-Si (3 wt.%), plastic deform. in micro- and macro-stress regions, 293 to 773K (Russian) 2-99484
 Fe-Ti alloy, dil., dislocation relax. peaks and solid soln. softening 2-111224
 Fe-V (2.4 at.%), C diffusivity 2-92282
 Fe-V-Si-Mn-C, internal friction meas. (Russian) 2-88115

internal friction continued

- Fe₂Ni₁₀Cr₁₄P₁₅B₆, Metglas, heat treatment effect on internal friction 2-62151
 FeO-V₂O₅-P₂O₅ glasses, internal friction and elec. cond., interpret. w.r.t. valency state of V ions 2-92606
 Ge, internal friction meas. in intrinsic and n-type crystals 2-81890
 Ge, internal friction of dislocationless and growth-dislocation containing crystals, amplitude depend. meas. 2-92109
 In-Bi alloys, US vel. and internal friction investigation 2-71585
 KH₂(SeO₃)₂ ferroelastic, internal friction and shear modulus 2-103899
 LiF:Mg²⁺, internal friction and charged dislocations 2-81793
 LiKSO₄ crystals, anomalous changes in piezoelec. and elastic props. 2-99054
 Li₂O-Na₂O-SiO₂ glass, static load effect on mech. relax. processes 2-62156
 Mg, electron irradi., peaking effect, internal friction, irradi. temp. effects 2-92107
 Mg, phaseautomodulation 2-56087
 MgF₂ films, vacuum deposited, Young's modulus, internal stress and internal friction meas. 2-8185
 (Mn_{1-x}Fe_x)_{0.95}Cu_{0.05}, γ-phase, damping capacity and Young's modulus 2-57394
 Mn_{1-x}Ni_x, γ-phase, damping capacity and Young's modulus 2-57394
 Mo composite, porous and filled, internal friction and effective elastic moduli 2-99476
 Mo, dislocation relax. peaks, internal friction study 2-60994
 NaO₂-B₂O₃-SiO₂ glass, internal friction (*Japanese*) 2-83161
 Na₂O-B₂O₃ glass, fluctuation of ionic current induced by mech. stress, rel. to internal friction 2-92274
 Nb film, internal friction in vicinity of superconductive transition 2-66707
 Nb, neutron irradi. induced defects, detrapping of N and O atoms during post-irradi. annealing 2-103839
 Nb-H alloys, low freq. internal friction study 2-116479
 Nb-H alloys, low freq. internal friction study 2-116480
 Nb-Ti, anelastic relax. due to Ti-H complexes, internal friction spectra 2-111222
 NbH₄, twin boundary motion, sound attenuation study, microstruct. effects 2-81897
 Nd, high-temp. spectra, relax. and phase shift peaks 2-57395
 Ni composite, porous and filled, internal friction and effective elastic moduli 2-99476
 Ni, microstrain damping loops meas. during stage II deformation 2-57389
 Ni, polycrystalline, internal friction, plastic deformation and mag. field effects (*Russian*) 2-116489
 Ni-Co, relation between damping capacity and magnetomech. props. 2-57397
 Pb alloys, ternary, US crystallisation (*Russian*) 2-67201
 Pr, high-temp. spectra, relax. and phase shift peaks 2-57395
 Si, internal friction meas. in intrinsic and n-type crystals 2-81890
 Ta, deformed, low temp. internal friction 2-72751
 Ta-H alloys, low freq. internal friction study 2-116479
 Ta-H alloys, low freq. internal friction study 2-116480
 TaS₃, elastic anomalies at CDW transition 2-76564
 Th-Fe(Co)(Ni), fast diffusing solutes, thermal friction studies 2-98326
 Ti alloys, flexural and longitudinal US wave absorption at high intensities 2-61063
 Ti, internal friction, temp. depend. (*Russian*) 2-115351
 V film, internal friction in vicinity of superconductive transition 2-66707
 V, low temp. internal friction peaks, effects of deform. temp., orientation and H 2-72752
 V-H alloys, low freq. internal friction study 2-116479
 V-H alloys, low freq. internal friction study 2-116480

internal friction of liquids *see viscosity of liquids*

internal mechanics, molecular *see molecular vibration*

internal mechanics of atoms *see atomic structure*

internal modes *see molecular vibration in solids*

internal stresses

- amorphous, ribbons, mag. anisotropy distrib., internal stress fields (*Chinese*) 2-110602
 arc sprayed coatings, mech. props. and appl. 2-111347
 brittle solid, hysteresis in abrasive wear 2-67559
 coating, vapour deposited, residual stresses, calc. method, growth process influence (*Russian*) 2-77755
 cold-formed member behaviour under normal stresses, residual stresses effect (*French*) 2-111193
 composite, directionally reinforced, stress distrib. in components 2-62158
 container glass, optical props. 2-61858
 creep, dislocation struct. and internal stress, stochastic model 2-92088
 curved bodies, elastically and geometrically identical, rough contact, failure due to brittle fracture 2-97470
 Czochralski grown crystal, residual stresses calc. 2-91853
 determination of the troposphen shape and stresses in a tapered blade for a vertical axis wind turbine 2-67810
 diamond, lattice consts., and internal X-ray diffractometer with uniaxial stress apparatus study 2-65797
 diffusion in solids, effect of self-stress 2-115447
 disc, circular, residual stresses creation by heating, optimum control 2-91275
 ductile-brittle transition, kinetic criterion, rel. to fracture kinetics (*Russian*) 2-76575
 elastic strain energy accumulation during cyclic loading 2-103892
 epitaxial systems, internal stresses meas. in presence of plastic deform. 2-56401
 epoxy resins, materials variables controlling transverse cracking 2-105295
 epoxy thermosetting resin beams, quenched, viscoelastic anal. of residual stress 2-116473
 fatigue, high cycle, effect of self stresses 2-105310
 fibre reinforced composite, brittle fracture dynamics, num. expt. and comput. algorithm 2-60475
 fibre reinforced composite, infinite elastic body, stress field due to cylindrical inclusion with constant axial eigenstrain 2-93580
 fibre reinforced composite with rigid curvilinear crack and interface crack, antiplane deform. 2-97456
 fibre reinforced composite with viscoelastic matrix, stress dynamic redistrib. in broken fibre (*Russian*) 2-81258
 fibre reinforced composites, unidirectional, strengths and thermal residual stresses 2-83215

internal stresses continued

- fibre reinforced plastic, filament-wound disc, rot. strength, tensile stress, cracking and buckling failures (*Japanese*) 2-57465
 fibre reinforced polymers coatings, internal stresses, reduction by physicochem. means 2-83187
 film, ferromag., elastic strains in crystallite boundaries, segregated pt. defects effect on induced anisotropy (*Russian*) 2-66877
 fracture mechanics parameter, elastic-plastic, preloaded specimens (*Japanese*) 2-91331
 glass, opt. grade, stress distrib., nonuniformity during air-jet quenching 2-67274
 glass, toughened, residual stress meas. using magnetophotoelasticity 2-109257
 glued connections, residual stresses meas. at low temps. 2-72911
 hard alloys, elastic deform. during compression, math. modelling 2-77863
 heated orthotropic plates, stress function under steady temp. distrib. 2-55449
 homogeneous and heterogeneous materials, residual stress in near-surface region after grinding 2-105170
 hysteresis loop, statistical theory 2-98185
 laminated, brittle strength calc., computer algorithm, stress conc. role 2-60474
 laser radiation thermoelastic action on surface of a solid 2-115285
 locking solids analysis, dual math. models 2-114653
 measurement by selected NDT, review 2-57567
 measurement method based on zero entropy of activation concept 2-105430
 metals, sheet, residual stresses determ. 2-72902
 metalworking processes, math. modelling 2-105258
 microcrystals, conical, ion irradi., surface stress and plastic deformation 2-66777
 minerals, Young's modulus determ. by X-ray method 2-99616
 multilayer thin films on thick substrate, internal stress formula 2-66404
 neutron diffraction method of stress measurement, stress gradient in Al alloy bar 2-99618
 nondestructive residual stress meas. using X-ray diffr. 2-72937
 piezoceramic shells under electrostatic load, stress and deform. calc. 2-55455
 poly(phenylene oxide), tensile props. and density, effect of residual stresses 2-67401
 polycarbonate sheet, rapidly cooled from melt, residual stresses and their relief by sectioning 2-57378
 polyester, unsaturated, thermosetting resin beams, quenched, viscoelastic anal. of residual stress 2-116473
 polyimide film, surface tension, tensile stress effects, expt. study 2-98485
 polysulfone, injection molded, effects of residual stress and orientation on fatigue 2-67536
 pure rolling fatigue conditions, anal. of effect of microstruct. and internal stresses 2-57485
 PVC, plasticised, stress relaxation behaviour 2-88122
 rectangular cantilever crystal plates, stresses under transverse loading 2-97430
 residual stress distrib. in vicinity of fatigue crack tip and crack growth (*Japanese*) 2-77917
 residual stress mapping using US tomography 2-105396
 residual stress measurement, appl. of finite element calcs. 2-60493
 residual stresses, local, determ. from X-ray meas. (*German*) 2-93747
 residual stresses and fracture props., effects on weld repair processes service performance 2-62222
 revolving plate, thermopiezoelectric material, enclosing γ-ray source, stress and elec. induction 2-65483
 shell, elastic-plastic instability under compression 2-55465
 shell structures, stresses, use of doubly curved finite elements 2-55479
 single phase polycrystals, microcrack zone formation 2-103887
 SOS, laser annealed, electron Hall mobility and residual stresses, heat treatment effects, Raman study 2-98745
 SOS device structures, Raman meas. of stress 2-77499
 SOS films, non-homogeneous elec. transport, galvanomag. expts., internal stress influence 2-115904
 SOS structures, Hall mobility and capacitance meas., internal stresses and pot. fluctuations influence 2-82470
 spiral growth, hollow dislocation core form., stress influence 2-98086
 steel, B. type 10B35, X-ray factography on const. fatigue fractured surface (*Japanese*) 2-77919
 steel, cast components, fatigue strength increase by residual stresses development 2-116551
 steel, Cr-Mo, high strength, delayed fracture strength, influence of residual stress due to surface treatment (*Japanese*) 2-72810
 steel, Cr-Mo, vacuum carburised, SCM 420, fatigue strength, carburised layer microstruct. effects (*Japanese*) 2-105304
 steel, Cr-Ni-Ti(Al), austenitic, rel. between struct., internal stress, and creep rate 2-83177
 steel, fatigue strength, residual stresses and surface hardening effects eval. 2-111103
 steel, high speed, unidirectionally deformed layers, ψ splitting and microscopic residual shear stress in X-ray stress meas. (*Japanese*) 2-78011
 steel, loaded, brittle fracture cause 2-111310
 Steel, Low C, weld zone crack resistivity (*Korean*) 2-57461
 steel, low C austenitic, supercooled austenite, abnormal decomp. 2-72666
 steel, low-alloy, H embrittlement in long-term strength tests 2-67539
 steel, maraging, Ni and Cr effect on thermal stresses and relax. capability, thermal welding simulation (*Russian*) 2-67386
 steel, mild and low-alloy, high strength residual stress near fatigue fracture surface, meas. by X-ray method (*Japanese*) 2-77918
 steel, sheet, residual stresses determ. 2-72902
 steel, stress-relieved SAW metal, Nb microalloyed, mech. props. and microstruct. 2-105192
 steel parts, magnetabrasive polishing influence on macrostresses magnitude and distrib. (*Russian*) 2-77989
 steel plates loaded by uniaxial in-plane compression, evaluation of elastic-plastic analyses 2-91265
 stress wave interaction with a periodic system of curvilinear longitudinal shear cracks 2-60469
 surface layer, deformed, X-ray residual stress meas. and d-sin²ψ diagrams (*Japanese*) 2-71780
 thin elastic rods, non-homogeneous, subjected to time depend. stress impact, wave propag. 2-55477
 thin films, intrinsic stresses due to interfacial energy, theory 2-76873
 torsion bar, internal stress generated by plastic loading, X-ray meas. (*German*) 2-62336
 twinning interaction with slip 2-76489

internal stresses continued

- ureaformaldehyde resin, BaSO₄ filled, internal deform. determ. (*Bulgarian*) 2-99508
 X-ray lithography masks, optically-transparent 2-87117
 X-ray residual stress meas. using half-width method, statistical anal. 2-67682
 X-ray stress measurement by centroid method, statistical anal. (*Japanese*) 2-105413
 Zircaloy-4, recovery and deform. substruct. in high temp. plasticity, stationary and non stationary stress 2-83173
 x-Zr, dislocation motion simulation in an internal stress in creep 2-81791
 Ag films, struct. and internal stresses in various gases, ultrahigh vacuum measurements 2-82174
 Ag, optical films, mechanical props. 2-82191
 Al alloy 2024-T3, perforated sheets, reinforcement by thermal shock with laser beams 2-116452
 Al alloys, residual stress determ., nondestructive evaluation using acoustoelasticity meas. 2-93744
 Al, creep deform. characts., effective stress 2-62171
 Al, high-temp. creep, dislocation density and internal stresses (*Russian*) 2-67447
 Al, optical films, mechanical props. 2-82191
 Al-BN coatings, plasma deposited, residual stresses, growth process influence (*Russian*) 2-77755
 Al-Fe-Mg (0.25, 0.11 wt.%) alloy, alternating periodic serrations in tensile curves 2-99497
 Al-Zn (11 wt.%), long range internal back stresses, new evaluation technique 2-105220
 Al-Zn (9.5 at.%), high temp. creep mechanism and dissolution process, expt. study 2-88146
 Al₃Ga_{1-x}As epitaxial layer, graded band gap, dopant impurity effects on carrier lifetime, dislocation density and internal stresses (*Russian*) 2-77215
 B amorphous film, internal stress, Young's modulus and thermal expansion meas. 2-82187
 B fibres, strength characts., changes during annealing (*Russian*) 2-72796
 BaTiO₃, hot pressed ceramics, internal stresses, Curie temp. 2-88017
 C fibre reinforced epoxy, unidirectional, strengths and thermal residual stresses 2-83215
 Cr film, sputtered, internal stresses, optical reflectance, 2-82181
 Cr films, vacuum deposited, interaction with various gases, internal stress and resist. study 2-82186
 Cr, optical films, mechanical props. 2-82191
 Cr-Cu alloy film, mech. props., thickness depend. 2-115628
 Cu, deformed single crystals, near surface and bulk dislocations, X-ray line broadening study 2-116490
 Cu-Al-Ni β -phase shape memory alloys, intergranular fracture origin 2-72838
 Cu-Be (2 wt.%) alloy strips, residual stress profiles along rolling direction, X-ray diffr. obs. 2-67367
 Cu-Zn Al, martensitic, rapid solidification effects 2-111175
 Cu₂AlMn₃, solid soln. containing disperse ferromag. Cu₂MnAl inclusions, martensitic transition obs. (*Russian*) 2-98915
 Fe, lattice dilation by dissolved D 2-104066
 Fe, magnetic domain walls, dislocation struct. effects, magnetomech. damping study 2-56885
 Fe, unidirectionally deformed layers, ϕ splitting and microscopic residual shear stress in X-ray stress meas. (*Japanese*) 2-78011
 Fe-Al (40 at.%), quenched or electron irradi., nucleation of dislocation loops (*French*) 2-55968
 Fe-B layers, effects of annealing (*Korean*) 2-62150
 Fe-Bi-C amorphous ribbon, mag. props., deleterious effect of Al 2-87525
 Fe-Ni(Ti)(Ga)(Al)(Co)(Pt), flow stress at low temp., influence substitutional elements 2-105213
 Fe-Si (6 at.%) single crystals, strain rate vs. stress depend. 2-105240
 Fe-Si bicrystalline sample, magnetisation reversal dynamics 2-72259
 Fe₆₀Ni₄₀B₂ amorphous alloys, influence of heating on mag. props. 2-78535
 Fe₈₀Ni₁₈Mo₂B₁₈, Metglas MB 2826, internal stresses and spin texture, Mossbauer study 2-87634
 Ga_{1-x}In_xP_{1-y}As_y internal strain determ. using Vegard's law 2-103709
 Ge, internal strain tensor, bond-bonding parameter, X-ray study 2-91864
 Hg₂Cl₂, surface layer hardness, stress and etching behaviour, surface treatment effects 2-111335
 In thin films, strength characts., struct. and temp. effect 2-76875
 In_{1-x}Ga_xAs_{1-y}P_{1-y}InP LPE layers, strain anal. and optical props. meas. 2-66392
 KNbO₃, hot pressed ceramics, internal stresses, Curie temp. 2-88017
 LiF crystal, dielec. losses under deform. by conc. load 2-66984
 MgF₂ films, vacuum deposited, Young's modulus, internal stress and internal friction meas. 2-82185
 MgF₂(CaF₂)(BaF₂), optical films, mechanical props. 2-82191
 Mn ferrite crystal, Young's modulus and internal stresses, mag. field effects 2-56909
 Mo film, electrolysis prep., growth rate anisotropy and struct. (*Russian*) 2-61304
 Mo film, sputtered, internal stresses, optical reflectance, 2-82181
 (Na,Li)NbO₃, hot pressed ceramics, internal stresses, Curie temp. 2-88017
 NaCl, deformed, dislocation motion 2-60987
 Nb, film, stress-modification by ion bombardment during deposition 2-82180
 Nb₃Sn, for fusion reactor magnets, displacement cascades, TEM obs. 2-109862
 Ni alloy, heat-resisting, EP-741P, fracture behaviour investig. by thermal microscopy, P/M alloys 2-67545
 Ni, electroless deposits, heat treatment effects on physical props. 2-57384
 Ni films and coatings, porosity and internal stresses, annealing and thermal cycling effects (*Russian*) 2-76870
 Ni-base superalloys, P/M, fatigue crack initiation, effect of defects, surface-subsurface transition 2-67519
 Ni-Cr alloy, brazed ring, geom. parameters selection, tolerable stresses 2-99640
 Ni-Fe, ultrahigh vacuum deposition, magnetisation, resistivity and stress 2-82482
 Pb-Bi film, Josephson junction counterelectrode, strain distrib., X-ray study 2-82179
 PbTe epitaxial layers on BaF₂, misfit and thermal strains, magneto-optical and X-ray study 2-82175

internal stresses continued

- PbTiO₃-PbZrO₃-PbNb_{2/3}Zn_{1/3}O₃-PbNb_{2/3}Mn_{1/3}O₃-PbSb_{2/3}Mn_{1/3}O₃, stability of electrophysical props. 2-99059
 Pd-Si interfaces, X-ray study of domain struct. and stress in Pd₂Si films 2-115614
 Pd_{1-x}Ag_xHy, α - α' phase transition of H, X-ray scatt. study 2-103977
 Pt film, sputtered, internal stresses, optical reflectance, 2-82181
 Si, internal strain study 2-92084
 Si, internal strain tensor, energy dispersive X-ray study using 006 forbidden reflection 2-66102
 Si, lattice const., and internal X-ray diffractometer with uniaxial stress apparatus study 2-65797
 Si particle reinforced Al, SASI-50 composite, internal stresses and dimens. instability under cyclic thermal load 2-62210
 a-Si:H films, residual stress elimination 2-61317
 Si-Fe, domain structs. and stress distrib. due to ball-point scratching 2-82629
 SiC, fracture parameters evaluation, controlled flaw method (*French*) 2-88293
 Si₃N₄, hot pressed, grooved by single-point grinding, residual stresses 2-57455
 Si₃N₄, neutron irradiated, X-ray anal. of internal strain 2-93557
 SiO₂ thin films, effects of humidity on stress 2-92427
 SiO₂-Al₂O₃-P₂O₅-Sb₂O₃ glasses, strengthened by ion exchange, stress relaxation 2-99471
 SiO₂, stress-strain curves and internal stresses, bulge and tensile tests 2-82190
 Si₂ON₂, neutron irradiated, X-ray anal. of internal strain 2-93557
 SmCo₅-Sn(Fe), alloying addition effect on X-ray diffr. relative intensity (*Chinese*) 2-97993
 SnTe films, vacuum deposited, microstruct., X-ray diffr. study 2-115598
 Sr(NO₃)₂, growth strains, synchrotron radiation X-ray section topography study 2-86512
 Ta film, sputtered, internal stresses, optical reflectance, 2-82181
 Ti-Al, helical dislocations by low temp. thermocycling, TEM study 2-115237
 TiB₂ coating for fusion reactor first wall, characterisation by lattice constant meas. 2-74912
 TiN powder, shock treatment effect, microstrain increase 2-105112
 W fibre reinforced Cu composites, tensile yield behavior, effect of thermal history (*Japanese*) 2-105238
 W film, plasma-enhanced CVD, elec. resist. and film stress 2-93434
 WC-Co, elastic deform. during compression, math. modelling 2-77863
 Zr alloys, hydride precipitate stacks form., elastic strains role 2-72704
- internuclear double resonance** see *INDOR*
- interplanetary magnetic fields**
 see also *interplanetary matter*
 closed magnetic loop indicated by IMP spacecraft obs. 2-68584
 cometary plasma tails, mag. field strength rel. to interaction with turbulent solar wind 2-106615
 corona and heliosphere mag. field struct. model 2-73948
 correlation of ISEE 1 and ISEE 3 IMF observations 2-84060
 cosmic ray electron modulation by solar wind, mag. field effects 2-106441
 cosmic ray intensities rel. to polarity of solar wind mag. field 2-73805
 cosmic ray interactions with solar wind magnetic field 2-106435
 cosmic ray semi-diurnal anisotropy direction at Deep River rel. to interplanetary mag. field 2-117540
 Earth bow shock crossings, mag. field meas. rel. to shock surface elec. currents 2-100652
 energetic particles accel. by interplanetary mag. fields at 1 and 5 AU, theory 2-106443
 galactic cosmic ray modulation by interplanetary mag. piston, kinetic theory 2-112275
 geomagnetic activity prediction by spacecraft (*Japanese*) 2-73444
 heliosphere, magnetic field configuration and relation to spiral galaxies 2-58218
 kinematic model 2-117555
 large-scale variations between 1 and 5 AU, Voyager obs. 2-100690
 magnetosphere, polar cap, plasma convection with interplanetary mag. field component 2-68564
 magnetosphere field-aligned current response to IMF changes 2-89075
 magnetosphere interaction, relation between interplanetary mag. field and Birkeland current densities 2-100663
 magnetospheric geomag. variation (2-60 min) rel. to IMF 2-78915
 N-S component orientation diagnostics 2-84057
 northward interplanetary mag. field, effect on geomag. field inside auroral oval 2-112293
 sector boundaries, solar wind vel. and density 2-100696
 sector boundaries and coronal radial proton temp. gradients 2-106646
 sector boundaries extrapolated to Sun, correl. with chromospheric flare distrib. 2-84203
 sector boundaries three dimensional properties from cometary plasma tail disconnection events 2-68666
 solar flare protons, propag. and diffusion coeff. in interplanetary mag. field 2-100675
 solar magnetic loop extending beyond 1 AU 2-78926
 solar nebula, growth and decay of mag. fields rel. to effects of mag. and turbulent viscosities on nebula 2-100776
 solar wind, effect on cosmic ray accel. modulation and drift 2-73806
 solar wind, penetration into comet ionospheres 2-112295
 solar wind, statistical props. of MHD fluctuations assoc. with high speed streams 2-100697
 solar wind effect on cosmic ray drift 2-106440
 solar wind field effect on polar cap magnetosphere convection and elec. field 2-73789
 solar wind inhomogeneities, effect on galactic cosmic rays diffusion 2-73804
 solar wind mag. field fluctuations between 0.3 and 1 AU 2-84059
 solar wind mag. field variations in July 1977 in near-Earth space 2-112292
 solar wind magnetic field sector struct. rel. to major seismic events (*Chinese*) 2-100259
 solar wind magnetic helicity evaluation in homogeneous turbulence 2-71127
 solar wind magnetically closed regions 2-58219
 structure inside Mars orbit from cosmic ray var. 2-106466
 structure of interplanetary mag. field during first STIP interval 2-106465
 variation correlation with 1970-1972 geomag. storm var. 2-84018

interplanetary magnetic fields continued

Venus environment, on interplanetary mag. field 2-84132
 Venus ionopause, turbulent accumulation of interplanetary magnetic fluxes 2-63290

interplanetary matter

see also comets; cosmic dust; interplanetary magnetic fields
 cosmic rays, solns. of spherically symmetric transport eqn. in interplanetary space 2-106439
 disturbances of 1976 March to April, related geomag., cosmic ray and solar disturbances 2-58214
 dust, radionuclide production due to cosmic ray protons 2-89100
 dust as origin for radio and photographic meteors 2-100840
 dust dynamics and origin 2-63314
 dust grains, solar wind pressure 2-63202
 dust influx to Mars atmosphere, effect on $^{15}\text{N}/^{14}\text{N}$ ratio 2-106590
 dust particle dynamics, evaporative effects 2-106614
 Earth bow shock, anal. of surface elec. currents 2-100652
 electron streams, type III, Langmuir wave levels 2-73814
 galactic cosmic ray modulation by interplanetary mag. piston, kinetic theory 2-112275
 heliopause location from galactic cosmic ray modulation obs. 2-58210
 HELIOS mission, objectives, verification and results 2-63210
 influx to Earth from meteor obs. 2-100841
 International Solar Polar Mission 2-63211
 International Solar Polar Mission to study corona and interplanetary medium 2-63208
 ion-acoustic turbulence and fundamental emission for type III bursts 2-100893
 light scatt. theory for rough surfaced grains 2-89142
 maser source of water vapour line, interplanetary oscillations 2-100829
 meteoric material influx rate to Earth 2-100842
 plasma clouds 2-89197
 plasma density, vars. from min. to max. of solar cycle (1974 to 1981) 2-89196
 radio sources scintillation, ground-based obs. rel. to interplanetary disturbances 2-68585
 radiowave scintillation, astrophysics 2-89103
 scintillation of radiogalaxy Cygnus A at 81.5 MHz, VHF obs. 2-63695
 shock wave causing fluctuations in cosmic ray neutrons 2-73803
 solar cosmic ray particles, interplanetary acceleration of energetic particles at 1 and 5 AU 2-106443
 solar flare protons, propag. and diffusion coeff. in interplanetary medium 2-100675
 solar influence on Earth's atmosphere and interplanetary space, review 2-94474
 solar nebula, growth and decay of mag. fields rel. to effects of mag. and turbulent viscosities on nebula 2-100776
 solar type II radio events observed in interplanetary medium, general characts. 2-94572
 solar type III radio bursts, stratification of assoc. electron beams (*Russian*) 2-112416
 solar wind microturbulence from PSR 0531+21 flux at 74 MHz, interplanetary scintillation obs. 2-84253
 solar wind streams obs. for above or below ecliptic, correl. with high latitude coronal holes 2-100879
 structure of interplanetary medium during first STIP interval, rel. to prerelease of energetic solar particles 2-106465
 O⁺ contamination of solar wind by Venus 2-117553

interplanetary medium *see interplanetary matter***interpolation**

see also function approximation
 conforming axisymmetric shell element 2-109216
 creep strength of irrad. stainless steel, time-temp. depend., extrapolation and interpolation 2-99633
 crystal potential, interpolation form factors calc. (*Russian*) 2-98520
 image sampling, reconstruction, and the effect of sample-scene phasing 2-108797
 large deformation static and dynamic finite element analysis of extensible cables 2-60442
 one-group nodal code, fourth order polynomial interpolation 2-107944
 oscillatory infinite integrals, numerical evaluation by extrapolation 2-79364
 piecewise interpolation technique for audio signal synthesis 2-86177
 speech synthesis units representation, approximate, nonlinear interpolation use 2-91174
 tristimulus values calc. method using integration and interpolation 2-58878
 vibration of circular arches, theory of matrix and interpolation (*Chinese*) 2-81273

interstellar dust *see cosmic dust***interstellar magnetic fields**

see also interstellar matter
 3C 31, 66B and 129, struct. and mag. fields, polarisation and spectral indices 2-101047
 3C 76.1, radiogalaxy, polarisation sources and mag. fields, UHF obs. 2-79230
 collapsing clouds, effects of mag. fields on cloud contraction and rotation 2-100909
 dark lanes in spiral galaxies, large-scale magnetic fields 2-101030
 Eridanus H I shell, mag. field meas. from radio obs. 2-106868
 fluctuations due to distortion of regular field by SNR shells 2-63717
 galactic disc, plane-parallel mag. fields in thin gaseous disc in random motion 2-68905
 galactic disc magnetic field generation, turbulence effects 2-106927
 galactic disc magnetic fields, energy density and origin 2-74049
 galactic field causing material mag. braking and infall to centre 2-117744
 galactic magnetic field correl. with dynamics and evolution 2-112574
 galactic magnetic field survival, magnetic monopole flux 2-117584
 galactic magnetic fields, contrib. of parity nonconservation to cosmic magnetic fields origin 2-63227
 grain alignment in the galactic magnetic field 2-58439
 gravitational collapse star formation 2-112434
 inhomogeneities of interstellar medium, rel. to radio emission of two types of supernova remnants (*Russian*) 2-101026
 Kleinmann Low Nebula mag. fields from OH maser UHF obs. 2-117726
 M17, H II region, mag. field rel. to optical linear polarisation 2-112536
 in M31, globular cluster optical polarization: meas. 2-63547
 M87, jet mag. field struct. from polarimetry in UVB 2-106915

interstellar magnetic fields continued

molecular clouds, mag. field strength rel. to cosmic rays confinement 2-112271
 R Monocerotis, shell dust grains aligned by mag. field, contrib. to NGC 2261 polarisation 2-63581
 NGC 6946, Scd galaxy, mag. field from 2.8 cm radiocontinuum distrib. obs. 2-68897
 Orion Molecular Cloud, mag. field small-scale struct. rel. to polarimetry of H₂ IR emission 2-106872
 Orion Nebula H I cloud and CO cloud, mag. fields determ. UHF obs. 2-106869
 radiogalaxies, magnetic field distribution from X-ray and radio map anal. 2-58505
 SNR associated with radio loop II, mag. field meas. from UHF obs. 2-106868
 spiral arms, effect of twisted mag. field on equilb. struct. of polypitropic and degenerate 2-106497
 spiral galaxies, mag. field configuration rel. to heliosphere 2-58218
 static equilibrium configurations with cosmic rays and plasma 2-63606
 strength determination from polarisation obs. 2-117727

interstellar matter

see also cosmic dust; H I regions; H II regions; interstellar magnetic fields; nebulae
 3.4 micron absorption feature comparison with laboratory ice+NH₃+methane (propane) mixtures 2-84304
 220 nm feature, due to MgO or SiO₂ 2-84302
 2200 Å hump nature, fine struct. and possible emission from circumstellar shells 2-106853
 4430 Å band strength, rel. to abundances of interstellar Fe, Ti and H₂ 2-106847
 in LMC, far UV extinction and 4430 Å band central depths for reddened stars 2-106898
 Abell 2241E, dominant galaxy halo nature 2-94846
 absorbing molecule photodesorption cross section on transparent substrate 2-115529
 absorption band at 220 nm, equivalent width catalogue 2-100760
 absorption bands at 3.2 and 3.3 μm, bacterial grain amino acid origin 2-106845
 abundance of B and Be towards zeta Ophiuchi, UV obs. 2-79182
 accreting rotating isothermal clouds collapsing, envelope evolution 2-94802
 active galaxies, jets 2-89383
 active galaxies nuclei, time depend. narrow emission line profile interpretation, emitting regions 2-68922
 adiabatic explosion into frozen in interstellar uniform magnetic field 2-106844
 AM 064-741, southern ring galaxy, rot. vels. of interstellar gas and stellar component of nucleus 2-79216
 asteroid impact on neutron stars, gamma-ray burst sources 2-94869
 astrophysical masers, collisional pumping rate, rot. state depend. 2-117583
 B335, dark cloud density distrib. from CS EHF obs. 2-68859
 bacterial interstellar grains, implications of IR spectroscopy over 2.9 to 3.9 μm waveband in biochemistry and astronomy 2-84347
 Barnard 18 cloud, interior low mass star form., CO line obs. 2-89328
 Berkeley 21, open cluster CM diagram field star contamination and reddening 2-112341
 bipolar nebulae, model of stellar wind flow in disc-shaped interstellar cloud 2-74074
 Bok globules near α Muscae, assoc. Hα emission line stars and star form. 2-94819
 butadiynyl (C₄H), detect. of N=1→0 transition in (Taurus MC-1) 2-68867
 3C 120, radio galaxy, interstellar gas distrib. rel. to large-scale radio struct. 2-68912
 3C 351, quasar intrinsic reddening obs. of broad and narrow lines 2-68918
 3C 445, Paschen α flux and dust extinction, IR obs. 2-84338
 Carina Nebula, H II region, gas motion from Ca II and Na I lines obs. 2-68869
 Carina Nebula towards HD 93205, interstellar vel. components comp. and physical conditions 2-117720
 Centaurus region reddening out to 2 kpc 2-63375
 Cepheus A, H₂ 2 micron emission obs. 2-89327
 Cepheus OB 3 association, interstellar graphite excess from UV obs. of brightest stars 2-101003
 chemical abundance gradients in planetary nebulae and H II regions in Galaxy 2-63666
 chemical evolution in interstellar clouds, laboratory simulation 2-106831
 chemical inhomogeneities on local and large scales, effect on galaxy chem. evolution 2-112573
 cloud compression and star form. due to galaxy spiral density wave shocks 2-63661
 cloud evolution, magnetic pressure effects 2-112434
 cloud fragmentation and collapse, protostar form. (*Polish*) 2-106879
 cloud medium motion behind large scale galactic shocks 2-58417
 clouds, formyl-d₁ ion emission regions, models from EHF obs. 2-68860
 clouds, parameters determined from spectra 2-79193
 clouds, plasma phase evolution to Solar System formation 2-63279
 clouds, supersonic turbulence dissipation 2-94811
 cold dark clouds, HCN hyperfine anomalies from EHF obs. 2-94812
 collapse of gaseous isothermal sphere, analytical soln. 2-106851
 colliding interstellar clouds, ang. vel. and ang. momentum changes 2-63567
 column densities towards O-type stars, depend. on reddening 2-58431
 comet coma model including nucleus with interstellar molecules 2-79028
 comets capture by Oort cloud on Solar System passage through cloud 2-68669
 components, phases and energy balance 2-63600
 components, static equilibrium configurations 2-63606
 conference on molecular clouds and star form., Goutelas, France (May 1980) (*French*) 2-63753
 cyanodiacetylene, mm spectrum up to 210 GHz 2-85637
 cyanohexatriene (HC₅N), classical rigid-ellipsoidal model for collisions with H₂ 2-68609
 cyanooctatetrayne (HC₈N), classical rigid-ellipsoidal model for collisions with H₂ 2-68609
 Cygnus A, confining gas temp. rel. to interpretation of milli-arcsecond radio jet 2-68884

interstellar matter continued

- Cygnus Loop, molecules form. rel. to UV spectra and heavy elements depletion 2-106848
- Cygnus superbubble (*Russian*) 2-68876
- Cygnus X-1, reddening, supergiant light var. and distance 2-63530
- dark clouds, dust grain segregation by gravit. settling 2-106843
- dark clouds and extinction in Galaxy 2-63598
- dark lanes in spiral galaxies, large-scale magnetic fields 2-101030
- dense cloud chemistry, grain-surface reactions, direct and indirect effects 2-63585
- dense clouds, molecules containing S, gas phase chemistry model 2-117725
- dense clouds in barred spiral galaxies, high velocities causing star form. inhibition 2-79199
- diffuse clouds, assoc. with dark clouds 2-117715
- diffuse clouds, CO density towards 14 stars, UV spectral obs. 2-101024
- diffuse interstellar bands, high-resolution obs. 2-58423
- diffuse interstellar clouds, methylene and methylene ions absorpt. 2-89323
- diffuse interstellar gas near Pleiades, spectroscopic study 2-58426
- disc, gas vertical/radial distrib. and Schmidt's star form. law 2-112582
- disc galaxies, gaseous spiral arms produced by oval distortions 2-63647
- DR 21(OH), molecular cloud/IR source, $J=4-3$ HCN IR obs. 2-63588
- dust, nature and composition 2-79198
- dust, radionuclide production due to cosmic ray protons 2-89100
- dust, scattering of diffuse galactic light 2-106832
- dust, scattering of UV background from neutrino decays 2-117810
- dust, starlight scatt. correl. with far UV background 2-63573
- dust, X-ray transition radiation generation contrib. to cosmic X-rays 2-117533
- dust clouds, comets formation and capture by solar system 2-101149
- dust clouds around pre and post main sequence stars, energy distrib. from IR photometry 2-94820
- dust density in central parsec of Galaxy, Sgr A far IR obs. 2-101034
- dust distribution in Bok globules 2-74060
- dust emissivity, mm spectral depend. 2-58421
- dust grains explosions, rel. to molecule cycling between gas and dust 2-89331
- dust grains in interstellar medium, formation and props. 2-89345
- dusty King spheres, elliptical galaxy model 2-101048
- dwarf galaxies, gas poor, winds and surrounding gas clouds rel. to L_{α} absorpt. lines 2-58482
- element abundance fluctuations, rel. to Fe abundance vars. among superficially normal A-type stars 2-63361
- element depletions, Fe and Ti abundances rel. to 2-106847
- element depletions in interstellar gas, results from high resolution UV obs. 2-106871
- element depletions in interstellar medium, effects of shock waves 2-106849
- elongated grains causing starlight thermalisation, origin for microwave background 2-79248
- emission line galaxies, nuclei, gas characts. and ionising mechanism 2-63629
- enhanced γ -ray emissivity delineating spiral arms 2-89411
- ethynyl radical (CCH), detect. of $N=3-2$ transition in Orion rel. to mol. rot. consts. determ. 2-63556
- extended adiabatic blast wave and soft X-ray background model 2-58424
- extinction in Milky Way field HD 95540, results from three-colour photometry 2-58328
- extinction in Puppis, photoelectric UVB sequence 2-106817
- extinction properties of T Tauri stars 2-73976
- extinction towards galactic Wolf-Rayet stars, results from IUE UV spectrophotometry 2-53660
- extreme λ_{MAX} stars, wavelength depend. of interstellar linear polarisation 2-74048
- filamentary shell on edge of NGC 6334 interstellar complex, struct. and dynamics 2-112535
- formaldehyde, isotope ratios from 6 cm obs. 2-68850
- formaldehyde, obs. of line emission from DR21(OH) 2-68863
- formaldehyde- ^{12}C , ^{13}C , towards galactic centre, $^{12}\text{C}/^{13}\text{C}$ var. with distance 2-89334
- formation mechanism, physical parameters of molecular clouds 2-58435
- formyl ion (HCO^+) $J=4-3$ transition in galactic sources 2-89341
- fragmentation, use of finite difference and particle methods 2-63241
- G43.2-0.1, new OH maser source, 1612 MHz obs. (*Russian*) 2-106946
- galactic and zodiacal light surface brightness measurements with the Atmosphere Explorer Satellites 2-94644
- galactic centre, gas distrib. and dynamics 2-63669
- galactic centre, gas distribution and velocity field from SHF, UHF, VHF obs. 2-112578
- galactic centre, gas dynamics and density 2-112576
- galactic centre kpc ring, gas density rel. to solar neighbourhood from γ -ray emission 2-89411
- galactic centre molecular clouds, formaldehyde/formaldehyde- ^{13}C ratio, SHF obs. 2-63591
- galactic cosmic rays acceleration in interstellar medium by shock waves 2-89088
- galactic cosmic rays-interstellar matter interactions, gamma ray prod. 2-63568
- galactic disc, chemical evolution and age-metallicity relation, model 2-68888
- galactic disc chemical composition variations 2-112581
- galactic disc magnetic field generation, turbulence effects 2-106927
- galactic disc magnetic fields, generated by interstellar gas motions 2-74049
- galactic dust and extinction in Galaxy 2-63598
- galactic dust layer, struct. from extinction of open clusters in Galaxy 2-89318
- galactic electron density distrib. from pulsar data 2-106880
- galactic fountain MHD instabilities effect on radio source scintillation and cosmic ray halo 2-63587
- galactic gas dynamics, comparative study of computational methods 2-94617
- galactic halo C^{3+} and Si^{3+} , distrib. and galactic struct., UV obs. 2-117722
- galactic halo contribution to 2-60 keV diffuse X-ray background 2-117800
- galactic halo interaction with globular cluster wind, X-ray emission, obs. 2-58502
- galactic halo massive neutrinos, emitted photons to ionise gas, possible UV detect. methods 2-117773
- interstellar matter continued
- galactic halo nature from interstellar lines towards Seyfert galaxies, UV obs. 2-79200
- galactic halos gas dynamics, numerical simulation 2-100729
- galactic interstellar absorption, effects on multipole moments in Rubin-Ford data 2-106892
- galactic lab C IV and S IV production from electron flux interactions 2-74066
- galactic mass loss, mild evolutionary correction to ang. size test 2-68882
- galactic NH_3 sources, OH emission and maser detect., UHF obs. 2-106944
- in galactic nuclei, structure and evolution of nuclear discs 2-94833
- galactic plane IR sources and assoc. mol. clouds, IR, CO and SHF obs. 2-68929
- galactic shock wave evolution, density wave theory 2-79172
- galactic wind effect on galactic antimatter cosmic rays 2-117609
- in galaxies, effects of internal absorpt. on location of supernovae 2-106757
- galaxies, gas layers, warping and thickness 2-63678
- in galaxies, generation of spiral density waves by bars in differentially rotating discs 2-101044
- normal galaxies, interstellar dust/gas ratio rel. to far-IR emission 2-63619
- in galaxies, numerical simulation of shock waves and corrugation waves 2-101071
- Galaxy, molecular gas, gap between nuclear and molecular cloud annulus 2-101037
- Galaxy corona cloud distances from UV lines towards Magellanic Clouds 2-106821
- Galaxy disc bending, effect of Magellanic Stream and Clouds 2-63681
- Galaxy mass and light distrib., three component model 2-63674
- Galaxy structure and evolution in terms of interactions of various components 2-63673
- gamma-ray background radiation derivation from using galaxy counts as galactic matter tracer 2-89413
- gas clouds, tidal stability in M101 and LMC 2-58445
- gas collisions with cosmic rays rel. to p obs. 2-117535
- gas dynamics in spiral galaxies, effect on star form., molecule form. and spiral struct. 2-107029
- gas stripping from cluster galaxies by intergalactic gas flow 2-58477
- gas/dust ratio and near-IR extinction law in LMC 2-79208
- GGD Herbig-Haro-like objects mol. clouds, mass outflow anisotropy 2-117730
- giant molecular cloud complexes 2-89344
- giant molecular clouds, collisionally supported, implications for spiral galactic struct. and massive star form. 2-112523
- giant molecular clouds, distrib., mass, size and struct., CO survey 2-63595
- giant molecular clouds, interstellar comets creation and relation to terrestrial cataclysm 2-79039
- giant molecular clouds, X-ray transition radiation emission 2-117533
- giant molecular clouds form. through Parker Jeans instability 2-68845
- giant molecular clouds formation in spiral arms 2-94823
- giant molecular clouds in Galaxy, age, distrib. and CO mapping 2-63665
- giant shells driven by field star radiation press., runaway expansion 2-68846
- GL 961, H $_2$ 2 micron emission obs. 2-89327
- Gould's Belt gas model, origin, dimensions and dynamics 2-112529
- grain alignment in the galactic magnetic field 2-58439
- grain size spectrum and grain-grain collisions in cool circumstellar envelopes 2-58428
- grains size distribution function in turbulent gas 2-106881
- halos, containing neutrinos, astrophysics 2-74680
- HD 44179 (Red Rectangle), 7.7 μm feature obs. 2-74064
- HD 93206 direction in Carina, gas column densities and abundances 2-74057
- HH 24-27, HH 1-2, Herbig-Haro objects, obs. of nearby high-vel. mol. gas 2-112526
- high redshift molecular clouds in intervening galaxies causing quasar absorpt. line spectra 2-84346
- HR 7308, peculiar classical Cepheid, interstellar reddening from UBVR photometry 2-106746
- IC 342, Scd galaxy, CO gas distrib. following light distrib., EHF obs. 2-101037
- IC 342, Scd galaxy, interstellar gas temp. meas. from NH_3 radio spectrum obs. 2-68629
- IC 388, open cluster field stars, dist. and reddening from photometry computer reduction 2-112519
- IC 4651 open cluster giants, reddening, distance and composition, DDO obs. 2-63543
- IC 5146, emission nebula, CO obs. of nearby mol. cloud complex 2-74044
- IC 5146 (S125), emission nebula, relation to mol. cloud from atomic and ionised H obs. 2-74043
- inhomogeneities of interstellar medium, rel. to radio emission of two types of supernova remnants (*Russian*) 2-101026
- intermediate mass stars, mass loss effects on contribution to interstellar medium 2-68772
- ion-neutral reactions, rate coeffs. 2-79196
- ionised component large scale characts. 2-63596
- ionised gas, radioastronomical obs. 2-101028
- far-IR sources in galactic plane, high resolution survey and nature of sources 2-58413
- IRS 1, 16, galactic centre ionised gas sources, 2 μm spectra obs. 2-101091
- in isolated galaxies, interstellar gas emission detect. from multiaperture UVB photometry 2-58449
- isothermal clouds gravitational collapse, hydrodynamics code 2-68862
- isothermal interstellar clouds, evolution under varying external pressure (*Russian*) 2-94813
- Kelvin-Helmholtz instabilities in supersonic flow with shear layers 2-58249
- Khavtasi 141, interstellar dark cloud complex, optical extinction and H I content 2-68874
- kinetic chemistry of dense interstellar clouds 2-117735
- Kleinmann Low Nebula mag. fields from OH maser UHF obs. 2-117726
- Kleinmann-Low Nebula, CO $J=17-16$ transition detect., IR obs. 2-84303
- Kleinmann-Low nebula, CO mapping, EHF obs. 2-89340
- L1454, interstellar dark cloud, catalogue of nearby red stars 2-106560

interstellar matter continued

- Large Magellanic Cloud, extinction in IR from early-type supergiants JHK photometry 2-89377
- Large Magellanic Cloud gaseous halo, evidence against existence 2-89356
- light scatt. theory for rough surfaced grains 2-89142
- LMC, intrinsic relations, interstellar reddenings and period-luminosity relation for Cepheids 2-58353
- local interstellar medium, COS-B gamma-ray meas. rel. to gas density and cosmic rays 2-74051
- local interstellar medium, props. from UV spectra of nearby white dwarfs 2-10690
- local interstellar medium, velocity anal. of spectral lines 2-63554
- local interstellar medium interaction with solar system, rel. to near-Earth UV environment 2-17513
- Lynds 134N, dark cloud density from CS EHF obs. 2-68859
- Lynds 1454 dark cloud region, parameters from automated star counts 2-63564
- Lynds 1529, dark cloud, CO wings, high vel. evidence, energetics/kinematics, EHF obs. 2-74054
- RR Lyrae stars, towards galactic anticentre, extinction, period, BV obs. 2-63426
- M16, evolved H II region, high resolution far-IR obs. of ionisation fronts 2-63561
- M16, H II, H I, mol. complex., IR sources near neutral inclusions, JHKL obs. 2-63589
- M17, H II region, formaldehyde distribution at 4.8 GHz 2-106875
- M17 SW giant molecular cloud, IR sources and OB star form. 2-94808
- M31, cosmic ray electron dominated galactic wind, accounting for central extended radio source 2-84325
- in M31, element abundance gradients from supernova remnants and H II regions 2-63618
- M31 main dust lane complex, extinction and mass, B-surface photometry 2-63624
- M82, irregular galaxy, light scatt. and extinction regions location 2-79214
- Magellanic Clouds, H₂O maser survey, SHF obs. 2-79204
- magnetic braking and infall to galactic centre 2-117744
- magnetite and interstellar extinction very broad struct. 2-101025
- maser source of water vapour line, interplanetary oscillations 2-100829
- masers, OH and H₂O, associated IR sources, JKL obs. 2-94807
- masers, OH and H₂O, evolution 2-112541
- masers brightness temp. determ. 2-58437
- massive gas clouds rel. to stellar dynamics anal. of transitions between epicyclic stellar orbits 2-68837
- matter-antimatter clouds collisional interpenetration, MHD shocks prod. and Leydenfrost layer prod. 2-73830
- methane, microwave spectra, rel. to radioastronomy 2-75280
- methanol, detection of torsionally excited state in Orion A 2-63551
- methylidyne ion formation in interstellar shocks, effect of cooling by OH IR line emission 2-106874
- molecular cloud CO lines, profiles determ., effect of complete freq. redistribution assumption relaxation 2-117723
- molecular cloud in NGC 2071 reflection nebula region, NH₃ mapping and star form. 2-84298
- molecular cloud inhomogeneity, interaction with ionisation/shock fronts, 2-dimens. radiation hydrodynamic calc. 2-117721
- molecular cloud IR sources, 2.2 and 3.8 micron obs. 2-89333
- molecular cloud OH and H₂O maser sources evolution 2-112541
- molecular cloud orbits and perturbation due to density wave spiral pot., star form. 2-63599
- molecular cloud polarised compact IR sources, search for ice absorpt., IR obs. 2-117727
- molecular clouds, collapsing, gas dynamics of assoc. H II regions 2-79190
- molecular clouds, cosmic rays confinement rel. to COS-B γ -ray sources 2-11271
- molecular clouds, extended, along galactic plane, catalogue of far IR sources, obs. 2-63273
- molecular clouds, formaldehyde absorpt. meas. 2-112532
- molecular clouds, fragmentation and star form. 2-63601
- molecular clouds, H₂ dissociation by H collisions 2-90653
- molecular clouds, radiofrequency lines linear polarisation 2-68604
- molecular clouds, turbulence, mag. field and rot. support 2-63601
- molecular clouds at Galaxy centre, IR obs. 2-63668
- molecular clouds interaction with galactic disc stellar population 2-63601
- molecular clouds larger than 10 pc diameter, number in Galaxy 2-79179
- molecular clouds launched from star arms, vel. effect on OB stars initial motion 2-68838
- molecular clouds near H II regions, J=2-1 CO line, EHF obs. 2-63584
- molecular spectroscopy using diode and combined diode-CO₂ lasers 2-63271
- molecules, formation and destruction 2-79195
- molecules cycling between dust and gas, role of dust grain explosions 2-89331
- molecules in clouds, nature and role in star form. 2-79194
- Monoceros R2 IRS 3, molecular cloud triple struct., IR obs. 2-94809
- Monoceros R2-IRS 3, molecular cloud source, speckle interferometry, IR obs. 2-63705
- N159A and N159, H II regions in LMC, excitation and extinction 2-106854
- N51D, interstellar bubble in LMC containing HD 36402, UV absorpt. due to gas, obs. 2-79178
- narrow emission line galaxies, column densities from X-ray spectrum obs. 2-74081
- neutron star accretion, H-He flash as gamma ray burst origin 2-106959
- NGC 1947, elliptical galaxy, dust lane rot., spectral obs. 2-68895
- NGC 1977, assoc. bright rim cloud, abundances/density/temp. from EHF/IR obs. 2-84300
- NGC 2071, reflection nebula, obs. of broad wings and self-reversals in CO lines 2-58425
- NGC 2547, southern open cluster, interstellar reddening from UVB photometry 2-58416
- NGC 3067, Sb III galaxy, evidence for nonluminous matter, visible/UHF obs. 2-79201
- NGC 3718, peculiar lenticular galaxy, polarisation and reddening due to interstellar matter, visible obs. 2-63628
- in NGC 5128, interstellar spectral lines in globular clusters 2-117731
- NGC 604, H II region in M33, WR stars and interstellar wind driven bubbles 2-74052

interstellar matter continued

- NGC 6334 molecular cloud, eleven IR sources detect., nature and obs. 2-112531
- NGC 6334 N, molecular cloud, J=4-3 HCN 2-63588
- NGC 6334-1(NORTH), 400 μ m source detect., star form. region anal. 2-101018
- NGC 6664, open cluster, interstellar reddening from intermediate-band photometry 2-106823
- NGC 6823 field, interstellar extinction rel. to struct. of inner edge of local spiral arm (Russian) 2-94831
- NGC 6853, NGC 7293, planetary nebulae, interstellar extinction rel. to IUE obs. of central stars 2-58333
- NGC 6946, Scl galaxy, CO gas distrib. following light distrib., EHF obs. 2-101037
- NGC 7528 H II complex, IR sources 1/2. assoc. visible stars extinction 2-79191
- NGC 7538, H II region, assoc. mol. cloud, CN line emission and star form. 2-101008
- Nova Coronae Austrinae 1981, re-discussion of interstellar absorpt. and distance 2-79117
- OB stars in SMC, extinction, visible obs. 2-74101
- obscuration and the various kinds of Seyfert galaxies 2-84312
- OH 205.1-14.1, unusual OH maser, intensity vars. of left circularly polarised component (1980 to 1982) 2-79238
- OH 351.78-0.54, interstellar OH maser source, radio and IR obs. 2-112600
- OMC-1, map in CN N=2-1 line, EHF obs. 2-89326
- OMC-1 temperatures determined from methyl cyanide obs. anal. 2-117719
- open clusters, interstellar reddening from colour-magnitude diagrams 2-106557
- Orion association, effect of reddening on HB distance scale for B-type stars 2-106692
- Orion MC-2, near IR spectroscopy of moderately luminous IR sources IRS 3 and (IRS 4) 2-68851
- Orion Molecular Cloud, polarimetry of H₂ IR emission 2-106872
- Orion Molecular Cloud, vibr. excited cyanoacetylene, rot. transitions detect., EHF obs. 2-117718
- Orion Molecular Cloud-1, H₂ and CO emission model 2-106864
- Orion Nebula, H₂ emission spectrum in near IR 2-112525
- Orion Nebula, UV absorpt. by highly ionised atoms, obs. 2-79183
- Orion region, vibr. excited SiO maser lines, EHF obs. 2-84219
- Orion SiO maser, time var. of vel. struct. of maser emission envelope 2-68875
- Orion Taurus Eridanus region, H α obs. 2-58432
- Parker instability in self gravitating gas layer 2-68605
- h and χ Persei clusters direction, interstellar extinction towards nine stars, UV obs. 2-63580
- ϵ Persei direction, line of sight struct., UV obs. 2-117716
- planetary nebulae, extinction from UV spectral obs. 2-79187
- plasma, far-IR fine struct. lines interpret., review 2-94621
- plasma, matter-antimatter clouds collision, separation mechanism 2-73829
- plasma, thermal and press. balance stability 2-63605
- Pleiades brightest stars, interstellar extinction and age from UV/visible obs. 2-63545
- polar molecules, in interstellar clouds, spectral intensity, electron impact effects 2-112533
- polarisation curves, meas. using simultaneous IR/optical polarimeter 2-106540
- polytropic clouds structure, fundamentals and classification of solns. for simple polytropes 2-68871
- polytropic interstellar clouds, stability of simple polytropes against homologous contraction 2-68872
- pre-shock densities from SNR and emission nebulae, VBLUW photometry 2-101015
- protostellar disks formation from rot. gas cloud accretion, hydrodynamic aspects 2-73959
- pulsar radiosignal fluctuations due to interstellar propagation 2-106765
- QSOs at large redshift, spectral energy distrib., intervening clouds effects, visible obs. 2-68919
- quasar emission line regions, isothermal isobaric models 2-117794
- quasar L α absorption features and surrounding gas clouds due to winds 2-58482
- quasars, clouds vel. fields and physical conditions from spectra anal. 2-112544
- quasars, emission line regions, reverberation mapping technique 2-78966
- quasars, H spectra, model of emitting regions 2-63701
- quasars, rotation of gaseous discs, assoc. spectral line calcs. 2-101087
- quasars, time depend. narrow emission line profile interpretation, emitting regions 2-68922
- quasars broad line forming regions, evidence for hot dust, IR obs. 2-89404
- radiogalaxies, effect of galactic gas shapes of radio sources 2-68883
- reddening at galactic anticentre near open cluster NGC 2360, field UVB obs. 2-58468
- reddening law in Taurus dark clouds 2-106850
- reddening maps, results from H I column densities and galaxy counts 2-106838
- reddening of stars, results from OAO-2, UVB, ANS and TDI obs. 2-58329
- reddening towards galactic poles, determ. using Geneva photometric boxes 2-58327
- reflection nebula model, interstellar grains mixtures, polarisation and UVB colour differences 2-94814
- regimes, heating and cooling mechanisms and general parameters 2-63601
- rotating clouds, instability to fragmentation and star form., heuristic criterion 2-112524
- rotating gas clouds, collapse and fragmentation 2-63586
- S235B, compact H II region, interstellar extinction from radio, IR and optical obs. 2-89332
- Sagittarius A-West, velocities, H110 α recomb. line, SHF obs. 2-112602
- Sagittarius B2, H II regions/mol. cloud, OH maser source, UHF obs. 2-74047
- Sagittarius-B2, mol. cloud, structure and component spectra from brightness at SHF, UHF 2-106941
- scintillation of extragalactic radio sources, suppression by galactic fountain MHD instabilities 2-63587
- Selected Area 133 F, galactic centre field, interstellar reddening and stellar types identification 2-100903

interstellar matter continued

- Selected Areas 128 and 156, interstellar dust distrib. from *uvby* obs. 2-101021
- self-gravitating gas clouds, cooling, equilibrium states in external gravit. fields 2-58440
- Seyfert 1 galaxies, clouds vel. fields and physical conditions from spectra anal. 2-112544
- Seyfert galaxies, effects of interstellar reddening on H line emission 2-74079
- Seyfert galaxies, H spectra, model of emitting regions 2-63701
- Seyfert galaxies, rotation of gaseous discs, assoc. spectral line calcs. 2-101087
- Seyfert galaxies emission line regions, reverberation mapping technique 2-78966
- sharp front formation 2-58436
- Sharpless 106, biconical H II region, surrounding mol. gas dynamics and model, EHF obs. 2-79180
- Sharpless 106, bipolar H II region, internal motion rel. to expanding mol. cloud 2-74071
- Sharpless 106, bipolar nebula, surrounding mol. complex distance 2-68856
- Sharpless 106, H II region, assoc. mol. cloud, CN line emission and star form. 2-101008
- Sharpless 106 molecular cloud, NH_3 mapping and H_2O maser detect., SHF obs. 2-101017
- Sharpless 140-IRS 1, molecular cloud source, IR obs. 2-63705
- Sharpless 68, mol. cloud boundary, CO isotope selective photodestruction and abundance, obs. 2-68858
- shock heated regions H_2 and CO collision induced dissociation 2-68861
- Small Magellanic Cloud extinction law 2-68891
- SN 1980k in NGC 6946, interstellar spectrum 2-74059
- SNR and shocked interstellar medium structure, X-ray image of Puppis A 2-101006
- solar neighbourhood, CNO chem. evolution and abundance 2-63579
- spectral feature near 3.5 μm , micro-organisms interpretation 2-58429
- spiral arms, effect of twisted mag. field on equil. struct. of polytropic and degenerate 2-106497
- star formation from interstellar clouds, criteria for contraction and fragmentation 2-100909
- star forming regions, young stars, energetic outflows 2-94822
- supernova ejecta interaction with interstellar matter, self similar soln. 2-94803
- supernova in dense clouds and cosmic ray accel. 2-106433
- supernova remnants in cloudy interstellar medium, shock front particle accel. and radioemission 2-117729
- supernova-driven interstellar shock waves, numerical gas dynamics theory 2-100729
- suprathermal evaporation of isolated spherical clouds in hot gas 2-58419
- Taurus dark cloud, association with Hg-Mn star HD 29647, obs. (*Russian*) 2-68794
- Taurus dark cloud, photometry and spectrum of B-type star (HDE 283809) (*Russian*) 2-112444
- Taurus MC 1, model based on cyanoacetylene (HC_3N) obs. 2-63560
- Taurus Molecular Cloud 1, detect. of butadiynyl and cyanopropynyl rot. transitions, SHF obs. 2-84297
- three phase models, role of supernova remnants 2-89346
- TMC-1, dark cloud density from CS EHF obs. 2-68859
- tumbling protate galaxies, gas disks orientation 2-89351
- turbulent clouds, struct. and characts. 2-58433
- Vela II field, absorbing clouds identification from RGU stellar photometry 2-106861
- velocity components for different ions towards epsilon and delta Persei 2-89324
- very high velocity clouds, 21 cm obs. rel. to clouds collision with Milky Way in anticentre 2-74083
- W33 continuum source, NH_3 ortho/para ratios from spectral obs. 2-101013
- W3-IRS 5, double struct. from IR obs. 2-63704
- W3-IRS 5, molecular cloud source, speckle interferometry, IR obs. 2-63705
- W51, H II region/mol. cloud, $\text{J}=4-3$ HCN transition obs. 2-63588
- W51 NORTH, IR and H_2O maser sources, H_2 emission, IR obs. 2-79228
- W63, supernova remnant, pre-shock interstellar density from radial vel. field of optical filaments 2-74073
- warm intercloud medium emission, contrib. to diffuse UV background 2-89412
- white dwarfs, He-rich with metal features, grain accretion from interstellar medium 2-117667
- X-ray line emission from C and O atoms 2-63549
- C, high Rydberg states, populations assoc. with radio recomb. lines 2-74055
- C I in immediate solar vicinity, first detection in UV 2-117734
- C II, influence of low temp. dielectronic-like recomb. on C I radio recomb. lines 2-112314
- $\text{C}^+ + \text{H}_2$ radiative association reaction, rate coeff. reinvestigation 2-58235
- C_2 column density determ. 2-63226
- C_2 , IR absorpt. lines obs. towards ζ Ophiuchi 2-63558
- C_2 in interstellar clouds, excitation, radiative lifetimes and rot. levels 2-101009
- CH towards α Cam and κ Cas, HF obs. 2-117715
- CH^+ abundance, role of production by vibrationally excited H_2 in circumstellar clouds 2-84296
- CO behaviour in central 2 kpc of galactic centre 2-63667
- CO cloud complexes around galactic longitude $l=45^\circ$, CO maps 2-79179
- CO emission in SAB galaxies NGC 157, 2903, 4321 and 5248, EHF obs. 2-74086
- CO in clumpy irregular galaxies, unsuccessful search for 115 GHz line 2-106920
- CO in galactic plane, 2.6 mm emission rel. to star formation regions identification 2-112421
- CO survey in Galaxy, tracing of giant mol. clouds 2-63595
- CO survey of southern galactic plane, EHF obs. 2-106876
- C_2O^+ isomers, bond lengths, ab initio SCF calcs. 2-113862
- $^{12}\text{CO}/^{13}\text{CO}$ abundance ratio towards ζ Ophiuchi, determ. from UV absorpt. 2-63557
- ^{18}O , obs. in second galactic quadrant (*French*) 2-89367
- Fe II, interstellar lines, UV oscillator strengths and abundances 2-112522
- Fe particles, starlight extinction from 195-650 nm 2-94804

interstellar matter continued

- FeO , search in interstellar mol. clouds 2-74045
- Fe_2O_4 2-94804
- H I, superheavy, upper limit from γ Cassiopeiae UV spectrum 2-89343
- H I absorption in direction of Sagittarius A, Westerbork obs. 2-89336
- H I at high galactic latitudes, warm gas 2-106889
- H_2 abundance, correl. with 2-106847
- H_2 , density in interstellar mol. cloud, spectrosc. obs. 2-112534
- H_2 , high spectral and spatial resolution obs. of 12.28 μm emission in Orion Molecular Cloud 2-63576
- H_2 in OMC, vibrationally excited gas motion and distrib. 2-63552
- H_2 mass and galactic metallicity gradient 2-101062
- H_2 $v=1$ emission, vel., reddening, and temp. structure in Orion molecular cloud 2-63550
- $\text{HCO}^+/\text{DCO}^+$ abundance ratio in dense interstellar clouds, temp. depend. 2-94806
- HCO_2^+ , abundance in interstellar clouds, calcs. 2-94810
- HCOS^+ , abundance in interstellar clouds, calcs. 2-94810
- HCS_2^+ , abundance in interstellar clouds, calcs. 2-94810
- H_2O maser emission in southern galaxies, obs. of NGC 4945, NGC 253 and LMC 2-94852
- H_2O maser outburst in Orion, nature and line profiles, model (*Russian*) 2-68877
- H_2O maser search near H II region Sharpless 106, obs. 2-101012
- H_2O masers, high velocity, search in regions of star form. 2-74072
- H_2O masers in Orion A, anal. of VLBI obs. using CS-type computer-software 2-68634
- He/heavy element enrichment ratio accounting for mass loss in heavier stars 2-68880
- HeH $^+$ formation and destruction in plasma appl. to planetary nebulae and dense clouds 2-78943
- Mn II, interstellar lines, UV oscillator strengths and abundances 2-112522
- N enrichment and abundance in galactic disk 2-112542
- NH_3 ice detection in BN object and NGC 2264-IR, obs. 2-117717
- NH_3 in external galaxies, temp. meas. from radio spectrum 2-68629
- NH_3 , obs. in cold cloud cores 2-106857
- NH_3 , obs. in mol. clouds in southern hemisphere 2-106839
- NS, mol. consts., isotope effects, microwave obs., relevance to radio astronomy 2-90524
- OH, broad main line emission from peculiar galaxy IC 4553, first detection 2-117757
- OH, IR line emission rel. to cooling of interstellar shocks and masers 2-106874
- OH maser emission assoc. with W49N, distrib. of $^2\pi_{3/2}$ $\text{J}=3,2$ emission 2-79188
- OH masers in H II regions W4(OH) and Sagittarius B2, UHF obs. 2-74047
- OH, widespread galactic emission at 1720 MHz as new tracer of spiral arms 2-68865
- $\text{OH} + \text{H}_2$, interstellar rate coeffs. for rotational excitation 2-70400
- S III forbidden line at 33 microns in Orion Nebula Trapezium region 2-106867
- SO, 86 GHz emission maps of Kleinmann-Low nebula, kinematics 2-106835
- Ti abundance towards high galactic latitude stars, Ti II obs. 2-84301
- Zn, interstellar abundances determ. from IUE obs. 2-63555

interstitials

- see also *Cottrell atmospheres; crowdions; Snoek effect*
- alkali halides, colouring curves, computer simulation using heterogeneous nucl. model 2-91960
- β -alumina, solid electrolyte, mobile ion conc. and mixed alkali effect 2-92271
- anelastic relax. of self-interstitial-solute atom complex 2-56082
- BCC interstitial alloys, strain ageing, dynamic and static, strain depend. 2-67384
- BCC metals, impurity interstitials strain ordering and associated anelasticity, theory 2-98242
- BCC metals, radiation damage, Mossbauer spectroscopy study 2-103808
- BCC metals, random interstitials strain ordering and associated anelasticity, theory 2-98243
- BCC ternary ordering alloys, interstitial diffusion, vacancies effect, theoretical anal. (*Russian*) 2-98338
- cavities in dense random packings 2-65886
- defect-induced lattice displacements, static Debye Waller factor, Bragg scatt. intensities 2-92138
- defects, bound and unbound, pressure variation of Gibbs energy 2-98348
- diamond:N, ion implanted, defect form., annealing and interactions, cathodoluminescence study 2-116277
- diamond, electron-irradiated, annealed, 1450 cm^{-1} IR absorption 2-110847
- diffusion in strained cryst., theory 2-104050
- embrittlement, continuum theory 2-109895
- FACSIMILE code for void swelling and creep calc. with vacancy loops 2-67468
- FCC (111) face, segregation of interacting atoms 2-76692
- FCC interstitial alloys, strain ageing, dynamic and static, strain depend. 2-67384
- FCC metals, self-interstitials, hyperfine interaction evidence, theoretical anal. 2-71437
- fluoride heterovalent solid soln. with unidirectional solubility, impurity energy of soln. 2-71651
- fusion material, ICFR, He interaction with displacement damage, rate theory applic. 2-85232
- fusion material, total He generation cross sections for fast neutrons 2-85231
- fusion material, void nucleation by gas atoms, He generation rate and conc. effect 2-86720
- ionic crystals, point defect pair relax. modes, approx. solns. for three-shell model 2-61016
- irradiated material, point defect-edge dislocation rate consts. and bias factors using lattice relax. and Monte Carlo simulations 2-86718
- lattice defects study by channelling 2-71532
- light interstitials, diffusion through nonuniformly distributed traps 2-104073
- metal-D system, FCC and BCC, energy and wave functions of interstitial D 2-109787
- metal-H system, FCC and BCC, energy and wave functions of interstitial H 2-109787

interstitials continued

- metals, amorphous, dil., and deformed, solubility, diffusivity and trapping of H 2-81964
 metals, bubble nucleation and growth, low temp., by He bombardment 2-76536
 metals, cascade damage, ion-irrad. study 2-103860
 metals, electronic props. of point defects, review 2-92519
 metals, FCC, interstitial quantum tunnelling at low temp. 2-115468
 metals, He bubble form. and swelling 2-109788
 metals, radiative creep, effect of defect struct. 2-88151
 metals, swelling, radiation-induced, effect of defect struct. 2-86721
 metals with BCC lattices, precipitation of interstitial solns., initial stages, computer simulation (*Russian*) 2-77824
 Mossbauer study of localised diffusion in interstitial cage model calc. 2-56983
 neutron irradiation defects, annealing 2-109840
 oxide heterovalent solid soln. with unidirectional solubility, impurity energy of soln. 2-71651
 pure metals, multiphase layered oxide growth, general formulation 2-77990
 quartz resonators, radiation induced cond. and high temp. Q changes meas. 2-98335
 radiation damage phenomena, cascade diffusion theory as general method for modelling 2-103841
 recombination cross section for interstitials and vacancies as a function of vacancy concentration 2-65988
 semiconductors, Frenkel defect chain annihilation 2-115223
 semiconductors and metals, metastable alloy form. by ion implantation, impurity lattice location 2-115260
 sink strengths, for high concs. of competing sinks 2-66038
 Snoek-Koster peak concept 2-66122
 Snoek-Koster peak in BCC metals, model 2-66124
 Snoek-Koster peaks BCC metals, phys. models, review 2-66123
 Snoek-Koster relaxation, core diffusion and unpinning, models analysis 2-66126
 Snoek-Koster relaxation, kink-pair-form. theory 2-66125
 solid solution, binary substitutional solvent, nonrandom, thermodynamics of interstitial solute atoms 2-92236
 stacking faults, oxidation induced, growth kinetics, interstitial capture by partial dislocations 2-98118
 stainless steel, electron irradiated, void swelling 2-61039
 steel, austenitic ferritic, with low interstitial level, mech. and corrosion props. (*Italian*) 2-99563
 steel, austenitic stainless, microstruct., in situ obs. of heavy-ion damage 2-86754
 steel, austenitic stainless, precip. reactions, effect of stabilising additions 2-72699
 steel, austenitic stainless, void swelling, 1.1 MeV N-ion irradi., TEM study 2-109854
 steel, equilibrium between trapped and diffusible H at room temp., obs. using gas-surface reaction 2-88092
 steel, H-induced delayed cracking of type III specimens 2-116596
 steel, stainless, austenitic, precip. and cavity form. during irradi. 2-86735
 steel, stainless, powder metallurgical, struct. condition, effect of different sintering environments 2-67254
 steel, stainless, radiation-induced struct. changes 2-86714
 steel, stainless, Type 316, fusion irradiation damage simulation expt., He-to-DPA ratio calcs. 2-85230
 steel, stainless, Types 304 and 316, dual ion bombarded, He partitioning to extended defects 2-86755
 strontium tartrate tetrahydrate, Co^{2+} centres, optical absorpt. studies 2-115220
 transition metal hydrides, low-temp. stable states, interstitial sublattices 2-86618
 TTF-TCNQ, electron irradi. effects 2-103821
 vacancy loops and interstitial loops, intrinsic bias differential 2-91954
 ZnSe:Li, p-type cond. 2-115925
 α -Ag-Zn, irradi., vacancy and self-diffusion mobility, Zener relax. study 2-56244
 Ag₂O internal friction, neutron irradi. effect 2-81889
 Al, anelastic relax. of self-interstitials, X-ray diffuse scatt. study 2-56082
 Al, electron irradi., frozen free split phenomena, mech. relax. study 2-56084
 Al, fast neutron irradi., interstitial clustering in cascades, diffuse X-ray scatt. 2-103833
 Al, ion implantation radiation damage, Mossbauer study and math. model 2-81835
 Al, self-interstitials, hyperfine interaction evidence, theoretical anal. 2-71437
 Al-Co dil. alloys, damage rate and recovery meas. 2-76488
 Al-Cr dilute alloy, irradi., self interstitial trap and clustering at impurities 2-76689
 Al-Fe, dil. alloy, electron irradi., frozen free split phenomena, mech. relax. study 2-56084
 Al-Mg(Fe), dil., electron irradi., self-interstitial-impurity complexes, internal friction study 2-56007
 β -Al₂O₃-NH₃⁺, defect struct., PMR study 2-110649
 α -Al₂O₃, native disorder, determ. of parameters 2-76432
 B-Fe(Ni), phase comp. and cryst. struct. meas. 2-88055
 BaF₂, impurity and interstitial clustering 2-86884
 BaF₂:La³⁺, Raman spectra between 300 and 1400K 2-99129
 BaF₂:La³⁺, thermal depolarisation studies 2-61817
 CaF₂, fluorite, thermoluminescence rel. to pretreatment history 2-72566
 CaF₂, impurity and interstitial clustering 2-86884
 CaF₂:H, contrbs. of H zero-point vibr. to F transferred hyperfine consts. nearest neighbour to H₂⁺ centre 2-76627
 CaF₂:La³⁺, thermal depolarisation studies 2-61817
 CaF₂:Pr³⁺, optically detected NMR, hole burning 2-72379
 CaF₂:PrF₃(NdF₃)(SmF₃), radiation induced F⁻ interstitials, TDPAC study 2-98163
 CdS:Ag, Ag solid solubility meas. 2-56200
 CdS₂-Se₂, diffusion of chalcogen 2-61201
 CdTe, Li diffusion, internal elec. field effects in dissociative mechanism 2-115462
 Co-B, phase comp. and cryst. struct. meas. 2-88055
 Co-W-C, n-carbides, struct. stability (*German*) 2-83097
 CoO, creep and point defects, O diffusion 2-109893
 Cr, electron irradi., internal friction 2-56085
 Cr transport through Cr₂O₃ scales, lattice diffusion 2-86926
 CsCl(Br), X-ray irradi., colloid form., optical props. 2-56030

interstitials continued

- Cu alloys, dil., single vacancies and clustered interstitials, spontaneous recomb., elec. resist. meas. 2-76435
 Cu, lattice vibr. of split self-interstitials, local density of states, recursion method 2-81910
 Cu, neutron and electron irradiations, initial damage rates study of internal friction 2-92046
 Cu, neutron irradi., 0.1-24 MeV, free interstitial prod. cross sections 2-103834
 Cu, neutron irradi., long-time, elevated temps., damage-rate meas. 2-103832
 Cu, Ni partial diffusion coeff. after ion irradi., fusion neutron effects simulation 2-86757
 Cu, single vacancies and clustered interstitials, spontaneous recomb., elec. resist. meas. 2-76435
 Cu/Sn bimetallic thin film, interdiffusion and intermetallic phase form. 2-115473
 Cu-Al(Si)(Sn)(Ga) solid soln., H₂ solubility, thermodynamic props. (*Russian*) 2-92207
 Cu-Au(Be)(Pd)(Sb) dil. alloys, electron irradiated, solutes as nuclei for self-interstitial complexes 2-66061
 Cu-In, dil., electron irradi., self-interstitial-impurity complexes, internal friction study 2-56007
 Cu-Ni, high temp. sputtering, ion-enhanced diffusion, grain boundary erosion (*Japanese*) 2-116317
 CuAu, fast neutron irradiated, defect production, resist. meas. (*French*) 2-76510
 Cu₂Au, fast neutron irradiated, defect production, resist. meas. (*French*) 2-76510
 CuInSe₂, impurity states, after annealing, elec. cond. study 2-66475
 ErFe₂H₂, spin reorientation temp., hyperfine fields, Mossbauer study 2-93082
 Fe, magnetic aftereffects in specimens containing interstitial solutes and precipitates 2-87551
 Fe, neutron irradi., TEM study 2-103838
 α -Fe phases, nitrides and carbonitrides, N substitution, influence of C, Mossbauer study 2-99389
 α -Fe, polycryst., stress-strain behaviour, improved dislocation model 2-105247
 Fe, vacancy migration at 220K, HVEM obs. 2-81828
 Fe-Al(V)(Si), dilute alloy, electron irradi., impurity-interstitial trapping sites, mag. aftereffect spectra study 2-56895
 Fe-Cr-Ni alloys, electron-irrad., swelling and Ni segregation 2-111182
 Fe-Ni (29.9 wt.%) alloy, anomalous diffusion of C, martensitic transform. role 2-71727
 Fe-Si, electron irradi., defect cluster nucleation at coherent twin boundaries, electron microscopy study 2-66036
 Fe-Si; mobility transfer loci owing to orientation aftereffect for steadily moving 180° Bloch wall 2-87528
 Fe-Ti, magnetic aftereffects in specimens containing interstitial solutes and precipitates 2-87551
 Fe-Ti alloy, dil., dislocation relax. peaks and solid soln. softening 2-111224
 Fe-W-C, n-carbides, struct. stability (*German*) 2-83097
 Fe(Cr), triple beam ion irradi., microstruct. 2-109856
 FeO, wustite, struct. and morphology, vacancy and interstitial clusters (*French*) 2-86644
 Fe₃-O₂, nonstoichiometry, point defects and cation diffusion 2-71435
 GaAs:B, electron irradiated, IR study of annealing 2-56033
 GaAs:Cu, electron irradi., photoluminescence 2-61967
 GaAs:Fe(O), ion implanted and electron irradi., deep levels and electron traps, annealing 2-98584
 GaAs:Se, ion implanted, carrier props. and photolum. meas. (*Korean*) 2-56585
 GaP:B, electron irradi., interstitials, IR study 2-103747
 GaSe:Ni(Fe)(Cr), luminescence spectra, absorption edge, struct. defects (*Russian*) 2-93273
 Ge:H, interaction of H with point defects, under ⁶⁰Co gamma-irrad. 2-115279
 GeO₂:Zn(Mg), X-irrad., hole centre ESR study 2-87592
 Hb-Hf, dynamic strain aging, 20 to 900°C (*French*) 2-57377
 He partitioning, low doses, trap theory 2-86715
 HfV₂H₂, low temp. phase, H-atom configuration, NMR study 2-72375
 In₂O₃:Sn films, annealed, elec. resist. and defect model 2-66671
 n-InP, diffusion of ¹¹⁰Ag from vapour 2-86941
 K, vacancies and self-interstitials 2-103749
 KCl:Br⁻(Sr²⁺)(Ba²⁺), X-ray irradi., H₂ ntype defects, ESR study 2-110641
 KCl:Eu, F-centre colouring 2-109791
 KCl:Sr, interstitial centres and thermoluminescence 2-72565
 Li₂GeO₄-Al₂O₃, solid electrolytes, cationic cond. and struct. 2-110031
 LiH, X-ray irradiated, thermolum., TSC and F centre annealing at low temps. 2-116278
 Li₃+(P₁-Si₂)O₄, Li⁺ ion diffusion, NMR spin-lattice relax. study 2-115455
 (Mg,Fe):SiO₄, atomic C depth profiling meas. 2-99721
 Mg, electron irradiated, Frenkel defects study by diffuse X-ray scatt. 2-65989
 MgO, atomic C depth profiling meas. 2-99721
 MgO, anelastic relax. of self-interstitials, X-ray diffuse scatt. study 2-56082
 Mo, diffusion of interstitial atoms, elastic aftereffect meas. (*German*) 2-71734
 Mo, electron irradi., self-interstitials, anelastic relax. at 4.7K 2-56083
 Mo irradiated with Ar ions, defects study using thermal desorption spectrometry 2-76517
 Mo-Ti (0.3-2 wt.%), nitrided (*Japanese*) 2-83176
 Mo-Zr, gaseous impurity effects on mech. props., interstitials role 2-57538
 Na, vacancies and self-interstitials 2-103749
 NaCl:Mn, γ and X-ray irradi. charge compensation thermoluminescence and optical absorption spectra 2-61988
 NaF:Ca²⁺, γ -ray irradi., colour centres and interstitials, luminesc. spectra 2-110960
 1.67[(Na₂O)₂(K₂O)₂]-1.33ZnO.10.34Ga₂O₃, mixed alkali effect, cond minimum 2-61200
 Nb, diffusion of H and D, N interstitials effect 2-104067
 Nb, neutron irradi. induced defects, detrapping of N and O atoms during post-irrad. annealing 2-103839
 Nb, vacancy and interstitial annealing and migration, PAC study 2-86663

interstitials continued

- Nb:Fe(Co)(Cr), electromigration and self diffusion, effective valence, radioactive tracer method (*French*) 2-76756
 Nb:H₂, ultra small angle X-ray and neutron scatt. 2-86521
 Nb-H, low-temp. stable states, interstitial sublattices 2-86618
 Nb-H system, relax. process caused by interstitial H 2-103930
 Nb-Ti, anelastic relax. due to Ti-H complexes, internal friction spectra 2-111222
 Nb-Zr, gaseous impurity effects on mech. props., interstitials role 2-57538
 Nb-Zr(Ti)(V)(Ta), dil. alloys, diffusion of O, appl. of McNabb-Foster trapping eqns. 2-76744
 Nb₂O₅, oxidation, interstitial O, TEM 2-97879
 Ni, irradi. creep, 17 MeV deuterons, stress depend. 2-86749
 Ni-Be (lat.%), radiation induced homogeneous precip., HVEM obs. 2-83124
 Ni-Fe(Cu), electron irradi., Frenkel defects, elec. cond. (*German*) 2-98080
 Ni₃Al, irradiated, defect aggregation 2-103748
 NiO, creep and point defects, O diffusion 2-109892
 Pb-Ag (0.038 at.%), kinetics of Ag precip. 2-111187
 PbF₂, neutron study of anion disorder, fast-ion cond. 2-92258
 PbMoO₄, formation of Pb³⁺, influence of foreign ions 2-115219
 Pt alloys, thermal and fast neutron irradiated, interstitial-impurity reactions during stage I 2-61041
 Pt, ion-irradiated, atomic resolution obs. of point defect struct. of depleted zones 2-103862
 Pt, neutron irradi., stage I recovery, effect of impurity atom size 2-103837
 Pt-C alloy, defect clustering induced by secondary collisions during HVEM irradi. 2-92042
 SeFe₂, hydrogenated, ⁵⁷Fe Mossbauer spectroscopy 2-72388
 Si, Czochralski crystals, intrinsic gettering study 2-76430
 Si, diffusion of Al, oxidation effects 2-56257
 Si, diffusion of As and P enhanced by thermal oxidation 2-71720
 Si, diffusion of B(P), enhancement by thermal oxidation 2-56258
 Si, diffusion of B(P), Si₃N₄ directly masked film effect 2-56260
 Si, diffusion of Ni, dissociative mechanism, expt. study 2-56259
 Si, dislocation free, formation of self-order agglomerates during cryst. growth 2-81782
 Si, Fourier transform IR spectra obs. of temp. depend. of O impurity 2-116215
 Si, neutron irradi., EPR obs., review 2-110638
 Si, neutron irradi., diffuse X-ray scatt. obs. of defects 2-109849
 Si, neutron irradi., radiation defects due to Si transmutation into P, elec. cond. study 2-115308
 Si, oxidation enhanced dopant diffusion and growth or shrinkage of oxidation-induced stacking faults 2-66015
 Si, oxidation stacking faults stacking faults and oxidation enhanced diffusion 2-66020
 Si, point defects, diffusion mechanisms and shrinkage and growth of extended defects, theoretical anal. 2-71443
 Si, point defects, negative-U props., expt. study 2-71918
 Si, proton irradi., defect centre form., electrophys. props. 2-76534
 Si, proton irradi., rearrangement of intrinsic defects during annealing, Hall coeff. meas. 2-109863
 Si, radiation damage, defect study 2-66068
 Si, radiation damaged self-interstitial struct., double alignment channelling study 2-76433
 Si, self-interstitials, review 2-71442
 Si, self-interstitials, transform. under electronic and thermal stimulation 2-103752
 Si, stacking fault growth and shrinkage kinetics in oxidizing ambient containing a Cl cpd. 2-98117
 Si, transition metal interstitials, impurity states, many electron effects, SCF X α cluster calc. 2-82283
 Si, transition metal interstitials, impurity levels, many electron effects, SCF X α cluster calc. 2-82284
 Si:As, ion irradiated, point defect chains, high resolution TEM study 2-71479
 Si:Au, cluster centres, EPR study 2-56923
 Si:B, electron irradi., B interstitial, capacitance bridge meas. 2-56034
 Si:B, interstitial B negative-U props., EPR 2-71908
 Si:B, proton irradi., impurity distrib. and diffusion 2-61203
 Si:B,Fe, quenched-in trap level at E_c+0.45 eV 2-104291
 Si:B(C), electron irradi. defect accumulation kinetics and point defect annihilation 2-98153
 Si:Fe, electron beam irradi., EPR spectra 2-56920
 Si:Fe, heat treated, interstitial impurity, EPR study 2-71439
 p-Si:Fe, interstitial Fe and Fe-acceptor pairs, DLTS and Hall effect study 2-66476
 Si:Fe,B, Fe donor activity on heat treatment, elec., DLTS and EPR meas. 2-71911
 Si:Ga, electron irradi., luminesc. of traps 2-61969
 Si:H, implanted, radiation defects study by DLTS 2-92522
 Si:O, electron irradi., carrier removal and recombination by interstitial complexes 2-115781
 Si:O, Mg influence of Mg on IR absorpt. and elec. cond. props. 2-87258
 Si:P, electron irradi. damage, capacitance and dielec. loss meas. 2-92037
 Si:P, O, electron and neutron irradi., point defects and colour centres, DLTS study 2-103754
 Si:Zn layers, ion implantation, damage annealing 2-103798
 Si-Mn, supersaturated solid soln., Mn interstitials, disintegration kinetics (*Russian*) 2-92222
 Sn, electro-plated coatings, grain size effect on whisker growth 2-115635
 Sn-Pb, electro-plated coatings, grain size effect on whisker growth 2-115635
 SnSb thin films, obliquely vacuum-deposited, elec. cond., defect density and struct. 2-66662
 SrF₂, impurity and interstitial clustering 2-86884
 SrF₂:La, Raman spectra between 300 and 1400K 2-99129
 SrF₂:La³⁺, thermal depolarisation studies 2-61817
 Sr_{1-x}Yb_xF_{2+x}, defect parameters ionic cond. study 2-115453
 Su:B(P), heavily doped, defect formation under electron irradi. 2-103822
 Ta, diffusion of H and D, N interstitials effect 2-104067
 Ta-H, low-temp. stable states, interstitial sublattices 2-86618
 Ti-Cr_{1-x}H₂(D), H position and diffusion, NMR studies 2-93025
 Ti-Cr_{1-x}H₂(D), Ar sputtered, photoemission studies 2-116330
 V-H₂, ultra small angle X-ray and neutron scatt. 2-86521
 V-C(Mo)(Nb)(Fe), neutron irradi., void form.: effect of substitutional and interstitial elements 2-103849

interstitials continued

- V-H-D system, isotope effects on thermodynamic functions (*German*) 2-110016
 V-Nb(Al), dil. alloys, radiation-induced defects, interaction, with O 2-103840
 V₂N₃ and V₃₂N₁₆, N ordering, neutron and electron diff. obs. 2-91879
 VT_{0.3} and VT_{0.75}, triton relax. time obs. of phase transitions 2-110684
 W, ion-irradiated, atomic resolution obs. of point defect struct. of depleted zones 2-103862
 Y-H(D) system, solid solutions, resistivity meas., isotope effects 2-66524
 Zr, deform., mech. eqn. of state and strengthening mechanisms 2-93556
 ZrNiH_x, interstitial site occupation of H atoms 2-86664

intersymbol interference

- digital fibre optic communication systems, coherence and intersymbol interf. 2-81119

intersystem crossing see nonradiative transitions

intramolecular forces see atomic forces

intramolecular mechanics see atomic forces

intramolecular potentials see potential energy functions

intramolecular vibrations see molecular vibration; molecular vibration in solids

intrinsic magnetisation see spontaneous magnetisation

Invar

- energy band calcs. of magnetism 2-66749
 ferromagnet, magnetovolt. effects, crit. temp. press. depend. calc. 2-66886
 ferromagnetic, thermomag. anal. using electron diff. 2-110584
 magnetovolume effects, molecular orbital study 2-66884
 XPS of valence and shell electrons, temp. variations (*Russian*) 2-67192
 Fe-Cr-B amorphous Invar alloy, Curie temp. and high field susceptibility, press. effects 2-72322
 Fe-Ni, FCC, linear expansion coeff. control by heat treatment (*Russian*) 2-61177
 Fe-Ni, high-temp. superstruct., X-ray diff. study (*Russian*) 2-61154
 Fe-Ni, magnetic phase transition, electron s-d orbital redistribution, sound vel. change 2-104620
 Fe-Ni, Young modulus anomaly, alloying effect (*Russian*) 2-77857
 Fe-Pt, Invar, alloy, disordered, mag. props. suggesting premartensitic transform. 2-87490
 (Zr_{1-x}Nb_x)Fe₂, spin wave stiffness const. determ., inelastic neutron scatt., magnetisation meas. 2-115989

invariance

see also conservation laws

- radiation transfer theory, appls. of general principle of invariance 2-114615

inversion layers

- electron gas, two-dimensional plasma waves, instabilities and amplification, theoretical anal. 2-61501
 hopping cond. in two-dimensional impurity band 2-104464
 MIS inversion layers, resonance electron-phonon interaction, light absorption 2-82468
 MIS system, ellipticity and Faraday rotation due to 2-D electron gas 2-110822
 MOS struct., elec. props. meas. 2-72060
 MOS structure with nonuniform and degenerate doping, strong inversion and terminal voltages 2-92767
 MOSFET, quantum Hall effect, role of inversion layer geometry 2-61492
 noise near metal-insulator transition, power spectra meas. 2-66649
 random systems, one- and two-dimens., electron localisation and elec. cond. 2-110305
 semiconductor, surface 2D plasma conductivity tensor components, direct meas. method 2-115850
 semiconductor sample having surface inversion region, simple approx. model for pot. distrib. 2-87397
 surface scattering in a quantum inversion layer 2-77197
 two-dimensional subbands, artificial superlattice creation, theory 2-61596
 two-dimensional systems, electronic props., review 2-82467
 n-CdS, exciton refl. spectrum, inversion layer effect 2-116207
 GaN-GaAs MIS capacitors, interface states charact., G-V, C-V and transient capacitance anal. 2-92776
 Ge (111), n-inversion layers, subband energy struct., effective mass approx. 2-110489
 Hg_{0.7}Cd_{0.3}Te-anodic oxide interface, photoelec. and field effect props. 2-87398
 Hg_{1-x}Cd_xTe-native oxide MIS struct., elec. props. meas. 2-87399
 HgTe-CdTe lattice matched Schottky barrier heterojunction, metal organic CUD epitaxial growth and elec. props. meas. 2-87366
 p-InSb inversion layer, electron-phonon interaction, cyclotron resonance study 2-56939
 Mg-SiO₂-p-Si tunnel junctions, subband struct. in n-inversion layers 2-61595
 MoSe₂ solar cells, photovoltage, kinetic model 2-83474
 Si (100), inversion layers, freq.-depend. cond. 2-82427
 Si (100), magnetoplasmon interaction with cyclotron reson. harmonics 2-110482
 Si (100) inversion layer, temp. depend. cond. 2-110483
 Si (100) inversion layers, subband splitting, uniaxial stress and substrate bias effects 2-56701
 Si (100) MOSFET, photoresponse of electron inversion layer, mag. field depend. 2-61518
 n-Si (100) MOSFET inversion layers, zeros of transverse magneto-resist. 2-66650
 Si (111), subband separations, effects of exchange-correl. and surface strain 2-61543
 Si (111), valley degeneracy and intersubband spectroscopy 2-61542
 Si, anomalous magnetoresistance in two-dimensional hole gas (*Russian*) 2-72012
 Si, dielec. const. and cond. of 2D electron gas, mag. field effects 2-56451
 Si, inversion channels on high-index surfaces, energy spectrum, lower miniband obs. 2-115910
 Si inversion layer, conductance, logarithmic corrections, localisation and interaction effects 2-61598
 Si inversion layer, inelastic electron-electron scatt. time 2-61599
 Si inversion layer, intervalley and intersubband scatt., phonon electron interactions 2-87401
 Si inversion layers, cyclotron effective mass and electron relax. time 2-56454
 Si, inversion layers, logarithmic and power law corrections 2-72064

inversion layers continued

- p-Si, inversion layers, two-dimens, plasmon anisotropy, *expt.* study 2-61545
 Si inversion layers, valley splitting and degeneracy, Shubnikov-de Haas oscils. 2-56706
 Si inversion layers, valley occupancy transition 2-87356
 Si inversion layers, Wigner glass and cond. oscils. 2-98753
 p-Si MIS inversion layer solar cell, two-dimensional model 2-73125
 Si MIS structure, Faraday rotation for inversion layer electrons, Appel-Overhauser model 2-87746
 Si MOS inversion layer, Anderson localization, neg. magnetoresist. 2-61597
 Si MOS inversion layers, Hall effect in strong mag. fields 2-61489
 Si MOS inversion layers as two-dimensional conductor (*Japanese*) 2-82469
 Si MOSFET, magnetoresistance study 2-115900
 Si MOSFET, tilted inversion layer, tunnelling 2-77193
 Si, tipped inversion layers, tunnelling, Shubnikov-de Haas data 2-56705
 Si, two-dimens. electron gas, localisation and interaction effects 2-72071
 Si, Z 2-56700
 p-Si-Mg solar cells, fundamental props. 2-88442
 Si-SiO₂, MOS inversion layer, stress induced supercond., electron-phonon coupling 2-56702
 Si-SiO₂, MOSFET inversion layer, energy loss of warm electrons, Shubnikov-de Haas study 2-56703
 Si-SiO₂, MOS inversion layer high field electron vel., time of flight technique 2-56704
 Si₃N₄ film on Si, very high charge densities for inversion layer solar cells 2-61608
 Si(100) surface inversion layer, electron mobility, memory function and Boltzmann eqn. approaches 2-56699
 Si(100)-SiO₂ inversion layers, final-state interaction and intersubband spectroscopy 2-56698
 Si(100)-SiO₂, MIS system, inversion layer electronic struct. 2-115901
 WSe₂, solar cells, photovoltage, kinetic model 2-83474

iodine

- see also nuclei with*
¹²⁷I in Missouri thyroids 2-68172
 absorption line width determ. in I switch parameter optimisation 2-60181
 adsorbed on Si(111)×7 and Ge(111)2×8, surface EXAFS study 2-66360
 adsorbed on Si and Ge(111), surface EXAFS study 2-110977
 adsorption on W (110), LEED and Auger study, antiphase boundary model 2-82144
 adsorption on W (110), non-coincident adatom net model, LEED patterns 2-82145
 adsorption/desorption on graphite, rel. to fission reactor coolant distrib. 2-80123
 atom, ¹²⁷I₂P_{3/2} Raman transition, cross-section and hyperfine struct. 2-96487
 atom, emission at 1.3 μm, collisional enhancement by CF₃I, C₂F₅I, i-C₃F₇I and n-C₃F₇I 2-59739
 atom, spectral and relax. charact. investigation using a photodissociative I laser 2-113934
 2,2-bipyridyl-1S₂, complex, form. thermodynamics, visible and far IR obs. 2-108517
 β-carotene: I₂, IR spectra, vibronic charge oscils. 2-116171
 chemical reaction, release during HTGR accidents 2-96255
 coadsorbed on Pt and Pd, surface enhanced Raman spectra 2-99132
 diatomic molecules thermal dissociation with bound electron excited states 2-93764
 diffusion couple Ag-I, struct. and elec. cond. meas. 2-82033
 halogenation of Pb surfaces, UV photoelectron spectra 2-73013
 hydrocarbon complex, I₂ saturated, contact charge transfer interaction, UV absorpt. spectra 2-108547
 ion+atom collisions, information theoretical description of charge-state distributions 2-102576
 isotopic anal. using negative surface ionisation 2-114121
 laser, 2 TW, irrad. of spherical microtargets, exploding pusher regime case (*Russian*) 2-55768
 laser, anti-Stokes Raman, tunable, 178 nm 2-75560
 laser, Asterix III, high power, status and prospects 2-97063
 laser, high-power, fundamentals, pulse propag. and Asterix III description 2-75563
 laser, photodissoc., new active substances 2-114259
 laser, photodissoc. subnanosec. 2-60116
 laser, photodissociation, cavity length and absorpt. depend. longit. beat 2-60124
 laser, photodissociation, possible gain control of stimulated enthalpy scatt. of light 2-90986
 laser, pumped by open high-current discharge radiation, active mixture regeneration anal. 2-114260
 laser frequency stability, He-Ne laser with heated I₂ absorption cell 2-60135
 lasers, photodissociation, stimulated light scatt. by thermal waves excited in thermodynamically nonequib. media 2-60164
 lasers, photodissociation, ultrasound intensity excited in stimulated light scatt., optically-controlled chem. reactions 2-60165
 molecule, D' to A' transition, vibr. anal., Franck-Condon and band profile calcs., weak emission 2-108546
 molecule, E region states excited by two-photon spectroscopy, kinetic obs. 2-85758
 molecule, excited state, chemically pumped, superfluorescence 2-65064
 molecule, fluoresc. spectra from I₂Ar quasimol. photodissoc. cage effect 2-96661
 molecule, high energy electronic state identification by means of ion dip spectroscopy 2-59875
 molecule, ion pair states study and assignment in 40000 cm⁻¹ region 2-70268
 molecule, ion-pair state, laser excitation, fluoresc. obs. 2-96616
 molecule, ion-pair state, two-photon excitation, fluoresc. obs. 2-85721
 molecule, laser fluoresc. studies 2-59844
 molecule, new ion-pair state 2-114133
 molecule, rot. consts. representation and extrapolation, improved method 2-54826
 molecule, transition strengths, visible and IR obs. 2-70244
 molecule, visible absorpt. spectra by Stark modulation spectroscopy 2-64997
 monolayer on Ag(111), core electron spectroscopy 2-72604
 trans-polyacetylene: I₂ film, elect. cond. and IR absorpt. 2-71969

iodine continued

- polyacetylene: I₂, conducting polymer, doping mech. 2-66028
 polyacetylene: I₂, stability and stabilisation, phys. and elec. props. 2-56593
 polyacetylene: I₂, struct., electron diffrr. study 2-86588
 polyacetylene: I₂, elec. cond., three-dimens. disordered semicond. islands model 2-56589
 polyacetylene: I, conductivity, struct. variables effect 2-56568
 polyacetylene: I, dopant size effect on elec. cond. 2-87285
 polyacetylene: I, microwave harmonic mixing in metallic regime 2-104412
 polyacetylene, cis, trans. and I₂ doped, cryst. struct., electron diffrr. study 2-91820
 polyacetylene, I₂ doped, elec. cond. and mag. susceptibility props., review 2-71955
 polyacetylene, I₂ doped, EPR saturation characteristics meas. 2-92991
 polyacetylene, I doped, three-dimens. variable range hopping obs. 2-92620
 polyacetylene film, I₂ or Na doping, swelling meas. 2-92007
 polyacrylonitrile: thin film, I-V characts., induced percolation 2-110513
 polyphenylacetylene: I₂, stability and stabilisation, phys. and elec. props. 2-56593
 polyphenylacetylene: I₂, thin films, Schottky barriers, elec. props., doping reactions 2-77212
 PVC: I₂, photoconductivity, doping effect 2-61629
 radioiodine control in power reactors, evolution and current state 2-85401
 solid, cryst. struct., pressure effects 2-115176
 solid, high-pressure phase transition obs. using diamond-anvil device 2-56173
 solid, metallic press. induced phase, elec. cond., thermoelectric power 2-92570
 stabilised He-Ne laser at 633 nm, international comparisons results 2-102772
 stability and stabilisation, phys. and elec. props. 2-56593
 thermal desorption from W (100), Auger spectra study 2-87067
 triethylamine: I₂, charge transfer complexes and ion pairs, stoichiometry, permittivity effects 2-114063
 vapour, IR luminescence, spectral emission density, absorption spectra (*Russian*) 2-90553
 Ag/zeolite 4A-I₂ solid state cell, electrochemical performance 2-73101
 As₂Se₃: I, chalcogenide glasses, carrier mobility, transient photocurrent spectra study 2-72024
 Cu₂O/I⁻ photoelectrochemical cell, photocorrosion mechanism 2-62415
 H₂ production, sulphur-iodine thermochemical water-splitting cycle bench scale testing preliminary results 2-73156
 I CW photodissociation laser with cyclic circulation of gaseous trifluoromethyl iodide 2-96987
 I laser amplifier chain performance, pulse compression, extraction efficiencies 2-80940
 I, adiponitrile solns., ionisation energies, photoelectron study 2-80727
 I+I, electronic shell struct. influence on heavy ion elastic scatt. 2-114079
 I+I, recombination in liqs., vibr. relax. study 2-105465
 I+Kr(Xe), interaction pots., crossed-beam meas. 2-108661
 I+Na₂, metal cluster oxidation, chemiluminescence study 2-99681
 I⁺+H₂O(D₂O), recombination, Monte Carlo classical trajectory method 2-111481
 I⁺+He, electronic and vibronic transitions, translational energy spectroscopy 2-54935
 I₂ doped polyacetylene, far IR absorpt. spectrum below isometal-metal transition 2-77525
 I₂ laser, optically pumped, CW laser lines 540 to 650 nm range 2-60064
 I₂, optically pumped dimer laser development, 540 to 650 nm laser lines 2-80939
 I₂ saturated absorption freq. stabilisation for He-Ne lasers (*Polish*) 2-96978
 I₂, state-to-state dissociative electron capture rate, optogalvanic demonstration 2-59949
 I₂+H, exchange reactions, classical var. rate calcs. 2-105461
 I₂+He, vibr. relax., Morse type pots., quantum mechanical study 2-80787
 I₂+He(Xe), rotationally inelastic transitions, rate consts., laser induced fluoresc. 2-85786
 I₂+inert gas atoms, vibr. energy transfer from highly excited anharmonic oscillators, quantum state and interaction pot. depend. 2-96697
 I₂+O, supersonic at. beam reactive scatt. 2-105474
 I⁺ CW laser excited by electron beam 2-55126
¹²⁷I, A=129, 131, UV photodecomposition from organic iodides in nuclear facility off-gas beams 2-74839
¹²⁷I, airborne levels during protein labelling 2-62777
¹²⁷I volume implants, dose table describing peripheral vol. fractions 2-94212
¹²⁷I₂, stabilised He-Ne laser at 633 nm, freq. shifts at low I₂ press. 2-96897
¹²⁷I₂, hyperfine components (520 THz), absolute frequency meas. 2-108929
¹²⁹I, radioecology problems 2-93977
¹³¹I, BWR nuclear power station, monitoring of critical radiation exposure pathways 2-90306
¹³¹I in Cumbrian thryd due to release from nuclear fuel reprocessing plant 2-62778
¹³¹I therapy of thryoid cancer, effective focal doses and radiation loads (*Russian*) 2-62767
¹³¹I, thryoid morphofunctional changes after administration of ¹³¹I alone or in combination with ⁴⁵Ca (*Russian*) 2-116997
¹³¹I uptake in organic resin, rel. to activated charcoal 2-85397
 KCl:H, I, relaxed excited state of atomic H centres, ODMR study 2-99000
 KCl:I, dielec., sp. ht. and thermal cond. 2-86960
 O₂-I chemical laser, efficient small scale operation 2-90919
 n-PbTe: I, thermal diffusion of impurity atoms 2-66293
 RbCl:H, I, relaxed excited state of atomic H centres, ODMR study 2-99000
 Se: I, vitreous, thermal crystn., DTA study 2-115143
 Si(111)7×7, SEXAFS studies of I adsorpt. 2-83417
 UO₂ pellet, pulse n. irrad., ¹³¹Xe and ¹³¹I release (*Japanese*) 2-64476
 ZnS:I, iodine transport grown, channelling and ionoluminesc. spectra study 2-56058
 ZnS:I cubic crystals, blue self-activated luminesc., N, P and Ag ion implementation effect 2-116237

iodine compounds

- chalcogen-iodine cations, ¹²⁷I Mossauer study 2-96608
 iodates, simple and complex, ¹²⁷I NQR investig. 2-110716
 iodide in Arabian Sea 2-111967
 iodoform, crystn., 2-photon induced photoconductivity 2-66585
 Ag₃I₂P₂O₇ solid electrolyte, ionic cond. study 2-61198
 H+XY and X+HY where X and Y are halogen atoms, semiempirical pot. energy surfaces 2-99644
 I₂Ar van der Waals complex, photodissoc. cage effect 2-96661
 IBr, Stark effect in hyperfine components, rot. transition in microwave region 2-70312
 IBr+O, supersonic O beam, reactive scatt. study 2-83377
 IBr+Xe reaction, steric effect, photodissoc. polarisation obs. 2-11477
 ICN, photodissoc. and Raman scatt., semiclassical theory of radiation interaction 2-70357
 ICN, photofragment spectrosc., vibr. and rot. distrib. of CN(X²Σ⁺) 2-64951
 ICl, supersonic expansion, laser spectrosc. 2-114032
 ICl, visible absorpt. spectra by Stark modulation spectroscopy 2-64997
 ICl+O, supersonic O at. beam reactive scatt. 2-105475
 ICl₄, bond order from Raman intensity data 2-59962
 IF laser, discharge pumped, upper state form. kinetics and line tunability 2-85943
 IF₇, struct., vibr. assignment, and intramol. forces, pseudopot. SCF-MO studies 2-75171
 I₂Ne, intramolecular energy transfer, dissociation, time depend. SCF approx. 2-108452
 IO₃²⁻, back donation effect, Xα calcs. 2-80474

ion-atom collisions *see atom-ion collisions***ion beam effects**

- see also ion-surface impact; ionoluminescence; plasma-beam interactions*
 alkali halides, sputtering under ion bombardment 2-99240
 alloy, austenitic, microstruct. development, effects of pulsed dual-ion irradiation 2-109852
 alloy, ion bombardment, solute redistrib. process 2-109858
 alloys, ordered, displacement cascade damage, TEM obs. 2-103861
 alopecia, effects of heavy ions on rabbit tissues 2-57866
 apatite, ion induced track formation mechanism 2-59664
 atom mobility under ion bombardment 2-81836
 atomic mixing, ion bombardment induced, sputtering assessment 2-98166
 biomolecules, rel. depend. of fast heavy ion induced desorption 2-94127
 bioorganic solids, ion induced desorption of mols., conf., Uppsala, Sweden (June 1981) 2-94884
 bubble garnets, Ne ion implantation, damage profile, Rutherford backscatt. and channelling study 2-71524
 carbide films, sputtered, effect of ion implantation on props. 2-87120
 cataractogenesis, effects of heavy ions on rabbit tissues 2-83605
 cell struct. irradiation damage, heavy charged particle stochastic track concept study (Russian) 2-57855
 cellulose triacetate, spatial damage distrib., at. number and ion energy influence 2-59663
 condensed gas films, erosion and mol. form. by electronic energy loss of fast ions 2-98171
 coronary artery, mouse, late effects of heavy charged particles on fine struct. 2-105805
 desorption, fast ion induced, polarization field 2-98432
 desorption, ion induced, surface chemistry 2-99701
 diamond, epitaxial growth on Ni, irradiation with C ions, ESR spectra 2-77371
 DNA, molecular modification, fast heavy ion induced desorption, mass spectrometry 2-100170
 Electrochemical Society, Incorporated, Spring Meeting, conf., Montreal, Canada (May 1982) 2-101133
 ergosterol, desorption, fast heavy ion induced 2-98429
 film formation, ion based, role of ions 2-116385
 frost, condensed gas, ion induced erosion, planetary apps. 2-100781
 fusion materials, H trapping due to ion irradiation, implications for neutron irradiation 2-108117
 fusion reactor alloys, candidate, radiation-induced segregation 2-85227
 fusion reactor first wall, welded joint, microstruct. and erosion during ion bombardment 2-113738
 fusion reactor materials, fatigue test under irradiation, from cyclotron 2-85238
 fusion reactor materials, pulsed irradiation, effects on microstruct., swelling, creep 2-54641
 garnet layers, ion implanted, damage evaluation, Monte Carlo simulation 2-76519
 gas targets, high-pressure, opt. obs. of intense particle beam influence, radionuclide prod. 2-113794
 glass, saline leaching, ion bombardment enhancement, radioactive waste appl. 2-74811
 glass surfaces, ion beam effects, XPS study 2-99252
 glycylglycine, desorption, fast heavy ion induced 2-98429
 graphite, deuterium implants thermal release, He-induced damage influence 2-76468
 graphite, He⁺ bombardment, microstruct. changes 2-76524
 graphite ion implantation damage, impurity profile, Raman, Auger and electron microscopy study 2-81834
 heavy-ion stopping-power calculation for light absorbers 2-76539
 hydrodynamic stability, electron and ion beam study 2-74894
 implantation, H/D isotope exchange, local mixing model 2-56048
 implantation damage in semiconductors 2-61006
 Inconel 600, 625, ion eroded, erosion yields, topographical changes and depth profile anal. 2-77661
 Inconel 625, sequentially He⁺ implanted, surface exfoliation suppression 2-76522
 inelastic ion-surface collisions, conf., Feldkirchen-Westerham, Fed. Rep. of Germany, (Sept. 1980) 2-74161
 ion beam, transport equation in three dimensions, energy deposition, reflection 2-56052
 ion beam-pellet interaction, energy and momentum deposition 2-85254
 ion bombarded by 10 MeV ⁴He⁺ ions, depth depend. of radiation hardening 2-88095
 ion bombarded solid surface, ionisation of ejected atoms 2-82989
 light ion bombardment, simulation of neutron-induced mech. prop. changes 2-103864
 lunar silicates, concepts for fossil track studies 2-63283
 metal film, vacuum condensed, texture form., ion beam induced 2-115601
 metals, cascade damage, ion-irradiation study 2-103860
 ion beam effects continued
 metals; chemicothermal treatment in glow discharge, ion bombardment effect 2-111376
 metals, defect structs. below surface after neutron or ion irradiation, monoenergetic positron study 2-92052
 metals, ion and neutron bombarded, primary recoil spectra and subcascade effects meas. 2-76529
 microcrystals, conical, ion irradiation, surface stress and plastic deformation 2-86777
 Mo, ion irradiation, by H⁺ and He⁺ damage struct., blistering process, TEM study 2-76520
 Monte Carlo simulation of ion beam penetration in solids 2-92054
 multicomponent target, secondary ion emission, current density effects 2-99275
 near-surface composition changes, dynamic Monte Carlo simulation 2-109851
 Nimonic alloy PE 16, ion eroded, erosion yields, topographical changes and depth profile anal. 2-77661
 oxides, sputter etching, ion beam charge composition effect 2-67181
 polymer surfaces, SIMS anal., ion beam damage charge neutralisation, surface pot. 2-93353
 quartz, crystalline, optical S-waveguides fabricated by ion bombardment 2-109044
 quartz, crystn., effects of ion implantation 2-98124
 α-quartz, ion irradiation, surface polaritons, ATR study 2-57133
 semiconductor, disorder production, during ion irradiation, composite model, annealing 2-66080
 semiconductor superlattices, planar ion channelling, computer simulation 2-109873
 shock waves in collision cascades 2-56091
 silicide epitaxy induction Si substrates, characterisation by ion channelling and backscattering techniques 2-56403
 SIMS, reactive ion bombardment for secondary ion yield enhancement 2-82973
 single crystal surface, chem. reactivity, surface irregularities and point defects role 2-57637
 skin, fractionated irradiation with X-rays or accelerated C ions, hamster expts. 2-68073
 skin, rat, residual damage 1 year after exposure to X-rays or accelerated heavy ions 2-88622
 solid surface microasperities, thermodynamic and mechanical equilibrium morphologies 2-92334
 solids, lenticular bubble growth, rel. to blistering and flaking 2-74926
 spinal cord, rat, response to single and fractionated doses of accelerated heavy ions, rel. to X-rays 2-88620
 steel, austenitic, stainless, annealing twins absence during radiation-induced recrystallization 2-105187
 steel, austenitic stainless, 316, cold worked, Ti modified, tensile props., irradiation in high flux isotope reactor 2-72764
 steel, austenitic stainless, 316, fatigue under H and He bombardment 2-72802
 steel, austenitic stainless, 316, TEM observations of crack tip-cavity interactions 2-71521
 steel, austenitic stainless, DIN 1.4970, He embrittlement, high temp. ion beam simulation 2-71519
 steel, austenitic stainless, ion-irradiation, void swelling and microchem. segregation 2-111181
 steel, austenitic stainless, microstruct., dual ion-irradiation, influence of He injection rate 2-109853
 steel, austenitic stainless, microstruct., in situ obs. of heavy-ion damage 2-86754
 steel, austenitic stainless, Mn, irradiation with 46 MeV Ni⁺, microstruct. before and after 2-92051
 steel, austenitic stainless, rapidly solidified, path A prime candidate alloy, microstruct. after Fe and He ion irradiation 2-108115
 steel, austenitic stainless, SCC behaviour, effect of surface modification 2-116595
 steel, austenitic stainless, simultaneous ion bombardment, neutron irradiation and stress/temp. cycling 2-108113
 steel, austenitic stainless, void swelling, 1.1 MeV N-ion irradiation, TEM study 2-109854
 steel, austenitic stainless 316, containing irradiation induced He, high temp. fatigue life 2-72801
 steel, austenitic stainless 316, He embrittlement, microstruct. aspects 2-71518
 steel, austenitic stainless 316, Ti effect on microstruct. changes rel. to void swelling 2-86741
 steel, ferritic, ion irradiation, void swelling and solute segregation 2-85212
 steel, stainless, 1.4970, He embrittlement reduction by finely dispersed TiC precipitates 2-71520
 steel, stainless, amorphous, crystn. behaviour, effect of heavy ion irradiation 2-81676
 steel, stainless, austenitic, ion irradiation mode effects on void form. 2-86756
 steel, stainless, austenitic, precip. and cavity form. during irradiation 2-86735
 steel, stainless, D beam irradiation, surface erosion 2-74933
 steel, stainless, neutron irradiation at 55°C, effect on mech. props. 2-69866
 steel, stainless, surface damage, AR ion induced, implantation effects 2-98164
 steel, stainless, surface modification by H ion erosion 2-93655
 steel, stainless, type 304, dual-ion bombarded, crit. cavity sizes 2-109860
 steel, stainless, type 304, dual-ion bombarded, crit. cavity sizes 2-109861
 steel, stainless, type 304, Ti implantation effect on creep rate and oxidation resist. 2-93576
 steel, stainless, types 304 and 316, dual ion bombarded, He partitioning to extended defects 2-86755
 steel, stainless, types 304 and 316, He⁺ irradiation, surface roughness, form Xe adsorption 2-76525
 steels, austenitic stainless types 316, 347, high flux reactor irradiation, microstruct., TEM study 2-80118
 surface, ion bombardment self-decorated, cryst. microstructure study 2-111337
 surface interaction, radioactive isotope prod. review 2-103859
 surface modifications due to preferential sputtering 2-110103
 surface texturing by ion bombardment, sputtering yield and related phenomena, review 2-76528
 surface topography development using two ion beams 2-92317
 surfaces, atomically clean, prep., struct. and props. 2-82103
 SYNROC, damage cross-section of heavy ions 2-115313
 targets prep. for superheavy element synthesis 2-108185
 texturing with an RF-ion source using Xe working gas 2-105390

ion beam effects continued

- thin film stress control during deposition for improved device performance 2-99331
 transition metal fluorosilicates, surface damage under Ar ion bombardment, XPS studies 2-61045
 vitamin D-metabolites from human plasma and mass spectrometric analysis by fast heavy ion induced desorption 2-100171
 AgCl film, light illumination, modifications induced by ion implantation 2-93311
 Al, adsorption of O₂, SIMS studies 2-104169
 Al, fusion neutron simulation study, comparison of electron and self-ion damage 2-85225
 Al, He ion energy straggling, 0.25 to 0.75 MeV/a.m.u., backscatt. study 2-76550
 Al, ion bombarded with C⁺, plastic deformation stress meas. 2-86760
 Al, ion implanted, radiation damage and annealing studies 2-76532
 Al, irradiated with Al ions, pure and He doped 2-86747
 Al magnetron sputtered film overlaid with plasma SiN film, trapped Ar induced deformation 2-82155
 Al Mg, adsorption of O₂, SIMS studies 2-104169
 Al, surface erosion under the ion bombardment, mech. loading effects, SEM study 2-78021
 Al, thin film, blistering by helium ions, TEM study 2-56049
 Al:He thin film, He ion bombardment, TEM, SEM and α -particle backscatt. study 2-115319
 Al-SiO₂-Si, B-ion implanted MOS structure, radiation defect spectra study by TSC method 2-66646
 Al-Zn, adsorption of O₂, SIMS studies 2-104169
 AlAs-GaAs superlattice, disorder by Si implantation 2-76465
 Al₂O₃, ion incidence angle effect on cleanliness, roughness and topography 2-92050
 Ar, solid, erosion by fast He ions 2-98165
 Au, He ion energy straggling, 0.25 to 0.75 MeV/a.m.u., backscatt. study 2-76550
 Au, ion bombarded, damage profile, electron microscopy and computer simulation study 2-76531
 Au, resonant coherent excitation of B, C, N, O, F ions 2-76537
 Au-Cu, surface comp. ion scattering spectra study by Ar⁺ and He⁺ ion bombardment 2-71781
 B, surface modification by H ion erosion 2-93655
 B vapour deposited coatings, ion implantation, temp. cycling effects 2-74924
 B₂₀Fe₄₀Ni₄₀, metallic glass, He ion irradi., sputtering and blistering 2-76521
 C foils behaviour under ion irradiation 2-66076
 C stripper foil lifetimes, temp. influence 2-75090
 C stripper foils, laser treated, prep. and tests 2-108174
 C stripper foils, procedure for rapid evaluation 2-108175
 C, stripper foils, recent development work and meas., review 2-108176
 C, surface modification by H ion erosion 2-93655
 CaO, ion irradi., F⁺ and F centre form. and annealing, UV spectra and volume study 2-76437
 CdTe:¹¹¹In, ion implanted, annealing 2-98126
 CsI, desorption, fast heavy ion induced 2-98429
 CsI, desorption yield as function of fast heavy ion beam angle of incidence 2-87058
 Cu, 30 keV Cu⁺ ion bombarded, temp. depend. of sizes of defects 2-56047
 Cu, double focusing in Ar ion refl. 2-81866
 Cu, He ion energy straggling, 0.25 to 0.75 MeV/a.m.u., backscatt. study 2-76550
 Cu, heavy ion-irrad., vacancy loop form. 2-103863
 Cu, Ni partial diffusion coeff. after ion irradi., fusion neutron effects simulation 2-86757
 Cu single crystal, ion bombardment induced surface topography, incidence angle effect 2-76471
 Cu surface, Auger neutralisation mechanism in secondary ion emission 2-67179
 Cu/Cr epitaxial film, ion mixing during RF sputtering deposition 2-82161
 Cu-Au, ion beam mixing study by 300 keV Kr⁴⁺ bombardment 2-76514
 Cu-Be, TEM obs. of microstruct. evol. in simulated ion irradi. alloys 2-86745
 Cu-Ge, heavy ion-irrad., vacancy loop form. 2-103863
 Cu-In, low energy ion bombard. enhanced diffusion, segregation, and phase transforms. 2-82991
 Cu-Ni, sputter-enhanced diffusion at high temps. 2-92279
 Cu-Ni (40 at.%) Ar⁺ irradi., subsurface composition modification 2-74932
 Cu-W, ion beam mixing study by 300 keV Kr⁴⁺ bombardment 2-76514
 Cu₃Au, Cu⁺ ion irradi., displacement cascade dimensions, TEM and computer simulation study 2-86759
 Cu₃Au, ordered, displacement cascade damage, TEM obs. 2-103861
 Cu(100)+Ar ion, semichannel focusing energy determ. 2-105030
 D-T plasma, energy deposition of fast α -particles 2-102259
 D₂O ice crystal, light ion interaction 2-81842
 D₂O ice film, erosion and mol. form. by electronic energy loss of fast ions 2-98171
 ergosterol, desorption yield as function of fast heavy ion beam angle of incidence 2-87058
 (Fe,Ni)₃V long range ordered alloy, resistance to neutron and ion irradi. 2-85217
 Fe, ion irradiation, void swelling and solute segregation 2-85212
 Fe, Ni ion irradi., simulation studies 2-109857
 α -Fe, triple beam ion irradi., depth distrib. of displacement damage 2-86752
 Fe-Co monocryst. alloy, surface comp., ion bombardment and annealing effects, Auger study 2-71782
 Fe-Cr-Ti(Si), ion irradiation, void swelling and solute segregation 2-85212
 Fe-(Cr), triple beam ion irradi., microstruct. 2-109856
 Fe₈₀B₂₀, amorphous alloy, ion irradi. effects, conversion electron Mossbauer spectra study 2-61043
 Fe₃₁Ni₁₆Cr₁₄P₁₂B₈, amorphous and polycryst., He ion bombardment 2-103856
 Fe₈₀Ni₁₆Mo₄B₈, amorphous, ion implantation, He bubble and blister formation 2-115314
 Ga film, low temp. ion beam irradiation 2-103858
 GaAs, cylindrical sample, adsorpt. of O₂, orientation depend., AES meas. 2-115565
 GaAs, ion irradi., Frenkel defects and annealing 2-115316

ion beam effects continued

- GaAs, ion-plasma treatment influence on structural and recomb. characts. (*Russian*) 2-66079
 GaAs:B⁺ ion implanted, lattice damage profile, multilayer anal., ellipsometry study 2-92059
 GaAs:N, radiation damage and near edge optical props. 2-71523
 GaP, ion irradi., Frenkel defects and annealing 2-115316
 (GaSb)_{1-x}Ge_x epitaxial film, ion mixing during RF sputtering deposition 2-82161
 Gd targets prep. for superheavy element synthesis 2-108185
 Ge, surface topography, self-ion bombardment effects, 30 to 500 keV 2-71516
 GeS, electroreflection spectra, changes under ion bombardment 2-82876
 Ge_{0.25}Se_{0.75} amorphous inorganic resist film, ion and electron beam induced struct. changes, TEM study 2-115588
 glycylglycine, desorption yield as function of fast heavy ion beam angle of incidence 2-87058
 Hf, Bi ion irradi., dislocation loops 2-86758
 Hg_{0.25}Cd_{0.75}Te, surface anodic oxide film composition, ion beam effects, XPS study 2-71832
 III-V semiconductors, ion beam gettering, review 2-115310
 In-Mn, ion beam induced precipitate dissolution, characterisation by supercond. transition temp. meas. 2-86740
 In-Mn alloys, dil., supercond., T_c depression produced by ion implantation 2-77221
 InAs, ion irradi., Frenkel defects and annealing 2-115316
 InP (110), ion bombardment and etching effects, EELS and AES study 2-110099
 InP, ion irradi., Frenkel defects and annealing 2-115316
 KCl (001), Ar ion irradi., defect instability, LEED study 2-82110
 LiF implanted single crystals, oriented in metallic aggregates formation 2-76680
 Lu-Fe alloy, recoil mixing produced by atom beams, simulation using computer code D⁺ beam irradi. 2-74933
 Mo film on Si, ion beam induced interfacial reactions, TEM obs. 2-110050
 Mo, ion bombarded by 10 MeV ⁴He⁺ ions, depth depend. of radiation hardening 2-88095
 Mo, ion implantation effect on microstruct., TEM obs. 2-71522
 Mo, ion irradi., final damage state, mass dependence, channelling and TEM study 2-76530
 Mo irradiated with Ar ions, defects study using thermal desorption spectrometry 2-76517
 Mo, nitridation by low energy N₂⁺ ion bombardment, surface pretreatment depend. 2-111349
 Mo, nitridation by N₂⁺ and N⁺ beam bombardment, energy and dose depend. 2-111350
 Mo, precipitation at room temp., TEM and THDS obs., He platelet form. 2-88088
 Mo single crystal, creep during low energy ion irradi. (*Russian*) 2-72762
 Mo with adsorbed O, effect on excited particle emission (*Russian*) 2-87073
 Mo:D, ion-implanted, permeation and re-emission rate, rel. to irradi. damage 2-74937
 Mo:He, ion implanted, exfoliation modes, near-surface stress effects 2-74927
 Mo-Nb-C (0.06, 0.24 wt.%), surface Ar⁺ ion irradi. damage 2-74929
 Mo-RE (0.50-2 wt.%), surface Ar⁺ ion irradi. damage 2-74929
 Mo-Re, re effect on void swelling, in-situ obs. in HVEM 2-86743
 Mo-Ti and alloy TZM, void swelling behaviour under heavy ion bombard. 2-86744
 Mo-TiC (23.5 mol.%), ion bombardment, surface damage 2-74930
 Nb and alloys, ion irradiated by ³⁶Ni⁺ and ⁴He⁺, swelling 2-85216
 Nb and Nb-Zr, He bubble behaviour, alloying effects 2-86742
 Nb, film, stress modification by ion bombardment during deposition 2-82180
 Nb foil, He ion irradi., supercond. props., pinning mechanisms (*Russian*) 2-66728
 Nb, He⁺ irradi., surface swelling 2-74931
 Nb, irradiated by He ions, bubble evolution, blistering cut-off mechanism (*French*) 2-76515
 Nb, surface erosion under the ion bombardment, mech. loading effects, SEM study 2-78021
 Nb-V alloys, sputtered clusters 2-93341
 Nb₃Al films, ion irradi., supercond., struct. disorder and phase transitions 2-98786
 NbN, supercond. thin film., ion beam irradi. during deposition transition temp. 2-82180
 Nb₃Sn, for fusion reactor magnets, displacement cascades, TEM obs. 2-109862
 Ni, cavities depth distrib. induced by 20 keV He ion irradi. 2-86748
 Ni first wall, passive He pumping, regeneration 2-71190
 Ni, He⁺ ion irradi., microhardness, microstruct., and blistering 2-98168
 Ni, ion implantation, He bubble and blister formation 2-115314
 Ni, irradi. creep, 17 MeV deuterons, stress depend. 2-86749
 Ni, irradi. creep, pulsed, 15 MeV deuterons 2-86751
 Ni, nonstationary Ni⁺ irradiation regimes effect on void formation 2-56050
 Ni, pore formation and swelling under Ar ion irradi., temp. depend. (*Russian*) 2-115312
 Ni surface, (100), ion bombardment induced faceting, LEED study 2-56310
 Ni, void swelling, pulsed ion beam effects 2-85214
 Ni:D, ion-implanted, permeation and re-emission rate, rel. to irradi. damage 2-74937
 Ni:He, ion implanted, damage profiles, swelling due to Ni ion irradi. 2-103805
 Ni-Al(Si), irradi. creep enhancement, 21 MeV deuteron bombardment 2-86750
 Ni-Cr-Co, monomic 90, He⁺ ion irradi., microhardness, microstruct., and blistering 2-98168
 Ni-Ge(Si) alloys, radiation-induced segregation, defect prod. rate effect 2-92055
 Ni-Mo, irradi.-induced Mo₂C precip. 2-57356
 Ni-Si, radiation-induced segregation, in situ Rutherford backscattering anal. 2-76679
 Ni-Si atomic mixing, Xe⁺ induced, depth depend., backscatt. spectra 2-103865
 Ni-Si films, compositional change induced by Ar⁺ ion bombardment 2-86753

ion beam effects continued

- Ni-Si interface, ion beam mixing, expt. study 2-66376
 NiSi₂ epitaxial layers on Si(001) substrate, pulsed ion beam annealing, TEM and Rutherford backscattering study 2-66383
 NiSi₂ composition changes due to Ar⁺ ion bombardment, AES meas. 2-103866
 NiSi₂ layers, ion irradiated epitaxial reordering 2-71830
 Ni₃Si, ion and electron irradi., near-surface segregation, TEM and electron diffr. study 2-86883
 NiSi₂(NiSi)(Ni₃Si), ion bombardment damage and annealing, sheet resist. study 2-56044
 Pb_{0.5}Sn_{0.5}Te film, struct. and elec. props., Ar⁺ bombard. and annealing effect 2-56731
 Pd-Fe, dil., thin film, AC susceptibility, ion irradi. effects, rel. to supercond. 2-56828
 Pd₃Si (PdSi) 2-56044
 Pd₃₀Si₇₀ metallic glass, radiation damage by heavy ions 2-103853
 Pt, desorption of O, ion induced 2-115562
 Pt, ion-irradiated, atomic resolution obs. of point defect struct. of depleted zones 2-103862
 Pt-Si atomic mixing, Xe⁺ induced, depth depend., backscatt. spectra 2-103865
 PtSi, composition changes due to Ar⁺ ion bombardment, AES meas. 2-103866
 Pt₃Si(PtSi₃), ion bombardment damage and annealing, sheet resist. study 2-56044
 Se_{0.7}Ge_{0.3} films, obliquely deposited, ion-induced physical and optical densification 2-61042
 Si, amorphous, ion irradi., hopping cond., prep. condition effects 2-92605
 Si, amorphous, low temp. high energy heavy ion beam annealing 2-81831
 Si amorphous layer, low-temp. recrystallisation by high-energy ion beam annealing 2-65861
 Si, disorder production during ion implantation 2-81806
 Si, energy struct. changes after As ion bombard. 2-92057
 Si epitaxial layers, defects anal., ion backscatt. and channelling techniques appls. (Chinese) 2-92376
 Si, intense pulsed H⁺, B⁺, Ba⁺ beam irradiation effects 2-76513
 Si, ion beam epitaxial growth on Ge and Si at 400K 2-99339
 Si, ion beam gettering, review 2-115310
 Si, ion bombarded and annealed, UPS and RBS investig. 2-103857
 Si, ion bombardment, surface layer amorphisation, ellipsometry and channelling investig. 2-103855
 Si, ion implantation, amorphous phase and point defect generation, generalised overlap-damage model 2-115315
 Si, ion irradi. by intense pulse, defect production, proton backscatt. study 2-109865
 Si lattice damage due to low energy deuterium bombardment, plasma edge studies 2-81832
 Si, radiation-induced defects, room temp., in HVEM studies 2-92043
 Si, single crystal, treatment by ion flows (Russian) 2-66077
 Si surface, (111), thermal epitaxial growth during ion bombardment, LEED study 2-87088
 Si surface layer struct., action of directed flow of ionised halogen containing gas (Russian) 2-71515
 Si, surface modification by H ion erosion 2-93655
 Si:As⁺(P⁺), ion implanted, cryst. damage, spectroscopic ellipsometry study 2-92049
 Si:Ge, atomic mixing effects on high fluence 40 keV Ge⁺ implantation 2-76466
 Si:Ge, Ne ion beam induced atomic distrib. of implanted range profiles 2-56002
 Si:P, ion implanted, wavelength modulation spectrum 2-104916
 Si:P⁺, ion implanted, damaged layer study 2-71480
 Si-Ni interface, Ni₂Si thermal formation, ion irradi. enhancement 2-56369
 Si-SiO₂, patterned surface, planarisation using ion beam erosion 2-67577
 SiC CVD coatings on Mo, surface damage under D⁺ irradiation 2-76523
 SiC, He⁺ bombardment, microstruct. changes 2-76524
 α-SiO₂, X-cut surface, defect stability under ion irradi., LEED study 2-92058
 Te single crystal, amorphisation by ion implantation 2-103854
 ThSiO₄ dimorphs, huttonite and thorite, metamict states 2-56046
 α-Ti, Bi ion irradi., dislocation loops 2-86758
 Ti, ion beam induced radiation defects and stimulated trapping efficiency 2-76516
 Ti-Al-V (6.4 wt.%), He⁺ irradi., surface swelling 2-74931
 Ti-Al(V)(V-Mo), ion irradiated, segregation 2-109859
 Ti-V (3 wt.%), ion irradiated, segregation 2-109859
 TiB₂, surface modification by H ion erosion 2-93655
 TiC_{0.98}, ion bombardment, surface damage 2-74930
 TiN, ion beam induced radiation defects and stimulated trapping efficiency 2-76516
 TiO₂ surface (001) thermal faceting 2-86992
 UO₂ monocrystal, ¹²C irradi., blocking, radiation damage (Russian) 2-59434
 V and V-Ti, He bubble behaviour, alloying effects 2-86742
 V, ion implanted, mech. props. study after neutron irradi. 2-71511
 V-Ti, ion implanted, mech. props. study after neutron irradi. 2-71511
 W, ion beam induced radiation defects and stimulated trapping efficiency 2-76516
 W, ion irradi., faulty field evaporation at divacancies in {222} 2-57271
 W, ion irradiation, by H⁺ and He⁺ damage struct., blistering process, TEM study 2-76520
 W, ion-irradiated, atomic resolution obs. of point defect struct. of depleted zones 2-103862
 W single crystal, ²²Ne irradi., radiation damage, blocking minima (Russian) 2-59434
 WC-Co cermet, surface modification by H ion erosion 2-93655
 Zr, Bi ion irradi., dislocation loops 2-86758

ion beam lithography

- PMMA resist, ion beam exposed, dry development 2-116573

ion beams

- see also beam-foil spectra; beam-foil spectroscopy; energy loss of particles; ion beam effects; ion optics; ion-surface impact; mass spectrometers; particle accelerators; sputtering
 3rd IEEE International Pulsed Power Conference, Albuquerque, NM, USA (June 1981) 2-89461
 10 kHz 10MW average power neutralised Li ion beam injector 2-96308

ion beams continued

- 50-keV He⁺ beam in He gas cell, neutralisation efficiency meas. 2-89860
 200 GW light ion beam power transport for fusion reactor ignition 2-90303
 accelerator, water-cooled extraction grids, heat flux limitations 2-85408
 adhesion in electronic stopping region, ion beam appl. 2-101496
 Auger electron spectra, reduction of Doppler broadening, refocusing props. of parallel-plate electrostatic analysers 2-64165
 collective acceleration by relativistic electron beams (Russian) 2-54693
 CR-39 plastic track detector response to 2 MeV microbeams of H, He and Ne 2-101502
 current density monitor cross-sectional 2-85443
 cyclotron beam, neutral beam profiles and computer-controlled emittance measuring device 2-102312
 electrode extraction system for prod. of intense ion beams 2-80369
 electron-ion beam, partially compensated, transverse oscils. 2-60006
 energy spread reduction by space charge control 2-114179
 fast response Faraday cup for low-energy, nanosecond-pulse ion beams 2-54703
 gas neutralisers for multi-MeV beams of light negative ions 2-54704
 heavy ion acceleration in ring cyclotron to relativistic energies 2-80357
 heavy ion beam ignition for inertial confinement fusion systems 2-113733
 ICF, neutralised ion beams, Pierce instability, theory 2-90292
 inert gas ion beams, singly charged, metastable fraction meas. 2-89861
 intense ion beams, very low emittance, generation method 2-96359
 intense pulsed ion beams, cross-field propag. 2-85445
 large current ion trajectory for a sector type magnetic analyzer in a third-order approximation (Japanese) 2-90795
 light ion beam time-compression, tapered transmission-line accelerator 2-96307
 liquid metal ion source, emission characts. 2-96353
 monatomic ions, charge stripping spectra 2-54780
 negative ion beam formation, transport and acceleration 2-80372
 negative ion source, self-extraction 2-89858
 neutral beam sources, extractor grids fabrication 2-101495
 pinched electron beam diode with oil-covered anode, pulsed ion beam extraction 2-90339
 plasma focus discharge, electron and ion beam energies and currents meas. 2-70024
 proton beam, intense neutralized, cross-field propag. near metal plate 2-75508
 proton beam intense from applied B₀ mag. insulated ion diode, characts. 2-75074
 proton beams, intense, focused, diagnostic method using ¹¹B(ρ,α)2α reaction 2-102306
 pulse current meas. of electron multipliers counting efficiency (Japanese) 2-89866
 Pulselac, high intensity accelerators for ion beam fusion 2-90324
 radial ion diode for generating intense focused proton beams 2-96351
 relativistic heavy ion beams, space charge wave simulation 2-107453
 self-focussing charge-neutralised beam, analytic calcs. 2-102291
 spectroscopy on localised and cooled ions 2-70450
 thermalization of heavy ion beams in the final lens of vacuum reactor vessels 2-80326
 ultrahigh vacuum apparatus for combined low-energy electron diffraction, Auger spectroscopy, MeV ion scattering, and nuclear microanalysis 2-89733
 Ar²⁺ beam, metastable state (3p⁴ 1D) fraction determ. 2-113809
 Ba ions, collective acceleration in preformed anode plasma 2-90320
⁵⁶Fe ion beam, CR-39 plastic track detector, mass resolution 2-108319
 H⁺ beam emittance measurements for the Penning and the asymmetric, grooved magnetron surface-plasma sources 2-64160
 H⁺ neutralised beam propag. undeflected across a mag. field, polarisation elec. field obs. 2-80891
 HD⁺, vibr. rot. spectroscopy 2-80840
 Mn-activation detector calibration for intense pulsed energetic neutron sources 2-102355
 N₂⁺ ion beam trajectories, direct obs. during deceleration 2-102709
 Ne⁺ beam bending by Si surfaces, computer simulation 2-79717
 SH⁺, high resolution laser study 2-70224

ion chambers see ionisation chambers

ion counters see counters

ion cyclotron resonance heating see plasma heating

ion cyclotron resonance spectra see mass spectra

ion cyclotron resonance spectroscopy see mass spectroscopy

ion density

see also plasma density

- H₂ discharge, H₂ vibr. population distrib. and negative ion conc. calc. 2-90501

ion emission

see also field ion emission; secondary ion emission; thermionic ion emission

- adhesive failure, fracto-emission of electrons, positive ions and photons 2-77716

- ceramic glaze, CuO-doped, Pb²⁺ release, effects of alkaline substitution and addition of trivalent ions 2-77955

- polybutadiene, filled elastomer, fracture, electron and positive ion emission time correlations meas. 2-116345

- thermal emission mass spectrometry, ion source 2-74567

ion engines

see also aerospace propulsion; rockets

- fluid model of plasma outside hollow cathode neutraliser 2-109464

ion etching see sputter etching

ion exchange

- amino acids, H⁺ transfer energies and electrostatic lattice energies, CNDO/2 and ab initio SCF calcs. 2-78079

- glass, antireflection polished, strengthened by ion exchange 2-97134

- glass, doped polarisable ion diffusion behaviour during ion-exchange process 2-76738

- glass, strengthening, by combined etching and ion exchange 2-72860

- glass optical waveguide, fabrication by ion exchange, two-dimens. integrated optics appl. 2-65348

- glass planar optical waveguides, fabrication by Ti⁴⁺ ion exchange diffusion 2-109042

- glass plane optical waveguide fabrication, immersion in molten AgNO₃, ion exchange (Chinese) 2-65419

- gradient index optics, conf., Honolulu, HI, USA (May 1981) 2-58521

- gradient-index rod lens, fabrication by ion exchange 2-65333

ion exchange continued

- hydrocarbazoles, di- and hexa-, sigmatropic H^+ shift, tunnel effect 2-78072
- integrated optics, waveguide fabrication, glass and $LiNbO_3(TaO_3)$, ion exchange and diffusion processes 2-65411
- low-loss multimode opt. waveguides from soda-lime glass in dil. $AgNO_3$ melt 2-86106
- optical waveguides, planar, graded-index, critical ray-like propag. modes 2-91044
- peptides, H^+ transfer energies and electrostatic lattice energies, CNDO/2 and ab initio SCF calcs. 2-78079
- polyethylene resins, phosphorylated, surface area, SEM meas. 2-101386
- radioactive spent resins, in situ immobilisation, Dow process 2-64501
- radioactive waste, mobile ion exchange and filtration treatment 2-64500
- reactor coolant water, radionuclide anal. system, ion-exchange method 2-75064
- Schmidt plate realisation by ion exchange in glass 2-75727
- silicogermanate gradient glass, ion exchange diffusion from molten salts, refractive index change 2-111487
- small molecules in ion-exchange resins, ^{13}C NMR 2-65015
- star coupler, 1XN, single mode integrated optical 2-65414
- waste resins, Cs release during solidification 2-64502
- $\beta-Al_2O_3 \cdot K_2O$, superionic conducting membrane, prod. by ion exchange 2-76733
- ^{125}Cs , positron emitter for medical applic., cyclotron prod. 2-117084
- H_2^+ + $N_2(CO)(O_2)$, H^+ and charge transfer, collision energy and ion vibr. excitation 2-102604
- $HNbO_3$, cubic perovskite, ion exchange prep. from $LiNbO_3$, characterisation 2-60953
- $HTaO_3$, cubic perovskite, ion exchange prep. from $LiTaO_3$, characterisation 2-60953
- $LiNbO_3$, high-index waveguides, fabrication by proton exchange 2-114419
- $LiNbO_3$, Ti indiffused proton exchanged waveguides, fabrication and characterisation 2-91043
- NaF , electron density by γ -ray diffractometry 2-76998
- Na_2O - CaO glass, ion substitution at low temp. by elec. field 2-67277
- $SiO_2-Al_2O_3-P_2O_5-Sb_2O_3$ glasses, strengthened by ion exchange, stress relaxation 2-99471
- $SnO_2 \cdot nH_2O$, proton transport, 1H NMR study 2-93044
- TiF_4 , Schott glass, high index gradient, ion exchange technique 2-75726
- $TiO_2 \cdot nH_2O$, proton transport, 1H NMR study 2-93044
- U, recovery from seawater, ion exchange method 2-64555
- $\alpha-Zr(PO_4)_2M_2$ ($M = Li^+, Na^+, K^+, Cs^+$) Mg K α ESCA spectra, shake up struct. enhancement by sputtering 2-57252

ion exchanging *see ion exchange***ion excited X-ray emission** *see ion microprobe analysis***ion implantation***see also semiconductor doping*

- alloys, metastable, prod. by ion implantation, solubility, characterisation 2-76687
- amorphous, ion implanted, ultrarapid cryst. growth and impurity segregation during laser annealing 2-86722
- amorphous processes, review 2-103788
- bubble garnets, ion implantation border line, pot. barrier study 2-77339
- $C_2H_4(D)$, ion-implanted impurity retention, release and isotope exchange 2-69848
- carbide films, sputtered, effect of ion implantation on props. 2-87120
- charged particle propag. in crystalline solids, defect effects, review 2-81818
- concentrator solar cells, high performance, use of ion implantation processing 2-93919
- cryopumping, theory, operations and appl. 2-53777
- diamond:N, ion implanted, cathodoluminescence of impurity-defect complexes 2-116276
- diamond:N, ion implanted, defect form., annealing and interactions, cathodoluminescence study 2-116277
- diamond:Sb(N), ion implanted, defects, elec. cond., EPR study 2-66027
- evaporated and implanted layers characterisation by RBS and PIXE anal. 2-99724
- film, nonuniform, on solid substrate, ellipsometric parameters computation 2-62008
- film growth, ion bombard. implantation of impurity atoms, diffusion and defect interaction study 2-55997
- focused ion beams for ion implantation doping of semiconductors 2-91999
- garnet epitaxial bubble film, ion implantation strain annealing, propag. device stability 2-88100
- garnet film, ion implanted, charge wall dynamics, Faraday effect study 2-72311
- garnet ion implanted bubble films, CEMS characterisation 2-72387
- garnet layers, ion implanted, damage evaluation, Monte Carlo simulation 2-76519
- glass chemical comp. rel. to struct. and phys. props. 2-91803
- graphite: F^+ , ion implanted, ^{19}F NMR spectroscopy study 2-61773
- graphite, deuterium implants thermal release, He-induced damage influence 2-76468
- graphite, ion implantation, ESR, NMR, IR and XPS study 2-92008
- graphite, pyrolytic, ^{133}Xe implanted, lattice location study by Mossbauer effect 2-55999
- graphite intercalation cpd. with F, chem. synthesis by ion implantation, optical reflectivity 2-92006
- Inconel 625, sequentially He^+ implanted, surface exfoliation suppression 2-76522
- ion-beam technology appls. 2-61008
- LC3 ion implanter, development and appl. (*Chinese*) 2-91996
- LPDVD A-Si post-hydrogenation and ion-implantation doping 2-71960
- metallurgy applications, research and prospects (*Italian*) 2-93639
- metals, FCC, vacancy migration, trapping and clustering by γ -ray spectra 2-56996
- metals and oxides, ionic implantation for SIMS quantification, corrosion study 2-99744
- MoN film, As ion implantation, stopping power, SIMS study 2-56053
- MOS ion-implanted structs., dopant density from maximum-minimum capacitance ratio 2-77195
- MOS minority carrier lifetime improvement by F ion implantation in Si 2-66651
- MOS structure, ion implanted, capacitance-voltage characts., temp. depend. 2-77191
- MOS structures, ion-implanted, charge transport and storage 2-92759
- ion implantation continued**
- muscovite mica track detectors, low energy ion track-etch pits study 2-70088
- PMMA film, ion-bombarded, high resoln. photomasks prep., LSI appls. 2-77799
- polyacetylene: F^+ , ion implanted, ^{19}F NMR spectroscopy study 2-61773
- polyacetylene, ion implantation, ESR, NMR, IR and XPS study 2-92008
- quartz, crystn., effects of ion implantation 2-98124
- radioactive isotope prod. by doping surfaces, review 2-103859
- recoil implantation, Monte Carlo code, RITA 2-76476
- rotating powder target 2-95552
- ruby, doping by Fe, laser rod damage threshold increase 2-55990
- segregation of impurities due to pulsed laser beam annealing 2-103995
- semiconductor, implant activation using multiple-scan electron beam annealing 2-56040
- semiconductor, ion implanted, photacoustic meas. 2-71586
- semiconductors, implanted, laser annealing, review 2-115282
- semiconductors, ion-implanted and single-cryst., pulsed laser annealing 2-56011
- semiconductors, SEM with secondary-electron collector 2-86998
- semiconductors and metals, metastable alloy form. by ion implantation, impurity lattice location 2-115260
- Si:Sn, metastable alloy form., by electron beam annealing 2-56041
- site location, atomic orbital radii phenomenological model 2-66234
- solid-state track detectors, low energy ion implantation, chem. reactivity 2-70089
- SOS structures, CVD growth, surface defect and strain reduction by ion implantation and solid phase epitaxy 2-66384
- source gas composition and ion current spectrum, optimisation by gas mixing 2-69296
- steel, austenitic stainless, 316, fatigue under H and He bombardment 2-72802
- steel, austenitic stainless, creep fracture model after neutron irradi. and He injection 2-88173
- steel, austenitic stainless, DIN 1.4970, He embrittlement, high temp. in-beam simulation 2-71519
- steel, austenitic stainless, fatigue, under different atmospheres, effect of He implantation 2-77905
- steel, austenitic stainless, Sb^+ ion implantation, martensitic transition, Rutherford backscatt. study 2-76658
- steel, austenitic stainless 316, Ti effect on microstructs. changes rel. to void swelling 2-86741
- steel, C, ion implanted with n, Fe, N and carbonitride phases, conversion electron Mossbauer study 2-98120
- steel, medium C, N implanted, Mossbauer surface study 2-93086
- steel, stainless, 1.4970, He embrittlement reduction by finely dispersed TiC precipitates 2-71520
- steel, stainless, N implanted, Rutherford backscatt., channelling and nucl. reaction study 2-98119
- steel, stainless, surface damage, AR ion induced, implantation effects 2-98164
- steel, stainless, Type 304, Te implantation effect on creep rate and oxidation resist. 2-93576
- steel, stainless, Types 304 and 316, dual ion bombarded, He partitioning to extended defects 2-86755
- steel, stainless type 316, neutron-induced He implantation in fusion the coolant pipes 2-69863
- VSLI, and VHSIC materials development, SIMS anal. of thin surface layers and low kV ion implants 2-78156
- waveguide Luneburg lenses, alternate technology proposal 2-55296
- Ag film, ion beam epitaxiation on Si 2-116389
- Ag, ion implantation of $H^+(D^+)$, atomic displacements, residual resist. study 2-98121
- Ag-Si layer struct., B implantation depth profiles 2-103804
- AgCl film, light illumination, modifications induced by ion implantation 2-93311
- Al anodic barrier films, direct obs. of ion implanted Xe marker layers 2-71481
- Al in Fe, high temp. oxidation 2-77976
- Al, ion implantation radiation damage, Mossbauer study and math. model 2-81835
- Al, ion implanted, radiation damage and annealing studies 2-76532
- Al, irradiated with Al ions, pure and He doped 2-86747
- Al, self-ion sputtering yields 2-77660
- Al:D, defect trapping of implanted D 2-92020
- Al-Cu, ion implanted nonsubstitutional alloy, laser treatment, expt. study 2-86724
- Al-SiO $_2$, B-ion implanted MOS structure, radiation defect spectra study by TSC method 2-66646
- Al-Sn(Ni), metastable alloy form., by electron beam annealing 2-56041
- AlAs-GaAs superlattice, disorder by Si implantation 2-76465
- $Al_2Ga_{1-x}As_x$, ion implantation study, rel. to elec. activation 2-86692
- Al_2O_3 , amorphous dielectric film, short-range order struct., change after ion implantation 2-86690
- Al_2O_3 :Al, variable range hopping conductivity 2-66546
- Au, bicryst. film, ion implanted with $Cr(Co)(Pb)(Au)$, struct., TEM study 2-92418
- Au, ion implantation of $H^+(D^+)$, atomic displacements, residual resist. study 2-98121
- B vapour deposited coatings, ion implantation, temp. cycling effects 2-74924
- Bi-Sb, ion implanted, electronic struct., magnetorefl. study 2-99095
- C film, ion implanted, resist. changes, plasma energetic particle probe appl. 2-115041
- C, H isotope exchange, depth resolved meas. 2-69847
- CdSe, ion implantation postrange defects, cathodoluminescence study 2-99196
- CdSe polycrystalline thin film transistor, conductivity behaviour 2-56735
- CdTe: ^{111}In , ion implanted, annealing 2-98126
- CdTe:P, doped by ion implantation, cathodoluminesc. 2-67124
- CoP, ion implanted, elec. resistivity and channelling studies 2-104337
- CoSi $_2$ epitaxial films, Ar-ion implanted, elec. and struct. props. 2-87413
- Cr, ion implantation of $H^+(D^+)$, atomic displacements, residual resist. study 2-98121
- Cu, caesiated surfaces and negative ion emission 2-99277
- Cu, ion implanted with Xe^+ , Xe-defect configuration spatial anisotropy, ^{133}Xe TDPAC study 2-61044
- Cu, polycrystn., fatigue surface damage modifications, by ion implantation 2-55996
- Cu, self-ion sputtering yields 2-77660

ion implantation continued

- Cu single crystal, ion bombardment induced surface topography, incidence angle effect 2-76471
 Cu:¹¹⁹In (¹¹⁵Sb), Mossbauer study of impurity-vacancy interactions 2-56705
 Cu:B, cavitation-erosion resist., effect of B implantation 2-88197
 Cu:Kr, ion implanted, cryst. defects, positron annihilation and TEM study 2-81781
 Cu:¹¹¹In, defects obs. by channelling and perturbed $\gamma\gamma$ ang. correl. 2-81844
 Cu-Au, ion beam mixing study by 300 keV Kr⁴⁺ bombardment 2-76514
 Cu-Ni (40 at.%) Ar⁺ irradi., subsurface composition modification implantation appls. 2-74932
 Cu-W, ion beam mixing study by 300 keV Kr⁴⁺ bombardment 2-76514
 diamond:Fe, ion implantation study by conversion electron Mossbauer spectroscopy 2-77427
 (Eu,Tm,Y,Ca)₂(Fe,Ge)₂O₁₂ thin film system, domain boundaries (*Russian*) 2-77338
 Fe:F, concentration depth profiling using nuclear reson. reactions 2-98139
 Fe:N, ion implanted, temp. stimulated outgassing 2-111205
 α -Fe-Al, ion implanted paramagnetic, diffusion of Al 2-76731
 Fe-garnet films, hard-stripe domains, investig. 2-104673
 Fe₉₀Ni₁₀Mo₂B₈, amorphous, ion implantation, He bubble and blister formation 2-115314
 GaAs, ion implanted, laser annealed, defect anal. 2-66053
 GaAs, ion implanted and annealed, defect conc. distrib. study 2-71923
 GaAs implantation annealing using incoherent light focused by elliptical mirrors 2-76490
 GaAs, implanted, laser annealing, Fermi level pinning model, solar cell fabrication 2-56027
 GaAs, implanted, pulsed ruby laser annealing, SIMS and elec. obs. 2-56023
 GaAs, implanted, pulsed laser annealing, dopant profile redistrib. and surface melting duration 2-56024
 GaAs, implanted, transient and furnace annealing behaviour 2-56022
 GaAs, ion implanted, excitation size determ. 2-87156
 GaAs, ion implanted, range statistical parameter calcs. (*Chinese*) 2-109818
 GaAs, ion implanted, Zn diffusion profiles meas. 2-92285
 GaAs, Raman spectrum, phonon modes, ion implantation and annealing effects 2-82833
 GaAs, semiconducting, Cr gettering by Ne ion implantation, elec. activation of implanted Si 2-55993
 GaAs:Al(P), ion implanted, radiation damage 2-115317
 GaAs:Be(Si), channelling depth distrib. as function of implant energy and fluence 2-98125
 GaAs:Cr layers, elec. props., and electron microscopy 2-61628
 GaAs:Cr, horizontal Bridgman-grown for ion implantation, elec. characs. 2-115756
 GaAs:Cr, ion implanted, annealing, Cr redistrib., SIMS study 2-76484
 GaAs:Cr, ion implanted, postannealed material state 2-103793
 GaAs:Cr, O, ion implanted, Cr redistribution and Cr-defect-O interactions, SIMS and TEM study 2-98149
 GaAs:Cr, Se, hot implanted, effects of damage-impurity interaction on elec. props. 2-71990
 GaAs:Cr, semi-insulating, ion implanted, photoelectrochem. etching and defect characterisation 2-98072
 GaAs:Cr, Si, damage and Si lattice location studies 2-76479
 GaAs:Cr, Si, ion implanted, AlN capped annealing, carrier profiles 2-66023
 GaAs:Cr, Si, ion implanted, Hall effect, depth profiles (*Slovak*) 2-98669
 GaAs:Cr, Si implanted, thermally annealed, semi-insulating, deep levels 2-76966
 GaAs:Cr:Si⁺, ion implanted semi-insulating substrate, carrier conc. uniformities meas. 2-98134
 GaAs:Cr:Si⁺, Se⁺, Mn, ion implanted, Mn redistribution after annealing, SIMS study 2-86699
 GaAs:Fe(O), ion implanted and electron irradi., deep levels and electron traps, annealing 2-98584
 GaAs:S, ion implanted, elec. props., ion energy depend. 2-71999
 GaAs:S, ion implanted, elec. carrier and atomic profiles correlation 2-72000
 GaAs:S, ion implanted, elec. props. and impurity distrib. 2-98141
 GaAs:Se, implanted, pulse diffused n⁺ layers form. using As₂Se₃ diffusion source 2-55998
 GaAs:Se, ion implanted, carrier props. and photolum. meas. (*Korean*) 2-56585
 GaAs:Se implanted, dose depend. of epitaxial regrowth 2-56378
 GaAs:Se implanted layer, low temp. annealing, Rutherford backscatt. channelling study 2-71818
 GaAs:Se⁺, ion implanted, transient annealing using graphite strip heater, elec. cond. study 2-82348
 GaAs:Se⁺, ion implanted, high temp. annealed, damage, defects and elec. props. 2-98097
 GaAs:Si, ion implantation, elec. props., for dual gate MESFET (*Chinese*) 2-109817
 GaAs:Si, ion implanted, surface polaritons, frustrated internal refl. spectra study 2-71886
 GaAs:Si, ion implanted rad. damage, X-ray rocking curve study 2-66075
 GaAs:Si, ion implanted and proton irradi., deep levels, laser beam annealing 2-98587
 GaAs:Si, ion-implanted, laser annealing effects 2-103811
 GaAs:Si, LEC grown semi-insulating, charact. for integrated circuit appl. 2-98654
 GaAs:Si, low dose implants, CW laser annealing 2-56028
 GaAs:Si, study of encapsulation for annealing 2-77082
 GaAs:Si(Sn), ion implanted, Raman spectra study 2-110837
 GaAs:Sn, ion implanted, laser annealed, TEM study 2-66050
 GaAs:Te, implanted, laser annealed, metastable Te donor conc., expt. study 2-56025
 GaAs:Zn, ion implanted, depth distrib., annealing, SIMS and Rutherford backscattering obs. 2-56000
 GaAs:Zn, ion implanted, laser annealing, expt. study 2-61024
 p-GaP-Au, ion beam contacting by Be implantation 2-115889
 GaS:Cr, impurity redistribution after implantation with Ga,As,O, SIMS and TEM study 2-115276
 Gd:Ar film, ion implanted, impurity depth distrib. 2-110215
 Ge:Cl, amorphous, ion implanted, gap-states, elec. cond. study 2-76987
 Ge:He⁺(Ar⁺), ion implantation, surface recombination kinetics meas. 2-66031

ion implantation continued

- Ge:P, ion implanted, elec. props. 2-77089
 Ge:Si, ion implanted, rad. damage, X-ray rocking curve study 2-66075
 Ge:Te, ion implanted amorphous, struct. change features due to laser irradiation 2-76493
 Ge/GaAs interface in refractory ohmic contacts, laser and thermal anneal 2-87386
 graphite:Fe, ion implantation study by conversion electron Mossbauer spectroscopy 2-77427
 H isotope exchange, local mixing model 2-56048
³He ion ranges in Fe, Cu, Zn, W, Bi, Co 2-66089
 HgCdTe epitaxial layers, implantation-induced defects behaviour 2-87379
 HgCdTe, implantation induced damage, effects of implantation and annealing temps. 2-86695
 HgCdTe, physics and chemistry, workshop, Minneapolis, MN, USA (Oct. 1981) 2-89437
 Hg_{0.8}Cd_{0.2}Te:B⁺(Al⁺), ion implantation, IR reflectivity study 2-116191
 Hg_{1-x}Cd_xTe, annealing and ion implantation damage, Rutherford backscatt. and channelling study 2-86763
 Hg_{1-x}Cd_xTe:B, ion implantation, elec. cond., annealing effects, SIMS study 2-66026
 Hg_{1-x}Cd_xTe:Mg, ion implanted, elec. and optical props. from IR refl. spectra 2-116218
 Hg_{1-x}Cd_xTe-CdTe ion implanted epilayers, elec. and optical props. 2-115927
 III-V semiconductors, ion beam gettering, review 2-115310
 In-Mn alloys, dil., supercond., T_c depression produced by ion implantation 2-77221
 n-InAs:Cd, ion implanted, photo-EMF, spectral response 2-92697
 In_{0.33}Ga_{0.47}As, Be⁺ ion implantation 2-55989
 In_{0.43}Ga_{0.47}As:Be, Si, ion implanted, n⁺ layers, sheet resist., electron mobility and conc. 2-66022
 In_{0.33}Ga_{0.47}As:Si, n-layer formation by Si implantation 2-92001
 InP, implanted, laser annealing, Fermi level pinning model, solar cell fabrication 2-56027
 InP, ion implantation profiles, theoretical and empirical distrib. 2-81811
 InP, Raman spectrum, phonon modes, ion implantation and annealing effects 2-82833
 InP³Be, ion implanted, migration during annealing, SIMS study 2-98143
 InP:Be, Zn, Cr, Se, doping profiles, SIMS anal. 2-103806
 InP:Be(C)(Si)(Ge)(Sn), ion implanted, annealing behaviour obs. 2-98135
 InP:Fe, Be⁺(He⁺) ion implanted, semi-insulating, photoluminesc. meas. 2-99168
 InP:Mg(Si), implanted, impurity redistrib. during annealing, SIMS study 2-98144
 InSb layer oxidation study after ion implantation by backscattering and nuclear reaction 2-99567
 InSb:Mg, implanted, ion current density and dose effect on radiation defects 2-76533
 InSb:Si, p-n junction diodes, hole traps, DLTS study 2-110452
 KCl, CN⁻ radical formation by ion implantation 2-76470
 KCl, sequential C⁺ and N⁺ implantation, CN⁻ radical formation, ionolum. study 2-81802
 Li, SIMS analysis involving Li⁺ implantation and matrix effects 2-78152
 LiF implanted single crystals, oriented In metallic aggregates formation 2-76680
 LiNbO₃, ion implant. amorphisation optical and EPR studies 2-103789
 LiNbO₃:Ti, strip waveguides fabricated by combined metal diffusion and ion implantation 2-75731
⁶Li ion ranges in Fe, Cu, Zn, W, Bi, Co 2-66089
 Mo, detrapping of implanted He and N 2-81808
 Mo film, As ion implantation, stopping power, SIMS study 2-56053
 Mo, ion bombarded by 10 MeV ³He⁺ ions, depth depend. of radiation hardening 2-88095
 Mo, ion implantation effect on microstruct., TEM obs. 2-71522
 Mo, self-ion implanted, in situ annealing 2-92011
 Mo:D, ion-implanted, permeation and re-emission rate, rel. to irradi. damage 2-74937
 Mo-W bilayer film, solid state disilicide form., annealing and ion implantation effects 2-92371
 Nb:Ar, O₂ supercond. thin films, ion implantation effects on supercond. props. 2-77226
 Ni (110), N₂⁺ implantation, AES, LEED, EELS and secondary electron spectra study 2-92014
 Ni, alpha particle implanted, stopping power and radiation damage distrib., Boltzmann eqn. calc. 2-76548
 Ni film, ion implanted, influence of disorder on resistivity 2-61616
 Ni, ion implantation, He bubble and blister formation 2-115314
 Ni, ion implantation of H⁺(D⁺), atomic displacements, residual resist. study 2-98121
 Ni, low temp. release of ion-implanted He 2-82118
 Ni, range distrib. of deuterons, target crystallinity effects 2-66092
 Ni, self-ion sputtering yields 2-77660
 Ni thin film, 40 keV Xe⁺ implanted, range profile and sputtering efficiency 2-66091
 Ni:B, cavitation-erosion resist., effect of B implantation 2-88197
 Ni:Cr⁺(Ni⁺) oxidation, effect of implantation 2-88254
 Ni:D, ion-implanted, permeation and re-emission rate, rel. to irradi. damage 2-74937
 Ni:D⁺, ion implanted, impurity defect trapping, ion beam anal. studies 2-81812
 Ni:He, gas re-emission and surface structure due to implantation 2-76469
 Ni:He, ion implanted, damage profiles, swelling due to Ni ion irradi. 2-103805
 Ni:He⁺, D⁺, ion implanted, D trapping, ion beam anal. studies 2-81813
 Ni:P, implanted, channelling study of amorphous phase formation 2-81804
 Ni-Al, ion implanted, annealing kinetics, chem. reaction-rate formalism 2-67365
 NiP, ion implanted, elec. resistivity and channelling studies 2-104337
 Ni_{1-x}P_x, amorphous, ion implantation prod., elec. resist., temp. depend. 2-104341
 Ni₃P₈, amorphous, ion implanted, TDPAC study 2-104771
 NiSi₂ epitaxial films, Ar-ion implanted, elec. and struct. props. 2-87413
 P ion implantation from solid ion source, non-mass-analysed technique, solar cell appl. 2-84737
 PLZT ceramics, photoelectric props., ion implantation effects, review 2-110393

ion implantation continued

- Pb-²⁰⁷Pb, ion implanted, 5f electron localisation and relax., TDPAC study 2-56991
 PbSe, Te_{1-x}Se_x, localised deep defect states 2-92530
 Pb_{1-x}Sn_xTe films, ion implantation induced defect levels, Hall meas. 2-92528
 PbTe, H⁺(Ag⁺)(Sn⁺) ion-implanted, elec. props. 2-104377
 Pd, H ion implantation by low voltage glow discharge plasma 2-96305
 Pd, ion implantation of H⁺(D⁺), atomic displacements, residual resist. study 2-98121
 Pd_{0.8}Au_{0.2}:D, lattice location of implanted D 2-71488
 PdD₂, ion implanted, phonon resistivity 2-110328
 Pd₂Si epitaxial films, Ar-ion implanted, elec. and struct. props. 2-87413
 Pd₂Si-Si:Ar interface, contact resist. stabilization due to ion implantation 2-66635
 Pt, ion implantation of H⁺(D⁺), atomic displacements, residual resist. study 2-98121
 Si, amorphous, hopping cond., ion implantation 2-56592
 Si, amorphous and crystalline, low energy range distrib. of ¹⁰B and ¹¹B 2-66090
 Si, arc annealing, regrowth and impurity diffusion calc. 2-55992
 Si, brittle fracture crit. stress, ion implantation and surface treatments effect 2-81882
 Si detectors, passivated and ion implanted, performance and appl. 2-70050
 Si, dislocation generation by ion implantation during manuf. of p-n junctions for ICs (*Russian*) 2-66030
 Si, disorder production during ion implantation 2-81806
 Si epitaxial layer on substrate with buried SiO₂ layer, ion implantation, crystallographic props. 2-92382
 Si film, polycryst., amorphized by Si ion implantation, solid phase epitaxial recrystn. 2-115581
 Si film, polycryst., grain growth under CW electron beam annealing, modified SEM study (*Japanese*) 2-115597
 Si, formation of buried SiO₂ layers, optimisation of implantation conditions 2-61004
 Si, heavily implantation with BF₂⁺ (BCl₂⁺) and carrier density meas. 2-81803
 Si, implantation annealing by thermal imaging of incoherent light sources 2-66037
 Si, implanted, CW laser annealing, dislocation nucleation, growth and suppression 2-56021
 Si, implanted, pulse laser annealed, defect-induced photolum. 2-57181
 Si, implanted ion impurity profile, book contrib. 2-71493
 Si, implanted wafers, annealing using incoherent light and Si cryst. growth on SiO₂ 2-103791
 Si, implanted wafers, high dose rate, laser annealing effects, TEM, backscatt. and channelling obs. 2-56019
 Si, impurity defect struct. form. by ion implantation, amorphous and cryst. comparison 2-103790
 Si, impurity doping processes, book 2-68985
 Si, intense pulsed H⁺, B⁺, Ba⁺ beam irradiation effects 2-76513
 Si, ion and neutron irradi., radiation damage, thermal and laser annealing, electron microscopy study 2-71512
 Si, ion beam gettering, review 2-115310
 Si, ion bombarded and annealed, UPS and RBS investig. 2-103857
 Si, ion implant. amorphisation optical and EPR studies 2-103789
 Si, ion implantation, amorphous phase and point defect generation, generalised overlap-damage model 2-115315
 Si, ion implantation, source feed materials in ion beam technology, book contrib. 2-71483
 Si, ion implantation disorder, ion channelling studies, review 2-71537
 Si, ion implantation processes, book contrib. 2-71482
 Si, ion implanted, isothermal annealing, IR refl., refr. index, regrowth rates, and carrier profiles 2-110836
 Si, ion implanted, photoacoustic determ. of thermal cond. 2-86959
 Si, ion implanted, pulsed laser annealing dynamics, plasma annealing model 2-56013
 Si, ion implanted, pulsed laser annealing, melting model and Raman scatt. 2-98155
 Si, ion implanted, rad. damage, crystalline props., X-ray rocking curve study 2-66075
 Si, ion implanted, residual defects after pulsed laser annealing 2-71502
 Si, ion implanted, secondary defects annealing, electron microscopy study 2-71485
 Si, ion implanted or sputter etched, damage depth profile, ellipsometric study 2-56045
 Si, low energy BF₂⁺ ion doping during MBE 2-92003
 Si p⁺ implanted damaged layers, ellipsometric study (*Chinese*) 2-66024
 Si p-i-n position sensitive detectors fabrication using ion-laser method 2-108271
 Si p-n junction, ion implanted, CW laser annealed, elec. and struct. props. 2-115872
 Si p-n photovoltaic junction formation by pulse implantation doping 2-115259
 Si, polycrystalline, grain boundary passivation by H₂ 2-76459
 Si, pulsed laser annealing, threshold energy density, backscatt. and channelling meas. 2-92029
 Si, self ion implanted, residual lattice disorder after pulsed laser irradi. 2-76494
 Si solar cell, high efficiency, laser processing 2-57702
 Si solar cell fabrication using high speed junction processor 2-83473
 Si solar cell wafer annealing electron accelerator with solid dielectric energy storage 2-90325
 Si solar cells, effect of back-surface B implantation 2-88433
 Si solar cells fabricated by ion implantation 2-88440
 Si, solid phase lateral epitaxial growth onto adjacent SiO₂ film from ion implanted amorphous Si 2-77730
 Si surface, high dose N⁺ ion implanted layer (*Chinese*) 2-91997
 Si surface, tetrahedrally textured, charact. of ion implanted n⁺ layers 2-76475
 Si surface (111), buried oxide layers by O₂ implantation for use in dielectrically isolated ICs 2-61011
 Si, surface layer struct., external photoeffect under X-ray diffr. conditions 2-98402
 Si: P and compensated Si:P,B, ion implanted, epitaxial regrowth obs. 2-92388
 Si:As, doping during Pd₂Si form. at low temp. 2-86698
 Si:As, implanted, CO laser annealing 2-86727
 Si:As, ion damaged, undissociated dislocation dipoles and intermediate defects, TEM study 2-71459

ion implantation continued

- Si:As, ion implantation profiles, 10 keV to 2.56 MeV, Rutherford backscatt. study 2-115269
 Si:As, ion implanted, blink furnace annealing 2-62140
 Si:As, ion implanted, laser annealing mechanism 2-61023
 Si:As, ion implanted, laser annealed, bonding defects, Roman scatt. study 2-67066
 Si:As, ion implanted, pulsed X-ray annealing 2-115286
 Si:As, ion implanted, solid state phase annealing with CW Nd:YAG laser (*German*) 2-105183
 Si:As, ion irradiated, point defect chains, high resolution TEM study 2-71479
 Si:As, ion-implanted, laser and thermal annealing comparison, ion backscatt. and elec. meas. 2-55991
 Si:As, range distrib. and thermal annealing props. of low-energy implants 2-115258
 Si:As, surface layer struct., influence of non-uniformity of laser beam intensity 2-92314
 Si:As diffusion and impurity concentration profiles, Rutherford backscatt. study 2-82019
 Si:As implanted 4 in wafers, fast annealing using imaging furnace with 6.5 kW Xe arc lamp 2-98123
 Si:As⁺, implanted, pulsed electron beam annealing apparatus and utilisation (*Chinese*) 2-66059
 Si:As⁺ layer, ion implanted, Q switched Nd:YAG laser annealing 2-56015
 Si:As(B), ion implantation damage, optical constants anal., ellipsometry expt. and refractive index model study 2-77469
 Si:As(P), implanted and laser annealed, electronic states, IR optical props. 2-57112
 Si:As(W), ion implanted, defect features 2-103796
 Si:B, bulk and SOS struct., ion implanted, doping profile, thermal distribution, computer simulation 2-66033
 Si:B, ion implanted, B diffusion and segregation obs. in dry O₂ ambient 2-92281
 Si:B, ion implanted, radiation damage production 2-61009
 Si:B, laser beam annealing, recrystn. 2-103812
 Si:B, polycrystalline, B⁺ ion implantation, heat treatment effects 2-103795
 Si:B, polycrystalline, quantitative doping using ion implantation process 2-92002
 Si:B radial position sensitive detectors fabrication and characts. 2-70058
 Si:B thin film, polycrystalline, elec. props., use as sensor (*German*) 2-87427
 Si:B⁺, inhomogeneous implanted surface layers studied by X-ray rocking curves meas. 2-92315
 Si:BF₂⁺, ion implanted, wafer bending and stress, thermal annealing effect, X-ray topography 2-115311
 Si:BF₂⁺ single cryst., pulsed laser irradiated, ion implanted, F conc. profile 2-115263
 Si:B(As), high-dose implanted, CO₂ laser annealing characts. 2-57219
 Si:B(P)(As), supersaturated, ion implanted and laser annealed, heat treatment effects 2-92000
 Si:B(P)(As)(Sb)(Ga), ion implanted, electron beam annealing by multiple-scan method 2-92036
 Si:Be, atom and carrier depth distrib. 2-92018
 Si:BF₂⁺, recrystallisation by light-flash annealing 2-98130
 Si:Bi, ion implanted, impurity redistrib. after Nd laser pulse irradi. 2-115265
 Si:Bi(As), scanning electron-beam annealing 2-103818
 Si:C, ion implanted, defect states, DLTS study 2-56471
 Si:Ga (In)(Sb), ion implanted, dopant redistrib. after flash lamp annealing, He⁺ backscatt. study 2-86936
 Si:Ge, atomic mixing effects on high fluence 40 keV Ge⁺ implantation 2-76466
 Si:Ge, ion implantation, high fluence, contrib. of atomic mixing, theoretical and exptl. study 2-98131
 Si:Ge, Ne ion beam induced atomic distrib. of implanted range profiles 2-56002
 Si:H, amorphous film, vacuum evaporated, substitutional doping by ion implantation, elec. cond. and EPR study 2-55850
 a-Si:H, Ga(As), ion implanted, absorpt. and photocond. spectra 2-115820
 Si:H, implanted, radiation defects study by DLTS 2-92522
 Si:H, ion implanted, metastable cond. and shallow donor conc. meas. 2-115764
 Si:H, N(Ga), amorphous film, ion implanted, photocond. and energy spectrum 2-92698
 Si:H,P amorphous glow discharge thin films, elec. props., heat treatment and P ion implantation effects 2-61467
 Si:In, ion implanted, laser annealed, convection and constitutional supercooling cells 2-66054
 Si:In, range distrib. and thermal annealing props. of low-energy implants 2-115258
 α-Si:Mn⁺, doping by ion implantation, dark cond. meas. 2-98128
 Si:N, ion implanted, oxidation inhibition 2-115271
 Si:N, low energy implantation, material composition, oxidation resist. and elec. characts. 2-86694
 Si:N, low energy N implantation, room temp. formation of Si-nitride films 2-86693
 Si:Ne, Ar, amorphous, ion implanted, localised defect states and impurity distrib., photocond. spectra study 2-61414
 Si:O, ion implanted, conductivity mode conversion, dielec. isolation technique appl. 2-61003
 Si:O, secondary ion yield enhancement, implanted O conc. depend. 2-62036
 Si:O⁺, implanted, deep level defects study by DLTS (*Chinese*) 2-92506
 Si:O⁺(C⁺), MOS capacitors and Schottky diodes, ion implantation, elec. props. 2-86696
 Si:O(B), ion implantation in 100 MeV range 2-81805
 Si:O(N), surface crystallinity and anomalous comp. profiles of buried SiO₂ and Si₃N₄ layers 2-86688
 Si:P, amorphous, ion implantation doping and surface conductivity 2-115262
 Si:P and other implants, SIMS studies of anomalous behaviour 2-92013
 Si:P, As, Sb, ion implanted, multiphase electron beam annealed, impurity profiles 2-103803
 n-Si:P, B ion implanted, deep level profiles 2-98571
 Si:P, ion implanted, depth profiles, channelling and nuclear resonance studies 2-98142
 Si:P, ion implanted, distrib. profiles, elec. props. 2-103797
 Si:P, ion implanted, wavelength modulation spectrum 2-104916

ion implantation continued

- Si:P, ion implanted and annealed, IR reflectivity characterisation, physical model 2-77532
 Si:P⁺, ion implanted, damaged layer study 2-71480
 Si:P⁺(As⁺) layers, ion implanted, electron beam annealing, elec. props. 2-92039
 Si:P, ion implanted, electrolyte electroreflectance spectra study (*Chinese*) 2-93156
 Si:P(As), dechannelling by dislocations and stacking faults 2-81845
 Si:Sb(In)(Ga)(Bi)(As), ion implanted, metastable supersaturated solid solns. formation during solid phase epitaxy 2-98283
 Si:Zn layers, ion implantation, damage annealing 2-103798
 Si:AlSi, Schottky barrier diodes, implanted P distrib., barrier height 2-82457
 Si-As surface alloy, supersaturated, formation by ion implantation and pulsed electron beam annealing 2-81801
 Si-F amorphous film, grown from SiF₂ disproportionation, F conc. determ. 2-92021
 Si-on-sapphire, amorphous, ion implanted, time-resolved optical transmission meas. during pulsed laser annealing 2-61027
 Si-on-sapphire, cryst. defects reduction by room temp. ion implantation 2-92012
 Si-PtSi Schottky barrier diodes, implanted P distrib., barrier height 2-82457
 Si-SiO₂ interface, Si ion implantation, defects, deep levels, annealing, C-V characts. study 2-61403
 SiC buried layer form. in Si, annealing, IR spectra study 2-103799
 SiC films, formation by ion implantation of Si cryst. and elec., photovoltaic and struct. props. (*French*) 2-72089
 SiC:Al, implanted ion diffusion, profile anal. by STMS 2-109824
 SiC:Al polytypes, p-n structs., electrolum. characts. 2-93285
 Si₃N₄ amorphous dielectric film, short-range order struct., change after ion implantation 2-86690
 Si₃N₄ film form. on Si(100) by low energy ion implantation, characterisation 2-92375
 Si₃N₄:H CVD film, chem. bonding changes and elec. effects 2-115930
 SiO₂, amorphous dielectric film, short-range order struct., change after ion implantation 2-86690
 SiO₂ films, ion implantation, effect on struct. 2-55995
 SiO₂, fused, implanted D/H ions trapping and release 2-76467
 SiO₂, thermally grown layer, Cl implantation 2-61010
 SiO₂ thin film, ion implantation CO₂ form., astrophysical implications 2-92009
 SiO₂:Ar⁺, ion implanted electron irradi., antiannealing effect 2-66062
 SiO₂:As, ion implantation profiles, 10 keV to 2.56 MeV, Rutherford backscatt. study 2-115269
 SiO₂/Si thermal, F ion implantation and distrib. (*Chinese*) 2-109821
 SiO₂ formed by Si ion implantation into fused SiO₂; optical props. 2-93144
 SiO_x, O implanted, stress-strain curves and internal stresses meas. 2-82190
 Si₂O₃N₂ layers, synthesized by ion implantation, IR and elec. props. 2-99136
 SiO₂, fused and cryst., ion implant. amorphisation optical and EPR studies 2-103789
 Sm:Ar film, ion implanted, impurity depth distrib. 2-110215
 TaSi₂ layers, coverage on Si/SiO₂, surface struct., ion-implant profiles surface anal. study 2-82094
 Te single crystal, amorphisation by ion implantation 2-103854
 Ti, H ion implantation by low voltage glow discharge plasma 2-96305
 Ti, ion beam induced radiation defects and stimulated trapping efficiency 2-76516
 Ti-Al-V alloy, improvement of fatigue life by ion implantation 2-57444
 TiC(H:D), ion-implanted impurity retention, release and isotope exchange 2-69848
 TiN films from N₂⁺-implantation of Ti coated Si, elec. and optical props. 2-116286
 TiN, ion beam induced radiation defects and stimulated trapping efficiency 2-76516
 TiSi₃, appls. in MOS technology 2-104501
 V, ion implanted, mech. props. study after neutron irradi. 2-71511
 V, neutron irradi., preimplantation of He effect on microstruct. 2-85215
 V-Cr-Ti (1.0,1 wt.%), neutron irradi., preimplantation of He effect on microstruct. 2-85215
 V-Ti, ion implanted, mech. props. study after neutron irradi. 2-71511
 V-Ti (20 wt.%), He injected and neutron irradi., tensile props. and microstruct. 2-71509
 W, ion beam induced radiation defects and stimulated trapping efficiency 2-76516
 W, ion implanted with Xe⁺, Xe-defect configuration spatial anisotropy, ¹³⁵Xe TDPAC study 2-61044
 W:Ag,He, ion implanted, He precipitation at substitutional Ag atoms He desorption study 2-92218
 (Y,Sm,Lu,Ca)₃(Fe,Ge)₂O₁₂ films, H⁺ implanted, laser annealing 2-76492
 Y₃Al₂O₃:Tb single crystal, phosphor's produced by ion implantation 2-76472
 YIG epitaxial films, mag. bubble collapse field and FMR spectrum, ion implantation and annealing effects 2-104670
 YIG:Gd, Tm, Ga, He⁺ implanted, mag. and cryst. props. 2-77334
 YIG:La, Ga(Tm, Ca,Ge) films, Ne⁺ implanted, magnetisation, FMR and X-ray study 2-98967
 YIG:Tm,Ca,Ge,Ne layers, ionimplanted, annealing effects on cryst. and mag. props. 2-77333
 (YSmCa)₃(FeGe)₂O₁₂ epitaxial film, cylindrical mag. domain behavior in ion implantation advancement channel 2-77347
 (YSmLuCa)₃(FeGe)₂O₁₂ films, ion implanted, cubic anisotropy meas. 2-77340
 YSmLuCaGeIG:Ne(H), ion implanted bubble garnet film, mag. and cryst. props. 2-82644
 ZnO, exciton refl. spectra, influence of ion implantation 2-67082
 ZnS:Ag, photolum. and elec. props. study of Ag doping 2-110944
 ZnS:I cubic crystals, blue self-activated luminesc., N, P and Ag ion implementation effect 2-116237
 ZnS:Mg AC thin film electroluminescent devices, luminescence-voltage characts. 2-104967
 ZnTe, ion implantation postrange defects and 1.59 eV luminescence origin, expt. study 2-99169
 ZrO₂-Y₂O₃:Yb crystals, Yb implanted yttria stabilised, O vacancies, channelling study 2-109867

ion lasers

- hollow cathode laser design with alternative excitation 2-96998
 metal vapour hollow cathode discharge lasers, coil hollow cathode design 2-55199
 multiply ionised ions, hydrogenic states, X-ray laser pumping with ionising radiation 2-55132
 nonlinear resonances in ion spectra, Coulomb broadening 2-113917
 plasma recombination laser, electron density and energy output units calc. 2-96902
 power meas. of He-Ne and Ar-ion lasers, international comparison 2-102771
 recombination UV, visible and IR lasers in expanding metal vapour plasmas 2-65207
 short wavelength lasing plasma, kinetic theory 2-86394
 subnanosecond optical pulse generator using argon ion laser 2-65249
 X-ray laser research, hydrogenic ions inverted in laser-produced plasmas 2-70550
 X-ray laser research, progress and trends 2-108855
 Al XII plasma laser, resonantly photopumped, theory 2-90873
 Ar 2-90951
 Ar ion corner cube laser, modes 2-80999
 Ar ion laser radiation, HF modulation due to stable two-mode oscill. 2-97023
 Ar laser power meas. in visible region, international intercomparison 2-102771
 Ar longitudinal flow, ionisation wave instabilities in DC discharge rel. to laser parameters 2-97819
 Ar⁺ laser, self-modulation by resonator loss control 2-65266
 As II CW laser transition at 6511.7 Å, electron beam excitation of He-As mixture 2-85939
 Ba⁺ VUV autoionisation-pumped laser 2-70551
 Cd II, CW laser oscillations in electron beam created plasma 2-102783
 CdII segmented hollow cathode lasers 2-114251
 Cl II, III, IV, UV and visible laser oscillations obs. 2-85942
 Cu ion, hollow cathode laser design with alternative excitation, 781 nm transition 2-96998
 H⁺-Cs, plasma, charge exchange, population inversion, laser characts. 2-108861
 He⁺ plasma dynamic recombination laser, population inversion 2-108852
 He-Cd, electrophotography appl. 2-74536
 He-Cd high power and long lifetime laser, monomode output (*Chinese*) 2-55184
 He-Cd ion lasers with transverse RF discharge excitation 2-86002
 He-Cd laser line at 4416 Å, effect of non-uniform mag. field 2-90876
 He-Cd⁺ laser, Cd II electron impact excitation cross-sections meas. for 5s² 2D_{5/2} (5p² 3P_{3/2}) states 2-85816
 He-Cd⁺ transverse HF discharge laser, 441.6, 537.8 and 636.0 nm transitions 2-70544
 He-Cu ion lasers with transverse RF discharge excitation 2-86002
 He-Hg ion lasers with transverse RF discharge excitation 2-86002
 He-like ions, optical pumping rel. to gain at X-ray wavelengths 2-70536
 He-Se ion laser, electron beam pumped, CW laser action on 15 Se II transitions 2-90874
 He-Se ion lasers with transverse RF discharge excitation 2-86002
 He-Se⁺ cathaporetic lasers, origin of laser-output noise 2-96905
 He-Sr plasma laser, kinetic model of active medium 2-85947
 He-Tl ion lasers with transverse RF discharge excitation 2-86002
 He-Zn ion lasers with transverse RF discharge excitation 2-86002
 He-Zn laser, hollow cathode, with an additional command electrode 2-114248
 I⁺ CW laser excited by electron beam 2-55126
 Mg XI ion recombining laser plasma, population inversion meas. 2-85948
 N II, III, visible laser oscillations obs. 2-85942
 N⁺ laser, high-pressure UV-preionised discharge-pumped 2-55120
 Na⁺ plasma laser, 15.5 nm, CO₂ laser pumped, active medium form., numerical anal. 2-65205
 Ne IX plasma laser, resonantly photopumped, theory 2-90873
 Ne-Tl ion lasers with transverse RF discharge excitation 2-86002
 O II, III, IV, UV laser oscillations obs. 2-85942
 Se-He, HF discharge, laser levels excitation 2-65786
 Sr II pulsed gas discharge lasers, output power, acoustic wave influence 2-114348
 Zn II CW laser transitions at 4911.6, 4924.0, 6102.5 and 7588.5 Å, electron beam excitation of He-Zn mixture 2-85939

ion lenses see lenses

ion lithography see ion beam lithography

ion microanalysis

- see also ion microprobe analysis
 biological tissue appl., review 2-111830
 depth profiling by ion-beam spectrometry 2-67780
 dissector ion microanalyser, performance and use 2-95566
 microanalyser, dual primary ion source and mass filter 2-95540
 sputter profiling, depth resolution, depth depend. 2-83438
 Ni-O surface, interaction with H₂ and H₂O, SIMS study 2-99708
- ion microprobe analysers see ion microprobe analysis
- ion microprobe analysis
 see also ion microanalysis
 accelerator microanalysis techniques, usefulness 2-95551
 achromatic proton microbeams 2-95544
 aerosols, atmospheric, X-ray methods for chem. characterisation 2-67907
 Amsterdam proton microbeam and its appl. 2-95549
 archaeological artifacts, proton induced X-rays study 2-99730
 beam exit window materials effect on detection sensitivity in PIXE anal. 2-99717
 biliary and urinary calculi anal., PIXE and other methods comparison 2-68203
 biological samples trace element anal. using proton microprobe 2-100168
 CR-39 plastic track detector response to 2 MeV microbeams of H, He and Ne 2-101502
 depth profile of foreign atoms in bulk material using PIXE anal. 2-116739
 depth profiling, quantification in ion microprobe anal. 2-95530
 element concentration assignment in PIXE anal. 2-99727
 elemental mapping with Karlsruhe nucl. microprobe 2-99725
 evaporated and implanted layers characterisation by RBS and PIXE anal. 2-99724
 glia and glioma cells, human, elemental characterisation by nuclear microprobe 2-68202
 Heidelberg proton microprobe 2-95542

ion microprobe analysis continued

- high energy beam surface probes, ion and electron 2-110987
 human teeth root surfaces, meas. of corrosion products from dowels with proton microprobe 2-100090
 ion beam-target interactions in ion microprobe analysis 2-78151
 ion probes A-DIDA, advances 2-95568
 isotopic ratio meas. in SIMS/ion microprobe technique 2-95533
 light element distrib. meas. using Harwell nucl. microprobe 2-99728
 light isotopes in metals, ion beam anal. using solid state track detectors 2-67789
 low-Z impurities lattice location study by ion channelling 2-81843
 mass analyser, distortion of secondary ion extraction due to sample surface irregularities 2-95567
 mass analyser using positive primary ions and electron gun, insulator anal. 2-95565
 Melbourne scanning proton microprobe developments 2-95543
 meteorites, Fe, ion microprobe mass anal. of Ni, Co, Ga and Cu distrib. 2-106637
 microanalysis using charged particle accelerators, conf., Namur, Belgium (Sept. 1981) 2-94883
 microanalysis using charged particle accelerators, control and data handling system 2-95546
 microbeam analysis, conf., Vail, CO, USA (July 1981) 2-68961
 nutrient elements in apples during growth period, elemental study by PIXE 2-67776
 Oxford 1 μ m proton microprobe 2-95541
 PIXE depth profiling technique appl. to near surface Ar distrib. in semiconductor 2-99716
 PIXE sample characterization, review 2-111523
 polycrystalline materials, ion scatt. spectroscopy 2-111004
 proton and nuclear microprobe developments 2-95550
 proton microprobe, spatial intensity profile characterisation for external beam 2-95545
 proton microprobe for K X-ray studies 2-99726
 proton microprobe for Rossendorf tandem generator (German) 2-89864
 quadrupole probe-forming systems of ion microprobe, real and parasitic aberrations 2-96820
 quadrupole-based SIMS instruments, design and performance, review 2-84735
 residual gas analysis by DIDA ion microprobe using SIMS instrument 2-78150
 Russian quadrupole, rotational misalignments 2-108197
 scanning ion microprobe equipped with EHD type In ion source, expt. results 2-95564
 scanning ion microscope, ion probe forming and secondary electron images (Japanese) 2-113051
 scanning PIXE meas. with Eindhoven cyclotron, data handling 2-95548
 scanning proton microprobe appl. to biology and medicine 2-100167
 secondary ion extraction in a quadrupole based ion microprobe 2-95553
 SIMS, isotope fractionation effects obs. 2-67784
 SIMS analysis, spatially three-dimensional instrumental aspects 2-95521
 size-chemical profiles of environmental samples by PIXE, 2-57761
 steel, stainless, oxidation investig. using automated scanning proton microbeam 2-111351
 surface analysis by electron and ion beam methods, conf., Newcastle, NSW, Australia (Feb. 1981) 2-106995
 surface crystallography, ion scatt. studies 2-110106
 target preparation of biological specimens for SPIXE meas. 2-100166
 thick insulating sample microbeam anal., thin foil technique appl. 2-95536
 tissue sections at cellular resolution, elemental mapping using nucl. microprobe 2-99920
 trace pollutants determ. in urban snow using PIXE techniques 2-67910
 tritium induced X-ray emission from glass shell inertial fusion targets 2-67774
 two-dimensional anal. of solid materials using nucl. microprobe, techniques development and comparison 2-95547
 X-rays and γ -rays source and appl., symposium, Ann Arbor, MI, USA (June 81) 2-58525
 Al, self-ion sputtering yields 2-77660
 Au items of ancient jewellery, milliprobe and microprobe anal. 2-99729
 Br determ. in blood serum using PIXE spectrometry 2-78163
 Cr film, evaporated, scanning ion microscope study, ion probe forming and secondary electron images (Japanese) 2-113051
 Cs⁺ ion source on COALA ion microprobe for negative ion SIMS 2-95538
 Cu, self-ion sputtering yields 2-77660
 F concentration profile, nuclear microprobe meas., appl. in archaeology and geology 2-100572
 Ga liquid ion source and scanning ion microprobe system (Japanese) 2-113039
 GaAs:Cr, ion implanted, postannealed material state 2-103793
 Gd₂Ga₂O₇:Mg, Zr, channelling study 2-81841
 In ion source, EHD type microfocus gun, for scanning ion microprobe 2-95539
 Mn content determ. in steels using proton-induced prompt γ -ray emission 2-67779
 Ni, grain boundary diffusion of H, electrochem. and ion microprobe obs. 2-92284
 Ni, self-ion sputtering yields 2-77660
 Si-C-Al-O film on Mo, D⁺ irradiation effect 2-66081
 SiC, D⁺ ion irr., secondary ion sputtering, energy anal. 2-77675
 SiC film on Mo, D⁺ irradiation effect 2-66081
 Si(Li) detector and data processing system for energy-dispersive X-ray microanalysis 2-90373
 Si(Li) detector and proportional counter calibration for microbeam PIXE anal. 2-59601
 U, electrochemically marked, residual contamination and corrosion, SEM and ion microprobe anal. 2-83269
 ZnSe LEDs, effect of residual impurities 2-57183

ion microscopes

- see also *field emission ion microscopes; ion microscopy*
 scanning ion microscope, ion probe forming and secondary electron images (Japanese) 2-113051
 SIMS analysis, spatially three-dimensional instrumental aspects 2-95521

ion microscopy

- see also *field emission ion microscopy; ion microscopes*
 biological tissue appl., review 2-111830

ion microscopy continued

- metallurgical appls. 2-101505
 Cr film, evaporated, scanning ion microscope study, ion probe forming and secondary electron images (Japanese) 2-113051
- ion mobility**
 see also *electrolytic ion mobility; ionic conduction in solids*
 coherent spectroscopy on single atomic system at rest in free space 2-65111
 drift meters, aperture separation upper limit 2-83949
 ethyl cation, ion mobility in methane gas 2-81440
 gases, drift velocities, electrons and ions, field depend. 2-86380
 grid transparency influence in ion-mobility meas., numerical simulation 2-103271
 ion diffusion and generalised Einstein relations, reson. charge transfer effects 2-71064
 ion-atom interaction potential and ion mobilities 2-91584
 irreversible kinetic eqns., distrib. function proportional force, (French) 2-69083
 Langevin's mobility maximum 2-65066
 mass identified ions, lateral diffusion meas. system 2-91586
 methane ion protonated, ion mobility in methane gas 2-81440
 molten salts, ionic transport props., mass and size effects 2-56230
 parallel ion viscosity, double-adiabatic fluid eqns. 2-71065
 in polar solvent, dielec. saturation and friction 2-71680
 propenyl cation, ion mobility in methane gas 2-81440
 propyl cation, ion mobility in methane gas 2-81440
 quadrupole traps, 3D, ion mobility characteristics, Hill equation appl., angular momentum effect (French) 2-101489
 simple fluids, gas-liquid transition and transport behaviour 2-103964
 Ar⁺ mobility in Ar, charge exchange cross section 2-55695
 Br⁺, diffusion coeffs. in inert gases, test of generalised Einstein relation 2-60704
 CH₃⁺, ion mobility in Ar, drift tube meas. 2-91585
 CH₃⁺ (n=0,1,2,3), ion mobility in He, drift tube meas. 2-91585
 Cl⁻.H₂O ion mobilities and collision cross-sections in Ar, Kr and Xe 2-91581
³He, superfluid, negative ions mobility 2-56286
 KCl:Cu, Schottky defects, energy of form., ion mobility and cond. study 2-71441
 Li⁺ ions in Ar, Kr and Xe, mobilities and longitudinal coeff. at room temp. 2-60713
 Li⁺ ions in He gas, mobility and diffusion coeff. 2-109437
 MgO-Fe₂O₃, solid-phase interaction, ESR investig. 2-87579
 N₂H⁺ gaseous mobility meas. in He and Ar at 295K 2-91580
 NaCl:Cu(Ag), Schottky defects, energy of form., ion mobility and cond. study 2-71441
 Ne⁺, mobility in Ne, charge exchange cross sections 2-55695
 O⁺, ground and metastable states ion mobilities meas. in He, Ne 2-109451
 O⁺, O⁺ and O₂⁺, mobilities in He and Ar, ion energy distrib. meas. in injected ion drift tube 2-76060
 O₂⁺, ground and metastable states ion mobilities meas. in He, Ne 2-109451
 O₂⁺, ground and metastable states ion mobilities meas. in He, Ne 2-109451
 O₂⁺, ground and metastable states ion mobilities meas. in He, Ne 2-109451
 SF₆, positive and negative mean ion mobilities in corona discharges 2-103524
 SF₆-N₂ mixtures, positive and negative mean ion mobilities in corona discharges 2-103524
- ion-molecule collisions**
 see also *charge exchange; ion-molecule reactions*
 alignment of beam-foil excited fast (MeV) molecular ions from defined electronic configuration 2-54931
 charge state distributions and charge-changing cross sections of heavy ions in the energy range up to 10 MeV/u 2-54952
 compound atom model for charge exchange processes 2-54951
 electronic excitation, conf., Feldkirchen-Westerham, Fed. Rep. of Germany, (Sept. 1980) 2-74161
 ethanol ionic dissociation studied by photoelectron-photoion coincidence spectroscopy 2-75468
 experimental aspects of ion-ion collisions, appl. to thermonuclear fusion 2-59925
 hydronium ions+hydroxide ion, neutralisation reaction, isotope effects, polarisation model study 2-72978
 internal state distrib., fluorescence and IR spectroscopy study 2-96694
 ion+asymmetric top rigid rotor, perturbed rot. state method, adiabatic pot. curves and nonadiabatic couplings 2-85798
 ion+H₂O (HDO), perturbed rot. state method, adiabatic pot. curves and nonadiabatic couplings 2-85798
 ion+polar molecule, capture collisions, adiabatic and rot., cross-section calc. 2-59907
 luminescence, report on spectroscopic and laser investigation 2-96710
 methane, stopping power of protons and alpha particles 2-70386
 organic molecules, double differential ionisation cross-section under heavy charged particle bombardment 2-65681
 perturbed rotational state, effect of pot. ridge 2-108691
 polar molecule+ion collision rate const., trajectory calcs. 2-80780
 preequilibrium distribution of the charge states of fragments of molecular ions in gaseous targets 2-54953
 ter-molecular ionic recombination, rate coeff., Monte Carlo calcs. 2-85774
 tetrasaccharide stachyose, ion bombardment ionisation, SIMS 2-102599
 vibrational excitation, time scales 2-96703
 Ar-N₂ laser, intense proton beam pumping, kinetic model 2-75561
 Ar⁺+H₂, low energy charge transfer reactions, time-of-flight study 2-80803
 Ar⁺+N₂(CO), charge transfer, spin-orbit states, threshold electron-secondary ion coincidence study 2-96715
 Br ion bombardment on light-ion target, L X-rays perturbation 2-77625
 C foil+H₂⁺ (H₂⁺), convoy electrons dwell-time depend. 2-59922
 CO₂+Li⁺, electron loss cross-sections 2-54943
 Cl⁻+H₂(D₂)(HD), reactive scatt. 2-88345
 D⁺+(H₂O)_n, solvating collisions, trajectories calcs., mechanism 2-90654
 F+CO(N₂)(O₂)(CO₂), electron detachment cross sections meas. 2-59927
 Fe⁶⁺+H₂, one-electron capture, cross section meas. 2-102618
 H⁺+C (methane), K shell ionisation, electron capture, cross section meas. 2-54940

ion-molecule collisions continued

- $H^+ + CO(NO)(N_2)$, small angle vibr. excitation 2-85801
 H^+ + hydrocarbons, electron capture, cross-section additivity failure 2-102612
 H_2 , stopping power of protons and alpha particles 2-70386
 $H_2 + Be^{4+}(B^{4+})(C^{4+})$, electron capture, cross section meas. 2-102619
 $H_2 + C^+(N^+)(O^+)$, atomic ground state, charge transfer cross sections 2-75417
 $H_2 + H^+(H_2^+)(H_3^+)$, Balmer alpha emission 2-75375
 H_2 + ion collisions, electron-capture and -loss cross section data compilation 2-79294
 $H_2 + Li^+$, electron loss cross-sections 2-54943
 HDO , ion collisions, Coriolis transition and impact parameter Born theory, perturbative treatment 2-65071
 $He^+ + H_2$, vibr. excitation, differential cross-sections meas. 2-75384
 $He^+ + H_2(D_2)$, collision spectrosc., triatomic mol. orbital promotion model 2-96691
 $He^+ + N_2$, charge transfer collisions, $N_2^+(B^2\Sigma_u^+)$ state vibr. populat. on 2-70411
 $K^+ + CsCl$, differential cross sections for ion-dipole scatt., intermol. pot. calc. 2-70381
 $Li^+ + CO_2$ collisions, high resolution ion energy-loss spectroscopy 2-114083
 $Li^+ + H_2$, diffusion cross sections, close coupling calcs. 2-75374
 N_2 , stopping power of protons and alpha particles 2-70386
 $N_2 + C^+(N^+)(O^+)$, atomic ground state, charge transfer cross sections 2-75417
 $N_2 + H^+$, N_2 energy loss spectrum 2-80799
 $N_2 + Li^+$, electron loss cross-sections 2-54943
 $N_2 + N_2^+$, charge transfer, vibr., laser induced fluoresc. study 2-80802
 $N_2^+ + N_2$, charge exchange, energy transfer dynamics 2-11475
 O_2 , stopping power of protons and alpha particles 2-70386
 $O_2^+ + O_2$, symmetric molecular charge exchange and vibr. excitations, quantum mechanical calcs. 2-96683
 $SF_6 + N^{++}$, collision induced atom ionisation, time of flight spectra 2-114095

ion-molecule reactions

- acetylene + $He^+(Ar^+)$, excitational dissoc. optical emission from excited fragments 2-105470
acetylene ion + acetylene, internal energy effects and energetics studied by photoionisation 2-11479
complex form., mech. of remote polar substituents effect 2-88337
enthalpy changes involving H-D exchange, zero-point energy considerations 2-78077
guided-beam tandem mass spectrometer 2-93782
hydronium ions + hydroxide ion, neutralisation reaction, isotope effects, polarisation model study 2-72978
inert gas halogenides, excimer form., kinetics 2-72961
interstellar clouds chemical evolution, role of ion-molecule reactions 2-106831
interstellar ion-neutral reactions, rate coeffs. 2-79196
ion + neutral reactions in drift tubes, energy depend. investig. 2-93784
isotope exchange reactions 2-78076
methane, ions, free radical form. and combination, reaction with ethane 2-99656
methane cations, collision-induced dissoc., mol. dynamics obs. 2-93779
methyl ion + $H_2(HD)(D_2)$, isotope exchanges and collisional assoc. 2-105462
methyl ion + methane, gas phase reaction, mechanistic study, ab initio MO calcs. 2-99647
proton-proton hole asymmetry in gas-phase neutralisation reactions 2-105476
rate consts., mass spectrometric study 2-72962
reaction dynamics, review 2-93783
sector type tandem mass spectrometer used to study ion-molecule reactions (Japanese) 2-113036
ternary association reaction collisional stabilisation step, intermediate coupling approach 2-93763
 $Al^+ + O_2$, cross section, mass spectroscopy 2-105464
 $Ar + H_2^+(D_2^+)$, proton and charge transfer, coupling 2-102571
 $Ar^+ + H_2O$, reaction rate consts. and branching ratios, kinetic energy depend. 2-93788
 $Ar^+ + H_2(N_2)(CO)(O_2)(CO_2)(N_2O)(COS)$, energy depend., rate consts. meas. 2-88346
 $ArD^+ + H_2(D_2)$, deuteron transfer reactions, rate coeff. 2-70409
 $ArH^+ + H_2(D_2)(methane)(N_2)(O_2)(CO)(CO_2)$, proton transfer reactions, rate coeffs. 2-70409
 ArH_2^+ , ion-molecule reactions, rate consts., mass spectrometric study 2-72962
 ArN_3 cluster ions, unimol. and collision induced dissoc. 2-90759
 $B^+ + H_2 \rightarrow BH^+ + H$ reaction, crossed-beam study 2-105454
 $Ba^+ + O_2(H_2O)$, cross section, mass spectroscopy 2-105464
 $C^+ + H_2$, pot. energy surfaces, CEPA calcs. 2-93766
 $C^+ + H_2$ in interstellar medium, role of vibrationally excited H_2 in CH^+ prod. 2-84296
 $C^+ + H_2$, radiative association reaction, rate coeff. reinvestigation 2-58235
 $C^+ + O_2(NO)$, reaction rate coeffs., energy depend. 2-93787
 $CH^+ + O_2(NO)$, reaction rate coeffs., energy depend. 2-93787
 $CH_2^+ + O_2(NO)$, reaction rate coeffs., energy depend. 2-93787
 $C_2H_4^+ + C_2H_2$, reaction in propyne and allene, long lived collision complex form., exothermicity effect 2-111473
 CO_2^+ ion-molecule reactions, SIFT obs. 2-83355
 $Cl_2 + F^-(Cl^-)$ reactions, flowing afterglow study 2-62387
 $D^+ + H_2 \rightarrow HD + H^+$ reactions, drift tube investig. in relative energy range 0.04 to 0.3 eV 2-57606
 $F^+ + H_2(D_2)(HD)$, reactive scatt. 2-88345
 $H^+ + D_2 \rightarrow HD + D^+$ reactions, drift tube investig. in relative energy range 0.04 to 0.3 eV 2-57606
 $H^+ + H_2$, isotope exchanges, reactive cross-sections and rate coeffs. calcs. 2-93789
 H_2^+ , ion-molecule reactions, rate consts., mass spectrometric study 2-72962
 $H_3^+ + D_2 \rightarrow HD_2^+ + H_2$ reaction dynamics, reactant vibr. excitation effect on product energy and angle distrib. 2-62388
 $HCO_3^+ + H_2O$, O isotope exchange, rate and equilib. factor 2-88350
 $HCl^+ + H_2(NO)(O_2)(O)(CO_2)(N_2O)(H_2S)(COS)(SO_2)(NH_3)(methane)$, charge exchange reactions, rate coeffs., selected ion flow study 2-88341
 $H_2O^+ + D_2O$ isotope exchange reactions 2-78076
 $H_2O^+ + H_2O_2$, reactive collision, energy distrib. functions calcs. 2-105476

ion-molecule reactions continued

- $H_2O_2^+ + OH^+$, reactive collisions, energy distrib. functions calcs. 2-105476
 $H_2PO_4^+ + Mg^{2+}(Be^{2+})(Na^+)(Li^+)$ interactions, ab initio SCF study, model of cation binding to nucleic acid 2-88344
 $He^+ + H_2O$, reaction rate consts. and branching ratios, kinetic energy depend. 2-93788
 $I^+ + H_2O(D_2O)$, recombination, Monte Carlo classical trajectory method 2-111481
 $Kr^+ + O_2(CO)(N_2O)(OCS)$, fine struct. state depend. reactivity 2-105471
 $Kr^+ + O_2(CO)(NO)(OCS)$, charge exchange, electronic state effects 2-90691
 $N_2 + Pb(Xe)$, charge changing cross sections at velocities up to 4×10^9 cm/sec 2-105479
 $N_2^+ + N_2$, charge exchange, energy transfer dynamics 2-11475
 NH_2^+ + methylamine (methanol), reaction kinetics, mass spectrosc. investig. 2-93786
 $NH_4^+ + ND_3$ isotope exchange reactions 2-78076
 $N_2O + Cr^+(Mn^+)(Fe^+)(Co^+)(Ni^+)$ 2-62389
 $Ne^+ + H_2O$, reaction rate consts. and branching ratios, kinetic energy depend. 2-93788
 O^+ + allene, product energy and ang. distrib., crossed-beam studies, reaction mechanism 2-72951
 $O^+ + BrO_2$, EPR spectra obs. 2-59827
 $O^+ + H_2$, pot. energy surface, diatomics in mols. calcs. 2-105469
 $O^+ + H_2$, potential energy surfaces, diatomics-in-molecules approach 2-67744
 $O^+ + N_2$, vibr. excitation, pot. energy surface, quasiclassical trajectory reaction theory 2-99662
 O_2^+ , reaction paths to water clusters in cold mesosphere 2-100499
 $O_2^+ + Cr^+(Mn^+)(Fe^+)(Co^+)(Ni^+)$ and other reactions, translational energy depend. of cross sections 2-62389
 SO_2 , ion-mol. reactions, low pressure, metastable transitions, mass spectrosc. investig. 2-93781
Si negative ion chemistry in mesosphere 2-100612
 $ZrF_4 + F^+$, enthalpies of reaction, mass spectrometric determ. 2-116719
 $ZrF_4 + ZrF_5^+$, enthalpies of reaction, mass spectrometric determ. 2-116719
- ion optics**
see also ion beams; ion microscopes; mass spectrometers
 α -particle microfresnel zone plates, batch production method 2-84774
achromatic quadrupole lenses as probe-forming lens for high-energy ions 2-95544
beam energy spread reduction by space charge control 2-114179
biological samples trace element anal. using proton microprobe 2-100168
cyclotrons, radial-longitudinal coupling and focusing complementarity 2-85427
electric deflectors with a spatial main path, ion optics 2-53890
electrostatic mirrors and lenses, three-cylinder design, mass spectrometer appl. 2-89847
focusing using inverse reflex tetrode, expt. study 2-89855
ion + molecule reactions, guided-beam tandem mass spectrometer 2-93782
ion mass and energy analyser 2-101488
low-energy ion beam transport, periodic focusing structure 2-75088
magnetic focusing prisms with hyperbolic field, aberrationless variants 2-55058
magnetic multipole lens, third order transfer matrix 2-102295
Melbourne scanning proton microprobe developments 2-95543
microprobe mass analyser, distortion of secondary ion extraction due to sample surface irregularities 2-95567
plasma, multibeamlet neutral injection, high transparency, primary ion tetrode optics design, theoretical anal. 2-81495
proton and nuclear microprobe developments 2-95550
QMG/2 spectrometer, effective field boundaries location 2-96361
quadrupole probe-forming systems of ion microprobe, real and parasitic aberrations 2-96820
Russian quadruplet, rotational misalignments 2-108197
SIMS, double channel instrument 2-95523
SIMS, secondary ion optics system for use with quadrupole mass spectrometer 2-95526
SIMS spectrometer with direct imaging laser ionization 2-95527
In ion source, EHD type microfocus gun, for scanning ion microprobe 2-95539
 N_2^+ ion beam trajectories, direct obs. during deceleration 2-102709
- ion plating**
biased deposition systems, phys. processes in substrate dark space 2-57308
film formation, ion based, role of ions 2-116385
ion vapour deposited aluminium, process and coating performance 2-83272
ion-assisted film form., conf., Tokyo and Kyoto, Japan (June 1981) 2-112653
metal film, ion plating on plastic substrate 2-116386
metallic thin film deposition methods using ion beam technology 2-57304
physical vapour deposition methods (Hungarian) 2-93445
specimen heating, predictive model 2-105092
Ag film, ion beam epiplating on Si 2-116389
C, diamond-like, quasi-amorphous hard film deposition and characteris., review 2-57307
GaAs layer growth on insulating substrates, ion beam deposition (Japanese) 2-116384
Ge ion beam deposition, epitaxial growth 2-116388
Mg film formation by direct ion beam deposition 2-116387
Pb film formation by direct ion beam deposition 2-116387
Pd/Si epitaxial film, ion beam induced, growth mechanisms and thermal stability 2-115604
Se, ion plated on α -brass, adhesion and interface chemistry 2-66405
Si ion beam deposition, epitaxial growth 2-116388
ZnO piezoelectric films formed by RF reactive ion plating, SAW device appl. 2-93446
- ion probe analysers** see ion microprobe analysis
ion probe microanalysis see ion microprobe analysis
ion pumps
multipactor ion pump, high speed, using multipactor cathode 2-107336
orbitoron device, electron density distrib. and ionisation efficiency, Boltzmann eqn. calc. 2-84644
sputtering ion pump speed, calc. 2-74436

ion recombination

- astrophysically abundance elements ionisation equilib., radiative recomb. and collisional ionisation 2-68610
 atomic and surface physics, conf., Salzburg, Austria, Feb. 1982 2-89455
 Debye-Smoluchowski equation for geminate and homogeneous recombination 2-83379
 ionosphere, ion recombination coefficient and short wave solar flux 2-73750
 isolated pair recombination probability, s approx. in Coulomb field 2-96687
 plasma, ion-ion recombination, reaction and diffusional drift 2-86384
 potassium tris (oxalato) cobalt (III), neutron irradiat., oscill. effects in annealing 2-56042
 scavenger problem in diffusion controlled recombination 2-62390
 scavenger problem in diffusion-controlled recombination 2-54910
 ter-molecular ionic recombination, rate coeff., Monte Carlo calcs. 2-85774
 termolecular ionic recombination polarisation at low ambient gas density 2-80783
 C II, interstellar, influence of low temp. dielectronic-like recomb. on C I radical recomb. lines 2-112314
 C, molecular state of H_2^+ traversing ultra-thin foils 2-81856
 Cl recombination, preelating investigations 2-114973
 Cl^{1+} , resonant dielectronic recombination cross sections 2-102578
 $F^+ + H_2^+$, F atomic laser, gain and saturation meas. 2-90880
 Fe^{13+} plasma, dielectronic recombination via autoionisation states 2-103283
 Fe^{23+} , dielectronic recombination, forbidden 2s-3d transition, plasma 2-103284
 Fe^{23+} , transition probability, dielectronic recombination rate coeffs., HF calcs. 2-108679
 $I^+ + H_2O(D_2O)$, recombination, Monte Carlo classical trajectory method 2-111481
 $Kr^+ + F^+$, ion-ion recombination, reaction rates 2-99672
 Mg^+ , dielectronic recombination cross section 2-105468
 N^+ , electron impact dissociation, recombination, metastable N yield 2-96752
 NH_3 , electron-ion recombination coeff. at high densities 2-93760
 O^+ in ionosphere F-region, radiative recomb. contrib. to near-Earth UV environment 2-117513
 S^{13+} , dielectronic recombination cross sections 2-59944
 Si^{11+} , dielectronic recombination cross sections 2-59944
 $Xe^+ + Cl^-$, ion-ion recombination, reaction rates 2-99672

ion scattering see collision processes; ion mobility; ion-surface impact

ion solvation see solvation

ion sources

see also ion emission

- 50 kV neutral-beam injection system, properties 2-64162
 50-keV He^+ beam in He gas cell, neutralisation efficiency meas. 2-89860
 accel. in high current nonrelativistic electron beam injected into neutral gas 2-80888
 APOLON polarised ion source and KEK polarised beam project 2-75084
 ASDEX periplasmatron ion sources, development, fabrication and testing 2-80273
 beam dynamics from ion gun with three electrodes (Chinese) 2-108204
 cluster beam ionizer having the self-acceleration mechanism 2-80374
 CRYEBIS, advanced multicharged ion source, expt. results and improvements 2-102292
 CRYEBIS, multicharged ion source 2-64724
 design techniques for industrial appls. 2-107446
 discharge performance and stability 2-91700
 duopigatron gas discharge ion source, ion current, mass and energy distributions, and current density meas. 2-79712
 duoplasmatron, for obtaining C ions 2-85442
 electrode extraction system for prod. of intense ion beams 2-80369
 electron beam ion source instability modification by longit. kinetic effects 2-102294
 electron beam ion sources, linear electrostatic instability 2-102293
 electron cyclotron resonance ion source, dense plasma generation 2-102302
 26-cm electron-cyclotron-resonance in source, for reactive ion beam etching 2-74572
 energy dissipation on ion accelerator grids during high voltage breakdown 2-80378
 field desorption mass spectrometry 2-113029
 focused ion beams for ion implantation doping of semiconductors 2-91999
 focusing using inverse reflex tetrode, expt. study 2-89855
 gas neutralisers for multi-MeV beams of light negative ions 2-54704
 guns, charge exchange effect, appl. to confinement devices 2-96352
 heavy ion accelerator for investigating ion interactions in semiconductors (German) 2-90321
 high energy neutral beam injector for fusion reactor based on magnetron 2-75094
 high temperature thermal ion source for an on-line isotope separator 2-96338
 hollow cathode and ion accelerator system for high current ion sources 2-80373
 hollow cathode development at JAERI 2-80375
 hollow cathode ion sources for neutral beam injector, reduction of gas flow 2-95537
 implantation sources, source gas composition and ion current spectrum, optimisation by gas mixing 2-69296
 indirectly heated cathodes and duoplasmatron-type electron feeds for positive ion sources 2-80376
 intense ion beams, very low emittance, generation method, inertial confinement fusion driver appls. 2-96359
 ion-assisted film form., conf., Tokyo and Kyoto, Japan (June 1981) 2-112653
 ion-impact ion source using low energy charge transfer collisions 2-102301
 ions generated by electron ionisation, photodissoc. in ionisation chamber of double focusing mass spectrometer 2-113032
 isotopic sputter-ion source targets, prep. techniques 2-108191
 JT-60 prototype ion source for neutral beam injector 2-75042
 large magnetic cusp type plasma generator, design and fabrication 2-81594
 Large Source Test Stand for H^- (D^-) ion source 2-80371
 liquid metal, space charge effects for different geometries 2-77708
 liquid metal ion source, emission mechanism, theory 2-89856
 ion sources continued
 liquid metal ion source, field effect ion beam exposure apparatus 2-113045
 liquid metal ion sources, hydrodynamics 2-59578
 liquid metals, extracted beam divergence calc. 2-74571
 long-pulse ion source for neutral-beam applications 2-64161
 long-pulse sources using filament-free LaB₆ multi-cathodes 2-59586
 low-current, for mass spectrom., props. 2-91586
 low-energy ion beam system for materials studies 2-79714
 magnetic circular multipole line-cusp ion source 2-54698
 magnetic multipole ion source, hollow cathode, plasma studies for neutral beam injection 2-89859
 magnetically insulated reflex ion diode, operating characteristics calc. 2-102305
 mass spectrometer, dielectric film form. on ion source 2-69293
 mass spectrometer with an electrostatically collimated electron beam 2-89848
 metal ion source based on arc discharge 2-107451
 MI-1201 mass spectrometer ion source for temps. of 400 to 1400K 2-95516
 microanalyser, dual primary ion source and mass filter 2-95540
 MINIMAFIOS multicharge ion source, expt. characts. (French) 2-90334
 multicusp, efficiency increase 2-113041
 multicusp source, magnetically filtered, geometry study 2-113040
 multiply charged ions in a hot electron layer ion source (HELIOS) 2-81586
 negative ion production in mag. insulation diode 2-113044
 negative ion source, self-extraction 2-89858
 negative ion sources, USSR research 2-54710
 neutral beam development at BNL, for fusion reactors 2-75045
 neutral beam ion sources for MFTF, industrialisation and production 2-80380
 neutral beam sources, extractor grids fabrication 2-101495
 neutral injectors, high current voltage, long pulse duration development ion beam 2-80368
 neutral-beam injection, ion sources 2-76147
 neutral-beam systems for magnetic fusion reactors 2-80203
 organic solids, thermal desorpt. prod. of gas phase ions, mass spectrometry appl. 2-115535
 Penning type, with high efficiency, and appls. 2-74574
 pinched electron beam diode with oil-covered anode, pulsed ion beam extraction 2-90339
 plasma, laser produced, super-fast ion generation due to nonlinear processes 2-76162
 plasma focus discharge, electron and ion beam energies and currents meas. 2-70024
 plasma generator for PLT/PDX neutral beam injectors 2-80377
 plasma-beam ion source, ion beam extraction with ion space-charge compensation 2-113796
 polarised in source for Saturne synchrotron 2-75073
 polarised ion sources, progress report on at. beam stage 2-75078
 polarised ion sources 2-75086
 polarised proton ion sources, cold H techniques 2-75081
 polarised proton ion sources, conf., Ann Arbor, MI, USA (May 1981) 2-74144
 positive, design for neutral beam appl. 2-80379
 positive, heavy, new developments, review 2-53436
 positive heavy ion sources, review, book contrib. 2-54708
 positive ion based neutral injectors for fusion reactors, status and trends 2-75093
 positive ions, photoexcited, average internal energy, source temp. effect 2-116710
 proton beam intense from applied B₀ mag. insulated ion diode, characts. 2-75074
 radial ion diode for generating intense focused proton beams 2-96351
 radical combination in a mass spectrometer source 2-99656
 RF discharge, low-pressure, plasma diagnostics 2-103468
 RF ion source using RF heating plasma 2-96350
 RPI and SOWA ion implosion facilities, intense ion beam generation 2-69816
 scanning ion microprobe equipped with EHD type In ion source, expt. results 2-95564
 sciopticon array analysis of ORNL ion sources 2-54701
 source feed materials in ion beam technology, book contrib. 2-71483
 spectroscopy on localised and cooled ions 2-70450
 spiral filament fabrication for multifilament ion sources 2-54705
 stationary plasma double layers sustained by differential vacuum pumping 2-69297
 steady state magnetron H^- source for fusion reactors 2-75095
 steady-state gas efficiency of ion sources for neutral beams 2-80363
 stored ions, laser cooling and double reson. spectroscopy 2-69298
 supersonic mol. beam source with internal β -emitter, charged mol. cluster prod. 2-90758
 TFTR neutral beam test facility, discharge ion sources and power supply 2-69951
 Al, liquid, field emission ion source, emission characteristics meas. 2-74570
 Al liquid metal ion source C needle emitter appl. 2-89854
 Al liquid metal ion source, emission characts. 2-96353
 B liquid metal ion source, C needle emitter appl. 2-89854
 Be sample prep. from BeO for use in accelerator ion sources 2-112155
 Cs inverted negative ion sputter source 2-108172
 Cs^+ ion source on COALA ion microprobe for negative ion SIMS 2-95538
 D beam species measured by fusion reactions in neutralizer 2-80362
 D^- , Lamb-shift polarised ion sources, review 2-75075
 D^- production, by charge exchange in Rb 2-90332
 D^- production by double electron capture, Cs supersonic jet 2-54702
 D^- volume source from plasma, development progress 2-80370
 Ga liquid ion source and scanning ion microprobe system (Japanese) 2-113039
 H polarised ion sources, ground state at. beam stage, review 2-75077
 H^- beam emittance measurements for the Penning and the asymmetric, grooved magnetron surface-plasma sources 2-64160
 H^- , intense unpolarised negative ion sources 2-75082
 H^- , Lamb-shift polarised ion sources, review 2-75075
 H^- , Lamb-shift polarised ion sources improvements, working group summary 2-75076
 H^- polarised ion prod., progress on ionisation stage 2-75080
 H^- polarised ion prod. using optical pumping 2-75083
 H_2 RF-ion source beam, ion species 2-103466

ion sources continued

- H⁺ (D⁺) polarised ion source design and performance 2-90333
 H⁺ (H⁺) atomic-beam polarised ion sources, ionisation stage 2-75079
 In ion source, EHD type microfocus gun, for scanning ion microprobe 2-95539
 LaB₆ cathodes in mass spectrometry 2-113031
 Na vapour targets, optical pumping by single-freq. CW ring dye laser, polarisation 2-114054
 Na+H⁺, polarised proton and N⁺ source, target optical orientation (*Russian*) 2-102311
 P ion implantation from solid ion source, non-mass-analysed technique, solar cell appl. 2-84737
 Xe ions, RF-ion source for surface texturing 2-105390

ion-surface impact

- see also particle backscattering; sputtering*
 alignment of beam-foil excited fast (MeV) molecular ions from defined electronic configuration 2-54931
 atomic and surface physics, conf., Salzburg, Austria, Feb. 1982 2-89455
 atomistic or molecular processes on clean surfaces: recent advances 2-110130
 Auger electron emission from solids, review 2-82990
 beam-surface interaction at grazing incidence, projectile excitation and polarisation 2-93360
 biological implants, ion beam sputter modification of surface topography, SEM obs. 2-116570
 charge state distributions and charge-changing cross sections of heavy ions in the energy range up to 10 MeV/u 2-54952
 conference, Feldkirchen-Westerham, Fed. Rep. of Germany (Sept. 1980) 2-74161
 conference on surface physics, Varna, Bulgaria (Sept.-Oct. 1980) 2-89468
 conference on surface science, Liverpool, England (April 1981) 2-58538
 CR-39 plastic track detector response to 2 MeV microbeams of H, He and Ne 2-101502
 desorption, fast ion induced, polarization field 2-98432
 diatomic ion beam-surface reaction, quantum mechanical model 2-99705
 dielectric thin films, composition depth profiling, SIMS, IIR and AES comparisons 2-99287
 ejected atom ionisation 2-82989
 elastic ion scatt. by surface atomic strings 2-105026
 energy redistribution of ion flux on interaction with a scattering center 2-77688
 fast-ion bombardment of thin foils, projectile Rydberg atoms and convoy electrons obs. 2-54946
 film growth by ion beam techniques 2-116364
 gaseous molecular targets, dissoci. by fast ion beams 2-54933
 glass surfaces, ion beam effects, XPS study 2-99252
 graphite, pyrolytic, H ion backscatt., energy and ang. depend. 2-69849
 graphite target, light ion bombardment, reflected particle energy distrib. 2-82995
 heavy ion-solid collision, convoy electron 2-77647
 hydrogenated species at surface of solid material, chemical effects induced by MeV ion beams 2-93852
 inelastic scattering, collective modes and surface-channelled ions 2-57233
 inert gas ion beams, singly charged, metastable fraction meas. 2-89861
 ion etching instrument for depth profiling with SIMS or ion-impact induced radiation 2-95528
 ion neutralisation, tight binding linear chain model 2-111009
 ion-clusters, collisions with atoms and condensed matter, vicinage effects 2-75489
 ionised projectiles traversing inert gases, polycrystalline solids and axial channels in Au, electron capture and loss 2-90661
 K-vector selection for electron capture at metal surfaces 2-77645
 low energy ion scatt., correlated atomic vibr. effects, two-atom, three-atom and chain models 2-93350
 low energy ion scatt. from solid surfaces, neutralisation effects 2-77663
 low energy light ion sputtering, primary recoil contrib. 2-77659
 low-energy interactions (~1 keV) 2-93358
 metal surface, interaction with charge or atom, complex self energy 2-87933
 metal surface, ion and atom interaction, excitation probability in time-depend. external pot. 2-77673
 metal surface, non-adiabatic processes 2-87939
 metal target, kinetic ion-electron emission, review 2-77648
 metallic superlattice superconductivity and magnetism 2-92819
 metals, heavy ion bombarded, secondary electron emission coeff. meas. 2-72591
 metals, heavy-ion bombarded, sputtering from elastic collision spikes 2-77653
 metals, ion beam textured surfaces, quasi-liquid states 2-82984
 molecular and atomic ions, scatt. from metallic surfaces meas. (*Russian*) 2-72594
 molecular dynamics simulation study of atom ejection processes influence of lattice atom pot. function 2-93343
 monocrystal, ion bombardment at grazing angles, fast dimer ejection 2-82994
 multicomponent material sputtering theory 2-77736
 multiphoton reson. ionisation of sputtered neutrals from ion bombarded solids 2-85601
 neutralisation, Auger processes 2-93357
 neutralisation probability for slow ions 2-62038
 optical glass surface interaction with ions of F-containing gases 2-72593
 organic solid, ion impact, mol. ion form. mechanism 2-99247
 outer shell excitation, appl. to surface anal. 2-111003
 Penning type ion sources, with high efficiency and appls. 2-74574
 polycrystalline materials, ion scatt. spectroscopy 2-111004
 potential effect on motion of ion and ion pairs at surface 2-67169
 reconstructed surface, backscattered channelling MeV ions, surface peak intensity 2-116322
 relativistic particle reflection, reson. effect 2-105021
 Rutherford ion backscattering appls. to surface crystallography 2-111001
 semiconductor films, sputtering, MBE and plasma-enhanced CVD growth, ion-surface interactions, reviews 2-110201
 single cryst., secondary ion emission, anisotropy, orientation effect 2-82986
 sputter depth profiling, mass redistrib. by atomic mixing 2-82974
 sputtered atoms degree of positive ionisation periodicity in thermal spikes 2-77658
 sputtered particle energy distrib., surface disruption as observable factor 2-77655

ion-surface impact continued

- sputtering, charge states theory 2-77735
 sputtering process, excited neutral atoms formation 2-77656
 sputtering process, excited sputtered atoms kinetic energy determ. 2-77737
 sputtering theory and comparison to expt. data 2-77733
 stainless steel, type 304, H ion backscatt., energy and ang. depend. 2-69849
 steel, austenitic stainless, H recycling props. 2-74934
 steel, C, passivation using low energy Hg ion surface treatment 2-93677
 steel, stainless, surface damage, AR ion induced, implantation effects 2-98164
 steel, stainless, type 316, secondary ions ejected by D⁺, He⁺ ion bombardment, energy anal. 2-93355
 superficial changes of dielectrics in contact with electrodes subjected to corona discharge 2-104131
 surface analysis by electron and ion beam methods, conf., Newcastle, NSW, Australia (Feb. 1981) 2-106995
 surface crystallography, ion scatt. studies 2-110106
 surface modifications due to preferential sputtering 2-110103
 surface struct., single and double scatt. intensities ratio in ion scatt. spectroscopy 2-105029
 surface wake, surface potential, and its related phenomena 2-57228
 thin film, neutralisation of 50-230 keV H ions 2-111015
 trajectory focusing effects on total refl. coeff., and energy spectrum of refl. ions 2-93347
 transient and equilibrium effects in the charge state distribution of ions 2-57226
 transition metal fluorosilicates, surface damage under Ar ion bombardment, XPS studies 2-61045
 valine, energetic ¹⁶O ion bombardment, desorbed secondary ion yield as function of ionic charge state 2-99242
 Ag, electron emission under heavy at. and mol. ion bombardment 2-77649
 Ag, secondary electron emission coeff. under ion bombardment 2-111007
 Ag-Cu, ion sputtered, surface topography 2-105025
 Ag-Mg polycryst. target, detection of low energy ion-induced secondary electron emission 2-82975
 Al (111), ion bombarded, secondary electron energy resolved angular distrib. 2-93349
 Al, electron emission under molecular H ion bombardment 2-72592
 Al, pulsed He⁺ beam scatt., time of flight technique 2-77670
 Al, secondary electron emission coeff. under ion bombardment 2-111007
 Al, secondary electron emission spectrum, ion induced 2-116320
 Al, self-ion sputtering yields 2-77660
 Al surface, autoionisation of colliding Ne projectiles, Auger electron energy distrib. 2-57231
 Al surface, inert gas ion impact, Auger emission study 2-77684
 Al thin film, neutralisation of 50-230 keV H ions 2-111015
 Ar⁺ ion sputtering in Be, Mg, Zn, Cd, at. excitation 2-75372
 Au, convoy electron production by 1-8.5 MeV/u highly ionised ions traversing polycryst. solids and axial channels 2-57227
 Au epitaxial growth on Ag(111), ion scatt., Auger and LEED study 2-82160
 Au foil, secondary electron emission coeff. under ion bombardment 2-111007
 Au, ion-electron emission depend. on projectile incidence angle 2-62031
 Au, polycrystalline, low energy ion scatt. and neutralisation 2-77664
 Au, proton scatt. energy losses, impact-parameter depend. meas. 2-76541
 Au, secondary electron emission for H⁺, H₂⁺, H₃⁺, He⁺, HeH⁺ bombardment 2-77650
 Au, sputtering from (111) crystal, ang. distrib., impact energy depend. 2-77652
 Au surface (110), angle resolved low energy K⁺ and Ar⁺ ion scatt. 2-62033
 Br ion bombardment on light-ion target, L X-rays perturbation 2-77625
 Br ions bombarding thin C targets, L-shell vacancies and radiative electron capture 2-75412
 C foil, inner shell ionisation by ion bombardment 2-75391
 C foil, OH⁺ break-up, H⁰ component study 2-75371
 C foils, H₂⁺ dissociation, interatomic separation and relative vel. distrib. calc. 2-75370
 C surface, 32-2000 eV deuterium reflection 2-116316
 C thin film, neutralisation of 50-230 keV H ions 2-111015
 C³⁺ + Au, Auger transition lineshape, CO⁺ coulomb explosion influence 2-78068
 Cr compounds, maximal-valent, L₃MM Auger transitions under ion bombard. 2-105028
 Cs, D⁺ (D₂⁺) reflected particle charge states for grazing incidence 2-77646
 Cs, thin film, neutralisation of 50-230 keV H ions 2-111015
 Cu, 2-105024
 Cu, (110) surface, oscill. relax. investig. 2-104137
 Cu (410) surface, ion scatt. spectroscopy study 2-82096
 Cu, ion-electron emission depend. on projectile incidence angle 2-62031
 Cu, self-ion sputtering yields 2-77660
 Cu single crystal, ion bombardment induced surface topography, incidence angle effect 2-76471
 Cu surface, (110), H⁺ ion reflection, ionic charge states, expt. study 2-57234
 Cu, surface (100), N₂⁺ ion reflection, directional effects 2-116319
 Cu, surface (110), O covered, surface reconstruction, Ne⁺ and H₂O⁺ ion scatt. 2-61268
 Cu, surface (110), Ne⁺ and H₂O⁺ ion scatt., angular distrib., surface geometry 2-62035
 Cu, surface scattering of non-homonuclear hydrated ArH⁺ ions (*Russian*) 2-111014
 Cu-Au, threshold sputtering effects, ion scatt. spectroscopy study 2-82982
 Cu-In, low energy ion bombard. enhanced diffusion, segregation, and phase transforms. 2-82991
 Cu(100)+Ar ion, semichannel focusing energy determ. 2-105030
 Fe-Ni, secondary ion emission under O₂⁺ bombardment, oxidation 2-82980
 H⁺ production by proton scatt. from W, Cs and W-Cs surfaces, theoretical model 2-93351
 H⁺ ions reflection at cryst. surface, ionic charge states, expt. study 2-57234
 H₂⁺ ions, Coulomb explosion, measurement on the extended range of the wake 2-57594

ion-surface impact continued

- He⁺, backscattering from Pb, Sn, Al targets, equilib. charge state distrib. 2-54957
 He⁺ scattering at grazing incidence, reson. coherent excitation, ang. depend. 2-77644
 p-InP (111) A face, semiconductor interface charact. in photoelectrochem. solar cells 2-111552
 K ion scatt. from Cu surface, ion fractions 2-77690
 KCl (001), Ar ion irradi., defect instability, LEED study 2-82110
 Li ion scatt. from Cu surface, ion fractions 2-77690
 Lu-Fe alloy, recoil mixing produced by atom beams, simulation using computer code 2-76518
 Mg (0001) surface, interatomic pot. considerations in low energy Ar⁺ scatt. 2-77666
 Mo adsorption of H on Cs monolayer, negative H ion production by sputtering 2-99253
 Mo, H ion backscatt., energy and ang. depend. 2-69849
 Mo monocrystal, (110) surface, chemisorbed gas, desorption by low-energy ions 2-74923
 N₂⁺ + Al(Cu)(Mo)(Ni) surfaces, nitridation reaction in low kinetic energy region, Auger effect 2-99706
 Na ion scatt. from Cu surface, ion fractions 2-77690
 Ne⁺ beam bending by Si surfaces, computer simulation 2-79717
 Ne²⁺ neutralisation at surface Auger processes 2-93357
 Ni, ⁴He⁺ impact, 0.5 to 1.8 MeV, projected range and spread 2-82993
 Ni (001) surface, K covered, low energy K⁺ scatt., survival probability 2-77669
 Ni (110) surface, outer-shell electronic processes in Ne⁺ collisions 2-77665
 Ni (110) surfaces, O covered, low energy Li⁺ and He⁺ ions scatt. 2-77667
 Ni (110) surfaces, S and N covered, N₂⁺ mol. ion dissoci. 2-78069
 Ni (111) surface, clean and O-adsorbed, high energy ion scatt. study 2-62039
 Ni, D⁺(D₂⁺) reflected particle charge states for grazing incidence 2-77646
 Ni, ion-surface scatt. for Ne⁺ ions, computer simulation 2-62037
 Ni, laser irradiated, epitaxial regrowth and defects, Rutherford backscatt., channelling and TEM obs. 2-61031
 Ni, polycrystalline, chemisorbed gas, desorption by low-energy ions 2-74923
 Ni, secondary ions ejected by D⁺, He⁺ ion bombardment, energy anal. 2-93355
 Ni, self-ion sputtering yields 2-77660
 Ni surface, (110) and (111), H⁺ ion reflection, ionic charge states, expt. study 2-57234
 Ni surface, low energy He⁺ scatt., Auger neutralisation model 2-82992
 Ni surface (110), clean and O covered, Li⁺ and He⁺ ion scatt. 2-99263
 Ni-He, gas re-emission and surface structure due to implantation 2-76469
 OH⁺ ions in Li target, dissoci. 2-57593
 Pd, polycrystalline surface, low energy O⁺(O⁻) backscatt. spectrum meas. 2-93342
 Pt, surface (111), low energy alkali ion backscatt. 2-116323
 Pt, surface (997), double step form, and destruction dynamics, O₂ induced, He beam scatt. study 2-115513
 Pt, surface (997), reconstruction, O₂ induced, He diffr. pattern shape changes 2-115514
 Pt_{0.9}Ni_{0.1} surface (111) composition determ. by AES, XPS and ion scatt. spectroscopy 2-98410
 Si surface (111)-(7×7), D adsorption, nuclear microanal., LEED and ion scatt. study 2-76821
 SiAs, ion-implanted, laser and thermal annealing comparison, ion backscatt. and elec. meas. 2-55991
 SiO₂ ion bombardment induced electronic states (*Japanese*) 2-93345
 Si(001) surface, low-energy ion scatt. study 2-104127
 Si(100) and (111) surface electronic struct. changes induced by ion bombard., LEED and AES study 2-82983
 Ti, secondary ions ejected by D⁺, He⁺ ion bombardment, energy anal. 2-93355
 U⁴⁺ + inert gas target, highly charged inert gas recoil ion prod. 2-114097
 V compounds, maximal-valent, L₂MM Auger transitions under ion bombard. 2-105028
 W, field adsorption of Ne, electron-stimulated field desorption study 2-105053
 W polycrystalline surface, Auger neutralization of multiply charged rare gas ions 2-99265
 W, resonance tunnelling neutralisation of He⁺ ions 2-62038
 W, scattering of keV H and He ions 2-77668
 W surface (110), low energy K⁺ ion scatt., struct. effects 2-99264
 WO₃, scattering of keV H and He ions 2-77668
 Zr, sputtered-atoms surface normal vel. distrib. for light-ion irradiation 2-77651

ion thrusters see ion engines**ionic conduction in solids**

see also *superionic conducting materials*

- β-alumina, solid electrolyte, mobile ion conc. and mixed alkali effect 2-92271
 benzophenone-polyiodine complexes, electronic and ionic cond. 2-104440
 carrier diffusion and trap controlled drift, non-equilibrium transport regime 2-61427
 coumarin-polyiodine complexes, electronic and ionic cond. 2-104440
 dielectric, stationary distrib. of mobile ions with regard to elastic interactions with medium 2-82015
 diffusion processes in semiinfinite electrically conducting media, contact phenomena influence 2-86921
 disordered materials with traps, drift and diffusion, quasi-equilib. transport regime 2-61426
 drift and diffusion in materials with traps, transient current and transient time characts. anal. 2-61428
 electrode sets for MHD generator, physicochem. principles 2-73129
 electrolytes, amorphous, ionic transport 2-56250
 fluorite oxides, non-stoichiometric, anion transport props., dopant cation-vacancy complex effects 2-92268
 glass electrode, with ionic and ionic-electronic conducting layers 2-105491
 glass fibre reinforced epoxy, elec. props, effect of water absorpt. 2-67573
 hydrous oxides, AC proton condensation 2-115451
 insulating film, ionic space charge distrib. and polarisation 2-116120
 ionic crystal, contact melting, external electrostatic field effect (*Russian*) 2-66182
 Kapton polyimide film, elec. cond. at high elec. fields 2-71707
 Kapton polyimide film, photocond. at high elec. fields 2-98694
 Nerst-Einstein eqn. in high defect solids, tracer and chem. diffusion coeff. 2-76727
 nylon-6, current following voltage reversal 2-86922
 oxides, non-stoichiometric doped, O⁻ ion cond. 2-92267
 PEPC electrophotographic layers, study of ionic conductivity (*Russian*) 2-74562
 polyether-alkali metal salt complexes, ionic cond. meas. 2-110032
 polyether-polyurethane networks containing Li perchlorate, ionic cond. correlation with ⁷Li-NMR 2-86928
 polyethylene oxide-LiClO₄ filled polymer electrolytes, electrochem. and mechanical props. 2-115458
 polyethylene oxide-LiClO₄ filled polymer electrolytes, electrochem. and physical props., prep. condition effects 2-115459
 polymers, time depend. currents after changing external elec. field strength in steps 2-66286
 quartz resonators, radiation induced cond. and high temp. Q changes meas. 2-98335
 transient currents, hopping model, numerical anal. 2-110027
 zeolite, hydrated, protonic conduction 2-82014
 AgBr emulsion grains, space charge characts., effect of soln. pAg and pH 2-72418
 AgBr emulsions, ionic thermocurrent meas., grain microcryst. struct. depend. 2-88383
 AgBr, fast ionic conduction concepts applied to latent image form. 2-111503
 AgBr, space charge characts., EDTA influence 2-93110
 AgFeCl₄, cryst. struct., mag., optical, and ionic cond. props. 2-92266
 Ag₂HgI₄, ionic cond., Raman spectra and phase diagram, press. depend. 2-115450
 β-AgI emulsion grains, space charge characts., EDTA influence 2-93110
 β-AgI, phonon spectra, hopping kinetics, IR spectra study 2-76616
 Ag₂Ag₂B₂O₇, vitreous electrolytes, struct. and ion dynamics 2-61197
 AgI-PbI₂ mixture, elec. and phase behaviour 2-76737
 Ag₂Se-Se-Au(Cr)(Ag)(Ag₂Se) thin film sandwich, polarised memory switching obs. 2-104468
 Al₂O₃-Cu porous anodic film, elec. props. meas. 2-82501
 Al₂O₃-XO₂-Na₂O (X=Si, Te, Ge), ionic conductor, elec. props. and struct. 2-110030
 Au-β-PbF₂ thin film interface, XPS and elec. meas. 2-87080
 B₂O₃-Li₂O-LiCl amorphous fast ionic conductor, crystallisation effects on cond. 2-115454
 B₂O₃-Na₂O-Na₂SO₄ system, synthesis and cond. of glasses (*French*) 2-56248
 BiI₃, photodecomp., struct. and transmittance, effect of illum. 2-87101
 CdBr₂·4H₂O, solid, elec. and electrochemical props., dehydration effects 2-71708
 Cu₂HgI₄, ionic cond., Raman spectra and phase diagram, press. depend. 2-115450
 Cu₂PS₂Br(I) argyrodite-type ionic conductors, bulk photovoltaic and photocond. effects 2-104424
 F⁻-containing conductors, use for detection of certain gases (*French*) 2-89702
 Ga alumina, ionic and electronic cond. meas. 2-71703
 (GeTe)_{0.92}Bi_{0.08}Cu_{0.01}, ionic transport of Cu and thermo EMF 2-104068
 H moving in electron gas, charge states 2-86920
 H-bonded chain, proton transport, solitonic mechanism 2-110028
 HfNbO₃, cubic perovskite, ion exchange prep. from LiNbO₃, characterisation 2-60953
 HfNbO₃·xH₂O, proton conductor, charact. 2-104054
 HfSbO₃·xH₂O, proton conductor, charact. 2-104054
 HTaO₃, cubic perovskite, ion exchange prep. from LiTaO₃, characterisation 2-60953
 HTaO₃·xH₂O, proton conductor, charact. 2-104054
 H₂UO₄·4H₂O, hydrogen gas sensor using electrochemical concentration cell 2-112888
 He ions moving in electron gas, charge states 2-86920
 In alumina, ionic and electronic cond. meas. 2-71703
 K-β-Al₂O₃, low temp. microwave conductivity tunnelling model, dielec. const. 2-76736
 KBr, thermal breakdown, ionic cond., optical microscopy study of breakdown channels 2-82017
 KCl, γ-ray irradi., impurity-vacancy dipoles, ionic cond. study 2-109790
 KCl, thermal breakdown, ionic cond., optical microscopy study of breakdown channels 2-82017
 KCl:Cu, Schottky defects, energy of form., ion mobility and cond. study 2-71441
 K₂(Ga₂Ge_{1-x/2})O₂, ionic cond. and cryst. chem. (*French*) 2-92269
 KH₂PO₄, protonic transference number, EMF meas. 2-92264
 KIO₃·2H₂O, proton conductivity, permittivity, cryst. struct. 2-86931
 K₂LiNb₃O₁₇ and K₃LiTa₆O₁₇, polycryst., ionic cond. meas. and comparison 2-66283
 K₂(Li_{2-4x}Sb_{2x})O₁₆, hollandite phase, cryst. struct. and ionic cond. meas. (*French*) 2-103717
 K₂O-B₂O₃-SiO₂ glass, temp. derivative of elec. resist. near transition temp. 2-76730
 K₂O-B₂O₃-SiO₂ glass, phase separation and structon types, DC elec. resist. meas. 2-76729
 β'-K₂O-Mg_{0.5}Al₂O₃, ionic cond. and IR absorption spectra 2-92260
 K₂-Zn_{1-x}Al_xPO₄, ionic cond. and cryst. struct., comp. dependence meas. 2-104053
 K₂(Zn_{1/2}Ge_{1-x/2})O₂, ionic cond. and cryst. chem. (*French*) 2-92269
 LiAlSi₄O₈-SiO₂ solid solns., ionic cond., temp. and crystal orientation effects 2-86930
 β-Li_{1-x}AlSi_{1-x}P_xO₄ ceramic solid soln., ionic cond. meas. 2-104052
 Li₂Cu₂(MoO₄)₂, electrical cond., ionic and electronic 2-72034
 LiFeCl₄, cryst. struct., mag., optical, and ionic cond. props. 2-92266
 Li₂GeO₄-Al₂O₃, solid electrolytes, cationic cond. and struct. 2-110031
 LiHS, ionic conduction, impurity effects 2-76735
 Li₂D₂O ionic conductor, struct. props., neutron scatt. study 2-86640
 Li(N₂H₅)₂SO₄·VO²⁺, elec. cond. and stimulated thermo-current studies 2-71706
 Li₂O-B₂O₃ glasses, non-classical Li diffusion, elec. cond. meas. 2-98333
 Li₂O-Na₂O-SiO₂ glass, polarisation and cond. mechanism 2-87656
 Li₂-R_{1-x}T_x(BO₃)₂ (R=rare earth, T=Zr or Th), ionic cond. study (*French*) 2-71714
 Li₂SO₄, elec. cond. in monoclinic phase 2-71710

ionic conduction in solids continued

- $\text{Li}_3\text{SiO}_4\text{-Li}_3\text{AsO}_4$, Li^+ ion conductivity and phase diagram 2-115452
 $\text{Li}_{0.5}\text{Y}_{0.5}\text{Zr}_{0.5}\text{S}_2\text{Cr}^{3+}$, NMR ionic motion studies 2-110676
 $(^6\text{Li}/^7\text{Li})/0.3\text{B}_2\text{O}_3$ glasses, mixed isotope ionic elec. cond. 2-110035
 NH_4IO_3 , 2HIO_3 , proton conductivity, permittivity, cryst. struct. 2-86931
 $\text{Na-}\beta\text{-Al}_2\text{O}_3$, low temp. microwave conductivity tunnelling model, dielec. const. 2-76736
 $\text{Na}_2\text{Ag}_2\text{S}_3$, temp. depend. of elec. cond. and self-diffusion of Ag^+ 2-76728
 NaCl:Cu(Ag) , Schottky defects, energy of form., ion mobility and cond. study 2-71441
 $\beta\text{-Na}_2\text{O-Al}_2\text{O}_3$, AC ionic conductivity, equivalent circuit modelling 2-115457
 $\text{Na}_2\text{O-B}_2\text{O}_3$ glass, fluctuation of ionic current induced by mech. stress, rel. to internal friction 2-92274
 $\text{Na}_2\text{O-K}_2\text{O-GeO}_2$ glass, DC conductivity, mixed-alkali effect 2-82010
 $1.67[(\text{Na}_2\text{O})_x(\text{K}_2\text{O})_{1-x}].1.33\text{ZnO}.10.34\text{Ga}_2\text{O}_3$, mixed alkali effect, cond. minimum 2-61200
 $\text{Na}_2\text{O}_3\text{SiO}_2$ glass, HF- H_2O impregnated, elec. cond. 2-86925
 Na_3PO_4 , ionic cond. (French) 2-56247
 $\text{Na}_3\text{Sc}_2(\text{PO}_4)_3$, ferroelec., ionic cond. meas. 2-92263
 $\text{Na}_2\text{ScSi}_4\text{O}_{12}$, cryst. struct. and ionic cond. mechanism 2-91933
 $\text{Na}_2\text{YSi}_4\text{O}_{12}$, cryst. struct. and ionic cond. mechanism 2-91933
 $\text{O}_2/\text{AsF}_6^-$, phase transitions and ionic motions, Raman obs. 2-104868
 $\text{Pb(NO}_3)_2$, soln. grown single crystals, DC ionic cond. meas. 2-71711
 Pb-SiO_2 glass, reduced surface layers, struct., resist. and electron emission props. 2-105016
 RbCl:CoCl_2 , heavily doped crystals, Co precip., elec. cond. studies 2-56201
 SiO_2 film, thermally grown on Si, elec. behaviour of H ions 2-61634
 SiO_2 , thermally grown layer, Cl implantation 2-61010
 $\text{SiO}_2\text{-B}_2\text{O}_3\text{-Sb}_2\text{O}_3\text{-Na}_2\text{O}$ glasses, electronic and ionic cond. 2-87348
 $\text{SiO}_2\text{-CaO-Na}_2\text{O}$ glass surfaces, interdiffusion of H^+ and alkali ions, elec. resist. study 2-110034
 $\text{SiO}_2\text{-Li}_2\text{O-Li}_2\text{SO}_4$ struct. and prep., elec. cond. study 2-65870
 $\text{SiO}_2\text{-Li}_2\text{O(Na}_2\text{O)(K}_2\text{O)(Rb}_2\text{O)}$ glasses, conc. fluctuations and ionic cond. props. 2-92261
 $\text{Sr}(\text{Sr}_{1/3}\text{Nb}_{2/3})\text{O}_3$, band gap, electron mobility, Schottky disorder, elec. cond. meas. 2-61530
 $\text{Sr}_{1-x}\text{Yb}_x\text{F}_{2+x}$, defect parameters ionic cond. study 2-115453
 Ta_2O_5 , elec. cond. 2-56582
 TlF-SnF binary system, cryst. struct., ionic cond. and thermal behaviour (French) 2-109769
 Ti_2ZnI_4 , ionic cond., Raman spectra and phase diagram, press. depend. 2-115450
 $\text{UO}_2\text{-HPO}_4\cdot 3\text{H}_2\text{O}$, solid, protonic cond. 2-92272
 $\text{ZrF}_4\text{-BaF}_2\text{-(BaCl}_2\text{)}$, glasses, mixed cond. as function of temp. 2-115832
 $\text{ZrO}_2\text{-Y}_2\text{O}_3$ ceramics, high-purity, effect of grain boundaries on cond. 2-71712

ionic conductivity in solids see ionic conduction in solids**ionic thermocurrents see thermally stimulated currents****ionisation**

- see also associative ionisation; autoionisation; charge exchange; electron attachment; electron capture; field ionisation; ion recombination; ionisation of atoms; ionisation of gases; ionisation of liquids; ionisation of molecules; ionisation of solids; ionisation potential; Penning ionisation; photoionisation; surface ionisation
circumstellar expanding envelopes, ionisation and vel. struct. 2-63370
 G-GeAu , photoconductivity at photon energy less than impurity ionization energy 2-77121
medium and low energy heavy charged particles crossing complex media, ionisation cross-sections 2-75128
solar atmosphere, ionisation of photosphere-chromosphere transition layer below flares 2-68720
solar atmosphere, time-depend. ionisation eqn. rel. to emission line profiles in wake of shock wave 2-89221
solar chromosphere, effects of flare XUV radiation on energy and ionisation balance 2-79059
space-charge-limited bipolar current flow between concentric spherical electrodes, numerical solution 2-103484
stellar warm wind model, collisional ionisation rel. to O^{5+} and N^{4+} prod. 2-63388
stellar winds, ionisation balance and IR spectrum of radiatively-driven winds in O-type stars 2-63387
stellar winds in binary X-ray system, effects of X-ray heating and ionisation 2-106775
thermionic ionisation detectors, characteristics study 2-90403

ionisation chambers

- Al_2O_3 plastic-equivalent gas, appl. to ionisation chambers for ^{60}Co γ -rays and 14.8 MeV neutrons 2-83657
adjustable field drift chamber, construction and performance (Chinese) 2-80396
Bragg curve spectroscopy ionisation chamber, at Legnaro, heavy-ion mass and charge determ. 2-85471
Bragg curve spectroscopy using gaseous ionisation chamber 2-90355
compact gas detector for heavy ion identification 2-80389
cosmic ray ion chambers, digital recording system 2-117606
CRISIS detector, characteristics and performance 2-64790
design parameter optimisation, dE/dx measurement in inert gases and pure hydrocarbons 2-108312
Diamondron transmission ionisation chamber, evaluation for exposure-area product indication in radiological exam. 2-83660
dosimeter calibration, collimation conditions effect obs. 2-59560
electron ranges in gases using ionisation chamber, charge carrier diffusion influence 2-96403
exposure dose rate meas. of X- and γ -rays 2-102345
fission foil targets prep. for fission ionisation chambers by painting 2-108184
freon filled, environmental rad. exposure rate meas. 2-96369
gamma-ray ionisation chambers, for environmental meas. 2-54669
gas counter, avalanche growth around anode wire 2-90353
gas detectors for time and energy meas. using time-of-flight technique 2-90377
gas multiplication counters, UV light converters 2-75113
gas sampling EM calorimeter in saturated avalanche mode 2-108229
gas scintillation proportional counters 2-90358
gaseous detectors, recent trends in evolution 2-90351
graphite calorimeter as ^{60}Co g-radiation absorbed dose standard 2-70006
graphite ion chamber, neutron and γ -ray sensitivities expt. meas. 2-64766

ionisation chambers continued

- heavy ion identification system for mag. spectrometer 2-108217
heavy-ion identification system based on kinematic coincidence techniques 2-90418
ion chambers for fluoresc. and laboratory EXAFS detection 2-84765
long focal-plane detector with hybrid structure for spectrograph 2-90380
monitor using ion chambers for monitoring HT and HTO 2-78272
MSC, organic vapour conc. monitoring using chromatography (Chinese) 2-96394
multi-angle detector for heavy ion reaction studies 2-64748
multielectrode radiation detectors, signal evaluation using time depend. weighting factor 2-64754
multilayer ionisation chamber with ^{235}U for fission fragment detection 2-113817
multineedle counters with cathodic focusing for UV Cherenkov imaging device 2-64762
multiplication ionisation chamber survey meter for low level X- and γ -ray monitoring 2-59558
multistep avalanche chamber, min. ionising particle electrostatic imaging 2-96376
multistep avalanche chamber, multiplicity detector using glow discharge memory 2-70046
multistep parallax-free X-ray imaging counter 2-75098
needle corona counter with preamplification gap for β -rays 2-96382
neutron beam dosimetry using ionisation chambers (Czech) 2-59559
neutron dosimetry with spherical ionisation chambers, tissue-equiv. chamber calcs. 2-117094
neutron radiation absorbed doses determ., meas. standards errors reduction 2-96392
nuclear radiation detectors, Int. Symp., Tokyo, Japan (March 1981) 2-89434
particle identification for heavy ions in time-of-flight spectrometer 2-90346
positron camera, large-area stationary, using wire chambers 2-78430
pulsed X-rays dosimetry with ionisation chambers 2-96314
radiation detectors for X-ray and γ -ray spectroscopy, needs and prospects 2-58974
radiation monitor for pulsed X-ray sources using ionisation chamber 2-75056
reference ionisation-chamber system for fast absorpt. meas. 2-59593
TASSO high precision vertex detector 2-90408
thermal neutron counter working in the corona discharge region (Chinese) 2-59606
thermionic ionisation detectors, characteristics study 2-90403
Time Projection Chamber, analogue signal processing system 2-59649
time projection chamber, CCDs appl. 2-64799
time projection chamber, data acquisition system 2-64758
time projection chamber, low noise preamplifiers/amplifiers system 2-70104
tissue equivalent chamber for fast neutrons, cavity size rel. to sensitivity 2-100128
tissue-equivalent ionisation chamber for area radiation monitoring at IPNS facility 2-75115
transition effect for ionisation calorimeters calc. 2-102326
wire chamber, self-quenching streamer discharge operation mode (Russian) 2-75106
Ar, liquid, two-dimensional time projection chamber, track obs. 2-108237
Ar liquid ionisation chamber design for heavy ion detection 2-70034
Ar purification in liquid state for time projection chamber 2-70033
H time projection chamber development and performance 2-70036
 ^3H monitor with wide dynamic range, design and performance 2-75117
 ^3He active well coincidence counter calibration for ^{235}U meas. 2-113840
Ne Penning mixture filled proportional counters, resolution depend. on gas gain 2-59594
Pb-solid Ne sandwich detector, EM calorimeter development 2-90393
Rn ionisation chamber monitor which eliminates effect of decay products 2-59643
Xe ionisation chamber for digital radiography 2-68127
Xe, liquid, γ -ray detectors, present status and future plans 2-90362

ionisation gauges

- Bayard-Alpert broad range ionisation gauge tube, calibration 2-84650
Bayard-Alpert gauge, sensitivity, mag. field effects 2-53778
Bayard-Alpert gauge, three-grid modulated, static characteristics (Japanese) 2-79604
Bayard-Alpert gauge, wide range, 10^{-10} to 10^{-1} Torr 2-84653
Bayard-Alpert gauges, use in Daresbury synchrotron radiation source 2-84639
calibration, 10^{-7} to 10^{-12} mbar, mol. beam method 2-53779
charge-rate digital ion gauge system to pressure measurement 2-74440
hot filament, possibilities for enhancement of range of press. meas. (German) 2-74441
magnetic fusion devices, ionisation gauges for press. meas., review 2-84655
magnetic fusion devices, press. and gas flow meas. techniques 2-55789
modulating ion current pressure gauge (Japanese) 2-112916
nanoammeter using CA 3140 op. amp. (Spanish) 2-84669
partial pressure monitoring, in industrial vacuum plant 2-89734
reference gauge for vacuum press. meas., 10^{-3} to 1 Pa 2-107337
secondary standard, sensitivity, electrode displacement influence (Japanese) 2-112915
secondary standard ionisation gauge, calibration 2-84654
sensitivity of commercial ion gauge tubes 2-84656
terminal flow UHV gauges design 2-84651

ionisation of atoms

- see also atomic electron impact ionisation
alkali metal atoms, photoionisation spectra, Stark effect theory 2-90475
alpha-induced k-shell ionisation, binding effect 2-75379
astrophysically abundance elements ionisation equilib., radiative recomb. and collisional ionisation 2-68610
asymmetric ion atom collisions, coherent Coulomb ionisation of $1s\sigma$ mol. orbital 2-102606
atom+light ion, L-shell ionis., electronic relativistic effects calcs. 2-59898
atomic collisions, inner shell alignment, X-ray polarization 2-90677
atoms, double resonance via continuum states: ionization quantum beats 2-64944
atoms in high density plasma, statistical average pots., rel. to degree of ionisation 2-71082
autoionisation state excitation and electronic decay 2-80545

ionisation of atoms continued

binary encounter approx. for ionisation of atoms by collisions with ions, relativistic correction 2-54918
coherent fluorescence radiation following photoexcitation and photoionization 2-80553
continuum process calc. program, using model pots., Breit-Pauli Hamiltonian, R-matrix 2-90431
deuteron-induced k-shell ionisation, binding effect 2-75379
electron affinities and ionisation energies of atoms up to Ne 2-53453
electron impact inner shell ionisation, ang. correl. meas. 2-85812
excited electron orbit collapse and atomic spectra 2-102400
excited states, photoionisation cross sections, multiple minima, dipole matrix elements 2-54816
fast-ion bombardment of thin foils, projectile Rydberg atoms and convoy electrons obs. 2-54946
first ionisation potentials, rel. to element depletions in interstellar gas 2-106871
free ions, quantitative VUV absorpt. spectroscopy 2-70175
heavy ions, ionisation cross section, plane-wave Born approx, PWBA low energy limit 2-80556
high z-systems, Coulomb collisions, review 2-70391
highly excited atomic states, radiative transition probabilities (*Russian*) 2-108428
highly excited atoms, intense circularly polarised EM radiation effects 2-90483
hydrogenic atoms, Rydberg states, ionisation rate in static electric fields 2-113928
inert gas atom+ground state atom(molecule), ionisation 2-90680
inert gas atoms counting by resonance ionisation spectroscopy 2-64899
inert gases, third-harmonic generation and multiphoton ionisation 2-70205
inner shell ionisation by Compton effect, Al appl. 2-59768
inner-shell excitation and ionisation studies 2-58556
ion bombarded solid surface, ionisation of ejected atoms 2-82989
ion induced monopole transitions, semiclassical approx. 2-85780
Knudsen arc, time varying, thermal electron distrib. and ionization rate, anomalous features 2-115086
l X-ray satellite energies 2-79290
L-shell X-rays by low-energy proton impact, relative intensity ratios 2-96704
laser-induced autoionisation, relax. effects 2-102441
model atom, ionisation by strong electric field, perturbation theory 2-54784
monatomic ions, charge stripping spectra 2-54780
multiphoton ionisation for breakdown triggering or control Xe 2-96529
multiphoton reson. ionisation of sputtered neutrals from ion bombarded solids 2-85601
photoelectron ang. distribns., energy depend. for s subshells 2-80554
photoionisation, selective, laser isotope separation 2-65100
photoionisation, selective, laser isotope separation selectivity 2-65102
photoionisation, stochastic averages, quantum optical functional integration calc. 2-90846
photoionisation cross section reson., pseudo-bound-state methods comparison 2-102442
polarised targets, photoelectrons, kinematic anal., relativistic and correl. effects 2-85603
potential scattering in presence of static mag. field and radiation field of arbitrary polarisation 2-74255
rare earth elements, laser isotope separation by two-step selective photoionisation method 2-64940
rare earth elements, photoionisation cross section meas. from excited states rel. to laser isotope separation 2-64939
reson. photoionisation in vicinity of $2p^{-2}3s3p$ P reson. in close-coupling approx. 2-96519
resonance EM field effect on autoionisation states (*Russian*) 2-64934
resonant multiphoton ionisation, laser field correl. function 2-102452
semiconductors, LCAO calcs. of photoionisation of deep centre 2-104304
transition metal atoms, electron impact ionisation, excitation autoionis. effects 2-59945
two-electron multiphoton ionisation 2-108432
two-photon atomic ionisation, radiative collision influence 2-96523
UV 2^1S to 5^1P transition fine and hyperfine struct. spectra, detected via associative ionisation 2-85831
Ar, electron impact inner shell ionisation, ang. correl. meas. 2-85812
Ar, electron impact ionisation, inner-shell alignment, distorted-wave approx. appl. 2-102635
Ar, photoelectron angular distrib. β parameter near $3s^{-1}4p$ resonance 2-80551
Ar+H⁺(He²⁺), L-shell impact ionisation, coupled state calcs. 2-102598
Ar(P₀₂), metastable atoms, chemi-ionisation reactions 2-72974
Au+H⁺, L-shell ionisation cross sections Dirac-Hartree-Slater calcs. 2-114093
Ba, $4d^{10}$ subshell photoionisation cross section 2-70204
Ba, excited state, autoionisation, spectra 2-90487
Ba, Rydberg states, config. interaction calcs. 2-90462
Ba²⁺, $4d^{10}$ subshell photoionisation cross section 2-70204
Br⁺, adiponitrile solns., ionisation energies, photoelectron study 2-80727
C²⁺, ground and metastable states, photoionisation cross section calcs. 2-102447
C³⁺, ground state, inner-shell photoionisation cross section calcs. 2-102447
C⁶⁺+H(1s), electron capture cross section, Landau-Zener formula 2-114101
Cd, photoelectron spectra, autoionising reson. profiles 2-96520
Cd, photoionisation prod. alignment 2-70207
Cl⁺, adiponitrile solns., ionisation energies, photoelectron study 2-80727
Cs, continuous spectrum, autoionisationlike reson. 2-96517
Cs, ground state, two-photon ionisation cross sections calcs. 2-54815
Cs, multiphoton processes, collision induced 2-96528
Cs, source of spin-polarised slow electrons based on Fano effect 2-79711
Cs+Ar collisional narrowing in Cs two-photon transition 2-80827
Cs⁴⁺, multiphoton ionisation, reson. effects 2-96522
Cu clusters, symmetry breaking and ionis. from 3d and 4s shells 2-59985
Cu⁺+Cu(Ge)(Ag), K-shell vacancy prod. study 2-108694
Eu, photoionisation cross-section, giant reson. 2-102448
GaAs:Fe, LCAO calcs. of photoionisation of deep centre 2-104304
GaP:Fe, LCAO calcs. of photoionisation of deep centre 2-104304
Ge+H⁺(π^+)(π^-), K-shell excitation and ionis. by relativistic projectiles, channeling obs. 2-59920
H atom, ionisation by weak external elec. field (*Russian*) 2-53594
H glow discharge-Co₂ laser interaction, spectroscopic aspects 2-97812

ionisation of atoms continued

H I in stellar envelopes, parameters of ionisation-dissociation shock waves (*Russian*) 2-73956
H₂ ionisation by bare ions with charges 1 to 6 in Glauber approx. 2-96724
H ionisation probability calc. based on quadratically integrable functions 2-70202
H₂ multiphoton ionisation in ultrastrong laser fields 2-64941
H plasma, oscillator strengths, photoionisation cross sections emission spectra 2-103449
H⁺ production by proton scatt. from W, Cs and W-Cs surfaces, theoretical model 2-93351
H⁺, two-electron photodetachment, H⁺ threshold yield 2-75443
H-like ions, excitation and ionisation mechanism, role of autoionising states 2-65684
H+H⁺, ionisation rates and ejected electron prod. rates, appl. to upper atm. 2-100611
H+H⁺ scattering appl. of soln. of time depend. Schrodinger eqn. with trajectory method 2-54944
H+H⁺(He²⁺), electron ejection, single differential and total scatt. cross-sections calcs. 2-59921
H⁺+Au(Dy), L-subshell ionisation, cross sections, X-ray spectra 2-54941
H⁺+Ne, K shell ionisation, electron capture, cross section meas. 2-54940
H⁺+Ti(Cr)(Co)(Ni)(Cu)(Zn), K-shell X-ray prod. cross section meas. in energy range 300-2400 keV 2-90492
H₂+ion collisions, electron-capture and -loss cross section data compilation 2-79294
H⁺+N^{q+}(O^{q+})(Ar^{q+}), charge exchange, impact ionisation, cross section, crossed-beam expt. 2-114102
He, electron scatt. at 30-400 eV, polarisation and absorpt. effect 2-90707
He ionisation balance in intergalactic medium, photoionisation anal. 2-94837
He, photoionisation, asymmetry parameter, photoemission obs. 2-102445
He-like ions, multiply charged, reson. photoabsorpt. characts. 2-113949
He-like multicharged ions, self-ionisation states, intermediate-coupling approx. 2-75152
He+Ar, cross sections, pot. energy curve 2-54939
He⁺+H⁺(He²⁺)(He²⁺), excitation, charge transfer, ionisation, emission cross section meas. 2-114090
³He UV 2^1S to 5^1P transition fine and hyperfine struct. spectra, detected via associative ionisation 2-85831
⁴He+Au(Bi), L-subshell ionisation cross sections meas. 2-54942
He*, multiphoton ionisation, reson. effects 2-96522
I⁺, adiponitrile solns., ionisation energies, photoelectron study 2-80727
In, Rydberg states, electric field ionisation 2-102652
K, efficiency of isotopically selective laser excitation 2-70438
K, polarisation phenomena during three-photon ionisation 2-113950
K, three-photon resonance ionisation (*Chinese*) 2-90488
Kr, $4s4p^35p$ reson., spin-orbit branching ratios and angular asymmetry param., photoionisation cross section 2-70203
Kr, multiphoton ionisation in continuum 2-85608
Li+H⁺(He²⁺), electron capture and ionisation cross sections calcs. 2-54956
Li⁺+H₂(N₂)(Ar)(CO₂), electron loss cross-sections 2-54943
Mg, electron impact ionisation, inner-shell alignment, distorted-wave approx. appl. 2-102635
Mg I, photoionisation cross-section for metastable ³P levels, expt. determ. 2-96506
N**, metastable state, collision-induced ionisation, time of flight study 2-114095
Na, excited $34d$ state; electric field ionisation 2-90485
Na, excited states, photoionisation Stark spectra 2-70183
Na I, radiative decay of autoionisation states (*Russian*) 2-80546
Na, photoionisation Stark spectrum, Earth mag. field effect 2-59766
Na Rydberg atom, high-resolution field ionisation 2-96479
Ne, photoionisation and state selected polarised Ne⁺($2p^23p_{1/2}$) 2-96518
Ne+Ne⁺(Ar²⁺), Ne K Auger electron emission study 2-85795
Pb+H⁺, ionisation, anisotropy of Pb L₃ subshell X-ray emission line 2-75407
Pd, L subshell photoionisation cross-section determ. 2-80550
Rb+H⁺, double K-shell ionisation, single photon emission probability 2-85794
Rb+Rb(5p)(Rb(5s)), ion form. from (8s) state 2-80795
Rb⁺+Rb, collisional ionis. 2-90681
Si⁺+H⁺, charge transfer ionisation at thermal energies, reaction rates 2-59923
Sn, L subshell photoionisation cross-section determ. 2-80550
Sr, 2- and 3-photon reson. ionisation, electron 2-75224
Sr, multiphoton ionis., Sr⁺ and Sr²⁺ prod. 2-75225
Sr, resonant double photoionisation 2-102446
Sr-Cs mixture, two-photon atomic ionisation, radiative collision influence 2-96523
⁸⁵Sr+H⁺, K-shell ionisation probability meas. 2-114092
Ti II, singly ionised, spectrum and term system, configuration interaction and ionisation energy 2-64904
U+H⁺, L-shell ionisation cross sections Dirac-Hartree-Slater calcs. 2-114093
U⁴⁴⁺+inert gas target, highly charged inert gas recoil ion prod. 2-114097
Xe, $5s5p^6p$ reson., spin-orbit branching ratios and angular asymmetry param., photoionisation cross section 2-70203
Xe long-lived excited atoms, autoionising resonances in photoionisation 2-54814
Xe, multiphoton ionisation studied by photoelectron spectrometry 2-75223
Xe, resonantly enhanced multiphoton ionisation, third harmonic generation 2-85609
Xe, third harmonic generation multiphoton ionisation, cooperative effects 2-90493
Xe+Xe, Rydberg atom, state changing, ionisation, electric field effects 2-114096
Zn absorption and dispersion study of $4s4p^2$ ³P multiplet 2-85598

ionisation of gases

see also atmospheric ionisation; electron avalanches; Townsend discharge
butane, stopping cross-sections for α -particles in the energy region 0.3 to 5.5 MeV 2-60715
DC corona discharge in air, mass spectra of ionic species obs. 2-103513
discharges, ionisation waves, crit. current meas. 2-91697

ionisation of gases continued

- ethane, stopping cross-sections for α -particles in the energy region 0.3 to 5.5 MeV 2-60715
 hybrid particle pushing/fluid approach to modelling X-ray deposition region 2-86375
 inert gases, double differential ionisation cross-section under heavy charged particle bombardment 2-65681
 Knudsen discharge, initiation, ionisation cross-section, electron energy depend. 2-103490
 laser-irradiated plasma, ionisation threshold intensities, ionisation periods, calc. program 2-109447
 local ionisation state, of plasma in low-voltage highly-ionised Cs are 2-81590
 methane, stopping cross-sections for α -particles in the energy region 0.3 to 5.5 MeV 2-60715
 negative ion detachment, effect on statistical time-lag in gases 2-103270
 Penning ionisation formula, for mixture of Ar in Ne 2-103267
 plasma shock waves, ionising, behaviour in mag. field 2-86434
 propane, stopping cross-sections for α -particles in the energy region 0.3 to 5.5 MeV 2-60715
 pulsed power education of Texas Tech University, in USA 2-94944
 shock wave ionisation of gases, adiabatic motion meas. (Russian) 2-71230
 tissue-equivalent cloud chamber gas mixture, ionisation distrib. calc. 2-88584
 tissue-equivalent gas, W value meas., advances in cloud-chamber techniques 2-62870
 toroidal discharge, gas ionisation, Tokamak and stellarator conditions (Russian) 2-91704
 transient voltage measurement of gaseous ionisation, sensitivity and error anal. 2-97822
 volume electroionisation discharge, electron beam ionis. of gas, electron conc. determ. 2-115077
 Ar discharge, ionisation waves, crit. current meas. 2-91697
 Ar longitudinal flow, ionisation wave instabilities in DC discharge rel. to laser parameters 2-97819
 C₂F₆ dielectric strength, ionisation and attachment cross sections meas. 2-103269
 CF₃SF₆ dielectric strength, ionisation and attachment cross sections meas. 2-103269
 CO gas, resonantly enhanced vacuum UV generation and multiphoton ionisation 2-65298
 CO₂ TEA laser, semiconductor preioniser, expt. study 2-80993
 H₂, low energy electrons ionisation yield, statistical fluctuations 2-102594
 K discharges between plane parallel electrodes, secondary ionisation processes analysis 2-103535
 N, electron ranges in low energy region, ionometric determ., charge carrier diffusion influence 2-96403
 N₂O-(O₂)-(O₂-CO₂)-(CCL₂F₂)-(O₂-CCL₂F₂) mixtures, ionisation and attachment obs. 2-103275
 SF₆, transport and elec. props. calc. 2-114964
 Xe, ionisation coeff. and breakdown potentials obs. 2-103266

ionisation of liquids

No entries

ionisation of molecules

see also molecular electron impact ionisation

- 1s σ molecular orbital direct ionisation, scaling law 2-90679
 acetone, methyl cation prod., photoelectron-photoion coincidence spectrosc. obs. 2-93759
 acetylene, photoexcitation and ionisation 2-54903
 acetylene photoexcitation, photofragment emission, fluoresc. obs. 2-65040
 alkali metal clusters, photoionisation and fragmentation in supersonic mol. beams 2-102547
 anilines, substituted, Penning ionisation, methyl group steric shielding effect 2-85805
 azulene isomer, multiphoton ionisation fragmentation patterns, maximal entropy theory 2-75360
 BeF₂/BeF₃⁺, struct. changes, second order phase transition 2-75142
 benzaldehyde, excited states, nucl. config. effect on two-step photoionisation 2-114055
 benzene, multiphoton ionisation and fragmentation, UV-laser induced 2-96651
 benzene clusters, mass-selective two-colour photoionisation 2-75486
 biphenyl, Ar matrix isolated, two-colour resonance photoionisation 2-85751
 biphenyl-d₆(D₆), matrix photoionisation, isotope shift, UV-visible obs. 2-70350
 dichlorodifluoromethane fragmentation, multiphoton ionisation photoelectron obs. 2-70333
 1,2-epoxypropane, methyl cation prod., photoelectron-photoion coincidence spectrosc. obs. 2-93759
 fluoranthene, in dielectric liqs., photoionisation, fluoresc. obs. 2-85749
 fluoroethylene, ionisation, binary (e,2e) energy spectra, Green's function study, chemical bond 2-80730
 hydrocarbons, unsaturated, photoionisation, visible absorpt. spectra 2-114008
 inert gas atom+ground state atom(molecule), ionisation 2-90680
 inert gas atom alkali halide molecules, dissociation, ionisation, momentum model 2-114098
 inner-shell excitation and ionisation studies 2-58556
 metastable ions, lifetimes meas. using photoion-photoelectron coincidence 2-108627
 methane, double ionisation threshold, ion lifetime, MCSCF and CI calcs. 2-64888
 methane, ionis., free radical form: and combination, reaction with ethane 2-99656
 methyl iodide collisionless multiphoton ionisation 2-59865
 methyl radical, electronic states, resonance enhanced multiphoton ionisation obs. 2-65062
 methyl radicals, selective stepwise ionisation 2-59865
 methylene blue in water and acetonitrile, photoinduced electron ejection 2-75348
 molecular ion formation from liquids and solids 2-98384
 multiphoton ionisation mass spectroscopy 2-64158
 naphthalene, Ar matrix isolated, two-colour resonance photoionisation 2-85751
 naphthalene isomer, multiphoton ionisation fragmentation patterns, maximal entropy theory 2-75360
 n-octane, collision with SiO₂ surface, vibr. energy transfer, mass spectrosc. obs. 2-114082
- ionisation of molecules continued
 optically active, oriented mols., circular dichroism in continuous absorpt. region 2-59836
 optically active molecule, Coulomb ionisation, spin polarisation (Russian) 2-59901
 organic gas phase negative ions, IR multiphoton photodetachment 2-85750
 organic molecules, double differential ionisation cross-section under heavy charged particle bombardment 2-65681
 organic molecules, surface ionisation on Pt needle shaped emitters 2-105054
 oxo-compounds, unsaturated, ionisation, hole-mixing effects 2-59857
 1-phenyl-1-propyne, Ar matrix isolated, two-colour resonance photoionisation 2-85751
 planets upper atmospheres, neutral components photoionisation rate coeffs., solar activity depend. 2-106570
 tetrakis-dimethyl-amino-ethylene photoionisation, quantum efficiency 2-75113
 tetrasaccharide stachyose, ion bombardment ionisation, SIMS 2-102599
 trichlorofluoromethane, fragmentation, multiphoton ionisation photoelectron obs. 2-70333
 p-xylene, multiphoton ionisation mass spectroscopy at 193 and 248 nm 2-70348
 Ar-like mols., L_{I(III)} emission spectra, many-electron effects 2-90568
 CN⁻, adiponitrile solns., ionisation energies, photoelectron study 2-80727
 CO gas, resonantly enhanced vacuum UV generation and multiphoton ionisation 2-65298
 CO₂, C₂²⁺, reson. ionis., photoelectron ang. distrib., partitioning anal. 2-59864
 CO₂/CO₂⁺, struct. changes, second order phase transition 2-75142
 COS, angle resolved PES meas. as a function of photon energy from 21 to 70 eV 2-102532
 COS, mol. and dissociation, photionis., dipole oscill. strengths 2-70355
 CS₂, angle resolved PES meas. as a function of photon energy from 21 to 70 eV 2-102532
 CS₂, mol. and dissociation, photionis., dipole oscill. strengths 2-70355
 D₂, rot. and vibr. consts., photoionisation photoelectron obs. 2-96634
 DCO⁺ in dense molecular clouds, ionization state 2-63574
 Fe complex, trimethylenemethane iron carbonyl, Koopman's defects, Hamiltonian calcs. 2-80480
 H⁺+C (methane), K shell ionisation, electron capture, cross section meas. 2-54940
 p-H₂, excited states, three-photon reson. ionisation 2-96667
 n- and p-H₂, rot. and vibr. consts., photoionisation photoelectron obs. 2-96634
 H₂, vibrational autoionis., photoelectron spectrosc. obs. 2-90638
 H₂, vibrational preionisation, multichannel quantum-defect theory 2-75359
 H₂/H₂⁺, struct. changes, second order phase transition 2-75142
 HCO⁺ in dense molecular clouds, ionization state 2-63574
 HCl, photoionisation cross sections, UPS obs. 2-65055
 HCl, vibronic transitions and photionis., photoelectron spectrosc. obs. 2-108626
 HD, rot. and vibr. consts., photoionisation photoelectron obs. 2-96634
 H₂O, inner-valence ionisation, satellite peaks, symmetry adapted cluster CI calcs. 2-64886
 H₂S, PES following multiphoton ionisation 2-85737
 I₂, state-to-state dissociative electron capture rate, optogalvanic demonstration 2-59949
 IrCl₆³⁻, electronic struct., relativistic calc. 2-102401
 KHe, model potential method used to compute ionisation energies and dipole moments 2-59967
 KHe, model potential method used to compute ionisation energies and dipole moments 2-59967
 Kr₂ dimer, relative photoionisation cross section 2-70346
 Li₂, reson. two-photon ionis., ionis. pot. calcs. 2-80741
 N₂, A² Π_u , nonreson. ionis., photoelectron ang. distrib., partitioning anal. 2-59864
 N₂ in decaying plasma, dissociation and ionisation 2-81447
 N₂, multiphoton ionisation by Nd-glass laser 2-65056
 N₂+He(2'S), Penning ionis., intermediate Rydberg states obs. 2-65082
 NF⁺, ground state, VuV photoelectron spectrosc. and ab initio calcs., ionisation 2-114043
 NH₃, multiphoton ionisation, mass anal., photoelectron spectra 2-90624
 NH₃/NH₃⁺, struct. changes, second order phase transition 2-75142
 (NH₃)_n-NH₄⁺ cluster, (n=2-8), multiphoton ionisation mass spectra 2-70347
 NO, 4-photon ionisation two-colour double reson., fluoresc. de-enhanced obs. 2-85706
 NO, ionisation and photoexcitation, static exchange approx. 2-85752
 NO, nascent, detect. in methane-air flame by multiphoton ionis. 2-59863
 NO, resonantly enhanced 4-photon ionisation, electron spectra 2-85733
 NO, Rydberg-valence interactions, multiphoton UPS 2-85745
 NO scattered from Pt (111) surface, vibr. and rot. energy distrib., two-photon ionisation study 2-87932
 NO⁺, unimol. dissociation, threshold photoelectron-photoion coincidence obs. 2-90638
 NO₂, excited states, nucl. config. effect on two-step photoionisation 2-114055
 NO₂, adiponitrile solns., ionisation energies, photoelectron study 2-80727
 Na₂, autoionising Rydberg states, optical-optical double reson. obs. 2-59829
 Na₂, autoionising Rydberg states, ionisation pot. determ. 2-70352
 O₂, valence shell photoionisation, shape reson. induced non-Franck-Condon effects 2-90634
 O₂⁺(Π_g)-O₂⁺(Δ_g) transition, UV photoelectron spectra, modulation technique investig. 2-107458
 PO in C₂H₂/air flame, two-photon ionisation processes 2-102549
 SO₂, autoionisation states, vibr., mol. beam photoionisation mass spectrometry 2-80644
 SO₂, ionisation and dissociation in Io plasma torus 2-106602
 1,1,1-trichloroethane, IR enhanced multiphoton ionis.: mass spectrum 2-80748

ionisation of solids

- glass, interdiffusion of alkali and hydronium ions, partial ionisation 2-86947
 inner shell ionisation, absence of a density effect 2-86764

ionisation of solids continued

poly-2,4-hexadiyne-1,6 diol bis(p-toluene sulphonate), ionisation energy determ. by Milliken-Pope-Arnold technique 2-77696
silicate glass, interdiffusion of alkali and hydronium ions, partial ionisation 2-86946

ionisation potential

see also work function
acetophenones, p-substituted, ionisation pot., PES, correl. with reactivity (French) 2-96629
acetylene, ionisation energy, X α SW method with universal potential 2-75183
acetylene isotopic molecules, absorpt. spectrum, vibr. and rot. anal., ionisation pot. 2-64999
adenosine, vertical ionisation pot., UV PES 2-75354
alkaline earth atoms, two electron Rydberg states 2-70160
alkanes, electronic excitation calcs. using semi-empirical method RCNDO/S 2-102390
aminoalkyl radicals, ionisation pots., stabilisation energies, MO-SCF calcs. 2-96437
anions in adiponitrile soln., HeI photoelectron spectra, ionisation energies 2-70336
atomic and molecular systems, ionisation pot., electron affinities, MBPT, resolvent operator approach 2-54741
atomic ions, chemical and ionisation pots., electron correlations 2-54775
atomic ions, energy rel. to low-order ionisation pots. and imag. susceptibility 2-96416
atoms, closed shell, radial electron density moments and X-ray scatt. factors 2-75184
Bethe-Salpeter eqn. higher-order irreducible vertex parts, mol. appls. 2-80437
2-cyclohexene-1-one, 3 substituted, ionisation pot., PES, correl. with reactivity (French) 2-96629
cytidine, vertical ionisation pot., UV PES 2-75354
diatomic molecules, estimation from spectroscopic data 2-90729
difluoromethane, vertical ionisation pot. calc. by perturbation corrections to Koopmans' theorem 2-54987
electronic excitation calcs. using semi-empirical method RCNDO/S 2-102390
ethyl acetate, cation radical, equilib. struct., SCF MO LCAO CNDO calcs. 2-96456
flavins, reduction, ionisation pot. MINDO/3 calcs. 2-113887
5-fluorouracil, and 4-hydroxytautomeric form., ab initio MO STO calcs. 2-113864
formaldehyde, electronic ground, excited triplet and ionised doublet state, ionisation pot. and geometry depend. 2-114134
formaldehyde, hydration, intermolecular interactions, SCF MO calcs. 2-85526
formic acid ion, electronic ground, excited triplet and ionised doublet state, ionisation pot. and geometry depend. 2-114134
gas, microwave breakdown, low press. 2-91583
gas phase clusters, photoelectron-photoion coincidence spectroscopy for obtaining photoelectron spectrum 2-80862
hydrocarbons, conjugated, ionisation pots., EHT calc. 2-108391
hydroxy-ellipticine (-olivacines) (-methyl-z-ellipticine), oxidation pathways, CNDO calcs. (French) 2-96453
isoelectronic atoms, total electronic energy, Z expansions, \bar{V}_{en} and \bar{V}_{ec} determ., electron affinities, ionisation pot. 2-96419
long lived electronically excited states 2-54779
metal, sputtering and secondary ion yields under O $_2^+$ ion bombardment 2-99268
methane dication, struct., stability, pot.-curve, HF calcs. 2-85535
methyl dication, struct., stability, pot.-curve, HF calcs. 2-85535
methylene-dication, struct., stability, pot.-curve, HF calcs. 2-85535
5-methoxyuracil, and 4-hydroxytautomeric form., ab initio MO STO calcs. 2-113864
MO bonding-antibonding charact., core electron binding energies and valence-shell ionisation pot. 2-75141
non-local corrections to total, ionisation, and single particle energies, local spin density approx. 2-66469
organic compounds, electron donors and acceptors (Russian) 2-59969
organic compounds, ionisation pot., susceptibilities, moments ab initio SCF calcs. 2-113871
poly(p-phenylene), band struct., density of states, valence effective Hamiltonian study 2-98515
poly(p-phenylene sulphide), band struct., density of states, valence effective Hamiltonian study 2-98515
poly-2,4-hexadiyne-1,6 diol bis(p-toluene sulphonate), ionisation energy determ. by Milliken-Pope-Arnold technique 2-77696
polyacenes, linear molcs., ionisation pot., topological resonance energy 2-64870
polymers, elec. cond., bond gaps, valence effective Hamiltonian study 2-76890
rare earth trifluorides, lattice self-pots., photoelectron spectroscopic determ. 2-62042
SIMS, molecular ion sputtering from surfaces 2-111002
small molecules, ionisation pots., MS- and LCAO-X α calcs. 2-64846
thioformaldehyde, substituent effect on ionisation pot. 2-90739
thymidine, vertical ionisation pot., UV PES 2-75354
thymine, and 4-hydroxytautomeric form., ab initio MO STO calcs. 2-113864
tricarbonyl(norbornadiene)iron, grand and cationic hole states, struct., INDO MO study 2-108385
trichloroethylbenzene, ionis. pots. and intramol. charge transfer, photoelectron spectra, electronic struct. 2-90626
uracil, and 4-hydroxytautomeric form., ab initio MO STO calcs. 2-113864
uridine, methylated, vertical ionisation pot., UV PES 2-75354
Ag, electron impact, K-shell ionisation, relativistic effects, plane wave Born approx. 2-85818
Ag isoelectronic series ionisation potentials, core polarisation, relax., and relativistic effects 2-113896
(ArCO) $_2^+$, electron impact ionisation in supersonic mol. beam, appearance pots. 2-108728
Au isoelectronic series ionisation potentials, core polarisation, relax., and relativistic effects 2-113896
BO $_2$, density matrix treatment, atomisation energies, equilib. distances and ionisation pot. 2-80500
CH $_2^+$, struct., stability, pot.-curve, HF calcs. 2-85535
(CO $_2$ CO) $_2^+$, electron impact ionisation in supersonic mol. beam, appearance pots. 2-108728

ionisation potential continued

CO, ionisation energy, X α SW method with universal potential 2-75183
CO $_2$, density matrix treatment, atomisation energies, equilib. distances and ionisation pot. 2-80500
CO $_2$, ionisation energy, X α SW method with universal potential 2-75183
(CO $_2$) $_2^+$, electron impact ionisation in supersonic mol. beam, appearance pots. 2-108728
Cd, relaxed orbital binding energy calcs. 2-80833
Co, energy levels, Co I to Co XXVII 2-74171
Cr IV, energy levels and ionisation energy 2-80468
Cu isoelectronic series ionisation potentials, core polarisation, relax., and relativistic effects 2-113896
Cu $_2$ supersonic cluster beam, laser photoionisation 2-108761
F $_2$, vertical ionisation pots. calc. by perturbation corrections to Koopmans' theorem 2-70445
FSCN, He(I) photoelectron spectra, valence ionisation energies, HF Slater calcs. 2-80728
Fe complex, trimethylenemethane iron carbonyl, Koopman's defects, Hamiltonian calcs. 2-80480
Fe I to XXVI, energy levels, data compilation 2-94925
n-Ge:Sb, Au, compensated, Sb ionization energy 2-76985
H, Stark resonance, review 2-70185
HF, Bethe-Salpeter eqn., mol. appls. 2-80437
HNF $_2$, vertical ionisation pot. calc. by perturbation corrections to Koopmans' theorem 2-54987
H $_2$ O, vertical ionisation pots. calc. by perturbation corrections to Koopmans' theorem 2-70445
(H $_2$ O) $_2$, valence ionisation energies, CI calcs., photoelectron spectrum assignment 2-96463
He-like multicharged ions, self-ionisation states, intermediate-coupling approx. 2-75152
Hg, electron impact, K-shell ionisation, relativistic effects, plane wave Born approx. 2-85818
Li isoelectronic series, ionisation pots., transition freqs., perturbation theory, HF method 2-113937
Li $_2$, reson. two-photon ionis., ionis. pot. calcs. 2-80741
N $_2$, ionisation energy, X α SW method with universal potential 2-75183
N $_2$, vertical ionisation pots. calc. by perturbation corrections to Koopmans' theorem 2-70445
NH $_3$ radical, ground state, electronic struct., Rydberg spectra, SCF-X α -SW calcs. 2-64874
N $_2$ O, ionisation energy, X α SW method with universal potential 2-75183
Na $_2$, autoionising Rydberg states, optical-optical double reson. obs. 2-59829
Na $_2$, autoionising Rydberg states, ionisation pot. determ. 2-70352
Nb IV, UV spectra 2-70174
Ne ionisation pot., electron correl. SCF, GTO, CI calcs. 2-113895
Ne-inert gas dimens., photoionisation cross sections, ionisation pot., dissociation energies, binding energies 2-70349
Ni (100), adsorption of N $_2$ and CO, photoemission study 2-56335
Ni, adsorption of N $_2$, HF cluster model calc. 2-56334
Ni complex, bis(β -thioketonato)Ni(II) ground and cationic hole states electronic struct., INDO calcs. 2-96461
Ni $_2$ and Ni $_4$, ionisation manifolds comparison using symmetry broken SCF wave functions 2-102667
OF $_2$, vertical ionisation pot. calc. by perturbation corrections to Koopmans' theorem 2-54987
 16 O, trapped negative ions, Zeeman reson. spectroscopy 2-64913
Pb clusters, formation by adiabatic expansion and ionisation pot. meas. 2-85854
SF $_6$ mixtures with enhanced corona stabilisation 2-103520
 12 S, trapped negative ions, Zeeman reson. spectroscopy 2-64913
Si, surface (111), Mott insulator model 2-115839
SiH $_4$, ionisation energy, X α SW method with universal potential 2-75183
Si(100), electronic correlation and buckling props. calc. 2-110421
SnO, (X $_2$ Z) state, gas phase high temp. photoelectron spectroscopy 2-80724
TiO $_2$, ESR studies of defect centres 2-87594
TiNO $_2$, struct. param. derived from O 1s ionisation pot., XPS 2-85743
VCl $_3$ (VOCl $_3$), electron impact dissociative ionisation, mass spectra study 2-96750
Xe III, 5p 4 ground configuration, transition probabilities for forbidden lines, Auger transitions 2-64927
Xe, and Xe $_2$, photoelectron-photoion coincidence spectroscopy for obtaining photoelectron spectrum 2-80862
XeF, pot. energy curves, dissociation energy, ionisation pot. 2-54783
Y IV, spectrum and energy levels, 300-5000 Å 2-75210
Yb $^+$, ionisation energies, polarisability, transition probability, one-electron spectrum anal. 2-80519
Zn, relaxed orbital binding energy calcs. 2-80833

ionisation time *see* ionisation

ionogen *see* electrolytes

ionoluminescence

excited state formation by ion impact on surfaces, review 2-67177
ion interaction with atoms and molcs., luminesc. study 2-96710
quenching, stochastic model of radiation quality effects in prompt radioluminescence 2-61984
CdS semiconductive single crystals, CdII line spectrum emission 2-82929
KBr, intrinsic luminescence under H $^+$ and He $^+$ ion bombardments 2-67123
KCl, sequential C $^+$ and N $^+$ implantation, CN $^+$ radical formation, ionolum., study 2-81802
KI, intrinsic luminescence under H $^+$ and He $^+$ ion bombardments 2-67123
NaCl, intrinsic luminescence under H $^+$ and He $^+$ ion bombardments 2-67123
Ni (110) surface, outer-shell electronic processes in Ne $^+$ collisions 2-77665
Ni, photon emission from sputtered atoms as function of phase transition 2-77596
Pb, photon emission from sputtered atoms as function of phase transition 2-77596
Sn, photon emission from sputtered atoms as function of phase transition 2-77596
Ta, sputtering, continuous emission production of photons 2-57188
ZnSi $_3$, iodine transport grown, channelling and ionoluminesc. spectra study 2-56058

ionosondes *see* ionospheric measuring apparatus

ionosphere

see also D-region; E-region; F-region; ionospheric electromagnetic wave propagation; ionospheric techniques; sporadic-E layer
 Appleton anomaly crests, VHF Faraday polarisation fluctuations and L-band amplitude scintillations 2-106647
 auroral arc, electrostatic potential distrib. obs. 2-63161
 auroral current flow, model predictions of mag. perturbations observed by Magsat in dawn-dusk orbit 2-106631
 auroral double layers, current carrying props. rel. to low frequency auroral fluctuations 2-106622
 auroral electrojet correlation with mesospheric winds 2-83993
 auroral electrons energy spectrum determ. from electron profiles and auroral emission 2-73699
 auroral ionosphere, weak HF electrostatic turbulence obs. 2-106399
 auroral kilometer radiation, growth rate calcs. 2-84042
 auroral kilometer radiation, theoretical review 2-58206
 auroral kilometer radiation, theory of fine struct. 2-78920
 auroral kilometer radiation generation at high altitudes 2-94554
 auroral region, energy dissipation by precipitating particles and Joule heating 2-106401
 auroral topside, thermal ion flows, transverse acceleration 2-100651
 auroral zone, anomalous resist. along field lines 2-73758
 auroral zone ions, transverse accel. mechanism 2-106392
 auroras, oval, rel. to polar cap, in northward interplanetary mag. field 2-68546
 Birkeland current densities, relation to interplanetary mag. field and solar wind props. 2-100663
 Birkeland current systems, regions 1 and 2, energy coupling 2-106425
 Birkeland currents obs. simultaneously by MAGSAT and TRIAD satellites 2-100660
 characteristics from radio signals transmitted between orbiting satellites 2-89061
 decimetric emission caused by solar flare events 2-112230
 depletion of electron content assoc. with radio scintillations 2-78901
 discrete arc events, 3-D model 2-68573
 Dynamics Explorer mission, spin-scan auroral imaging photometers 2-58226
 Dynamics Explorer program, general 2-58224
 dynamo, effect on estimates of accuracy of geomag. field approximations 2-111851
 eccentric dipole coordinates, for Magsat data presentation and anal. of external current effects 2-100661
 electric current due to sudden commencement preliminary impulse 2-100629
 electric current through enclosed by MAGSAT orbit 2-100630
 electric currents, meas. with Saint-Santin radar 2-83999
 electric currents above Saint-Santin, model 2-84000
 electric currents produced by field-aligned currents, calc. 2-106410
 electric currents studied by obs. of geomag. changes, at Indian ground stations 2-62889
 electric field variations over land, correl. with elec. field var. over oceans 2-78905
 electric measurements made at Nagycenk Observatory, Hungary 2-78856
 electrodynamics of auroral ionosphere 2-106388
 electron beam interaction with ionospheric plasma 2-73760
 electron beam interaction with plasma, instability growth rate 2-60763
 electron beam plasma discharge, laboratory expts. 2-73774
 electron concentration at Arecibo, effect of antenna near field effects 2-84095
 electron content at mag. equator, determ. from Faraday rotation data 2-106385
 electron content depletions and enhancements in 1978 to 1979 period 2-84003
 electron content perturbations and assoc. TIDs due to thermosphere gravity waves 2-100638
 electron density inhomogeneities, model determ. of volumetric characts. 2-112196
 electron density variations at middle latits. in topside ionosphere, theory 2-112194
 electron density variations during 1980, February 16 solar eclipse at Gauhati 2-117521
 electron gas cooling due to O fine struct. spectral emission 2-94555
 electron precipitation, attenuation of electron flux in lower ionosphere 2-112220
 electron precipitation, relaxation of monoenergetic electron stream in ionosphere 2-112195
 electron precipitation at equatorward boundary of diffuse aurora 2-73770
 electron precipitation flux modulated by Pc 5 2-84006
 electron precipitation statistical study 2-89062
 electron temperature measurements with Intercosmos 10, cylindrical Langmuir probe, ion current 2-97785
 electrostatic plasma instabilities in daytime lower ionosphere 2-78899
 ELF wave generation in ionosphere by use of HF waves radiated from ground 2-68552
 EM induction effects at Magsat altitudes, model simulations 2-100635
 energy budget role of bremsstrahlung X-ray emission from precipitating electrons 2-78903
 equatorial electrojet and counterelectrojet latitudinal excursions 2-73764
 equatorial electrojet electrostatic wave obs. 2-106395
 equatorial electrojet long wavelength irregularities, radar obs. 2-106394
 equatorial midnight temp. bulge, seasonal var. in occurrence time 2-100637
 equivalent currents representing IMF sector effects 2-112219
 field-aligned current systems, mag. perturbations modelling technique 2-100632
 field-aligned currents deduced from radar ion drift obs. 2-84045
 field-aligned currents rel. to auroral electrojets, review 2-58202
 gravity wave, Hines dispersion rel. test 2-106406
 gravity wave disturbance seen in digital ionogram data 2-73763
 Harang discontinuity and plasmapause boundary changes 2-106409
 Harang discontinuity position at auroral latitudes 2-117520
 hard electron precipitation flux at midlatitude 2-112212
 HF radiowave heating of ionosphere, effect on wide band attenuation 2-68555
 high latitude, charge particle var. during ionosphere-magnetosphere disturbances 2-100625
 high latitude, O⁺ and H⁺ distrib. model 2-106408
 high latitude electric fields var. 2-106403

ionosphere continued

high-latitude ionosphere, inhomogeneity spectrum of polar electron density along geomag. field 2-58199
 hydrated cluster ion formation rates and winter anomaly 2-63168
 hydromagnetic waves of long-period inside plasmasphere 2-73792
 incoherent scatter radar at high-latitude, observability of electron density changes 2-78900
 incoherent scattering plasma lines enhancement due to precipitation H⁺ and secondary electrons 2-84012
 inhomogeneities due to neutral gas motion in the dynamo domain (*Russian*) 2-94551
 inverted V auroral arc, model including effects of electrostatic turbulence 2-68553
 ion cyclotron turbulence in magnetosphere, effect on ionosphere 2-84017
 ion density latitudinal inhomogeneities at 500 km altitude 2-112203
 ion energisation by electrostatic H cyclotron waves, appl. to auroral plasma 2-73757
 ion precipitation from magnetotail current sheet source 2-84034
 ionogram full wave anal. method with improved numerical instability 2-73776
 ISIS program, contrib. to ionospheric studies 2-84013
 Landau damping of steepening magnetosonic wave 2-63178
 large scale travelling ionospheric disturbances 2-68548
 large-scale inhomogeneities, effect on reflected wave field struct. 2-112197
 late afternoon sector currents, obs. with TRIAD and Scandinavian Magnetometer Array 2-106414
 light ion mass spectrometer for space-plasma investigations 2-64159
 long- and short-period variations on Boulder-Havana radiopath 2-112206
 longitudinal electrostatic field effects on ionospheric struct. 2-112207
 low-energy particles in upper and middle atm., interaction model 2-73813
 lunar daily geomag. variations, seasonal change 2-68260
 lunar tides, vars. in ionospheric A1-absorption at low latit. during solar min. 2-106387
 magnetic pulsations of magnetosphere damped by ionosphere 2-63186
 magnetosphere Alfvén instability due to coupling with ionosphere 2-63179
 magnetosphere electrical coupling, IMS satellite obs. review 2-112223
 magnetosphere electrodynamical interaction highlights from International Magnetospheric Study 2-112268
 magnetosphere interactions, EM disturbances, convection study (*Russian*) 2-63171
 magnetosphere Vasyliunas approach anal. 2-112222
 Magsat data for Birkeland and electrojet currents 2-100633
 meridional electric current system in equatorial region 2-100628
 magnetosphere Alfvén instability due to coupling with ionosphere 2-63175
 MHD waves propag. in ionosphere, boundary conditions 2-112198
 micropulsation effects on ionosphere 2-63166
 mid-latitude thermal plasma, dynamic interaction with plasmaspheres, review 2-83987
 midlatitude struct. and plasma convection 2-112205
 movements caused by 2-D motion of Earth's surface 2-112188
 nocturnal intermediate layer occurrence, solar and geomag. influences 2-106411
 omega bands, eastward drifting, assoc. current system and mag. disturbance field 2-100645
 Pc 5 pulsation and associated elec. currents in ionosphere 2-83995
 Pi 2 oscillation attenuation in ionosphere 2-117529
 plasma, drift wave turbulence, electric field and density fluctuations, saturation spectra 2-91613
 plasma, electron beam nonlinear radiation in whistler range, theoretical model 2-94556
 plasma, powerful radio emission action 2-58168
 plasma cloud striations, Rayleigh-Taylor instability study 2-100626
 plasma irregularity dissipation by wave-particle and collision interactions 2-83996
 plasma neutral beam interactions, Alfvén's critical vel. effect 2-112224
 plasma ohmic heating by microwave beam from Solar Power Satellite 2-71186
 plasma parametric instability due to incident EM wave 2-84005
 plasma turbulence, two-dimensional, relation between Kolmogoroff's theory and direct interaction approx. 2-65726
 plasma wave (Farley-Buneman) propagation at high-latitudes 2-73773
 plasmapause plasma density from myriametric radiofreq. radiation obs. 2-73775
 plasmapause-plasmasphere struct. and dynamics results from ground-based and satellite obs. of whistlers (*French*) 2-106382
 plasmasphere, refilling of geomag. force tubes with thermal plasma after mag. disturbance 2-106383
 plasmasphere 'hot' zone characteristics 2-117519
 plasmasphere H⁺ ion distrib. affected by magnetospheric convection 2-112211
 polar cap arc morphology and classification 2-73747
 polar cap arc occurrence 2-83997
 polar cap arcs, elec. and mag. field obs. 2-83998
 polar cap currents, effect of northward interplanetary mag. field rel. to reverse geomag. disturbance 2-112293
 polar cap size and potential predicted by magnetosphere-ionosphere coupling model 2-112213
 polar ionosphere, magnetosphere coupling, elec. fields and plasma characts. 2-112221
 polar magnetic perturbations, Magsat obs. of transverse and parallel components 2-100634
 precipitating electrons, struct., dynamics and geomag. field effects 2-83988
 precipitating protons, ionisation and electron flux determ. method 2-106355
 proton and electron aurora study of substorms 2-94548
 proton precipitation and H atom flux, linear transport theory study 2-63162
 quasistationary elec. fields and electron precipitation 2-117520
 radar echo occurrence and irregularity drift, Siple Station Antarctica 2-89066
 radio aurora during irregular micropulsation burst 2-68554
 radioastronomy, effect of phase perturbations caused by ionosphere 2-63167
 radiowave heating experiment, diagnostic wave phase changes 2-73759
 radiowave heating of ionosphere, role of 3-D soliton collapse 2-63163
 rocket exhaust induced ionospheric hole and optical emissions 2-83992

ionosphere continued

- secondary cosmic rays, relative contrib. of electrons produced at different heights to albedo flux 2-112277
- secondary cosmic rays in ionosphere props. of excessive radiation from Kosmos-721 data 2-112276
- SFA type dependence at low freq. 2-58195
- solar flare disturbances studied by Doppler method 2-117518
- southern scintillation oval, obs. of equatorward limit 2-89067
- Sq(H) causes on abnormal quiet days 2-68550
- Sq(H) phase variability on normal quiet days in equatorial electrojet region 2-117516
- Sq and assoc. elec. fields during 1965 AD 2-62888
- Sq currents, quiet and active year behaviour 2-105924
- Sq focus latitude during sunspot minimum 2-68551
- Sr atom interaction with ionospheric plasma following explosion 2-83990
- storm-time dynamics model of inner magnetosphere/ionosphere 2-112245
- sudden ionospheric disturbances, seasonal and solar cycle depend. 2-73768
- suprathermal electron bursts and formation of auroral arcs 2-83994
- TID phenomena, relation to upper atmos. gravity waves 2-63156
- topside equatorial spread-F, obs. of turbulent fluctuations 2-73761
- total electron content variations at 31°S, 1967 to 1974 period 2-63165
- travelling ionospheric disturbances and thermosphere gravity wave, review 2-106379
- ULF pulsation mode coupling 2-63189
- vertical current to ground, var. modulation and influence of polar cap dusk-dawn pot. drop 2-112214
- VLF chorus bursts characts. and ionosphere-magnetosphere interaction 2-112210
- wave-particle interaction, Landau reson. in whistler waves 2-84040
- wind induced ion-convergence following disturbance of ionosphere 2-78897
- wind measurement by radar obs. ionospheric drift 2-106356
- X-ray bremsstrahlung emission from precipitating particles 2-84002
- Ba atom interaction with ionospheric plasma following explosion 2-83990
- H ion distrib. in plasmasphere and magnetospheric convection influences 2-112211
- He⁺ distrib. in plasmasphere from EUV nightglow obs. 2-78902
- N₂ photoionisation by 304 Å solar UV 2-89063
- O depletion in active auroral arc region 2-83986
- O photoionisation by 304 Å solar UV 2-89063
- O⁺ ²P state production by electron impact in auroral region 2-89064
- O⁺ precipitation, theory 2-84001
- O⁺ precipitation as energy source to thermosphere, wind and temp. perturbation 2-106377

ionospheric electromagnetic wave propagation*see also atmospheres*

- Al-absorption at low latit. during solar min., lunar tidal var. 2-106387
- absorption in MF/HF, depend. on solar zenith angle and solar cycle 2-100641
- atmospheres, 1-4 kHz noise obs. made in Italy and Norway 2-58110
- auroral radar echoes, STARE obs. of long discrete echoes 2-112217
- cosmic radio noise absorption due to electron precipitation 2-83988
- D-region, physics and forecasting radiowave propag. 2-94559
- D-region radio wave absorption, influence of water vapour concs. 2-112201
- data transmission over high freq. links 2-63169
- decimeter radio waves at high altitudes, space-time dependences of propag. parameters 2-94557
- decimeter radiowave propagation on transpolar paths during auroral substorms 2-106415
- digital AM channel bandwidth, effect of interferential ionospheric propag. 2-83989
- digital high frequency radiocommunications, applications of microprocessors 2-73781
- disturbed ionosphere radiowave absorpt., seasonal effects 2-78897
- Doppler shift of transionospheric satellite signals due to irregularities 2-73767
- Doppler shifts of refl. radiowave from parabolic and quasiparabolic layers 2-73765
- doubly reflected echoes, distrib. and auto correlation coeff. (Chinese) 2-100623
- ducting of auroral kilometric radiation obs. out to 4 Earth radii 2-78918
- lower E-region, vertical HF sounding in presence of acoustic wave for neutral temp. and electron density meas. 2-100636
- eclipse time absorption of radio waves, gravity wave effects 2-78893
- electric breakdown of air due to intersecting pulsed radio beams 2-112023
- ELF hiss at auroral geomag. field equator rel. to auroral electron precipitation 2-100646
- ELF wave generation in ionosphere by use of HF waves radiated from ground 2-68552
- equatorial scintillation at 327 MHz comparison with global nocturnal scintillation model 2-100639
- F₂-layer, angular spectra of reflected vertical EM waves 2-78911
- F₂-layer, critical frequency prediction technique 2-112184
- F₂-layer, f_o daytime variations depend. on solar activity 2-117517
- F₂-layer, postnoon bite-out study at Karachi 2-106390
- F-region, equatorial, radiowave propag. rel. to F-region height forecasting 2-112192
- Faraday rotation of ATS 6 satellite transmissions, rel. to ionosphere electron content at mag. equator 2-106385
- geostationary satellite radio propagation studies, Japan. (Japanese) 2-94561
- half-space, filled with nonlinear medium, one-dimens. problem of wave self-action, reflectance (Russian) 2-55250
- HF echo, unusual long period phase path fluctuation obs. on solar eclipse day, (1980 February 16) 2-106386
- HF fadeings close to MUF on subauroral radiopath 2-73755
- HF propagation between mag. conjugate points, ionosphere effects 2-117524
- HF radiowave heating of ionosphere, effect on wide band attenuation 2-68555
- HF sky-wave field strengths and max. usable freqs., calc. using programmable pocket calculator (German) 2-78912
- HF sky-wave paths, factors influencing use of spread spectrum 2-94562
- HF waves effect on Earth VLF elec. field 2-73428
- HF waves propagation on mid-latitude round-the-world hop path 2-73754
- ionospheric electromagnetic wave propagation continued**
- incoherent scattering method, coded signals, spectral and correl. processing (Russian) 2-63137
- induced temperature scattering of EM waves ionospheric plasma 2-68559
- ionosphere, plasma ohmic heating by microwave beam from Solar Power Satellite 2-71186
- L-band propagation, amplitude scintillations near Appleton anomaly crests 2-100647
- LF emission mechanism, cyclotron rel. to 106398
- LF wave propagation, rocket expt. rel. to electron collision frequency in D and E-regions 2-112216
- long- and short-period variations on Boulder-Havana radiopath 2-112206
- magnetic storm-associated ionospheric scintillations 2-58196
- magneto-active collisional plasma, attenuation and refr. coeffs. 2-109520
- meteorological and ionospheric fluctuations, correlation in annual and biannual periodicities 2-112070
- mid-latitude lower ionosphere, anisotropic scatt. of short radio waves, 25 MHz 2-89069
- nocturnal D-region, characts. from VLF waves 2-84010
- oblique backscatter sounding, echo signal shape and envelope 2-112209
- OMEGA Hawaii 13.6 kHz signals, cycle slippings as received at Kagoshima 2-84014
- Pedersen ray arrived angles and skip distance determ. in horizontally inhomogeneous atm. 2-94560
- plasma parametric instability due to incident EM wave 2-84005
- polar, rocket obs. of electron density profiles (Japanese) 2-73779
- polarisation change of refl. from dielectric media 2-65134
- radio Doppler shifts caused by moving ionosphere (Chinese) 2-106389
- radio horizon on HF band, effects of ionosphere on Earth-space paths 2-58197
- radio reflection, estimation of the mean power of signals in the presence of m-fades 2-63170
- radio signals transmitted between orbiting satellites, Doppler shift 2-89061
- radio wave propagation prediction in Japan area (Japanese) 2-58201
- radio wave reflection, space correl. of polarisation characts. of partly scattered vector field 2-112200
- radio wave scattering, appl. to model determ. of volumetric characts. of ionospheric inhomogeneities 2-112196
- radio waves, reson. absorpt. at freqs. close to electron gyrofrequency 2-112199
- radiowave heating experiment, diagnostic wave phase changes 2-73759
- radiowave heating expt., effect of strong HF wave on weak wave 2-112208
- radiowave heating of ionosphere, role of 3-D soliton collapse 2-63163
- radiowave polar scatt., diagram with anisomeric inhomogeneities, param. freq. depend. 2-84011
- radiowave propagation inside ergodic layer 2-106416
- radiowave reflection from thin horizontally inhomogeneous E_s layer 2-73753
- radiowave scintillations in ionosphere, review 2-73771
- radiowaves, ionospheric effects on radiosoource astrometry 2-79233
- ray theory of radiowave propagation using magneto-ionic formula 2-73769
- reflected wave field structure, effect of large-scale ionospheric inhomogeneities 2-112197
- scattering of ultrashort waves on artificial inhomogeneities, angular meas. 2-68560
- scintillation meas. at 4 and 6 GHz during sunspot cycle 21 peak using INTESAT earth stations 2-78898
- scintillation meas. using Global Positioning System 2-78913
- scintillation of equatorial VHF and UHF waves and electron. changes 2-78901
- scintillation of Jupiter HF radiation 2-73816
- scintillation of transionospheric VHF and UHF signals at midlatitude 2-106412
- scintillations, global morphology 2-73772
- scintillations at nighttime magnetic equator 2-78906
- SEASAT radar altimetry ionosphere corrections 2-89027
- SHF, artificial ionospheric disturbances by powerful beams 2-68558
- short radiowaves scattering on artificial magnetically oriented inhomogeneities excited in ionosphere 2-94558
- similar fading method for close-spaced receivers data anal. (Chinese) 2-83952
- skywave field strength estimation, HF, in tropical region, AIR method appl., E-mode propagation 2-106413
- solar flare disturbances studied by Doppler method 2-117518
- spread-F, simultaneous obs. on oblique and vertical incidence records, anal. 2-78904
- subionospheric propagation of VLF whistlers, Trimpf effect 2-100643
- sweeper activity during solar flares 2-78909
- transequatorial VHF wave propagation, sunspot correlation, long term exp. results (Japanese) 2-73780
- transionospheric radio signals, characterization using intensity scintillation data 2-58198
- transionospheric VHF depolarisation near equatorial anomaly crest 2-68556
- UHF emission associated with solar UV/X-ray radiation pulsed component 2-73756
- VHF propagation, Faraday polarisation fluctuations near Appleton anomaly crests 2-100647
- VLF amplitude changes due to D-region ionisation irregularities 2-100627
- VLF long distance propagation during SID phenomena (French) 2-68547
- VLF signals phase variations at sunrise in Earth-ionosphere waveguide 2-73778
- waveguide channel, RF signals Doppler freq. shift 2-89070
- whistler ionospheric exit points obs. in Canada 2-89065
- whistler mode propagation in elec. fields theory 2-84041
- whistler oblique mode propagation in hot anisotropic plasma 2-68565
- whistler propagation to ground at low-latitudes 2-84004
- ionospheric measuring apparatus**
- EISCAT radar system for studying ionosphere at high latitudes 2-58188
- High-Altitude Plasma Instrument for Dynamics Explorer-A 2-58180
- Ion Drift Meter for Dynamics Explorer-B 2-58181
- ion drift meters, aperture separation upper limit 2-83949
- UOSAT radiation monitoring application 2-117500
- whistlers, meas. of polarisation and intensity, design of radio-receiver system 2-58141

ionospheric measuring instruments *see ionospheric measuring apparatus*

ionospheric propagation *see ionospheric electromagnetic wave propagation*

ionospheric techniques

see also electron density; ion density

auroral electrons energy spectrum determ. from electron profiles and auroral emission 2-73699

D-region electron concentration, diurnal variations, use of Arecibo 430 MHz incoherent scatter radar 2-83962

digital topside ionograms, automatic O and X trace identification 2-68530

Doppler ionosonde data processing techniques 2-73709

dopplionogram method used to study dynamics of sporadic E 2-73711

electric field meas. methods at Nagyecenk Observatory, Hungary 2-78856

electron beam plasma discharge, laboratory expts. 2-73774

equatorial F-region height forecasting, technique 2-112192

F₂-layer, critical frequency prediction technique 2-112184

F-region ionisation struct. obs. by means of airglow emissions 2-89043

incoherent scatter radar at high-latitude, observability of electron density changes 2-78900

incoherent scattering method, coded signals, spectral and correl. processing (Russian) 2-63137

ionogram full wave anal. method with improved numerical instability 2-73776

ionogram mathematical analysis techniques 2-106357

low ionosphere variations, determ. using Forbush effects 2-100677

magnetic perturbations produced by field-aligned current systems, modelling technique 2-100632

magnetotelluric observational observations, at Nagyecenk, Hungary 2-78536

oblique backscatter sounding, echo signal shape and envelope 2-112209

optical remote-sensing for auroral ionosphere 2-94549

RF probing of disturbed region, modulation transfer of powerful radio emission 2-58168

scintillation meas. at 4 and 6 GHz during sunspot cycle 21 peak using INTELSAT earth stations 2-78898

scintillation meas. using Global Positioning System 2-78913

SEPA Spacelab-1 expts. with particle accelerators, plasma accelerator and charger (Japanese) 2-84062

similar fading method for close-spaced receivers data anal. (Chinese) 2-83952

vertical HF sounding in presence of acoustic wave, appl. to neutral temp. and electron density meas. in lower E-region 2-100636

VHF auroral radar system at Siple Station, Antarctica 2-89066

VLF receiving dipole in magnetoplasma, directivity pattern 2-63121

whistlers, meas. of polarisation and intensity, design of radio-receiver system 2-58141

wind measurement by radar obs. ionospheric drift 2-106356

O⁺ ion flux detection from F-region topside soundings 2-83961

iontophoresis *see electrophoresis*

ions

see also atoms; electrolytic ions; hydrogen ions; negative ions

No entries

Ir. astronomy *see infrared astronomy*

Ir. detectors *see infrared detectors*

IR drop *see electric potential*

Ir. imaging *see infrared imaging*

Ir. sources *see infrared sources*

Ir. spectra *see infrared spectra of diatomic inorganic molecules; infrared spectra of inorganic solids; infrared spectra of organic molecules and substances; infrared spectra of polyatomic inorganic molecules; spectra of inorganic liquids and solutions*

irasers *see lasers*

iridium

see also nuclei with

abundance anomaly, Eocene extinction implications 2-94664

adsorbed ethylene, decomposition, surface struct. effects, comparison with Pt 2-98460

adsorption of CO, on flat and rough surfaces, IR spectrosc. 2-66352

band struct. calc. and photoemission anal. 2-82214

bremsstrahlung excited Auger electron spectra 2-105035

chemisorption of N₂ and H₂ on densely packed cryst. planes 2-115559

Cretaceous-Tertiary boundary clay, Ir content rel. to cosmic catastrophe (Russian) 2-83820

Cretaceous-Tertiary boundary Ir abundance anomaly in New Mexico, USA 2-62930

electrode, film growth and conversion processes, ellipsometric study of electrochromism of IrO₂ film 2-77488

eqn. of state and volume compression under high press., α - β transition 2-115385

field evaporation events as Markov chains, time of flight atom probe study 2-93381

film on n-Si, silicide form., AES study 2-86951

geochemical abundances in lherzolites, implications for mantle precious metals 2-62918

reconstructed (110) 1x2 surfaces, missing row model 2-86995

surface, (100) and (110), H₂ thermal desorption, field emission thermal desorption study 2-92352

surface, Cs adlayer structure, LEED study 2-115509

surface (100), adsorption of H₂, N₂, work function changes, field emission study 2-87047

surface (100), quasidynamical LEED intensity analysis in the medium energy range 200-600 eV 2-98405

surface (110), adsorption and reaction of alkanes, mass spectroscopy study 2-67764

surface (110), interaction of H₂ and cyclopropane, thermal desorpt. mass spectrometry study 2-87062

tape, covered by graphite monolayer, adsorpt. of K 2-115569

trace quantity determ. by atomic absorpt. spectrophotometry 2-116767

¹⁹²Ir, insoluble, committed dose eqivs. from accidental inhalation 2-68154

¹⁹²Ir interstitial implants, localised current field hyperthermia system 2-83700

¹⁹²Ir seed implants, effect of geometric errors in reconstruction 2-68126

¹⁹⁴Ir, oriented in Fe and Ni, NMR 2-98977

iridium alloys

see also iridium compounds

CaIrSi₄ (110) surface, scanning tunnelling microscopy study 2-86987

Fe-Ir, dil., impurity hyperfine fields, press. and temp. depend. 2-104610

Ho(Rh_{0.3}Ir_{0.7})₄B₄, mag. struct., superconducting T_c 2-104585

iridium alloys continued

Ir-W-Th, DOP-26, Th-doped, weld metal grain struct. and mech. props. 2-99499

Ir-Pt₂, Mossbauer spectra, localised moment continuous formation 2-82763

Nb_{0.45}Ir_{0.55}, metallic glass, electronic struct., UPS and XPS study 2-76908

Pt-Ir clusters, catalysts, EXAFS study 2-67149

Ta_{0.3}Ir_{0.7}, metallic glass, electronic struct., UPS and XPS study 2-76908

Th(Ir_{0.5}O_{1.5})₂, superconductive behaviour, transition temp., lattice const. 2-66694

Th(Ir_{0.5}Ru_{0.5})₂, superconductive behaviour, transition temp., lattice const. 2-66694

W-Ir matrix cathodes with 10A/cm² current density, emission and life testing studies 2-57244

Y-Ir system, supercond. transition temp., heat capacity and susceptibility meas. 2-82508

Y(Ir_{1-x}-Fe_x)₂, mag. ordering 2-98845

Yb-Ir₂ cryst. struct. 2-55887

Zr-Ir system, phase equilib. study using thermal anal., metallographic and X-ray methods 2-83090

iridium compounds

see also iridium alloys

oxides with anodic coloration, electrochromic materials and displays review 2-77487

Ir complex, iridium (I)⁺ dicarbonyl complex of 4,7-bis(dicyanomethylidene)-4,7-dihydro-1,10-phenanthroline, synthesis and solid state props. 2-92596

IrBr₂⁺, Zeeman levels, mag. optical activity-reson. Raman spectra 2-85668

IrO₂, single cryst. growth from vapour 2-62054

IrO₂, VPE growth on TiO₂, chemical interdiffusion, optical absorption and SEM study 2-92401

IrO₂ film, amorphous nonmetal-crystalline metal transition 2-109980

IrO₂ film, ellipsometric study of electrochromism 2-77488

IrO₂.2D₂O film, cation insertion reactions 2-105526

IrSi_{0.75}, semiconductor thin film, optical and Hall effect meas. 2-77209

LaIrSi₃, cryst. struct., supercond. transition temp., mag. props. 2-65969

Nb₄Ir₃O_{13.5}, Sp.h.t., f.2 to 15K, supercond. transition temp. 2-61655

NdIrSi₃, cryst. struct., magnetisation and susceptibility 2-65969

Y₂Ir₂O₇, IR spectra and elec. cond. 2-110835

Y₂O₃-In₂O₃-Fe₂O₃, superhigh freq. props., Fe and In ions electron struct. influence (Russian) 2-66442

iron

see also nuclei with

(001) film, surface states, surface magnetisation, electron spin polarisation 2-61540

3d, L_{2,3} edge, EELS 2-108636

(100) surface, adsorbed H₂O, bonding and electron energy loss spectra 2-87030

(110) surface, exchange splitting, binding energies 2-77149

α phase, vacancy-type point defect, dipole force tensors, computer calc. 2-71438

α -phase, C atmosphere near edge dislocation 2-115275

A-type stars, possible Fe abundance vars. among superficially normal stars 2-63361

abundance in Venus' atmosphere 2-117622

abundance in waters of Baffin Bay and Canadian Arctic Archipelago 2-83850

acicular particles, mag. props. and morphology, heat treatment effects 2-77328

adsorbed and absorbed H₂ characters, 2-71791

adsorption on Fe (001) and (110), work function study 2-92722

amorphous, electronic struct. 2-66427

arc light source for spectroscopy 2-102893

Armo, electrochem. props. in friction, H absorpt. influence 2-67651

Armo, plasma-nitriding in N₂-H₂-CH₄ gas mixtures (German) 2-88292

Armo, strain hardening curves, math. approx. 2-99448

Armo, surface films grown in saturated Ca(OH)₂ soln., electrochem. and ellipsometric invest. 2-67611

Armo, unstable crack propag. and arrest during cyclic loading 2-116548

Armo Fe, behaviour in gaseous NH₃ under temp.-force loading 2-111380

Armo Fe, C migration on ferrite surface during graphite centres form. 2-67378

Armo Fe, effect of spark discharge and electrolytic plasma in surface layer (Russian) 2-62267

Armo Fe, rolled or hydroextruded, dislocation struct., brittleness and impact toughness meas. (Russian) 2-93560

atom, superposition errors, contracted basis set investigation 2-85537

atom ionic charge state distribution in solar energetic storm particle enhancement 2-94570

atoms, 200-300 nm spectrum, emission by ICP Ar plasma 2-85579

based alloys, Mossbauer spectra, hyperfine interaction, Fourier anal. 2-104766

BCC, surface (001), O chemisorpt., X₂ cluster model calcs. 2-98461

BCC, technical, plastic strain autocorrel. functions and spectral densities 2-56071

carbonyl based high-frequency magnetic powder materials 2-77331

case-cementation, local, in conditions of pulse laser heating and fast hardening (Russian) 2-62270

cast, abrasive wear resist. improvement, cryogenic treatment 2-116556

cast Fe, engine valve units, wear resist. of powder coatings produced by elec.-pulse sintering and weld facing 2-67659

cast Fe products, friction and wear 2-88221

catalysts, Fischer-Tropsch, Mossbauer study of surface effects 2-82750

cavity growth during diffusion saturation with Ni from vap. phase (Russian) 2-104059

charge aspherity, electron density distrib. 2-115177

chemisorption of H₂, EELS vibrational spectrum 2-61286

chemisorption of propyne Fe(110) and Fe(100) surfaces, decomposition, UPS 2-62427

Compton profiles, effect of BCC-FCC phase transition 2-82949

corrosion, in HCl gas and HCl-O₂ gas mixtures 2-67614

corrosion and passivation, in H₂O₂ soln., Mossbauer invest. 2-116589

corrosion cracking, role of H 2-67653

corrosion in water at room temp., electron microscope obs. 2-67622

corrosion kinetics, in natural waters 2-95986

corrosion of high purity grade (Japanese) 2-57532

corrosion reaction, in NH₄NO₃ aq. soln. 2-67606

corrosion testing using Raman spectroscopy 2-93689

iron continued

crevice corrosion, expt. study 2-77998
 deformed, cyclically and monotonically, stress-substruct. relationships in wavy slip mode metals 2-99498
 deformed, recovery, positron annihilation study (*Chinese*) 2-111226
 determ. in laterite ores, using radioisotope X-ray fluoresc. 2-57665
 determination in human body, in vivo, γ -ray nucl. reson. scatt. method 2-68111
 determination in waste water by radionuclide X-ray fluoresc. anal. 2-78164
 diffusion in Re, SIMS study 2-110041
 diffusion of H in high-purity α -Fe, intrinsic diffusivity 2-110042
 distribution in layered silicate minerals of Indian origin, Mossbauer study 2-82754
 electrodeposited film on Ni, Auger sputter profiles, quantitative interpretation 2-82962
 electrolytic, friction and wear, strain and failure processes investigation by acoustic emission method 2-116633
 electron energy absorption spectrometry (*German*) 2-113084
 electroplating with Al in AlCl_3 based molten salt mixtures 2-62285
 electropolishing rel. to other types of metal dissolution 2-57568
 embrittlement, role of H 2-67537
 embrittlement by H, interaction energy term role in H adsorption at cracks 2-72841
 emission lines from magnetised neutron star surface, observational possibility 2-84260
 energy band calcs. of magnetism 2-66749
 epitaxial growth on W(110), periodic lattice distortions, LEED and Auger study 2-82170
 equations of states derived from shock wave expts., theoretical anal. 2-71602
 erosion wear mechanism, solid particle, 90° impact 2-88209
 fatigue crack growth, mechanism and kinetics 2-88191
 fatigue deformation, oxygen effect, crack initiation along slip lines 2-105329
 ferromagnetic; high purity mag. and magnetomechanical props., influence of grain size 2-87565
 ferromagnetic, expt. search for 1st order phase transition, magnetisation meas. 2-66867
 ferromagnetic, itinerant electron magnets, spin correlations 2-115964
 ferromagnetic, mag. transition on cooling course 2-116002
 ferromagnetic, single particle and collective excitations, EELS study oxidation effects 2-76915
 ferromagnetic film, single cryst., first order transitions in magnetisation 2-66813
 ferromagnetic foil prep. and annealing 2-108194
 ferromagnetic jellium model, surface characteristics, var. technique 2-72134
 ferromagnetic surfaces, magnetisation, mag. struct., spin polarised LEED study 2-98910
 ferromagnetic transition, character 2-56872
 film, Brillouin scatt. from magnons, Stokes-anti-Stokes asymm. 2-116202
 film, electrodeposited, sputtering yield 2-77676
 film, equatorially magnetized, transmitted light intensity odd-parity effect 2-116160
 film, evaporated at oblique incidence, columnar struct. 2-98493
 film, ferromag., Brillouin light scatt. by spin waves 2-66872
 film, magneto-optical Kerr effect, mag. props. 2-77492
 film, Θ adsorpt., excess current noise obs. 2-77137
 film, oxide layer, Mossbauer and ESCA meas. 2-76848
 films, RF sputtered, lattice expansion 2-60922
 foil, electroforming at high current density 2-99359
 foil, oxidised, depth profiling using Raman spectroscopy with ion bombardment 2-57646
 foil, stress meas. using slip initiation 2-72792
 foils, ^{106}Pb recoil through foil, transient mag. fields, X-ray spectra study 2-66891
 fracture and deformation props. meas. at elevated temperatures (*Russian*) 2-88158
 fracture mode and ductility on testing at cathodic potentials, P and S segregation effects 2-93679
 galvanic, microindentation hardness, deposition parameters influence (*Russian*) 2-67626
 glasses, Fe doped, impurity clustering, relax. Mossbauer studies 2-104753
 haemoglobin, dissolved, human, configuration of the 4 Fe atoms, anomalous dispersion obs. 2-67937
 high purity single crystal, H_2 effect on mech. props. (*Japanese*) 2-105236
 high-purity, effect of strain ageing on fatigue crack propagation 2-105316
 impurity migration stimulated by generation and recombination of Frenkel pair 2-76749
 inorganic glasses, Fe^{3+} and Mn^{2+} doped, glass transition, EPR obs. 2-92995
 intercrystallite fracture obs. by high power US (*Russian*) 2-88160
 intergranular fracture, cathodic pots., effect of S and Sb 2-57469
 interstellar medium, Fe, Ti and H abundances rel. to interstellar 4430 Å band strength 2-106847
 interstellar particles, starlight extinction from 195-650 nm 2-94804
 ion contrib. to neutral deuterium ionisation in Tokamak plasma 2-109459
 ion irradiated, triple beam, microstruct. 2-109856
 ion irradiation, void swelling and solute segregation 2-85212
 isomorphous cooling, δ - α transition and polymorphism (*Russian*) 2-103683
 itinerant electron systems with local mag. moments, paramag. state, static props. 2-98837
 lattice dilation by dissolved D 2-104066
 lattice dilation of dissolved H_2 (*Japanese*) 2-56261
 liquid, normal spectral emissivity, 645 nm 2-81992
 low dose fission neutron irradiation damage 2-103829
 low temp. pulsed action, γ - α transitions, radiative tracers (*Ukrainian*) 2-105141
 mag. props. near conc. ferromagnetic antiferromag. transition, neutron diff. study (*Russian*) 2-82599
 Magela Creek, N.Territory, Australia, natural trace metal concs. 2-88930
 magnetic aftereffects in specimens containing interstitial solutes and precipitates 2-87551
 magnetic anisotropy const., interdomain configuration transitions 2-66808

iron continued

magnetic domain wall motion, wall-defect interactions, mag. meas. 2-116028
 magnetic domain walls, dislocation struct. effects, magnetomech. damping study 2-56885
 magnetic surface states, angle resolved photoemission studies 2-66604
 magnetisation standards 2-63963
 magnetised Fe lenses, nonlinear focusing effects on muons 2-64735
 magnetism, fluctuating local band theory 2-82558
 magnetoelastic coupling const., anisotropic 2-82689
 materials with $Z_2=23$ -30, electronic stopping cross section for 30-300 keV protons 2-66086
 MBE film, [110] orientation, on GaAs, mag. props. 2-66874
 mechanical properties, effect of fast neutron irradiation 2-103844
 molecule, electronic band structure, ab initio HF and CI calcs. 2-108400
 multiphase oxide film growth by cation interstitial diffusion 2-62272
 muon spin rot. studies of local mag. fields 2-72394
 Nafion polymer membranes, exchanged with Fe^{2+} , Fe^{3+} , and Eu^{3+} , Mossbauer spectroscopy 2-97943
 neutron irradiated, TEM study 2-103838
 nitrided, etching techniques 2-72922
 nitriding processes control, thermodynamic calcs. 2-67642
 NMR on oriented ^{191}Ir 2-98977
 optical absorption anomaly (*Russian*) 2-61928
 overlayer growth on Ag(110), LEED and AES studies 2-98489
 overlayer on Pd(111), mag. behaviour, photoemission, LEED and Auger study 2-110611
 oxidation, at high temps., initial stages 2-78001
 oxidation, edge-on TEM obs. of metal-oxide interface 2-72889
 oxidation, high temp., growth of haematite blades 2-78019
 oxidation, high temp., stress effects, SEM obs. 2-99592
 oxidation at room temp., Al impurity effects 2-67632
 oxidation rates near E- γ and α - γ phase transitions, oxide thickness and temp. effects 2-67649
 oxide film, Auger sputtering profiles, quantitative interpretation 2-82962
 paramagnetic, short range order above T_c , paramag. neutron scatt. study 2-72139
 particles, dissc. adsorption catalyst for hydriding of Mg 2-67650
 particles in Hg, aggregate size, mag. prop., US vel. study 2-82668
 passivation film, automatic ellipsometry study 2-75724
 passivation in organo-aqueous media, solvent effects 2-83293
 passive, pit form. in cathodic polarisation, anion effects 2-57516
 passive, pit form. in cathodic polarisation, stimulation by chelating agents 2-116592
 passive film, AC electrochem. impedance study 2-77997
 passive film, chemi-conductor model 2-88269
 passive film formation in polyphosphate solns., XPS study 2-93672
 passive films, on Fe, in-situ Mossbauer studies 2-76864
 passive oxide films in aq. soln., high resolution electron microscopy study 2-72891
 pitting and pitting inhibition, in Na_2SO_4 solns. 2-105360
 pitting corrosion, hydrodynamic effects in NaCl soln. or type 304 2-62261
 plasma, photoelec. cross-sections, at models calcs. 2-71080
 plasma impurity, diffusion under finite reaction rates in JET 2-109471
 plasmas, K_{α} and K_{β} lines, struct. 2-103313
 pollution of Denmark coastal waters by heavy metals 2-78698
 polycrystalline, H ion evolution under const. heating rate 2-93361
 polycrystalline, stress-strain behaviour, improved dislocation model 2-105247
 polycrystalline, sulphidation in H_2S , ESCA obs. 2-111027
 polycrystalline film, saturation magnetostriiction meas. 2-77337
 polycrystalline wire, Ni coated, plastic deform. during diffusion homogenisation (*Russian*) 2-67445
 polymers, Fe doped, impurity clustering, relax. Mossbauer studies 2-104753
 positron annihilation spectra, k.p interpolation scheme 2-116296
 positron trapping and detrapping 2-77616
 Pourbaix diagram, EMF-pH, presence of solid $\text{Fe}(\text{OH})_2$ 2-116597
 powder, atomised, pressing behaviour, zinc stearate lubricant effect 2-67245
 powder, carbonyl, manufacturing conditions and influence on mag. permeability temp. coeff. 2-67242
 powder, characts., porous struct. and particle shape effects 2-83062
 powder, electrolytic Ni influence units distrib. on particle surfaces and powder particle size 2-116409
 powder, sintering diagrams, activation energy and mechanisms 2-93473
 powder, sintering in mag. field 2-116411
 powders, atomised, pressing behaviour, compressibility and compactibility rel. to sponginess and agglomeration 2-77779
 powders, nitrided and carbonitrided, N substitution, influence of C, Mossbauer study 2-99389
 powders, prod. from ferrous oxalate dihydrate, sintering characts. 2-88024
 powders, textured single-domain, mag. props. meas. (*Russian*) 2-116038
 precipitation of interstitial solns., initial stages, computer simulation (*Russian*) 2-77824
 protons in Be, Al, Ti, V, Fe, Co, Ni, Cu, Zn, Mo, Rh, Ag, Sn, Ta, Pt, Au, stopping power meas. 2-64820
 pure, H_2 effect on deform. and fracture microprocess (*Chinese*) 2-62188
 pure, mech. props., effects of low-temp. neutron irradiation 2-103845
 range profiles of ^3He and ^6Li ions 2-66089
 resistivity damage rate under neutron irradiation at 4.6K, 2-103827
 shock compression measurements at pressures >1 TPa 2-76590
 SIMS equipment for use in iron and steel anal. 2-95525
 slag, Fe-making, diffusion of water and H-bonding species 2-104072
 small molecules, in Ne matrix, EXAFS and matrix isolation spectra studies 2-80650
 solar flares, soft X-ray Fe line spectra and time vars. from Hinotori satellite obs. 2-100851
 solubility of H_2 , enhanced dissolution under press. and stabilisation of γ phase 2-86876
 spectra, Zeeman effect for solar surface conditions 2-73941
 spin waves, mag. props. 2-66795
 splat-quenched, pure, martensitic transform., microstruct. and kinetics 2-57348
 spray-deposited black Ni selective absorber coatings on galvanised Fe substrates for solar thermal conversion 2-78243
 sputtering yield for, Monte Carlo calc. 2-77674
 steel plate, Fe losses under nonsinusoidal excitation waves 2-82674

iron continued

- submonolayer, on Mg film, mag. scatt. time meas. by weak localisation 2-92599
- substrate, H absorption during electrodeposition and H charging on Sn and Cd coatings 2-77993
- sulfidation, at high temps. and diffusion kinetics 2-67647
- superplasticity and polymorphic transforms. 2-62177
- surface, (111), N₂ adsorpt. kinetics meas. 2-56356
- surface, NH₃ synthesis, IR spectrosc. anal. 2-93813
- surface, NH₃ synthesis, IR spectrosc. anal. 2-93814
- surface, P covered, segregation, XPS, AES and EELS study 2-92221
- surface (100), coadsorpt. of CO and H₂ 2-56363
- surface (110), adsorbed NH₃, vibrational EELS spectra 2-98459
- surface (110), chemisorbed H₂ layer, phase transitions, phase diagram, LEED study 2-98276
- surface (110), CO adsorption, thermal desorpt. spectroscopy, dissociation enhancement by surface defects 2-98464
- surface (110), H₂ adsorption, pair interaction energy, embedded cluster formalism 2-92356
- surface impurities on Pb, In and Sn films, mag. behaviour, Hall effect meas. 2-87557
- surface mag. moment and electronic struct., Hubbard model 2-115980
- surface magnetism, polarised electrons 2-66890
- surface topography development in SIMS anal. grain boundary struct. 2-98412
- surfaces, (111) and (100), K promoted, N₂(N) adsorpt. meas. 2-56357
- surfaces, oxidation of Fe₃O₄, IR and Raman spectroscopy study 2-116563
- thermal expansion, up to 600K above melting 2-66260
- thermal neutron radiography, point spread functions due to neutron scatt. 2-99610
- thin film, crossite walls, mag. field effects, electrostatic TEM study 2-82682
- thin film, struct., X-ray diff. study 2-104200
- thin film, twisted domains, magnetisation, electrostatic TEM study 2-82683
- Tokamak discharges, transitions in n=2 ground state configurations 2-86479
- transport in confined high temp. plasma 2-109565
- trapped H, thermal anal. 2-66290
- twinning by laser generated shock waves 2-76456
- unidirectionally deformed layers, γ splitting and microscopic residual shear stress in X-ray stress meas. (*Japanese*) 2-78011
- vacancy clusters, athermal formation in cascades of atomic collision 2-56061
- vacancy migration at 220K, HVEM obs. 2-81828
- whiskers, Barkhausen jump field distrib. 2-87540
- whiskers, dislocations by stress appl., X-ray transmission topography 2-115634
- whiskers, dynamic mag. response near T_c 2-66781
- work hardening of α -Fe, Mn and N₂ additions effect, 200-400°C 2-67369
- X-ray fluorescence analysis, calibration standards 2-73040
- Al implanted, high temp. oxidation 2-77976
- Al-Fe double layer scatterers, albedo charact. of bremsstrahlung 2-67708
- Al₂O₃/Fe, temperature depend. of Fe acceptor level 2-110898
- Al₂O₃/Fe and solar ruby/Fe, thermoluminescence props., Fe ions absence effects 2-110957
- Bi₂SiO₂₀/Fe, edge absorpt. spectrum, optical heterogeneities, X-ray spectral microanalysis 2-67091
- CaO/Fe³⁺, ESR dipolar linewidths 2-104688
- CaS/Ce, Fe, phosphors, luminescence emission and decay, quenching 2-77584
- CoCr₂S₄/Fe²⁺, impurity Jahn-Teller effect, phase transition, mol. field theory 2-61418
- CrO₂/Fe particles, noncollinear mag. struct., Mossbauer study 2-77329
- Cu electropalated, passivity and its breakdown 2-77972
- Cu-Fe low temp. thermocouples, props. and calibration (*Chinese*) 2-107323
- CuInSe₂/Fe, EPR study, thermal treatment effects 2-98945
- diamond/Fe, ion implantation study by conversion electron Mossbauer spectroscopy 2-77427
- EuO-Fe cermet, fabrication for reactor control-arm plates 2-107947
- Fe atoms in Ar matrices, visible and near IR fluoresce, spectra 2-102419
- α -Fe, dislocation splitting, alloying additions influence (*Russian*) 2-115231
- Fe I, cascade quantum beats, fluorescence obs. 2-102425
- Fe I, relative oscillator strengths meas. 2-59728
- Fe I 532 nm line formation in solar magnetic field (*Chinese*) 2-84198
- Fe I 557.6 nm solar line shift and asymmetry 2-100881
- Fe I 6301.5091 Å line in solar spectrum, absolute meas. of bisector 2-89218
- Fe I 6302 Å magneto-sensitive line and Alfvén waves (*Chinese*) 2-63238
- Fe I in solar atm. spectrum, abundance and microturbulent vel. 2-63351
- Fe I lines identification in solar spectra 2-106653
- Fe I lines in solar atmosphere, abundance across disc, model atm. test 2-112404
- Fe I lines in solar spectrum, equivalent widths rel. to internally consistent scale of oscillator strengths 2-58247
- Fe I lines in solar spectrum, problem of contrib. functions and average optical depth of line form. 2-68716
- Fe I to XXVI, energy levels, data compilation 2-94925
- Fe II, interstellar lines, UV oscillator strengths and abundances 2-112522
- Fe IX 171.07 Å photoexcitation of chromosphere Ø IV spectrum 2-73923
- α -Fe, neutron irradiat. damage, low dose, TEM study 2-102050
- α -Fe, scattered wave functions and electronic states 2-87172
- α -Fe, thermal cond. anal. 2-71945
- α -Fe, triple beam ion irradiat., depth distrib. of displacement damage 2-86752
- γ -Fe vacancy pore-point defect interaction, computer modelling 2-92024
- Fe XIII 10747 Å solar coronal emission line form. and interpretation 2-79055
- Fe XIV 5303 Å solar coronal line, polarisation, effect of mag. fields 2-79054
- Fe XIV 530.3 nm emission line polarization in solar corona 2-112407
- Fe XV spectra, intercombination lines obtained from Tokamak plasma 2-71262
- Fe XXIII, impurity flux in Tokamak plasma, transport mechanism 2-55781
- Fe Z, electron impact ionisation cross sections 2-80826

iron continued

- Fe¹³⁺, electron impact ionisation via autoionisation states with inner-shell vacancy 2-80815
- Fe¹³⁺, plasma, dielectronic recombination via autoionisation states 2-103283
- Fe²⁺ in aq. soln., thermal electron transfer correl., photoelectron emission 2-70408
- Fe²³⁺, dielectronic recombination, forbidden 2s-3d transition, plasma 2-103284
- Fe²³⁺, transition probability, dielectronic recombination rate coeffs., HF calcs. 2-108679
- Fe¹⁹⁹Au, elec. quadrupole interaction, NMR-ON meas. 2-116075
- α -Fe⁵⁷Co, Mossbauer study of magnetism 2-66956
- α -Fe-C, electron irradiat., vacancies and impurities, positron lifetime study 2-66065
- Fe-C, O, min. detectable atomic fractions, STEM study, EELS technique 2-67165
- Fe-C, positron trapping and detrapping 2-77616
- Fe/C, concentration depth profiling using nuclear reson. reactions 2-98139
- Fe/H, impurity electronic struct. and hyperfine fields 2-110292
- α -Fe/He, He precipitation at vacancies, computer simulation 2-86706
- Fe/N, ion implanted, temp. stimulated outgassing 2-111205
- Fe/O, vel. depend. of transient mag. field of O 2-56534
- Fe/molten Ag system, wetting behaviour 2-82080
- Fe/NiO, solid-state displacement reaction at 1000°C 2-77805
- Fe-Ar liquid segmented calorimeter, performance Monte Carlo simulation 2-75097
- Fe-Cu, K-shell vacancy prod., direct excitation effects 2-75405
- Fe-N, thermodynamics, kinetics and props., data collection 2-89474
- Fe-Ni grains, discovery in olivine of unequilibrated ordinary chondrites 2-100848
- Fe-Pb double layer scatterers, albedo charact. of bremsstrahlung 2-67708
- Fe-polydimethylphenylsilsesquene, filled polymer, ferromag. adsorbents, mag. props. 2-66871
- Fe-Sb layered films, absence of mag. moment, Mossbauer study 2-115592
- Fe-scintillator segmented hadron calorimeter performance 2-64759
- Fe⁺+C-foil, projectile K X-ray emission, target thickness depend. 2-75394
- Fe⁺+O₂(N₂O) and other reaction, translational energy depend. of cross sections 2-62389
- Fe²⁺+Fe³⁺ electron exchange in H₂O, theory 2-54954
- Fe⁶⁺+H₂, one-electron capture, cross section meas. 2-102618
- FeV, 3d⁴-3d⁴ap transition, J-file intensity sums in spectra 2-54788
- Fe(XVII) to (XXVI), electron impact ionisation rate coeff. and cross sections 2-70421
- Fe-phenol-formaldehyde resin, filled polymer, ferromag. adsorbents, mag. props. 2-66871
- ⁵⁷Fe, Mossbauer conversion electron spectra, electrostatic electron spectrometer appl. 2-96367
- Fe(110), of ethylene, adsorbed layers, characterisation by Auger electron spectra, decomposition 2-73029
- GaAs/Cr, Fe, liquid encapsulated Czochralski cryst., SIMS 2-115270
- GaAs/Fe, Cr, LEC grown, impurity densities and Fe(Cr) redistrib. 2-98146
- GaAs/Fe, epitaxial layers, impurity redistrib., SIMS study 2-98344
- GaAs/Fe, ion implanted and electron irradiat., deep levels and electron traps, annealing 2-98584
- GaAs/Fe, LCAO calcs. of photoionisation of deep centre 2-104304
- GaP/Fe, LCAO calcs. of photoionisation of deep centre 2-104304
- GaP/Fe crystal, electron irradiated, IR absorpt. 2-61908
- GaP/Fe³⁺, tetrahedral paramag. complex, distortions effects, ESR study 2-110633
- n⁺GaP-i-Al_xGa_{1-x}As:Cr(Fe)-M structs., I-V characts. 2-104477
- GaSe/Fe, luminescence spectra, absorption edge, struct. defects (*Russian*) 2-93273
- Ge/Fe, ion implantation study by conversion electron Mossbauer spectroscopy 2-77427
- Ge_{0.1}Se_{0.9}/Fe glass, photoluminesc. and excitation spectra 2-93263
- Ge, Se, ..., Fe, glassy, photoconductivity 2-56634
- graphite/Fe, ion implantation study by conversion electron Mossbauer spectroscopy 2-77427
- H effect, on mech. props. (*Japanese*) 2-77878
- INP: Fe, APR study 2-66900
- INP:Fe, Be⁺(He⁺) ion implanted, semi-insulating, photoluminesc. meas. 2-99168
- INP:Fe, deep level optical spectroscopy 2-61400
- INP:Fe, deep level photolum. study 2-104930
- INP:Fe, electron irradiated, EPR study 2-104690
- INP:Fe, impurity diffusion, carrier and impurity profiles 2-115467
- INP:Fe, LEC grown semi-insulating, effect of Fe content on thermal stability 2-97966
- INP:Fe, photocurrent instability, temp. depend. meas., temp. meas. system appl. 2-58824
- INP:Fe, semi-insulating, photoinduced current transient spectroscopy 2-92646
- INP:Fe, semiisolating, photocond. mechanism peculiarities (*Russian*) 2-104435
- INP:Fe, VPE layers, deep impurity levels DLTS and DLOS study 2-98590
- KNbO₃/Fe²⁺, vol. phase hologram form., coherent light amplification, optical phase conjugation 2-65311
- KTaO₃/Fe, electron trap levels, ESR and TSC meas. 2-82703
- KTaO₃/Fe³⁺, cubic cryst. field splitting, anomalous temp. effect, EPR study 2-77366
- LiNbO₃/Fe, cryst., absorpt. spectra, γ -ray effects (*Russian*) 2-93232
- LiNbO₃/Fe, electro-optic cryst., photorefractive effect, holographic study (*German*) 2-57057
- LiNbO₃/Fe, emission study of surface states 2-66608
- LiNbO₃/Fe, ferroelectric, anomalous current due to electron drag, photovoltaic effects 2-72027
- LiNbO₃/Fe, influence of irradiat. power on photocurrent 2-56632
- LiNbO₃/Fe, single cryst., Mossbauer spectroscopy 2-110733
- LiNbO₃/Fe, spatially-oscillating photogalvanic current (*Russian*) 2-56644
- LiNbO₃/Fe crystals, anomalous effect of drag of photovoltaic electrons by light 2-110386
- LiNbO₃/Fe electrooptic crystal refractive-index grating, investig. by optical microscopy 2-102916
- LiTaO₃/Fe electrooptic crystal refractive-index grating, investig. by optical microscopy 2-102916

iron continued

- MgCl₂:Fe²⁺, Co²⁺, optical absorpt. spectra 2-93234
 MgCl₂:Fe²⁺, optical absorpt. spectra 2-93234
 MgO:Fe²⁺, colour centres induced by neutron irradiation 2-98081
 MgO:Fe²⁺, quenched crystals, kinetic reactions 2-57380
 MgTiO₃:Fe²⁺, Mossbauer and EPR studies 2-104773
 Mo fibre reinforced composites, porous, stress-strain state during compression 2-116414
 Na₃Al₂F₁₄:Fe³⁺, superposition model for cryst. field parameters, EPR study 2-110632
 Na₂O-PbO-SiO₂:Fe³⁺, glass, spectroscopic behaviour of Fe³⁺ 2-77554
 Na₂O.2SiO₂ glass, Fe³⁺ coordination number 2-97931
 Nb:Fe, electromigration and self diffusion, effective valence, radioactive tracer method (*French*) 2-76756
 Ni ion irradiation, simulation studies 2-109857
 Ni-Fe alkaline battery electrodes, temp. limitations 2-88423
 Ni-Fe cell, sintered Fe electrode struct. obs. 2-93886
 Ni(100) surface, effects of Fe in reactivity 2-78135
 Pb₂Ge₂O₁₁:Fe³⁺ ferroelectric, electret props. 2-116111
 Si:B, Fe, quenched-in trap level at E_c+0.45 eV 2-104291
 Si:Fe, deep levels under hydrostatic press., isothermal capacitance study 2-66477
 Si:Fe, electron beam irradiation, EPR spectra 2-56920
 Si:Fe, heat treated, interstitial impurity, EPR study 2-71439
 Si:Fe, impurity diffusion coeffs., CW laser annealing and SIMS (*French*) 2-110040
 p-Si:Fe, interstitial Fe and Fe-acceptor pairs, DLTS and Hall effect study 2-66476
 Si:Fe, ion implantation study by conversion electron Mossbauer spectroscopy 2-77427
 Si:Fe, local electronic struct., molecular cluster method based on HF approx. 2-92533
 Si:Fe, Ti (In), photoluminescence lines, Fe-Ti complexes 2-104948
 Si:Fe, Zn, donor-acceptor complexes, DLTS and TSC meas. (*German*) 2-98579
 Si:Fe,B, Fe donor activity on heat treatment, elec., DLTS and EPR meas. 2-71911
 Si-Fe contacts, sputter deposited, barrier height meas. 2-110473
 Sn/Fe interface form., chem. interdiffusion, Mossbauer study 2-104171
 SrO:Fe²⁺, ESR dipolar linewidths 2-104688
 TiO₂:Fe, rutile pigments, EPR study 2-104695
 α-Y, fast diffusion and electrotransport of Co, Fe and Ni 2-86933
 YAG:Fe cathodoluminesc. props., Fe ions absence effects 2-110957
 YIG:Fe²⁺, irreversible photomagn. effect 2-98918
 ZnO:Al₂O₃, garnite, behaviour of Cr³⁺ and Fe³⁺ ions 2-98296
 ZnS:Fe, CVD polycrystalline films, incorporation of Fe impurities 2-116379
 ZnSe:Fe, Z 2-116236

iron alloys

- see also *Elinvar*; *Invar*; *iron compounds*; *Permalloy*; *steel*
 Alnico magnets, anisotropic, model for field computation 2-82638
 amorphous alloys and intermetallic compounds, mag. props., prep. method effects 2-115982
 C DyCo_{2-x}Fe_xHy, lattice parameters and mag. characts. 2-56891
 cast, corrosion products in NH₄NO₃ solns., Mossbauer study 2-111378
 cast, grey, local electric arc remelting for generation of wear resistant layers 2-111363
 cast Fe, abrasion-resist., transition wear behaviour 2-88215
 cast Fe, austempered spheroidal graphite, strain hardening 2-93533
 cast Fe, bending test for tension and compression stress-strain curves 2-105401
 cast Fe, cavitation resist. of Cr diffusion coatings 2-72872
 cast Fe, compacted-vermicular graphite, rel. between physico-mech. props. and numerical indexes 2-105337
 cast Fe, fatigue strength, notch sensitivity obs. 2-116534
 cast Fe, graphite morphology in sintered swarf powder from nodular Fe (*Japanese*) 2-83060
 cast Fe, graphite size and spacing effect on elastic const. 2-116481
 cast Fe, graphitic, struct.-prop. relationships 2-93604
 cast Fe, grey, degreaphitized powder, sintering (*Korean*) 2-57318
 cast Fe, grey, fatigue behaviour and mean effects 2-93603
 cast Fe, grey, stress-strain simulation model 2-93562
 cast Fe, grey, superficial heat treating with CO₂ laser radiation 2-116611
 cast Fe, high strength, γ→γ' phase transform., effect of initial struct. and heating rate 2-72695
 cast Fe, hot-worked high-strength, kinetics of isothermal breakdown of austenite 2-105140
 cast Fe, hypoeutectic, Ce microdistrib. between struct. components, wide solidification range 2-99393
 cast Fe, nodular, freq. spectra of acoustic emission 2-62326
 cast Fe, nodular, statistical study of graphite and pearlite (*German, English*) 2-111423
 cast Fe, nodular graphite, min. annealing (*French*) 2-88105
 cast Fe, resonance testing 2-62302
 cast Fe, solidification kinetics, flake and nodular graphite 2-72688
 cast Fe, spheroidal graphite, fatigue strength of machined and as-cast surfaces 2-93602
 cast Fe, thermodynamic stimulus to graphitisation, alloying elements influence, chilling action 2-105139
 cast Fe, white and grey, Cr₂C₃ diffusion layer form. 2-83289
 cast Fe type medium, grey yield limit and energy dissipation, strain/temp. coupling effect (*Polish*) 2-83180
 cast Fe-Al-Cu, high strength, effect of Al-Cu additions (*Korean*) 2-67311
 cast Fe-Mg, nodular, mech. props. and cryst. struct., effect of heat treatment 2-83113
 corrosion in atmos. containing C and O₂ 2-88276
 dilute, impurity hyperfine fields, press. and temp. depend. 2-104610
 dilute, muon spin rot. studies of local mag. fields 2-72394
 ductile and gray, elastic moduli 2-57396
 electrolytic, wear resist. optimisation, math. model (*Russian*) 2-67628
 FeCrAlly surface, oxide layers nuclear reaction anal. 2-99723
 friction glazing, surface melting interpret. of white etching areas 2-67550
 grain boundary segregation and embrittling effect of P 2-62187
 gray cast Fe, cooling rate influence on eutectic cell struct. and mech. strength (*Japanese*) 2-62115
 Hastelloy alloy G, roles of ordering and impurity segregation as H-assisted crack propag. 2-57481
 Hastelloy C-276 and G, Ni-base stainless alloys, H transport rel. to H embrittlement 2-99539

iron alloys continued

- Hastelloy X, carburization protection with Ti-Si enriched layers 2-116619
 Inconel 600, Cr depletion at grain boundaries, detection 2-60996
 Inconel 600, mechanically polished and sand- and bead-blasted, thermal outgassing props. 2-110161
 Inconel 600, Ni-base superalloy, corrosion behaviour in high temp. steam, effect of grain size 2-67615
 Inconel 600, SCC using const. strain rate test 2-57520
 Inconel 600, stress corrosion cracking in high-temp. water 2-83297
 Inconel 600 alloy, stress corrosion cracking 2-83298
 Inconel 625, high-temp. air oxidation 2-80115
 Inconel 625, sequentially He⁺ implanted, surface exfoliation suppression 2-76522
 Inconel 718, Ni-base superalloy, low cycle fatigue, stress-strain behaviour 2-116516
 Inconel alloy 600, stress corrosion cracking in PWR boilers 2-80124
 Inconel X750, age hardenable, stress corrosion cracking in hot water, rel. to prior heat treatment 2-83299
 Inconel X750, stress corrosion cracking, yield strength, rel. to heat treatment, Zr levels 2-83300
 Inconel X-750, fatigue and creep crack growth at elevated temps., effect of environment 2-99536
 irreversible magnetising properties in amorphous and crystalline material, propag. props. 2-87539
 liquid Fe-base ternary system, H diffusivity estimation 2-115443
 liquid ternary system, N diffusivity estimation 2-115446
 α'-martensite, crystallographic parameters (*Russian*) 2-91872
 martensite produced by cooling austenite with coherent inclusions, cryst. struct. calc. (*Russian*) 2-67347
 metallic glass ribbon, plate wave velocity and attenuation, mag. field depend. 2-77350
 metallic glasses, (A₂B_{1-x})₇₅P₁₀B₅Al₃, A and B=Fe, Co, Ni, Mn or Cr, mag. phase diagrams 2-92931
 Metglas 2826, Ni-Fe-base metallic glass, dynamically compacted, mech. props. 2-99527
 Permalloy, pulse plating system for high-resolution deposits 2-62079
 Permalloy-FeMn system, uniaxial anisotropy temp. depend. 2-72192
 quantitative chem. anal. by SIMS 2-99743
 rare earth alloy, R₂(Co_{1-x}Fe_x)₁₇, magnetic anisotropy 2-72191
 rare earth alloys, R_{0.4}Fe_{0.6} (R=Pr, Sm, Gd, Tb, Er), melt-spun coercivity, quench rate depend. 2-72285
 rare earth alloys R₂(Co_{1-x}Fe_x), magnetic anisotropy phase diagram 2-98883
 rare earth-Si-Fe alloys, self-powdering, X-ray diffr. and electron microscopy invest. (*Chinese*) 2-62249
 Sm₂(Mn_{1-x}Fe_x)₂₃, mag. props. study 2-87542
 stainless alloys, surface wave studies of H damage incubation time 2-111296
 Stellite-6, in fission reactors, ⁶⁰Co release rates 2-80114
 superalloys thermodynamics, activity coeffs. of Al, Ti, Cr, Fe, Co, Ni, Mo and W 2-99390
 white cast Fe powders, enhanced densification by cyclic phase transformations under stress 2-111110
 Ag-Fe(16.8 wt.%), mag. double transition, Mossbauer study 2-87503
 Al-alloys, Mossbauer study of Fe impurities 2-56997
 Al-Co-Fe, electron irradiation, ⁵⁷Fe diffusion, Mossbauer study 2-92254
 Al-Co-Fe system, phase equilibria 2-111138
 Al-Cu-Mg-Mn-Si-Fe sheet, fracture toughness and crit. crack length, inhibiting layer effect 2-72826
 Al-Fe, dil. tilt boundary detachment from impurity 2-81798
 Al-Fe dil., electron irradiation, self-interstitial-impurity complexes, internal friction study 2-56007
 Al-Fe, dil. alloy, electron irradiation, frozen free split phenomena, mech. relax. study 2-56084
 Al-Fe, Fe impurity mag. moment, cluster approx. calc. with k-dependent boundary conditions (*Russian*) 2-115972
 Al-Fe, moving grain boundary double successive detachment from adsorbed impurity 2-115254
 Al-Fe, solid solns., secondary quenching defects features 2-62153
 Al-Fe, twin-rolling casting, centreline segregation 2-116435
 Al-Fe alloys, Fe profile meas. using SIMS and SEM 2-109999
 Al-Fe-Mg (0.25, 0.11 wt.%) alloy, alternating periodic serrations in tensile curves 2-99497
 Al-Fe-Si alloys, commercial purity, DC casting, form. of intermetallic cpds. 2-88060
 Al-Fe(4wt.%), STEM-EDS X-ray microanal. of rod-shaped precipitates 2-67795
 Au-Fe, dil., electron irradiated, damage rates 2-66067
 Au-Fe, dil., mag. impurity effects studied by tunnelling in supercond. proximity layers 2-61660
 Au-Fe, dilute, thermoelectric power meas. technique at low temp. (*French*) 2-101419
 Au-Fe, spin glass, anisotropy energy at T<T_g transverse susceptibility study 2-66829
 Au-Fe, spin glass alloy, vol. and shape magnetostriction 2-104674
 Au-Fe spin glasses, at short-range order, X-ray determ. 2-92941
 Au-Fe spin glasses, dynamics, muon spin relax. study 2-116106
 Au-Fe spin glasses, time and field depend. of magnetisation 2-72216
 Au-Fe₂ spin glass, AC susceptibility, Mossbauer and anomalous Hall effect, mag. hysteresis, review 2-56866
 Au-Fe-Co system, permanent magnet material for ornamental appls. 2-56890
 B-Fe(Ni), phase comp. and cryst. struct. meas. 2-88055
 B₂₀Fe₈₀Ni₂₀, metallic glass, He ion irradiation, sputtering and blistering 2-76521
 Be-Cu-Fe, phase relations in Be rich section 2-111146
 Ce-Fe, nuclear orientation and NMR in oriented nuclei 2-61776
 CeFe₂Si₂, valence state of Ce rel. to thermoelec. power, X-ray absorpt. spectra meas. 2-61448
 Co-Fe, dilute alloy, elec. resist. meas., 4 to 300K 2-87223
 Co-Fe, induced mag. anisotropy, role of stacking faults, expt. study (*Russian*) 2-92897
 Co-Fe, mag. props., review 2-82652
 Co-Fe, magnetostriction meas. at high stress levels 2-82692
 Co-Fe, ternary oxide scale form., diffusional growth, computer simulation 2-62271
 Co-Fe (20 at.%), grain boundary precip., TEM, STEM, SEM and electron channelling study 2-72708
 Co-Fe-Cu-Hf-Sm, permanent magnet, microstruct., SEM study 2-92224

iron alloys continued

- Co-Fe-Cu-Zr-Sm-(Ti), permanent magnet, microstruct., SEM study 2-92224
- Co-Fe-Nb alloy, magnetisation reversal and Barkhausen effect 2-72277
- Co-Fe-Nb semihard mag. alloy, cold working effects on precipitate morphologies rel. to mag. hysteresis 2-92962
- Co-Fe-Si-B amorphous ribbons, with induced mag. anisotropy, influence of applied tensile stress on power loss 2-82686
- Co₇₀Si₂₅Fe₅B₁₀, amorphous, crystn., Mossbauer and X-ray diffr. study 2-103636
- (Co_{0.78}Fe_{0.22})₃V alloy, ordered, microstruct. 2-72719
- Co₅₈Ni₁₀Fe₃Si₁₁B₁₆, amorphous, annealing effects and short range ordering 2-82588
- Co₅₈Ni₁₀Fe₃Si₁₁B₁₆, surface conditions influence in mag. props. 2-82593
- Co₅₈Ni₁₀Fe₃Si₁₁B₁₆, amorphous ferromag. alloys, anal. of coercivity 2-87538
- Co₅₈Ni₁₀Fe₃Si₁₁B₁₆ ribbons, domain pattern annealing effect 2-92978
- Cr-Fe, antiferromagnetic, high press. phase diagram, neutron scatt. study 2-116000
- Cr-Fe, mag. first-order transition, susceptibility and latent heat study 2-98880
- Cr-Fe-C alloy with precip. (Cr,Fe)₂₃C₆ phases, nonrandom site occupation, parameters 2-72705
- Cr-Fe-V alloys, mag. susceptibility and thermal expansion 2-98855
- Cr-Ni-Fe, free energy Kohler method rel. to subregular model 2-62103
- Cr-Si-Fe (2, 0.5 wt.%), mag. behaviours in commensurate spin density wave state 2-92882
- CrCoFe permanent magnet, powder metallurgy processing 2-72652
- CrFe₂, itinerant electron systems with local mag. moments, paramag. state, static props. 2-98837
- Cr-Al-Fe, surface oxidation, suppression during laser surface treatment 2-83294
- Cu-Fe, containing α -Fe particles, back stress hardening and static and dynamic hardening 2-67358
- Cu-Fe, Fe impurity, mag. moment, cluster approx. calc. with k-dependent boundary conditions (Russian) 2-115972
- Cu-Fe, spin glass state form. invest. (Russian) 2-56875
- Cu-Fe alloys, solid soln. to precip. hardening transition, mech. props. 2-105172
- Cu-Fe dil. alloys, internally oxidised, elec. and mag. props. 2-98620
- Cu-Fe electron irradi., rad. induced segregation at internal sinks 2-86731
- Cu-Fe spin glass, elec. resist., Hall effect, mag. susceptibility, and EPR meas. (Russian) 2-82602
- Cu-Ni-Fe, micromagnetic aged alloy, mag. susceptibility and elec. resist. meas. (Russian) 2-98885
- Cu-Ni-Fe, superplasticity and form. of microduplex struct. (Japanese) 2-72769
- Cu-Ni-Fe disperse ferromag. particles, mag. state transition with charge in interparticle distance (Russian) 2-104665
- Cu-Ni-Mn-Fe (45.19, 0.95, 1.40 wt.%) constant wire, elec. resist., press. effect (Japanese) 2-98623
- CuFe dilute mag. alloys, g-factor, mag. field splitting of microcontact spectrum (Russian) 2-98527
- Cu₉₀Zr₁₀Fe₁₀, amorphous, thermoelec. powers and resistivities 2-98611
- Dy-Fe, hyperfine fields, Mossbauer spectra obs. 2-99005
- Dy-Fe intermetallic cpds., mag. and cryst. props., X-ray and Mossbauer study 2-92877
- Dy₂Fe₁₇, cryst. and mag. props. 2-86626
- Dy₂Fe₁₇Al₃, Mossbauer study 2-87636
- Dy(Fe,Al)₁₇, Laves phases, mag. and cryst. props., X-ray and Mossbauer study 2-92899
- Dy₂(Fe_{1-x}Co_x)₁₇, spontaneous magnetostriction 2-77356
- Dy(Fe_{1-x}Ga_x)₁₇, mag. props. and Mossbauer spectra, 4.2 to 293K (Russian) 2-104657
- Dy_{2-x}YFe_{17-x}, mag. props. 2-115984
- ErCo₅Fe₅, Laves phase cpds. and their hydrides, mag. behaviour 2-56855
- ErFe₂, spin polarised photoemission probing of magnetism 2-67184
- ErFe₂, spin wave temp. depend. 2-104598
- EuFe₂Al₃, mixed valence cpd., magnetically ordered, XPS study 2-56513
- (Fe,Ni)₂V long range ordered alloy, resistance to neutron and ion irradi. 2-85217
- (Fe,Ni)₂V, long-range ordered alloys, fusion reactor appl., mech. props. 2-85218
- Fe based metallic glasses, industrial appl. (Japanese) 2-77325
- Fe-⁵⁷Mn, NMR ON study 2-98971
- Fe-(Si)-C, grey, microstruct. and abrasive wear mechanism (French) 2-116557
- Fe-Al, dislocation disloc. and fault energies (French) 2-98106
- Fe-Al, electronic struct., KKR-CPA calc. with muffin-tin pot. model 2-66431
- α -Fe-Al, ion implanted paramagnetic, diffusion of Al 2-76731
- Fe-Al, Mossbauer spectra hyperfine struct. and ordering anal., density function reconstruction 2-87643
- Fe-Al, pseudoelasticity and slip reversibility, optical and electron microscopy obs. 2-111221
- Fe-Al (10 to 50 at.%), quenched from 1100°C, 10 to 26.5 at.% Al during tempering (German) 2-111215
- Fe-Al (12 wt.%), high permeability mechanism, soft mag. props. 2-82654
- Fe-Al (30.5 at.%), plastically deformed, ordered, antiphase domain boundary tubes, electron microscopy study 2-72784
- Fe-Al (40 at.%), ordered, recovery after 20K neutron or electron irradi. 2-56043
- Fe-Al (40 at.%), quenched, nucleation of dislocation helices (French) 2-55969
- Fe-Al (40 at.%), quenched or electron irradi., nucleation of dislocation loops (French) 2-55968
- Fe-Al (45 at.%) film, electronic struct., X-ray emission spectra study 2-61338
- Fe-Al alloys, order-disorder phase transition by neutron diffr. 2-115401
- Fe-Al bronze, laser-surface-melted self-quenched, cavitation erosion 2-76491
- Fe-Al-C, abnormally high tetragonality of martensite lattice, origin 2-97996
- Fe-Al-Hf oxidation, Al₂O₃ scales with oxide dispersions, peg formation obs. 2-93670
- Fe-Al-Mo-Zr alloys, precip. hardening by ZrC 2-93524
- Fe-Al-O, liq. solubility of oxides, prediction 2-86889
- Fe-Al-Si, sputtered granules, characters, before and after annealing (Russian) 2-67368
- Fe-Al-Sn, Mossbauer study of spin and charge density changes 2-116102

iron alloys continued

- Fe-Al(Cr), elastic modulus and internal friction, mag. field effect 2-116500
- Fe-Al(V)(Si), dilute alloy, electron irradi., impurity-interstitial trapping sites, mag. aftereffect spectra study 2-56895
- Fe-B, amorphous, elastic moduli, hardness and density 2-99472
- Fe-B, amorphous, heat treatment conditions influence on crystn. and struct. (Russian) 2-65868
- Fe-B, amorphous and cryst., electron irradi., vacancies, elec. cond. study 2-92038
- Fe-B, quenched from liq state, crystn., microstruct. and hardness 2-111166
- Fe-B (19.1 wt.%), amorphous, structural transitions under thermomagnetic treatment (Russian) 2-61130
- Fe-B metallic glass, mag. domains and composition behaviour, neutron scatt. study 2-104651
- Fe-B metallic glass ribbons, mag. hyperfine field distrib., Mossbauer study 2-104763
- Fe-B metallic glasses, comparison of struct. meas. 2-91807
- Fe-B metallic glasses, crystn., calc. and calorimetric meas. 2-71369
- Fe-B metallic glasses, rare earth additives, mag. props. study 2-87498
- Fe-B metallic glasses, secondary ion emission, sensitivity by factors, matrix effect 2-99289
- Fe-B metallic glasses, transition metal substituted, mag. props. and thermal stability 2-87497
- Fe-B-Cr(Co)(Ni), metallic glasses, crystn. behaviour 2-71368
- Fe-B-Si amorphous ribbon, crystn., domain struct. and magnetisation study 2-71363
- Fe-B-Si metallic glass, crystn. kinetics, DSC study 2-71364
- Fe-B-Si-C alloy, amorphous, effect of field annealing angle on mag. props 2-82671
- Fe-B-Si-C amorphous ribbon, mag. props., deleterious effect of Al 2-87525
- Fe-B-Si-C(Co), Metglas 2605, magnetostriction and mag. anisotropy, meas. using magnetisation loops under stress 2-77352
- Fe-B-Si-Co(C), Metglas 2605, Mossbauer and magnetoelastic coupling 2-77432
- Fe-B-Si(Cr) metallic glass ribbon, elec. resist. free volume depend. 2-110322
- Fe-base superalloy A-286, effect of composition and high energy rate forging on precipitation 2-111183
- Fe-based ternary solid solns. containing N and substitutional solute, thermodynamics 2-98289
- Fe-Bi-Si metallic glass, form. and mag. props. 2-103648
- Fe-C, dil., primary recrystn. textures 2-57372
- Fe-C, ferrite, C cluster formation, critical cluster size, computer calc. 2-67340
- Fe-C, high purity, softening and hardening, H-induced 2-88096
- Fe-C, phase equilib., small alloying additions influence (Czech) 2-116424
- Fe-C (1.3 wt.%), martensite, acoustic emission during ageing, microcracking 2-57387
- Fe-C system, austenite+liquid phase boundaries, expt. determ. by DTA 2-105125
- Fe-C-P (1.4, 0.02 wt.%), stereological technique appl. to martensitic transform. 2-111410
- Fe-C-Si melts, thermodynamic study 2-71668
- Fe-Ce-C, ternary system, liquidus and isothermal section at 8000 and 950°C 2-88061
- Fe-Co, BCC, mag. moments and lattice constns., band theory 2-72133
- Fe-Co, order-disorder transition, band theory 2-98268
- Fe-Co films, IR absorpt. props. meas., order-disorder phase transition effect (Russian) 2-93297
- Fe-Co monocryst. alloy, surface comp., ion bombardment and annealing effects, Auger study 2-71782
- Fe-Co powder, form., struct., and mag. props., electrolysis conditions effect 2-83063
- Fe-Co-Bi, amorphous film, magnetisation, Mossbauer study 2-72263
- Fe-Co-Cr system, phase diagram, thermodynamic evaluation 2-72667
- Fe-Co-Mn-V cryogenic magnetostrictive transducer 2-81200
- Fe-Co-Ni activity measurement, implications for solar nebula condensation processes 2-84115
- Fe-Co-Ni system, mag. moment, CPA calc. (Russian) 2-115981
- Fe-Co-V, Vicalloy-2, phase and struct. transitions, mag. props. (Russian) 2-61714
- Fe-Co-W semihard mag. alloys for remanent reed switch appl. 2-82626
- Fe-Cr, diffusion of S, activation energy, comp. depend. 2-86939
- Fe-Cr, electron irradi., rad. induced segregation at internal sinks 2-86731
- Fe-Cr, high purity, corrosion resistance and acid and chloride media (Japanese) 2-105373
- Fe-Cr, oxide film, Auger sputtering profiles, quantitative interpretation 2-82962
- Fe-Cr, oxide scale form. in air at elev. temp., Raman obs. 2-62264
- Fe-Cr, packet martensite, struct. changes during annealing, electron microscopy study (Russian) 2-99425
- Fe-Cr, passive film, ESCA, AES and SIMS study 2-111366
- Fe-Cr, varying corrosion rate system, monitoring in H₂PO₄ 2-67608
- Fe-Cr (0-15 wt.%), mech. props. changes by fast neutron irradiation 2-67504
- Fe-Cr (2.5 wt.%), Cr₂O₃ forming alloys, corrosion in H₂-H₂O-H₂O atmosphere 2-77982
- Fe-Cr (32 at.%) supersaturated solid solns., spinodal decomp. at 470°C, precip. morphology 2-105162
- Fe-Cr (45.5 at.%), σ phase form., Mossbauer effect study 2-104776
- Fe-Cr alloy, decomposition in unstable state, neutron small angle scatt. study 2-61145
- Fe-Cr alloys, existence of spin glass region 2-66830
- Fe-Cr alloys oxide film growth, vibr. technique obs. 2-83311
- Fe-Cr based alloys, damping capacity, mag. field, heat treatment and cold working effects 2-57393
- Fe-Cr system, lattice dynamical parameters, X-ray diffr. study (Russian) 2-61101
- Fe-Cr-Al, corrosion in H₂/H₂O/H₂S mixtures at 1200°C 2-105380
- Fe-Cr-Al, corrosion resist. meas. in coal gasification atm., Cr conc. effects 2-93669
- Fe-Cr-Al (20, 4.5 wt.%), oxide dispersion strengthened, long-term high velocity oxidation and hot corrosion testing 2-88274
- Fe-Cr-Al (22.4 wt.%), void form. mechanism at substrate oxide interface 2-67610
- Fe-Cr-Al alloy, wrought, prep. and charact. 2-67249
- Fe-Cr-Al alloys, rapidly quenched, microstruct., mech. props., elec. cond. 2-111332

iron alloys continued

- Fe-Cr-Al-Hf, corrosion scales, elevated-temp., erosion rate 2-67570
 Fe-Cr-Al-P-C alloys, amorphous corrosion resist. 2-78016
 Fe-Cr-Al(22, 5.5wt.%), sulfidation, far-from-equilibrium phenomenon 2-62279
 Fe-Cr-B amorphous Invar alloy, Curie temp. and high field susceptibility, press. effects 2-72322
 Fe-Cr-C (31.5 wt.%) martensite cryst., midribs (*Russian*) 2-115249
 Fe-Cr-Co permanent magnets, mag. props. and Mossbauer effect 2-72282
 Fe-Cr-Co permanent magnet alloys, coercivity mechanism obs. 2-92971
 Fe-Cr-Co-Mo-Ti (24, 15, 2, 0.5 wt.%), magneto alloy, machinable, microstruct. and props. (*Chinese*) 2-72261
 Fe-Cr-Co-Nb-Al, high-coercivity, microstruct. rel. to mag. props. 2-111333
 Fe-Cr-Co-W, mag. props. and cryst. struct. (*Russian*) 2-92970
 Fe-Cr-Ni, austenite-ferrite struct., tensile props. and fracture (*Japanese*) 2-105239
 Fe-Cr-Ni, neutron irradi., swelling under electron irradi., reactor conditioning effect 2-109837
 Fe-Cr-Ni, ternary phase diagrams, computer calc. (*Korean*) 2-67289
 Fe-Cr-Ni alloys, electron-irrad., swelling and Ni segregation 2-111182
 Fe-Cr-Ni alloys, neutron irradiated, defect recovery 2-66074
 Fe-Cr-Ni-Al, NiAl precipitation during ageing 2-105156
 Fe-Cr-Ni-Al coatings, for resisting fretting wear in temp. range 20-700 °C 2-88291
 Fe-Cr-Ni-Mn-Si-Al-REM alloys, heat resist., expt. design appl. 2-116604
 Fe-Cr-Ni-based alloys, commercial, electron irradi., void swelling 2-103820
 Fe-Cr-Si (18.2 wt.%), corrosion resist. meas. in coal gasification atm., Si additions' effect 2-93668
 Fe-Cr-Ti-Mo-TiO₂, dispersion strengthened, void swelling in HVEM, influence of fabrication procedure 2-111189
 Fe-Cr-Ti(Si), ion irradiation, void swelling and solute segregation 2-85212
 Fe-Cr-(Al), oxidation, high temp., wet and dry atmos. (*Japanese*) 2-83283
 Fe-Cr-(Mo), Neel temp. and elec. resist., mag. moment-spin density wave coupling 2-82573
 Fe-Cr-(Mo), reaction with Cl₂ gas, kinetics and mechanism 2-67639
 Fe-Cr(Al), mech. props., effect of fast neutron irradi. 2-103844
 Fe-Cr(Ni)(Mn) solid solns., vol. effects in thermodynamics at high temps. 2-61172
 Fe-Cu, precipitation during annealing, after low temp. electron irradi. (*Russian*) 2-116445
 Fe-Cu, sintered, mech. props., effect of steam treatment and age-hardening 2-88097
 Fe-Cu, sintering, liq. phase, grain coarsening kinetics 2-111111
 Fe-Cu, thermal expansion of inclusions 2-61180
 Fe-Cu binary alloy, selective oxidation, optical, X-ray and SEM obs. 2-99605
 Fe-Cu wire reinforced Cu-Fe alloy, age hardening (*German*) 2-111192
 Fe-Cu-Ni (2.2 at.%), e-Cu precip. on interphase boundaries, orientation relationships, electron microscopy study 2-72707
 Fe-FeSi, hypereutectic films, solidification, lamella to dendritic struct. transition 2-57341
 Fe-FeSi, liquid hypoeutectic alloy, solidification, obs. by droplet method 2-67309
 Fe-H, anomalous plastic self-deform. (*Russian*) 2-62168
 Fe-H system, T-P phase diagram at temps. to 450°C and pressures 6.7 GPa 2-57335
 Fe-Mn, amorphous, ferromagnet-spin glass transition, ESR linewidth meas. 2-77305
 Fe-Mn, dil., ferromagnetic antiferromagnetic interactions (*Russian*) 2-77282
 Fe-Mn, electron struct. and mag. state, CPA calc. (*Russian*) 2-87135
 Fe-Mn, ϵ - α + β transform. on heating 2-105142
 Fe-Mn, liq., activity coeff. of Mn, meas. by isobaric method (*Japanese*) 2-83084
 Fe-Mn, microstruct. and phase transform. mechanism, lenticular struct. origin 2-99424
 Fe-Mn, shape memory and plasticity transform., superelasticity (*Russian*) 2-67332
 Fe-Mn alloys, γ - α polymorphic transition and α -phase struct. (*Russian*) 2-103684
 Fe-Mn electron irradi., rad. induced segregation at internal sinks 2-86731
 Fe-Mn ferromagnetic solid soln., electron density perturbation, residual resistivity 2-77019
 Fe-Mn-Al-C, nonequilib. ordered austenite wire fabrication by in-rotating-water spinning method, mech. props. 2-93532
 Fe-Mn-Cr-Mo-C-P, metallography rel. to sintering 2-116665
 Fe-Mn-Cr-Ni systems, alloy comp. effects on lattice parameters regarding γ , ϵ and α phases (*German*) 2-88058
 Fe-Mn-Ni alloys, influence of comp. and plastic deform. on paramag. phase content 2-83246
 Fe-Mn-P-B-Al alloys, amorphous, evidence for spin-glass phase transition 2-72218
 Fe-Mn-Si, shape memory effect in γ - ϵ martensitic transform. 2-83114
 Fe-Mn-Si (30, 1 wt.%), single crystals., hardening due to pre-existing ϵ -martensite 2-116493
 Fe-Mo system, phase diagram and thermodynamic props. 2-111137
 Fe-Mo-Cr, σ phase, range of stability 2-62100
 Fe-Ni, atomic ordering effects on mag. props., superlattice form., TEM study 2-92966
 Fe-Ni, ferrite-austenite orientational relationships during γ - α transformation (*Russian*) 2-93505
 Fe-Ni, ferromagnetic state, electronic struct., electron-magnon interaction effects 2-82217
 Fe-Ni, galvanic, microindentation hardness, deposition parameters influence (*Russian*) 2-67626
 Fe-Ni, laser surface alloying, mass transport effects, theory 2-93660
 Fe-Ni, liq., normal spectral emissivity, 645 nm, comp. depend 2-81992
 Fe-Ni, packet martensite, struct. changes during annealing, electron microscopy study (*Russian*) 2-99425
 Fe-Ni, passive film exam. by AES 2-57513
 Fe-Ni, secondary ion emission under O₂⁺ bombardment, oxidation 2-82980
 Fe-Ni, splat-quenched, martensitic transform., microstruct. and kinetics 2-57349
 Fe-Ni (29.9 wt.%), anomalous diffusion of C, martensitic transform. role 2-71727

iron alloys continued

- Fe-Ni (31.2 wt.%); direct and reverse martensitic transforms., impulse duration influence (*Russian*) 2-67335
 Fe-Ni (32 wt.%), plate martensite, deformation on cold rolling 2-57373
 Fe-Ni alloys, critical, mag. struct., Arrott plots and Mossbauer spectra 2-104615
 Fe-Ni alloys, low temp. pulsed action, γ - α transitions, radiative tracers (*Ukrainian*) 2-105141
 Fe-Ni based austenitic alloys, electropolishing effect on struct. state 2-78014
 Fe-Ni film, struct. ordering and mag. anisotropy, Mossbauer study (*Russian*) 2-93074
 Fe-Ni films, periodic domain walls interactions, electron microscopy study (*Russian*) 2-87560
 Fe-Ni Invar alloys, magnetocrystalline anisotropy, torque meas. 2-110576
 Fe-Ni martensitic alloys, tempering behaviour in cryst. microstruct. (*Korean*) 2-83144
 Fe-Ni-Al system, phase equilib. and cryst. struct. of ternary phases 2-99399
 Fe-Ni-Al-Co-Cu;Ti, thermomag. treatment, struct. form. and mag. props. 2-62152
 Fe-Ni-B based amorphous ferromags., aging effects on mag. props. 2-98909
 Fe-Ni-B metallic glass, mag. domains and composition behaviour, neutron scatt. study 2-104651
 Fe-Ni-B-Si amorphous alloys, spin glass, mag. viscosity 2-72217
 Fe-Ni-C, martensite, physical-metallurgy characts. of unstable flow (*Czech*) 2-67437
 Fe-Ni-C, nucleation of burst martensite 2-57351
 Fe-Ni-C, substruct. of lenticular martensite 2-72697
 Fe-Ni-C (24, 0.5 wt.%), plate martensite, deformation on cold rolling 2-57373
 Fe-Ni-C alloys, precipitation and distrib. of carbides, effects on martensitic transform. and electrochem. behaviour (*French*) 2-99433
 Fe-Ni-Co, phase transitions occurring during heating (*Russian*) 2-62119
 Fe-Ni-Co (54, 28.5, 17.5 wt.%), struct. transforms. of FCC phases on heating 2-62121
 Fe-Ni-Co powders obtained by decomp. of carbonyls, Co content influence on phase comp. 2-67294
 Fe-Ni-Co-B-Si-Al, amorphous, initial permeability and long-time stability, freq. depend. 2-72258
 Fe-Ni-Co-Ti, martensite and austenite, disperse γ' particles elastic deform. and γ - α transitions (*Russian*) 2-88078
 Fe-Ni-Co-Ti (23, 10, 10, wt.%), martensitic transformation 2-83118
 Fe-Ni-Cr, A286 superalloy, electron beam welded, fatigue crack growth 2-111300
 Fe-Ni-Cr, Alloy 800, mechanical behaviour at 838K 2-77888
 Fe-Ni-Cr, mass transfer and corrosion in Li, Ni conc. effect 2-72866
 Fe-Ni-Cr, sp. ht. and magnetis. near Curie pt., anomalous behaviour (*Russian*) 2-66836
 γ -Fe-Ni-Cr, spin glass state characts. near crit. conc. (*Russian*) 2-98886
 Fe-Ni-Cr alloys, grain coarsening, influence of second phase particles 2-93511
 Fe-Ni-Cr-Al-Y alloys, high-temp. oxidation, adherence of Al₂O₃ scale 2-105367
 Fe-Ni-Cr-(Al), corrosion in H₂/H₂O/H₂S mixtures at 1200°C 2-105380
 Fe-Ni-Mo, field vaporis., auto-ion mass spectrometry obs. (*Russian*) 2-67198
 Fe-Ni-Mo, martensitic γ to α transform., purity depend. (*Russian*) 2-99426
 Fe-Ni-Mo-B, metallic glasses, annealed, phase transforms 2-67302
 Fe-Ni-Mo-B amorphous alloys, struct. relax., permeability aftereffect and elec. resist. meas. 2-87550
 Fe-Ni-Mo-B ferromag. metallic glasses, mag. and neutron diffr. meas. 2-116027
 Fe-Ni-NbC, phase equilib., struct., mag. props. and hardness (*Russian*) 2-67291
 Fe-Ni-P-B based metallic glasses, Mossbauer study under press. 2-72385
 Fe-Ni-Si (18.3 at.%), martensite aging, precipitated intermetallic phase struct., electron microscopy study (*Russian*) 2-93514
 Fe-Ni-Ti, phys. props., reverse martensitic transform. effect (*Russian*) 2-67334
 Fe-Ni-Ti type N26T3 alloy, martensitic transform. in austenite 2-105145
 Fe-Ni-V, σ phase, range of stability 2-62100
 Fe-Ni-V and Fe-Ni-Co-V, maraging kinetics, specific elec resist. obs 2-105204
 Fe-Ni-Y₂O₃, martensite morphology, affect of inert oxide particle dispersion 2-57352
 Fe-Ni(Si)(Cr), wetting of TiC 2-67597
 Fe-Ni(Ti)(Ga)(Al)(Co)(Pt), flow stress at low temp., influence substitutional elements 2-105213
 Fe-O-Zr(Ti), liq., solubility of oxides 2-98295
 Fe-P, struct. change of grain boundaries due to P segregation 2-67349
 Fe-P alloys, amorphous, elec. resist. 2-77014
 Fe-P alloys, fracture mode and toughness, C effects 2-57484
 Fe-P-C alloys, spin texture, Mossbauer study 2-104757
 Fe-P-C amorphous wires, prod. by in-rotating-water spinning, mech. props. 2-57317
 Fe-P-C metallic glass ribbons, mag. hyperfine field distrib., Mossbauer study 2-104763
 Fe-P-M (M: Ni, Mo), powder premixes, effect of Cu addition on sintering 2-72650
 Fe-P-Ni(Mo), powder premixes, sintered props., effect of Cu 2-88026
 Fe-Pd, dil. alloys, model of mag. behaviour 2-72198
 Fe-Rh, mag. transitions press. depend. and bulk modulus, s-d exchange model (*Russian*) 2-92902
 Fe-Sb-Co(Mn)(V)(Ti), dil., impurity pair interactions, resist. and NMR meas. 2-82317
 Fe-Sb(-Ni), ultra-high purity, interactive co-segregation of Sb and Ni at grain boundaries 2-93512
 Fe-Si, corrosion cracking, role of H 2-67653
 Fe-Si, elec. steel grain-orientated sheets, commercial production, review 2-83243
 Fe-Si, elec. steel sheets, nonoriented, mag. core losses reduction, review 2-82649
 Fe-Si, electric steel sheets, fully processed mag. anisotropy, cutting strains effect 2-82590
 Fe-Si, electric steel sheets, semi-processed, mag. anisotropy, cutting strains effect 2-82591
 Fe-Si, electric steel sheets, mag. losses with large biasing DC flux density 2-82650

iron alloys continued

- Fe-Si, electrical steel, mag. induction meas. in weak mag. fields 2-89753
 Fe-Si, electron irradi., defect cluster nucleation at coherent twin boundaries, electron microscopy study 2-66036
 Fe-Si, electrotechnical steel type 2011, mag. induction anisotropy determ. 2-92898
 Fe-Si, grain orientated, mag. loss meas. using Epstein square, error anal. 2-79620
 Fe-Si, grain orientated elec. steel, decarburization rate related to surface oxidation, math. model 2-83284
 Fe-Si, grain orientated laminations, coercivity meas. 2-82647
 Fe-Si, grain oriented, domain struct. obs. using high voltage SEM 2-87527
 Fe-Si, grain-oriented and amorphous ribbon, power loss, mag. flux harmonics and domain motion meas. 2-82648
 Fe-Si, high permeability elec. steel, Goss texture, surface energy and primary texture effects 2-83135
 Fe-Si, multistereo synchrotron X-ray topography, defects depth determ. 2-91722
 Fe-Si, oxidation, theoretical anal. 2-67618
 Fe-Si, oxide layer composition, influence on mag. props. 2-56893
 Fe-Si, oxide scale removal, interface exposure 2-105383
 Fe-Si, plastically deformed sample, near-surface dislocation sources 2-98088
 Fe-Si, rolling rel. between strain in deform. zone and texture 2-72716
 Fe-Si, single cryst., domain struct. depend. on freq. of demagnetising fields 2-87526
 Fe-Si, surface segregation temp. depend. (Russian) 2-86999
 Fe-Si (1-4 wt.%), simultaneous creep and oxidation, 973-1073K 2-105214
 Fe-Si (2.9 wt.%), slip geometry, hydrostatic press. effects, expt. study (Russian) 2-116499
 Fe-Si (3 wt.%), cold rolling induced mag. anisotropy use for cryst. defect analysis (Russian) 2-67574
 Fe-Si (3 wt.%), cryst. defects, neutron diffr. topography study 2-86519
 Fe-Si (3 wt.%), domain struct. dynamics and EM losses, relationship to cryst. lattice (Russian) 2-87524
 Fe-Si (3 wt.%), fatigue crack tip strain loop under single overload 2-77900
 Fe-Si (3 wt.%), grain orientated sheets, effect of spike closure domains on remanence and magnetisation curve 2-82630
 Fe-Si (3 wt.%), grain oriented, magnetostriction meas. at high stress levels 2-82692
 Fe-Si (3 wt.%), grain orientation and core loss relationships in high permeability materials 2-83245
 Fe-Si (3 wt.%), grain oriented, Barkhausen noise meas. 2-87537
 Fe-Si (3 wt.%), mag. loss model 2-82655
 Fe-Si (3 wt.%), mag. props. meas. using single strip tester and Epstein frame 2-83308
 Fe-Si (3 wt.%), magnetisation reversal prop., Barkhausen expts. 2-82656
 Fe-Si (3 wt.%), magnetoelastic hysteresis loop rel. to phase depend. mech. energy of vib. (Russian) 2-98927
 Fe-Si (3 wt.%), on-line, single sheet and Epstein power loss testing 2-83307
 Fe-Si (3 wt.%), plastic deform. in micro-and macro-stress regions, 293 to 773K (Russian) 2-99484
 Fe-Si (3 wt.%), plastic deform. around fatigue crack near threshold 2-105315
 Fe-Si (3 wt.%), primary recrystn. grain size, influence on secondary crystn. and texture (Russian) 2-116458
 Fe-Si (3 wt.%), recrystn. texture, effect of deform. methods (Russian) 2-99442
 Fe-Si (3 wt.%), rotational power loss meas., 30 to 100 Hz, using torque magnetometer 2-82651
 Fe-Si (3 wt.%), ruckling process, surface domain wall obs. 2-82632
 Fe-Si (3 wt.%), surface-active Sb influence on recrystn. and texture (Czech) 2-67374
 Fe-Si (3 wt.%), synchrotron X-ray topography, multistereoscopic imaging technique 2-81624
 Fe-Si (3 wt.%), total power loss meas. 2-79621
 Fe-Si (3 wt.%) sheets, grain-oriented, magnetisation mechanisms 2-82657
 Fe-Si (3/4 wt.%), grain oriented, magnetostriction effects at angles to the rolling direction 2-82691
 Fe-Si (3/4 wt.%) grain-oriented elec. steel strip, magnetostriction, stress and temp. effects meas. 2-82690
 Fe-Si (33 at.%) amorphous films, domain struct. characts. 2-82685
 Fe-Si (3.25 wt.%), quasibrittle fracture nucleation under strain twinning conditions (Russian) 2-62193
 Fe-Si (3.25 wt.%) plate, fast crack development mechanism in parallel twin system 2-57482
 Fe-Si (3.5 wt.%) grain-oriented, plastic deform. and fatigue crack growth 2-72785
 Fe-Si (3wt.%) sheets, grain-oriented, core loss heterogeneity 2-72260
 Fe-Si (3wt.%) single crystal, saw tooth domain struct. and charged wall observed in gradient field (Japanese) 2-77321
 Fe-Si (5 wt.%), supercooled ingots, cryst. struct. features 2-67318
 Fe-Si (6 at.%) single crystals, strain rate vs. stress depend. 2-105240
 Fe-Si (≤ 1 wt.%), dil. alloy, oxidation in CO_2 2-67617
 Fe-Si [110] tilt boundaries and grain boundary dislocations TEM study 2-76461
 Fe-Si alloy, single cryst., mag. domain walls, X-ray diffraction contrast obs. 2-87521
 Fe-Si alloys, polycrystalline ribbon form, rapid quenching technique (Japanese) 2-116475
 Fe-Si bicrystalline sample, magnetisation reversal dynamics 2-72259
 Fe-Si electric steel, disperse excess phase formation 2-105165
 Fe-Si oriented alloys with residual S, tensile stress effect on mag. props. 2-72325
 Fe-Si ribbon-form alloys, rapid quenching preparation techniques, soft mag. props. (Japanese) 2-67240
 Fe-Si sheets, mag. domain struct. and stray field behaviour, grain orientation effects 2-82631
 Fe-Si/Zn, diffusion couples, periodic form. of FeSi bands 2-76755
 Fe-Si-Al, dil. alloy, mech. props., elec. cond. and mag. losses meas. 2-83217
 Fe-Si-Al, electric steel sheets, mag. aftereffects meas. 2-82670
 Fe-Si-Al, secondary recrystn. kinetics, Al influence (Russian) 2-93417
 Fe-Si-Al, Sendust, order-disorder transform. and dislocation configuration, TEM study 2-83108
 Fe-Si-Al, Sendust polycrystals, plastic deform. (Japanese) 2-57416

iron alloys continued

- Fe-Si-Al, Sendust polycrystals, deformability (Japanese) 2-57417
 Fe-Si-Al, Sendust single cryst., plastic deform. (Japanese) 2-57415
 Fe-Si-Al nonoriented electrical sheet, oxide film form. and props., effect on material quality, AES obs. (German) 2-105386
 Fe-Si-Al Sendust ribbon, rapidly quenched, annealing effect on coercive force 2-72273
 Fe-Si-B, mag. induction, effect of Sb and Sn during secondary recrystn. 2-83244
 Fe-Si-B amorphous wires, produced by in-rotating-water spinning method, mech. props. 2-111233
 Fe-Si-B metallic glasses, substituted, saturation magnetisation 2-87481
 Fe-Si-C, melts, crystn. of primary graphite 2-72687
 Fe-Si-C, primary stage of bainite reaction, TEM obs. 2-83109
 Fe-Si-C, secondary stage of bainite reaction, TEM obs. 2-83110
 Fe-Si; mobility transfer loci owing to orientation aftereffect for steadily moving 180° Bloch wall 2-87528
 Fe-Si(Mo)(C), liq., density, influence of Si, Mo and C 2-61048
 Fe-Si(5 at.%), high temp. phonons, neutron inelastic scatt. meas. 2-56121
 Fe-Si(6.5 wt.%), ribbon formed by melt spinning technique, mag. props. 2-110603
 Fe-Sn, hyperfine field, isomer shift, spin and charge density changes, Mossbauer study 2-93083
 Fe-Sn, phase relations and multiphase diffusion 2-99400
 Fe-Sn metallic glass, struct., forming ability and elec. cond. 2-103653
 Fe-Ti, dil., dislocation relax. peaks and solid soln. softening 2-111224
 Fe-Ti, dil. alloy, vacancy-impurity interaction, positron annihilation study 2-98152
 Fe-Ti, enthalpy of form., short-range order effect (Russian) 2-97982
 Fe-Ti, magnetic aftereffects in specimens containing interstitial solutes and precipitates 2-87551
 Fe-Ti-V-N system, complex nitrides form. in liq. metal 2-67295
 Fe-Ti(Cr)(Mn)(Ni)(Rh)(W), in contact with SiC single cryst., adhesion, friction and wear 2-88199
 Fe-Tribaloy 700 mixture, sintering temp. effect on microstruct. and mech. and tribological props. 2-77775
 Fe-V, mag. moment distrib., diffuse neutron scatt. study 2-72151
 Fe-V, σ -phase and solid soln., V self diffusion coeff. meas. 2-98328
 Fe-V (2.4 at.%), C diffusivity 2-92282
 Fe-V-C, cold rolled, containing carbides, recrystallisation 2-83137
 Fe-V-C ferritic steel, carbide precipitate size, EELS and energy dispersive anal. 2-67362
 Fe-V-Si-Mn-C, internal friction meas. (Russian) 2-88115
 Fe-W-C, n-carbides, struct. stability (German) 2-83097
 Fe-X-C (X=Ti, V, Nb, W, Cr, Mo), C activity, influence of alloying additions (German) 2-93491
 Fe-Zn, electrodeposition, pulse current characts. influence on comp. (Russian) 2-67228
 Fe-Zn, grain boundary migration, diffusion-induced, morphology 2-109811
 Fe-Zr amorphous alloy, ferromag-spin glass transition, magnetisation study 2-72220
 Fe-Zr amorphous sputtered films, elec. and mag. props. 2-71948
 Fe-Zr metallic glass, struct. investig. by X-ray diff. 2-55857
 Fe₂ Zr₆₃, amorphous, mag., Mossbauer, and resist. study 2-72384
 Fe-(Cr), triple beam ion irradi., microstruct. 2-109856
 Fe₃A, low-energy Stoner excitations 2-66798
 Fe₃Al, hyperfine field and mag. moment, Mossbauer study 2-72380
 Fe₃As, mag. phase diagram, critical behaviour 2-56862
 Fe₃Au_{0.8-1}, amorphous films, mag. and transport props. 2-72296
 FeB, compositional and chem. state, XPS study 2-77706
 α -FeB, Mossbauer spectra 2-61803
 Fe_{1-x}B_x, amorphous, electronic struct. 2-66427
 Fe_{1-x}B_x, amorphous, spin waves, inelastic neutron scatt. study 2-72179
 Fe_{1-x}B_x, amorphous, sputtered and liquid quenched, hyperfine field, Mossbauer study 2-104760
 Fe_{1-x}B_x glass, crystn. kinetics, Mossbauer and DSC study 2-103632
 Fe_{1-x}B_x, metallic glass, atomic struct., Mossbauer study 2-103639
 Fe_{1-x}B_x, short range struct., pair distrib. functions, Lennard-Jones pot. 2-103624
 Fe_{100-x}B_x, metallic glass, electrochem. corrosion and Mossbauer spectra, composition and processing parameters effects 2-93640
 Fe_{100-x}B_x, metallic glasses, hyperfine fields and local environment 2-104320
 Fe₂B, high-press. Mossbauer study 2-56994
 Fe₂B₂₃, crystalline to amorphous phase transform. by ion bombardment 2-103629
 Fe₆₀B₄₀ alloy glass, partial radial distrib. functions calc., X-ray and neutron diffr. 2-91814
 Fe₆₀B₂₀, amorphous, aging effects on mag. props. 2-98909
 Fe₆₀B₂₀, amorphous, crystn., annealing, elec. resist. meas. 2-55853
 Fe₆₀B₂₀, amorphous, electronic props., struct. related effects, EELS study 2-67163
 Fe₆₀B₂₀, amorphous, irradiated, structural relax. 2-55864
 Fe₆₀B₂₀, amorphous alloy, ion irradi. effects, conversion electron Mossbauer spectra study 2-61043
 Fe₆₀B₂₀ metallic glasses, response to irradiation with 800 MeV protons 2-80188
 Fe₆₀B₂₀, Metglasses, thermomagnetic treatments 2-88110
 Fe₆₁B₁₉ metallic glass, struct. factor, time of flight neutron diffr. study 2-103644
 Fe₆₃B₁₈ metallic glass, as-quenched, low-temp. relax. under tensile stress, dilatometer obs. 2-91812
 Fe₆₃B₁₇, amorphous struct. formation on laser irradi. 2-82960
 Fe₆₄B₁₆, amorphous, mag. excitations, neutron diffr. study 2-115992
 Fe₆₅B₁₅ (Fe₇₀B₂₃), metallic glasses, AC magnetisation props. meas. cryst. precipitates effect 2-72851
 Fe₆₅B₁₅, amorphous, struct. and crystn. study by Mossbauer spectroscopy (Russian) 2-93075
 Fe_{67-x}B_x, amorphous, magnetization and magnetoresist. in high mag. fields 2-61740
 Fe_{67-x}B_x, amorphous films, spin glass behaviour and non-ergodicity, FMR study 2-98897
 Fe₆₈B_{32-x}, amorphous, mag. hyperfine interactions, Mossbauer study 2-82764
 Fe₆₈B_{32-x}, amorphous, mag. ordering temp., hyperfine fields, Mossbauer study 2-104755
 Fe₆₈B_{32-x}, amorphous film, sputtered ferromag., Mossbauer investig. 2-66957

iron alloys continued

- Fe₂B_{18-x}Co_x ferromagnets, Auger CVV spectra as probe of electronic struct. 2-76906
 Fe₈₄B_{16-x}C_x glassy, crystallisation, magnetisation 2-55862
 Fe₇₈B₂₀Mo₂ amorphous, crystn., annealing, elec. resist. meas. 2-55853
 (Fe_{0.82}B_{0.18})₁₀₀R_{1-x} (R=Pr, Nd, Sm, Gd, Tb, Dy, Ho, Er), amorphous, exchange interactions 2-72185
 Fe₈₁B₁₄Si₄ glass, spin and energy analysed secondary electron emission 2-87921
 Fe₈₁B₁₄Si₄ metallic glass, struct. relax., effect of quench rate 2-81683
 FeBSiC metallic glass, creep and homogeneous plastic flow 2-105257
 Fe₈₁B₁₃Si₅C₂ amorphous, Mossbauer study 2-99013
 Fe₈₁B₁₃Si₅C₂ Metglas 2605SC, at. rearrangements and cryst. transforms., Mossbauer study 2-103655
 Fe₈₃B₄Si₅C₁₃ metallic glass, crystn. kinetics study using thermoelec. power meas. 2-86575
 Fe₈₀B₅Si₅-Ge_x amorphous, Curie temp. and crystn. behaviour 2-87496
 Fe₈₂B₁₇Si₆ Metglas, ferromag. reson. absorpt. and ferromag. antireson. transmission meas. 2-72353
 FeCo and Fe₅₀Co₅₀Cr₇₀ films, polycryst., subjected to X-irrad., magnetisation (*Russian*) 2-66876
 FeCo, energy band struct. and optical props. due to order-disorder transition 2-82220
 FeCo, heat capacity in range 5-300K, anal. of entropy contribs. 2-56211
 FeCo, ordered single cryst., slip systems, compression test obs. 2-93573
 Fe_{80-x}Co_xB₂₀ (Fe_{80-x}Cr_xB₂₀), amorphous, crystn., Mossbauer study 2-103633
 (Fe_{1-x}Co_x)₇₈B₂₂ and (Fe_{1-x}Co_x)₇₂Si₂₈B₂₆ glasses, ⁵⁷Fe substitution effects, Mossbauer study 2-110738
 Fe₆₇Co₁₈B₁₄Si₁ metallic glass, atomic site environments, spin echo NMR study 2-72376
 Fe₆₇Co₁₈B₁₄Si₁ Metglas 2605CO, transverse field annealed, transverse susceptibility and magnetisation 2-72268
 (Fe_{0.65}Co_{0.35})₇₅Si₁₅B₁₀ amorphous, zero-magnetostriction induced mag. anisotropy, formation kinetics meas. 2-72189
 Fe₄₇Co₇₀Si₁₅B₁₀ amorphous struct., X-ray diffr. study 2-65866
 Fe₄₇Co₇₀Si₁₅B₁₀ amorphous zero magnetostriction alloy, mag. aftereffect 2-72290
 Fe₃Co₇₀Si₁₅B₁₀ (Fe₄₀Ni₄₀P₁₄B₆) glassy, free vol., positron annihilation study 2-104987
 (Fe_{1-x}Co_x)₉₀Fe₁₀ amorphous alloys, mag. induced anisotropy meas. 2-92896
 Fe_{0.16}Cr_{0.84} spin glass, mag. relax. meas. 2-110589
 Fe_{80-x}Cr_xB₁₄Si₆ amorphous, magneto-resist. mag. props. 2-71947
 Fe₇₀Cr₁₀P₁₃C₇ amorphous, spin waves 2-92884
 Fe₇₂Cr₁₄P₁₃C₇ amorphous powder, spark erosion prep., corrosion study 2-105384
 Fe₇₄Cr₆P₁₀C₇Si₃ amorphous, appearance pot. spectroscopy, electronic struct. effects 2-105005
 Fe₃Ga, magnetic struct., neutron diffr. obs. 2-92871
 FeGe₂, canted antiferromag., magnetisation meas. (*Russian*) 2-98907
 Fe₃Hf₁₀ amorphous, mag., Mossbauer, and resist. study 2-72384
 Fe₈₀M₁₈B₁₇ amorphous alloy, (M=transition metal), mag. and stress annealing 2-87554
 Fe₈₀M₁₈B₁₇ M=transition metal, metallic glass, Mossbauer and corrosion studies 2-104769
 Fe₈₀M₁₈B₁₇ metallic glasses, (M=transition metal), mag. after-effect meas. 2-87549
 (Fe_{1-x}M_x)₇₅P₁₆B₆Al₃ (M=Ni, Mn), amorphous, mag. props. meas. 2-92880
 (Fe_{0.64}Mn_{0.36})₇₅P₁₆B₆Al₃ spin glass, irreversible response study 2-104594
 (Fe_{0.64}Mn_{0.36})₇₅P₁₆B₆Al₃ spin glass, temp.-field phase diagram 2-104619
 (Fe_{0.65}Mn_{0.35})₇₅P₁₆B₆Al₃ amorphous, ferromagnetism collapse 2-104618
 (Fe_{1-x}Mn_x)₇₅P₁₆B₆Al₃ amorphous, spin corrls. near ferromag.-spin glass crossover point 2-72268
 Fe(Mn,Pt)_{1-x/3} antiferromag. structure, neutron diffr. study (*Russian*) 2-87477
 Fe_{0.968-x}Mn_{0.032} system, Mossbauer and mag. studies 2-82761
 Fe_{0.85}Mn_{0.15}Ti, surface anal. by magnetisation meas. 2-73012
 Fe_{1-x}Mn_xTi, hydrogenation and oxidation characts., Mn additive effect, subsurface role 2-76690
 Fe₇₈Mo₂₀B₂₀ Metglasses, thermomagnetic treatments 2-88110
 (Fe_{0.93}Mo_{0.07})₈₀B₁₀P₁₀ amorphous, mag. excitations, neutron diffr. study 2-115992
 (Fe_{1-x}Co_x)₇₅P₁₆B₆Al₃ amorphous, anomalous crit. behaviour, random anisotropy effects 2-72322
 Fe₆₀Ni₂₅B₁₅ metallic glasses, AC magnetisation props. meas. cryst. precipitates effect 2-72851
 FeNi alloys from Fe meteorites, order-disorder transitions, Mossbauer spectra study 2-67328
 (Fe_{0.75}Ni_{0.25})₇₅B₂₅ high-pressure Mossbauer study 2-56994
 (Fe_{1-x}Ni_x)₇₅B₂₅ amorphous, magnetisation and crystals 2-72266
 (Fe_{1-x}Ni_x)₈₀B₂₀ amorphous hyperfine fields, magnetisation, Mossbauer study 2-104764
 Fe₄₀Ni₄₀B₂₀ amorphous, in-core, reactor irradiated, props. 2-102047
 Fe₄₀Ni₄₀B₂₀ amorphous, neutron irrad. and annealed density changes 2-109850
 Fe₄₀Ni₄₀B₂₀ Co₇₅Fe₁₅Si₅ and Co₃₅Fe₁₅Ni₂₀(SiB)₂₀ amorphous, crystn. in RF mag. field, Mossbauer study 2-103634
 Fe₄₀Ni₄₀B₂₀ metallic glass, short-range ordering during structural relax. 2-71359
 Fe₄₀Ni₄₀B₂₀ metallic glass, rel. between struct. relax. and sp. ht. 2-72750
 Fe₄₀Ni₄₀B₂₀ metallic glass, diffusion rates of Au 2-104057
 Fe₄₀Ni₄₀B₂₀ metallic glass, Vitrovac 0040, crystallisation, TEM obs. 2-116474
 Fe₄₀Ni₄₀B₂₀ surface conditions influence in mag. props. 2-82593
 Fe₄₀Ni₄₀B₂₀ amorphous alloys, influence of heating on mag. props. 2-87535
 Fe_{80-x}Ni_xB₂₀ (Fe_{80-x}Ni_xP₁₄B₆) amorphous, magneto-resist. mag. props. 2-71947
 (Fe₂Ni_{1-x})₈₀B₂₀ glass, mag. props. and crystn., Mossbauer study 2-104754
 Fe₁₀Ni₇₀B₁₀P₄ amorphous, mag. phase transition, magnetisation and DC susceptibility meas. 2-56857
 Fe₁₃Ni₆₇B₁₉Si₁ amorphous, critical mag. behaviour, mag. order disorder transition 2-66821
 Fe₁₀Ni₆₂B₁₄Si₈ amorphous, struct. relax., Mossbauer study 2-72383
 Fe₄₇Ni₇B₁₈Si₁₀ amorphous alloy, ferromag. resonance, neutron effects 2-87597

iron alloys continued

- FeNiCo films, secondary nucl. spin echo signals in NMR and FMR overlap region 2-104741
 Fe₆₅Ni₂₅Cr₁₀ spin glass, magnetic viscosity obs. (*Russian*) 2-72230
 γ-Fe_{2-x}Ni_xCr₁₈ transport and galvanomag. props. near crit. comp., 4.2 to 300K (*Russian*) 2-61444
 Fe₇₃Ni₃₆Cr₁₄P₁₂B₆ Metglas, heat treatment effect on internal friction 2-62151
 Fe₇₃Ni₃₆Cr₁₄P₁₂B₆ thin passive films, comparison of AES and XPS anal. 2-78004
 Fe₇₃Ni₃₆Cr₁₄P₁₂B₆ metallic glass, mag. hyperfine field distrib., Mossbauer study 2-87640
 Fe₇₃Ni₃₆Cr₁₄P₁₂B₆ metallic glass, crystn., hardness and tensile deformation meas. 2-91784
 Fe₇₃Ni₃₆Cr₁₄P₁₂B₆ amorphous and polycryst., He ion bombardment 2-103856
 Fe₇₃Ni₃₆Cr₁₄P₁₂B₆ metallic glass, hydrogen embrittlement 2-116599
 Fe₇₃Ni₃₆Cr₁₄P₁₂B₆ amorphous, Mossbauer study under press. 2-72385
 (Fe_{1-x}Ni_x)_{78-x}Cr_xSi₂₀B₁₂ glass, magnetisation, crystn. and microstruct. 2-77322
 Fe₆₀(Ni₄₀Mn₂₀Mo₂₀)₃₅, effect of external field on spin glass behaviour 2-61716
 Fe₄₀Ni₃₈Mo₁₃ metallic glass, crystn., TEM study 2-65867
 Fe₄₀Ni₃₈Mo₁₃ amorphous, elastic moduli, hardness and density 2-99472
 Fe₄₀Ni₃₈Mo₁₃ amorphous, ion implantation, He bubble and blister formation 2-115314
 Fe₄₀Ni₃₈Mo₁₃ metallic glass, struct. evolution during crystallisation 2-109682
 Fe₄₀Ni₃₈Mo₁₃ metallic glass ribbon, elec. resist. free volume depend. 2-110322
 Fe₄₀Ni₃₈Mo₁₃ Metglas MB 2826, internal stresses and spin texture, Mossbauer study 2-87634
 Fe₁Ni₆₉P₁₄B₆ amorphous, elec. resist. near ferromag. transition 2-87218
 Fe₄₀Ni₄₀P₁₄B₆ amorphous, ferromag. phase transition, mol. field theory 2-72225
 Fe₄₀Ni₄₀P₁₄B₆ amorphous activation energy of crystallisation 2-81681
 Fe₄₀Ni₄₀P₁₄B₆ amorphous, press. distrib. under compression to 250 kbar, fluorescence study 2-83171
 Fe₄₀Ni₄₀P₁₄B₆ amorphous mag. alloys, correlation between power loss and viscosity field 2-87523
 Fe₄₀Ni₄₀P₁₄B₆ amorphous ferromag. alloys, anal. of coercivity 2-87538
 Fe₄₀Ni₄₀P₁₄B₆ amorphous, mag. anisotropy and atomic short-range order, Mossbauer study 2-104607
 Fe₄₀Ni₄₀P₁₄B₆ amorphous films, STEM obs. of crystn. 2-109688
 Fe₄₀Ni₄₀P₁₄B₆ metallic glass, rotational and alternating loss 2-87536
 Fe₄₀Ni₄₀P₁₄B₆ metallic glass ribbons, P conc. meas. using neutron generator (*Russian*) 2-99742
 Fe₄₀Ni₄₀P₁₄B₆ Metglasses, thermomagnetic treatments 2-88110
 Fe₄₀Ni₄₀P₁₄B₆ Metglas 2826, early crystn. behaviour, nucleation mechanisms 2-93500
 Fe₄₀Ni₄₀P₁₄B₆ Metglas 2826, crystn. kinetics, effect of tensile stress 2-103652
 Fe₄₀Ni₄₀P₁₄B₆ amorphous, electron state of Fe (*Russian*) 2-76905
 Fe_{80-x}Ni_xP_{20-x}B_y amorphous ferromag. alloys, mag. aftereffect spectra 2-56894
 Fe₈₀Ni_{80-x}P₁₄B₆ amorphous alloy, mag. props. study, phase diagram 2-110580
 Fe₈₀Ni_{80-x}P₁₄B₆ amorphous alloys, ferromag.-spin glass transition, ferromag. resonance study 2-110648
 Fe₈₀Ni_{80-x}P₁₄B₆ ESR study in reentrant phase 2-72331
 Fe₄₀Ni₄₀P₁₄B₆Al₃ amorphous, elec. resist. near ferromag. transition 2-87218
 (Fe_{1-x}Ni_x)₇₅P₁₆B₆Al₃ amorphous, spin wave and scaling law anal., magnetisation meas. 2-92888
 Fe₄₀Ni₄₀Si₁₄ (P₁₄)B₆ metallic glass, positron annihilation, electron irrad. and heat treatment effects 2-104992
 Fe₄Ni₂Si₃B₁₃ amorphous spin glass, mag. props., Mossbauer effect meas. 2-104765
 Fe₂P, ferromag., sp. ht. meas. 2-92930
 Fe₂P_{1-x} amorphous, electronic struct. 2-66427
 Fe₂P₅Cr₁₀ amorphous, mag. excitations, neutron diffr. study 2-115992
 Fe(Pd_{1-x}Au_x) atomic ordering, quadrupole splitting in Mossbauer spectra 2-104783
 Fe₂Pd_{82-x}Si₁₈ amorphous, spin glass-ferromag. transitions and crit. lines, magnetisation meas. 2-77302
 Fe₂Pt, magnetisation near Curie temp. 2-72275
 Fe₂Pt, ordered, thermoelastic martensitic transform. free energy changes 2-105143
 Fe_{78-x}R_xSi₁₀B₁₂, R=Re, Ru, Os, Ir, Pd, Pt, metallic glass, thermal stability 2-109681
 FeRh, electronic band struct., and mag. order, antiferromag.-ferromagnetic transition 2-82595
 FeRh, paramag., ferromagnetic and antiferromag., band struct., muffin-tin calc. 2-82216
 (Fe_{1.2}Sb)_{1-x}(Fe_{0.65}Sn)_x solid solns., magnetisation, Curie temps. and lattice const. meas. 2-76365
 FeSi, dilute, mag. relax. on electron irrad. 2-61743
 FeSi, mag. susceptibility variation 2-92864
 FeSi sheets, effect of stacking on coercivity 2-56887
 FeSi, compositional and chem. state, XPS study 2-77706
 Fe₂Si_{1-x} amorphous thin film, mag. anisotropy, Mossbauer and ESR study 2-93087
 Fe₂Si_{1-x} ferromag. alloys, amorphous and crystalline, even magneto-optic spectroscopy 2-104857
 Fe₂Si_{1-x}Al_x, elec. resist. and band struct., density of states at Fermi level 2-61440
 Fe₇₃Si_{25-x} glass, crystn., Mossbauer study 2-103637
 Fe_{10-x}Sn_xB₂₀ amorphous ferromagnet, Sn and Fe hyperfine fields, Mossbauer study 2-92552
 FeTi activated surface, oxide struct., X-ray study 2-99591
 FeTi, spin polarised photoemission probing of magnetism 2-67184
 FeTi, surface anal. by magnetisation meas. 2-73012
 FeTi, H₂ storage props., XPS, Mossbauer and metallographic study 2-92347
 FeTiH₉, Pauli paramagnet, mag. susceptibility, magnetisation, hysteresis 2-66765
 FeTiH₉, local H vibrs. in α, β₁, β₂, and γ phases, inelastic neutron scatt. study 2-103927
 Fe_{1-x}V_x, disordered, spin wave dispersion relations 2-77279
 Fe_{3-x}V_xSi, Mossbauer study of Fe hyperfine fields 2-87635

iron alloys continued

- $\text{Fe}_{0.99}\text{W}_{0.01}$, amorphous, magnetoresist. mag. props. 2-71947
 $\text{Fe}_{40}\text{Zr}_{60}$, Kr, amorphous, vibr. densities of states, inelastic neutron scatt. study 2-56142
 $\text{Fe}_{90}\text{Zr}_{10}$, amorphous, sp. ht., susceptibility, resist. 2-72224
 $\text{Fe}_2\text{Zr}_{11}$, metallic glass, electronic struct. calc. 2-98529
 $\text{Fe}_{40}\text{Ni}_{40}\text{P}_{10}\text{B}_{10}$, metallic glasses, response to irradiation with 800 MeV protons 2-80188
Gd-Fe, charge transfer and isomer shift, ^{155}Gd Mossbauer spectra 2-104777
Gd-Fe thin films, comp. graded, mag. field meas. appl. 2-112939
 GdFe_{12} , Mossbauer spectrum, dipolar contrib. and quadrupole effect 2-93092
GdFe amorphous bubble film, FMR spectra, angular depend. 2-72354
GdFe amorphous thin films, induced anisotropy and temp. effect on domain struct. 2-104609
 GdFe_{12} , ^{57}Fe local fields, NMR study rare earth ion and interionic dist. effects 2-82744
GdFeB amorphous thin films, mag. props. 2-72298
 Gd_2Y_3 , indirect exchange param. 2-71942
 $\text{Hf}_{0.8}\text{Ta}_{0.2}\text{Fe}_2$, ferromagnetic-antiferromag. transition, magnetisation and Mossbauer study 2-87493
 HoCo_2Fe_5 , Laves phase cpds. and their hydrides, mag. behaviour 2-56855
 HoFe_{17} , magnetic anisotropy 2-72190
 HoFe_{17} , magnetic excitations study 2-110573
Ir-Fe dil. alloy, high field Mossbauer study 2-99001
 $\text{LaFe}_{0.34}\text{Sn}_{0.66}$, cryst. struct., stability criteria (German) 2-65925
Lu-Fe alloy, recoil mixing produced by atom beams, simulation using computer code 2-76518
 $\text{Mg}_{1-x}\text{Fe}_x$, amorphous, Mossbauer effect and mag. props. 2-66965
r-Mn-Fe, single-domain antiferromagnet, mag. struct. study 2-87478
 $\text{Mn}_{1-x}\text{Fe}_x\text{B}$, Invar like props. 2-72174
 $(\text{Mn}_{1-x}\text{Fe}_x)_2\text{Co}_{0.95}\text{Cu}_{0.05}$, γ -phase, damping capacity and Young's modulus 2-57394
 $\gamma\text{-Mn}_{0.7}\text{Fe}_{0.3}\text{Cu}_{0.3}$, thermal-excitation phonon spectra near FCC \rightarrow FCT transform. 2-56126
Nb-Fe inhomogeneous system, laser irradiation, internal field at ^{57}Fe , atom redistribution, and antiferromag. suppression (Russian) 2-66929
Nd-Fe alloys, melt-spun, mag. hardening and crystn. props. 2-88228
NdFe₂, Laves phase cpds., correlation of ^{57}Fe hyperfine interactions with Fe-Fe distance 2-56985
Ni-Al-Fe L1₂ cpds., melt quenching, improved mech. props. 2-116472
Ni-base Alloy 600, stress corrosion cracking in oxygenated water at high temp., environmental effects (Japanese) 2-83282
Ni-base superalloy, Inconel X-750, fatigue and creep crack growth at elevated temps., effect of environment 2-99536
Ni-Cr-Fe-Mo-Co, aluminide coated, compatibility in simulated HTGR 2-113664
Ni-Cr-Fe(Mo), long-life fatigue test results 2-62226
Ni-Fe, mag. props., review 2-82652
Ni-Fe, surface (100), oxidation 2-116612
Ni-Fe, ultrahigh vacuum deposition, magnetisation, resistivity and stress 2-82482
Ni-Fe (24 to 35 at.%), Curie temp. meas. by Mossbauer expts. 2-77290
Ni-Fe (25 at.%), ESCA studies, surface prep. treatments, oxidation effects 2-83295
Ni-Fe (25 at.%), ESCA studies, anodic dissolution, passivation effects 2-83296
Ni-Fe base superalloys, serrated yielding of 700°C 2-57428
Ni-Fe bubble overlay l-bars, magnetisation distrib., saturation 2-82663
Ni-Fe film, magnetization oscillations excitation (Russian) 2-92976
Ni-Fe films, domain wall struct., low-angle electron deflection study 2-87562
Ni-Fe patterns for thin film heads, selective microelectrodeposition 2-83046
Ni-Fe-Co magnetic alloys with stepwise hysteresis loop 2-61738
Ni-Fe-Cr, Niche, phonon-induced desorption of He, crit. concn 2-92349
Ni-Fe-Cr alloy tubes, prestrained, creep rupture bending test 2-62184
Ni₂(Fe,Ti) alloys, electronic characts., anomalous Hall effect and Nernst-Ettingshausen effect study 2-61447
NiFe, 3d electron density charge on atomic ordering, Mossbauer study 2-61804
NiFe thin films with uniaxial anisotropy, head-on domain walls 2-72309
Ni_{1-x}Fe_x (100), spin polarised photoemission probing of magnetism 2-67184
Ni_{1-x}Fe_x (100), spin-dependent density of states, spin-polarised photoemission meas. 2-83004
Ni₃Fe, electron irradiation, Frenkel defects, elec. cond. (German) 2-98080
Ni₄₀Fe₆₀B₂₀, amorphous, spin-depend. elastic electron scatt. 2-116311
Ni₄Fe₈₀-B₂₀, amorphous, electron momentum distrib., positron annihilation 2-103626
Ni₄Fe_{80-x}B₂₀ metallic glass, surface B composition, $^{10}\text{B}(n,\alpha)^7\text{Li}$ nuclear reaction meas. 2-104121
Ni₈₈Fe₁₀Mo₂B₂, Metglas 2826MB, stripe domain dragging by temp. gradient 2-72254
(Ni_{0.95}Fe_{0.05})₈₀P₁₀B₁₀, amorphous, magnetization, annealing influence 2-104660
(Ni_{0.9}Fe_{0.1})₈₀V_{0.11}, substructure develop. during cold working, neutron diffraction and microprobe obs. 2-83133
Pd-Fe, anomalous Hall effect, cond. tensor (Russian) 2-77021
Pd-Fe, dil. thin film, AC susceptibility, ion irradiation effects, rel. to superconduct. 2-56828
Pd-Fe, Pd based solid soln., diffusivity of H meas. 2-104058
Pd-Fe (1.5 at.%), spin waves, inelastic neutron scatt. study 2-72178
Pd_{77-x}Cu_{23-x}Si_{1-x}Fe_x, amorphous, elec. and mag. props. 2-72169
Pd₂Fe and Pd₂FeH₂, electronic struct. and mag. props. in ordered and disordered phases 2-76917
(Pd_{0.998}Fe_{0.002})_{0.95}Mn_{0.05}, nonlinear mag. susceptibility and sp. ht. meas. 2-87480
Pd₂Pt_{1-x}Fe_x, magnetic state, mixed exchange interaction, magnetisation and susceptibility 2-72208
(Pd₂Pt_{1-x})₂Fe_x, atomic-ordered, sp. ht., 3 to 20K (Russian) 2-56204
Pr-Fe alloys, melt-spun, mag. hardening and crystn. props. 2-88228
PrFe₂, Laves phase cpds., correlation of ^{57}Fe hyperfine interactions with Fe-Fe distance 2-56985
Pr₂(Fe_{0.8}B_{0.2})₁₁, amorphous, crystn. and mag. moments study 2-71362
(PrRd_{0.8}Ga_{0.2})_{100-x}Fe_x metallic glasses, mag., Mossbauer, and struct. studies 2-72270
Pt-Fe, weakly ferromag. alloys, elastic diffuse neutron scatt. 2-98849

iron alloys continued

- RFe₃, magnetisation meas. and mol. field theory anal. 2-92963
Ru-Re, X-ray fluorescence, K-emission band struct. (Russian) 2-116300
ScFe₂, hydrogenated, ^{57}Fe Mossbauer spectroscopy 2-72388
Si-Fe, domain struts. and stress distrib. due to ball-point scratching 2-82629
SiFe laminations, skew domain wall bowing and shearing, asymmetric roll orientation 2-82680
SiFe, stacked H1-B sheets, domain interactions, eddy current losses 2-82679
SiFe₂Co₂, ferromag., thermal expansion, mag. contribution meas. 2-86910
SiFe₂Co₂, mag. props. and magnetovolume effects, thermal expansion 2-86909
Sm-Co-Cu-Fe-Zr, permanent mag., struct., sintering and annealing effects (Russian) 2-82226
Sm(Co, Cu, Fe, Zr)_{7.4}, permanent magnet, precip. hardened, microstruct. 2-71657
Sm(Co, Cu, Fe)_{6.8-7.2} cast hard mag. alloys, fine struct. after heat treatment 2-99465
Sm₂(Co, Fe, Cu, Zr)₁₇, sintered permanent magnets, coercive force and struct., Sm content effect 2-72278
Sm₂(Co, Fe, Cu, Zr)₁₇, permanent magnet, coercivity 2-72284
SmCo₅-Fe, alloying addition effect on X-ray diffraction relative intensity (Chinese) 2-79993
Sm₂(Co_{1-x}Fe_x)₁₇, magnetisation reversal and coercive force, comp. depend. 2-72279
Sm(Co_{0.66}Fe_{0.34}Cu_{0.10}Zr_{0.06})_{7.4}, struct. transformations and coercive force meas. (Russian) 2-98913
Sm(Co_{0.69}Fe_{0.31}Cu_{0.07}Zr_{0.03})_{7.22}, magnetic hardening 2-72283
Sm₂Dy_{1-x}Fe_x, magnetostriiction, temp. depend. meas. 2-77351
SmFe₂, Laves phase cpds., correlation of ^{57}Fe hyperfine interactions with Fe-Fe distance 2-56985
Sn-Fe, electron struct., X-ray and X-ray electron spectra obs. (Russian) 2-67153
Tb-Fe amorphous films, mag. props., sputtering induced recrystn. effect 2-72300
Tb-Fe amorphous films, struct., decomposition, crystallisation (Chinese) 2-104176
TbCO_{2-x}Fe_xHy, lattice parameters and mag. characts. 2-56891
Tb_{0.27}Dy_{0.73}Fe₂, magnetostrictive materials, US induced irreversible changes in magnetisation 2-82640
TbFe₂, amorphous, struct. ordering, neutron scatt. study 2-97923
TbFe₂ amorphous film, mag. and elec. props. (Chinese) 2-104750
Tb₂Fe_{1-x} amorphous alloy system, simulation of dense random packed models 2-71353
Tb₂Fe_{1-x} amorphous RF sputtered films, magneto-optic props. 2-72459
Tb(Fe,Co)_{1-x}, pseudobinary intermetallic compound, mag. struct., neutron diffraction study (Russian) 2-98846
Te-Fe, film, prep. by sputtering from composite targets with fine metal wires (Japanese) 2-99333
Ti-Fe(Co)(Ni), fast diffusing solutes, thermal friction studies 2-98326
Ti-Fe film, composite cathode sputtered, struct. and comp., expt. study 2-56390
Ti-Fe films, elec. cond., composition depend. 2-56727
Ti-V-Fe-Al, shape memory with large temp. hysteresis 2-111249
TiBe₂-Fe₂, magnetisation meas. in low and high fields 2-56839
TiFe, nitrided by NH₃, pretreatment, SIMS investig. 2-105389
TiFe_{0.3}Co_{0.7}, thermal expansion, mag. contrib., spontaneous magnetisation 2-115440
TiFe₂Co_{1-x}, mag. props. and magnetovolume effects, thermal expansion 2-86909
TmFe₃, cubic Laves phase, Mossbauer study 2-66961
TmFe₂Al₃, Mossbauer study 2-76366
U(Co_{1-x}Fe_x)₂ and Hf(Co_{1-x}Fe_x)₂, mag. ordering 2-98845
U(Fe_{1-x}Mn_x)₂, effective Curie-Weiss const., susceptibility and magnetisation meas. 2-72165
V-C(Mo)(Nb)(Fe), neutron irradiation, void form., effect of substitutional interstitial elements 2-103849
V-Fe, binary alloys, fabricability and tensile strength 2-67496
V-Pd-Fe, itinerant ferromagnetism study 2-66750
W-Fe powders, predetermined comp., electrochem. prod. 2-83064
W-Ni-Fe, sintered alloy, fatigue crack growth 2-99521
W-Ni-Fe, sintering, effects of impurities (German) 2-105103
W-Ni-Fe system, thermodynamic calc. of phase diagram at 1540°C (Korean) 2-83085
Y-Fe, amorphous, mag. props. due to 3d magnetism 2-72269
Y(Al_{1-x}Fe_x)₂, mag. and cryst. struct., magnetisation and Mossbauer spectra study 2-72150
Y(Co,Fe)₃, metastable character, decomposition behaviour, precipitation 2-67342
Y(Co_{1-x}Fe_x)₃, struct. and mag. props. 2-91874
YFe₂, amorphous, melt-spinning prep., mag. props. 2-72267
YFe₂, amorphous, struct. relax., Mossbauer study 2-72383
YFe₂, amorphous, struct. ordering, neutron scatt. study 2-97923
YFe₂, amorphous and crystalline, Mossbauer study 2-10734
YFe₂, local mag. fields temp. depend., vol. expansion effects, NMR study 2-56955
Y_{0.33}Fe_{0.67} amorphous spin glass, spin dynamics, inelastic neutron scatt. study 2-98892
Y(Fe_{1-x}Al_x)₂, Fe moment localisation, mag. props. 2-82572
Y(Fe_{1-x}Co_x)₂, crystal struct. deform., elastic props. (Russian) 2-92074
Zn-Fe, delta phase stability meas. 2-111144
Zr-Cu-Cr-Fe, phase diagram, isothermal section of Zr corner 2-83093
Zr-Fe, amorphous, thermal stability study 2-104029
 β -Zr(Fe) phase, effect of Ti in stabilisation 2-105166
Zr_{100-x}Fe_x, amorphous, hyperfine field distrib., spin coupling, Mossbauer study 2-104756
Zr(Fe_{1-x}Al_x)₂, Fe moment localisation, mag. props. 2-82572
Zr(Fe_{1-x}Al_x)₂, ferromag., mag. props., conversion to superparamagnet and spin glass on H₂ absorption 2-92965
Zr(Fe_{0.33}Co_{0.67})₂, acoustic study of elastic behaviour, temp. and mag. field effects 2-56065
(Zr_{0.8}Hf_{0.2})Fe₂, hyperfine mag. field at ^{181}Ta , radiation defects influence, TDPAAC meas. 2-56986
Zr_{1-x}Hf_xFe₂, isomer shift and quadrupolar interaction, Mossbauer study 2-104778
ZrMn_{2-x}Fe_xHy, C14 struct., mag. props., H absorpt. effects 2-98853

iron compounds

- see also ferrites; iron alloys
 boride layers, effects of annealing (*Korean*) 2-62150
 complex, $[\text{FeF}_6]^{3-}$, superhyperfine interactions, Hartree-Fock-Roothaan calc. 2-87210
 decamethylferrocene, equilib. geometry, Hartree-Fock model, LCAO SCF calcs. 2-108374
 $\gamma\text{-Fe}_2\text{O}_3\text{-Mn}_2\text{O}_3$, thin epitaxial film, resonance meas. of mag. moment 2-72295
 ferric fluorides amorphous, ^{57}Fe nucl. quadrupole splittings distrib., struct. implications 2-77003
 ferrocene, equilib. geometry, Hartree-Fock model, LCAO SCF calcs. 2-108374
 ferrous and ferric compounds, spin transitions 2-66832
 garnet films, interrelation of exchange energy, anisotropy and the Neel temp. 2-82676
 iron pentacarbonyl, clusters, multiple-reson. mass spectroscopy 2-95515
 oxalate emulsions, Ag free, optical characs. of Ni, Cu and Cd scales and grids 2-107440
 porous oxalate, behaviour in high vac. of XPS spectrometer 2-99739
 sulphides, mixed-valence compounds, valence meas. using Mossbauer ^{57}Fe isomer shift 2-61798
 titanomagnetic solid solns., phase and point defect equilibria 2-109792
 $\text{Al}_2\text{Fe}_{1-x}\text{O}_4$, single and polycryst., magnetostriction meas. 2-87569
 $\text{Al}_2\text{O}_3\text{-SiO}_2\text{-Fe}_2\text{O}_3$, heat treated, Fe valence-coordination state, Mossbauer study 2-103662
 $\text{Au-Fe}_3\text{-Au}$ struct., FeF_3 film polarisation 2-61821
 $\text{B}_2\text{O}_3\text{-Al}_2\text{O}_3\text{-Fe}_2\text{O}_3$ based glasses, Fe coordination, Mossbauer study 2-103641
 $\text{B}_2\text{O}_3\text{-Fe}_2\text{O}_3\text{-PbO-GeO}_2(\text{CaO})(\text{As}_2\text{O}_3)$ glass, Fe valence states, comp. dependence, Mossbauer and mag. study 2-104317
 $\text{B}_2\text{O}_3\text{-SiO}_2\text{-Na}_2\text{O-Fe}_2\text{O}_3$ glasses, phase separation, mixed valence effect 2-92210
 $\text{Ba}_{1-x}\text{Fe}_x\text{S}_4$, Mossbauer spectra, mag. and elec. props. 2-66962
 $\text{Ba}_{1-x}\text{Fe}_x\text{S}_4$, phase relationships 2-62105
 $\text{BaFeSi}_4\text{O}_{10}$, gillespite, Fe^{2+} , Mossbauer spectra, mag. relax. effects 2-61793
 $\text{Bi}_{1-x}\text{Ca}_x\text{Fe}_{2-x}\text{In}_x\text{Fe}_{3-x}\text{V}_x\text{O}_{12}$, magneto-optical Kerr rotation (*Chinese*) 2-110819
 $\text{CaO-FeO-FeS-Cu}_2\text{S}$ melts for electrothermal metallography elec. cond. mechanism, 1000-1210°C 2-104378
 $\text{CaO-B}_2\text{O}_3\text{-V}_2\text{O}_5\text{-Fe}_2\text{O}_3$ glass, Mossbauer and ESR studies 2-66963
 $\text{CaO-FeO-P}_2\text{O}_5$ glass, internal friction meas. 2-92105
 $\text{CaO-MgO-Ca}_2\text{SiO}_4\text{-Ca}_4\text{Al}_2\text{Fe}_2\text{O}_{10}$ magnesia-dolomite refractories, thermal equilib. 2-62111
 $2\text{CaO.K}_2\text{O.xFe}_2\text{O}_3.(5-x)\text{P}_2\text{O}_5$ glass, elec. cond., temp. depend. anomaly 2-56580
 $\text{Co}_2\text{Fe}_{1-x}\text{O}_4$, ^{57}Fe Mossbauer study 2-77428
 $\text{Co}_2\text{Fe}_{1-x}\text{S}$, electrical resistance, time depend., α -phase transition (*German*) 2-92626
 $\text{Co}_{1-x}\text{Fe}_x\text{Si}$, elec. props. and thermal cond. 2-82366
 $\text{Co}_{1-x}\text{Fe}_x\text{TiO}_3$, competing mag. orderings, Mossbauer and neutron diff. study 2-66777
 $(\text{Cr,Fe,Al,Mg})_2\text{O}_4$ spinel, cation atom distrib., channelling effect in electron-induced X-ray emission 2-98018
 CsNiFeF_6 , spin glass props. 2-87515
 Cu-Fe-Se system, phase equilibria and stability field, X-ray, electron microprobe and DTA study 2-116429
 ErFe_2H_4 , spin reorientation temp., hyperfine fields, Mossbauer study 2-93082
 $(\text{Fe,Co})\text{Cl}_2$, anhydrous single crystals, in-situ purification and Bridgman growth 2-111060
 $(\text{Fe,Co})\text{Si}_{1-x}$, solid solns., Mossbauer effect study of mag. behaviour 2-61797
 $(\text{Fe,Cr})_2\text{O}_4$ (chromite)+C, in meteorites, noble gases sorption 2-100845
 $(\text{Fe,Mg})\text{Cl}_2$, anhydrous single crystals, in-situ purification and Bridgman growth 2-111060
 $(\text{Fe,Mn})_2(\text{PO}_4)_2$ grafted-type solid solns., cation distrib. 2-115186
 $\text{Fe}(\text{ClO}_4)_2.6\text{H}_2\text{O}$, ^{57}Co , Mossbauer emission and absorpt. spectra, study of phase transitions 2-61805
 Fe carbonyl powder based sintered magnetic material, polyorganosilazane resin bonded 2-67261
 Fe complex, $(\text{Fe}_2\text{Zn}_{1-x}(2\text{-pic})_x\text{Cl}_2)\cdot\text{EtOH}$, high spin=low spin transitions, lattice expansion effect 2-87510
 Fe complex, (cyclobutadiene)iron tricarbonyl, bonding, photoelectron spectra and photoionisation, Alpha SW calcs. 2-102382
 Fe complex, bis(N,N-diethylthiocarbamate)-iron chloride, crit. behaviour, theoretical anal. 2-72240
 Fe complex, bromobis(diethylthiocarbamate)iron(III), mag. susceptibility, Mossbauer study 2-87632
 Fe complex, $\text{Fe}(\text{Bipyridyl})_2^{2+}$ electronic struct. of metal-to-ligand CT states 2-92535
 Fe complex, $\text{Fe}(\text{CH}_3\text{NO})_2^{2-}$ isotope effects, struct., IR obs. 2-75269
 Fe complex, $\text{Fe}(\text{bipyridyl})_2^{2+}$ in host lattice, circular dichroism of CT bands 2-93162
 Fe complex, $\text{NH}_4[\text{Fe}(3,5\text{-dichlorosalicylalthiosemicarbazone})_2]$, cryst. struct. 2-103744
 Fe complex, rapid spin equilib., relax. time 2-82753
 Fe complex, $\text{trans}(\eta^3\text{-C}_3\text{H}_5)_3\text{Fe}(\text{CO})_2$, instability, HF function, INDO calcs. 2-64880
 Fe complex, trimethylenemethane iron carbonyl, Koopman's defects, Hamiltonian calcs. 2-80480
 Fe complexes, $\text{Fe}(\text{II}), \text{Fe}(\text{III}), \text{N,N'-di}(2\text{-pyridyl})$ thiourea, Mossbauer and other spectroscopic studies 2-110735
 Fe complexes, high spin-low spin $\text{Fe}(\text{II})$ solns., positron annihilation study 2-93321
 Fe complexes+methylene blue, quenching rates and efficiencies of forward and reverse electron transfer, temp. depend. 2-83369
 Fe III complex, Fe III haeme-fluoride, absorpt. and MCD spectra 2-102492
 Fe-B, refractory layer, powder boriding, photoelectron spectra, thermodynamic studies 2-93471
 Fe-garnet films, hard-stripe domains, investig. 2-104673
 Fe-N thin films, RF sputtered, static mag. and Mossbauer study 2-82641
 Fe-rich magnetites, $\text{Fe}_{3-x}\text{O}_4$, non-existence 2-83100
 $(\text{Fe}_{1-x}\text{Zn}_x)^{2+}\text{Fe}_2^{3+}\text{O}_4^{2-}$ ferrites, thermopower-composition depend. 2-61499
 $\alpha\text{-(Fe}_{1-x}\text{Al}_x)_2\text{O}_3$, Mossbauer study 2-87637
 $\text{Fe}(\text{As}_2\text{Te}_2\text{S}_2\text{Sb}_2)_{1-x}$, film, sputtered, phys. props. 2-92421
 FeB, cryst. struct. of low temp. modification 2-62106

iron compounds continued

- $\text{Fe}(\text{BF}_4)_2.6\text{H}_2\text{O}$, ^{57}Co , Mossbauer emission and absorpt. spectra, study of phase transitions 2-61805
 FeBO_3 , parametric phonon excitation (*Russian*) 2-72328
 FeBO_3 , phonon parametric excitation, FMR nonlinear relax. 2-77349
 FeBO_3 , suppression of elastic scatt. of nuclear resonance γ -quanta (*Russian*) 2-82762
 Fe/C , cementite, electron diff. forbidden reflection intensity and influence on struct. image, theory 2-91729
 $\text{Fe}(\text{CN})_6^{4-}$ aq. soln., free energies, electron transfer, photoelectron obs. 2-110009
 $\text{Fe}(\text{CN})_6^{4-}$ in aq. soln., thermal electron transfer correl., photoelectron emission 2-70408
 FeCO_3 , antiferromag. indirect detection of cooling by adiabatic magnetisation 2-98884
 $\text{Fe}(\text{CO})_5$, adsorbed (0001) graphite, dynamical props., Mossbauer study 2-56342
 $\text{Fe}(\text{CO})_5$, dissociative electron attachment reactions, influence on thermalisation of electrons by CO_2 2-72967
 $\text{Fe}_{1-x}\text{Cd}_x\text{Cl}_2$, dilute antiferromagnet, Raman scatt. from magnons, Ising cluster model 2-61893
 FeCl_3 , anhydrous single crystals, in-situ purification and Bridgman growth 2-111060
 FeCl_3 aq. solns., in glassy state, Raman spectra 2-87774
 FeCl_3 , dil. metamagnet, quasisublim. transitions, Ising model 2-98879
 FeCl_3 intercalation compound with graphite, electron microscope imaging of various stages 2-71358
 FeCl_3 , ladder approximation for uniaxial metamagnets 2-66807
 FeCl_3 spin wave interactions in antiferromag. phase 2-110572
 FeCl_3 -graphite intercalation cpds., mag. phases 2-56863
 FeCl_3 aq. solns., in glassy state, Raman spectra 2-87774
 FeCl_3 doped polyacetylene, metallic elec. cond. and EPR spectrum meas. 2-77027
 FeCl_3 , hydrolysed soln., coordination, X-ray diff. study 2-65841
 FeCl_3 intercalated graphite, intercalated with FeCl_3 , Mossbauer study of mag. props. 2-99012
 FeCl_3 intercalated in graphite, reduction and Fischer-Tropsch reactions, Mossbauer study 2-116692
 FeCl_3 intercalation cpd. with graphite, low and high stage, mag. order, Mossbauer study 2-87642
 $\text{Fe}(\text{ClO}_4)_2$ eutectic frozen aq. soln., ligand fields, Mossbauer study 2-92543
 $\text{Fe}(\text{ClO}_4)_2$ frozen aq. soln., ligand field distrib., Mossbauer study 2-104762
 $\text{FeCl}_3.6\text{H}_2\text{O}$, cryst. field splitting, K X-ray absorpt. spectra, MO theory 2-62017
 $\text{Fe}_{1-x}\text{Co}_x\text{Cl}_2$, Raman study of excitations 2-72483
 $(\text{Fe}_{1-x}^{2+}\text{Co}_x^{2+}\text{Fe}_2^{3+})\text{O}_4^{2-}$ ferrites, thermopower-composition depend. 2-61499
 $\text{Fe}_{1-x}\text{Co}_x\text{Ge}_2$, $0 \leq x \leq 0.05$, selective etching on dislocations 2-86669
 $\text{Fe}_{1-x}\text{Co}_x\text{O}$, mag. props. 2-104592
 $(\text{Fe}_{1-x}\text{Co}_x)_2\text{Se}_8$, mag. easy-axis transition, magnetisation and mag. torque study 2-66810
 $\text{Fe}_{1-x}\text{Cr}_x\text{BO}_3$, ferrimagnet, Mossbauer study 2-72381
 $\text{Fe}_{2-x}\text{Cr}_x\text{O}_4$ films, optical props. and chem. resist. 2-93300
 $\text{Fe}_{1-x}\text{Cr}_x\text{O}_4$, heat capacity, 200 to 850K, λ -type anomaly due to ferriparamag. transition 2-61161
 FeCrS_4 , cooperative Jahn-Teller effect, phase transition, mol. field theory 2-61418
 $\text{Fe,Cu}_{1-x}\text{Rh}_x\text{Se}_8$, magnetic and crystallographic props. 2-92860
 FeF_2 , elastic constants between 1.5 and 298K 2-115327
 FeF_2 , far-IR reflectivity of optical magnons 2-98864
 FeF_2 , one-magnon Raman spectrum, effects of quadratic magneto-optical coupling 2-72482
 FeF_2Mn , localised magnon-pair modes 2-72182
 FeF_3 film, elec. cond. meas., charge transfer between localised states mechanism 2-82503
 FeF_3 granular films, dielec. polarisation, AC cond. and TSC study 2-82774
 FeF_3 thin films, localised electron states, optical absorption study 2-82268
 FeF_3 thin films, mag. and Mossbauer studies as a function of growth mod. 2-82678
 $(\text{Fe}^{2+}\text{Fe}_{2-x}^{3+}\text{Cr}_x^{3+})\text{O}_4^{2-}$ ferrites, thermopower-composition depend. 2-61499
 $\alpha\text{-FeGaS}_4$ (IT), mag., elec. and Mossbauer props. (*French*) 2-72389
 FeGa_2S_3 , 3R polytype, cryst. struct. determ. (*French*) 2-55929
 FeGe_2 , antiferromag., US attenuation anomalies at two transitions 2-104605
 $\text{Fe}(\text{HCOO})_2.2\text{H}_2\text{O}$, paramag. susceptibility anal. (*Japanese*) 2-92862
 $\text{Fe}(\text{II})$ complex, imine complex ions, vibr., resonance Raman spectra 2-75293
 $\text{Fe}(\text{II})$, porphyrin complexes, electronic struct., Mossbauer spectra, ab initio LCAO SCF calcs. 2-108596
 $\text{Fe}(\text{III})$ compounds, pressure-induced spin state transition, ligand field theory 2-82300
 $\text{Fe}(\text{III})$ compounds, high spin, X-band EPR spectra in rhombic ligand fields, computer simulation 2-87582
 $\text{Fe}(\text{III})$ monochelates with glycolic and lactic acid, form. kinetics studied by temp. jump method 2-105445
 $\text{Fe}(\text{II})=\text{Fe}(\text{III})$, mol. crystals, cooperative mol. distortive transitions, ligand field theory 2-76649
 $\text{Fe,Mn}_{1-x}\text{F}_2$, random anisotropic antiferromag., crit. behaviour, mag. birefringence study 2-77295
 $(\text{Fe}_{1-x}\text{Mn}_x)_2\text{P}$, mag. props. 2-61697
 $\text{Fe}_2(\text{MoO}_4)_3$, ferroelastic transition, Mossbauer and elec. cond. study 2-116101
 $\text{Fe}_2\text{Mo}_2\text{O}_8$, cryst. growth, morphology, elec. and mag. props. 2-87960
 $\text{Fe}_2\text{Mo}_2\text{O}_8$, cryst. struct. determ. 2-76376
 $\text{Fe}(\text{NH}_4)_2(\text{SO}_4)_2.6\text{H}_2\text{O}$, crystal growth from aq. soln., mag. field effect 2-109711
 $\text{Fe}(\text{NO}_3)_3$ aq. solns., in glassy state, Raman spectra 2-87774
 $\text{Fe}(\text{NO}_3)_3$, glassy paramag., Fe^{3+} Mossbauer spectra, spin-spin relax., microscopic model 2-93077
 $\text{FeNb}_2\text{Se}_{10}$, metal-insulator and CDW transitions correlation, elec. cond. press. depend. study 2-77133
 $\text{FeNb}_2\text{Se}_{10}$, one-dimensional, band struct. calc. 2-82201
 $\text{Fe}_{1-x}\text{Nb}_x\text{Se}_{10}$, electronic struct., tight binding calc. 2-98517
 $(\text{Fe,Ni}_{1-x})_2\text{Se}_8$, Mossbauer study 2-104774
 FeO , 3d, $L_{2,1}$ edge, EELS 2-108636

iron compounds continued

- FeO, electron energy loss study of K near-edge fine struct. of O 2-104248
 FeO high-pressure polymorphism at Earth core conditions 2-88821
 FeO in interstellar mol. clouds and stellar atmospheres, search for J=5-4 transition 2-74045
 FeO, laser induced fluoresc., sub-Doppler spectroscopy 2-59854
 FeO, wustite, struct. and morphology, vacancy and interstitial clusters (*French*) 2-86644
 FeO-Al₂O₃-SiO₂, amorphous, spin glass, mag. behaviour 2-72226
 FeO-V₂O₅-P₂O₅ glasses, internal friction and elec. cond., interpret. w.r.t. valency state of V ions 2-92606
 FeO_x, bertholide type, reactive sputtering prep., struct. and props. 2-82158
 FeO_x film, iron carbonyl oxidative pyrolysis formation struct. and chem. comp., expt. study 2-56399
 FeO_x, quantitative AES anal. 2-57662
 Fe_{1-x}O, ¹⁸O, tracer diffusivity 2-82018
 Fe_{1-x}O, wustite, 3-D modulated struct., six dimensional anal. 2-81728
 Fe₂O₃, acousto-optical modulation, permittivity (*Russian*) 2-57051
 γ-Fe₂O₃ aq. suspensions, H⁺ adsorpt. desorpt. kinetics, press. pump method 2-71792
 Fe₂O₃, chemisorption of O₂, N₂, NO and H₂, IR study 2-82130
 Fe₂O₃ crystal, depth profiling using Raman spectroscopy with ion bombardment 2-57646
 γ-Fe₂O₃, DC elec. cond., effect of adsorbed O₂ and water 2-115752
 α-Fe₂O₃ electrodes in aqueous electrolytes, photoactivity, effects of chemical doping, photoelectrochem. cell appls. 2-67866
 γ-Fe₂O₃, epitaxial growth induced anisotropy, expt. study 2-77287
 Fe₂O₃ film, surface mag. hyperfine interactions, Mossbauer study 2-72391
 α-Fe₂O₃, flux growth by fast cooling from low soaking temps. 2-111048
 α-Fe₂O₃, formation at surface of Fe Fischer-Tropsch catalysts, Mossbauer study 2-82750
 Fe₂O₃, goethite-derived, origin of preferential X-ray line broadening 2-97837
 α-Fe₂O₃, haematite, weak ferromag., magnetoresist. anisotropy meas. (*Russian*) 2-92659
 Fe₂O₃, hematite, dissolution and devitrification in float glass, Mossbauer, X-ray diff. studies 2-109686
 Fe₂O₃, hematite, shock compressed, point defect generation, positron annihilation study 2-86795
 Fe₂O₃, in solar absorbers, optical consts. 2-93142
 γ-Fe₂O₃ layer on Fe, Mossbauer and ESCA meas. 2-76848
 α-Fe₂O₃, microcrystals, surface modes, IR study 2-93206
 γ-Fe₂O₃, phase transition, influence of fine crystalline struct. 2-86852
 Fe₂O₃ semiconductor electrodes with deep impurity level (*Japanese*) 2-115690
 α-Fe₂O₃, solid state conversion from α-FeOOH 2-56179
 γ-Fe₂O₃ sputtered thin film disks, high density recording characts. 2-77335
 γ-Fe₂O₃ submicron particles, morphology using high-resolution electron microscopy (*French*) 2-97872
 α-Fe₂O₃, weak ferromag. moment stimulation by nonreson. mag. and sound pumping (*Russian*) 2-116044
 Fe₂O₃:Si, (Ge)Mg, solid solubility, elec. and photoelectric behaviour 2-61146
 α-Fe₂O₃:Zr single crystals, growth and photoelectrochemical study 2-62052
 Fe₂O₃/Si heterostructure photoanode, energy diag. and photoelectrochem. props. 2-98747
 Fe₂O₃-MgO-MnO-CoO (41, 3, 1 mol.%) ferrite film, thermal and thermomag. treatment 2-72294
 Fe₂O₃-TeO₂ glass, Mossbauer effect and elec. cond. meas. 2-87639
 n-Fe₂O₃-TiO₂/NaOH/Pt cell, and expt. study 2-78231
 Fe₂O₃, nonstoichiometry, point defects and cation diffusion 2-71435
 Fe₂O₃, magnetite, single- and poly-crystalline, mag. after effects, relax. spectra 2-77332
 Fe₂O₃ aq. suspensions, H⁺ adsorpt. desorpt. kinetics, press. pump method 2-71792
 Fe₂O₃, critical exponents and mag. eqn. of state, polarised neutron scatt. obs. 2-104628
 Fe₂O₃, electronic superstruct. 2-71866
 Fe₂O₃, interstellar particles, starlight extinction from 195-650 nm 2-94804
 Fe₂O₃, magnetite, cryst. struct. below Verwey transition temp., neutron diff. study 2-103699
 Fe₂O₃, magnetite, ferroelec. hysteresis loops, spontaneous polarisation study 2-87715
 Fe₂O₃, magnetite, mag., elec., and crystallographic props., low temp. anomalies 2-82586
 Fe₂O₃, magnetite, multidomain powders magnetostrictive control of coercive force 2-100374
 Fe₂O₃, magnetite, polar Kerr rot., temp. depend., 100 to 300K 2-72457
 Fe₂O₃, magnetite, reduction kinetics to wustite in mixed H₂/H₂O (*French*) 2-78090
 Fe₂O₃, mixed valence, elec. cond. below Verwey temp. 2-71968
 Fe₂O₃, natural magnetite, remanent magnetisation, mag. field freq. effect 2-72276
 Fe₂O₃ on steel and Fe surfaces, oxidation, IR and Raman spectroscopy study 2-116563
 Fe₂O₃ particles in silicate matrix, superparamag. and ferrimag. props., magnetisation study 2-92972
 Fe₂O₃-kerosene, mag. fluid, elec. cond. meas. 2-104363
 Fe₂O₃+C in meteorites, noble gases sorption 2-100844
 FeOCl intercalates with Lewis base, Fourier transform IR obs. of struct. 2-116166
 Fe(OH)₃, behaviour in high vac. of XPS spectrometer 2-99739
 Fe₂O₃.H₂O gel, pure, prep., struct. and mag. props. 2-67769
 FeOOH aq. suspensions, H⁺ adsorpt. desorpt. kinetics, press. pump method 2-71792
 α-FeOOH, Fe₂O₃ and γ-Fe₂O₃ acicular particles, prep. and mag. props. 2-72286
 α-FeOOH IR spectra, normal coord. anal. 2-87761
 γ FeOOH, mechanochemical reaction effects on struct. and surface, IR and X-ray anal. 2-116726
 β-FeOOH, rodlike crystals, dil. aqueous dispersions, light scatt. obs. of laminar, vortical and turbulent flow 2-76015
 α-FeOOH, solid electrolytes for H₂O hydrolysis, characts. and prod. 2-71716
 Fe₂O₃.xH₂O gel, pure, prep., struct. and mag. props. 2-67770

iron compounds continued

- Fe₂P, Curie temp., uniaxial stress effect, expt. study 2-87495
 Fe₂P, orientational phase transition near Curie temp., press. study 2-116008
 Fe₂P, pressure-induced metamag. states, magnetisation study 2-110583
 Fe₂P, FeP and FeP₂ powders, Mossbauer spectroscopy 2-116105
 FePO₄, anhydrous, mag. phase transition, mag. susceptibility, Mossbauer spectra and neutron diff. 2-110579
 Fe₄(PO₄)₃O, prep., cryst. struct., mag. props. and Mossbauer spectrum (*French*) 2-81749
 FePS₃, layer phases, optical and mag. props., intercalation-induced modifications 2-82875
 FePS₃, photoresponse under photoelectrolysis conditions 2-61513
 FePS₃(Se₃), layer cpds., mag. interactions 2-61699
 FeS, phase transitions with interactive order parameters (*Russian*) 2-61709
 FeS, polymorphism at high temps. and press., X-ray diff. study 2-97976
 FeS/LiAl cell, Ni positive electrode components, corrosion resist. meas. 2-78201
 FeS₂, electrodes in Li-Al cells, phase relationships 2-88422
 FeS₂, natural marcasite, orthorhombic, obs. of cryst. defects 2-76452
 FeS₂, pyrite, deformed, defect struct., TEM study 2-98107
 FeS₂.Mn²⁺, ESR spectra temp. depend. 2-87584
 FeS₂ cluster, radial densities calc. by multiple scatt. Xalpha method, bonding, Mossbauer isomer shift data 2-96450
 Fe₃₀Si₃, magnetic transitions and crystal struct. 2-82598
 Fe_{1-x}S, Mossbauer study of Fe vacancy distrib. 2-81783
 Fe_{1-x}S, pyrrhotites, mag. transitions near Curie point 2-87506
 Fe₂S₈, pyrrhotite, thermal diffusivity meas. 2-98357
 FeSe, extreme UV valence band photoemission 2-111022
 FeSe₂, transition metal substituted, paramagnetism 2-66762
 FeSi itinerant electron systems with local mag. moments, paramag. state, static props. 2-98837
 α-Fe_{1-x}Si_x, multiparticle atomic correlations, Mossbauer spectroscopy study 2-66960
 FeSiO₃-MnSiO₃, metasilicate glass, crystn. high-resolution EM 2-97936
 Fe₂SiO₄, fayalite, melt-grown, Fe²⁺ content, Mossbauer effect 2-93069
 Fe₂SiO₄, cryst. struct., net atomic charges and electron density distrib., X-ray diff. study 2-91935
 Fe₂SnMoS₈, influence of press. on T_c (*Russian*) 2-56763
 FeTa₂O₆, free energy of form. at 1470-1750K 2-111057
 Fe_{1/2}Ta_{1/2}S₂, X-ray core level photoemission, charge transfer effects 2-111023
 β-FeTiH, electronic props., band struct. APW calc. 2-66416
 β-FeTiH, electronic struct. and stability 2-71853
 β-FeTiH, Mossbauer isomer shifts 2-87641
 FeTiH₂, Mossbauer isomer shifts 2-87641
 FeTiO₃, metamagnetic transition, mag. props. 2-92903
 FeTiO₃ spinel, natural, oxidation-reduction reactions, electron microscopy 2-72986
 Fe_{3-x}Ti_{1+x}O₄, low temp. mag. props. 2-87543
 Fe_{3-x}TiSe₂, cryst. struct., elec., mag., and optical props. 2-81746
 FeVNb₂Se₁₀, low dimensional conductors, cryst. struct., X-ray diff. study 2-115197
 θ-Fe₃Si₃V₂O₁₃, elec. field gradient, Mossbauer study 2-104759
 Fe_{0.5}Si_{0.5}O₁₃, cryst. growth, elec. resist., Mossbauer spectra, and mag. susceptibility 2-83014
 Fe₂V₂-xO₄, solid solution, IR spectra, elec. cond. and DTA study 2-87751
 Fe₂V₂-xS₄, Raman study 2-87793
 Fe₂WO₆, prep. and characterisation, struct., mag., elec. and photoelectronic props. 2-76390
 FeZn ferrite, Cu²⁺ substituted, Jahn-Teller effect on ground states 2-66502
 Fe₂Zn_{1-x}F₂, dilute anisotropic antiferromag., random field effects on crit. region 2-87511
 Fe₂Zn_{1-x}F₂, randomly diluted antiferromag., field induced 'exchange-flips' 2-66811
 Fe₂Zn_{1-x}F₂, randomly diluted antiferromag., nuclear relaxation study 2-77401
 Fe₂Zn_{1-x}Fe₂, dil. Ising antiferromag., crit. behaviour, random field effects 2-66854
⁵⁷Fe, Mossbauer spectra of finite thickness cryst., elec. field gradient and electronic ground state determ., theory 2-93079
⁵⁷FeO₃, Mossbauer conversion electron spectra, electrostatic electron spectrometer appl. 2-96367
 FewO₄, prep., elec., mag. and structural props. 2-92682
 Gd_{3-x}Pb_xFe₂-Sn₂O₁₂ epitaxial garnet film, Faraday ellipticity 2-87745
 Ge_{1-x}Fe_xTe solid solutions, thermoelectric props. 2-98680
 GeTe-FeGe₂, phase diagram, eutectic composition 2-111154
 Hg_{1-x}Fe_xSe, zero gap mixed cryst., IR magnetoabsorption 2-99098
 Hg_{1-x}Fe_xTe crystal, Shubnikov-de Haas oscillation amplitude anomalies 2-77099
 Hg_{1-x}Fe_xTe, zero gap mixed cryst., IR magnetoabsorption 2-99098
 K₂FeF₄, NMR study of susceptibility 2-82575
 K₂FeF₄, spin wave anal., neutron scatt. 2-82580
 K₂FeF₄, anomalous mag. susceptibility and relax. effects above Neel temp. 2-66783
 K₂FeF₄, Neel temp. variation, Mossbauer study 2-92905
 K₂FeF₄, two-magnon Raman scatt., spin wave anal. 2-82865
 KFe[PO₃], cryst. struct., X-ray diff. study 2-65971
 K(Mg, Fe)₂Al₂Si₂O₁₀F₂, fluorophlogopite, cryst. struct. anal. 2-98041
 K₂Na_{0.01}Mg_{0.99}Fe_{0.01}Mn_{0.01}Al_{1.99}Si_{0.01}O₁₈, cordierite 2-91829
 LaFe₂P₄, superconductivity and mag. props., Mossbauer study 2-72102
 LaNi_{3-x}Fe_xO₁₀, magnetic props., review (*Japanese*) 2-66870
 Li-Al/FeS₂ cells optimisation for electric vehicle propulsion applications 2-93887
 Li-Fe-S system, elec. cond. and electronic struct., XPS study 2-104371
 LiNbO₃-Fe₂O₃, congruently melting, phase rel. 2-62110
 LiNbO₃-Fe₂O₃ solid soln. single cryst., congruently melting, phase transition 2-98264
 (Mg, Fe)₂Al₂Si₂O₁₈ in H₂O, cordierite, high press. phase transition 2-92172
 (Mg, Fe)_{1-x}Al_xO, magnesiowustite, polycryst., elastic props., press. and temp. depend. 2-58038
 (Mg, Fe)SiO₃, olivines, single cryst. spectra, 5000-40000 cm⁻¹, up to 200 kbar 2-93214
 (Mg, Fe)₂SiO₄, atomic C depth profiling meas. 2-99721
 (Mg_{0.55}Fe_{0.45})₂Fe₃³⁺Al_{0.14}(Si_{3.66}Al_{0.34})O₁₀(OH)₈, lizardite, cryst. struct., polymorphism 2-98008
 Mg_{0.6}Fe_{0.4}O, eqn. of state at Earth mantle press. 2-78645

iron compounds continued

- (Mg_{1-x}Fe_x)₂SiO₄, single-crystal olivine, floating-zone growth 2-77727
 MgO-Fe₂O₃, solid-phase interaction, ESR investig. 2-87579
 MgO-Fe₂O₃-CaO-SiO₂, fused, retrograde stability of periclase rel. to cracking 2-83103
 MgO-FeO-Fe₂O₃, cation interdiffusivity in magnesio-wustite solid soln., O₂ press. depend. 2-76753
 (Mn,Fe)₂Si₂O₇(OH,Cl)₁₀, mcGillite, one-layer monoclinic struct., electron microscopy and electron diff. 2-115181
 (Mn,Fe)₂Si₂O₇(OH,Cl)₁₀, mcGillite, polytypism and disorder, electron microscopy study 2-115182
 MnB-FeB system, phase diagram, 600 to 2400°C 2-62106
 Mn_{0.99}Fe_{0.01}As alloy, mag. ordered phase stability, mag. field effect (*Ukrainian*) 2-61708
 (Mn_{1-x}Fe_x)₃(PO₄)₂, cryst. struct. and homogeneity ranges, X-ray diff. study 2-115195
 Na₃Fe(CN)₆·2H₂O, ⁵⁷Fe elec. hyperfine field, polarised Mossbauer study 2-93078
 Na₃Li₂Fe₂F₁₂, garnet cryst. struct., bond lengths and angles, X-ray diff. study (*German*) 2-91936
 Na₂O-Fe₂O₃-SiO₂, glass, surface dealcalisation, role of iron oxides 2-73016
 Na₂O-FeO-SiO₂ simulated waste glass, chem. durability, press. effects and surface layer form. 2-93651
 (Pd_{1-x}Fe_x)H, mag. and supercond. ordering 2-98845
 RbFeCl₃, triangular XY-like antiferromag., incommensurate mag. phase transition 2-116004
 RbFeCl₃·2H₂O, Mossbauer study of critical fluctuations 2-99011
 (Sb₂S₃)₂(SbI₃)₂Fe₂, glassy semicond., spin glass like behaviour 2-56871
 ScFe₂H_{3.4}, Laves phase, thermal stability, H sorption, effects of Y and Ti doping 2-87014
 (Si_{1-x}Fe_x)₃(Fe_{3-x}²⁺Fe_{3-x}³⁺)O₂(OH)₄, cronstedtite, thermally-activated charge transfer, electron hopping, Mossbauer spectra 2-66561
 SiO₂-Al₂O₃-Fe₂O₃-CaO-MgO-Na₂O basalt glass, surface conc. profile, AES study 2-93333
 SiO₂-Fe₂O₃ system, gel-glass transform., Mossbauer spectra, thermal anal., and X-ray diff. 2-76318
 (Sr_{0.8125}La_{0.1875})(Zr_{0.75}Fe_{0.25}Ru_{0.25-x})O_{3-δ}, mixed perovskite oxide, elec. cond. and thermal stability meas. 2-82354
 Tb₂Fe₂Si₅, mag. order, neutron diff. study 2-82567
 TiFeSi₂, orthorhombic type cryst. struct., X-ray diff. anal. 2-103696
 TmFe₂H₈, heat and entropy of formation and absorption, H₂ desorption isotherms 2-110012
 VO₂-FeNbO₄, solid solns., phase transitions, ⁵¹V 2-110669
 Y₂Fe_{3-x}Ga_{2-x}O₁₂, mag. ordering influence on lattice reflection spectra (*Russian*) 2-72467
 Y₂O₃-In₂O₃-Fe₂O₃, superhigh freq. props., Fe and In ions electron struct. influence (*Russian*) 2-66442
 Yb₂O₃-Fe₂O₃-CoO (NiO)(CuO)(ZnO), phase diagrams, quenching method X-ray study 2-76639
 ZnCr₂Fe_{2-x}O₄ spinels, cation atom distrib., channelling effect in electron induced X-ray emission 2-81742

iron phosphate semiconductor glasses *see amorphous semiconductors***irradiation effects** *see radiation effects***irradiation induced creep**

- cascade-induced point defect fluctuations 2-86708
 creep, enhancement by irradiation 2-105221
 diffusion, biased, of radiation point defects to interactive sinks 2-110045
 diffusion, enhanced, under irradi., thermodynamic anal. 2-110046
 diffusion of point-defects in strained crystal, theory 2-104050
 diffusion processes in irradi. materials with point defects, transport eqns. (*Russian*) 2-92251
 dislocation development in theory of radiation creep 2-66008
 fusion reactor first wall, irradi. creep chars. 2-85220
 fusion reactor first wall materials, He bubble migration, creep rupture behaviour 2-69827
 fusion reactor materials, conf. Seattle, WA, USA (Aug. 1981) 2-68954
 fusion reactor materials, pulsed irradiation, effects on microstruct., swelling, creep 2-54641
 fusion reactors, pulsed, irradiation creep by climb controlled glide mech. 2-76573
 fusion reactors, pulsed, irradiation creep enhancement 2-85221
 graphite, irradiation-induced creep testing, computer-supervised data logger 2-69762
 metals, radiative creep, effect of defect struct. 2-88151
 point defect sink strength, thin foil, with bulk recombination 2-60970
 PWR fuel rods, high-temp., post-irrad. performance 2-54496
 radiation damage phenomena, cascade diffusion theory as general method for modelling 2-103841
 steel, austenitic stainless, type 09Kh16N15M3B, irradiation induced creep 2-102062
 steel, ferritic and austenitic, LMFBR materials, neutron irradi. effects 2-107950
 steel, stainless, type-348, neutron irradiated, microstruct. and rel. to creep and hardening 2-105231
 stress-induced preferential attraction due to anisotropic diffusion 2-103885
 thermal and irradiation creep by dislocation climb, theory 2-86709
 Tokamak first wall, irradi. creep, swelling erosion and embrittlement effects 2-69828
 WSA-4 mixed oxide fuel pin, irradi. creep deform. due to gradual temp. reductions 2-107953
 Mo single crystal, creep during low energy ion irradi. (*Russian*) 2-72762
 Ni, irradi. creep, 17 MeV deuterons, stress depend. 2-86749
 Ni, irradi. creep, pulsed, 15 MeV deuterons 2-86751
 Ni-Al(Si), irradi. creep enhancement, 21 MeV deuteron bombardment 2-86750
 Zr alloys, irradiation creep and growth (*Japanese*) 2-96087

Ising lattices

- see also Ising model*
 alloys, homogeneous long range and antiferromag. order, kinetic theory 2-103669
 alloys, order-disorder transformations, BBGKY eqns. 2-56153
 anisotropic, crit. temps., double chain approximation 2-74359
 compact 2D lattice homogeneous under icosahedral group, exact partition function 2-69109
 higher spin one-dimension Ising lattice in arbitrary external field 2-95264
 hypercubic lattice, crit. temp., linear formula 2-112837

Ising lattices continued

- random impurity electric dipole system, low temp. collective props., Ising model (*Russian*) 2-116136
 three-dimensional, partition function, closed-form approx., Q-approx. limitations 2-63909
 three-dimensional, partition function, closed-form approx. 2-63908
 triangular, mag. props., Monte Carlo simulation 2-87465
 two-dimensional, two-parameter modified Kadanoff lower bound renormalisation group study 2-69099
 two-dimensional triangular model, real-space renormalisation group calcs. 2-89633
 Pd, surface (100), adsorbed H, phase diagrams for a square lattice with two- and three-body interactions 2-115556

Ising model*see also Ising lattices*

- φ⁴ field and Ising models, geometrical anal. 2-95276
 anisotropic 2-D Ising models, with m-spin interactions, self-dual 2-72130
 anisotropic antiferromagnet in Ising limit 2-98900
 anisotropic two-dimensional system, statistical mechanics 2-82556
 ANNNI model, phase diagram in external mag. field, appl. to CeSb 2-77309
 antiferromagnet, competing interactions, influence on spin system props. 2-77247
 antiferromagnet, FCC Ising, Monte Carlo study of entropy 2-82618
 antiferromagnetic three-state Potts model, on square lattice, Monte Carlo renormalisation group anal. 2-77315
 Ashkin-Teller model, Ising crit. exponents 2-107259
 axial nearest neighbour Ising model, perturbation expansion, commensurate-incommensurate transition 2-56878
 axial neighbour Ising model, low-temp. anal. near multiphase 2-61727
 Baxter-Wu model, Monte Carlo renormalisation group study 2-101346
 Baxter-Wu model, random, duality relations and replica method 2-7128
 Baxter-Wu model, random bond, free energy and specific heat 2-53696
 Baxter-Wu model, Z(N) generalisation 2-104563
 BCC, with competing interactions, fluctuation induced first order transition, free energy series study 2-77306
 BCC Ising model, subdominant crit. singularities 2-87518
 binary alloys, Ising model phase diagram calcs. 2-76634
 bond dilute, phase diagrams, renormalisation group and replica methods 2-61725
 Cayley tree, combined site and bond percolation 2-77310
 Cayley tree basis, local props. 2-87466
 chain, impurity magnetisation in transverse field, weak coupling expansion 2-66853
 classical Ising-Heisenberg chain, instabilities 2-77308
 classical lattice gases, solvable models 2-74352
 compact 2D lattice homogeneous under icosahedral group, exact partition function 2-69109
 compressible systems, crit. behaviour, Monte Carlo study 2-107260
 computer simulation using Monte Carlo techniques 2-112832
 concentration expansion for random Ising systems 2-53693
 conserved charges, infinite set 2-53697
 critical dynamics of finite Ising model, queueing theory 2-104638
 cube cluster approximation for the spin glass in the simple cubic lattice 2-66850
 cubic lattice, Ising ferromag. transition, Monte Carlo calc. 2-56881
 Curie temperature of the square Ising ferromagnet with first-, second- and third-neighbour interactions 2-110578
 decoupling point and marginal crossover 2-89632
 diacetylene, solid state polymerisation autocatalytic region, neutron diff. study 2-67751
 dilute quasi-low dimensional Ising magnets, crit. props. 2-82619
 dilute s-state Potts model, Migdal-Kadanoff renormalisation approach anal. 2-95256
 diluted and pure quantum transverse Ising model, crit. behaviour 2-79490
 disordered magnet, Ising model with random exchange bonds, Monte Carlo study 2-87468
 disordered systems and sampling of Monte Carlo data 2-98889
 double-Gaussian model, crit. and crossover behaviour 2-112836
 duality relation between an interface in a pinning potential and a modified Coulomb gas 2-107258
 effective-field model with correls. 2-92950
 FCC quartet model, phase struct. 2-69097
 ferromagnet, crit. temp., cluster variation method 2-104026
 ferromagnet, dipolar, phase transitions with spontaneous modulation 2-104646
 ferromagnet, effective field model, influence of triplet correlations 2-66851
 ferromagnet, inhomogeneous mean-field model 2-104640
 ferromagnet, two-dimens., with high cond. of imperfections, sp. ht. 2-104648
 ferromagnets with random anisotropy 2-61684
 first-order phase transitions, scaling function for structure factor 2-98244
 frustrated, order as consequence of disorder 2-66856
 frustrated, spin glass behaviour with chaotic renormalisation group trajectories 2-61729
 frustrated, variational real space renormalisation group 2-101336
 frustrated chains, ground-state and low temp. props. 2-61726
 frustrated simple cubic, ground state and phase transition 2-92948
 fully frustrated 2-D Ising systems, correlation functions 2-66857
 gauge model, phase transition 2-56876
 geometric analyses of φ⁴ fields and Ising models 2-107496
 Green's functions for two-dimens. model 2-53996
 ground state phase diagram, of extended Hubbard model with Ising-like exchange parameters 2-98836
 Heisenberg-Ising ferromagnet, with uniaxial anisotropy, Curie temp. calcs. 2-66806
 hierarchical lattice with competing interactions 2-95260
 high-temperature approach, mean field approx. 2-89634
 homogeneous short-range order, kinetics 2-81929
 hyperscaling and crossover exponents near the percolation threshold 2-107261
 infinite range Ising spin-glass, lack of ergodicity 2-101344
 infinite susceptibility above T_c, in Migdal-Kadanoff scheme 2-72245
 infinite-range coupling, critical props. 2-79485
 infinitely coordinated systems, size scaling 2-103941
 inhomogeneous models, correlated, general methods, fully frustrated square lattice and chessboard model 2-112829
 interface fluctuations and the Ising model in a random field 2-74362

Ising model continued

- Ising ferromagnet, scaling laws, logarithmic corrections, inner field 2-77312
- Ising magnetic systems, cluster approx. for q-depend. correls. 2-82800
- Ising replicated system of $\pm J$ model 2-53692
- Ising three-dimensional ferromagnet, heat capacity critical parameters 2-104637
- Ising-classical spin systems, decomp. theorem 2-95252
- Ising-Heisenberg ferromagnetic chain, excitation spectrum at zero field 2-82615
- kinetic Ising model, real-space renormalisation group approach 2-104642
- kinetic Ising system, domain growth kinetics and fluctuations 2-104654
- kinetic model, homogeneous long range and antiferromag. order, kinetic theory 2-103669
- Kosterlitz-Thouless transition for two dims. phone rotor 2-95298
- lattice spin models, star-triangle relation anal. 2-63911
- long range Ising spin glass, exact results and Monte Carlo simulations 2-110595
- magnetic excitations in the Ising-Heisenberg chain at low temperatures 2-115986
- magnetisation, 1-D, response functions 2-61683
- magnetisation profile in the presence of a surface magnetic field 2-72247
- Mattis-Heisenberg model, spin quantum number in ground state 2-72751
- metamagnet, dilute, quasiequil. transitions, Ising model 2-98879
- metastability, Glauber dynamics 2-87467
- model with random sublattice vacancies, phase diagram 2-95273
- Monte Carlo renormalisation group studies of crit. phenomena 2-69119
- Monte Carlo simulation of Ising systems using a data structure 2-53687
- nonequilibrium system, struct. pulses 2-74361
- one dimensional, correlations decay 2-107247
- one dimensional Ising system, Monte Carlo simulation 2-72750
- one-dimensional, rel. to complete devil staircase 2-95271
- one-dimensional, with $1/r^2$ interaction energy, low-temp. spont. magnetisations 2-66849
- one-dimensional spin-exchange kinetic Ising model, real space dynamic renormalisation group 2-110597
- one-dimensionally inhomogeneous mag. system, mean field theory 2-66740
- partition function zeros 2-101340
- percolation, correlated, position-space renormalisation group 2-101339
- pinning of an interface by a planar defect, domain wall behaviour 2-107252
- pyrite lattice, annealed Ising bond mixture, phase diagram 2-82622
- quantum Ising lattice, renormalisation group, finite model 2-104635
- Quartet Ising model, Monte Carlo study consistent with selfduality 2-53681
- quasi two dimensional Ising model, scale factor universality in anisotropic crossover behaviour 2-77311
- quasi-two-dimensional Ising model, crossover behaviour of susceptibility 2-61682
- quaternary mixtures, liquid-liquid equilb., singlet-triplet Ising model 2-61106
- quenched dilute random-bond Ising model, crit. wave 2-56877
- random, critical temp., generalised transfer formalism 2-116020
- random, in d dims., susceptibility, high-temp. series expansion 2-82623
- random antiferromagnetic Ising chain, remanent magnetisation 2-72249
- random antiphase state and frustration in two dimensions 2-82620
- random bond Ising model, spin correl. function upper bound 2-56879
- random cluster model on a Cayley tree 2-74336
- random decorated Ising model 2-72236
- random field d-dims. hypercubic Ising model, Monte Carlo renormalisation group study 2-72238
- random field Ising model, roughening and lower critical dimension 2-104644
- random Ising model in mag. field, $T=0$, effective field distrib. 2-98832
- random model Ising model, zero field susceptibility, magnetisation, upper bounds 2-56880
- random site, free energy, convergence criterion and self-avoiding walk approx. 2-56812
- regular and random Ising model on Cayley tree, higher order susceptibilities 2-77248
- relaxational spin glasses, generating functional for dynamics 2-87516
- renormalized $(1/\sigma)$ expansion for lattice animals and localization 2-101347
- scaling corrections by partial differential approximants, unbiased estimation 2-53695
- series expansion for gen. temps. 2-72239
- short-range interactions, numerical studies 2-66844
- site diluted, FCC and frustrated square lattice, spin glass and super-antiferromagnetism 2-77313
- spin correlations, Ising and conjugate model, influence of surface, out $T=T_c$ 2-74337
- spin glass, dynamic nature of freezing process, Monte Carlo simulation 2-61723
- spin glass, Ising model, infinite-range, TAP eqn., convergence 2-77307
- spin glass, Ising model, phase transitions 2-82624
- spin glass, Ising model on Cayley tree, mean field eqns. 2-87517
- spin glass, mag. susceptibility TAP-like diagrammatic anal., Harris criterion 2-72242
- spin glass, random anisotropy study 2-72228
- spin glass, random-band Ising model, entropy, free energy 2-82621
- spin glass, randomly layered Ising model on square lattice, criticality condition 2-104645
- spin glass model, ground state props. 2-72244
- spin glass of site-random with first and second neighbour interactions, transition temps. 2-110598
- spin glass with finite range interactions, Bethe approx. 2-72243
- spin glasses, Ising model, order parameter, lower bound 2-72246
- spin glasses, Ising model study thermodynamic props. 2-98901
- spin glasses, magnetic model with short- and long-range interactions 2-77314
- spin glasses, mean field theory, recent developments 2-116015
- spin glasses, mean field theory in framework of broken replica symm. for Ising spins 2-66855
- spin glasses, order parameter and static susceptibility in mean-field theory 2-72237
- spin-glass model, infinite ranged, bounds for entropy 2-92947
- spin-glass phase, stability versus space dimensionality 2-72241
- square dipole lattice, phase transitions (Russian) 2-53712
- square lattice, exact differential renormalisation group eqns. 2-84535

Ising model continued

- square lattice anisotropic Potts ferromag., renormalisation group anal. 2-110557
- squaric acid, antiferroelec. phase transition, realisation of Baxter model 2-82790
- squaric acid, layered antiferroelec., interacting one dimensional Ising spin chain model 2-77457
- stochastic process for computer simulation at equilb. 2-104636
- superconducting transition temp. Ginzburg-Landau theory, Ising approx. 2-115943
- supersymmetric Liouville action renormalisation and 3D Ising model critical exponent 2-79762
- surface energy and equilb. shape for $d=2$ Ising cryst. 2-69106
- surfaces, order-disorder transitions 2-115549
- susceptibility, high temp. series and exact relations in random fields 2-61724
- synergetics, chaos and order in nature, conf., Schloss Elman, Bavaria, FRG (April-May 1981) 2-58543
- ternary mixtures, liquid-liquid equilb., singlet-triplet Ising model 2-61105
- three dimensional, critical temp., partition function numerical integration using collective variable method (Russian) 2-92851
- three dimensional, partition function, integration by collective variables and linear renormalisation (Russian) 2-92852
- three-dimensional lattice, exact solns. to Ising model 2-107268
- transverse field, linear decoupling approx. calcs. 2-66739
- transverse model with random local fields, tricritical line 2-84557
- triangular, two- and three-spin, variational approx. 2-72248
- triangular lattice, modulated struct., domain boundaries, free energy 2-98831
- two dimensional pure and random, spin fluctuations, review (Japanese) 2-82625
- two-dimensional, thermodynamic props. at phase transform., analytic continuation method 2-69120
- two-dimensional, with impurity lattice bonds, two-point correl. function 2-89631
- two-dimensional Ising model, scaling limit and Osterwalder-Schrader axioms 2-74338
- two-dimensional kinetic Ising model, real-space dynamic renormalisation group method 2-104647
- two-dimensional kinetic Ising model, spin conserving, dynamic correls., renormalisation method 2-92949
- two-dimensional system, finite size scaling and phenomenological renormalization 2-63935
- two-dimensional triangular model, real-space renormalisation group calcs. 2-89633
- CeBi mag. phase transitions, anisotropic Ising model 2-116021
- CeSb, phase diagram of ANNNI model in external mag. field 2-77309
- CsD₂PO₄, critical props., dielectric const., Ising model 2-67007
- CsD₂PO₄, quasi-one-dimens, H-bonded ferroelec., phase diagram, anisotropic compressible Ising model 2-87709
- CsH₂PO₄, critical props., dielectric const., Ising model 2-67007
- CuMn spin glass, magnetisation, calorimetric determ., rel. to Maxwell relation 2-92928
- Fe complex, bis(N,N-diethylthiocarbamate)-iron chloride, crit. behaviour, theoretical anal. 2-72240
- Fe_{1-x}Cd_xCl₂, dilute antiferromagnet, Raman scatt. from magnons, Ising cluster model 2-61893
- Fe₂Zn_{1-x}Fe_x, dil. Ising antiferromag., crit. behaviour, random field effects 2-66854
- KD₂PO₄-type ferroelectrics, cluster approx. for q-depend. correls. 2-82800
- KH₂PO₄ type structure, Monte Carlo simulation of order-disorder transition 2-104818
- LiTbO₃Y_{0.1}F₄, randomly diluted Ising dipolar-coupled ferromagnet, mag. eqn. of state 2-61730
- Mn_{1-x}Zn_xF₂, heat capacity meas. for $x < 0.1$ 2-72210
- Mn₂Zn_{1-x}F₂, dil. Ising antiferromag., crit. behaviour, random field effects 2-66854
- NH₃ halides, Ising model, high-temperature approach, mean field approx. 2-89634
- Rb₂CoF₄, two-dimensional Ising system, dynamic crit. neutron scatt. study 2-104643
- RbFeCl₃·2H₂O, Mossbauer study of critical fluctuations 2-99011
- Sm₂Fe₂O₇, mag. phase transitions, Ising ordering hypothesis (Russian) 2-56860
- ZnMn, hexagonal, spin glass behaviour 2-66861
- island-like metallic thin films *see discontinuous metallic thin films*
- islet-like metallic thin films *see discontinuous metallic thin films*
- isobaric analogue resonances
- see also nuclear collective states and giant resonances*
- A=12-90, giant dipole resonance isobaric analogue from (³He,t), (³He,³He') 2-69624
- relativistic heavy-ion collisions, resonances and isobaric analogue states 2-59313
- spin pivity in isobaric analogue reson. 2-95980
- X-ray production from united-atom K-spectra in nuclear reactions, theory 2-101860
- (π^0), pion charge exchange and transition densities to isobaric analogue states 2-85107
- ⁵¹Co isobaric analogue resonances, J^π, spectroscopic factors from ⁵⁶Fe(p,p) 2-59311
- ⁵²Cr(p, γ), resonance phenomena in cross section 2-95997
- ⁵²Cr(p,p'), resonance phenomena in cross section 2-95997
- ⁵⁸Cu, isospin impurity and core polarisation of IAR fragments 2-101856
- ¹⁸F, analogue resonances from ¹⁸O(p,x')¹⁸F γ -ray emission meas. 2-107820
- ⁶⁴Ga, d_{1/2} isobaric analogue resonance decay following ⁶⁴Zn(p, γ) 2-90066
- ¹⁴N(n,p), 60 MeV, analogue isovector giant resonance excitation, DWBA anal. 2-107821
- ²⁸Si(n,p), 59.6 MeV, giant dipole resonance parent analogue 2-107822
- Sn, isobaric analogue resonances, proton particle-neutron quasiparticle calcs. 2-113442
- isobaric analogue states
- see also isobaric analogue resonances*
- Gamow-Teller reson. 2-54318
- proton and neutron radii, isospin projected HF description 2-107743
- (p,n) on Li,C,Mg,Cl,Ca, 5-200 MeV, isovector effective interaction strength ratio, energy depend. 2-59358

isobaric analogue states continued

- ²⁶Al, ²⁴Al^m, β^+ -decay and weak transitions, analog states 2-59294
²⁶Al levels, analogue E2 transitions, lifetimes, branching ratios from
²⁶Mg(p, γ) 2-107797
⁷Be small angle diff. cross sections to isobaric analogue states, energy depend. in ¹³Li(π^+ , π^0) 2-64386
¹³C(π^+ , π^0) ¹³N ground state, single charge exchange reaction, isobar excitation mechanism, theoretical study 2-59405
⁴Ca(π^+ , π^-) ⁴Ti, A=40, 42, 44, 48, double charge exchange, two-amplitude model of cross section 2-69681
⁴⁰Ca(π^+ , π^0), giant-resonance excitation, eikonalised strong-absorption model 2-85103
⁴⁸Ca(p,n), 160 MeV, cross-section, $\Delta(1232)$ isobar effect 2-85039
⁴⁸Cd(p,n), A=110, 114, 116, ground and excited state analogues study 2-54378
⁴Fe(p,n), A=54, 56, 28-35 MeV, ang. distrib. for low-lying states, DWBA anal. 2-74764
³He(π^+ , π^-), $T_p=200$ MeV, differential cross section meas. 2-54447
¹N small angle diff. cross sections to isobaric analogue states, energy depend. in ¹³C(π^+ , π^0) 2-64386
¹⁶O(p,n) ¹⁶F, 99, 135 MeV, spectroscopy of ¹⁶F 2-64407
³²S, T=1 isospin triplet states 2-95921
³S resonance parameters, J^{π} , neutron strength distrib., IAS from ³²S(n,n) 2-113437
⁴⁰Sc beta-decay to proton and α -particle unbound states in ⁴⁰Ca 2-85000
⁴Se(p,n), 19 to 25 MeV, A=76, 80, 82, excitation of analogue states, coupled channel analysis 2-113444

isobars see atmospheric pressure and density**isoelectronic series**

- alkaline earth ions isoelectronic with alkali metal atoms, hyperfine interactions 2-90738
atoms, total electronic energy, Z expansions, V_{en} and V_{ee} determ., electron affinities, ionisation pot. 2-96419
atoms and ions with valence config. (nd)¹⁰ where n=3 and 4, multipole polarisability and shielding factors 2-85836
Born-approx. electron ionisation cross section, oscillator strengths, proton stopping power calc. 2-96644
F-like ions, 2s²2p⁵-2s2p⁶ transitions obs. 2-102403
H-like heavy ions, polarisation of vac. in spectra 2-85611
molecules, dissociation process, ab initio study 2-88355
molecules and ions, equilb. geometries, inversion barriers and force const. calc. by MNDO method 2-70146
Ag isoelectronic series ionisation potentials, core polarisation, relax., and relativistic effects 2-113896
Al sequence isoelectronic ions, oscillator strengths, potential model calc. 2-80538
Ar-like mols., L_{II-III} emission spectra, many-electron effects 2-90568
Ar isoelectronic series ionisation potentials, core polarisation, relax., and relativistic effects 2-113896
Be isoelectronic series, optimal geometric approx., uncoupled HF calcs. 2-113868
Cl like ions, electron impact ionisation cross sections 2-80826
Cl-like ions, electric dipole transition energies, wavelengths and oscillator strength for E1 transitions 2-79291
Cu isoelectronic series ionisation potentials, core polarisation, relax., and relativistic effects 2-113896
Fl isoelectronic sequence, 2s^m2pⁿ-2s^{m+1}2pⁿ⁺¹ intersystem transitions 2-80530
H isoelectronic sequence, 2E1 and M1 radiative decay rates 2-102436
H-like ions, electron elastic scatt., s-, p- and d-wave phase shifts 2-108709
H-like ions, excitation and ionisation mechanism, role of autoionising states 2-65684
H-like ions, scaled collision strengths for $\Delta n \geq 1$ transitions (for n ≤ 5) 2-108716
H-like ions, spectrum, dipole and quadrupole moments in superstrong mag. field 2-113912
He I and isoelectronic sequence, Fock expansion for S-states, first terms (French) 2-54762
He isoelectronic series, energy and transition probabilities correl. wavefunctions calcs. 2-113874
He isoelectronic series, optimal geometric approx., uncoupled HF calcs. 2-113868
He, isoelectronic series, S state, eigenvalues of two-dimensional Schrodinger eqn. 2-54749
He-like atoms in strong mag. field, HF calcs. 2-102377
He-like ions, multiply charged, reson. photoabsorpt. characts. 2-113949
He-like ions, optical pumping rel. to gain at X-ray wavelengths 2-70536
He-like ions, spectrum, dipole and quadrupole moments in superstrong mag. field 2-113912
He-like ions, Z=6-20, Lyman- α and dielectronic satellite spectra 2-70167
He-like multicharged ions, self-ionisation states, intermediate-coupling approx. 2-75152
He + B⁴⁺ (C⁴⁺) (N³⁺) (O²⁺) (F⁺) (Ne⁰) (H-like) (He-like) (Li-like) ions, one-electron capture cross sections 2-96223
Kr, highly ionised, spectroscopy for Tokamak plasmas 2-97767
Li isoelectronic sequence, even-parity quartet P states, corrective results 2-102655
Li isoelectronic series, ionisation pots., transition freqs., perturbation theory, HF method 2-113937
Li-like ions, 1s2p² configuration, multiplet splitting and radiationless transition, relativity effects 2-108419
Li⁻ X (X=O²⁻, OH⁻, OH₂, N³⁻, NH²⁻, NH₂⁻, NH₃) isoelectronic series, geometric struct. and stability, FSGO calc. 2-80442
Mg, multipole optical transition calcs. by relativistic SCF method 2-80541
Na-like ions, electron impact ionisation rate, ionisation cross section, excitation-autoionisation contrib. 2-102636
Ne isoelectronic sequence, outer subshell photoionisation, ab initio calcs. 2-75222
Ne isoelectronic sequence, third order correl. energies 2-80501
Ne to Si and Ar, exact hydrogenic Compton profiles 2-59687
ne-isoelectronic molecules, electron impact dissoci., Doppler profile translational spectrosc. 2-80829
O₁, isoelectronic sequence, 2s^m2pⁿ-2s^{m+1}2pⁿ⁺¹ intersystem transitions 2-80530

isoelectronic series continued

- Si isoelectronic series, ground config. up to 3p², forbidden lines radiative transition probabilities 2-85592
Sn XX, XXI, XXII, spectrum obs. in extreme UV, 20 to 85 Å, isoelectronic extrapolations 2-54794

isomer shift

- atomic states, spin-orbit contribution to isotope, isomer shifts (Russian) 2-96480
diamond: Sn, cordency and compression effects on isomer shift of impurities 2-56989
dihaloethylenes, cis effect, NMR study 2-114018
iron sulphides, mixed-valence compounds, valence meas. using Mossbauer ⁵⁷Fe isomer shift 2-61798
Mossbauer spectra, hyperfine interaction, Fourier anal. 2-104766
semiconductors, Mossbauer isomer shift and band struct. 2-93091
stainless steel, type SS 310 and SS 316, isomer shift, tensile stress effects 2-93093
vinyl ethers, β -substituted, cis effect, NMR study 2-114018
As, Te_{1-x} glasses, intrinsically broken 8-N coord. rule, ¹²⁹I Mossbauer study 2-81686
AuI, high press. Mossbauer study of ¹⁹⁷Au, electrical cond. 2-61794
¹⁹⁷Au, Au and Au-Cu Mossbauer isomer shift calc. from electron capture lifetime meas. 2-93076
Ba_{1-x}Fe₂Si₂, Mossbauer spectra, mag. and elec. props. 2-66962
Cd, Cu_{1-x}Fe₂O₄, mag. props., hyperfine interaction, Mossbauer study 2-116103
Co, Fe_{1-x}Fe₂O₄, Mossbauer spectra, isomer shifts, quadrupole coupling consts. and effective mag. fields calc. 2-82755
Co, Mn_{1-x}Fe₂O₄, solid solns., Zeeman spectra, Mossbauer study 2-61792
⁵⁷CoCl₃, frozen aq. soln., electron capture after-effects, Mossbauer study 2-104768
Cs₃AgAuCl₆, high press. Mossbauer study of ¹⁹⁷Au, electrical cond. 2-61794
Cs₃Au₂Cl₆, high press. Mossbauer study of ¹⁹⁷Au, electrical cond. 2-61794
Cu₂TaSe₄, ¹⁸¹Ta 6.2 keV nuclear transition isomer shift 2-110737
diamond: Fe, ion implantation study by conversion electron Mossbauer spectroscopy 2-77427
EuCu₂Si₂, energy balance of mixed-valent Eu ions 2-87197
Eu_{1-x}Gd_xSi spin glass, mag. relax., Mossbauer study 2-66833
EuPd₂Si₂, cooperative config. change, isomer shift meas. 2-66964
EuPd₂Si₂, mixed valence cpd., mag. susceptibility, lattice const., Mossbauer isomer shift 2-56510
¹⁵¹Eu atoms and mols. in solid Ar, matrix isolation and Mossbauer study 2-54807
Fe complex, rapid spin equilb., relax. time 2-82753
Fe distribution in layered silicate minerals of Indian origin, Mossbauer study 2-82754
Fe-Al-Sn, Mossbauer study of spin and charge density changes 2-116102
Fe-Ni-P-B based metallic glasses, Mossbauer study under press. 2-72385
Fe-Sn, hyperfine field, isomer shift, spin and charge density changes, Mossbauer study 2-93083
Fe₇₄Zr₂₆, amorphous, mag., Mossbauer, and resist. study 2-72384
Fe_{1-x}B_x amorphous, sputtered and liquid quenched, hyperfine field, Mossbauer study 2-104760
Fe₂B_{0.99-x} amorphous, mag. hyperfine interactions, Mossbauer study 2-82764
Fe_{1-x}Cr_xBO₃, ferrimagnet, Mossbauer study 2-72381
Fe₂Hf₂O₇ amorphous, mag., Mossbauer, and resist. study 2-72384
Fe(II), porphyrin complexes, electronic struct., Mossbauer spectra, ab initio LCAO SCF calcs. 2-108596
Fe₈₀M₂₀B₁₀, M=transition metal, metallic glass, Mossbauer and corrosion studies 2-104769
Fe_{0.948-x}Mn_{0.052} system, Mossbauer and mag. studies 2-82761
Fe₂Ni₃₆Cr₁₄P₁₂Fe₂, amorphous, Mossbauer study under press. 2-72385
(Fe₂Ni_{1-x})₁Se₈, Mossbauer study 2-104774
Fe₂O₃-Fe₂O₄ glass, Mossbauer effect and elec. cond. meas. 2-87639
Fe₂Si_{1-x} amorphous thin film, mag. anisotropy, Mossbauer and ESR study 2-93087
 β -FeTiH, Mossbauer isomer shifts 2-87641
FeTiH₃, Mossbauer isomer shifts 2-87641
 θ -Fe_{0.35}V₂O₇, elec. field gradient, Mossbauer study 2-104759
Gd intermetallic cpds., charge transfer and isomer shift, ¹⁵⁵Gd Mossbauer spectra 2-104777
GdCu₂, mag. and crystallographic props., Mossbauer effect, H₂ absorption effects 2-82758
Ge, amorphous, Mossbauer study 2-99004
Ge:Sn, cordency and compression effects on isomer shift of impurities 2-56989
⁷¹Ge, Mossbauer isomer shifts calc. for 67.03 and 13.3 keV transitions 2-72392
graphite: Fe, ion implantation study by conversion electron Mossbauer spectroscopy 2-77427
KFe(Cl)(Br), Mossbauer isomer shift of ⁴⁰K⁺ 2-56993
LaFeP₆, superconductivity and mag. props., Mossbauer study 2-72102
Mg_{1-x}Fe_x amorphous, Mossbauer effect and mag. props. 2-66965
MgTiO₃:Fe³⁺, Mossbauer and EPR studies 2-104773
Mg₂Zn_{1-x}Fe₂O₄, Mossbauer spectra, isomer shifts, quadrupole coupling consts. and effective mag. fields calc. 2-82755
Mo₂(Se_{1-x}Te_x)₈, Chevrel phase cpds., ¹²⁵Te Mossbauer effect 2-77436
NdFe₂, Laves phase cpds., correlation of ⁵⁷Fe hyperfine interactions with Fe-Fe distance 2-56985
NiFe, 3d electron density charge on atomic ordering, Mossbauer study 2-61804
Ni₃Mn_{1-x}Fe₂O₄, solid solns., Zeeman spectra, Mossbauer study 2-61792
P₂O₅-SnO₂-MgO(CaO)₂(SRO)₂(BaO), Mossbauer and IR spectra quadrupole splitting 2-104767
PrFe₂, Laves phase cpds., correlation of ⁵⁷Fe hyperfine interactions with Fe-Fe distance 2-56985
Si, amorphous, Mossbauer study 2-99004
Si:Sn, cordency and compression effects on isomer shift of impurities 2-56989
SmFe₂, Laves phase cpds., correlation of ⁵⁷Fe hyperfine interactions with Fe-Fe distance 2-56985
 α -Sn, amorphous, Mossbauer study 2-99004
Sn-O amorphous system, bonding struct. and lattice dynamics, Mossbauer study 2-104770

isomer shift continued

- SnS-BaS(Tl_2S) systems, ^{119}Sn Mossbauer spectra, chemical isomer shifts (French) 2-61799
 YCo₂ powders, ferromagnet and Mossbauer props., grinding effects (Russian) 2-87546
 YFe₂, amorphous and crystalline, Mossbauer study 2-110734
 YIG, amorphous, Mossbauer Zeeman spectrum, linewidth asymm. 2-110736
 Zr_{1-x}Hf_xFe₂, isomer shift and quadrupolar interaction, Mossbauer study 2-104778

isomerisation

- asymmetric reaction, transfer theories comparison 2-105451
 benzaldazine, thermal isomerisation, coupled N-N rot./N inversion mechanism 2-96465
 benzyl chloride parent ions struct., biomol. isomerisation process 2-78078
 butadiene cations, laser photogrammetric study at 5145 Å, vibr. predisoc. 2-96659
 butadiene cyclobutene isomerisation paths, nonadiabatic coupling paths 2-111465
 conservative dynamical systems, conditions determ. RRKM behaviour 2-96659
 α -cyano carbanions, isomerisation, struct., stability, ab initio STO calcs. 2-102370
 cyclobutadiene, liq. cryst. soln., isomerisation reaction NMR spectra calc. 2-96601
 cycloheptatriene, conformation effects, valence isomerisation to norcaradiene, MINDO/3 calcs. 2-111461
 cyclohexatriene, liq. cryst. soln., isomerisation reaction NMR spectra calc. 2-96601
 cyclooctatetraene, liq. cryst. soln., isomerisation reaction NMR spectra calc. 2-96601
 9, 10-Dewar-isomer, valence isomerisation to 9-t-butylanthracene (German) 2-83380
 3,3'-diethyloxadiazocarbonyne iodide, photochemical isomerisations, solvent effects 2-57599
 diphenyl butadiene, photochemical isomerisation in soln., radiative and nonradiative decay rates 2-73002
 ethylidene, struct., mol. rearrangement, MINDO and UHF calcs. 2-85547
 ferrocenyl derivative, bridged, 1st order isomerisation, signal averaging, Varytemp NMR investig. 2-85698
 fulminic acid, rare gas matrix isolated, isomerisation, photolysis, IR and UV obs. 2-75264
 hydroxymethylene radical, unimol. reactions, energy barriers calcs. 2-62383
 methoxy radical, unimol. reactions, energy barriers calcs. 2-62383
 methylenephosphorane, hypersurface, geometries, tautomerisation, dissociation calcs. 2-54756
 methylenesulphurane, hypersurface, geometries, tautomerisation, dissociation calcs. 2-54756
 nonrigid molecules, isomerisation reaction construction 2-105455
 l-pentene, laser photocatalytic isomerisation and hydrogenation 2-116688
 l-pentene, photo-induced isomerisation, Fourier transform IR spectroscopy obs. 2-116708
 perinaphtho-thioindigoid dyes, photoisomerisation, flash photolysis study 2-99649
 polyacetylene:Li, n-type doping, isomerisation, EPR and Raman spectra 2-65878
 polyacetylene, cis-trans isomerisation, IR, DSC, UPS, NMR, EPR and elec. cond. study 2-93792
 polyacetylene, cis-trans isomerisation induced by mech. rolling, report 2-72746
 polyacetylene, cis-trans isomerisation mechanisms due to thermal treatment and doping 2-83371
 polyacetylene, cis-trans isomerisation on doping and heat treatment, MINDO/3 calc. 2-93791
 polyacetylene, ESR linebreadth narrowing mechanisms, expt. study 2-77358
 polyacetylene, isomerisation and disorder induced by doping 2-99670
 polyacetylene film, IR study of cis trans isomerisation 2-62398
 polymethine dyes, fast photoisomerisation process, double valley pot. model 2-99654
 porphines, free base, H⁺ migration dynamics, tautomerisation 2-88351
 probabilistic dynamics, sub master eqn. 2-88352
 propane ion, C skeletal rearrangement, obtained by photoelectron-coincident photoion mass spectrometry 2-72972
 propylidene, struct., mol. rearrangement, MINDO and UHF calcs. 2-85547
 pseudoisocyanine iodide photoisomers form., picosecond time resolved kinetic studies, quantum yield 2-72991
 quantum dynamics of isomerisation reactions, localised state and coherent state model 2-72958
 trans-retinal, laser photochem. evolution, Raman and visible spectrosc. obs. 2-62410
 trans-N-retinylidene n-butylamine, laser photochem. evolution, Raman and visible spectrosc. obs. 2-62410
 smectic liquid cryst. imaging device based on photochem. reaction 2-99692
 spiropyran, ultrafast form. of transients in photochromism 2-108534
 stilbene, picosecond excitation and trans-cis isomerisation in supersonic jet 2-83347
 s-trioxane, liq. cryst. soln., isomerisation reaction NMR spectra calc. 2-96601
 AlBF₄, isomerisation, pot. energy surfaces calc. ab initio using double-zeta basis sets 2-102411
 AlBH₄, isomerisation, pot. energy surfaces calc. ab initio using double-zeta basis sets 2-102411
 Al₂F₆, isomerisation, pot. energy surfaces calc. ab initio using double-zeta basis sets 2-102411
 Al₂H₄, isomerisation, pot. energy surfaces calc. ab initio using double-zeta basis sets 2-102411
 B₂F₄, isomerisation, pot. energy surfaces calc. ab initio using double-zeta basis sets 2-102411
 B₂H₄, isomerisation, pot. energy surfaces calc. ab initio using double-zeta basis sets 2-102411
 Cu chromite catalysts, XPS struct. elucidation and correl. with catalytic activity 2-105038
 HCN (HNC), ground states, freq. optimised pot. energy functions 2-90644

isomerisation continued

- HONO, in N₂ and Ar matrices, IR laser photoisomerisation study 2-111471
 LiON, struct., isomerisation, ab initio CI SCF calcs. (French) 2-108395
 Pt complexes, diaminodihaloplatinites, cis-trans isomerisation, NQR study 2-108559
- isomerism**
 see also isomerisation; nuclear isomerism; rotational isomerism
 2-arylamino-1,2-diarylethanesulphonic acid esters, stereochemistry, PMR study 2-114019
 binaphthyl spiro cyclophosphazene derivatives, isomeric 1,1' and 2,2' forms, UV obs. 2-108549
 carbodimide, isomerism, force consts. vibr. spectra, CNDO calcs. (French) 2-108383
 chamic acid, configuration and conformation, ¹H NMR spectra 2-114130
 chlorin photoisomer, in n-hexane, S₁→S₀ transition, Zeeman effect, photochem. hole-burning obs. 2-80697
 6-chloropurine, IR absorpt. spectra obs. 2-54840
 cyanamide, isomerism, force consts. vibr. spectra, CNDO calcs. (French) 2-108383
 cyclo-octatetraene, in liq. cryst. solvents, bond shift kinetics, dynamic NMR meas. 2-90572
 dihaloethylenes, cis effect, NMR study 2-114018
 5-fluorouracil, and 4-hydroxytautomeric form., ab initio MO STO calcs. 2-113864
 formic acid, cis-trans isomerism, HF and MCSCF calcs. 2-96436
 gas-solid interactions, adsorption-complex isomerism and quantum chemical study 2-93816
 harmine, absorpt. and fluoresc. spectra, pH depend., tautomeric equilib. 2-96627
 harmol, absorpt. and fluoresc. spectra, pH depend., tautomeric equilib. 2-96627
 hexafluorobut-2-ene-d₆(d₂), struct., vibr., normal coordinate anal., electron diff., IR and Raman obs. 2-113981
 hexaphenylisomelamine and hexaphenylmelamine, cryst. and mol. struct. 2-103742
 5-hydroxy-2(3H)benzofuranone, struct., stereochemistry 2-96765
 4-hydroxy-5-phenyl-2-imidazolidinone, substituted, ¹H NMR 2-96593
 in-plane fundamental vibr. frequencies, rel. to cis-trans correlation 2-108440
 methyl-10-phenothiazine, phosphonation isomers, ¹³C and ³¹P NMR 2-75317
 5-methoxyuracil, and 4-hydroxytautomeric form., ab initio MO STO calcs. 2-113864
 model chemical system related to absolutely asymmetric synthesis, stereospecific and autocatalytic processes 2-62373
 molecular ions, stereochemical struct. studied using electrostatic accelerator 2-54982
 molecular spectroscopy, conf., Albena, Bulgaria, (Oct. 1980) 2-107020
 2-nitromalonaldehyde-d₄(-d₁), H⁺ tunnelling and nitro group torsion 2-96548
 organic molecules, stereochemistry, NMR appl. 2-108579
 pentaziridinocyclodiphosphathiazene (NPAZ)₂NSOAz, (Az=NC₂H₄), Raman and IR studies 2-114002
 2-phenoxy-γ-butyrolactone, struct., stereochemistry 2-96764
 poly-1,3-pentadiene stereoisomers, vibr. spectra anal. 2-75482
 polyatomic molecules, hyperfine struct. corrections, P odd effects (Russian) 2-108736
 propylene oxide-maleic anhydride oligoesters, struct. isomers and compositional sequences, ¹³C NMR (Russian) 2-75327
 tetrazole, annular tautomerism, electric dipole moment study, ab initio MO calcs. 2-96773
 thymine, and 4-hydroxytautomeric form., ab initio MO STO calcs. 2-113864
 trifluoromethyl anilines, CF₃ substitution effect on vibr., far IR obs. 2-108519
 trypsin, conformational fluctuations of protein mol. 2-73185
 uracil, and 4-hydroxytautomeric form., ab initio MO STO calcs. 2-113864
 uracil tautomerism, mol. relax. effect 2-102661
 ureas, trisubstituted, containing chlorophenyl groups, IR spectra, conformational anal. 2-90544
 vinyl ethers, β-substituted, cis effect, NMR study 2-114018
 C₂H₂O species, triplet state, isomerism, geometry, STO calcs. 2-85525
 C₂O₂, isomers, bond lengths, ab initio SCF calcs. 2-113862
 o-H₂→p-H₂ conversion in Jovian planetary atmospheres 2-100782
 HCN(HNC), one-electron bases for electron correl. methods 2-80498
 HSiOH, form., matrix isolation IR spectra, isotope effects 2-108492
 Pt complexes, diaminodihaloplatinites, cis-trans isomerisation, NQR study 2-108559

isomorphism

- character table of D₃, C_{8v} and D_{4d} single and double groups 2-63756
 Cu₆Hg₃As₂S₁₂, aktoskite, cryst. struct., isotypy with Cu₆Zn₃As₂S₁₂ 2-103727
 Cu₆Zn₃As₂S₁₂, nowackite, cryst. struct., isotypy with Cu₆Hg₃As₂S₁₂ 2-103727
 SrO-BaO-Al₂O₃-TiO₂-SiO₂ system, crystallised-glass materials, isomorphous substitutions, X-ray diff. study 2-71615

isothermal transformations

- crystal phases, press. induced first-order phase transition, shift model 2-109950
 phase transitions during heating and isothermal annealing 2-81944
 planar interface instability 2-61110
 steel, eutectoid, austenite to pearlite and upper bainite isothermal transform. 2-99422
 steel, isothermal transform. diagram, thermodynamic anal. 2-57329
 steel, supercooled austenite, decomp. products morphology changes during continuous cooling, HTMT influence 2-105159
 steel, V, hot deformed, isothermal austenite-ferrite transform, TEM study 2-111172
 steel, V, mech. props. rel. to γ→α transform. kinetics 2-83112
 Cu₂Te₆₈Se₃₂, phase transitions during heating and isothermal annealing 2-81944
 Fe, cast, hot-worked high-strength, kinetics of isothermal breakdown of austenite 2-105140
 Fe-Ni-Mo, martensitic γ to α transform., purity depend. (Russian) 2-99426

isothermal transformations continued

- Fe-Si-C, secondary stage of bainite reaction, TEM obs. 2-83110
 LiO₂-NaO₂ pseudobinary system, phase diagram and amorphous state
 crystal. kinetics, expt. study (*Chinese*) 2-91778

isotope detection

see also mass spectra

- ³H-solute conc. monitoring using encapsulated plastic scintillator 2-73400
 deadline of isotope diagnostic measuring devices (*Hungarian*) 2-113843
 hydrologic sample isotope ratio measurement technique 2-73718
 light isotopes in metals, ion beam anal. using solid state track detectors
 2-67789
 radioactive minerals from SW England, CR-39 α -particle autoradiographs
 2-68524
 B mapping in minerals and rocks using CR-39 polycarbonate plastic
 detector 2-68522
¹⁴C, meas. in CO₂, tunable diode laser sensitivity spectroscopy 2-65103
 HT and HTO in air, prototype monitor design and performance 2-78272
³H monitor using ionisation chamber, design and performance 2-75117
³H on-line monitor development with γ -ray rejection and energy discrimi-
 nation 2-75057
 Pu assay in nuclear waste packages, modular 4 π neutron counting system
 2-64471
 Pu detection using Ge planar detectors array 2-85481
 Pu isotopic anal. using automated mass spectrometer 2-74563
 Rn concentration meas. in indoor air using LR-115 and CR-39 detectors
 2-67900
 Rn concentration meas. using CR-39 detector in Orkney islands and
 Kinver caves 2-67897
 Rn concentration meas. using solid state track detector 2-67916
⁸⁵Sr, A=32, 34, isotope identification using reson. nucl. reactions
 2-116740
¹⁴⁴Sm(³²S,X), 139.5-201 MeV, fusion reaction, Pt and Os isotopes detec-
 tion and study 2-64431
 traces determ. using solid state track detectors 2-67920
 U concentration meas. in water using solid state nuclear track detectors
 2-67921
 U content calc. of U-rich veins and inclusion in minerals 2-68523
 U estimation in plants using fission track technique 2-67898
 U in sea, lake and spring water, fission track determ. 2-67922
 U isotopic anal. using automated mass spectrometer 2-74563

isotope effects

see also isotope shifts

- acetamide-d₀(d₁)(d₂)(d₃)(d₄)(d₅), isotope effects, force consts., CNDO
 calcs. 2-96457
 acetylene-HCN(DCN) complexes, struct., quadrupole coupling, microwave
 rot. spectra obs. 2-108474
 Anderson localisation induced by isotopic disorder 2-82292
 anhydrous, H bonds in metastable forms, spectrosc. investig. 2-57078
 benzene, isotope and derivatives, vibrationally excited, visible and IR obs.
 2-63769
 benzene-d₀(-d₆), local mode vibrs., spectra, model 2-59772
 benzene-d₀(d₁-d₆) vibronic Jahn-Teller state splitting, UV obs. 2-108543
 benzene-d₀(d₂)(d₃)(d₄), planar vibr., force field, IR obs. 2-85661
 benzenes isotopically labelled, two-photon hot band spectra, Duschinsky
 effect 2-85680
 benzoxazoles, excited, intramol. proton transfer, tautomeric fluoresc., iso-
 tope effect 2-105447
 bromomethane, rovibrational transition, saturation spectra 2-70229
 bromomethane-d₀(-d₁), third order vibr. problems, Redington's method
 calcs. (*German*) 2-108467
 3-bromothiophene, rot. consts., nucl. quadrupole coupling, hyperfine
 struct., microwave obs. 2-75246
 bromotrifluoromethane; ground and excited states, rot., microwave obs.
 2-59791
 chloroform-d₀(-d₁), ³⁵Cl NQR line widths and mag. dipole interaction
 2-110700
 chloromethane-d₀(-d₁), third order vibr. problems, Redington's method
 calcs. (*German*) 2-108467
 collinear exchange reactions, quantum mech. calcs. 2-62381
 cyclopentanol-d₀(-d₁), solid and liq., IR spectra 2-99135
 diazaphosphorines, cyclic, intramol. transmission effects, ³⁵Cl NQR
 2-108566
 dimethylbenzaldehydes, in duren single crystals, phosphoresc. lifetimes
 2-67094
 ethene-HF, H-bonded pi complex, matrix isolated, vibr., IR obs. 2-90536
 ethylene ozonides, secondary, photolysis, pyrolysis and matrix IR spectra
 2-113979
 ethylene-HCN(DCN) complexes, struct., quadrupole coupling, microwave
 rot. spectra obs. 2-108474
 formic acid, excited state, optically pumped, microwave obs. 2-75245
 fluorene:acridine, photochemical H abstraction from fluorene, kinetic
 2-57627
 fluoroform-d₀(-d₁), liq., vapor press., isotope effects meas. 2-76646
 fluoromethane-d₀(-d₁), third order vibr. problems, Redington's method
 calcs. (*German*) 2-108467
 formamide-d₀(d₁)(d₂)(d₃), isotope effects, force consts., CNDO calcs.
 2-96457
 H⁺ transfer reactions, kinetic isotope effect 2-70410
 hexafluorobut-2-ene-d₀(d₂), struct., vibr., normal coordinate anal., electron
 diff., IR and Raman obs. 2-113981
 hydronium ions+hydroxide ion, neutralisation reaction, isotope effects,
 polarisation model study 2-72978
 ice, crystal phase II and IX, translational and rot. vibrs., Raman study
 2-93176
 inert gases, isotopic thermal diffusion factor, temp. depend., determ. using
 cadmium calibration factor 2-86369
 liquid-liquid phase diagrams, D isotope effects, review 2-66193
 metals, diffusion of H, isotope effects, theory 2-98341
 metals, H impurity electronic struct., μ SR studies, review 2-99014
 methane, inverse spectral problem, normal F₂ oscill. modes (*Russian*)
 2-85636
 methane, microwave spectra, rel. to radioastronomy 2-75280
 methane, solid, isotope effect in phase diagram, proton NMR expt.
 2-56964
 methane, solid, isotope effect is phase diagram, corresponding state anal.
 2-56184
 methane, vibr., ¹²C and ¹³C, IR obs. 2-90539
 methane-d₀-d₄(-¹³C), stretching overtone bonds, local mode model
 2-80574

isotope effects continued

- methane-d₀(-d₄), electron impact dissoci., product ion laser induced fluo-
 resc. 2-96619
 methane-d₀(d₂), electron impact, dissociative excitation, balmer emission,
 isotope effect 2-54975
 methinophosphide-d₀(-d₁), ν_2 vibr.-rot. band and equilib. struct. 2-64957
 methyl cyanide, rot. transitions, pressure shift 2-64963
 methyl fluoride-d₀(-d₃), optical-optical double reson., isotope effects
 2-65024
 methyl fluorosilane, isotope effects, struct., rot., dipole moments, micro-
 wave obs. 2-75247
 methyl nitrite-d₀(d₂), vibr., force consts., IR obs. 2-85659
 methyl silane, ground vibronic state, Stark and Zeeman effects, mol. beam
 mag. reson. 2-85697
 molecular internal space, stability rel. to isotope substitution 2-59684
 monosaccharide (-dn) and ¹³C enriched compounds, ¹H and ¹³C two
 dims. spectroscopy (*French*) 2-80679
 muonium chemistry, review 2-65113
 naphthalene-d₀(-d₈), vitreous solns., tunnel electron transfer, inverse iso-
 tope effect 2-98726
 p-nitroaniline, solns. and cryst., Fermi resonance, IR study 2-57103
 nitromethane-d₀(-d₃), tunnel states and splitting meas. 2-60894
 organic non-rigid molecules, symmetry, isotopic substitution effects (*Rus-
 sian*) 2-85833
 organolead amines, vibr., isotope effects IR and Raman obs. (*German*)
 2-54847
 (perylene)₂TCNQ, single cryst. Raman spectra, temp. depend., isotope
 effects 2-72470
 phenol-d₀(d₁), isotope effects, H bonds, line shifts, vibr. spectra 2-64952
 phenyl alkyl cations, Ar matrix isolated vibr., visible UV obs. 2-108544
 polyatomic molecules, isotope substitution, vibr.-rot. centers displacement
 2-85623
 propylene oxide, primary decomposition to singlet methylene, laser-induced
 fluoresc. obs. 2-108647
 propynal-d₀(-d₁), S₁ decay, energy depend. and collision effects 2-90606
 propyne-d₁(-d₃), beam maser spectrosc. 2-90521
 proton transfer reactions, kinetic isotope effect, interaction pot. influence
 2-11467
 relativistic heavy-ion collisions, projectile fragments, anomalous mean free
 paths interpretation 2-101921
 secondary ion emission, isotope effects 2-99276
 SIMS, ionization yield, elemental composition depend., isotopic variations
 2-99272
 SIMS, isotope fractionation effects obs. 2-67784
 sodium malononitrile, its derivatives and isotopomers, IR spectra, vibr.
 coupling 2-64968
 TCNQ salt, KTCNQ, single cryst., Raman spectra 2-110826
 thermal diffusion factor of isotopic gases, temp. depend., determ. using
 column calibration factor 2-86369
 2-thiapyridine, isotope effects, H-bond IR obs. 2-108488
 thioformaldehyde-d₀(d₁)(d₂), ground and triplet states, vibr., SCF MO
 calcs. 2-85539
 thioformaldehyde-d₀(d₂), average struct., dipole moments, quadrupole
 coupling, microwave obs. 2-85645
 thioformaldehyde-d₀(d₂), matrix isolated form., vibr., IR obs. 2-96556
 (TMTSF)₂ClO₄, deuterated, organic supercond. Meissner anisotropy
 2-56776
 trifluorochloromethane, ground vibr. state mol. consts., isotope effects,
 microwave obs. 2-90523
 urea-d₀(d₂), isotope effects, force consts., CNDO calcs. 2-96457
 vacancy-isotopic substitutional impurity complex, lattice dynamics, Greens
 function formalism (*Russian*) 2-86819
 vibrational data, force const. determ., isotope effects calcs. 2-90736
 vinylidene-fluoride-d₀(-d₁)(-d₂), IR intensity meas., polar tensors and
 effective charges 2-102476
 water, H₂ pair correl. function meas. 2-103594
 water, spectroscopic and transport props., model calcs. and expt. results
 interpretation 2-91749
 XY₃ type materials, force field calcs. using parametric representation
 method 2-96532
 AgCl, isotopically invariant Dunham coeff. 2-85643
 Al₂O₃, stretching vibrs. of unperturbed and H-bonded OH and OD
 groups, appearance regions 2-116188
 BH(NH₂)₂, microwave spectra and mol. struct. 2-108475
 B₂O₃ glasses, isotopically substituted, Raman spectra study 2-87756
 CO⁺, hyperfine and spin-rot. parameters, isotope effects, microwave obs.
 2-70226
 CO₂, isotope laser technology status 2-96894
¹²C¹⁸O₂, collisional line broadening, IR obs. 2-75268
 CaBr ² Σ -radical, microwave rot. spectra, unresolved hyperfine struct.
 investig. 2-90519
 CaCl ² Σ -radical, microwave rot. spectra, unresolved hyperfine struct.
 investig. 2-90519
 CaNi₂, H₂ and D₂ desorp. isotherms meas., H₂ storage appl. 2-105506
 Ca₁₀-Sr₉(PO₄)₁₆-(VO₄)₂(OH)₂, struct., isotope effects, IR obs. 2-57104
^ACa(α , α), A=40, 42, 44, 48, elastic scatt. microscopic study, within
 generator coord. method framework 2-54412
 CdS(Se):Ni²⁺, optical spectra, isotope splitting const. 2-57163
 Cl+H₂, semiempirical method of modelling pot. energy surfaces for gene-
 ralised TST and appl. to kinetic isotope effects 2-62376
 Cl⁺+H₂(D₂)(HD), reactive scatt. 2-88345
 ClBO, mol. consts., vibr.-rot., IR diode laser and microwave spectra
 2-90541
 ClO, fundamental band, isotope effects, IR obs. 2-75263
 Co alloy, FCC, diffusion of H,D, and T, mag. aftereffect meas. 2-82027
 Co-H(D), based alloy, mag. relax., isotope effects and diffusion 2-77382
 Cs₂UO₂Cl₄, polarised IR absorpt. spectrum 2-104874
 CuBr, isotopically invariant Dunham coeff. 2-85643
 CuCl, isotopically invariant Dunham coeff. 2-85643
 CuO₂, Ar matrix isolated, laser induced fluoresc. obs. 2-65039
 D isotope effects on outer-sphere electron-transfer reactions 2-78083
 D+Cl₂-DCl+Cl, kinetic isotope effect, pot. energy surface 2-57598
 DCN, vibr. states, N isotope, dipole moments, laser Stark reson. spectra
 2-90594
 DCl, X' Σ ⁺ state, pot. energy function calcs. 2-114065
 Er³⁺, single-phonon nonradiative transition regularities 2-114035
 F⁺+H₂(D₂)(HD), reactive scatt. 2-88345
 Fe complex, Fe(CH₃NO)₂, isotope effects, struct., IR obs. 2-75269
 GaBr, isotopically invariant Dunham coeff. 2-85643
 GeH₃Cl, Coriolis interaction, vibr.-rot., IR obs. 2-90549
 GeH₄(GeD₄), stretching overtone bonds, local mode model 2-80574

isotope effects continued

- H binding to isotopic He surfaces, long-range model and scaling rels. 2-80413
 H-bonded crystals, isotope, tunnelling effects 2-77459
 H+H₂, kinetic isotope effects, transition state theory, quantum calcs. 2-88347
 HBS, D isotope effects, equilib. struct., force fields, IR obs. 2-80622
 HCN, isotope effects, dipole moments, vibr., SCF, MRD-CI calcs. 2-85563
 HCl, X²⁺ state, pot. energy function calcs. 2-114065
 HCl-DCI isotopic pairs, dipole moment and polarisability, deuterium isotope effects 2-90735
 HClO₄, anhydrous, H bonds in metastable forms, spectrosc. investig. 2-57078
 H₂¹⁸O liquid, rot. correl. time, quadrupole coupling consts., PMR relax. study 2-85690
 H₂S, polarisability variation, D-isotope effect, rot. Raman and Rayleigh scatt. study 2-75292
 H₂S, HF, struct., H bond stereochemistry, spectrosc. obs. 2-102499
 HSiF, form., struct. and matrix isolated IR spectrum 2-108493
 HSiOH, form., matrix isolation IR spectra, isotope effects 2-108492
 Hg*+CO (NO), electronic to vibr. energy transfer, isotope effects 2-102593
 KH₂PO₄, type ferroelec., Curie temp., isotope effect 2-110786
 LiCl, isotopically invariant Dunham coeff. 2-85643
 LiD₃(SeO₃), ferroelec., cryst. struct., neutron diff. study 2-81733
 Mn complex, Mn(CH₃NO)₆²⁺, isotope effects, struct., IR obs. 2-75269
 MoN, matrix isolation, electronic states, ESR study 2-70296
 Mu+H₂(D₂), kinetic isotope effects, transition state theory, quantum calcs. 2-88347
 NH₃-ND₃ isotopic pairs, dipole moment and polarisability, deuterium isotope effects 2-90735
 NH₃D, vibr.-rot., hyperfine struct., microwave obs. 2-85644
 NH₄HSeO₄, dielec. and struct. props., isotope effect, pyroelec. and X-ray studies 2-57022
 NS, mol. consts., isotope effects, microwave obs., relevance to radio astronomy 2-90524
 NaLi, ground and excited states, vibr. and rot. consts., pot. energy curves, laser induced fluoresc. 2-65033
 Nb:Fe(Co)(Cr), electromigration and self diffusion, effective valence, radioactive tracer method (*French*) 2-76756
 Ni alloys, dil., diffusion of H₂ and T, mag. aftereffect meas. 2-82027
 Ni complex, Ni(CH₃NO)₆²⁺, isotope effects, struct., IR obs. 2-75269
 Ni-H(D) based alloy, mag. relax., isotope effects and diffusion 2-77382
 O₂, thermal desorption of isotopically exchanged O₂ from UV irradiated MgO surface 2-66351
¹⁶O₃, anharmonic vibr. problem, soln. by var. method 2-113962
 OCS, isotope effects, rot. transitions, microwave absorpt. lines 2-94923
 Pd-H(D) based alloy, mag. relax., isotope effects and diffusion 2-77382
 Rb(D₂H₂)PO₄, phase transitions, isotope effects, dielec. const. meas. 2-86853
 RbHSeO₄, deuterated, ferroelec. transitions, isotope effects, DTA and dielec. study 2-87707
 SbCl₃-aromatic hydrocarbon complexes, single crystals, isotope and Zeeman effects, NQR study 2-77413
 Si, diffusion of ⁶⁹Zn isotopes, SIMS studies 2-104070
 Si:Mn, B, Mn²⁺ pairs, EPR study 2-110628
 SiC, sintered and radiation-bonded, radiation response, B isotope effects 2-80191
 SiH₄(SiD₄), stretching overtone bonds, local mode model 2-80574
 Sn, liq., isotope self-diffusion effect, radiotracer method 2-66270
 V complex, V(CH₃NO)₂²⁺, isotope effects, struct., IR obs. 2-75269
 V-H-D system, isotope effects on thermodynamic functions (*German*) 2-110016
 V,H(V₂D₂), B→α transition, press. effects meas. 2-98269
 Y-H(D) system, solid solutions, resistivity meas., isotope effects 2-66524
 ZnO(S):Ni²⁺, optical spectra, isotope splitting const. 2-57163

isotope exchanges

- C,H(D), ion-implanted impurity retention, release and isotope exchange 2-69848
 inosyl (3'-5') inosine, dinucleoside monophosphate, D exchange rates 2-72983
 ion implantation, H/D isotope exchange, local mixing model 2-56048
 isotope exchange, H recycling and impurities in ISX-B Tokamak 2-71189
 isotope exchange reactions 2-78076
 methyl ion+H₂(HD)(D₂), isotope exchanges and collisional assoc. 2-105462
 N-methylacetamide, deuteration kinetics by stopped-flow multidetector Raman spectrophotometry 2-72490
 radionuclide behaviour in aqueous soln., sorption on hydrated oxides 2-57628
 C,H isotope exchange, depth resolved meas. 2-69847
 D+HCl reaction, abstraction vs. exchange study 2-83357
 H retention in refractories, isotope exchange, trap activation model 2-69846
 H-D exchanges in ion-molecule reactions, enthalpy changes, zero-point energy consideration 2-78077
 H⁺+H₂, isotope exchanges, reactive cross-sections and rate coeffs. calcs. 2-93789
 HCO₃⁻+H₂O, O isotope exchange, rate and equilib. factor 2-88350
 H₂O⁺+D₂O isotope exchange reactions 2-78076
 NH₄⁺+ND₃, isotope exchange reactions 2-78076
 Ni, monocryst., chemisorpt. of benzene, hydrogenation and exchange (*French*) 2-67766
 OH reduction in preforms by isotope exchange 2-83408
¹⁸O+¹⁶O₂ (p=0) exchange reaction dynamics on pot. energy surface for ground-state O₂ 2-78071
 Pt₁₀Ni₉₀, chemisorpt. of benzene, hydrogenation and exchange (*French*) 2-67766
 SiO₂ layers, in water vapour, O¹⁸ study of cooperative diffusion and chem. reaction 2-76742
 Ti:C,H(D), ion-implanted impurity retention, release and isotope exchange 2-69848

isotope relative abundance

- see also element relative abundance
 Allende meteorite, Ca-Ti-Cr isotopic anomalies in inclusion rel. to nβ process 2-112397
 Antarctica ice stable isotope composition 2-117368

isotope relative abundance continued

- Ascension Island, S. Atlantic, volcanic rock isotope composition 2-106019
 N Atlantic mid-ocean ridge, H isotope variations and mantle heterogeneity 2-62914
 atmosphere precipitation, D/H isotopic comp. in E United States rel. to storm trajectories 2-68444
 E China volcanic rocks, element and Sr isotope distrib. 2-83778
 cosmic ray isotope expt. using Cherenkov range detector technique 2-68625
 cosmic ray isotopic abundances meas. using plastic track detectors 2-68626
 cosmic ray nuclei, isotope meas. from Ca to Fe by plastic-electronic expt. 2-68624
 cosmic ray nuclei relative abundance obtained with track detectors, correction factor calc. 2-68581
 Costa Rica Rift, Sr and O isotopes of Pacific basalts 2-106016
 V460 Cygni, C star, determ. of ¹²C/¹³C and C/O ratios 2-63421
 Decan Trap flood basalt origin, isotope geochem. study 2-106017
 enriched compounds, ¹³C resons. assignment by spin echo FT NMR 2-90576
 formaldehyde, interstellar, isotope ratios from 6 cm obs. 2-68850
 Hadar Formation (Ethiopia), 1.2 Myr record of ¹⁸O and ¹³C changes in late Pliocene Rift Lake 2-68338
 hail stable isotope concs. described using cloud model 2-117416
 heavy element yields in stars of neutron capture nucleosynthesis 2-58243
 hydrothermal systems, H isotope origins 2-88823
 interstellar ¹²CO/¹³CO abundance ratio towards ζ Ophiuchi, determ. from UV absorpt. lines 2-63557
 Kilauea volcano, Hawaii, S isotopes of basalts and volcanic glass 2-88822
 Lappajarvi meteorite crater, Finland, Rb-Sr isotopic geochemistry of impact melt 2-106119
 mass-spectrometric analysis of hydrogen and helium isotopes 2-90297
 meteorite C, H and N isotopes: in carbonaceous chondrites 2-68684
 meteorites, ⁶Li content of irons (non-cosmogenic) 2-106633
 meteorites, Fe, ion microprobe mass anal. of Ni, Co, Ga and Cu distrib. 2-106637
 meteorites, H₂, C and N₂ concs. and isotopes in carbonaceous chondrites 2-68683
 meteorites (L-chondrites), Pb isotope composition 2-63322
 Mount Meager geothermal area, B.C., Canada, hydrogeology and geothermometry 2-11896
 New Zealand hydrology, role of ¹⁸O, D, T isotopes 2-73603
 noble gases in meteorites, abundances rel. to origin and age (*Japanese*) 2-117635
 nucleon creation within atomic nuclei and Dirac's Large Numbers Hypothesis 2-101096
 mid-ocean ridge basalt Pb, Nd and Sr isotope ratios 2-106010
 oceans, isotopic paleo-oceanography of Caribbean and E Pacific rel. to Late Neogene Panama uplift 2-11968
 TX Piscium, C star, determ. of ¹²C/¹³C and C/O ratios 2-63421
 planetary atmospheres, isotopic fractionation by thermal and nonthermal escape mechanisms 2-112359
 primordial light-isotope abundance, anisotropy and dissipation effects 2-84361
 primordial nucleosynthesis, implications for cosmology and neutrino physics, review 2-84356
 sediment radionuclide conc. in sediments, influence of mixing and compaction 2-58089
 solar ³He-rich particle events, ³He/⁴He ratios rel. to stochastic Fermi accel. in Alfvén turbulence 2-106442
 solar cosmic ray heavy ion abundances/energy spectra, use of cellulose triacetate track detectors 2-112335
³⁹Ar/⁴⁰Ar dating of trans-Himalayan magmatism in S Tibet 2-94330
⁴⁰Ar/³⁹Ar spectral method of geological dating 2-83786
⁹Be production by neutrinos generated in gravit. collapse of stars, rel. to Galaxy ⁹Be abundance (*Russian*) 2-106686
¹⁰Be/⁹Be ratio in geological samples, radiometric dating 2-112155
¹⁰Be/⁹Be ratio meas. with FN tandem 2-64704
¹⁰Be/⁹Be ratios in oceanic Mn crusts, rel. to constancy of ¹⁰Be deposition rate 2-111920
 CO isotope selective photodestruction near mol. cloud boundary of H II region Sharpless 68 2-68858
¹²C/¹³C from formaldehyde obs. towards galactic centre, variation with distance 2-89334
¹²C/¹³C in tree rings, var. rel. to atm. CO₂ conc. 2-78811
¹⁴C, meas. in CO₂, tunable diode laser sensitivity spectroscopy 2-65103
 D anal. spectrometer and sample technique for enriched water samples 2-53852
 D in atmosphere, model of vertical distrib. 2-83928
 D/H ratio in Venus atmosphere, outgassing implications 2-100793
 H isotope ratios in tree cellulose, climatic significance 2-89000
⁴He/³He in igneous rocks on oceanic islands used for mantle age determ. 2-78605
⁷⁸Kr/⁸⁴Kr abundance ratio, implications of ⁸²Se(n,γ) energy measurements in meteorites 2-113445
⁶Li abundance from primordial synthesis, anal. of α(d,γ)⁶Li reaction rate 2-112626
¹⁵N/¹⁴N composition in Solar Systems, mechanism 2-84114
¹⁵N/¹⁴N ratio in Mars atmosphere, effect of dissipation and exogenous sources 2-106590
 Nd/Sr/Pb isotope systematics in three-component mantle model 2-100334
¹⁴³Nd/¹⁴⁶Nd in Drake Passage seawater 2-106146
¹⁴³Nd/¹⁴⁶Nd in oceanic basalts rel. to mantle evolution 2-73551
¹⁴³Nd/¹⁴⁶Nd in Walvis Ridge basalts, mantle source 2-106015
²⁰Ne/²²Ne ratio in Earth interior, rel. to rare gas retention by accreting Earth in solar nebula 2-112353
²²Ne abundance in low energy cosmic ray sources 2-89094
²⁸Ne composition at WC star surface 2-94568
¹⁸O abundances in oceanic sediments, appl. to assessment of global melt-water spike 2-94395
¹⁸O ratios in deep-sea sediments, appl. to dating of Brunhes-Matuyama mag. reversal 2-94277
¹⁸O/¹⁶O, study of atmospheric sulphates 2-63025
¹⁸O/¹⁶O in groundwater of Federal Republic of Germany (*German*) 2-106165
 Pb in Grenville Province, Central Metasedimentary Belt, precontinental nature and regional var. 2-83777

isotope relative abundance continued

- Pb, isotopic comp. in ophiolitic volcanogenic sulphide deposits, Troodos Complex, Cyprus 2-62925
²⁰⁴Pb/²⁰⁶Pb/²⁰⁷Pb/²⁰⁸Pb in Walvis Ridge basalts, mantle source 2-106015
²¹⁰Pb distribution in sediments, influence of radon diffusion 2-58012
²³⁹⁻²⁴⁰Pu/¹³⁷Cs in Greenland ice sheet cores as fallout record 2-69994
²³⁹⁺²⁴⁰Pu/⁹⁰Pu in Greenland ice sheet cores as fallout record 2-69994
 S isotopes in E Siberian iron ore deposits 2-78614
 Sm and Nd isotope ratio determination method using laboratory standard solutions 2-63253
 Sr isotopic evidence for upper mantle long lived heterogeneities 2-100333
⁸⁶Sr/⁸⁷Sr in Walvis Ridge basalts, mantle source 2-106015
⁸⁷Sr/⁸⁶Sr, biotite samples age estimation by Rb-Sr method (*Japanese*) 2-94366
⁸⁷Sr/⁸⁶Sr in oceanic basalts rel. to mantle evolution 2-73551
⁹⁰Sr in surface air and stratosphere, inventory of 1963-75 data 2-111599
 Th isotope geochemistry of basalt, genesis and mantle struct. 2-111902
 Ti isotope ratios of lunar, terrestrial and meteorite samples 2-84113
 U isotopic ratios in Chalk River and CANDU fuel 2-102080
²³⁵U in Brazil, abundance, correl. with Gabon Oklo reactor and continental drift implications 2-117280
 Zn/Ni ratio meas. in cosmic radiation using Lexan polycarbonate track detector 2-68580
 Zr isotopic composition in terrestrial/extraterrestrial samples, implications for ⁹²Nb as solar system chronometer 2-84116

isotope separation

- see also isotope exchanges; laser isotope separation; radiochemistry*
 advanced isotope separation cascade design considerations 2-69748
 constant current discharge, isotope separation (*Russian*) 2-60811
 dichlorodifluoromethane, multiple photodissoc. for H isotope separation 2-75447
 gas mixtures and isotopes in free supersonic jet, spatial separation of components 2-88392
 gasdynamic separation, theory 2-75998
 high temperature thermal ion source for an on-line isotope separator 2-96338
 Indian Point-1 reactor ThO₂-UO₂ isotopics anal. 2-54534
 mass spectrometer for isotope separation, collision phenomena 2-108215
 mass-spectrometric analysis of hydrogen and helium isotopes 2-90297
 mixture separation in rot. plasma (*Russian*) 2-76064
 multiple isotope cascade algorithm 2-54977
 on-line isotope separator, gas-jet transport system characts. 2-113673
 planetary atmospheres, isotopic fractionation by thermal and nonthermal escape mechanisms 2-112359
 quadrupole mass filter as commercial isotope separator 2-74850
 radioactive species transfer from gaseous to liquid phase 2-74851
 rotating apparatus, turbulence limits for isotope separation 2-65727
 SIMS apparatus for use on accelerator beam lines 2-107445
 spent plasma processing, exhaust plant 2-85378
 trifluoriodomethane, sensitised disoc. with isotopic selectivity using SF₆ 2-80832
 Tritium System Test Assembly fuel Cleanup System 2-85379
 vibrational freqs. and harmonic force consts., mol. orbital calcs. 2-80443
 Br, short-lived fission products, gas-phase chem. separation 2-75450
 H, isotope distrib. equilib. in Pd/H₂-H₂O system, Pd use in isotope separation 2-111509
 H isotope separation, Boynton's mathematical model adaption 2-69898
 H isotope separation by gas chromatography 2-85381
 H isotope separation in cryogenic distillation columns, dynamic simulation 2-69899
 H isotope separation using multiple photodissoc. of dichlorodifluoromethane 2-75447
 H isotope separation with UH₃, UD₃, and UH₃D₃ 2-96122
 H isotopes, current status of separation techniques 2-54976
 H isotopes recovery and separation using U bed 2-90250
 H separation from blanket ³H production streams 2-69885
 H, temp. swing process using VH 2-80830
 H-T separation, cryogenic distillation column with feedback stream, simulation 2-90289
 I isotopic anal. using negative surface ionisation 2-114121
 Nd-Sm mixture, isotope ratios determ. by resonance ionisation mass spectrometry 2-116761
 Ne isotope separation in DC arc 2-85829
²⁰³Pb, carrier-free, prod. and separation method 2-100125
 Ra traces in aqs. soln. containing chlorides, sulphates and carbonates, isotope separation 2-78120
 SF₆/Cl, sensitised disoc. with isotopic selectivity using SF₆ 2-80832
 Se, short-lived fission products, isolation and obs. by organometallic reactions 2-75449
⁸⁶Se, A=85-88, fission products, on-line system for isolation and study 2-96404
 Tl isotope refinement and chem. recovery by anodic oxidation technique 2-108020
²³⁵U, separation and enrichment by cation exchange chromatography 2-59480
 Xe isotope separation in DC arc 2-85829
 Xe thick target prod. using UWIS isotope separator 2-96345

isotope shifts

- see also atomic spectra*
 alkaline earth orthosilicates, vibr., isotope shift, IR and Raman study 2-77507
 atomic states, spin-orbit contribution to isotope, isomer shifts (*Russian*) 2-96480
 biphenyl-d₆(d₁₀), matrix photoionisation, isotope shift, UV-visible obs. 2-70350
 Fourier transform IR matrix isolation spectroscopy, performance and developments 2-113002
 glycolic acid, struct., microwave spectrosc. investig. 2-96545
 glycolic acid, vibr., isotope shifts, transferable valence force field 2-75235
 hydrocarbazoles, di- and hexa-, sigmatropic H⁺ shift, tunnel effect 2-78072
 imidazole, cryst., lattice vibr., isotope shifts, Raman study 2-67032
 methyl glycolate, vibr., isotope shifts, transferable valence force field 2-75235
 2-nitromalonaldehyde-d₆(-d₇), H⁺ tunnelling and nitro group torsion 2-96548
 nuclear density distrib., review 2-59230
 phenoxy-d₆(d₈), aq. radicals, solvent effects, resonance Raman obs. 2-70254

isotope shifts continued

- propyne-acetone, vibr. relax., Raman band shapes 2-90555
 pyridinium salts, solns., IR spectra, Fermi reson. and ν_{NH} band struct. 2-64981
 pyridinium salts, solns., IR spectra, isotope shifts 2-64980
 Ar⁺, 3d-4p transitions in ionic spectra, isotope shifts, laser spectroscopic meas. 2-70193
 BH⁺, A⁺II-X⁺ band system, high-resolution obs. 2-114009
 Ba I atoms, highly excited, hyperfine struct. and isotope shifts meas. 2-102653
 Ba II, J-dependent isotope shift in the 5d²D₃ doublet 2-80540
 Ba odd isotopes, perturbed 6sns ¹S₀ and ³S₁ Rydberg states 2-96510
 Ba, Rydberg states, electron densities, isotope shifts 2-75213
 BaI, hyperfine struct. in 6p5d configuration and isotope shifts in transitions 6s5d-6p5d, fluoresc. spectra 2-96758
⁴Ba, A=134-138, muonic X-rays, nuclear charge distrib. 2-74730
 CO adsorbed on Cu (100), IR spectra study 2-56359
 CO₂, π_g^- 3pp_u σ_u \rightarrow X⁺ Σ_g^+ transition, rot.-resolved Rydberg absorpt. 2-114013
⁴C, A=12-14, K-series muonic X-ray energies determ. 2-74728
 Ca, isotope shift meas. by two-photon spectroscopy 2-64915
⁴⁰Ca-⁴⁸Ca, low-lying collective excitation contrib. to nuclear density 2-95893
⁴³Ca metastable 3d4s ¹D₂ state, laser RF double reson. HFS meas. 2-96756
 Cl⁺, 3d-4p transitions in ionic spectra, isotope shifts, laser spectroscopic meas. 2-70193
 Ga, np¹_{1/2,3/2} Rydberg series, dye laser study 2-114123
 Gd, energy levels, isotope shifts and electronic configs. 2-113875
 GeO, E⁺ Σ_g^+ - Σ_g^+ system, vac. UV spectra, isotope shifts 2-96494
 GeO, low lying electronic states, vibrational numbering determ. from isotope shifts 2-64850
 HCN, excited vibr. states, direct overtone spectra, classical chaos and quantum simplicity 2-108536
 HNO, photochem. complexation in low temp. matrices, IR obs. 2-67737
 He, energy level high precision meas. 2-59956
 In, np¹_{1/2,3/2} Rydberg series, dye laser study 2-114123
 K, specific mass shift, many-body perturbation theory 2-96642
⁴⁰K, energy levels, isotope shifts, two-photon spectra 2-54824
 KClO₄, UV irradi., librations of O₂ defects, ESR study 2-72346
 Li, specific mass shift, many-body perturbation theory 2-96642
 LiH, mol. consts., pot. energy curves, isotope shifts 2-96541
⁶Li, isotope shift, two-photon spectra 2-54823
⁷Li, isotope shift, two-photon spectra 2-54823
 N₂, matrix isolated in Ar, N₂, mol. vibr., Raman obs. 2-70250
 NaClO₃, UV irradi., librations of O₂ defects, ESR study 2-72346
²³Na, A=20-24, 31, radioactive isotopes, elec. quadrupole moments and isotope shifts meas. 2-84954
 OVCl₃, matrix isolated and vapour phase, force consts., vibr. IR obs. 2-108515
 Pb chalcogenides, rot. energy, isotopic field shift 2-85748
 Pb, isotope shift in 6p² ³P₀-6p⁷s ³P₁ 283.3-nm line 2-90480
 Pb, isotope shifts and HFS laser spectroscopic meas. 2-70194
 PbS, AO⁺-X⁺ transition, rot. and vibr. struct. studied by sub-Doppler laser spectroscopy, isotope shifts 2-85630
 Rel, high-lying metastable states, hyperfine structure and isotope shift 2-113904
 S⁺, 3d-4p transitions in ionic spectra, isotope shifts, laser spectroscopic meas. 2-70193
 SF₆, IR multiphoton excitation and disoc. 2-59871
 (S₂NH₂) and (S₂ND₂), IR and Raman spectra, vibr. assignments and force consts. isotope shifts 2-59796
 SO, highly excited vibr. states, millimetre wave, mol. consts. 2-64962
 SiH₃NCO, vibr. spectra and normal coord. anal. 2-96572
 Sm, anomalous isotope shifts theory 2-64916
⁸⁵⁻⁸⁶Sr I, II, isotope shifts, Doppler-free optogalvanic spectroscopy 2-108425
 Tl halides, rot. energy, isotopic field shift 2-85748
 UF₆, supercooled, ν_3 band, isotope shift, high-resolution IR laser spectroscopy 2-54853
 WF₆, supercooled, ν_3 band, isotope shift, high-resolution IR laser spectroscopy 2-54853
¹⁶⁸Yb, isotope shift meas. by selective laser mass spectroscopy 2-108427
 Zn atomic spectrum, isotope shifts and hyperfine struct. 2-113916
 ZnO, adsorption of H₂ and D₂, coverage induced IR freq. shifts 2-115539

isotopes

- see also radioisotopes*
¹⁵N tracers, quantitative anal. by proton reaction 2-99718

isotopic generators *see* radioactive sources**isotopic spin (elementary particles)**

- see also baryon spin and parity; lepton spin and parity*
 Coleman-Glashow relation and the chromodynamic spin-spin interaction 2-113215
 global isospin invariance, effective gauge theory 2-79750
 isospin relations, Schumkevich counting method appl. 2-107049
 Lie algebras in particle physics, book 2-79298
 QCD, L=1 light quark mesons 2-59115
 radical unification, effective generalisation of hypercharge from isospin, SU(2) dynamics 2-59069
 SU(2)×SU(2)×SU(2)×SU(2) symmetry scheme for new particles 2-54106
 SU(2)⊗U(1) model, dynamical symmetry breaking and radiative correction to weak-isospin relation 2-95714
 e⁺e⁻ \rightarrow π^+ π^- K⁺K⁻, 1.4-2.18 GeV, cross sections, isospin interference, K⁰K⁰ dynamics 2-69476
 J/ ψ -BB, B=baryon, isospin-violating EM contrib. 2-69456
 NN- π d(NN π), below 1500 MeV, single pion prod. cross section 2-64340
 π N phase shift determ. from isospin constraints and fixed t analyticity 2-95863

iteration methods *see* iterative methods**iterative methods**

- see also predictor-corrector methods*
 arc static voltage gradient as nonlinear one-dimensional Elenbaas-Heller eqn. eigenvalue (*German*) 2-60830
 atom and mol. beam-surface diff., hard-wall approx., iterative calc. method 2-57241
 atom-surface scattering, iterative solution for realistic potentials 2-99267

iterative methods continued

- Chandrasekhar X and Y eqns. for isotropic scatt., iterative soln. 2-103006
 classical fluid, crit. point, iterative perturbative theory 2-76647
 conformal mapping methods, convergence characteristics 2-109263
 core neutronics, iterative calc. acceleration, dominant error vector eigenvalue 2-54477
 cross-section adjustment with Monte sensitivities, appl. to Winfrith Iron Benchmark 2-95979
 deep state profiles calc. from transient capacitance data, computer simulation 2-87170
 deformable body nonlinear boundary value problems, quasilinearisation method 2-65479
 dielectrics, nonhomogeneous, theory, iteration method 2-72403
 differential equations, initial-value problems, iterative soln. (*Russian*) 2-94984
 digital scintillation camera for single photon computerised tomography appl., concepts and design 2-73343
 dynamical systems, computer studies 2-53490
 elastoplastic problem soln. by finite element method 2-75868
 electron density images from imperfect X-ray data, iterative energy maximisation 2-91720
 electronically collimated gamma camera, reconstruction algorithms comparison 2-73320
 fluorescence decay curves, numerical deconvolution, regularisation operators use with Lagrange multipliers, in FORTRAN 2-65034
 gas-driven fracture propagation 2-89541
 general structures, creep induced buckling 2-114692
 heat and mass transfer processes: numerical method for simulation 2-95277
 Kepler's equation solution, starting values comparison 2-94585
 linear filter coefficients accuracy determined by iteration of least squares method, geophysics appl. 2-78567
 magnetic fields, two dims. problems, NMLAP finite element program 2-55018
 magnetostatic fields, nonlinear medium, fixed point theorem calc. 2-55015
 magnetostatic problems, saturable media iterative algorithms 2-55016
 magnetostatics, 3D mag. vector problem, point iterative algorithm 2-55013
 magnetostatics, iterative algorithm for volume integral method 2-102680
 mathematical physics transcendental eqns. iterative solns. with programmable pocket calculator 2-84412
 metals, liq., structure factors calc., accuracy of liq. theory approx. methods 2-65842
 modified secant Newton method for non-linear problems 2-109191
 multi-aircraft minimum noise impact landing trajectories calc. 2-57754
 multimode optical fibres calc., Helmholtz scalar equation solution (*German*) 2-91056
 neutron diffusion linear equations solution by implicit non-stationary iteration method 2-80051
 nonlinear transformations, iterate sequences, asymptotic props. 2-69001
 nonstationary fluid flow, polygonal path procedure (*German*) 2-101174
 on-line reactor noise anal. using time series anal. 2-64454
 optical slab waveguide, scattering and mode conversion 2-81079
 optical vector-matrix iterative processors, use of acoustooptic transducers 2-80905
 plane frames, linearly elastic, exact dynamic stiffness matrix, transcendental eigenvalue problem 2-109189
 plate theory, variational iteration method substantiation 2-58619
 plates, clamped skew sandwich, finite deflection analysis 2-114676
 plates and shells, optimum design with allowance for temp. effect 2-114640
 quantum mechanics, perturbation-iteration methods for large perturbations 2-84470
 rare earth doped alkaline earth fluorides, point defect modelling 2-103757
 shells, thin, separation method in thermoelasticity problems 2-114661
 signal reconstruction from Fourier transform phase, iterative procedures 2-60033
 steel structures, limit analysis of rigid-plastic frames, shear force influence 2-75863
 stripe geometry injection lasers, theoretical anal. of current spreading 2-90891
 structural systems minimum weight design 2-114670
 time-stepping methods for miscible displacement in porous media 2-60643
 tubular flow, computations of chemical reactions using iterative methods 2-81405
 two-dimensional system with off-diagonal disorder, electronic states, tight-binding model 2-115711
 GaAs, hot photoexcited electrons, theoretical study 2-82367
 He+CO, integral and differential cross sections, use of nondiagonal matrix Green functions 2-70383
 K₁ CDW state and residual resist. anisotropy 2-82316
 O 3-dims. calc., Hartree-Fock iteration techniques 2-69590
- itinerant model of magnetism** see band model of magnetism
- IV-VI semiconductors**
 epitaxial film, elec. cond. and Hall effect 2-115922
 lattice dynamics and phase transitions, pseudopot. theory 2-92139
 lattice dynamics and phase transitions, shell model, 3D highly nonlinear 2-92140
 LPE layer, Hall and resistivity meas., impurity doping influence 2-92796
 narrow band gap ferroelec. semicond., phase transitions, microscopic theory 2-110788
 PbS, superconductivity, cond. under high press. 2-66702
 phase transitions and optical props. 2-91861
 spectrum in field of reson. light wave 2-77466
 Al-GeS₂ work function determ. method 2-61553
 (Ge, Sn)Se system, glass form. and vibr. props. 2-86578
 Ge_{1-x}Pb_xTe solid soln., physicochem. investig. 2-104008
 GeS₂ core level line widths, XPS study 2-57263
 GeS₂ electroreflectance spectra meas., 1.6 to 3 eV 2-87742
 GeS₂ electroreflection spectra, changes under ion bombardment 2-82876
 GeS₂ negative photoconductivity 2-110402
 GeSe amorphous thin layers electronic characs. modification by junction metal azones incorporation (*German*) 2-92631
 GeSe, core level line widths, XPS study 2-57263
 p-GeSe, layered cryst., photocond., polarised light study (*Russian*) 2-77124
- IV-VI semiconductors continued**
 (GeTe)_{0.94}Bi_{0.05}Cu_{0.01}, ionic transport of Cu and thermo EMF 2-104068
 GeTe, acoustic emission during polymorphic transitions 2-109972
 GeTe, cubic and rhombohedral, band struct. 2-92468
 GeTe, elastic props., room temp. 2-81872
 GeTe, fundamental energy gap calc. 2-92458
 α-(γ)-GeTe, hole effective mass, plasma reflectivity study 2-56428
 GeTe, intervalley Jahn-Teller effect and polymorphic ferroelectric transitions 2-87208
 GeTe, magnetic susceptibility change at ferroelec. phase transition 2-77260
 GeTe solid solutions, polymorphic phase transitions kinetics, elec. cond. and Hall coeff. study 2-86851
 GeTe:Cr(Mn)(Fe)(Ni)(Co), solid solutions, thermoelectric props. 2-98680
 GeTe-Co₂Ge, eutectics, microstructure and mech. props. meas., thermocouples appl. 2-86890
 P_{0.93}Sn_{0.07}Se long-wavelength laser diode, emission spectra, temp. and mag. field effects 2-81012
 (Pb,Sn,Ge)Te, dielectric props., defects influence 2-93101
 Pb-Sn chalcogenide photodiodes, quantum efficiency and R₀A product, struct. effect 2-107403
 Pb-Sn-Se, LPE, comp. depend., 770 to 1020K 2-99356
 Pb-Sn-Se, P_{0.93}Sn_{0.07}Se diagram calc., 973-1353K 2-72677
 Pb-Sn-Te diode laser, recombination mechanisms and lasing threshold 2-90896
 Pb-Sn-Te system, solidus determ. of phase diagram 2-93495
 Pb_{1-x}Ge_xSe, optical and elec. props. (*Russian*) 2-57048
 Pb_{1-x}Ge_xTe, band edge struct. transform. due to ferroelectric transition 2-92456
 Pb_{1-x}Ge_xTe, band struct., cyclotron reson. study 2-56439
 Pb_{1-x}Ge_xTe, C_{3v}-phase, band struct. 2-92467
 Pb_{1-x}Ge_xTe, coupled phase transitions, sp. ht. meas. 2-98277
 Pb_{1-x}Ge_xTe narrow band gap ferroelec. semicond., photostimulated phase transition shift 2-110789
 Pb_{1-x}Ge_xTe p-n junction diode, capacitance, press. induced phase transition 2-72055
 Pb_{1-x}Ge_xTe, phonon and elec. resist. anomalies at displacive phase transition 2-98653
 Pb_{1-x}Ge_xTe thin film structures, growth by MBE 2-92393
 p-Pb_{1-x}Ge_xTe, velocity of sound quantum oscils. 2-92114
 PbS film, spectrally selective, produced by ion beam sputtering 2-71824
 PbS, growth of single crystals from natural galena 2-116356
 PbS, high field resistivity meas., phonon scatt. 2-104387
 PbS, lattice period, influence of composition and γ-irradiation 2-76382
 PbS, natural galena, electron beam evaporated film, optical and electronic props. meas. 2-61621
 PbS polycrystalline film, cond. and permittivity meas. at microwave freqs. (*Russian*) 2-95403
 PbS-NiSb, eutectics, microstructure and mech. props. meas., thermocouples appl. 2-86890
 PbS_{1-x}Se_x laser threshold and recombination 2-90897
 PbS_{1-x}Se_x thin film deposition, soln. growth technique 2-93461
 PbS(Se)₂(Te), elastic consts., 3rd and 4th order 2-76563
 PbSe room temperature IR position sensor 2-101459
 (PbSe)_{1-x}(SnTe)_x:In, influence of In on props. 2-110238
 PbSe_{1-x}Te_x film, IR absorption due to valence state-localised state transitions 2-77608
 n-PbSe_{1-x}Te_x, Shubnikov-de Haas effect meas., 1.2 to 4.2K 2-76902
 PbSe_{1-x}Te_x:In, localised deep defect states 2-92530
 Pb_{1-x}Sn_xGe_{1-x}Se_x, heterojunction, open-circuit EMF meas. 2-87378
 n-Pb_{0.85}Sn_{0.15}Se films thermoelectric props. for use in thermal radiation converters 2-99817
 Pb_{1-x}Sn_xSe epitaxial layers, equilb. compositions and cond. type 2-66398
 Pb_{1-x}Sn_xSe, Fermi surface, Shubnikov-de Haas oscillations ang. depend. study 2-82211
 Pb_{1-x}Sn_xSe, interband magnetoreflectivity meas. 2-110821
 n-Pb_{1-x}Sn_xSe, native defect energy levels, Hall study, 4.2 to 300K 2-92529
 Pb_{1-x}Sn_xSe, thin layers, grown by 'hot wall' method 2-72627
 PbSnSeTe-PbSeTe DH lasers, lattice-matched, LPE grown 2-55194
 PbSnSeTe-PbSeTe lattice-matched DH lasers, total refl. mode oscill. 2-60080
 PbSnTe diode laser, lifetime mechanisms, tunnelling currents and laser threshold 2-80956
 p-PbSnTe, free carrier freq. depend. relax. time, plasma refl. studies 2-110364
 PbSnTe laser, gain saturation, theory and expt. 2-85965
 PbSnTe, lifetime calcs. for Auger recomb. rel. to laser and IR detector performance 2-77081
 Pb_{0.7}Sn_{0.3}Te film, struct. and elec. props., Ar⁺ bombard. and annealing effect 2-56731
 Pb_{0.76}Sn_{0.24}Te: Cd, photoconductivity kinetics 2-104427
 Pb_{0.78}Sn_{0.22}Te:In, photoferroelec. behaviour and Hall coeff., expt. study 2-87708
 Pb_{0.8}Sn_{0.2}Te epitaxial films produced by vacuum evaporation, high mobility produced by annealing 2-82486
 p-p⁺Pb_{0.8}Sn_{0.2}Te LPE layer, IR plasma refl. spectra (*Chinese*) 2-93295
 Pb_{0.81}Sn_{0.19}Te DH laser, LPE grown, operation at 10.6 μm, 85K 2-80955
 Pb_{0.83}Sn_{0.17}Te solid soln. epitaxial films, absorpt. edge obs., 100 to 300K, band struct. model (*Russian*) 2-61913
 Pb_{1-x}Sn_xTe (x=0.59 to 1), valence bonds energy separation, Hall coeff. meas. 2-72010
 Pb_{1-x}Sn_xTe, band struct. dispersion low and parameters (*Russian*) 2-61358
 Pb_{1-x}Sn_xTe epitaxial films, additional long-wavelength absorpt. 2-77610
 Pb_{1-x}Sn_xTe epitaxial film, surface recombination, photoconductivity study 2-104393
 n-Pb_{1-x}Sn_xTe, Fermi surface and cond. band, Shubnikov-de Haas study 2-115644
 Pb_{1-x}Sn_xTe films, ion implantation induced defect levels, Hall meas. 2-92528
 Pb_{1-x}Sn_xTe hetero-layers for IR diode lasers, hot-wall epitaxial growth 2-60103
 Pb_{1-x}Sn_xTe, horizontal vapour transport in closed tube (*Chinese*) 2-111078
 Pb_{1-x}Sn_xTe LPE inhomogeneous layer, IR plasma reflection spectrum, vapour transport process 2-93314
 Pb_{1-x}Sn_xTe LPE layer, Hall and resistivity meas., impurity doping influence 2-92796

IV-VI semiconductors continued

- Pb_{1-x}Sn_xTe laser threshold and recombination 2-90897
 Pb_{1-x}Sn_xTe MBE film struct. 2-104184
 Pb_{1-x}Sn_xTe, phonon and elec. resist. anomalies at displacive phase transition 2-98653
 Pb_{1-x}Sn_xTe single cryst. growth, by vapour-melt-solid mechanism 2-62060
 Pb_{1-x}Sn_xTe, struct. instabilities, composition and carrier depend. 2-98652
 p-Pb_{1-x}Sn_xTe, valence band struct., elec. props. (*Russian*) 2-87144
 n-Pb_{1-x}Sn_xTe: Cd, elec. cond., photocond., and elec. cond. transitions 2-115759
 Pb_{1-x}Sn_xTe: Cd, photoluminescence study 2-104958
 Pb_{1-x}Sn_xTe: Cd(Bi), narrow band gap semicond., galvanomag. and optical props., Cd solubility and diffusion (*Russian*) 2-92666
 Pb_{1-x}Sn_xTe: Cd(In), photoluminesc. study 2-93279
 Pb_{1-x}Sn_xTe: In, band struct. at high In conc., elec. cond. press. depend. study 2-82230
 Pb_{1-x}Sn_xTe: In, dielec. phase, switching effects and I-V characts. under IR illumination 2-92688
 Pb_{1-x}Sn_xTe: In, semicond.-metal transitions, IR illumination, induced dynamics 2-72036
 Pb_{1-x}Sn_xTe: In epitaxial film, photolum. 2-77590
 Pb_{1-x}Sn_xTe: In epitaxial film, elec. and struct. props. 2-110506
 Pb_{1-x}Sn_xTe: In films, impurity electron-state, elec. cond. study 2-115705
 Pb_{1-x}Sn_xTe: PbTe(BaF₂), heterojunction, defect form. 2-92374
 (Pb_{1-x}Sn_x)_{1-Δ}Te_{1+Δ}/PbTe, diffusion phenomena, during heteroepitaxy 2-92378
 Pb_{1-x}Sn_xTe: In, Fermi level stabilization by defects at low temp., mechanism 2-66487
 Pb_{1-x}Sn_xTe(Se) solid soln., carrier g-factor longitudinal and transverse components, band gap depend. 2-76903
 PbTe and PbTe-SnTe solid solns., Ga doping effect on electrophys. props., doping mechanism 2-56578
 PbTe, bulk crystal, synthesis by iodide method, elec. and struct. characterisation 2-67210
 PbTe, CDW, mag. field depend. 2-61376
 PbTe cryst. growth from soln., travelling heater method, gravitation effects 2-111044
 PbTe, cryst. growth from soln. by travelling heater method, gravitation effects 2-111045
 PbTe crystal growth by travelling heater method 2-93404
 PbTe, electron-hole plasma, high density, time resolved spectrum 2-92678
 PbTe epilayers, LPE growth from supercooled solns., improved morphology 2-110192
 n-PbTe epitaxial (111) layer, weak and strong field magnetoresist. meas., 1.8 to 300K 2-87424
 PbTe epitaxial film, misfit strain 2-92423
 PbTe epitaxial layer, dielec. const. at 4.2K 2-99017
 PbTe epitaxial layer, optical four-wave mixing 2-93315
 n-PbTe epitaxial layers, ionised defect scatt. mobility 2-92671
 PbTe epitaxial layers on BaF₂, misfit and thermal strains, magneto-optical and X-ray study 2-82175
 PbTe film, charge carrier conc. and mobility variations after deposition 2-66680
 PbTe, film, thermo-EMF calc. 2-87423
 PbTe films, electron mobility, temp. depend. meas. 2-110505
 PbTe films, RF sputtered, struct. props. obs. by X-ray asymm. refls. 2-110197
 PbTe, frozen cond. study (*Russian*) 2-56739
 PbTe, H⁺(Ag⁺)(Sn⁴⁺) ion-implanted, elec. props. 2-104377
 PbTe, heterogeneous nucleation, statistical thermal anal. 2-65892
 PbTe, intrinsic defects, mag. susceptibility study 2-115217
 PbTe, Knight shift spin-orbit and many-body effects 2-72366
 PbTe layers, photocurrent decay 2-87340
 PbTe, negative-U centre form. due to group II impurities 2-61399
 PbTe, polycrystalline, sublimation-grown, cryst. perfection 2-93391
 PbTe polycrystalline film, cond. and permittivity meas. at microwave freqs. (*Russian*) 2-95403
 PbTe single crystal, IR absorpt., selection rules, group theoretical anal. (*Russian*) 2-61912
 PbTe single crystals grown by vertical Bridgman technique, micro-size defects 2-97958
 PbTe, stimulated radiation polarisation characts. (*Russian*) 2-61929
 PbTe thin films, flash deposited, relax. processes 2-87113
 n-PbTe: I, thermal diffusion of impurity atoms 2-66293
 PbTe: In, thermal cond., elec. cond., Hall and Seebeck coeffs. 2-115479
 PbTe: Sn(Ge), donor and acceptor props., elec. and thermal cond. meas. 2-66480
 PbTe: Ti, doping effect on superconductivity (*Russian*) 2-110525
 PbTe: Ti, impurity states and supercond. 2-104308
 PbTe: Ti, In single cryst. p-n junction, tunnel cond. characts. 2-77174
 p-PbTe: Ti epitaxial films, Hall mobility, doping effects 2-110509
 PbTe: Ti(Na), density of states in valence band, sp. ht. and Hall coeff. meas. 2-82515
 p-PbTe/mica/Ag struct., field effect study, Hall coeff. and mobility 2-110490
 PbTe-LiNbO₃ system, ferroelec. polarisation effect on elec. cond. of semicond. layer 2-110503
 PbTe-NiSb eutectic, microstructure and mech. props. meas., thermocouples appl. 2-86890
 PbTe-Pb_{1-x}Sn_xTe superlattices, prepared by hot wall epitaxy, optical props. 2-99208
 PbTe-Pb_{1-x}Sn_xTe, superlattice, interband optical absorpt. (*Japanese*) 2-116179
 PbTe-Si, heterojunction, open-circuit EMF meas. 2-83738
 SiO₂, thermally stimulated hole current 2-104392
 Sn-GeS, work function determ. method 2-61553
 SnTe, epitaxial film, effect of thermal treatment on comp. and struct., Mossbauer and X-ray study 2-66399
 SnTe elastic consts., 3rd and 4th order 2-76563
 SnTe films, vacuum deposited, microstruct., X-ray diffr. study 2-115598
 p-SnTe, MIS structure, field effect studies 2-104491
 SnTe, soln. of impurities, behaviour of group IV elements 2-71650
 SnTe vacuum evaporated thin films struct. param. from X-ray studies 2-103707
 SnTe: H epitaxial film, elec. cond. and Hall effect on H₂ desorption 2-115923
 p-SnTe: In epitaxial thin film, elec. transport props., In effect 2-104514
 SnTe: In film, field effect studies, In effect 2-77210

IV-VI semiconductors continued

- SnTe-GaAs, heterojunction, open-circuit EMF meas. 2-87378
 (SnTe)_x(PbSe)_{1-x} system, ¹¹⁹Sn Mossbauer study (*Russian*) 2-104781
- J particles** see *psi mesons*
- Jahn-Teller effect**
 alkali halides, Stark effect in F-centre emission, theoretical problems 2-104850
 alkali metal halides 2-82297
 angular overlap model, weak-field basis 2-92536
 antiferroelastic, metamagnetoelastic and metamagnetoelectric behaviour, EPR spectra 2-98931
 antiferroelastic Jahn-Teller cryst., metamagnetoelectricity, metamagnetoelectricity (*Russian*) 2-61746
 band Jahn-Teller systems with A15 struct., lattice dynamics, thermodynamic model 2-61422
 benzene-d₀(d₁-d₆) vibronic Jahn-Teller state splitting, UV obs. 2-108543
 carbenes, singlet, equilib. struct. and force const. calc. using MNDO approx., electronegativity 2-59702
 cooperative Jahn-Teller effect, charge and charge-orbital ordering, NQR spectral effects 2-93058
 cooperative Jahn-Teller effect, Ham reduction in mol. field theory 2-61417
 crystal with impurity Γ_8 term, Jahn-Teller states 2-71940
 cubic symmetry systems, Jahn-Teller effect, linear ⁴T₂- τ_2 problem 2-96474
 diamond: N, A₁T₂ splitting, Jahn-Teller distortions, EHT calc. 2-82277
 diamond, GR1 luminesc. band, Jahn-Teller effect and stress-induced dichroism 2-57147
 ferrocenium cations, Jahn-Teller interaction 2-66501
 ferroelectric phase transitions, Jahn-Teller impurities effect, soft mode contrib. 2-61843
 haemoglobin, Jahn-Teller effect 2-93982
 peri-hexabenzocoronene triplet state, symm. distortions and pseudo-Jahn-Teller effect, MODOR obs. 2-75196
 high resolution spectroscopy, conf., Bristol, England (April 1981) 2-74147
 impurity centres, quadratic interaction with ferroelec. soft host mode 2-93128
 intermediate-strength Jahn-Teller effect in an orbital triplet 2-82299
 methoxy radical, Jahn-Teller energy surface, spin-orbit splitting and Zeeman effect, perturbation theory 2-75198
 molecular crystal, Jahn-Teller and Barnett effects 2-71939
 molecule, nonlinear, EM field induced Jahn-Teller effect 2-59717
 noncentral Jahn-Teller impurities in crystals with inversion centre, vibronic interactions effect 2-56529
 nonferroelastic crystals, elastic and dielec. props. 2-115331
 optical absorption band shape due to localised $\Gamma_3^- \rightarrow \Gamma_4^-$ transition 2-61852
 optical response function, vibronic states 2-61423
 quasielastic electron knockout in atoms, molecules and solids, wave functions 2-102630
 renormalisation by force constants and impurity mass changes 2-92542
 semiconductors with cubic symmetry, influence of dynamic Jahn-Teller effect on phonon-scattering mechanism at acceptors 2-98599
 transition metal complexes, orbitally degenerate, EPR spectra 2-110634
 s-triazine, π^- and n-cations, Jahn-Teller distortion, ab initio MO calcs. 2-96473
 sym-trichlorotrifluorobenzyl cation $\dot{X}^{\cdot+}$ state, Jahn-Teller distortion from fluoresc. studies 2-75197
 van der Waals complexes, degenerate states of coupled vibr., dynamic Jahn-Teller effect 2-59878
 vibron ferroelectrics, phase transition, Jahn-Teller effect, mag. field effects (*Russian*) 2-82801
 vibronic reduction factors of Jahn-Teller impurity centres, determ. from Raman scatt., theory 2-93208
 α -Al₂O₃: V³⁺, zero field splitting, g-factors (*Chinese*) 2-110310
 CaO: Cr, APR study, Jahn-Teller effect 2-66899
 CoCr₂S₄: Fe²⁺, impurity Jahn-Teller effect, phase transition, mol. field theory 2-61418
 CrSe₂: IT, lattice instability and electron-lattice interaction, Jahn-Teller mechanism 2-98210
 α -CsCuCl₃, Jahn-Teller distorted struct. 2-55893
 Cs₃NaBi₂Y₁₀Cl₁₆, optical centre conc. effects on electron lattice coupling, optical props. study 2-57151
 Cs₂ZnCl₄: Ni(II), polarised electronic spectra at temps. between 300 and 10K 2-77557
 Cu complex, ethylenedisguanidine copper(II) chloride monohydrate, tetradentate ligand coordinated, EPR study 2-110623
 Fe(ClO₄)₃, eutectic frozen aq. soln., ligand fields, Mossbauer study 2-92543
 Fe(ClO₄)₃, frozen aq. soln., ligand field distrib., Mossbauer study 2-104762
 FeCr₂S₄, cooperative Jahn-Teller effect, phase transition, mol. field theory 2-61418
 FeZn ferrite, Cu²⁺ substituted, Jahn-Teller effect on ground states 2-66502
 GaAs: Cr²⁺, APR study 2-66897
 GaAs: Cr²⁺, EPR resonance parameter calcs. 2-104691
 GaAs: Cr²⁺, substitutional impurities, dynamic Jahn-Teller theory 2-76995
 GaAs: Cr²⁺, zero-phonon optical absorpt. lines, dynamic Jahn-Teller model 2-57130
 GaP: Ni, charge state of Ni²⁺, piezoabsorpt. and Zeeman meas. 2-99087
 GeTe, intervalley Jahn-Teller effect and polymorphic ferroelectric transitions 2-87208
 HfSiO₄: V⁴⁺, ESR and absorpt. spectra 2-66902
 InP: Fe, APR study 2-66900
 KBr: Ti³⁺-type phosphors, quadratic Jahn-Teller effect in line shapes of A-emission and A-absorpt. bands 2-87825
 KCl: Pb²⁺, EPR study 2-56930
 KCuF₃, Jahn Teller distorted, anharmonic vibr. and electron density distrib. 2-81920
 K₂PbCu(NO₃)₆, cooperative Jahn-Teller system, incommensurate phase struct. 2-66507
 K₂PbCu(NO₃)₆, Jahn-Teller effect, uniaxial stress effects, ESR study 2-87580
 (La, A_{1-x})₂(Mn_{1-x}³⁺Mn_x⁴⁺)O₄, A = Ca, Ba, Sr, indirect exchange interactions, and Jahn-Teller distortions, neutron diffr. study 2-66800
 Mg₂Mn₂Fe₂O₄, Mossbauer study 2-104782
 Ni₂, Jahn-Teller distortion, struct., SCF and CI calcs. 2-108396

Jahn-Teller effect continued

- NaCl: Pb^{2+} , luminescent centre symmetry, photoluminescence meas. 2-57168
 NbH_3 , electronic struct., electron-phonon coupling 2-66444
 NbH_4 , Jahn-Teller resonance states, electron-phonon interaction, HF calc. 2-82302
 $NiZn$ ferrite, Cu^{2+} substituted, Jahn-Teller effect on ground states 2-66502
 OsF_6 , energy levels, vibronic coupling, IR and visible study 2-116189
 P_1 , Jahn-Teller distortion, struct., SCF and CI calcs. 2-108396
 $RbCuCl_3$, Jahn-Teller phase transitions and phase struct., X-ray diff. study 2-98266
 $Rb_2Na_2H_2F_{10}$, phase transition and low temp. struct. 2-66209
 $Si:P_3(P_3^+)$, multiple scatt. X α mol. cluster model of complex defects 2-76977
 $SiCl_2:Sn$, electron-phonon interaction of impurity centres, photolum. and Jahn-Teller effect (*Russian*) 2-57179
 SiO_2 , fused silica, nonbridging O defect center, dynamic Jahn-Teller effect study 2-87194
 $SnCl_2$, luminescence at low temp. (*Russian*) 2-57178
 TaH_4 , Jahn-Teller resonance states, electron-phonon interaction, HF calc. 2-82302
 $TbVO_4$, collective mode damping near struct. phase transition 2-109944
 $ThGeO_4:V^{4+}$, ESR and absorpt. spectra 2-66902
 $ThSiO_4:V^{4+}$, ESR and absorpt. spectra 2-66902
 TiS_2 , 1T, lattice instability and electron-lattice interaction, Jahn-Teller mechanism 2-98210
 Tl^+ impurity luminescence, Jahn-Teller model 2-77582
 $Tm_2Y_{1-x}VO_4:Gd^{3+}$, EPR study of Jahn-Teller induced random strains 2-77368
 $V(CO)_6$, EPR spectra and mol. struct., Jahn Teller modes, hyperfine struct. anal. 2-70295
 VH_3 , Jahn-Teller resonance states, electron-phonon interaction, HF calc. 2-82302
 VS_2 , 1T, lattice instability and electron-lattice interaction, Jahn-Teller mechanism 2-98210
 $W_6(OC_2H_5)_{10}$, bonding, second order Jahn Teller effect 2-70467
 ZnS , vacancy optically detected mag. resonance 2-77425
 $ZnSe:Mn^{2+}$, Zeeman splitting of 4T_1 , 4T_2 , and 6E states, luminesc. study 2-57063
 ZrH_3 , electronic struct., electron-phonon coupling 2-66444
 $ZrSiO_4:V^{4+}$, ESR and absorpt. spectra 2-66902

jellies see *gels***jellium**

- elastic electron-electron scatt.-amplitude, approx. comparison 2-101306
 electron gas, effective interactions including exchange 2-71894
 Fresnel formulas for EM fields at interface for jellium model within random phase approx. 2-59993
 metal, atomic adsorption, adatom binding at surface ledges 2-82148
 metal, electromigration, theory 2-82039
 metal surface, pressure distrib., density functional theory 2-77146
 metal surface electrostatics, elect. field generation by oscill. dipole polarisation of surface 2-56655
 metallic elements, density functional calcs. of, Auger and XPS shifts 2-93370
 metals, adsorbed vibrationally excited molecules, indirect vibr. coupling, jellium model 2-82116
 metals, Auger and X-ray photoemission shifts, embedded-atom calcs. 2-54822
 metals, work functions, relation between theory and expt. 2-92728
 rare-earth impurities, near valence instability 2-61396
 small metal sphere, EM response, general nonlocal theory 2-104830
 surface, charge response through ripples 2-87164
 surface, chemisorption, universal binding energy relationship 2-61285
 Thomas-Fermi metal-dielectric surface, scaling relations and analytic soln. 2-104484
 two-component fluid, ripplon dispersion relations, hydrodynamic mean-field calc. 2-58699
 two-dimensional electron gas, dynamic correlations, first order perturbation theory 2-76958
 viral theorem generalisation, appl. to semi-infinite electron gas 2-110272
 Al, interatomic pots. and electronic props., ab initio calc. 2-56460
 Ne, impurity in electron gas, temp. depend. screening, pair pot. calcs. 2-103281
 Si, elastic and inelastic backscattering of slow electrons 2-105018

jet stream see *atmospheric movements***jets**

- see also *plasma jets*; *sprays*
 acoustic noise, low-speed, prediction (*French*) 2-75760
 acoustic noise, source function study by causality method (*French*) 2-75947
 air jet, axisymmetric, issuing into vac. chamber, density distrib. (*Russian*) 2-60596
 air jet, heated axisymmetric temp. and vel. profiles (*Russian*) 2-91504
 air jet, self-excitation, whistler nozzle driven, laminar and turbulent flows 2-55631
 air jet, turbulent axisymmetric, coherent struct. 2-60601
 annular jet initial region, wake-induced and jet vortices and covariance obs. 2-91501
 annular jets, excited, of low Mach number 2-55630
 R Aquarii, symbiotic star, discovery and photometry of elongated extension of stellar image 2-117685
 V1343 Aquilae (SS 433), accretion disc models with relativistic jets 2-63474
 V1343 Aquilae (SS 433), polarisation due to electron scatt. in jets or disc 2-63468
 V1343 Aquilae (SS 433) relativistic jets role in W50 radio ansae origin 2-63473
 attached water jet, at curved wall, acoustic wave effects (*Japanese*) 2-91506
 axisymmetric flow field induced by a point force in the presence of a plane wall 2-60600
 axisymmetric jet, with varying electrical cond. in radial mag. field 2-103224
 axisymmetric jet impinging flat plates, mass transfer, surface press. fluctuations influence 2-91503
 B2 1321+31 (NGC 5127), large radio galaxy, multifreq. obs. of radio jets and lobes 2-89396
 blown gas jet, supersonic oncoming stream interaction 2-71000
 boundary layer formation on density discontinuities 2-60523

jets continued

- buoyant plume heat transfer to unconfined ceiling 2-114802
 capillary liquid jets in parallel airstream, instability and breakup 2-81379
 cavitation bubble dynamics, vortex rings and jet formation 2-55642
 cavitation in jet flow, photographic study 2-65622
 chloroethene molecular beam, pulsed, optical study 2-80562
 choked jets, shock associated noise meas. 2-60293
 circular and turbulent plane jets, line scale velocity, statistics 2-91502
 circular jet with and without crossflow, impingement, local heat transfer 2-109380
 coaxial jet noise, expt. study of isothermal subsonic jets 2-114548
 coherent structure in turbulent shear flows 2-81327
 compressible nonisothermal flow, boundary layer with surface reaction, appl. to wall jet (*French*) 2-55628
 Compton heating and cooling and astrophysical jets 2-112318
 concentration fluctuations in free turbulent jets 2-91499
 creeping Newtonian jet dynamics with gravity and surface tension, free-surface flows 2-91496
 decay, variable control 2-109375
 dichlorodifluoromethane molecular beam, pulsed, optical study 2-80562
 discharge jet interaction with multiple port diffusers 2-86318
 discharge of cryogenic fluids from nozzles, flow rate determ. using isentropic equilibrium model 2-97614
 disk-jet sound generator with a convergent jet 2-114585
 falling parabolic jets, Poiseuille flow, instabilities, vorticity induced waveforms 2-76030
 fast capillary jets nonaxisymmetric flow buckling regime 2-109384
 flexiglas, shaped charge jet penetration, compressibility related effects 2-86794
 flow during sublimation in vacuum studied by schlieren photography 2-60598
 free axisymmetric submerged jets turbulence development, influence of initial conditions 2-97610
 free liquid jet and its influence on direct contact heat transfer, hydrodynamics 2-97607
 free swirling jets, turbulent mixing, marker nephelometry study 2-103196
 freely expanding gas jet, thermal effect on flat plate 2-86314
 freely expanding jet interaction with a plate 2-80595
 freon 113, impinging jets, forced convection boiling, burnout heat flux 2-70935
 gasdynamic jet, seeded, visualisation by laser light (*German*) 2-55681
 glycerol, shaped charge jet penetration, compressibility related effects 2-86794
 high frequency sound emission from moving point multipole sources embedded in arbitrary transversely sheared mean flows 2-86276
 hot-wire probes in nominally 2-D wall jet, interference effects 2-86358
 hypervelocity jet effects on layered target 2-69007
 ideal fluid, steady flow of jets 2-81380
 ideal ponderable liquids, jet stability charact. 2-76008
 impactor, two-dimensional virtual, theory and obs. 2-75920
 impinging jets, dynamics, noise generation 2-65627
 impinging turbulent jets, low Mach number, organised wave self-generation 2-71004
 inclined two-phase jet, turbulence struct., gravity effect 2-60514
 incompressible turbulent wall jet, appl. to Coanda flare 2-114865
 isotope separator, gas-jet transport system charact. 2-113673
 jet noise, pressure dependence and silencing of blow-offs 2-91128
 laminar, submerged diffusion flame in immiscible liquid, combustion 2-60594
 laminar buoyant jets discharged at inclination to vertical buoyancy force 2-114862
 laminar jet of liq. with initial segment, heat transfer during vapour condensation 2-60533
 large-scale jet-mixing struct., coherence with press. field 2-65625
 Laval nozzles with gas jets blown asymm. 2-60605
 liquid flow through sharp inlet edged orifice, hydrodynamics 2-97608
 liquid jet impingement with plain and cavitating jets, erosion study 2-114863
 liquid layer, acceleration study 2-60597
 LMFB, cavitation in submerged jets 2-102162
 low strength material, shaped charge jet interactions 2-92070
 mean wake of axisymmetric bluff body, central jet effects obs. 2-86315
 methanol, shaped charge jet penetration, compressibility related effects 2-86794
 model of turbulent channel flow 2-76028
 NGC 4151 Seyfert galaxy, nucleus struct. and jets, UHF obs. 2-63651
 noise characteristics of a pulsed jet 2-91155
 noise source meas. using elliptical acoustic mirror and laser velocimeter 2-76042
 non-Newtonian fluid, ligament type disintegration in spinning disk atomisation 2-81370
 nonhomogeneous fluid flow, Navier-Stokes eqn. soln. 2-70894
 nonmechanical adiabatic wave expansion in gas stream, cooling effects 2-91505
 nonreacting turbulent flow of jet in opposing stream, heat, mass and momentum transport meas. 2-65573
 ocean, mesoscale eddies detachment from spatially growing meanders in eastward-flowing jet 2-83830
 opposed jets discharging normally into cross stream 2-55543
 optical quality of supersonic jets of various gases 2-55697
 ordered structures simulation in open turbulent flows 2-86265
 organ pipes sound generation mechanism, wave propagation on turbulent jets, amplitude growth 2-97319
 oscillating jet generation from nozzle, Coanda effect 2-60604
 oscillations of an impinging turbulent jet: coherence characterization via conditional sampling 2-114864
 parietal, Coanda and Young effects appl. (*French*) 2-109377
 perfect vibrationally relaxing gas, radial expansion due to connection with vacuum 2-109381
 phenols, H bonded, dispersed fluoresc. spectra in supersonic free jet 2-108610
 planar ideal gas jets, interactions 2-71001
 plane jet deflection in crossflow by turbulent mixing and press. effects (*German*) 2-55629
 power law fluid, boundary layer approx., similarity solns. for wedge and free-jet flows (*French*) 2-109275
 pulsating jet flow, pressure distrib. around sphere meas. 2-60693
 pulsed core jet, velocity field and entrainment meas. 2-60603
 quarsars, models and emission features 2-63698
 quasihomogeneous turbulent diffusion investig. using the probability density distrib. function of conc. 2-88357

- jets continued**
radio galaxies, radio obs. of jet-like structs. in nearby early-type galaxies 2-106910
radio jets production and MHD flows from accretion discs 2-89141
radiogalaxies, models and emission features 2-63698
radiogalaxies jet like formations nature 2-58460
radio source CTB 80, directed jets source, nature and possible link with SN 1408, model 2-63696
radio sources, double extragalactic, particle beams prod. from massive black hole accretion disc 2-63699
Raman spectroscopy, ultrahigh resolution, using free-expansion jets 2-108522
research in Bangalore in the 1950s and 1960s 2-79337
round jet normal to crossflow, velocity characteristics, turbulence intensities 2-65631
round jets, incompressible turbulent, scaling law 2-97611
separation zone characteristics of jet blown into hypersonic flow, surface longit. angularity influence (*Russian*) 2-103188
spray aiming in bombardier beetles: jet deflection by the coanda effect 2-73290
steady pot. flow between boundaries, jet emergence, gravity effects 2-114861
steam jet, high-pressure, impingement, nozzle reaction, press. distrib. 2-65629
steel, mild, shaped charge jet penetration, compressibility related effects 2-86794
stratified fluids, jet development (*French*) 2-109379
supersonic, impingement on normal flat surface 2-109376
supersonic, moderate Reynolds no., flow and acoustic props. 2-65626
supersonic flow, convergent nozzles, broadband shock noise, acoustic meas. 2-65617
supersonic jet coherent struct., instability and mixing zone visualisation using laser light sheets (*French*) 2-86362
supersonic jet entering conical cavity, gas heating and press. pulsations 2-70985
supersonic jets, overexpanded, instability and acoustic emission (*French*) 2-76005
swirling, confined, turbulent mixing (*Russian*) 2-81331
swirling jet flow, turbulence intensity meas. 2-103154
swirling radial free jet flow (*French*) 2-109378
turbulence in axisymmetric jets in still air 2-91500
turbulent, mechanics and environmental factors effects 2-97528
turbulent, space-time correlation for US beam propag. (*French*) 2-114507
turbulent compressible 2D impinging jet flowfields, Navier-Stokes computations 2-109288
turbulent flows, acoustics, Euromech 142 report 2-114784
turbulent jet, entrainment charact. in cross-flow 2-86316
turbulent jet mixing, non-isoelectric in a const. area duct 2-91497
turbulent jets, noise characteristics 2-91412
turbulent jets, ultrasonic beam propagation, spatial coherence (*French*) 2-97253
turbulent jets emanating from rectangular nozzles, impingement, wall jet radial momentum flux 2-109374
turbulent liquid jets, heat and mass transfer 2-71003
2-D turbulent offset jet-boundary interaction 2-65632
turbulent plane jet, acoustic interaction effects on mean flow 2-109300
turbulent plane jet, correl. of squared vel. and temp. derivatives 2-97609
turbulent plane jet, flapping motion 2-65630
turbulent plane jet interacting with small amplitude waves, mean flow characts. 2-65628
turbulent plane wall jet, velocity profile and optimum skin friction 2-86319
turbulent shear flows, conf., Toulouse, France (May 1981) 2-58545
turbulent wall jets in rectangular diffuser, vel. profile, press. distrib. 2-71002
underexpanded free jets, interaction with adjacent surfaces 2-65624
unsteady flow interaction with jet pipe, low freq. sound radiation and generation 2-109310
vertical turbulent jet with negative buoyancy 2-76009
viscoelastic liq. threads, surface tension driven jet breakup, stability anal. 2-75599
vortex breakers in an air jet 2-75972
wall jet, electrically conducting fluid, vel. and thermal boundary layers 2-86317
wall jet, turbulent diffusion, vel. and temp. field mean and turbulent charact. 2-91498
wall jets, 3-dimens., struct., hot-wire investig. 2-76006
water, thin slender jets 2-76007
water sheet jets issuing from slit nozzles; linear stability theory, appl. to fusion reactors 2-66062
wedge-shaped bucket of maximum drag in finite-width stream 2-55632
Ar free jet, rot. distrib. of N_2 , translational temp. anisotropy, effect 2-109383
Ar jet, high temp., Ti particle dispersion regularity (*Russian*) 2-60599
 CO_2 free jets, rot. energy distrib. FT IR emission spectrosc. obs. 2-108688
CO jet, Rayleigh meas. 2-111521
 H_2O_2 impinging jets, forced convection boiling, burnout heat flux 2-70935
 $KAl(SO_4)_2 \cdot 12H_2O$, nonuniform soln. growth 2-77722
 N_2 free jet, rot. relax. in transition regime 2-114084
 N_2 free jets, rot. levels population kinetics, electron beam meas. 2-109382
 N_2 supersonic jets, two-dimens., interferometric obs. 2-103197
 N_2 underexpanded jet, compressible flow density meas. by LIF 2-97581
 NH_3 molecular beam, pulsed, optical study 2-80562
 SF_6 cooled in free jet expansion from pulsed supersonic nozzle, multiple-photon absorpt. characts. 2-96555
 SF_6 $v_2 + v_6$ combination band multiple photon excitation in bulk and pulsed free jet 2-96670
Se, short-lived fission products, isolation and obs. by organometallic reactions 2-75449
- j.f.e.t. see junction gate field effect transistors**
- Johnsen-Rahbek effect see adhesion; electrostatics**
- Johnson noise see thermal noise**
- joining processes**
see also brazing; cable jointing; soldering; welding
diffusion bonding of Zr alloys to C steels, reactor appl. 2-64545
index matching single mode fibre alignment system 2-60252
- joining processes continued**
industrial anaerobic adhesives (*Polish*) 2-88332
optical fibre splicing method 2-97237
- jointing, cable see cable jointing**
- jointing (electric connectors) see electric connectors**
- Jordan-Thiry field see cosmology; general relativity**
- Josephson effect**
ampere definition based on combined Josephson and quantised Hall expt. 2-101376
bistability in Josephson junctions irradiated with external coherent radiation 2-104549
bunched solitons on finite Josephson tunnel junctions, approx. theory 2-77238
clean SNINS junction, double critical current stimulation (*Russian*) 2-110546
coupled Josephson weak links, resistivity shunted junction model perturbation calc. 2-66721
current, in nonsymmetric proximity systems, theory (*German*) 2-61661
current-driven junction, nonlinear eqns. 2-77237
double junction phase locking 2-92839
double-loop DC SQUID, lumped circuit element model 2-98816
driven Josephson junction, dissipative phase transition 2-77239
EMF standards maintenance and comparison at BIPM 2-112927
EMF units reproduction accuracy increase 2-89652
ferromagnetic, superconductor, Josephson currents 2-110547
flux trapping threshold in narrow superconducting thin films, obs. 2-82529
Hamiltonian model, cooperative and chaotic behaviour, free-electron laser analogy 2-110543
inductively shunted Josephson tunnel junctions, relax. oscills. 2-92836
interferometers, dense array, stray mag. coupling between neighbouring supercond. memory cells 2-115951
Josephson contacts, connected soliton states (*Russian*) 2-87456
Josephson junction, bifurcations, transition to chaos 2-92834
Josephson junction tunnelling, pseudo-angular momentum approach 2-98820
Josephson junctions, chaotic behaviour 2-110538
Josephson S-N-S junctions, critical current oscills. (*Russian*) 2-56797
Josephson transmission line, fluxon propagation 2-87460
Josephson tunnel junctions, soliton dynamics, zero field steps 2-92838
junction, nonequilibrium, Josephson current, Harris singularity, model calc. 2-66716
junction, pair current, periodic modulation 2-92840
junction, quantum dynamics of tunnelling 2-92835
junction, resonance cct. model (*Japanese*) 2-87451
junction, subharmonic freqs. and chaos, theory, parametric amplifier appl. 2-92833
junction fluxon oscillators, freq. tuning by mag. field 2-87453
junctions, current-driven small-capacitance, thermal voltage fluctuation spectrum 2-98817
junctions, fluxon propagation 2-72123
junctions, vortex lines, eqn. of motion 2-82550
Kondo alloys, transition temp., sp. ht., and DC Josephson effect 2-98818
large tunnel junctions, vortex penetration and self-resonant effects 2-56789
long Josephson junction breather decay into fluxon-antifluxon pair and transform. into bunched fluxons 2-72118
long junctions, overlap and inline geometries, fluxon motion 2-82528
multiconnected Josephson network, partial destruction of Meissner state 2-98813
pair tunnelling current and new tunnelling theory 2-110539
phase tunnelling in Josephson junctions, influence of dissipation 2-92828
planar DC SQUID based on thin-film Josephson microbridges, coherent arrays 2-92837
point contact junctions, bridge-type and tunnel-type, submillimeter wave response 2-56790
point contacts, Josephson effect in high voltage limit 2-87458
point-contact voltage standard 2-112930
potentiometer realisation, voltage standard appl. 2-112928
quantum fluctuations 2-104545
quantum tunneling and zero-point motion limit of noise fluctuations 2-61666
resistivity shunted Josephson junction, quantum noise meas. 2-98822
resonances in Josephson tunnel junction 2-79611
running soliton superstructure stability (*Russian*) 2-72121
scattering model from Ginzburg-Landau eqns. 2-56795
short tunnel junctions, low-freq. cavity mode excitation 2-56798
sine-Gordon system, two-dimens., vortex solns., phase transitions and Josephson junction appl., Josephson junction appl. 2-69028
small Josephson junction, soft-phonon emission from electron-pair tunnelling 2-104546
small-particle superconductor, Monte Carlo simulation, disorder effects 2-82518
solid state physics conf., Copenhagen, Denmark (Aug. '81) 2-89440
SQUID low freq. noise and parameter fluctuations 2-92824
superconducting devices, precision metrology appl. 2-94937
superconducting junction devices development (*Japanese*) 2-77235
superconducting point contacts, low resist., static and HF props., microwave and Josephson radiation 2-104548
superconducting ring with weak link, supercurrent oscills. (*Chinese*) 2-110535
superconductor and metal point contact, irradiat. effect 2-66724
superconductor-insulator-superconductor reflection parametric amplifier 2-98811
synchronization effects in a linear array of N Josephson junctions 2-77231
thermal EMF oscills. versus mag. Vector pot. field in supercond. loop with Josephson SNS junctions 2-77241
thermal noise meas. using Josephson junction thermometer, effect of additive noise and bandpass filter 2-112902
tunnel junction with Nb-NbN double-layered electrodes 2-77233
tunnel junctions, microwave-induced DC quasiparticle tunnelling currents, capacitance meas. 2-82535
tunnel junctions, soliton excitations, sine-Gordon model 2-82543
tunnel junctions, stable zero field mode 2-66719
tunnel junctions, tunnelling, pair field susceptibility 2-98821
tunnel junctions, variation of crit. current with external DC mag. field (*Chinese*) 2-110537
two-dimensional junction, phase distrib., boundary conditions effect 2-110541

Josephson effect continued

- voltage standard, rel. to freq. 2-63962
voltage unit reproduction based on Josephson effect, Italian (IEN) participation 2-11299
weak link, current-biased, fluxoid tunnelling, QED theory 2-72117
weak links, influence of effective electron interaction on critical current (Russian) 2-104557
Z- γ mixing in superconductors, P-violation from Josephson effect 2-59080
BaPb_{0.7}Bi_{0.3}O₃ films, grain boundary Josephson junction network props. meas. 2-87452
BaPb_{0.7}Bi_{0.3}O₃ films, grain boundary junctions, max. DC Josephson current, temp. depend. meas. 2-92832
BaPb_{0.7}Bi_{0.3}O₃ fabrication and supercond. props., boundary layer Josephson junctions appl. 2-82530
ErRh₃B₄ film, pair tunnelling meas. 2-87454
⁴He superfluid interferometer, Sagnac-Josephson interference, inertia 2-71750
In superconducting microbridges, two strongly coupled effects of microwave radiation 2-110542
Li_{1-x}Ti_{2-x}O₄ fabrication and supercond. props., boundary layer Josephson junctions appl. 2-82530
Nb Josephson junctions weakly coupled array, phase coherence 2-72124
Nb Josephson point contact, supercond. energy gap, RF noise enhancement study 2-92829
Nb, point contact, crit. current-normal state resist. product meas. 2-56791
Nb/Pb thin film Josephson junctions, tunnelling barrier struct., Auger and XPS study 2-115956
Nb/Pb-In thin film Josephson junctions, tunnelling barrier struct., Auger and XPS study 2-115956
Nb-Nb oxide-Pb Josephson tunnelling elements in junction microstructs. 2-98819
Nb-Nb_{0.7}Pb Josephson junction, phase distrib., boundary conditions effect 2-110541
Nb-NbO₂-Pb Josephson junctions, high current density, fabrication and props. 2-82532
Nb-NbO₂-Pb Josephson junctions for narrow-linewidth tunable microwave oscillators 2-87455
Nb-Pb Josephson junction, submicron, electron beam lithographic fabrication and crit. current density meas. 2-56796
Nb-SnO₂-Sn and Nb-Sn, tunnel- and bridge-type Josephson junctions, submm wave response meas. 2-92831
Nb-Te-Nb Josephson MM-wave mixer, characs. and anal. 2-92830
NbN granular weak links, current-phase relationship inferred from Josephson interferometer characs. 2-82527
NbN-Nb double-layered base-electrode Josephson junctions, single flux quantum memory cells fabric 2-82531
NbN-Nb Josephson tunnel junctions, with sputtered amorphous Si barriers 2-66715
Pb Josephson tunnel junctions formed by thermal oxidation, fabrication (Chinese) 2-110536
Pb-Bi film, Josephson junction counterelectrode, strain distrib., X-ray study 2-82179
Pb-Zn-Pb junction, Josephson supercurrent oscil. temp. depend. 2-82544
Pb-Zn-Pb superconductor-normal-superconductor junction, self-field effects 2-110540
PbInAu film, RF oxidation, oxide composition 2-76858
VO_x/V₂Si/Si₃N₄ semiconductor-superconductor-semiconductor, Josephson junction fabrication (Japanese) 2-82537

Joshi effect *see glow discharges***Joule-Thomson effect**

No entries

junction gate field effect transistors

downhole logging, high-temp. electronic components and cct. designs 2-100605

junction lasers *see semiconductor junction lasers***Jupiter**

- 1978 December positions, Uccle double astrophot obs. 2-79007
asteroid orbit perturbations, exploration of three-dimensional motion at 2/1 resonance 2-106594
astrolabe observations at CERGA Observatory (January 1978-May 1979) (French) 2-100808
astrometric posns., 1974-6 obs. at Pulkovo (Russian) 2-79009
astrometry, photographic positional obs. with long focus astrophot during (1975) (Russian) 2-94636
atmosphere, albedo, absorption model and airglow, UV obs. 2-79006
atmosphere, disk and satellites, physics, book (Russian) 2-84392
atmosphere, electron precipitation and EUV emission 2-94638
atmosphere, HCN IR obs. 2-58298
atmosphere, PH₃, methane-d₁, and GeH₄ abundances, Voyager IRIS spectra 2-100810
atmosphere, processes from Voyager mission 2-79017
atmosphere eddy transports anal. 2-112379
atmosphere features and dynamics 2-79014
atmospheric non-biological organic molecules existence 2-100812
aurora, radiative transfer with partial freq. redistrib. 2-73899
aurora, study of H₂ fluorescence spectrum (1200 to 1700 Å) due to electron impact 2-63237
aurora UV emission spectra 2-112377
binary magnetosphere of Jupiter-Io review 2-79016
Callisto, mechanical model of Valhalla basin 2-73896
celestial mechanics, motion of Jovian commensurability reson. rel. to asteroid zone kinematics and struct. 2-89170
Comet Bowell (1980b), orbit perturbation due to planets 2-106627
comet encounters, orbital patterns 2-106622
decametric emission, beaming pattern cyclotron theory 2-106520
decametric emissions, VLBI techniques use for observations (Japanese) 2-117599
decametric radio emission, obs. of arc struct. from Earth and from Voyager 2-63303
early evolution in absence of solar tidal field, shape and collapse 2-63305
early evolution in solar tidal field, shape and collapse 2-58300
EM radiation from magnetosphere 2-89190
Floquet reference solutions for the lunar theory and the Jovian moons 2-84068
free oscillations, review 2-100894
Galilean satellite system, appl. of general planetary theory extended to case of resonance (French) 2-78939

Jupiter continued

- Galilean satellites, 1979 mutual eclipses and occultations, visible obs. (French) 2-100807
Galilean satellites, anal. of early eclipse obs. 2-79011
Galilean satellites, astrometric posns., 1974-6 obs. at Pulkovo (Russian) 2-79009
Galilean satellites, astrometry from Leander McCormick Observatory for 1978-9, 1980, 1981 oppositions, obs. 2-73891
Galilean satellites, determ. of semi-major axes (French) 2-79012
Galilean satellites, photographic observations (1913-1928) and ephemerides corrections 2-112376
Galilean satellites, Sampson-Lieske theory, new constants 2-79008
Galilean satellites chemical comp. and struct. and evolution 2-63307
Galilean satellites of Jupiter, comparison of Sampson-Lieske theory with obs. 2-79010
Galileo Mission, spectral mapping of Jupiter and Galilean satellites in near IR 2-112300
Ganymede, polygons and grooved terrain sequential development 2-63304
Great Red Spot, persistence anal. 2-84145
HF radiation, interplanetary scintillations used to analyse solar wind plasma irregularities 2-73816
HF spectra, fast drift shadow events, SHF obs. 2-58299
Himalia, precise posns. (1982 April 28) 2-100811
inner satellites discovery and nature 2-79015
Io, atmosphere SO₂, photochemical models 2-73897
Io, charged particle erosion of SO₂ ice rel. to SO₂ atmosphere, laboratory studies 2-112374
Io, S geochemistry 2-106600
Io plasma torus, Fabry-Perot/CCD obs. of forbidden S II and S III emissions 2-112373
Io plasma torus, SO₂ ionisation and dissociation 2-106602
Io plasma torus energy sources 2-84143
Io torus, multiply refl. standing Alfvén waves from mag. obs. (on Pioneer 10) 2-73892
magnetic field, quadrupole and octupole parameters 2-68655
magnetic field model of interior and magnetosphere 2-89188
magnetic field secular variation 2-84146
magnetosphere, model of differential rot. and wavy magnetodisk 2-73898
magnetosphere, Na emission of Io origin plasma and motion 2-73893
magnetosphere, VLF and LF emission, review 2-106430
inner magnetosphere light ion conc. 2-84144
magnetosphere plasma dynamics and Io 2-63306
magnetosphere plasma ion comp. diagnostics, use of plasma resonance lines 2-63231
magnetospheric charged dust grain motion, theory 2-89175
narrow band splitting at HF cutoff freq. 2-106599
origin and initial temp. 2-100809
perturbation of Comet Bowell (1980b) 2-79041
plasma torus characteristics from forbidden line visible obs. 2-58296
ring and satellites, visible obs. 2-73894
Rossby vortex as model of Great Red Spot 2-100813
rotational energy loss, scaling from Jupiter to pulsars rel. to pulsars mass spectrum 2-112375
S-bursts obs. in freq. range 3.2-32 MHz 2-89187
satellites, simultaneous disappearance of four major satellites 2-106603
thermal balance, role of phase transitions latent heat 2-58434
troposphere lower boundary, zonal flows stability 2-58297
upper atmosphere and ionosphere, probe meas. 2-89178
upper ionosphere spatial irregularities from Voyager radio occultations 2-106601
VLF hiss emission from magnetosphere 2-89189
vortices of long-lived nature, numerical model 2-73895
zonal mean circulation 2-112378
C/H ratio from Voyager IR spectra 2-89186
o-H₂-p-H₂ conversion in Jovian planetary atmospheres 2-100782
NH₃ abundance from radio occultation obs. 2-79013

K-capture *see nuclear electron capture***K mesons** *see kaons***K-N interactions** *see kaon-nucleon interactions***Kalman filters**

- architectural noise, Kalman's filtering theory under preestablished estimation algorithm form (Japanese) 2-97297
artificial satellite position precise prediction, appl. of extended Kalman filter (Chinese) 2-112298
cardiovascular signals, detect. of trends in long term recordings 2-111808
deconvolution program for processing radiotracer dilution curves 2-117056
marine seismic reflection records processing, compensation for source heave by use of a Kalman filter (underwater sound) 2-68513
road traffic noise, dynamical estimation method of objective noise under background noise (Japanese) 2-97288

kaon-baryon interactions*see also kaon-baryon scattering; kaon-hyperon interactions; kaon-nucleon interactions*K⁰-d- π^+ π^0 π^0 (π^+ π^-), 1.45, 1.65 GeV/c, dibaryon resonance prod. 2-79909**kaon-baryon scattering***see also kaon-baryon interactions; kaon-hyperon scattering; kaon-nucleon scattering*

No entries

kaon decay*see also kaon hadronic decay; kaon leptonic decay*CP violation, mass matrix in Higgs-boson model 2-69387
K⁰-K⁰ system fundamental parameters determ. in energy range 30-110 GeV 2-69463K_L⁰ π^0 π^0 π^0 , tagged neutrino beam prod. (Russian) 2-84888K_L⁰ π^0 π^0 (π^0 π^0) atom capture (Chinese) 2-107657K_L⁰ π^0 π^0 hydrogen like atoms, formation rate 2-69448**kaon hadronic decay***see also kaon regeneration*

amplitude helicity suppression, relativistic quark models 2-54148

K- π , quark dynamics 2-107658K- π π , flavour changing neutral processes suppression 2-113223K- π π , strangeness-changing nonlepton decay 2-74648K⁺ π^- γ (γ γ) (π^+ γ γ), expt. limits for decays 2-79885K_L⁰ π π , flavour changing neutral processes suppression in technicolour theories 2-113223

kaon-hyperon interactions*see also kaon-hyperon scattering*

No entries

kaon-hyperon scattering*see also kaon-hyperon interactions*

No entries

kaon interactions *see kaon-baryon interactions; kaon-nucleus reactions; lepton-hadron interactions; meson-meson interactions; photon-hadron interactions***kaon leptonic decay**charge $2/3$ quark mass constraints from $K_L \rightarrow \mu^+ \mu^-$ and $K_L - K_S$ mass difference 2-113189 $K \rightarrow l \nu M$, Majoron emission in Gelmini-Roncadelli gauge model 2-54048 $K \rightarrow \mu \nu$, parent identification from mixed π/K beam 2-113793 $K_2 \rightarrow \mu^+ \mu^-$, dispersive contrib., neutral-kaon mixing and top quark mass 2-69450 $K_L^0 \rightarrow \mu^+ e^-$, charged boson mass bounds in Fritzsche-Mandelbaum composite model 2-113253 $\nu_e(p_e)N$, limits for oscillation parameters, majoron emission and L violating decays 2-79861**kaon-nucleon interactions***see also kaon-nucleon scattering; kaon-proton interactions* K_S^0 regeneration on nuclei, energy depend. 2-54449 KN , 1.47-1.89 GeV, quasinuclear amplitude for $I=0$ and implications for bag models 2-54210 KN , dd Δ isobar prod. at high energies, EM mechanism (*Russian*) 2-101773 $K^-N \rightarrow X$, 40 GeV/c, charged particle multiplicities (*Russian*) 2-59195 $K^+n \rightarrow K^0p$, 1.06-1.49 GeV/c, polarisation meas. 2-79925 $K^-N \rightarrow KN$, 0.2-1.6 GeV/c, phase shift and energy depend. partial wave anal. 2-79910**kaon-nucleon scattering***see also kaon-nucleon interactions; kaon-proton scattering*

quasi-two-body phase-space factors in isobar model 2-69483

 KN , 1.47-1.89 GeV, quasinuclear amplitude for $I=0$ and implications for bag models 2-54210 K^-n , elastic scatt., 1.60-1.74 GeV, in d, differential cross section 2-113296 $K^-n \rightarrow K^-n$, 1.8 to 2.08 GeV, $\Sigma(1940)$ elasticity 2-84915 $K^+n \rightarrow KN$, 0.2-1.6 GeV/c, phase shift and energy depend. partial wave anal. 2-79910 K^+n scatt., 1.06-1.49 GeV/c, polarisation meas. 2-79925**kaon-nucleus reactions***for inelastic kaon-nucleus scattering, see "kaon-nucleus scattering"**see also kaon-nucleon interactions*

conference on mesons and light nuclei, Liblice, Czechoslovakia (June 1981) 2-58527

exotic atoms, K-nucleus scatt. and hypernuclei, review 2-59416

high energy physics and nuclear structure, conf., Versailles, France (July 1981) 2-53416

hypernuclear physics, expt. and theoretical review 2-54444

 (K, π^-) strangeness exchange, hypernuclear resonance excitation, p-shell struct. effect 2-59279 (K^-, π^-) , hypernuclear prod., continuum shell model 2-59281 (K^-, X) , 40 GeV/c, charged particle multiplicities (*Russian*) 2-59195 K^- emulsion nuclei interaction, 12.5 GeV/c, pion emission study 2-64441 K_S^0 regeneration on nuclei, energy depend. 2-54449 $Ag(K, X)$, 200 GeV, multiplicity meas. 2-113467 $Au(K, X)$, 200 GeV, multiplicity meas. 2-113467 $^2H(K, \pi)\Sigma N$, 800 MeV/c, Σ -nucleon system expt. study 2-59423 $^6Li(K^-, \pi^+)$, 713 MeV, $^6H_{22}$ hypernucleus expt. observation 2-64367 $^6Li(K^-, \pi^-)$, 720 MeV/c, $^6H_{22}$, small angle cross sections, narrow Σ states, energy shifts 2-64368 $O(K^-, \pi^+)$, 713 MeV, $^{16}C_{22}$ hypernucleus expt. observation 2-64367**kaon-nucleus scattering***see also kaon-nucleon scattering*

exotic atoms, K-nucleus scatt. and hypernuclei, review 2-59416

 $^{12}C(K^\pm, K^\pm)$, 800 MeV/c, inelastic scatt. cross section calc. in DWIA 2-85105 $^{12}C(K^\pm, K^\pm)$, 800 MeV/c, elastic, inelastic scatt., comparison with optical model and DWBA calcs. 2-85101 $^{40}Ca(K^\pm, K^\pm)$, 800 MeV/c, elastic, inelastic scatt., comparison with optical model and DWBA calcs. 2-85101 $^2H(K^+, K^+)$, N/D eqn., dispersion methods, partial wave amplitudes 2-59415 $^4He(K^+, K^+)$, A=3,4, N/D eqn., dispersion methods, partial wave amplitudes 2-59415**kaon production**

heavy ion collisions, strange particle production in the hadrochemical model 2-113529

meson production reaction by p, d, α on nuclei 2-54370 e^+e^- annihilation, π , K, ρ and \bar{p} prod., quark combinatorics calc. (*Russian*) 2-95858 $e^+e^- \rightarrow KX$ at $\Psi(4s)$ resonance, $\Psi \rightarrow B\bar{B}$ and B-charged and neutral K 2-69453 $e^+e^- \rightarrow \pi^+ \pi^- K^+ K^-$, 1.4-2.18 GeV, cross sections, isospin interference, $K^*K\pi$ dynamics 2-69476 $\gamma_e \rightarrow K^+ K^-$, 2.8-4.8 GeV, 0 meson diffractive prod. 2-54179 $K^0(K^0)$, production in $pp \rightarrow X$ at 63 GeV/c 2-107706 K^+ A production by the weak decay current, final state interaction effect 2-101637 K^-p , 110 GeV/c, K^{\pm} , K^0 \bar{K}^0 and ρ^0 inclusive prod., cross sections 2-84927 $K^-p \rightarrow K^+ K^- (\Lambda/\Sigma^0)$, 18.5 GeV/c, high mass ϕ -like state 2-54214 $K^+p \rightarrow K^0(K^0)X$, 32 GeV, rel. to strange antibaryon prod. 2-59200 $K^+p \rightarrow K^0(1430)X$, 32 GeV, inclusive cross-section, rel. to quark recomb. model 2-59202 $K^+p \rightarrow K^{*+}(1430)X$, 32 GeV, inclusive cross-section, rel. to quark recomb. model 2-59202 pN , 70 GeV, hadron prod. in high- p_T processes (*Russian*) 2-89989 pN , 70 GeV, low-energy hadron prod. cross section at zero angle (*Russian*) 2-89987 $pp \rightarrow K$, 540 GeV, strangeness prod. yields 2-101767 $pp \rightarrow K_S^0 X$, 403-670 MeV/c, exclusive cross-section, enhancement 2-74702 $pp \rightarrow K_S^0 X$, $s^{1/2}=63$ GeV, neutral strange particle prod. cross section 2-69500 $pp \rightarrow K^+ K^- 4\pi^0$, partially conserved axial-vector current hypothesis, branching ratios 2-113293**kaon production continued** $pp \rightarrow K^\pm X$, inclusive cross section in central region in terms of Pomeron 2-101775 $\pi p \rightarrow K_S^0(\Lambda, \bar{\Lambda})X$, 12-405 GeV/c, cross-section, multiplicity, energy depend. (*Russian*) 2-74710 $pp \rightarrow K_S^0(\Lambda, \bar{\Lambda})$, 12-405 GeV/c, cross-section, multiplicity, energy depend. (*Russian*) 2-74710 $^{28}Si(^{28}Si, X)$, 2.1 GeV/nucleon, subthreshold prod. of K^- , \bar{p} 2-80031**kaon-proton interactions***see also kaon-proton scattering* $J^P=1^+$ three pion system anal., Watson theorem for multi-quark states 2-95790

QCD and dual topological unitarisation, gluons in hadronic S-matrix 2-101666

0 meson mass precision determ. from $K\bar{K}$ mass histograms 2-79911 K^-p , 10.16 GeV, inclusive $\phi(1020)$ prod. cross section, comparison with ψ prod. 2-101778 K^-p , 110 GeV/c, K^{*+} , K^{*0} \bar{K}^{*0} and ρ^0 inclusive prod., cross sections 2-84927 K^-p , cluster model for multiplicity distrib., KNO scaling 2-89982 $K^-p \rightarrow \eta \Lambda(\eta \bar{\Lambda})$, differential cross-section and polarisation study of Regge pole model 2-101766 $K^-p \rightarrow K^+ \pi^- \pi^- n$, 8.25 GeV, $K\pi\pi$ system partial wave analysis 2-107685 $K^-p \rightarrow K^+ K^- (\Lambda/\Sigma^0)$, 18.5 GeV/c, high mass ϕ -like state 2-54214 $K^-p \rightarrow \Lambda(1520)\pi^0$, transversity amplitude anal. at 4.2 GeV 2-84912 $K^-p \rightarrow \Lambda\pi$, $\Sigma(1385)$, resonance parameters from decay mode 2-84913 $K^-p \rightarrow \Lambda\pi^+ \pi^-$, 620 to 870 MeV, final state anal. 2-54211 $K^-p \rightarrow \Sigma^+ \Sigma^-(1385)$, interference effects and kinematic reflections 2-84914 $K^-p \rightarrow \bar{Z}^+ K^+$, hyperon exchange, SU(3) violation 2-59182 $K^-p \rightarrow \bar{Z}^0 K^0$, hyperon exchange, SU(3) violation 2-59182 K^+ , 147 GeV/c, topological, total and elastic cross section meas. 2-95872 $K^+p \rightarrow f(1270)X$, 32 GeV, inclusive cross-section, rel. to quark recomb. model 2-59202 $K^+p \rightarrow$ hadrons, 32 GeV/c, multiparticle fragmentation 2-59201 $K^+p \rightarrow K^0(K^0)X$, 32 GeV, rel. to strange antibaryon prod. 2-59200 $K^+p \rightarrow K^+ p K^+ K^- \pi^+ \pi^-$, 32 GeV/c, cross-section rel. to quark-parton model (*Russian*) 2-59188 $K^+p \rightarrow K^+ X$, low p_T reaction, quark distrib. in K, valon model 2-107647 $K^+p \rightarrow K^{*0}(1430)X$, 32 GeV, inclusive cross-section, rel. to quark recomb. model 2-59202 $K^+p \rightarrow K^{*+}(1430)X$, 32 GeV, inclusive cross-section, rel. to quark recomb. model 2-59202 $K^+p \rightarrow K^{*+} X$, ($Y^{*+} X$) 147 GeV/c, x and t distrib. 2-74715 $K^+p \rightarrow \bar{\Lambda} X$, 3.2 GeV/c, rel. to strange meson prod. 2-59200 $k^+p \rightarrow pX(\pi^+ \pi^- X)$, recombination model testing with ρ^0 resonance to $(\pi^+ \pi^-)$ background production ratio 2-113236 $K^+p \rightarrow \bar{Z}^+ X$, 3.2 GeV/c, rel. to strange meson prod. 2-59200 $K^+p \rightarrow \bar{Z}^+ X$, 32 GeV, rel. to strange meson prod. 2-59200 K^+p , 100, 200 GeV/c, charged multiplicity distrib. universality 2-107704 $K^+p \rightarrow pX$, 100-200 GeV/c, high-mass diffractive states, charged multiplicities 2-74707**kaon-proton scattering***see also kaon-proton interactions* Kp , elastic unitarity of direct channel and Froissart saturation (*Russian*) 2-101772 K^-p , 30 GeV/c, elastic scatt., hadronic form factors and quark size determ. (*Russian*) 2-54213 K^+p , 147 GeV/c, topological, total and elastic cross section meas. 2-95872 K^+p scatt., spin-flip cross section bound from variational calculus 2-107686 $K_L^0 p \rightarrow K_S^0 p$, Regge pole model, ω trajectory 2-54209**kaon regeneration**

No entries

kaon resonances *see meson resonances***kaon scattering** *see kaon-baryon scattering; kaon-nucleus scattering; lepton hadron scattering; meson-meson scattering; photon-hadron scattering***kaons***see also kaon regeneration*charge $2/3$ quark mass constraints from $K_L \rightarrow \mu^+ \mu^-$ and $K_L - K_S$ mass difference 2-113189

charge radii, relativistic corrections from quark model 2-89946

strange and nonstrange quark distrib. 2-107636

SU(3)XSU(3) bag model with pseudoscalar meson cloud of K, η , η' (*Chinese*) 2-95792 $K-\pi\pi$, weak decays using QCD corrected hamiltonian and $1/N_c$ expansion 2-101709 K^0, \bar{K}^0 system fundamental parameters determ. in energy range 30-110 GeV 2-69463 K^0, \bar{K}^0 transition amplitudes in six-quark model 2-54105 $K_L - K_S$ mass difference, left-right symmetric electroweak theory, constraint on mass scale 2-64250 K^0, \bar{K}^0 system nonseparability test 2-101229 K^-p , 30 GeV/c, elastic scatt., hadronic form factors and quark size determ. (*Russian*) 2-54213 $K^+p \rightarrow K^+ X$, low p_T reaction, quark distrib. in K, valon model 2-107647 H_K , 1S state, strong interaction shift and width 2-59976**Kapitza-Dirac effect***see also Schwarz-Hora effect*

No entries

Kapitza resistancebolometer freq. response in liq. 4He 2-61225

liquid-solid interface inertia 2-109962

 $CuK_2(SO_4)_2 \cdot 6H_2O$, 4He , phonon bottleneck, thermal resist. meas. 2-76760 3He , normal liq., thermal boundary resist. with small particles 2-82062 3He , solid, mag. transition 2-82070 4He , liq. and solid, Kapitza resistance meas. 2-110064 4He , liquid-solid interface, phonon transmission, Kapitza resist. 2-98365 4He -Ge interface, transient heat transfer and onset of film boiling 2-115482 4He -quartz interface, anomalous Kapitza cond. saturation 2-110073**KDP** *see potassium compounds***Kelvin-Helmholtz instability** *see flow instability*

Kennelly-Heavyside layer *see E-region; ionosphere*

keratin *see proteins*

Kerr electro-optical effect

see also optical Kerr effect

- mono- and di-arylphosphine oxides, conformations, dipole moments, molar Kerr const. and refraction 2-75151
- 4'-butylphenyl 4-hexyloxybenzoate, electro-optical props., relax. near phase transition 2-99092
- carbon tetrachloride, nonpolar symmetric molecules, electrostriction and Kerr effect 2-57020
- COC, optical rot., Kerr effect, and dynamic light scatt. in isotropic and homeotropic states 2-61135
- glasses, Kerr effect, phase and elec. field induced absorpt. meas. 2-57056
- glycerol, fast dynamic Kerr effect and dielec. relax. 2-104845
- 4'-hexyloxyphenyl 4-butylbenzoate, electro-optical props., relax. near phase transition 2-99092
- high-voltage pulse meas., electrooptical method 2-69199
- HV measurement errors of optoelectronic measurements due to lack of parallelism of the light beam in the Kerr cell 2-95399
- nonuniform electric fields meas. using Kerr effect 2-89750
- relaxation processes, in rapidly rotating elec. field 2-104855
- H-S, dipole polarisability, Kerr effect, temp. depend. 2-102514
- KCl:Pb²⁺(Cu⁺), Kerr const. dispersion 2-72453
- Mn_{1-x}Zn_xFe₂O₄, spinel ferrite, charge transfer transitions in Dember photoEMF 2-110401
- Ni_{1-x}Zn_xFe₂O₄, spinel ferrite, charge transfer transitions in Dember photoEMF 2-110401

Kerr magneto-optical effect

- amorphous alloys, mag. domain struct. under elastic stresses 2-82634
- ferromagnetic thin films, magneto-optical const. meas. using automated system 2-64099
- Bi_{1-x}Ca_xFe_{2-x}Y_xO₁₂, magneto-optical Kerr rotation (*Chinese*) 2-110819
- Co-Cr film, RF sputtered, perpendicular mag. anisotropy, magneto-optical Kerr effect and reflectivity meas. 2-61878
- CoFe₂O₄ single cryst., ellipsometric and magneto-optical study 2-61880
- Co₈₀Ni₂₀Fe₁₀B₁₀ ribbons, domain pattern annealing effect 2-92978
- CoS₂, pyrite-type ferromag., obs. of strong IR magneto-optical effect 2-116157
- Fe film, magneto-optical Kerr effect, mag. props. 2-77492
- Fe-Si (3wt.%) single crystal, saw tooth domain struct. and charged wall observed in gradient field (*Japanese*) 2-77321
- Fe₂O₃, magnetite, polar Kerr rot., temp. depend., 100 to 300K 2-72457
- Fe₂Si₂, ferromag. alloys, amorphous and crystalline, even magneto-optic spectroscopy 2-104857
- Gd-Co, RF-sputtered amorphous film, magneto-optical spectra (*Japanese*) 2-116158
- Gd-Co uniaxial amorphous ferrimagnet, mag. states 2-110608
- Ge, Faraday rot., nonreson. interband transitions, expt. and Kramers-Kronig anal. 2-57065
- Ge, interband Faraday and Kerr effects 2-72463
- Ho-Co uniaxial amorphous ferrimagnet, mag. states 2-110608
- Ni₈₀Fe₂₀Mo₁₀B₁₀, Metglas 2826MB, stripe domain dragging by temp. gradient 2-72254
- Si, Faraday rot., nonreson. interband transitions, expt. and Kramers-Kronig anal. 2-57065
- Sm-transition metal alloys, domain struct. characts. appl. to phase anal. 2-72253
- Tb-Fe_{1-x}, amorphous RF sputtered films, magneto-optic props. 2-72459
- YIG:Bi single cryst., polar Kerr rotation spectra (*Chinese*) 2-77482

keyboards

- electronic keyboard noise suppressor 2-75769
- keystroke noise meas., operator simulation using profile robot driver 2-75804

kicksorters *see counting circuits*

kidney

- blood flow, determ. by math. interpretation of radionephrograms (*Russian*) 2-73316
- blood flow and metabolism, regional tissue, 3D quantitative meas. using ¹⁵O and positron emission tomograph 2-94201
- cells, mouse, repair of sublethal and pot. lethal damage after γ-irrad. 2-68063
- dynamic studies, practical appl. of deconvolution techniques 2-94189
- functional imaging future in radionuclide studies 2-94190
- functional mapping of organ systems, computer methodology, symposium, New Orleans, LA, USA (1981) 2-63742
- ion regulatory function of the human kidney in prolonged space flights 2-62787
- malignant and healthy tissue, improved characterisation by NMR line-shape relax. corals. 2-93990
- medullary layer, pig, channel-forming protein of an Na, K-ATPase prep. 2-111643
- microvillus membrane vesicles, modifier role of internal H⁺ in activating Na⁺-H⁺ exchanger 2-105687
- US characterisation of acute renal failure, rabbit expts. 2-100043
- US in medicine and biology, conf., Brighton, England (Jul. 82) 2-101123
- X-irradiation nephropathy in rats, rel. to dietary protein, histologic exam. 2-94122

Kikuchi lines *see electron diffraction crystallography*

killed steel *see alloy steel*

kinematic viscosity *see viscosity*

kinematics

see also acceleration; ballistics

- Aegean plate, subduction zone kinematics rel. to finite element study of plate deformation 2-94353
- AM 064-741, southern ring galaxy, kinematics from photometric and spectroscopic obs. 2-79216
- artificial heart electromechanical drive unit with rotary/translational motion kinematic converter 2-78498
- asteroid zone, kinematics and struct. rel. to motion of Jovian commensurability resonances 2-89170
- biomechanics cinematography, kinematic anal. procedures 2-117149
- finger tendons, kinematic anal. of role 2-105730
- galaxies velocity dispersion, isothermal models for phase space struct. of r^{1/4} galaxies 2-112563
- galaxy clusters velocity dispersions, implications of rich clusters substructure 2-106938
- galaxy pairs, orbital motion and masses from homogeneous sample of double galaxies 2-101043

kinematics continued

- GF 2.4+1.4, ring nebula assoc. with Wolf-Rayet star, vel. components from Fabry-Perot spectra 2-63562
- H I in M31, position-velocity contour maps from high resolution 21 cm obs. 2-112559
- HH-39, Herbig-Haro object, proper motions and relation to R Monocerotis and (NGC 2261) 2-106841
- IC 5146 (S125), emission nebula, radial vels. and expansion of assoc. H I 2-74043
- interstellar CO towards ζ Ophiuchi, vel. dispersion and kinetic temp. from UV absorpt. lines 2-63557
- local interstellar medium, velocity anal. of spectral lines 2-63554
- interstellar medium, Westerbork obs. of H I absorption in direction of Sagittarius A 2-89336
- interstellar molecular cloud complex in vicinity of IC 5146, vel. struct. rel. to rot. 2-74044
- knee, simulation study of spatial kinematic articulation (*French*) 2-116946
- M87, vel. dispersion profiles rel. to M/L ratio, vel. anisotropy and presence of massive black hole 2-94835
- Markaryan 744, intermediate Seyfert galaxy, internal vel. field determ. 2-101041
- NGC 3359, barred spiral galaxy, H I kinematics and struct. 2-79206
- NGC 3504, barred spiral galaxy, evidence for predominantly circular internal motions 2-106919
- NGC 6334 interstellar complex, struct. and dynamics of 3.5 pc diameter filamentary shell 2-112535
- NRA 140, quasar, apparent superluminal motion obs. 2-68925
- Palomar 14, outer halo globular cluster, galactic orbit rel. to structural characts. 2-106828
- planetary nebulae, expansion vels. meas. from [O III] emission line profiles 2-79197
- planetary nebulae in centre of M31, radial vels. from velocity modulated photographs 2-74042
- planetary nebulae internal motions, forbidden O III expansion vel. meas. 2-89337
- ring nebulae assoc. with Wolf-Rayet stars, kinematics of NGC 3199, anon (MR 26), RCW 58 and (RCW 104) 2-68854
- ring nebulae assoc. with Wolf-Rayet stars 2-68853
- rod, flexible, extensible, steady-state-motion, shape, tension (*Russian*) 2-58594
- Sharpless 106, bipolar H II region, internal motions from radial vels. meas. 2-74071
- Sharpless 308, ring nebula assoc. with Wolf-Rayet star, kinematics 2-68852
- solar atmosphere, non-thermal vel. field above faculae from OSO-8 obs. 2-94691
- spherical galaxies, M/L and vel. anisotropy determ. method rel. to massive black hole in (M87) 2-94835
- spherical stellar system, radial distrib. of vel. dispersion in two component model 2-106820
- stellar kinematics, odd behaviour of nearby stars vel. components in direction l=330°, (b=0) 2-112432
- W63, supernova remnant, radial vel. field of optical filaments 2-74073
- wrist kinematics, normal, in vivo study 2-116970

kinematography *see cinematography*

kinerecording *see video recording*

kinetic theory

see also Boltzmann equation; collision processes; intermolecular mechanics; kinetic theory of gases

- Brownian particle in uniform field, Fokker-Planck eqn., kinetic boundary layer 2-84520
- classical hard-sphere fluid, kinetic theory 2-71314
- classical hard-sphere fluid, kinetic theory 2-71315
- correlation functions for quasi-linear response theory 2-101364
- dense fluids, entropy maximisation, irreversible thermodynamics, kinetic eqns. 2-84523
- dense fluids, kinetic theory, fluctuating force correlation functions 2-60856
- diffusion of classical particle in random medium, linear response theory 2-84561
- diffusion of classical particle in random medium, nonlinear response theory 2-84562
- diffusion-controlled dissolution of solid in liq. and growth of new phase layer, kinetic law 2-98294
- Enskog equation, time correl. functions, calc. 2-71316
- EPF, relaxation, kinetic theory for zero frequency shift 2-82698
- Fokker-Planck eqn., eigenvalue and definite evolution operator soln. 2-89641
- Fokker-Planck eqn. reduction to diffusion eqn. and radiation boundary condition 2-101304
- galactic cosmic ray modulation by interplanetary mag. piston, kinetic theory 2-112275
- gas-surface interaction, microscopic theory 2-115536
- hard ellipsoid fluid, Enskog-Boltzmann eqn. 2-103244
- hard particle models, kinetic eqns., initial-value problem non-uniqueness 2-84515
- ion tail formation in EBT, power requirements, kinetic transport model 2-103297
- Kolmogorov-Feller equations, asymptotic dynamics for system of large no. of particles 2-112807
- mixtures, Kac-tail limit, kinetic variational theory 2-86533
- non-spherical bodies, binary collisions in two dimensions, classical mech. 2-63814
- open systems, general formalism, mirror operation 2-89640
- plasma, collisionless ballooning modes, kinetic theory 2-91615
- plasma, Nyquist theorem, validity at large collision freq., kinetic theory 2-71139
- plasma convergent kinetic equations, collision bracket quenching functions 2-81449
- plasma in bumpy cylinder, kinetic stability anal., Vlasov-Maxwell eqns. 2-103372
- Rayleigh model, singular transport theory in one dimens. 2-101302
- relativistic, for variables mass particles, thermodynamic props., transport coeffs. 2-69085
- relativistic plasma, kinetic theory 2-60795
- solutions, intrinsic shear and bulk viscosities, microscopic theory 2-86918
- superconducting film, phonon-induced nonequilibrium states, kinetic eqn. study 2-82519
- Tjon-Wu equations, generalised, struct. 2-63890

kinetic theory continued

Tokamak device, electron cyclotron current drive, kinetic theory 2-109557
H neutral kinetic theory in bounded plasma slab with inhomogeneous temp. and density profile 2-91595

kinetic theory of gases

see also *Brownian motion; collision processes; equations of state; intermolecular mechanics; Joule-Thomson effect*
atoms and molecules, excited, diffusion lifetime calcs. 2-60701
Boltzmann eqn. for steady flow, Hilbert expansion 2-109439
Burnett coefficient divergence in three dims. hydrodynamics of hard spheres 2-91574
charged particle beam propagation in neutral gas, self mag. field effect 2-109546
classical hard-sphere gas, kinetic theory 2-71314
cold gas, nonadiabatic compression, P-V relation 2-94949
diatomic molecule, kinetic theory cross-section classical, rigid body model 2-60698
dilute polar gases in electric field, kinetic theory and irreversible thermodynamics 2-103239
dilute spatially homogeneous gas, projection method for Boltzmann energy eqns. 2-55690
ellipsoidal particle in binary mixture, thermophoresis 2-114959
energy transfer in gases 2-59899
fluid, nonequilibrium steady state, fluctuations, correl. functions 2-103583
gas mixture, thermal conduct. meas. 2-86372
gas mixture turbulent flow in external EM field 2-97686
gas mixtures, nonstationary mixed convection problem 2-97690
gas suspensions, transport coeffs., aerodynamic effects 2-81436
gases, electron thermalisation, moment theory 2-99693
hard-sphere gas, vel. distribution, large energy behaviour calc. 2-103237
hyperbolic distribution in statistical physics 2-86368
ideal polarisable gas, interior electrostatic interaction 2-97687
inhomogeneous gas, thermal hydrodynamic fluctuations, kinetic theory 2-81430
ion diffusion and generalised Einstein relations, reson. charge transfer effects 2-71064
irreversible kinetic eqns., distrib. function proportional force, (*French*) 2-69083
Kramers problem, solubility (*Russian*) 2-103245
light induced drift 2-97704
light-induced kinetic effects in gas with radiation spatial nonuniformity and external force fields 2-55691
linear Boltzmann collision operator, time evolution props. 2-65677
Maxwell, contrib. to mol. physics and statistical methods 2-112682
mixtures, binary diffusion, second virial coeff. meas. 2-60697
molecular gas, vibr. rot. transitions saturation kinetics in diffusion approx. 2-81433
molecule-surface impact, velocity correlation, boundary conditions 2-91572
natural vibr. freqs. for gas outside circular cylindrical surface 2-60700
negative glow, kinetic theory 2-60826
negative optical pressure 2-55700
noble gases, virial series and computer simulation at low densities 2-91573
nonspherical bodies, Boltzmann eqn. of H-theorem, two-dims. 2-63815
one-component gas with selective velocity excitation (*Russian*) 2-109442
paramagnetic gas kinematic coeffs. depend. on mag. field, resonance struct. (*Russian*) 2-71056
physical kinetics, theoretical aspects, book 2-58569
polarisable suspension, cluster expansion for dielectric const. 2-97697
polyatomic gases, H-theorem 2-76055
polydisperse gas suspensions, kinetic model 2-103243
quantum gas, kinetic equations with bound states 2-109438
quantum gas, triple-collision operator with bound states 2-103238
rarefied multicompartment ionised gas, collision processes, physico-probabilistic analogue model 2-55705
Rayleigh gas, one-dimensional long-time tail in vel. correlations 2-55692
Rayleigh scattering, depolarised, multilevel description, appl. to H-D-He system, collision breadth 2-80638
relativistic gas, generalised hydrodynamics, kinetic theory 2-81435
review of 110 years of kinetic theory of gases (*Spanish*) 2-65678
shear viscosity coeff., Green's function calc. method 2-86367
statistical description incompleteness and irreversibility desorption (*Russian*) 2-103240
statistical mechanics, moderately dense gas, functionals generating method (*Ukrainian*) 2-76054
swarm parameters determ. in O₂ and dry air 2-103246
transport props. for pots. with multiple extrema 2-97688
uniform gas Boltzmann eqn., semidivergence of Legendre expansion 2-107277
vibrationally relaxing gas, weak discontinuity propag. along bicharact. curves 2-65676
weakly ionised gas, boundary conditions near wall, hydrodynamic transport eqns. 2-65679
weakly nonideal gas, strong nonequilib. case, kinetic eqn. 2-103242
Ar-methane mixture, 300.4K; 1-22 MPa, thermal cond., rel. to kinetic theory 2-81438
C gas, transport props., atomic interaction pots. 2-97689
H₂-He system, shear viscosity SBE cross sections, close-coupled and coupled-state calcs. 2-81431
Ne-methane mixture, 300.4K; 1-22 MPa, thermal cond., rel. to kinetic theory 2-81438
SF₆ and SF₆ mixtures, transport parameters calc. 2-103273
SF₆ transport parameters calc. for non-equilibrium medium 2-103274

kinetic theory of liquids see *kinetic theory; liquid theory*

kinetics of chemical reactions see *reaction kinetics*

kink bands

brittle crack advance by double kink nucleation 2-57451
formation, expt. and theoretical study 2-109885
kink-pair formation, on dislocations, diffusion theory 2-98347
polymer, oriented, elastic anisotropy and kink band form., disclination-dislocation model analysis 2-71542
Snoek-Koster relaxation, kink-pair-form. theory 2-66125
steel, high hardness, grain size effect on fracture toughness (*Japanese*) 2-77921
steel, stainless, ferrite struct., rolling, plastic deform., metallography study 2-57422

kink bands continued

steel, stainless, Nb stabilised 20/25, creep, primary and recoverable 2-116492
transition metal surface kink electronic structure 2-56666
Fe-C, high purity, softening and hardening, H-induced 2-88096
Fe-Ni(Ti)(Ga)(Al)(Co)(Pt), flow stress at low temp., influence substitutional elements 2-105213
KCl, large gas filled pore migration due to temp. gradient 2-56265
Mo, deformed, single cryst. foils, anomalous slip induced by surface effect, HVEM study 2-86671
Si, deformed {100} oriented single crystals, single slip deform. and nature 2-92086
Ti, {112}($\bar{1}\bar{1}23$) slip behaviour 2-71466

kinofoms see *computer-generated holography*

Kirkendall effect see *diffusion in solids*

kitchen appliances see *domestic appliances*

KKR calculations

fast band theory, multiple scatt. approach 2-115636
graphite, band struct., Fermi surface, KKR calc. 2-82228
Green's function calc. of bulk and surface electron states, layer-by-layer KKR scheme 2-98523
random alloys, electronic states, SCF-KKR-CPA method 2-76904
Ag, electronic energy bands, KKRZ calc. 2-76910
Al, electronic energy bands, KKRZ calc. 2-76910
Cu, electron-phonon effects, electron scatt. rate, mass enhancement 2-115376
Cu, electron-phonon effects, elec. and thermal resistivities, Hall effect 2-115728
Cu, electronic energy bands, KKRZ calc. 2-76910
Cu, vacancy, electronic struct., self-consistent calcs. of soln. of embedding problem 2-76982
Fe-Al, electronic struct., KKR-CPA calc. with muffin-tin pot. model 2-66431
FeCo, energy band struct. and optical props. due to order-disorder transition 2-82220
KCs, intercalation compound, cryst. and band struct., Fermi surface, de Haas-van Alphen effect 2-82227
Mo, electronic struct. of 3d and 4d impurities 2-110290
Nb, Z 2-110290
Nb-Mo, random alloy, Fermi surface, KKR-CPA calc. 2-61334
Ni-Cu, L₁₁, L₁₂ X-ray absorpt. spectra and density of states, KKR CPA calc. 2-99223
Ni-Pd alloys, electronic struct. calc. by self-consistent KKR-CPA method 2-56432
Pd-Al, electronic struct., KKR-CPA calc. with muffin-tin pot. model 2-66431
Rh, electronic energy bands and optical props. KKR calc. 2-66432

klystrons

see also *reflex klystrons*
charge density harmonics generation in free-electron relativistic parametric devices 2-60003
high-power klystron for HF plasma heating of Tokamak machines (*German*) 2-115022
microwave tubes for RF heating of plasmas, klystron and gyrotron 2-69169
transverse optical klystron expt. in Adone 2-102806

Knight shift

see also *nuclear magnetic resonance*
correction due to demagnetising effects 2-77399
metals, H impurity electronic struct., μ Sr studies, review 2-99014
poly(para-phenylene):AsF₆, electronic props., ESR and ¹³C NMR study 2-82737
rare earth alloys, RCo₂, C15 type, ⁵⁹Co NMR study, hyperfine field anisotropy 2-66934
spin-orbit and many-body effects 2-72366
Be-Mo-Zr amorphous alloy, ⁹Be NMR line breadth and Knight shift 2-104720
Be-Nb-Zr amorphous alloy, ⁹Be NMR line breadth and Knight shift 2-104720
CeCu_{5-x}Ni_x, NMR and mag. susceptibility 2-66938
Cu-In, NMR study 2-104724
ErCo₅, ⁵⁹Co Knight shift anisotropy, spin echo study 2-110668
EuNi₂P₂, intermediate valence system, mag. susceptibility and NMR meas. 2-72364
In₂Te₃, liquid, Knight shift studies of cond. and struct. inhomogeneity 2-72362
K solid, spin density, analytic tetrahedron method 2-87123
Li-Ge liq. alloys, ⁷Li Knight shift meas. 2-93030
Li-Mg liq. alloys, ⁷Li Knight shift 2-56956
Na solid, spin density, analytic tetrahedron method 2-87123
 β -Na_{0.33}V₂O₅, quasi-1D-conductor, nuclear quadrupole effect and phase transition 2-56970
NdD_{2+x}, PMR of paramag. and ferromag. phases 2-66935
Ni-P based amorphous alloys, local mag. props., NMR and magnetisation meas. 2-104721
Ni-P metallic glasses, polymorphism rel. to processing conditions, Knight shift meas. 2-91811
Ni-Pt-P, amorphous, NMR, Knight shift and linewidth 2-93031
PbTe, Knight shift spin-orbit and many-body effects 2-72366
Pd, nuclear mag. relax. and Knight shift meas. 2-66941
PrCo₂, ⁵⁹Co Knight shift anisotropy, spin echo study 2-110668
Pt particles, ¹⁹⁵Pt NMR, intraparticle Knight shift broadening 2-66937
Pt-P, NMR, Knight shift and linewidth 2-93031
Rh-Cr dil. alloys, low temp. nucl. orientation meas. 2-92546
SmD_{2+x}, PMR of paramag. and ferromag. phases 2-66935
TiBe₂, nearly ferromag., Ti NMR study 2-87609
TmCo₅, ⁵⁹Co Knight shift anisotropy, spin echo study 2-110668
UPS(Se)(Te), ³¹P NMR Knight shift meas. 2-104723
YCo₂, ⁵⁹Co Knight shift anisotropy, spin echo study 2-110668
Zr-Cu metallic glass, density of states and comp. short range order, NMR and mag. study 2-104726

Knudsen flow

drops, spherical, evaporation at arbitrary Knudsen numbers 2-56169
fission reactor fuel rods, gap conductance for arbitrary Knudsen number 2-74828
gas diffusion in porous media, mass transfer in transition region calc. 2-70995
heat transfer in rarefied gas between parallel plates, boundary conditions effect 2-97597
molecular gas, distrib. function calc. in Knudsen layer 2-60580

Knudsen flow continued

- polyatomic gas flow in cylindrical tube, thermal transpiration and mechanical effect 2-76023
 quartz, diffusion of adsorbed Br₂ and acetone 2-66294
 strongly nonequilibrium layers, numerical investig. 2-81362
 GaAs, CVD from trimethyl gallium-AsH₃ flowing vapour 2-116381

Knudsen number see *Knudsen flow***Kohn effect** see *lattice dynamics***Kondo effect**

- alloys with rare earth impurities, degenerate exchange model, Bethe ansatz technique 2-66769
 Anderson impurities, pair of interacting, Fermi liq. relations 2-56491
 Anderson model, asymmetric, density of states 2-66406
 Anderson model, one dimensional periodic Hamiltonian, finite cell calcs. 2-66407
 Anderson model, two-impurity, thermodynamic scaling theory 2-66408
 Beth-ansatz approach to the Kondo model with arbitrary impurity spin 2-92866
 Bethe Ansatz model of magnetism 2-66744
 Bloch equations for the Kondo system 2-66767
 crossover from asymptotic freedom to infrared slavery 2-77265
 fluctuating valence model, real space renormalisation group study 2-56521
 intermediate valence compounds Kondo problem in nonlocal state (*Russian*) 2-61696
 Kondo lattice, elec. cond. study 2-66543
 lattice, Schrieffer-Wolff transform, mag. transition 2-115973
 metals, generalised impurities, thermodynamic scaling theory 2-56490
 metals, magnetoresistance, transverse, Kondo effect in quantising mag. field, theory (*Russian*) 2-115730
 mixed valence systems 2-115714
 model, thermodynamic eqns. 2-104362
 normal metal point contacts, non-Ohm's law behaviour 2-87375
 nuclear spin relax. of host metal, field depend. 2-116083
 one dimensional, renormalisation group study 2-56830
 periodic Kondo system, Fermi surface and Fermi liq. props. 2-66768
 resistivity of the Kondo lattice 2-66544
 s-d exchange or Kondo model, general derivation of Wiegmann's soln. 2-98844
 s-d model transform, and renormalisation 2-77264
 semiconductors, magnetoresistance, transverse, Kondo effect in quantising mag. field, theory (*Russian*) 2-115730
 superconducting alloys, transition temp., sp. ht., and DC Josephson effect 2-98818
 susceptibility and impurity relax. rate 2-77266
 thermodynamics study for spins $s=1/2$, 1 and $3/2$ (*Russian*) 2-82562
 thermopower of the Kondo lattice 2-77030
 two-impurity Anderson model in local moment regime, path-integral study 2-56829
 Au foil, elec. cond., 4.2 to 20K, Cl₂ annealing effect 2-104344
 Co, volume collapse in Kondo lattice 2-87476
 Ce-Si, ferromagnetic dense Kondo behaviour 2-104662
 CeAl₃, volume collapse in Kondo lattice 2-87476
 CeAl₃, thermal dilatation and sp. heat at very low temp. 2-56213
 CeAl₃ ($x=2, 3, 11/3$) mixed valence cpd., neutron diff., props. on basis of interacting Kondo-like ions 2-56831
 CeB₆, mag. ordering, neutron diff. study 2-72155
 CeB₆ mixed valence cpd., anomalous props. 2-56511
 CeIn, mixed valence cpd., neutron diff., props. on basis of interacting Kondo-like ions 2-56831
 Ce_{0.75}La_{0.25}B₆, Kondo state, transport and mag. props. 2-56832
 CeLa_{1-x}Be_x, mixed valence and Kondo behaviour, lattice const. elec. resist. susceptibility 2-56515
 Ce_{0.9}-La_{0.1}Th_{0.1}, mixed valent ground-state, elec. resist., localisation transition 2-56551
 CeMo₆S₈, mag. props. under press. 2-56911
 CePd, electronic struct. from resonant photoemission and optical reflectivity spectra 2-66498
 CeSb_{1-x}Te_x, elec. and mag. props. 2-66523
 Ce_{1-x}Sc_xAl₃, volume collapse and spin fluctuation behaviour 2-55892
 Co-P alloys, amorphous, elec. resist. 2-77014
 Cu alloys, dilute, US attenuation, impurity and dislocation effects 2-56096
 Cu-Cr, nucl. spin relax. of host metal, field depend. 2-116083
 Cu-Mn, dil., mag. impurity system, spin-resolved scatt., de Haas-van Alphen study 2-82563
 Fe-P alloys, amorphous, elec. resist. 2-77014
 GaSbTe, Kondo effect obs. under high press. 2-61459
 La_{1-x}Ce_xY, system, multiple supercond. transition temps. 2-98788
 Ni-P alloys, amorphous, elec. resist. 2-77014
 Pd₇₅₋₈₅Cu₁₅₋₂₅Si₁₀Fe₅, amorphous, elec. and mag. props. 2-72169
 (Pd_{1-x}M_x)H, M=Cr, Mn, Fe, mag. and supercond. ordering 2-98845
 Pt-Mn, nucl. spin relax. of host metal, field depend. 2-116083
 SmB₆, mixed valence cpd., anomalous props. 2-56511
 Sn-Nd(Pr)(Ce), liquid, dil., 4f spin dynamics, TDPAD study 2-56992
 TmSe mixed valence cpd., neutron diff., props. on basis of interacting Kondo-like ions 2-56831
 (U_{0.06}Th_{0.94})S, spin fluctuation temp., press. depend., elec. resist. meas. 2-56827
 U_{1-x}Th_xSb, Kondo behaviour, ferromag. and antiferromag. behaviour, transport and mag. meas. 2-77032

Korringa-Kohn-Rostoker calculations see *KKR calculations***Koster effect** see *dislocation damping***k.p. calculations**

- crystals with diamond and sphalerite structs., valence bands, spin-orbit interaction 2-76898
 electronic wave functions, k.p. interpolation scheme 2-116296
 heterostructures, effective-mass theory for electrons 2-110231
 Fe, positron annihilation spectra, k.p. interpolation scheme 2-116296
 n-Ge, magnetophonon reson. obs. and effective masses calc. 2-98672
 Pb_{1-x}Ge_xTe, C_{3v}-phase, band struct. 2-92467

Kramers-Kronig relations

- n-alkane liquids, complex permittivity, far IR absorpt. spectra study 2-93098
 dispersion relations for finite freq. intervals, generalised Kramers-Kronig relations, spectrum-restoring filter 2-85903
 ferroelectrics, band structure and VUV optical props., Kramers-Kronig anal. 2-110883
 generalization of Kramers-Kronig transforms and some approximations of relations between viscoelastic quantities 2-91367

Kramers-Kronig relations continued

- magneto-optical difference effects in Faraday config., dispersion relations, tensor and scalar form comparison (*German*) 2-77495
 optical constants calc. of material, review 2-93146
 optical props., 0.5 to 9.5 eV, electronic struct. 2-57125
 reflectance phase, estimation of calc. accuracy from Kramers-Kronig relation 2-110803
 spin glasses, magnetic susceptibility phenomenological theory 2-98894
 testosteronepropionate in soln., circular dichroism and optical rotatory dispersion, Kramers-Kronig transforms 2-70314
 Al-Al₂O₃-Au struct., dielec. props. meas. at low freq. (*French*) 2-72075
 Al₂O₃, optical const. of amorphous, polycryst., α,γ phases, EELS study 2-57224
 As-Se, amorphous struct. far IR reflection spectra study 2-67029
 AuAl₂, optical props., elec. cond. 2-61861
 Ba₂Sr_{1-x}O₆, ferroelectric, dielec. and optical props. in fund. absorption region 2-77481
 CO₂ thin cryofilm, IR optical props. 2-87883
 Cd₃P₂(As₂), far IR reflectivity meas. 2-93210
 CePd₃, f-states, optical refl. study 2-77550
 β' -CoAl, optical absorpt. spectra meas. 2-82866
 CoP₃(As₃)(Sb₃), far IR reflection spectra meas. and dielec. function and lattice dynamics calc. 2-110855
 Cr₂O₃ plasma sprayed, control of mech. props. using IR specular reflection 2-77607
 Cu-Zr metallic glass, sputtering prep. and props. 2-82948
 CuBr, optical constants and exciton spectrum (*Russian*) 2-67131
 Gd₂(MoO₄)₃, band structure and VUV optical props., Kramers-Kronig anal. 2-110883
 Ge, Faraday rot., nonreson. interband transitions, expt. and Kramers-Kronig anal. 2-57065
 Ge, interband Faraday and Kerr effects 2-72463
 H₂O thin cryofilm, IR optical props. 2-87883
 HfN, CVD coatings, optical props., Kramers-Kronig anal. 2-87888
 IrO₂, optical props., 0.5 to 9.5 eV, electronic struct. 2-57125
 KC₈($x=8, 24$) intercalation compounds valence and core-electronic excitations, EELS study 2-87167
 K_{0.33}MoO₃, optical refl. spectra, optical const. 2-87814
 MoSe₂ (2H), electrolyte electroreflectance and reflectance studies 2-57060
 NH₃ thin cryofilm, IR optical props. 2-87883
 Na₂SO₄ aqueous solution IR optical constant 2-93179
 PbMg_{1-x}Nb₂O₃, reflectivity, dielectric const., electrooptic effect, vacuum UV reflection spectra obs. 2-61924
 PbTiO₃, reflectivity, dielectric const., electrooptic effect, vacuum UV reflection spectra obs. 2-61924
 Si, Faraday rot., nonreson. interband transitions, expt. and Kramers-Kronig anal. 2-57065
 SrTiO₃, IR refl. and antistochastic transition 2-67058
 ThPd₃, f-states, optical refl. study 2-77550
 TiN, CVD coatings, optical props., Kramers-Kronig anal. 2-87888
 TiN:C film, reactivity sputtered, optical const. and spectral selectivity, IR reflectivity study 2-72445
 TiN_{1-x}C_x films, optical const. and spectral sensitivity meas. 2-104980
 UPd₃, f-states, optical refl. study 2-77550
 ZrN, CVD coatings, optical props., Kramers-Kronig anal. 2-87888

Kramers systems see *determinants***Kromayer lamps** see *mercury vapour lamps***Kronig-Penney model**

- energy gap and forbidden energy bands 2-104221
 one-dimensional disordered model, localisation and elec. props. 2-71925
 random potential, spectrum of Schrodinger operators calc. 2-107138
 PbTe-Pb_{1-x}Sn_xTe superlattices, prepared by hot wall epitaxy, optical props. 2-99208

kryptonsee also *nuclei with*

- absorbed on Cu, He beam impact, order, disorder, nucleation and energy changes 2-98399
 adsorbed monolayer on lamellar halides, two-dimens. condensation, critical temp. 2-66350
 adsorbed on Ag (111), two-dimens. gas phases 2-61293
 adsorbed on Al(111), photoemission studies 2-62048
 adsorbed overlayer on graphite, commensurate-incommensurate phase diagram, helical Potts model 2-82136
 adsorption, low-temp., on porous UO₂ 2-61297
 adsorption on exfoliated graphite compressed and uncompressed 2-87059
 adsorption on Ni (110), electronic binding energies of valence levels, UPS study 2-82437
 adsorption on zeolite, Freundlich parameters 2-76839
 angular distrib. parameters for electron spectrometer calibration 2-85468
 atom, 4s^{4p}5p reson., spin-orbit branching ratios and angular asymmetry param., photoionisation cross section 2-70203
 atom, angular distrib. param., mol. effects, PES using synchrotron radiation 2-70332
 atom, autoionising states obs. using low energy electron impact excitation and ejected electron spectroscopy 2-64932
 atom, diagm. susceptibility, new Thomas-Fermi model test 2-85543
 atom, electron and positron scatt., total cross section meas. 2-114114
 atom, electron impact excitation, correl. effects near ionisation threshold 2-96741
 atom, electron impact excitation, electron-photon angular correl. 2-80818
 atom, matrix isolated in Ar, emission spectra, excitation spectra and lifetimes 2-54795
 atom, metastable, laser mag. reson. 2-65021
 atom, metastable, quenching by O containing compounds, reson. fluoresc. study of reaction prod. 2-59890
 atom, monoenergetic electron impact excitation above ionisation threshold, 22 to 26 eV, broadband photon yield 2-90714
 atom, multiphoton ionisation in continuum 2-85608
 atomic closed-shell ions, radial electron density moments and X-ray scatt. factors 2-75184
 atoms, third-harmonic generation and multiphoton ionisation 2-70205
 BCC-FCC allotropic, F-bands and metallisation 2-56185
 crystal, band struct., Gaussian OPW calc. 2-61349
 crystal, interatomic forces, cohesive energy and elastic constants. 2-55882
 dimer, relative photoionisation cross section 2-70346
 discharges between plane parallel electrodes, secondary ionisation processes analysis 2-103535
 elastic electron scatt., cross section data compilation 2-54964
 electron scatt. angular distrib. 2-70420

krypton continued

- electron trapping 2-110410
 gas, electron irradi., electrons energy degradation, Monte Carlo calc. 2-96743
 gas, luminous layers in prebreakdown region at low press., Monte Carlo simulation 2-97702
 gas, narrowband tunable VUV radiation generated by nonresonant sum- and difference-freq. mixing 2-60152
 gas, refr. index determ. in vacuum spectral region using third harmonic generation 2-109454
 gas and liq., quasi-free electron state, density depend., photoelectron meas. 2-103253
 highly ionised, spectroscopy for Tokamak plasmas 2-97767
 ionisation sampling resolution and relativistic rise, dE/dx meas. 2-108312
 lasers, singly ionised, excitation mechs. 2-70545
 liquid, hot-electron thermalisation, density depend. 2-103807
 matrix for naphthalene, phosphorescence spectra, electronic transitions 2-61957
 molecule, pair polarisabilities, SCF calcs. 2-113870
 monolayer adsorbed on graphite, 2D commensurate solid, stabilization by Xe 2-61287
 monolayer adsorption on Cu(110), surface structs. and uniaxial phase transitions 2-66367
 monolayer on Cu (110), electronic and geometric struct., LEED and photoemission study 2-98407
 monolayer on graphite, commensurate melting and commensurate-incommensurate transition, X-ray study 2-115548
 polycrystalline, growth and cryst. struct. 2-93394
 positron diffusion, elastic cross sections 2-76057
 positron-gas cross-section measurements 2-75420
 propylene-Kr liquid mixture, self-diffusion and nuclear mag. relax. (*Russian*) 2-86915
 radioactive, solid-state storage in SiO_2 based matrix 2-54494
 solid, lattice dynamic props., self-consistent average-phonon eqn. of state 2-81922
 solid, sublimation press. and zero temp. cohesion energy, determ. from sp. ht. data 2-103970
 solid and liquid, hot electron thermalisation following subnanosec. pulse irradi. 2-72015
 submonolayer on graphite, density-functional theory 2-98444
 submonolayers on Grafoil, EXAFS study 2-82139
 Ar, liquid and solid scintillators, UV emission time depend. meas. 2-90364
 Ar-Kr photoionisation proportional scintillation chamber, energy transfer 2-64760
 Cu-Kr, ion implanted, cryst. defects, positron annihilation and TEM study 2-81781
 $\text{Fe}_{40}\text{Zr}_{60}\text{Kr}$, amorphous, vibr. densities of states, inelastic neutron scatt. study 2-56142
 He-Kr, near-Lorentzian mixture, diffusion coeff. temp. depend. 2-86370
 He-Kr, quasi-Lorentzian mixture, thermal diffusion factor 2-86371
 He-Xe, hollow cathode discharges, VUV study 2-97823
 Kr II, $4p^55p$ config., lifetime and transition probabilities meas. 2-102434
 Kr II, transition probabilities 2-96507
 Kr III, beam-foil level lifetimes 2-96511
 Kr⁺ $^3P_{3/2}$ ground state, thermal energy charge transfer 2-90692
 Kr-Xe adsorbed bilayer on Pd, interlayer diffusion, photoemission and Auger study 2-104081
 Kr+Ar⁺, excitation collisions studied by monitoring resulting luminesc. 2-108675
 Kr+Ar²⁺, single electron capture products, energy loss spectra meas. 2-102607
 Kr+Ca, Ca principal series line broadening 2-85591
 Kr+H₂(N₂), relativistic correction to interaction coeffs. 2-75202
 Kr+I($^2P_{3/2}$), interaction pots., crossed-beam meas. 2-108661
 Kr+K, $4p^2\ ^3P_{3/2}-7s\ ^3S_{1/2}$ transition, effect of collisions 2-59732
 Kr+K, excited states, transition cross sections, fluoresc. obs. 2-75408
 Kr+K, II interaction, pot. param. 2-108677
 Kr+K⁺(Li⁺) 2-102567
 Kr+Kr⁺(Kr²⁺), symmetric reson. charge transfer, drift tube study 2-108696
 Kr+Li⁺, clustering reactions, forward and backward rate coeff., energy depend. 2-83365
 Kr+Li*, Li fine struct. transitions, rate coeff. 2-54938
 Kr+N₂(O₂), anisotropic well depth parameters, from total differential cross-sections 2-80777
 Kr+Xe(Kr) slow collisions, rot. induced $4f\sigma$ excitation 2-96705
 Kr⁺+F⁻, ion-ion recombination, reaction rates 2-99672
 Kr⁺+inert gas atoms, charge transfer cross section meas. 2-102601
 Kr⁺+Kr, symmetric reson. charge transfer, drift tube study 2-108696
 Kr⁺+O₂(CO)(N₂O)(OCS), fine struct. state depend. reactivity 2-105471
 Kr⁺+O₂(CO)(NO)(OCS), charge exchange, electronic state effects 2-90691
 Kr⁺+He, electronic and vibronic transitions, translational energy spectroscopy 2-54935
 Kr⁺+Kr, symmetric reson. charge transfer, drift tube study 2-108696
 Kr⁺+C-foil, relative level populations expt. study 2-75397
 KrI, transition probabilities 2-96507
⁷⁸Kr/⁸³Kr abundance ratio, implications of ⁸²Se(n, γ) energy measurements in meteorites 2-113445
⁸¹Kr, conc. meas. rel. to groundwater dating 2-105525
⁸¹Kr^m, quantitative comparison with ⁹⁹Tc^m-acrosol in ventilation imaging 2-83632
⁸⁵Kr detection, evaluation of radiation monitor effectiveness 2-90307
⁸⁵Kr disposal, immobilisation, storage, cost and safety 2-64510
⁸⁵Kr, fixation on KrF₂ with zeolites 2-102085
⁸⁵Kr storage cylinder, adsorption, heat transfer 2-64694

krypton compounds

- KrF laser amplifier with phase-conjugate Brillouin retroreflectors 2-108865
 KrCl laser, at 222 nm, UV-preionised (*Chinese*) 2-96904
 KrCl laser, high-pressure UV-preionised discharge-pumped 2-55120
 KrF 250 J laser, pulsed electron beam pumping system development 2-90938
 KrF discharge excited laser, gain and absorpt. meas. 2-55129
 KrF high-energy discharge-pumped laser 2-85945
 KrF laser, coaxial diode for electron beam pumping 2-60091
 KrF laser, high power, pumping by annular electron beam 2-85986
 KrF laser, high-pressure UV-preionised discharge-pumped 2-55120

krypton compounds continued

- KrF laser, tunable, with narrow bandwidth and diffr. limited beam divergence 2-75597
 KrF laser pulse compression in plasma theory 2-90950
 KrF laser pumped by LC circuit, effect of spark gaps 2-80937
 KrF laser pumping using 36 kJ electron beam system 2-90935
 KrF pulsed-periodic excimer lasers, average power optimisation 2-55203
 KrF UV laser triggering of spark gap 2-97825
 KrF with phase-conjugate Brillouin mirror 2-60136
 Kr₂F, electron beam pulse irradi., fluorescence lifetime and quenching rate const. 2-108727
 Kr₂F tunable blue-green laser, fluoresc. and laser parameters meas. for 436 nm transition 2-96924
 KrF* broad band emission at 400 nm 2-96625
 KrF* electron beam laser with high specific energy output 2-96931
 KrF* transverse-discharge excimer laser based ultrashort pulse amplification at 248 nm 2-108864
 Kr₂F* luminescence, 420 nm range, as result of KrF₂ photolysis in KrF₂-CF₄-N₂(Ar, Kr) mixtures 2-80721
 Kr₂HCl, anisotropic pot. energy surfaces obtained from mol. beam spectra and rot. line broadening 2-80514
 Kr₂HF, anisotropic intermol. pot. obtained from mol. beam spectra 2-80766
Kuhn-Thomas sum rule *see molecular energy levels*
Kurie plots *see beta-decay theory*
Kyproulous method *see crystal growth from melt*
labelled atoms *see radioactive tracers*
labelled compounds *see radioactive tracers*
labelled molecules *see radioactive tracers*
laboratories
 see also acoustical laboratories
 Sandia Shock Thermodynamics Applied Research Facility 2-74185
 Shock Wave Physics Group (M-6) at Ancho Canyon, review 2-74445
laboratory apparatus and techniques
 see also specific instruments and techniques, e.g. balances, plasma probes, vacuum techniques
 see also instrumentation; instruments; measurement; student laboratory apparatus; test equipment; test facilities; testing
 accelerated electrons, intense beam, device for cooling thin samples irradiated by beam 2-112880
 AMICA sample preparation system 2-79549
 boiling points determination, true, for multicomponent mixtures 2-58815
 clinical chemistry laboratory, development of large automated instruments 2-79550
 compact torus experiment, diagnostic equipment screen room 2-84608
 computerised, development trends 2-79545
 corrosion resistant props. of metals, review 2-62278
 discrete vapourisation system in standard VUP-4 instrument 2-116361
 electron microscope specimen prep. by ultramicrotomy 2-64007
 flowmeter testing using mobile laboratories 2-55683
 geologic materials, laboratory meas. of ultralow permeability 2-106364
 light-gas gun, two-stage, at Lawrence Livermore Nat. Lab. 2-74444
 liquid scintillation counter, alternative uses in lab. anal., biological research appl. 2-105875
 magnetic stirrer for circulation of dye solutions for dye lasers 2-53745
 microphotography lab. vibration control 2-58930
 minicomputer techniques, book 2-107313
 optoelectronic displacement transducer for the neurophysiological lab. 2-105869
 piezoelectric pile of ceramic elements as displacing device 2-79552
 pitch of complex tones, acoustical anal. 2-107070
 sample cell for deoxygenation of surfactant sols. 2-107314
 scientific instrumentation for chemical labs., classification and appl. (*Spanish*) 2-95352
 semiconductor spectra, prospects for near state-of-the-art anal. in laboratory 2-58978
 semiconductor thermoelectric modules for heating and cooling appls. in instruments (*German*) 2-107318
 Shock Wave Physics Group (M-6) at Ancho Canyon, review 2-74445
 standard specimens metrological characs. evaluation, from interlaboratory expt. data 2-79530
 UV photographic techniques, basic guidelines 2-69269
 vacuum technology, lab. package for training 2-84427
 visual discrimination learning in rodents, microcomputer-controlled laboratory 2-62877
 X-ray fluorescence excited by ¹²⁵I, Br in blood serum determ. 2-68123
labryrithn speakers *see loudspeakers*
Lacertids *see BL Lacertae-type objects*
ladder filters *see filters*
lakes
 see also rivers
 acoustic profiling of lake sediments using magnitude and phase anal. 2-112169
 Agassiz, Manitoba, relict ice scour marks and late phases 2-100383
 Alaska permafrost and annual freeze-up studied by remote sensing 2-112171
 Babine Lake, wind mixing and restratification 2-78709
 Baikal, terrestrial heat flux distrib. and nature of local anomalies 2-73500
 Bonneville, Utah, late Pleistocene lake, study of Earth response to surface loading 2-106070
 breaking wind waves in deep water, bubble clouds, role in air-sea gas transfer 2-58083
 current estimation modelling method (*Japanese*) 2-58091
 drainage network with lakes, topological model 2-94410
 dynamics 2-100413
 elongated homogeneous, extended channel model for prediction of motion 2-111974
 Enchantment Lakes Basin, North Cascade Range, Washington, regional significance of early Holocene moraine 2-94406
 Erie, Long Point Bay 2-83854
 Erie, model of stratified temp. and current struct. 2-83857
 Erie, survey of discharges from natural gas drilling operation 2-111595
 Erie, water quality of Long Point Bay 2-83855
 Erie, water temps. in Nanticoke-Long Point Bay region 2-88918
 Erie, wind stress determ. from water level fluctuations using inverse method 2-106151
 Erie ice cover duration and influence of Niagara R. ice boom 2-94482
 Erie, geomagnetic excursions seen in sediment cores 2-83740

lakes continued

- Ethiopia, 1.2 Myr record of ^{18}O and ^{13}C changes in late Pliocene Rift Lake 2-68338
 evaporation estimation techniques using climate data 2-117379
 free oscillations and forced motion in natural basins 2-111976
 Fuxian Lake, Yunnan Province, turbidity current deposits 2-63007
 gas exchange rate with atmosphere 2-58088
 Geneva, ^{210}Pb distribution in sediments, influence of radon diffusion 2-58012
 geomagnetic secular variation, Australian lake sediment record 2-68248
 Great Lakes, effects of atmospheric stability on evaporation 2-88919
 Great Lakes, sedimentary processes, review 2-58093
 Great Lakes Basin, precipitation in 1854-1979 period rel. to water resources 2-68397
 Green Bay, Lake Michigan, numerical models and obs. of water motion 2-106160
 Guan Ting reservoir, temp., humidity, wind profiles and turbulent exchange over water surface layer (*Chinese*) 2-88944
 Huron, flow in coastal boundary layer 2-78711
 Huron, winter temp. struct. 2-83856
 irradiance levels, in-water, solar zenith angle depend., scatt. phenomena influence 2-58086
 Kremasta reservoir earthquake sequence induced by filling (N.Greece) 2-88774
 Lahontan, palaeo-lake level fluctuations, corresponding climatic conditions 2-78847
 light scattering, Monte Carlo description of time and space resolved multiple forward scatter 2-58056
 limnic ecosystems, water quality models 2-73608
 Lough Neagh, N.Ireland, pollution by nitrate fertilisers 2-67899
 Lough Neagh, Northern Ireland, anthropogenic changes in sedimentary flux of Mg, Cr, Ni, Cu, Zn, Hg, Pb, and P 2-105609
 Michigan, sediment core palaeomagnetism and geochronology 2-83741
 Michigan, vorticity waves in shallow basin 2-100389
 Michigan lake-effect snow storm, boundary layer struct. and horizontal roll convection 2-112038
 Missoula, Washington, USA, catastrophic floods due to glacial lake 2-111982
 Mono Lake, California, chemistry of elevated concs. of actinides 2-94408
 Mono Lake, California, radionuclides concs. 2-94407
 Mount St. Helens region, chemical changes in lakes within blast zone of eruption 2-88929
 Neoglacial Lake Alsek, SW Yukon Territory, history and chronology 2-78707
 North America lake sediment dating, use of geomag. secular var. type curves 2-100325
 Nurek Reservoir, Tadzhik, USSR, weak earthquake focal mechanism 2-57990
 Onega, USSR, upwelling and thermal struct. 2-73607
 Ontario, surface heat fluxes, thermal model 2-78716
 Ontario, thermal bars anal. from Heat Capacity Mapping Mission data 2-100404
 Ontario, wind driven circulation theory 2-78710
 pollutant particulate dry deposition from atmosphere, model 2-106171
 Pyramid Lake, Nevada, evaporation rate from climatic energy flux balance model 2-78847
 radionuclides conc. in sediments, influence of mixing and compaction 2-58089
 rectangular basins with flat bottom, fluid motion, first order channel model appl. 2-111975
 reservoir-induced seismicity, statistical examination 2-88766
 restratification of lake near to 4°C density max. 2-78709
 rotational normal modes calc. with general orthogonal coords. 2-53528
 Schofield Reservoir, Utah, USA, lake sediments; ^{210}Pb dating, sedimentation rate 2-58087
 sediment interstitial water motion due to density convection 2-117370
 sediment used to test method for magnetite grain size determ. 2-106341
 sedimentary record of rainfall variations in a sub-humid lake 2-73602
 sediments, organic matter chem. changes in compacting sediment 2-63009
 sonar for scattering inhomogeneity meas. 2-83969
 Lake St. John, Quebec, Canada, temp., chemistry and water quality (*French*) 2-88916
 stratified lake, temp. and current model 2-83857
 stratified lake dynamics, cloud-in-cell and finite-difference models 2-83861
 subglacial lakes of Antarctica (*Russian*) 2-68396
 Superior, seismic refl. study of recessional moraines rel. to regional deglaciation 2-94405
 surface wave generation by wind, Miles' theory 2-68423
 Suwa, Japan, climate change and freezing dates 2-117438
 Turkana, Kenya, palaeoclimate determination from gastropod shell $^{18}\text{O}/^{16}\text{O}$ ratios 2-83967
 transient upwelling events near coasts, theory 2-88893
 Valencia, Venezuela, Quaternary climate from sediment record 2-63084
 volcanic ash pyrolysis of plant material affecting water composition 2-106051
 vorticity waves in shallow basin 2-100389
 water-level fluctuations, inverse method for lake wind stress determ. 2-106151
 wind mixing of lake near to 4°C density max. 2-78709
 Xinfengjiang reservoir, China, parameters of 1966 earthquake (*Chinese*) 2-57979
 P conc. in water column, model including sedimentation effects 2-68399
 ^{210}Pb distribution in sediments, influence of radon diffusion 2-58012

Lamb shift

- atoms and ions, ion accelerator study of props., review 2-96478
 perturbation theory method, teaching 2-63776
 trifluoriodimethane, quadrupole hyperfine struct. investigated by Lamb-Dip spectroscopy in $10\ \mu\text{m}$ region 2-108502
 CaCl_2 , optical spectra at sub-Doppler resolution 2-75257
 Cl^{16+} , Lamb Shift studies by laser reson. spectroscopy 2-64928
 D^+ , Lamb-shift polarised ion sources, review 2-75075
 H, Lamb shift for $n=2$ (*Russian*) 2-96509
 H, magnetic Lam shift, relativistic formula and its Z-dependence 2-70192
 H, metastable, Lamb shift and molecular moments meas., spin polarised protons prod. 2-54778
 H spectrum including Lamb shift effects, stochastic phase space formulation and non-potential interactions 2-95051

Lamb shift continued

- H^- , Lamb-shift polarised ion sources, review 2-75075
 H^- , Lamb-shift polarised ion sources improvements, working group summary 2-75076
 He, energy levels and Lamb shift investig. 2-75208
 SF_6 , Lamb dip, optoacoustic tracking for CO_2 laser freq. stabilisation 2-70579
 SrF, optical spectra at sub-Doppler resolution 2-75257
- lambda point** see liquid helium-4; superfluidity
- laminar flow**
 see also laminar to turbulent transitions
 active control of laminar-turbulent transition 2-75930
 air flow in porous tube with uniform mass injection 2-55654
 air jet, self-excitation, whistler nozzle driven, laminar and turbulent flows 2-55631
 axisymmetric flow in a toroidal tube with current 2-103213
 Benard convection, laminar and turbulent, direct numerical simulation 2-91431
 bifurcation, 90° meas. and calc. of laminar flow 2-105736
 boundary layer, coordinate transformation 2-70924
 boundary layer flow into a suction slot, separation region meas. 2-109273
 boundary layer flow on isothermal moving flat sheet and moving cylinder, effect of air props. 2-70897
 boundary layer in symmetry planes of blunt bodies with large injection 2-60501
 boundary layer on moving surface, singularities in solns. of eqns. 2-55537
 boundary layer with blowing or suction along vertical wall, combined natural and forced convection 2-109276
 bubble ring cavitation on hemispherical headforms 2-86313
 buoyant jets discharged at inclination to vertical buoyancy force 2-114862
 butane droplet, evaporative instability at the superheat limit 2-56167
 cavitation, desinent, effect of short and laminar separation bubbles 2-65623
 cavity flow, high Rayleigh number convection investigation 2-91444
 chemically reactive gas condensation on horizontal tube, heat and mass transfer in boundary layer 2-60672
 circular channel with laminar flow, heat transfer in initial segment 2-55573
 closed-cavity laminar flows at moderate Reynolds numbers 2-55534
 combined free and forced laminar convection in entrance of horizontal pipe 2-91450
 compressible laminar boundary layer, oscillations, heat transfer and skin friction 2-86258
 compressible swirling stagnation-point boundary layer for a rotating sphere 2-65563
 convection dominated, finite element method for solving flow problems, upwinding technique 2-91456
 corner flow charact. anal. 2-97502
 Couette flow with mixed interpolation finite elements anal. 2-86257
 creeping flow about a spherical particle, theory 2-103139
 curved tubes, bifurcation in steady laminar flow 2-91385
 cylinder, oscillating, in transverse flow of liquid, heat exchange (*Russian*) 2-55400
 cylindrical container with rotating cover, laminar flow 2-86256
 cylindrical tube of varying radius, stationary flow, Newtonian two-fluid model 2-109414
 developed duct flow, surface integral numerical soln. 2-91552
 dispersion by laminar flow 2-91391
 drag of sphere with strong uniform suction or blowing in low Reynolds number flow 2-97498
 duct flow, heat and mass transfer with mist form. 2-109269
 dusty fluid, laminar two phase boundary layer flow over flat plate 2-81382
 dusty viscous incompressible gas through tube under time depend. harmonic press. gradient, laminar flow 2-97496
 Ekman boundary layer, evolution of disturbances 2-55538
 elliptical cone, compressible laminar boundary layer, heat transfer coeff. 2-75927
 ethyl alcohol, laminar boundary layer, heat and mass exchange with vaporisation and combustion 2-60503
 film condensation in tube with upward vapour flow 2-109270
 film flow, mathematical model, heat and mass transfer in two-phase flow 2-97495
 flame propagation in laminar flow, strain influence 2-114758
 flat plate, laminar flow and heat-transfer with approach flow and temp. distrib. 2-60500
 flow, low-Reynolds number, past two equal circular cylinders, matched asymptotic anal. 2-109271
 2D flow between parallel plates, mass transfer, turbulence promoters effect, flow separation obs. by visualisation 2-97513
 flow in porous walled channel with velocity slip 2-86254
 forced convection in converging or diverging planar symmetric ducts 2-114761
 free convection effects on laminar forced convective heat transfer in a horizontal isothermal tube 2-91402
 free convection flows under non-uniform gravity, integral method 2-91389
 free convection in triangular enclosures 2-91388
 free convection laminar flow, with transverse mag. field, time-depend. suction appl. 2-60663
 free convection with suction or blowing along a vertical surface 2-91387
 free stream above turbulent spots generated in laminar boundary layer, potential flow signature 2-70903
 friction matrix for two spherical particles with hydrodynamic interaction 2-103140
 gas, laminar convective channel flow, radiation effects 2-97667
 gas absorption into falling laminar non-Newtonian films 2-81369
 gas flow patterns in horizontal epitaxial reactor cells observed by interference holography 2-70907
 Graetz problem with third kind boundary condition, analytic soln. for eigenvalues and coeff. 2-70898
 heat convection and laminar flow in annular crevices 2-114801
 heat exchange in triangular channels under liq. laminar flow (*Ukrainian*) 2-60529
 heat exchanger employing laminar flow of particle suspensions, thermal design 2-70822
 heat transfer on annular channel walls, phase transitions effects 2-71030

laminar flow continued

- heat transfer to air from a yawed cylinder, independence principle 2-55564
- helicoidal laminar flow, drag reducing polymer study 2-60560
- n-hexane, laminar boundary layer, heat and mass exchange with vaporisation and combustion 2-60503
- hyperbolic segment cross-section tube, steady laminar flow 2-60648
- hypersonic laminar viscous flows past spinning cones at angle of attack 2-91482
- hypersonic shock-layer flow numerical solution, laminar, transitional and/or turbulent speeds 2-86301
- incompressible flow, boundary layers, unsteady mixed convection 2-91448
- incompressible flow, over solid plate with heat source, heat transfer in boundary layer 2-91442
- incompressible flow between finite parallel discs 2-103141
- incompressible fluid, electrically conducting transient laminar-vortical flow, travelling mag. field effect 2-86253
- incompressible laminar flow anal. using nodal coarse mesh method 2-102160
- incompressible separated flow, laminar and turbulent boundary layers, heat, mass and momentum transfer (*German*) 2-81335
- indicator dilution theory for convective dispersion in laminar flow through straight tubes 2-73288
- instability waves, control using new technique 2-75925
- jet of liq. with initial segment, heat transfer during vapour condensation 2-60533
- jets, submerged diffusion flame in immiscible fluid, combustion 2-60594
- laminar boundary layer, porous medium, blowing, heat transfer, conjugation problem 2-60502
- laminar diffusion flame, on vertical flat plate burner, elliptic field calcs. 2-70899
- laminar incompressible flow, large Reynolds number, wake flowfield development calc. 2-70896
- laminar separation bubble, cavitation gaseous microbubble growth anal. 2-60631
- luminescent, relaminarizing and retransitional flows, review 2-114773
- laser Doppler anemometer investig. of laminar boundary layer stability (*Russian*) 2-114943
- linear stability equations for compressible laminar boundary flows 2-97582
- liquid film mass transfer coeffs. for column packed with partially wetted rings 2-103138
- liquid films 2-65656
- LMFBR debris tray free convection flow, finite element solns. 2-90263
- MHD boundary layer on wedge, Hall and inslip currents effects 2-55673
- micropolar flow due to a rotating disc with suction and injection 2-55618
- microsize cylindrical channel, low press. gas flow, theoretical and expt. study 2-81395
- natural convection on vertical cylinder, perturbation calcs. 2-97548
- Newtonian fluid, high viscosity, in horizontal rectangular ducts, laminar heat transfer 2-109268
- non-Newtonian dilatant fluids, laminar boundary layer struct. 2-86310
- non-Newtonian fluid unsteady flow through elliptical long ducts with press. gradient 2-109402
- noncircular passages, laminar and turbulent flow, heat transfer, calcs. 2-91553
- nonisothermal chemical reaction at the particle surface in a laminar flow 2-91429
- nonisothermal objects, laminar free convection boundary layer heat transfer 2-55540
- nonlinear critical layers and their development in streaming-flow stability 2-75929
- oil beds with nonuniform struct., temp. field 2-114759
- over hemispherical headforms, separation bubble, cavitation inception 2-60593
- past permeable sphere, drag coeffs. and separation 2-91383
- plate, heat transfer in laminar boundary layer, temp. depend. physical props. effect (*German*) 2-114762
- point injection into laminar cell, Hele-Shaw flow model 2-86255
- porous tube, laminar flow with uniform mass injection 2-55653
- power law fluids in flat gaps with various thermal wall conditions; laminar heat transfer 2-114785
- pulsatile flow in constructed axi-symmetric tubes, numerical simulation 2-81393
- pulsating flow bounded by wall, shear stresses determ. on surface 2-97659
- pulsating instantaneous flow rate meas. using venturi meter (*Japanese*) 2-114760
- pulsating laminar flow in a pipe, heat transfer with const. wall temp. 2-91540
- pulsed ultrasonic Doppler velocimeter, laminar and turbulent flow meas. 2-76048
- Riabouchinsky functional, second variation 2-53532
- saline water, laminar buoyancy-driven flow near melting ice surface, transport meas. 2-70901
- saline water, laminar buoyancy-induced flows near melting ice surface 2-70900
- separated flows, heat exchange, separation of vortices from heated surface (*Russian*) 2-55569
- separating flow over backsteps and cavities 2-91494
- simultaneous melting-condensation on vertical wall anal. 2-91439
- single-phase flow in bent channels, laminar and turbulent flow, forced convection visualisation study 2-75951
- solar collectors, air heating, plate-type, flow passage geometry optimisation 2-78253
- solidification of a liquid metal flowing through a circular pipe: a prediction of nozzle blockage 2-83104
- stability of fluid flow in channel with porous walls 2-103146
- steady 2-dimens. incompressible laminar viscoelectric channel flow with suction or injection 2-97650
- steady laminar flow along a porous vertical wall, boundary layer thickness anal. 2-103144
- steady laminar flow in twisted square tubes, Navier-Stokes eqns. 2-55535
- steady laminar flow through twisted square pipes, heat transfer 2-55581
- supersonic viscous flow past a cone, heat transfer, flow separation, vortices 2-109362
- suspended particles dispersion in uniaxial flow, stochastic theory 2-86327
- Taylor vortices between two concentric rotating spheres 2-91463
- thermal fluctuations in the presence of two dissipative steady-state currents 2-65561

laminar flow continued

- thermal laminar boundary layer with const. press. gradient 2-91390
- thermoelectric fluid, free convection flow past plate, laminar boundary layer 2-103142
- transient incompressible fluid flow, quadratic finite element program user's manual 2-54487
- two dimens. flow, Prandtl boundary layer eqns. at zero point friction 2-109274
- two dimensional laminar flow about cylinder oscillating in uniform stream 2-97501
- two-dimensional channel, sudden expansion at high Reynolds number 2-91386
- unsteady boundary layer accelerated flow past vertical porous limiting surface 2-55536
- unsteady heat transfer in laminar non-Newtonian boundary layer over a wedge 2-81334
- vapour-gas mixture, condensation process, computational method 2-60505
- visco-elastic flow and heat transfer between two stationary uniformly porous discs of different permeability 2-91384
- viscoelastic liquid in converging channel, laminar flow development and heat transfer 2-109413
- viscous fluid, flow through porous media, permeability calcs. 2-103206
- viscous fluid flow, stationary and axially symmetric, numerical anal. 2-70895
- viscous incompressible fluid, laminar flow in porous wavy channel 2-81314
- viscous incompressible fluid, laminar flow past accelerated plate, mass transfer effect 2-65560
- viscous inert and reactive fluids, flow in long tube, temp. discontinuity effects 2-60644
- vortex, confined, laminar boundary layer near rotating end wall 2-97565
- vortex flow, mass transfer, forced convection (*French*) 2-55561
- vortex-sink flow of compressible fluid (*German*) 2-97580
- water waves, wind generated, laminar boundary layer flow model, nonlinear theory 2-114830
- wavy film flow, condensation and evaporation, Nusselt theory 2-114832
- wavy film flow, gravity driven, hydrodynamic anal. 2-114831
- β -FeOOH, rodlike crystals, dil. aqueous dispersions, light scatt. obs. of laminar, vortical and turbulent flow 2-76015

laminar to turbulent transitions

- active control of laminar-turbulent transition 2-75930
- air convective flow, in parallelepipedic box of aspect ratio 14 (*French*) 2-55568
- boundary layer laminar-turbulent transition, vel. fluctuations distrib., skewness coeff. 2-109278
- boundary-free incompressible flow, finite energy, global theorems 2-65558
- Casson model slurries laminar-turbulent transitions in pipeflow 2-81320
- compressible fluid flow stability at high Mach numbers 2-81318
- Couette to Taylor vortex flow transition, boundary and fluctuation effects 2-70908
- crossflow development, momentum integrals method 2-91392
- EHD, transition to turbulence, current fluctuations (*French*) 2-86354
- flat plate boundary layers, waves and flow transitions 2-70909
- glycerine-water, immersion of plane plate, natural convection 2-55566
- Hagen-Poiseuille MHD flow, stability, nonlinear theory 2-103221
- hydrodynamic instabilities, turbulence onset, expt. study 2-65570
- laser anemometer meas. of boundary layer susceptibility to planar and three dimens. disturb. (*Russian*) 2-114942
- laser Doppler meter, investig. of transition to turbulence in hydrodynamic flows (*Russian*) 2-114929
- multichannel laser anemometer investig. of laminar-turbulent flow transition (*Russian*) 2-114939
- PAA polymeric additives, effect on viscosity, mol. wt. depend. (*German*) 2-98324
- pulsatile pipe flow, turbulence transitions, pulsative vel. distrib. near transition region, wave forms, and distrib. 2-91539
- shear flow, vortex shedding patterns and pressure around low aspect ratio cylinder at transitional Reynolds numbers 2-65600
- sphere, drag in supersonic and hypersonic transition regimes 2-70906
- steam condensation in a vertical tube, heat transfer coeff. 2-91422
- supersonic boundary layer on cooled surface, laminar to turbulent transition 2-75931
- Taylor-Couette flow, geometric factors, struct. parameters (*French*) 2-86259
- transitional flow, boundary layer, coordinate transformation 2-70924
- wind driven circulation in rectangular cavity, ADI anal. 2-109328
- β -FeOOH, rodlike crystals, dil. aqueous dispersions, light scatt. obs. of laminar, vortical and turbulent flow 2-76015

laminates

- angle-ply laminates, stress intensity factors for through cracks 2-97436
- bimodulus composite materials, laminated plates, behaviour 2-97385
- composite laminates, NDT characterisation by means of US polar-scan 2-62327
- composite periodically laminated medium harmonic wave propag. 2-60447
- composite plates, cracked, sudden stretching 2-65518
- composites, laminated, nonlinear stress-strain response at elevated temps. (*Japanese*) 2-93567
- composites, three-dimens. inelastic anal. 2-70852
- cross ply laminated circular cylindrical panels, buckling and vibr. 2-97429
- cylindrical shell, strength on nonproportional loading 2-114725
- deformation obs. due to heat stresses, using holographic interferometry, partial exposure method (*German*) 2-81303
- elastoplasticity laminate structure modelling with mixed finite element 2-91260
- epoxy resins, materials variables controlling transverse cracking 2-105295
- fabric reinforced laminates, flexural deform., transverse cracks, ply delamination (*Japanese*) 2-57464
- fabric reinforced woven hybrid composites, elastic props. 2-83152
- fibre reinforced, brittle strength calc., computer algorithm, stress conc. role 2-60474
- fibre reinforced, edge effect, stress distrib. singularity 2-83153
- fibre reinforced, multidirectional, deform. and breakdown mechanism 2-114724
- fibre reinforced laminates, stress wave propag., micro-fracture mechanism (*Japanese*) 2-57463
- fibre reinforced single- and two-ply rectangular plates, bimodular material, transient response 2-88119

laminates continued

- finite element analysis of instability related delamination growth 2-62196
- glass fibre reinforced composites, at cryogenic temps., tensile and torsional fatigue 2-105340
- glass fibre reinforced epoxy, laminates, ballistically impacted, delamination-crack propag. 2-83207
- glass fibre reinforced epoxy laminate, AE energy anal. of damage 2-62291
- glass fibre reinforced epoxy laminate, failure under dynamic torsional loading 2-88194
- glass fibre reinforced plastic laminates, nondestructive inspection 2-67672
- glass fibre reinforced plastics, in-plane stiffness and strength props. 2-67409
- glass fibre reinforced polyester laminates, dynamic fracture toughness (*Japanese*) 2-111284
- glass fibre unidirectionally reinforced terephthalate-polyester filled resin, laminate, filament wound tubes, resin flexibility effects on props. 2-116497
- graphite fibre reinforced composite laminates, fracture toughness, effect of notch length, specimen thickness 2-111271
- graphite fibre reinforced epoxy, centre-notched angle ply composites, tensile fracture 2-57450
- graphite fibre reinforced epoxy laminate, fatigue damage detection using out-of-plane Moiré interferometry 2-88178
- graphite fibre reinforced epoxy laminate, in situ transverse lamina strength, X-radiographic obs. 2-88135
- graphite fibre reinforced epoxy laminates, notched, compression fatigue 2-116532
- graphite fibre reinforced epoxy laminates, US and mech. charact. 2-78041
- graphite fibre reinforced resin, tensile testing at 316°C, gripping system appls. 2-105399
- graphite-epoxy laminates, thermal expansion coeffs. determ. by moiré interferometry 2-64100
- materials design using programmable calculators and personal computers (*Japanese*) 2-78065
- Metglas ribbon reinforced epoxy, impact resist. 2-111270
- multilayer laminated plates, thin and thick, hybrid-stress eight-node elements 2-86212
- multilayer system with losses, scope for detecting exfoliation 2-62357
- plates, composite, laminated, edge effects 2-103028
- plates, dynamic contact problems, numerical simulation 2-114739
- plates, laminated, statics and dynamics, expt. investigation 2-55489
- plates, rectangular, laminated, anisotropic, nonlinear oscillations, finite-element anal. 2-103084
- plates, rectangular composite, forced motions 2-103050
- polymer laminated sheets, mechanical interactions 2-77883
- polymer structures, heat protective, optimum design 2-91221
- shell, cylindrical, thin-walled, functioning for stability, optimisation 2-91287
- shell, rolled cylindrical, loaded by internal pressure, elastic deform. and layers slippage 2-91340
- shell structure, rational parameter values calc. and selection 2-60409
- steel, laminated sheet, mag. props. for normal fluxes 2-82673
- structural performance evaluation of composite materials, moiré methods appl. 2-105424
- thermal methods for NDT, review 2-57574
- C fibre reinforced plastic, non-linear stress-strain effects in flexural wrinkling 2-77870
- Ti-Al laminar composites with a soft layer, low-cycle fatigue 2-67548

laminations

- eddy-current limited domain wall motion 2-82633

lamp accessories

- see also lamps*
- fibre optic lamps illumination setting, use of circular neutral wedge filter (*German*) 2-81093

lamps

- see also discharge lamps; filament lamps; light sources*
- fibre optic lamps illumination setting, use of circular neutral wedge filter (*German*) 2-81093
- goniophotometer for calibration of small luminous flux standard lamps 2-79644
- illumination systems quality estimation using luminous field integral characts. (*Czech*) 2-64085
- luminous fog lamp mounting assembly dynamic design and mechanical strength enhancement (*Russian*) 2-79351
- photoslit lamp, exposure settings determ. 2-88644
- sapphire lamp development for use in satellite-borne Rb atomic clocks 2-89685

Landau levels

- Anderson two-dimensional localised system, magnetoconductance 2-110320
- connected electron states on a centre of small radius in a magnetic field (*Russian*) 2-71912
- crystal electrons in mag. field, second order perturbation for general periodic pots. 2-71852
- disordered Landau level system, two dimensional, interaction effects 2-115678
- graphite, electronic phase transition, resistance magnetoresistance study 2-87306
- graphite, pyrolytic, second order phase transition; magnetoacoustic study 2-115828
- MOS structure, two-dimensional space-charge layer in a tilted magnetic field 2-82466
- narrow gap semiconductors, plasmon assisted recombination in mag. field 2-92657
- semiconductor, bielelectron in an external magnetic field 2-76952
- semiconductor, hot electrons, lowest Landau level, distrib. functions, I-V characts. and neg. differential conductance 2-61476
- semiconductors, temperature depend. cyclotron resonance linewidth, influence of Landau level broadening 2-77378
- semiconductors, transverse galvanomagnetic phenomena (*Russian*) 2-61497
- semimetal, two-dimensional, electronic phase transitions in strong mag. field, correlation effects (*Russian*) 2-71897
- superlattice semiconductors, Stark-cyclotron-phonon reson. 2-77107
- two dimensional electron system, random pot., localisation length, energy depend. 2-98563
- two-dimensional electron conductivity, Hall effect, random potentials 2-92557

Landau levels continued

- two-dimensional electron gas, Hall resist. meas., fine struct. const. determ. 2-58777
- two-dimensional electron structs., Coulomb correlations and the quantum Hall effect 2-82379
- two-dimensional electron systems, zero-resistance state and quantised Hall effect 2-61491
- two-dimensional high mag. field cond., quantum Hall effect 2-82380
- two-dimensional metal, quantum Hall effect, impurity and edge effects 2-61446
- two-dimensional system, quantized Hall cond., effect of Landau band struct. 2-61490
- Bi, second order phase transition, magnetoacoustic study 2-115828
- Bi-Sn, magnetoreflection study, band struct. 2-87747
- (Cd_{1-x}Mn_x)₂As₂, Landau levels, cyclotron effective mass and effective g-factor 2-110269
- GaAs-Al_xGa_{1-x}As heterojunctions, zero-resistance state of two-dimensional electrons in a quantizing magnetic field 2-61570
- GaAs-AlGaAs heterojunction, two-dimensional magnetotransport in the extreme quantum limit 2-82376
- GaAs-GaAlAs multilayers, high field magneto-transport, spin splitting, g-factors 2-56684
- n-Ge, many-valley semicond., hot electrons in quantising mag. field 2-56622
- Hg_{1-x}Cd_xTe, quasi-local acceptor level spectrum 2-87188
- Hg_{1-x}Mn_xSe, zero gap, far IR magnetotransmission 2-116159
- HgSe, far IR magnetotransmission, cyclotron and spin-flip resons. 2-57066
- n-HgSe-Al_xO₂-Pb junction, tunnelling spectroscopy study 2-92777
- InAs-GaSb superlattices, semimetallic, far IR magnetoabsorp. 2-61881
- InAs-GaSb superlattice, band structure, envelope-function approx. 2-104472
- InP (100), electron cond. in surface subbands 2-115846
- InSb, band struct. parameters, exciton magnetoabsorption study 2-115659
- InSb, Landau level nonlinear refr. 2-65292
- InSb, narrow band gap, resonant impurity states in strong mag. field 2-66485
- p-InSb, photoexcited electron system, spin relaxation 2-104706
- InSb, Wannier-Mott exciton at absorpt. edge, quasione dimens. state in strong mag. field, expt. study 2-61369
- Pb_{1-x}Ge_xTe, C_{2v}-phase, band struct. 2-92467
- PbTe, CDW, mag. field depend. 2-61376
- Sb, second order phase transition, magnetoacoustic study 2-115828

Landé g-factor *see g-factor***Landé splitting factor** *see g-factor***landing fields** *see airports***Langmuir films**

- amines, long-chains, Langmuir-Blodgett film formation 2-98441
- benzene-hexa-alkanoate, disodic mol., two-dimens. film at air-water interface 2-115507
- carboxylic acid Langmuir-Blodgett films, frictional force, shear strength 2-61318
- dipalmitoyl phosphatidyl ethanolamine, Langmuir-Blodgett film, elec. props. meas. 2-116891
- Langmuir-Blodgett films, deposition techniques and technological appls. 2-71820
- Langmuir-Blodgett films on semiconductors 2-56715
- Langmuir-Blodgett monolayers, molecular orientation meas. using integrated optics and Raman scatt. 2-74508
- merocyanine dye Langmuir films, high-field photoconduction 2-72029
- 4-n-octadecylphenol Langmuir films on Cu, surface EM wave versus IR refl.-absorp. spectroscopy 2-110964
- organic monolayer assemblies on Ag gratings, plasmon surface polariton field enhanced Raman spectra 2-110838
- phospholipids, synthetic Langmuir films, elec. props. meas. 2-72092
- polymers, preformed, Langmuir-Blodgett monolayers fabrication 2-88050
- stearic acid Langmuir film adsorbed on Ag and Ni, IR specular reflection spectra 2-116291
- Si:H amorphous MIS struct., Langmuir-Blodgett film 2-87410

Langmuir probes

- see also plasma diagnostics*
- bounded plasma in mag. field, resonance probe diagnostics 2-60803
- electron temperature, direct meas., new technique 2-97796
- ion current in cylindrical Langmuir probe electron temp. meas. (on Intercoms 10) 2-97785
- Langmuir probe characteristics in a plasma containing electrons with drift velocities 2-55786
- magnetic multipole ion source, hollow cathode, plasma studies for neutral beam injection 2-89859
- plasma etching, IR absorpt., spectroscopy and Langmuir probe obs. 2-116583
- secondary electron emission effect on characts. 2-103448
- sheath, static, one dimens., elec. pot., Langmuir probe meas. technique 2-55750
- supersonic equilibrium plasma, cylindrical Langmuir probe meas. 2-91672
- Tokamak edge diagnostics, ion trapping and Langmuir probes and bolometer techniques 2-86477
- tunnel magnetron characteristics and discharge diagnostics w.r.t. deposition and surface treatment 2-55806
- Hg vapour discharge, appl. of orbital limited theory to electrostatic probe meas. 2-103465

lanthanides *see rare earth metals***lanthanons** *see rare earth metals***lanthanum**

- see also nuclei with*
- ¹³⁹La(n,x), laser beam effect (*Russian*) 2-101896
- electron-phonon interactions, McMillan-Hopfield constant, transferability, rigid-muffin-tin approx. 2-61096
- liquid, electronic struct. 2-87133
- magnetic susceptibility, 77 to 293K, diamag. and paramag. contribs. 2-56824
- nature of 3d shake-down satellites, photoelectron spectroscopy 2-62045
- photoelectric cross-section at K edges 2-56639
- vacuum UV absorpt. spectra 2-93217
- BaF₂:La, Raman spectra between 300 and 1400K 2-99129
- BaF₂:La³⁺, thermal depolarisation studies 2-61817

lanthanum continued

- BaO-TiO₂-La system, phase diagrams, influence of foreign atoms on cryst. lattice 2-66179
 CaF₂-La³⁺, thermal depolarisation studies 2-61817
 CaTiO₃-La³⁺, self-compensation, gravimetric meas. 2-98127
 La II, HFS in low even configurations, interpretation 2-59955
 LaCo₅-Sn₂, cryst. struct., stability criteria (*German*) 2-65925
 LaOCr₂Tb³⁺, Stark level, cryst. field anal., fluoresc. study 2-66504
¹³⁹La II, 5d² and 5d6s levels, HFS constant meas. 2-59954
 SrF₂-La³⁺, Raman spectra between 300 and 1400K 2-99129
 SrF₂-La³⁺, thermal depolarisation studies 2-61817
 SrTiO₃-La, elec. cond., 850 to 1050°C 2-87264
 SrTiO₃-La, quenched, highly reduced, electronic cond. 2-56583

lanthanum alloys

see also lanthanum compounds

- misch metal-Ni-Si alloys, H absorpt.-desorpt. characts. 2-87024
 Ag-La (25 at.%), phase diagram invest., thermal anal. and X-ray meas. 2-67301
 Ce-La_{1-x}-Be₃, mixed valence and Kondo behaviour, lattice const. elec. resist. susceptibility 2-56515
 Ce-La_{1-x}-Be₃, thermal expansion temp. driven valence change 2-56226
 Ce_{1-x}La_xMn₂Si₂, mag. props. and struct. 2-87499
 Ce_{1-x}La_xPd₃, intermediate valence and Gd³⁺ ESR 2-56927
 Ce_{0.9-x}La_{0.1+x}Th_{0.1}, mixed valent ground-state, elec. resist., localisation transition 2-56551
 Cr-La (0.3 wt.%), films, dislocations, struct. and composition 2-115600
 Gd-La alloys, band struct., elec. resistivity and mag. moment 2-76912
 Gd_{1-x-x'}Ce_{1-x-x'}Be₃, cond. electron lattice relax. due to Ce ion 2-72350
 H₂ storage capacity of Mg, synthesis and study of reversible hydrides based on Mg rich alloys of La (*French*) 2-78261
 La-Co-Ni phase diagram, X-ray and metallographic study (*Chinese*) 2-93489
 La-Mn-Co(Ni), phase diagrams, isothermal sections at 400 and 600°C 2-83092
 La-Ni system, phase equilib., microhardness meas. (*Ukrainian*) 2-77803
 La-Sb-Dy, dilute alloys, magnetostriction, free energy calc., single ion Hamiltonian 2-92987
 LaAl, lattice dynamics, inelastic neutron scatt. meas. 2-56117
 LaAl₂, quadrupole interaction at ¹¹¹Cd probe 2-116100
 LaAl₂, superconducting, US attenuation and vel. below 5K 2-56782
 La_{0.8}Al_{0.2}, amorphous, fracture surface morphology (*Russian*) 2-99518
 La_{1.00-x}Al_x, amorphous, supercond. transition temp. press. depend. 2-115932
 LaB₆-Co(Ni) systems, wetting and contact reactions 2-77780
 La_{1-x-y}Ce_yY system, multiple supercond. transition temps. 2-98788
 La₂Co₉, mag. props., PAC study 2-66954
 La₂Co₉, amorphous, penetration depth, metallurgical phase separation 2-87446
 LaCu_{0.56}Sn₂, cryst. struct., stability criteria (*German*) 2-65925
 LaFe_{0.34}Sn₂, cryst. struct., stability criteria (*German*) 2-65925
 La_{1-x}Gd_xAl₂, cryst. struct., mag. elec. and ESR props. 2-92564
 La_{3-x}Gd_xIn, EPR study, mag. and superconducting props. (*Russian*) 2-93002
 LaNi₅, heat cap., Schottky contribution, nucl. mag. ordering 2-98304
 LaNi₅, hydriding, kinetic model and rate eqns. 2-57608
 LaNi₅, Ni microprecipitates produced by cyclic H absorpt. and desorpt., ¹⁵¹Ni Mossbauer study 2-66953
 LaNi₅, spin polarised energy band struct. calcs. 2-92449
 LaNi_{0.74}Sn₂, cryst. struct., stability criteria (*German*) 2-65925
 LaNi₅Sn, mag. susceptibility, cryst. struct., X-ray diff. study (*Ukrainian*) 2-103693
 LaPd₃, core-level spectroscopy, 4f count determ., 4f hybridisation 2-83006
 La_{1-x}Pr_x, intermediate valence materials, press. expts. 2-56502
 LaPtSi, cryst. struct. 2-65922
 LaSn₃, Fermi surface, linearised APW calc. 2-98525
 LaSn₃, monocryst., thermopower 2-71952
 LaSn₃, temp. factors, neutron scatt. study 2-103913
 La_{0.78}Zn_{0.22}, amorphous supercond., anomalous heat relax. 2-98801
 Ni-Cr-La-Y-Al, La, Y and Al addition effects on high temp. oxidation 2-93685
 Pr-La_{1-x}-Ni₂, heat capacity meas. 2-92916

lanthanum compounds

see also lanthanum alloys

- ethyl sulphate-Gd³⁺, spin lattice relax., Gd³⁺ splitting under press., ESR study 2-82713
 ferroelec., electro-optic and strain-optic effects 2-93159
 LaS:Er, ESR and origin of random strains in dil. rare earth alloys 2-56925
 lattice heat capacities resolution, Schottky contribution 2-56214
 PLZT, glass-like behaviour in specific heat, Debye temp. 2-71664
 PLZT, piezoelectric, ceramic, mech. strength 2-77907
 PLZT ceramic, domain switching, space charge field effects 2-99074
 PLZT ceramics, transparent, photoacoustic spectroscopy exam. in 300 to 700 nm range 2-62442
 Y_{3-x-y}La_xPb_{2-y}Fe_{2-y}Ga₂O₁₂, epitaxial layers, interface anal. using SIMS 2-82171
 AgF-LaF₃ reversible interface, Auger depth profiling and impedance study 2-71807
 β-Al₂O₃/La₂O₃:Eu³⁺, optical props., struct., dye laser site-selective excitation and X-ray diff. obs. 2-61959
 Al₂S₃-La₂S₃-Nd₂S₃, chalcogenide mini lasers, emission cross section and threshold power 2-96955
 Ba_{1-x-y}Co_{0.5}La_{0.5}, mag. clusters, hysteresis and susceptibility study 2-61739
 Ba_{0.7}La_{0.3}F_{2.3}, solid electrolyte, ionic cond. 2-92273
 Ba_{0.75}La_{0.25}Nd_{0.1}F_{2.25}, solid electrolyte, ionic cond. 2-92273
 BaMoO₄-La₂(MoO₄)₃, phase diagram, structural characteristics of BaLa₂(MoO₄)₄ 2-77809
 BaTiO₃-La₂O₃-3TiO₂, formation of BaLa₂Ti₄O₁₂, dielec. props. 2-71417
 Bi_{2-x}La_xWO₆:Pr(Sm)(Eu)(Tb)(Dy)(Er), luminesc. props. 2-82900
 Bi_{24-x}La_xWO₆, cryst. struct., electron microscopy lattice imaging method 2-60943
 Ca₂Fe₂O₇-LaFeO₃ system, Mossbauer resonance study 2-61801
 CaLa_{1-x}Y_xCrO₄ solid solns., struct. and mag. study 2-76391
 Ca(Sr)_{1-x}La_x(Nd)_{0.5}Si₄(P, V, As)₂O₂₆, solid phase synthesis, apatite struct. 2-111067
 Ce_{0.75}La_{0.25}B₆, Kondo state, transport and mag. props. 2-56832
 CrLa₂S₂, thermal conductivity, phonon-paramag. ion scattering effects obs. 2-115480
 Cs₂La(N₃)₆, IR and Raman spectra, mag. susceptibility 2-87767

lanthanum compounds continued

- Ga₂S₃-La₂S₃-Nd₂S₃, chalcogenide mini lasers, emission cross section and threshold power 2-96955
 HfF₂-BaF₂-LaF₃ glasses, polarised Raman scatt. study 2-57086
 (La,Gd)B₆, single cryst., exchange interaction and cryst. field splitting, ESR 2-104696
 La-Ni-O system, phase struct., electron microscopy and X-ray diff. study 2-91919
 La-Si compounds, X-ray K_α and L_{2,3} emission bands of Si 2-57217
 La_{2-x}R_xCuO₄ (R=Pr, Nd), struct. transitions, elec. props., semicond.-metal transition 2-81949
 (La,A_{1-x})₂(Mn_{1-x}³⁺Mn_{1-x}⁴⁺)₂O₇, A=Ca, Ba, Sr, indirect exchange interactions, and Jahn-Teller distortions, neutron diff. study 2-66800
 LaAsO₄, cryst. struct., IR and Raman vibr. spectra, X-ray diff. study 2-65957
 LaB₆, adsorption of O on (100), (110), and (111) surface, UPS, XPS, and LEED meas. 2-66365
 LaB₆, band struct., photoemission with synchrotron radiation (*Japanese*) 2-93377
 LaB₆ cathode, thermionic emission characteristics, (100) and (110) orientations 2-53894
 LaB₆ cathodes in mass spectrometry 2-113031
 LaB₆, compressibility, valency and intermediate valence effects 2-56072
 LaB₆, ion beam sputter deposition, on W filament, electron optical props. (*Japanese*) 2-82996
 LaB₆, K emission and absorpt. spectra, band struct. 2-87900
 LaB₆ multi-cathodes, filament-free, long-pulse ion sources, high-density plasma prod. 2-59586
 LaB₆, point contact spectroscopy of dynamic resistance 2-56591
 LaB₆, supercond., electronic struct., phonon modes, Eliashberg function, muffin tin approx. 2-66698
 LaB₆ surface, coadsorption of Cs and O₂, work function change and Auger study 2-87068
 LaB₆ surface, Cs thermal desorption, discrete binding states 2-87069
 LaB₆/Cu(Cu-Ni) system, wetting and the contact reaction 2-71777
 La_{1-x}B_xCoO₃, B=Ca,Sr, Mossbauer emission study of defect 2-87631
 La(BO₃)₃, refined cryst. struct. 2-55954
 La_{4-2x}Ba_{2+2x}Zn_{2-x}O_{10-2x}, cryst. struct. (*French*) 2-81750
 LaC₇, identification and atomisation energies by high temp. mass spectrometry 2-67761
 LaC₈, identification and atomisation energies by high temp. mass spectrometry 2-67761
 La_{1-x}Ca_xCoO₃, perovskite, prep., ferromagnetic props., rhombohedral distortion 2-61737
 La_{1-x}Ca_xCrO₃, electrode material for MHD converters, sintering (*Chinese*) 2-83503
 (La_{0.9}Ca_{0.2})MnO_{3-y}, elec. resist. and thermoelec. power 2-66551
 LaCl₃ gas phase, UVPEs 2-85739
 LaCl₃:rare earth metal ions, single-electron cryst. field, multipole contrib. 2-71938
 LaCoO₃, magnetic and electronic props. (*French*) 2-82574
 LaCoO₃-LaMnO₃, magnetic susceptibility and hysteresis loops meas. 2-77276
 La₂CoO₄, magnetic and electronic props. (*French*) 2-82574
 La₂CoO₁₀, magnetic and electronic props. (*French*) 2-82574
 LaCrO₃:Sr(Ti) perovskite, IR spectra assignments and interpret. 2-93231
 LaCu_{1-x}Ni_xO₄, struct. transitions, elec. props., semicond.-metal transition 2-81949
 LaD₃, deuteron spin-relax. time, diffusion and hopping 2-104734
 La_{1.2-x}Eu_xMo_{0.8}, superconductivity and mag. props. 2-72099
 LaF₃ epitaxial films, MBE growth on Si substrate, MIS capacitance and mass spectra study 2-76861
 LaF₃, IR wavelength modulation spectroscopy of laser window materials 2-60191
 LaF₃:Er³⁺, 0.2 THz phonon stimulated emission, luminescence study 2-81906
 LaF₃:Er³⁺, mag. field depend. optical dephasing 2-104856
 LaF₃:Gd³⁺, two-photon absorption in Gd³⁺ 2-57128
 LaF₃:Gd³⁺, two-photon absorpt., Judd-Ofelt theory 2-61935
 LaF₃:Gd³⁺, two-photon absorption lines, selection rule violation, anisotropy and anomalous intensity 2-77555
 LaF₃:Pr³⁺, fluoresc. quenching by cross relax. 2-82917
 LaF₃:Pr³⁺, interaction strength of weakly coupled pairs measured by a two laser spectroscopy technique 2-82881
 LaF₃:Pr³⁺, phonons created by quenching process, direct detection 2-71595
 LaF₃:Pr³⁺ single cryst., fluoresc. line 2-61944
 LaF₃:R³⁺, Pr³⁺ where R=Nd, Dy, fluoresc. obs., decay time meas. 2-110914
 LaFeO₃, electronic cond., Seebeck coeff. and defect struct. 2-110349
 LaFe₂P₄, superconductivity and mag. props., Mossbauer study 2-72102
 La_{3.33}Ga_{0.67}S₁₂, single-cryst. X-ray cryst. struct. determ. (*French*) 2-55930
 LaGaS₃, cryst. struct., X-ray diff. study, least squares technique (*French*) 2-81739
 La₂Gd_{1-x}TiO₃ solid solns., mag. behaviour, mean field model 2-104659
 LaGe_{1.70}, free energy, heat and entropy of form. determ., 940 to 1060K (*Ukrainian*) 2-56217
 LaH₂, electron-phonon coupling parameter rel. to occurrence of supercond. 2-66462
 LaH₃, XPS core level and valence band spectra 2-76925
 LaH₄, disorder of site occupation 2-91910
 LaH₄, H vibr. modes, pulsed neutron spectroscopy study 2-66154
 LaH₄, PMR spin-spin relax. time, 150 to 400K (*Russian*) 2-104728
 LaIr₂O₁₁, semicond., elec. and paramag. props., Mossbauer resonance (*French*) 2-92614
 LaIrSi, cryst. struct., supercond. transition temp., mag. props. 2-65969
 LaIrSi, cryst. struct., X-ray diff. study 2-81729
 La₂LiFeO₆, high-pressure stabilisation and physical props. of Fe(V) 2-66791
 La₂MM'O₆ (M,M'=Cr,Mn,Fe,Co,Ni; M≠M'), perovskites, prep. and characterisation 2-57314
 LaMnO₃, conductivity, magnetisation and neutron diff. in mag. transitions range 2-56850
 LaMnO₃, distorted, mag. transition above Curie point, magnetisation and magnetoresist. study 2-110582
 La₂(MoO₄)₃, Raman and IR spectra, vibr. assignment 2-82850
 La₂MoO₄:Eu³⁺, spectroscopic props. 2-93254
 LaNbO₄, cryst. struct. refinement 2-103726
 LaNbO₄:Ho³⁺, 2-μm stimulated emission 2-104915
 La_{0.33}NbO₃, thermal quenching prep., crystallisation and struct. 2-91924

lanthanum compounds continued

- La₉Nd₃P₃O₁₄ CW laser at 1.051 and 1.32 μ m 2-70567
 LaNi₄Al_{0.5}D_{0.5} neutron diff. struct. study 2-71422
 LaNi_{1-x}Co_xO₂, magnetic props., review (*Japanese*) 2-66870
 LaNi_{1-x}Fe_xO₂, magnetic props., review (*Japanese*) 2-66870
 LaNi_{0.5}Mn_{0.5}O₂, magnetic props., review (*Japanese*) 2-66870
 La₂NiO₄, coexistence of localised and itinerant 3 d electrons, lattice const. meas. 2-66755
 La₂Ni₂O₇, cryst. struct., electron microscopy and X-ray diff. study 2-91919
 La₂O₃, α -phase, normal coordinate anal. of Raman and IR vibrs. 2-87781
 La₂O₃-BaO-B₂O₃ and La₂O₃-BaO-PbO-B₂O₃ system glasses, very pure, absorpt. curve and colour 2-93227
 La₂O₃-NiO system, phase transitions in air, X-ray anal. 2-109971
 La₂O₃-PbO-B₂O₃ fluxed-melt system, solubility and relative supersaturation 2-93400
 (LaO)₂As₂S₃, cryst. struct. determ. (*French*) 2-91886
 LaOBr:Tb, luminesc., effect of Tb and rare earth impurities (*Chinese*) 2-72530
 LaOBr:Tb phosphors, two-stage excitation of phosphorescence 2-110945
 LaOBr(L):Eu³⁺, cryst. field effects, fluorescence study 2-66503
 (LaO)₂CO₃, type Ia and II polymorphs, Eu doped, site selective excitation of fluorescence 2-116226
 (LaO)₂S-(YO)₂S[(LuO)₂S]:Eu, STEM analytical and cathodolum. studies 2-72560
 La₂O₃S, α -phase, normal coordinate anal. of Raman and IR vibrs. 2-87781
 La₂O₃ films, RF sputtered, luminescent, high purity deposition 2-93423
 La₂O₃S, hot pressing, accretive recrystallisation 2-77785
 La_{1-x}P_xO₄:Nd³⁺, resonant fluoresc. line narrowing 2-104943
 La_{1-x}Pr_xF₃, inhomogeneous broadening, time resolved fluoresc. meas. 2-116251
 La₂Rh₂Ge₄, cryst. struct. determ. 2-91895
 LaRhSi₃, cryst. struct., supercond. transition temp., mag. props. 2-65969
 LaS₂, elec. cond. study 2-82363
 LaS₂, heat capacity in superconducting and normal states 2-82521
 La₂S₃, α and β phases and Nd doped, photocond. meas. 2-115824
 La₂S₃, α - and β -phases, heat capacity, 1.2 to 20K 2-56209
 La₂S₃, ceramic, opt. props., IR transparency and spectra 2-57080
 β -La₂S₃:Nd, Ce, efficient energy transfer from band excitation to Nd³⁺ 2-67102
 La₂(SO₄)₉(H₂O) single crystal, polarized Raman spectra, external vibr. modes, temp. effect (*French*) 2-72491
 La₂Sb₂O₇, cryst. struct. and dielec. props. 2-109755
 La₂Sb₂O₇, phase transitions, dielec., thermal expansion and second harmonic generation study 2-115406
 LaSe, point contact spectroscopy of dynamic resistance 2-56591
 LaSe₂, cryst. twin law (100), form B, cryst. struct. determ. and refinement (*French*) 2-55905
 LaSe₂, cryst. twin law (201), form A, cryst. struct. determ. and refinement (*French*) 2-55906
 La_{1-x}Sr_xCoO₃, X=0.2 to 1.0, elec. cond., influence of prep. and comp. 2-87257
 La_{0.96}Sr_{0.04}CrO₃ ceramic, sintering and dielectric props. 2-62094
 La_{1-x}Sr_xFeO₃, elec. cond., effect of CO adsorption, appl. to gas sensors 2-71979
 La_{1-x}Tb_xP₃O₁₄:Tb³⁺, strong self quenching of Tb³⁺ in stoichiometric materials 2-72542
 La_{2/3}TiO₃, n-type semicond. electrodes, photocond. 2-77116
 La₂Ti₂O₇, high-temp. modifications, cryst. struct. determ. 2-55928
 La₂Ti₂O₇, n-type semicond. electrodes, photocond. 2-77116
 La₂Ti₂O₇, non-stoichiometric disorder, high temp. elec. cond. study 2-98075
 La₄Ti₆O₂₄, indexed X-ray diff. data 2-103704
 La_{0.84}Sr_{0.16}MnO₃, cryst. struct. and elec. cond. 2-81748
 Li-Nd-La phosphate glass, high conc., use in Q-switched lasers 2-55167
 Li-Nd-La phosphate glass laser, high conc., efficiency at low pump energies, free lasing 2-55168
 LiLaP₆O₁₃:Ce³⁺(Eu³⁺)(Tb³⁺)(Bi³⁺), luminescence of broad band emitters, concentration quenching 2-77575
 LiLaSm-phosphate glass:Sm³⁺, luminesc. selective laser excitation study 2-67109
 Na₂O-La₂O₃-SiO₂ glass transition temp., relation to glass comp. 2-66219
 Nd₂La_{1-x}B_x, solid solns., mag. susceptibility 2-77257
 PLZT ceramic, holographic grating form by electro-optic effect 2-108826
 PLZT ceramic, reduced, dark cond. and optical absorpt. 2-104374
 PLZT ceramic, transparent ferroelectric, dielec., optical and semicond. props., reduction effect (*Russian*) 2-99668
 PLZT ceramics, photoferroelectric props., ion implantation effects, review 2-110393
 PLZT, chemically prepared powders, grain size of mixed oxides 2-72660
 PLZT electrooptic ceramic one-dimens. controlled transparency utilizing transverse effect, crosstalk 2-55323
 PLZT ferroelec. ceramic, laser beam amplification by dynamic holography 2-108835
 PLZT page composer production for holographic memory (*Hungarian*) 2-55091
 PLZT slim loop and linear ceramics, devices based on longitudinal electrooptic effects 2-55302
 PLZT, solid solutions, regions of homogeneity 2-110003
 PLZT, transparent ferroelec. ceramic, surface effects for information storage (*Russian*) 2-104846
 RbLa(SeO₄)₂, lattice parameters, X-ray powder diff. data 2-115193
 SeO₂-TeO₂-La₂O₃ glass formation at high press. 2-86576
 Si_{1-x}Ni_xSiO₂-La₂O₃ system, phase relationships 2-105134
 Sm_{1-x}La_xB₆, solid solns., valence states, X-ray absorption spectra study 2-87202
 Sm_{1-x}La_xB₆, valence instabilities and elec. props. 2-56595
 Sm₂La_{1-x}B₆, solid solution, valence and lattice consts. 2-66500
 SrLaCoO₄:⁵⁷Fe, emission and absorption Mossbauer spectra, electronic structure 2-77434
 (Sr_{0.825}La_{0.175})(Zr_{0.75}FeRu_{0.25})₂O_{3- δ} , mixed perovskite oxide, elec. cond. and thermal stability meas. 2-82354
 U_{0.1}La_{0.9}Si₂ 2-66700
 UO₂-La₂O₃, elec. cond., effects of doping 2-87262
 V₂O₅-La₂O₃ system, phase equilib. relations 2-67306
 ZrF₄-BaF₂-LaF₃ glasses, polarised Raman scatt. study 2-57086

Laplace transforms

- CARS, correlation functions, band profiles, Laplace transforms 2-69259
 column, perfect viscoelastic, dynamic stability 2-81262
 corrosion cells, impedance meas. by Laplace transform. of microprocessor data 2-116626
 homogeneous space, elastic piecewise, with spherical symm., non-steady-state radial vibrs. 2-55481
 inverse problem, inverse Laplace transform method 2-70812
 Laplace transforms of Airy functions 2-107151
 laser's second threshold Laplace transform anal. 2-55106
 light, low intensity, spectral study using time-interval probability Laplace or Fourier transform meas. 2-85925
 numerical inversion with noise, singular-value anal. for exponential relax. rates recovery 2-101155
 plates, thermoviscoelastic, dynamic problem soln. by Laplace transform-finite element method 2-81246
 solid-liquid suspensions in elastic tube, one-dimens. unsteady flows 2-109397
 thermal shock problem, generalised one-dimens., for small times 2-81229
 transient effects on the initial rate of oxygenation of red blood cells 2-83554
 unsteady MHD flow through two parallel porous plates, Laplace transform soln. 2-55655
 Weinberg sum rule application, pseudoscalar meson properties 2-113178

Large Magellanic Cloud

- A0538-66, X-ray transient, UV spectra anal. 2-94770
 Cepheid variables in LMC, intrinsic relations, interstellar reddening and Cepheid-luminosity relation 2-58353
 cluster age-metallicity relationship 2-100996
 DEM 45, 137, 165, 174 and 208, LMC Wolf Rayet ring nebulae; kinematics obs. 2-68779
 S Doradus, continuum energy distrib. and spectra variations, obs. 2-94729
 S Doradus, temps. for central star and envelope from VBLUW obs. 2-106726
 evolution from globular cluster motion, colour and comp., giants anal. 2-112547
 gamma-ray burst, 1979 May 5, physical processes 2-112609
 gas clouds, tidal stability 2-58445
 gas/dust ratio and near-IR extinction law 2-79208
 gaseous halo, evidence against existence 2-89356
 globular clusters, ellipticity-age relation 2-74040
 HD 36402 in interstellar bubble N51D, UV absorpt. by interstellar gas, obs. 2-79178
 HDE 269006, S Doradus star, temps. for central star and envelope from VBLUW obs. 2-106726
 hot stars flux distribution, winds and extinction law, UV spectral obs. 2-68891
 interaction with Galaxy and SMC, rel. to dynamics of Magellanic Stream 2-68904
 interstellar absorption, far UV extinction and 4430 Å band central depths for reddened LMC stars 2-106898
 interstellar extinction in IR from early-type supergiants JHK photometry 2-89377
 LMC2, supergiant shell, dynamics and driving mechanism from spectral obs. 2-101014
 LMC X-4, X-ray binary with disc. light var. and UV spectral obs. 2-63507
 Mira variables, pulsational props., JHK photometry obs. 2-63455
 N159, H II region in LMC, search for H₂O maser emission 2-94852
 N159A and N159, H II regions, excitation and extinction 2-106854
 N49, supernova remnant in LMC, possible association with anomalous gamma-ray transient, (1979 March 5) 2-68934
 N49 SNR as origin of 1979 March 5 gamma ray burst source 2-58500
 N70 H II region, possible origin from H I region stellar wind interaction 2-68752
 NGC 1806 globular cluster, struct. 2-106824
 Of-like stars with circumstellar shells, spectral classifications 2-84235
 R136a, possible supermassive star, speckle interferometry rel. to ang. dia. 2-94719
 R136a, possible supermassive star in LMC, anal. of vibr. instability of 3000 M_⊙ star 2-79083
 R 136a in 30 Doradus nebula, supermassive object (*French*) 2-58346
 radio pulsar discovery 2-79131
 star identification and membership (*French*) 2-58465
 stellar clusters, young, HR diagram comparison between Galaxy, SMC and LMC 2-68842
 supergiants, effective temp. and radii, absolute flux and flux distrib. from UV obs. 2-101067
 supernova remnants, X-ray spectra classification, obs. 2-79177
 young populous clusters, radial colour variation, supergiants anal. 2-94826
 H II region 30 Doradus, WC stars detect. and luminosities, visible spectral obs. 2-58368

large scale integration

- automatic single-barrel photorepeater for LSI masks fabrication 2-69276
 biochips, implanted electronic systems, practical realisation, problems encountered (*Czech*) 2-68196
 buried oxide layer formation by O₂ implantation for use in dielectrically isolated ICs 2-61011
 CMOS RAMs, LSI, radiation resistance for Jupiter radiation belt 2-68595
 dry etching, recent trends for VLSI fabrication 2-116582
 electron-beam lithography, polystyrene high resolution electron beam negative resist with very narrow molecular weight distributions 2-70461
 ellipsometry for test diff. gratings, basic eqn. 2-101444
 micro, mini and maxi processor applications 2-60312
 MOS LSI static RAM, passivated, meas. of internal signal waveforms using stroboscopic SEM 2-58970
 multi-chamber dry etching system for fabricating VLSI 2-69184
 PMMA film, ion-bombarded, high resolu. photomasks prep., LSI appls. 2-77799
 recording instruments, recent trends, exploitation of LSI, review 2-89740
 VLSI single wafer plasma etching of Al and Al-Si alloys 2-72878
 VLSI, and VHSIC materials development, SIMS anal. of thin surface layers and low kV ion implants 2-78156
 Al, porous, deposition techniques and heat transfer props. 2-87979
 CC Si-Ni interface, Ni₂Si thermal formation, ion irradi. enhancement, VLSI appl. 2-56369
 Si low pressure epitaxy for bipolar VLSI 2-87993

large scale integration continued

Si n⁺-p junction leakage behaviour, O precip. effects, double poly-Si gate
FET DRAM technology 2-61568
Si, reactive ion etching, contamination of blanket etched surfaces, MOS
VLSI appls. 2-116568

laser accessories

acoustooptic power stabilizer for a continuous laser beam 2-85990
alkali halide laser windows, photoacoustic spectroscopy of adsorbed surface
impurities 2-60192
Antares automatic opto-mech. beam alignment system 2-108894
antireflection coatings for LiNbO₃ crystals, laser-induced damage
2-65285
beam expander, two-element 2-81053
beam expanders, large diameter, interferometric anal. 2-95454
beam expanders, large diameter, interferometry 2-97038
beam transforming optical system thermal distortion correction 2-75656
beamsteering configuration based on photorefractive effect 2-90955
bichromatic coatings for pulsed laser fusion appls. at 0.53, 1.06 μ m,
damage thresholds 2-65283
biconical reflectors, single-layer-coated, polarisation-preserving 2-97150
birefringent filters for dye laser tuning (*Chinese*) 2-97026
borosilicate glass, antireflective surfaces for high-energy laser optics
formed by neutral soln. processing 2-70641
Brewster angle window aberration of CO₂ waveguide laser modes
2-60131
calibrated sources of monochromatic radiation at 0.69 and 1.06 μ m
2-60207
calibration of impulse lasers using absolute wavelength calibration equip-
ment (*German*) 2-108922
calorimeter with conical chamber, absorption coeff. determ. 2-85991
calorimetric wattmeter, thermocouple sections selecting system 2-81007
capacitive high-frequency discharge prospects in laser technology
2-65241
Cassegrain and other beam expander comparison for high-power pulsed
dye lasers 2-102838
catastrophic damage threshold of laser optics, insensitivity to dust and
surface defects 2-60147
cleaving tool for semiconductor lasers, for facet mirror form 2-65418
coaxial diode, scalable, for electron-beam pumped gas lasers 2-60091
coaxial flashlamps, laser pumping charact., review 2-65239
concentric etalon for single-freq. operation of higher-power ion lasers
2-89798
cooled surfaces, absorbed laser power, calorimetric meas. 2-86027
Dewar design for optically pumped semiconductor lasers 2-65240
diamond turning fabrication for laser design appls., review 2-81132
discharge laser electrode profiles, analytical design method 2-96966
dye laser simple accurate timing mechanism, novel geometry 2-114340
dye lasers, single-mode wedge, continuous-scanning system 2-75617
electrically controlled echelette grating for CO₂ laser wavelength selection
and modulation 2-65268
electron beam pumped excimer laser system with HV pulsed power supply
2-90939
electron beam pumping of high power lasers, annular electron beam
scheme 2-85986
electron beam pumping system, pulsed, for 250 J KrF laser 2-90938
electron beam system, compact 36 kJ, for KrF laser pumping 2-90935
electron beam technology, broad area, for pulsed high power gas lasers
2-96965
electron-beam diode, high-intensity, for laser pumping, operating modes
2-114295
electrooptic material application in laser research 2-60227
electrostatic dust protection for optical elements in Earth-mounted and
satellite orbital systems 2-55289
electrostatic modelling of electron-beam-generator/vacuum-diode interface,
using computer code PE2D 2-95389
Faraday rotator, laser intensity stabilisation appl. 2-70666
Faraday rotator for high-power glass laser systems 2-113578
Fizeau interferometer for laser wavelength meas. 2-60111
flash lamp pumping performance improvement, for dye laser excitation
with intense pulse preionisation (*Chinese*) 2-55176
flash lamps, pumping, type INP-16, parametric standard series 2-97137
flowing gas lasers, pulsed, active attenuation of acoustic disturbances
2-90911
fusion beam train phase aberration correction using deformable mirror
adaptive optics 2-97031
Gaussian to flat-top intensity distributing lens 2-97146
geometrical optics in a laser laboratory 2-108895
hole grating beam sampler, wavefront distortion, exact analysis 2-97039
ice calorimeter for pulsed radiation meas. 2-114346
IR laser reflector, dielectric-enhanced, wavefront error, interferometric
meas. in visible light 2-95455
IR window material absorpt. coeff., photo-acoustic meas. at CO₂ laser
wavelength freq. (*Chinese*) 2-91033
IR window materials for CO₂ laser, absorpt. coeffs, photoacoustic spectro-
scopy 2-70633
KrF laser amplifier with phase-conjugate Brillouin retroreflectors
2-108865
LED pump sources for Nd:YAG lasers 2-70572
limiting apertures in geometrically uncoupled laser systems 2-90953
local optical correction system, beam control concept 2-102835
low-reflectance absorber for CO₂ laser light 2-55239
magnetic pulse compressor cct. for elec. excitation of XeCl laser 2-60094
magneto-optical polarisation modulator for pulsed laser light 2-114332
Mandelstam-Brillouin stimulated scatt. mirror, appl. to subnanosecond
high contrast laser pulse production (*Russian*) 2-70609
material property requirements for laser windows 2-60196
metal mirrors, pulsed laser initiation of surface plasma, exoelectron emis-
sion 2-60144
metal refl. at visible, IR wavelengths, rel. to laser mirror appls. 2-67083
metal vapour hollow cathode discharge lasers, coil hollow cathode design
2-55199
metrological provision for laser radiation pulse power meas. 2-90962
mirror, 2.8 μ m, evaporation technique for low absorption 2-55299
mirror dynamic distortion meas. (*Chinese*) 2-97027
mirror using acousto-optical device meas. and control system, displacement
2-97051
mirrors, multilayer thickness nonuniformities required for wave front error
tolerances 2-65337
mirrors, repetitively pulsed, thermal distortions, analytical model 2-86022
mirrors, water-cooled, Fresnel ripple mapping 2-97040

laser accessories continued

mirrors for far VUV spectral region 2-81046
mode locking device, low-voltage, short CO₂ laser pulse generation appl.
2-114297
modulator, electro-optic, cryst., laser mode-locking appls. (*Chinese*)
2-91040
mono-ion oscillator as potential ultimate laser frequency standard
2-89656
multiple flash lamp system for laser pumping, demountable design
2-90912
multiple mirror telescope performance, piston and tilt errors effects
2-97142
nonlinear delayed action unit for high-freq. automodulation of two-mirror
laser radiation 2-108916
Nova, optical components 2-75014
Nova alignment and laser diagnostic systems, data acquisition 2-75019
Nova alignment and laser diagnostics systems 2-75018
Nova mechanical systems 2-75013
optical components, production-run, survey of damage thresholds at 532
nm 2-65284
optical components, ultrasonic cleaning and solvent drying 2-75730
optical components of CW and pulse-periodic laser systems, stability
parameters 2-81011
optical material laser damage, symposium, Boulder, CO, USA (Sept.-Oct.
1980) 2-58546
optical materials for high-power lasers, advances 2-81006
PDX CO₂ laser expt., optical mounts and shutter window grating system
design 2-85288
PMMA, and copolymers, dye, appl. to laser passive shutters, decouplers
2-97128
polystyrene, and copolymers, dye, appl. to laser passive shutters, decou-
plers 2-97128
power supply, designer requirements 2-108893
power supply, high speed current regulated, optovoltaic effect study in
CW CO₂ lasers 2-114318
prism, compound total internal refl., for use in laser resonator 2-90947
profile shaper, CO₂ laser beam, with interlaced binary diffraction gratings
2-108920
pulse laser energy meas., working standard 2-53724
pulse selector for mode-locked lasers 2-114333
pulsed discharge exciter for HgBr laser, design and testing 2-90936
pulsed lasers, with time depend. output mirror reflectivity, energy output
optimisation calc. 2-65263
quasi-optical mixer for efficient sum and difference freq. sideband genera-
tion at 1 THz 2-97107
rail-gap switches for high output energy excimer lasers 2-96999
RAYITO accelerator, designed to investigate electron-beam control and
uniform excitation of large volume lasers, characterisation 2-96335
rectangular waveguide resonators with conventional and phase-conjugate
mirrors, mode discrimination, coupling losses 2-90941
reflecting grating in laser resonator, freq.-selective losses 2-65342
reflection and antireflection coatings for laser optics, reactive sputtering
fabrication (*Czech*) 2-70634
reflectors, coated, laser damage testing at excimer laser wavelengths
2-97028
reflectors for high power laser beam, mirror figure-of-merit and material
index-of-goodness 2-97140
retroreflecting corner cube mirror resonator modes 2-80999
rhodamine 6G dye laser, lamp-pumped, using an interf. polarisation filter
2-96943
rhodamine 6G dye laser excitation with intense pulse preionisation, flash-
lamp pumping performance improvement 2-102787
segmented aperture averager, optical anal. 2-97141
self-coupled optical pickup, spatially-uneven optical feedback 2-102839
semiconductor heterojunction laser driver for optical communications,
bipolar IC 2-70706
semiconductor lasers, longitudinal mode control by rectangular conical dif-
fractor system, wavelength-division-multiplexing transmission 2-55190
Smartt interferometer, high damage threshold IR, using Si film, for laser
alignment and diagnostics 2-101452
Smartt IR interferometer for laser system optical analysis and alignment
appls. 2-101453
spatial analysers metrological certification using optical generator with
normalised characts. 2-90963
spatial filter for high power Nd:glass laser system 2-70629
standard meas. facility, laser emission power relative density distribution
2-53725
standard of laser radiation mean power unit 2-53723
stripline magnetic modulators for lasers and accelerators 2-97024
subnanosecond pyroelectric infrared detector 2-112986
TEA CO₂ multiple-pass laser amplifier, energy extraction 2-70539
transducer for meas. laser radiation, standard means for meas. dynamic
parameters 2-65276
transparent materials, absorbing defect role in laser damage 2-65287
tuning apparatus using microprocessor-controlled laser grating system
2-97047
ultra-fast discharge fine line flash light sources, for dye lasers pumping
2-86067
unit-length standards, design principles, Soviet meas. standards 2-58773
UV reflector films, multiple-shot laser damage thresholds at 248, 308 nm
2-65281
wavefront distortions in power optics, conf., San Diego, CA, USA (Aug.
1981) 2-94890
wavelength measurement of highly stable lasers, errors identification and
elimination 2-60134
wide-range integrated-circuit digital laser-power meter 2-114296
window 2-91023
window critical orientation, stress-induced birefr. and thermal lensing
expts. 2-61870
window materials, IR wavelength modulation spectroscopy 2-60191
window materials, optical distortion and far field meas. 2-97041
window materials for use at 1.3 μ m, survey 2-60195
windows, pulsed aerodynamic shock tube generated, optical quality
2-102831
Ag mirror, laser damage threshold depend. on wavelength, material, pulse
length and prep. method. 2-60143
Au mirror, laser damage threshold depend. on wavelength, material, pulse
length and prep. method. 2-60143
C, diamond-like, ion-beam deposited, improved optical elements for high
powered lasers 2-65323

laser accessories continued

- CO industrial electrical-ionisation laser with turbocompressor cooling 2-80938
 CO₂ laser high-power optics, absorption's dominant role 2-97043
 CO₂ laser radar using detector arrays, beam profile shaping 2-96964
 CO₂ TEA laser, semiconductor preioniser, expt. study 2-80993
 CO₂-laser modulator, microwave behaviour (*German*) 2-86015
 CaF₂ UV laser window material, low-level losses 2-97161
 CaF₂ window material for HF/DF chemical lasers 2-81040
 Cu mirror, diamond-turned, laser-induced damage, spot size dependence meas. 2-114343
 Cu mirror, laser damage threshold depend. on wavelength, material, pulse length and prep. method. 2-60143
 Cu mirrors used in CO₂-ICF laser systems, optical damage limitations 2-60145
 Cu vapour laser, externally heated, parametric study appls. 2-80991
 Cu vapour laser, pulse generator for energizing 2-85989
 DF-CO₂ intracavity knife-edge diffr. screen laser on D₂-F₂-CO₂-O₂-He gas mixture 2-85993
 GaAs recombination-type window material prep. for high power CO₂ laser appls. (*Chinese*) 2-99317
 GaP crystal with induced anisotropy, anisotropic Bragg diffr. of light by ultrasound 2-61873
 Ge, absorpt. calorimetry and laser induced damage threshold meas. 2-60146
 Ge laser windows, thermal runaway 2-81004
 Ge-As-Se glass, ion beam deposited, use as optical coating 1 to 16 μ m laser damage 2-65324
 He-Ne laser, 633 nm, ¹²⁷I, stabilised, power shifts for various mirror curvatures, report 2-97056
 He-Ne laser, with heated I₂ absorption cell, high frequency stability 2-60135
 KrF with phase-conjugate Brillouin mirror 2-60136
 LiF, forging processes development for large scale deform. without optical props. degradation 2-60194
 LiNbO₃ waveguide modulator, out-diffused, prism-coupled, fabrication and performance for long-term use at 632.8 nm 2-75670
 MgF₂ UV laser window material, low-level losses 2-97161
 Mo optical components, polishing procedures for surface texture reduction 2-102898
 Nd laser, multistage, digital supply system for stable apparatus operation (*Bulgarian*) 2-80989
 SF₆ optoacoustic cell, CO₂ laser freq. stabilisation using SF₆ Lamb dip 2-70579
 Si evaporated and sputtered films, multithreshold HF/DF pulsed laser damage meas. 2-65286
 TiO₂/SiO₂ multilayer dielectric coatings, damage thresholds in CW lasing 2-86019
 Xe pulsed flash lamps and filter envelopes of quartz tubes for use in lasers (*Chinese*) 2-55177
 XeCl discharge laser electrode profiles, analytical design method 2-96966
 YAG CW laser engineering 2-60108
 ZnS, ZnS/ThF₄ films, impurity initiated short pulse laser damage 2-65282
 ZnS-MgF₂ quarterwave layers forming dielec. laser mirrors, temp. depend. of phase anisotropy 2-97145
 ZnSe, absorpt. calorimetry and laser induced damage threshold meas. 2-60146
 ZnSe, window material for HF/DF chemical lasers 2-81040
 ZrO₂ films, impurity initiated short pulse laser damage 2-65282

laser annealing *see laser beam annealing*

laser beam annealing

- amorphous, ion implanted, ultrarapid cryst. growth and impurity segregation during laser annealing 2-86722
 automatic X-Y scanning controller for laser annealing of ion-implanted semiconductors 2-86035
 metal surface laser hardening, Gaussian and Doughnut beam, effect of heat source pattern (*Japanese*) 2-78008
 mode-locked laser developments and appls. 2-114331
 molecular dynamics simulation 2-109828
 nonequilibrium segregation coefficient, rel. to liq.-solid interface during recrystn., laser-annealing 2-71654
 optical waveguide fabrication in amorphous film 2-97171
 optical waveguide laser annealing and integrated waveguide detect. for scatt. effects reduction 2-70710
 resonant annealing of radiation defects, theory 2-56016
 segregation of impurities due to pulsed laser beam annealing 2-103995
 semiconductor device fabrication appl. (*Japanese*) 2-103813
 semiconductors, implanted, laser annealing, review 2-115282
 semiconductors, ion-implanted and single-cryst., pulsed laser annealing 2-56011
 semiconductors, pulse laser and electron beam annealing, electron microscopical characterisation 2-66051
 semiconductors, thermal and athermal laser annealing 2-110988
 Si electrodeposited on graphite and silver, characterisation for fabrication into solar cells 2-105095
 silicite formation, mechanisms and interfacial layers, book contrib. 2-61214
 solid solutions, metastable, formation by rapid melt quenching during pulsed laser and electron beam treatment 2-76496
 SOS, laser annealed, electron Hall mobility and residual stresses, heat treatment effects, Raman study 2-98745
 SOS epitaxial films, defects and strain after CW laser annealing, Rutherford backscatt./channelling and TEM study 2-81799
 temperature profiles induced by a scanning CW laser beam, theory 2-92028
 Al, pulsed laser annealing, energy absorption, melting 2-81820
 Al-Sb multilayered film, laser induced crystn. 2-61316
 AlSb film growth by laser annealing Al/Sb sandwich 2-92416
 Cd₂Hg_{1-x}Te (0≤x≤1) thin films, laser epitaxy and annealing (*Russian*) 2-105070
 CdS films, chemical bath deposited, elec. resist. increase obs. by laser annealing 2-98766
 CdSe_{1-x}Te_x (0≤x≤1) thin films, laser epitaxy and annealing (*Russian*) 2-105070
 p-CdTe, ohmic contacts with Au or Cd₃P₂ layers by pulsed laser heating 2-115890
 CdTe_{1-x}Se_x semiconducting cmpds., laser induced formation 2-115593
 Eu_{0.53}Y_{2.47}Pb_{0.03}Fe_{0.85}Ga_{1.1} 4O₁₂ epitaxial bubble film, dynamic props. 2-72319

laser beam annealing continued

- GaAs, ion implanted, laser annealed, defect anal. 2-66053
 Ga_{1-x}Al_xAs-GaAs double heterostruct., laser annealed, electrom. device performance 2-55158
 GaAs, amorphous and cryst., melting point, laser and electron beam annealing 2-109829
 GaAs IC, pulse annealing techniques optimisation 2-56693
 GaAs, ion implanted, laser annealing, Fermi level pinning model, solar cell fabrication 2-56027
 GaAs, ion implanted, pulsed ruby laser annealing, SIMS and elec. obs. 2-56023
 GaAs, ion implanted, pulsed laser annealing, dopant profile redistrib. and surface melting duration 2-56024
 GaAs, ion implanted, transient and furnace annealing behaviour 2-56022
 GaAs, ion-implanted, review of furnace annealing, thermal pulse annealing and laser annealing 2-67400
 GaAs, VPE and Czochralski grown, pulsed Nd:YAG laser annealing of defects, implanted sample obs. 2-56026
 GaAs:Se, ion implanted, pulse diffused n⁺ layers form. using As₂Se₃ diffusion source 2-55998
 GaAs:Si, ion implanted and proton irradi., deep levels, laser beam annealing 2-98587
 GaAs:Si, ion-implanted, laser annealing effects 2-103811
 GaAs:Si, low dose implants, CW laser annealing 2-56028
 GaAs:Sn, ion implanted, surface accumulation after laser beam annealing, Rutherford backscattering study 2-61006
 GaAs:Sn, ion implanted, laser annealed, TEM study 2-66050
 GaAs:Te, implanted, laser annealed, metastable Te donor conc., expt. study 2-56025
 GaAs:Zn, ion implanted, laser annealing, expt. study 2-61024
 GaP ohmic contacts, laser annealed, for high temp. devices 2-56692
 Ge, amorphous, Mossbauer study 2-99004
 Ge film, laser induced crystn. 2-61316
 Ge, laser pulse interaction, 2.7 μ m 2-77627
 Ge, pulsed-laser-annealed, stimulated surface polariton wave scatt. and grating formation, time resolved meas. 2-114359
 In_{0.49}Al_{0.51}As, concentrated, laser recrystn., solute redistribution, AES study 2-56014
 InP, ion implanted, laser annealing, Fermi level pinning model, solar cell fabrication 2-56027
 InSb, LPE regrowth by CW laser annealing, expt. study 2-56029
 Mo/Ge/GaAs 2-87386
 Mo-Si interface, MoSi₂ formation kinetics meas. during CW laser scanning 2-92025
 NbN_x, reactive synthesis by pulse laser annealing, X-ray, AES and supercond. study 2-72642
 Nb₂O₅ thin-film optical waveguide, CO₂ laser annealing for scatt. loss reduction 2-75677
 Ni first wall, passive He pumping, regeneration 2-71190
 Ni/Ge/GaAs refractory ohmic contacts, laser and thermal anneal 2-87386
 PbTiO₃ ferroelec. thin films, prep. by RF sputtering and laser annealing 2-82792
 Pt/n-GaAs Schottky interface, effects of surface treatments 2-98743
 Si (111) laser annealed and impurity induced metastable surfaces, UPS and LEED study 2-76789
 Si, amorphous, Mossbauer study 2-99004
 Si, amorphous and cryst., melting point, laser and electron beam annealing 2-109829
 Si, amorphous film, laser beam induced crystn., optical recording appl. 2-65325
 Si, amorphous film, laser crystallisation, rel. to density 2-56407
 Si, amorphous film, laser induced controlled nucleation and growth process 2-56408
 Si, amorphous film, melting threshold energy in laser annealing 2-92026
 Si, amorphous film, solid phase epitaxy, laser-induced 2-56405
 poly-Si beam recrystallisation for IC fabrication 2-111065
 Si, carrier and lattice temps. induced by picosecond laser pulses 2-67155
 Si crystals, photoacoustic effect in laser annealing 2-81824
 Si, electronic dilation during pulsed laser annealing, lattice constants 2-56224
 Si, electronically excited, phonon spectrum, rel. to laser induced recrystn. 2-115373
 Si, impurity diffusion coeffs., CW laser annealing and SIMS (*French*) 2-110040
 Si, ion and neutron irradi., radiation damage, thermal and laser annealing, electron microscopy study 2-71512
 Si, ion implanted, CW laser annealing, dislocation nucleation, growth and suppression 2-56021
 Si, ion implanted, hyperfine interaction study after thermal and laser annealing 2-99008
 Si, ion implanted, pulse laser annealed, defect-induced photolum. 2-57181
 Si, ion implanted, pulsed laser annealing dynamics, plasma annealing model 2-56013
 Si, ion implanted, pulsed laser annealing, threshold energy density, backscatt. and channelling meas. 2-92029
 Si, ion implanted, pulsed laser annealing, melting model and Raman scatt. 2-98155
 Si, ion implanted, residual defects after pulsed laser annealing 2-71502
 Si, ion implanted wafers, high dose rate, laser annealing effects, TEM, backscatt. and channelling obs. 2-56019
 Si, large grain growth on SiO₂ by selective laser annealing 2-116358
 Si, laser annealed, quenched-in defect levels, DLTS study 2-61389
 Si, laser annealed, surface topography study 2-104129
 Si, laser annealing, review 2-98157
 Si, laser annealing by nanosecond pulses, temp. rise and carrier conc., computer model 2-86723
 Si, laser pulse processing, heterogeneous nucleation of spatially coherent damage struct. 2-56020
 Si, laser scanned, temp. profile calc. 2-92028
 Si, melting and laser annealing using pulsed lasers 2-66052
 Si p-n junction, ion implanted, CW laser annealed, elec. and struct. props. 2-115872
 Si pattern laser annealing using pulsed laser 2-81823
 Si, phonon population, time-reversal invariance and Raman meas. 2-103920
 Si, polycrystalline, thin film, CW laser recrystallised material 2-56409
 Si, pulsed laser annealing, energy absorption, melting 2-81820
 Si, radiation defect laser annealing 2-103814
 Si solar cell, high efficiency, laser processing 2-57702

laser beam annealing continued

- Si solar cells, laser annealed, function and bulk region characts. 2-88441
 Si surface, laser annealed, residual strain, surface treatment effects, Raman spectra study 2-81821
 Si, UHV-deposited thin films, laser cleaning of (100), (110) and (111) surfaces 2-83250
 Si:As, amorphous film, laser induced solid phase epitaxy kinetics, time resolved reflectivity study 2-56384
 Si:As, implanted, CO laser annealing 2-86727
 Si:As, ion implanted, laser annealing mechanism 2-61023
 Si:As, ion implanted, laser annealed, bonding defects, Roman scatt. study 2-67066
 Si:As, ion implanted, solid state phase annealing with CW Nd:YAG laser (*German*) 2-105183
 Si:As, ion-implanted, laser and thermal annealing comparison, ion back-scatt. and elec. meas. 2-55991
 Si:As, laser beam annealed, defects and elec. props., TEM study 2-109799
 Si:As, surface layer struct., influence of non-uniformity of laser beam intensity 2-92314
 Si:As films, heavily doped, thermally and laser annealed, elec. props. 2-115924
 Si:As⁺ layer, ion implanted, Q switched Nd:YAG laser annealing 2-56015
 Si:As(P), implanted and laser annealed, electronic states, IR optical props. 2-57112
 Si:B, defect-impurity complexes, ion channelling study 2-71534
 Si:B, laser beam annealing, recrystn. 2-103812
 Si:B, polycrystalline, on SiO₂, elec. resist., CW laser and furnace annealing effects 2-61025
 Si:B(As), high-dose implanted, CO₂ laser annealing characts. 2-57219
 Si:B(P)(As), supersaturated, ion implanted and laser annealed, heat treatment effects 2-92000
 Si:Bi, ion implanted, impurity redistrib. after Nd laser pulse irradi. 2-115265
 Si:H, amorphous film, laser induced crystn. 2-55849
 Si:H,As, amorphous RF sputtered film, pulsed laser annealing 2-86726
 Si:In, ion implanted, laser annealed, convection and constitutional supercooling cells 2-66054
 Si:In(Sb), laser annealed, all formation and interfacial instability, expt. study and perturbation theory 2-56012
 Si:P films, heavily doped, thermally and laser annealed, elec. props. 2-115924
 Si:P polycryst. film, in situ doped, CW laser annealing, grain size and elec. cond. meas. 2-98771
 Si:Sb, laser epitaxy over buried layers 2-56406
 Si-on-sapphire, amorphous, ion implanted, time-resolved optical transmission meas. during pulsed laser annealing 2-61027
 Si-SiO₂ MOS struct. with PbTiO₃ layer, electronic props., laser annealing effect 2-82792
 Si-SiO₂ MOSFETs, fabrication in laterally seeded epitaxial Si on SiO₂ 2-92756
 Si-Ti (Ni) interface, laser and electron beam irradi., silicide form. 2-66377
 Si₃N₄ thin-film optical waveguide, CO₂ laser annealing for scatt. loss reduction 2-75677
 α-Sn, amorphous, Mossbauer study 2-99004
 Ta₃Ge/GaAs refractory ohmic contacts, laser and thermal anneal 2-87386
 TaO_x thin-film optical waveguide, CO₂ laser annealing for scatt. loss reduction 2-75677
 TiW/Ge/GaAs refractory ohmic contacts, laser and thermal anneal 2-87386
 V₃Si, supercond., produced by pulsed laser annealing 2-56766
 (Y,Sm,Lu,Ca)₂(Fe,Ge)₂O₁₂ films, H⁺ implanted, laser annealing 2-76492
 ZnTe, O diffusion during laser annealing, photolum. obs. 2-115463

laser beam applications

- see also holography; integrated optics; laser beam annealing; laser beam machining; laser beam welding; laser isotope separation; matrix isolation spectroscopy; measurement by laser beam; modulation spectroscopy; optical communication; optical radar; patient treatment; plasma production and heating by laser beam; Raman spectra; Raman spectroscopy; remote sensing by laser beam; spectroscopy; surgery; two-photon spectroscopy
 acetylene, UV laser photochem. at 193 nm 2-78114
 alkali dimer, preparation, perturbation and predissoc.; crossed laser and mol. beam studies 2-75471
 aspherical surface monitoring with laser interferometer (*Russian*) 2-84689
 ballistic photographic system, front light, high speed, pulsed ruby laser appl. (*Chinese*) 2-89837
 beacon or expendable fuse source, low cost lightweight CO₂ laser 2-102820
 benzene, aqueous solutions, UV-laser induced photo-oxidation, phenol form. 2-75358
 beta decay laser enhancement, electron shielding effect 2-54321
 beta-decay, laser enhancement theory, approximation 2-54322
 biomedical laser, book 2-63765
 camera, picosecond, step-by-step calibration 2-95496
 carvone photocyclisation to carvone camphor using rare gas halide lasers 2-72993
 chemical appls. 2-108897
 chemical etching, of metals and semiconductors 2-78133
 chemical etching enhancement of solid surfaces 2-77958
 chemical lasers, theory and appls. 2-108867
 chemistry problems, tunable lasers use 2-99694
 collision kernels and laser spectroscopy 2-70388
 colour centre laser spectroscopy 2-58923
 communication system using He-Ne 6328 Å laser 2-86127
 conference, 12th International Quantum Electronics, Munich, Germany (1982) 2-79268
 conference proceedings, held at Kanpur, India, March 1979 2-58530
 contactless US testing technique for metallic specimens (*French*) 2-93724
 CRT laser-induced arcing, and arc suppression 2-76221
 Del'fin I laser fusion facility, optical system, preliminary expts. 2-115029
 diamond, densified, laser treatment (*Russian*) 2-66045
 Doppler-free spectroscopy in excited He states using color centre laser and electron impact excitation 2-54792

laser beam applications continued

- Doppler-free two-photon heterodyne spectroscopy by single-beam freq. mod. 2-107419
 dye laser light for high-resolution classical photography of bubble chamber 2-108930
 dye laser spectrometer for ultrahigh spectral resolution, design and performance 2-79677
 dye solution laser photochem. study by photoinduced elec. cond. method 2-57626
 excimer laser, deep UV photoetching of PMMA photoresist. 2-57497
 fibre coherent-detection system with correl. fields, single-freq. laser phase-noise limitation 2-109059
 fibre-optic manufacturing process control by laser beam 2-91099
 film deposition by pulsed evap. technique 2-105090
 fluorimeter for direct cardiac metabolism investigation 2-100177
 FM sideband optical heterodyne techniques and laser freq. control for precision spectroscopy 2-64122
 formic acid, IR transitions, offset-locked CO₂ waveguide laser study 2-85652
 free-free transitions in a laser field 2-59756
 fusion target dynamics, time and space resolved radiography 2-74893
 gas-phase switch control, optical processes 2-97806
 gases, cooling or heating through energy transfer using lasers 2-102440
 gravitation constant, time variation, laser cavity expt. determ. 2-112798
 gyro, limiting accuracy 2-75622
 heat-mode recording, efficient use of laser power 2-102840
 high energy charged particle hydro-acoustic effect simulation using Q-switched pulsed laser beams (*Chinese*) 2-96342
 high power lasers and appls., Int. School of Physics, Varenna, Italy, July (1978) 2-74141
 high resolution spectroscopy, conf., Bristol, England (April 1981) 2-74147
 high-powered chemical lasers, development, weapon appls. (*French*) 2-60071
 holocinematography, high speed, with multiply cavity-dumped Ar ion laser 2-96860
 hydrography, review 2-68521
 industrial uses, of lasers 2-80981
 integrated optical ccts., masks, fabrication by Ar laser beam writing 2-75732
 interferometric fibre-optic sensor phase compensation by laser-diode source emission freq. tuning 2-89799
 intracavity laser spectroscopy system using dye laser pumped by pulse Ar laser, pulsed, high-sensitivity 2-113000
 intracavity photoacoustic spectroscopy with F-center lasers 2-84715
 laser breakdown mechanism in bombardment of water targets with CO₂ laser pulses 2-60367
 laser scanner microscope, ultrafast, performance tests 2-111831
 laser-optical blade tip clearance measurement system for turbines 2-60092
 LASSO experiment and its operational organization 2-89670
 Lawrence Livermore National Laboratories, high energy laser facilities, review 2-75620
 lead-glass calorimeters and laser based monitoring system for European Hybrid Spectrometer 2-102327
 length measurement, frequency stabilised laser appl. 2-84595
 lunar laser ranging from geodetic-geodynamic determ. (*German*) 2-89021
 material processing, overview 2-90913
 materials processing, economic viability 2-55240
 medical use of lasers and fibreoptic endoscopy 2-78406
 medicine, conf., Germany (1981) 2-89467
 metal film photodeposition by UV laser light 2-77751
 metal processing with gas transport CO₂ laser, cutting and heat treating 2-116611
 metallic components under high stress, surface thermal treatment by laser radiation (*Rumanian*) 2-99600
 metallic thin films, photodeposition with UV laser light 2-92395
 metals, laser surface alloying, review 2-116609
 methyl fluoride, IR sidebands meas. using tunable sideband laser 2-64978
 micro-materials processing 2-90914
 model expts. for laser-driven hydrodynamics 2-59514
 moire topography using developed recording methods 2-95450
 molecular and atmospheric high-resolution IR spectroscopy by high-press. tunable CO₂ laser 2-95494
 molecular fluorescence, time domain meas. system with /real-time monitor, pulsed dye laser control 2-74505
 ocean wave height meas. using laser techniques 2-68385
 oil colour fluorescence, laser induced, oil painting pigment identification 2-91665
 optical frequency standards, appl. of laser cooling of atoms 2-63998
 optical time scale using freq. stabilized laser 2-64004
 optical writing of dense 1000 Å features in photoresists 2-81013
 optics, conf., Los Alamos, NM, USA (Apr. 1981) 2-94889
 organic solvents, sound vel. and liq. struct., laser light scatt. method 2-81895
 overvoltage water spark gap switch, laser initiated conduction 2-97832
 PCB imaging photolithography, new developments 2-97068
 phase adjusted focusing laser accelerator, stability measures (*Chinese*) 2-96332
 phase-adjusted focusing laser accelerator, phase adjustment (*Chinese*) 2-108170
 photochemical and photothermal processes, review 2-93803
 photoconductive switches triggered by subpicosecond laser 2-114414
 picosecond high-power switching and applications 2-97069
 picosecond phase fluorimetry by mode-locked CW lasers 2-102528
 plating and etching enhancement, mechanisms and appls. 2-77758
 polymerisation, intensity fluctuating spectroscopic anal. 2-111493
 precise time transfer techniques, satellite laser ranging, Indian contribution 2-89671
 primary freq. standards and precision spectroscopy, impact of lasers 2-63994
 printing by laser, optical system design for HP 2680 system 2-102842
 projection microscope system for fast stop-motion photography of biol. objects 2-105860
 pulsed power education of Texas Tech University, in USA 2-94944
 Raman spectroscopic analysis, appl. to Mount St. Helens ash from 1980 May 18 eruption 2-100343
 recording media for laser beam memory 2-55285
 ring laser gyro of arbitrary shape and rot. axis 2-94958
 ring-laser gyros, quantum noise in unlocked region 2-90943

laser beam applications continued

- ring-laser gyroscopes, quantum noise, spectrum and signal mean beat freq. 2-86011
- scan linearity correction technique for laser optical scanning system 2-102746
- scanner driven by multireflection method 2-114352
- scanning microscopy, basic principles and advantages, review 2-89803
- scanning system, optimum operating parameters for xerography 2-97072
- seismic information processing, opto-electronic, using coherent-light system 2-117469
- semiconductor crystal properties, measuring apparatus (*Russian*) 2-98693
- semiconductor junction laser, COL type, AEG-Telefunken product with 10 mW continuous output (*German*) 2-80988
- semiconductor materials and structs. prod. by high intensity laser and electron beams 2-77729
- shock waves, planar, interferometric obs. 2-70993
- SIMS spectrometer with direct imaging laser ionization 2-95527
- solid dielectrics, electric field meas. using laser-generated acoustic pulses 2-79614
- spatial-period division, deep-UV, using an excimer laser 2-109090
- spectroscopic techniques using lasers 2-101467
- spectroscopy, conf., Jasper, Alberta, Canada (1981) 2-63748
- spectroscopy, high-resolution, appl. of GaAs laser with external resonator 2-53854
- spectroscopy, laser beam applications 2-95486
- spectroscopy, LSI-11/2 microcomputer-based data acquisition system 2-79686
- sputtering, rate meas. using laser optical technique 2-93354
- steel, Si, grain oriented, laser processing for reducing core loss 2-72255
- storage rings, electrons polarisation using free electron laser 2-64711
- surface contour meas., interference of diffracted laser beam 2-89687
- surface hardening by CO₂ CW laser irr., numerical anal. 2-116610
- surface shape measurement of imploding hollow plasma liners 2-84594
- surgical applications 2-94154
- Te layers for optical data storage, hole formation process 2-70640
- tetrafluoroethylene-¹³C efficient production in IR laser photolysis of chlorodifluoromethane 2-83390
- thermal diffusivity meas., photoacoustic and mirage effect methods (*French*) 2-65463
- thermoluminescent dosimeters, laser heating technique 2-104971
- trace gases, atm. press. monitoring using tunable diode lasers 2-73690
- transparent media characterization using sub-pico second dye laser 2-108873
- travelling wave ring laser gyro, quantised angular momenta 2-94959
- two-photon holographic recording with CW lasers in 750-1100 nm range 2-60045
- vacuum gap, microparticle detection by laser light scatt. 2-90970
- velocity meas. of blown sand using laser beams 2-89697
- xerography, laser-scanning parameters and latitudes 2-75619
- Al₂O₃, MgO doped, grain boundary meas. technique 2-109812
- Ar, laser induced breakdown at 0.35 μ m 2-103489
- BCl₃, isotopically selective dissociation in strong IR laser field (*Chinese*) 2-64057
- C stripper foils, laser treated, prep. and tests 2-108174
- CO₂ advanced laser rangefinders 2-109012
- CO₂ laser, pulse propag. simulation using saturable absorbers, laser fusion appl. 2-80992
- CO₂ laser beam reflected through atm. folded paths, scintillations 2-58124
- CO₂ laser fibre optics, medical appls. 2-100085
- CO₂ laser fusion driver concepts, advanced 2-97070
- CO₂ laser surgery 2-83628
- CO₂ laser tunable sideband spectrometer for 9-11 μ m region 2-101472
- CO₂ laser with plasma mirror, electron-beam-controlled 2-70582
- CO₂ laser-induced multiphoton dissociation, energy pooling, temp. effects 2-102555
- CdTe-Au(Cd₃P₂), ohmic contact form. by pulsed laser heating 2-104483
- Cr:GaAs HV sparkgap, laser triggered, with high trigger sensitivity 2-86492
- Cs D₂ line profile obs. using a CW semicond. laser 2-113940
- GaAs film, laser CVD deposition and characts. 2-82162
- GaAs solar cells, formed by UV laser chem. doping 2-67853
- Ge, thin film growth by laser induced CVD 2-77752
- H⁺ polarised ion prod. using optical pumping 2-75083
- He-Ne laser light, meas. of acoustic power radiating from linear array transducer 2-81181
- IrO₃, sputtered film, optical writing with laser beam 2-91008
- NH₃-N₂ mid-IR high power tunable laser, development and appl. 2-65257
- Na; CW two-photon transitions, spectral struct. 2-59876
- Na₂, spectra by laser level labelling, two-photon transitions 2-65063
- Nd:YAG laser based radar system for monitoring air pollution (*Japanese*) 2-93974
- Si films, microscopy during laser melting 2-66403
- Si p-i-n position sensitive detectors fabrication using ion-laser method 2-108271
- Si, sinterable ceramic powder prod. from laser driven reactions, process description and modeling 2-111128
- Si, sinterable ceramic powder prod. from laser driven reactions, powder charact. and process variables 2-111129
- Si, surface composition changes due to pulsed laser irr., appl. to surface cleaning 2-76787
- Si, thin film growth by laser induced CVD 2-77752
- Si, UHV-deposited thin films, laser cleaning of (100), (110) and (111) surfaces 2-83250
- Si:B, submicrometer-linewidth doping and relief definition by laser-controlled diffusion 2-98122
- Si/Rh bilayers, optical storage by laser writing 2-81036
- SiC, sinterable ceramic powder prod. from laser driven reactions, process description and modeling 2-111128
- SiC, sinterable ceramic powder prod. from laser driven reactions, powder charact. and process variables 2-111129
- Si₃N₄, sinterable ceramic powder prod. from laser driven reactions, process description and modeling 2-111128
- Si₃N₄, sinterable ceramic powder prod. from laser driven reactions, powder charact. and process variables 2-111129
- SiO₂, surface composition changes due to pulsed laser irr., appl. to surface cleaning 2-76787
- SiO₂ surfaces, fused, CO₂ laser polishing for increased laser-damage resist. at 1064 nm 2-114342

laser beam applications continued

- t₁ extinction coeff. determ. 2-80579
- Te₂, laser induced fluoresc. spectrum studied by Fourier transform spectrometry, RKR pot. and dissociation energies 2-65043
- Ti-Al-V (6.4 wt.%), laser welded, microstruct. and mech. props. 2-77935
- TiO₂ film, laser CVD deposition and characts. 2-82162
- TiO₂, surface composition changes due to pulsed laser irr., appl. to surface cleaning 2-76787
- W atomic beam laser excitation for lifetime meas. in configuration (5d+6s)²6p 2-54806

laser beam effects

- see also laser beam annealing; plasma-beam interactions; plasma production and heating by laser beam
- ¹³⁹La(n,x), laser beam effect (*Russian*) 2-101896
- adsorbed diatomic molecules, dissociation, surface mag. field, laser and phonon continuum effects 2-87063
- aerosol, polydisperse, aqueous, bleaching by 10.6 μ m laser radiation 2-117465
- aerosol, synthetic, aqueous, pulsed clearing by CO₂ laser radiation 2-65279
- air, electric breakdown, low threshold, laser spark initiation, plasma waves 2-91702
- air, laser-induced breakdown, pulse-width and focal-volume depend. 2-66055
- alkali halides, laser induced irreversible absorpt. changes, laser calorimetry study 2-57037
- amorphous thin films, pulsed energy beam crystn., struct. features 2-60888
- antireflection coatings for LiNbO₃ crystals, laser-induced damage 2-65285
- atomic beam, slowing down by reson. laser beam, theory 2-108431
- atomic beams, production, using laser-induced ablation, anal. 2-96776
- atomic deceleration, monochromatisation and trapping in laser waves 2-64929
- atoms, collisional redistrib. of radiation in strong laser field, dynamics 2-59895
- atoms in intense laser beam, continuum Rayleigh scatt. 2-70208
- bacterial plasmids, mechanism of inactivating effect of laser UV radiation 2-111736
- bacteriophages, MS2 and T7, inactivating effect of laser and conventional UV light sources 2-57870
- bichromatic coatings for pulsed laser fusion appls. at 0.53, 1.06 μ m, damage thresholds 2-65283
- biochemical effect of laser radiation 2-100058
- biological tissue scattering media, beam broadening 2-94104
- biology, laser appls., conf., Tbilisi, USSR (Nov. 1980) 2-94902
- biostimulation, hypothetical physical model 2-83600
- blood flow rate over sacral region in rabbits, He-Ne laser influence (*Chinese*) 2-100056
- borosilicate glass, antireflective surfaces for high-energy laser optics, laser damage threshold 2-70641
- brass, α/β phase, laser surface hardening, acoustic emission monitoring 2-67602
- bulk laser damage obs. by photographic technique 2-60141
- catastrophic damage threshold of laser optics; insensitivity to dust and surface defects 2-60147
- cationization in laser desorption mass spectrometry 2-98433
- ceruloplasmin, human, UV laser radiation effect 2-78394
- charged particle scatt. in laser field, variational formulation and low-freq. approx. 2-96689
- charged particle transmission through pot. barrier in superintense laser field 2-61081
- Chinese hamster cells, in vitro culture (*Russian*) 2-88588
- chlorodifluoroethane, CW IR laser induced reaction kinetics 2-105493
- chlorodifluoroethane, multiphoton excitation, collisional relax., laser-excited fluoresc. and optoacoustic spectra 2-96666
- chlorotrifluoroethylene, multiphoton excitation, collisional relax., laser-excited fluoresc. and optoacoustic spectra 2-96666
- compound semiconductor film, phase transition triggered by laser irr. 2-98500
- conference on radiation research, Salt Lake City, USA (Apr. 82) 2-112652
- CW beam tuned to exact reson., self-focusing phenomenon 2-102888
- damage thresholds, single-pulse, at short wavelengths 2-75612
- damage vestige structure and spherical aberration correlation 2-65288
- diamond, laser radiation effect on morphological and phys. characts. (*Russian*) 2-71497
- diamond (111), adsorbed H, photoemission and photon-stimulated ion desorpt. study 2-110144
- dielectric sphere in a Gaussian laser beam, radiation press. 2-90968
- disk target, laser generated shock waves, one- and two-dimensional hydro-code calcs. 2-76589
- DNA, light-induced diffusion, theory and automated expt. (*Russian*) 2-88587
- DNA, single-strand breaks formed by ps laser UV irr. 2-116986
- dye molecules in amorphous solids, phonon-induced fluoresc. changes 2-54893
- elastoplastic bodies, stress-strain state in high-power pulsed laser heating 2-114718
- ethanol, liquid, optical breakdown threshold, temperature depend. 2-98156
- ethanol dissociation characts. in strong IR CO₂ laser field (*Chinese*) 2-96652
- eye, permissible exposure normalisation 2-83661
- fibre reinforced resin, laser induced ablation, semianalytical model 2-105171
- fibres, radiation resistant, recent progress 2-114434
- fine-pored filter, gas diffusion, laser radiation control effect 2-97649
- foam target, low density, efficient laser absorpt., obs. and computer calc. 2-90960
- gas atoms, laser cooling by optical freq. shifts 2-59754
- gas diffusion through porous membranes, laser control, phenomenological model 2-55661
- gas heating or cooling using tunable laser radiation 2-54900
- gaseous mixture, nonthermal action of laser radiation, possible expt. proof 2-60717
- Gaussian multimode optical beam thermal self-interaction in a turbulent medium 2-97054
- glass, optical and coloured resist. to 3-nsec. Nd:YAG laser pulses 2-115280

laser beam effects continued

glass exposed to laser radiation, refr. index electrostrictive and thermal change kinetics 2-56018
 glycerine, liquid, optical breakdown threshold, temperature depend. 2-98156
 graphite, reflectivity at 10.6 microns, laser heating effects 2-72442
 haematoporphyrin, laser excitation, energy transfer, appl. to photoco-motherapy 2-62681
 haemocyanin, *Limulus polyphemus*, UV laser radiation effect 2-78394
 high speed photography of laser-induced damage 2-101483
 high-energy laser interaction with aerosols, vaporisation front, solitary wave 2-83941
 iodoform, crystn., 2-photon induced photoconductivity 2-66585
 ion form. by rapid energy transfer, pulsed laser induced desorption 2-115534
 IR dynamic high temp. target irradi., spatial and temporal effects 2-81003
 irradiance scintillation suppression in nonlinear defocusing medium 2-78838
 liquid, laser-produced bubble collapse, shock waves, shadowgrams and holographic interferometric study 2-91521
 liquids, laser-induced breakdown, self-focusing and spot-size depend. 2-65320
 marine dinoflagellate, laser-induced bioluminesc. 2-105755
 material processing, overview 2-90913
 materials irradiation, heat conductivity models (*German*) 2-86021
 MBBA, oriented nematic liq. cryst., effect of light-wave field and thermal-lens effect 2-91776
 metal, transient Nernst-Ettingshausen effect of hot electrons (*Russian*) 2-115732
 metal damage by pulsed CO₂ laser radiation 2-66049
 metal film-semiconductor system, heating by EM radiation 2-93332
 metal films, UV laser photodeposition, nucleation mechanism study 2-105067
 metal mirrors, pulsed laser initiation of surface plasma, exoelectron emission 2-60144
 metal surface, electron emission under pulsed laser irradi. 2-83010
 metal surface, laser pulse interaction, plasma evolution process 2-82961
 metal surface, laser stimulated nonequilibrium EM emission 2-87915
 metal surfaces, damage thresholds for short pulse IR lasers 2-108923
 metal-coated optical plate, thermally induced laser interf. and birefr. 2-108928
 metallic components under high stress, surface thermal treatment by laser radiation (*Rumanian*) 2-99600
 metallic surfaces, laser irradiated, regrowth, surface nonuniformities and coupling phenomena 2-61030
 metals, electron emission during laser bombardment, time of flight energy meas. 2-62023
 metals, laser evaporation, reaction to radiation intensity modulation 2-92171
 micro-materials processing 2-90914
 microscopically inhomogeneous optical media subjected to numerous light pulses, damage statistics 2-76497
 mirror dynamic distortion meas. due to high power CW laser radiation (*Chinese*) 2-97027
 mirrors, repetitively pulsed, thermal distortions, analytical model 2-86022
 mirrors, water-cooled, Fresnel ripple mapping 2-97040
 molecular radiationless transitions, laser field effects, theory 2-90597
 multichannel spark gap triggering by ruby laser via fibre optics 2-97826
 multilayer structure, laser induced local heating, optical energy absorpt. 2-62629
 multilevel systems, refr. index, nonperturbative quantum calc. 2-60053
 narrow-gap semiconductors, surface polariton excitation by laser radiation 2-104264
 nematic liquid crystals, light spot finite size influence on laser induced reorientation 2-76283
 neutron resonant absorpt. by nuclei in laser irradi. crystals, theoretical anal. (*Russian*) 2-69664
 nonlinear acoustic wave excitation by moving, distributed, monochromatic source 2-114513
 nucleic acid bases, high-power UV laser radiation effect, two-stage photodecomposition 2-100066
 octyl-cyano-biphenyl liq. cryst., light spot finite size influence on laser induced reorientation 2-76283
 ocular tissues, laser radiation interaction mechanisms, human exposure limits implications 2-100059
 oil, heavy, heated by laser beam, surface profile, interferometric determ. 2-84693
 optical coating, small absorptions characterisation rel. to laser damage 2-65165
 optical components, production-run, survey of damage thresholds at 532 nm 2-65284
 optical glass, internal damage with 3 ns pulse laser 2-60204
 optical material laser damage, symposium, Boulder, CO, USA (Sept.-Oct. 1980) 2-58546
 optical materials, cryst. and amorphous, light strength approximate evaluation 2-102889
 optogalvanic effect applications to opening switches 2-97824
 organic material pulsed laser heating, optimum energy and duration 2-71499
 organic thin films, laser marking obs., optical storage appl. 2-86064
 painted Al alloy plate, coupling of CW laser radiation, expt. studies 2-90961
 perylene molecules in cadmium arachidate Langmuir film, amorphous, phonon-induced fluoresc. changes 2-54893
 α -phenazine single crystals, pulsed dye laser induced photocond. 2-104422
 photographic recording of laser radiation, contrast reversal 2-97055
 plant growth, N₂ laser irradi. effects 2-62680
 plasma, ionisation threshold intensities, ionisation periods, calc. program 2-109447
 plasma, laser beam scatt. at oblique incidence 2-114984
 plasma-laser interaction, stimulated ion-Compton laser modulation 2-103309
 polyethylene, laser beam scatt. at oblique incidence, plasma hydrodynamics 2-114984
 porous materials, laser radiation effects, geometric characts. of craters 2-71501
 protective eyewear, developments 2-100132
 quartz, CO₂ laser-method, frozen periodic surface struct. 2-110110
 radiometric levitation of micron sized spheres 2-67154

laser beam effects continued

reflectors, coated, laser damage testing at excimer laser wavelengths 2-97028
 retinal tissue damage induced by 6-psec 530-nm laser light pulses 2-57847
 rock volatilisation by laser pulse (micrometeoroid analogue expts.) 2-106567
 semiconductor, free carrier, laser generation of acoustic phonons by optical phonon decay 2-109926
 semiconductor, one-dimensional, laser excitation of surface electronic states 2-56665
 semiconductor superlattice formation by standing laser wave and const. elec. field (*Russian*) 2-105010
 semiconductor surface, picosecond laser damage mechanisms 2-115283
 semiconductors, laser generated carriers by induced lattice temp. gradients 2-56630
 semiconductors, localised laser etching in aq. soln. 2-57498
 shock waves, laser driven, ultrahigh press., review 2-76587
 silicate glasses, destruction by laser beam and compressive stress (*Russian*) 2-99562
 solid transparent materials, laser damage, microdefect characts. determ. from statistical relations 2-70601
 solid-vapour transformation under action of laser or electron beam, spin sublimation regime (*Russian*) 2-81942
 spark in air, laser produced, scatt. and pulse narrowing 2-97057
 sparks, uniform linear filamentary, production technique 2-55801
 speckle motion due to laser light scattering off non-homogeneous media 2-60024
 steel, En8, stainless and C mild, laser surface hardening, acoustic emission monitoring 2-67602
 steel, high-speed, laser strengthening (*Russian*) 2-67625
 steel, phase and struct. transitions caused by laser heating, original struct. effect (*Russian*) 2-77814
 steel, Si, grain oriented, laser processing for reducing core loss 2-72255
 steel, stainless 12Kh18N9T, reflectivity at 10.6 microns, laser heating effects 2-72442
 superconducting film, quasiparticle and phonon nonlinear dynamics 2-87449
 surface-adspecies system, laser/phonon stimulated processes, synergistic effects, master eqn. approach 2-66371
 target temperature distribution generated and maintained by a scanning laser beam 2-90954
 temperature profiles induced by a scanning CW laser beam, theory 2-92028
 thermal lens effect, laser-induced, theoretical model 2-81033
 thermochemical phenomena stimulated by laser radiation 2-111463
 thermoelastic action of high-power pulse-periodic laser radiation on surface of a solid 2-115285
 thin absorbing films, laser induced formation of submicron holes 2-66046
 three-level atom, resonance fluoresc. spectrum numerical results 2-85587
 transparent materials, absorbing defect role in laser damage 2-65287
 transparent thin target, laser irradiated, rear surface temp. meas. 2-57220
 tumour cells, HeLa, ultrashort UV laser pulse action 2-100064
 two-layer structure, scanning electron or laser beam irradi., temp. distrib. calc. 2-92027
 two-level system energy level shift induced by laser pulse train (*Chinese*) 2-96505
 tyrosinase, mushroom, UV laser radiation effect 2-78394
 US coherent shear waves, laser excitation and stimulated Brillouin scatt., theory 2-114365
 UV reflector films, multiple-shot laser damage thresholds at 248, 308 nm 2-65281
 virus capsid destruction by laser radiation 2-100060
 viruses, mechanism of inactivating effect of laser UV radiation 2-111736
 water drop, internal optical field induced by laser action at 0.69 μ m, vapour bubble growth 2-97046
 window materials, optical distortion and far field meas. 2-97041
 yeast cells, lethal effect of high-intensity 266 nm UV laser radiation 2-100065
 Ag mirror, laser damage threshold depend. on wavelength, material, pulse length and prep. method. 2-60143
 Ag surface (111), NO scatt., laser induced fluoresc. 2-99256
 Al alloy 2024-T3, perforated sheets, reinforcement by thermal shock with laser beams 2-116452
 Al alloys, laser irradi. at 0.35 μ m, thermal and mechanical coupling coeffs., expt. and theoretical study 2-86448
 Al target subjected to microsec. pulsed CO₂-TE laser radiation, anomalous behaviour 2-115284
 Al-Cu, ion implanted nonsubstitutional alloy, laser treatment, expt. study 2-86724
 Al-Cu (4 wt.%), laser surface hardening, acoustic emission monitoring 2-67602
 Al-Mn (1.2 at.%), electrochemical behaviour, effect of laser-surface melting 2-57523
 Al-Mn (1.2 wt.%), rapid solidification with pulsed laser, microstructural and surface modification 2-67323
 AlSb film, phase transition triggered by laser irradi. 2-98500
 Ar breakdown by CO₂ laser radiation near metal surfaces 2-97699
 As₂S₃ amorphous film, struct. changes due to laser irradiation and thermal treatment 2-86579
 As₂S₃ film, vitreous, photodarkening value, press. effect 2-61026
 As₂S₃, glassy, photocond. and absorpt. spectra, photoinduced changes (*Russian*) 2-115825
 Au mirror, laser damage threshold depend. on wavelength, material, pulse length and prep. method. 2-60143
 BCl₃ molecule, fluorescence excited by intense IR laser radiation, pulse optical-acoustic-optical effect (*Chinese*) 2-75338
 B₂O₃-K₂O-Ti₂O (14, 1 mol.%) glass, Ti³⁺ centre interaction with laser radiation (*Russian*) 2-105009
 BaTiO₃, ferroelectric transition in superintense laser field 2-61081
 BeO, thermostimulated exoelectron emission, UV and laser irradi. effects 2-99307
 Br₂, steady-state saturated photodissoc. in high-power Ar⁺ laser radiation field 2-96663
 C film formation by laser evaporation and ion beam sputtering 2-116370
 C foils behaviour under laser-induced heat effect 2-66076
 CO, laser-assisted collisional energy transfer between Rydberg states 2-65078
 CO₂ large laser amplifier, in situ optical breakdown 2-102832

laser beam effects continued

- CO₂ large laser system, passive retropulse protection through enhanced optical breakdown 2-102833
 CO₂ laser irradiated target, phenomena study (*Chinese*) 2-109548
 CO₂ radial laser-induced sound wave propag. and vibr. relax. 2-81439
 CaF₂, IR laser-induced desorption of H₂O and hydrocarbons from optical surface 2-115530
 CdSe, absorpt. edge shift, EM wave polarisation effect (*Russian*) 2-104925
 CdSe, laser evaporated neutral components, energy distrib. 2-67156
 Co-Ni-Al-Ti-Co, porous, laser pulse treatment (*Russian*) 2-67355
 Co-Si film, laser melted, lamellar eutectic solidification 2-116431
 Cr films on K8 glass substrate exposed to pulsed laser heating, thermal stresses 2-82113
 Cs₃, selective laser photolysis 2-99696
 CsI spectral continuum, laser induced autoionising-like resonances 2-96650
 CsKr, selective laser photolysis 2-99696
 Cu mirror, diamond-turned, laser-induced damage, spot size dependence meas. 2-114343
 Cu mirror, laser damage threshold depend. on wavelength, material, pulse length and prep. method. 2-60143
 Cu mirrors used in CO₂-ICF laser systems, optical damage limitations 2-60145
 Cu with adsorbed CO, laser flash desorption, surface diffusion 2-87039
 Cu-Al, impedance-match experiments using high intensity lasers 2-76588
 Cu-Al-Fe, surface oxidation, suppression during laser surface treatment 2-83294
 Cu-As-Se glassy films, photoconductivity and optical absorpt. (*Russian*) 2-104516
 Cu-Sn, porous, laser pulse treatment (*Russian*) 2-67355
 Fe, local case-cementation in conditions of pulse laser heating and fast hardening (*Russian*) 2-62270
 Fe, twinning by laser generated shock waves 2-76456
 Fe-Al bronze, laser-surface-melted self-quenched, cavitation erosion 2-76491
 Fe-Ni, laser surface alloying, mass transport effects, theory 2-93660
 Fe₃B₁₇, amorphous struct. formation on laser irradi. 2-82960
 Ga_{1-x}Al_x heterostructure diodes, laser irradi., electroluminescence emission 2-82926
 GaAs, decomposition due to laser irradi. 2-93331
 GaAs, i-n heterostruct., low temp. diffusion, laser plasma pulse stimulated 2-56263
 GaAs, laser beam erosion, role of thermochemical effect 2-61028
 GaAs ohmic contact, laser alloying 2-61024
 GaAs, photocond. at high optical excitation rates, struct. disorder effect 2-115818
 GaAs, surface (110), oxidation, low intensity laser radiation effect 2-111341
 GaAs, surface ripples under picosecond laser illumination 2-81822
 Ge, absorpt. calorimetry and laser induced damage threshold meas. 2-60146
 Ge, amorphous, laser irradiated, struct. change features 2-76493
 Ge amorphous film, crystallisation boundary dynamics in CW laser irradi. 2-81680
 Ge, diffraction grating, high-density laser-induced transient plasma, picosecond dynamics 2-77628
 Ge film, laser-crystallised, crystallite morphology and defect struct; TEM and SEM study 2-64402
 Ge, hot plasma generation by intense 2.7 μ m laser pulse interaction 2-66582
 Ge, IR study of laser generated carriers 2-110859
 Ge, laser pulse interaction, 2.7 μ m 2-77627
 Ge laser windows, thermal runaway 2-81004
 Ge, laser-induced periodic surface damage and radiation remnants 2-98154
 Ge single crystals, optical erosion caused by CO₂ laser pulses 2-87303
 Ge:In(Sb), laser induced enhanced solubility, elec. and Rutherford backscatt. study 2-115416
 Ge:P, ion implanted, elec. props. 2-77089
 Ge-As-Se glass, ion beam deposited, use as optical coating 1 to 16 μ m laser damage 2-65324
 GeSe, amorphous film, struct. changes due to laser irradiation and thermal treatment 2-86579
 GeSe₂ films, amorphous, laser induced optical anisotropy 2-93313
 GeSx, glass, photoinduced EPR meas., dangling bonds role 2-56932
 H atom in high laser fields, space translation method validity using dipole approx. 2-96448
 H₂O, liquid, optical breakdown threshold, temperature depend. 2-98156
 He breakdown by CO₂ laser radiation near metal surfaces 2-97699
⁴He-Ge interface, transient heat transfer and onset of film boiling 2-115482
 Hg_{1-x}Cd_xTe film growth by laser included evaporation and deposition 2-87989
 InGaAsP-InP layers, catastrophic degradation, laser induced 2-61022
 InP (100), laser induced order-disorder transition, LEED study 2-110117
 InSb, Auger recombination rate during intense laser pulse, carrier density depend., reflectivity study 2-67158
 n-InSb, highly nonlinear interactions with picosecond CO₂ laser, electron-hole plasma generation 2-55244
 KBr(Cl), intensity depend. absorpt. at 10.6 μ m, laser damage process 2-60193
 KCl cryst., optical breakdown at localised states 2-82809
 KCl, surface, laser irradi., emission of EM radiation (flashes) study 2-66048
 KCl with adsorbed pyridine, gas-surface interactions, IR laser stimulated 2-87037
 KCl:Rb, pulsed CO₂ laser damage threshold meas. 2-60140
 KCl(Br) crystals irradiated by CO₂ laser pulses, nonthermal nature of generated radiation flashes 2-61995
 K₂PO₄ crystal, plastic flow and optical stability threshold during laser irradiation (*Russian*) 2-71498
 KH₂PO₄ crystal, plastic flow and optical stability threshold during laser irradiation (*Russian*) 2-71498
 KH₂PO₄ laser damage threshold, baking and pulsed laser irradi. effects 2-91007
 LiF crystals, γ -irrad., bulk laser damage threshold meas. 2-86028
 MgF₂ coatings, damage threshold, light wave interf. and film microstruct. influence 2-71500
 Mo, adsorbed CO dissociation, pulsed voltage and pulsed laser atom-probe study 2-76828

laser beam effects continued

- Mo, reflectivity at 10.6 microns, laser heating effects 2-72442
 N₂, electric breakdown meas., focused laser irradi. induced at 1.064 μ m 2-55800
 N₂-O₂ mixture, breakdown by CO₂ laser radiation near a metal surface 2-97700
 NH₄H₂PO₄ crystal, plastic flow and optical stability threshold during laser irradiation (*Russian*) 2-71498
 Na atomic beam, velocity distrib. deform. by reson. laser radiation press. 2-108429
 Na, laser deceleration and velocity bunching 2-54825
 NaCl crystals irradiated by CO₂ laser pulses, nonthermal nature of generated radiation flashes 2-61995
 NaCl, intensity depend. absorpt. at 10.6 μ m, laser damage process 2-60193
 NaCl, laser-induced breakdown, pulse-width and focal-volume depend. 2-66055
 NaCl, laser-induced primary defect form. role in optical breakdown 2-66057
 NaCl, pulsed CO₂ laser damage threshold meas. 2-60140
 NaCl, surface, laser irradi., emission of EM radiation (flashes) study 2-66048
 NaCl, tightly focused intense laser beam deform., multiphoton-polaron and avalanche breakdown models 2-66056
 Nb-Fe inhomogeneous system, laser irradi., internal field at ⁵⁷Fe, atom redistrib. and antiferromag. suppression (*Russian*) 2-66929
 Ni film-electrolyte system, transient processes initiation by IR laser pulse 2-82046
 Ni, porous, laser pulse treatment (*Russian*) 2-67355
 Ni single crystal, laser irradiated, epitaxial regrowth and defects 2-61031
 Ni, surface oxidation, suppression during laser surface treatment 2-83294
 Ni with adsorbed pyridine, gas-surface interactions, IR laser stimulated 2-70737
 Ni-Hf, surface oxidation, suppression during laser surface treatment 2-83294
 Ni₂Cr, laser damages, comparison with tensile deform. and neutron irradiation effects 2-66047
 O₂, electric breakdown meas., focused laser irradi. induced at 1.064 μ m 2-55800
 PbO-SiO₂ glasses, nonlinear colouring and destruction under multiphoton absorpt. conditions 2-108933
 Pd₈₀Si₂₀Cu₂ eutectic, laser beam interaction 2-99435
 SF₆ diffusion in He buffer due to CO₂ laser radiation (*Russian*) 2-109444
 SF₆, highly vibrationally excited, single photon excimer laser photodissoc. 2-96664
 Se, amorphous film, photo-induced stress relax. obs. 2-66044
 Se amorphous film, surface relief form. by laser bombardment 2-86728
 Se-Te bilayers, struct. changes by laser writing, TEM study 2-91009
 Si, Ar⁺ laser induced CVD from SiH₄ 2-83030
 Si, B diffusion by laser pulse irradi. (*Chinese*) 2-71717
 Si, CW laser scanned, temp. profile calc. 2-92028
 Si, cryst., laser quenching induced transition to defective cryst. and amorphous state 2-92030
 Si crystal surface picosec.-laser-induced phase transform. 2-75616
 Si, crystn., picosecond laser pulse irradiation 2-66043
 Si evaporated and sputtered films, multithreshold HF/DF pulsed laser damage meas. 2-65286
 Si, excess minority carrier transient decay, surface recomb. effects, laser pulse sample heating 2-77086
 Si film, CW laser melting, threshold behaviour 2-56411
 Si film, patterned and CW laser crystallised on amorphous substrate 2-61315
 Si film, recrystn. on amorphous substrate by doughnut shaped CW laser beam 2-56377
 Si film on Si₃N₄/SiO₂ double insulating layer, CW laser recrystallisation, bipolar transistor fabrication 2-82154
 Si films, on glass, laser crystn. 2-66382
 Si films over SiO₂ patterns, laser-induced lateral vertically-seeded epitaxial regrowth 2-87091
 Si, free-carrier gratings, diff. efficiency and decay times meas. 2-86087
 Si, laser excited, electronic struct. dynamic response, photoemission study 2-72606
 n-Si, laser irradi., shock wave defects, photocond. and annealing study 2-56017
 Si, laser pulse processing, heterogeneous nucleation of spatially coherent damage struct. 2-56020
 Si, laser-induced acceptor defects, H₂ passivation, DLTS study 2-115697
 Si, laser-induced epitaxial growth on SiO₂ with locally varied encapsulation 2-93448
 Si, laser-irradiated, reflectivity, transmission and electron-hole plasma, ps time-resolved meas. 2-115281
 Si, oxidation, laser enhanced, wavelength depend. 2-111343
 Si, polycrystalline, grain boundary recombination rate determ. by scanned spot excitation methods 2-115774
 Si, recrystallised CVD film; laser irradi., surface topography characts. 2-82086
 Si, self ion implanted, residual lattice disorder after pulsed laser irradi. 2-76494
 Si solar cells, fabrication by laser induced diffusion from dopant gas 2-57697
 Si, surface ripples under picosecond laser illumination 2-81822
 Si, vac. deposited amorphous, local anomalous oxidation and recrystn. by laser irradiation 2-77728
 Si:B, diffusion doped, CW CO₂ laser irradi., sheet resistance depend. on power density and scanning vel. (*Chinese*) 2-109827
 Si:B films, plasma deposition using laser microreaction 2-56375
 Si:BF₃, single cryst., pulsed laser irradiated, ion implanted, F conc. profile 2-115263
 Si-metal bilayer, laser writing for optical storage, TEM and electron diff. study 2-91011
 Si-Pd interface, silicide reactions induced by millisecond laser pulses, Rutherford backscatt. study 2-76495
 Si-SiO₂, Si seeded oscillatory epitaxial growth by CW laser irradi. 2-99329
 Si₃N₄, SiC, hot pressed or reaction-bonded, effect of laser radiation 2-83174
 SiO₂, fused, CO₂ laser polished, 1.06 μ m laser-induced breakdown 2-60142
 SiO₂, fused, laser-induced breakdown, pulse-width and focal-volume depend. 2-66055

laser beam effects continued

- SiO₂ interface degradation and minority carrier lifetime effects of laser beam processing 2-61609
 SiO₂ surfaces, fused, CO₂ laser polishing for increased laser-damage resist. at 1064 nm 2-114342
 Si(111), laser induced oxidation 2-99568
 Te films, sputtered and evaporated, struct. changes by laser writing, TEM study 2-91009
 ThF₄/ZnS coated Si and SiO₂ substrates, small-scale laser induced damage obs. and morphology 2-81819
 Ti-Al-V surface, response to XeF laser pulse 2-110989
 TiO₂ coatings, damage threshold, light wave interf. and film microstruct. influence 2-71500
 TiO₂ dielectric coatings, optical strength, water adsorption process influence 2-70638
 TiO₂/SiO₂ multilayer dielectric coatings, damage thresholds in CW lasing 2-86019
 U hollow-cathode discharge, optogalvanic effect, mechanistic study 2-91696
 UF₆, laser induced emission spectrum 2-96587
 UO₂ surfaces, laser irr., evaporation mechanism and kinetics 2-93330
²³⁵U_{fm} internal conversion, lifetime and spectra, laser irr. effect 2-74746
 V₂O₅, emission by laser produced plasma 2-109830
 W field emission, photoinduced, linear intensity depend. 2-87956
 W heated surface, SF₆ form. SF₆%-form. 2-99233
 W hot surface, laser-activated chemisorption of SF₆ mols. 2-56366
 W, reflectivity at 10.6 microns, laser heating effects 2-72442
 Xe breakdown by CO₂ laser radiation near metal surfaces 2-97699
 ZnO surface, laser irradiated, neutral particle emission induced by high density electronic excitation 2-77629
 ZnS film on CdS substrate, laser film thickness modulation and small pattern generation 2-66396
 ZnS, ZnS/ThF₄ films, impurity initiated short pulse laser damage 2-65282
 ZnS-SrF₂ nine-layer dielectric mirrors, radiation strength 2-70598
 ZnSe, absorpt. calorimetry and laser induced damage threshold meas. 2-60146
 ZnSe crystals, damage threshold, struct. defect. influence 2-61029
 ZrO₂ films, impurity initiated short pulse laser damage 2-65282

laser beam machining

- fusion targets, fabrication using laser and spark erosion machining 2-80194
 industrial uses, of lasers 2-80981
 metal processing with gas transport CO₂ laser, cutting and heat treating 2-116611
 metal surface laser hardening, Gaussian and Doughnut beam, effect of heat source pattern (*Japanese*) 2-78008
 organic material pulsed laser heating, optimum energy and duration 2-71499
 Al films, laser machined holes, TEM, SEM and numerical study 2-86725
 Cr films, laser machined holes, TEM, SEM and numerical study 2-86725
 Nd:YAG laser, CW pumped acousto-optically Q-switched (*Czech*) 2-85987

laser beam welding

- industrial uses, of lasers 2-80981

laser beams

- see also holography; laser frequency stability; Schwarz-Hora effect*
 aberrations in high power laser systems 2-97034
 absorption measurements of laser optical materials by interferometric calorimetry 2-97044
 aero-optical phenomena rel. to laser beam quality, overview 2-97036
 amplification by dynamic holography in PLZT ferroelec. ceramic 2-108835
 amplification regime, reversing mirror charact. control 2-81026
 amplifier design calculation accuracy based on the gain diagram 2-96989
 amplifiers with wavefront reversal, max. output parameter estimate 2-55109
 Antares CO₂ laser system automatic opto-mech. beam alignment system 2-108894
 apodised laser beam spatial filtering 2-81010
 astigmatic laser beam correction (*Chinese*) 2-97025
 atmosphere, integrated approach to optical propagation in low visibility weather conditions 2-106316
 atmosphere propagation, meas. of turbulence-induced beam spread and wander at 1.06, 3.8 and 10.6 μ m 2-117458
 chemical CW laser outcoupled beam diagnostic system 2-108921
 coherence control by US waves (*Japanese*) 2-86025
 coherent light pulse width meas. technique 2-75613
 combiner, laser beam, appls. to space-borne laser communications 2-109077
 compensation of laser amplifier trains with nonlinear conjugation techniques 2-70619
 CW mode-locked lasers, optical phase conjugation generation in ruby 2-60177
 digital meas. instruments for laser mean power and energy standards 2-114345
 doppler method of measuring the time coherence of a laser 2-86030
 electron-beam-discharge lasers, pulsed beam divergence calc. 2-70596
 energy meas. using calorimeter with conical chamber, absorption coeff. determ. 2-85991
 extracavity laser band-shape and bandwidth modification 2-97021
 far field laser beam meas. by array imaging, laser heating of plasma expt. (*Chinese*) 2-55232
 far-field characterisation 2-114341
 femtosecond pulse compression, self-phase modulation in optical fibre 2-81034
 fluctuations in model turbulent medium, longitudinal correlation 2-102720
 focal spot dimensions of quasispherical ray bundles 2-102717
 focal-plane flattop laser beam profiles, generating technique 2-55236
 focusing onto microscopic objects, theory 2-86031
 frequency standard based on mono-oscillator 2-89656
 fusion beam train phase aberration correction using deformable mirror adaptive optics 2-97031
 Gaussian beams weakly diffracted by circular aperture, changes in characts. 2-55060

laser beams continued

- Gaussian laser beam, focal shift and effective Fresnel number concept 2-86018
 geometrically outcoupled laser systems, limiting apertures 2-90953
 glass laser system, high-power, light pulse diff. propag. 2-55072
 glass optical system transforming laser beams, microinclusion influence 2-55238
 high power laser beam conditioning, adaptive optics problems and prospects 2-102834
 high power laser optical systems, flow field effects, thermal blooming control 2-97037
 high-gain amplifier systems stabilised by saturable absorbers, efficiency optimisation, model calcs. 2-97060
 high-power, optical material advances 2-81006
 highly stable laser system with pulse length controllable from 100 psec. to 10 nsec. 2-75605
 hole grating beam sampler, wavefront distortion, exact analysis 2-97039
 intracavity phase conjugating mirror for beam distortion reduction 2-102824
 IR high power picosecond radiation generation, by ultrafast optical switching 2-86063
 IR radiation beam divergence meas., by two section method 2-65277
 jitter debugging in two laser experiments 2-55237
 Kerr media, artificial, laser beam CW self-focusing and self-trapping 2-91004
 large diameter beam expanders, interferometry 2-97038
 large solid-state laser systems, aberrations and focusability 2-97035
 local optical correction system, beam control concept 2-102835
 metrological provision for laser radiation pulse power meas. 2-90962
 multi-wavelength fusion laser, beam diagnostics 2-55234
 multimode laser field phase fluctuations in turbulent atm. 2-97052
 multipass cavity, laser beam polarisation modifications between two spherical mirrors 2-102830
 multipass laser beam propag. through laboratory-simulated atm. turbulence, irr. fluctuations, statistical meas. 2-90812
 multiple mirror telescope performance, piston and tilt errors effects 2-97142
 nonlinear correlation method using multiphoton ionisation for UV ultra-short pulse meas. 2-81015
 optical analysis and alignment appls. using IR Smartt interferometer 2-101453
 optical fibres, coherence of propagating laser beam 2-86116
 optical waveguide theory, introduction, book 2-58573
 phase aberrations and laser output beam quality 2-97032
 phase locking by an injected signal 2-108927
 phase-modulated, total freq. nonsteady generation 2-108960
 phased array semiconductor laser, lateral beam collimation 2-114307
 photorefractive effect for laser beamsteering 2-90955
 picosecond laser pulse shortening using controlled self-focusing in CS₂ (*French*) 2-65317
 picosecond pulse time struct. conversion into spatial pattern, sum freq. photography 2-114364
 piecewise-continuous high-power laser medium, small-scale self-focusing, nonlinear loss reduction 2-97126
 pinhole radius, optimal, for fundamental mode operation 2-90942
 point splitting, coherent optical method (*Ukrainian*) 2-102837
 polarisation, bistable behaviour obs. 2-97050
 positive paper for laser light recording in student laboratory expts. 2-53470
 power absorbed by cooled surfaces, calorimetric meas. 2-86027
 power fade, system and atmospheric effects 2-100547
 power measurement in dual-beam laser scanner 2-95423
 profile shaper, CO₂ laser beam, with interlaced binary diffraction gratings 2-108920
 propagation in strong turbulence, physical implications of extended Huygens-Fresnel principle 2-65170
 propagation in turbulent atmosphere, correl. of shifts of optical images 2-117464
 pseudo-conjugation/compensation of high-power optical trains, precision corner, lens and K-mirror arrays 2-102899
 pulse generator, ultra low jitter synchronised 2-108905
 pulse laser energy meas., working standard 2-53724
 pulse laser energy meas. using optical meter based on optoacoustic phenomenon 2-55235
 pulsed Gaussian-beam spot size meas. using optically induced phase transform on Si single crystals 2-75616
 pulsed laser wavefront correction using hologram components 2-85911
 pulsed laser wavelength calibration, use of optogalvanic effect and U atlas 2-71270
 pulsed visible laser flow and acoustics rel. to beam quality 2-97042
 pulses, time parameter control using fast-response electrooptic deflectors, 10⁻¹¹-10⁻⁸ sec. range 2-97164
 pulsedwidth, ultrashort, real-time meas. technique 2-108925
 pyromagnetic detection, reproduction of free laser generation pulse (*Russian*) 2-60138
 quality characteristics, limitations on RMS phase use 2-97033
 radiation energy meas., working standard errors determ. 2-84591
 radiation in turbulent medium, thermal self-interaction influence on ang. spectrum and coherence 2-65280
 radiation meas. by calorimetric wattmeter 2-81007
 random light beams in absorbing media, correlation radius decrease obs. 2-91005
 real-time visual display of a high-power laser-beam 2-65275
 retropulse isolation, LiF spatial filter aperture for laser initiated vacuum plasma shutters 2-97162
 retroreflecting mirror resonator, laser radiation angular distrib. form. characts. 2-70587
 reversal of laser wavefront (*Czech*) 2-86055
 rotating linearly polarised light source 2-55286
 self-focusing, small-scale, suppression by rot., shaking and rocking of laser beam 2-81035
 semiconductor laser, picosecond pulse generation by combined DC and microwave current injection 2-108878
 shock wave expts., out-of-focus intensity distrib., focal number and aberration effects 2-97030
 single ultrashort pulse duration meas. by second harmonic method in uniaxial, biaxial nonlinear crystals 2-55267
 spatial analysers metrological certification using optical generator with normalised characts. 2-90963
 spatial correlation, fourth-order 2-65161
 spherical aberration in beam optical systems 2-80903

laser beams continued

standard meas. facility, laser emission power relative density distribution 2-53725
 standard of laser radiation mean power unit 2-53723
 subnanosecond high-contrast pulse production using stimulated Mandelstam-Brillouin sca. t. (*Russian*) 2-70609
 temporal pulse-shaping for laser-fusion experiments using a cavity-dumped Q-switched oscillator 2-64637
 thermal-blooming time constant 2-75639
 thermally bloomed oscillating atm. effect on high-power laser beam 2-94491
 transmission through scattering medium, light field outside geometric propagation zone 2-108924
 tunable difference frequency oscillator in 3.8-6.0 μm range with high pulse repetition freq. 2-114374
 ultrashort pulsewidth measurement, pulse variations effects 2-86034
 unit-length standards, Soviet meas. standards 2-58773
 units transmission of relative distribution of power density, laser radiation displacement influence 2-86023
 UV CW radiation generation by sum-freq. mixing in an external cavity 2-90982
 UV lasers, pulse width meas. using multiphoton ionization autocorrelation 2-60137
 water-droplet aerosol, illumination by laser probe, refractive props. of transparent region 2-55074
 wavefront coherence depend. on focussable power, optical spatial filter characts. (*Chinese*) 2-60219
 wavefront distortions in power optics, conf., San Diego, CA, USA (Aug. 1981) 2-94890
 wavefront reversal by stimulated Brillouin scatt., laser correction and pulse compression appls. 2-70620
 wavefront sensing and control aspects in a high energy laser optical train 2-102836
 wavelength meas. using multibeam Fizeau interferometer 2-60111
 wavelength measurement of highly stable lasers, errors identification and elimination 2-60134
 CO₂ amplifier with saturating absorber, pulse shaping 2-114325
 CO₂ Antares laser, alignment gimbal positioner 2-102814
 CO₂ electroionisation laser, physical processes numerical simulation, laser radiation angular divergence 2-75554
 CO₂ fast-circulation laser with unstable cavity resonator, radiation dynamics 2-75600
 CO₂ high-pressure laser, short light pulse generation, coherent effects role 2-70540
 CO₂ large laser, design and construction of short pulse front end 2-102815
 CO₂ laser beam diagnostics and alignment using high-damage threshold IR Smartt interferometer 2-101452
 CO₂ laser fusion systems, phase aberrations and beam cleanup techniques 2-102816
 CO₂ laser light, low-reflectance absorber 2-55239
 CO₂ laser polarised performance determ. method (*Chinese*) 2-65272
 CO₂ laser power transmission by single cryst. CsBr fibres 2-81085
 CO₂ nanosecond laser pulses, temporal shaping in multiphoton saturable absorbers 2-102828
 HF simple pulsed laser for optical expts. 2-55181
 I high power Asterix III laser, status and prospects 2-97063
 KrF laser, tunable, with narrow bandwidth and diffr. limited beam divergence 2-75597
 KrF laser pulse compression in plasma theory 2-90950
 N₂ laser, transversely excited, beam shape meas. 2-55233
 N₂ laser cavity, transversely excited, ionising waves of potential gradient 2-90940
 Na vapour, freq.-angular diffusion of monochromatic radiation 2-108983
 Nd:garnet CW laser with nonplanar ring resonator, spatial and polarisation characts. 2-70570
 Nd:glass laser amplifier efficiency, radiation freq. shift effect 2-65253
 Nd:glass laser amplifier with spatial filters and final disc stage, exit-beam brightness restriction 2-86020
 Nd:glass six-beam high-power laser, output beam characts. 2-55186
 Nd:phosphate glass superluminesc. laser with variable radiation pulse length 2-75589
 Nd:YAG CW laser with nonplanar ring resonator, temporal and spectral characts. 2-70571
 Nd:YAG laser beam, weak, simulation using LEDs 2-70602
 Nd:YLiF active mode-locked/Q-switched oscillator, temporal shape analysis 2-70592
 Nd³⁺:YAG CW laser with optical delay line, constrained mode locking, pulse length meas. 2-75608

laser cavity resonators

amplifier design calculation accuracy based on the gain diagram 2-96989
 anisotropic cavity laser, emission polarisation control 2-75602
 anisotropic open waveguide, effect of discontinuities on modes 2-60235
 anisotropic resonator laser with condensed active medium, absorpt. cell influence in longit. mag. field 2-70588
 annular laser-resonator alignment testing, comprehensive control using software system 2-108908
 aspherical open optical cavity props. 2-108914
 azimuthally polarised laser modes, phase shifts produced by coatings 2-97016
 biconical reflectors, single-layer-coated, polarisation-preserving 2-97150
 bistable behaviour in laser polarisation, intracavity birefr. explanation 2-97050
 bistable injection laser, interaction with external optical cavity 2-55210
 Brewster-angled semiconductor laser mode locking 2-80952
 cavity-dumped passive and synchronous hybrid mode locking for IR subpicosecond pulses 2-97020
 CW laser, mode selection and synchronisation, spatial hole-burning effect 2-55229
 7-diethylamino-4-methylcoumarin dye laser, N₂ laser pumping, nearly transform-limited pulse generation 2-60113
 diode laser, feedback noise rel. to carrier-induced index change 2-55162
 diode lasers with optical feedback spectral characts. 2-55161
 discharge laser, externally sustained, elec. field computation in cavity 2-90948
 dye laser, flashlamp-pumped, narrow linewidth operation 2-108899
 dye laser, multimode, parasitic selection in intracavity laser detection spectroscopy 2-55217
 dye laser, passively mode locked, stability and astigmatic analysis of six-mirror ring cavity 2-60120

laser cavity resonators continued

dye laser, powerful, with unstable resonator (*German*) 2-80986
 dye laser, pulsed, tuning using compound cavity 2-75601
 dye laser, single mode, picosecond short cavity, piezoelectrically tuned 2-65243
 dye laser multimode generation spectrum, depend. on gain and loss spatial localisation 2-55216
 dye laser pulses, synchronously mode-locked, generation process in linear cavity config. 2-55228
 dye laser with ultrashort cavity, optimum operational parameters calc. 2-97002
 dye lasers, Cu laser pumped, prism-expander and grazing-incidence grating cavities 2-102823
 dye lasers, single-mode wedge, continuous-scanning system 2-75617
 dye pulsed laser, freq. characts. and linewidth of passive cavity (*Chinese*) 2-60121
 dye pulsed laser, intracavity absorpt. and self freq.-locking 2-70559
 electron-beam-discharge lasers, pulsed beam divergence calc. 2-70596
 extracavity laser band-shape and bandwidth modification 2-97021
 fluoromethane subMM laser using new resonator type 2-81000
 four-wave combination interaction in field of counter-running light waves, theoretical and expt. study (*Russian*) 2-70625
 Fraunhofer diffraction, beam approx. from two longitudinally separated slits, unstable-resonator calc. appls. 2-60013
 free electron hybrid laser device, GYROFEL, estimation of intracavity power levels 2-108991
 garnet continuous laser with a lightguide resonator 2-60125
 gas ring laser oppositely travelling wave freq. diff. splitting 2-81008
 geometrically outcoupled laser systems, limiting apertures 2-90953
 injection laser, pulsed, self-modulated light output with optical feedback 2-75610
 injection lasers, tunable, with external resonator, asymm. of some characts. 2-55155
 instabilities in coherently driven two-photon absorption within a ring cavity 2-86040
 intracavity Fabry-Perot interferometer, parameter optimisation calcs. 2-70585
 intracavity phase distortion correction using passive phase conjugate reflector 2-97004
 intracavity SHG at 0.66 μ wavelength using Q-switched pulsed Nd³⁺:YAG laser 2-86051
 intracavity stimulated temperature scatt. of light, wavefront reversal 2-108969
 intracavity phase conjugating mirror for beam distortion reduction 2-102824
 intrinsic bistable ring cavity bifurcations, transverse beam var. effect 2-81016
 lenslike internal modulation of laser modes, theory and expt. 2-97011
 long laser cavity, mode-locking to produce high-energy photon beam 2-102827
 methyl fluoride, isotopic ¹³CH₃F, optically pumped pulsed far IR laser, cavity operation 2-97009
 mode calculation using WKB method 2-108915
 modulation resonance, atomic and cavity freq. coincidence case 2-75552
 multi-aperture optical cavities, transverse mode struct. props. 2-108911
 multipass cavity, laser beam polarisation modifications between two spherical mirrors 2-102830
 multistep laser pulse generation using passive electrical networks in cavity-dumped Q-switched oscillator driver 2-81005
 nonplanar double-heterojunction and large-optical-cavity laser structs., mode characts. 2-80968
 open resonators, diffr. losses, geometric approach 2-55219
 open resonators, interference effects between modes 2-55214
 optically pumped far IR rooftop resonator, output stability and polarisation meas. 2-86006
 phase conjugate mirror optical resonators, orthogonality props. 2-65262
 phase conjugate mirror resonator 2-70623
 phase conjugate resonators, mode-locked laser developments and appls. 2-114331
 phase inhomogeneities effect on unstable resonator props. 2-108910
 phase-conjugate resonators, intracavity amplitude perturbations, numerical anal. 2-65261
 phosphate glass active and active-passive mode-locked pulsed lasers (*Chinese*) 2-90921
 pinhole radius, optimal, for fundamental mode operation 2-90942
 polarisation coupled crossed-Porro resonator comparison with conventional resonator, airborne depth sounding appl. 2-70603
 prism, compound total internal refl. for use in laser resonator 2-90947
 pulsed lasers, with time depend. output mirror reflectivity, energy output optimisation calc. 2-65263
 pumping cavity radiation transfer efficiency, TI-59 programs 2-97008
 Q-switching of resonator using VO₂ film metal-semicond. phase transition 2-90952
 rectangular waveguide resonators with conventional and phase-conjugate mirrors, mode discrimination, coupling losses 2-90941
 reflexicon systems, wavefront aberrations 2-75604
 reflecting grating in laser resonator, freq.-selective losses 2-65342
 retroreflecting corner cube mirror resonator modes 2-80999
 retroreflecting element sets forming resonator mirrors, oscill. modes 2-70651
 retroreflecting mirror resonator, laser radiation angular distrib. form. characts. 2-70587
 rhodamine 6G CW dye laser, cavity length detuning effects, simultaneous autocorrel. and synchroscan streak camera meas. 2-97045
 rhodamine 6G CW dye laser design for intracavity spectroscopy 2-114316
 rhodamine 6G CW dye laser pumped by sinusoidally modulated radiation, pulse operation and appls. 2-96946
 rhodamine 6G dye laser, lamp-pumped, using an interf. polarisation filter 2-96943
 rhodamine 6G dye laser, single-mode tunable, high-efficiency 2-96941
 rhodamine 6G dye laser spectrum, gain determ. using the interf. struct. 2-114264
 rhodamine 6G jet dye laser, mode-locked saturable absorber optimal operating regime 2-96944
 rhodamine 6G picosecond gain spectroscopy during mode-locked laser action 2-89827
 rhodamine 6G pulsed dye laser polarisation 2-97064
 rhodamine 6G tunable dye laser pumped by pulsed Xe ion laser (*Chinese*) 2-90922

laser cavity resonators continued

- ring optical resonator with flat mirrors, threshold gain study (*Russian*) 2-86013
- ring resonators with moving, reflectors, eigenfreqs. calcs. 2-75603
- ring-laser opposing-wave frequencies, diffraction splitting, active element extent and transverse inhomogeneity effect 2-81009
- ruby Q-switched laser cavity, self-induced ellipse rot. and self-focusing effects 2-102798
- self-injection tuning and amplification method 2-55212
- semiconductor diode gain element in series with optical fibre, external cavity controlled operation 2-55221
- semiconductor interferometric laser, mode selection and tuning props. meas. 2-97000
- semiconductor interferometric laser, monolithically integrated cavity struct. 2-60127
- semiconductor laser, mode selection and tuning of dispersive extra cavity (*Chinese*) 2-60123
- semiconductor lasers, effect of superluminescence on modulation response 2-65214
- short pulse generation, review 2-108898
- solid-state CW laser in kinematic mode-locking regime, cavity mirror translational motion 2-75606
- spatial multimirror optical resonator geometry influence on sensitivity to misalignment 2-97017
- spherical optical resonator, interf. function, diffraction correction for length meas. by mirror displacement (*German*) 2-69246
- stationary transverse mode completeness in an optical cavity 2-86009
- switching wave control device 2-86017
- temporal pulse-shaping for laser-fusion experiments using a cavity-dumped Q-switched oscillator 2-64637
- tetrafluoromethane high-repetition-rate laser, 16 μm 2-75598
- thermal distortion insensitive resonators for TEM₀₀ solid state lasers (*Rumanian*) 2-90944
- thermally stable parallel-plane resonator theory (*Chinese*) 2-55211
- transparent waveguide resonator, amplification by refl. from inverted medium 2-70562
- transverse DFB cavity laser, stable two-dimensional oscillation 2-80949
- transverse mode struct. of optical resonator, derivation by Schrodinger eqn. 2-102825
- tuned optical radiation oscillator, intracavity vibr. stimulated Raman scatt. (*Russian*) 2-86012
- tuning apparatus using microprocessor-controlled laser grating system 2-97047
- two-mirror laser, high-freq. automodulation of radiation using nonlinear delayed action unit 2-108916
- ultrashort cavity laser, optimum operational parameters calc. 2-97002
- unstable confocal resonators, Strehl ratio, spherical aberration anal. 2-65260
- unstable optical resonators, design considerations 2-97007
- unstable resonator with aspherical mirrors 2-108995
- unstable ring resonator with self imaging aperture, mode anal. 2-108907
- UV CW radiation generation by sum-freq. mixing in an external cavity 2-90982
- waveguide resonator, multimode fibre, mode selection and freq. tuning 2-90945
- waveguide resonators, with phase-conjugate mirror 2-60126
- weak irregular inhomogeneity influence on laser resonator mode structure 2-55220
- AlGaAs CW injection laser with external resonator, emitted radiation mode beats and fluctuations 2-65228
- AlGaAs laser amplifier, Fabry-Perot cavity type, noise characts. 2-80958
- AlGaAs-GaAs injection laser with external dispersive cavity, bistable operation and spectral tuning 2-70566
- Al_{1-x}Ga_xAs oxide-defined, narrow-stripe, large-optical-cavity laser, thermal waveguiding obs. 2-97001
- Al_{1-x}Ga_xAs terraced-heterostruct. large optical cavity diode laser, LPE growth and high-power CW single-mode operation 2-114298
- Ar⁺ laser, self-modulation by resonator loss control 2-65266
- Ar-N₂ laser pumped by intense proton beam 2-114256
- CO gasdynamic laser gain kinetics 2-90877
- CO tunable sealed laser using selective, nonselective resonators, spectral and energy characts. 2-55131
- CO₂ 16- μm gasdynamic laser in intracavity cascading mode 2-96888
- CO₂ CW sealed high-pressure laser, high efficiency 2-55110
- CO₂ CW unstable resonator laser, output instability, mode-medium interactions 2-102764
- CO₂ electroionisational laser, resonator, wavefront inversion efficiency, theory 2-114381
- CO₂ fast-circulation laser with unstable cavity resonator, radiation dynamics 2-75600
- CO₂ frequency-switchable laser with intracavity CdTe modulator, design and performance 2-60093
- CO₂ frequency-switching waveguide laser for atm. pollution monitoring 2-96893
- CO₂ high power laser, direct narrow line tuning 2-96980
- CO₂ laser, etalon-coupled, cavity dumping and coupling modulation techniques 2-114334
- CO₂ laser, high power continuous wattage (*Japanese*) 2-70583
- CO₂ laser, wavelength selection and intracavity modulation using elec. controlled echelette grating 2-65268
- CO₂ laser two-wavelength and power-balanced oscill., differential absorpt. meas. appl. 2-90964
- CO₂ laser with plasma mirror, electron-beam-controlled 2-70582
- CO₂ pulse generation system, laser fusion appls. 2-97071
- CO₂ pulsed elec. discharge lasers, unstable resonator mode variations, phase grating effects 2-102765
- CO₂ stabilised laser parasitic amplitude modulation due to cavity periodic misalignment 2-55231
- CO₂ TE hybrid unstable resonator laser, single longit. and transverse mode operation 2-65198
- CO₂ TEA laser, injection locked single mode operation with high energy extraction 2-96981
- CO₂ TEA laser, injection locking depend. on injected radiation intensity 2-108904
- CO₂ TEA laser, single longit. mode operation by injection locking with tunable CO₂ waveguide laser 2-55189
- CO₂ TEA laser, variable short pulses 2-80996
- CO₂ TEA laser with unstable resonator, emission spectrum anal. using Fabry-Perot interferometer 2-70600
- CO₂ TEA passively mode-locked laser, single variable-duration nanosec. pulse emission 2-55115

laser cavity resonators continued

- CO₂-TEA laser mode-locked by intracavity plasma switching 2-55224
- CdS platelet laser, optically pumped 2-55191
- Cu vapour laser, active medium, wavefront reversal 2-60068
- DF-CO₂ intracavity knife-edge diffraction screen laser on D₂-F₂-CO₂-O₂-He gas mixture 2-85993
- GaAs-AlGaAs diode laser coupled to external resonator of narrow spectral bandwidth, bistable operation 2-108881
- GaInAsP-InP surface emitting injection laser with short cavity length 2-75594
- HF simple pulsed laser for optical expts. 2-55181
- He-²²Ne laser, freq. stabilisation by intracavity polarisation spectroscopy of CH₄ 2-86007
- He-Ne 0.633 μm laser freq. stabilised to Ne saturated absorpt. (*Chinese*) 2-65202
- He-Ne dual cavity laser (*Chinese*) 2-60122
- He-Ne internal mirror lasers, freq. stabilisation by flowing-water method 2-70594
- He-Ne internal mirror multimode laser, polarisation props. 2-60062
- He-Ne intra-cavity laser alignment (*Chinese*) 2-65274
- He-Ne intracavity laser using getter alloy ZrAl 16 (*Chinese*) 2-96972
- He-Ne laser, 633 nm, ¹²⁷I₂ stabilised, power shifts for various mirror curvatures, report 2-97056
- He-Ne laser, 1 stabilised, frequency stability in gravit. field, dG/dt depend. 2-112798
- He-Ne laser in hollow cathode discharge, output power 2-96899
- He-Ne long laser, tunable single mode operation 2-114239
- He-Ne two-mode modulated-parameter laser 2-114237
- He-Ne visible laser transitions, unsaturated gain coeff. and saturation intensity determ. 2-114240
- I CW photodissociation laser with cyclic circulation of gaseous trifluoromethyl iodide 2-96987
- I photodissociation laser, cavity length and absorpt. depend. longit. beat 2-60124
- I subnanosecond photodissociation laser 2-60116
- InGaAsP injection laser, mode spectra and single-longit.-mode power depend. on cavity length 2-85968
- InGaAsP short-cavity injection lasers with one high-reflectivity mirror 2-114275
- InGaAsP-InP laser, asymmetric longitudinal mode competition, mechanism 2-60076
- KCl Ti³⁺(1) colour centre laser, mode locking by synchronous pumping using gain medium with microsec. decay times 2-108889
- KrF with phase-conjugate Brilouin mirror 2-60136
- La₉Nd₁₀P₂O₁₄ CW laser at 1.051 and 1.32 μm 2-70567
- N₂ laser cavity, transversely excited, ionising waves of potential gradient 2-90940
- NH₃-N₂ tunable laser, passive mode locking using intracavity NH₃ cell 2-96997
- N₂O laser, optically bistable 2-96918
- Na₂ excimer laser, controlled operation, expt. study 2-65251
- Nd: garnet CW laser with nonplanar ring resonator, spatial and polarisation characts. 2-70570
- Nd: glass GILAS laser with plasma mirror 2-114317
- Nd: glass laser oscillator with unstable optical resonator 2-114322
- Nd: phosphate glass superluminesc. laser, unstable telescopic cavity resonator 2-75589
- Nd: YAG active-passive mode-locked oscillator 2-114286
- Nd: YAG CW laser with nonplanar ring resonator, temporal and spectral characts. 2-70571
- Nd: YAG continuously excited laser resonator acousto-optic switch (*Polish*) 2-97006
- Nd: YAG laser cavity, ray tracing program, flashlamp pumping uniformity rel. to component damage 2-55215
- Nd: YAG polarisation-coupled stable/unstable-resonator laser oscillator, single-axial-mode operation 2-55165
- Nd: YAG self-injected laser with unstable cavity 2-97003
- Nd: YAG unstable high repetition rate resonator (*Chinese*) 2-97005
- Nd³⁺: YAG CW laser radiation, polarisation switching using electrooptic phase modulator 2-114338
- Nd³⁺: YAG laser, passively Q switched by LiF crystals containing colour centres, characts. 2-85978
- XeCl laser, divergence and spectrum control 2-55133
- XeF laser emitting 2-nsec. pulses of near-diffraction-limited divergence 2-70599
- YAG CW laser engineering 2-60108
- Y₂O₃-SiO₂ UV laser mirror deposition and optical characteristics (*Hungarian*) 2-55213

laser frequency stability

- acoustooptic power stabilizer for a continuous laser beam 2-85990
- Allan variance real-time processing system 2-63983
- CW dye laser, freq. shift, reson. bleaching 2-75566
- diode laser feedback effects due to Rayleigh backscattering from optical fibre 2-75570
- diode lasers with optical feedback spectral characts. 2-55161
- dye ring laser, powerful single-freq., spanning visible spectrum 2-90916
- evaluation on basis of fluctuation distrib. density characts. (*Russian*) 2-85933
- femtosecond laser pulse duration meas. system 2-95428
- fluctuations in model turbulent medium, longitudinal correlation 2-102720
- I₂ saturated absorption freq. stabilisation (*Polish*) 2-96978
- injection laser, twin-stripe, optically induced spatial instability 2-55150
- injection lasers, stripe-geometry, transverse mode oscills. at GHz freqs. 2-108882
- intracavity laser radiation, freq. variations, theory 2-86008
- metre redefinition, laser freq. meas. 2-53718
- mirror using acousto-optical device meas. and control system, displacement 2-97051
- natural modes for the anal. of optical bistability and laser instability 2-108939
- nonlinearly absorbing cell lasers, absorption saturation method, ultimate precision 2-55279
- optical laser frequency standards, phase-stabilization technique 2-58792
- optical time scale using freq. stabilized laser 2-64004
- rhodamine 6G double-mode-locked dye laser, highly synchronous mode-locked picosec. pulses 2-75615
- ring dye laser, frequency-stabilized, design and performance 2-114265
- saturated absorption stabilized lasers, metrological aspects 2-60133

laser frequency stability continued

- sigmometer, instrument for meas. wave nos. of pulsed and CW lasers 2-95464
 stability conditions obtained using Lyapunov theorem fast laser operation, multimode CW 2-114249
 submillimetre laser with off-axis pump beam injection for heterodyne radiometry/spectroscopy 2-90928
 AlGaAs DH laser, short-term freq. stability 2-65256
 AlGaAs laser, freq. stabilisation to H₂O vapour absorpt. line 2-60129
 AlGaAs lasers, frequency stabilization based on H₂O and Rb-D₂ lines 2-65267
 CO₂ CW high power atm. laser radar power amplifier 2-96991
 CO₂ CW laser using high-speed current regulated power supply, optovolt-
 taic effect 2-114318
 CO₂ five colour laser stabilisation and switching 2-108903
 CO₂ laser, double electron beam controlled, freq. selection (*Chinese*) 2-65246
 CO₂ laser frequency stabilisation by optoacoustic tracking of SF₆ Lamb dip 2-70579
 CO₂ laser frequency stabilisation using OsO₄ narrow resonances 2-90965
 CO₂ lasers used in Doppler lidars, freq. stabilisation (*Chinese*) 2-65273
 CO₂ stabilised laser parasitic amplitude modulation due to cavity periodic misalignment 2-55231
 CO₂ TEA laser, injection locking depend. on injected radiation intensity 2-108904
 GaAlAs laser operating at 0.83 μ m, optical feedback-induced changes in output spectra 2-80957
 He-²Ne laser, freq. stabilisation by intracavity polarisation spectroscopy of CH₄ 2-86007
 He-Ne, methane stabilised (3.39 μ m) and I₂ stabilised (633 nm) 2-102772
 He-Ne 0.633 μ m laser freq. stabilised to Ne saturated absorpt. (*Chinese*) 2-65202
 He-Ne frequency locked laser, self-irrad. opto-galvanic effect 2-114336
 He-Ne frequency stabilised tunable multimode lasers 2-86026
 He-Ne frequency-stabilised laser design and construction project for students 2-94968
 He-Ne internal mirror lasers, freq. stabilisation by flowing-water method 2-70594
 He-Ne internal mirror multimode laser, polarisation props. 2-60062
 He-Ne laser, 0.63 μ m, stabilised without freq. deviation 2-60114
 He-Ne laser, 633 nm, ¹²⁷I₂ stabilised, power shifts for various mirror curvatures, report 2-97056
 He-Ne laser, 633-nm, ¹²⁷I₂ stabilised, freq. depend. on modulation amplitude and wall temp., report 2-75618
 He-Ne laser, I₂ stabilised, frequency stability in gravit. field, dG/dt depend. 2-112798
 He-Ne laser, with heated I₂ absorption cell 2-60135
 He-Ne laser stabilised with ¹²⁷I₂, nonlinear frequency shifts at 633 nm 2-102770
 He-Ne lasers at 633 nm, ¹²⁷I₂ stabilised, freq. shifts at low I₂ press. 2-96897
 He-Ne methane freq. stabilised laser oscill. period for optical time scale 2-101379
 He-Ne ring laser, secondary mode beat stabilisation 2-114236
 He-Ne single frequency stabilised laser 2-85994
 He-Ne/methane ring laser, freq. stability 2-65278
 Nd:YAG active-passive mode-locked oscillator 2-114286
 Nd:YAG subMHz frequency-stabilised oscillator 2-108906

laser isotope separation

- atomic vapour sources for laser isotope separation, electron-beam evaporation and cathode sputtering 2-65101
 high power lasers and appls., Int. School of Physics, Varenna, Italy, July (1978) 2-74141
 high-power tunable lasers, appls. to photochemistry and isotope separation 2-75451
 molecules, gas dynamic flow and laser spectroscopy 2-60574
 multilevel system of band type, laser radiation action 2-65061
 particle concentration longit. gradient increase under laser vel.-selective photodissociation 2-70361
 photochemical and photothermal processes 2-93803
 polyatomic molecules, multiple-photon excitation rel. to laser-induced chemistry and isotope separation 2-85760
 polyatomic molecules, vibr. levels rel. to isotopically selective collisionless dissociation 2-64953
 rare earth elements, laser isotope separation by two-step selective photoionisation method 2-64940
 rare earth elements, photoionisation cross section meas. from excited states rel. to laser isotope separation 2-64939
 selectivity in selective photoionisation of atoms method, excitation transfer and charge exchange 2-65102
 selectivity of laser action, photoionisation of atoms, collisionless dissociation of polyatomic mols. 2-65100
 ternary mixture of H/D/T compounds, CO₂ laser isotope separation 2-62412
 three-level quantum system, optical selective excitation not limited by field broadening 2-85931
 BCl₃, laser isotope separation products, IR absorpt. study 2-70437
 BCl₃, laser isotope separation by multiphoton absorpt. 2-72990
¹³C isotope separation by laser excitation of CO vibr. mode 2-85830
 D separation by 2,2-dichloro-1,1,1-trifluoroethane multiple-photon dissociation in two-freq. CO₂ laser field (*Chinese*) 2-96753
³H recovery from contaminated water by laser multiple photon dissociation 2-85380
 K, efficiency of isotopically selective laser excitation 2-70438
 Li isotope separation by laser 2-80831
 T isotope separation by CO₂ laser-induced multiphoton dissociation of pentafluoroethane-T 2-96754
 U isotope separation, economic viability of laser materials processing 2-55240
 U, isotope separation using high-power 16 μ m lasers, UF₆ multiphoton absorpt. 2-75453
 UF₆, isotope separation by CF₄ and CO₂ lasers, γ -ray spectra study 2-113671
 UF₆, photophysical and photochem. props. rel. to laser isotope separation 2-75452
 UF₆, two-colour IR isotopically selective decomp. 2-75448

laser magnetic resonance

- far-IR laser mag. reson. spectroscopy 2-74474

laser magnetic resonance continued

- high resolution spectroscopy, conf., Bristol, England (April 1981) 2-74147
 mid-IR LMR using Faraday and Voigt effects for sensitive detection 2-79637
 mid-IR laser mag. reson. spectroscopy 2-75330
 molecules, unstable, laser mag. double resonance spectra at 5 and 10 μ m 2-59833
 CF₄ rot., Zeeman hyperfine struct., laser mag. reson. obs. 2-90584
 Cl¹⁸, Lamb Shift studies by laser reson. spectroscopy 2-64928
 Cl+HO₂, rate const. and branching ratio, temp. depend. 2-105459
 HCl³⁵, rot. spectrum, laser mag. reson. 2-80688
 HD², vibr. rot. spectroscopy 2-80840
 Kr, metastable, laser mag. reson. 2-65021
 NCO radical, rot. const., vibr. rot. band, laser mag. reson. obs. 2-75332
 NHD, rot. transitions, far-IR laser mag. reson. study 2-96605
 NO₂, IR laser mag. reson. obs. using CO₂ laser, high K vibr.-rot. transitions 2-108586
 NiBr₂, NiCl₂, subMM mag. reson. meas. using HCN laser 2-98935
 OD, far-IR laser mag. reson. spectra 2-75329
 OH, far-IR laser mag. reson. spectra 2-75329
 SeD radical, vibr.-rot. spectrum studied by laser mag. reson., fine struct., spin-orbit splitting 2-65023
 Xe, metastable, laser mag. reson. 2-65021

laser mode locking

- acousto-optic modulator sound field state discrimination (*Chinese*) 2-97019
 antiresonant ring mode-locking device, compact device 2-97014
 Brewster-angled semiconductor laser mode locking 2-80952
 cavity-dumped passive and synchronous hybrid mode locking for IR subpicosecond pulses 2-97020
 Chinese dyes D₁ and D₂, absorption and relax. time (*Chinese*) 2-102883
 CW laser, mode selection and synchronisation, spatial hole-burning effect 2-55229
 developments in mode locked lasers and appls. 2-114331
 dye CW laser, passively mode-locked, transient absorber gratings for pulse shortening 2-108918
 dye laser, flashlamp pumped, passive mode-locking using saturable absorber 2-108917
 dye laser, passively mode locked, stability and astigmatic analysis of six-mirror ring cavity 2-60120
 dye laser, synchronously pumped mode locked, active mode stabilisation 2-70591
 dye laser amplifier chain, CW mode locked 2-114308
 dye laser mode locked dual system, triple synchronisation with picosecond semicond. laser 2-70580
 dye laser pulses, synchronously mode-locked, generation process in linear cavity config. 2-55228
 dye lasers, mode-locked CW, travelling-wave and standing-wave operations comparison 2-114328
 dye lasers, synchronously mode-locked CW, recent advances and appls. 2-114326
 dye ring laser, synchronously mode-locked travelling-wave, subpicosecond pulse prod. 2-114327
 far IR lasers phase-locked by Stark effect, optical frequency meas. appl. 2-102845
 garnet laser, mode locking stability 2-65235
 heptamethine cyanine IR dyes, lifetime, photostability and chem. struct. 2-102884
 homogeneous gain lasers, mode-locked pulses 2-70593
 long laser cavity, mode-locking to produce high-energy photon beam 2-102827
 magnetically-induced mode locking, semiclassical theory 2-80928
 mirror using acousto-optical device meas. and control system, displacement 2-97051
 modulator, electro-optic, cryst., laser mode-locking appls. (*Chinese*) 2-91046
 phosphate glass active and active-passive mode-locked pulsed lasers (*Chinese*) 2-90921
 picosecond lasers and appls., conf., Los Angeles, CA, USA (Jan. 1982) 2-112642
 pulse selector for mode-locked lasers 2-114333
 rhodamine 110 and disodium fluorescein active dyes, hybridly mode locked laser, tunable subpicosecond pulse generation 2-85954
 rhodamine 6G double-mode-locked dye laser, highly synchronous mode-locked picosec. pulses 2-75615
 rhodamine 6G dye laser, double mode-locked, subpicosec., widely tunable 2-96984
 rhodamine 6G jet dye laser, mode-locked saturable absorber optimal operating regime 2-96944
 ruby laser, free-running, passive Q-switching and self-mode-locking regime study at 100K 2-108890
 semiconductor laser amplifiers, injection locked and resonant type, optical FM signal amplification 2-80959
 semiconductor laser diode, actively mode locked, transient behaviour obs. 2-97018
 semiconductor laser injection locking props. 2-80969
 semiconductor lasers, picosecond pulse generation, active and passive mode locking 2-114329
 SHG autocorrelation pulse width, evaluation using mode-locking theory 2-90977
 short pulse generation, review 2-108898
 solid-state CW laser in kinematic mode-locking regime 2-75606
 steady-state pulse profile generation computational technique in theory of mode locking by synchronous pumping 2-96962
 stiff mode locking laser theory 2-75607
 stimulated Mandel'shtam-Brillouin scattering line, generation of short radiation pulses in mode locking 2-86016
 subpicosecond light pulse generation, optoelectronics developments 2-114414
 ultrashort pulsewidth measurement, pulse variations effects 2-86034
 Al_xGa_{1-x}As laser, single-mode picosecond pulse generation by injection locking 2-90949
 Ar 2-90951
 CO₂ high-pressure laser, short light pulse generation, coherent effects role 2-70540
 CO₂ laser phase-locking 2-102844
 CO₂ pulsed laser, low-voltage passive mode locking device 2-114297
 CO₂, TEA laser, injection mode locked, pulse broadening 2-60059

laser mode locking continued

- CO₂ TEA laser, injection locked single mode operation with high energy extraction 2-96981
 CO₂ TEA laser, multiple injection mode locking 2-86014
 CO₂ TEA passively mode-locked laser, single variable-duration nanosec. pulse emission 2-55115
 CO₂-TEA laser mode-locking by intracavity plasma switching 2-55224
 CdS, CdSSe, CdSe, optically pumped semiconductor platelet lasers, tunable CW laser action 2-114290
 CdS platelet laser, optically pumped 2-55191
 GaAs bulk laser, two-photon pumped synchronously mode-locked 2-114291
 He-Ne frequency stabilised tunable multimode lasers 2-86026
 He-Ne laser system, mag. induced mode locking investig. 2-80928
 He-Ne ring laser, internally loss modulated, mode locked travelling wave oscillations calc. 2-55227
 He-Ne/methane ring laser, nonlinear absorpt. line, resonant narrowing 2-90946
 HgBr injection-locked laser oscillator spectrum, injected intensity effect 2-55123
 InGaAsP laser, optically pumped, tunable CW mode-locked action 2-65233
 InGaAsP, optically pumped semiconductor platelet lasers, tunable CW laser action 2-114290
 KCl Ti⁴⁺(1) colour centre laser, mode locking by synchronous pumping using gain medium with microsec. decay times 2-108889
 NH₃-N₂ mid-IR high power tunable laser, development and appl. 2-65257
 NH₃-N₂ tunable laser, passive mode locking using intracavity NH₃ cell 2-96997
 Nd:phosphate glass laser oscillator-amplifier system, repetitively pulsed mode-locked 2-70578
 Nd:YAG active-passive mode-locked oscillator 2-114286
 Nd:YAG CW laser, simultaneous mode locking and Q-switching, use as picosecond pump source 2-114330
 Nd:YAG laser light pulse single-delay meas. by intensity correlation (*Chinese*) 2-102829
 Nd:YAG pump laser for sum-freq. light generation in optical fibres 2-81019
 Nd:YLF single-frequency active-passive mode-locked oscillator at 1.053 μ m 2-90915
 Nd:YLiF active mode-locked/Q-switched oscillator, temporal shape analysis 2-70592
 Nd³⁺:YAG, CW solid-state laser, forced synchronisation of axial modes 2-55230
 Nd³⁺:YAG CW laser with optical delay line, constrained mode locking 2-75608
 Nd³⁺:YAG ring laser with diffr. acousto-optic mode feedback 2-97015
 XeCl laser, active mode locking 2-96921
 YAG linear CW laser, longit. mode self-locking 2-75609

laser modes

- see also laser mode locking*
 anisotropic open waveguide, effect of discontinuities on modes 2-60235
 aspherical open optical cavity, fundamental mode field 2-108914
 azimuthally polarised laser modes, phase shifts produced by coatings 2-97016
 Brewster-angled semiconductor laser mode locking 2-80952
 diode laser, longit. mode spectra, spontaneous emission coupling 2-55163
 diode laser, real time spectral characteristic technique 2-114344
 diode laser, stripe geometry, modal propag. const. and field intensity calc. 2-55148
 diode lasers, mode partition noise meas. 2-85967
 diode lasers, spontaneous emission effects on power-current characteristics, theory 2-90888
 doughnut shaped, thermal focusing 2-55283
 dye laser, multimode, parasitic selection in intracavity laser detection spectroscopy 2-55217
 dye laser, single mode, picosecond short cavity, piezoelectrically tuned 2-65243
 dye laser forced oscillator, pulsed, tuning (*Chinese*) 2-65271
 dye laser multimode generation spectrum, depend. on gain and loss spatial localisation 2-55216
 dye lasers, single-mode wedge, continuous-scanning system 2-75617
 free electron laser, single-mode, coherent dynamics 2-75584
 free-electron lasers, sideband instability, fluctuating space-charge effects 2-85982
 free-electron lasers based on single-pass linear accelerator technology, anal. 2-75582
 frequency variation of intra-cavity laser radiation, theory 2-86008
 garnet continuous laser with a lightguide resonator 2-60125
 gas ring laser oppositely travelling wave freq. diffr. splitting 2-81008
 gas ring laser unidirectional lasing region control using mag. field 2-81001
 half-tone method for laser mode detection (*Chinese*) 2-90956
 homogeneously broadened two-mode laser, latent heat 2-102760
 injection lasers, relation between transverse mode control and longitudinal mode behaviour 2-55153
 injection lasers, spontaneous emission factor meas. 2-102793
 injection lasers, stripe-geometry, transverse mode oscils. at GHz freqs. 2-108882
 intracavity Fabry-Perot interferometer, parameter optimisation calcs. 2-70585
 inverse Raman scatt. efficiency, laser mode effects, for breakdown-limited intensity (*German*) 2-60132
 lateral double-barrier BH laser, lateral selective-area LPE growth technique 2-88006
 lenslike internal modulation of laser modes, theory and expt. 2-97011
 methanol laser, optically pumped, CO stretch states and vibr. states, far IR laser lines 2-55122
 model problem for laser with saturable absorber and two-component Benard convection 2-55105
 multi-aperture optical cavities, transverse mode struct. props. 2-108911
 narrow stripe-geometry DH lasers, mode reflectivity 2-102795
 natural modes for the anal. of optical bistability and laser instability 2-108939
 nonplanar double-heterojunction and large-optical-cavity laser structs., mode characts. 2-80968
 optical cavity, stationary transverse mode completeness 2-86009
 optical fibres, coherence of propagating laser beam 2-86116
 pinhole radius, optimal, for fundamental mode operation 2-90942

laser modes continued

- planar stripe lasers with deep Zn diffusion, horizontal transverse mode stability (*Chinese*) 2-60078
 population pulsations in single-mode laser instabilities 2-55108
 Raman gain coefficients for higher order Hermite Gaussian modes 2-108858
 rectangular waveguide resonators with conventional and phase-conjugate mirrors, mode discrimination, coupling losses 2-90941
 reflecting grating in laser resonator, freq.-selective losses 2-65342
 resonator, retroreflecting corner cube mirror, modes 2-80999
 resonator mode calculation for lasers with active medium, WKB method 2-108915
 rhodamine 6G double-mode-locked dye laser, highly synchronous mode-locked picosec. pulses 2-75615
 rhodamine 6G dye laser, single-mode tunable, high-efficiency 2-96941
 rhodamine 6G infinitesimal thin-film ring laser, mode structure 2-108913
 ring laser, homogeneously broadened, mode instabilities 2-97012
 ring laser, unidirectional, detuning effects on single-mode instabilities 2-108912
 ruby Q-switched laser cavity, self-induced ellipse rot. and self-focusing effects 2-102798
 semiconductor diode lasers, single-mode constricted DH large optical cavity 2-55208
 semiconductor interferometric laser, mode selection and tuning props. meas. 2-97000
 semiconductor laser, mode selection and tuning of dispersive extra cavity (*Chinese*) 2-60123
 semiconductor laser, single-mode, linewidth theory 2-55145
 semiconductor laser, statistical anal. of instantaneous spectra 2-75574
 semiconductor laser, threshold condition rel. to transverse mode (*Chinese*) 2-60079
 semiconductor laser injection locking props. 2-80969
 semiconductor laser multiple longit. mode control, feedback system using diffr. grating 2-60105
 semiconductor lasers, longitudinal mode control by rectangular conical diffractor system, wavelength-division-multiplexing transmission 2-55190
 semiconductor lasers, longitudinal mode lasing spectrum, theory 2-80945
 semiconductor stripe-geometry laser, emission freq. thermal drift characts. 2-86029
 semiconductor lasers, longitudinal mode self-stabilisation 2-96950
 spatial correlation, fourth-order 2-65161
 stability conditions obtained using Lyapunov theorem fast laser operation, multimode CW 2-114249
 Stokes modes, first and second order, correl. and anticorrel. effects 2-75548
 TEM₀₀ mode, diffractometer with thermomagnetic recording for monitoring distortions of the wave front of the radiation of pulsed lasers 2-95426
 thermally stable parallel-plane resonator theory (*Chinese*) 2-55211
 three-level atomic system, two-mode laser operation, quantum theory 2-85935
 three-mirror semiconductor laser, active-passive design 2-90931
 transmission system, mode partition noise analysis 2-75719
 transverse DFB cavity laser, stable two-dimensional oscillation 2-80949
 travelling-wave laser, single-mode, natural fluctuation of radiation emitted opposite to strong field 2-114349
 two-mode lasers, multicritical points 2-96882
 unstable ring resonator with self imaging aperture, mode anal. 2-108907
 waveguide resonator, multimode fibre, mode selection and freq. tuning 2-90945
 waveguide resonators with phase-conjugate mirror 2-60126
 weak irregular inhomogeneity influence on laser resonator mode structure 2-55220
 (AlGa)As buried convex waveguide struct. laser with truncated convex active region 2-65258
 AlGaAs CW DH nearly single mode laser, intensity fluctuations in longitudinal modes 2-65224
 AlGaAs CW injection laser with external resonator, emitted radiation mode beats and fluctuations 2-65228
 AlGaAs crank structure high power TJS laser, 15 mW single mode CW operation at high temp. 2-80982
 AlGaAs DH undoped injection lasers, anal. of longitudinal mode behavior 2-65229
 AlGaAs inverted strip buried heterostructure lasers 2-114302
 Al_{1-x}Ga_xAs terraced-heterostruct. large optical cavity diode laser, LPE growth and high-power CW single-mode operation 2-114298
 Al_{1-x}Ga_xAs BH high quantum efficiency low threshold microcleaved laser fabrication 2-96976
 Al_{1-x}Ga_xAs laser, longitudinal mode self-stabilisation 2-96950
 Ar ion laser radiation, HF modulation due to stable two-mode oscill. 2-97023
 Ar⁺ laser, self-modulation by resonator loss control 2-65266
 CO laser, fundamental and second harmonic freq. emission 2-102781
 CO₂ 16- μ m gasdynamic laser in intracavity cascading mode 2-96888
 CO₂ CW laser, mode quality and tuning 2-75558
 CO₂ CW unstable resonator laser, output instability, mode-medium interactions 2-102764
 CO₂ high power laser, direct narrow line tuning 2-96980
 CO₂ isotope lasers, sealed-off, 00⁰-[10⁰, 02⁰]_{1 and 11} vibr. band, transition small signal gain and saturation intensity 2-102766
 CO₂ pulsed elec. discharge lasers, unstable resonator mode variations, phase grating effects 2-102765
 CO₂ TE hybrid unstable resonator laser, single longit. and transverse mode operation 2-65198
 CO₂ TEA laser, single longit. mode operation by injection locking with tunable CO₂ waveguide laser 2-55189
 CO₂ TEA sealed long-life lasers, medium pulse repetition 2-114314
 CO₂ TEA UV-preionised lasers, medium pulse repetition 2-114314
 CO₂ tunable single-longit.-mode oscillator for efficient optical pumping 2-85992
 CO₂ waveguide laser mode aberration by Brewster angle windows 2-60131
 CO₂-laser modulator, microwave behaviour (*German*) 2-86015
 CdS platelet laser, optically pumped 2-55191
 D₂O laser emission investigation at 50, 66, 83, 111 and 116 μ m 2-102779
 GaAlAs DH separated multilayer stripe geometry laser mode calcs. 2-85963
 (GaAl)As DH visible lasers on p-GaAs substrate, reliable and mode-stabilised 2-55207
 (GaAl)As gain guided lasers, analysis at threshold 2-75575

laser modes continued

- GaAlAs single-mode laser, dynamic wavelength tuning 2-55144
 GaAlAs visible laser, V-channelled substrate inner stripe, stabilised mode operation 2-55183
 GaAlAs-GaAs, channelled substrate narrow stripe laser, expt. characterisation 2-96982
 GaAlAs-GaAs transverse DFB cavity laser, room temp. operation 2-102817
 GaAs injection lasers, influence of waveguiding props. on longitudinal spectrum 2-96947
 GaAs/GaAlAs W-shaped diffused stripe DH lasers grown by metal-organic CVD 2-65232
 GaAs-(AlGa)As twin-mesa laser integrated with passive waveguide, controllable single mode operation 2-55209
 GaAs-Al_{0.3}Gd_{0.7}As DH lasers, near field spectrum (*Chinese*) 2-65219
 GaAs-AlGaAs diode laser coupled to external resonator of narrow spectral bandwidth, bistable operation 2-108881
 GaInAsP laser with new gain guiding struct., transverse and longit. mode operation 2-102797
 GaInAsP low threshold current CW operation of multiple infil buried heterostruct. 1.3 μ m lasers 2-65247
 GaInAsP-InP 1.5 μ m DBR lasers with built-in optical waveguide, room temp. operation 2-75593
 GaInAsP-InP BH integrated laser with butt-jointed built-in DBR waveguide, 1.6 μ m CW operation 2-80987
 GaInAsP-InP groove laser using laterally diffused junction, single longit. and single lateral modes 2-75595
 GaInAsP-InP surface emitting injection laser with short cavity length 2-75594
 GaInPAs-InP mesastripe heterojunction lasers buried in InP or GaInPAs, radiation mode composition 2-60083
 HCN laser, mode examination using liquid crystal camera 2-70595
 He-Cd high power and long lifetime laser, monomode output (*Chinese*) 2-55184
 He-Ne frequency stabilised tunable multimode lasers 2-86026
 He-Ne internal mirror multimode laser, polarisation props. 2-60062
 He-Ne laser in hollow cathode discharge, output power 2-96899
 He-Ne long laser, tunable single mode operation 2-114239
 He-Ne multimode laser, radiation intensity fluctuations due to nonequidistant mode distrib. 2-55177
 He-Ne ring laser, secondary mode beat stabilisation 2-114236
 He-Ne two-mode modulated-parameter laser 2-114237
 He-Ne/I₂ linear two-mode laser, high-contrast power resons. 2-114241
 He-Xe high-gain single-mode laser, mode-pulling, mode-splitting and pulsing, 3.51 μ m 2-55198
 I photodissociation laser, cavity length and absorpt. depend. longit. beat 2-60124
 InGaAsP injection laser, mode spectra and single-longit.-mode power depend. on cavity length 2-85968
 InGaAsP/InP DFB lasers, 1.5 μ m range 2-102794
 InGaAsP-InP DH laser structures, effective refr. index and first-order-mode cutoff conditions 2-75576
 InGaAsP-InP laser, asymmetric longitudinal mode competition, mechanism 2-60076
 La_{0.1}Nd_{0.9}P_{0.1}O_{1.4} CW laser at 1.051 and 1.32 μ m 2-70567
 Nd₃ excimer laser, controlled operation, expt. study 2-65251
 Nd laser, multistage, digital supply system for stable apparatus operation (*Bulgarian*) 2-80989
 Nd:glass fibre lasers, generation kinetics 2-96959
 Nd:YAG laser, Q-switching with continuous pumping by nonlinearly absorbing LiF cryst. with F₂ colour centres 2-102804
 Nd:YAG polarisation-coupled stable/unstable-resonator laser oscillator, single-axial-mode operation 2-55165
 Nd:YLF single-frequency active-passive mode-locked oscillator at 1.053 μ m 2-90915
 Nd³⁺:YAG laser, passively Q switched by LiF crystals containing colour centres, characts. 2-85978
 NdP₃O₁₄ laser, thermal effects, expt. and theory 2-102802
 P_{0.9}S_{0.1}Se long-wavelength laser diode, emission spectra, temp. and mag. field effects 2-81012
 PbSnSeTe-PbSeTe lattice-matched DH lasers, total, refl. mode oscill. 2-60080
 RbCl:Li colour centre laser pumped with a DCM dye laser 2-102803

laser radar *see optical radar***laser theory**

- see also laser transitions; population inversion; stimulated emission*
 absolute photon numbers in laser, determ. method using relative intensity meas. 2-55107
 amplifier with a delayed swept-gain boundary, analytic soln. 2-108848
 amplifiers with wavefront reversal, max. output parameter estimate 2-55109
 Cerenkov tunable lasers 2-102758
 channelled electrons, stimulated emission possibility, optical and X-radiation generation 2-116208
 channelled electrons, X-ray stimulated emission, theory 2-85979
 chemical laser, pulsed chain reaction, initiator duration effect 2-96933
 chemical lasers, high-power, physical principles, chem-reaction systems and modelling 2-75564
 chemical potential of radiation, appl. to lasers 2-90849
 conference, 12th International Quantum Electronics, Munich, Germany (1982) 2-79268
 CW laser, mode selection and synchronisation, spatial hole-burning effect 2-55229
 diode laser, longit. mode spectra, spontaneous emission coupling 2-55163
 diode lasers, harmonic distortion 2-108875
 diode lasers, spontaneous emission effects on power-current characteristics, theory 2-90888
 dye lasers, distributed feedback, semiclassical theory (*Chinese*) 2-108868
 energy transfer in excitation trapping conditions 2-116241
 four-level lasers, optimised 2-90862
 free electron Cherenkov laser as possible near MM wave source, multiphoton analysis 2-80979
 free electron hybrid laser device, GYROFEL, estimation of intracavity power levels 2-108891
 free electron laser, ACO storage ring, gain meas. versus theory 2-55174
 free electron laser, coherent dynamics 2-75584
 free electron laser, high gain, with variable wiggler magnets, pulse amplification calcs. 2-70574
 free electron laser, Madey's gain-spread theorem and stochastic processes theory 2-102807

laser theory continued

- free electron laser, multicomponent wiggler config. in small-signal regime 2-90910
 free electron laser, relativistic electron beam, low gain near cyclotron reson. 2-85983
 free electron laser, single-particle theory 2-75583
 free electron laser, spontaneous radiation, squeezed coherent state generation 2-55175
 free electron laser, storage ring operation 2-75585
 free electron laser amplifier, elliptically polarised, electron motion 2-60090
 free electron laser in magneto-Compton regime, gain 2-70575
 free electron laser with axial mag. field, theory 2-80977
 free electron laser with transverse dimens. effects, nonlinear theory 2-80976
 free electron lasers, multiphoton transitions and saturation 2-114293
 free electron lasers, two-stream 2-90908
 free electron lasers with axial guide field, relativistic electron trajectories 2-70576
 free-electron lasers, sideband instability, fluctuating space-charge effects 2-85982
 frequency variation of intra-cavity laser radiation, theory 2-86008
 gain enhancement, collision-induced 2-96881
 gamma-ray laser, coherent and incoherent pumping with intense optical radiation 2-96878
 gas lasers operating simultaneously on two coupled transitions 2-108849
 heterogeneous media, rot. levels, population inversion prod. 2-80929
 high-energy lasers, introduction 2-75553
 homogeneous gain lasers, mode-locked pulses 2-70593
 III-V semiconductor lasers, rapid and gradual degradation, dangling bonds and antisite defects role, theory 2-114270
 injection laser, twin stripe, diffusion and waveguiding effects 2-55149
 injection laser, twin-stripe, optically induced spatial instability 2-55150
 injection lasers, relation between transverse mode control and longitudinal mode behaviour 2-55153
 Laplace transform analysis of laser's second threshold 2-55106
 long laser amplifier pulse distrib. (*Russian*) 2-70537
 Lorenz equations, real and complex, with weak dissipation 2-97564
 magnetically-induced mode locking, semiclassical theory 2-80928
 metal-vapour pulsed lasers, numerical modelling 2-114253
 model problem for laser with saturable absorber and two-component Benard convection 2-55105
 modulation resonance, atomic and cavity freq. coincidence case 2-75552
 molecular laser, rot. exchange kinetics 2-75559
 multi-pass amplifier, high-power, energy gain 2-60084
 multilevel system excitation, superselectivity, adiabatic switching on of resonant radiation (*Russian*) 2-96867
 multiphoton laser, fluctuations in multiphoton optical bistability 2-86038
 multiphoton laser, two-level model, bistability 2-96885
 multistability in systems with complex order parameters 2-96883
 NMR laser, bistability and phase transitions of nuclear spin systems 2-104719
 nonlinear refractive index measurement, need to allow for slow nonlinearity 2-97085
 open systems, laser dynamics and optical bistability, quantum statistical treatment 2-96871
 parametric light source based on four-wave interaction 2-65213
 phase locking by an injected signal 2-108927
 photon statistics of dye laser 2-85956
 phototropic valves, opening by standing light wave 2-75637
 plasma lasers in astrophysical sources as coherent radiation sources 2-63246
 plasma recombination laser, electron density and energy output units calc. 2-96902
 population pulsations in single-mode laser instabilities 2-55108
 pulse modelling, Cutler bootstrap eqn. soln. 2-114229
 pulse space-time structure deform. as result of two-photon absorpt. 2-114347
 pulsed lasers, with time depend. output mirror reflectivity, energy output optimisation calc. 2-65263
 quantum, semiclassical and classical theories of lasers and laser light, lectures 2-96886
 Raman gain coefficients for higher order Hermite Gaussian modes 2-108858
 relativistic cold guided electron beam amplification of freq. upshifted radiation, theory 2-90860
 resonance energy transfer in incoherent interaction, laser transitions 2-65196
 ring laser, nonreversible component of freq. charact. 2-70589
 ring laser, unidirectional, detuning effects on single-mode instabilities 2-108912
 ring laser props. with misadjusted spatially inhomogeneous medium 2-97013
 ring lasers, active medium, gain coeffs. of opposed waves 2-55218
 semiconductor laser, statistical anal. of instantaneous spectra 2-75574
 semiconductor laser, threshold condition rel. to transverse mode (*Chinese*) 2-60079
 semiconductor laser gain saturation, theory and expt. 2-85965
 semiconductor laser of interferometric and ring types scatt. matrix formulation 2-80963
 semiconductor laser transmission characteristics, classical control theory 2-80962
 semiconductor laser waveguiding analysis, effective index method 2-85966
 semiconductor lasers, Gaussian approx. of emission 2-55152
 semiconductor lasers, longitudinal mode lasing spectrum, theory 2-80945
 semiconductor lasers, transmission characteristics, theoretical anal. (*Chinese*) 2-65218
 semiconductor strip geometry lasers, theory for self-sustained pulsations 2-96949
 short wavelength lasing plasma, kinetic theory 2-86394
 single-mode laser model with saturable absorber, bistable limit cycles 2-85934
 solid-state CW laser in kinematic mode-locking regime 2-75606
 solid-state lasers, emissive props., neutron beam effects 2-102805
 stiff mode locking laser theory 2-75607
 stripe geometry injection lasers, theoretical anal. of current spreading 2-90891
 summer school in quantum optics, Natal Drakensberg, South Africa (Jan. 1981) 2-94881

laser theory continued

- three level gas, optically pumped, time-depend. pulse amplification 2-85941
 three-level atomic system, two-mode laser operation, quantum theory 2-85935
 three-level gas excited by two unidirectional waves, amplification 2-70552
 three-level laser, saturation effects calc. with uniform losses 2-102759
 total internal reflection theories from amplifying media, possible critical expts. 2-96865
 travelling-wave laser, single-mode, natural fluctuation of radiation emitted opposite to strong field 2-114349
 two-level laser amplifier, ultrashort optical pulse propag. (Russian) 2-96884
 two-mode laser, homogeneously broadened, latent heat 2-102760
 two-mode lasers, multicritical points 2-96882
 two-photon laser and two-photon optical bistability, nonclassical effects 2-75551
 ultrashort cavity laser, optimum operational parameters calc. 2-97002
 ultrashort pulses generation with strong overlapping of saturation stage of active medium and bleachable filter 2-65234
 Al XII plasma laser, resonantly photopumped, theory 2-90873
 Ar-N₂ laser, intense proton beam pumping, kinetic model 2-75561
 CO chemical laser produced by supersonically mixing CS-S-O₂, computer model 2-90881
 CO₂ 16 μ m laser action study 2-96887
 CO₂ 16- μ m gasdynamic laser in intracavity cascading mode 2-96888
 CO₂ electronisation laser, physical processes numerical simulation 2-75554
 CO₂ high-power laser systems, math. simulation 2-60060
 CO₂ laser, electron beam preionised, discharge plasma characts. 2-80931
 CO₂-N₂-He laser, vibr.-temp. model for determ. populations of N₂ and CO₂ levels 2-85936
 (GaAl)As gain guided lasers, analysis at threshold 2-75575
 (GaAl)As-GaAs DH lasers, narrow oxide stripe, lateral current spreading and diffusion problem 2-80964
 GaAs injection lasers, influence of waveguiding props. on longitudinal spectrum 2-96947
 HF, continuous wave chemical laser with chain excitation mechanism, ring model 2-55137
 He-Cd⁺ laser, Cd II electron impact excitation cross-sections meas. for 5s²2p_{1/2} (5p²P_{1/2}) states 2-85816
 He-Ne ions, optical pumping rel. to gain at X-ray wavelengths 2-70536
 He-Sr plasma laser, kinetic model of active medium 2-85947
 I laser amplifier chain performance, pulse compression, extraction efficiencies 2-80940
 InGaAsP-InP DH laser structures, effective refr. index and first-order-mode cutoff conditions 2-75576
 NH₃ pulsed optically pumped laser, energy characts., numerical model 2-70553
 Nd highly concentrated media, lasing characts. of microlasers for pulsed pumping 2-75579
 NdP₂O₇ laser, thermal effects, expt. and theory 2-102802
 Ne IX plasma laser, resonantly photopumped, theory 2-90873
 PbSnTe diode laser, lifetime mechanisms, tunnelling currents and laser threshold 2-80956
 XeCl self-sustained discharge laser, kinetic model 2-108856
 YAG linear CW laser, longit. mode self-locking 2-75609

laser transitions

- see also laser theory
 acetic acid-d₃ optically pumped submm. laser, 363-756 μ m range 2-55134
 bromotrifluoromethane, optically pumped CW far IR laser, emission lines and tentative assignments 2-96911
 carbon tetrafluoride 16 μ m optically pumped laser, tuning characts. 2-102782
 carbon tetrafluoride laser modelling 2-102776
 carbonyl fluoride, strong far IR laser action obs. 2-102775
 carbonyl fluoride continuous submm.-wave laser source 2-96919
 colour centre lasers, possibility of visible oscillation (Japanese) 2-70569
 cis 1,2-difluoroethene laser, optically pumped far-IR emission 2-55125
 difluoromethane-d₂, efficient far IR lasing gas, wavelengths and freqs. meas. 2-96913
 dye binary donor-acceptor mixtures, optimum conditions for laser emission 2-102789
 dye CW laser, high power emission near 888 nm 2-75567
 fluorocarbon 12, CW optically pumped CF₃Cl₂, subMM laser action 2-96906
 free electron lasers, multiphoton transitions and saturation 2-114293
 garnet:Ho³⁺, ³I₂-³I₈ laser transition at 2 μ m 2-110892
 imitrite class dye solns. and vapours, laser action in 500 nm band 2-55142
 methanol, CH₃OD, CW laser pumped, lasing transitions at 57, 82 and 103 μ m, direct gain meas. 2-96910
 methanol laser, optically pumped, CO stretch states and vibr. states, far IR laser lines 2-55122
 methanol optically pumped submm. laser, emission lines, 150-970 μ m range 2-55135
 methanol-d₄, optically pumped, new far IR laser lines and freq. meas. 2-96912
 methyl alcohol, CO₂ laser pumped, wavelengths for new laser lines 2-96907
 methylamine optically pumped submm. laser, emission lines 2-55135
 multilevel system excitation, superselectivity, adiabatic switching on of resonant radiation (Russian) 2-96867
 nitromethane optically pumped submm. laser, 311-1070 μ m range 2-55134
 oxazine 750 CW dye laser, broadly tunable near IR, using propylene carbonate solv ent 2-55140
 resonance energy transfer in incoherent interaction, laser transitions 2-65196
 rhodamine 6G jet dye laser, mode-locked saturable absorber optimal operating regime 2-96944
 travelling-wave laser, single-mode, natural fluctuation of radiation emitted opposite to strong field 2-114349
 triatomic molecules, linear, gas lasers utilising cascade transitions 2-70541
 two-mode laser, homogeneously broadened, latent heat 2-102760
 vinyl fluoride, strong far IR laser action obs. 2-102775
 Ar-N₂ laser pumped by intense proton beam 2-114256
 As II CW laser transition at 6511.7 Å, electron beam excitation of He-As mixture 2-85939

laser transitions continued

- Bi³⁺ CW laser, optically pumped, hyperfine struct. 2-96914
 CO chemical laser utilising the branched-chain stage of CS₂ oxidation 2-96935
 CO tunable sealed laser using selective, nonselective resonators, spectral and energy characts. 2-55131
 CO₂ 16 μ m laser action study 2-96887
 CO₂ 16- μ m gasdynamic laser in intracavity cascading mode 2-96888
 CO₂ CW gasdynamic lasers operating at 16 and 14 μ m, thermal excitation 2-96895
 CO₂ frequency-switching waveguide laser for atm. pollution monitoring 2-96893
 CO₂ gas lasers utilising cascade transitions 2-70541
 CO₂ gasdynamic laser, 16.8 to 17.2 μ m output obs. 2-90868
 CO₂ gasdynamic laser, shock driven, vibr. temps. and gain coeff. 2-102761
 CO₂ isotope laser status and appls. in tunable laser spectroscopy 2-108850
 CO₂ isotope laser technology status 2-96894
 CO₂ isotope lasers, sealed-off, 00¹1-[10⁰0, 02⁰0]₁ and ₁₁ vibr. band, transition small signal gain and saturation intensity 2-102766
 CO₂ TEA laser, intense 11 μ m pulses production from 01¹1-[11⁰03⁰0]₁ band 2-90867
 CO₂ thermally pumped gasdynamic laser, transitions between ν_1 , ν_2 mode levels, 16.4 to 17.2 μ m emission 2-55114
 CO₂ Ar-pulsed 18.4 μ m gasdynamic laser, shock-tube driven 2-96896
¹³C¹⁸O spectroscopic constants of Fermi dyad [10² ν_3 , 02⁰ ν_3] and laser sequence band transition wavenumbers 2-102479
 Cd atomic laser action at 508.6, 643.8 nm based on CdI₂ photodissoc. 2-55136
 CdI molecular laser action at 475, 656 nm based on CdI₂ photodissoc. 2-55136
 Cl II, III, IV, UV and visible laser oscillations obs. 2-85942
 Cr³⁺:Ge garnets, broad-band emission 2-104914
 Cu ion, hollow cathode laser design with alternative excitation, 781 nm transition 2-96998
 D₂O laser emission investigation at 50, 66, 83, 111 and 116 μ m 2-102779
 D₂O, optically pumped laser, wave interaction, for IR emission study 2-55128
 Er³⁺:LiYF₄, high-efficiency deep-red laser (850 nm), pumped by doubled Nd:YAG laser 2-60087
 GaAlAs laser operating at 0.83 μ m, optical feedback-induced changes in output spectra 2-80957
 GaInAsP-InP 1.55 μ m distributed Bragg reflector integrated laser directly coupled to external waveguide 2-60117
 GaInAsP-InP integrated twin guide DBR laser emitting at 1.55 μ m, low threshold current 2-60119
 Gd₂(Ga₂O₇):Ho³⁺, cascade generation of Ho³⁺ ions, solid laser appl. 2-85975
 H₂ discharge, laser action obs. at 3.767 μ m 2-55118
 HF CW subsonic chemical laser, 120 W power output, design and performance characts. 2-96985
 He-Cd⁺ transverse HF discharge laser, 441.6, 537.8 and 636.0 nm transitions 2-70544
 He-Ne visible laser transitions, unsaturated gain coeff. and saturation intensity determ. 2-114240
 He-Se ion laser, electron beam pumped, CW laser action on 15 Se II transitions 2-90874
 He-Xe plasma recombination laser excited by 10.6 μ m laser pulses 2-96898
 He-Zn laser, hollow cathode, with an additional command electrode 2-114248
 Hg blue-green laser emitting at 435.8, 546.1 nm, using HgI₂ photodissociation 2-96937
 Hg produced by HgBr₂ photodissociation by ArF laser, superfluoresc. laser action at 404.7 nm 2-96934
 HgCl₂ visible laser, tuning charact., laser emission spectra 2-60065
 Ho³⁺:LiYF₄, high-efficiency deep-red laser (750 nm), pumped by doubled Nd:YAG laser 2-60087
 I photodissociation laser, possible gain control of stimulated enthalpy scatt. of light 2-90986
 I₂ laser, optically pumped, CW laser lines 540 to 650 nm range 2-60064
 I₂, optically pumped dimer laser development, 540 to 650 nm laser lines 2-80939
 I⁺ CW laser excited by electron beam, 5760.7 and 6127.5 Å transitions 2-55126
 Kr²⁺F tunable blue-green laser, fluoresc. and laser parameters meas. for 436 nm transition 2-96924
 La_{0.1}Nd_{0.9}P₂O₇ CW laser at 1.051 and 1.32 μ m 2-70567
 Li vapour, two-photon laser 2-65208
 Li₂ pulsed laser, optically pumped 2-114255
⁶Li₂ molecule, optically pumped ring laser operation, 5237-5889 Å transitions 2-75556
 Mn vapour laser, compact 534.1 nm high pulse repetition freq., construction techniques 2-60104
 N II, III, visible laser oscillations obs. 2-85942
 NH₃, 12 μ m, CW optically pumped, Raman processes 2-65203
 NH₃, 12 μ m Raman laser, pumped by low-power CO₂ laser pulses 2-55121
 NH₃ laser emission, 20.9 to 148.7 μ m, optically pumped by TE-CO₂ laser 2-85938
 Na₂, optically pumped dimer laser development, 520 to 560 nm laser lines 2-80939
 NaF, single freq. laser using (F₂⁺)^{*} centres, 1.0 to 1.15 μ m range 2-108886
 Nd:YAG lasers pumped by LEDs, lasing characts. at 1.06, 1.32 μ m 2-70572
 Nd³⁺:BiCl₃ glass, stimulated emission cross-sections meas. 2-90899
 Nd⁴⁺ oxide (halide) glasses, stimulated emission cross-sections meas. 2-90899
²⁰Ne 260 THz emission, absolute frequency meas. 2-108929
 O II, III, IV, UV laser oscillations obs. 2-85942
 PbF₂-GaF₃-ZnF₂(MnF₂):Er³⁺, fluoride glasses, optical transition probabilities, Judd-Ofelt method 2-61960
 Se-He, HF discharge, laser levels excitation 2-65786
 Se₂, optically pumped multiline laser, continuous oscill. in 387 to 709 nm range 2-85944
 Ti, visible laser oscillations obs. 2-85942
 Tl atomic laser, two photon dissociation of Tl-Hg mixture, 535 nm stimulated emission 2-90875

laser transitions continued

- Tl M1 transition absorpt. line, inert-gas broadening 2-113938
 Tl photodissociation laser emitting at 535.0 nm, radiation trapping and collisional de-excitation effects 2-96938
 Tm vapour laser, optically pumped 2-55124
 Xe₂Cl tunable blue-green laser, fluoresc. and laser parameters meas. for 520 nm transition 2-96924
 XeF excimer laser pumping possibility with ionisation by an external low-power source 2-60139
¹³⁶Xe laser, 5d[3/2]_{1/2}-6p[3/2]_{1/2} transition in weak mag. field, polarisation bistability obs. 2-90870
 Zn II CW laser transitions at 4911.6, 4924.0, 6102.5 and 7588.5 Å, electron beam excitation of He-Zn mixture 2-85939

laser tuning

- acetylene-d₂ optically pumped rotationally relaxed grating tuned laser oscillations obs. 2-96900
 7-amino coumarins, substituted, types C311, C47, C102, C152, C481, spectral and lasing behaviour (*Chinese*) 2-65211
 broadband tunable source based on lasing at sum, difference freqs., Nd³⁺:YAG and dye laser mixing 2-75627
 carbon tetrafluoride 16 µm optically pumped laser, tuning characts. 2-102782
 cavity-dumped passive and synchronous hybrid mode locking for IR subpicosecond pulses 2-97020
 coumarin 1-acriflavine-uranine ternary dye mixture 2-96945
 4-dicyanomethylene-2-methyl-6-p-dimethylaminostyryl-4H-pyran laser dye, tunable props. (*Chinese*) 2-65210
 diffractometer with thermomagnetic recording for monitoring distortions of the wave front of the radiation of pulsed lasers 2-95426
 dye activated cholesteric liq. cryst. as tunable laser with DFB 2-114262
 dye CW laser, high power emission near 888 nm 2-75567
 dye CW laser, operation at 200 W pump power, prism-tunable 560 to 650 nm 2-102812
 dye laser, Hansch-type, simple linewidth-reducing modification, tuning characts. 2-55180
 dye laser, N₂ laser pumped, using dielectric multilayer tuning filter 2-60115
 dye laser, N₂ laser pumped, with optical amplifier, near IR dye lasing props. 2-85955
 dye laser, powerful, 550 to 660 nm tuning range (*German*) 2-80986
 dye laser, pulsed, tuning using compound cavity 2-75601
 dye laser, single mode, picosecond short cavity, piezoelectrically tuned 2-65243
 dye laser, YAG pumped, tunable, characts. and appls., review 2-96940
 dye laser forced oscillator, pulsed, tuning (*Chinese*) 2-65271
 dye laser simple accurate timing mechanism, novel geometry 2-114340
 dye laser tuning using birefringent filters (*Chinese*) 2-97026
 dye lasers, single-mode wedge, continuous-scanning system 2-75617
 dye ring laser, powerful single-freq., spanning visible spectrum 2-90916
 dye ring laser, synchronously mode-locked travelling-wave, subpicosecond pulse prod. 2-114327
 dye two-wavelength picosecond laser, wide tuning range, appl. to semiconductors 2-57119
 fluoromethane subMM laser using new resonator type, tuning characts. 2-81000
 formic acid submm. laser, optically pumped, tuning possibility 2-114246
 free electron laser, tunable far IR, appls. for solid state system spectroscopy 2-80978
 gamma radiation tuning and stimulation 2-96879
 gas ring laser unidirectional lasing region control using mag. field 2-81001
 grating system, microprocessor-controlled tuning appls. 2-97047
 high power lasers and appls., Int. School of Physics, Varenna, Italy, July (1978) 2-74141
 high-power tunable lasers, appls. to photochemistry and isotope separation 2-75451
 I tunable anti-Stokes Raman laser, 178 nm 2-75560
 injection lasers, tunable, with external resonator, asymm. of some characts. 2-55155
 methanol large offset far IR laser lines, CO₂ waveguide laser pumped, obs. and assignment 2-80935
 oxazine 750 CW dye laser, broadly tunable near IR, using propylene carbonate solv ent 2-55140
 parametric light source based on four-wave interaction 2-65213
 PPO-POP scintillator multicomponent soln., tuning range enlargement (*Chinese*) 2-60072
 rhodamine 110 and disodium fluorescein active dyes, hybridly mode locked laser, tunable subpicosecond pulse generation 2-85954
 rhodamine 6G CW dye laser, cavity length detuning effects, simultaneous autocorrel. and synchroscan streak camera meas. 2-97045
 rhodamine 6G CW dye laser, design for intracavity spectroscopy 2-114316
 rhodamine 6G dye laser, double mode-locked, subpicosec., widely tunable 2-96984
 rhodamine 6G dye laser, lamp-pumped, using an interf. polarisation filter 2-96943
 rhodamine 6G dye laser, single-mode tunable, high-efficiency 2-96941
 rhodamine 6G picosecond gain spectroscopy during mode-locked laser action 2-89827
 rhodamine 6G tunable dye laser pumped by pulsed Xe ion laser (*Chinese*) 2-90922
 rhodamine-6G solutions, stimulated emission, light quenching of fluoresc. effect 2-60073
 ring laser, unidirectional, detuning effects on single-mode instabilities 2-108912
 self-injection tuning and amplification method 2-55212
 semiconductor external grating loaded lasers, oscill. centre freq. tuning, quantum FM noise, direct freq. modulation characts. 2-85961
 semiconductor interferometric laser, mode selection and tuning props. meas. 2-97000
 semiconductor laser, mode selection and tuning of dispersive extra cavity (*Chinese*) 2-60123
 semiconductor laser injection locking props. 2-80969
 semiconductor stripe-geometry laser, emission freq. thermal drift characts. 2-86029
 styryl-11 laser dye, CW operation, 770 to 850 nm 2-96942
 styryl-9 laser dye, CW operation, 780 to 900 nm 2-96942
 tunable laser electronic spectroscopy 2-74507
 tunable lasers, an overview 2-108896

laser tuning continued

- tuned optical radiation oscillator, intracavity vibr. stimulated Raman scatt. (*Russian*) 2-86012
 waveguide resonator, multimode fibre, mode selection and freq. tuning 2-90945
 AlGaAs external grating loaded lasers, oscill. centre freq. tuning, quantum FM noise, direct freq. modulation characts. 2-85961
 AlGaAs-GaAs injection laser with external dispersive cavity, bistable operation and spectral tuning 2-70566
 ArF excimer laser, spectral tuning obs. 2-60099
 CO tunable sealed laser using selective, nonselective resonators, spectral and energy characts. 2-55131
 CO₂ 16 µm laser action study 2-96887
 CO₂ CW laser, mode quality and tuning 2-75558
 CO₂ high power laser, direct narrow line tuning 2-96980
 CO₂ high-pressure electric-discharge laser with continuous freq. tuning and narrow emission line 2-96892
 CO₂ laser, high-power, continuous freq. tunable 2-65254
 CO₂ laser two-wavelength and power-balanced oscill., differential absorpt. meas. appl. 2-90964
 CO₂ TEA laser, multiple injection mode locking 2-86014
 CO₂ TEA laser, single longitud. mode operation by injection locking with tunable CO₂ waveguide laser 2-55189
 CO₂ tunable single-longit.-mode oscillator for efficient optical pumping 2-85992
 Cd_{1-x}Mn_xSe, stimulated spin-flip Raman scatt., laser emission obs. 2-114287
 CdS, CdSe, CdSe, optically pumped semiconductor platelet lasers, tunable CW laser action 2-114290
 Co:MgF₂ lasers, liq. N₂ cooled, pulse-pumped operation 2-102800
 Cr³⁺:BeAl₂O₄, alexandrite, ground state absorpt. determ. over tunable lasing region, 830 to 690 nm 2-60088
 Cr³⁺:BeAl₂O₄, alexandrite, laser freq. tuning 700 to 800 nm, spectroscopic characts. 2-114288
 Cs vapour tunable electronic Raman laser at 16 µm 2-75557
 GaAlAs single-mode laser, dynamic wavelength tuning 2-55144
 GaAs bulk laser, tunable picosecond pulse generation, two-photon absorpt. excitation 2-55164
 GaAs bulk laser, two-photon pumped synchronously mode-locked, 840 to 885 nm tuning range 2-114291
 GaAs-AlGaAs diode laser coupled to external resonator of narrow spectral bandwidth, bistable operation 2-108881
 He-Ne long laser, tunable single mode operation 2-114239
 HgCl₂ visible laser, tuning charact., laser emission spectra 2-60065
 IF laser, discharge pumped, upper state form. kinetics and line tunability 2-85943
 InGaAsP optically pumped semiconductor platelet lasers, tunable CW laser action 2-114290
 InGaAsP tunable thin-film laser, Nd:YAG laser pumped, for high bandwidth fibre spectral meas. 2-65248
 KCl:Li, Li(F₂)₂ centre lasing action 2-85980
 K(F₂)₂ centre lasing action, continuous timing between 2 and 4 µm 2-90900
 KrF₂ laser, tunable with narrow bandwidth and diffr. limited beam divergence 2-75597
 KrF₂ tunable blue-green laser, fluoresc. and laser parameters meas. for 436 nm transition 2-96924
 NH₃-N₂ high-power laser tunable in 745 to 930 cm⁻¹ range, laser chemistry appls. 2-96997
 NH₃-N₂ mid-IR high power tunable laser, development and appl. 2-65257
 Ni:CaY₂Mg₂Ge₂O₁₂ lasers, liq. N₂ cooled, pulse-pumped operation 2-102800
 Ni:MgF₂ lasers, liq. N₂ cooled, pulse-pumped operation 2-102800
 P_{0.95}Sn_{0.05}Se long-wavelength laser diode, emission spectra, temp. and mag. field effects 2-81012
 Xe₂Cl tunable blue-green laser, fluoresc. and laser parameters meas. for 520 nm transition 2-96924

laser velocimeters

- acoustic impedance meas. by laser-doppler anemometry (*German*) 2-86182
 anemometer appl. to hydrodynamics investig. in chromatographic columns (*Russian*) 2-114941
 anemometer configuration for meas. of travelling US field in acousto-optic deflector 2-114575
 anemometer meas. of boundary layer susceptibility to planar and three dimens. disturb. (*Russian*) 2-114942
 anemometry, appln. to investigation of ultrasonic vibratory systems 2-89800
 automated laser Doppler anemometer, aerodynamic expts. (*Russian*) 2-114937
 calibration using laser speckle photography 2-76043
 compressor rotor axial transonic flow meas. using laser anemometer 2-60687
 crossflow velocities meas. by laser anemometer 2-65662
 diagnostic probes for flames; combustion products and sprays 2-89824
 digital anemometer based on a scanning Fabry-Perot spectrometer 2-71049
 distributed-energy-stroke railgun projectile velocity meas. 2-95330
 Doppler, sediment erosion meas. appl. 2-68539
 Doppler anemometer, computer-controlled real-time meas. of intra-cell protoplasm flow (*Russian*) 2-117140
 Doppler anemometer, flow investig. in vortex chamber (*Russian*) 2-114938
 Doppler anemometer, for plasma stream diagnostics in industrial MHD systems (*Russian*) 2-115040
 Doppler anemometer, investig. of flow vel. distrib. in packed beds. (*Russian*) 2-114940
 Doppler anemometer, passive impurity transport velocity meas. (*Russian*) 2-114945
 Doppler anemometer, two-colour, for nozzle flow meas. 2-65673
 Doppler anemometer, velocity pulsations correlation function determ. (*Russian*) 2-114947
 Doppler anemometer for crosswind vel. meas. 2-106326
 Doppler anemometer investig. of laminar boundary layer stability (*Russian*) 2-114943
 Doppler anemometer signals, digital processing accounting for non-uniform discretisation (*Russian*) 2-114936
 Doppler anemometer with Gaussian beams optical system metrological characts. (*Russian*) 2-114932

laser velocimeters continued

- Doppler anemometers, configurations of multipoint meas. for coherent and noncoherent detection 2-60695
 Doppler anemometry, book 2-89488
 Doppler anemometry, influence of CW-lasers axial modes (*German*) 2-65671
 Doppler anemometry, systematic error elimination (*Russian*) 2-114930
 Doppler anemometry system, two-phase flow meas. 2-65674
 Doppler anemometry using microprocessor-based data logging and processing 2-79547
 Doppler anemometry with selection of optical signal coherent component (*Russian*) 2-114931
 Doppler meter, investig. of transition to turbulence in hydrodynamic flows (*Russian*) 2-114929
 Doppler meter using scanning optical frequency discriminator (*Russian*) 2-114946
 Doppler rate meter with electronic signal recording system 2-97671
 Doppler techniques and systems, review 2-114953
 Doppler vel. meter with low freq. modulation, meas. in photon counting regime 2-64005
 Doppler velocimeters performance and appl. 2-81408
 fibre optic laser Doppler meter, optically opaque fluid meas. (*Russian*) 2-114351
 fibre-optic dual-beam transit velocimeters 2-81407
 flow between stationary and rotating discs (*French*) 2-103176
 flow velocity distribution meas. in horizontal circular pipe using laser Doppler velocimeter (*Japanese*) 2-114956
 flow velocity field meas. using optical processor with coherent optical negative feedback (*Russian*) 2-114933
 fluid flow measurement, laser Doppler velocimetry, review 2-91566
 forward-scattering, noise suppression using apertures and stops 2-60213
 high resolution LDV with optical fibre pickup, pulsatile blood flow meas. 2-83704
 high-speed flow process investig. using laser Doppler and stroboscopic anemometers (*Russian*) 2-114934
 hypersonic aerodynamic tube, laser Doppler vel. meas. beam shifts due to turbulence (*Russian*) 2-114840
 intra-rotor flow mapping in turbomachinery using laser anemometer 2-60686
 jet noise source meas. using elliptical acoustic mirror and laser velocimeter 2-76042
 laser Doppler system with transient recorder for study of particles in flowing fluid 2-74582
 laser-Doppler anemometry, real-time velocity measurement (*German*) 2-97680
 liquid convection, Rayleigh-Benard, flow field meas., speckle velocimetry appl. 2-76051
 low-frequency component suppression in the laser velocity meter signal (*Czech*) 2-95329
 microcomputer-based flow sensing systems (*French*) 2-60681
 multichannel laser anemometer investig. of laminar-turbulent flow transition (*Russian*) 2-114939
 nonNewtonian flow, use of laser velocimeters (*French*) 2-91563
 oil-spray flames, burning processes in gas turbine low NO_x combustors, flow meas. appls. 2-62403
 optical advances in Laser Transit Anemometry 2-60688
 particle sizing with the laser velocimeter, Mie and refr. theory comparison 2-53730
 period timing device for laser Doppler signals 2-65670
 pseudoplastic transient flow, numerical and expl. simulation methods 2-91492
 secondary flow meas. by freq. tracking laser Doppler anemometer 2-91559
 single beam transit time laser velocimeter, practical aspects 2-65289
 supersonic mixing nozzles, laser Doppler velocimeter meas. 2-91507
 turbulent intensity determ. using probability after-effects, laser method 2-109427
 two-component laser Doppler anemometer system using acousto-optical splitters (*Russian*) 2-114935
 two-phase dispersed flow, turbulence laser velocimetry obs. 2-65636

lasers

- see also chemical lasers; distributed Bragg reflector lasers; distributed feedback lasers; dye lasers; excimer lasers; free electron lasers; gas lasers; laser beams; laser frequency stability; laser tuning; liquid lasers; nuclear pumped lasers; Raman lasers; ring lasers; solid lasers; X-ray lasers
 conference, lasers and electro-optics, Washington, DC, USA (June 1981) 2-58529
 conference on lasers, New Orleans, LA, USA (Dec. 1980) 2-79281
 high power lasers and appls., Int. School of Physics, Varenna, Italy, July (1978) 2-74141
 optics, conf., Los Alamos, NM, USA (Apr. 1981) 2-94889
 reliability and commercial lasers, life testing and field operation experience 2-80980
 review of optics developments 2-55059
 short wavelength lasers, figures of merit 2-108902

latent heat

- see also heat of fusion; heat of sublimation; heat of vaporisation
 CaCl₂·6H₂O heat storage system for off-peak energy supply and solar heating 2-83519
 moving phase boundaries with latent heat, calculations 2-69116
 storage materials, effect of impurities on melting temp. heat of fusion and sp. ht. 2-62503
 thermal energy storage in horizontal cylindrical capsule, high Rayleigh no. calcs. 2-116853
 two-mode laser, homogeneously broadened, latent heat 2-102760
 Cr, antiferromag., spin-flip transition, latent heat 2-92906

latent heat of adsorption see heat of adsorption**latent heat of combustion** see heat of combustion**latent heat of crystallisation** see heat of crystallisation**latent heat of dissociation** see heat of dissociation**latent heat of formation** see heat of formation**latent heat of fusion** see heat of fusion**latent heat of mixing** see heat of mixing**latent heat of reaction** see heat of reaction**latent heat of solution** see heat of solution**latent heat of sublimation** see heat of sublimation**latent heat of transformation** see heat of transformation**latent heat of vaporisation** see heat of vaporisation**latent image** see photographic process**lattice constants**

see also crystal atomic structure

- A15 compounds, cell dimensions of stoichiometric phases 2-81745
 alkali metal halides, lattice constants, Rittner pot., Simons-Parr-Finlan technique 2-91930
 alkali metal-graphite intercalation cpds., disordered, decorated-lattice struct. factors 2-81764
 ammonium hydrogen oxalate hemihydrate, transition to ferroelastic monoclinic phase, struct. study 2-92191
 anharmonic cryst., lattice const. fluctuations, self-consistent phonon field theory study 2-56145
 benzaldehyde thiosemicarbazone, lattice parameters, space group, X-ray diffr. 2-109776
 borides, RCo₂B₆, new, with rhombohedral SrNi₂B₆ type struct. (*Ukrainian*) 2-65946
 borides, RNi₂B₆, new, with rhombohedral SrNi₂B₆ type struct. (*Ukrainian*) 2-65946
 C DyCo₂, Fe, Hy, lattice parameters and mag. characts. 2-56891
 chloramil, phase diagram under press., order parameter variations 2-109977
 crystal perfection evaluation by means of asymm. Bragg refls. 2-97851
 cubic oxide phases with perovskite struct., electronic expansion factor 2-60918
 determination, geometrical correction 2-86518
 determination using measured beam and cryst. tilts 2-97848
 diamond, lattice consts., and internal X-ray diffractometer with uniaxial stress apparatus study 2-65797
 epitaxial layers, absolute lattice parameter meas. method 2-82159
 ferrimagnetic materials, exchange striction and crystal lattice in domains and domain walls 2-72186
 2-formyl furan thiosemicarbazone, lattice parameters, space group, X-ray diffr. 2-109776
 HxBPA, temp. depend. of lattice parameters in S_G¹ and S_G² phases 2-86556
 ice, lattice parameters, Raman and X-ray study 2-104872
 ice VI, morphological obs. 2-86608
 III-V antimonides, phase diagrams 2-116427
 intermetallic phases, prediction by interpolation method, space filling factor 2-76640
 ionic crystals, lattice distortion due to isovalent impurities 2-61002
 metal superconductive superlattices, critical prop. singularities 2-104530
 naphthalene d₈, compressibility temp. depend. 2-92085
 quartz, thermal expansion, Gruneisen functions and static lattice props. 2-98313
 rare earth alloys, RInZn, lattice parameters and struct. characts., X-ray diffr. study 2-91876
 rare earth alloys, RPbCu, lattice parameters and struct. characts., X-ray diffr. study 2-91876
 rare earth compounds, R₂Cu₂O₅ (R=Lu, Yb, Tm, Ho, Er, Dy, Tb, Y), cryst. struct. data 2-81757
 rare earth cpds., R(AlMn²⁺)O₄, cryst. struct. 2-60945
 rare earth cpds., R(GaM²⁺)O₄ (M=Mg, Mn, Co, Cu, Zn), cryst. struct. 2-60945
 rare gas solids, lattice dynamic props., self-consistent average-phonon eqn. of state 2-81922
 rare-earth substituted chloro-phosphate apatites, prep., lattice parameters, X-ray diffr. obs. 2-60936
 rhombohedral perovskites, R3C symmetry, structural relationships 2-115166
 solid gases, review 2-115121
 SOS films, struct.-props. rels. associated with haze 2-91907
 space lattices and their lattice planes, coincidence coeffs. 2-103679
 surfaces with large unit cell structures 2-110105
 tetramethylammonium trichlorocuprate trichloromanganate, X-ray struct. study (*French*) 2-98056
 (TMTSF)₂PF₆, compressibilities, X-ray diffr. study 2-115338
 s-triazine, high pressure elastic phase transition, neutron diffr. study 2-66210
 Volcoloy, antiferromagnetic Invar type alloy in Mn-Ge system (*Japanese*) 2-77291
 wurtzite derivatives and related dipolar tetrahedral structs. 2-81756
 X-ray diffractometry, cryst. orientation matrix coeffs. and lattice const., computer program 2-115098
 xenon clathrate hydrate, struct. I, far-IR spectrum and X-ray diffr. 2-110843
 Ag-based solid solns. with group I to VB solutes, at. size and lattice parameters 2-109748
 Ag₂TiS₃, disordered stage II, c-axis parameters, X-ray study 2-109772
 Al, epitaxial growth on polycryst. Si surface, micro-probe RHEED study 2-61308
 Al, interatomic pots. and electronic props., ab initio calc. 2-56460
 Al-Ru (10-15 wt.%), rapidly quenched, phase transform 2-77823
 Am, phase transitions under press., cryst. struct., X-ray diffr. study 2-92192
 β-As₂S₃, thermal expansion, compressibility, X-ray diffr. study 2-115438
 Au-based solid solns. with group I to VB solutes, at. size and lattice parameters 2-109748
 Au-Cu alloy particles produced by Au and Cu smoke particles coalescence, electron microscopy study 2-93476
 Ba₃Fe₂S₈, cryst. struct., 2-D array of FeS₄ tetrahedra, X-ray diffr. obs. 2-60941
 Ba(Sr)(M_{1/3}Nb_{2/3})O₃-PbZrO₃-PbTiO₃ (M=Pb, Ca, Sr) elec. and optical props. 2-82794
 Ba₂(Sr_{1-x}Nb_{2-3x})O₃-PbZrO₃-PbTiO₃ elec. and optical props. 2-82796
 BaVS₃, stoichiometric, phase transitions at 240K and 80K, X-ray diffr. study 2-61125
 Ba₂XPa₂, X=Si, Ge, struct. and characterisation (*German*) 2-60955
 Be, total energy calcs., lattice const. 2-87168
 Bi_{1-x}Sb_x solid soln., system, Vegard rule validity 2-65968
 CO₂, thermal expansion, X-ray diffr. study, 5 to 195K (*Russian*) 2-81991
 Ca-Pd, phase diagrams and intermetallic phase cryst. struct., X-ray and DTA study 2-109955
 CaNi₂H₂, cryst. struct., hydriding, X-ray diffr. study 2-91875
 CaSc₂S₄, cryst. struct., refinement by powder neutron diffr. 2-81732
 Ca₂XPa₂, X=Si, Ge, struct. and characterisation (*German*) 2-60955
 CdIn₂Se₄, semicond., lattice const. and thermal expansion, X-ray diffr. study 2-92240

lattice constants continued

- CdS, Se_{1-x}S_x sprayed thin films, struct. props. and optical band gap 2-110199
 CdSe_{1-x}S_x films, soln. grown, struct. and optical props. 2-56388
 Ce Laves alloys, C15, Ce metallic radius 2-86625
 Ce-Sn system, phase struct. and heat of form. 2-109745
 Ce_{1-x}La_xBe₂, mixed valence and Kondo behaviour, lattice const. elec. resist. susceptibility 2-56515
 CePd₃, intermediate valence theory, lattice const. and paramag. susceptibility 2-76988
 CePd₂Si₂, Ce valence state, Si addition effect, lattice const. and susceptibility meas. 2-79997
 CeR₂ (R = Zr, Hf, Th), Laves phases, C15, Ce metallic radius 2-86625
 Ce(Rh_{1-x}Pt_x)₂, intermediate valence effects in mag. susceptibility and lattice const. 2-87200
 Ce_{1-x}Sc_xAl₂, electronic struct. of Ce 2-71933
 Ce_{1-x}Sc_xAl₂, volume collapse and spin fluctuation behaviour 2-55892
 Ce_{1-x}Y_xAl₂, electronic struct. of Ce 2-71933
 Ce_{1-x}Y_xPd₃, electronic struct. of Ce 2-71933
 Co-Ga alloys, B2 struct., defect struct. and lattice parameters (*German*) 2-81784
 Co-Sn-M (M=rare earth, Y, Sc, Ca, Sr, Th), supercond. and mag. transition temp. 2-115934
 Co₂Si₃, chimney-ladder structs., formed by high-temp. and pressure treatment 2-88022
 Cr₃Si-type struct., at. dias. in voids rel. to unit-cell dimensions 2-109747
 Cu, effect of lattice periodicity on channelling radiation 2-71528
 Cu-Al-Ni, shape memory alloys, ageing effects 2-77852
 Cu-based solid solns, with group I to VB solutes, at. size and lattice parameters 2-109748
 Cu-Ge alloys, EXAFS associated with K-absorption discontinuity 2-99220
 Cu-Zn-Al, shape memory alloys, ageing effects 2-77852
 Cu₂AsS₃, elastic and mag. props., temp. depend., phase transform. 2-116009
 CuBr-CuI system, physicochem. props. 2-111512
 Cu₂Co_{2-x}O₄, props. of spinel prep. at low temps. and normal press. 2-55945
 CuIn₂Te₈, cryst. struct. and microstruct., electron microscopy study 2-115198
 Cu₂Mg-type struct., at. dias. in voids rel. to unit-cell dimensions 2-109747
 Cu₂Mg_{1-x}Fe_xO₄, spinel ferrites, ionic-covalent bonding, X-ray diff. and absorption chemical shift study 2-65919
 Cu₂MnIn(Al)(Sn) films, struct., mag. and transport props. 2-60889
 CuO-NiO-MgO system, X-ray powder diff. study at 1000°C 2-86636
 Cu_{2-x}S, CDW and struct. transition, X-ray diff. study 2-92189
 Cu₂Zn_{1-x}Fe_xO₄, spinel ferrites, ionic-covalent bonding, X-ray diff. and absorption chemical shift study 2-65919
 Dy₂Fe₁₇, cryst. and mag. props. 2-86626
 Er-Ni-Al, isothermal sections at 800°C, X-ray analysis (*Ukrainian*) 2-77802
 Er₃Al₂O₇, garnet, thermal expansion, optical dispersion, refractive index 2-66261
 EuPd₂Si₂, mixed valence cpd., mag. susceptibility, lattice const., Mossbauer isomer shift 2-56510
 Eu₂S₃, crystallographic study of phase transition at 185K 2-97978
 Fe alloys, α' -martensite, crystallographic parameters (*Russian*) 2-91872
 Fe films, RF sputtered, lattice expansion 2-60922
 Fe thin film, struct., X-ray diff. study 2-104200
 Fe-Co, BCC, mag. moments and lattice const., band theory 2-72133
 Fe-Co powder, form., struct., and mag. props., electrolysis conditions effect 2-83063
 Fe-Mn-Cr-Ni systems, alloy comp. effects on lattice parameters regarding γ , ϵ and α phases (*German*) 2-88058
 Fe-Ni-Mo-B, metallic glasses, annealed, phase transforms 2-67302
 Fe-Si-Al, Sendust, order-disorder transform. and dislocation configuration, TEM study 2-83108
 Fe₂Cu_{1-x}Rh_xS₂, magnetic and crystallographic props. 2-92860
 (Fe_{1-x}Sn_x)₂, (Fe_{1-x}Sn_x)₃ solid solns., magnetisation, Curie temps. and lattice const. meas. 2-76365
 Fe₂Zn ferrite, Cu²⁺ substituted, Jahn-Teller effect on ground states 2-66502
 FewO₄, prep., elec., mag. and structural props. 2-92682
 Ga_{1-x}In_xP_{1-y}As_y, internal strain determ. using Vegard's law 2-103709
 GaN epitaxial layer, optimized growth conditions 2-66391
 GaN, heteroepitaxial layers, characterisation by Kossel effect technique 2-92380
 GdFe₂, ⁵⁷Fe local fields, NMR study rare earth ion and interionic dist. effects 2-82744
 GdGa₂O₃, garnet, formation, DTA and X-ray phase anal. 2-67207
 Gd₂Ga₂O₇, lattice const. determ. using measured beam and cryst. tilts 2-97848
 Ge, lattice const. and bulk moduli, self-consistent pseudopot. calc. 2-109741
 HfO₂-MgO system, struct. and phase props. (*Ukrainian*) 2-57336
 α -HgI₂, lattice const. thermal expansions 2-98312
 Ho-Ni-Al, isothermal sections at 800°C, X-ray analysis (*Ukrainian*) 2-77802
 2Ho₂O₃-SiO₂, lattice constants 2-88070
 Ho₂O₃-3SiO₂, lattice constants 2-88070
 InGaAsP LPE on InP, growth temp. and impurity doping effect on comp. 2-94842
 InGaPAs_{0.01}-Zn(Te)(Se) LPE layer on GaAs, doping effect on physical, elec. and optical props. 2-110501
 In₂O₃:Sn films, annealed, elec. resist. and defect model 2-66671
 In₂WO₆, cryst. struct., relation to fluorite struct., X-ray diff. study 2-81726
 Ir, eqn. of state and volume compression under high press., α - ϵ transition 2-115385
 Ir_{0.78}Y_{0.22} eutectics, strain-induced softening and high-press. expts. 2-56090
 KCl_{1-x}Br_x, crystals, lattice parameter and F-band position 2-98037
 KCl_{1-x}Br_x, crystals, Compton profile anal. 2-86730
 K₂H(SeO₄)₂, ferroelectric transition and twin structs., X-ray and optical study 2-86854
 KMnF₃, struct. phase transition, precursor effect in lattice const., single-wall pot. model 2-92185
 K₂SeO₄, incommensurate superlattice, X-ray diff. study 2-55943
 K₂ZnCl₄, high temp. phase transitions, lattice const., X-ray diff. study 2-92186

lattice constants continued

- La_{2-x}R_xCuO₄ (R=Pr, Nd), struct. transitions, elec. props., semicond.-metal transition 2-81949
 La₂Cu_{1-x}Ni_xO₄, struct. transitions, elec. props., semicond.-metal transition 2-81949
 LaNi_{4.5}Al_{0.5}D₄S₄, neutron diff. struct. study 2-71422
 La₂NiO₄, coexistence of localised and itinerant 3 d electrons, lattice const. meas. 2-66755
 LaNi₂Sn, mag. susceptibility, cryst. struct., X-ray diff. study (*Ukrainian*) 2-103693
 Li BCC cluster, CNDO/BW method calc. 2-55003
 β -LiAl, positive carrier conc. rel. to Li vacancies, Hall effect and lattice parameters study 2-56552
 LiCoO₂, new variety with unusual O₂ packing obtained by exchange reaction 2-60956
 Li₂N, anharmonic thermal vibrs., fast ionic conduction 2-109937
 LiNbO₃-Fe₂O₃, congruently melting, phase rel. 2-62110
 Li₂TiS₃, intercalation compound, elastic energy and staging 2-71391
 Li₂VO₃, preparation and lattice parameters 2-81752
 Lu₂Al₂O₇, garnet, thermal expansion, optical dispersion, refractive index 2-66261
 Lu₂V₂O₇, cryst. struct., rel. to mag. props., superexchange pathways 2-91923
 (Mg,Fe)₂Al₂Si₂O₁₈ in H₂O, cordierite, high press. phase transition 2-92172
 MgSiO₃-MgGeO₃, phase relation diagram, physicochemical anal. 2-66175
 Mn_{1-x}Cr_x(Fe)₂B, Invar like props. 2-72174
 Mo-Zr-C, cubic solid soln., prep. and props. 2-71395
 Mo₂O₃ and Mo₁₈O₅₂ as cathodes for Li cells, props. 2-93883
 Mo₂Si₃, integrated intensities and lattice parameters 2-81747
 (NH₄)₂BeF₄, incommensurate superlattice, X-ray diff. study 2-55943
 NH₄HSeO₄, dielec. and struct. props., isotope effect, pyroelec. and X-ray studies 2-57022
 (NH₄)₂ZnCl₄, coexistence of lattice superperiods near phase transitions, X-ray diff. study 2-92184
 (NH₄)₂ZnCl₄, ferroelec., phase transition sequence, X-ray diff. and NQR study 2-76360
 N₂O, thermal expansion, X-ray diff. study, 100 to 182K (*Russian*) 2-81991
 N₂O₄, cryst. struct., neutron diff. study, ab initio calcs. 2-76386
 Na₂AO₄ (A=Si,Ge), low-temp. orthorhombic variety, X-ray diff. (*French*) 2-55950
 Na_{0.5}Bi_{0.5}TiO₃, ferroelectric, structural phase transitions, X-ray diff. study 2-67002
 Na₂Ca₄Al₁₀Si₄O₄₀, cryst. struct., X-ray diff. method 2-115188
 NaCl, cohesive props., ab initio pseudopot. calc. 2-109738
 NaCl, equation of state, lattice const. and bulk modulus, SCF calc. 2-71604
 Na_{0.33}(H₂O)₂TaS₂ intercalation cpd., cryst. struct., X-ray diff. study 2-91909
 Na_{1-y}(H₂O)_yTaS₂, O₂ \leq y \leq 2, ambient temp. phase rels. 2-61155
 NaNbO₃, single crystal, low-freq. reflectance spectrum temp. depend., phase transition, lattice mode parameters 2-99111
 Nb-Ga-Si system, crystallographic phases, supercond. transition temp., X-ray diff. study 2-86837
 Nb-Ge films, supercond. and struct. props. rel. to sputtering conditions (*Russian*) 2-104522
 Nb₂Ge bulk metastable alloys, containerless undercooling and solidification 2-57340
 Nb₂Ge(Si), d.c. sputtered, quenching effect on metastable cmpd. 2-93544
 NbN_{1-x}, reactive synthesis by pulse laser annealing, X-ray, AES and supercond. study 2-72642
 Nb₂Si, Al₁₅ phase, high press. annealing prep., struct. and supercond. props. 2-77778
 Nb₂Si and Nb₂Si₃, α -particle irradi. effects on supercond. and struct. props. 2-98167
 Nb₂Sn, ultrafine supercond. powder form. by vapour phase reactions 2-67232
 NdNi₂Sn, mag. susceptibility, cryst. struct., X-ray diff. study (*Ukrainian*) 2-103693
 Ne adsorbed layer on graphite, fluid-solid transition line, phase diagram, lattice constant, LEED study 2-66185
 Ni, electron irradi., Frenkel defects, elec. cond. (*German*) 2-98080
 Ni-Cr, lattice parameter studies of struct. changes near Ni₃Cr 2-105124
 Ni-Fe(Cu), electron irradi., Frenkel defects, elec. cond. (*German*) 2-98080
 NiFe₂O₄-CaFe₂O₄, magnetic props. (*Japanese*) 2-82578
 NiGa₂Si(Si₂N)₂ mixtures, phase diagram invest. 2-67303
 Ni_{1-x}Si_x(Ge)_{1-x} mixtures, phase diagram invest. 2-67303
 NiSi₂, coevaporated film, lattice structure 2-98484
 γ -Ni₃V precipitates, habit plane 2-65923
 Ni₂Zr ferrite, Cu²⁺ substituted, Jahn-Teller effect on ground states 2-66502
 Os-Sn-M (M=rare earth, Y, Sc, Ca, Sr, Th), supercond. and mag. transition temp. 2-115934
 PbO, polymorphic, thermal expansion, phase transitions, dielec. props., X-ray study 2-76716
 Pb₂O₃, orthorhombic, lattice parameters as function of temp., struct. evolution (*French*) 2-60929
 PbSe₂S₄, cryst. struct. refinement by powder neutron diff. 2-81732
 PbTe epitaxial film, misfit strain 2-92423
 PbTe films, RF sputtered, struct. props. obs. by X-ray asymm. refls. 2-110197
 PbTiO₃, phase transition in low temp. range, lattice const. meas. 2-81947
 Pd_{1-x}Ag_xHy, α - α' phase transition of H, X-ray scatt. study 2-103977
 PrNi₂Sn, mag. susceptibility, cryst. struct., X-ray diff. study (*Ukrainian*) 2-103693
 R₂GeBeO₄ (R=La,Pr,Sm,Gd,Dy,Er), cryst. struct., prep. and mag. susceptibility meas. 2-103719
 RbCe(SeO₄)₂, lattice parameters, X-ray powder diff. data 2-115193
 RbLa(SeO₄)₂, lattice parameters, X-ray powder diff. data 2-115193
 Rb₂NaHoF₆, phase transition and low temp. struct. 2-66209
 RbNd(SeO₄)₂, lattice parameters, X-ray powder diff. data 2-115193
 RbPr(SeO₄)₂, lattice parameters, X-ray powder diff. data 2-115193
 Re₂Ge₂, chimney-ladder structs., formed by high-temp. and pressure treatment 2-88022
 ReP₂O₇, isomorph of ZrP₂O₇, synthesis and struct., X-ray study 2-115196

lattice constants continued

- (Rh_{1-x}Cr_x)₂Te₄, paramag. susceptibility, elec. resist. and lattice consts. meas. 2-72136
- Ru-Sn-M (M=rare earth, Y, Sc, Ca, Sr, Th), supercond. and mag. transition temp. 2-115934
- Si, electronic dilation during pulsed laser annealing, lattice constants 2-56224
- Si, lattice consts., and internal X-ray diffractometer with uniaxial stress apparatus study 2-65797
- Si, lattice consts. and bulk moduli, self-consistent pseudopot. calc. 2-109741
- Si, phonon freq. calcs., lattice const. 2-76619
- Si, single cryst., highly pure lattice parameter 2-109740
- Si, total energy calcs. 2-66470
- Si-B epitaxial layer, lattice parameter determ. by means of asymm. Bragg refls. 2-97851
- Si-Ge, solid soln., press.-vol. relation, covalent-metallic transition 2-82232
- Si-Ge solid solns., pressure-induced covalent-metallic phase transition, pseudopot. calc. 2-87149
- Si-VSi₂, directional eutectic, structure, comp. dependence, expt. study (Russian) 2-99410
- SiC-B, Al epitaxial layers, lattice deformation and perfection, X-ray study 2-92406
- SiC-AlN solid solutions, hot pressed, comp. and props. 2-88037
- Sm, fluctuating valence materials, replicate core levels and 4f excitation energies 2-56504
- Sm,Ce_{1-x}B₂, solid solution, valence and lattice consts. 2-66500
- Sm,Lu_{1-x}B₂, solid solution, valence and lattice consts. 2-66500
- Sm,Ni₁₉ polypolys, cryst. struct., electron diff. and microscopy study 2-91877
- α -Sn, lattice consts. and bulk moduli, self-consistent pseudopot. calc. 2-109741
- SnMo₂S₈, Chevrel phase, stoichiometry, rel. to supercond. props. 2-66242
- SrBiSe₃, prep. and cryst. struct., X-ray study (German) 2-109768
- SrO-Li₂O₂-P₂O₅-Mn, Ce, luminesc. system, whitlockite phase struct. 2-98015
- SrSe₂Se₄, cryst. struct. refinement by powder neutron diff. 2-81732
- Sr₂XP₄, X=Si,Ge, struct. and characterisation (German) 2-60955
- TbCO_{2-x}Fe₂Hy, lattice parameters and mag. characts. 2-56891
- Tb-Co₂, mag. anisotropy, cryst. symmetry effects 2-92901
- Th(IrOs)₂, superconductive behaviour, transition temp., lattice consts. 2-66694
- Th(Ir,Ru)₂, superconductive behaviour, transition temp., lattice consts. 2-66694
- ThNiAl, absorption of H₂, thermodynamic and struct. study 2-56196
- Ti-Al-Mo, α' phase form. and decomp. (Russian) 2-99385
- Ti-V-Cr-Mo, VT₃-1, α' phase form. and decomp. (Russian) 2-99385
- TiB₂ coating for fusion reactor first wall, characterisation by lattice constant meas. 2-74912
- tio single crystals, ordered modification with O, crystal-geometrical features (Ukrainian) 2-65945
- TmSe, stoichiometry, press. effects, lattice parameter, resistivity 2-56203
- TmSe_{0.85}Te_{0.15}, mixed valence cpd., mag. and elec. props. 2-56444
- Tm₂V₂O₇, cryst. struct., rel. to mag. props., superexchange pathways 2-91923
- UC, density, lattice parameters and elec. resist. up to 100 kbar 2-76387
- U₂C₃, neutron irradi., mag. susceptibility, Neel temp., lattice consts. 2-66073
- UMAl (M=Ni,Co,Mn), absorption of H₂, thermodynamic and struct. study 2-56196
- UNi_{2-x}Cu_x, intermediate valence theory, lattice const. and paramag. susceptibility 2-76988
- V-O system, phase relations, homogeneity, X-ray diff. study 2-66173
- V₉₀M₁₀ (M=Cr, Mn, Nb, Mo, Pd, Ta, W, Re, Pt, Au), supercond. crit. temp. and crit. field meas. 2-92805
- V₉N₄ and V₃₂N₁₆, N ordering, neutron and electron diff. obs. 2-91879
- V₃Si, amorphous supercond. film, crit. temp., thermal annealing effects 2-92801
- V₃Si film, magnetron sputtering and supercond. props. 2-77738
- WC-TiC-TaC-NbC-Co cemented carbide, C content effects 2-77939
- Y₃Al₂O₇, garnet, thermal expansion, optical dispersion, refractive index 2-66261
- Y(Co_{1-x}M_x)₅, M=Ni, Cu, Al, Ti, V, Cr, Mn, Fe, struct. and mag. props. 2-91874
- Y(Fe_{1-x}Co_x)₂ crystal struct. deform., elastic props. (Russian) 2-92074
- Y₂Be₂O₇, cryst. struct., prep. and mag. susceptibility meas. 2-103719
- YMn₂, first-order struct. phase transition, lattice parameter study (Russian) 2-103974
- YbAl₃, mixed valence states, cryst. struct. and transformations, X-ray study 2-104319
- YbFe₂O_{4+x}, hexagonal cpd., magnetisation, lattice parameter depend. on x and temp. 2-116033
- YbNi_{1-x}Cu_x, mixed valence states, cryst. struct. and transformations, X-ray study 2-104319
- Yb₂V₂O₇, cryst. struct., rel. to mag. props., superexchange pathways 2-91923
- Zn-Fe, delta phase stability meas. 2-11144
- Zn₂Cd_{1-x}S_{1-x}Cu_{2x}S single crystal photovoltaic cell, optimum performance 2-116822
- Zn₂Cu_{1-x}Fe_{2x}O₄, ferrite, mag. ordering 2-66819
- ZnO₂Al₂O₃, gahnite, behaviour of Cr³⁺ and Fe³⁺ ions 2-98296
- ZnS₂Cu, Br phosphor, electroluminesc. and lattice const. meas. 2-93283

lattice defects see crystal defects**lattice diffusion** see diffusion in solids**lattice dynamics**

- see also crystal surface and interface vibrations; displacive transformations; Gruneisen coefficient; lattice dynamics of covalent crystals; lattice dynamics of ferroelectric crystals; lattice dynamics of ionic crystals; lattice dynamics of metallic crystals; lattice dynamics of molecular crystals; lattice localised modes; lattice phonons; soft modes; vibrational states in disordered systems
- A^{Nb8-N} compounds, X-ray struct. amplitudes, anharmonic core vibr. effects 2-81762
- angular force models, nonequivalence of De Launay and Clark, Gazis and Wallis theories 2-109915
- anharmonic cryst., imperfect, unsymmetrised self-consistent field approx. 2-81921
- anharmonic cryst., lattice const. fluctuations, self-consistent phonon field theory study 2-56145
- anharmonic thermal vibrs., statistical approaches 2-109936

lattice dynamics continued

- antishielding of ions in solids, Sternheimer factor and lattice dynamic effects 2-77001
- atomic chain, temp.-force instability, breaking strength 2-86789
- colloidal liquids and solids, dynamics 2-109945
- coupled external and internal strains, elastic response and consts. 2-92076
- crystallography, cryst. struct., book 2-112666
- defect-induced lattice displacements, static Debye Waller factor, Bragg scatt. intensities 2-92138
- diamond structure elements, internal strain, survey of theoretical approaches 2-61087
- displacive phase transition, dynamics of 1-D model (Russian) 2-98236
- double-Gaussian model, crit. and crossover behaviour 2-112836
- explosive, shocked, vibronic relaxation, press. depend. 2-76605
- fluorindates, struct. modifications, IR and Raman investig. 2-87771
- graphite intercalation compound with K, Rb, Cs, phonon branches, neutron spectra study 2-76618
- graphite intercalation compounds, C₆K(Rb)(Cs), vibr. density of states 2-81909
- inert gas solids, lattice dynamics and thermodynamic props., zero point motion and three body effects 2-109941
- intercalation compounds, conf., Trieste, Italy (July 1981) 2-74165
- intermediate valence compounds, electron-phonon coupling 2-56133
- internal strains from generalised forces, theoretical study 2-61080
- isotropic solid films, Green functions and fluctuation spectra for thermal modes 2-98213
- isotropic solids, Green functions and fluctuation spectra for coupled acoustic-thermal modes 2-98212
- layered crystals, one-dimens. nonlinear waves, theory (Russian) 2-115367
- low dimensional systems, theoretical aspects of solitons, review (Japanese) 2-81901
- mixed crystal modes, vibr. conc. depend. 2-86820
- narrow gap semiconductors, conference, Linz, Austria (Sept. 1981) 2-89445
- phonon physics, conference, Bloomington, IN, USA (Aug.-Sept. 1981) 2-53414
- polymorphism, thermodynamic props., lattice dynamics and polymorphic transitions, review 2-109731
- quadratic vibrationally coupled systems, vibr. relaxation and hot luminesc. (Russian) 2-99187
- quartz, polar vibrs. at 129 and 265 cm⁻¹, temp. depend. (German) 2-93181
- quartz, thermal expansion, Gruneisen functions and static lattice props. 2-98313
- random walks and nonintegral effective dimensionality 2-112830
- rare earth mixed valent cpds., homogeneous, lattice vibrs. 2-76608
- rare earth orthophosphates, vibr. props. of PO₄³⁻ (German) 2-81907
- rare gas solids, lattice dynamic props., self-consistent average-phonon eqn. of state 2-81922
- rigid ions dynamic simulation in liq. and solids using Ewald sum, MDIONS program 2-65826
- rigid ions dynamic simulation in liq. and solids using Ewald sum, MDIONS program 2-65827
- ruby, resonant phonon assisted energy transfer from 29 cm⁻¹ phonon dynamics 2-71594
- small particle, specific heat and lattice vibr. 2-109920
- solids, effect of low-freq. modes in dielec. loss 2-72419
- spin-lattice coefficients, for s-state (4fⁿ) ions 2-98830
- superconducting film, quasiparticle and phonon nonlinear dynamics 2-87449
- tetragonal crystals, elastic Debye temp. determination, heat capacity 2-86824
- thermodynamic and transport properties of crystals in anharmonic approx., effect of temp. and press. 2-76706
- unresolved Raman excitation profiles, unresolved, anal., totally symmetric vibrs. 2-116185
- vibrations and microwaves in solids 2-99066
- vibronic spectra, hydrostatic and uniaxial press. effects 2-57050
- AgInTe₂, force consts. and phonon freq., spectral moment calc. from sp. ht. data 2-98224
- Ag₂X₂O₆ (X=Ta, Nb, Sb), vibr., force fields, IR and Raman study, normal coordinate anal. (French) 2-110869
- Al₂O₃V, nonequil. phonon propag. by quasidiffusion 2-92297
- As₂S₃, Raman spectrum, effect of temp. and press. 2-67040
- BeSO₄4H₂O, and BeSO₄4D₂O, Raman and IR activity (French) 2-116184
- C₆K, cryst. dynamics and binding, inelastic neutron scatt. obs. 2-109736
- C₆K, intercalation cpd., struct., dynamics, neutron diff. obs. 2-109763
- C₆KD₂/3, cryst. dynamics and binding, inelastic neutron scatt. obs. 2-109736
- C₆KD₂/3, intercalation cpd., struct., dynamics, neutron diff. obs. 2-109763
- C₆KH₂/3, cryst. dynamics and binding, inelastic neutron scatt. obs. 2-109736
- C₆KH₂/3, intercalation cpd., struct., dynamics, neutron diff. obs. 2-109763
- Cd₂Co₂Fe₂O₄, mag. props. and lattice dynamics, Mossbauer effect study 2-77426
- Cd₂X₂O₆ (X=Ta, Nb, Sb), vibr., force fields, IR and Raman study, normal coordinate anal. (French) 2-110869
- CoAl₂O₄, IR and Raman spectra and lattice vibrs. 2-57074
- CoAs₂, far IR reflection spectra meas. and dielec. function and lattice dynamics calc. 2-110855
- Co³⁺Co₂¹¹O₄, IR and Raman spectra and lattice vibrs. 2-57074
- CoP₃, far IR reflection spectra meas. and dielec. function and lattice dynamics calc. 2-110855
- CoP₃(As₂)(Sb₂), far IR reflection spectra meas. and dielec. function and lattice dynamics calc. 2-110855
- CrSe₂-IT, lattice instability and electron-lattice interaction, Jahn-Teller mechanism 2-98210
- Cr₂Si₂, lattice dynamics neutron scatt. study 2-92126
- CsNiF₃, acoustic phonon vel., elastic coeff., refractive index, Brillouin scatt. study 2-86812
- Cu (100), adsorbed CO, CH₃O and S layers, electron scatt. from surface vibr. modes 2-98424
- CuInS₂, force consts. and phonon freq., spectral moment calc. from sp. ht. data 2-98224
- Cu₂Te hexagonal, lattice vibrs. symmetry 2-115374
- Fe-Cr system, lattice dynamical parameters, X-ray diff. study (Russian) 2-61101

lattice dynamics continued

- GaAs:Zn(Cu), F- and C-centres, vibr. props., Green's function calc. 2-86811
 β -Ga₂O₃, single cryst., valence force field, Raman study 2-77514
 GaS, layered, atomic vibr., Mossbauer study 2-110739
 HfS₂, lattice dynamical anisotropy, two phonon reson. Raman scatt. study 2-98220
 Hg_{3-1-x}AsF_{6x}, incommensurate, low-freq. dynamics, crossover theory 2-103918
 HgTe(Se), lattice dynamics, rigid ion model, neutron scatt. study 2-86809
 KCuF₃, Jahn Teller distorted, anharmonic vibr. and electron density distrib. 2-81920
 K₂TaF₇, cryst., vibr., Raman study 2-77510
 LaB₆, supercond., electronic struct., phonon modes, Eliashberg function, muffin tin approx. 2-66698
 LaH₂, H vibr. modes, pulsed neutron spectroscopy study 2-66154
 Li₃N, anharmonic thermal vibrs., fast ionic conduction 2-109937
 MgIn₂S₄, partially-inverse spinel, cryst. struct. and far IR absorpt. meas. 2-91906
 Mg₂Pb, third-order elastic consts. and low temp. limit of Gruneisen parameter, Axe shell model 2-76631
 Mg₂SiO₄, forsterite, single cryst., Brillouin scatt. meas. up to 40 kbar 2-57115
 MnO₄⁻ ion, ¹⁸O enriched, in RbBr matrix, reson. Raman spectrum 2-116183
 N₂-type crystals, libration motion dynamics, anharmonic and correlation effects (*Russian*) 2-61082
 NH₄NO₃, phase transformations, Raman study 2-87768
 NH₄ReO₄, Raman spectrum at high press. 2-116182
 Na, thermodynamic props. from lattice and mol. dynamics, pseudopot. calc. 2-104028
 NaNO₂, lattice mode anharmonicity, order-disorder transition, IR spectra study 2-76614
 NaNO₃, lattice mechanics, phonon dispersion, rigid mol. ion model 2-109927
 NaNbO₃, zone-centre soft mode behaviour in cubic 2-56150
 NbH_{0.99}, lattice vibr. spectrum, inelastic neutron scatt. study 2-71597
 NbSe₂-2H, normal state phonon prop. anal. 2-103919
 NiO mag. and lattice mechanical props. 2-92890
 β -PbF₂, anharmonic thermal vibrs. and at pots., temp. depend. 2-115380
 Pb(MoO₄)_x(WO₄)_{1-x} mixed cryst., lattice dynamics, Raman scatt. study 2-67050
 a-Si:H, reassessment of vibr. spectrum 2-57136
 β -SiC, phonon dispersion, bond-bending force model 2-76617
 Si₃ON₂, covalent ceramic, vibr. assignment, IR absorption bands 2-87770
 SmS, mixed valence, lattice dynamics 2-76621
 Sm_{0.75}Y_{0.25}S₂, intermediate valence cpd., lattice dynamics 2-56111
 Sn chalcogenides, Mossbauer effect probability anal. 2-77431
 Sn-O amorphous system, bonding struct. and lattice dynamics, Mossbauer study 2-104770
 TaSe₂-2H, normal state phonon prop. anal. 2-103919
 TaSe₂(2H), electronic susceptibility, CDW and lattice vibr., Raman scatt. study 2-77530
 TiS₂-IT, lattice instability and electron-lattice interaction, Jahn-Teller mechanism 2-98210
 Ti₂X₂O₆ (X=Ta, Nb, Sb), vibr., force fields, IR and Raman study, normal coordinate anal. (*French*) 2-110869
 TmSe, intermediate valence cpd., lattice dynamics 2-56111
 US(Te)(As), rock-salt struct., mag. excitations and lattice vibr., neutron diffr. study 2-72153
 VC-based carbide phase, thermal vibrs. of ats., effect of alloying elements (*Russian*) 2-103912
 VSe₂-IT, lattice instability and electron-lattice interaction, Jahn-Teller mechanism 2-98210
 W, proton dechannelling, lattice thermal vibrs. effect 2-109872
 YB₆, supercond., electronic struct., phonon modes, Eliashberg function, muffin tin approx. 2-66698
 ZnFe₂O₄, IR spectra and lattice vibrs. 2-57074
 ZnO, mean-square dynamic displacements and X-ray characteristic temp. 2-66157
 α -ZnP₂, lattice dynamics, X-ray diffr. study 2-56146
 ZnS, mean-square dynamic displacements and X-ray characteristic temp. 2-66157
 ZnSe, mean-square dynamic displacements and X-ray characteristic temp. 2-66157
 ZrS₂, lattice dynamical anisotropy, two phonon reson. Raman scatt. study 2-98220

lattice dynamics of covalent crystals

- diamond, photoelasticity, elec. field induced ionic contris. 2-67020
 CoCr₂S₄:Fe²⁺, impurity Jahn-Teller effect, phase transition, mol. field theory 2-61418
 FeCr₂S₄, cooperative Jahn-Teller effect, phase transition, mol. field theory 2-61418
 GaP, lattice dynamics under hydrostatic pressure 2-98223
 Ge, focusing of high-frequency dispersive phonons 2-61093
 Ge, lattice dynamics, Gruneisen coeffs., pseudopot. calc. 2-98226
 Ge, melting temp., vol. depend., Debye model 2-86825
 Ge, proton dechannelling, lattice thermal vibrs. effect 2-109872
 Ge-Si alloy and amorphous Ge and Si, far-IR vibr. spectra using double-beam Fourier transform spectrometer 2-113003
 Ge_{1-x}Si_x solid solns., mode Gruneisen parameter for long wave phonons, elastic consts. 2-109942
 Si, deformation caused by absorpt. at fundamental band max. 2-77465
 Si, electronically excited, phonon spectrum, rel. to laser induced recryst. 2-115373
 Si, lattice response near vacancy, Green's function calc. 2-81905
 Si, melting temp., vol. depend., Debye model 2-86825

lattice dynamics of ferroelectric crystals

- see also *displacive transformations; soft modes*
 displacive ferroelectrics, doped, shear viscosity 2-115366
 ferroelectrics, vibronic, nonlinear optical props. (*Russian*) 2-81017
 KTa_{1-x}Nb_xO₃, induced ferroelec. phase transition mech., thermal cond. meas. 2-56274
 lattice dynamics and phase transitions, pseudopot. theory 2-92139
 paraelectric phase in homogeneous, intense VHF field 2-99067
 perovskites, oxydic, ferroelec. transitions, IR and Raman spectra and dielec. const. data anal. 2-67008
 Rochelle salt, ferroelec., dynamic study 2-56104
 soft modes, microscopic polarisability model 2-56149

lattice dynamics of ferroelectric crystals continued

- TGS, ferroelec. transition, depolarisation field, Brillouin spectra line breadth study 2-67068
 thiourea, submillimeter dielec. spectra, 85 to 300K 2-110744
 BaMnF₄, submillimeter dielec. spectra, 85 to 300K 2-110744
 BaTiO₃, ferroelec. transition role of polar phonons in chemical bond, Fourier spectroscopy 2-57028
 BaTiO₃, tetragonal, oblique phonons, polarised Raman scatt. meas. 2-56123
 KD₂PO₄, ferroelec., dynamics of proton sublattice, Raman scatt. study 2-86814
 KD₂PO₄, ferroelectric fluctuation, diffuse X-ray and neutron scatt. anal. 2-61837
 KH₂PO₄, ferroelec., dynamics of proton sublattice, Raman scatt. study 2-86814
 KH₂PO₄ type ferroelec., instabilities in coupled acoustic and optical modes (*Japanese*) 2-86806
 KNbO₃, ferroelec. transition role of polar phonons in chemical bond, Fourier spectroscopy 2-57028
 K_{0.5}Rb_{0.5}Cl, phonon dispersion, inelastic neutron scatt. study 2-115372
 K₂SeO₄, ferroelec. incommensurate transition, Brillouin scatt. study 2-66997
 KTaO₃, induced ferroelec. phase transition mech., thermal cond. meas. 2-56274
 LiNH₄SO₄, Raman scatt. internal and external vibrs., soft modes 2-82834
 LiTaO₃(LiNbO₃), ferroelec. transition, soft modes, IR reflection spectra study 2-67009
 NaNO₂, incommensurate transitions, phenomenological theory 2-57025
 Nb₂O₅, high temp. form, room temp. Raman spectrum and vibr. assignments 2-116163
 Rb₂ZnBr₄, incommensurate struct., far IR and Raman spectra meas. 2-104882
 Rb₂ZnCl₄, incommensurate ferroelec., far IR spectra study 2-116174
 Rb₂ZnCl₄, phase transitions, Raman scatt., dielec. const. and spontaneous polarisation study 2-72510
 SbSI, ferroelec. phase transition, Raman scatt. in strong mag. field 2-57027
 SbSI, phonon spectrum, soft modes and order parameter near ferroelec. transition 2-103936
 Sn₂P₂S₆, lattice vibrs. in ferroelec. phase, Raman spectra anisotropy 2-104888
 SrTiO₃, Raman spectra 2-82840

lattice dynamics of ionic crystals

- alkali halides, ion dynamics, anion-cation mirror symm. 2-81911
 damping factors for Madelung const. calc. 2-71388
 diamond structure crystals, lattice dynamics, deformable ion model, calc. program 2-66144
 dielec. sp. ht. and thermal cond. 2-86960
 ionic crystal, localized effective charge parameter, strain depend. 2-97984
 many body interactions in binary ionic solids, review 2-98209
 zincblende structure crystals, lattice dynamics, deformable ion model, calc. program 2-66144
 β -AgI, phonon spectra, hopping kinetics, IR spectra study 2-76616
 AgI, thermal cond. meas., 120-500K 2-56277
 BaF₂, high-temp. mean square displacements 2-66139
 CaF₂, high-temp. mean square displacements 2-66139
 CoBr₂, lattice and mag. vibr. study 2-86803
 CsO, three-body force shell and deform. dipole moment effects 2-56114
 CsF, lattice dynamics, effect of second order deform. dipole moment 2-76622
 CuI, theory of superionic transition 2-66200
 KCl, optic phonons, ab initio calc. 2-66147
 KCl:Li, IR absorpt., lattice dynamics 2-104884
 KCl:NH₄⁺, localised modes, Green's function technique 2-56136
 KCl₃Br₃, phonon dispersion, inelastic neutron scatt. study 2-115372
 MnO, three-body force shell and deform. dipole moment effects 2-56114
 NaCl lattice, evolution of three-body interatomic forces and formulation of general model 2-76361
 NaCl-type alkali halides, phenomenological pots., elastic and dielec. data anal. 2-81706
 NiO, three-body force shell and deform. dipole moment effects 2-56114
 RbCaF₃, lattice dynamics, Debye-Waller factor near 195K phase transition 2-76609
 SrF₂, high-temp. mean square displacements 2-66139

lattice dynamics of metallic crystals

- alkali metal, BCC, phonon dispersion relations, model calcs. 2-66145
 alkali metals, lattice dynamics, compression effect 2-92120
 alloys, highly resistive, negative temp. coeff. of elec. resist., at low temps. (*Chinese*) 2-110323
 BCC metals, noncentral force 2-98216
 cubic metals, brittle fracture surface energy, evaluation by lattice dynamical method (*Chinese*) 2-61059
 film, metallic, local phonon density of states and its influence on supercond. props. 2-56321
 HCP metals, lattice dynamics, three-body interaction model 2-98215
 metal powders, phonon echoes (*Japanese*) 2-115375
 metals, incommensurate charge density wave phase-amplitude instabilities 2-115683
 metals, interionic interactions model, elastic consts. and phonon spectra calc. 2-81711
 metals, pseudopot. theory, density functional formalism 2-115637
 non simple metals, FCC, appl. of improved Fiekek model 2-76611
 nonsimple FCC metals, lattice dynamics theory 2-76615
 phonons in metals 2-56128
 surface (100), atom motion dynamics for BCC and FCC materials 2-66340
 transition metals, BCC, simplified forms of Fiekek model 2-115368
 transition metals, HCP, lattice dynamics, dipole fluctuation model 2-81912
 Al, coherent neutron scattering from polycrystals 2-56120
 Al, lattice relax. at surface, work function, surface energy 2-87008
 Au, FCC, appl. of improved Fiekek model 2-76611
 Au film, condensed, lattice dynamics and substruct. (*Russian*) 2-92425
 Au, lattice dynamics, relativistic effects 2-103917
 Cu-Cd(Sn)(Zn), dilute alloys, low-temp. specific heat calcs. 2-61165
 Cu, coherent neutron scattering from polycrystals 2-56120
 Cd, electron-phonon coupling, inelastic neutron scatt. 2-56129
 Cd, phonon dispersion calc. 2-61088

lattice dynamics of metallic crystals continued

- γ -Ce, lattice dynamics, dispersion curves 2-92127
 CeSn₃, mixed valent props. 2-56506
 Co, FCC, cryst. dynamics 2-86813
 Co, lattice dynamics, neutron diff. study and dipole fluctuation model 2-81912
 Cr, longitudinal acoustic phonon vel. in spin density wave state, temp. depend. 2-98219
 Cr powder, thermal vibr. anharmonicity, temp. depend. 2-103933
 Cr-Mo and G-V solid soln. systems, high-temp. X-ray investigs., lattice and thermal props. (Russian) 2-66156
 Cs, anharmonic phonons 2-92122
 Cu, lattice vibr. of split self-interstitials, local density of states, recursion method 2-81910
 Cu, phonon dispersion, three-body interactions effects, theory 2-98217
 Fe-Si(5 at.%), high temp. phonons, neutron inelastic scatt. meas. 2-56121
 β -Ga, metastable, neutron inelastic scatt. study of phonons at melting temp. 2-56119
 Ge, phonon focusing of dispersive phonons 2-115371
 Ho, phonon dispersion calc., model with 3-body forces 2-61089
 K:H, lattice relax. and crystallographic distortion around impurity 2-103914
 LaAl, lattice dynamics, inelastic neutron scatt. meas. 2-56117
 LaSn₃, temp. factors, neutron scatt. study 2-103913
 Li, Debye-Waller factor calc. method 2-81923
 Li:H, lattice relax. and crystallographic distortion around impurity 2-103914
 Mg, HCP, static lattice Green function, force model dependence and asymptotic props. 2-109934
 Mg, lattice relax. at surface, work function, surface energy 2-87008
 Na, lattice relax. at surface, work function, surface energy 2-87008
 Na, phonon dispersion and thermophysical props. 2-56118
 Na:H, lattice relax. and crystallographic distortion around impurity 2-103914
 Nb, lattice dynamics, local field corrections 2-103911
 Ni, nonsimple FCC metals, lattice dynamics theory 2-76615
 Ni, phonon dispersion, three-body interactions effects, theory 2-98217
 Pb, linear potential calcs. of phonon props. 2-66146
 Pd, nonsimple FCC metals, lattice dynamics theory 2-76615
¹⁹³Pt, force const. and Debye temp. in Mossbauer studies, temp. depend. calc. 2-66955
 Rb, Debye-Waller factor calc. method 2-81923
 Rb, phonon dispersion curves 2-76610
 Ta, ultrasound induced elec. field gradient, quadrupole nucl. acoustic reson. study 2-56951
 Tb, phonon dispersion calc., model with 3-body forces 2-61089
 Tc, lattice dynamics, neutron diff. study and dipole fluctuation model 2-81912
 Th, FCC, appl. of improved Fiekk model 2-76611
 Ti, lattice dynamics, neutron diff. study and dipole fluctuation model 2-81912
 Tl, phonon dispersion calc. 2-61088
 V, screening of short range pot. by local field correction 2-56122
 VAl₁₀47, one-particle pot. determ., cryst. struct., lattice dynamics 2-109938
 V₂Si, anomalous E_g phonon and electronic Raman scatt. 2-57089
 V₂Si, Debye-Waller factor, temp. depend., 8 to 293K 2-56143
¹⁰²W, force const. and Debye temp. in Mossbauer studies, temp. depend. calc. 2-66955
 YAl, lattice dynamics, inelastic neutron scatt. meas. 2-56117
 Zn, HCP, static lattice Green function, force model dependence and asymptotic props. 2-109934
 Zn, phonon dispersion calc. 2-61088

lattice dynamics of molecular crystals

- acetonitrile, crystals, vibr., phase transitions, Raman and Raman study 2-77513
 acetylene, cryst., lattice dynamics and struct. phase transition 2-92123
 acetylene, crystals, vibr., phase transitions, Raman and Raman study 2-77513
 alkali metal compounds, molecular crystals, electron gas model 2-104272
 alkali metal halides, mol. crystals, lattice phonons, tunnel states 2-76329
 alkaline earth compounds, molecular crystals, electron gas model 2-104272
 anthracene-d₁₀, low freq. phonon dispersion, butterfly and twisting motions 2-76613
 anthracene-d₁₀, phonon dispersion branches at 12K, inelastic neutron scatt. study 2-66149
 aromatic hydrocarbons, lattice and internal modes, temp. factors 2-81908
 benzene, freq. distrib. function calcs. 2-103916
 benzil, cryst. phase transition, acoustic phonon mode, Brillouin scatt. study 2-56175
 chloranil, crystalline, low temp. phase, phonon dynamics 2-98214
 diamantane, 35K struct. phase transition light scatt. study 2-61918
 1,4-dichlorobenzene, lattice dynamics, rigid mol. approx. calcs., NQR and X-ray diff. obs. 2-110693
 disc shaped particles forming anharmonic mol. lattice, dynamics 2-103934
 elastic consts., noncentral force contrib., lattice dynamics 2-61084
 homopolary crystals with point dipoles, lattice dynamical shell model 2-66140
 imidazole, cryst., lattice vibr., isotope shifts, Raman study 2-67032
 lithium formate, parametric light scatt. obs. of lattice vibr. 2-99145
 methane, solid, Raman spectra under high press., Gruneisen parameters 2-77502
 mixed valency species, excitation models, vibr. line shapes 2-110884
 molecular crystals, US relax., Boltzmann eqn. approach 2-56099
 naphthalene, external phonon spectrum, neutron scatt. time of flight spectra study 2-71596
 m-nitroaniline, electro-optic cryst., anharmonicity of vibrs. 2-67044
 m-nitroaniline crystal, polarised IR and Raman spectroscopic study, lattice vibrs. 2-87775
 one-dimensional conductors, neutron scatt., struct., lattice dynamical, and mag. props. 2-91726
 organic conductors, librins, review 2-86802
 oxamide, Raman active internal and external modes, vibr. 2-82847
 rotational tunnelling systems, temp. depend. of inelastic neutron scatt. 2-91830
 rotational tunnelling systems, temp. depend. of inelastic neutron scatt. time depend. correlation functions 2-91831

lattice dynamics of molecular crystals continued

- solid halogens, lattice dynamical shell model 2-66140
 stearic acid, 1-C form, lattice vibrs., low freq. Raman active mode mixing 2-72494
 TCNQ salt, KTCNQ, single cryst. Raman spectra of phase transition 2-87785
 tetrachloromethane high-pressure, solid, lattice dynamics 2-71593
 di-(tetramethyl ammonium) copper tetrachloride, modulated structs., lattice excitations, Brillouin spectroscopy 2-92121
 thiourea, phases I to V, US props. 2-109911
 tribromomethane, crystals, vibr., phase transitions, Raman and Raman study 2-77513
 trioxane, piezoelectric cryst., lattice modes, Raman and IR study 2-72478
 two-particle vibrational excitations in molecular crystals 2-109919
 Ba(NO₃)₂, ionic-mol. cryst., US absorpt. 2-56100
 CO₂, solid, second-order IR absorpt. spectrum 2-67028
 N₂-type crystals, libration motion dynamics, SCF and harmonic approx. (Russian) 2-56103
 NaNO₃, mol. crystals, lattice phonons, tunnel states 2-76329
 NaOH, mol. crystals, lattice phonons, tunnel states 2-76329
 Pb(NO₃)₂, ionic-mol. cryst., US absorpt. 2-56100
 Sr(NO₃)₂, ionic-mol. cryst., US absorpt. 2-56100

lattice energy

- see also binding energy*
 alkali halide crystals, cohesive props. 2-115175
 alkali halide crystals, interionic potentials derived by hybrid Thomas-Fermi-Dirac method 2-65918
 alkali halides, cohesive energy, compressible ion theory 2-71387
 alkali halides, mixed crystals, cohesive energies and bulk moduli calc. 2-60920
 alkali metal compounds, molecular crystals, electron gas model 2-104272
 alkali metal vapour, ionized, eqn. of state 2-76056
 alkaline earth chalcogenides, cohesive energy, compressible ion theory 2-71387
 alkaline earth compounds, molecular crystals, electron gas model 2-104272
 N-alkyl-phenazinium TCNQF₄ salts, solid-state props. 2-87574
 amino acids, H⁺ transfer energies and electrostatic lattice energies, CNDO/2 and ab initio SCF calcs. 2-78079
 antishielding of ions in solids, Sternheimer factor and lattice dynamic effects 2-77001
 cohesive energy, rel. to phonon frequencies of crystals 2-66150
 9-cyanoanthracene, excited mol. cryst., dynamic instabilities, packing calcs. 2-60915
 divalent-metal orthosilicates, M₂SiO₄, heat of form. and lattice energy 2-109739
 FCC lattice, long range interaction of atoms, Madelung const. 2-103690
 ferrocene, struct., lattice energy and order-disorder transition, X-ray study 2-115206
 ferrocene cryst., static disorder, mol. configuration, X-ray and lattice energy study 2-115207
 hexagonal minimisation procedure for lattice energies calc. 2-60917
 inert gas crystals, Salter vap. press. eqn., anharmonic effects 2-115381
 ionic crystal, NaCl struct. cohesive and surface energy eval. 2-65915
 ionic crystals, cohesive energy, compressible ion theory 2-71387
 ionic crystals, damping factors for Madelung const. calcs. 2-71388
 irradiated material, point defect-edge dislocation rate const. and bias factors using lattice relax. and Monte Carlo simulations 2-86718
 layered struct., energy of anion polarisation, lattice energy 2-97989
 lithium formate monohydrate, lattice energy, electrostatic term, determ. from electron density 2-115173
 mean internal potential, rel. to density, calc. of phys. characteristics 2-110311
 metals, nonsimple FCC, lattice dynamics and cohesion theory 2-76615
 p-methyl-N-(p-methylbenzylidene) aniline trimorphic, cryst. energetics incl. disorder 2-115171
 9-methylanthracene, excited mol. cryst., dynamic instabilities, packing calcs. 2-60915
 olivines, cryst. struct., interatomic pot. function method 2-97979
 organic molecular crystals, static lattice potential energy minimisations for defects, computational approaches 2-76426
 orthorhombic lattices, dipolar configurations of minimum dipole interaction energy 2-109734
 partially ionic lattices, stabilisation and cohesive energy calcs. 2-86615
 peptides, H⁺ transfer energies and electrostatic lattice energies, CNDO/2 and ab initio SCF calcs. 2-78079
 potential energy, Birman pair pot. method using expanse-atom approx. 2-86614
 quartz, thermal expansion, Gruneisen functions and static lattice props. 2-98313
 rare earth sesquioxides, cubic, lattice and binding energies 2-60916
 rare earth trifluorides, lattice self-pots., photoelectron spectroscopic determ. 2-62042
 semiconductors, phonon and struct. energy ab initio calc. methods, review 2-76612
 semiconductors, pseudopotential theory, total energies, phonon freq., bulk modulus 2-87130
 TCNQ salts, N-alkyl-phenazinium TCNQ, solid-state props. 2-87574
 tetragonal minimisation procedure for lattice energies calc. 2-60917
 transition metals, total energy computation by model electron density functional 2-61384
 trigonal minimisation procedure for lattice energies calc. 2-60917
 TTF-TCNQ, lattice energy, struct., and stability of models with segregated and mixed states 2-115172
 Ag halides, cohesive energy, compressible ion theory 2-71387
 Ar, sublimation press. and zero temp. cohesion energy, determ. from sp. ht. data 2-103970
 AsH(PO₄), H₂O, synthesis and struct. determ. 2-86631
 BN, graphitlike, interlayer reaction energy and relative stability of various cryst. modifications 2-65972
 Be, total energy calcs., lattice const. 2-87168
 C₆K intercalated cpd., Madelung energy studies 2-86616
 C₆Li intercalated cpd., Madelung energy studies 2-86616
 Cd, phonon spectra and cryst. struct. 2-115370
 CsGeO₃, cryst. struct., lattice energy, X-ray diff. study (German) 2-86643
 Cs₂SiO₃, cryst. struct., lattice energy, X-ray diff. study (German) 2-86643

lattice energy continued

- H, infinite metallic chain, correlation energy, perturbation theory calc. 2-97985
 H₂ solid, likelihood of high press. phase involving (H₂)₂ complexes, lattice energy calc. 2-76769
 KCl, press. induced polymorphic transition, hysteresis phenomena, theoretical study 2-109973
 K₂SiO₃, cryst. struct., lattice energy, X-ray diffr. study (*German*) 2-86643
 Kr, sublimation press. and zero temp. cohesion energy, determ. from sp. ht. data 2-103970
 LaSn₃, temp. factors, neutron scatt. study 2-103913
 Li₃PO₄, cryst. structs. and electrostatic energy 2-81755
 Li₂TiS₂, intercalation compound, elastic energy and staging 2-71391
 Mg-Cd alloys, ordering energy, pseudopot. calc. 2-103687
 Mg-In alloys, ordering energy, pseudopot. calc. 2-103687
 MgF₂, tetragonal cryst., minimisation procedure for lattice energies calc. 2-60917
 Mg₂SiO₄, olivines, cryst. struct., interatomic pot. function method 2-97979
 NaCl, lattice sums with exact electrostatic pot. 2-55881
 NaCl, semi-infinite, site-by-site Madelung energies 2-79314
 NaCl:Ca²⁺, low temp. soln. hardening due to lattice distortion around impurity-vacancy pairs 2-98077
 NaCl-type alkali halides, phenomenological pots., elastic and dielec. data anal. 2-81706
 Ni, nonsimple FCC metals, lattice dynamics theory and cohesion theory 2-76615
 Pb, linear potential calcs. of phonon props. 2-66146
 Pd, nonsimple FCC metals, lattice dynamics theory and cohesion theory 2-76615
 Rb₂GeO₄, cryst. struct., lattice energy, X-ray diffr. study (*German*) 2-86643
 Rb₂SiO₄, cryst. struct., lattice energy, X-ray diffr. study (*German*) 2-86643
 SBH(PO₄)₂·H₂O, synthesis and struct. determ. 2-86631
 Si, phase stability, ab initio pseudopot. and linear-muffin-tin-orbitals calcs. 2-55883
 Ti halides, cohesive energy, compressible ion theory 2-71387
 V₂Zr(Hf), lattice stability in premartensitic temp. range (*Russian*) 2-97981
 Xe, sublimation press. and zero temp. cohesion energy, determ. from sp. ht. data 2-103970
 Zn, phonon spectra and cryst. struct. 2-115370
 ZnO surfaces, Madelung pots., effect on photoemission spectra and work functions 2-66342

lattice gas see *lattice theory and statistics*

lattice localised modes

- see also *phonon-defect interactions; phonon-impurity interactions*
¹¹⁹Sn impurity force const. changes, Mossbauer study 2-61098
 alkali halides: BH₄⁻ (BD₄⁻), vibr. studies by IR and Raman spectra 2-82841
 alkali halides: FHF⁻, IR spectra 2-82843
 alkali halides: SbF₆⁻, IR spectra 2-82842
 alkali halides, hydrogen centres, interatomic pot., vibr. modes, and diffusion, pseudopot. cluster calc. 2-65992
 alkali-halides, dislocations attendant to HF vibr., electrostatic field effect on translational motion 2-76453
 aragonite struct. cpds., CO₃²⁻ out-of-plane calcs., intermol. vibr. coupling 2-115377
 diamond, synthetic, anomaly in IR absorption spectrum 2-93236
 diatomic polar crystals, localised modes due to substitutional impurities 2-109932
 disordered systems, localisation, physical picture, exact results 2-104316
 ferroelectric, displacive transformations, US attenuation study 2-56095
 ferroelectric phase transitions, Jahn-Teller impurities effect, soft mode contrib. 2-61843
 g-values, lattice dynamical contribs. 2-92444
 grain boundaries, thermodynamic functions, lattice dynamics studies 2-92134
 impurity centres, two-well adiabatic pot., relax. and optical processes calc. 2-61931
 impurity problem in lattice dynamics, perturbation approach 2-66153
 luminescence centre with local mode, secondary resonant radiation, cryst. phonons effect (*Russian*) 2-99186
 metal, elec. resist., local phonon modes effect 2-82336
 mixed crystal modes, vibr. conc. depend. 2-86820
 m-nitroaniline, electro-optic cryst., anharmonicity of vibrs. 2-67044
 phonon models, localisation in disordered elastic chain (*Russian*) 2-103931
 point defect vibrational behaviour, renormalisation group method 2-81918
 polyacetylene, quantum corrections to solitons 2-103929
 porphyrin in n-decane host, optical dephasing of S₁-S₀ transition studied by photochemical hole-burning 2-72531
 semiconductors, substitutional impurity vibr., Debye-Waller factors, Green's function calc. 2-56135
 spectral hole burning, localised vibrational modes in cryst. solids 2-104919
 Toda lattice, impurity localised vibr. mode, perturbation theory based on universe scatt. method 2-103928
 two-impurity system, asymm. ground states, local phonon transfer 2-109933
 vacancy-isotopic substitutional impurity complex, lattice dynamics, Greens function formalism (*Russian*) 2-86819
 CaF₂:H, contribs. of H zero-point vibr. to F transferred hyperfine const., nearest neighbour to H₂ centre 2-76627
 Cd_{1-x}Mn_xSe, Mn impurity vibr., Raman scatt. study 2-110942
 CdP₂:As, impurity vibr., Raman scatt. study (*Russian*) 2-77540
 Cs₂UO₂Cl₄, polarised IR absorpt. spectrum 2-104874
⁶³Cu:Sn, ¹¹⁹Sn impurity force const. changes, Mossbauer study 2-61098
 Cu-Be system, local vibr. levels, effect of long range stress fields, neutron scatt. study 2-71599
 FeTiH₃, local H vibrs. in α, β₁, β₂, and γ phases, inelastic neutron scatt. study 2-103927
 GaAs:Cr, semi-insulating, impurity modes, far-IR Fourier transform spectroscopy obs. 2-116214
 GaP:B grown by LEC technique, IR absorpt. band, resonant and gap modes 2-99157

lattice localised modes continued

- Ge, amorphous, and cryst. Ge-Si alloy, far-IR vibr. spectra using double-beam Fourier transform spectrometer 2-113003
 Ge:¹¹⁹Sn, impurity atom vibrs., adiabatic bond-charge model 2-81917
 Ge:H, vacancy vibrational behaviour, renormalisation group method 2-81918
 KCl:NH₄⁺, localised modes, Green's function technique 2-56136
 KCl:OH⁻ (Na⁺), heat capacity, 5 to 40K, effect of impurities 2-98301
 KINO₃, gap mode, half-width and freq. shift, IR absorpt. study 2-56134
 LuPO₄:Na³⁺ (Eu³⁺)(Er³⁺), IR absorption spectra 2-87822
 Mg, HCP, static lattice Green function, force model dependence and asymptotic props. 2-109934
 Nb-H system, relax. process caused by interstitial H 2-103930
¹⁰⁷Pd:Sn, ¹¹⁹Sn impurity force const. changes, Mossbauer study 2-61098
 Pd-Mn-H soln., dil., thermodynamic props. 2-56195
 Se, amorphous, defect vibrs., Green function-CPA calc. 2-98233
 Si, amorphous, and cryst. Ge-Si alloy, far-IR vibr. spectra using double-beam Fourier transform spectrometer 2-113003
 Si, neutron irradi., electronic and vibr. spectra of defects 2-115299
 Si:¹¹⁹Sn, impurity atom vibrs., adiabatic bond-charge model 2-81917
 Si:H, vacancy vibrational behaviour, renormalisation group method 2-81918
 Si-Ge, amorphous, defect vibrs., Green function-CPA calc. 2-98233
 SiO₂:F, vitreous silica optical fibre preform, Raman spectra anal. 2-65382
 α-Sn:¹¹⁹Sn, impurity atom vibrs., adiabatic bond-charge model 2-81917
 Zn, HCP, static lattice Green function, force model dependence and asymptotic props. 2-109934
 ZnF₂:As, impurity vibr., Raman scatt. study (*Russian*) 2-77540
 ZnSe:Al, IR absorption and defects 2-87823

lattice mechanics see *lattice dynamics*

lattice parameters see *lattice constants*

lattice phonons

- see also *electron-phonon interactions; lattice dynamics of covalent crystals; lattice dynamics of ferroelectric crystals; lattice dynamics of ionic crystals; lattice dynamics of metallic crystals; lattice dynamics of molecular crystals; lattice localised modes; phonon-defect interactions; phonon dispersion relations; phonon drag; phonon-exciton interactions; phonon-impurity interactions; phonon-magnon interactions; phonon-phonon interactions; phonon-plasmon interactions; polaritons; soft modes; spin-phonon interactions; tunnelling spectra; tunnelling spectroscopy*
 q²-kinks, diffusion const., quantum corrections 2-112817
 alkali halogenates, phonon spectra, NQR and vibr. spectra 2-93047
 alkali metal halides, mol. crystals, lattice phonons, tunnel states 2-76329
 alkali metals, lattice dynamics, compression effect 2-92120
 amides, solid, H-bonded, γ(N-H) mode width, temp. depend. 2-72492
 Anderson coupled two-impurity system, Hartree-Fock staggered ground states 2-56489
 anisotropic elastic continua, densities and currents, rel. to Umklapp process 2-61083
 atom-surface scattering, Debye-Waller factor, angular and temp. depend. 2-110116
 atom-surface scattering, Debye-Waller factor 2-56322
 ballistic acoustic phonons in crystals, high energy, optical studies 2-109931
 benzene, freq. distrib. function calcs. 2-103916
 centrosymmetric dielectrics, thermopolarisation effect (*Russian*) 2-61835
 channelled charged particles inelastic scatt. by phonon excitation 2-81837
 chloranil, crystalline, low temp. phase, phonon dynamics 2-98214
 coherent states, photon and phonon statistics of Brillouin scatt. 2-97104
 cohesive energy, rel. to phonon frequencies of crystals 2-66150
 condensed matter, US methods, conf., Zilina, Czechoslovakia (Sept. 1980) 2-63733
 conference, Bloomington, IN, USA (Aug.-Sept. 1981) 2-53414
 convalent semiconductors, nonequilibrium carriers cascade capture effects on Faraday rotation 2-99093
 coupled rotor-phonon system, instability 2-109916
 crystals, quantum field-theoretical treatment 2-56107
 crystals, resonance interactions in phonon spectra 2-109924
 density functional theory, phonon spectra calcs. 2-56413
 desorption kinetics, surface phonon modes, Debye temp., quantum statistical theory 2-71803
 di-potassium tartrate hemi-hydrate cryst., laser Raman and IR spectra 2-116181
 diamond, GR1 luminesc. band, Jahn-Teller effect and stress-induced dichroism 2-57147
 diamond, photelasticity, elec. field induced ionic contribs. 2-67020
 diamond, yellow-luminescing brown, optical meas. 2-72538
 dielectric crystals, first and second viscosities 2-98321
 dirty cryst., lattice absorption of acoustic waves by phonons (*Russian*) 2-81899
 dirty dielectrics, nonlocal heat conduction, longitudinal long-wave phonons (*Russian*) 2-92299
 displacive phase transition, dynamics of 1-D model (*Russian*) 2-98236
 flowing states and vortices in XY model in external field 2-53694
 glass fibre/epoxy composite, thermal cond., 2 to 80K 2-92296
 graphite intercalated with Br, phonons, inelastic neutron scatt. study 2-56105
 graphite intercalation compounds, C₆K(Rb)(Cs), vibr. density of states 2-81909
 graphite intercalation compounds, phonon Raman spectroscopy 2-57087
 graphite layer covering Pt foil, Br₂ lobular scatt. 2-99269
 high density electron-hole plasma cooling 2-87312
 ice I_h 2-87795
 impure metals, phonon spectrum calcs. (*Russian*) 2-92130
 incommensurate cryst. phases, microscopic model 2-81925
 incommensurate modulated structures, excitations dynamic struct. factors, theory 2-98208
 incommensurate phases, acoustic anomalies 2-66162
 incommensurate systems, dynamical equations, superspace symm. 2-66138
 insulating material-impurity system spin-lattice relax., two phonon Raman processes 2-77361
 insulators, crystalline, electrothermal effect 2-61822
 intermediate-valence cpds., 4f-electron dynamics, mag. and phonon props. 2-56112
 intraband optical cond. relax. time, phonon contrib. 2-93143
 ionic solids, binary, many body interactions, review 2-98209
 KCNS, λ-type order-disorder phase transition, Raman study 2-103984

Lattice phonons continued

- lattice dynamics and phase transitions, pseudopot. theory 2-92139
layered cryst., low temp. sp. ht., optical oscill. contrib., Jacobi matrix method (*Russian*) 2-98300
luminescence centre with local mode, secondary resonant radiation, cryst. phonons effect (*Russian*) 2-99186
mean number in a crystal 2-56102
metal powders, phonon echoes (*Japanese*) 2-115375
metallic film, local phonon density of states and its influence on supercond. props. 2-56321
metals, phonon spectrum Taylor singularities (*Russian*) 2-92131
mixed distance crystals, lattice dynamics within CPA for disordered shell models 2-92124
molecular spectroscopy, conf., Albena, Bulgaria, (Oct. 1980) 2-107020
naphthalene: 2(1,4-diodotetrafluorobenzene), exciton-phonon coupling, triplet energy transfer, Raman spectrosc. obs. 2-104869
naphthalene, cryst., vibr. dephasing, temp. depend., picosec. CARS obs. 2-110827
nonequilibrium superconductor, detection of HF phonons from inhomogeneous gap states 2-104544
nonmetals, additivity of relax. times and thermal cond. 2-61221
one-dimensional interactive kink-phonon gas, statistical theory 2-76633
pentacene in benzoic acid, optical dephasing, optical absorpt. and picosecond photon echo expt. 2-70626
pentacene in naphthalene mixed crystals, reson. Raman scatt. study of vibr. dephasing 2-77500
phonon models, localisation in disordered elastic chain (*Russian*) 2-103931
phonon-focusing theory based on geometrical acoustics 2-61092
piezoelectric semiconductor film, surface phonon amplification, nonparabolic effect 2-76795
PMMA, thermal phonon softening and crazing under tensile stress, Brillouin scatt. study 2-110877
polyacetylene, quantum corrections to solitons 2-103929
polydiacetylene, electronic excited state, Raman study 2-72484
quartz, anisotropic phonon propag., SEM study 2-115369
quartz, ballistic phonon propag. imaging by electron beam scanning 2-56124
rotational tunnelling system, three-fold, inelastic neutron scatt. spectrum, temp. depend. 2-86596
rotational tunnelling systems, temp. depend. of inelastic neutron scatt. 2-91830
rotational tunnelling systems, temp. depend. of inelastic neutron scatt. time depend. correlation functions 2-91831
ruby- Cr^{3+} , generation, detect. and reson. trapping of very high freq. acoustic phonons 2-93277
ruby, multiple resonant combination scatt. with spin flip and trapping of phonons (*Russian*) 2-92129
ruby, nonequilib. phonon effects on luminescence 2-82886
ruby, resonant phonon assisted energy transfer from 29 cm^{-1} phonon dynamics 2-71594
sapphire, anisotropic phonon propag., SEM study 2-115369
sapphire, phonons, shell model investigations 2-61090
semiconductor, deep levels, phonon-assisted tunnel ionisation, quantum theory 2-87185
semiconductor, free carrier, laser generation of acoustic phonons by optical phonon decay 2-109926
semiconductor, Kane, strong EM wave propag. under electron and phonon heating 2-82368
semiconductor plasmas, stimulated Raman scatt. and instability 2-93196
semiconductors, electronic Raman scatt., review (*Japanese*) 2-72508
semiconductors, phonon and struct. energy ab initio calc. methods, review 2-76612
semiconductors, pseudopotential theory, total energies, phonon freq., bulk modulus 2-87130
smectic crystal-like struct., Rayleigh-Benard convection, phase diffusion 2-70950
 $\text{SnCl}_4 \cdot (\text{H}_2\text{O})_2$ and deuterated form, isostructural phase transition, pseudospin model 2-76662
solids, effect of low-freq. modes in dielec. loss 2-72419
SOS device structures, Raman meas. of stress 2-77499
superconducting film, nonequilibrium electron and phonon kinetics in intense UHF fields 2-98807
superconducting film, phonon-induced nonequilib. states, kinetic eqn. study 2-82519
superconducting film, quasiparticle and phonon nonlinear dynamics 2-87449
superconductors, differential cure of T_c (crit. temp.) with respect of λ (penetration depth) (*Chinese*) 2-98779
surface electron states, Green's function calcs. 2-104448
surface shape resonances 2-87718
TCNQ salt, KTCNQ, single cryst., Raman spectra 2-110826
TGS powder, phonon echo attenuation coeff., freq. depend., 10 to 60 MHz 2-66142
theory and expts., models of interatomic forces, book 2-89489
thermal baths, reduced models 2-81924
thermal conductivity, role of low freq. phonons 2-61218
thiourea, submillimeter dielec. spectra, 85 to 300K 2-110744
(TMTSeF) $_2$, superconductor, thermal conductivity 2-92822
transition metal dichalcogenides, Raman scatt. from charge density wave phonons 2-104881
transition metals, normal mode vibr. freqs. and struct. props., total energy calcs. 2-103688
weak EM wave absorpt. in presence of reson. laser radiation (*Russian*) 2-93134
zero-phonon line profile in Mossbauer, optical spectra, theory 2-104784
 Ag_3AsS_4 , proustite, phase transition, Raman and Brillouin scatt. study 2-103986
 AgCl , thermal cond. and sp. ht. under press., hot-wire method 2-82040
 Al , phonon freq. calcs. 2-86810
 Al_2O_3 , far-IR absorption, 300-1500K, multiphonon processes 2-93174
 Al_2O_3 , phonon spectrum thermalisation obs. by freq. crossing 2-61220
 Al_2O_3 :V, nonequilib. phonon propag. by quasidiffusion 2-92297
Au, intraband optical cond. relax. time, phonon contrib. 2-93143
 BaMnF_4 , incommensurate transition, phonon light scatt. 2-76660
 BaMnF_4 , submillimeter dielec. spectra, 85 to 300K 2-110744
 $\text{BaS}(\text{BaSe})$, optic phonon IR reflection spectra and cryst. growth, expt. study 2-99117
 BaTiO_3 , tetragonal, oblique phonons, polarised Raman scatt. meas. 2-56123

lattice phonons continued

- Be, neutrons moving through matter, phonon analogue of Cherenkov radiation (*Russian*) 2-115322
BiTel, thermophysical props. 2-82386
C fibre/epoxy composite, thermal cond., 2 to 80K 2-92296
CO, cryst., two-phonon transitions, vibr., IR study 2-57069
 CO_2 , solid, second-order IR absorpt. spectrum 2-67028
 CaCO_3 , calcite, phonons and mixed polaritons, hyper-Raman scatt. study 2-61900
 CaCO_3 , calcite, polariton hypercombination scatt. spectra, anharmonism effects (*Russian*) 2-56449
 CaF_2 crystal, phonon focusing obs. by luminesc. phonon detector 2-61871
 CaF_2 , HF longitudinal-acoustic phonon lifetime calcs. 2-109930
 $\text{CaS}(\text{CaSe})$, optic phonon IR reflection spectra and cryst. growth, expt. study 2-99117
Cd, phonon spectra and cryst. struct. 2-115370
 Cd_2As_2 , spin-flip resonances, subMM magnetospectroscopy 2-93167
 $\text{Cd}_2\text{Ni}^{2+}(\text{Co}^{2+})$, phonon side bands in absorpt. spectra 2-99161
 $\text{Cd}_{1-x}\text{Mn}_x\text{Se}$, exciton and phonon spectra, photoluminesc. and Raman scatt. study 2-110942
 $\text{Cd}_{1-x}\text{Mn}_x\text{Te}$, semimagnetic, Raman scatt. by phonons and magnons 2-77531
 CdS , lattice attenuation meas. by acoustic domains 2-98218
 CdSb , IR reflection spectra meas. 2-57108
 CdSe , high density electron-hole plasma cooling 2-87312
 $\text{CrLaS}_2(\text{CeS}_2)$, thermal conductivity, phonon-paramag. ion scattering effects obs. 2-115480
 CrSi , Raman scatt., phonon linewidth and mag. susceptibility 2-57090
Cs, anharmonic phonons 2-92122
 CsCN , phonons in rotator phase 2-109921
Cu complex, α -bis(N-methylsallylaldimino)Cu(II), incommensurate phase, X-ray study 2-97975
Cu, electron-phonon effects, electron scatt. rate, mass enhancement 2-115376
Cu, intraband optical cond. relax. time, phonon contrib. 2-93143
 β -Cu-Zn-Al, ordered, martensitic phases, premartensitic states and struct. (*Russian*) 2-62123
 $\text{CuGaSe}_2(\text{Te}_2)$, specific heat, Debye temp., entropy 2-92231
 CuInTe_2 , specific heat, Debye temp., entropy 2-92231
 Cu_2O 1S yellow exciton luminescence intensity temp. depend. 2-87858
 $\text{Fe-Si}(5\text{ at.}\%)$, high temp. phonons, neutron inelastic scatt. meas. 2-56121
 $\text{FeS}_2\text{Mn}^{2+}$, ESR spectra temp. depend. 2-87584
 $\text{Ga}_{1-x}\text{Al}_x\text{As}$, anharmonicity and disorder-induced effects, Raman study 2-57083
 $\text{Ga}_{1-x}\text{Al}_x\text{As}$ epitaxial layers and single crystals, anharmonicity and disorder-induced effects, Raman study 2-67052
 $\text{Ga}_{1-x}\text{Al}_x\text{As}$, radiative decay rate exponential distrib. 2-77583
 GaAs (110), formic acid adsorption EELS study 2-98454
 GaAs , deep level elec. field induced phonon assisted tunnel ionisation 2-71909
 p - GaAs , heavily doped, coupled LO phonon-plasmon modes and forbidden TO modes, Raman scatt. study 2-57101
 GaAs , one phonon density of states determ. by disorder-activated first-order Raman scatt. 2-66151
 GaAs , piezobirefringence dispersion due to strain-dependent lattice effects 2-67017
 GaAs , Raman spectrum, phonon modes, ion implantation and annealing effects 2-82833
 GaAs , thermal expansion coeff. calcs. 2-86911
 GaAs with chemisorbed H, surface optical phonon obs. 2-115550
 $\text{GaAs}(\text{Zn}(\text{Cu}))$, F- and C-centres, vibr. props., Green's function calc. 2-86811
 $\text{GaAs}_2\text{P}_{10}$, resonant Raman scatt. 2-87754
 $\text{Ga}_{1-x}\text{In}_x\text{As}$ epitaxial layers, Raman spectra 2-82934
 $\text{Ga}_2\text{In}_2\text{As}_2\text{P}_{10}$, effects of two longitudinal optical phonon modes on electron distrib. 2-82349
 GaP , deep level elec. field induced phonon assisted tunnel ionisation 2-71909
 GaP , piezo-optical study of phonons 2-67023
 GaP with chemisorbed H, surface optical phonon obs. 2-115550
Ge, electron-hole drop evaporation by laser heating (*Russian*) 2-104256
Ge, electron-hole liquid phonon spectroscopy 2-115667
Ge, focusing of high-frequency dispersive phonons 2-61093
Ge, melting point, press. derivatives 2-61117
Ge, n 2-82249
Ge, phonon focusing of dispersive phonons 2-115371
Ge, plastically deformed, phonon scatt. 2-92133
Ge, Raman phonon press. depend. 2-67054
Ge:Sb, photo-excited acoustic phonons 2-98225
 GeAs , long wavelength refl. spectra, IR active zone optical phonon freqs. 2-110831
H, metallic, interatomic pot. appl., density functional theory 2-76946
 H_2 , IR spectrum, rot. transitions, phonon branches 2-87755
 ^3He , BCC, neutron scatt. in paramag. phase, self-consistent phonon theory 2-76773
 InAs , far-IR dielec. response at room temp., dispersive Fourier transform spectroscopy, phonon freqs. 2-116165
 $\text{InBr}(\text{I})$, lattice dynamics, IR and Raman spectra 2-116194
 InP , (n, γ)-induced point defects, NMR study 2-98980
 InP , Raman spectrum, phonon modes, ion implantation and annealing effects 2-82833
 InP , thermal expansion coeff. calcs. 2-86911
 InP with chemisorbed H, surface optical phonon obs. 2-115550
 $\text{InP}:\text{Mn}(\text{Fe})$ and undoped, deep level photolum. study 2-104930
 InSb , (n, γ)-induced point defects, NMR study 2-98980
 InSb , impact ionisation and quantum efficiency, time depend. perturbation calc. 2-77075
 InSb , photo-excited acoustic phonons 2-98225
 $\text{InSb}:\text{Ga}$, lattice thermal cond., 0.35-3K 2-98353
 KCl_{12} , intercalation cpd., Raman scatt. studies of folded shearing phonons 2-57088
 $\text{KCN}, \text{X}_{1-x}$, mixed crystals, (X = Cl, Br, I), Brillouin scatt. and rotational coupling 2-110876
 KCl , optic phonons, ab initio calc. 2-66147
 $\text{KCl}:\text{Li}$, IR absorpt., lattice dynamics 2-104884
 KD_2PO_4 , light scatt. study of acoustic phonon damping 2-86804
 KH_2PO_4 type ferroelec., instabilities in coupled acoustic and optical modes (*Japanese*) 2-86806
 K_2MF_4 (M = Zn, Ni, Cu), optically active phonons, interionic pot. calc. and vibr. spectra 2-66148

lattice phonons continued

- KSc(MoO₄)₂, ferroelastic, Raman and IR refl. spectra, 4 to 300K (*Russian*) 2-116170
 K₂Zn(SO₄)₆·6H₂O, IR and Raman spectra, phonon modes 2-87787
 LaCrO₃:Sr(Ti) perovskite, IR spectra assignments and interpret. 2-93231
 LaF₃:Er³⁺, 0.2 THz phonon stimulated emission, luminescence study 2-81906
 LaF₃:Pr³⁺, phonons created by quenching process, direct detection 2-71595
 Li isotopes, electrical resistance study (*Russian*) 2-61443
 Li₂B₂O₇, Raman spectrum, 100 to 400K 2-67038
 LiF, edge dislocation dipole contrib. to thermal resistivity 2-86961
 LiF surface (001), inelastic scatt. of Ne atoms 2-57239
 LiF(001), surface phonon dispersion relations 2-109929
 LiO₃, uniaxial stress induced changes in Raman spectrum 2-110858
 MgO, far-IR absorption, 300-1500K, multiphonon processes 2-93174
 MgO film, IR spectra study of optical vibr. modes 2-67133
 MgO:Cr²⁺, nonradiative transitions and energy levels 2-72548
 γ-Mn₈₂Cu₁₈, thermal-excitation phonon spectra near FCC=FCT transform. 2-56126
 γ-Mn₈₇Fe₁₃Cu₃, thermal-excitation phonon spectra near FCC=FCT transform. 2-56126
 NaF(001), surface phonon dispersion relations 2-109929
 NaNO₂, mol. crystals, lattice phonons, tunnel states 2-76329
 NaNO₃, paraelectric phase critical fluctuations 2-82797
 NaNO₃:NO₂, luminescence spectrum fine struct. 2-87841
 NaOH, mol. crystals, lattice phonons, tunnel states 2-76329
 NbO₂, struct. transition, role of polar phonons Fourier spectroscopy 2-57028
 Nb₂Sb, Raman scatt., phonon linewidth and mag. susceptibility 2-57090
 NbSe₂-2H, normal state phonon prop. anal. 2-103919
 Ni-Fe-Cr, Nichrome, phonon-induced desorption of He, crit. cone 2-92349
 NiO microcrystal, IR spectra obs. at high temp. 2-61902
 P, orthorhombic black, vibr. spectra, inelastic neutron scatt. meas. 2-56139
 Pb, linear potential calcs. of phonon props. 2-66146
 Pb₂Cd_{1-x}, crystal, interlayer interactions, Raman phonon spectra (*Russian*) 2-104893
 Pb_{1-x}Ge_xTe p-n junction diode, capacitance, press. induced phase transition 2-72055
 PbI₂:Ni²⁺, phonon side bands in absorpt. spectra 2-99161
 PdD_{0.74}, optical phonons, short range order effect 2-56125
 PdD₂, ion implanted, phonon resistivity 2-110328
 PdH(D₂), elastic moduli, optical phonon contrib. 2-115329
 Rb₂NbCl₆, phase transitions, Raman scatt., dielec. const. and spontaneous polarisation study 2-72510
¹⁹Sr_{1-x}⁸⁸Sr_xF₆ solid isotopic mixture, IR spectra of dipole-active optical phonons 2-67063
 Si, electron irradiated, uniaxial stress anal. of 0.79 eV vibronic band 2-67019
 Si, heat pulse propag. study by supercond. bolometer 2-92298
 p-Si, hole-acoustic phonon transition rate angular depend. 2-110237
 Si inversion layer, intervalley and intersubband scatt., phonon electron interactions 2-87401
 Si, melting point, press. derivatives 2-61117
 Si, phonon focusing effect on thermal cond., theory 2-98359
 Si, phonon freq. calcs., lattice const. 2-76619
 Si, phonon population, time-reversal invariance and Raman meas. 2-103920
 Si, Raman and time-resolved transmission meas. 2-57073
 Si:B, IR absorption spectrum 2-77503
 Si:Cu, deep centre long lifetime photoluminescence 2-110938
 Si:Cu, luminescence, excitons and impurity states 2-104946
 Si:Ga, heavily doped, free electron zero-phonon transition, luminescence 2-61954
 Si:In, vibronic spectrum of U₂ isoelectronic centre 2-61953
 SiC (3C), optical phonons and transverse effective charge, temp. depend., 77 to 750K, Raman study 2-82861
 SiC-3C, Raman phonon press. depend. 2-67054
 SiC(3C), optical phonons and transverse effective charge, press. depend., Raman study 2-82860
 Sn, supercond. tunnel junctions phonon spectrum emitted 2-56106
 Sn₂P₂S₆, lattice vibr. in ferroelec. phase, Raman spectra anisotropy 2-104888
 (SnTe)_{1-x}(PbSe)_x, system, ¹¹⁹Sn Mossbauer study (*Russian*) 2-104781
 SrS(SrSe), optical phonon IR reflection spectra and cryst. growth, expt. study 2-99117
 SrTiO₃, Raman spectra 2-82840
 Ta, ultrasound induced elec. field gradient, quadrupole nucl. acoustic reson. study 2-56951
 TaSe₂-2H, normal state phonon prop. anal. 2-103919
 TiGaSe₂(Se₂) layered semicond., polar optical phonon freq., angular behaviour 2-109928
 TiInS₂, layered semicond., polar optical phonon freq., angular behaviour 2-109928
 TiSe, inelastic neutron scattering, selection rules (*Russian*) 2-92119
 Tm₂Se and TmSe_{1-x}Te_x, intermediate valent, phonon and elastic anomalies 2-56116
 UN(Si)Te single crystal, neutron scatt. from spins and phonons 2-56837
 V₂Si, anomalous E_g phonon and electronic Raman scatt. 2-57089
 V₂Si(Ge), Raman scatt., phonon linewidth and mag. susceptibility 2-57090
 YIG, polycrystalline, thermal cond., 77-300K (*Russian*) 2-98358
 Zn, phonon spectra and cryst. struct. 2-115370
 ZnS, lattice dynamics under hydrostatic press., Raman spectra 2-86805
 ZnSe, lattice dynamics under hydrostatic press., Raman spectra 2-86805
 ZnSe, phonon anomalies, Raman spectra study 2-98221
 ZnSe, Raman intensity press. depend. 2-93182
 ZnSe, stimulated photoluminescence, lasing mechanism 2-99183
 ZnTe lattice dynamics under hydrostatic press., Raman spectra 2-86805
 ZrS₃, depend. of phonon spectrum on hydrostatic press., Raman scatt. data 2-109922

lattice structure, crystals see *crystal atomic structure*

lattice theory and statistics

- see also *Ising lattices; percolation; renormalisation; X-Y model*
 1/n expansion for weakly random system with impurity correlation 2-53671
 β-bell particles, one dimensional array, saturation coverage 2-63930

lattice theory and statistics continued

- φ⁴ field and Ising models, geometrical anal. 2-95276
 φ⁴-kinks, diffusion const., quantum corrections 2-112817
 adsorbate diffusion, particle hopping lattice gas model 2-92362
 angular momentum on lattice 2-107170
 anharmonic chain with nearest neighbour interactions, dynamics 2-107249
 anharmonic lattice simulation, nonlinear LC ladder line, asymptotic behaviour of negative rectangular pulse 2-84550
 animals, embedding in square lattice 2-74347
 anisotropic bond percolation by position-space renormalization group 2-69104
 anisotropic lattice, random walk, asymptotic behaviour 2-84532
 anisotropic Potts model, large q expansion 2-110341
 anisotropic triangular lattice, bond-site percolation, real space renormalisation group study 2-95255
 anisotropic triangular lattice, bond-site percolation, series anal. 2-95254
 antiferromagnetic three-state Potts model, on square lattice, Monte Carlo renormalisation group anal. 2-77315
 Ashkin-Teller five-state model, group theory 2-95250
 Ashkin-Teller model, Ising crit. exponents 2-107259
 asymmetry four-state clock model, perturbation expansion, commensurate-incommensurate transition 2-56878
 atomistic lattices with covering property, modularity, O symm. 2-58718
 bags, non-gauge lattice models 2-69427
 Bargmann transform, Zak transform, and coherent states 2-74349
 Baxter-Wu model, Monte Carlo renormalisation group study 2-101346
 Bethe lattice, regular tiling of hyperbolic plane 2-69096
 Bethe-ansatz quantum sine-Gordon thermodynamics, sp.ht. 2-79521
 binary system, cluster variation approx., pair correl. function, free energy expansion 2-79492
 bond percolation, randomly directed, position space renormalisation group approach 2-107263
 bond percolation and the Yang-Lee edge singularity problems in three dimensions 2-107255
 Cartesian tensors, fourth-rank, irreducible representation 2-69100
 cell-to-cell mapping for nonlinear dynamical systems, generalised theory 2-53676
 chaos, quantum recurrences and Anderson localisation 2-101227
 chlorophyll a, loop currents 2-111612
 classical diffusion on a random chain 2-53672
 classical lattice dipole gases, low-fugacity asymptotic expansion 2-74351
 classical lattice gases, solvable models 2-74352
 cluster growth on square lattice, simulation using stochastic model 2-101345
 cluster high-temp. expansion, for classical and quantum lattice systems 2-84552
 cluster radius at percolation threshold, position space renormalisation group study 2-84546
 cluster variation method for lattice models, thermodynamic and correlation functions 2-89630
 combinatorial lattice models, critical behaviours 2-69108
 conductivity of a lattice-gas with coulomb-interactions 2-101353
 confluent singularities, appl. to 2D percolation 2-101349
 continuous Potts model, phase transition (*Chinese*) 2-69092
 continuum models of discrete systems, conf., Stockholm, Sweden (Jun.-Jul., 1981) 2-84380
 continuum statistical mechanics, Dobrushin uniqueness techniques and decay of correl. 2-112800
 correlation functions, computer simulation 2-101337
 coupled quantum mechanical oscillators with independent Fermi systems, pseudo scalar interaction 2-74247
 cubic lattice, short chain dynamics 2-53678
 decay of correlations for infinite range interactions in unbounded spin systems 2-107248
 dense random packed hard sphere Bernal model, site percolation critical conc. 2-79497
 density of states on fractals, Green's function method calc. 2-107266
 diamond lattice, self-avoiding walks, collapse transition and crossover scaling 2-107257
 dilute s-state Potts model, Migdal-Kadanoff renormalisation approach anal. 2-95256
 diluted lattices, self-avoiding-walks, Monte Carlo anal. 2-84547
 directed animals, correl. lengths, crit. exponents 2-79484
 directed bond percolation, real-space renormalisation techniques 2-58723
 directed lattice animals, configurational props. 2-63914
 directed lattice animals and percolation, Flory theory 2-79482
 discrete Gaussian chain with 1/r² interactions 2-112831
 disordered 1-D anharmonic chain, soliton dynamics, Korteweg de Vries model 2-107121
 disordered chains, inequivalent ensembles 2-84543
 disordered media, inhomogeneous transport, binomial random variables, orthogonal polynomial expansion 2-63941
 disordered systems, localisation, physical picture, exact results 2-104316
 disordered systems and localisation, conf., Rome, Italy (May 1981) 2-63750
 double-Gaussian model, crit. and crossover behaviour 2-112836
 dumbbells, pseudobidimensional arrays, exact recursion relations 2-63925
 dynamical plane rotator model, dynamical correlation function expanded from high temp. limit 2-58720
 dynamics, random walks and nonintegral effective dimensionality 2-112830
 eight-vertex model, new solvable classes 2-112833
 energy gap, clustering and Goldstone theorem in statistical mechanics 2-74350
 equilibrium approach in lattice field theory 2-95268
 equilibrium states, continuous symmetry, absence of spontaneous breakdown 2-58726
 exactly soluble models, symm. relations 2-63917
 excitation trapping in crystals, random walk studies 2-74321
 Fermi hypernetted chains, correlated basis functions method 2-63921
 finite and periodic lattice with traps, random walk method 2-101348
 finite-size percolation networks, elec. cond. 2-101356
 four-dimensional cube symmetry group, structure and representation 2-95263
 four-dimensional lattice, self-avoiding walks, fractal dimensionality anal. 2-79488
 four-dimensional Z₂ lattice gauge theory linearisation 2-84799
 fractal lattices, nth order phase transitions, critical exponents from catastrophe theory 2-107256
 gas of topological excitations, real-space renormalisation group 2-79518

Lattice theory and statistics continued

- gauge theory, free energy density bands 2-107512
 Gaussian model, inhomogeneous, semiinfinite, nonuniversal and anomalous surface crit. behaviour 2-79486
 general self-dual spin models in two dimensions 2-107253
 geometric analyses of ϕ^4 fields and Ising models 2-107496
 Goldstone theorem in statistical mechanics 2-74355
 hard core particles in one dimens. systems, BBGKY eqn. hierarchy 2-89636
 hard hexagon model, interface tension and correl. length 2-53688
 hard ramrod lattice gas model, phase transitions using scaling transform. 2-63918
 hard sphere system, statistical theory of crystallisation 2-97964
 helical Potts model, commensurate-incommensurate phase diagrams for overlayers 2-82136
 heterogeneous lattices, random walks, diffusion laws 2-79501
 homogeneous short-range order, kinetics 2-81929
 honeycomb and square lattice, site percolation threshold 2-95257
 Hubbard chain, Bethe-Ansatz solution failure 2-84558
 hyperscaling and crossover exponents near the percolation threshold 2-107261
 integrable Hamiltonian systems and the Painleve property 2-58731
 ionic crystal having Frenkel or Schottky disorder, finite length effects in lattice gas treatment 2-60973
 Ising model, 1-dimens., rel. to complete devils staircase 2-95271
 Ising model, hierarchical lattice with competing interactions 2-95260
 Ising model, regular and random, on Cayley tree, higher order susceptibilities 2-77248
 Ising models, computer simulation using Monte Carlo techniques 2-112832
 Ising models, self-dual anisotropic 2D with multispin interactions 2-72130
 Ising systems, compressible, crit. behaviour, Monte Carlo study 2-107260
 Ising-classical spin systems, decomp. theorem 2-95252
 isotropic helical Potts model on square lattice, phase boundaries 2-112839
 kinetic model for desorption of paired adatoms 2-98434
 kink free energy calc., WKB approx. 2-79495
 Kosterlitz-Thouless transition for two dimens. phase rotator 2-95298
 laminar boundary layer, estimates of errors incurred in asymptotic representations of isolated wave packet 2-109277
 lattice animals: $d_c=8$ for trees 2-112835
 lattice boson field theory, soliton doubling 2-79769
 lattice Fermi gas, one-dimens. weakly nonideal, ground state 2-63932
 lattice gas, two-dimens., cluster partition function, asymptotic form 2-84534
 lattice gases, particle distrib. functions 2-107251
 lattice sine-Gordon model, quantum and classical (*Russian*) 2-53699
 lattices, with periodically distributed imperfect traps, random walks with spontaneous emission 2-95270
 Leech lattice, constructions 2-74357
 Leech lattice, covering radius, bounds 2-58729
 Leech lattice, covering radius 2-58730
 liquid mixture, closed-loop phase diagrams, orientational degrees of freedom effects, lattice gas model 2-98259
 majority rule model, real-space renormalisation group soln. and finite size scaling 2-84554
 martensitic transformation, generalised lattice correspondence theory 2-71611
 massive Thirring and quantum sine-Gordon system thermodynamics 2-84581
 massive Thirring model thermodynamics for weak sine-Gordon coupling regime 2-74373
 metastability and restricted equilb. conditions for classical lattice 2-107264
 Migdal recursion formula, potential-moving derivation, differential renormalisation, duality 2-79749
 Migdal-Kadanoff type, of recursion scheme for 2-D square lattice 2-95272
 minimal subtraction method, percolation scaling amplitude ratio correction 2-107262
 monomer-dimer model relation with Yang-Lee model 2-95261
 Monte Carlo simulations, use in study of real lattice gas, and appl. for α' Pd-D system 2-67307
 multicomponent alloys, cluster effects 2-92436
 multicomponent spin models with transitive symm. groups, Cayley trees for special cases 2-104562
 multicomponent spin models with transitive symm. groups, theory 2-104561
 muscle, thin filament regulated, activation by Ca^{2+} ion, nearest-neighbour lattice statistics 2-116903
 n-step random walk, number of points on lattice subset visited 2-79491
 n-vector model with defect plane, critical behaviour at $n \rightarrow \infty$ 2-63929
 n-vector model with random interactions, spin correl. function upper bound 2-56879
 nonlinear lattice relaxation by a regional virial theorem 2-56480
 nonlinear LC circuit simulation of Toda lattice, soliton propag. 2-58722
 nonlinear weakly negative dispersive medium, two-dimensional wave local energy decay 2-95026
 nonMarkoffian diffusion in 1D disordered lattice 2-95242
 normaliser and automorphism groups of symm. groups 2-63933
 O(n) model, peculiarities for $n < 1$ in mag. field 2-69107
 O(N) nonlinear σ -model, lattice action near continuum limit 2-101551
 one dimensional lattice systems, diffusion with random transfer rate 2-101352
 one dimensional quantum Ising model with transverse mag. field, first integrals 2-53988
 one-dimensional fermion lattice, thermodynamic props., Monte Carlo calc. 2-84553
 one-dimensional random walk chain, particle random walk 2-58711
 Peierls system, nearly half-filled, effects of electron-electron interactions on soliton lattices 2-58719
 percolating Bethe lattices, conducting backbone 2-74348
 percolation, critical phenomena and fractals 2-63937
 percolation clusters, scaling props., lattice animal theory, review 2-63934
 percolation clusters, three dimensional surface struct. above p_c 2-53682
 percolation problem of discs with distrib. of radii, Monte Carlo renormalisation group study 2-63910
 percolation theory appls. to real world 2-63938
 phase transition in a lattice gas with extended hard core 2-107254

Lattice theory and statistics continued

- pinning of an interface by a planar defect, domain wall behaviour 2-107252
 planar lattice gas, phase separation, intrinsic interface profile 2-74364
 planar model, crit. exponent, one-dimens. quantum field theory calc. 2-79493
 plane quadratic lattice gas, multiphase behaviour 2-101342
 plane square lattice, dimer distrib. in Percus-Yevick approx. 2-58732
 polyacetylene, Peierls system model, equivalence to HF model on virtual equidistant lattice 2-79496
 polyelectrolyte chain, unscreened model, swelling corrections relevance 2-108745
 polymer chain, fractal dimensionality 2-79487
 polymer chains, Edwards' model, Borel summability 2-95251
 polymer solutions, $n=0$ vector model, negative susceptibility 2-65838
 polymer solutions, partition function, mol. wt. depend., criticality 2-63920
 polymers, conformation change, dynamic lattice model, exact and Monte Carlo calcs. 2-69094
 polymers, self-avoiding walks, critical phenomena approach 2-80857
 polymers, statistical mech., Boltzmann eqn. approach 2-84555
 polymers, topological entanglement, field theory 2-63919
 Potts chain interface 2-95258
 Potts ferromagnet, anisotropic planar, phase diagram 2-110588
 Potts model, 2-dimens., critical behaviour, finite size scaling anal. 2-95269
 Potts model, antiferromagnetic, on square lattice, crit. behaviour anal. 2-104641
 Potts model, dil. s-state, geom. struct. and thermal phase transition at percolation threshold 2-63936
 Potts model, ferromag. and antiferromag. in (1+1) and (2+1) dimensions 2-72231
 Potts model, first-order phase transitions 2-58717
 Potts model, generalised three-state and antiferromag., phase transitions and entropy 2-66852
 Potts model, large cell renormalisation, anal. 2-101351
 Potts model, q-state, clusters and droplets 2-74344
 Potts model, quantum in D dimens., with multi-spin interactions, self-duality, phase transforms. 2-69093
 Potts model, self-dual renormalisation 2-101350
 Potts model, semi-infinite, low temp. phase 2-53679
 Potts model, semi-infinite, renormalisation group anal. 2-63916
 Potts model, three state, in 2D, interface props. 2-112828
 Potts model, three-state, dynamic crit. exponent, Monte Carlo renormalisation group method 2-74363
 Potts model, three-state, with two- and three-body interactions, Monte Carlo study 2-74345
 Potts model, triangular lattice, crit. behaviour 2-104639
 Potts model, two-dimens. anisotropic, inverse functional relation 2-95253
 Potts models on pseudo-lattices, absence and presence of phase transitions 2-53680
 Potts three-state model, scaling corrections 2-95259
 potts-model formulation of continuum percolation 2-112838
 quantum spin models, two dimens., approx. mapping on staggered eight-vertex models 2-101366
 quantum spin systems, inverse problem in statistical mechanics 2-101307
 quantum Toda lattice 2-53574
 quasicontinual representation of field given on finite lattice, interpolation props. 2-95265
 random cluster model on a Cayley tree 2-74336
 random Gibbs fields on lattice, compactness and maximal Gibbs state 2-84548
 random lattice network, directed and diode percolation 2-63928
 random mixture, high connectivity, rel. to 2-cluster percolation, universality class 2-79494
 random resistor networks, threshold behaviour 2-77006
 random walk on 2-dimens. lattice, distinct site anal. 2-84549
 random walk on anisotropic dual-medium lattice, asymptotic behaviour 2-101321
 random walk on lattices 2-53691
 random walk representation of classical spin systems and correlation inequalities 2-53684
 random walks, symmetric, in random environments 2-107234
 random walks 2-69095
 random walks with infinite spatial and temporal moments 2-84531
 renormalized $(1/\sigma)$ expansion for lattice animals and localization 2-101347
 rigid rectangular particles highly heterogeneous populations, lattice statistics 2-74340
 Rogers-Ramanujan identities in the hard hexagon model 2-58725
 scaling corrections by partial differential approximants, unbiased estimation 2-53695
 Schrodinger eqn., nonlinear classical and quantum lattice models 2-63931
 self-avoiding lattice walk interaction with interface 2-87016
 self-avoiding random walks, persistency 2-84537
 self-dual quantum Potts model with multispin interactions in one dimension 2-53690
 self-dual two-dimensional Potts model with multispin interactions 2-58724
 semiclassical Coulomb system, in periodic boundaries, lattice sums 2-69086
 series analysis, direct estimates of η 2-84556
 sine-Gordon chain, driven damped, coherence and chaos 2-101316
 sine-Gordon lattice, 2-D. internal energy, molecular dynamics calc. 2-84551
 sine-Gordon system, kinks, Brownian motion and diffusion const. 2-84530
 site percolation, high-density, on real lattices 2-95262
 solid-on-solid roughening, planar model, F model, and related systems, Monte Carlo test 2-69103
 solid-on-solid roughening, planar model, F model and related systems, Monte Carlo test 2-69102
 solids in supercrit. gases, lattice gas model 2-103998
 solitons, nonlinear LC circuit method, dark solitons, Schrodinger eqn. 2-58721
 some inequalities related to roughening 2-95219
 spin models, star-triangle relation anal. 2-63911
 square lattice, adsorbed polymer chain, critical exponents for self-avoiding lattice walks 2-107250

lattice theory and statistics continued

- square well lattice gas model, phase transitions using scaling transform. 2-63918
- square-lattice percolation clusters, surface tension, Monte Carlo simulation 2-69105
- square-lattice three-state Potts model with spin anisotropy 2-63924
- strong scattering regime, localisation, Bethe lattice approx. 2-58728
- superfluidity in restricted geometry, spherical model 2-104097
- superionic conductors, modulated, hopping cond. 2-71709
- surface tension of 2-D and 3-D lattice-gas models, Monte Carlo calcs. 2-63927
- surfaces, order-disorder transitions 2-115549
- thermal conductivity, lattice thermal components, calc. from dynamic theory 2-110055
- thermodynamical phases and surface effects 2-107279
- three-dimensional lattice, dimers statistics, exactly solvable model 2-74353
- three-dimensional lattice, dimers statistics, improved lower bound 2-74354
- three-dimensional lattice, two-dimens. defect, local critical exponent 2-74358
- three-particle distribution function, variational method 2-53686
- Toda lattice, impurity localised vibrational mode, computer simulations 2-112834
- Toda lattice, soliton-gas approx., dynamic corrls. 2-79489
- Toda lattice, statistical mech. based on soliton dynamics 2-69101
- Toda lattice Backlund transformation, 2-dimens. Volterra eqns., general solns. 2-53698
- Toda lattice type, classical and quantum-mechanical system 2-53685
- topologically entangled molecules, configurational props. 2-53689
- transition moments for linear potentials 2-95225
- trapping, one-dimens., excitation time decay 2-84563
- Turing machines, with no energy dissipation, quantum mech. models 2-79424
- two-dimensional classical XY model in random p-fold system breaking field 2-89635
- two-dimensional Glauber model, Monte Carlo renormalisation study 2-79498
- two-dimensional integrable lattice system, Lorentz group (Russian) 2-53700
- two-dimensional lattices, directed site animals 2-79483
- two-dimensional models in lattice statistics, inversion relation method 2-95266
- two-dimensional percolation and lattice animals, phenomenological renormalisation appl. 2-63912
- two-dimensional regular lattice, energy transfer as a random walk 2-74339
- two-dimensional system, finite size scaling and phenomenological renormalization 2-63935
- two-dimensional triangular lattice, spin struct. 2-61704
- U(N) lattice gauge theory, planar random surfaces on lattice 2-101550
- n-vector model, geom. struct. and thermal phase transition at percolation threshold 2-63936
- vertex model, two-dimens., ice type, free energy, polarisation 2-95275
- X-Y model, frustration in two dimensions, renormalisation group method 2-74360
- XY model in two dims., finite-size scaling 2-63913
- Yang-Baxter eqns., for generalised Baxter models, symmetry 2-58691
- $Z_N \times Z_N$ invariant vertex lattice model, partition function 2-113137
- ϕ^4 model on lattice, bifurcations, chaos 2-74346

lattice vibrations see *lattice dynamics*

laves phases see *alloys*

lawrencium

No entries

lawrencium compounds

No entries

LCAO calculations

- alcohol-water mixtures, H-bonding, ab initio MO calcs. 2-80469
- amino acids, H^+ transfer energies and electrostatic lattice energies, CNDO/2 and ab initio SCF calcs. 2-78079
- aromatic heterocyclic compounds, S-containing, proton, ^{13}C and ^{15}N chemical shifts, MO LCAO SCF method 2-75321
- aromatic sulphonylamines electronic struct., PES and CNDO/S LCAO MO calcs. 2-85742
- average Fock operator technique of approx. open-shell LCAO MO SCF calcs. 2-90437
- benzene, ring current model, CHF approx. 2-108368
- conjugated compounds, CNDO and INDO method failure in conformational anal. 2-80481
- cyclopentyl cation, non-empirical LCAO MO SCF investig. of ground and core-hole states 2-96445
- diamonic molecules, vibrational smearing of deform. density, Hartree-Fock-Slater SCF calcs. 2-80559
- 1,6-dicarba-closo-hexaborane electronic struct., CNDO approx. 2-90456
- ethyl acetate, cation radical, equilib. struct., SCF MO LCAO CNDO calcs. 2-96456
- ferroelectric crystal, photovoltaic bulk effect, two-dimens. LCAO calc. 2-110400
- graphite acceptor intercalate, stage 1 model, electronic struct., optical and energy loss props., LCAO calc. 2-61346
- methyl-phosphine (-difluoro phosphine), force field calcs., IR obs. 2-64856
- methyl-phosphonic difluoride (-phosphine oxide), force field calcs., IR obs. 2-64856
- molecules, integral HF eqns. soln. by method of MO LCAO in momentum space 2-90426
- momentum density maps for molecules 2-108347
- olefins, catalytic hydrogenation by Pd complex, MO calcs. 2-83378
- open-shell LCAO-MO-SCF calcs., scaled one-electron Hamiltonian model, comparison with Roothaan restricted open-shell method 2-80483
- organic molecules, $1/3$ dipolar cycloadditions, LCAO-SCF-MO ab initio calcs. 2-111462
- peptides, H^+ transfer energies and electrostatic lattice energies, CNDO/2 and ab initio SCF calcs. 2-78079
- perovskites, cubic d-band, electronic density-of-states and partial-density-of-states functions 2-76889
- polymers, one-dimens. cond., electronic struct., ab initio SCF LCAO calc. 2-76892
- resonance-integrals from Heisenberg eqn. of motion, theoretical formula derivation 2-102367

LCAO calculations continued

- semiconductors, LCAO calcs. of photoionisation of deep centre 2-104304
- small molecules, ionisation pots., MS- and LCAO- $X\alpha$ calcs. 2-64846
- thiophenes, electrophilic bromination, charge density-activation energy correlation, Huckel LCAO calc. 2-54771
- transition metal surfaces, work function, polarisation model, Huckel LCAO MO calc. 2-115858
- $AgCl$, band struct. and density of states, APW-LCAO calc. 2-115663
- Be, electronic and struct. props., HF ab initio calc. 2-82218
- Be monolayer, electronic struct. calc. method 2-115844
- Cl^- , hydrated, mixed electrostatic quantum chem. approach MO calcs. 2-85530
- $Cu_{60}Zr_{40}$ glass, electronic struct. 2-104236
- F^- , hydrated, mixed electrostatic quantum chem. approach MO calcs. 2-85530
- $Fe(II)$, porphyrin complexes, electronic struct., Mossbauer spectra, ab initio LCAO SCF calcs. 2-108596
- GaAs:Fe, LCAO calcs. of photoionisation of deep centre 2-104304
- GaP:Fe, LCAO calcs. of photoionisation of deep centre 2-104304
- $GeCl_2$ and $GeBr_2$, He(I) photoelectron spectroscopy, HF Slater LCAO calcs. 2-108624
- H monolayer, electronic struct. calc. method 2-115844
- H_2 , magnetic shielding, dipole magnetisability tensor, LCAO-SCF calcs. 2-80464
- HS^- , hydrated, mixed electrostatic quantum chem. approach MO calcs. 2-85530
- $KMgF_3$, electronic energy band struct. 2-82225
- La, liquid, electronic struct. 2-87133
- NO_2^- , hydrated, mixed electrostatic quantum chem. approach MO calcs. 2-85530
- NO_3^- , hydrated, mixed electrostatic quantum chem. approach MO calcs. 2-85530
- $Nb_5S_4(Se_2)(Te_4)$, Fermi surface, band struct. and elec. cond., LCAO calc. 2-115658
- Ni_4 cluster, $X\alpha$ LCAO and $X\alpha$ scatt. wave calc. comparison 2-96786
- Ni_2Si , self-consistent energy bands and bonding 2-66436
- OH^- , hydrated, mixed electrostatic quantum chem. approach MO calcs. 2-85530
- POF_3 , force field calcs., IR obs. 2-64856
- PF_3 , ground electronic state and geometry, ab initio LCAO MO SCF calcs. 2-102381
- Si, total energy calcs. 2-66470
- Si-Ni(Cr) interface, chem. bonding and density of states, UPS and LCAO calc. 2-110476
- SiC cluster, electronic component of free energy in gas phase 2-59987
- SiC:N (6H), exchange-coupled vacancy pairs, ESR study 2-116062
- TiH_2 , electronic struct., APW method and LCAO interpolation 2-61353
- VC_2O_4 , quadrupole effects and chem. bonding 2-110723
- VS_2 (V_2Si), band struct., LCAO EHT calc. 2-82219
- W surface, (111), clean and adsorbed H_2 , ang. resolved photoemission meas. and LCAO calc. 2-83008
- ZnO :Cu, deep Cu centre, lattice distortion effects, SCF-LCAO cluster calc. 2-104297

lead

- see also *nuclei with*
- adsorbed monolayer on Cu crust., secondary electron emission enhancement 2-62025
- adsorbed on Cu(100), LEED studies 2-98450
- adsorbed on GaAs (001) electronic struct., angle-resolved photoemission study 2-110424
- air pollution, Pb in human blood, Silver Valley Lead Study 2-83531
- air pollution in Germany, deposition and emission sources (German) 2-78825
- air pollution in Nepal Himalayas, due to domestic fires 2-62527
- anodic oxidation in H_2SO_4 based soln. to form soluble species 2-67663
- in atmosphere, Pb concs. in aerosols in downtown Guatemala City 2-105622
- atom, isotope shift in $6p^2\ ^3P_0-6p7s\ ^3P_1^o$ 283.3-nm line 2-90480
- atom, isotope shifts and HFS laser spectroscopic meas. 2-70194
- atom, L_1 , L_2 and L_3 subshells, X-ray fluoresc. yields and Coster-Kronig transition probabilities 2-70114
- atomic clusters, formation by adiabatic expansion and ionisation pot. meas. 2-85854
- atoms, incoherent photon scatt. cross sections 2-75220
- atoms, Rayleigh scatt. of photons in vicinity of K-absorpt. edge 2-54787
- backscattering of He^+ , equilb. charge state distrib. 2-54957
- bremsstrahlung excited Auger electron spectra 2-105035
- circular crystals, growth from melt, grain boundaries and solid-liq. interface normal orientation 2-87966
- corrosion in sea water 2-111360
- crystallites on graphite, morphological change mechanisms during equilb. shape establishment 2-91839
- determination in bone, X-ray fluoresc. method 2-68112
- diffusion rates in $NiZr$, metallic glass 2-71726
- discharge charact. of Pb-acid batteries 2-116797
- electron emission during elastoplastic deform. (Russian) 2-57276
- film, reducing grain size by use of nucleants 2-104188
- film, supercond. transition, voltage decomposition 2-87461
- film, UPS and Auger anal., use of combined study apparatus 2-116341
- film formation by direct ion beam deposition 2-116387
- film with Fe surface impurities, mag. behaviour, Hall effect meas. 2-87557
- films, strain relax. meas. on Si substrates 2-82189
- fusion material, irradi., time-depend. flow props. from indentation tests 2-88315
- fusion reactor appls., corrosion and compatibility 2-69864
- grain boundary diffusion of Sn, radioactive tracer study 2-82022
- heat deposition meas. in ZING-P pulsed spallation neutron source 2-102028
- in-situ UHV high-resolution TEM surface study 2-98411
- inner-shell/subshell photoionisation cross section meas. using variable energy X-ray source 2-64935
- interaction cross section with low energy neutrons 2-59446
- ion beam textured surfaces, quasi-liquid states 2-82984
- isotopic systematics in three-component Earth mantle model 2-100334
- Josephson tunnel junctions formed by thermal oxidation, fabrication (Chinese) 2-110356
- layers, differential γ -ray albedo depend. on layer thickness 2-96407
- liquid, electronic density of states, Green's function and perturbative calcs. 2-71854

lead continued

liquid, interatomic pair pot., combined WCA and RPA calc. 2-60857
 liquid, optical absorpt. 2-87813
 liquid, phonon-like collective oscillation modes and related props. calc. (Russian) 2-65843
 liquid, static struct. factor rel. to effective pair pot. 2-60868
 liquid, structure factors, pseudopotential and WCA method 2-65844
 mass absorption coeff. and range of beta particles 2-75135
 metallic target, isotope discrimination, secondary ion mass spectrometry 2-57652
 meteorites (L-chondrites), Pb isotope composition 2-63322
 microclusters, inert gas condensation 2-103969
 modulus defect and amplitude dependent damping, normal-supercond. transition effect 2-55978
 molecule, YAG laser vaporisation, laser excitation spectra and lifetimes 2-59850
 monitoring for industrial hygiene survey 2-67906
 monolayers and ultrathin films, growth on Cu 2-71829
 multi plate liq. Ar calorimeter for elementary particle energy meas., resolution 2-96388
 mid-ocean ridge basalt Pb, Nd and Sr isotope ratios 2-106010
 overlayer adsorption on Cu, surface structural characterization by secondary electron emission 2-87923
 phonon properties, linear pot. calcs. 2-66146
 photon emission from sputtered atoms as function of phase transition 2-77596
 pollution of Denmark coastal waters by heavy metals 2-78698
 pseudopotential elastic const. calcs. (Chinese) 2-109880
 Red Sea, ^{226}Ra , ^{210}Pb , ^{210}Po profiles and residence times 2-68387
 scrap Pb recovery from batteries, electrolytic method 2-62406
 sediment metal conc. determination by at. absorpt. spectrometry method 2-68536
 shear stress and spall strength under shock loads, preview 2-83213
 shielded plastic scintillator-photomultiplier combinations, response to ns neutron pulse 2-70062
 soil contamination near Adelaide, S Australia, sources 2-73171
 sput. cooled, excess vacancy conc., lattice parameter and elec. resist. meas. 2-71440
 superconducting film, behaviour in states far from equilibrium 2-72125
 superconducting film, current-carrying, induced by mag. fields, breakdown of supercond. 2-104528
 superconducting film, distrib. of pinning forces on trapped flux 2-61669
 superconducting film, interfaced with Formvar, influence of size on T_c 2-115933
 superconducting film under quasiparticle injection, inhomogeneous gap states obs. (Chinese) 2-92826
 superconducting films, thermodynamic fluctuations of order parameter, review 2-98809
 superconductor, type I, supercooled and superheated metastable phases, average lifetime meas. (Russian) 2-115957
 surfaces, halogenation, UV photoelectron spectra 2-73013
 thermal diffusivity determ. of solid materials near melting point 2-115394
 thermal resist. of normal/supercond. interphase boundary 2-77228
 thin film, energy-loss straggling of p, d and α -particles in 0.2-2.5 MeV range 2-98169
 thin films, on substrate, low-temp. strain behaviour 2-110218
 Troodos Complex, Cyprus, Pb isotopic composition of ophiolitic volcanogenic sulphide deposits 2-62925
 ultra thin overlayers on Ag surface, oxidation, UPS and XPS study 2-83267
 ultrahigh-energy EM cascades development including LPM effect 2-73809
 vapour, high-efficiency joule-level Raman generation 2-60160
 vapour laser, small-scale, pulsed 2-85949
 vapour lasers, contaminants, decontamination procedures 2-86032
 AgBr:Pb $^{2+}$, photocond. meas. for sub-bandgap light 2-87325
 AgBr:Pb $^{2+}$, photocond. meas., pre-exposure effects 2-87326
 AgBr:Pb $^{2+}$, photoresponse and photoelectron lifetime 2-56641
 Al-Al $_2\text{O}_3$ -Pb tunnel junctions, voltage annealing with alternating polarity 2-45000
 Al-oxide-Pb tunnel junctions, water infused, thermal and voltage annealing 2-82472
 Al-oxide-Pb tunnel junctions, effect of top electrode deposition rate on tunnelling characs. 2-82473
 Al-Pb double layer scatterers, albedo charact. of bremsstrahlung 2-67708
 Al-steel-Pb admixed alloys, wear-resistant, prod. by dynamic compaction 2-88025
 CaCO $_3$:Pb $^{2+}$, EPR spectrum, Raman spin lattice relax., hyperfine interaction effect 2-61761
 CaSiO $_3$:Pb $^{2+}$, phosphors, high press. phases, luminescence props., quenching 2-82903
 Fe-Pb double layer scatterers, albedo charact. of bremsstrahlung 2-67708
 Ge:Pb, deep impurity states, energy levels and majority carrier capture cross sections 2-71900
 n-HgSe-Al $_2\text{O}_3$ -Pb junction, tunnelling spectroscopy study 2-92777
 KBr:Sr (Pb), mech. strengthening and impurity precip. 2-88093
 KCl:Pb, mech. strengthening and impurity precip. 2-88093
 KCl:Pb, precipitation behaviour, luminescence and UV spectra study 2-115418
 KCl:Pb, radiation kinetics during intense excitation in A absorpt. band 2-110932
 KCl:Pb $^{2+}$, (100) and (111) face crystal growth rates, Pb $^{2+}$ effects (Russian) 2-65897
 KCl:Pb $^{2+}$, EPR study 2-56930
 KCl:Pb $^{2+}$, Kerr const. dispersion 2-72453
 KCl:Pb $^{2+}$ excited in A absorpt. band, time resolved spectra 2-104921
 NaCl:Ca (Sr)(Mn)(Pb)(Cd), mech. strengthening and impurity precip. 2-88093
 NaCl:Pb, Mn, excitation and emission spectra 2-104952
 NaCl:Pb, precipitation behaviour, luminescence and UV spectra study 2-115418
 NaCl:Pb $^{2+}$, luminescent centre symmetry, photoluminescence meas. 2-57168
 NaCl:Pb $^{2+}$, microhardness and bulk density meas., precip. and impurity-dislocation interactions 2-115345
 NaCl:Pb $^{2+}$, yield stress, solid soln. precip. and dissolution effects, IR absorpt. study 2-57366
 NaCl:Pb $^{2+}$ single cryst., microindentation and flow limit, doping effect (Russian) 2-71552
 NaCl:Sr, Pb $^{2+}$, luminescence and absorpt. spectra 2-72547

lead continued

NaCl:Sr(Ca)(Cd), Pb, clustering processes, use of Pb $^{2+}$ as optical probe 2-57131
 Nb/Pb thin film Josephson junctions, tunnelling barrier struct., Auger and XPS study 2-115956
 Nb-Al $_2\text{O}_3$ -Pb, electron tunnelling in normal and supercond. states 2-115913
 Nb-Nb oxide-Pb Josephson tunnelling elements in junction microstructs. 2-98819
 Nb-Nb $_2\text{O}_5$ -Pb Josephson junction, phase distrib., boundary conditions effect 2-110541
 Nb-NbO $_2$ -Pb Josephson junctions, high current density, fabrication and props. 2-82532
 Nb-NbO $_2$ -Pb Josephson junctions for narrow-linewidth tunable microwave oscillators 2-87455
 Pb $^{2+}$ effect on fatty acid monolayer compressibility at air-water interface 2-104145
 Pb/Bi/Jn oxide-Pb/Bi tunnel junction, quasiparticle mixer and other appls. 2-98812
 Pb-acid batteries, active material electronic conductivity, capacity limiting role during discharge 2-105553
 Pb-acid battery, self-discharge and passivation obs. during storage 2-78200
 Pb-Nb Josephson junction, submicron, electron beam lithographic fabrication and crit. current density meas. 2-56796
 Pb-scintillator sampling shower counter characts. for electron and photon detection 2-75099
 Pb-Zn-Pb junction, Josephson supercurrent oscill. temp. depend. 2-82544
 Pb-Zn-Pb superconductor-normal-superconductor junction, self-field effects 2-110540
 Pb+Br superheavy system, δ -electron production rates 2-59893
 Pb+H $^+$, ionisation, anisotropy of Pb L $_3$ subshell X-ray emission line 2-75407
 Pb+He $^+$, M to L shell X-ray yields ratio 2-59592
 Pb+N $_2$, charge changing cross sections at velocities up to 4×10^9 cm/sec 2-105479
 Pb+Pb metastable levels 6p 2 $^3\text{P}_1$ and 6p 2 $^3\text{P}_2$, collisional quenching, rate const. meas. 2-59888
 Pb, electronic states, relativistic quantum mech. calcs. 2-113866
 PbO $_2$ -Zn battery performance characts., comparison with conventional Pb-acid cell 2-78202
 ^{203}Pb , carrier-free, prod. and separation method 2-100125
 ^{204}Pb , ^{206}Pb , ^{207}Pb , ^{208}Pb in Walvis Ridge basalts, mantle source 2-106015
 ^{210}Pb and ^{226}Ra concns. in foodstuffs 2-57909
 ^{210}Pb , fallout radionuclide, transport through Saguenay Fjord fluvial-marine system 2-99856
 ^{210}Pb in rain at tropical oceanic sites 2-63037
 ^{210}Pb radioactive dating of lake sediments, γ -ray spectroscopic method appl. 2-58087
 ^{212}Pb ions and insoluble particles, differential retention in rat nasal mucosa 2-83664
 ^{212}Pb , isotopic generator, medical appl. 2-78446
 Pb(110), chemisorpt. of HCl, ionic adlayer form. 2-105501
 Pd-Pb, thin film couple, single intermetallic cpd. form., X-ray diffr. obs. 2-92288
 Sb $_2$, Bi $_2$, Te $_2$:Pb solid soln., doping, carrier density 2-71997
 SiO $_2$:Pb, laws of growth on Si, X-ray spectra 2-77960
 SnO $_2$:Pb thin film gas sensor, sensing characteristics meas. 2-79559
 SrSiO $_3$:Pb $^{2+}$, phosphors, high press. phases, luminescence props., quenching 2-82903
 ZnS:Pb, Gudden-Pohl effect flash spectra depend. on elec. field 2-87817
 Zn(SCN) $_2$:Pb, excitation spectra, luminesc. 2-104927

lead alloys

see also lead compounds

bronze-graphite antifricition material, sintered, struct. and mech. props. 2-67556
 dilute molten alloys, O $_2$ -Ag(Au)(Bi)(Cu)(In)(Ni)(Sb)(Sn)(Te) interactions 2-62099
 model beams, rig for creep and thermal ratchet testing, strain and temp. meas. 2-57558
 rare earth alloys, RPBu, lattice parameters and struct. characts., X-ray diffr. study 2-91876
 ternary, US crystallisation (Russian) 2-67201
 Pb-Bi alloys, temp. dependence of Young's modulus 2-72747
 Ag-Pb, system, solid-liq. region of phase diagram, interfacial tensions and adsorption 2-88057
 Ag-Pb alloys, rapidly quenched, Ag-rich phase 2-88056
 Al-Pb, hyper-monotectic alloys, solidified by rapid cooling, struct. (Japanese) 2-105136
 Au $_{55}\text{Pb}_{22}\text{Sb}_{22.5}$, metallic glass spheres, prep. and surface characteristics 2-55851
 Bi-Al-Pb, ternary phase diagram, computer calc. (Korean) 2-67289
 Cd-Pb submicron eutectic thin-film struct. 2-104186
 Cu-Pb, microstruct., mech., elec., and mag. props., depend on synthesis conditions 2-56748
 CuPbM, (M=Ag, Ni, Sn, Sb), solid-liquid two-phase system, equilib. microstruct. and interface tensions (French) 2-61156
 Gd-Pb, charge transfer and isomer shift, ^{155}Gd Mossbauer spectra 2-104777
 Hg-Pb, dilute liq. alloys, thermodynamic and elec. props., density and vol. of mixing 2-61171
 In-Pb, surface comp., ion sputtering effect, AES study 2-82985
 Li-Pb, liq. alloy, chem. short-range order, neutron and X-ray diffr. study 2-97906
 Li-Pb, liquid, thermodynamic calcs. 2-98308
 Li-Pb-Bi, liq. breeds blanket material, candidate studies 2-75001
 LiPb, molten, short range order and conc. fluctuations 2-91757
 Li $_2$ Pb $_{81}$ blanket candidate, ^3H confinement and recovery 2-69886
 Li $_2$ Pb $_{81}$, breeding blanket, in-situ ^3H recovery 2-75010
 Li $_2$ Pb $_{81}$ eutectic, compatibility with 316 L austenitic stainless steel 2-111372
 Mg $_2$ Pb, molten semiconductors, US velocity, temp. depend. 2-76600
 Mg $_2$ Pb, third-order elastic const. and low temp. limit of Gruneisen parameter, Axe shell model 2-76631
 Nb/Pb-In thin film Josephson junctions, tunnelling barrier struct., Auger and XPS study 2-115956
 Pb ternary alloys, supercond. props., influence of US treatment 2-82514
 Pb- ^{237}Np , ion implanted, 5f electron localisation and relax., TDPAC study 2-56991

lead alloys continued

- Pb-Ag (0.038 at.%) kinetics of Ag precip. 2-111187
 Pb-Ag-Sn-Au solder, solidus and liquidus temp., Au addition effects, DTA study 2-93499
 Pb-Au, yield stress and resist., effect of composition and thermal treatment 2-83165
 e-Pb-Bi film, alloy evaporation prep. and comp. control 2-105077
 e-Pb-Bi film, alloy evaporation prep., film comp. control 2-111077
 Pb-Bi film, Josephson junction counterelectrode, strain distrib., X-ray study 2-82179
 Pb-Bi(In) films, strain relax. meas. on Si substrates 2-82189
 Pb-Bi(Sb) melts, activity coeff. of O, impurities effect 2-67299
 Pb-Ca-Sn, phase diagram, Pb rich corner 2-105123
 Pb-Cd-Zn ternary system, microstructures of eutectic and near-eutectic specimens 2-111162
 Pb-In, liq., dil., activity coeff. of O, impurities effect 2-99700
 Pb-In films, thermal cycling between room and liq. He temps., microstruct. changes 2-111214
 Pb-In supercond. alloys, pinning effect by dislocations (*Japanese*) 2-71467
 Pb-In-Au:O film for Josephson tunnel junction base electrode 2-98499
 Pb-In-Pb-In-Pb double tunnel junction, inhomogeneous gap states 2-82539
 Pb-Mn alloy, supercond., with localised excited states in energy gap, strong coupling theory 2-104543
 Pb-Pd alloy polycrystalline films, grain size reduction by coevaporation 2-71815
 Pb-Sb, discontinuous precip. obs., role of bulk diffusion (*Russian*) 2-88083
 Pb-Si-Ga-As, phase equilibria, calc. of phase diagrams 2-66170
 Pb-Sn, capillary infiltration into high-porosity Ni strips 2-115506
 Pb-Sn, corrosion in acid soln. 2-67662
 Pb-Sn, discontinuous precip. obs., role of bulk diffusion (*Russian*) 2-88083
 Pb-Sn, grain boundary diffusion 2-104074
 Pb-Sn, liq., dil., activity coeff. of O, impurities effect 2-99700
 Pb-Sn, phase diagram calcs., thermodynamic anal. 2-72668
 Pb-Sn, supersaturated solid soln., discontinuous precip. obs. during ageing (*Russian*) 2-88082
 Pb-Sn alloys, effect of precipitation on positron annihilation 2-67144
 Pb-Sn submicron eutectic thin-film struct. 2-104186
 Pb-Te, liq., dil., activity coeff. of O, impurities effect 2-99700
 PbInAu film, RF oxidation, oxide composition 2-76858
 PbMn alloys, M=Ag, Cu, Ni, Zn, liq., role of adsorption on wetting of Fe solid (*French*) 2-71771
 Pn-In-Au, RF oxidation, XPS and ellipsometric study 2-57530
 Pt,Pb, polycrystalline, O₂ adsorp. at high temps., SIMS study 2-104170
 Sn-Pb, electro-plated coatings, grain size effect on whisker growth 2-115635
 Sn-Pb, high speed electrodeposition from HBF₄ soln. 2-93453
 Sn-Pb, material ejection from shocked surfaces 2-71569
 Sn-Pb, solid cylinders, surface contours in axi-symm. upsetting 2-67431
 Sn-Pb, surface comp., ion sputtering effect, AES study 2-82985
 Sn-Pb (15 wt.%), acceleration forces influence on dendritic growth and grain struct. 2-67316
 Sn-Pb (38 wt.%) eutectic alloy, fracture in superplastic flow Region III 2-105300
 Sn-Pb alloy, surface comp. 2-78157
 Sn-Pb alloys, equilb. surface composition, Auger spectroscopy 2-82104
 Sn-Pb alloys, superplastic, superelasticity 2-83147
 Sn-Pb eutectic, superplastic behaviour in as-worked state 2-67442
 Sn,Pb_{1-x} (x=0.998, 0.03), equilibrium surface composition 2-115516
 Zn solid/Zn-In(Bi)(Sn)(Pb) liquid, equilb. struct. transitions of solid-liq. interface 2-93487

lead bonding

- fibre-optic transmitter/receiver modules, mounting and bonding of optical components 2-79234
 frame bond failure mode in film integrated circuits, discriminants anal. of AE data 2-99621
 semiconductor wafer wire bonding process, characterisation by X-ray diffr. topography 2-78031

lead compounds

see also lead alloys

- alkali lead silicate glass, water content influence on viscosity, T_g, thermal expansion and hardness 2-93632
 BPNN ceramics, transparent, photoacoustic spectroscopy exam. in 300 to 700 nm range 2-62442
 ceramic glaze, CuO-doped, Pb²⁺ release, effects of alkaline substitution and addition of trivalent ions 2-77955
 chalcogenides, low temp. sp. heat anal. using Debye temp. 2-71661
 chalcogenides, mechanochemical synthesis, explosions (*German*) 2-62053
 dicalcium lead propionate, two-sublattice model, piezoelec. and elastic props. 2-87675
 dicalcium lead propionate, ferroelectric transitions, ESR study 2-66999
 ferroelec., electro-optic and strain-optic effects 2-93159
 lead phthalocyanides, AC conduction, and DC conduction 2-66527
 LPE layer, Hall and resistivity meas., impurity doping influence 2-92796
 oxides, phase comp. determ., semiquantitative X-ray method 2-93708
 PbS, superconductivity, cond. under high press. 2-66702
 perovskite ferroelectrics, γ-ray effects on dielectric and electro-optical props. (*Russian*) 2-61809
 phthalocyanine, triclinic form, cryst. struct. 2-71428
 phthalocyanine film solar cells, spectral sensitivity and photocurrent, barrier height 2-88453
 PLZT, glass-like behaviour in specific heat, Debye temp. 2-71664
 PLZT, piezoelectric ceramic, mech. strength 2-77907
 PLZT ceramic, domain switching, space charge field effects 2-99074
 PLZT ceramics, transparent, photoacoustic spectroscopy exam. in 300 to 700 nm range 2-62442
 Y_{1-x}La_xPb_{1-x}Fe_xGa_{1-x}O₁₂, epitaxial layers, interface anal. using SIMS 2-82171
 AgI-PbI₂ mixture, elec. and phase behaviour 2-76737
 Al₂O₃ Fibre FP reinforced pure Pb composite electrodes for Pb-acid battery 2-111544
 B₂O₃-Fe₂O₃-PbO-GeO₂(CaO)(As₂O₃) glass, Fe valence states, comp. dependence, Mossbauer and mag. study 2-104317
 B₂O₃-Na₂O-PbO glasses, press. induced struct. changes, ESR study 2-110637
 BaO-PbO-P₂O₅-Nd₂O₃, glass, separation of luminescence-quenching processes 2-104964

lead compounds continued

- BaPb_{1-x}Bi_xO₃, electronic struct. study 2-110432
 BaPb_{1-x}Bi_xO₃, fabrication and supercond. props., boundary layer Josephson junctions appl. 2-82530
 BaPb_{1-x}Bi_xO₃, supercond. ceramics, thermodynamic props. 2-92820
 BaPb_{1-x}Bi_xO₃, supercond. props., effect of O²⁻ conc. 2-115939
 (Ba_{0.75}Pb_{0.16}Na_{0.10}K_{0.04})(Mn,Fe,Al)₈(OH)₁₆, cryst. struct., symm. and cation displacements 2-65928
 Ba(Sr)(Ca)(Zn_{1/3}Nb_{2/3})O₃-PbTiO₃-PbZrO₃: elec. and optical props. 2-82795
 Ba(Sr)(M_{1/3}Nb_{2/3})O₃-PbZrO₃-PbTiO₃ (M=Pb, Ca, Sr) elec. and optical props. 2-82794
 Ba₂(Sr)_{1-x}Nb₂(3-x)₂O₁₂-PbTiO₃-PbTiO₃ elec. and optical props. 2-82796
 Bi₂Ru₂O₇-Pb₂Ru₂O₇ thick film resistors, particle size effect on cond. props. 2-104367
 Bi₂Te₃-Sb₂Te₃-GeTe-PbTe system alloys, thermo-EMF, elec. and thermal cond., thermoelec. efficiency 2-56626
 Ca ferrite: PbF₂, mag. props., substitution effects (*Japanese*) 2-62240
 Cd-Pb-Se-Te system, liquidus surface 2-105132
 Cd,Pb_{1-x}S_x film, growth kinetics, chem. deposition from aq. soln. 2-110190
 CdTe, epitaxial growth on PbTe, by close-spaced technique 2-88001
 xCr₂O₃(1-x)₃B₂O₃-PbO glasses, EPR and mag. susceptibility studies 2-98946
 CsPbCl₃, sp. ht. near struct. phase transitions 2-81976
 (CuO)₂(2B₂O₃.PbO)_{1-x} glasses, EPR study of mag. behaviour 2-110631
 dicalcium lead acrylate, ferroelastic phase transition, lattice const. and birefringence 2-92187
 Gd_{3-x}Pb_xFe_{3-x}Ge_{3-x}O₁₂ epitaxial garnet film, Faraday ellipticity 2-87745
 Ge_{1-x}Pb_xTe solid soln., physicochem. investig. 2-104008
 KCl:PbCl₂, X-ray irradi. V_F centres, optical production, thermoluminescence, ESR and light absorption study 2-57194
 K₂GaPbW₁₀O₃₉.16H₂O, cryst. struct. X-ray diffr. and Fourier synthesis study (*French*) 2-81722
 K₂MoO₄-Pb₂MoO₄, fusibility diagrams 2-111152
 KPrCr₂F₉, structural and mag. props., X-ray diffr. and EPR study 2-60949
 K₂PbCu(NO₂)₆, Jahn-Teller effect, uniaxial stress effects, ESR study 2-87580
 La₂O₃-BaO-PbO-B₂O₃ system glass, very pure, absorpt. curve and colour 2-93227
 La₂O₃-PbO-B₂O₃ fluxed-melt system, solubility and relative supersaturation 2-93400
 Na₂MoO₄-Pb₂MoO₄, fusibility diagrams 2-111152
 Na₂O-PbO-SiO₂:Fe³⁺ glass, spectroscopic behaviour of Fe³⁺ 2-77554
 (Nb,Pb)(Zr,Ti,Zn)O₃ piezoceramic, influence of static compression on props. 2-72426
 Nb₂O₅-PbO system, pyrochlore phases, cryst. struct. and solid solubility, X-ray diffr. study (*French*) 2-86642
 PLZT 7/65/35, ceramic, domain switching, one-dimens. polar responses 2-67010
 PLZT ceramic, holographic grating form by electro-optic effect 2-108826
 PLZT ceramic, reduced, dark cond. and optical absorpt. 2-104374
 PLZT ceramic, transparent ferroelectric, dielec., optical and semicond. props., reduction effect (*Russian*) 2-99668
 PLZT ceramic electrochromism, material, image storage tube appls. (*Czech*) 2-82826
 PLZT ceramics, photoferroelectric props., ion implantation effects, review 2-110393
 PLZT, chemically prepared powders, grain size of mixed oxides 2-72660
 PLZT electrooptic ceramic one-dimens. controlled transparency utilizing transverse effect, crosstalk 2-55323
 PLZT ferroelec. ceramic, laser beam amplification by dynamic holography 2-108835
 PLZT page composer production for holographic memory (*Hungarian*) 2-55091
 PLZT slim loop and linear ceramics, devices based on longitudinal electrooptic effects 2-55302
 PLZT, solid solutions, regions of homogeneity 2-110003
 PLZT, transparent ferroelec. ceramic, surface effects for information storage (*Russian*) 2-104846
 PLZT-Pb(Zn_{1/3}Nb_{2/3})O₃ piezoelec. ceramics, electromech. props. 2-87696
 P_{0.93}Sn_{0.07}Se long-wavelength laser diode, emission spectra, temp. and mag. field effects 2-81012
 (Pb, Ca) ((Co_{1/2}W_{1/2}), Ti)O₃ piezoelectric ceramics and their applications 2-87697
 (Pb,Nd)(Ti,Mn,In)O₃ piezoelectric ceramics, appl. to high freq. SAW filters 2-81178
 (Pb, Nd)(Ti, Mn, In)O₃ piezoelectric ceramic SAW reflector, poled/unpoled domain array 2-91196
 (Pb,Sn,Ge)Te, dielectric props., defects influence 2-93101
 Pb(II) complex, 5-benzylthio-1,2,4-triazole, IR obs. 2-113991
 Pb chalcogenides, rot. energy, isotopic field shift 2-85748
 Pb-acid batteries for electric vehicles, power and energy characts. and test results 2-78204
 Pb-Sn chalcogenide photodiodes, quantum efficiency and R_{0A} product, struct. effect 2-107403
 Pb-Sn-Se, LPE, comp. depend., 770 to 1020K 2-99356
 Pb-Sn-Se, P_{0.96}-x-y diagram calc., 973-1353K 2-72677
 Pb-Sn-Te diode laser, recombination mechanisms and lasing threshold 2-90896
 Pb-Sn-Te system, solidus determ. of phase diagram 2-93495
 Pb₂Al₂NbO₆, prep., polymorphic transition from pyrochlore to perovskite struct. 2-77787
 PbBi₂Nb₂O₈, ferroelasticity, Curie temp., birefringence and spontaneous strain 2-81876
 PbBi₂Nb₂O₈, layer struct., grain oriented ferroelec. ceramics, liq. phase sintering 2-77788
 Pb₃Bi₃(PO₄)₂, Czochoalski growth, cryst. struct., X-ray diffr. study 2-91922
 PbBr₂, elec. cond. meas. 2-72037
 PbBr₂, large needles and single crystals, growth in silica gel 2-93395
 Pb₂Cd_{1-x}I_x, crystal, interlayer interactions, Raman phonon spectra (*Russian*) 2-104893
 PbCl₂, large needles and single crystals, growth in silica gel 2-93395
 PbCl₂, molten salt, elemental transport number, frit material effect 2-105513
 PbCl₂, XPS, satellites on core and valence bands 2-67194
 PbDAsO₄, ferroelec., birefringence and transition temp. 2-72447

lead compounds continued

- PbDPO₄, quasi-one-dimens. ferroelec., spontaneous polarisation and dielec. const., Ising model theory 2-74359
 β -PbF₂, anharmonic thermal vibrs. and at. pots., temp. depend. 2-115380
 PbF₂, Debye screening length saturation, free energy 2-86929
 PbF₂, ionic disorder computer simulation 2-92259
 PbF₂, neutron study of anion disorder, fast-ion cond. 2-92258
 PbF₂, XPS, satellites on core and valence bands 2-67194
 PbF₂Eu³⁺ superionic conductor, optical absorption line broadening due to F⁻ ion motion 2-115456
 PbF₂Mn, EPR rigid lattice dipolar broadening 2-104689
 Pb₂GaF₂ZnF₂(MnF₂)₂Er³⁺ fluoride glasses, optical transition probabilities, Judd-Ofelt method 2-61960
 PbFe₂Ga₂O₁₀ single crystal, prep. and charact. 2-72617
 PbGa₂Mo₂S₈, flux pinning force, scaling laws (*Russian*) 2-92845
 Pb₂Gd₂O₁₁, refractive index behaviour in high-temp. phase 2-116145
 Pb₂Ge₂Al₂O₂₀, cryst. struct. and luminesc., neutron diffr. obs. 2-60935
 Pb₂Ge₂(O,F)₁₁, ferroelectric crystals, growth, Curie point, dielectric const. 2-72616
 α -PbGe₂O₉, ferroelectric, dielec. and pyroelec. props. 2-61845
 PbGe₂O₉, polymorphism, cryst. struct., and dielec. props. 2-109754
 Pb₂Ge₂O₁₁, ferroelec., acoustic emission from domain wall motion 2-99077
 Pb₂Ge₂O₁₁, ferroelectric, electret props. 2-116111
 Pb₂Ge₂O₁₁, soft mode, neutron and Raman scatt. study 2-93125
 Pb₂Ge₂O₁₁Gd³⁺, elec. field effect and model of triclinic paramag. centres 2-66912
 Pb₂Ge₂O₁₁Gd³⁺, ferroelec., EPR line intensity, ferroelec. hysteresis 2-116059
 Pb₂Ge₂O₁₁Gd³⁺, hyperfine interaction, discrete saturation, ESR study 2-104697
 Pb₂Ge₂O₁₁Mn²⁺, ESR spectra, hyperfine interactions 2-87585
 Pb₂Ge₂O₁₁Nd³⁺, cryst. growth and spectroscopic props. 2-99178
 Pb_{1-x}Ge_xSe, optical and elec. props. (*Russian*) 2-57048
 Pb_{1-x}Ge_xTe, band edge struct. transform. due to ferroelectric transition 2-92456
 Pb_{1-x}Ge_xTe, band struct., cyclotron reson. study 2-56439
 Pb_{1-x}Ge_xTe, C_{3v}-phase, band struct. 2-92467
 Pb_{1-x}Ge_xTe, coupled phase transitions, sp. ht. meas. 2-98277
 Pb_{1-x}Ge_xTe narrow band gap ferroelec. semicond., photoinduced phase transition shift 2-110789
 Pb_{1-x}Ge_xTe p-n junction diode, capacitance, press. induced phase transition 2-72055
 Pb_{1-x}Ge_xTe, phonon and elec. resist. anomalies at displacive phase transition 2-98653
 Pb_{1-x}Ge_xTe thin film structures, growth by MBE 2-92393
 p-Pb_{1-x}Ge_xTe, velocity of sound quantum oscils. 2-92114
 PbHAsO₄, ferroelec., birefringence and transition temp. 2-72447
 PbHAsO₄, ferroelectric, neutron diffr. structural study 2-82798
 PbHPO₄, ferroelec., birefringence and transition temp. 2-72447
 Pb(Hf_{1-x}Zr_x)₂Ti₂O₉, ferroelectric-antiferroelectric transition (*French*) 2-99068
 Pb₂Hg_{1-x}Te, single crystal growth by Czochralski method 2-99322
 PbI₂ (6H), high press. Raman study 2-104864
 PbI₂, cloud seeding laboratory expts. 2-58105
 PbI₂, cryst. and thin films, electronic absorption spectra meas. 2-67071
 PbI₂, dynamical props. of excitons in layer crystals 2-98551
 PbI₂ film, prep. by iodination of PbS film, X-ray characterisation 2-67215
 PbI₂ film surface layer, band gap illumination effects 2-92368
 PbI₂, ice nucleating behaviour in presence of soluble salts 2-71619
 PbI₂, intercalation compounds with org. donor mols., charge transfer and luminesc. (*Russian*) 2-61975
 PbI₂, layered, intercalation with organic cpds., NQR investig. 2-110717
 PbI₂, maximum degree of order polytypes, theory for inequivalent OD layers 2-97974
 PbI₂, polariton radiation and relaxation (*Russian*) 2-92487
 6H-PbI₂, Raman spectrum, phonon dispersion curve 2-87765
 PbI₂, secondary radiation and reflection spectra, polaritons and excitons (*Russian*) 2-92486
 PbI₂, surface, photolysis and conductivity, desorption, quadrupole mass spectra study 2-66617
 PbI₂, XPS, satellites on core and valence bands 2-67194
 PbI₂Ga(In), exciton spectra, refl. and photoluminesc. spectra 2-67118
 PbI₂Ni²⁺, phonon side bands in absorpt. spectra 2-99161
 Pb(II) diethyldithiocarbamate chelate, struct., XPS obs. 2-75355
 Pb(II)tetraphenylporphyrin, cation radical, optical and ESR spectra 2-80682
 Pb₂InNbO₆, elec. props., band gap energy 2-110395
 Pb₂KNbO₅, ferroelectric-ferroelastic domain struct., electron diffr. and microscopy study 2-67011
 Pb₂KNbO₅, films for SAW devices 2-82111
 Pb₂KNbO₅, phase determ. and growth for good quality crystals 2-97957
 Pb_{1-x}(La_{0.5}Li_{0.5})(Zr_{0.7}Ti_{0.3})O₃ transparent ceramic, SHG excited by Q-switched Nd³⁺ glass laser 2-81024
 Pb_{1-x}M_xGe₂O₉ (M=Sr, Ba), polymorphism, cryst. struct., and dielec. props. 2-109754
 PbMO₃ (M=Ti, Zr, Hf), elec. props., band gap energy 2-110395
 Pb(Mg_{1/3}Zn_{1/3})Nb_{2/3}O₃, ferroelec., dielec. const. crit. exponent, diffused-phase-transition 2-110781
 PbMg_{1/3}Nb_{2/3}O₆, ferroelec., electro-optic and strain-optic effects 2-93159
 PbMg_{1/3}Nb_{2/3}O₃, cubic ferroelec., with diffuse phase transitions, photorefractive mech. 2-110797
 Pb(Mg_{1/3}Nb_{2/3})O₃ electrostrictor for bistable optical device used in optical stabiliser 2-102846
 Pb(Mg_{1/3}Nb_{2/3})O₃, ferroelectrics, glasslike props. at low temps. 2-110778
 PbMg_{1/3}Nb_{2/3}O₃, pyrocurrents, dielectric polarisation (*Russian*) 2-61834
 PbMg_{1/3}Nb_{2/3}O₃, reflectivity, dielectric const., electrooptic effect, vacuum UV reflection spectra obs. 2-61924
 Pb(Mg_{1/3}Nb_{2/3})O₃ type materials, electrostrictive effect 2-87683
 Pb(Mg_{1/3}Nb_{2/3})O₃-Pb(Mg_{1/3}W_{1/3})O₃(PbTiO₃) ceramics, electrostriction rel. to phase transition diffuseness 2-87694
 PbMgNb₂O₉ crystals, electromech. props. 2-99047
 Pb_{1-x}Mn_xS solid solns., energy band gap temp. and composition depend., photovoltaic effect meas. 2-110450
 Pb₂MnTaO₆, prep., polymorphic transition from pyrochlore to perovskite struct. 2-77787
 Pb_{1-x}Mn_xTe, influence of In and Ga on kinetic props. 2-87261

lead compounds continued

- Pb_{1-x}Mn_xTe, quantum transport and mag. energy levels, Shubnikov-de Haas oscils. 2-98676
 PbMoO₄ crystal, photocond. and luminesc. 2-66591
 PbMoO₄, electrogyration studies 2-67026
 PbMoO₄, formation of Pb²⁺ influence of foreign ions 2-115219
 Pb(MoO₄)₂(WO₄)_{1-x} mixed cryst., lattice dynamics, Raman scatt. study 2-67050
 PbMo_{0.25}S₈, thin film, sputtered supercond., crit. currents and scaling laws 2-61677
 PbMo_{0.25}S₈, charge transfer and 4d orbital splitting of Mo atom 2-76918
 PbMo_{0.25}S₈, Chevrel phase thin films, crit. currents meas. 2-115960
 PbMo_{0.25}S₈ coatings, second crit. field and crit. current density (*Russian*) 2-98826
 PbMo_{0.25}S₈, electronic struct. and charge distrib., CSF MS Xalpha calcs., relativistic effect 2-96451
 PbMo_{0.25}S₈, high press. superconducting phase, cryst. struct., critical field (*Russian*) 2-56762
 PbMo_{0.25}S₈, supercond. and electronic props. (*Russian*) 2-98638
 PbMo_{0.25}S₈, superconducting props. 2-66697
 PbMo_{0.25}S₈, type II supercond., scaling law parameters, upper critical field, critical current meas. 2-56803
 Pb_{1-x}Mo_xS₈, superconducting critical parameters (*Russian*) 2-61646
 PbMo_{0.25}S₈, superconductive props. 2-66689
 PbMo_{0.25}S₈(Se₈), supercond crit. props., depend on hexagonal cell vol. 2-61643
 Pb(NO₃)₂, ionic-mol. cryst., US absorpt. 2-56100
 Pb(NO₃)₂, soln. grown single crystals, DC ionic cond. meas. 2-71711
 Pb_{1-x}Nb_xO_{6.5}, pyrochlore type, cryst. struct. determ. (*German*) 2-65974
 Pb_{0.99}Nb_{0.01}(Zr_{0.68}Sn_{0.25}Ti_{0.07})_{0.98}O₃, ferroelectric, direct heat to electrical energy conversion, pyroelectric meas. 2-67878
 PbO film/B₂O₃-Na₂O glass interaction, UV spectra and cation conc. profile meas. 2-86945
 PbO, fusibility diagram and p-T diagram 2-111149
 PbO, orthorhombic, photopolimerisation 2-93102
 PbO, orthorhombic, spectral sensitisation of AgCl, peak photographic response 2-88368
 PbO, polymorphic, thermal expansion, phase transitions, dielec. props., X-ray study 2-76716
 PbO, rhombic, energy band struct. 2-98539
 PbO, tetragonal, exciton thresholds, wavelength-modulation of photocond. spectra 2-104434
 PbO, transition moment variation with internuclear separation 2-80733
 PbO:TiO₂, mixed conductivity, defect model, temp. and press. depend. 2-115834
 PbO-B₂O₃ glasses, comp. depend. of fracture toughness, Vickers hardness and fracture surface energy 2-72793
 PbO-B₂O₃ glasses, microstruct. charact. by phys. prop. meas. 2-91800
 PbO-B₂O₃ phase separated glass, matrix composite with dispersed crystalline or glass particles, indentation hardness (*Japanese*) 2-67509
 PbO-B₂O₃ phase-separated glasses, fracture toughness to Young's modulus relationship 2-93609
 PbO-Bi₂O₃, prep. and electrophysical props. of compounds 2-72619
 PbO-GeO₂(SiO₂) binary glass systems, fracture toughness and crack tip flow mechanism 2-105282
 PbO-SiO₂, effect of P₂O₅ on crystallisation 2-109683
 PbO-SiO₂, glass, structural relaxation calc. when no thermorheological simplicity 2-103663
 PbO-SiO₂, reduced surface layers, slow-electron spectroscopic study 2-105017
 PbO-SiO₂ (40 wt.%) glass, Narayanaswamy struct. relaxation model, expt. check 2-103659
 PbO-SiO₂ glass, crystn. kinetics, 500° to 725°C 2-86574
 PbO-SiO₂ glass, electron and gamma irradiated, charge trapping and release 2-57013
 PbO-SiO₂ glass, IR polishing process 2-67584
 PbO-SiO₂ glass, reduced surface layers, struct., resist. and electron emission props. 2-105016
 PbO-SiO₂ glasses, leaching mechanism in acid soln. 2-93646
 PbO-SiO₂ glasses, nonlinear colouring and destruction under multiphoton absorpt. conditions 2-108933
 PbO-SiO₂ system, glass and cryst. phase struct., XPS study 2-87943
 PbO-Ta₂O₅ system, pyrochlore related structs., X-ray diffr. study 2-103712
 PbO-V₂O₅, equimolar system, new phases 2-93496
 PbO-ZnO-B₂O₃, critical load for median crack initiation in Vickers indentation 2-111279
 PbO-ZnO-B₂O₃ glass, relation of K_{IC} to median crack indentation load in Vickers indentation (*Japanese*) 2-67508
 PbO₂, defect struct., X-ray diffr. and TEM 2-76446
 PbO₂ positive battery plate, cryst. struct., neutron diffr. study 2-91926
 PbO₂-Ti anodes breakdown 2-78113
 Pb₂O₄, orthorhombic, lattice parameters as function of temp., struct. evolution (*French*) 2-60929
 Pb₂O₄, struct. evolution, dilatation, vibr., rigidity (*French*) 2-91911
 Pb₂O₄, vibr. spectrosc., force fields and bond rigidity (*French*) 2-67055
 PbO-(ZrO₂) powder, shock-induced chem. and struct. modifications 2-76583
 (PbO)_mSiO₂ glass, M=1, 2, 4, struct. and devitrification, ²⁹Si NMR study 2-110655
 Pb₂(PO₃)₃, ferroelastic domain walls, interaction with struct. transition, TEM obs. 2-76655
 Pb₂(PO₃)₃, ferroelastic domain wall interactions, structural transition 2-86681
 Pb₂(PO₃)₃, ferroelastic phase transition, domain walls (*French*) 2-86866
 Pb₂(PO₃)₂Pb₂(AsO₄)₂, stepwise ferroelastic transition, Raman X-ray, neutron and stress birefringence study 2-115402
 PbS, AO²⁺-X²⁺ transition, rot. and vibr. struct. studied by sub-Doppler laser spectroscopy, isotope shifts 2-85630
 PbS, crystallisation from KSCN melts, solubilities 2-111043
 PbS, elastic consts., 3rd and 4th order 2-76563
 PbS film, spectrally selective, produced by ion beam sputtering 2-71824
 PbS, growth of single crystals from natural galena 2-116356
 PbS, high field resistivity meas., phonon scatt. 2-104387
 PbS, lattice period, influence of composition and γ -irradiation 2-76382
 PbS, natural galena, electron beam evaporated film, optical and electronic props. meas. 2-61621
 PbS polycrystalline film, cond. and permittivity meas. at microwave freqs. (*Russian*) 2-95403
 PbS/PbSe bicryst., planar dechannelling at misfit dislocations 2-109870

lead compounds continued

- PbS-Bi₂S₃, chem. twinning in PbS region, transmission electron microscopy obs. 2-76457
- PbS-Bi₂S₃ system, synthetic PbS-rich homologues, microscopic study 2-115253
- PbS-CdS composite films, solution-grown, spectral selectivity meas., solar absorber appl. 2-105596
- PbS-GeS-GeS₂ chalcogenide glass, struct. and photoelectronic props., DTA and SEM study 2-92681
- PbS-NiSb eutectic, microstructure and mech. props. meas., thermocouples appl. 2-86890
- PbSO₃, cerussite, morphological lattice and reciprocal crystal 2-115169
- PbS_{1-x}Se_x laser threshold and recombination 2-90897
- PbS_{1-x}Se_x thin film deposition, soln. growth technique 2-93461
- PbS_{1-x}NbO_{3-x}, elec. props., band gap energy 2-110395
- PbS_{1-x}Se_x cryst. struct. refinement by powder neutron diff. 2-81732
- PbSe, elastic consts., 3rd and 4th order 2-76563
- PbSe room temperature IR position sensor 2-101459
- PbSe-TlSbSe₂, phase diagram and physicochemical and electrophysical props. determ. 2-88067
- (PbSe)_{1-x}(SnTe)_x, influence of In on props. 2-110238
- PbSe_{1-x}Te_x film, IR absorption due to valence state-localised state transitions 2-77608
- n-PbSe_{1-x}Te_x, Shubnikov-de Haas effect meas., 1.2 to 4.2K 2-76902
- PbSe_{1-x}Te_x, localised deep defect states 2-92530
- PbSiO₂, hydrophobic films, CVD prep. and microelectronic appls. 2-62070
- Pb_{1-x}Si_xO_{1.7-x}, X-ray cryst. struct. determ. (German) 2-55911
- Pb_{1-x}Sn_xGe_{1-x}Si_x, heterojunction, open-circuit EMF meas. 2-87378
- n-Pb_{0.85}Sn_{0.15}Se films thermoelectric props. for use in thermal radiation converters 2-99817
- Pb_{1-x}Sn_xSe epitaxial layers, equilib. compositions and cond. type 2-66398
- Pb_{1-x}Sn_xSe, Fermi surface, Shubnikov-de Haas oscillations ang. depend. study 2-82211
- Pb_{1-x}Sn_xSe, interband magnetoreflectivity meas. 2-110821
- Pb_{1-x}Sn_xSe, microhardness meas., optimal conditions 2-116634
- n-Pb_{1-x}Sn_xSe, native defect energy levels, Hall study, 4.2 to 300K 2-92529
- Pb_{1-x}Sn_xSe, solid soln., carrier g-factor longitudinal and transverse components, band gap depend. 2-76903
- Pb_{1-x}Sn_xSe, thin layers, grown by 'hot wall' method 2-72627
- PbSnSeTe-PbSeTe DH lasers, lattice-matched, LPE grown 2-55194
- PbSnSeTe-PbSeTe lattice-matched DH lasers, total refl. mode oscill. 2-60080
- PbSnTe diode laser, lifetime mechanisms, tunnelling currents and laser threshold 2-80956
- p-PbSnTe, far carrier freq. depend. relax. time, plasma refl. studies 2-110364
- PbSnTe laser, gain saturation, theory and expt. 2-85965
- PbSnTe, lifetime calcs. for Auger recomb. rel. to laser and IR detector performance 2-77081
- Pb_{0.7}Sn_{0.3}Te film, struct. and elec. props., Ar⁺ bombard. and annealing effect 2-56731
- Pb_{0.76}Sn_{0.24}Te: Cd, photoconductivity kinetics 2-104427
- Pb_{0.78}Sn_{0.22}Te: In, photoferroelec. behaviour and Hall coeff., expt. study 2-87708
- Pb_{0.8}Sn_{0.2}Te, amorphous-cryst. films, optical and elec. props. 2-104373
- Pb_{0.8}Sn_{0.2}Te epitaxial films produced by vacuum evaporation, high mobility produced by annealing 2-82486
- Pb_{0.81}Sn_{0.19}Te DH laser, LPE grown, operation at 10.6 μm, 85K 2-80955
- Pb_{0.81}Sn_{0.18}Te, intrinsic defects, mag. susceptibility study 2-115217
- Pb_{0.81}Sn_{0.17}Te solid soln. epitaxial films, absorpt. edge obs., 100 to 300K, band struct. model (Russian) 2-61913
- Pb_{1-x}Sn_xTe (x=0.59 to 1), valence bonds energy separation, Hall coeff. meas. 2-72010
- Pb_{1-x}Sn_xTe, band struct. dispersion low and parameters (Russian) 2-61358
- Pb_{1-x}Sn_xTe epitaxial films, additional long-wavelength absorpt. 2-77610
- Pb_{1-x}Sn_xTe epitaxial film, surface recombination, photoconductivity study 2-104393
- n-Pb_{1-x}Sn_xTe, Fermi surface and cond. band, Shubnikov-de Haas study 2-115644
- Pb_{1-x}Sn_xTe films, ion implantation induced defect levels, Hall meas. 2-92528
- Pb_{1-x}Sn_xTe hetero-layers for IR diode lasers, hot-wall epitaxial growth 2-60103
- Pb_{1-x}Sn_xTe, horizontal vapour transport in closed tube (Chinese) 2-111078
- Pb_{1-x}Sn_xTe LPE inhomogeneous layer, IR plasma reflection spectrum, vapour transport process 2-93314
- Pb_{1-x}Sn_xTe LPE layer, Hall and resistivity meas., impurity doping influence 2-92796
- Pb_{1-x}Sn_xTe laser threshold and recombination 2-90897
- Pb_{1-x}Sn_xTe MBE film struct. 2-104184
- Pb_{1-x}Sn_xTe, phonon and elec. resist. anomalies at displacive phase transition 2-98653
- Pb_{1-x}Sn_xTe solid soln., carrier g-factor longitudinal and transverse components, band gap depend. 2-76903
- Pb_{1-x}Sn_xTe, struct. instabilities, composition and carrier depend. 2-98652
- p-Pb_{1-x}Sn_xTe, valence band struct., elec. props. (Russian) 2-87144
- n-Pb_{1-x}Sn_xTe: Cd, elec. cond., photocond., and elec. cond. transitions 2-115759
- Pb_{1-x}Sn_xTe: Cd, photoluminescence study 2-104958
- Pb_{1-x}Sn_xTe: Cd(Bi), narrow band gap semicond., galvanomag. and optical props., Cd solubility and diffusion (Russian) 2-92666
- Pb_{1-x}Sn_xTe: Cd(In), photoluminesc. study 2-93279
- Pb_{1-x}Sn_xTe: In, band struct. at high In conc., elec. cond. press. depend. study 2-82230
- Pb_{1-x}Sn_xTe: In, dielec. phase, switching effects and I-V characs. under IR illumination 2-92688
- Pb_{1-x}Sn_xTe: In, semicond.-metal transitions, IR illumination induced dynamics 2-72036
- Pb_{1-x}Sn_xTe: In epitaxial film, photolum. 2-77590
- Pb_{1-x}Sn_xTe: In epitaxial film, elec. and struct. props. 2-110506
- Pb_{1-x}Sn_xTe: In films, impurity electron-state, elec. cond. study 2-115705
- Pb_{1-x}Sn_xTe-PbTe(BaF₂), heterojunction, defect form. 2-92374
- (Pb_{1-x}Sn_x)_{1-Δ}Te_Δ/PbTe, diffusion phenomena, during heteroepitaxy 2-92378

lead compounds continued

- Pb_{1-x}Sn_xTe: In, Fermi level stabilization by defects at low temp., mechanism 2-66487
- Pb(Sn_{1-x}Zr_x)_{1-Δ}Te_ΔO₃, ferroelectric-antiferroelectric transition (French) 2-99068
- (Pb_{0.8}Sr_{0.2})Bi₂Nb₂O₆, piezoelectric. ceramic, mech. strength 2-77907
- PbTe and PbTe-SnTe solid solns., Ga doping effect on electrophys. props., doping mechanism 2-56578
- PbTe, bulk crystal, synthesis by iodide method, elec. and struct. characterisation 2-67210
- PbTe, CDW, mag. field depend. 2-61376
- PbTe cryst. growth from soln., travelling heater method, gravitation effects 2-111044
- PbTe, cryst. growth from soln. by travelling heater method, gravitation effects 2-111045
- PbTe crystal growth by travelling heater method 2-93404
- PbTe, elastic consts., 3rd and 4th order 2-76563
- PbTe, electron-hole plasma, high density, time resolved spectrum 2-92678
- PbTe epilayers, LPE growth from supercooled solns., improved morphology 2-110192
- n-PbTe epitaxial (111) layer, weak and strong field magnetoresist. meas., 1.8 to 300K 2-87424
- PbTe epitaxial film, misfit strain 2-92423
- PbTe epitaxial layer, dielec. const. at 4.2K 2-99017
- PbTe epitaxial layer, optical four-wave mixing 2-93315
- n-PbTe epitaxial layers, ionised defect scatt. mobility 2-92671
- PbTe epitaxial layers on BaF₂, misfit and thermal strains, magneto-optical and X-ray study 2-82175
- PbTe film, charge carrier conc. and mobility variations after deposition 2-66680
- PbTe film, thermo-EMF calc. 2-87423
- PbTe films, electron mobility, temp. depend. meas. 2-110505
- PbTe films, RF sputtered, struct. props. obs. by X-ray asym. refls. 2-110197
- PbTe, frozen cond. study (Russian) 2-56739
- PbTe, H⁺(Ag⁺)(Sn⁴⁺) ion-implanted, elec. props. 2-104377
- PbTe, heterogeneous nucleation, statistical thermal anal. 2-65892
- PbTe, intrinsic defects, mag. susceptibility study 2-115217
- PbTe, Knight shift spin-orbit and many-body effects 2-72366
- PbTe layers, photocurrent decay 2-87340
- PbTe MIS structs., field effect studies, DC cond. and Hall effect 2-115895
- PbTe, negative-U centre form. due to group II impurities 2-61399
- PbTe, polycrystalline, sublimation-grown, cryst. perfection 2-93391
- PbTe polycrystalline film, cond. and permittivity meas. at microwave freqs. (Russian) 2-95403
- PbTe single cryst., IR absorpt., selection rules, group theoretical anal. (Russian) 2-61912
- PbTe single crystals grown by vertical Bridgman technique, micro-size defects 2-97958
- PbTe, stimulated radiation polarisation characs. (Russian) 2-61929
- PbTe thin films, flash deposited, relax. processes 2-87113
- PbTe: H epitaxial film, elec. transport props., p-type to n-type conversion 2-66676
- n-PbTe: I, thermal diffusion of impurity atoms 2-66293
- PbTe: In, thermal cond., elec. cond., Hall and Seebeck coeffs. 2-115479
- PbTe: Sn(Ge), donor and acceptor props., elec. and thermal cond. meas. 2-66480
- PbTe: Ti, Ag(Na) epitaxial film, elec. cond. and Hall effect 2-115922
- PbTe: Ti, doping effect on superconductivity (Russian) 2-110525
- PbTe: Ti, impurity states and supercond. 2-104308
- PbTe: Ti, In single cryst. p-n junction, tunnel cond. characs. 2-77174
- p-PbTe: Ti epitaxial films, Hall mobility, doping effects 2-110509
- PbTe: Ti(Na), density of states in valence band, sp. ht. and Hall coeff. meas. 2-82515
- p-PbTe/mica/Ag struct., field effect study, Hall coeff. and mobility 2-110490
- PbTe-LiNbO₃ system, ferroelec. polarisation effect on elec. cond. of semicond. layer 2-110503
- PbTe-NiSb, eutectics, microstructure and mech. props. meas., thermocouples appl. 2-86890
- PbTe-Pb_{1-x}Sn_xTe superlattices, prepared by hot wall epitaxy, optical props. 2-9208
- PbTe-Pb_{1-x}Sn_xTe, superlattice, interband optical absorpt. (Japanese) 2-116179
- PbTe-Si, heterojunction, open-circuit EMF meas. 2-87378
- PbTe-Si, 180° polarisation switching and dielec. props. associated with point defects 2-82803
- PbTiO₃, amorphous ferroelec., time depend. dielec. const. during annealing 2-109676
- PbTiO₃, amorphous state and crystn. process, Raman scatt., SEM, and dielec. meas. 2-81677
- PbTiO₃, ceramics, grain-orientated, prep. by unidirectional solidification of melts 2-62118
- PbTiO₃, ceramics, piezoelectric, elastic and dielectric props. 2-87685
- PbTiO₃, electronic spectra of TiO₆⁸⁻ clusters 2-93222
- PbTiO₃, ferroelec. Raman scatt. from amorphous state, rel. to crystallisation process 2-57091
- PbTiO₃, ferroelec. thin films, prep. by RF sputtering and laser annealing 2-82792
- PbTiO₃, ferroelectric film for pyroelectric IR sensor fabrication on Si wafer 2-79668
- PbTiO₃, phase transition in low temp. range, lattice consts. meas. 2-81947
- PbTiO₃, reflectivity, dielectric const., electrooptic effect., vacuum UV reflection spectra obs. 2-61924
- PbTiO₃, refractive index behaviour in high-temp. phase 2-116145
- PbTiO₃: Mn ceramics, Mn doping effect on dielec. and ferroelec. props. (Chinese) 2-72431
- PbTiO₃: PbZrO₃, solid solutions, phase transitions 2-87704
- PbTiO₃: PbZrO₃: PbNb₂O₇: Zn_{1-x}O₃: PbNb₂O₇: Mn_{1/3}O₃: PbSb_{2/3}Mn_{1/3}O₃, stability of electrophysical props. 2-99059
- PbTiO₃: Si, RF sputtered, ferroelec.-semicond. interface states, DLTS and capacitance study 2-98746
- PbTi(ZrO₃), packing pressure and particle size effect on formation reaction kinetics 2-88040
- PbWO₄, crystal, photocond. and luminesc. 2-66591
- PbWO₄, crystals, flux growth and elec. props. 2-77721
- PbWO₄, scintillators, γ-ray absorpt. data 2-104983

lead compounds continued

- PbWO₄, vapour form., by sublimation mass spectrometric investigation 2-86846
- 0.88Pb(Zn_{1/3}Nb_{2/3})O₃-0.12PbTiO₃, ferroelec., dielec. const. crit. exponent, diffused-phase-transition 2-110781
- Pb(Zn_{1/3}Nb_{2/3})O₃-PbTiO₃, ferroelec. transitions, dielec., elastic and piezoelec. study 2-116124
- Pb(Zr,Ti)₂O₇ piezoelectric ceramic, P/S mode transducer, theory and fabrication 2-53746
- Pb(Zr,Ti)₂O₇ ceramic/Ni-Zn ferrite composite, dynamic magnetoelectric effect 2-116049
- Pb(Zr,Ti)₂O₇ composition piezoelectric ceramic preparation and props. 2-88030
- Pb(Zr,Ti)₂O₇ disc sensors, thermal response improvement 2-69158
- Pb(Zr,Ti)₂O₇, ferroelec. ceramic, domain switching, butterfly loops 2-67001
- Pb(Zr, Ti)₂O₇, ferroelectrics, glasslike props. at low temps. 2-110778
- Pb(Zr,Ti)₂O₇, impurity doping effects 2-86689
- Pb(Zr,Ti)₂O₇, piezoceramic, influence of ZnO on props. 2-72427
- Pb(Zr,Ti)₂O₇, piezoelectric effect 2-87686
- Pb(Zr,Ti)₂O₇, poling method 2-87653
- Pb(Zr,Ti)₂O₇, single cryst., ferroelec., growth conditions and effect on growth features 2-77724
- Pb(Zr,Ti)₂O₇, solid solns., piezoceramic fatigue strength, influence of polarisation on cyclic strength 2-72797
- Pb(Zr,Ti)₂O₇, transverse honeycomb composition transducers, dielectric const., piezoelectric props. 2-66991
- Pb(Zr,Ti)₂O₇-polymer composites, preparation and props. 2-88045
- Pb(Zr,Ti)₂O₇-polymer composite, preparation and transducer applications 2-88046
- Pb(Zr_{1/3}Nb_{2/3})O₃-Pb(Sn_{1/3}Nb_{2/3})O₃-PbTiO₃-PbZrO₃ hot pressed ceramics, piezoelec. props. 2-87695
- PbZrO₃, antiferroelec. domain struct., electron microscopy and diffr. study 2-57031
- PbZrO₃, antiferroelec. phase, space group and O atom coordinates, electron diffr. study 2-109759
- PbZrO₃ ceramic, dielec. props., X-ray irr. effect 2-110745
- PbZrO₃, Urbach edge behaviour at ferroelec. phase transitions 2-104838
- PbZr_{1-x}Ti_xO₃, ferroelec. ceramic, mechanoelec. energy conversion under shock loading 2-72423
- PbZr_{1-x}Ti_xO₃, Ti distrib., ferroelectric transition 2-86654
- PbZr_{1-x}Ti_xO₃-polyvinylidene fluoride composite, piezoelec. and dielec. const. and Young's modulus meas. 2-93119
- Pb(Zr,Ti_{1-x})O₃, ceramics, low freq. dielectric props. (*Chinese*) 2-104788
- PbZr_{1-x}Ti_xO₃, solid soln., ferroelec.-paraelec. transition, tricritical point 2-93126
- Pb(Zr,Ti_{1-x})O₃ system, morphotropic phase boundary 2-62109
- Pb(Zr,Ti_{1-x})O₃+yMnO₂ solid solution, piezoelectric props. 2-87684
- (PdCl₄)²⁻, symmetry forbidden transitions, oscillator strengths 2-85635
- Pt-Pb complexes, heteronul. second-order coupling effects in NMR 2-80666
- Sb₂S₃-PbS glass, prep. and props. 2-71367
- SiO₂-PbO-Bi₂O₃ glass, surface const. meas. 2-87363
- (SnTe)_{1-x}(PbSe)_x system, ¹¹⁹Sn Mossbauer study (*Russian*) 2-104781
- Sr_{0.02}Pb_{0.98}(Li_{0.008}W_{0.012}Ti_{0.46}Zr_{0.52})O₃, impurity distrib., props. 2-86701
- Te-Si-Pb glasses, preheating effect on cryst. kinetics 2-97926
- Th,Pb_{1-x}Mo_xS₈, supercond. props., effect of actinide component 2-66700
- TiBiTe₂-2PbTe cross section, solid soln. form., physicochem. and electrophys. props. 2-57337
- TiPbI₃, Ti₃PbI₅, Ti₃PbBr₅, crystal growth, elec. and optical props. 2-87967
- U,Pb_{1-x}Mo_xS₈, supercond. props., effect of actinide component 2-66700

leak detection

- Daresbury synchrotron radiation source, vacuum instrumentation 2-84639
- Doublet III, leak testing program 2-80201
- FFTF wide range He mass spectrometer leak detector 2-83319
- fusion reactor vacuum vessel leak detection system 2-80335
- ionisation gauge tube leak detectors, selective modulation of radiation 2-67711
- nuclear reactor primary coolant system leakage detection using acoustic emission 2-64594
- standard leaks, methods for calibration 2-74431
- tightness inspection, determ. of time log of test systems 2-57579
- tightness of small parts determ. by radioactive ⁸⁵Kr gas 2-62354
- water leak into atmos. through small hole, AE study 2-57578
- He leak detection in Tokamak vacuum system in D₂ atmos. 2-84640

leakage, electrical *see electrical faults*

leakage, magnetic *see magnetic leakage*

leakage currents

- HV contaminated insulators physical surface processes (*German*) 2-86486
- GaAs:Cr, horizontal Bridgman-grown for ion implantation, elec. characts. 2-115756

learning systems

- see also adaptive systems*
- automatic data classification in mass spectroscopy 2-53799
- natural language man-machine dialogue in TULIPS-2 artificial intelligence system 2-114562
- synaptic long-term memories, neuronal model 2-57799

least squares approximations

- advection equation, stability and convergence of polynomial spectral methods (*French*) 2-75964
- alternative techniques 2-112336
- colorimetric matching of RGB colour recordings, mathematical approach 2-64093
- electron beam lithographic system performance, computerised optimisation using damped least squares method 2-75506
- electronically collimated gamma camera, reconstruction algorithms comparison 2-73320
- generalised nonlinear inverse problems in geophysics solved by least squares criterion 2-106365
- geolectrical sounding, fast automatic solution of inverse resistivity problem 2-111863
- lens automatic design, selection of damping factor 2-55293
- linear filter coefficients accuracy determined by iteration of least squares method, geophysics appl. 2-78567
- macromolecular structure refinement with X-ray and neutron diffr. data from single crystals 2-60840

least squares approximations continued

- membranes, cable reinforced, initial-equilib. soln. methods, formulations 2-91230
- microprocessor-based Mossbauer fitting program 2-84772
- molecular symm. axis orientation, least-squares method 2-115163
- noncircular cross-section Tokamaks, mag. anal. 2-109476
- object reconstruction with missing high freq. components, least-squares estimation 2-55081
- on-line reactor noise anal. using time series anal. 2-64454
- optical design, extrapolated least-squares optimisation 2-75650
- outlying data points, M-estimator robust regression model 2-74196
- phase measurement interferometry, least-squares estimation 2-95462
- plates, polygonal, elastic, thermal stresses due to localised heating 2-103035
- radioactive decay curves with background, noniterative method for fitting 2-96410
- semiconductor technology, diffusion, complementary error function approximations by least squares method 2-71724
- silicate glasses, Raman spectra, curve fitting 2-116161
- solid mechanics problems, point least squares method with B-splines appl. 2-86209
- spatially limited objects, least-squares reconstruction using smoothness and non-negativity constraints 2-65172
- speech spectral patterns, weight function coefficient determ. 2-70784
- Wiener filtering, appl. to meas. of seismic waves interstation phase and group vels. and Q 2-88748
- X-ray diffractometry, cryst. orientation matrix coeffs. and lattice consts., computer program 2-115098
- X-ray photogrammetry using multi-parallel projections, least squares locating method 2-113020
- X-ray structure factors calc. from symm. operators 2-97856
- Cr IV, energy levels and ionisation energy 2-80468
- FI isoelectronic sequence, 2s^m2pⁿ-2s^{m-1}2pⁿ⁺¹ intersystem transitions 2-80530
- H₂SiI₄ force consts., rot.-vibr. anal., IR obs. 2-64973
- Mg,Pb, molten semiconductors, US velocity, temp. depend. 2-76600
- Mg₂Sn, molten semiconductors, US velocity, temp. depend. 2-76600
- OI, isoelectronic sequence, 2s^m2pⁿ-2s^{m-1}2pⁿ⁺¹ intersystem transitions 2-80530
- Si(Li) detector response treatment as probability density function 2-102335
- ¹⁴⁷Sm, A=144-154 even isotopes, charge and transition densities in interacting boson model 2-95911

leather *see materials*

Lee model

- mesic atoms, Lee model in quantum field theory 2-85846
- nonequilibrium, collision operator singularity, rel. to pseudo Markovian eqn., Lee model appl. 2-63894
- nuclear matter, many body Lee model, coupled cluster description, binding energy 2-107788
- three-particle eqns. and Lee model 2-64305

LEED *see low energy electron diffraction*

legal protection of software *see industrial property*

legislation

- alternative energy sources development, role of electrical and electronic engineering (*Japanese*) 2-99745
- assessment of the legislative and regulatory environment: NO_x case studies 2-67903
- liquid fuels, coal-derived, potential health problems 2-67805
- mechanical energy storage schemes, safety, socio-economic legal and environmental aspects 2-73152
- nuclear power station radioactive waste disposal status in West Germany (*German*) 2-85127
- nuclear power technical risks and constitutional law (*German*) 2-64448
- residential solar power-systems, adoption in USA incentives offered by electricity supply industry 2-73080
- solar power commercialisation, utility regulation in USA 2-73079
- solar power interface with electric utility systems, legal issues in the USA 2-73081
- wind power utilisation as energy sources, various aspects (*German*) 2-93862

length measurement

- see also micrometry*
- elongation measurement of thin sheets, regression formula (*German*) 2-95300
- end gauges, 2nd to 4th order, length meas. using IG-113 interferometer 2-107301
- frequency stabilised laser appl. 2-84595
- IR two-wavelength He-Xe laser interferometer, appl. to length meas. 2-79534
- laser interference length measurement, data processing, dial and interpolation combination (*Chinese*) 2-97066
- laser interferometer, length measurement (*German*) 2-95319
- laser interferometer for industrial length meas., atm. influence compensation, metric unit conversion 2-112966
- magnetic bubble material length from stripe domain meas. using Faraday rotation 2-92982
- metre, prospects of new definition 2-63961
- metre redefinition, laser freq. meas. 2-53718
- optoelectronic transducer technology (*German*) 2-63981
- rod-shaped standards thermal behaviour (*German*) 2-112863
- sonar radial target length estimation from echo duration 2-60282
- spherical optical resonator, interf. function, diffr. correction for length meas. by mirror displacement (*German*) 2-69246
- UIM-28 three-coordinate universal measuring instrument 2-95322
- unit reproduction, high-precision test installation 2-53732

length standards *see measurement standards*

Lennard-Jones and Devonshire theory *see liquid theory*

Lennard-Jones potential

- amorphous solid, screw dislocations, energy and displacement vector 2-91966
- benzene, second virial coeff. calc. using Lennard Jones pot. expressions (*German*) 2-97691
- binary Lennard-Jones fluid mixture, liquid-vapour interface, surface segregation and tension 2-115495
- chlorobenzene, second virial coeff. calc. using Lennard Jones pot. expressions (*German*) 2-97691
- complex energy eigenvalues, semiclassical calcs. 2-84466

Lennard-Jones potential continued

- decanoate bilayer, lipid membrane model, mol. dynamics simulation 2-67974
- dense fluids and fluid mixtures, chemical pot. evaluated via computer simulation technique 2-103577
- diatomic mol., mol. force const., bond lengths, pot. energy functions, electronegativity anal. 2-75463
- dichloromethane liq., mol. dynamics simulation with 3×3 and 5×5 site-site interactions 2-76261
- ethane, liq., fluids, thermodynamic props., mol. dynamics simulations 2-81648
- FCC (111) Lennard-Jones system, surface self-diffusion theory 2-98327
- fluids, first-order triplet correl. calcs. 2-65835
- fluorobenzene, second virial coeff. calc. using Lennard Jones pot. expressions (*German*) 2-97691
- gas-liquid-solid contact region, struct. and stress 2-115500
- grain boundaries, computer mol. dynamics study, migration, sliding and annihilation, 2D solid 2-103781
- grain boundaries, computer mole. dynamics study, coupled sliding and migration, 3D simulation 2-103780
- graphite, adsorption of Lennard-Jones gas, Monte Carlo method 2-66359
- liquid, simple, interparticle vel. correlation calc. 2-109649
- Mackay icosahedra relax. study 2-109721
- metal-metalloid amorphous alloys, short range struct., pair distrib. functions, Lennard-Jones pot. 2-103624
- methane, collision induced light scatt., three body correl. spectrum 2-80636
- molecular fluids, RAM perturbation theory 2-91742
- molecular orientation at gas-liquid interface, for model fluids 2-115496
- Monte Carlo simulation of the grand canonical ensemble 2-91741
- nucleation of Lennard-Jones vapour, critical cluster size, Monte Carlo calc. 2-109951
- phenol, second virial coeff. calc. using Lennard Jones pot. expressions (*German*) 2-97691
- rare gas solids, lattice dynamic props., self-consistent average-phonon eqn. of state 2-81922
- solid-fluid interface, struct. and thermodynamics 2-115499
- surface, orientational order-disorder transition 2-103942
- tetrafluoromethane, collision induced light scatt., three body correl. spectrum 2-80636
- toluene, second virial coeff. calc. using Lennard Jones pot. expressions (*German*) 2-97691
- two centre fluids, thermodynamic props., mol. dynamics simulations 2-81648
- two-dimensional, long-time tails 2-80755
- two-dimensional Lennard-Jones system, phase transitions, stability, computer simulation 2-56155
- p-xylene, second virial coeff. calc. using Lennard Jones pot. expressions (*German*) 2-97691
- CS₂, liq. Lennard-Jones pot., struct. and dynamics, computer simulation 2-97901
- ClF, cryogenic solns., vibr., IR and Raman obs. 2-70240
- Cu₆₀Zr₄₀ glass, electronic struct. 2-104236
- Hg+Na⁺, excited state pots., rainbow scatt., polarisation effects 2-85776
- O₂, molecular solid, Raman vibr. band shape, mol. dynamics study 2-104871
- SF₆, collision induced light scatt., three body correl. spectrum 2-80636
- SF₆, force const., excited vibr. states, Lennard-Jones and Morse pots. 2-90647
- Xe adsorption energy profiles at flat and stepped metal surfaces 2-115561
- α-Zr, vacancies, form. and binding energy, Lennard-Jones pot. calc. 2-98078

lenses

- see also aberrations; aspherical lenses; contact lenses; electron lenses; electrostatic lenses; focusing; magnetic lenses; photographic lenses*
- afocal close-up lenses, for optical projector systems in professional cinematography (*Czech*) 2-55291
- all-spherical catadioptric telescope with small corrector lenses 2-108989
- applied optics, conf., Rochester, NY, USA (May 1982) 2-112647
- astigmatic laser beam correction (*Chinese*) 2-97025
- automatic lens design, selection of damping factor 2-55293
- ball lens aberration effect anal. for laser diode to single mode fibre coupler 2-102936
- camera, Pentax LX system, lens specifications, system ergonomics, comparison with other systems 2-74528
- cemented objectives, two-lens, limiting capability evaluation 2-75658
- centering on an axis of rot. by speckle photography (*French*) 2-102901
- chirped grating lenses design for planar optical waveguides 2-114431
- compensator, two-lens afocal, for spherical aberration and coma correction (*Russian*) 2-70645
- concentric surface, astigmatism, inlet pupil random position (*Russian*) 2-85901
- Cooke triplet design, utility of low-index high-dispersion glasses 2-65331
- cylindrical acoustic lens for high power transmitting array in sector scanning sonar 2-109146
- cylindrical lens, directional treatment of images utilising astigmatism in incoherent light (*French*) 2-85906
- defocused white light speckle effect 2-80898
- diamond drilling of optical blanks from brittle materials 2-91102
- distributed-index lenses, aberration evaluation and reduction, review 2-75648
- distributed-index lenses, index profiling by shearing interference method 2-74483
- distributed-index planar microlens 2-75721
- distributed-index planar microlens as optical tap array 2-75723
- double-Gauss lens, extrapolated least-squares optimisation in optical design 2-75650
- effectivity in terms of dioptric power matrices 2-73394
- eye, optical density of the crystalline lens 2-88537
- fluorocarbon gas-filled acoustic lens 2-75810
- Fourier transformer, achromatic, spatially coherent 2-96847
- Fourier-transform lenses, for micro-meas. with wide angular spectrum (*Chinese*) 2-70643
- Fresnel lens-DCPC-concentrating solar cell-heat sink type solar module operational characs. (*Japanese*) 2-57703
- Gaussian to flat-top intensity distributing lens 2-97146
- glass, thermal lens formation by radiation at softening temperature (*Ukrainian*) 2-114672
- glass selection automation in optical system calc. 2-108986

lenses continued

- graded-index fibre lens array, non-Gaussian imaging props. 2-75686
- graded-index lens performance, axial perturbation effect 2-75645
- graded-index polymer rods, polarisation props. 2-114426
- graded-index sphere lens with hemispherical rod cladding 2-102954
- gradient index optics, conf., Honolulu, HI, USA (May 1981) 2-58521
- gradient singlet, ideal imaging of point at infinity 2-108998
- gradient-index fibre lenses of methyl methacrylate-vinyl phenylacetate 2-75687
- gradient-index lens array, luminous intensity 2-75646
- gradient-index rod lens, fabrication by ion exchange 2-65333
- gradient-index rod lenses, wave-front aberration meas. 2-75649
- GRIN fibre lens arrays, optical imaging and radiometric props., fibre length depend. 2-102935
- GRIN rod lens, large-diameter, for high-capacity wavelength demultiplexer 2-60254
- high aperture objective operating in photon limited conditions, aspheric corrector design 2-55294
- holographic cascade lens, diff. efficiency, bandpass and spurious beam rejection anal. 2-108831
- holographic efficient aberration-free lenses, design in presence of construction-reconstruction wavelength shift 2-60039
- holographic Fourier transform lens recorded using computer-generated hologram 2-60044
- holographic imaging systems two- and three-element, chromatic connection 2-70519
- holographic lenses, on-axis, higher diff. orders 2-114395
- holographic lenses, planar, for integrated optics, fabrication from shaped Bragg gratings from circular fringe patterns 2-65412
- hololens, dichromated gelatin, for simplified colour image processing system 2-108796
- image glare coeff. determ. from paraxial ray calc. results 2-90811
- image multiplexing method through internal modulation of speckle patterns 2-65177
- in-diffused passive elements of integrated optics in ion-exchanged waveguides 2-86136
- integrated-optic spectrum analyser, folded-type, using butt-coupled chirped grating lenses 2-86133
- intraocular lens edge meas., noncontact profiling with focal spot and fringe projection techniques 2-57922
- IR zoom lens system design for target detect., 8 to 13 μm 2-102903
- laser protective eyewear, developments 2-100132
- lasers, lenslike internal modulation of laser modes, theory and expt. 2-97011
- lenslet array processors 2-65329
- light rangefinder (*Russian*) 2-97152
- light transmission optics, book 2-112672
- Luneburg lens configurations, ray tracing anal. 2-114182
- magnetised Fe lenses, nonlinear focusing effects on muons 2-64735
- micro-lens, planar, stacked planar optics for optical communications 2-65415
- micro-optic grating demultiplexer, 20-channel, 1.1 to 1.6 μm, using graded index rod lens 2-65402
- microlenses, conical, chemically etched, for coupling single mode lasers into single mode fibres 2-65401
- microscope dry objective lens, 100X magnification from Nikon 2-107398
- modular optical design, book 2-89470
- moire topography fringe visibility and exposure time enhancement 2-95449
- moire topography projection type, fringe formula 2-96824
- MTF measurement for high-speed production lens testing 2-114399
- noncontact alignment and spacing of optics 2-102897
- objective lens resolution, mechanical scanning effect evaluation 2-91020
- ocular lens opacification in cold cataracts, identification of scatt. elements responsible 2-62597
- ophthalmic lenses, oblique astigmatic error, power error and distortion minimisation using aspherical surfaces 2-111812
- optical power of simple lenses, automatic meas. method 2-108990
- optical systems development and manufacture, requirements on optical media (*German*) 2-86072
- OTF measurement techniques in China 2-114203
- OTF measuring instrument for lens system based on edge image analysis 2-55295
- OTF of lenses, illumination noncoherence in equipment for meas. 2-90833
- partitioned holographic optical elements, cylindrical lens prod. 2-75542
- Pentax-M series lens test reports 2-74527
- phospholipid membranes, kinetics of lens formation 2-57786
- photovoltaic concentration system for solar cell, linear Fresnel lens 2-99801
- pseudo-conjugation/compensation of high-power optical trains, precision corner, lens and K-mirror arrays 2-102899
- quality assessment, microprocessor controlled instrument for line spread function meas. 2-114400
- rapid wide angle objective lens, design principles (*Russian*) 2-97143
- reflectors and immersion lenses for diffuse radiation detectors 2-60210
- refractive index measurement of simple lens, liq. immersion method 2-55290
- sagittal depth determ., comments 2-60208
- selfoc gradient-index rod microlens with spherical surface 2-75647
- selfoc rod lenses, chromatic aberration anal. (*Chinese*) 2-102727
- semiconductor laser module for single-mode fibre transmission system using conical lenses 2-86129
- SOPHOCLE photovoltaic concentrator generator producing energy for water electrolysis cell 2-99795
- speckle, time-varying, correlations near focal plane of lens 2-55068
- spectacle lenses, w. rel. to density, shape and power 2-117130
- Temos 4, mosaic telescope problem soln. (*French*) 2-94600
- thermal imaging lenses, optical evaluation 2-114401
- thick meniscus field correctors of field curvature and astigmatism 2-108988
- thin-lens cemented doublets, rapid design method 2-91018
- triplet standard lens, intercomparison of calc. and meas. OTF 2-114202
- two-lens finite-thickness cemented doublet aberration coeff. calc. 2-91022
- US cylindrical Fresnel lenses, frequency response 2-109145
- volume holographic cylindrical lens for plane to cylindrical wave conversion, two dims. soln. 2-55092
- wavefront compensation with pseudoconjugation, precision corner, lens and K-mirror arrays 2-70646
- waveguide Luneburg lenses, alternate technology proposal 2-55296
- X-Chrom lens and dichoptic colour perception 2-73236

lenses continued

zoned Fresnel lenses, freq. characts. 2-75663
InGaAsP-InP LEDs, prep. and props. of monolithically integrated lenses 2-114473

lepton decay

see also *muon decay*

flavour-changing decay, review 2-79877
heavy leptons, gravitational decay in unified theories (*Russian*) 2-54228
neutrino decay and lepton number spontaneous violation in $SU(2) \times U(1)$ gauge theory 2-54154
orthopositronium decay rate, QED calc., electron self-energy contrib. 2-54991
spin 3/2 leptons prod. and decay props., weak interaction processes 2-69441
 γ - $\delta\nu$ decay induced by light quark mass difference 2-113270
 $la \rightarrow l_1 l_2 \bar{\nu}$, pure leptonic decays with massive neutrinos and arbitrary Lorentz structure 2-79879
 (μ, π) and (μ, γ) invariant masses from decay of possible neutral heavy lepton 2-95834
 ν , radiative decay, astrophysical tests and fund. physics implications 2-89130
 $\nu \rightarrow \gamma\gamma$, detection prospects for primordial neutrinos 2-117837
 $\nu_2 \rightarrow \nu_1 \gamma$, massive neutrinos radiative decays in $SU(2) \times U(1)$ model 2-54153
 $\nu_H \rightarrow \nu_L \gamma$, radiative life-time in Zee model 2-113186
 τ , neutrinoless decay modes, expt. upper decays on branching fractions 2-95833
 τ decay, Mark II results from SPEAR and PEP 2-79876
 τ lepton decay and cross section for $e^+e^- \rightarrow \tau^+\tau^-$ at 34.2 GeV CM 2-101698
 $\tau \rightarrow l\nu$, $l=e, \mu$, differential probability expressions 2-59147
 $\tau \rightarrow \mu\gamma(e\gamma)$, radiative decays in arbitrary order 2-74688
 $\tau \rightarrow \pi\nu$, current algebra appl. to $p(1600)$ 2-74629
 τ -three prongs, lifetime determ. 2-89963
 $\tau \rightarrow K\nu$, branching fraction determ. 2-79878

lepton-deuteron interactions

see also *lepton-deuteron scattering*

ed, backward electrodisintegration, quark model of two-baryon currents 2-84863
ed- e^+pn , dibaryon reson., six-quark model of two nucleon current appl. 2-79987
ed- e^+pn , parity nonconservation effects (*Russian*) 2-59160
rd, d splitting, cross section calc. using currents of second kind 2-101704
 $\nu_d \rightarrow \mu^- X$, high-energy, neutrino flux, total charged current cross-section 2-89960
 $\nu_d \rightarrow \mu^- pp$, momentum transfer distrib., axial vector form factors 2-101703

lepton-deuteron scattering

see also *lepton-deuteron interactions*

ed-ed, d pol., neutral current effects, gauge model test 2-101727
ed-ed, EM form factor meas. procedure 2-113276

lepton-hadron interactions

see also *lepton-hadron scattering*; *lepton-nucleon interactions*

deep inelastic processes, mean associated multiplicities (*Russian*) 2-95848
deep inelastic scatt., QCD appl. 2-95743
deep inelastic scatt., two-loop QCD corrections to longit. structure function 2-113274
deep inelastic scattering, QFT, asymptotic scaling on the light cone 2-53984
deep-inelastic scatt. structure functions, renormalisation-convention in dependence beyond leading order 2-69466
hadron production, multiplicity, two-fireball model 2-74693
QCD, constraint on anomalous dimension function, rel. to deep inelastic lepton-hadron scatt. 2-89941
lh deep inelastic scatt., struct. functions, rel. to analyticity and renorm-group (*Russian*) 2-95655
 μh interaction, muonic X-rays search 2-59974

lepton-hadron scattering

see also *lepton-hadron interactions*; *lepton-nucleon scattering*

No entries

lepton interactions see *lepton-deuteron interactions*; *lepton-lepton interactions*; *photon-lepton interactions***lepton-lepton interactions**

see also *electron-electron interactions*; *electron-positron interactions*; *lepton-lepton scattering*; *neutrino-electron interactions*; *neutrino-neutrino interactions*

No entries

lepton-lepton scattering

see also *electron-electron scattering*; *electron-positron scattering*; *lepton-lepton interactions*; *neutrino-electron scattering*; *neutrino-neutrino scattering*
colour van der Waals forces between leptons made of coloured constituents 2-54118

lepton mass

charged lepton masses, semiclassical Reissner-Nordstrom model, leptospin splitting 2-79793
cosmic massive neutrinos in bulk matter; vanishing of order-Cu mech. effects 2-106462
E(6) grand unified gauge model, mass hierarchy for quarks and leptons 2-69393
E(6) unified theory with harmless axion, massive neutrinos 2-79794
effective potential calc. in internal space 2-59135
electron mass-radius symmetry rel. to proton 2-107651
fermion masses, from large mass scale, rel. to GUTs, composite quark/lepton 2-95704
Majorana neutrino masses, rel. to lepton number violation and supernovae 2-68800
massive neutrinos, review 2-74680
neutrino, mass and oscillations, expt. searches 2-74681
neutrino mass, derivation from 3H β -decay atomic effects calc. (*Chinese*) 2-90053
neutrino mass, rel. to lepton number nonconservation 2-101590
neutrino mass, rel. to unified field theories and big bang cosmology 2-101627
neutrino mass and mixing effects in muon decay (*Russian*) 2-95836
neutrino mass and right-handed neutrino abundance, effect on Universe closure 2-117819
neutrino rest mass, cosmological impact 2-117815
neutrino rest mass and clustering in early Universe 2-101098

lepton mass continued

neutrinos, Dira and Majorana masses limits 2-59077
neutrinos in galactic systems 2-106522
neutrinos rel. to universal structure 2-79252
primordial nucleosynthesis, neutrino mass effect 2-79261
right handed neutrino abundance, neutrino mass, closure of the Universe 2-58514
spectrum, τ decay, Mark II results from SPEAR and PEP 2-79876
spectrum inducing pol., elementary construction 2-84870
 $SU(2)_L \times SU(2)_R \times U(1)_{B-L}$, left-right symmetric GUT, proton lifetime, quark-lepton mass ratio 2-95721
 $SU(2)_L \times SU(2)_R \times U(1)_{B-L}$, gauge theory, neutrino masses, intermediate mass scales and cosmology 2-84825
 $SU(2) \times U(1)$ gauge models, permutation symmetries, neutrino masses and mixings 2-69392
subquark fermion-boson two body model, Cabibbo model 2-89949
 e , mass operator behaviour in superstrong mag. field 2-89930
 (μ, π) and (μ, γ) invariant masses from decay of possible neutral heavy lepton 2-95834
 $\mu \rightarrow e\gamma$, lepton-like Cabibbo angles, neutrino mixing angles and mass ratios (*Chinese*) 2-95835
 μ^+ magnetic moment meas. by stroboscopic muon-spin-rotation technique 2-54159
 μN , 1209 GeV, heavy neutral muon mass lower limit and bottom hadron prod. 2-95849
 ν , right handed interaction, double beta decay, formalism 2-59295
 ν , right handed interaction, double beta decay, props. 2-59296
 ν mass in $SO(10)$ supersymmetric GUT 2-101622
 ν_e mass from $^{128,130}Te \rightarrow ^{128,130}Xe$ double beta decay 2-113415
 ν_e mass upper limit from electron capture β -decay of ^{163}Ho 2-85001
 ν_e/e mass ratio, empirical formula 2-69438
 ν_R , mass in $SO(10)$ model, with symm. breaking hierarchy (*Russian*) 2-64263
 νe mass meas. from nuclear beta-decay, exptl. results on weak interaction 2-79775
 $\pi^+ \rightarrow \mu^+ \nu_\mu$, ν_μ mass upper limit from π decay in flight 2-89961
 3H containing mol., mol. structure effect on chemical shift 2-79983

lepton-nucleon interactions

see also *electron-nucleon interactions*; *lepton-nucleon scattering*; *muon-nucleon interactions*; *neutrino-nucleon interactions*

charm hadron prod. 2-107697
deep inelastic scatt., baryon prod. and diquark fragmentation 2-95852
deep inelastic scatt., expt. evidence of quarks and gluons, book contrib. 2-113233
deep inelastic scatt., higher twist contrib. 2-64292
deep inelastic scatt., QCD beyond leading order 2-64289
deep inelastic scatt. in QCD, power corrections theory 2-101730
hadron production, review 2-53436
jet production, expt. results 2-107648
nucleon neutral weak form factors from lepton-nucleon elastic and inclusive processes 2-59150
perturbative QCD, conf., Tallahassee, FL, USA (March 81) 2-53409
QCD, experimental evidence, review, book contrib. 2-54082
QCD and dual topological unitarisation, gluons in hadronic S-matrix 2-101666
ep, scaling violations and gluon distrib. of nucleon 2-79882
IN- l^+X , deep inelastic leptonproduction, review, book contrib. 2-54172

lepton-nucleon scattering

see also *electron-nucleon scattering*; *lepton-nucleon interactions*; *muon-nucleon scattering*; *neutrino-nucleon scattering*

nucleon neutral weak form factors from lepton-nucleon elastic and inclusive processes 2-59150

lepton-nucleus reactions

see also *electron-nucleus reactions*; *lepton-nucleon interactions*; *muon-nucleus reactions*; *neutrino-nucleus reactions*

high-energy hadrons, photons and leptons interactions with nuclei, quark-parton model 2-95796
leptonproduction of neutrino pairs by nuclear Coulomb field, equiv. photon approx. 2-85029
nuclear structure function at large x and A_{QCD} 2-107634

lepton-nucleus scattering

see also *electron-nucleus scattering*; *lepton-nucleon scattering*; *muon-nucleus scattering*; *neutrino-nucleus scattering*

No entries

lepton production

see also *electron pair production*; *muon production*; *neutrino production*

deep inelastic scattering, Drell-Yan process, one-loop QCD corrections 2-101668
dilepton angular distrib. coeff. in different frames, geometrical methods 2-95791
Drell-Yan cross section, QCD corrections 2-54215
hadron-hadron collisions, lepton pair prod. process, kinematic anal. 2-95887
NN- l^+l^- NN, scaling violations 2-59186
perturbative QCD, conf., Tallahassee, FL, USA (March 81) 2-53409
pseudoscalar meson decay, $P \rightarrow l^+l^- + \gamma$, bound state quark model calculations 2-101667
semi-inclusive hard processes in QCD, eikonal corrections 2-101661
 e^+e^- annihilation, neutral conjugate heavy mesons, dilepton charge asymmetry, CP violation 2-95856
 $e^+e^- \rightarrow \mu^+\mu^-$, radiative corrections in Z0 region 2-107654
 $e^+e^- \rightarrow s_s s_c$, 33-36.72 GeV CM, scalar lepton search with CELLO detector at PETRA 2-101699
 $e^+e^- \rightarrow \tau^+\tau^-$, 34.2 GeV CM, cross section and τ lepton decay props. meas. 2-101698
 $e^+e^- \rightarrow \tau^+\tau^-$ charge asymm., weak interaction effects 2-54130
 $\gamma\gamma \rightarrow e^+e^- (\mu^+\mu^-)(h^+h^-)$, two body final states invariant mass > 2 GeV 2-107717
hh, high energy scatt., massive lepton pair prod. in perturbative QCD 2-54220
hh- l^+l^- , Drell-Yan pairs, p_T effects in QCD 2-89944
pp- eX , 53.63 GeV, single electron prod. 2-79919
pp- $Z^0(\gamma)(W^\pm) \rightarrow l^+l^- X$, $\sqrt{s}=540$ GeV, QCD and direct lepton prod. 2-54216

lepton scattering see *lepton-deuteron scattering*; *lepton-hadron scattering*; *lepton-lepton scattering*; *photon-lepton scattering*

lepton spin and parity

No entries

leptonic decays

- see also *baryon leptonic decay; meson leptonic decay; muon decay*
 hadron weak decays in $SU(2) \times U(1)$ model 2-54141
 $la \rightarrow \nu_\mu \pi^0$, pure leptonic decays with massive neutrinos and arbitrary Lorentz structure 2-79879
 $Z^0 \rightarrow l^+ l^-$, charge and helicity asymms., Weinberg model calc. 2-107611
 $A_X \rightarrow A^- X + p + l^- + \bar{\nu}$, many-particle leptonic decays, energy and ang. distrib. (Russian) 2-90040

leptons

- see also *electrons; heavy leptons; lepton spin and parity; muons; neutrinos; positrons*
 anomaly eqns. solns. based on $SU(N) \times SU(N)$ hypercolour and superalgebras 2-84846
 black hole, appl. to elementary particles, species limit number 2-94767
 Casalbuoni-Gatto subquark model study 2-79851
 colour van der Waals forces between leptons made of coloured constituents 2-54118
 common substructure of quarks and leptons using basisons 2-59130
 composite Hariari-Shupe model, revision, new algebraic formulation 2-101681
 composite leptons in supersymmetric grand unification 2-101686
 composite models, generation problem soln. 2-84871
 composite models, group theoretical search 2-89950
 composite models, mass scale, rel. to flavour gauge symm. 2-95801
 composite models of quarks and leptons 2-79848
 composites, effective symm. 2-74664
 conservation laws, in electroweak gauge models 2-95705
 constituent models 2-101685
 doublet composite schemes of leptons and quarks (Russian) 2-74665
 effective Schwarzschild radius and internal interaction of leptons 2-107652
 electroweak unification of quarks and leptons in $Sp(8)$ and $Sp(10)$ symplectic gauge symmetry 2-101623
 elementary particle properties review 2-89481
 fermionic composite models from complementarity 2-101684
 fermionic flavours and generations, unification before flavours and colours 2-95700
 generations number limitation by nucleosynthesis 2-117839
 geometric rishon model, quark and lepton generations 2-69436
 grand unified model with composite fermions based on $SO(3) \times SU(8)$ group 2-69394
 internal structure of quarks and leptons and asymptotic freedom in $SU(8)_L \times SU(8)_R$ model (Russian) 2-74639
 light composite fermion spectrum from gauge theory of quark and lepton constituents 2-64304
 mass hierarchy in grand unified theories 2-54125
 preon models within 10 constraints 2-101682
 preons with strong and electroweak quantum numbers, composite quarks and leptons 2-101687
 quark-lepton correspondence in model with $(SU(2)_L \times U(1))_{VS} \times U(1)_{II} \times U(1)_{II}$ symmetry 2-54029
 quark-lepton unification in $SU(4)_{FS} \times SU(2)_L \times SU(2)_R \times SU(2)_L \times SU(2)_R$ model 2-54026
 review of 'New Physics' 2-54049
 $SO(10)$ grand unified model, unification constraints on mirror fermion mass scale 2-89923
 spectrum inducing pot., elementary construction 2-84870
 $SU(3)_{HC} \times SU(6)_C \times SU(6)_R$ theory, four families of composite quarks and leptons 2-84873
 $SU(3) \times SU(2) \times U(1)$ model, supersymmetric extension 2-79803
 $SU(8)$ hyperunification, composite quarks and leptons derivable from $SO(8)$ extended supergravity 2-95712
 subconstituent model, 't Hooft consisting conditions 2-54117
 subquark fermion-boson two body model, Cabibbo model 2-89949
 subquark models of leptons and quarks, observable effects 2-79850
 topological representation 2-113254
 volume viscosity including massive neutrinos 2-79467
 weak current algebra, composite W bosons and weak interactions universality 2-101683

level control

- corrosion protection, automatic control of pickling process (Russian) 2-72857

level crossing (energy) see *energy level crossing***level measurement**

- amplitude-measuring wire/slope-measuring laser water wave gauge comparison 2-81418
 concentric capacitive sensor for cryogen level 2-74401
 cryostat, of refrigerant 2-64051
 fibre-optic sensor for cryogen level 2-74402
 liquid fibre optic sensors, applications 2-75705
 liquid level indicator for liq. He and liq. N_2 (Chinese) 2-107297
 liquid level measurement using moiré technique 2-107394
 microprocessor based reactor vessel level/containment monitor 2-85175
 nuclear reactor vessel level monitoring system for assessing inadequate core cooling 2-64561
 test installation for level meter checking, universal stationary design 2-53733
 US sensor for simultaneous meas. of level, temp. and density 2-65435

level meters

- see also *power measurement*
 cryogenic, refrigerant in cryostat 2-64051

levels, energy see *energy states***levitation, magnetic** see *magnetic levitation***librarianship** see *information science***library science** see *information science***LIDAR** see *optical radar***Lie groups**

- see also *elementary particle symmetry*
 A_3 , simple complex Lie algebra, indecomposable representations 2-84813
 affine algebra $C_n^{(1)}$, Hirota-Satsuma 2-74232
 associative algebra A , Lie-admissible mutation $A(r,s)$ 2-95680
 atomic mechanics, hadronic generalisation, interior strong problem, bimolecular genoptic Hilbert space formulation 2-113111
 atomic mechanics, hadronic generalisation, modular isotopic Hilbert space formulation for exterior strong problem 2-113256
 Backlund transformations and lattice systems with G-gauge symmetries 2-74603
 bi-Hamiltonian structure, recursion formulas for symm. and conserved covariants 2-53483

Lie groups continued

- boson and fermion wave function classification by Lie superalgebra chains (Chinese) 2-95692
 calculus of variations, inverse problem, general soln. 2-113257
 canonical transformations and theory of representations 2-101237
 Casimir operators, anomalies and eigenvalues 2-64238
 Casimir operators of groups of motions of spaces of constant curvature 2-95696
 Chern number for gauge fields on R^4 2-95601
 chiral field model, cylindrically symmetric solutions 2-107504
 chromohydrodynamics, gauge-invariant Poisson brackets 2-95606
 complex Lie algebras, dimensions of orbits and strata 2-64239
 complex orthogonal and symplectic Lie algebras, versal deformations of elements 2-74625
 cosymplectic struct., Lie algebra, appl. to hydrodynamical and plasma system 2-113157
 cylindrical Korteweg-de Vries eqn., prolongation anal. 2-101600
 de Sitter supersymmetry, graded Lie algebra, linear unitary irreducible representation, with positive energy 2-64241
 deformation theory in particle physics, fundamental concepts, physical theories 2-69318
 differential equations, nonlinear superposition principles, Lie criterion 2-53486
 dynamical systems, symmetry transformation, first integrals 2-112689
 eigenvalue evolution equations, algebraic structure 2-107564
 eleton dynamics, Lie-admissible formulation, gauge degrees of freedom 2-113251
 Ermakov systems, nonlinear eqns. of motion, Lie symmetries 2-107086
 Ermakov systems from Lie symm. theory 2-69048
 even-even nuclei, rot. levels using Lie algebra weight diagrams in IBM 2-59213
 exponentiation and deformations of Lie-admissible algebras 2-95679
 finite dimensional wave eqns., associated Lie algebras, Lorentz invariance 2-53932
 fluid electrodynamics, phase space, Hamiltonian struct. 2-114917
 gauge field theory solutions 2-107514
 gauge theory, holonomy group and spontaneous symmetry breaking 2-74596
 geometric supergravity in $D=11$ and hidden supergroup 2-101294
 geometry of Lie-admissible algebras 2-74624
 global bifurcation diagram in ecological interacting and diffusion systems 2-95284
 global one parameter Lie subgroups of continuum deformations group 2-53512
 graded Lie algebra $(Sp(4);4)$, infinite-dimensional representation 2-95682
 graded Lie algebra $osp(1,2n)$ appl. to algebra $osp(1,4)$, Casimir operators, Micu invariance 2-95670
 graded Lie algebras, cohomology theory 2-101581
 grand unified theories-extended supergravities connections, Lie groups 2-58684
 Hamiltonian mechanics, appl. of Lie theory of extended groups 2-53498
 Heisenberg's algebra of theory of fields and vectorial type fibred space (French) 2-107482
 infinite-dimensional Lie-admissible algebras 2-74623
 interacting boson mode wave functions calcs. 2-95940
 invariant τ -quantisation associated with affine group 2-95083
 $ISO(p,q)$ group invariant operators 2-69370
 Korteweg-de Vries eqn., Lie-Backlund symm., rel. to sine-Gordon eqn. 2-53936
 Kowalewski's asymptotic method, Kac-moody Lie algebras and regularization 2-53551
 KP-type soliton eqns., hierarchy and transformation groups 2-63826
 Laplace operator, spectral problem, eigenvalues, asymptotic determ. (Russian) 2-69032
 Lax representation by quantisation of Lie algebra 2-113174
 Lie-admissible algebras, construction 2-74622
 Lie-admissible algebras, history and methods 2-74621
 mathematical methods in hydrodynamical systems, conf., La Jolla, California, USA (Dec. 1981) 2-112637
 Maxwell eqn., symmetry generation by Lie algebra 2-69029
 molecular shell model and Lie algebra 2-80426
 neutrons interaction with elec. field of atoms and Lie-admissible spin algebra 2-95678
 nonlinear dynamical systems, integration and group representations 2-89571
 nonpotential interactions, Lie-admissible treatment, conf., Orleans, France (Jan. 1982) 2-74149
 nonpotential interactions, Lie-admissible treatment 2-74666
 nonpotential scattering theory and Lie admissible algebras, time evolution operator and S-matrix 2-95053
 nuclear $SO(5)$ model, boson mappings 2-107780
 orthogonal polynomial bases of the orthogonal and symplectic groups 2-69364
 orthosymplectic Lie superalgebras, para-Bose and para-Fermi operators as generators 2-95086
 $osp(1,2)$ Lie superalgebra, boson-fermion representation 2-54010
 particle physics, book 2-79298
 perturbation at large order, conf. proceedings of international workshop (March 1981) 2-53412
 quantum theory, hadronic generalisation, Heisenberg and Schrodinger representation 2-113255
 rank dependency of weight multiplicities for simple Lie groups 2-107561
 real classical Lie algebras, elements, versal deformations 2-64232
 reductive Lie-admissible algebras applied to H-spaces and connections 2-113162
 relativistic eikonal eqn., symmetry and exact solns. 2-107567
 Rosochatius system, Lie algebraic interpretation 2-113158
 Schrodinger equation, nonlinear, pseudopotentials and Lie symm. 2-63848
 semisimple Lie groups, finite and continuous subgroups 2-64235
 semisimple Lie groups, principal and supplementary series unitary irreducible representation, geom. quantisation 2-64237
 semisimple Lie groups, unitary irreducible representations, discrete series, rel. to geom. quantisation 2-64236
 simple Lie superalgebras, finite representations, congruence classes 2-101583
 sine-Gordon equation, Lie-Backlund symm., rel. to Kortweg-de Vries eqn. 2-53936
 singular unitary representations and indefinite harmonic theory 2-101607
 $sl(2,R)$, Clebsch-Gordan coeffs. in parabolic basis 2-69367

Lie groups continued

- SL(2,R) unitary representations in all subgroup reductions 2-54008
 SO(2n+1) in SO(2n-3)×SU(2)×SU(2), symmetric representations reduction 2-107559
 SO(7) symmetric representations on SO(2n-3)×SU(2)×SU(2) basis 2-107560
 space-time manifolds and kinematics 2-74270
 special functions of math. phys., algebraic, geometric and system-theoretic props. 2-95684
 spin(2,1) and spin(2,2), semisimple Lie groups, geometric quantisation and representations 2-54009
 spin plethysms 2-64234
 SU_{2/1} electroweak ghost-gauge theory, BRS algebra construction 2-113166
 SU(2,2/N), nonrealisation on Hilbert space of SU(2,2) 2-113173
 SU(5)-SO(10)-E₆ chain, weights of elementary representation 2-79784
 superalgebra osp(1,2n) connection to algebra o(2n+1) 2-53548
 superalgebra osp(1,4), canonical representations 2-95671
 supergroup SU(N/M) from SU(N+M), branching rules 2-95683
 supersymmetry, infinite Lie algebra construction 2-101584
 supersymmetry in nuclear and particle physics 2-59053
 symmetry algebra of Heisenberg model and nonlinear Schrödinger eqn. 2-113168
 symplectic inhomogeneous groups invariant operators 2-69371
 unified gauge theories, Lie algebra choice 2-54035
 unitary inhomogeneous groups invariant operators 2-69371
 Virasoro algebra 2-107553
 Z₂ graded Lie algebra su(l/m/n) (*Chinese*) 2-95674

life testing

- BWR control blade pins and rollers, non-Co alloys test project 2-85156
 direct-coupled optical pulse generator hybrid IC for fibre-optic testing 2-97250
 duration testing of MHD anodes 2-93929
 lasers, commercial, reliability, life testing and field operation experience 2-80980
 terrestrial solar cells, accelerated stress testing 2-116813
 thermionic matrix cathodes with 10A/cm² current density, emission and life testing studies 2-57244
 AlGaAs narrow stripe proton isolated DH lasers for optical communication, HF intensity noise behaviour during accel. life testing 2-65223
 Al_{0.1}Ga_{0.9}As/GaAs concentrator solar cells, organometallic, vapour phase epitaxial, fabrication and performance 2-93921
 Al_{0.1}Ga_{0.9}As/GaAs DH laser, struct., characts., lifetime (*Chinese*) 2-65270
 CO₂ miniature sealed laser, service life, gas filling stabilisation 2-55202
 GaInPAs/InP heterostructure LED service life, 1.2-1.3 μ range 2-60082
 GaInPAs/InP heterojunction lasers, service life, 1.2-1.3 μ range 2-60082
 HgBr lasers, electrode and laser tube materials for long life operation 2-86004
 InGaAsP-InP buried heterostructure laser reliability, degradation modes 2-80946
 Si solar cells, degradation due to formation of Schottky barrier contact 2-93923
 TiO₂/SnO₂ ceramic moisture sensor, elec. resistance stability, SEM, powder X-ray diff. exam. 2-74398

lifting machinery see hoists**lifts**

- flaw detection in mine hoist transportation systems 2-78064

ligand field theory see bonds (chemical); crystal field interactions; molecular energy levels**light**

- see also airglow; optics; sunlight; zodiacal light*
 behaviour in spherically symm. aether field 2-79357
 gravitational deflection of fast particles and light 2-84413
 gravitational deflection of light during solar eclipses, correl. with ellipticity of solar corona 2-100880
 spatial structure transform. method 2-85883

light absorption

- see also atmospheric optics; densitometry; light transmission; optical constants; optical films; optical filters; optical saturable absorption; pleochroism; spectra*
 absorbing materials, refractive index and absorpt. coeff., reflectance meas. method 2-89793
 absorption coefficient, electron-phonon and hole-phonon interactions 2-67016
 aerosol absorption meas. using aethalometer 2-112146
 aerosol layers, tropospheric, shortwave radiative props. evaluation uncertainties, expt. and numerical errors 2-94490
 aerosol light absorpt., diffuse reflectance and diffuse transmission meas. 2-53821
 aerosol optical absorption, imaginary refr. index, mass conc. and size meas., integrating plate method 2-53806
 aerosol particle generation, transport and characterisation, comparison of light absorpt. instruments 2-57639
 aerosol particle light absorpt. meas., photometric and calorimetric techniques 2-53812
 aerosol particle light absorption meas., workshop, Fort Collins, CO, USA (July-Aug. 1980) 2-53407
 aerosols, volumetric scatt. and absorpt., parametric sensitivity in Mie modelling 2-70506
 Al₂O₃ films on Al solar absorbance and thermal emittance computation 2-70639
 alkali halides, sputtering, electron and photon induced 2-99232
 amorphous semiconductors, transient photoconductivity and photo-induced optical absorption 2-92684
 atmosphere, aerosol extinction modelling rel. to electro-optical systems performance in marine environments 2-117455
 atmosphere, light extinction coeffs., visibility and aerosol comp. in Houston Texas 2-112124
 atmosphere extinction, meteorological models for optical props. in marine boundary layer 2-117452
 atmosphere IR absorption, band model rel. to incoming longwave radiation from clear sky 2-100555
 atmospheric aerosols, light absorpt. meas. using integrating plate method, filter internal refl. coeff. effects 2-112119
 atmospheric particle light absorpt. coeff. meas. using integrating sandwich method 2-112144
 atoms and ions undergoing Brownian motion, nonlinear light absorption calc. (*Russian*) 2-70197
 band shape due to localised Γ₃⁺→Γ₄⁻ transition 2-61852

light absorption continued

- breast diaphanography, colour rel. to blood conc. 2-111767
 carbon tetrachloride solution absorpt. meas. using thermooptic-based interferometric technique 2-79652
 chalcogenide glass film, photoinduced structural changes (*Russian*) 2-61301
 chemisorption bond making and breaking 2-98431
 container glass, optical props. 2-61858
 cooled surfaces, absorbed laser power, calorimetric meas. 2-86027
 crystal plates, plane-parallel, arbitrary thickness, light reabsorpt. 2-65162
 crystals, magnetically ordered, light absorpt., Jones and Muller matrices 2-108780
 diamond-turned metal optics, surface characterisation 2-109089
 dielectric permeability at high concentrations of excitons 2-93135
 dielectric thin films on metal surfaces, attenuation of absorptivity, IR spectroscopic meas. 2-110965
 diffraction grating absorbed energy meas. by photoacoustic detector in Wood anomaly region 2-91035
 disordered semiconductor, smooth random field inception 2-77004
 disordered semiconductors with Coulomb-type random field, interband absorpt., multiphonon transitions effects 2-104840
 exciton absorption bands, anomalous thermal shift 2-93136
 excitons, diamagnetic, polarisation vibr. interaction in strong mag. field 2-104261
 eye, optical density of the crystalline lens 2-88537
 eye media absorption in goldfish 2-111659
 fibre loss model, total-loss data separation into absorpt. and scatt. components 2-102934
 fibre loss spectra meas. equipment 2-53807
 fibre optic materials, optical props. 2-60190
 fibres, transient absorpt., electron beam radiation induced 2-114436
 films, thick, for conduction of optical and IR radiation, solar cell appls. 2-99763
 finite fermion systems, sum rules for dipole transitions, giant resonances (*Russian*) 2-79993
 gaseous mixture, nonthermal action of laser radiation, possible expt. proof 2-60717
 gratings, dichromated gelatin, absorpt. and refr. index modulations 2-70520
 haze aerosols, effect on atmospheric light transmission 2-117459
 high-pressure cell for meas. of optical absorption coeffs. at liquid N₂ temps. 2-69197
 humidity analysers based on controlled radiation sources (*Russian*) 2-64055
 inhomogeneous medium absorption coeff. calc. 2-60023
 interstellar absorption in LMC, far UV extinction and 4430 Å band central depths for reddened stars 2-106898
 IR absorption spectra of oceanic aerosols 2-83946
 IR fibre losses, overview 2-97181
 IR window material absorpt. coeff., photo-acoustic meas. at CO₂ laser wavelength freq. (*Chinese*) 2-91033
 isotropic nonconducting medium, absorpt. coeff., upper and lower bounds 2-82813
 Khavtasi 141, interstellar dark cloud complex, optical extinction and H I content 2-68874
 laser calorimetric determ. of absorpt. coeff., polarisation sensitive technique 2-65290
 laser optical materials absorpt. coeff. meas. by interferometric calorimetry 2-97044
 laser window materials for use at 1.3 μm, survey 2-60195
 layered semiconductor, interband absorpt. with smooth random field 2-104839
 low-reflectance absorber for CO₂ laser light 2-55239
 RY Lupi, T Tauri star, variable circumstellar extinction as cause of optical and IR variability 2-79098
 marine atmosphere, ang. scatt. and IR extinction coeffs. from modified gamma aerosol distrib. 2-117453
 metal, optical characteristics rel. to damping length for surface EM wave 2-87724
 metal optical surfaces, intrinsic and roughness-induced absorpt. of EM radiation 2-70632
 methylene blue particles collected on filters, photoacoustic meas. of absorptivity, substrate refl. effect 2-53851
 mid-IR waveguide materials 2-97129
 mirrors, metallic, absorpt. coeff. meas. at 10.6 μm using calorimetric technique 2-70649
 multi-thin-film array, absorptivity, interference, finite element embedding 2-70492
 multilayer structure, laser induced local heating, optical energy absorpt. 2-65269
 multiple small angle light scattering in medium with elongated scatt. indicatrix, self-similarity theory (*Russian*) 2-114184
 narrow energy bands, opt. absorpt. in weak mag. fields (*Russian*) 2-61882
 narrow-gap semiconductor, excitonic insulator, optical absorpt. with various phases of order parameter, theory 2-110805
 optical coating, small absorptions characterisation rel. to impurities 2-65165
 optical fibres, mode power distrib. meas. 2-60242
 optical film loss factors, surface scatt., volume scatt. and absorbance (*Chinese*) 2-55061
 organic semiconductor layer, photoelectric pulse current (*Russian*) 2-61625
 pentacene, layer, photoelectric pulse current (*Russian*) 2-61625
 phycobilisomes, reversible changes in fluoresc. and absorpt. on exposure to light 2-57791
 polar crystal, Coulomb attraction effect on light absorpt. coeff., Urbach rule and exciton effects (*Russian*) 2-57049
 polar crystals, in elec. field, long-wave tail by optical absorpt. (*Russian*) 2-104912
 polyacetylene, optical absorption and boundary conditions in soliton model 2-82814
 polymodal media, spectral attenuation of EM radiation 2-80901
 rare earth iron garnets, magneto-optic anisotropy, many-sublattice model 2-72465
 RY Sagittarii, R Coronae Borealis variable, circumstellar extinction meas. from UV spectrophotometry 2-106747
 semiconductor, EM wave amplification in quantising elec. field 2-77489
 semiconductor, light absorpt. by free carriers in presence of light wave 2-77479

light absorption continued

- semiconductor, nonlinear collisionless absorpt. of ultrashort light pulses 2-75625
- semiconductor, optical transitions between light-and heavy-hole bands and drag effect 2-116138
- semiconductor free carriers, light absorpt. in strong EM waves 2-72444
- semiconductor thin films, optical processes, review 2-93310
- semiconductor with fluctuating gap width, optical breakdown 2-116303
- semiconductors, direct gap, optical absorpt. and refr., complex optical dielec. function 2-93139
- semiconductors, freq. modulated EM wave absorption coeff., linear field approx. 2-110804
- semiconductors, interzone light absorpt., multiphonon processes, with Coulomb random field 2-72439
- semiconductors, many-valley, uniaxially deformed, free carrier light absorpt., theory 2-57053
- semiconductors, optical phonon amplification in multiphoton absorpt. 2-87722
- semiconductors, three-proton two exciton absorpt., theory (*Russian*) 2-116137
- semiconductors, two-photon two-exciton light absorpt. 2-87723
- semiconductors doped with 3d metals, light absorption perturbation theory 2-104828
- simple fluids, line broadening, dressed cluster and hydrodynamic expansions 2-104829
- single scattering props. using multiple scatt. inverse transport methods 2-99078
- solids, optoacoustic method of small absorpt. coeffs. meas. 2-87725
- soot particles collected on filters, photoacoustic meas. of absorptivity, substrate refl. effect 2-53851
- SOS films, investigation by optical absorption meas. (*Chinese*) 2-92764
- stratosphere, attenuated solar irradiance meas. rel. to O₂ Herzberg continuum absorpt. 2-100550
- strongly anisotropic multiple light scatt., self-similar approx. 2-114187
- strontium tartrate tetrahydrate, Co²⁺ centres, optical absorpt. studies 2-115220
- surface energy transfer enhanced by optical cavity excitation, pole analysis 2-57042
- transparent materials, absorbing defect role in laser damage 2-65287
- underwater off-axis radiance meas. comparison with radiative transfer eqn., analytical 2-88882
- Voigt profile absorpt. line region, refr. index of medium, approx. calcs. 2-108779
- volume gratings, anomalous absorpt., modal approach 2-65191
- water drop, internal optical field induced by laser action at 0.69 μm , vapour bubble growth 2-97046
- Al films, granular, reson. absorpt. of light, plasma reson. 2-67134
- As₂S₃, amorphous, photodarkening, configuration-coordinate model 2-57033
- As₂Se₃, film, photostructural changes, influence of prep. method 2-99353
- As₂Se₃, glassy, pulse-induced microcosmic geminate excitons, thermal decay 2-61905
- As₂Te₃ chalcogenide glass, photoabsorption and photoconductivity 2-82406
- Bi-SiO₂ cermet films, elec. and optical props., H addition effects 2-82505
- C, particulate, collected on Teflon filters, monitoring with photoacoustic and transmission techniques 2-53850
- CO₂ laser high-power optics, absorption's dominant role 2-97043
- CaF₂, surface-to-bulk optical absorpt., 1.3 μm laser rate calorimetry and photoacoustic meas. 2-58921
- CaF₂ UV laser window material, low-level losses 2-97161
- CdGa₂S₄, uniaxially deformed, long wave absorption edge 2-104836
- Cd,Hg_{1-x}Te, narrow gap, absorption coeff. and optical band gap 2-116146
- CdIn₂S₄, fundamental absorpt. edge meas., doping effects 2-61927
- Cd_{1-x}Mn_xTe, absorption edge pinning, transmission and piezotransmission meas. 2-72443
- CdS, plastically deformed, light propag. obs., dislocations effect 2-67024
- CdS:Hg crystal, optical absorpt. and luminesc. (*Russian*) 2-104841
- CsBr(Cl)(I), additively coloured, illumination effect, 200-300 nm 2-57645
- Cs₂Cr₂Cl₆(Br₆), optical absorpt. and Zeeman study 2-98871
- CuInSe₂ single cryst., fundamental absorpt. band edge 2-77538
- Cu₂O, third order optical nonlinearity near exciton lines (*Chinese*) 2-99083
- Cu_{2-x}S thin films, oxidation-reduction effects on optical absorption, application in solar cells 2-82941
- Eu chalcogenides, undoped ferromag., real spin 7/2, density of states and band edge shift 2-76885
- GaAs film, amorphous, plasma deposition and characterisation 2-111094
- GaAs NIPi superlattice, tunable optical absorpt. coeff. 2-77477
- GaAs, third order optical nonlinearity near exciton lines (*Chinese*) 2-99083
- (GaAs)_{1-x}Ge, single-crystal metastable alloys, growth and optical props. 2-116360
- GaP, absorption coefficient, electron-phonon and hole-phonon interactions 2-67016
- GaP, indirect gap absorpt., invariants method appl. 2-77474
- GaP, uniaxially stressed, free carrier absorpt. spectra (*Russian*) 2-87818
- Ge, absorpt. calorimetry and laser induced damage threshold meas. 2-60146
- Ge, electron-phonon scatt. matrix and absorption coeff. 2-103923
- p-Ge, energy relax. mechanisms under nonlinear absorpt. of light 2-114357
- Ge, optical absorpt., photoacoustic spectra study, window material appl. 2-61855
- Ge, optical surface and bulk absorption at 10.6 μm 2-70631
- p-Ge, optical transitions between light- and heavy-hole bands and drag effect 2-116138
- Ge, uniaxially stressed, free carrier absorpt. spectra (*Russian*) 2-87818
- GeAs₂Ga, heavily doped by neutron doping, fundamental optical absorpt. edge profile 2-93145
- Ge-Se(S)(-As) amorphous films, obliquely deposited, Urbach tail, photoinduced changes 2-93309
- GeO₂, glassy, minimum optical losses 2-110891
- GeSe₂, glassy and cryst., pressure-optical studies, network topology analysis 2-67021
- GeSe, glass, reversible quasicrystn., Raman scatt. study 2-81685
- HCl, optoacoustic meas. of specific absorpt. coeffs. at DF laser wavelengths 2-112116

light absorption continued

- He-Ne/methane ring laser, nonlinear absorpt. line, resonant narrowing 2-90946
- In₂O₃ RF sputtered films, optical props. 2-57202
- In₂O₃:Sn film, transparent conductive, prep. by pyrolysis method 2-111091
- InP:Fe, semisolating, photocond. mechanism peculiarities (*Russian*) 2-104435
- InSb, Wannier-Mott exciton at absorpt. edge, quasione dimens. state in strong mag. field, expt. study 2-61369
- KBr(Cl), intensity depend. absorpt. at 10.6 μm , laser damage process 2-60193
- K₃Cr₂Cl₆(Br₆), optical absorpt. and Zeeman study 2-98871
- β'' -K₂O.Mg_{0.5}Al_{1.5}O₃, ionic cond. and IR absorption spectra 2-92260
- Li⁺, forging processes development for large scale deform. without optical props. degradation 2-60194
- LiNbO₃(Ni), γ - and X-ray irradiated, ESR, optical absorpt. and elec. cond. 2-98951
- LiTaO₃, depend. of photorefractive on temp. and light intensity (*Russian*) 2-61849
- LiYF₄:Nd³⁺, oscillator strengths and Nd³⁺ optical absorption lines 2-116175
- MgF₂ UV laser window material, low-level losses 2-97161
- MoS₂-metal Schottky barriers, photovoltaic effect and optical absorption 2-115862
- NH₃ laser absorpt. meas. in NH₃/O₂ flames, oscillator strength determ. 2-88388
- NH₃ laser absorpt. meas. in NH₃/O₂ flames, oscillator strength determ. 2-88388
- NaCl, intensity depend. absorpt. at 10.6 μm , laser damage process 2-60193
- OH, laser absorpt. meas. in NH₃/O₂ flames, oscillator strength determ. 2-88388
- PLZT ceramic, reduced, dark cond. and optical absorpt. 2-104374
- PLZT ceramic, transparent ferroelectric, dielec., optical and semicond. props., reduction effect (*Russian*) 2-99668
- PLZT transparent ceramic, elec. cond. model, dark current, photocond., optical absorpt. coeff. (*Russian*) 2-61504
- PbF₂:Eu³⁺ superionic conductor, optical absorption line broadening due to F⁻ ion motion 2-115456
- Pb_{1-x}Sn_xTe epitaxial films, additional long-wavelength absorpt. 2-77610
- PbZrO₃, Urbach edge behaviour at ferroelec. phase transitions 2-104838
- Rb₂Cr₂Cl₆(Br₆), optical absorpt. and Zeeman study 2-98871
- RuO₂ film, reactively sputtered, electronic struct. 2-110515
- Si, amorphous film, melting threshold energy in laser annealing 2-92026
- Si, deformation caused by absorpt. at fundamental band max. 2-77465
- Si film, glow discharge deposited, optical consts. 2-62006
- Si, indirect gap absorpt., invariants method appl. 2-77474
- n-Si, uniaxially stressed, free carrier absorpt. 2-87736
- Si, uniaxially stressed, free carrier absorpt. spectra (*Russian*) 2-87818
- Si:H, amorphous, sputtered, time-of-flight and photoinduced mid-gap absorpt., dispersion 2-87432
- Si:H, As, amorphous film, optical absorption, doping and temp. depend. 2-82945
- Si:H amorphous film, DC sputtered, characterization by optical and nuclear methods 2-93308
- α -Si:H films, optical absorption and density of states in band gap 2-72571
- Si-SiO₂ MOS interface states, optical excitation by IR light 2-56714
- Si₃N₄ thin film, amorphous, prep. by reactive sputtering in tetrafluoromethane (*Japanese*) 2-115596
- SIN film, plasma enhanced CVD coating, phys. and elec. props. 2-115629
- SiO₂, fused, far IR absorpt. coeff. meas. of different types 2-60188
- SiO₂-Ge, recombinative luminescence (*Russian*) 2-61962
- SiO_x film, semi-insulating polycryst., optical absorpt., depend. on annealing conditions 2-61999
- Te, optical absorption, permittivity, Hartree-Fock-Slater calc. 2-87733
- Th/Ba fluoride multicomponent glass, extended IR absorpt 2-61854
- Ti-Al-V surface, response to XeF laser pulse 2-110989
- TiO₂ sputtered optical thin film, extinction meas. 2-110967
- UF₆, laser induced fluoresc. and absorpt., temp. controlled vacuum cell and two-stage pumping system 2-84637
- XeCl laser pumped by high-intensity electron beam 2-80936
- α -Zn₃P₂ film, optical band gap 2-62004
- ZnS film, ultrahigh vacuum deposited and RF sputtered, optical consts. meas. 2-72573
- ZnSe, absorpt. calorimetry and laser induced damage threshold meas. 2-60146
- Zr vapour, density meas. by laser resonant absorption 2-91588

light absorption spectra see spectra

light amplifiers see image intensifiers

light attenuation see light absorption; light scattering; light transmission; optical dispersion

light coherence

see also laser beams; lasers

adaptive systems and coherence. I, conditional coherence function 2-70502

adaptive systems and coherence. II, conditional coherence function and effect of noise on meas. system 2-70503

aerosol spatial-frequency and wavelength-depend. effects on atm. MTF 2-106314

aperture aberration of fifth order, optimal compensation, light partial spatial coherence influence (*Czech*) 2-70509

apodisation problem in coherent imagery of edge ringing phenomenon reduction 2-75530

astrophysical sources of plasma lasers 2-63246

Brillouin backscattering from a double-pulse CO₂ laser incident on planar targets 2-91601

Brillouin scattering from laser-target interaction, spatial struct. and coherence props. meas. 2-91600

Collett-Wolf generalised sources, synthesis using principle of superposition 2-108781

complex amplitude addition and subtraction by holographic Fourier transform, coherence and misalignment influence 2-65190

correlator comparison, joint-transform and freq.-plane types, from coherence theory viewpoint 2-108812

couplers, codirectional and contradirectional, polarisation evolution 2-109037

light coherence continued

- cross-spectrally pure fields, spatially fully coherent, cross-spectral density function 2-85889
- crystals, magnetically ordered, light absorpt., Jones and Muller matrices 2-108780
- digital fibre optic communication systems, coherence and intersymbol interf. 2-81119
- double-slit imaging by acoustically coherence-controllable illum. 2-90801
- fibre coherent-detection system with correl. fields, single-freq. laser phase-noise limitation 2-109059
- fibre optic gyroscope, performance limitations due to end reflections and coherence 2-91083
- filter operations by coherent optics, three- and four-dimens. 2-90826
- free space propagation of the coherence of different frequencies 2-85890
- Gaussian multimode optical beam thermal self-interaction in a turbulent medium 2-97054
- Gaussian Schell-model planar anisotropic sources, radiant intensity 2-90808
- Gaussian Schell-model source and radiation field coherent-mode representation 2-96826
- Gaussian Schell-model sources, partially coherent light beams, propag. parameters 2-85888
- hologram, focused-image, recorded through scatt. layer in partially coherent light, contrast enhancement 2-114218
- holographic optical elements in partially coherent light, behaviour and appls. 2-85913
- image reversal in detect. of hidden diffractors by interferometry 2-70496
- image structure in coherent light 2-65180
- laser coherence control by US waves (*Japanese*) 2-86025
- laser field fourth-order spatial correl. functions 2-65161
- laser interferometer with spatial division of the wave front 2-84697
- laser light, classical and quantum theories of coherence, lectures 2-96886
- laser radiation, Doppler method of meas. time coherence 2-86030
- laser radiation in turbulent medium, thermal self-interaction influence on ang. spectrum and coherence 2-65280
- molecular gas, coherent emission, polarisation wave, control of transverse dimens., expt. study 2-114230
- multi-atom system, coherent radiation and entropy increase, theory (*Chinese*) 2-90848
- multimode laser field phase fluctuations in turbulent atm. 2-97052
- non-periodic extended object imaging in coherent illumination 2-55083
- nonlinear optical parametric up conversion, coherent interaction, statistical and coherence effects 2-108961
- nonlinear optical parametric up conversion, incoherent interaction, statistical and coherence effects 2-108962
- optical fibres, coherence of propagating laser beam 2-86116
- optical fibres, multimode, transmitted light, photon counting statistics meas. 2-65364
- optical isolator parameters, quasi-monochromatic wave, time coherence effect 2-97151
- OTF of lenses, illumination noncoherence in equipment for meas. 2-90833
- partial, photon counting distrib., computer simulation by Monte Carlo methods 2-60015
- partial coherence in space-freq. domain, steady-state source spectra and cross spectra 2-60014
- partially coherent imaging in space and freq. domains, digital simulation and modal expansion 2-102726
- partially coherent optical processing, coherence requirements 2-102723
- partially coherent radiators, theory 2-114186
- partially coherent sources, radiant intensity 2-75519
- periodic object imaging by acoustically coherence-controllable illum. 2-90802
- phase problem soln. of coherence theory 2-108793
- planar sources that generate the same intensity distrib. at output plane, relations 2-60012
- planar sources that generate the same radiant intensity at general optical system output 2-86068
- plane monochromatic wave propag. in extended turbulent medium, intensity correl. 2-55075
- quasi-monochromatic partially polarised source coherence matrix expansions, object reconstruction problem appl. 2-108814
- radiometry and coherence for quasi-homogeneous scalar wavefields 2-90804
- random light beams in absorbing media, correlation radius decrease obs. 2-91005
- resonant degenerate four wave mixing, nonlinear optical coherences theory 2-108946
- spatial coherence complex degree meas. at optical fibre end face 2-91059
- stimulated Brillouin scatt. excitation by incoherent optical radiation 2-114379
- stimulated scattering of partially coherent optical radiation, dominant conversion 2-108952
- superfluorescence transverse coherence and scaling in four-dimens. simulations 2-80921
- turbulence-meter signals, statistical characts., linear approxs. 2-114193
- two-dimensional imaging by acoustically coherence-controllable illum. 2-90803
- wave front reversal system performance, effect of inhomogeneity drift along a beam propag. line 2-102882
- wavefront coherence depend. on focusable power, optical spatial filter characts. (*Chinese*) 2-60219
- CO₂ high-pressure laser, short light pulse generation, coherent effects role 2-70540
- Na₂O-B₂O₃-SiO₂ glass, multiple scatt. in medium where single scatt. has a cooperative character 2-65169

light communication *see optical communication*

light cones

see also current algebra

- free massless scalar field theory, local algebras, modular struct. 2-64213
- nonlocal expansions, Altiarelli-Parisi equations 2-113148
- operator product expansion, application to Bethe-Salpeter equation 2-107505
- QCD, local and nonlocal light cone expansion, anomalous dimensions 2-95743
- QFT, asymptotic scaling on the light cone 2-53984
- supersymmetric dual string theory, vertices and trees 2-84876
- vacuum with oscillatory collapse, world lines, light cones 2-69062

light diffraction

see also holography; optical zone plates

- acoustic waves, light diffr. for case when beam axes coincide 2-96831
- acousto-optic diffr., collinear, using diffuse acoustic field 2-72450
- acousto-optic modulators with anisotropic diffr. 2-86089
- acousto-optic nonlinear device, bistable optical switching based on Bragg diffraction 2-60229
- adjacent ultrasonic beams effects, outside Raman-Nath region 2-102971
- adjacent US beam effects 2-109104
- annular apertures focused in the Fresnel region 2-108775
- astigmatic rainbow holography, diffr.-limited recording scheme 2-75543
- astronomical object image correction procedure for distortions due to atm. turbulence 2-100756
- asymptotics and catastrophes 2-90798
- atomic beam resonant light diffraction 2-96832
- beam optical systems, spherical aberration, diffr. theory 2-80903
- Bragg cell diffraction, patterns, appl. to optical processing 2-65154
- Bragg diffraction switches, electrooptic, in low cross-talk integrated-optics switching matrix 2-91093
- broadened penumbra caustics 2-102722
- chromatin fibres, electron micrographs, Fourier analysis and optical diffr. 2-111826
- colour-coded character-recognition expt. with wavelength-triplexed refl.-type holographic filters 2-75536
- complex amplitude distribution determ. transmitted by arbitrary refracting surface 2-70499
- conductor edge slopes meas. 2-58779
- converging spherical wave diffraction, focal shifts 2-60017
- corrugated grating structures in diffused waveguides, noncollinear Bragg diffr. 2-60237
- 4-cyano-4-n-ocetyl-diphenyl, smectic A liq. cryst., light diffr. on linear disclination 2-103622
- cylinder size distribution, light-scatt. determ., analytic approx. 2-75527
- diaphragm aperture, focusing of light beams with Gaussian intensity distrib. 2-97163
- dicalcium barium propionate, short-range order, optical transform study 2-98044
- diffraction, of light by sound, nonlinear effects 2-65426
- distorted boundary imaging, astigmatism influence (*Czech*) 2-96844
- dyes, self-diffr. of light by means of induced dichroism lattices 2-108942
- far-field caustics, law of reflection, catastrophe theory 2-65153
- fibres, transparent, sizing using light scatt., refractive index, correction factors 2-58781
- Fourier transformer, achromatic, spatially coherent 2-96847
- Fraunhofer diffraction, beam approx., from two longitudinally separated slits, unstable-resonator calc. appls. 2-60013
- gas ring laser oppositely travelling wave freq. diffr. splitting 2-81008
- Gaussian beam diffraction by dielectric spheres 2-85873
- Gaussian beam incident upon thick phase grating, diffr. orders 2-55315
- Gaussian beams weakly diffracted by circular aperture, changes in characts. 2-55060
- Gaussian optical pulse distortion by diffr. grating 2-91034
- glass laser system, high-power, light pulse diffr. propag. 2-55072
- gratings, dichromated gelatin, absorpt. and refr. index modulations 2-70520
- gratings, perfectly conducting, variational theory, ghost study appls. 2-75511
- holograms, plane diffr. efficiency calcs. for speckle-inhomogeneous object field 2-55097
- holographic efficient aberration-free lenses, design in presence of construction-reconstruction wavelength shift 2-60039
- holographic grating surface diffr. efficiency uniformity improvement 2-75544
- holographic imaging systems two- and three-element, chromatic connection 2-70519
- holographic lenses, on-axis, higher diffr. orders 2-114395
- image multiplexing method through internal modulation of speckle patterns 2-65177
- image reversal in detect. of hidden diffractors by interferometry 2-70496
- imaging, diffr.-limited 2-90825
- inhomogeneous anisotropic medium, phase function anal. and Born approx. 2-114190
- irradiance moments, propag. and use for unique phase retrieval 2-108778
- laser induced excited state gratings, amplitude and phase grating contribs. to diffraction 2-102970
- laser light recording on positive paper for student laboratory expts. 2-53470
- laser speckle produced by moving diffuse object under Gaussian beam illum., dynamic statistical props. 2-75526
- laser systems, geometrically outcoupled, limiting apertures 2-90953
- Lau effect and grating imaging 2-75515
- lipid-water systems, phasic transition models, evaluation by optical analogy 2-57776
- multimode laser field phase fluctuations in turbulent atm. 2-97052
- near field Fresnel diffr. pattern numerical evaluation, undersampling and aliasing error distinction 2-108776
- nematic liquid crystals with high nonlinearity, strong optical diffr. 2-60185
- nonlinear cryst., SHG and laser radiation diffr. by acoustic waves 2-65305
- open resonators, diffr. losses, geometric approach 2-55219
- optical disc readout, coherent scanning mode 2-85899
- phase contrast flow visualisation, diffr. theory 2-55675
- planar dielectric grating diffr. theories 2-80893
- plane wave diffraction in weakly turbulent medium 2-60022
- pulse evolution, effects of propag., transverse mode coupling and diffr. 2-97098
- pulsed laser wave front monitoring appl. 2-95426
- pulverised products quality control, computerised particle size analyser (*Italian*) 2-58789
- quasi-optical wave beams diffraction by periodic gratings 2-90810
- Raman-Nath acousto-optical diffraction in phase grating plane 2-80897
- ring-laser opposing-wave frequencies, diffr. splitting, active element extent and transverse inhomogeneity effect 2-81009
- rough surfaces, light scatt. processing by stationary phase method, effect of approximations (*French*) 2-60021
- SAW, laser beam diffr. for investigating props. of planar structures (*German*) 2-102843
- segmented aperture averager, optical anal. 2-97141
- Shannon numbers of diffraction images 2-102736

light diffraction continued

- spectrum reconstruction from intensity distrib. of diffraction pattern from slit or slit array (*Japanese*) 2-113015
 spherical optical resonator, interf. function, diffr. correction for length meas. by mirror displacement (*German*) 2-69246
 spherical particles, partial-wave resonances for electric light scattering 2-75528
 surface contour meas., interference of diffracted laser beam 2-89687
 telescope, ground, phase detector wave-front sensing and correction, different wavelength effects 2-78837
 transmission optics, book 2-112672
 turbulent medium, collimated Gaussian light beam propag. 2-70508
 unsalted thick phase grating finite beam Bragg diffr., rival theories 2-80894
 unstable ring resonator with self imaging aperture, mode anal. 2-108907
 volume holograms, Raman-Nath diffr. corrections 2-102749
 waveguide mode diffraction at open end of two-dimens. metallic waveguide, indeterminate Pade approx. 2-90809
 waveguides, dielectric, graded-index, planar, optical modes, WKB approx. 2-102923
 Ag film, volume EM, surface EM and SAWs, three-wave mixing 2-82936
 $\text{Ba}_2\text{NaNb}_2\text{O}_5$, rotational striations and diffusion 2-115157
 $\text{Bi}_7\text{SiO}_{20}$ photorefractive crystals, collinear Bragg diffr. 2-97080
 GaAs stripe injection lasers, regular integrated array 2-80998
 GaP crystal with induced anisotropy, anisotropic Bragg diffr. of light by ultrasound 2-61873
 Ge, laser-induced periodic surface damage and radiation remnants 2-98154
 Na at. beam, resonant light diffraction 2-96832
 Nd:YAG polarisation-coupled stable/unstable-resonator laser oscillator, single-axial-mode operation 2-55165
 Nd³⁺:YAG laser, passively Q switched by LiF crystals containing colour centres, characts. 2-85978
 Si, laser annealed, surface topography study 2-104129
 XeF laser emitting 2-nsec. pulses of near-diffr.-limited divergence 2-70599

light diffusion *see* light scattering

light dispersion *see* optical dispersion

light emitting devices

see also light emitting diodes; light sources; luminescent devices
 No entries

light emitting diodes

- see also* semiconductor junction lasers
 calibrated sources of monochromatic radiation at 0.69 and 1.06 μm 2-60207
 chemical potential of radiation, appl. to LEDs 2-90849
 coupling step index fibre, review (*French*) 2-97225
 density and moisture meas., using functional equation of radiation flux 2-58836
 devices for advanced fibre systems 2-97229
 EM interference, reduction (*Japanese*) 2-65397
 fibre coupling efficiency improvement using total internal reflection 2-70673
 fibre-optic communication line, expt., with spectral multiplexing of LED radiation by diffr. grating 2-114464
 fibre-optic coupling for packages with surface emitting LEDs 2-97223
 glossometry, tongue-palate distance meas. during speech using LED/phototransistor combination 2-94264
 II-VI semiconductor, polishing induced phase transforms. of single crystals. for device appl. 2-72852
 IR reflectance system for ambulatory characterisation of left ventricular function 2-94151
 laser diode and LED luminance law $L(P,\theta)$ determ., near field technique (*French*) 2-107382
 launching efficiency improvement into fibres with hybrid or integrated spherical lenses 2-109067
 material dispersion meas. in optical fibres 2-60243
 moisture optoelectronic transducer, LEDs based on heterojunctions 2-79594
 optical communication appls., book 2-101147
 optical fibre technology, comparison of uses of lasers and LEDs 2-97228
 optical transmission techniques, emitters and detectors (*German*) 2-97231
 photodetectors and LEDs for wavelength-division-multiplexed light-wave systems 2-81120
 proton damage effects 2-71517
 pump sources for Nd:YAG lasers 2-70572
 semiconductor device physics, book 2-53437
 visual experimentation applications 2-62874
 $\text{AlGa}_{1-x}\text{As}$ p-n junction, double injection, electroluminescence 2-61981
 CdS MIS diodes green electrolum. and photolum. study 2-72558
 GaAlAs DH LEDs, recombination-induced deep level form., DLTS study 2-98588
 GaAs, p-n homojunction LEDs, emission spectra calc., ghost peak form. 2-61980
 GaAs, shallow-junction, surface-emitting spectral tuning through gamma radiation 2-115287
 Ga_{0.95}In_{0.05}N VPE LEDs, deep centre studies by photocapacitance method 2-56637
 Ga_{1-x}In_xAs_{1-y}P_y LED, spontaneous emission efficiency and nonradiative recombination meas. at 1.58 μm 2-116220
 GaInPAs/InP heterostructure LED service life, 1.2-1.3 μm range 2-60082
 GaP, deep level, luminesc. study 2-110949
 GaP LEDs, LPE growth on LEC and synthesis solute diffusion substrates 2-111098
 GaP, large diameter single cryst., computer controlled LEC growth, yellow LED fabrication 2-99327
 GaP light emitting diodes, microcomputer-corrected spectrosc. meas. 2-58910
 GaP p-n junction, LED, thermally stimulated noise 2-104444
 GaP:N LED, yellow sideband radiation increases during ageing 2-116261
 GaP:N LED degradation, surface corrosion 2-116559
 InGaAsP on InP LPE for 1.3 micron high radiance IR LEDs and for photodiodes 2-111101
 InGaAsP sources and detectors for the 1.0-1.7 μm wavelength range 2-95467
 InGaAsP/InP DH, nature of electron leakage 2-87377
 InGaAsP/InP DH, photolum. intensity 2-87881
 InGaAsP/InP high radiance IREDS with emission wavelength 1.3 micron and transmission rate 140 Mbit/s 2-109079

light emitting diodes continued

- InGaAsP-InP DH LED, aged, dark defects 2-91974
 InGaAsP-InP LEDs, prep. and props. of monolithically integrated lenses 2-114473
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ lasers and LEDs, Auger recombination 2-55160
 $\text{InGa}_{1-x}\text{P}_x$ LPE layer, N conc. and In content, correlation 2-71819
 InP/(Ga,In)(As,P)/InP, optical fibre components for 1.3 micron telecommunication (*French*) 2-97224
 n-In₂-Sn₂O₃-InP photo and electroluminesc. diode 2-61571
 Nd:YAG laser beam, weak, simulation using LEDs 2-70602
 ZnSe LEDs, effect of residual impurities 2-57183
 ZnSe thin films, selective area MBE, electrolum. device appl. 2-92387
 ZnSe:Ga, MBE growth and elec. cond. and photoluminesc. props. meas., blue LED appl. 2-87986
light filters *see* optical filters
light intensifiers *see* image intensifiers
light interference
see also light interferometers; light interferometry; Moire fringes
 beamsplitter coatings for visible and IR spectral regions 2-75661
 blood flow velocity measurement using laser Doppler microscope 2-94261
 crystals with anisotropic point, polarised beam multiple-beam selective interference 2-65163
 dielectric spheres, periodic monolayer, light reflectivity and EM localised states 2-60019
 diffusers, identical, interference, speckle patterns 2-60026
 fibre location determination in silicone coatings, light scatt. model 2-65362
 filters, magneto-optic, dispersive 2-86075
 filters with multiple peaks 2-86076
 fringe shifts in multiple-beam Fizeau interferometry 2-74491
 graded-index polymer rods, polarisation props. 2-114426
 gradient index optics, conf., Honolulu, HI, USA (May 1981) 2-58521
 holographic grating surface diffr. efficiency uniformity improvement 2-75544
 holography, far-field, object shape, fringe visibility and resolution 2-75541
 image formation, three-dimens., by time signal transform. into spatial struct. 2-102732
 in-line holography with interference filters as Fourier processors 2-85915
 interference optical coating synthesis 2-70652
 interference polarisation filter, element orientation accuracy influence on transmission spectrum 2-91030
 laser interference length measurement, data processing, dial and interpolation combination (*Chinese*) 2-97066
 laser mirrors for far VUV spectral region 2-81046
 lateral shearing interferometer, interference field phase distrib. 2-58894
 Lau effect and grating imaging 2-75515
 linear nonuniform medium, phase conjugation, aperture probing, interference, optimum focusing 2-5896
 linear pattern elements, recognition unit (*Russian*) 2-96849
 liquid core fibres, geom. characts., thermally induced mode cutoffs and interf. meas. 2-102932
 metal-coated optical plate, thermally induced laser interf. and birefr. 2-108928
 microscopy, quantitative interference, microscope aperture effect 2-89802
 mirrors, multilayered, interf., ang. props. 2-81045
 moire pattern of a linear grid with a lenticular grating 2-90807
 moire patterning, graphic method 2-70497
 multi-thin-film array, absorptivity, interference, finite element embedding 2-70492
 optical fibres, coherence of propagating laser beam 2-86116
 optical fibre connections, interf. effects 2-70675
 polymer sphere Poisson ratio meas. using Newton's rings 2-114742
 prism coupler jig for coupling gap obs. using interf. fringes 2-65416
 reflecting interference-polarization light filter 2-75664
 reflection filters for fluorometry 2-70662
 rhodamine 6G dye laser spectrum, gain determ. using the interf. struct. 2-114264
 segmented aperture averager, optical anal. 2-97141
 spatial coherence complex degree meas. at optical fibre end face 2-91059
 speckle patterns, interference from two identical diffusers 2-75522
 surface contour meas., interference of diffracted laser beam 2-89687
 telescope, ground, phase detector wave-front sensing and correction, different wavelength effects 2-78837
 thin-film optical waveguide, interf. of scattered modes 2-97173
 Al, anodic oxide film, electrolum., interference effect 2-61983
 Al_2O_3 anodic oxide film thickness determ. by electrolum. method 2-110961
 $\text{Bi}_7\text{GeO}_{20}$ photorefractive crystals, four-wave mixing expt., interference between signal and its conjugate 2-90972
 CO_2 laser optics design, weak refl. influence from anti-refl. coated surfaces 2-90933
 GaAs, thermally oxidised, Lloyd's mirror interference method for determ. of photoelastic index variation 2-64096
 MgF₂ coatings, damage threshold, light wave interf. and film microstruct. influence 2-71500
 SiO₂ thin films, luminesc. study, interf. effects 2-104968
 TiO₂ coatings, damage threshold, light wave interf. and film microstruct. influence 2-71500
light interferometers
see also light interferometry
 accelerometer, portable fibre launched confocal Fabry-Perot, design and performance 2-91087
 acoustic sensors, interferometric, fibre coating optimisation 2-81099
 applied optics, conf., Rochester, NY, USA (May 1982) 2-112647
 astrometric appl. 2-58258
 concentric etalon for single-freq. operation of higher-power ion lasers 2-89798
 confocal Fabry-Perot sensor, optical displacement sensor for acceleration and vibration meas. 2-58889
 differential heterodyne fibre interferometers, phase tracking schemes 2-79665
 digital IR phase meter using laser emission frequency conversion 2-112985
 dilatometer, AC interferometric, electromechanical deformation meas. appl. 2-69128
 diplexer, high efficiency, using interferometric optical circuits 2-70697
 double exposure grating interferometer, direct phase meas. 2-101451
 double-beam and multiple-beam reflection interferometer charact. comparison when measuring displacements 2-112965

light interferometers continued

- Doublet III, real time two wavelength interferometer system 2-80278
 dual tunable Fabry-Perot concept for spectrally agile IR filter 2-109022
 echelle-interferometer Cassegrain spectrograph, appl. to astronomical spectroscopy 2-106534
 Fabry-Perot, absorptive and dispersive bistability for Doppler-broadened medium, steady-state theory 2-97087
 Fabry-Perot, using laser light, passband stabilization circuit 2-95458
 Fabry-Perot, with spherical-surface adjustment 2-64101
 Fabry-Perot etalon, fast dispersive beam deflectors and modulators 2-86083
 Fabry-Perot interferometer, coherently driven, bistable systems in nonlinear optics 2-102857
 Fabry-Perot interferometer, errors computing due to non-parallel mirrors 2-58893
 Fabry-Perot interferometer, five-pass, Brillouin scattering meas. under high press. (*Japanese*) 2-64104
 Fabry-Perot interferometer, nonparallel plates, intensity distrib. 2-107397
 Fabry-Perot interferometer, triple etalon, appn. in meas. of atmospheric absorption lines and stratospheric winds 2-68517
 Fabry-Perot interferometer for 1-5 μm range 2-106536
 Fabry-Perot interferometer for HCN CW submillimeter wave laser output wavelength meas. 2-102811
 Fabry-Perot Interferometer on Dynamics Explorer 2-58176
 Fabry-Perot multi-pass interferometer 2-74494
 Fabry-Perot nonlinear interferometer, multi-stable mode 2-112963
 Fabry-perot scanning interferometer for student meas. of spectral line splittings 2-79304
 Fabry-Perot scanning interferometric bistable optical device 2-102847
 Fabry-Perot type cavity pair, very high freq. intensity oscills. 2-108991
 far-infrared Michelson interferometer with a step drive operating on line with a computer 2-95457
 far-IR interferometer, microprocessor controlled 2-74492
 far-IR interferometer with sky input horn 2-75655
 fast-scanning interferometer, for meas. of atmospheric effects on limiting resolution of electro-optical devices 2-117457
 fibre interferometer, passive stabilisation scheme using (3X3) fibre directional couplers 2-112962
 fibre interferometer, phase oscillation due to light impulse, bolometer appl. 2-89806
 fibre interferometer for minute biological displacements meas. 2-73411
 fibre interferometers, optical techniques, for signal fading problem soln. 2-53825
 fibre interferometric sensor, synthetic-heterodyne demodulation technique 2-81101
 fibre optic coherent interferometric sensors, optical FM appl. 2-91084
 fibre optic interferometer as elec. field sensor utilising piezoelec. PVF₂ film 2-81096
 fibre optic interferometric sensor construction, LF laser jitter effect 2-91086
 fibre optic interferometric sensors, homodyne, signal fading elimination using passive compensation 2-91085
 fibre optic Sagnac interferometer, freq. modulated heterodyne, for rot. rate detect. 2-81100
 fibre optic sensors, colloquium, London, England (May 1982) 2-89464
 fibre ring interferometers, nonreciprocity 2-109066
 fibre-optic, microwave signal generation using an optical self-heterodyne technique 2-75611
 fibre-optic interferometer, high-noise-rejection 2-58895
 fibre-optic interferometer sensors for weak magnetic fields 2-89757
 filters for Fourier filtering and freq. coding 2-65339
 Fizeau, laser wavelength meas. appl. 2-60111
 flow velocity field meas. using optical processor with coherent optical negative feedback (*Russian*) 2-114933
 geometrical parameters of objects testing, by annular structure of laser beams 2-58783
 grating interferometer with an unusual fringe direction 2-89795
 gravitational wave detector, demands on laser parity 2-63887
 guided-wave interferometer, high-speed, appl. 2-102957
 gyros based on Sagnac effect, fundamental precision limit (*Chinese*) 2-60241
 heterodyne plasma interferometer based on polarisation modulation of a HCN laser 2-109594
 high-speed flow process investig. using laser Doppler and stroboscopic anemometers (*Russian*) 2-114934
 I2T at Grasse, France, optical interferometer, principles, setting up and use 2-78961
 imaging interferometer sounder for remote sensing, design considerations for programmable signal processor 2-112160
 imaging sounder interferometer for remote sensing, optical system design 2-112159
 integrated optical temperature sensor based on array of waveguide interferometers 2-95373
 interference correlator with determination of the foreshortening of the image 2-89801
 intracavity Fabry-Perot interferometer, parameter optimisation calcs. 2-70585
 laser, vibr. compensated far-IR, for plasma density meas. 2-91667
 laser Doppler meter using scanning optical frequency discriminator (*Russian*) 2-114946
 laser interferometer, multi-purpose, aspherical surface monitoring (*Russian*) 2-84689
 laser interferometer for industrial length meas., atm. influence compensation, metric unit conversion 2-112966
 laser interferometer with spatial division of the wave front 2-84697
 laser wavelength meas., errors identification and elimination 2-60134
 laser-beam heterodyne receiver, four-prism interferometric diplexer 2-60256
 lateral shearing interferometer, interference field phase distrib. 2-58894
 layered semiconductors, Brillouin scattering meas. using microprocessor-controlled Fabry-Perot interferometer 2-79655
 liquid crystal tunable Fabry-Perot spectral filter, visible and IR operation 2-109023
 Mach-Zehnder interferometer, sinusoidal object differentiation using holographic filter 2-108807
 Mach-Zehnder waveguide interferometer, picosecond sampling 2-60238
 Mach-Zender interferometer, correlation function in pattern recognition, effect of transparency characts. 2-108821
 Martin-Puplett twofold interferometer providing path difference doubling 2-95459
 Michelson, He-cooled, for far-IR astronomy on GIRL 2-117595

light interferometers continued

- Michelson, refractively scanned, performance characts. in Fourier transform spectroscopy 2-113008
 Michelson interferometer, multiple-beam, for far IR 2-84687
 Michelson interferometer based complete Fourier transform system for far-IR spectroscopy 2-95491
 Michelson spectrometer, calibration procedures 2-113009
 Michelson-type cryogenic, balloon-borne, for atm. IR emission meas. using Fourier transform spectroscopy 2-117474
 multi-beam selective interferometers, theory 2-112964
 multichannel CO₂-laser interferometer using a PbSnTe detector array for plasma electron line density meas. 2-53828
 multiple-beam selective interferometers, optical characts. 2-95461
 multiple-beam selective interferometers using diff. gratings 2-64103
 multiple-reflections interferometer, ultrasensitive 2-89794
 noncoherent Fourier-transforming interferometers 2-74498
 nonlinear bistable interferometer, transverse field struct., switching waves, steady-state profiles 2-112967
 nonlinear bistable interferometer, transverse field struct., time-depend. regimes 2-112968
 nonlinear interferometer, role of phases in transient dynamics, absorptive and dispersive bistability 2-97088
 nonlinear optical interferometer 2-53824
 optical fibre interferometric sensors, correlated laser phase and intensity noise 2-79664
 outdoor scatter-fringe interferometer as visual phenomenon 2-74495
 phase modulation interferometer, for characterisation of laser fusion targets 2-79656
 planar optical micro-waveguide 2-79661
 polarisation-maintaining single-mode-fibre interferometer for autocorrelation function meas. 2-114452
 polarizing interferometer for far IR Fourier spectroscopy 2-74490
 pressure continuous measurement using laser interferometer (*German*) 2-79531
 reflection-transmission phase shift, interferometer and viewing optics for automated surface mapping 2-74489
 refractive index differences measurement using multibeam wedge interferometer 2-64098
 ring fibre interferometer, nonlinear phase nonreciprocity 2-112969
 ring fibre interferometer phase nonreciprocity due to acoustic emission 2-79662
 Ronchi-Talbot shearing interferometer, periodic source coupled with single filtering slit 2-101454
 scanning device for optical instruments 2-75666
 semiconductor interferometric laser, mode selection and tuning props. meas. 2-97000
 semiconductor interferometric laser, monolithically integrated cavity struct. 2-60127
 semiconductor internal reflection interference laser 2-60096
 semiconductor laser of interferometric and ring types scatt. matrix formulation 2-80963
 shearing interferometer, multiple-order radial-grating 2-79653
 sigmometer, instrument for meas. wave nos. of pulsed and CW lasers 2-95464
 single mode fibre interferometer, passive compensation scheme 2-84688
 Smartt interferometer, high damage threshold IR, using Si film, for laser alignment and diagnostics 2-101452
 Smartt IR interferometer for laser system optical analysis and alignment appls. 2-101453
 spherical optical resonator, interf. function, diff. correction for length meas. by mirror displacement (*German*) 2-69246
 stable salinity gradients, heated from below or cooled from above 2-65634
 strain/displacement gauge appls., review 2-86245
 twin hollow cathode interferometer-spectrometer, low temp., gas kinetic temp. radial distrib. (*German*) 2-84713
 two-channel optical Doppler anemometer turbulent flow spatial correl. meas. (*Russian*) 2-114944
 CO₂ eight-chord laser interferometer for plasma density meas. on ZT-40 2-103441
 CO₂ laser interferometer for plasma electron density meas. 2-114231
 CO₂ TEA large cross-section interferometer for plasma diagnostics 2-103440
 GaAlAs-GaAs-GaAlAs passive etalon, optical bistability obs. 2-102859
 Ge Fabry-Perot interferometer heated by laser radiation, thermal hysteresis 2-53829
 He-Ne laser probe for SAW measurements 2-81184
 Si etch rate thin film monitor for in-situ meas. using light interferometry 2-79654
 Si wafers, surface deform. meas. using interferometric techniques 2-84691

light interferometry

see also *holographic interferometry*; *Moiré fringes*

- aberrations, sixth-order, interferograms and point spread functions 2-114201
 absorption measurements of laser optical materials by interferometric calorimetry 2-97044
 astro speckle interferometry, phase problem, simple resolving modification 2-94622
 atomic distributions determ. by anomalous methods, increased efficiency 2-114967
 automatic fringe analysis using digital image processing techniques 2-89797
 binary star speckle interferometry, accuracy 2-58269
 biomedical sciences, optics appls., conf., Graz, Austria (Sept. 1981) 2-107021
 coherent source alignment using spherical confocal Fabry-Perot interferometer, expt. work and appls. (*German*) 2-74493
 colour photography by speckle interferometry in white light 2-89841
 complex refractive index of gases, meas. as function of wavenumber, temp. and pressure 2-107396
 component surface testing, interferogram processing precision analysis 2-60212
 contact lenses, hard, back surface meas. with interferometer 2-62714
 corona discharges, interferometric meas. of gas temp. 2-65785
 crystal electro-optic coefficient meas. method, interference signal detect. between transmitted and refl. beams 2-84690
 crystalline polymers, birefringence meas. using far-IR interferometry 2-95465

light interferometry continued

current measurement, fibre-optic detector for difficult environments (*French*) 2-91054
 deformed state examination, interference optical methods, survey 2-114745
 differential speckle interferometry, astron. appls. 2-73856
 diffusing object contouring in real time with moiré interference 2-69139
 dralon fibre of dog-bone cross-sectional shape, birefringence, interferometric meas. 2-91049
 electrodeposition, vertical electrodes, diffusion layer growth, mag. field effect, interferometric study 2-93455
 electronic speckle pattern interferometry for static and dynamic surface displacement meas. 2-91357
 explosive, Gruneisen parameter meas. 2-76629
 Fabry-Perot interferometer, device function determ., spectral line profile (*German*) 2-69245
 femtosecond interferometry for nonlinear optics 2-81014
 fibre coherent-detection system with correl. fields, single-freq. laser phase-noise limitation 2-109059
 fibre connectors, single and multimode, interferometric technique for small gap meas. 2-102926
 fibre fracture parameters and testing (*French*) 2-70694
 fibre optic interferometer for vibr. meas. (*Japanese*) 2-84619
 fibre power-law and wavelength depend. group refr. index determ. (*German*) 2-75711
 fibre-optic interferometric sensor phase compensation 2-89799
 fibre-optic magnetic field sensors, thermal phase noise anal. 2-102948
 fibre-optical hydrophone using multimode waveguide, based on Mach-Zehnder interferometer 2-81189
 fibreoptic sensors, introduction 2-81105
 film thickness determ., laser interferometry technique 2-63969
 Fizeau multiple-beam interferometry, fringe shifts 2-74491
 free convection heat transfer from upward-facing horizontal isothermal surfaces, investig. 2-114805
 fringe-pattern analysis using Fourier-transform method, computer-based topography and interferometry appls. 2-58890
 gases, mean mol. polarisabilities and second virial coeffs., interferometric determ. 2-97703
 gravitational radiation, laser interferometry high precision detection 2-63888
 gravitational waves, optical cavity laser interferometry detection 2-63889
 heterodyne interferometry, vibr. meas. method 2-74496
 heterodyne plasma interferometer, technique for direct phase demodulation 2-84695
 holograms, off-axis image field, object phase, simple reconstruction device for interferometric detection 2-114223
 image spectrogram interpretation in some metrological appls. 2-79685
 inertial confinement fusion plasmas, laser diagnostics 2-103450
 intensified video speckle interferometry system, Steward observatory 2-73857
 interference microscopy in field of crystal growth 2-69243
 interference-microscopic film thickness meas. (*German*) 2-112864
 interferometric refractometer for measuring the relative refractive index of two liquids 2-53822
 IR laser reflector, dielectric-enhanced, wavefront error, interferometric meas. in visible light 2-95455
 IR two-wavelength He-Xe laser interferometer, appl. to length meas. 2-79534
 laser anemometry, appln. to investigation of ultrasonic vibratory systems 2-89800
 laser beam expanders, large diameter, interferometric anal. 2-95454
 laser beam expanders, large diameter, interferometry 2-97038
 laser beam wavelength meas. instrum. 2-95460
 laser diagnostics appl. 2-95456
 laser Doppler anemometer, for plasma stream diagnostics in industrial MHD systems (*Russian*) 2-115040
 laser fusion targets, noncentricity characterization by interferometry 2-85248
 laser interferometry for aspherical surface shape testing 2-97247
 laser mirror dynamic distortion meas. using Twyman-Green interferometer (*Chinese*) 2-97027
 laser specklegram automatic readout technique (*Chinese*) 2-95453
 laser targets, high-precision optical monitoring technique 2-85263
 length measurement, by means of laser (*German*) 2-95319
 lenses, gradient-index rod, wave-front aberration meas. using digital Twyman-Green interferometer 2-75649
 Linnik interferometer use at short wavelengths 2-69240
 liquid refr. index meas. using interf. device, depend. on press. and temp. 2-116143
 low-gravity environment, interferometry and holography, materials processing in space expts. 2-70515
 magnetic tape contact area meas. using interferometry 2-69242
 Michelson expts., conf. (Potsdam, April 1981) 2-89430
 Michelson stellar interferometer optical surface and rot. axis alignment using Twyman-Green interferometer 2-112337
 microscope employing laser interferometry for cosmic ray track meas. in plastic detector 2-64841
 microscopic equipment, methods, appls. and related topics, list of publications 2-53449
 mirror surface ripple effects on image quality, astron., telescope performance appls. 2-108994
 mirror surface testing, fringe contrast improvement in Fizeau interferoscope 2-55297
 moiré, for strain gauges calibration 2-114743
 moiré interferometry developments, in-plane displacements determ. 2-84694
 moiré interferometry for simultaneous detect. of in-plane (U) and out-of-plane (W) displacement fields 2-101450
 Moiré interferometry near the theoretical limit 2-79651
 moving platform experiments, drag of light aberration 2-53607
 multiple-wavelength AC interferometry, simultaneous ref. index profile and gradient chromatic var. meas. appls. 2-74486
 natural convection in partitioned enclosures, interferometric obs. 2-114810
 nematic liquid cryst., elastic constants, band and splay, in cylindrical geometry, interferometric anal. 2-71347
 noncontact relative meas. of cylinder diameter and end gauge length using IG-113 interferometer 2-107301
 object reconstruction uniqueness from intensity data, interferometric method 2-84692

light interferometry continued

oil, heavy, heated by laser beam, surface profile, interferometric determ. 2-84693
 optical surfaces and thin films, IR interferometric analysis 2-70711
 phase measurement interferometry, least-squares estimation 2-95462
 planarity checking of thin transparent plates, resolving power 2-69136
 Pluto-Charon system, speckle interferometric obs. (1980 June 5) 2-106612
 polarisation effects in interferograms of conical optical elements 2-53823
 polypropylene fibre, multiple skin, refractive index and birefringence variations, interferometric meas. 2-91048
 quartz, microwinning, interferometry study 2-115248
 quasi-interferometry with coded correlation filtering 2-107392
 R136a, possible supermassive star, speckle interferometry rel. to ang. dia. 2-94719
 radionuclide production from gas targets, opt. obs. of intense particle beam influence on high-pressure gas targets 2-113794
 Ramsey fringe observation in 10 micron spectral region using CO₂ laser and SF₆ supersonic beam 2-58892
 Ramsey fringes using transitions in the visible and 10 μ m spectral regions: experimental methods using Ca atomic beam and dye laser system 2-58891
 real-time image subtraction using complementary photographic diffusers 2-102724
 refractive index measurement of moist air in 3 μ m region 2-95444
 remote sensing, design considerations for programmable signal processor for imaging interferometer sounder 2-112160
 remote sensing, optical system design of interferometer imaging sounder for temp. meas. 2-112159
 remote sensing with white light 2-89781
 Rozhdestvenskii interferometer with zero path difference for Nfl value determ. 2-79658
 shear role in interferometer system 2-107395
 shearing, appl. to imaging and strain distrib. of ang. vibr. diffused plate 2-69244
 shearing interference method for index profiling of distributed-index lenses 2-74483
 shearography, method for strain meas. and NDT 2-91355
 shock waves, planar, interferometric obs. 2-70993
 single-mode optical fibre, min. dispersion spectra of short lengths, interferometric meas. 2-86138
 solar pond mixing layer development interferometric study in laboratory simulation 2-83516
 speckle method, white light, perspective effect 2-74487
 speckle metrology techniques, parametric exam. of observed fringes 2-89796
 speckle pattern interferometry, vibration meas. appl. 2-79657
 speckle photography, error of lateral sinusoidal vibrs., simple analytical soln. 2-74488
 speckle photography data processing, diff. halo intensity variation in Young's fringes 2-95463
 speckle shearing interferometry, a new method 2-107393
 speckle shearing interferometry rel. to displacement derivatives, use of glass plate for correlation fringes 2-53826
 stellar speckle interferometry, isoplanatic patch size 2-112343
 stellar speckle interferometry; object reconstruction method, computer simulation 2-112338
 surface profile and texture meas. by laser interferometric transducer 2-112869
 thermooptic-based interferometric technique for differential meas. of weak solute absorpts. 2-79652
 thin film, low absorbing, 2-D thickness distrib. determ. using new laser interferometry 2-112961
 time-average defocused speckle photography, virtual fringe analysis method 2-53827
 trace gas detection using Fabry-Perot interferometric photothermal technique 2-112881
 triplet standard lens, intercomparison of calc. and meas. OTF 2-114202
 two-beam interferometry, hidden diffractor detect., image reversal 2-70496
 US power determination, μ W range, using laser interferometry, medical appl. 2-91193
 variable displacement resolution by laser interferometry 2-107298
 vibration mode anal. using electronic speckle pattern interferometry, instrument 2-83324
 vibration mode analysis using electronic speckle pattern interferometry 2-79659
 Voigt analysis of interferograms using Ballik's method 2-74497
 volume electroionisation discharge, electron beam ionis. of gas, electron conc. determ. 2-115077
 water, cavitation induced by shock wave refl. 2-70999
 wavefront detector based on the Talbot effect 2-58896
 Weigert effect, use for optical data processing (*Dutch*) 2-58924
 wideband differential interferometric system using optical fibres 2-79663
 Ag, single crystal, electrocrystallisation, conc. non-homogeneity, light interferometry study 2-91834
 Ar, pulsed discharge, channel form. at medium pressures, interferometric study 2-71273
 CO₂ TEA laser emission spectrum anal. using Fabry-Perot interferometer 2-70600
 CS₂, liq., nonlinear refractive index, femtosecond interferometry study 2-81014
 CdS crystal, group vel. of light meas. near exciton absorpt. bands, Rozhdestvenskii hook method 2-112875
 Cu-Ni alloy film deposition by RF sputtering, rate and chem. composition (*Japanese*) 2-87982
 H, Lamb shift for n=2 (*Russian*) 2-96509
 N₂ laser design for holographic and interferometric appls. 2-114315
 N₂ supersonic jets, two-dimens., interferometric obs. 2-103197
 Ni-based superalloys, phase identification, by interference film microscopy 2-62322
 SF₆ axially blown arc, dielec. recovery after current zero, expt. 2-115067
 Si wafers, HCl etched {111}, deep etch pits and facet form. obs. 2-76447
 SiO₂, vitreous, with small OH conc., absorpt. by 3D impurities, thermo-optical interferometric study 2-104923

light meters *see* photometers

light modulation *see* optical modulation

light polarisation

- see also* birefringence; optical rotation; photoelasticity; polarimetry
 A 0538-66, X-ray transient, optical polarisation 2-58392
 alkali halides, F-centre emission, Stark effect 2-104850
 analytical derivatisations reactions, fluoresc. polarisation change appls. 2-93755
 o Andromedae, recurrent shell star, linear polarisation obs. in April 1982 rel. to new shell episode 2-94737
 anisotropic cavity laser, emission polarisation control 2-75602
 anisotropic single-mode optical fibres, degree of polarisation, theory 2-65373
 (anthracene), (picric acid), polarisability and absorpt. tensor orientation 2-87810
 V1343 Aquilae (SS 433), polarisation due to electron scatt. in jets or disc 2-63468
 beam displacers and axicons with polarization-preserving single-layer-coatings 2-114396
 1,2-benzanthracene in polystyrene matrices, delayed luminesc. time-resolved anisotropy 2-85728
 binary stars, polarisation variation modeling, effects of orbital eccentricity 2-63524
 birefringent chain light-filter, basic theoretical formulae (Russian) 2-60221
 birefringent optically active crystal, coupled-mode analysis of light propagation, linearly polarised eigenmodes 2-55062
 circumstellar envelopes, polarization by scattering in single stars 2-89246
 coherent spontaneous molecular radiation, control of direction 2-114224
 collimated light beam propagation in layers of ice and snow 2-106161
 comets, intensity and linear polarisation of Na I D₂-line resonantly scattered in cometary atmosphere (Russian) 2-73907
 conference proceedings, held at Kanpur, India, March 1979 2-58530
 cool stars with magnetic structures, expected broadband linear polarisation 2-89241
 couplers, codirectional and contradirectional, polarisation evolution 2-109037
 crystal surfaces, uniaxial, Brewster and pseudo-Brewster angles, optical property determ. appls. 2-75516
 crystals, magnetically ordered, light absorpt., Jones and Muller matrices 2-108780
 crystals with anisotropic point, polarised beam multiple-beam selective interference 2-65163
 CW 1103+254, AM Herculis star, optical and IR light curves and circular polarisation vars. 2-94751
 CW 1103+254, new AM Herculis star, photometry, spectrum and polarisation obs. 2-84250
 cyclopentanone, n^* excited state, racemization 2-80704
 degenerate two-wave mixing in the collinear geometry 2-108935
 diamond, type Ia, cathodoluminescence from giant platelets and 2.526 eV vibronic system, plastic deform. effects 2-72561
 dielectric, optical property determ. method 2-107376
 dielectric spheres, periodic monolayer, light reflectivity and EM localised states 2-60019
 diffraction gratings, perfectly conducting, variational theory, ghost study appls. 2-75511
 digital instrument for circular polarisation meas. of luminescence 2-107422
 dimethylmalonic acid and its salts, Raman and IR spectra (French) 2-113997
 elliptical-core single-mode fibre, polarisation mode dispersion due to thermal-stress-induced birefringence 2-86111
 equivalent layers in oblique incidence, partial reflector unsplit admittances and depolarisation 2-85884
 evanescent wave holograms, polarisation props. 2-65186
 extreme C stars, optical spectropolarimetry rel. to circumstellar dust shells morphology 2-114447
 ferromagnetic and antiferromagnetic cryst., reflectivity spectra, permeability tensor, magnons 2-77473
 fibre, high birefringence, polarisation holding 2-75695
 fibre, single-mode, polarised light wave stability anal. 2-109068
 fibre, single-mode, single-loop polarisation stabilisation 2-97209
 fibre birefringent networks, inline single mode 2-97222
 fibre optic gyroscopes, birefr. and polarisation effects 2-75690
 fibre optic ring resonator, closed-loop, birefr. effect on reson. freq. 2-97213
 fibre-optic waveguides, single-mode, with weak birefr., polarisation props. rel. to device appl. 2-70696
 fibres, graded-index, circularly polarised modal skew rays 2-109057
 fibres, single-mode, birefringent transmission bandwidth, polarisation-mode coupling influence 2-109056
 fibres, twisted, polarisation states 2-91065
 filters, polarisation interf., narrow band and wide field-of-view 2-97160
 fluorescent liquid solutions, self-depolarisation 2-82885
 glass, random scatt. field polarisation struct. (Russian) 2-102718
 graded-index polymer rods, polarisation props. 2-114426
 AM Herculis, VRI photometry and circular polarisation during low state, (1982 March 6 to April 19) 2-74025
 HH100, K-band polarisation of nearby variable IR source 2-94816
 holography, depolarisation influence on brightness of reconstructed image (Russian) 2-70528
 interference polarisation filter, element orientation accuracy influence on transmission spectrum 2-91030
 interferograms of conical optical elements, polarisation effects 2-53823
 interferometer, polarizing, for far IR Fourier spectroscopy 2-74490
 interstellar polarisation curves, meas. using simultaneous IR/optical polarimeter 2-106540
 IR polariser selection for ellipsometric instrumentation 2-101442
 IR-ellipsometric spectroscopy with Fourier spectrometer, Mueller-matrix appl. (German) 2-64128
 isotropic surfaces, normal-incidence refl., stationary property 2-108777
 K1:Sn²⁺, polarised luminesc., nature of Sn²⁺-cation vacancy complex 2-57159
 Lamb wave analysis through light polarization discrimination techniques 2-75875
 laser biconical reflectors, single-layer-coated, polarisation-preserving 2-97150
 laser calorimetric determ. of absorpt. coeff., polarisation sensitive technique 2-65290

light polarisation continued

- laser modes, azimuthally polarised, phase shifts produced by coatings 2-97016
 laser polarisation, bistable behaviour obs. 2-97050
 laser radiation passing through plane scatt. layer with variable interface condition, polarisation characs. (Russian) 2-60011
 lateral waveguiding, polarisation-selective, in layered dielec. structs. 2-86099
 linearly polarised radiation direct analysis using Ge and Si photodetectors 2-107387
 linearly single polarisation fibres with zero polarisation mode dispersion, optimum waveguide struct. 2-65374
 liquid-crystal optical attenuator, polarisation-independ., fibre-optics appls. 2-65346
 Lyot depolariser, white light depolarisation by birefr. cryst. 2-75660
 M17, optical linear polarisation map 2-112536
 M82, starlight and scatt. light contrib. separation, colour/polarisation anal. 2-79214
 magnetic Ap stars, calc. of Stokes parameters for line emission 2-94747
 many-valley semiconductor, polarisation-dependent photocond. and surface photocurrent 2-115821
 metal coated cube corner prisms, polarisation props. 2-102905
 molecules, free, complex, spontaneous and stimulated emission, polarisation 2-81443
 Moon, connection between albedo and polarisation props. and Fresnel component of reflected light 2-68640
 mordenite, optical absorpt. anisotropy by Se chains 2-87816
 multipass cavity, laser beam polarisation modifications between two spherical mirrors 2-102830
 multiple scattering problem in plane layer, polarisation of radiation 2-100719
 nematic liq. cryst., orientation degree and direction, polarisation absorption spectroscopy technique 2-115134
 NGC 2261, cometary nebula illuminated by R Monocerotis, polarisation obs. 2-63581
 NGC 3718, peculiar lenticular galaxy, polarisation and reddening due to interstellar matter, visible obs. 2-63628
 noncentrosymmetric media, spin polarised electron scatt. asymm. and photogalvanic effect mechanisms 2-104335
 nonlinear, Volterra-series computation 2-108945
 nonlinear optics, elliptically polarised normal waves 2-114356
 nonlinear spectroscopy, steady-state, third-order, in inhomogeneous media 2-60167
 ocean-atmosphere systems, iterative radiative transfer code rel. to polarisation of diffuse radiation 2-100554
 optical discrete-saturation spectrum, NMR saturation effect 2-82746
 optical fibres, coherence of propagating laser beam 2-86116
 optical fibre development, low and high-birefr., polarisation props. 2-65372
 optically pumped far IR rooftop resonator, output stability and polarisation meas. 2-86006
 Orion Molecular Cloud, polarimetry of H₂ IR emission 2-106872
 Orion Nebula, optical polarisation obs. 2-68873
 paramagnetic crystals, cubic, radiation polarisation change 2-116139
 (perylene):AsF₆, PF₆, polarisability and absorpt. tensor orientation 2-87810
 phospholipid multilayer, oriented monodomains, polarized Raman spectra 2-73207
 photoregistration material, frequency contrast characteristics, light polarisation effect 2-65328
 RR Pictoris, catalytic binary, light/colour curves interpretation, visible photometric/polarisation obs. 2-89271
 plasma, laser generated, second harmonic emission, spectra and polarisation 2-91638
 polarisation optics, connection between Mueller and Jones matrices 2-102716
 polychromatic OTF of polarising microscope with crossed polarisers 2-84699
 polymer film, stretched, partially oriented mol. fluoresc. polarization, electronic transition moment 2-77609
 prisms, modified Rochon and Senarmont, elimination of optical activity depolarising action 2-109011
 quartz ang. depend. of anomalous photovolt. effect in linearly polarised light 2-104433
 reflecting interference-polarization light filter 2-75664
 resonant medium, 3 polarised wave interaction 2-65160
 rhodamine 6G pulsed dye laser polarisation 2-97064
 ring fibre interferometer, nonlinear phase nonreciprocity 2-112969
 rotating linearly polarised light source 2-55286
 scattering of polarised light, basic phase matrix 2-89136
 scattering polarisation into second harmonics by free electrons 2-60156
 semiconductor, photoconductivity, nonequilib., external fields influence on surface photogalvanic effect 2-77118
 side-tunnel fibre, polarisation-maintaining optical waveguide scheme 2-114453
 single mode elliptical core fibres, orientation and polarisation dependent cutoff wavelengths 2-97193
 single-mode fibres, polarisation-maintaining, stress-induced birefr. and elliptical core types 2-75689
 solar corona, Fe XIV 530.3 nm emission line polarization 2-112407
 solar corona, theory of Hanle effect in coronal H I Ly line 2-94697
 solar spectrum, influence of magneto-optical effects on determ. of mag. fields from Stokes profiles 2-100878
 solid state laser system nonlinear cubic medium self-focusing suppression using circularly polarised optical beams 2-97125
 spatially inhomogeneous anisotropy, meas. in scattered light 2-108784
 spiral filament radiation, analytical determ. of polarisation degree 2-102894
 stellar radiation, numerical tables of broadband linear polarisation from magnetised stellar atmospheres 2-112431
 stressed optical fibers and their use as polarizing components 2-97175
 switch, polarisation independ., using a Gaussian taper function 2-75681
 TCNQ salt, (MTPA) (TCNQ)₂, polarisability and absorpt. tensor orientation 2-87810
 teflon, glass-filled, Fluorogold, polarisation props. in far IR 2-81056
 thin film waveguide parameters, single-mode, two polarisation meas. 2-102920
 thin-film optical waveguide, interf. of scattered modes 2-97173
 transparent media interface, total refl. or refr. of parallel-polarised light 2-70500
 TTF-TCNQ, polarisability and absorpt. tensor orientation 2-87810

light polarisation continued

- volume holographic recordings in $\text{Bi}_{12}\text{SiO}_{20}$, polarisation charact. 2-102751
- AM Herculis-type eclipsing binary (1114+18), photometric, polarisation and spectrum vars. and ephemerides 2-58408
- waxicon, polarisation-correction scheme 2-109008
- white dwarfs, magnetic, influence of magneto-optical effects on polarisation 2-112443
- zodiacal light, stability of brightness and polarisation from min. to max. of solar cycle (1974 to 1981) 2-89196
- AlGaAs travelling-wave-type semiconductor laser, polarisation charact., gain sensitivity 2-75572
- $\text{Al}_x\text{Ga}_{1-x}\text{As}$ multielectrode rib waveguides, electrooptic polarisation modulation 2-65345
- $\text{Al}_x\text{Ga}_{1-x}\text{As}$ multielectrode rib waveguides, electrooptic polarisation modulation 2-81065
- CO_2 laser polarised performance determ. method (Chinese) 2-65272
- Ca fluoresc. polarisation due to coherence in Ca_2 photodissoc. (French) 2-96498
- CaO:Mg , neutron or electron irradi., circular polarised luminesc. from F- and F_2 -centres 2-110915
- CdS , thermal neutron irradi., optical anisotropy of red luminesc. centres 2-93268
- CdS:Cu , photochemically active IR centres, luminesc. and excitation spectra, polarisation charact. 2-61970
- CdSe , absorpt. edge shift, EM wave polarisation effect (Russian) 2-104925
- CuCl , excitonic mol. broadening under giant two-photon excitation, circular dichroism and light depolarisation study 2-66454
- CuCl , self-induced polarisation rotation effect of elliptically polarised beam 2-108936
- Cu_2O , relaxed excitons, optical and cyclotron reson. study 2-76938
- D_2S , rot. Raman spectra and principal optical polarisabilities (French) 2-75290
- Fe film, equatorially magnetized, transmitted light intensity odd-parity effect 2-116160
- Fe XIV 5303 Å coronal line, polarisation, effect of mag. fields 2-79054
- GaAlAs:Zn , variable gap semicond., photon transport of carriers, photoluminescence study 2-116256
- GaAs:Zn , Cd, hot photoluminescence spectrum and polarisation 2-82894
- GaP:Ni , charge state of Ni^{2+} , piezoelectr. and Zeeman meas. 2-99087
- Ge:As , bound-exciton luminesc. polarisation in longit. mag. field 2-87864
- GeS_2 , polarised far IR transmission spectra meas., lattice structure 2-82836
- p- GeSe , layered cryst., photocond., polarised light study (Russian) 2-77124
- H 0139-68, AM Herculis star, optical and near-IR polarisation obs. 2-106803
- H_2S , rot. Raman spectra and principal optical polarisabilities (French) 2-75290
- He-Ne internal mirror multimode laser, polarisation props. 2-60062
- He-Ne laser, intensity stabilisation by mag. field induced light polarisation 2-65264
- $\text{HfF}_4\text{-BaF}_2\text{-LaF}_3(\text{ThF}_4)$ glasses, polarised Raman scatt. study 2-57086
- Hg_2Cl_2 , Hg_2Br_2 , production of light polarisers 2-109009
- InSb(As) , subband reson., nonpolarizability parallel excitation mechanism and doublet peak problem 2-61863
- InSe, exciton selection rules in polarised reson. Raman scatt. by LO phonons 2-67034
- InSe, two-phonon absorpt. spectra, pol. and temp. depend. 2-57095
- KCl, F-centre excitation, reson. Raman scatt. study 2-116232
- KH_2PO_4 crystal, forced resonance acoustic vibrs. (Russian) 2-103909
- KLiLi^+ , F and M centres, luminescence and absorption spectra 2-67115
- KLiF_2 , decay and polarisation of luminesc. pulses in 336 nm emission band 2-77560
- $\text{K}_1\text{Pt(CnN)}_4 \cdot 1.5\text{H}_2\text{O}$, electronic props. and Peierls transition, polarised refl. study 2-82858
- $\text{La}_2(\text{SO}_4)_3 \cdot 9(\text{H}_2\text{O})_2$ single cryst., polarized Raman spectra, external vibr. modes, temp. effect (French) 2-72491
- $\alpha\text{-LiIO}_3$, impurity distrib. in single crystal growth from soln. 2-71386
- LiNbO_3 , TI channel waveguides, photoinduced polarisation conversion obs. 2-109043
- LiTaO_3 , depend. of photorefractive on temp. and light intensity (Russian) 2-61849
- Nd: garnet CW laser with nonplanar ring resonator, spatial and polarisation charact. 2-70570
- Nd:YAG polarisation-coupled stable/unstable-resonator laser oscillator, single-axial-mode operation 2-55165
- Nd:YAG unpolarised electro-optically Q-switched laser, report 2-96990
- Nd^{3+} :YAG CW laser radiation, polarisation switching using electrooptic phase modulator 2-114338
- Nd^{3+} :YAG laser, passively Q switched by LiF crystals containing colour centres, charact. 2-85978
- Si, plastically deformed, photoluminescence polarisation, stress effects 2-110907
- ^{136}Xe laser, $5d[3/2]_0 - 6p[3/2]_1$ transition in weak mag. field, polarisation bistability obs. 2-90870
- ZnS:Eu , influence of cryst. lattice field on Eu^{2+} emission spectra 2-87866
- ZnSe , self activated centre, excited states, polarisation spectroscopy study 2-110291
- $\text{ZrF}_4\text{-BaF}_2\text{-LaF}_3(\text{ThF}_4)$ glasses, polarised Raman scatt. study 2-57086

light propagation

- see also atmospheric light propagation; guided light propagation
- absorption coefficient for radiation propagating in an inhomogeneous medium 2-60023
- active media, ultrashort light pulse propagation 2-70531
- adaptive correction algorithms, comparative charact. 2-65313
- atomic absorbers, many-level, optical pulses propag., exact solitary-wave soln. 2-108430
- birefringent optically active crystal, coupled-mode analysis of light propag., linearly polarised eigenmodes 2-55062
- broadened penumbra caustics 2-102722
- collimated light beam propagation in layers of ice and snow 2-106161
- CW light propagating through strong absorbing medium, self-focusing and spatial ringing 2-65318
- deflection by Sun, non-eclipse optical determ. 2-94591
- diffraction propagation of light pulse through high-power glass laser system 2-55072

light propagation continued

- energy losses in illumination of distant aperture of different shape 2-108785
- extinction by aerosol clouds of nonspherical particles 2-114189
- Gaussian beam propagation in periodic lenslike media 2-108783
- gaussian Schell-model sources, partially coherent light beams, propag. parameters 2-85888
- Goa coastal waters, India 2-111934
- ionization wave sustained by intense monochromatic radiation (Russian) 2-109452
- laser beam propagation in strong turbulence, physical implications of extended Huygens-Fresnel principle 2-65170
- laser radiation fluctuations in model turbulent medium, longitudinal correlation 2-102720
- laser radiation in turbulent medium, thermal self-interaction influence on ang. spectrum and coherence 2-65280
- linear nonuniform medium, phase conjugation, aperture probing, interference, optimum focusing 2-85896
- linear system, optical pulse propag., pulse area 2-70501
- Maxwell-like gravit. field, light propag. 2-69067
- multilevel systems, refr. index, nonperturbative quantum calc. 2-60053
- optical material reflectance and transmittance (French) 2-70498
- planar sources that generate the same intensity distrib. at output plane, relations 2-60012
- plane monochromatic wave propag. in extended turbulent medium, intensity correl. 2-55075
- plane wave diffraction in weakly turbulent medium 2-60022
- pulse evolution, effects of propag., transverse mode coupling and diffraction 2-97098
- random media, functional methods for waves 2-63827
- randomly inhomogeneous medium, reflected radiation propag. 2-60027
- strongly anisotropic multiple light scatt., self-similar approx. 2-114187
- synchronisation by light beacons 2-107058
- turbulent medium, collimated Gaussian light beam propag. 2-70508
- natural water, Monte Carlo description of time and space resolved multiple of forward scatter 2-58056
- GaP:N , absorbing medium, linear pulse propag. 2-61860

light propagation in plasma

- doubly degenerate four-wave mixing, IR image conversion appl. 2-65728
- electron waves, remote extraction by modulated laser beam, expt. study 2-55728
- laser beam scatt. at oblique incidence 2-114984
- laser-fusion and laser-plasma interactions 2-76165
- resonant self-focusing of laser light in plasma 2-65731
- second harmonic emission from laser generated plasma, spectra and polarisation 2-91638
- H_2 plasma striations, laser induced phase locking 2-60754
- KrF laser pulse compression in plasma theory 2-90950

light reflection

- see also mirrors; optical films
- albedo of planetary surfaces, var. with solar incidence angle 2-106573
- amplification regime, reversing mirror charact. control 2-81026
- amplifying media, total internal refl. theories, possible critical expts. 2-96865
- animal cell adhesion to glass, study by disturbed total internal reflection 2-57935
- antireflection coatings, achromatic, optimal refr. index calcs. 2-65336
- antireflection coatings, two-wave, optimal refr. index calcs. 2-65336
- atmospheric aerosols, light absorpt. meas. using integrating plate method, filter internal refl. coeff. effects 2-112119
- atmospheric differential spectral reflectance effect on DIAL meas. 2-100545
- attenuated total reflection modulator using prism at variable-width gap from metal 2-55320
- beam displacers and axicons with polarization-preserving single-layer-coatings 2-114396
- cholesteryl hexanoate, phase transitions, high press. study 2-71642
- cholesteryl n-alkanoates, cholesteric helix pitch behaviour at cholesteric-smectic A phase transition 2-103988
- couplings pentanoate, phase transitions, high press. study 2-71642
- couplings, rectangular, tapered, reflective, intensity transform, 2-81071
- crack tip acceleration and deceleration, Rayleigh surface wave obs. 2-109255
- crack tip stress intensity factor, two upper bound values estimated by expt. optical method 2-91349
- crystal surfaces, uniaxial, Brewster and pseudo-Brewster angles, optical property determ. appls. 2-75516
- demonstration to show the difference in mechanism of reflection and scatt. at a surface 2-79326
- dielectric optical waveguides with arbitrarily shaped cut-ends, guided mode refl., transmission and radiation 2-114428
- dielectrics, brightening using diffraction grating 2-110806
- diffuse interface, optical reflectivity 2-55063
- doubly painted layer, radiative props. 2-90813
- Earth surface, techniques for field meas. of reflectance 2-112142
- Earth surface reflectance meas. at 340 to 2500 nm, portable field spectrometer 2-112143
- energy splitting, Huygen's theory of light 2-55065
- equivalent layers in oblique incidence, partial reflector unsplit admittances and depolarisation 2-85884
- far-field caustics, law of reflection, catastrophe theory 2-65153
- fibre optic gyroscope, performance limitations due to end reflections and coherence 2-91083
- films, thick, for conduction of optical and IR radiation, solar cell appls. 2-99763
- granulated active medium, amplification of field upon total internal reflection 2-85932
- grating reflection, Rayleigh methods, author's reply to comments by A. Wirgin 2-96829
- grating reflection, Rayleigh methods, comment 2-96828
- ground reflectance in optically thin atmosphere, Landsat digital counts 2-73553
- heliostat and related instruments, principles and practical arrangements 2-100742
- hysteresis jump of reflection coefficient at interface with nonlinear medium 2-82816
- image reconstruction, eikonal eqn. 2-75517
- interface between linear and Kerr effect media, optical props. 2-97096
- interference reflection filters for fluorometry 2-70662
- interferometer, multiple-refls., ultrasensitive 2-89794

light reflection continued

- interferometer and viewing optics for automated surface mapping, refl.-transmission phase shift 2-74489
- intraocular lens edge meas., noncontact profiling with focal spot and fringe projection techniques 2-57922
- isotropic surfaces, normal-incidence refl., stationary property 2-108777
- Jones matrix method, extended, off-axis light transmission through birefr. networks 2-75512
- laser based on amplification by refl. from inverted medium 2-70562
- laser beam scanner driven by multireflection method 2-114352
- laser radiation passing through plane scatt. layer with variable interface condition, polarisation characts. (*Russian*) 2-60011
- laser resonator reflecting grating freq.-selective losses 2-65342
- liquid cryst., acoustic and optical beam displacement, appl. to optical computing 2-86551
- liquids, US rel. and absorpt. meas. up to 1.5 GHz by high resolution Bragg reflection 2-75809
- lunar soil, Fresnel component of refl. light rel. to connection between albedo and polarisation props. of Moon 2-68640
- M17, refl. nebula model for optical linear polarisation distrib. 2-112536
- non-imaging transformers, axially symm., variable angle 2-108997
- nonlinear interface, Gaussian beam refl. 2-86036
- nonlinear interface, theory of plane wave refl. and refr. 2-97095
- nonstationary wave beam reflection from randomly inhomogeneous plane-layered medium 2-102721
- ocean surface, sky light refl. meas. by CCD camera rel. to remote sensing of wave dynamics 2-58133
- ocean-atmosphere systems, iterative radiative transfer code rel. to polarisation of diffuse radiation 2-100554
- oil film optics, appl. to rough surface anal. 2-112859
- paint coatings, portable gloss tester 2-58873
- photographic layers, scattering and non-scattering, reflection halo avoidance (*German*) 2-79696
- principal angle spectroscopic ellipsometry utilizing a rotating analyser thin film thickness meas. appls. 2-107385
- prism coupler jig for coupling gap obs. using interf. fringes 2-65416
- pseudo-object colours, simplified method for formulation 2-95430
- quartz gyrotropic bounded medium, surface wave dispersion 2-96827
- randomly inhomogeneous medium, reflected radiation propag. 2-60027
- randomly orientated convex particles with rough surfaces, light reflection calc. 2-80900
- rhodamine 6G soln., laser based on amplification by reflection from inverted medium 2-70562
- rough surface, light interaction, spatial distrib. of scatt. radiation (*French*) 2-108791
- single and double coating systems on metallic substrate, reflection, graphical representation 2-75521
- spatial light modulator, linear, total internal refl., optical information processing appls. 2-75669
- surface binding rates of nonfluoresc. mols., determ. by total internal refl. and fluoresc. correl. spectroscopy 2-94258
- surface layers, light refl. mol. theory, applicability limits of macroscopic approach 2-90806
- transparent media interface, total refl. or refr. of parallel-polarised light 2-70500
- triple reflector using mirror wall tiles 2-107056
- twin waveguides, coupled mode zero dispersion, refl. characts. at prism-twin-waveguide-coupling boundaries 2-86100
- water, shock front, laser-generated optical signal reflection 2-70491
- water surface reflection, effect of waves on reflected image 2-100560
- wave front reversal system performance, effect of inhomogeneity drift along a beam propag. line 2-102882
- wavefront reversal by four-wave mixing in a medium exhibiting Raman nonlinearity 2-114384
- wavefront reversal of reflected radiation, high-sensitivity systems 2-108968
- waveguide, dielec.-slab, scatt. from immersed cylindrical inhomogeneities 2-75678
- waveguide 2X2 matrix switch using dielectric chip motion 2-86094
- waveguide resonators with distributed Bragg reflectors 2-86101
- CO₂ IR laser beam retroreflected through a turbulent atm., statistical props. 2-100561
- CO₂ laser optics design, weak refl. influence from anti-refl. coated surfaces 2-90933
- He-Ne visible laser beam retroreflected through a turbulent atm., statistical props. 2-100561
- LiNbO₃ optical channel waveguide TIR switches, GHz bandwidth, 4X4 switching networks 2-75680
- LiTaO₃ crystals with linear electrooptical effect, intensified refl. of reversed wavefront waves 2-108967
- NaClO₃ gyrotropic bounded medium, surface wave dispersion 2-96827

light reflection spectra *see reflectivity; spectra***light refraction***see also birefringence*

- angle of refraction evaluation in absorbing medium 2-80896
- atmosphere boundary layer, refr. index struct. parameter determ. using sodar 2-100432
- collimated light beam propagation in layers of ice and snow 2-106161
- crack tip stress intensity factor, two upper bound values estimated by expt. optical method 2-91349
- electron-beam-discharge lasers, pulsed beam divergence calc. 2-70596
- energy splitting, Huygen's theory of light 2-55065
- flame, axisymmetric, temp. distrib. meas. by holographic interferometry, refr. effects 2-69170
- Jones matrix method, extended, off-axis light transmission through birefr. networks 2-75512
- lapse-rate sensing, remote, using atm. rel. over complex terrain 2-63085
- lunar soil, refr. index and struct. rel. to connection between albedo and polarisation props. of Moon 2-68640
- mirage in the laboratory 2-84411
- nonlinear interface, theory of plane wave refl. and refr. 2-97095
- numerical computations (*Japanese*) 2-68491
- ocular refractive error, accuracy of multimetric refr. 2-73229
- particle sizing with the laser velocimeter, Mie and refr. theory comparison 2-53730
- polygon image formation by refr. optics, EM diff. theory 2-55082
- semiconductors, direct gap, optical absorpt. and refr., complex optical dielec. function 2-93139
- Snell's law of refraction, appl. to light microscopy 2-58898

light refraction continued

- thermal diffusivity meas., photoacoustic and mirage effect methods (*French*) 2-65463
- trajectory elongation on paths with localised refr. index inhomogeneities of air 2-106277
- transparent media interface, total refl. or refr. of parallel-polarised light 2-70500
- water-droplet aerosol, illumination by laser probe, refractive props. of transparent region 2-55074
- SF₆, self-focusing and self-defocusing of intense reson. IR radiation 2-65316
- light scattering**
see also Brillouin spectra; opalescence; Raman spectra; Rayleigh scattering; stimulated scattering
- Abastumani Forest Aerosol Experiment, (August 1978), weather conditions, solar and atm. radiation (*Russian*) 2-117401
- aerosol angular scattering functions, effects of particle comp. and shape on size distrib. retrieval 2-58118
- aerosol IR backscattering profiles at 10.6 microns 2-100548
- aerosol optical props., information content rel. to size distrib. 2-108787
- aerosol spatial-frequency and wavelength-depend. effects on atm. MTF 2-106314
- aerosol volume scattering ratios determ., comparison of polar and integrating nephelometers 2-53805
- aerosol-scattered background light, spatial-freq. depend., atm. modulation transfer function 2-78836
- aerosols, volumetric scatt. and absorpt., parametric sensitivity in Mie modelling 2-70506
- n-alkanes, soln. and gas phase, intramolecular interactions, polarisabilities, light scatt. 2-55698
- amorphous transparent media, inverse scatt., statistical soln. 2-65167
- aqueous soln. of milling yellow, study of basic patterns of light scattering 2-80899
- aspherical particles of arbitrary size, light scatt. theory 2-85892
- lower atmosphere, investigation of spectral properties of radiation by modelling method 2-117462
- atmosphere, light extinction coeffs., visibility and aerosol comp. in Houston Texas 2-112124
- atmosphere, relation between light scatt. coeff. and particulate matter conc. in forest fire smoke 2-105617
- atmosphere optical propagation, integrated approach to multiple scatt. problem 2-106316
- atmospheric aerosol, backscatt. spectra for nonabsorbing accumulative fraction, calcs. 2-117425
- atmospheric laser beam propagation, ang. scatt. and intensity scintillation meas. 2-117460
- atoms, collisional redistrib. of radiation in strong laser field, dynamics 2-59895
- atoms, forward laser light scatt. in mag. field, perturbation theory 2-96515
- backscattered mode power distribution in optical fibres 2-81086
- bacteria, magnetotactic, mag. moments, light scatt. study 2-83708
- benzene, cryogenic soln., mol. aggregates, IR study 2-67031
- book, EM scattering and its applications 2-89492
- Bragg acousto-optic eqns., plane wave derivation, finite-width optical beam scatt. appl. 2-65164
- bubbles, light scatt., Mie theory, physical optics approx. 2-60619
- bubbles and drops, Mie and model predictions, refr. index conditions, glory rays 2-75525
- n-butane in soln., light scatt., mol. theory, solute-solvent interactions 2-82870
- cavitation nuclei meas. using optical techniques 2-65621
- CBOOA, elastic light scattering by smectic A focal conic defects 2-91767
- cell, high press., adapted to density meas. 2-74388
- cholesteric binary compensate mixture with added pleochroic dye, dynamic scatt. 2-86544
- cholesteric-nematic mixture, compressional deform. response 2-97912
- circumstellar envelopes, light polarization by scattering in single stars 2-89246
- coal, pulverised, complex refractive index, light scatt. meas. technique 2-95443
- COC, optical rot., Kerr effect, and dynamic light scatt. in isotropic and homeotropic states 2-61135
- cola drink, taste anal. using differential light scatt. props. 2-105708
- collagen solns., rat skin, dynamic light scatt. studies 2-105654
- colloidal large particle aggregates, light scatt. and transmittance 2-96836
- colloidal liquids and solids, dynamics 2-109945
- colloidal solutions, scattered light streaming birefringence 2-55687
- comets, intensity and linear polarisation of Na I D₂-line resonantly scattered in cometary atmosphere (*Russian*) 2-73907
- comets H I atmospheres, solar La radiation scatt. (*Russian*) 2-73906
- conference proceedings, held at Kanpur, India, March 1979 2-58530
- corrugated random surface with fractal slope, Fresnel scatt. 2-114191
- cross-correlation laser scattering 2-96837
- crystals, resonance interactions in phonon spectra 2-109924
- cyclohexane, liq., light scattering and far-IR absorpt. spectra 2-77515
- cylinder size distribution, light-scatt. determ., analytic approx. 2-75527
- cylinders, tilted, partial wave coeff. props. 2-75513
- cylindrical medium, semi-infinite, exposed to laser beam, two dims. linear anisotropic scatt. 2-96830
- demonstration to show the difference in mechanism of reflection and scatt. at a surface 2-79326
- diamantane, 35K struct. phase transition light scatt. study 2-61918
- diamond-turned metal optics, surface characterisation 2-109089
- dicalcium barium propionate, short-range order, optical transform study 2-98044
- dichloromethane, liq., light scattering and far-IR absorpt. spectra 2-77515
- dielectric mirror, refl. or light scatt. meas. using simple single beam device 2-114403
- dielectric optical waveguides with arbitrarily shaped cut-ends, guided mode refl., transmission and radiation 2-114428
- dielectric sphere, lossy, long-wavelength limit 2-102693
- dielectric spheres, periodic monolayer, light reflectivity and EM localised states 2-60019
- dilute hard core suspensions, scatt. and memory functions, transport coeff., light scatt. 2-60851
- isotropic liquid crystals, longitudinal fluctuation of order parameter 2-76287

light scattering continued

- disordered mag. system 2-72438
dispersive medium, coalescence of several photons into photon pair at impurity centres 2-61922
doubly painted layer, radiative props. 2-90813
dressed atoms, collisional effects in resonance fluorescence 2-59742
erythrocytes, intact, determ. of fluoresc. polarisation of membrane probes, scatt. artifacts 2-111641
eye, optical density of the crystalline lens 2-88537
ferromagnetic materials, spin wave excitations, light scatt., review (*Japanese*) 2-93213
ferromagnets, disordered, light scatt. theory 2-72438
fibre attenuation coeff. meas. using backscattering method (*French*) 2-70691
fibre backscatter signature simulations, computer-generated 2-95447
fibre coating concentricity, high speed meas. and control 2-86104
fibre location determination in silicone coatings, light scatt. model 2-65362
fibre loss model, total-loss data separation into absorpt. and scatt. components 2-102934
fibres, multimode, backscatt. process theory 2-81080
fibres, multimode, scatt. theory 2-91062
flames, sooting, particle size diagnostics using photon correl. spectroscopy 2-64112
flexible molecules in soln., light scatt., mol. theory, solute-solvent interactions 2-82870
fluids far from equilibrium, nonlinear reson. coupling of shear and heat fluctuations 2-114797
foils, electrodeposited, ESCA signal intensity dependence on surface area (roughness) 2-110098
forward-scattering optical instruments, noise suppression using apertures and stops 2-60213
frequency separated waves in scattering medium, fluctuation correlation, statistical characts. 2-108794
gas discharges, low press., electron temp. determ. by reson. laser light scatt. 2-91676
gasdynamic jet, seeded, visualisation by laser light (*German*) 2-55681
glass, random scatt. field polarisation struct. (*Russian*) 2-102718
glass sputtered film waveguides for integrated optics, scatt. pattern meas. 2-70671
glass surface, polished, autocorrelation function determ. by light scatt. (*German*) 2-109081
glass thin film optical waveguide, RF sputtered, fluctuation and scatt. props. 2-81078
glass waveguides, out-of-plane scatt. 2-75520
graded-index compound-glass fibres, scatt. sphere and total loss meas. 2-102943
harmonic liquid, one dims., nonequilibrium steady state fluctuations, Fokker-Planck eqn. 2-103584
haze aerosols, effect on atmospheric light transmission 2-117459
hologram, focused-image, recorded through scatt. layer in partially coherent light, contrast enhancement 2-114218
holograms, image plane, with scatt. props., reconstruction, Fourier filtering 2-102748
in-water irradiance levels, solar zenith angle depend., scatt. phenomena influence 2-58086
incommensurate phase, light scatt. characts. in presence of devil's ladder 2-87806
inhomogeneous medium near critical point, multiple light scatt. (*Russian*) 2-55077
injection lasers, stripe geometry, optical scatt. at lateral waveguide boundaries 2-85969
interstellar grains, scattering of diffuse galactic light 2-106832
inverse scattering problem in photon echo theory (*Russian*) 2-55280
IR fibre losses, overview 2-97181
isobutyric acid-H₂O-D₂O, phase behaviour near critical point, phase diagram, scatt., ang. depend. 2-61119
isotropic solids, Green functions and fluctuation spectra for coupled acoustic-thermal modes 2-98212
kinematics from SAW in anisotropic media (*German*) 2-80895
large droplets, light scatt. device for sizing and velocimetry using ring-shaped laser beam 2-95316
large particle with random rough surface, theory 2-89142
laser beam broadening in dense biological tissue scatt. media 2-94104
laser beam transmission through scattering medium, light field outside geometric propag. zone 2-108924
laser bulk damage obs. by photographic technique 2-60141
laser medium, piecewise-continuous, high-power, small-scale self-focusing, nonlinear loss reduction 2-97126
laser radiation passing through plane scatt. layer with variable interface condition, polarisation characts. (*Russian*) 2-60011
laser spark, scatt. and pulse narrowing 2-97057
lens opacification in cold cataracts, identification of scatt. elements responsible 2-62597
lenses, fibre, gradient-index, of methyl methacrylate-vinyl phenylacetate fabricated by photocopolymerisation 2-75687
lidar clear atmosphere multiple scattering dependence on receiver range 2-106306
line-of-sight optical link at 8.5 km range, atm.-induced beam extinction and scintillation influence 2-94489
lipid bilayers, viscoelasticity and phase transitions 2-116723
lipid monolayers, viscoelasticity and phase transitions 2-116723
liquid core fibres, geom. characts., thermally induced mode cutoffs and interf. meas. 2-102932
liquid crystal cells, dynamic light scatt., threshold voltages and currents 2-71345
lithium formate, parametric light scatt. obs. of lattice vibr. 2-99145
lithium formate crystal, light scatt. by polaritons in uncoupled two-particle states 2-82251
M82, starlight and scatt. light contrib. separation, colour/polarisation anal. 2-79214
macromolecule spherical and cylindrical binary mixtures, scatt. light normalised second-order factorial moment meas. 2-114188
marine atmosphere, ang. scatt. and IR extinction coeffs. from modified gamma aerosol distrib. 2-117453
Martin Black, BRDF values meas. at 10.6 μ m 2-108788
Martin Black, scatt. characts. at 118 μ m 2-102710
melanin, optical props., role of water 2-105653
metallic thin, volume EM, surface polaritons and SAWs, theory of three-wave mixing 2-82937

light scattering continued

- methacrylonitrile-styrene copolymers in dil. soln., conform. changes, light scatt. obs. 2-60866
micellar solutions, nonuniversal crit. behaviour, laser light scatt. study 2-83420
microemulsion, conc., light scatt. and square-well model 2-83419
microemulsions, correl. dynamics and light scatt. 2-108792
Mie laser radar obs. of convective cell structs., image data processing 2-112149
Mie scatter centre located on axisymm. light profile axis, scatt. intensities (*French*) 2-108782
mirror surface autocovariance functions, visible scatt. rel. to roughness scales 2-81043
molecules, randomly oriented, circular intensity differential light scatt. 2-70251
monochromators, prism and diffraction, designed for 200 to 750 nm region, radiation scatt. 2-102913
multimode optical fibres, mode conversion effects on backscattering meas. 2-97191
multiple forward scatter in natural water, Monte Carlo description of time and space resolved scatt. 2-58056
multiple scattering analysis of optical wave propagation through inhomogeneous random media 2-55073
multiple scattering corrections to Beer-Lambert law, open detector 2-96835
multiple scattering problem in plane layer, polarisation of radiation 2-100719
multiple small angle light scattering in medium with elongated scatt. indicatrix, self-similarity theory (*Russian*) 2-114184
N-level atoms, scattered light spectra, multicomponent struct. 2-96513
N-level molecules, scattered light spectra, multicomponent struct. 2-96513
NBS conf., Gaithersburg, MD, May 1979 2-86463
nematic liq. cryst., wall defects and dynamic light scatt. relax., expt. study 2-115138
nematic liquid cryst., light scattering at uniaxial-biaxial transition 2-92197
nematic liquid crystals, elastic constants determ. from noise meas. of scattered laser light 2-76559
neopentane, vapour, collision induced light scatt. 2-103279
nitroethane+3-methylpentane mixt., thermally excited capillary waves, light scatt. spectroscopy 2-75982
non-Gaussian light in presence of number fluctuations, single-interval statistics 2-85893
non-Gaussian light scattering by ruffled water surface 2-55071
nonmonochromatic waves scattering 2-90782
nonuniform fluids, propag. of density fluctuations, simple models 2-71318
oceanic lidar method, underwater light scatt. effects 2-111929
oceanographic lidar system computed laser backscatt. from turbid liqs., Monte Carlo radiative transfer model 2-94504
optical fibres, twisted single mode, circular birefr., scatt. light meas. 2-60248
optical film loss factors, surface scatt., volume scatt. and absorptance (*Chinese*) 2-55061
optical mixing spectroscopy, tuning and control, appl. to vibr. meas. 2-69257
optical slab waveguide, scattering and mode conversion 2-81079
Orion Molecular Cloud, scatt. model rel. to polarimetry of H₂ IR emission 2-106872
Orion Nebula, polarisation obs. rel. to light scatt. by dust grains 2-68873
particle clouds, image diagnostics by light scatt. at definite angles (*Japanese*) 2-90834
particle layer luminescence, two-const. models, fluoresc. lamp appl. 2-65157
particle layer luminescence, two-const. models, layer luminesc. 2-65156
particle layer luminescence, two-const. models, p-layer model 2-65155
particle radius distribution density calcs. from spectral attenuation coeff. integral characts. 2-114194
particle size distribution analysis by dynamic light scatt. apparatus 2-112861
particle size spectra, optical scatt. data, constrained linear inversion, approach to ang. optimisation 2-65158
particle sizing with the laser velocimeter, Mie and refr. theory comparison 2-53730
particles moving with helical trajectories, light scatt. spectra scaling props. 2-55067
persistent chain model, anisotropic light scatt. (*Russian*) 2-70466
phase conjugation with weak scatterers, backscatt. effect 2-90990
phase retrieval using logarithmic Hilbert transform, algorithm for distortion reduction 2-60031
photoelasticity, scattered light method, review 2-65542
photographic emulsions, monodisperse, processed, optical density and granularity prediction 2-64144
photographic layers, scattering and non-scattering, reflection halo avoidance (*German*) 2-79696
plasma focus, Frascati, light scatt. meas. 2-76198
polar molecules, binary light scatt., cross-multipole field fluctuations, time-correlation functions 2-85683
polarisation into second harmonic by free electrons 2-60156
polarised light scattering, basic phase matrix 2-89136
poly(γ -benzyl-L-glutamate), orientation behaviour in electric field 2-71335
poly-n-butyl methacrylate, laser light scatt. obs. in glass transition regime 2-67070
polyacrylamide gel, neutron and quasielastic light scatt., screening length rel. to elastic modulus 2-93820
polyacrolactone/chlorinated polyethylene blends, miscibility, Cl⁻ conc. depend. DSC and light scatt. obs. 2-92215
polydimethylsiloxane-diethyl carbonate, liq. mixture, phase separation, light scatt. study 2-98260
polydisperse tobacco mosaic virus (TMV) solns., light scatt. study 2-85891
polyethylene oxide fractions, fractionation in mixtures during crystn. 2-91817
polyion diffusion in low ionic strength buffers, electrolyte polarisation effects obs. 2-66264
polymer chain, regularly branched, static and dynamic light scatt. behaviour, soft-sphere microgels model 2-93819
polymer dilute solns., real gas model and props. (*Russian*) 2-57039
polymer gels, transverse modes, light scatt. 2-98231

light scattering continued

polymer macromolecules, optically anisotropic, struct., depolarised light scatt. obs. 2-99144
 3-Dpolymer spherulite, disorder effect in twist angle on light scattering 2-87804
 polymers, characterisation, conf. Durham, UK, 13-17 July 1981 2-68957
 polymers, liquid crystals and biological systems, light scatt. appls. 2-87805
 polystyrene, disperse system, interacting Brownian particles, diffusion, light scatt. 2-72512
 polystyrene, charged spheres in colloidal suspensions, dynamic correls. calcs. 2-105521
 polystyrene, monodisperse lattices, particle size determ., stopped-flow spectroscopy 2-84593
 polystyrenes in isorefractive PMMA-toluene solvents, light scatt. obs., radii of gyration, virial coeffs., θ condition 2-116730
 pyrazine, cryogenic soln., mol. aggregates, IR study 2-67031
 quartz tube, inside to outside dia. ratio meas. technique using forward scatt. light field (*Chinese*) 2-63970
 radiation heat transfer using mean photon path lengths 2-91424
 radiative transfer, analytic soln. of difference eqns. for coherent scatt. problem 2-78946
 random inhomogeneous media, multiple light scatt., ladder approx. appl., sufficient conditions 2-85894
 random light field in multiple-scatt. conditions, statistical charact. reconstruction 2-65168
 random media, transient phenomena, diffusion theory, expts. using latex spheres 2-65171
 rare earth metal atoms, incoherent photon scatt. cross sections 2-75220
 ratio turbidimeter for meas. of strongly coloured liquids 2-89782
 rhodopsin-GTP-binding proteins, interactions, kinetics and stoichiometric anal., light scatt. meas. 2-57771
 ribosomes, Artemia, sedimented in a CsCl density gradient, quasi-elastic light scatt. 2-83722
 rod outer segments, bounce, near-IR scatt. 2-62599
 rod outer segments and disc vesicles, bovine, shrinkage effects, refractive index, IR scatt. 2-62598
 rod-like macromolecules, lengths and diameters, intensity fluctuation spectrosc. meas. 2-70465
 rough periodic surface scatt., iterative corrections to Kirchhoff approx. 2-60025
 rough surface, light interaction, spatial distrib. of scatt. radiation (*French*) 2-108791
 rough surface statistical charact. determ. using waveguide scatt. of light 2-70714
 rough surfaces, light scatt. processing by stationary phase method, effect of approximations (*French*) 2-60021
 ruby, picosec. laser pulse train scatt. on randomly distrib. inclusions (*Russian*) 2-93211
 Saturn rings, thickness and scatt. props. from March 1980 obs. 2-79019
 sea water, coherent light scatt. calc. (*Russian*) 2-62989
 sea water, light scatt. spectral depend. (*Russian*) 2-73572
 semiconductor laser of interferometric and ring types scatt. matrix formulation 2-80963
 simple systems, higher order correlations 2-75239
 single scattering props. using multiple scatt. inverse transport methods 2-99078
 single-crystal inhomogeneity geometry anal. using light-scatt. method 2-82871
 slab target remote characterisation with a pulsed laser 2-85885
 small angle, by polyethylene spherulites with aid of polarizing microscope 2-72515
 sodium dodecylsulphate-protein complex, binding, light scatt. study 2-70459
 spatially inhomogeneous anisotropy, meas. in scattered light 2-108784
 speckle metrology development using scattered light, strain, displacement and velocity meas. 2-91356
 speckle motion due to laser light scattering off non-homogeneous media 2-60024
 sperm head of octopus, *Eledone cirrhosa*, differential scatt. of circularly polarised light 2-105756
 spermatozoa, bull, circularly swimming, motility anal. by quasi-elastic light scatt. and cinematography 2-67980
 spermatozoa, bull, half-width scaling of elec. field autocorrelation functions of scatt. light 2-67981
 spherical macroscopic bodies, light scatt., integrated density of states 2-60018
 spherical particles, partial-wave resonances for electric light scattering 2-75528
 spherulites, small-angle light scatt. in anomalous diffr. approx. 2-90815
 spin glasses, light scatt. theory 2-72438
 stratosphere aerosol, obs. of enhanced lidar backscattering over central Europe during (1981) 2-100450
 strongly anisotropic multiple light scatt., self-similar approx. 2-114187
 styrene-acrylonitrile copolymer solns., hydrodynamic characts. and light scatt. (*Russian*) 2-108756
 sum rules for optical scattering amplitudes 2-75514
 surface wake, light scattering 2-98607
 tetrachloroethylene, liq., light scattering and far-IR absorpt. spectra 2-77515
 tetrachloromethane, liq., light scattering and far-IR absorpt. spectra 2-77515
 TGSe, crystalline, X-ray topography and laser tomography 2-71290
 thin-film optical waveguide, interf. of scattered modes 2-97173
 Tokamak noncircular TNT-A, electron temp. and density, Thomson scatt. meas. 2-97786
 transparent solids, destruction by pulsed tensile loading, submicroscopic crack development 2-66118
 triaxial ellipsoid surfaces, Monte Carlo approach 2-100824
 trichloromethane, liq., light scattering and far-IR absorpt. spectra 2-77515
 two-dimensional systems, electronic props., conf., New London, NH, USA (Aug. 1981) 2-58536
 two-level quantum system, luminesc. and scatt. in reson. secondary radiation 2-93255
 two-photon scatt., generalised redistribution functions 2-75228
 underwater off-axis radiance meas. comparison with radiative transfer eqn., analytical 2-88882
 UV spectrograph lens 2-97139
 vacuum gap, microparticle detection by laser light scatt. 2-90970
 water, Brownian motion rot. transport from light scatt. 2-89626

light scattering continued

water droplet, light backscatt. and glory effect visualisation 2-79308
 water microemulsions in organic media, dynamic light scatt. 2-93826
 water Raman scattering in radiative transfer model for airborne laser fluorosensors 2-112122
 water-oil microemulsion, dynamic scaling near critical phase transition point 2-115400
 waveguide, dielec.-slab, scatt. from immersed cylindrical inhomogeneities 2-75678
 waveguide laser annealing and integrated waveguide detect. for scatt. effects reduction 2-70710
 Ag gratings in air and electrolyte, plasmon surface polaritons, nonresonant excitation, light scatt. 2-104896
 AlGaAs-GaAs heterostructure, modulation doped, reson. light scatt. in strong mag. fields 2-61921
 Ar, collision induced light scatt., three body correl. spectrum 2-80636
 Ar, dense gas and liq., polarisability anisotropy induced light scatt. spectra 2-97701
 Bi, incoherent photon scatt. cross sections 2-75220
 CO₂ laser fusion target optical diagnostics using backscatt. light 2-109589
 CdS, plastically deformed, light propag. obs., dislocations effect 2-67024
 CdTe, light scatt. by inhomogeneities, IR absorpt. and etching meas. 2-77543
 β -FeOOH, rodlike crystals, dil. aqueous dispersions, light scatt. obs. of laminar, vortical and turbulent flow 2-76015
 GaAs, n-i-p-i crystal, photoexcited electrons quantisation, photoluminesc. and light scatt. study 2-61576
 GaAs-Al_xGa_{1-x}As quantum well struct., single particle and collective excitations temp. and incident light intensity depend. 2-61920
 GaAs-AlGaAs heterojunctions and multiple quantum well heterostructs., doped, reson. inelastic light scatt. 2-61919
 Gd₂(MoO₄)₃, permitt. dispersion, infrared refl. and spontaneous parametric scatt. by polaritons 2-104837
 Ge-GaAs interface, two-dimens. electron states, light scatt. study 2-110885
 H₂SO₄ aerosol, IR laser backscatter spectra, appl. to atm. 2-65166
 He-Xe 3.51 μ m laser radiation scatt. 2-70597
³He-⁴He liq. mixtures, anisotropic decomposition below tricritical pt., light scatt. study 2-104106
⁴He, liquid, superfluid transition, crit. phenomena 2-110066
 InAs MOS interfaces, reson. inelastic light scatt. 2-61919
 K₂PO₄, light scatt. study of acoustic phonon damping 2-86804
 α -LiIO₃, quasi-elastic light scatt. induced by ionic transportation, expt. study (*Chinese*) 2-93155
 Li₂O-K₂O-SiO₂ glass microstruct., laser scatt., small angle X-ray scatt. and TEM 2-91799
 NH₄Br(Cl), light scatt. near order-disorder transition 2-99140
 (NH₄)₂SO₄ aerosol, IR laser backscatter spectra, appl. to atm. 2-65166
 Na atom, hyperfine struct. of D-lines forward scatt. of reson. radiation as function of applied mag. field 2-70195
 Na, collision-perturbed, with doublet excited states, near reson. scatt. 2-96499
 Na, freq. depend. polarisation of light scatt. near D2 reson. line 2-85595
 Na₂O-B₂O₃-SiO₂ glass, multiple scatt. in medium where single scatt. has a cooperative character 2-65169
 Na₂O-Ca₂O-SiO₂ glass microstruct., laser scatt., small angle X-ray scatt. and TEM 2-91799
 NaOD solution, interaction induced light scatt. spectra of amorphous solid and liq. 2-57113
 Nb₂O₅ thin-film optical waveguide, CO₂ laser annealing for scatt. loss reduction 2-75677
 Nd:YAG laser beam, weak, simulation using LEDs 2-70602
 OsO₄, cryogenic soln., mol. aggregates, IR study 2-67031
 Pb, incoherent photon scatt. cross sections 2-75220
 n-Si, heavily doped, electron light scatt., theory 2-110880
 Si₃N₄ thin-film optical waveguide, CO₂ laser annealing for scatt. loss reduction 2-75677
 Ta, incoherent photon scatt. cross sections 2-75220
 TaO_x thin-film optical waveguide, CO₂ laser annealing for scatt. loss reduction 2-75677
 ZnO, light scattering spectrum, thermal noise (*Russian*) 2-82872

light sources

see also *infrared sources*; *light emitting devices*; *photometric light sources*; *spectroscopic light sources*
 beam fluctuations, student expt. 2-79305
 ceramics, electrotechnical, present and future develop. (*Czech*) 2-111133
 coaxial flashlamps, laser pumping charact., review 2-65239
 coherent source alignment using spherical confocal Fabry-Perot interferometer, expt. work and appls. (*German*) 2-74493
 Collett-Wolf generalised sources, synthesis using principle of superposition 2-108781
 colour rendering, chromatic adaptation effect 2-58881
 common plane-wave model verification by band-limiting the far field of localised source 2-102695
 cross-spectrally pure fields, spatially fully coherent, cross-spectral density function 2-85889
 daylight simulator visual evaluation for colorimetry of luminescent materials 2-58880
 flash lamp, reflected radiation effect in pulsed Xe discharge 2-108987
 flash lamps, pumping, type INP-16, parametric standard series 2-97137
 Gaussian Schell-model planar anisotropic sources, radiant intensity 2-90808
 Gaussian Schell-model source and radiation field coherent-mode representation 2-96826
 gaussian Schell-model sources, partially coherent light beams, propagation parameters 2-85888
 halogen, insertion loss meas. in multimode opt. fibres appl. 2-97179
 HID lamps nonequilibrium vaporization effects during warmup 2-95436
 IR beam port for SRS at Daresbury 2-85437
 Klein ERNA, table-top synchrotron radiation source 2-113780
 lantern for colour perception testing 2-100084
 luminaire reflectors CAD, new method for optimising candlepower distribution 2-97144
 MAX accelerator system as synchrotron light source 2-90327
 National Synchrotron light source, data acquisition and control system 2-59672
 National Synchrotron Light Source, progress and prospects 2-85413
 National Synchrotron Light Source, in IR region 2-85420
 noncoherent Fourier-transforming interferometers 2-74498

light sources continued

- partially coherent optical information processor, apparent transfer function 2-96841
 partially coherent sources, radiant intensity 2-75519
 particle layer luminescence, two-const. models, fluoresc. lamp appl. 2-65157
 photocopying, light source brightness determination (*Russian*) 2-97136
 planar sources that generate the same intensity distrib. at output plane, relations 2-60012
 planar sources that generate the same radiant intensity at general optical system output 2-86068
 polychromatic sources, effect on OTF of polarising microscope 2-84699
 quasi-monochromatic partially polarised source coherence matrix expansions, object reconstruction problem appl. 2-108814
 reliability of light sources, failure rate statistical evaluation (*Slovak*) 2-55287
 rotating linearly polarised light source 2-55286
 semiconductor source luminance law $L(P,\theta)$ determ., near field technique (*French*) 2-107382
 spiral filament radiation, analytical determ. of polarisation degree 2-102894
 strobe light sources for shadow photography 2-53868
 synchrotron radiation sources and instrumentation, review 2-108770
 ultra-fast discharge fine line flash light sources, for dye lasers pumping 2-86067
 He, CW optical discharge as hot steady-state UV light source 2-109474
 Hg-K pumping lamps, expt. study (*Chinese*) 2-91014
 K-Rb pumping lamps, expt. study (*Chinese*) 2-91014
 Na, high pressure illuminants, perception of object colour 2-99975
 ($\text{Ni}_0\text{Zn}_{10}$) Fe_2O_4 ferrite, switching and surface line emission spectrum obs. under pulse voltage 2-115831
 Si photodiode absolute spectral response self-calibration using filtered W source 2-89804

light transmission

- see also *light absorption; optical filters*
 absorbing thin film, optical const. and thickness determ., reflectance and transmittance meas. uncertainties (*German*) 2-99203
 aerosol layers, tropospheric, shortwave radiative props. evaluation uncertainties, expt. and numerical results 2-94490
 aerosol light absorpt., diffuse reflectance and diffuse transmission meas. 2-53821
 atmospheric transmission conf. (Washington, DC, April 1981) 2-84370
 birefringent chain light-filter, basic theoretical formulae (*Russian*) 2-60221
 bistable twisted nematic liquid crystal boundary layer display, optical props. 2-86546
 book 2-112672
 breast diaphanography, colour rel. to blood conc. 2-111767
 CdS, thin evaporated films, optical and elec. props. 2-61624
 cholesteric-nematic mixture, compressional deform. response 2-97912
 colloidal large particle aggregates, light scatt. and transmittance 2-96836
 dielectric, optical property determ. method 2-107376
 dielectric optical waveguides with arbitrarily shaped cut-ends, guided mode refl., transmission and radiation 2-114428
 EBBA, melting and crystn. processes, thermal anal. 2-92198
 eye, optical density of the crystalline lens 2-88537
 Fabry-Perot multi-pass interferometer 2-74494
 fibre, optical coated with UV-cured polyurethane acrylate, microbending loss, correl. with sub- T_g annealing of coating 2-60251
 fibre transmission systems for 0.8-1.6 μm multimode vs. single mode 2-97185
 fibres, single-mode, birefringent transmission bandwidth, polarisation-mode coupling influence 2-109056
 fibres, single-mode, parameter design consideration 2-86121
 fog chamber characs., used for electrooptical device performance meas. 2-96834
 grating transmission function anal. as it undergoes a periodic nonuniform motion 2-70504
 4-n-hexyloxyphenyl-4-(2"-methylbutyl)biphenyl 4'-carboxylate, ang. depend. of selective reflection from chiral smectic C phase 2-77464
 interference reflection filters for fluorometry 2-70662
 interferometer and viewing optics for automated surface mapping, refl.-transmission phase shift 2-74489
 IR high-pass filter with high contrast 2-97159
 Jones matrix method, extended, off-axis light transmission through birefr. networks 2-75512
 lenses, fibre, gradient-index, of methyl methacrylate-vinyl phenylacetate fabricated by photocopolymerisation 2-75687
 liquid core fibres, geom. characs., thermally induced mode cutoffs and interf. meas. 2-102932
 mid-IR waveguide materials 2-97129
 modulator, light-pipe, electrooptic, gigahertz, for CO_2 laser wavelength 2-81066
 moth eye antireflection surfaces, optical props. 2-91012
 multilayer stacks, spectral transmittance, refining method for design 2-81055
 nonuniform gas layer, average transmission, analytic calc. 2-76061
 optical glass, optical properties 2-60198
 optical material reflectance and transmittance (*French*) 2-70498
 organic index-matching fluids, high intensity transmission props., stimulated Raman scatt. thresholds 2-102866
 picosecond optical gate (*Chinese*) 2-91001
 planar and nonplanar samples, integrating sphere for solar transmittance meas. 2-107377
 polymeric index-matching fluids, high intensity transmission props. 2-102866
 quartz, particles, anisotropic, spectral transmission 2-114192
 reflecting interference-polarization light filter 2-75664
 rubber, natural and polydimethylsiloxane, for artificial heart valves, props. in biaxial stretching 2-83155
 semiconductor laser transmission characteristics, classical control theory 2-80962
 transmittance occurrence frequency in several wavelength regions, Ypenburg airfield, The Hague (1977-81) 2-94488
 TTF-TCNQ, temp. depend. of low energy IR modes 2-87784
 vertebrate retinas, isolated, light-induced IR transmission changes 2-111658
 waveguide, dielec.-slab, scatt. from immersed cylindrical inhomogeneities 2-75678
 waveguide resonators with distributed Bragg reflectors 2-86101

light transmission continued

- ZnTe-CdS thin film photovoltaic cells, optical and elec. props. meas. 2-116824
 Au-Ag composite granular films, optical transmittance 2-72570
 $\text{BaF}_2\text{-ThF}_2\text{-ZnF}_2\text{-YbF}_3$, glasses, stabilization and IR transmission, DTA study 2-97929
 C, particulate, collected on Teflon filters, monitoring with photoacoustic and transmission techniques 2-53850
 CdGa_2S_4 crystals, spatial dispersion effects 2-72446
 $\text{Cd}_3\text{Hg}_{1-x}\text{Te}$, brittle to plastic transition, microhardness and optical transmission meas. 2-86783
 $\text{Cd}_{1-x}\text{Mn}_x\text{Te}$, absorption edge pinning, transmission and piezotransmission meas. 2-72443
 CdS, plastically deformed, light propag. obs., dislocations effect 2-67024
 CdS sprayed thin film, optical reflectance and transmittance 2-110969
 CdS, thin films, inhomogeneity, optical transmission, refr. index 2-62001
 CdTe, brittle to plastic transition, microhardness and optical transmission meas. 2-86783
 GaSe:Sn, interference oscills. in temp., depend. of photocurrent and transmission 2-87329
 GaSe, $\text{Te}_{1-x}\text{Sn}_x$, interference oscills. in temp., depend. of photocurrent and transmission 2-87329
 GaTe:Sn, interference oscills. in temp., depend. of photocurrent and transmission 2-87329
 Ge, picosec. pulse transmission at various thicknesses 2-77104
 H_2 , press.-induced opacity in 5 μm region 2-60716
 $\text{Hg}_{1-x}\text{Mn}_x\text{Se}$, microwave and far IR magnetotransmission studies 2-98955
 HgTe, brittle to plastic transition, microhardness and optical transmission meas. 2-86783
 $\text{La}_2\text{O}_3\text{S}$, hot pressing, accretive recrystallisation 2-77785
 LiNbO_3 , single crystal, optical uniformity, expt. study 2-86065
 PbS, natural galena, electron beam evaporated film, optical and electronic props. meas. 2-61621
 Rb_2ZnCl_4 , optical props. changes at successive phase transitions 2-77476
 Si, ion implanted, pulsed laser annealing dynamics, plasma annealing model 2-56013
 Si, laser-irradiated, reflectivity, transmission and electron-hole plasma, ps time-resolved meas. 2-115281
 Si, Raman and time-resolved transmission meas. 2-57073
 a-Si:H, P, photoinduced absorpt. in picosec. range due to deep hole traps 2-72527
 Si:H amorphous film, glow discharge deposited, refractive index, 95 to 723K (*French*) 2-62005
 Si-on-sapphire, amorphous, ion implanted, time-resolved optical transmission meas. during pulsed laser annealing 2-61027
 $\text{SnO}_2\text{-Sb}$ films, deposition by oxidation of tetramethyltin and trimethylantimony, elec. and optical props. 2-87997
 $\text{Sr}(\text{Ca}_{1/2}\text{Nb}_{3/2})\text{O}_3\text{-PbZrO}_3\text{-PbTiO}_3$, elec. and optical props. 2-82794
 WO_3 film, reactively sputtered, prep., elec. and optical props. 2-93420
 $\text{Y}_2\text{O}_3\text{S}$, hot pressing, accretive recrystallisation 2-77785
 ZnS-Na:AlF₆, multi-layer interference filter, temp.-effect on peak transmission wavelength (*Korean*) 2-55304
 ZrO_2 , cubic, stabilised with Y_2O_3 , refr. index and optical transmission meas. 2-107388
- light velocity**
 No entries
- light velocity measurement**
 coherent laser expt., light vel. direction depend. 2-107089
 Earth rotation measurement, using light velocity charges with optical fibre gyro (*German*) 2-69149
 one-way vel. meas. 2-84414
 unidirectional light vel. meas. 2-101388
 CdS crystal, group vel. of light meas. near exciton absorpt. bands, Rozhdestvenskiy hook method 2-112875
- light water** see *water*
- lighting**
 cinematographic studios (*Russian*) 2-69292
 fluorescent lighting, light intensities at corneas of working radiologists 2-94109
 illumination systems quality estimation using luminous field integral characs. (*Czech*) 2-64085
 office lighting contrast rendering gauge 2-95438
 photographic darkrooms, safelight illumination 2-69280
 prism light guide, efficient, for interior illumination 2-102919
 skylight energy balance analysis procedure 2-70825
 TV studio systems (*Russian*) 2-69292
 VLF emission from lightning, theory 2-68428
- lightning**
 airborne warning systems for natural and aircraft-initiated lightning 2-83894
 artificially triggered lightning in Japan 2-106297
 ball lightning, summary of characs. and obs. 2-73666
 ball lightning, thermal effects 2-117431
 ball lightning at Crail, Scotland, in 1968 August 2-73667
 ball lightning stability 2-83925
 current meas. at CN Tower, Toronto, Canada, 1980 obs. 2-68474
 danger to human life, effect of local geology (*Croatian*) 2-73617
 direction-finding VHF radio receiver system (*Chinese*) 2-78861
 electromagnetic interaction with aircraft 2-83896
 environmental parameters meas. related to interaction with electronic systems 2-79543
 formation and discharge process, discharge parameters and safety measures (*French*) 2-78719
 global distribution of thunderstorm activity observed with ISS-b 2-58102
 global lightning distributions at dawn and dusk 2-63033
 K-field changes due to return strokes in tropical thunderstorms 2-63049
 laser-guided electric discharges in the atmosphere, review 2-103276
 location relative to storm struct., preliminary study 2-94417
 microcomputer controlled data acquisition system for lightning strike current recording 2-68538
 natural lightning, EM interaction with aircraft, exptl. data and modelling review 2-83892
 Norman, Oklahoma, thunderstorm steady glow and multicoloured flashes 2-94432
 photographic atlas of lightning and its spectrum, book 2-94918
 primitive atmosphere, C and N fixation by lightning 2-63098
 prolate spheroid model of lightning channel 2-68464
 radar research 2-89047

lightning continued

- Sferics, measured spectral amplitude in HF, VHF and UHF bands 2-117398
- simulation and testing for assessing effects on aircraft and avionics 2-83898
- severe thunderstorms of Great Plains, USA 2-63016
- triggered lightning, Doppler radar study 2-106211
- triggered lightning, effect on aircraft 2-83893
- tropical, characts. 2-73630
- warning systems, operational comparison 2-106262
- X-ray enhancements, origin 2-63028
- O₃, absorbed in porous particles, rel. to ball lightning 2-105512
- SF₆, development of predischage currents in sphere to sphere arrangement for lightning impulse voltages 2-103262

lightning conductors *see lightning protection***lightning protection**

- see also surge protection*
- air gap, oscillating lightning impulse voltage, breakdown behaviour of nonuniform electrode arrangements 2-97821
- aircraft susceptibility assessment and development of protection criteria 2-83899
- direct effects of lightning on aircraft, protection procedures 2-83895
- telephone exchange energy requirements supplied by roof-top solar cell arrays (*French German*) 2-57699
- SF₆ gap, oscillating lightning impulse voltage, breakdown behaviour of nonuniform electrode arrangements 2-97821

lightning rods *see lightning protection***limit cycles**

- complex Lorenz eqns., Hopf bifurcation, limit cycle 2-53485
- driven anharmonic oscillator, bistability and Feigenbaum bifurcations anal. 2-94995
- forced Lorenz system, chaos, limit cycles, topology 2-79478
- Langevin eqns., coupled, nonlinear, asymptotic props. and transition to limit cycle in weak noise limit 2-107240
- physiological oscillators intercoupled via pure time delays, mode anal. 2-83538

limited space charge accumulation

- see also Gunn effect; negative resistance effects; space-charge limited devices*
- polyethylene, TSC following AC stressing 2-87655
- n-GaAs, hot electrons, inertial props., Monte Carlo calc. 2-56628

linear accelerators

- see also collective accelerators; electrostatic accelerators*
- acceleration characteristics for 15 MeV electron linac 2-70027
- biperiodic slow-wave struct., standing wave excitation anal. 2-64709
- bunched beam problems with anharmonic space charge forces, Vlasov's eqn. 2-108210
- clinical accelerator, energy calibration with photonuclear reactions 2-88657
- clinical accelerator, use in spectroscopic studies of ¹⁹⁷Ir decay 2-85407
- coaxial coupled linac structure 2-64703
- control computer, online replacement 2-54695
- defectoscopy, electron accelerator applicability (*Czech*) 2-62318
- electron beam acceleration in radial line system, excited by external pulse generator 2-70023
- electron linacs, appl. to storage ring RF systems and linear colliders 2-113763
- high current injection channel for linear accelerator 2-102286
- inductive linear ion accelerators, longitudinal beam dynamics, vel. lens model 2-64707
- injector for medical heavy ion synchrotron 2-75072
- ion focusing by travelling wave field, efficiency 2-102288
- LALAGE program for TM₀₁₀ modes of cylindrically symmetrical multicell structures 2-102290
- laser-driven electron accelerators, interactions between EM fields and electrons 2-113764
- light ion beam time-compression, tapered transmission-line accelerator 2-96307
- linac, fast nonintercepting electron beam position and current monitor 2-96343
- medical electron accelerator, energy spectrum of inhibitory radiation (*Russian*) 2-88649
- Medium-Energy Accelerator for electrons up to 500 MeV 2-59571
- MLUD-3 linear for accelerating deuterons for activation anal. neutron source 2-96354
- Particle Beam Fusion Accelerator Performance Monitoring and Evaluation System 2-96409
- plasmas in particle accelerators, warm-beam equilibria 2-108209
- pulsed electron accelerator using solid dielectric energy storage 2-90325
- pulsed multibeam accelerator for complex irradiations 2-102289
- RF linear accelerator for heavy ion fusion 2-80243
- RFQ linac, beam dynamic design study (*Chinese*) 2-108203
- SLAC linear collider, machine, physics and future 2-80354
- SLACINPT - A FORTRAN program that generates boundary data for the SLAC gun code 2-108328
- slow positrons production, with 100-MeV electron linac 2-64723
- therapy accelerators, beam alignment tests 2-78418
- URAL-30 proton linear accelerator, injector for 76 GeV proton synchrotron 2-64710
- Vlasov equations, initial boundary value problems, appl. to linear accelerators (*Russian*) 2-97708
- X-ray inspection system, real-time, high-energy, development (*Japanese*) 2-78051
- X-ray Linac, 10 MV, induced radioactivities in head 2-102287
- Cu electroplating for LINAC accelerating structures for heavy ion fusion 2-85291
- D, variable phase focusing, expt. study (*Russian*) 2-113806

linear algebra

- see also determinants; eigenvalues and eigenfunctions; matrix algebra; tensors; vectors*
- eddy current NDT, algebraic analysis for cylindrical geometries 2-67724
- piecewise homogeneous bodies of complex shape, stationary heat conduction equations 2-91210

linear combination of atomic orbitals calculations *see LCAO calculations***linear differential equations**

- gyropendulum theory 2-63805
- Markov perturbation of linear system, eqns. for moments and stability conditions 2-53666
- parametric vibration, approx. method of anal. 2-58598

linear differential equations continued

- special functions of math. phys., algebraic, geometric and system-theoretic props. 2-95684
- toroidal geometry, linear differential eqns. relation to MHD continuum 2-109482

linear integrated circuits

No entries

linear motors

- heteropolar linear synchronous motor (LSM) theoretical design, construction and testing for combined propulsion and levitation 2-70479
- induction machines in heave mode, dynamic behaviour anal. using finite element and Fourier anal. 2-80871
- induction pump instability suppression by external mag. field 2-103147
- maglev train development status in German Federal Republic (*German*) 2-70473
- single-sided linear induction motor with solid iron secondaries, reaction forces prediction using computer model 2-80872
- step motor drive for auxiliary blood circulation equipment and partially implantable artificial heart 2-78500
- step motors for medical apparatus and medical-biological research instruments 2-78516

linear network analysis

- nonuniform semi-infinite grounded grid, finite power soln. 2-77034

linear programming

- discrete Fourier spectrum restoration using linear programming 2-114206
- elastoplastic analysis problem 2-81244
- energy conversion systems, modelling by means of hierarchical decomposition of large dynamic linear programming problems 2-73091
- energy supply system and environmental impact model 2-99852
- toroidal axisymmetric devices poloidal field winding design for controlled thermonuclear fusion (*Italian*) 2-74786

linear rectification *see rectification***linear systems**

- multivariable t, theory 2-101323

linear vibrations *see vibrations***linearisation techniques**

- see also piecewise-linear techniques*
- flowmeter characts. linearisation, variable-area, microcomputer appl. (*German*) 2-86364
- photoelectric microscope, output signal linearisation (*German*) 2-84698
- semiconductor transport equations, linearization methods, decoupled and coupled approaches 2-77035
- temperature characts. linearisation of Ni resistance thermometer 2-64035
- Pt 100 resistance sensors, linearisation through positive feedback at transmitter (*German*) 2-89712

linewidths (spectral) *see spectral line breadth***linguistics**

- cross-language study of perception of the oral-nasal distinction 2-91168
- fricative-stop coarticulation, acoustic and perceptual evidence 2-91169
- vowel identification, orthographic, perceptual and acoustic aspects 2-70778

linguistics, language *see linguistics***linkages (electric connectors)** *see electric connectors***linking** *see joining processes***Liouville equation**

- see also Vlasov equation*
- Backlund generated solns. and graphical representations in three spatial dimensions 2-112716
- correlation time expansion for multidimensional weakly non-Markovian gaussian processes 2-89621
- coupled translational and rotational diffusion in liquids 2-53669
- dye laser threshold region, quantum description 2-65212
- generalised virial relations, subdynamics theory 2-84524
- ideal gas in empty space, Liouville theorem 2-79516
- large particle in inhomogeneous field, Brownian motion 2-101333
- Liouville-von Neumann eqn., soln. analytic continuation, singularities 2-63894
- Liouville-von Neumann equation, soln. in quantum statistical mech. 2-63893
- magnetic resonance spectra, simulation using stochastic Liouville eqn. with Pade approximants 2-85692
- nonequilibrium system, linear response, generalised eqn. of motion derivation 2-101303
- Polyakov string theory, pomeron singularities, saddle point anal. 2-101694
- randomly forced two dimens. flow, nonequilib. probability distrib. 2-97511
- randomly forced two-dimens. flow, Liouville's eqn. soln. 2-109296
- relativistic quantum plasma, strong magnetic field effect, covariant Wigner function approach 2-91662
- sequential quantum processes, Liouville space theory, appl. to system with internal reservoir 2-95227
- sequential quantum processes, Liouville space theory 2-95226
- stationary solns. and transport processes in strong mag. field 2-63939
- statistical mechanics, dynamic field equations interpretation 2-74313
- statistical mechanics, Liouville theorem links (*French*) 2-74312
- supersymmetric Liouville action renormalisation and 3D Ising model critical exponent 2-79762

lip microphones *see microphones***lipid bilayers**

- acyl chain motion, statistical mechanical model 2-78301
- archipelago, lateral diffusion, effects of impermeable patches on cell membrane diffusion 2-111644
- bacteriorhodopsin, lateral and rot. diffusion in lipid bilayers 2-111634
- carrier-mediated ion transport, kinetics in solvent-free lipid bilayers 2-111630
- cerebroside and phospholipid-cerebroside membranes, phys. parameters 2-57785
- charged membranes, interaction problem 2-78318
- chlorophyll in liposomes, phosphoresc. and liposome effects on quantum yields 2-78308
- cryofixation, simple procedures for evaluation 2-83713
- decanoate bilayer, lipid membrane model, mol. dynamics simulation 2-67974
- dimyristoyl phosphatidylcholine-d₅₅ liposome, Raman linewidth, 2103 cm⁻¹, membrane bilayer reorganization 2-73206
- dipalmityl phosphatidyl ethanolamine, Langmuir-Blodgett film, elec. props. meas. 2-116891

lipid bilayers continued

- dipalmitoyl-lecithin monomolecular layers, insoluble, dynamical props. under press. (*French*) 2-62646
- 1,2-dipalmitoyl-sn-glycero-3-phosphocholine bilayers, ^2H and ^{14}N quadrupolar spin-lattice relax. 2-105505
- dipalmitoyllecithin, fractional order phase transform. 2-116877
- L- α -dipalmitoylphosphatidylcholine, lamellar liposome, biomembranes, phase transition study 2-78304
- dipalmitoylphosphatidylcholine bilayers, amplitude of rippling in P_{β} phase 2-93995
- dipole molecules in membranes, energy profile 2-99906
- egg phosphatidylcholine, single-walled liposomes, neutron small angle scatt. 2-116890
- elastic modulus measurement method for cylindrical bilayer lipid membranes 2-68201
- electric breakdown state, irreversible damage to /lipid bilayer membranes 2-57788
- excitable properties of an artificial membrane containing amphotericin B in presence of cationic blockers 2-67964
- flat bilayer membranes with const. surface charge, interaction 2-99908
- flat lipid membranes, elec. capacitance, phasic transition effect 2-99907
- flat lipid membranes, electrostriction and elastic moduli 2-99909
- interaction rel. to charged components redistrib. 2-111629
- intrinsic molecules in bilayer membranes, lipid mediated interactions 2-83552
- ion adsorption isotherm in internal field compensation conditions 2-57782
- ion pores, electrostatic modelling, energy barriers and elec. field profiles 2-111631
- ionic channels, anion-selective, appearance during phasic transitions of lipids 2-99926
- lecithin bilayers, ripple phase, mol. interaction, statistical mech. model 2-99914
- lecithin-water lamellar system, rheological props. (*French*) 2-68033
- lipid bilayer, phase transition from an intercalated to nonintercalated struct. 2-115412
- liposome suspensions, optical study of microstruct. 2-111633
- mitochondria, bovine heart, protein inducing channel K^+ cond. in bilayer lipid membranes 2-99923
- molecular motions, lateral and transverse diffusion 2-78303
- multilamellar and vesicle systems, mol. motion, NMR line breadth 2-78302
- order parameters in hydrocarbon chains 2-62555
- phospholipid bilayer membranes, hydration, free energy, enthalpy and entropy determ. 2-116685
- phospholipid bilayer membranes, neutral, interactions between 2-62565
- phospholipid bilayers, hydrocarbon tail region, fast dynamic processes 2-94004
- phospholipid bilayers, lateral compressibility obs. 2-62566
- phospholipid bilayers, press. induced phase transitions, Landau phenomenological theory 2-83551
- phospholipid bilayers, press. induced phase transitions, Landau phenomenological theory 2-105669
- phospholipid membranes, props. of conductivity channels induced by α -staphylo toxin 2-67966
- phospholipid membranes, proton permeability and elec. breakdown after UV irradi. 2-99924
- phospholipid multilayers, oriented, ^{31}P NMR obs. 2-94000
- phospholipid vesicle tether formation, surface viscosity meas., anal. 2-67971
- phospholipid vesicle tether formation, surface viscosity meas., expts. 2-67972
- phospholipids in inverted micelles, small mols. interactions, NMR spectra 2-99913
- rod outer segments, bovine, incorporation into bilayer lipid membrane, transformation into photoexcitable system 2-116888
- rupture potential of phospholipid bilayer membranes, temp. dependence 2-67968
- synthetic phospholipid bilayers, ordering effects due to N_2O 2-62571
- thermotropic mesomorphism of *Acholeplasma laidlawii* B, temp. induced phase transition, Fourier transform IR spectra 2-116889
- viscoelasticity and phase transitions 2-116723
- voltage-dependent conductance rel. to alamethicin dipole moment 2-73203
- K^+ and Cl^- channels in calf cardiac sarcolemma 2-105693
- liquefaction of gases**
No entries
- liquid alloys**
see also liquid metals
- alkali metal alloys, heat and entropy of mixing, Gibbs-Bogolyubov variational technique 2-56221
- binary, compound-forming, entropy of mixing 2-103999
- binary, contact melting study for interdiffusion coeff. determ. 2-71700
- binary, defective two sublattice model 2-99387
- binary, diffusion coeffs. 2-71686
- binary, surface tension 2-98393
- binary, thermodynamic props. with negative deviation of activities from Raoult's law (*Japanese*) 2-77804
- binary alloys, surface tension, rel. to thermodynamic enthalpy and activities, eqns. 2-61260
- binary melt, nonequilib. model of two-dimens. cellular solidification 2-67319
- compound forming, thermodynamic props. in weak interaction approx. 2-91759
- concentration fluctuations 2-97907
- configurational entropy and regular associated model of compound-forming binary systems 2-97890
- electronic density of states calc. 2-61325
- entropy of mixing, excess vol. formation, hard sphere model 2-76684
- entropy of mixing of liquid metal alloys 2-115420
- heat of formation, simple model for liquid metal alloys and relation to Miedema's variables 2-116722
- melts, crystal quasiparticle anal. using cluster-variation method 2-103586
- rare earth-thallium, thermodynamic characts., intermetallics form., liquidus behaviour 2-67293
- short range order and conc. fluctuations in regular and cpd. forming alloys 2-91757
- steel-inclusion boundary, interphase props. and degree of struct. refinement 2-72685
- Ag-Mg, conc. and temp. depend. of mag. susceptibility 2-56826
- Ag-O liquid alloys, surface tension and adsorption meas. 2-104117

liquid alloys continued

- AgAl, short range order and conc. fluctuations 2-91757
- AgAl, thermodynamic props. in weak interaction approx. 2-91759
- Al-Ge-Sn, liq. alloy, thermodynamic props., EMF meas. 2-104031
- Al-Sn, liquid system, oxidation, Auger electron spectroscopy 2-93658
- $\text{Au}_{0.81}\text{Si}_{0.19}$, liquid ^{199}Au diffusion coeff., shear cell meas. 2-81997
- Ba-Sr, elec. resist. and thermopower 2-82311
- Ba-Zn alloys, liq. 2-72670
- Bi-In melts, thermodynamic activities by Knudsen cell-mass spectrometry 2-67296
- Cd-Au, dil., EMF and vapour press. values, equil. and second law of thermodynamics confirmation 2-81981
- Cd-In, liq., vapour press. and calorimetric meas. 2-67298
- Cd-Mg, short range order and conc. fluctuations 2-91757
- Cd-Sb, liq. alloys, elec. resist. in cpd. forming conc. range 2-115724
- Co-Al-O, liq. solubility of oxides, prediction 2-86889
- Co-Cr, liq. and solid., conc. and dil., temp.-conc. relationships of susceptibility 2-66766
- Co-Ge liquid alloys, thermodynamic excess props. determ. by mass spectrometry 2-98306
- Co-O-Zr(Ti), liq., solubility of oxides 2-98295
- Co-S system melts, thermodynamic activity of S 2-105126
- Cr-binary alloys, liq. and solid., enthalpies of formation 2-61175
- Cs-In, phase diagram, cryst. struct., liquid immiscibility, X-ray diff. study 2-66176
- Cs-Tl molten alloys, reflectances meas. 0.65-4.5 eV 2-67076
- Cu-Al-O, liq. solubility of oxides, prediction 2-86889
- Cu-Cr, thermodynamic study and phase diagram by mass spectrometry 2-56219
- Cu-Ni/LaB₆ system, wetting and the contact reaction 2-71777
- Cu-Si liq. alloy, cpd. forming, configurational entropy and regular associated model 2-97890
- Fe based ternary system, liq., N diffusivity estimation 2-115446
- Fe-Al-O, liq. solubility of oxides, prediction 2-86889
- Fe-base ternary system, liq., H diffusivity estimation 2-115443
- Fe-C-Si melts, thermodynamic study 2-71668
- Fe-FeSi, liquid hypoeutectic alloy, solidification, obs. by droplet method 2-67309
- Fe-Mn, liq., activity coeff. of Mn, meas. by isobaric method (*Japanese*) 2-83084
- Fe-Ni, normal spectral emissivity, 645 nm, comp. depend. 2-81992
- Fe-O-Zr(Ti), liq., solubility of oxides 2-98295
- Fe-Si(Mo)(C), density, influence of Si, Mo and C 2-61048
- Ga-In, interference functions, radial atomic distrib. and elec. resist. 2-103595
- Ga-Te, liq. alloys, appl. of percolation theory and transport coeffs. 2-66516
- Ga-Ti(V)(Cr) melts, contact reactions with quartz and graphite, X-ray diff. study 2-82085
- Hg-Bi(Cd), dil., expanded fluid, thermoelec. power, transition from liq. semicond. to plasma state 2-82387
- Hg-Cd-(Bi)-(Na)-(Pb) dilute liq. alloys, thermodynamic and elec. props., density and vol. of mixing 2-61171
- Hg-Cs, liq. alloys, molar vol. and thermal expansion coeff. meas. 2-109879
- Hg-Cs(Tl), liq., anomalous electronic props., higher order correl. effects 2-104340
- Hg-Sn, dil., EMF and vapour press. values, Duhem integration, second law of thermodynamics confirmation 2-81982
- Hg-Tl, liq. alloys, molar vol. and thermal expansion coeff. meas. 2-109879
- In-Cu(Ag), liq. binary system, O diffusivity and thermodynamic props. 2-86907
- In-Sn-Cu system, dispersion-hardening pastes, phase comp. 2-111143
- In-Te, molten, liq. struct., X-ray diff. study 2-115131
- In-Te liq. alloys, appl. of percolation theory and transport coeffs. 2-66516
- K-Cs, liquid, thermodynamic calcs. 2-98308
- Li-Ge liq. alloys, ^7Li Knight shift meas. 2-93030
- Li-Mg liq. alloys, ^7Li Knight shift 2-56956
- Li-Pb, liq. alloy, chem. short-range order, neutron and X-ray diff. study 2-97906
- Li-Pb, liquid, thermodynamic calcs. 2-98308
- Li-Pb-Bi, liq. breeds blanket material, candidate studies 2-75001
- LiPb, short range order and conc. fluctuations 2-91757
- Mg-Ga liq. system, thermodynamics studies 2-66257
- MgBi, short range order and conc. fluctuations 2-91757
- Mn-binary alloys, liq. and solid., enthalpies of formation 2-61175
- Na-Bi, molten alloy, chem. pot. and related thermodynamic props. 2-92235
- Na-Cs, molten alloy, chem. pot. and related thermodynamic props. 2-92235
- Na-Cs liq. alloy, partial struct. factors calc. 2-60869
- Na-Cs liquid alloys with atomic size mismatch, conc. fluctuation 2-81965
- Na-Ga(Cd), conc. fluctuations, press. effect, EMF meas. 2-91758
- Na-Hg, liquid, thermodynamic and struct. props., EMF meas. 2-81986
- Na-In, liq. and solid, mag. susceptibility 2-82577
- Na-K, liquid, concentration fluctuations 2-97907
- Na-K, liquid, thermodynamic calcs. 2-98308
- Na-K liq. alloys, statistical thermodynamics 2-86540
- Na-K liquid alloys with atomic size mismatch, conc. fluctuation 2-81965
- Na-Sn, liquid, entropy of mixing 2-103999
- Na-Sn liq. alloys, thermodynamic props. 2-92234
- Ni-Al-O, liq. solubility of oxides, prediction 2-86889
- Ni-Co-S melt, associated solution model extension, thermodynamic props. 2-71669
- Ni-Cu liq. alloys, thermodynamic props. and solubility limits of O₂ 2-56199
- Ni-Mn liquid alloy, Mn activity 2-83089
- Ni-O-Zr(Ti), liq., solubility of oxides 2-98295
- Pb dilute molten alloys, O₂-Ag(Au)(Bi)(Cu)(In)(Ni)(Sb)(Sn)(Te) interactions 2-62099
- Pb-Bi(Sb) melts, activity coeff. of O 2-67299
- Pb-In(Sn)(Te), liq. dil., activity coeff. of O, impurities effect 2-99700
- Pb-Sn, phase diagram calcs., thermodynamic anal. 2-72668
- PbM alloys, M=Ag, Cu, Ni, Zn, liq., role of adsorption on wetting of Fe solid (*French*) 2-71771
- Pd-Ge, liq., thermodynamic props. rel. to bonding and short-range order 2-91756
- Pd-Te, liq. and solid alloys, thermodynamic props. 2-67297

liquid alloys continued

- Pt-Ge, liq., thermodynamic props. rel. to bonding and short-range order 2-91756
 Sb-Cs(Na)(K), elec. and mag. props., transition to semicond. characts. 2-92709
 Sb-Te, absolute viscosity, temp. and comp. depend., Sb_2Te_3 intermetallic behaviour 2-82002
 Sn-Nd(Pr)(Ce), dil., 4f spin dynamics, TDPAD study 2-56992
 Ti-Si, enthalpy of form. 2-105127
 Ti-Te liq. alloy, cpd. forming, configurational entropy and regular associated model 2-97890
 V-Si, enthalpy of form. 2-105127
 Zn-Bi, density and surface tension 2-61259
 Zn-Sb, liq. alloys, elec. resist. in cpd. forming conc. range 2-115724

liquid crystal devices

- see also liquid crystal displays
 biemeasuring system, photo-coupled with liq. cryst. optical modulator (Japanese) 2-117045
 camera for IR HCN laser mode examination 2-70595
 dye activated cholesteric liq. cryst. as tunable laser with DFB 2-114262
 electrooptic 4×4 matrix switch for multimode fibre-optic systems 2-76698
 light modulators with piezoceramic transducers for hybrid fibre optic sensors 2-102930
 light valve for microcomputer-based hybrid processor using two optical processors 2-91026
 liquid crystal cells, dynamic light scatt., threshold voltages and currents 2-71345
 matrix for optical processing (French) 2-109033
 mechanical stress effects 2-55831
 memory light valve using smectic-cholesteric liq. cryst. mixture 2-72468
 molecular physics, review 2-76302
 nematic twisted cell, opto-electronic bistable devices in real-time optical information processing 2-86073
 optical attenuator, polarisation-independ., fibre-optics appls. 2-65346
 optical waveguide, transmission characteristics meas., 0.7 to 1.7 μm 2-75674
 pretilted nematic cell, modelling 2-60880
 second-harmonic lasing in orientationally ordered solutions of noncentrosymmetrical molecules 2-108950
 smectic liquid cryst. imaging device based on photochem. reaction 2-99692
 thermometry technique, appl. to hyperthermal microwave irradi. of cells 2-100163
 tunable Fabry-Perot spectral filter, visible and IR operation 2-109023
 twisted nematic cell for control of calcite 2×2 optical bypass switch 2-60257

liquid crystal displays

- bistable twisted nematic liquid crystal boundary layer display, optical props. 2-86546
 electrochemiluminescence cell with electrolyte-free solution, used for LCDs 2-99199
 electrochromic and liquid crystal materials (Japanese) 2-91775
 film, elec. field induced texture and phase transformation, light absorpt. study 2-55833
 guest-host cell, dichroic azo dyes 2-61868
 guest-host type, UV stability of liq. cryst./dye mixtures 2-62416
 nematic liquid cryst. display, multiplexible bistable, homogeneous elec. field threshold switching 2-103597
 nematic twist cells, viscous props., temp. depend. electrooptical performance 2-65857
 twist cells, electro-optical performance, phys. props., correl. with mol. struct. 2-65856

liquid crystal phase transformations

- aligned nematics, dielec. spectrosc. and mol. theory 2-65853
 p-alkoxyazoxybenzene, expt. obs. of growth of mesophase in elec. field 2-55846
 4-alkoxybenzoyl esteramides, thermotropic liq. cryst. behaviour 2-60875
 4(4'-n-alkoxybenzoyloxy)-3-methoxy-benzylidene-4"-toluidines (4'-anisidines), mesomorphism, lateral substitution effect 2-61134
 N-(alkoxycarbonyl-n-pentyl)-3 β -cholesterilyl urethanes, synthesis, polymorphic and mesomorphic props. 2-81957
 4-n-alkoxyphenyl 4-nitrobenzoates, liq. cryst. props. 2-103602
 4-(trans-4-n-alkylcyclohexyl) benzoic acids, synthesis and liq. cryst. props. 2-103600
 alkylene glycol terephthalate copolymers with mesogenic p-oxycarboxylate units, thermal transitions 2-61139
 4-n-alkyloxybenzylidene-4'-n-hexylanilines, smectic phase, reorientation of long mol. axis, dielec. dispersion study 2-65848
 2-[4-n-alkylphenyl]-5-[4-n-alkyloxyphenyl]-pyrimidines, calorimetric investigation, 2-56172
 anthraquinone-2,6-diamides, nematic liq. cryst., phase transitions 2-86552
 anthraquinone-2,6-diesters, nematic liq. cryst., phase transitions 2-86552
 azomethyne polymeric films, thermotropic liq. cryst. behaviour 2-60877
 benzene-hexa-n-octanoate, heat capacity and IR spectra, 13 to 393K 2-76696
 binary mixtures, thermal props., review 2-103605
 biological membranes and model liq. cryst. systems 2-67963
 blue phase, cubic, lack of second order phase transition in Landau theory 2-103989
 blue phase IIB, possible non-existence 2-76674
 butoxybenzylidene heptylaniline, smectic-A-smectic-C transition, mag. birefringence determ. of tilt susceptibility 2-115411
 4-n-butoxybenzylidene-4'-aminopropiophenone, smectic A to B transition, PMR spin-lattice relax. study 2-93037
 4-n-butyl-4'-n-dodecyloxyazobenzene, dielec. relax. 2-116114
 butyloxybenzylidene octylaniline, shear mech. impedance near crystalline-B-smectic-A phase transition, US study 2-56190
 4'-butylphenyl 4-hexyloxybenzoate, electro-optical props., relax. near phase transition 2-99092
 charged liquid crystals, isotropic-nematic transition 2-66215
 chiral smectic C liq. cryst., effect of fluctuation of tilt angle on pitch 2-109668
 chiral-racemic mixture, cholesteric pitch and blue phases 2-71643
 cholesteric and blue phases, relative order parameters 2-86560
 cholesteric liquid crystals, localised instabilities and order-disorder transition 2-86867
 cholesterol-1-hexadecanol smectic liquid crystal mixtures, US velocity, adiabatic compressibility and density meas. 2-61066

liquid crystal phase transformations continued

- cholesteryl arylbenzoates, mesomorphic props., effect of ang. linkage 2-103604
 cholesteryl chloride-cholesteryl myristate mixture, negative-positive monopole transitions (Russian) 2-81961
 cholesteryl hexanoate, phase transitions, high press. study 2-71642
 cholesteryl myristate/ethyl p-aminobenzoate mixture, cholesteric-smectic A transition, US vel., density and compressibility study 2-71581
 cholesteryl n-alkanoates, cholesteric helix pitch behaviour at cholesteric-smectic A phase transition 2-103988
 cholesteryl nonanoate-cholesteryl chloride, blue phase stability, pitch depend. 2-92194
 cholesteryl nonanoate-propionate (butyrate) binary mixtures, cholesteric pitch divergence near smectic-A transition 2-98280
 cholesteryl oxycarboxylate derivatives, liq. cryst. props. 2-103603
 cholesteryl peltargonate, homeotropic-planar transition, electrooptical characts. 2-103993
 cholesteryl pentanoate, phase transitions, high press. study 2-71642
 COC, optical rot., Kerr effect, and dynamic light scatt. in isotropic and homeotropic states 2-61135
 COC, smectic A-cholesteric transition, press. induced tricritical behaviour, expt. study 2-115409
 COC optically determ. transitions at high pressure 2-76669
 columnar mesophase, prep. and phase sequence (French) 2-109987
 4-cyano-4'-pentylbiphenyl-hexamethylbenzene, isotropic to nematic transition, substrate surface effects, birefringence study 2-115408
 4-cyano-4-n-octyl-diphenyl, smectic A liq. cryst., light diffr. on linear disclination 2-103622
 4-cyanobenzylidene-4'-(4"-alkoxybenzoyloxy) aniline, homologues, reentrant nematic phase with pentamorphism 2-61138
 cyanobiphenyls, nematic, smectic, and reentrant nematic phases 2-66217
 cyanophenyl cyclohexenes, mesomorphic props. 2-76675
 di-alkoxyazobenzenes, homologous series, nematic phase, high-press. thermodynamic meas. 2-71342
 di-ethyl-p-azoxybenzoate, liq. cryst. phase transitions, high press. effects 2-76672
 di-Schiff base liq. crystals., gas-liq. chromatography and DSC studies 2-98281
 disc-like liquid crystals, reentrant isotropic phase 2-71646
 discotic mesophase, Freedericksz transition, phys. parameters meas. 2-76286
 disodium cromoglycate, in mag. fields, lyotropic cholesteric and nematic phases 2-76284
 dye laser in region of thermodynamic phase transition (Russian) 2-80944
 EBBA, EPR of nitroxide radical, phase transition temp. 2-56935
 EBBA, melting and crystn. processes, thermal anal. 2-92198
 EBBA-MBBA mixture, EPR of nitroxide radical, phase transition temp. 2-56935
 p-(p-ethoxyphenyl azo) phenyl undecylenate, liq. cryst. phase transitions, specific vol. and US vel. study 2-92199
 film, elec. field induced texture and phase transformation, light absorpt. study 2-55833
 group theoretical anal. of ordering and modulation of smectic layers 2-66218
 N-(4-n-heptoxybenzylidene)-4-n-hexylaniline, smectic-F to H transition, AC sp. heat and X-ray meas. 2-86868
 heptyloxybenzylidene-heptylaniline, smectic B phases, synchrotron X-ray study 2-103617
 4-n-heptyloxyphenyl-4'-n-decyloxybenzoate, liq. cryst. phase transitions, high press. effects 2-76672
 heptylphenyl cyanobenzoyloxy benzoate, smectic A phases, bilayer and partial bilayer (French) 2-55841
 hexadecyltrimethylammonium fluoride- H_2O , phase equilibria studied by ^2H , ^{14}N and ^{19}F NMR 2-81958
 hexatic and crystal B phases in a series of liquid crystal compounds 2-103608
 hexatic B and crystal B phase, press. study 2-71644
 hexatic order and herring-bone packing 2-81670
 4'-n-hexyloxy-4-cyanobiphenyl-4'-n-octyloxy-4-cyanobiphenyl mixture, nematic-isotropic transition, mol. ordering effect 2-76673
 N-p-hexyloxybenzylidene-p-toluidine, refr. index, density, and order parameter meas. in liq. cryst. phases 2-103601
 p-n-hexyloxybenzylidenecamino-p'-chlorobenzene, heat capacity and thermodynamic props. 2-98302
 p-n-hexyloxybenzylidenecamino-p'-fluorobenzene, heat capacity and thermodynamic props. 2-98303
 4'-hexyloxyphenyl 4-butyloxybenzoate, electro-optical props., relax. near phase transition 2-99092
 incommensurate-commensurate phase transition, tricritical point, Landau-type theory 2-66167
 isotropic-nematic transition, Landau-de Gennes vs. molecular theory 2-76671
 lipid bilayer, phase transition from an intercalated to nonintercalated struct. 2-115412
 lipid bilayers, acyl chain motion, statistical mechanical model 2-78301
 lipid thermotropic mesomorphism of Acholeplasma laidlawii B, temp. induced phase transition, Fourier transform IR spectra 2-116889
 lipid-water systems, phasic transition models, evaluation by optical analogy 2-57776
 lyotropic liq. crystals., phase diagram, symmetry anal. 2-66186
 lyotropic liquid crystals., review 2-76298
 MBBA, EPR of nitroxide radical, phase transition temp. 2-56935
 MBBA, fluctuations, phase transition, electroreflection method 2-76305
 MBBA, liq. cryst., nematic-isotropic transition, Landau-de Gennes model, Gaussian approx. 2-66163
 mesophase fluid transitions due to periodicity anomalies (French) 2-86870
 mesomorphic polymer and monomer liq. cryst. mixture, nematic phases 2-115410
 mesophase, possible universal existence 2-66214
 4-methoxybenzylidene-4'-perfluorobutylaniline, smectic liq. cryst., Urbach rule 2-65854
 4-(2'-methylbutyl)phenyl 4'-n-nonyloxybiphenyl-4-carboxylate, tilted smectic phases, press.-temp. diagram 2-71645
 2-methylbutyl p-(p-n-alkoxybenzylidenecamino) cinnamates, ferroelec. smectic C* liq. cryst., helical pitches and wall anchoring, optical study 2-55839
 microscopic unified description of smectic-A, nematic and isotropic phases 2-103614
 nematic, impurity centres, liq. cryst.-isotropic transition temp. shift, Maier-Saupe model (Russian) 2-76307

liquid crystal phase transformations continued

- nematic binary mixture, induced smectic phase, theory 2-109983
 nematic binary mixtures of terminal nonpolar cpds., reentrant nematic phase, X-ray study 2-109984
 nematic fluids, Flory statistical mechanics, steric effects 2-60873
 nematic liq. cryst., orientation statistics and nematic-isotropic transition 2-103620
 nematic liq. crystals, order parameter fluctuations and mol. anisotropy, Raman study 2-103619
 nematic liq. crystals, with biaxial mols., mean field theory 2-103615
 nematic liquid crystal, light scattering at uniaxial-biaxial transition 2-92197
 nematic liquid crystal, giant optical nonlinearity near nonoptical Frederiks transition threshold 2-91003
 nematic liquid crystal, phase transition temp. determ. by free radical EPR 2-56936
 nematic liquid crystal mixtures, pretransitional effects 2-76676
 nematic liquid crystal-organic liq. mixtures, phase diagrams 2-109986
 nematic liquid crystals, optical uniaxial birefringence meas. 2-104844
 nematic liquid crystals, equilibrium props. and phase transition 2-60874
 nematic to smectic-A crit. point, correlations when $v_{\perp} = 2v_{\parallel}$ 2-61132
 nematic-columnar phase transition, statics and dynamics 2-81959
 nematic-isotropic phase transition, SC lattice model, Monte Carlo simulation, pair approx. 2-92196
 nematic-isotropic transition, boundary and size effects, mean field theory 2-98278
 nematic-isotropic transition, mag. field induced order 2-103616
 nematic-isotropic transitions, generalised mean-field equations, appls. 2-76670
 nematic-smectic A phase transition, microscopic theory, short-range order effects 2-103992
 nematic-smectic A transition, anomalous sound attenuation, mode coupling theory 2-66131
 nematics, dielectric relaxation and Doolittle's law 2-116117
 nematogens, pre-transitional effects, g-factor simulation using Monte Carlo technique 2-98282
 4-nitrophenyl-4'-octyloxybenzoate, liq. cryst. phase transitions, high press. effects 2-76672
 4-nitrophenyl-4'-octyloxybenzoate, solid state and liq. cryst. phase transitions, calorimetric study 2-61136
 4-nonyloxyphenyl-4-nitrobenzyloxybenzoate, reentrant nematic and smectic phases (French) 2-92195
 NPOOB, fluctuations, phase transition, electroreflection method 2-76305
 16-OCB binary mixtures, smectic A-nematic transition, elastic constant temp. depend. 2-56191
 4'-n-octyloxy-4-cyanobiphenyl, piezothermal studies in vicinity of smectic A-nematic transition 2-61133
 N-p-octyloxybenzylidene-p-toluidine, refr. index, density, and order parameter meas. in liq. cryst. phases 2-103601
 octyloxycyanobiphenyl, nematic, surface smectic A order, synchrotron X-ray diffr. study 2-71341
 partially flexible macromolecules, liq. crystalline ordering 2-97920
 n-pentyl 4-[4'-n-dodecyloxybenzylideneamino] cinnamate, smectic phase classification, smectic I phases 2-61137
 4-n-pentyl-4'-cyanobiphenyl-d₁₅, nematic, pretransitional behaviour, NMR investig. 2-82731
 4-pentyl-4'-cyanobiphenyl nematic liq. crystals, boundary layer phase transition 2-109988
 4-n-pentyloxybenzylidene-4-ethylaniline, conformational changes, Raman scatt. study 2-109985
 4-n-pentyloxyphenyl-4'-n-decyloxybenzoate, liq. cryst. phase transitions, high press. effects 2-76672
 p-phenylene di-p-substituted benzoates, esteramide analogues, thermotropic liq. cryst. behaviour 2-60875
 phospholipid multilayers, oriented, ³¹P NMR obs. 2-94000
 poly(ethylene terephthalate-co-p-oxybenzoate), phase transitions 2-98279
 polyester, thermotropic nematic, phase transition entropies, influence of mol. weight 2-103990
 polyesters, thermotropic liq. cryst., orientation in high mag. fields 2-103607
 polymer, thermotropic, elec. field induced cooperative struct. transition, electro-optical behaviour 2-76677
 re-entrant nematogens pre-transitional effects in elec. cond. 2-71339
 reentrant cholesteric phase of optically active derivative of p-cyanobiphenyl 2-60878
 review of liq. cryst. phases and phase transitions 2-76297
 rigid molecule model of phase transitions mol. shape effect 2-66216
 rod-like polymer soln. phase behaviour, Gaussian distrib. of chain lengths effects 2-91753
 smectic A nematic, X-ray diffr. study 2-65858
 smectic A phases, bilayer and partial bilayer (French) 2-55841
 smectic A to C transitions, orientational order, refractive indices meas. 2-86869
 smectic A-C phase transition, calorimetry study 2-81960
 smectic B liq. cryst., AC shear elastic const. meas. 2-103875
 smectic liquid crystals, C phase, transform, X-ray study 2-55836
 smectic S_A, S_B and S_E phases, highly ordered orthogonal, mol. relax. 2-72416
 smectic-A-nematic transition, dislocation loop model 2-103991
 terephthalylidene-bis-[4-n-alkylanilines], liq. cryst., temp. and enthalpy of phase transition, calorimetric studies 2-92193
 terminal polar two-ring organic cpds., re-entrant nematic phase, phase diagrams 2-11512
 two-dimensional, Kosterlitz-Thouless anal. 2-66187
 US propagation rel. near nematic-smectic A transition (Russian) 2-98202

liquid crystals

- see also *cholesteric liquid crystals; liquid crystal phase transformations; nematic liquid crystals; smectic liquid crystals*
 acoustic props. from infrasonic to hypersonic 2-109672
 acoustical and optical beam displacement, appl. to optical computing 2-86551
 acousto-optical props., appls. 2-110814
 alignment on Al₂O₃ surfaces, tilt angle, conoscopic method 2-71344
 2-[4-n-alkylphenyl]-5-[4-n-alkoxyphenyl]-pyrimidines, calorimetric investig. 2-56172
 azobenzene monomers, struct. features of liq. cryst. state (Russian) 2-60885
 BBCA-p'p' liquid crystal mixture, US absorption study 2-71580
 benzene-hexa-alkanoate, discotic mol., two-dimens. film at air-water interface 2-115507

liquid crystals continued

- benzene-hexa-n-octanoate, heat capacity and IR spectra, 13 to 393K 2-76696
 bibliography for 1979 2-58576
 binary mixtures, thermal props., review 2-103605
 cellulose derivatives, thermotropic mesomorphic tendencies and rheological characteristics 2-91774
 columnar discotic mesophases, elasticity, dislocations, instabilities 2-65851
 columnar mesophase, prep. and phase sequence (French) 2-109987
 columnar mesophases, macroscopic evidence of mol. chirality 2-91772
 defects, review 2-76300
 di-Schiff base liq. crystals, gas-liq. chromatography and DSC studies 2-98281
 disc-like liquid crystals, reentrant isotropic phase 2-71646
 discotic liquid crystals, longitudinal fluctuation of order parameter 2-76287
 discotic liquid crystals, solvation sites in mesophases of benzene-d₆ 2-97916
 discotic mesophase, Freedericksz transition, phys. parameters meas. 2-76286
 dispersions, transitions, alcohol effects 2-93833
 dodecyltrimethylammonium chloride-water, mol. motion and struct., ¹⁴N spin-lattice and spin-spin relax. times 2-82740
 dye laser in region of thermodynamic phase transition (Russian) 2-80944
 dynamic light scatt., threshold voltages and currents 2-71345
 electrochemically induced coloration 2-71334
 electrochromic and liquid crystal materials (Japanese) 2-91775
 ferroelectric liq. crystals, electrooptical props. 2-57061
 film on solid substrate, alignment and texture 2-91765
 films, two-dimens. behavior 2-76301
 hexadecyltrimethylammonium fluoride-H₂O, phase equilibria studied by ²H, ¹⁴N and ¹⁹F NMR 2-81958
 hexadecyltrimethylammonium fluoride-water, mol. motion and struct., ¹⁴N spin-lattice and spin-spin relax. times 2-82740
 hexapentoxo-triphenylene, discotic columnar mesophase, mol. ordering, ¹³C NMR study 2-71336
 hexatic order and herring-bone packing 2-81670
 p-n-hexyloxybenzylidene-p'-toluidine, phase relation, DTA and microscopic studies 2-91770
 intra- and interpair dipolar order, proton NMR signals 2-116081
 IR spectra studies of hindered mol. rot. 2-110875
 isotropic phase, mean spherical model 2-81666
 light scatt. appls. 2-87805
 lyotropic liq. crystals, phase diagram, symmetry anal. 2-66186
 lyotropic liquid crystals, review 2-76298
 mesonic mols., flexible, orientational ordering, local order tensor 2-86550
 mesophase, possible universal existence 2-66214
 metastable chiral liq. cryst. structs., prod. by rapid cooling 2-65855
 microscopic unified description of smectic-A, nematic and isotropic phases 2-103614
 mixtures, diamagnetic susceptibility anisotropies, ¹H NMR study 2-65850
 molecular fluids, small angle X-ray anal. of orientation fluctuations 2-76281
 molecular mesomorphism, concept of superpositional state 2-76289
 molecular physics rel. to device appls. 2-76302
 molecular theory, supercooling temp. (Chinese) 2-109662
 nematic thermotropic and lyotropic liq. cryst. mixtures, obs. of apparent high strength singularities 2-103612
 nonlinear optical expts., suppression of unwanted self-focusing effects 2-102887
 orientation effect of substrate surfaces (German) 2-86563
 orientational ordering at high press., NMR 2-89779
 partially flexible macromolecules, liq. crystalline ordering 2-97920
 poly(γ-benzyl-L-glutamate), orientation behaviour in electric field 2-71335
 poly(ethylene terephthalate-co-p-oxybenzoate), phase transitions 2-98279
 polyamide liquid crystals, thermotropic, and analogous small mol. diamides 2-103609
 polyesters, rigid-chain, thermotropic liq. cryst., crystallites 2-76303
 polymer, comb-like, with phenylbenzoate side groups, liq. cryst. ordering (Russian) 2-76278
 polymeric, acoustoelectric light scanner studies (Chinese) 2-91828
 polymeric liquid crystals, review 2-76299
 polymers, microheterogeneous struct., X-ray scatt. 2-91773
 polymers, mol. order and motion, ²H NMR spectroscopy 2-86545
 polystyrene-polyethylene oxide (polyisoprene) block copolymer-solvent systems, liq. cryst. textures 2-115130
 rod-like polymer soln. phase behaviour, Gaussian distrib. of chain lengths effects 2-91753
 semiflexible macromolecules, liquid crystal solns., susceptibility in external orienting field 2-65852
 size effects in struct. factor (Russian) 2-86562
 symmetry anal. of liq. cryst. structures 2-65859
 thermotropic liquid crystalline polymers, synthesis by poly(acryloyl chloride)+mesogenic cpds. interactions 2-115136
 thermotropic liquid crystals, methylene groups orientational ordering theory 2-81669
 twist cells, electro-optical performance, phys. props., correl. with mol. struct. 2-65856
 two-dimensional, Kosterlitz-Thouless anal. 2-66187
 unit cell dimensions and space groups of some liquid crystals 2-60968
 X-ray crystallography, at high pressures, 1933-1980: a bibliography 2-63771
 C mesophase, in situ obs., 400-500°C (French) 2-76304

liquid drop model (nuclear) see nuclear liquid drop model**liquid films**

- see also *adsorbed layers; helium films; liquid helium; superfluidity; surface tension*
 benzene-hexa-alkanoate, discotic mol., two-dimens. film at air-water interface 2-115507
 binary, Rayleigh linewidth meas. near crit. point 2-57116
 capillaries, meniscus, wetting film, equilib. profile of transition zone 2-66321
 displacement wetting, thermodynamic anal. 2-76780
 electrically cond. liq. flow stability 2-109286
 evaporator downward flow, heat transfer coeff. meas. 2-70934
 flow, irregular, down vertical column, curvature effect on flow stability 2-55668

liquid films continued

- Freon 113, flow boiling system, dryout heat flux and entrained drop size 2-91512
 gas liquid trickling flow through packed bed, liq. flow struct. (*French*) 2-91528
 gas liquid two phase flow, liq. distrib., effect of swirl, film flowrate meas. 2-97625
 horizontal layer, free-convection flow struct., boundary condition 2-70933
 interface with supersonic gas stream, nonlinear wave interaction 2-109345
 IR photography, surface energy role (*Russian*) 2-58954
 laminar film condensation in tube with upward vapour flow 2-109270
 laminar films, chemical reactions, gas absorpt., mass transfer 2-65656
 laminar wavy film flow, condensation and evaporation, Nusselt theory 2-114832
 laminar wavy film flow, gravity driven, hydrodynamic anal. 2-114831
 liquid crystal film, elec. field induced texture and phase transformation, light absorpt. study 2-55833
 liquid crystal film on solid substrate, alignment and texture 2-91765
 liquid crystal films, two-dimens. behavior 2-76301
 lubricant boundary layers, elec. props. 2-56653
 magnetisable liquid film effect on nonmag. liq. drop motion 2-60662
 mass transfer coeffs. for column packed with partially wetted rings 2-103138
 nematic liq. cryst. film, optically induced birefringence, laser beam self focusing 2-55281
 nematic liquid crystal 2-55276
 nematic liquid crystal films, acousto-electro-optical effects, thickness dependence meas. 2-116148
 nonlinear Marangoni convection, large cells, form. and stabilisation 2-55571
 plane turbulent mixing layer, high-speed film, digital image anal. 2-91401
 saturated liq. film, forced convection boiling heat transfer from cylinder 2-75952
 semiempirical theory or film condensation of pure nonmetal vapours 2-70833
 squeeze film between porous annular curved plates 2-71026
 stability of flow over flat surface under gas flow 2-91394
 stability of thin liquid films evaporating into saturated vapor, theory 2-98394
 surfaces, hot dry, rewetting by water films, correl. for predicting quench front velocity 2-114622
 tear film, human, Marangoni convection 2-78358
 thin dipolar fluid films, capacitance 2-104792
 thin films, stability rel. to foam stability 2-71179
 thin liquid films, surface waves, spectral anal. 2-70969
 vertical surface, hot, wetting by flowing liquid film 2-110094
 viscoelastic, on plane surface, stability 2-82084
 viscous liq. layer covered with thin plate, motion under gravity action 2-81364
 viscous liquid, thin film flow in gas jet, droplet detachment 2-60566
 viscous liquid film, nonstationary waves 2-70968
 water film, air desorpt., cryotraping vacuum pump appl. 2-86976
 water film thickness meas. in two-phase flow by capacitance method 2-71045
 Ga liquid layer dispersion on surface of Ag film (*Russian*) 2-71778

liquid flow coaxial cables see *coaxial cables*

liquid He see *liquid helium*

liquid helium

- see also *helium films*; *liquid helium-3*; *liquid helium-4*; *liquid helium sound propagation*; *ripples*; *vortices*
 acoustic echo on bubbles (*Russian*) 2-66319
 breakdown strength calc. and obs., electrode conditioning effects 2-99036
 breakdown strength obs. and statistical evaluation, using IEC and cylindrical electrodes 2-99037
 cryostat, continuously filled, temp. stabilisation 2-112905
 2-D electron systems, at liq. He surface (*Russian*) 2-98361
 ESR spectra, of trapped N atoms (*Russian*) 2-98934
 film surface, self-trapped electron, temp. depend. effective mass 2-76776
 flow cryostat, high voltage, for solid insulator surface strength study in vac. 2-64049
 hexagonal charged surface reconstruction (*Russian*) 2-110061
 localised electron states energy spectra (*Russian*) 2-110278
 nonlinear equilibria of electron-charged surface 2-82047
 specific heat, nonlocal critical, in broken symmetry state, fluctuation/order-parameter hybridisation 2-71755
 sum rules and dynamical properties of two-dimensional classical electron liquid 2-110087
 surface, character of electrons (*Japanese*) 2-82055
 surface, two dimens. electrons, escape rate, correlation effects, expt. study 2-61252
 surface, two-dimens. electron lattice, phonon-ripple coupled modes 2-110089
 surface physics, conference, Varna, Bulgaria (Sept.-Oct. 1980) 2-89468
 thermodynamic parameters in centrifugal force field 2-115434
 two-dimensional systems, electronic props., conf., New London, NH, USA (Aug. 1981) 2-58536
 two-dimensional systems, electronic props., review 2-82467
 VUV scintillation detection using Ge photodiode 2-113813
 Wigner lattice, two-dimensional, ripple limited mobility, expt. 2-56297
 H₂ masers, low temp., using liquid He coated walls 2-60056
 He I and II, pulsed thermal loading on Cu, heat transfer 2-60358

liquid helium-3

- see also *fermion systems*; *superfluid helium-3*
 adiabatic demagnetisation expts., temp. controller 2-95337
 adsorbed layers, on Grafoil, melting, neutron scatt. study 2-71763
 adsorbed on graphite, multilayer physisorption, mean-field theory 2-110152
 Brueckner theory of interacting fermion systems, radial distrib. function 2-90034
 D-T: ³He, liq., anomalous vapour press. meas. 2-66188
 dynamic correlations, memory functions, shear viscosity, collective modes 2-66311
 effective mass, energy depend. 2-104099
 fermion quantum fluids, kinetic energy and Born-Green-Yvon method 2-66310
 ground state, spatial and energetic struct. (*Russian*) 2-56284
 ground state energy, lowest order constrained variation calc. and backflow effects 2-98373

liquid helium-3 continued

- heat capacity meas. 2-110081
 homogeneous nucleation temp. meas. 2-104095
 influence of rotation on NMR signal (*Russian*) 2-71758
 interpolating integral eqns. for quantum fluids, appl. to liq. ³He 2-115487
 Landau-Fermi liquid theory of NMR relax. times 2-98377
 magnetic susceptibility in high mag. fields, manometric meas. 2-82560
 normal phase, thermal boundary resist. with small particles 2-82062
 pair potentials, second virial coeff. calcs. (*Russian*) 2-71766
 RPA theory, extension to strongly interacting systems 2-84987
 single particle spectrum and specific heat 2-66315
 sound attenuation in first and zero sound regions 2-76761
 specific heat meas., 8 to 500 mK 2-92304
 specific heat under press., 0.5-1.4K 2-61235
 spin density fluctuations and energy based on Slater-Jastrow trial wave function 2-76764
 surface tension temp. depend., quantum effects 2-56302
 surface-induced magnetic susceptibility enhancement effective exchange interactions 2-82059
 thermal conductivity near liquid-vapour critical point 2-56288
 thermodynamic functions 1.5 to 14k (*Russian*) 2-86966
 X-ray scatt. studies 2-110059
 zero sound damping, density response function, Green's function method 2-66316
 zero sound excitation (*Russian*) 2-82056
 H₂-³He, low-temp. target for use in electron beams 2-64731
³He-Pt thermal boundary resistance study 2-86968

liquid helium 3-4 mixtures

- anisotropic decomposition below tricritical pt., light scatt. study 2-104106
 density matrices and momentum distrib., variational calc. 2-104105
 diffusive relax. processes in normal phase 2-61240
 diffusive relaxation processes in superfluid phase 2-61241
 dilute, liquid-solid interface thermodynamics 2-76766
 dilute, spin polarised, second sound vel. meas. 2-110083
 dilute, transverse acoustic impedance 2-61238
 dilute mixture, statistical mechanics 2-98378
 dilution refrigerator, low temp. heat exchanger design and construction 2-89726
 dilution refrigerators, possibility of operation aboard spacecraft 2-64048
 dilution refrigerators 2-112911
 ground state props. 2-82063
 interface electrons, localisation energy and effective mass, path integral formalism 2-61244
 mean free path effects and search for superfluidity, 0.4 to 4 mK 2-98374
 phase separation boundary, charged particle systems, collective aspects, theoretical anal. 2-61230
 refrigerator, dilution, ⁴He cycling, Pomeranchuk cooling device 2-64047
 saturated, vibr. wire behaviour, mean free path effect and boundary limitations 2-76765
 second sound attenuation in dil. solns. below 1K 2-61239
 sound attenuation and dispersion near transition temps. 2-76761
 spin polarised, transport phenomena and sound propag. 2-76767
 structure factor, X-ray scatt. study 2-82064
 superfluid, dil., onset of convection in closed cylindrical container 2-104103
 superfluid, dil., onset of convection in unbounded slab 2-104102
 superfluid, mutual friction effects, flow impedance expts. 2-76768
 X-ray scatt. studies 2-110059
³He-He II dilute mixture, density fluctuation spectra, rotors 2-104104

liquid helium-4

- see also *boson systems*; *superfluid helium-4*
 adsorbed on graphite, multilayer physisorption, mean-field theory 2-110152
 bolometer freq. response in liq. ⁴He 2-61225
 convection and turbulence, Rayleigh-Benard expt. 2-110060
 critical dynamics near lambda transition, nonlinear renormalisation group anal. 2-110069
 critical dynamics of λ transition 2-56283
 crystallisation waves 2-104113
 density relax. on transition from two-phase to one-phase state (*Russian*) 2-71747
 electrostriction theory 2-71752
 excitation spectrum and structure factor for interacting bosons 2-112813
 film, adsorption of spin polarised H, surface polaron 2-82075
 film, desorption kinetic meas. 2-71761
 ground state, spatial and energetic struct. (*Russian*) 2-56284
 homogeneous nucleation temp. meas. 2-104095
 interface with solid ³He, phonon transmission, Kapitza resist. 2-98365
 interpolating integral eqns. for quantum fluids, appl. to liq. ⁴He 2-115487
 Kapitza resistance between liq. and solid ⁴He 2-110064
 lambda transition, microscopic theory 2-89609
 lambda transition in narrow gaps (*Russian*) 2-82053
 linear irreversible thermodynamics, two-fluid model 2-92301
 magnetic susceptibility in high mag. fields, manometric meas. 2-82560
 many-particle physics in solid state theory, book 2-68981
 nonasymptotic critical dynamics of the asymmetric-spin model in two-loop order 2-86962
 pair potentials, second virial coeff. calcs. (*Russian*) 2-71766
 permittivity, molar volume and crit. phenomena near λ -point (*Russian*) 2-98371
 phonon pulses, injected, charact. temp. meas. 2-61224
 Pomeranchuk cell, cooling device, ⁴He-cycling ³He-⁴He dilution refrigerator 2-64047
 pressurised, high freq. first sound meas. near lambda point 2-92303
 Rayleigh wave attenuation on LiNbO₃ crystal in contact with liq. ⁴He bath 2-61273
 ripplon scatt. from 2D Wigner lattice, electron lattice mobility meas. 2-61231
 scaling approximation for the elementary diagrams in hypernetted-chain calculations 2-82054
 sound attenuation and dispersion near transition temps. 2-76761
 sound attenuation at very low temps. 2-115485
 sound propagation near λ point, specific heat 2-71754
 structure factor meas. as a function of density, pair correlation function 2-66309
 supercritical, convecting heat transfer from vertical surface, numerical anal. 2-60532
 superheating limits, homogeneous nucleation temp. 2-115481

liquid helium-4 continued

- surface, charged particle systems, collective aspects, theoretical anal. 2-61230
 surface, electron charged, macroscopic struts., optical study 2-61233
 surface, fluctuations and shear modulus 2-92302
 surface, macroscopic electron dimples obs. 2-61232
 surface tension temp. depend., quantum effects 2-56302
 thermal conductivity, nonlinear renormalisation anal. 2-71753
 thermodynamic functions 1.5 to 14k (*Russian*) 2-86966
 US attenuation near lambda point, deviations from dynamic scaling 2-56280
 vortex generation, second sound damping by thermal pulses (*Russian*) 2-71748
 X-ray scatt. studies 2-110059
 Bi/liquid ⁴He interface, transient heat transfer, light induced enhancement 2-92431
 H₂-⁴He, low-temp. target for use in electron beams 2-64731
⁴He-Ge interface, transient heat transfer and onset of film boiling 2-115482

liquid helium sound propagation

- see also second sound; zero sound
 acoustic streaming rel. meas. 2-110062
 first sound, XY model, three-dimens., collective modes, rel. to quantum lattice 2-110058
 US attenuation near lambda point, deviations from dynamic scaling 2-56280
³He, ⁴He and ³He-⁴He mixtures, attenuation obs. 2-76761
³He, superfluid, A-phase, sound attenuation well below T_c, anomalous behaviour at low press. 2-110077
³He, superfluid, B-phase, acoustic order parameter mode spectroscopy 2-110080
³He, superfluid B-phase, transitions between sublevels of J=2 collective mode 2-56291
³He-⁴He solutions, spin polarised, transport phenomena and sound propag. 2-76767
⁴He adsorbed film on graphite substrate, superfluid transition, colorimetric study rel. to third sound meas. 2-104108
⁴He, epitaxial adsorption on graphite, fourth sound meas. 2-86971
⁴He film, adsorbed on pyrolytic graphite, third-sound vel. and superfluid onset 2-61242
⁴He, liq., sound attenuation at very low temps. 2-115485
⁴He, pressurised, high freq. first sound meas. near lambda point 2-92303
⁴He, sound velocity superfluid, 2D and 3D 2-98363
⁴He, superfluid, first-sound subharmonic generation, bifurcation universal-ity 2-56281
⁴He superfluid film, third sound and thermal cond. 2-56279
⁴He superfluid film, with layer of spin polarised H, third sound 2-82077

liquid lasers

- see also dye lasers
 Nd³⁺:POCl₃-P₂O₅-Cl₂-SnCl₄:Nd³⁺, liquid laser performance and fluorescence 2-70556

liquid metal embrittlement

- creep fracture, intergranular, aggressive environments 2-83201
 reactor materials, cyclic loading influence on Li corrosion behaviour steel Cr-Mo 2-80172
 steel, 316 plates, effects of C and N on corrosion resist. to liq. Li 2-105370
 steel, 4140, mechanism of crack initiation and propag. in In-induced embrittlement 2-111295
 steel, austenitic stainless, cyclic loading influence on Li corrosion behavi-our 2-80172
 steel, austenitic stainless type 316, liq.-metal embrittlement in LMFBRS 2-80088
 steel, C, 4140, by liquid In 2-67477
 steel, liquid metal embrittlement by molten Zn, stress conc. effect (*Japanese*) 2-77922
 steel, low-C, contact with liq. metal medium, deform. rate influence on ductility, adsorption induced embrittlement 2-99550
 steels, ferritic, corrosion by flowing liq. Pb (*French*) 2-105369
 steels, stainless, embrittlement by liq. Cu and liq. braze alloys 2-67516
 Al-Ti (0.26 wt.%) alloy, dil. cold rolled, brittle-ductile transition after liq. Ga embrittlement, temp. and strain rate effect 2-88189
 Ni-Cu, Monel 400, liq. metal and H embrittlement, influence of grain boundary P conc. 2-77930
 TiB₂-Ni ceramics, crack form. and swelling in liquid Al 2-111273

liquid metals

- see also electron energy states of liquid metals; liquid alloys; mercury (metal)
 alkali metals, internal energy and entropy, Gibbs-Bogolyubov variational technique 2-56221
 alkali metals, liq., liquid, interionic potentials and struct. factors calc. 2-97905
 alkali metals, liquid, electrical resistivity and thermoelectric power 2-61436
 alkali metals, optimised RPA for struct. 2-91760
 binary liquid metal, convective instability in horizontal layer, mag. field effect 2-98318
 compressibility and structure, hard-sphere model approach 2-65845
 conductivity, vertex corrections in effective medium approx. 2-77015
 Couette flow, linear induction motor induced MHD flow 2-81398
 coupled capillary-plasma wave excitation at liquid metal surface in plasma (*Russian*) 2-86435
 current-voltage drop charact., nonlinearity origin in ammonia solns. 2-115767
 diffusion-controlled dissolution of solid in liq. and growth of new phase layer, kinetic law 2-98294
 electrical conductivity, CPA study (*Chinese*) 2-110315
 electrical conductivity, effective medium approx. 2-104338
 electrical resistivity, pseudopot., model 2-87217
 electronic structure of metals and alloys, symposium, Gaussig, Germany (Apr. '81) 2-68968
 entropy and specific heat calcs. 2-71660
 flow in nonconducting vessel, skin layer, free surface shape, MHD 2-86349
 fusion reactor appls., corrosion and compatibility 2-69864
 ICF liquid metal first wall surfaces, gas dynamics and heat transfer 2-80242
 infiltration of porous medium under influence of electric current 2-65642
 ion source, emission mechanism, theory 2-89856
 ion source, field effect ion beam exposure apparatus 2-113045

liquid metals continued

- ion sources, extracted beam divergence calc. 2-74571
 ion sources, hydrodynamics 2-59578
 ion sources, space charge effects for different geometries 2-77708
 kinetic theory, generalised density expansion, resistivity 2-76277
 levitation melting in mag. fields, Navier-Stokes eqn. 2-70838
 liquid metal, turbulent flow in flat induction pump channels 2-103156
 liquid-vapour interface struct., pseudosatom theory, computer simulation 2-115497
 metals, molten, local velocity and mass transfer meas. using incorporated mag. probe 2-114949
 noble metals, electronic props., one parameter model pot. 2-61331
 penetration into diamond powder, high static press. 2-82082
 self-diffusion and viscosity (*Russian*) 2-66268
 sintering, liquid-phase, recrystn. of C during diffusion-limited process 2-67234
 solid-liquid metal interface, true contact area, expt. study 2-56328
 solidification, thermal and hydrodynamic phenomena, mathematical model 2-115395
 solidification of a liquid metal flowing through a circular pipe: a predic-tion of nozzle blockage 2-83104
 solvent-O₂ system, correlations for thermodynamic and kinetic props. of gas solutes 2-98286
 sound vel. and entropy, Percus-Yevick phonon description 2-61068
 spin-orbit coupling and the Hall coefficient of liquid metals 2-66530
 steels, ferritic, corrosion by flowing liq. Pb (*French*) 2-105369
 structure, in improved RPA 2-76276
 structure factor calc., accuracy of liq. theory approx. methods 2-65842
 structure factors, pseudopotential and WCA method 2-65844
 thermodynamic properties and self-diffusion of liq. with purely repulsive interatomic pot. 2-103585
 two phase liquid metal MHD generator, analytical model 2-71266
 vibration viscometry, review 2-103230
 Ag, liquid, mag. susceptibility calcs. 2-98843
 Ag, molten/Fe system, wetting behaviour 2-82080
 Ag-In melt, X-ray investigation, hard sphere model (*Russian*) 2-86541
 Al, dissolution of Cr, kinetic parameters and diffusion coeffs. 700-900°C 2-99395
 Al, high-purity, viscosity and density, 670-950°C 2-66272
 Al, interatomic pair pot., combined WCA and RPA calc. 2-60857
 Al, interatomic pots. and electronic props., ab initio calc. 2-56460
 Al, liquid, 3p electron density of states 2-82199
 Al, liquid, field emission ion source, emission characteristics meas. 2-74570
 Al liquid metal ion source C needle emitter appl. 2-89854
 Al liquid metal ion source, emission characts. 2-96353
 Al, static struct. factor rel. to effective pair pot. 2-60868
 Al/Sn, liquid system, oxidation, Auger electron spectroscopy 2-93658
 Au, liquid, mag. susceptibility calcs. 2-98843
 B liquid metal ion source, C needle emitter appl. 2-89854
 Bi, liq., struct. factor, neutron diffr. study 2-71332
 Bi, liquid, optical absorpt. 2-87813
 Bi, static struct. factor rel. to effective pair pot. 2-60868
 Cd, liquid, nearly-free-electron-phonon interaction and elec. resist. temp. depend. 2-98610
 Cd, nearly-free-electron-phonon interaction and elec. resist. temp. depend. 2-98610
 Cd, surface tension, temp. depend., 325-800°C 2-104120
 Co, molten, thermal expansion up to 600K above melting 2-66260
 Co, thermodynamic activity of S 2-105126
 Cs, structure factors, X-ray study 2-60870
 Cu, Czochealski classical growth method and CACRT, free and forced convection simulation 2-76339
 Cu, interaction with solid Mo 2-72873
 Cu, liquid, mag. susceptibility calcs. 2-98843
 Cu, molten, thermal expansion up to 600K above melting 2-66260
 Cu/LaB₆ system, wetting and the contact reaction 2-71777
 Fe, molten, thermal expansion up to 600K above melting 2-66260
 Fe, normal spectral emissivity, 645 nm 2-81992
 Ga liquid ion source and scanning ion microprobe system (*Japanese*) 2-113039
 Ga liquid layer dispersion on surface of Ag film (*Russian*) 2-71778
 H, metallic, liquid, transport, props. calcs. 2-56292
 Hg, liquid, mag. susceptibility calcs. 2-98843
 Hg-Ar two phase heat transfer in vertical annulus under transverse mag. field 2-114873
 In, interatomic pair pot., combined WCA and RPA calc. 2-60857
 In, interference functions, radial atomic distrib. and elec. resist. 2-103595
 In ion source, EHD type microfocus gun, for scanning ion microprobe 2-95539
 In, O diffusivity and thermodynamic props., influence of Cu and Ag solute additions 2-86907
 In, solubility of Ge, γ -ray effects, expt. study 2-115423
 K, dil. solns. of K halides, struct. and elec. resist. 2-56233
 La, liquid, electronic struct. 2-87133
 Na, dissoln. of Au and Ag wires, dynamic X-radiography 2-111398
 Na, influence on strength of nucl. reactor constructional materials, calc. method 2-96112
 Na, liq., radial distrib. function studied using integral equation perturba-tion theory 2-91762
 Na, liquid and solid, eqn. of state and struct., mol. dynamics study using model pseudopot. 2-71606
 Na, low-angle struct. factor away from triple point 2-55827
 Na, small-angle X-ray scatt., collective mode 2-60867
 Na₂, surface emission from liq. Na, laser diagnostics 2-70444
 Ni, molten, thermal expansion up to 600K above melting 2-66260
 Ni, normal spectral emissivity, 645 nm 2-81992
 Pb, interatomic pair pot., combined WCA and RPA calc. 2-60857
 Pb, liquid, optical absorpt. 2-87813
 Pb, phonon-like collective oscillation modes and related props. calc. (*Rus-sian*) 2-65843
 Pb, static struct. factor rel. to effective pair pot. 2-60868
 Rb, liquid, transport props. meas. using automated equipment 2-115722
 Rb, model, phonon spectrum 2-66155
 Rb, phonon-like collective oscillation modes and related props. calc. (*Rus-sian*) 2-65843
 Rb, structure factors, X-ray study 2-60870
 Sn, isotope self-diffusion effect, radiotracer method 2-66270
 Sn, liquid, dielectric function calcs. 2-76959
 Ti, viscosity, C content influence, correl. with equilib. diagram 2-66273

liquid metals continued

- Zn, liquid, mag. susceptibility calcs. 2-98843
 Zn, molten, liquid metal embrittlement of steel, stress conc. effect (Japanese) 2-77922
 Zr, viscosity, C content influence, correl. with equil. diagram 2-66273

liquid oscillations

- see also liquid waves
 frequency spectrum of liquid and gas oscillations in complex tubing 2-55670
 heat transfer with matched oscillations of thermal load and heat carrier flowrate 2-55575
 immiscible liquid oscills. in free space or spherical containers in zero gravity environment 2-110090
 internal flow fields of drop-shape oscills. 2-114824
 liquid film-superionic gas stream interface, nonlinear wave interaction 2-109345
 magnetic liquids, drops, oscills., mag. field effects 2-103181
 micropolar fluids heated from below, overstable motion possibility 2-65568
 oceans and lakes rotational normal modes calc. with general orthogonal coords. 2-53528
 polymer soln., viscoelastic liq., bubble, surface tension driven oscills. 2-60581
 pulsating flow bounded by wall, shear stresses determ. on surface 2-97659
 steam generator tubes, forced convection, density-wave oscillations 2-55565
 steam generator tubing, critical heat flux-induced temp. oscills., thermal modeling 2-70939
 surge-like oscillations excitation under aperiodic external disturbances 2-55607
 viscous fluid, between parallel plates, flow induced by vibrating plate 2-81363
 viscous fluid in cylindrical elastic shell, normal modes, surface tension 2-65607
 water-saturated porous media, viscosity variation effect on convection 2-70944

liquid permeability see permeability**liquid phase epitaxial growth**

- CCAlGa_{1-x}Sb, LPE growth on (111)-B oriented GaSb 2-98495
 electroepitaxy, interface stability enhancement, theoretical anal. 2-72636
 electroepitaxy, liq. phase, binary systems, anal. of growth kinetics 2-67227
 Ga_{1-x}Al_xP, solid soln., variation of comp. gradient during LPE 2-83047
 garnet LPE growth, interfacial and volume transport processes 2-110195
 garnet magnetic bubble LPE films, mag. parameter drift control (Chinese) 2-110612
 garnets, LPE growth and defects, review 2-82168
 garnets, mono-molecular steps movement 2-61307
 II-VI compound crystal growth, characterisation and device appls., conf., Durham, England (April 1982) 2-107003
 II-VI semiconductors, bulk and epitaxial growth, impurity role 2-116347
 III-V compounds, contact phenomena between liq. phase and substrate during LPE 2-61305
 III-V heterostructures, ternary, formed by LPE, growth and dissolution kinetics, temp. programming effects 2-104187
 III-V semicond. epitaxial growth, appl. to compound semiconductor device technology 2-77741
 lateral selective-area LPE technique, double barrier BH laser growth appl. 2-88006
 LPE layer, Hall and resistivity meas., impurity doping influence 2-92796
 multilayer structures in multislice boat, simultaneous LPE method 2-111100
 nonplanar double-heterojunction and large-optical-cavity laser struct., mode charact. 2-80968
 rare earth magnetic garnet epitaxial bubble film, rare earth segregation 2-72633
 semiconductor heterostructure LPE growth, melt prep. improvements 2-93456
 Al-Cu, ion implanted nonsubstitutional alloy, laser treatment, expt. study 2-86724
 Al-Ga-As, LPE film growth, interdiffusion coeff. of components in solns., temp. depend. 2-76717
 AlGaAs narrow stripe gain-guided DH lasers, far field asymm. 2-108877
 (AlGa)As strip BH lasers prepared by hybrid crystal growth 2-80951
 p-Al_{0.5}Ga_{0.5}P-GaAs-nGaAs, concentrator solar cell, LPE growth with electrolytic contacts 2-93893
 Al_{1-x}Ga_xAs terraced-heterostruct. large optical cavity diode laser, LPE growth and high-power CW single-mode operation 2-114298
 Al_{1-x}Ga_xAs epitaxial film, homogeneous, high resistivity, synthesis 2-116397
 Al_{1-x}Ga_xAs, growth of variance epitaxial layers, by isothermal mixing of melts 2-88009
 Al_{1-x}Ga_xAs heteroepitaxial struct., graded-index, current controlled thickness composition profile 2-88013
 Al_{1-x}Ga_xAs, LPE short-time growth, anal. 2-61306
 Al_{1-x}Ga_xAs solid soln., electroliq. epitaxy distinctive features 2-88012
 Al_{1-x}Ga_xAs-GaAs heterostructure grown by LPE, Auger electron spectra (Chinese) 2-66388
 Al_{1-x}Ga_xAs DH laser, rake lines, influence of cooling rate and melt config. in LPE 2-77760
 Al_{1-x}Ga_xAsSb_{1-x}, LPE growth on (111)-B oriented GaSb 2-98495
 AlGaInSb semiconductor system, LPE growth 2-83045
 Al_{0.45}In_{0.55}As, LPE growth lattice matched to InP 2-99355
 Bi_{1-x}Si_xO₂ single-crystal film, LPE growth, optically activated planar optical switch appls. 2-116391
 (Bi_{1-x}Y_x)₂Fe₂O₇ bubble film, mag. props., FMR study 2-72317
 n-CdS/n-InP/p-InP heteroface solar cell, growth and evaluation 2-88452
 CdSnAs₂ film prep. 2-72634
 CdSnAs₂-GaSb heterojunctions, LPE fabrication and props. 2-92743
 CdTe, bulk grown and epitaxial samples, minority carrier diffusion length 2-115776
 CdTe, LPE growth on CdS polar face from Cd soln. 2-57311
 CuGaTe₂, LPE growth on ZnSe from Bi soln. and heterostruct. elec. props. 2-62084
 CuInSe₂, LPE heteroepitaxial growth on ZnSe from In soln. 2-57310
 (Ga_{1-x}In_x)As, equil. const. derivation from LPE, VPE growth data, solid activity coeffs. determ. 2-98481
 GaAlAs heterostructures on GaAs, simultaneous LPE method for multilayer structures in multislice boat 2-111100

liquid phase epitaxial growth continued

- GaAlAs-GaAs, channelled substrate narrow stripe laser, LPE growth, computer model 2-96982
 Ga_{0.85}Al_{0.15}As, growth by temp. gradient LPE with convective flow (Chinese) 2-111097
 Ga_{1-x}Al_xAs LPE layers, dislocations config. TEM study (Chinese) 2-67670
 Ga_{1-x}Al_xAs, Si, Ge, LPE growth and doping, elec. and photolum. props. 2-116393
 GaAs and related cpds., conf. Oiso, Japan (Sept. 1981) 2-94906
 GaAs epitaxial layers, MBE and LPE, luminesc. props. 2-72564
 GaAs, impurity band transport in large mag. fields 2-61487
 GaAs, ion implanted, transient and furnace annealing behaviour 2-56022
 GaAs LPE layers, dislocations as growth step sources, rel. to interface struct. 2-115615
 GaAs, selective epitaxial growth by liquid phase electroepitaxy 2-62082
 GaAs substrates and GaAs-Al_{1-x}Ga_xAs DH epitaxial wafer, defects meas. by X-ray topography (Chinese) 2-67669
 GaAs vapour-phase transport on V-shape grooved GaAs substrate 2-99347
 p-GaAs:Ge LPE layer, electron diffusion length determ. by EBIC method 2-56736
 GaAs:Sb, LPE, Sb distrib. 2-104182
 GaAs:Si LPE layer, photolum. and carrier conc. (Russian) 2-99174
 GaAs-Ga_{1-x}Al_xAs_{1-x}P_y heterostructure lattice matching rel. to laser fabrication (Chinese) 2-66375
 GaAsSb_{1-x}, LPE growth on InAs substrates 2-88010
 GaInAsP-InP 1.3 μm DH, LPE (Chinese) 2-93449
 GaInAsP-InP BH 1.5 μm lasers fabricated by hybrid combination of LPE and VPE 2-60101
 GaInAsP-InP DH laser with monolithically integrated passive waveguide, LPE regrowth 2-60118
 Ga_{1-x}In_xAs_{1-y}P_y, epitaxial layer, charact. of electron-pumped lasers 2-75577
 Ga_{1-x}In_xP, LPE growth on GaAs (100) and (111)B, orientation dependence meas. 2-93450
 GaP LEDs, LPE growth on LEC and synthesis solute diffusion substrates 2-111098
 GaP layer, liq. phase electroepitaxy from limited and unlimited sources, growth kinetics 2-56380
 Gd₂O₃·Nd³⁺ garnet films prep. by LPE, crystallographic and optical characterisation, laser appls. 2-83044
 Ge, epitaxial growth from Ge-In solution, radiation effects (Russian) 2-76869
 Ge epitaxial layers, LPE growth in γ-radiation field, struct. and electro-physical parameters 2-115599
 Hg_{1-x}Cd_xTe, isothermal epitaxial growth, elec. props. optimisation 2-93452
 III-V semiconductors, LPE, substrate orientation and surface morphology 2-67229
 In-Ga-As-P/InP system, improved LPE techniques for low threshold lasers at 1.55 μm 2-99357
 InGaAs-InP p⁺-n heterojunctions, fabrication and charact. 2-99362
 In_{0.53}Ga_{0.47}As, LPE growth on structured InP substrates 2-105093
 InGaAsP (E_g≥1.15 eV) layers, growth by LPE under P overpressure 2-67226
 InGaAsP (InGaAs) LPE layers, room temp. electron diffusion lengths 2-56730
 InGaAsP LPE layers, melt-carry-over 2-98473
 InGaAsP LPE on InP, growth temp. and impurity doping effect on comp. 2-98482
 InGaAsP on InP LPE for 1.3 micron high radiance IR LEDs and for photodiodes 2-111101
 InGaAsP/InP DH stripe geometry lasers using proton-defined LPE-grown wafers (Chinese) 2-65244
 InGaAsP/InP double heterostructs. on InP, large area LPE growth 2-99358
 InGaAsP-InP single-mode buried waveguide structures grown on channelled [111]B InP substrates 2-114421
 InGaAsP-InP V-grooved substrate BH laser, fabrication by one-step epitaxy 2-80995
 In_{0.48}Ga_{0.52}As_{0.01}P_{0.99} lattice matched to GaAs, LPE from In melt rich in P, photoluminesc. obs. 2-88008
 In_{1-x}Ga_xAs_{1-y}P_y, low temp. LPE on InP, immiscible domain 2-98494
 In_{1-x}Ga_xAs_{1-y}P_yCd(Zn) LPE junction laser, SEM EBIC study 2-102821
 In_{1-x}Ga_xAsP_{1-y} LPE system, alloy scattering mobility and energy gap evaluation by dielectric model 2-82485
 In_{1-x}Ga_xAsP_{1-y} LPE layer, energy gap and alloy scatt. mobility, meas. and dielec. model 2-98542
 In_{1-x}Ga_xAsP_{1-y}-InP LPE layers, strain anal. and optical props. meas. 2-66392
 In_{1-x}Ga_xAsP_{1-y}-GaAs_{1-x}P_y (100), LPE growth and pulsed room temp. laser operation 2-90926
 In_{1-x}Ga_xAsP_{1-y} LPE layers, lattice matched to InP, comp. modulation, expt. study 2-87084
 In_{1-x}Ga_xAs_{1-y}Sb_{1-z} solid soln., LPE growth, unstable comp. regions, regular soln. approx. 2-92204
 In_{1-x}Ga_xP, LPE growth on GaAs, composition self-modulation obs. 2-116395
 In_{1-x}Ga_xP/Ga_{1-y}Al_yAs on GaAs, LPE growth 2-99361
 In_{1-x}Ga_xP_{1-y}As_{1-z}, high purity, LPE growth 2-93459
 In_{1-x}Ga_xP_{1-y}As_{1-z}GaAs, reproducible LPE growth by P vapour control on substrate 2-88007
 In_{0.45}Gd_{0.55}As:Te degenerate LPE layers, electron mobility 2-61620
 InP, high purity, LPE growth 2-93459
 InP, impact ionization coeffs. for electrons and holes, photomultiplication meas. 2-61472
 InP, LPE, detection and prevention of S contamination 2-93458
 InP, LPE grown, surface morphology, doping impurities and cooling rates effects 2-92390
 InP, LPE growth on In_{0.53}Ga_{0.47}As (111)A without dissolution 2-77757
 InP LPE layers, dislocation density, intermittent growth procedures effects 2-116392
 InP LPE layers, melt-carry-over 2-98473
 InP layers, growth by LPE under P overpressure 2-67226
 InP MISFET, monolithic integration with GaInAsP/InP laser, LPE growth 2-65242
 InP structured {100} substrate, fabrication by preferential etching for LPE growth 2-99571
 InP-InGaAsP-InGaAs struct., LPE grown, lattice defects study 2-71454

liquid phase epitaxial growth continued

- InP-InGaAsP-InP DH wafer, LPE grown, misfit dislocations 2-98096
 InSb, LPE regrowth by CW laser annealing, expt. study 2-56029
 Mn-Zn ferrite synthesis from $\text{Na}_2\text{O-B}_2\text{O}_3$ flux under CO-CO_2 ambients 2-72612
 Pb-Sn-Se, comp. depend. 770 to 1020K 2-99356
 Pb-Sn-Te system, solidus determ. of phase diagram 2-93495
 PbSnSeTe-PbSeTe DH lasers, lattice-matched, LPE grown 2-55194
 p-p⁺Pb_{0.9}Sn_{0.1}-Te LPE layer, IR plasma refl. spectra (Chinese) 2-93295
 p_{0.81}Sn_{0.19}Te DH laser, LPE grown, operation at 10.6 μm , 85K 2-80955
 Pb_{1-x}Sn_xTe LPE layer, Hall and resistivity meas., impurity doping influence 2-92796
 PbTe epilayers, LPE growth from supercooled solns., improved morphology 2-110192
 Si, amorphous film, laser crystallisation, rel. to density 2-56407
 Si, LPE, low-temp. 2-62083
 Si, LPE, minority carrier lifetime 2-72637
 Si LPE layers, dislocations as growth step sources, rel. to interface struct. 2-115615
 Si, laser-induced epitaxial growth on SiO_2 with locally varied encapsulation 2-93448
 SiC epitaxial layers, electrodeposition from $\text{Li}_2\text{CO}_3/\text{SiO}_2$ -melts 2-93460
 Sn film, graphoeptitaxial electrodeposition, expt. study 2-87083
 YIG-Ca film, mag. dichroism study of Fe^{4+} centres 2-72461
 YLuBiIG epitaxial films, Bi content and growth-induced anisotropy 2-93457
 ZnSn epitaxial growth on Wall and Cu, substrate ion planing effects 2-83048
 ZnSe, bulk and epitaxial growth, impurity role 2-116347
 ZnSe in Sn, LPE, phase diagram and electronic props. 2-116428
 ZnSe, LPE, by temp. difference method 2-116394
 ZnSe, LPE growth on ZnS and ZnTe using Te and Te-Se as solvents 2-93398
 ZnSnAs₂ LPE growth on ZnSe substrate from Sn soln. 2-77756

liquid semiconductors

see also *electron energy states of liquid semiconductors*

- diffusion coefficient, intrinsic, determ. method for components of semiconductor melt 2-92244
 Ag₂Te-In₂Te system, molten, elec. cond. and mag. susceptibility, temp. and comp. depend. 2-61465
 Ag₂TiSe₂, liq. semicond., elec. props. study 2-66576
 Ag₂TiSe₂, liq. semicond., elec. props. 2-82384
 Ag₂TiSe₂, semicond., solid and liq. states, dielec. relax. and AC cond. 2-110754
 Ag₂TiTe₂-Ti, liq., elec. cond., diamag. susceptibility and thermopower 2-56586
 CaO-FeO-FeS-Cu-S melts for calorimetric metallography elec. cond. mechanism, 1000-1210°C 2-104378
 Cd-Pb-Se-Te system, liquidus surface 2-105132
 CsI, elec. cond. behind shock wave front, semicond. props., liq. and solid phases 2-77065
 Cu₂TeSe₂, ternary semicond., liq. and solid, dielec. relax., defect electron states 2-61829
 Hg, expanded fluid, thermoelec. power, transition from liq. semicond. to plasma state 2-82387
 Hg-Bi(Cd), dil., expanded fluid, thermoelec. power, transition from liq. semicond. to plasma state 2-82387
 In-Se, melt, elec. cond. and thermo-EMF, temp. depend. 2-87307
 In-Te, liquid, electrical cond. meas. 2-92612
 InSb melt, suppression of thermal convection by transverse mag. field 2-86600
 In₂Te₂, liquid, Knight shift studies of cond. and struct. inhomogeneity 2-72362
 Mg-Pb, molten semiconductors, US velocity, temp. depend. 2-76600
 Mg-Sn, molten semiconductors, US velocity, temp. depend. 2-76600
 Ni-Te, liquid semiconductors, struct. factors 2-97903
 Ni-Te liquid semiconductor, resistivity, thermoelectric power and band struct. 2-98641
 Sb-Cs(Na)(K), elec. and mag. props., transition to semicond. characts. 2-92709
 Sb-Te, liquid, electrical cond. meas. 2-92612
 Se, amorphous, liq. and solid, struct. and phys. props., uniaxial compression effects 2-71352
 Se-Ge-As glass melt, solubility of He 2-98292
 Se-Te, liquid, thermodynamic and elec. props., inhomogeneous struct. model 2-98314
 Se-Te liq. and cryst. semicond., elec. transport and struct. props. 2-115746
 Te, liq., elec. cond., at temps. up to 1200°C and press. up to 3 k bar 2-77048
 Ti-Ag₂TiS₂, molten system, electronic and mag. props. 2-98647
 Ti-Se, melt, elec. cond. and thermo-EMF, temp. depend. 2-87307
 Ti₂Se₃, fused, diffusion of impurities ²⁰⁴Tl, ¹¹⁰Ag and ¹¹³Sn 2-81996
 Ti₂Te, liquid semiconductor, total struct. factor 2-97904

liquid-solid transformations see *solid-liquid transformations***liquid structure**

see also *classical theories of fluid structure; long-range order; neutron diffraction examination of liquids; quantum theories of fluid structure; short-range order; X-ray diffraction examination of liquids*

- acetone, liq., dynamics and interactions, microwave and far-IR study 2-82869
 alkali metal halides, liquid, charge ordering and struct. 2-109654
 alkali metals, liq., liquid, interionic potentials and struct. factors calc. 2-97905
 alkali metals, optimised RPA for struct. 2-91760
 alloy melts, crystal quasiparticle anal. using cluster-variation method 2-103586
 alloys, concentration fluctuations 2-97907
 alloys, regular and cpd. forming, short range order and conc. fluctuations 2-91757
 benzonitrile liq., motional param. from spectral profiles 2-71317
 carbon tetrachloride, liq., far IR absorpt. spectra, octupole induced dipole moment correl. functions 2-72472
 carbon tetrachloride, liq. and plastic cryst., mol. dynamics calcs. 2-65839
 carbon tetrafluoride, liq., far IR absorpt. spectra, octupole induced dipole moment correl. functions 2-72472
 charged hard sphere-dipolar hard sphere mixture near charged wall, interfacial struct. 2-115498
 cholesterol based liq. cryst. polymers, X-ray struct. study 2-103621

liquid structure continued

- classical fluids, struct. factor and its derivatives, long-wavelength behaviour 2-60853
 classical liquids, cluster expansions, ordering principle 2-65834
 classical supercooled liquid, velocity correlation spectrum 2-91744
 concept of struct. rel. to crystallography and struct. of disordered systems 2-97892
 conformational equilibria, quantum effect 2-81638
 cyclohexanol mixtures, molecular interactions, ultrasonic studies 2-86796
 dense gas, cluster expansions, ordering principle 2-65834
 dibutyl phthalate, molecular motion and struct., ¹³C NMR spectra 2-75324
 trans-1,2-dichloroethylene, ordered liq. state, NMR study 2-81652
 dichloromethane, liq., mol. rot., translational kinetic energy, computer simulation 2-86536
 dimethyl phthalate, molecular motion and struct., ¹³C NMR spectra 2-75324
 dodecyltrimethylammonium chloride-water, mol. motion and struct., ¹⁴N spin-lattice and spin-spin relax. times 2-82740
 electrolyte solns., surface struct., thermodynamic props., calcs. 2-76262
 ethane, liq., struct. functions, X-ray diffr. study and Monte Carlo simulation 2-103592
 EXAFS spectroscopy, conference, Boston, MA, USA (Nov. 1979) 2-74160
 fluid-structure interaction problems, computer implementation aspects 2-109645
 hard-sphere ensembles, use of stereology to determine partial 2-body correlation functions 2-65829
 heavy water, liq., pressure effects on struct. X-ray diffr. study 2-81657
 heavy water, structure studied by neutron diffr., press. effect 2-71323
 hexadecyltrimethylammonium fluoride-water, mol. motion and struct., ¹⁴N spin-lattice and spin-spin relax. times 2-82740
 integral equation calcs. using waterlike intermol. pots. 2-103572
 liq., anomalous electronic props., higher order correl. effects 2-104340
 liquid and solid, eqn. of state and struct., mol. dynamics study using model pseudopot. 2-71606
 lithium formate solutions, refr. index, density and elec. cond. meas. near saturation temp. 2-76719
 macroions in solns., struct. factor determ., neutron scatt. obs. 2-86538
 metal, hard-sphere model approach 2-65845
 metal with purely repulsive interatomic pot., thermodynamic props. and self-diffusion 2-103585
 metals, liquid, entropy and specific heat calcs. 2-71660
 metals, struct., in improved RPA 2-76276
 metals, structure factors calc., accuracy of liq. theory approx. methods 2-65842
 metals structure factors, pseudopotential and WCA method 2-65844
 methane, liq., far IR absorpt. spectra, octupole induced dipole moment correl. functions 2-72472
 methane, liq., Monte Carlo simulations, thermodynamic and struct. props. 2-91748
 methanol, liq., struct., thermodynamic props. and H-bonds, pressure effect, intermolecular interactions 2-71326
 methyl fluoride, liquid, case representative of joint expt. and theoretical progress 2-76272
 methylalcohol liq., H-bonds, X-ray diffr. study 2-103591
 microscopic theory, validity of macroscopic concepts 2-55819
 molecular fluids, small angle X-ray anal. of orientation fluctuations 2-76281
 molecular liquid soln., coupling between local struct. and dynamics, theoretical NMR study (French) 2-116078
 molecular structure and fluid dynamics, expt. study methods (German) 2-55826
 multiparticle systems, inelastic electron scatt., mol. distrib. function determ. (Russian) 2-91745
 neopentane, liq., Monte Carlo simulation 2-81655
 NH₄Cl conc. aq. solns., NH₄⁺ ion coordination 2-71322
 NMR spectroscopy, high-pressure techniques 2-98990
 organic solvents, sound vel. and liq. struct., laser light scatt. method 2-81895
 partial molar volumes at infinite dilution rel. to cryst. vol. (French) 2-76263
 partial struct. factor determ. 2-97889
 polyethylene, molten, local struct., wide-angle X-ray scatt. 2-109659
 polymer melts, dynamic coherent struct. factor 2-86539
 polymer solutions, impenetrability of polymer balls with excluded volumes 2-81660
 polystyrene, charged spheres in colloidal suspension, spatial correl. calcs. 2-105520
 polystyrene, charged spheres in colloidal suspensions, dynamic correl. calcs. 2-105521
 quantum fluids cluster expansions, ordering principle 2-65834
 rigid ions dynamic simulation in liq. and solids using Ewald sum, MDIONS program 2-65826
 rigid ions dynamic simulation in liq. and solids using Ewald sum, MDIONS program 2-65827
 simple fluid, struct. distortion under shear, radial distrib. function calcs. 2-65836
 trichloromethane, liq., mol. rot., translational kinetic energy, computer simulation 2-86536
 two dimensional dense hard discs fluid, equilib. props., semiclassical statistical mechanics 2-81647
 water, fluid, in space between two structureless walls, Monte Carlo calcs. 2-115128
 water, intermolecular pots., X-ray scatt. 2-86537
 water, IR spectra, struct., continuous model 2-76273
 water, liq., pressure effects on struct. X-ray diffr. study 2-81657
 water, percolation theory appl. 2-63938
 water, Raman spectra, Fermi reson. band, association model 2-99120
 water, structure, many-body effects 2-115126
 water, supercooled, Raman spectra, H-bonds 2-61890
 Al, interatomic pair pot., combined WCA and RPA calc. 2-60857
 Al, static struct. factor rel. to effective pair pot. 2-60868
 AlCl₃-n-butylpyridinium chloride melt, ²⁷Al NMR 2-66923
 Al(ClO₄)₃ solns. in methanol (ethanol), ligand exchange rates, PMR obs. 2-104712
 alkali metal oxide-CaO-Al₂O₃-SiO₂ glass, liq.-liq. phase separation, struct. interpretation, alkali aluminate complex form. 2-103973
 Ar, liquid, hard sphere model calcs. of Gruneisen const. and Moelwyn-Hughes parameter 2-71327
 Ar, low-angle struct. factor away from triple point 2-55827

liquid structure continued

- Ar, scaling corrections to X-ray scatt. near liquid-vapour critical point 2-98256
 Ar, small-angle neutron scatt., van der Waals forces 2-60867
 Ar, spectral density of square-well and hard-sphere fluids through correlation function 2-91735
 As-S, melt structure, polymerisation temp., orientation birefringence study 2-65840
 As_{1-x}S_x, glass-forming liqs., viscosity and struct. transition 2-61187
 Bi, liq., struct. factor, neutron diff. study 2-71332
 Bi, static struct. factor rel. to effective pair pot. 2-60868
 Bi₂Se₃(Te₃), liquid, radial distrib. anal. 2-91751
 Br₂, polar fluid, extended RISM eqn. appl. 2-97896
 C₂H₆, inhomogeneous liq., pair correl. function, temp. depend. 2-103588
 C₇H₈, inhomogeneous liq., pair correl. function, temp. depend. 2-103588
 CS₂, liq., Lennard-Jones pot., struct. and dynamics, computer simulation 2-97901
 CaO-Al₂O₃-CaF₂, melt struct., anion packing 2-71325
 Cl₂, liq. struct., neutron diff. investig. 2-81650
 Co-Ge liq. alloys, liq. struct. and elec. cond. (Russian) 2-91761
 Cs, structure factors, X-ray study 2-60870
 Cu²⁺ coordination in aqueous soln., neutron diff. study 2-60862
 CuBr₂ aq. solns., local struct., EXAFS study 2-71331
 CuCl, molten, partial struct. factors, neutron diff. determ. 2-97902
 Ga-In, interference functions, radial atomic distrib. and elec. resist. 2-103595
 H₃PO₄, polarisation model appls. 2-60861
 H₂P₂O₇, polarisation model appls. 2-60861
 He, X-ray scatt. studies 2-110059
³He, fermion quantum fluids, kinetic energy and Born-Green-Yvon method 2-66310
⁴He, structure factor meas. as a function of density, pair correlation function 2-66309
⁴He-³He mixture, structure factor, X-ray scatt. study 2-82064
 Hg-Na liq., elec. and thermodynamic props., mag. susceptibility, compound form, effect 2-82314
 In, interatomic pair pot., combined WCA and RPA calc. 2-60857
 In, interference functions, radial atomic distrib. and elec. resist. 2-103595
 In-Te, molten, liq. struct., X-ray diff. study 2-115131
 InBr₃, conc. soln., struct., X-ray diff. study 2-115127
 InCl₃, conc. soln., struct., X-ray diff. study 2-115127
 In₂Te₃, liquid, Knight shift studies of cond. and struct. inhomogeneity 2-72362
 K halides in molten K, dil. solns., struct. and elec. resist. 2-56233
 K salts, molten, ³⁹K NMR obs. 2-77397
 K-KCl solution, ionic struct. study 2-103589
 Li-Pb, liq. alloy, chem. short-range order, neutron and X-ray diff. study 2-97906
 LiCl aq. solns., second zone existence, incoherent neutron scatt. study 2-60865
 MgCl₂ aq. solns., second zone existence, incoherent neutron scatt. study 2-60865
 N₂, intermol. electron density distrib., diff. anal. 2-91750
 N₂, liquid, energy difference functions in Monte Carlo simulations, free energy calcs. 2-81654
 N₂, liquid dynamics, neutron inelastic scatt. 2-81659
 N₂, liquids, mol. vibr. dephasing rates, mol. orientations and attraction effects 2-97895
 NH₃, liquid, empirical pot. for conformational, intermol. and solvation studies 2-91747
 Na, low-angle struct. factor away from triple point 2-55827
 Na, small-angle X-ray scatt., collective mode 2-60867
 Na, spectral density of square-well and hard-sphere fluids through correlation function 2-91735
 Na-Cs liq. alloy, partial struct. factors calc. 2-60869
 Na-Ga(Cd), conc. fluctuations, press. effect, EMF meas. 2-91758
 Na-Hg, liquid, thermodynamic and struct. props., EMF meas. 2-81986
 Na-K, liquid, concentration fluctuations 2-97907
 Na-K liq. alloys, statistical thermodynamics 2-86540
 NaCl, molten, struct., neutron scatt. amplitudes 2-76269
 NaNO₂, molten, paraelectric phase, molecular dynamics computer simulations, struct. 2-98035
 NaNO₃, struct. of NO₃⁻ ions in conc. aqueous solns. 2-76270
 Ne, interatomic pair pot., combined WCA and RPA calc. 2-60857
 Ne, low-angle struct. factor away from triple point 2-55827
 Ni-Te, liquid semiconductors, struct. factors 2-97903
 NiCl₂ aq. solns., second zone existence, incoherent neutron scatt. study 2-60865
 P, liq. and plastic cryst. phase, neutron diff. study 2-97900
 Pb, interatomic pair pot., combined WCA and RPA calc. 2-60857
 Pb, static struct. factor rel. to effective pair pot. 2-60868
 Rb, structure factors, X-ray study 2-60870
 Rb-RbBr solution, ionic struct. study 2-103589
 S, melt structure, polymerisation temp., orientation birefringence study 2-65840
 Sb₂Te₃, liquid, radial distrib. anal. 2-91751
 Se, amorphous, liq. and solid, struct. and phys. props., uniaxial compression effects 2-71352
 Se_{1-x}Te_x, amorphous and liq., short range order, thermal neutron scatt. study 2-103623
 SrCl₂ aq. solns., X-ray diff. study 2-115129
 Te-Tl melt, short range order struct. 2-103590
 Tl₂Te, liquid semiconductor, total struct. factor 2-97904
 ZnCl₂ solutions in D₂O, local order and dynamics, small angle neutron scatt. study 2-55828

liquid surface waves see surface waves (fluid)**liquid theory**

- see also classical theories of fluid structure; equations of state of liquids; quantum theories of fluid structure
 1:1 electrolytes, restricted primitive model, mol. dynamics simulation 2-97886
 adamantane-d, in dilute n-alkane solns., rot. relax., mol. quasi-hydrodynamic free space descriptions 2-76268
 alkali halides, molten, entropy calc. within mean spherical approx. 2-60864
 alkali metal halides, liquid, charge ordering and struct. 2-109654
 alkali metals, liq., liquid, interionic potentials and struct. factors calc. 2-97905

liquid theory continued

- alloy melts, crystal quasiparticle anal. using cluster-variation method 2-103586
 alloys, entropy of mixing, excess vol. formation, hard sphere model 2-76684
 alloys, regular and cpd. forming, short range order and conc. fluctuations 2-91757
 anomalous electrolytes, pair distrib. and osmotic coeff. up to 1 mol.⁻¹ 2-61183
 benzene-n-dodecane, binary liq. mixtures, excess internal press. and intermol. interactions 2-71324
 benzene-n-hexane, binary liq. mixtures, excess internal press. and intermol. interactions 2-71324
 benzonitrile liq., motional param. from spectral profiles 2-71317
 binary alloys, configurational entropy and regular associated model of cpd. forming systems 2-97890
 binary mixture, closed-loop phase diagrams, orientational degrees of freedom effects, lattice gas model 2-98259
 binary solutions, infinitely dilute, Percus-Yevick eqn., new soln. 2-91740
 binary van der Waals fluid, interfacial density profiles 2-109647
 book on liquid state of matter 2-94930
 charged hard sphere distrib. near charged hard wall, mean spherical approx. 2-65828
 charged two-component fluid in equilb., nonlinear hydrodynamic fluctuation theory 2-103581
 chloromethane, point charge model 2-81646
 classical liquids, cluster expansions, ordering principle 2-65834
 classical spectra, detailed balance symmetrisation procedure 2-87720
 classical supercooled liquid, velocity correlation spectrum 2-91744
 convex molecule mixtures, conformal soln. theory (German) 2-55823
 coordination number, temp. depend. 2-115123
 Coulomb systems of high density, generalised hypernetted chain approx. 2-103576
 critical point props. and Born-Green theory 2-60858
 crystal-liquid phase boundary, direct and pair correl. functions 2-109957
 crystalline-fluid state equilb., unitary classical molecular theory 2-109643
 dense fluid at a hard wall, mol. dynamics simulation 2-76265
 dense fluids, kinetic theory, fluctuating force correlation functions 2-60856
 dense fluids and fluid mixtures, chemical pot. evaluated via computer simulation technique 2-103577
 dense gas, cluster expansions, ordering principle 2-65834
 diatomic molecular fluid, vortex viscosity, fluctuation expression 2-65597
 dichloromethane, correl. times, computer simulation 2-97894
 dichloromethane liq., mol. dynamics simulation with 3×3 and 5×5 site-site interactions 2-76261
 dielectric const. in fluids of classical deformable molecules 2-61811
 dilute hard core suspensions, scatt. and memory functions, transport coeff., light scatt. 2-60851
 dipolar fluids, computer simulation, pair correl. function, permittivity calcs. 2-65832
 dipole hard spheres, vapour-liq. equilb. of polar substances, perturbation theory 2-66189
 double layers, repulsive interaction calc. for dissimilar layers 2-98720
 electrical double layer, modified Gouy-Chapman eqn. for different ion sizes 2-81640
 electrical double layer theory, nonlinear Poisson-Boltzmann eqn. soln. for inner problems 2-74366
 electrical double layers, image effects, Monte Carlo and hypernetted chain eqn. calcs. 2-81639
 electrolyte solns., surface struct., thermodynamic props., calcs. 2-76262
 electrolyte solution surface, slow decay of ion correl. 2-97888
 electrolyte solutions, bimorphic lattice theory 2-103574
 Enskog equation, time correl. functions, calc. 2-71316
 equations of state, statistical mechanical, appl. to fluid phases 2-56151
 ethane, external force field, mol. dynamics simulation 2-81656
 ethane, liq., struct. functions, X-ray diff. study and Monte Carlo simulation 2-103592
 ethanol, dilute aq. soln., Monte Carlo calcs. 2-60859
 fluid, nonequilibrium steady state, fluctuations, correl. functions 2-103583
 fluid, nonequilibrium steady state with small temp. gradient, light scatt. 2-104900
 fluid system under shear, thermodynamics, simulation 2-60852
 free-vol., non-random mixing theory 2-66230
 hard core molecular fluid, mol. dynamics simulation 2-91739
 hard discs, vel. autocorrel. function, mol. dynamics calcs. 2-109650
 hard dumbbell system, reference fluid struct., mol. interaction site model 2-91737
 hard rods system, Yvon-Born-Green eqn. solved using Kirkwood superposition approx. 2-81643
 hard sphere, charged, entropy calc. within mean spherical approx. 2-60864
 hard sphere mean spherical model with dipole moments, stability 2-115122
 hard sphere system, eqn. of state theory, pair distrib. function 2-71600
 hard sphere system in limited volume, density and isothermal compressibility coeff. changes (Ukrainian) 2-56064
 hard spheres mutual diffusion, thermodynamic driving force 2-60849
 hard-sphere ensembles, use of stereology to determine partial 2-body correlation functions 2-65829
 harmonic liquid, one dimens., nonequilibrium steady state fluctuations, Fokker-Planck eqn. 2-103584
 hole theory of liquids, estimation of volume and energy of hole creation using US vel. data 2-76594
 hydrogens, liq., thermodynamic props. calcs. using interaction site model 2-103593
 hypernetted chain approx. for non-spherical particles 2-115124
 hypernetted chain approx. for simple fluids, theory 2-103580
 interatomic pair pot., combined WCA and RPA calc. 2-60857
 interparticle velocity correlations in simple liquids 2-109649
 ionic and dipolar systems, Monte Carlo and molecular dynamics simulations, periodic boundary conditions 2-81644
 Lennard-Jones fluids, first-order triplet corals. calcs. 2-65835
 Lennard-Jones molecular fluids, RAM perturbation theory 2-91742
 Lennard-Jones two centre fluids, thermodynamic props., mol. dynamics simulations 2-81648
 liquid metals, kinetic theory, generalised density expansion, resistivity 2-76277
 liquid mixtures, 2-fluid theory and thermodynamic props. 2-110015

liquid theory continued

- liquid-gas interface, generalised van der Waals theory 2-104118
 liquid-gas interface, nonlocal density functional theories 2-110091
 mean-spherical model, extremum condition 2-55825
 mean, phonon-like collective oscillation modes and related props. calc. (Russian) 2-65843
 metal with purely repulsive interatomic pot., thermodynamic props. and self-diffusion 2-103585
 metals, liq., structure factors calc., accuracy of liq. theory approx. methods 2-65842
 metals, liquid, entropy and specific heat calcs. 2-71660
 methane, liq., Monte Carlo simulations, thermodynamic and struct. props. 2-91748
 methane-ethane crit. mixt., liq.-gas crit. line prediction and interaction param. evaluation 2-71623
 methylene dichloride, liq., mol. dynamics simulation 2-76271
 microdynamic processes, review (German) 2-55822
 microscopic theory, validity of macroscopic concepts 2-55819
 mixture, nonconformal, computer simulation of behaviour 2-60850
 mixtures, Kac-tail limit, kinetic variational theory 2-86533
 mixtures, thermodynamics of gas solubility in liq. solvents 2-66231
 molecular diffusion in anisotropic liqs., equilb. props., mol. dynamics simulation 2-86531
 molecular fluids, interaction site models 2-81649
 molecular fluids, pair correl. functions, perturbation theory 2-65831
 molecular fluids, site-site equilb. corrs., integral eqns. 2-103578
 molecular liquid, extended diffusion oscillator model in two dimens. 2-91736
 molecular liquids, site superposition approx. 2-81653
 molecular liquids 2-55818
 molecular solutions, quantum intramolecular degrees of freedom, path integrals, Monte Carlo evaluation 2-103573
 molecules in anisotropic liq., rise and fall transients, mol. dynamics simulation 2-86532
 molten salts, current fluctuations, mode-coupling theory 2-71328
 molten salts, ionic transport props., mass and size effects 2-56230
 Monte Carlo simulation of the grand canonical ensemble 2-91741
 nematic liquid cryst., axially symmetric mols., perturbation theory 2-97918
 nonassociated liquids, equation for free volume, mol. diameters determ. 2-55829
 nonpolar fluid, dielectric const., deviation from Clausius-Mossott; eqn. 2-99023
 nonpolar fluids, dielec. const., quadrupole approx. calcs. 2-104793
 nonprimitive electrolytes, Ornstein-Zernike eqn. soln. with generalised closure 2-81645
 nonuniform fluid with long-range attractions, statistical mechanics 2-65833
 nonuniform fluids, density functional formalism, potential distrib. theory 2-60854
 nonuniform fluids, propag. of density fluctuations, simple models 2-71318
 one-component fluid, spinodal decomposition, hydrodynamic fluctuation theory 2-104002
 organic liquids, flow behaviour, modified Hildebrand eqn. appl. 2-81637
 Ornstein-Zernike eqn., soln. for one-dimens. fluid 2-86535
 partial struct. factor determ. 2-97889
 peroxylamindisulphonate radical, rot. dynamics in alcohol solvents, EPR study 2-77374
 polar fluid, electrostriction, dielectric saturation, statistical mech. study 2-99060
 polar hard dumb-bell fluid, dielec. const., Monte Carlo simulation calcs. 2-81646
 polar solvent, long-range interionic interaction, nonlocal screening effects 2-76264
 polyelectrolyte solution, counterion distrib. around cylindrical polyon 2-109644
 polyelectrolyte solution containing mixture of same charge counterions, thermodynamic props., cell model 2-116721
 polyelectrolyte systems, cell model, statistical mech., Monte Carlo and Poisson-Boltzmann calcs. 2-81642
 polymer solutions, semidilute, conformation space renormalisation theory 2-81658
 propane-like molecules, external force field, mol. dynamics simulation 2-81656
 quantum fluids, method of interpolating integral eqns. 2-115487
 quantum fluids cluster expansions, ordering principle 2-65834
 reference hypernetted chain eqn., local thermodynamic equilb. 2-76266
 rigid ions dynamic simulation in liq. and solids using Ewald sum, MDIONS program 2-65826
 rigid ions dynamic simulation in liq. and solids using Ewald sum, MDIONS program 2-65827
 rigid mols., rot. diffusion tensor calcs. 2-86530
 rotorlike molecule in dense fluid of spheres, orientational correl., kinetic theory calc. 2-109648
 simple fluid, struct. distortion under shear, radial distrib. function calcs. 2-65836
 simple fluids, gas-liquid transition and transport behaviour 2-103964
 simple fluids, transport props. at low temps. and high press. 2-71691
 simple liquids and mixtures, mol. theory, review 2-55821
 solid-liquid transition, symmetry anal. 2-66186
 solutions, associated, equilb. const., enthalpy and entropy of association 2-67760
 solutions, associated, vapour-liq. equilibria calc. 2-66190
 solutions, intrinsic shear and bulk viscosities, microscopic theory 2-86918
 solvation structure, Voronoi polyhedra description 2-83364
 square-well fluid, 2-dimens., compressibility factor 2-97887
 Stockmayer molecules, thermodynamic props., Monte Carlo simulation 2-81641
 supercooled liquid, nondispersive relax. processes 2-115148
 symmetry and broken symmetry in condensed matter physics, conf., Paris, France (Sept. 1980) 2-68966
 tetrachloromethane, liq., collision effects, mol. dynamics study 2-81651
 tetrahedral mols., reorientation in liquids, model tests by computer simulation 2-91738
 thermal props., hole model (German) 2-55820
 thermodynamic properties of two-dimens. fluid, quantum corrections 2-86534
 thermodynamically consistent eqn. of liquid theory 2-115125
 triatomic molecular fluid, linear, site-site direct correl. function 2-91743

liquid theory continued

- two dimensional dense hard discs fluid, equilb. props., semiclassical statistical mechanics 2-81647
 urea-alcohol aq. solns., interactions, excess enthalpies at 25°C 2-103587
 water, dense, mol. interaction at high temp. 2-91746
 water, H₂ pair correl. function meas. 2-103594
 water, IR spectra, struct., continuous model 2-76273
 waterlike mols., fluid system Monte Carlo simulations, thermodynamic props. 2-65830
 Ar, freezing line, liq. theory and perturbation theory 2-109960
 Ar, Lennard-Jones fluid, Couette flow, shear rate depend. viscosity function (French) 2-97497
 Ar, liq. mol. dynamics simulation, collision times and durations 2-71321
 Ar, liquid, hard sphere model calcs. of Gruneisen const. and Moelwyn-Hughes parameter 2-71327
 Br₂ in Ar, binary collision trajectories calc. using efficient computer algorithm 2-108686
 Br₂ polar fluid, extended RISM eqn. appl. 2-97896
 Cl₂, fluid, liq.-vapour interphase, perturbation-variational theory 2-115502
 H₃PO₄, polarisation model appls. 2-60861
 H₂O, polarisation model appls. 2-60861
 N₂ fluid, liq.-vapour interphase, perturbation-variational theory 2-115502
 N₂, liq., Rayleigh spectra, temp. and density of second moment 2-104898
 N₂, liquid, energy difference functions in Monte Carlo simulations, free energy calcs. 2-81654
 N₂, liquids, mol. vibr. dephasing rates, mol. orientations and attraction effects 2-97895
 NH₃, liquid, empirical pot. for conformational, intermol. and solvation studies 2-91747
 Na, liq., radial distrib. function studied using integral equation perturbation theory 2-91762
 Na, liquid and solid, eqn. of state and struct., mol. dynamics study using model pseudopot. 2-71606
 Na-K liq. alloys, statistical thermodynamics 2-86540
 O₂ fluid, liq.-vapour interphase, perturbation-variational theory 2-115502
- liquid-vapour transformations**
 see also boiling; condensation; evaporation; liquefaction of gases
 alcohol-alkane systems, prediction of vapour-liq. equilibria, group-contrib. methods 2-115397
 binary mixtures, isomorphous eqn. of state near liq.-gas crit. point, theoretical anal. (Russian) 2-71601
 bubble stability in closed vol. of liquid-gas soln., expt. and theory 2-115399
 chlorotrifluoromethane gas/liq. crit. points, holographic interferometry 2-98251
 electric field effects on the limit of liquid metastability 2-71608
 equilibria, determ. by circulation methods 2-98254
 equilibria, vapour-liq., modification of Martin eqn. of state 2-115398
 ethane, liquid-vapour coexistence curve (Russian) 2-103968
 ethanol-n-heptane, ebulliometric technique 2-98252
 ethanol-n-nonane, ebulliometric technique 2-98252
 fluid mixture, Redlich-Kwong-Soave volumes, consistent correction 2-98237
 hydrocarbons, critical temp., density and pressure parameters 2-103967
 interface tension and profile, generalised van der Waals theory 2-104118
 intrinsic liquid-vapour interface, rel. to phase transition 2-115493
 lipid monolayers phase transitions theoretical model 2-78300
 methane-ethane crit. mixt., liq.-gas crit. line prediction and interaction param. evaluation 2-71623
 polar substances, vapour-liq. equilb., dipole hard sphere perturbation theory 2-66189
 post dryout and decompressive flashing systems, gas-liquid thermal non-equilb., unified approach 2-96228
 simple fluids, gas-liquid transition and transport behaviour 2-103964
 solutions, associated, thermodynamics and vapour-liq. equilibria calc. 2-66190
 sound propagation in crit. fluids, viscosity and sp. ht. theories 2-103252
 water-oil (air) interfaces, phase transitions in monolayers 2-66324
 Ar, scaling corrections to X-ray scatt. near liquid-vapour critical point 2-98256
 CO₂-n-paraffins, Peng-Robinson equation of state, interaction parameters determ. 2-66160
 HCl, high-density fluid, vibr. energy relax., 150 to 345K 2-80786
³He, thermal conductivity near liquid-vapour critical point 2-56288
 Hg, dielectric anomaly and vapour-liq. phase transition 2-66192
 In-As, activity coefficient, regular soln. approach and lattice model 2-93492
 In-P, activity coefficient, regular soln. approach and lattice model 2-93492
 Xe, liq., nucleation near crit. point 2-71624
- liquid waves**
 see also capillary waves; ocean waves; surface waves (fluid)
 acceleration waves in thermoconducting fluids, relativistic theory 2-75823
 apparent internal waves in fluid with exponential density distrib. 2-114827
 classical shallow water eqns., symplectic geometry 2-55606
 collective modes, with very short wavelength 2-81349
 deep-water waves, instability and breaking 2-55600
 floating cylinder transient heaving motion, fluid-motion and rigid-body dynamics soln. 2-86206
 inertial waves above an obstacle in an unbounded, rapidly rotating fluid, theory 2-103182
 internal wave generation by bottom roughness, at two-fluid interface 2-114826
 laminar wavy film flow, condensation and evaporation, Nusselt theory 2-114832
 laminar wavy film flow, gravity driven, hydrodynamic anal. 2-114831
 liquid film-supersonic gas stream interface, nonlinear wave interaction 2-109345
 nonlinear drag-free flow over submerged semi-elliptical body 2-86251
 oceans and lakes rotational normal modes calc. with general orthogonal coords. 2-53528
 oil thickness variation on wavy water in the presence of wind 2-86292
 propulsive agent, method of calc. (Russian) 2-81348
 resonant sideband instabilities in wave propagation in fluidized beds 2-114894
 Rossby wave instability (Chinese) 2-60563
 rotating fluid, Gerstner edge wave discontinuities 2-70963

liquid waves continued

- second-order wave force on a large cylinder 2-114814
 shallow water waves, Kadomtsev-Petviashvili eqns., constraints and conserved quantities 2-74222
 shells, coaxial, cylindrical, with liq. filler, small perturbation propag. 2-65608
 solitary wave reflection in shallow water, MAC method, inviscid theory 2-60565
 solitary wave with surface tension 2-109348
 soliton models of long internal waves 2-75980
 two-dimensional supersonic flow, weak nonlinear waves, reductive perturbation theory 2-75994
 unstable water wave train, long-time evolution 2-65603
 viscous liquid film, nonstationary waves 2-70968
 water, far field asymptotic behaviour and localised vorticity distrib. diffusion 2-114829
 water, nonlinear wave problems, Fourier method, appl. to solitary-wave interactions 2-75981
 water, solitary surface wave, oblique interactions 2-97571
 water wave scattering by pair of semi-infinite barriers 2-55608
 water waves, finite amplitude, modulation theory 2-81351
 water waves, free boundary problems 2-91471
 water waves, regular, radiation and diff. by body, Green function theory 2-86291
 water waves, Stokes, nonlinear diff. by circular cylinder for arbitrary uniform depth 2-109339
 water waves, wind generated, laminar boundary layer flow model, nonlinear theory 2-114830
 water waves, wind generated, quasilinear approx. 2-73578
 wave-turbulent current interaction investig. 2-65665

liquids

- for generalities only: for specific aspects see appropriate headings
 see also liquid structure; liquid theory; solutions
 condensed matter physics, conf., Antwerp, Belgium (Apr. 1980) 2-101132
 surface tension, pure liqs. and liq. mixtures, prediction, generalised corresponding-states method 2-86975

literature

- instrument science and technology, review 2-69163

literature reviews see reviews**lithium**

see also nuclei with

- abundance in Galaxy at time of form. from extreme population II dwarfs obs. 2-89382
 abundance in K-type giant star HD 112127, obs. and model atm. anal. 2-79088
 abundance in M-type supergiants and giants, obs. 2-84225
 abundance in R Coronae Borealis stars 2-63434
 adsorbed on W, indirect interaction 2-71806
 atom, antiprotonic rot. states and lifetime calc. 2-102672
 atom, autoionising states in low lying triplet excited reson., saddle point technique 2-64933
 atom, electron and positron impact excitation differential cross sections 2-102644
 atom, electron impact excitation of lowest autoionising states 2-80820
 atom, electron impact ionisation cross-section calcs. 2-108718
 atom, ground state electronic extracule densities 2-80446
 atom, idempotent density matrices from X-ray diff. struct. factors 2-54752
 atom, KVV Auger spectrum, line-shape, many-body effects 2-80555
 atom, photoionisation studied using CI theory, energy levels and oscillator strengths 2-102444
 atom, Rydberg IR optogalvanic spectroscopy 2-59759
 atom, solvated, far IR spectrum, INDO calcs. 2-108413
 atom, specific mass shift, many-body perturbation theory 2-96642
 atomic beam interaction with Si(111) and (100), surface ionization and desorpt. kinetics 2-115566
 atomic cluster, binding energy, Huckel mol. orbital approx. 2-108758
 atomic cluster, CNDO/BW study of different crystallographic structs. 2-59988
 atomic clusters, pseudopot. CI calcs. 2-59984
 atomic K-shell, absolute photoabsorpt. cross section 2-70201
 atomic vapour, laser optical pumping with vel. changing collisions 2-59762
 atomic vapour, two-photon laser 2-65208
 atoms, D line broadening by inert gas perturbers 2-64925
 atoms, g factor correction calc. 2-85565
 battery technology and characts. (Italian) 2-105549
 BCC cluster, CNDO/BW method calc. 2-55003
 blanket design of fusion reactor, MHD finite element anal. 2-113731
 cells, Mo_6O_{13} and Mo_8O_{13} as cathodes props. 2-93883
 chemisorbed H, localized spin-orbital theory 2-56339
 chemisorption on Al (111), cluster model 2-66363
 chemisorption on W and Mo, image pot. contrib. to sorption energy 2-104163
 cylindrical film, Aaron-Bohm effect (Russian) 2-87418
 Debye-Waller factor calc. method 2-81923
 discharge charact., Li/MnO₂ cells, at low temp. 2-116790
 electrical resistivity at high temps. 2-98619
 electron-electron scatt. resist., sample depend. 2-82337
 Fermi surface parameters, Fourier transform of positron annihilation curves 2-98524
 fire modelling, in fusion reactors 2-54644
 fusion reactor appls., corrosion and compatibility 2-69864
 giant stars, late type, UV excess and Li content, model 2-58342
 intercalated in graphite, C_6Li , Auger line shape, final state rule 2-105012
 ion scatt. from Cu surface, ion fractions 2-77690
 isoelectronic sequence, even-parity quartet P states, corrective results 2-102655
 isoelectronic series, ionisation pots., transition freqs., perturbation theory, HF method 2-113937
 isotopes, electrical resistance study (Russian) 2-61443
 K absorption spectrum, band struct. and density of states, initial state approx. 2-87901
 liquid, internal energy and entropy, Gibbs-Bogolyubov variational technique 2-56221
 meteorites, ^6Li content of irons (non-cosmogenic) 2-106633
 model clusters, adsorpt. of H_2 , surface enhanced Raman intensities, Hartree-Fock calcs. 2-80626
 molecule, B⁺Li⁺ state, quenching and vibr. energy transfer 2-80789
 molecule, geometry, dipole moments, pseudopotentials, FSGO calcs. 2-102372
 molecule, ground state, HF energy, corrections to an incomplete basis set 2-108366
 molecule, laser excitation, collision induced transitions 2-90611
 molecule, predissociated vibr.-rot. levels predicted using ab initio calcs. 2-54904
 molecule, pulsed optical-optical double reson. spectroscopy 2-65026
 momentum depend. positron annihilation rate 2-99214
 nuclei transverse oscils. in planar channels in Si 2-81863
 paper thin Li battery, technology, characts. (Japanese) 2-73098
 particles, Na impurity distrib., ESR study 2-76485
 plasmon energies, long wavelength, nearly-free-electron pseudopotential calc. 2-98510
 polyacetylene:Li, n-type doping, isomerisation, EPR and Raman spectra 2-65878
 trans-polyacetylene:Li film, visible spectra 2-116206
 primary batteries using Li compounds, technology, characts. (Japanese) 2-73097
 primary cell, development, high power and high energy cell concepts (Czech) 2-73100
 pseudopotential elastic const. calcs. (Chinese) 2-109880
 secondary ions desorbed by fission fragments, energy spectra, time-of-flight method 2-99243
 p-Si(Li) parameter meas. during drift compensation 2-74465
 SIMS analysis involving Li⁺ implantation and matrix effects 2-78152
 steel, austenitic stainless, corrosion in Li test loop, for type 304 2-72867
 surface reaction with CO₂, C KVV Auger electron spectrum 2-111511
 surfaces (100) and (110), BCC, H atom-cluster interactions, ab initio CI calc. 2-116325
 total energy calc. method 2-71898
 ZnSe:Li, p-type cond. 2-115925
 Am/Li 5 Ci neutron source, neutron spectrum 2-102303
 CdTe, Li diffusion, internal elec. field effects in dissociative mechanism 2-115462
 CdTe:Li, In, donor acceptor pairs, luminesc. excitation spectra 2-57154
 p-CuO:Li, conduction and valence band edge positions, photoelectrochem. determ. 2-56440
 Fe-Ni-Cr, mass transfer and corrosion in Li, Ni conc. effect 2-72866
 GeSi:Li 2-56932
 (H₂O)₂:Li⁺, vibr. intensity, ab initio calcs. 2-85528
 He-Li, intermol. forces calc., ab initio valence bond theory 2-80753
 KCl:Li, IR absorpt., lattice dynamics 2-104884
 KCl:Li, Li(F²⁺)_A centre laser action 2-85980
 KCl:Li, F_A(II) centre relaxed excited state, second order perturbation theory 2-76974
 KLi⁺, F and M centres, luminescence and absorption spectra 2-67115
 KTaO₃:Li, dynamics of freezing electric dipoles, dielec. relax. meas. 2-77447
 Li atom-ion collisions, state-selective electron capture 2-90689
 Li He, mol. autoions. electron spectra 2-102582
 Li isotope separation by laser 2-80831
 Li, relativistic wave functions for non-penetrating Rydberg states 2-80510
 Li⁺, ¹⁵S-P excitation energies, coordinate rotated TDHF calcs. 2-102383
 Li⁺ excited at state, 3489 Å optical transition using beam-foil spectroscopic technique 2-80511
 Li⁺ and Na⁺ in H₂O₂/Ar flame, ionic diffusion, mobility coeff. and flame temp. determ. by dual laser ionisation 2-105484
 Li⁺ conductance in compressed water at 25°C 2-81998
 Li⁺, energy and transition probabilities correl. wavefunctions calcs. 2-113874
 Li⁺ ion scatt. from solid surfaces, neutralisation effects 2-77663
 Li⁺ ions in Ar, Kr and Xe, mobilities and longitudinal coeff. at room temp. 2-60713
 Li⁺ ions in He gas, mobility and diffusion coeff. 2-109437
 Li⁺, laser-microwave spectroscopy 2-64902
 Li²⁺, electron elastic scatt., s-, p- and d-wave phase shifts 2-108709
 Li-H, lattice relax. and crystallographic distortion around impurity 2-103914
 Li/MnO₂ batteries, structure, features and future prospects 2-83466
 Li/SO₂ battery anodes, surface struct., electrode chemistry, SEM and XPS study 2-82095
 Li/SO₂ cell, discharge products, X-ray diff. and DSC study 2-78196
 Li-Al cells, phase relationships in positive electrodes 2-88422
 Li-Al/FeS cells optimisation for electric vehicle propulsion applications 2-93887
 Li-Al₂O₃-Cu layers, electron tunnelling, ESR study 2-82714
 Li-Cs plasma, dense, supercooled, recomb. and Li level population calcs. 2-81448
 Li-like ions, 1s2p² configuration, multiplet splitting and radiationless transition, relativity effects 2-108419
 Li-like ions, C³⁺ and W⁷¹⁺, inelastic scatt., excitation, relativistic Born cross sections 2-114116
 Li-like ions, P¹²⁺, transitions and lifetimes meas., X-ray and beam-foil time-of-flight spectra 2-113920
 Li-like ions, radiative transition rates and wavelengths, MCDF-EAL calc. 2-54803
 Li-like ions + He, one-electron capture cross sections 2-96723
 Li⁺-Li⁺(He), polarisabilities, oscil. strengths, interaction, coeffs. calcs. 2-80763
 Li + F₂, excited atom system, pot. surface for weakly bound electron in coulombic and point pot. field 2-108411
 Li + FH, endothermic reaction, vibr. threshold, pot. energy surface 2-99658
 Li + FH(FD)(FT), collinear exchange reactions, quantum mech. calcs. 2-62381
 Li + H⁺(He²⁺), electron capture and ionisation cross sections calcs. 2-54956
 Li + He, Li 3S-3P transition relax. spanning short term impact regime to the long term asymptotic regime 2-59915
 Li + He⁺, electron transfer, single and double, cross-sections 2-65086
 Li + He²⁺, collisions, absolute cross sections for one electron capture into excited projectile states 2-59929
 Li + inert gas atom, 3³D state quenching, product state specific obs. 2-80796
 Li + Li (He)(Ne), quenching, excitation transfer processes, radiative coeff., collision rate coeff. 2-108418

lithium continued

- Li+Mg, optically pumped LiMg* excimer chemiluminesc. intensities, form. and decay kinetics 2-8353
 Li+muonic H, μ -mesomolecule form., charge exchange (Russian) 2-96779
 Li+NO₂(Cl₂)(F₂), chemi-ionisation reactions 2-72968
 Li+O₂, reaction in presence of He or Ar, energy transfer mechanism 2-72977
 Li⁺+H₂(N₂)(Ar)(CO₂), electron loss cross-sections 2-54943
 Li⁺+Ar(Kr)(Xe), clustering reactions, forward and backward rate coeff., energy depend. 2-83365
 Li⁺+Ar(Kr)(Xe), interaction pot. determ. 2-102567
 Li⁺+CO₂, collisions, high resolution ion energy-loss spectroscopy 2-114083
 Li⁺+H₂, diffusion cross sections, close coupling calcs. 2-75374
 Li⁺+H₂PO₄⁻, interactions, ab initio SCF study, model of cation binding to nucleic acid 2-88344
 Li⁺+He, excited quasimolecular state form., autoionisation, electron spectra 2-59894
 Li³⁺+H, charge exchange calcs. 2-102610
 Li³⁺+H, electron capture, mol. treatment, impact parameter approx. 2-85797
 Li³⁺+H, electron capture investigated at impact velocities 0.3 and 1.4 au 2-114074
 Li³⁺+H, electron transfer collisions at low and intermediate energies 2-80804
 Li³⁺+H, low impact energy, charge transfer 2-114099
 Li³⁺+H(s), charge transfer cross sections, impact parameter approx. 2-59931
 Li₂, electron scatt., total cross-sections, 0.5 to 10 eV 2-65092
 Li₂ pulsed laser, optically pumped 2-114255
 Li₂ reson. two-photon ionis., ionis. pot. calcs. 2-80741
 Li₂⁺, ⁷Li, spontaneous emission and predissoc. calcs. 2-59868
 Li(²S), electronic states, multiconfigurational coupled-cluster theory 2-80416
 Li(²S_g⁺), excited state, ion-pair interaction effect on vibr. energy spectrum 2-80567
⁶Li ion ranges in Fe, Cu, Zn, W, Bi, Co 2-66089
⁶Li, isotope shift, two-photon spectra 2-54823
⁶Li primordial synthesis, reaction rate for ⁶He(d, γ)⁶Li 2-112626
⁶Li₂ molecule, optically pumped ring laser operation 2-75556
⁷Li, isotope shift, two-photon spectra 2-54823
⁷Li on Re surface, nuclear spin relaxation 2-98991
⁷Li primordial abundances, cosmology and neutrino physics, review 2-84356
⁷Li+Ne(Ar), K-shell ionisation and capture differential cross sections, scaling props. 2-96706
 Li*+He(Ar)(Kr)(Xe), Li fine struct. transitions, rate coeff. 2-54938
 Li*+Li, two photon optical ionising collisions 2-70206
 Li*+Xe, rot. inelastic cross sections, vel. depend. 2-108685
 Li(²P), electron impact excitation, cross sections, oscillator strengths 2-102640
 MgO-Li, struct. and electronic props. of minute Li aggregates (French) 2-61391
 MgO-Li⁺ crystal, dielec. behaviour 2-87661
 NaF:Li, single crystal, stability of electronic colour centres 2-91958
 RbCl:Li colour centre laser pumped with a DCM dye laser 2-102803
 Si:In, Li, In X-centre donor-acceptor pair photoluminescence 2-57139
 Si:Li, D⁻ centres, far IR photocond., uniaxial stress and mag. field effects meas. 2-98691
 Si:Li, D⁻ states, electronic struct. and binding energies 2-82280
 Si:Li, neutron transmutation doped, heat treatment effects 2-115304
 Si:Li,In(Ga)(Al)(B), sharp line donor-acceptor pair recombination luminesc. 2-104928
 Si(Li) detector block design features 2-64770
 Si(Li) detector parameters, electron and X-ray large doses effect, expt. study 2-85496
 V-Zr-O-Li, phase equilibria, penetration of Li at 670K 2-72681
 ZnS:Ce, Li phosphors, luminesc. excitation and emission spectra 2-57155
 ZnSe:Li, donor-induced acceptor-pair splittings, excitation spectroscopy study 2-82906
 ZnTe:P, Li, magnetoluminescence, electron and hole g-factors, Zeeman effect 2-99193
 ZrP₂O₇:Li⁺, solid electrolyte, ionic cond. meas. 2-92256

lithium alloys

- work function of emitted electrons, chem. comp. effect (Russian) 2-104465
 Al-Li alloys, cyclic and monotonic ductility, effect of slip distrib. 2-67419
 Al-Li-Cu-Zr-Cd system alloys, microstruct.-prop. rels. 2-111210
 Al-Li-Mg, Mg effect on Young's modulus 2-57391
 Al-Li-Mg system, Guinier-Preston zones, coarsening mechanism, SAXS study 2-62129
 Al-Li-Mn(Zr)(Mg)(Cu), corrosion behaviour, correl. with microstruct. 2-88253
 AlLi, electronic energy bands, Fermi surface 2-92448
 In₂-Sn₂O₃- γ -WO₃-LiAlF₄-LiIn thin film overlayer, electrochromism 2-72569
 β -Li-Al electrode pot. and Li diffusivity meas. at ambient temp. 2-116793
 Li-Al/FeS cell, Ni positive electrode components, corrosion resist. meas. 2-78201
 Li-Al(Zn)(Cd)(Hg)(Sn)(Bi), impurity solubility, dislocation and deformation effects, ESR study (Russian) 2-103996
 Li-B anode for molten salt thermal cell, discharge characteristics meas. 2-93882
 Li-B film, electron diff. study 2-110182
 Li-Ge alloys, thermodynamic studies, appl. to negative electrodes for molten salt batteries 2-76709
 Li-Ge liq. alloys, ⁷Li Knight shift meas. 2-93030
 Li-Mg, asymmetric slip, thermal activation parameters 2-86676
 Li-Mg, BCC solid soln., soft X-ray emission and self-absorpt. spectra meas. 2-99229
 Li-Mg, thermo-EMF meas. (Russian) 2-82326
 Li-Mg liq. alloys, ⁷Li Knight shift 2-56956
 Li-Pb liq. alloy, chem. short-range order, neutron and X-ray diff. study 2-97906
 Li-Pb, liquid, thermodynamic calcs. 2-98308
 Li-Pb-Bi, liq. breeds blanket material, candidate studies 2-75001
 LiAl, Hall mobility of positive carrier 2-110330

lithium alloys continued

- β -LiAl, positive carrier conc. rel. to Li vacancies, Hall effect and lattice parameters study 2-56552
 LiNa, liq. heat and entropy of mixing, Gibbs-Bogolyubov variational technique 2-56221
 Li_{1-x}Na_x, immiscible liq. metals, interfacial tension, pseudopotential theory 2-86980
 LiPb, molten, short range order and conc. fluctuations 2-91757
 Li_{1-x}Pb_x blanket candidate, ³H confinement and recovery 2-69886
 Li_{1-x}Pb_x, breeding blanket, in-situ ³H recovery 2-75010
 Li_{1-x}Pb_x eutectic, compatibility with 316 L austenitic stainless steel 2-111372
 Mg-Li-Al-Cd, superplastic deform., effect on struct. and props. 2-62180
 Mg-Li-Cd-Al system, isothermal section in Mg-rich range 2-99398
 Mg-Li-Y system, isothermal sections and mech. props. in Mg-rich region 2-111142
 SiC whisker reinforced Al-Li alloys, mech. props. and microstruct., effect of Li 2-111240

lithium compounds

see also lithium alloys

- Se₃, 2-71415
 breeder materials, compatibility with struct. 2-69854
 breeders, ceramic, preparation, characts. and chemistry 2-69856
 breeding materials, interactions with structural alloys 2-69853
 C-C Li-Ne, A²Li⁺ pots. well depths, fluoresc. obs. 2-108670
 crystalline phase containing ⁶Li, radiation damage by (n, α) reactions 2-115306
 electrochemical intercalation in layered transition metal chalcogenophosphates, effect of bond ionicity 2-71392
 ferrite, polycryst., anisotropy field determ. from FMR linewidths 2-66809
 ferrites, ordering mechanisms 2-57345
 fluoride melts of U, Th, Be, Li mixtures specific elect. cond. meas. 2-56235
 formate, Raman light scatt. by polaritons, intensity dispersion 2-72509
 formate, single ultrashort pulse duration meas. by second harmonic method 2-55267
 formate crystal, light scatt. by polaritons in uncoupled two-particle states 2-82251
 formate monodeuterate, lattice energy, electrostatic term, determ. from electron density 2-115173
 formate solutions, refr. index, density and elec. cond. meas. near saturation temp. 2-76719
 fusion reactor materials, conf. Seattle, WA, USA (Aug. 1981) 2-68954
 intercalated dichalcogenides, props. and electrode apps. 2-57691
 intercalation compounds with graphite, σ -electron energy bands, secondary electron spectroscopy study 2-93337
 intercalation compounds with TiS₂, ZrSe₂, HfSe₂, TaS₂ and VSe₂, elec. props. 2-66529
 intercalation cpds., form., in situ X-ray diff. effects 2-65944
 Li₂O, fusion breeding materials, Li compound, irradiation study 2-69858
 Li₂SiO₄, fusion breeding materials, Li compound, irradiation study 2-69858
 Li₂Pb₂, fusion breeding materials, Li compound, irradiation study 2-69858
 LiNbO₃/Ti interferometric modulator array for 4-bit 275-MS/s electrooptic A/D converter 2-60231
 LiUO₂AsO₄4D₂O, cryst. struct., powder neutron diff. study 2-65936
 (M=Mn, Fe, Co, Ni, Cu), charge transfer bands 2-87808
 mullite form. kinetics, grain comp. and component activity, effects 2-77271
 β -spodumene (LiAlSi₂O₆), preliminary evaluation as fusion reactor structural material 2-69836
 zeolites, quantum chemical study of physico-chemical props. 2-65917
 AlF₃-CaF₂-LiF system, computer anal. of phase diagrams and thermodynamic props. 2-67308
 β -Al₂O₃-Li₂O, Li⁺ distrib. and motion, NMR and Raman study 2-66284
 β -Al₂O₃-Na₂O-Li₂O, ceramic, solid electrolyte, chemical coloration, EPR study 2-66914
 β -Al₂O₃-Na₂O-Li₂O, dehydration reactions, DTA and TGA study 2-78091
 B₂O₃-Li₂O-LiCl amorphous fast ionic conductor, crystallisation effects on cond. 2-115454
 B₂O₃-Li₂O-(LiCl) glasses, chem. durability 2-93647
 C₆Li intercalated cpd., Madelung energy studies 2-86616
 CaF₂-LiF-NaF system, computer anal. of phase diagrams and thermodynamic props. 2-67308
 He-LiF system, neutral particle scatt. by exponential corrugated pot. 2-84483
 In₂-Sn₂O₃- γ -WO₃-LiAlF₄-LiIn thin film overlayer, electrochromism 2-72569
 K₂LiNb₃O₁₅ films for SAW devices 2-82111
 K₂LiNb₃O₁₅ and K₃LiTa₃O₁₇, polycryst., ionic cond. meas. and comparison 2-66283
 K₂LiNb₃O₁₇(Ta₂O₇), Li⁺ ion motion, NMR study 2-66939
 K_{1-x}Li_xTaO₃, ferroelectric, dipole-dipole interactions, EPR line width study (Russian) 2-82805
 Li₂ZrO₃, breeding compounds for ³H, preparation 2-69857
 Li molecules with Bi and Pb, atomisation energies determ. 2-60710
 Li oxide systems, sublimation and vapourisation, high temp. mass spectrometric obs. 2-113037
 Li-Fe-S system, elec. cond. and electronic struct., XPS study 2-104371
 Li-He, A²Li⁺ pots. well depths, fluoresc. obs. 2-108670
 Li-Nd-La phosphate glass, high conc., use in Q-switched lasers 2-55167
 Li-Nd-La phosphate glass laser, high conc., efficiency at low pump energies, free lasing 2-55168
 li-o-dimesitylbenzene radical complexes, soln., KEPR, ELDOR and ENDOR 2-59832
 Li-VSe₃, electrochemical insertion of Li, Thompson method, EMF study 2-116707
 Li⁺-X (X=O²⁻, OH⁻, OH₂, N³⁻, NH₂⁻, NH₃⁻, NH₃) isoelectronic series, geometric struct. and stability, FSOG calc. 2-80442
 Li_{1-x}Ag_xSO₄, solid electrolyte, cryst. struct. at 565°C 2-91934
 γ -LiAlO₂, appl. as solid breeder material 2-69852
 LiAlO₂, fusion breeding materials, Li compound, irradiation study 2-69858
 LiAlO₂/molten carbonate structs., compressive strength anal. 2-61050
 LiAlSiO₄, β -eucryptite crystallisation from glass, laser Raman spectra 2-71366

lithium compounds continued

- β -LiAlSiO₄, ising triangular lattice, modulated struct., domain boundaries, free energy 2-98831
 LiAlSiO₄-SiO₂ solid solns., ionic cond., temp. and crystal orientation effects 2-86930
 β -Li_{1-x}AlSi_{1-x}P_xO₄ ceramic solid soln., ionic cond. meas. 2-104052
 Li₂B₂O₇, gamma-irrad., laser heating in thermolum. dosimetry 2-104971
 Li₂B₂O₇, Raman spectrum, 100 to 400K 2-67038
 Li₂B₂O₇:Cu, thermoluminesc. phosphor, radiation dosimetry characs. expts. 2-113755
 Li₂B₂O₇:Cu thermoluminescent phosphor, dosimetry characs. 2-59556
 Li₂B₂O₇:Mn, Cu, suitability of different props. for medical dosimetry 2-100129
 Li₂B₂O₇:Mn TLD phosphor, light conversion efficiency for α -particles rel. to ⁶⁰Co gamma radiation 2-75136
 Li₂B₂O₇:X, (X=Cl, Br) 2-66917
 Li₂B₂O₇.5H₂O, growth and growth mechanism 2-97963
 LiBeH₃, normal vibr. freq. and force field determ. by ab initio calc. 2-108462
 LiBiPb, atomisation energies determ. 2-60710
 LiBr, ab initio interaction polarisability and pair pot. 2-75179
 LiBr-methanol, vapour press. eqn. and meas. (German) 2-98257
 LiBr-methanol-(ZnBr₂), solvation, heat of mixing determ. 2-66238
 LiBr(l), molten, nuclear spin relax. 2-104737
 LiC₆, electron states, cluster model (Chinese) 2-66415
 LiC₆, intercalate, absolute spin susceptibility, paramagnetism 2-77259
 LiC₆ intercalation compound, band struct., self consistent extended muffin tin calc. 2-82229
 Li₂C, electronic struct., ab initio GVB, SCF and CI calcs. 2-108357
 LiCN, ab initio SCF pot. energy surface 2-96482
 LiCe(MoO₄)₂, synthesis, structural characterisation 2-86633
 Li₂Co₂, solid electrolyte, ionic cond. study (French) 2-71704
 LiCeP₂O₁₂ crystals, growth and spectral properties (Chinese) 2-99163
 LiCl aq. solns., second zone existence, incoherent neutron scatt. study 2-60865
 LiCl, aqueous soln., enthalpy of dilution 2-105497
 LiCl, crystals and aq. solns., optical dispersion and molar refractivities 2-110795
 LiCl crystals and aqueous solns., four-wave mixing 2-102865
 LiCl dew point measuring apparatus, modified, use (German) 2-73716
 LiCl, energy band calcs., self interaction correction, density of states 2-66445
 LiCl, isotopically invariant Dunham coeff. 2-85643
 LiCl:Ag(Cu), ligand relax., isotropic superhyperfine const. anal. 2-109816
 LiCl:Cu²⁺(Ag⁺), luminesc. props. and impurity electronic struct. 2-57161
 LiCl:Mn²⁺ (M=Mn, Fe, Co, Ni, Cu), charge transfer bands 2-87808
 LiCl-AgCl molten soln., surface tension, activity and thermodynamic props. and density meas. 2-76778
 LiCl-B₂O₃ glass, ionic cond., ⁷Li and ¹¹B NMR study 2-93022
 LiCl-KCl, liq. state, ion mobility mol. dynamic simulation 2-110022
 LiCl+He—LiHe⁺+Cl⁻, chemical exchanges, mechanism, cross-section determ. 2-57604
 LiClO₄-dioxolane-water electrolytes in WO₃ electrochromic cells 2-93305
 LiClO₄-poly(ethylene oxide) filled polymer electrolytes, electrochem. and mechanical props. 2-115458
 LiClO₄-poly(ethylene oxide) filled polymer electrolytes, electrochem. and physical props., prep. condition effects 2-115459
 LiClO₄.3H₂O IR stretching and bending bands of dil. H₂O 2-72479
 LiClO₄.3H₂O, pyroelectric, neutron diff. refinement 2-55902
 LiCoO₂, new variety with unusual O₂ packing obtained by exchange reaction 2-60956
 Li₂CrO₄, cathodes in Li/organic electrolyte batteries, props. 2-93889
 Li₂CrO₄, ferroelastic transition, elastic const., acoustic softening 2-98188
 Li₂CSO₄, ferroelec., elastic const. near phase transition, US vel. study 2-56066
 Li₂Cu₂(MoO₄)₃, electrical cond., ionic and electronic 2-72034
 LiD, elec. field gradients, semi-empirical SCF MO calcs. 2-108387
 LiD single crystals, exciton-absorpt. edge and Urbach rule 2-67080
 LiD₂(SeO₃)₂, ferroelec., cryst. struct., neutron diff. study 2-81733
 LiErP₂O₁₂, absorpt. spectra and Stark energy levels of Er³⁺ ion 2-57118
 LiErP₂O₁₂ crystals, growth and spectral properties (Chinese) 2-99163
 LiEuP₂O₁₂ crystals, growth and spectral properties (Chinese) 2-99163
 LiF (TLD-100) phosphor, thermoluminesc. sensitivity, irradi. temp. dependence 2-116281
 LiF (001), rotationally inelastic scatt. of HF 2-67174
 LiF (001) surface, H₂ adsorption at anion vacancy 2-61279
 LiF and ⁶LiF TLD polycryst., SEM obs. of neutron irradi. damage, surface defects, TL and response and recovery 2-115298
 LiF, cation size effect on ionic thermocurrents 2-72405
 LiF, channeling radiation from relativistic positrons 2-103870
 LiF corrugated surface, He(Ne) beam scatt., quasi-hard wall model 2-62040
 LiF crystal, dielec. losses under deform. by conc. load 2-66984
 LiF crystals, deform., dislocations, parameters of paired distrib. 2-66002
 LiF crystals, γ -irrad., bulk laser damage threshold meas. 2-86028
 LiF crystals, X-ray luminesc. obs. of F-aggregate colour centres 2-110931
 LiF crystals containing F₂⁻ centres, Nd laser induced bleaching 2-60180
 LiF crystals, with colour centres, passive shutter appls., residual losses 2-81061
 LiF cubic crystals, refr. index dn/dT temp. coeff., thermoelastic stress contrib. 2-57054
 LiF, deformed, thermal cond. 0.05 to 5K, phonon-dislocation scatt. 2-56276
 LiF doped Al-Mg spinel, compaction and recryst. kinetics 2-93482
 LiF, EM emission stimulated by acoustic wave 2-116301
 LiF, edge dislocation dipole contrib. to thermal resistivity 2-86961
 LiF, electron backscattering, Monte Carlo calcs. 2-82966
 LiF, energy absorpt. coeffs. and photon kerma 2-85405
 LiF, excitons, local correl. effects 2-87153
 LiF, F₂⁻ colour centers, optical pumping of YAG:Nd laser 2-102804
 LiF, F₂(F₂⁻)(F₂⁻) centres, formation and pumping by electron beam bombardment 2-90901
 LiF film, on LiNbO₃, Raman scattering by surface polaritons under conditions of resonance with the transition layer 2-77539
 LiF films, thermoluminescence and thermally stimulated exoelectron emission, γ -ray irradi. effects 2-57191
 LiF, forging processes development for large scale deform. without optical props. degradation 2-60194

lithium compounds continued

- LiF, geometry, force const., test of new SCF method 2-108367
 LiF, He atom-surface impact, attractive corrugated hard wall model, convergent perturbative soln. 2-99251
 LiF, heavily deformed, sp. ht. and thermal cond., 0.08 to 4K 2-56210
 LiF, high level γ -dosimetry using high temp. thermolum. peaks 2-117090
 LiF, highly deformed, phonon-dislocation interaction anisotropy, phonon imaging study 2-86818
 LiF, IR wavelength modulation spectroscopy of laser window materials 2-60191
 LiF implanted single crystals, oriented in metallic aggregates formation 2-76680
 LiF in teflon TLDs, response to positrons 2-64685
 LiF, inert gas metastable atom scatt. from solid surfaces 2-99261
 LiF lasers based on F₂ centres, lasing action, luminescence 2-80972
 LiF, lasing action and spectra of M-centres 2-75580
 LiF, mechanical props. and dislocation struct. under creep conditions 2-81880
 LiF, multipin mag. resonance with polarised β -active nuclei taking part (Russian) 2-82732
 LiF, neutron irradi., excess sp. ht. and thermal cond. 2-61160
 LiF, optical radiation from photon-stimulated desorption of excited atoms 2-110934
 LiF, photoacoustic IR spectroscopy 2-99108
 LiF, photoelectric cross sections 2-96514
 LiF, plastic deformation under tension and compression, density changes, dislocation form. 2-61057
 LiF, radiative tunnelling transitions between defects, energies calc. 2-77587
 LiF single crystals, push-pull fatigue at high temps., microstructs. 2-105276
 LiF single crystals, push-pull fatigue at elevated temps., mech. props. 2-105275
 LiF, slip on {100} planes 2-81792
 LiF, soft X-ray absorpt. spectra by pot. scanning, numerical inversion 2-93323
 LiF spatial filter aperture for laser initiated vacuum plasma shutters 2-97162
 LiF surface (001), inelastic scatt. of Ne atoms 2-57239
 LiF, surface phonon dispersion rel. meas. using He atomic beam 2-66143
 LiF TLD dosimetric characs. 2-64693
 LiF, TLD-100, thermoluminescence, order of kinetics 2-61990
 LiF, TLD-100, thermoluminesc. response meas. at high irradi. temp. 2-77603
 LiF TLD-100 phosphor, sensitisation and supralinearity, Z-centres and nonluminescent centres role, expt. study 2-99197
 LiF, thermoluminescence, review, radiation dosimetry appl. 2-77600
 LiF, X-ray refractive index, multiple reflection diffractometer study 2-97845
 LiF:F₂⁻ centre tunable ring laser 2-85998
 LiF:Mg, impurity-vacancy pair clustering, trimer form., dielec. losses and TSC meas. 2-115419
 LiF:Mg, shocked and recovered, dislocations obs. 2-81790
 LiF:Mg, TLD-100, clustering and precip., dielec. loss study 2-92213
 LiF:Mg, TLD-100, thermoluminesc. meas., clustering and precip. effects 2-93291
 LiF:Mg, Ti, gamma-irrad., laser heating in thermolum. dosimetry 2-104971
 LiF:Mg, Ti, thermoluminesc., Z-centre model 2-57195
 LiF:Mg, Ti, thermoluminescence sensitivity optimisation method 2-104972
 LiF:Mg:OH, radiation point defect condensation at dislocations (Russian) 2-71494
 LiF:Mg:OH crystals, gamma-irrad., new emission centres 2-116248
 LiF:Mg²⁺, internal friction and charged dislocations 2-81793
 LiF:Mg(Cn)(P), phosphor, thermolum., carrier capture during irradi. 2-104973
 LiF:Ni(Co), dielec. relax., impurity-conc. effects 2-104811
 LiF:U, fluoresc. and MCD spectra 2-57160
 LiF/epoxy alternating layers, shock wave attenuation, effect of thin glue bonds 2-71568
 LiF-B₂O₃ glass, ionic cond., ⁷Li, ¹¹B, and ¹⁹F NMR study 2-93022
 LiF-LiCl-LiBr salt mixture for extracting tritium from fusion reactor Li blanket 2-80174
 LiF-MgF₂, Suzuki phase, nucleation characs. 2-86831
 (LiF)₂ clusters, energy struct., polarisation model 2-65121
 LiF(Cl)(Br)(I), Compton profile anisotropy calcs. 2-72574
 LiF(001), surface phonon dispersion relations 2-109929
 LiFeCl₄, cryst. struct., mag., optical, and ionic cond. props. 2-92266
 Li_{0.5}Fe_{2.5}O₄, for ferrimagnetic pastes, prep. and props., effect of additions of glass and Bi₂O₃ 2-88034
 Li₂FeO₃, cryst. struct., powder X-ray diff. study 2-91927
 Li₂FeO₄, cryst. struct., powder X-ray diff. study 2-91927
 (Li_{0.5}Fe_{2.5}O₄), (Cu_{0.5}Fe_{2.5}O₄), (CuFe₂O₄)_{1-x-1/2}, ferrite solid soln., thermodynamic props. 2-66256
 LiFeSnO₄ phase, cryst. struct. characs. 2-65942
 LiGa₂O₇:Cr³⁺, tetrahedral coordination, energy levels, absorpt. spectra 2-76088
 LiGa₂O₇:Cr³⁺, luminescence and absorpt. spectra 2-82908
 Li₂GeO₅, dielect. props. and phase transition 2-57006
 Li₂GeO₄, tetragonal-packed crystal structures, theory 2-97968
 Li₂GeO₄-Al₂O₃ solid electrolytes, cationic cond. and struct. 2-110031
 LiH, ab initio SCF and CI studies, FSGO calcs., HF function determ. 2-102397
 LiH, antisymmetrised geminal power wavefunctions, rels. to electronic struct. 2-80423
 LiH, correl. energy, pot. energy surface, Green's function Monte Carlo method 2-96468
 LiH, crystal with self-trapping excitons, exciton luminesc. and multiphonon Raman spectrum 2-82922
 LiH, dipole moment, polarisabilities, electric field gradients and nuclear screening, bond length depend. 2-54763
 LiH, electronic ground states, dissociation energies 2-70375
 LiH, geometry, dipole moments, pseudopotentials, FSGO calcs. 2-102372
 LiH, ground state, HF energy, corrections to an incomplete basis set 2-108366
 LiH, ground state electronic extracule densities 2-80446
 LiH, intermol. forces calc., ab initio valence bond theory 2-80753
 LiH, mol. const., pot. energy curves, isotope shifts 2-96541
 LiH, proton bombard., positron annihilation study 2-62012

lithium compounds continued

- LiH, second order correl. energies, variational SCF calcs. 2-113860
 LiH single crystals, exciton-absorpt. edge and Urbach rule 2-67080
 LiH, solid, elec. cond., H₂ press. effect 2-66598
 LiH, two-electron integrals, elliptical basis set calc. 2-113879
 LiH, X² Σ^+ state, dipole polarisability function, complete active space SCF study 2-80458
 LiH, X-ray irradiated, thermolum., TSC and F centre annealing at low temps. 2-116278
 LiH, X-rayed at low temps., ESR studies of Mn²⁺ centre 2-98950
 LiH:S, ionic conduction, impurity effects 2-76735
 LiH-He, translational-rotational energy transfer, classical formalism 2-90665
 LiH₃ (SeO₃), Cu²⁺, EPR spectra, g and A matrices, Q tensor 2-82709
 LiHe, van der Waals mol., rovibration struct., optical double reson. 2-70308
 Li₂HfO₆, solid electrolyte, ionic cond. study (French) 2-71704
 LiHoPO₄, crystals, growth and spectral properties (Chinese) 2-99163
 α -LiIO₃, bulk photovoltaic and photorefractive effects 2-110387
 LiIO₃ crystal, Li spin-lattice relaxation, cross-relaxation effects 2-93032
 LiIO₃ crystal, difference freq. generation by mixing Cu vapour laser and rhodamine 6G dye laser radiation 2-114374
 LiIO₃ crystal growth by reagent method SHG of Nd:YAG laser 2-114371
 α -LiIO₃, crystallisation from solution characteristics meas. 2-86599
 LiIO₃ crystals, Raman light scatt. by polaritons, intensity dispersion 2-72509
 α -LiIO₃, doped, bulk photovoltaic effect and optically induced change of spontaneous polarisation 2-92694
 α -LiIO₃, elec. field related extinction reduction in diffraction expts. 2-97861
 α -LiIO₃, impurity distrib. in single crystal growth from soln. 2-71386
 LiIO₃, NQR frequencies, temp. and press. depend., compressibility, thermal expansion calc. 2-93050
 α -LiIO₃, quasi-elastic light scatt. induced by ionic transportation, expt. study (Chinese) 2-93155
 LiIO₃, Raman scatt. from three phases 2-57107
 α -LiIO₃ single crystal, thermal study, 195-265 K 2-104014
 LiIO₃, single ultrashort pulse duration meas. by second harmonic method 2-55267
 LiIO₃ single-resonator maser oscillator, radiation parameter generation in field of wide pump beams 2-75550
 α -LiIO₃, stimulated Raman scatt., multimode lattice vibr. excitation obs. 2-65300
 LiIO₃, thermal radiation upconversion, thermal noise effects, theory 2-81023
 LiIO₃, uniaxial stress induced changes in Raman spectrum 2-110858
 d-LiIO₃/Mn²⁺, superhyperfine and Li quadrupolar interactions, ENDOR and RF discrete saturation study 2-56535
 α -LiIO₃/Ni²⁺, impurity ground state level splitting, EPR study 2-56530
 LiIO₃-HIO₃-LiOH-H₂O, phase equilibria, microscopic obs. 2-86599
 LiIO₃-NaIO₃ pseudobinary system, phase diagram and amorphous state cryst. kinetics, expt. study (Chinese) 2-91778
 Li₂D₂O ionic conductor, struct. props., neutron scatt. study 2-86640
 Li₂3H₂O IR stretching and bending bands of dil. H₂O 2-72479
 Li₂SO₄ crystals, anomalous changes in piezoelec. and elastic props. 2-99054
 Li₂SO₄, low temp. phase, phase transitions, thermal expansion and twinning 2-86861
 Li₂SO₄/Cr³⁺, optical absorpt. and EPR spectra 2-116212
 LiLaPO₄/Ce³⁺(Eu³⁺)(Tb³⁺)(Bi³⁺), luminescence of broad band emitters, concentration quenching 2-77575
 LiLaSm-phosphate glass:Sm³⁺, luminesc. selective laser excitation study 2-67109
 LiMgPO₄, olivine type cpd. cryst. struct. and cryst. chemistry 2-115189
 LiMoO₄, insertion cpd., cryst. struct., neutron powder diffr. study 2-98024
 Li₂MoO₄, vapourisation and thermal stability 2-66191
 δ -Li₂MoO₄, vapourisation and thermal stability 2-66191
 Li₂MoO₄ cathodes in Li/organic electrolyte batteries, props. 2-93889
 Li₂MoO₄, electrochemical Li incorporation into MoO₃ thin films 2-72454
 Li₂N, anharmonic thermal vibr., fast ionic conduction 2-109937
 Li₂N, Li⁺ conductivity, primary cell application 2-92270
 Li₂N:D, H, Czochralski growth and doping method 2-111061
 Li(ND₃)₃, expanded compounds, low temp. mag. susceptibility 2-77275
 LiNH₂, unrestricted HF MO calcs. 2-75172
 Li(NH₂)₃, expanded compounds, low temp. mag. susceptibility 2-77275
 LiNH₂SO₄, ferroelectric phase transitions, elec. props., IR spectra 2-67000
 LiNH₂SO₄, phase transition, dielectric const., elec. cond. 2-72435
 LiNH₂SO₄, Raman scatt. internal and external vibr., soft modes 2-82834
 LiNH₂SO₄, tunnelling, reorientation, PMR study 2-93034
 Li(N₂H₅)₂SO₄/VO²⁺, elec. cond. and stimulated thermo-current studies 2-71706
 LiNO₃, Auger induced decomposition/desorption of covalent and ionic systems 2-76834
 LiNO₃-AgNO₃ molten mixture, diffusion, elec. cond. and phenomenological coeffs. 2-66265
 LiNO₃-NH₄NO₃, binary melts, Chemia effect, internal mobility meas. 2-66271
 Li₂Na(NH₂)₃, LiH₂ related cryst. struct., X-ray study (German) 2-98021
 LiNa₂PO₄, synthesis and props. 2-111102
 Li₂NaPO₄, synthesis and props. 2-111102
 LiNaSO₄/Cr³⁺, optical absorpt. and EPR spectra 2-116212
 LiNbO₃, A₁ polarisation dispersion characts., low temp. 2-67046
 LiNbO₃, acoustoelectric charge injection obs. 2-92704
 LiNbO₃ amorphous and polycryst. thin films, RF sputtering, struct., refractive index, X-ray study 2-72624
 LiNbO₃ bulk crystals, phase shifting at 94 GHz 2-99090
 LiNbO₃ channel waveguide-single mode fibre end-to-end joint contact investigation 2-97217
 LiNbO₃, computer controlled growth method (Japanese) 2-105055
 LiNbO₃ crystal, anomalous acousto-optic interaction 2-77486
 LiNbO₃ crystal in contact with liquid ⁴He bath, Rayleigh wave attenuation 2-61273
 LiNbO₃ crystals, conjugate wavefront picosecond generation at 530 nm 2-114383
 LiNbO₃ crystals, laser-induced damage in antireflection coatings 2-65285
 LiNbO₃ crystals, SAW materials and devices in Japan 2-99056

lithium compounds continued

- LiNbO₃, Czochralski-grown single crystals, growth striations and ferroelectric domain struct. 2-93129
 LiNbO₃, double-cavity electrooptic Fabry-Perot tunable filter 2-109016
 LiNbO₃, elec. field induced ionic displacement and bonding electron redistrib., modulation X-ray diffr. study 2-81718
 LiNbO₃, electro-optic modulator, optical bistability of hybrid dispersive optical system 2-60228
 LiNbO₃, electrooptic devices for laser pulse time parameter control in 10⁻¹¹-10⁻⁹ sec. range 2-97164
 LiNbO₃, exoelectron emission by uniaxial deform. 2-116344
 LiNbO₃, ferroelec., photorefractive materials, phase conjugation, real time optical processing and dynamic holography appl. 2-65312
 LiNbO₃, ferroelec. transition, soft modes, IR reflection spectra study 2-67009
 LiNbO₃, ferroelectric domain struct. and growth striations (Chinese) 2-110793
 LiNbO₃ film, plasma assisted deposition and struct. (Japanese) 2-115595
 LiNbO₃, foreign cation incorporation, IR absorpt. investigation 2-116211
 LiNbO₃, high-index waveguides, fabrication by proton exchange 2-114419
 LiNbO₃ in Cs vapour, thermionic emission 2-72595
 LiNbO₃ integrated optical 2-114429
 LiNbO₃, interference modulator based on multimode channel waveguide 2-70667
 LiNbO₃, ion implant. amorphisation optical and EPR studies 2-103789
 LiNbO₃ low-voltage electrooptic deflector 2-60223
 LiNbO₃, luminesc. excitation by piezoelec. prod. ultrasound 2-82932
 LiNbO₃, nonlinear acoustic propag. 2-98415
 LiNbO₃, oblique-cut microchannel spatial light modulator 2-97166
 LiNbO₃ optical channel waveguide TIR switches, GHz bandwidth, 4X4 switching networks 2-75680
 LiNbO₃ optical switch, 2X2 transverse-type, appls. as wavelength meter and demultiplexer 2-55351
 LiNbO₃ optical waveguides, 3-D, nonlinear optical phenomena 2-55264
 LiNbO₃ optical waveguide for integrated optics, fabrication by ion exchange and diffusion processes 2-65411
 LiNbO₃ optical waveguides, temp. compensated prism coupler 2-109035
 LiNbO₃ parametric oscillator, UV tunable picosecond pulse generation down to 197 nm using KH₂PO₄ or KB₃O₈.4H₂O 2-86047
 LiNbO₃, photorefractive, annealing, charge carrier trapping (Russian) 2-104833
 LiNbO₃, photorefractive and photogalvanic effect under high intensities 2-110796
 LiNbO₃, photovoltaic const. determination by holography technique 2-110392
 LiNbO₃ piezoelectric plate, acoustoelectric convolution and correlation (Russian) 2-92707
 LiNbO₃, planar electro-optic beam splitter with a sawtooth electrode 2-114409
 LiNbO₃ pulsed optical parametric oscillator dynamics, power reconversion influence 2-86050
 LiNbO₃ resonators, influence of polarising field 2-87681
 LiNbO₃, SAW phase velocity, meas. using comb filters 2-81183
 LiNbO₃, SAW plate substrate for ⁴He films, US method for superfluidity studies 2-61227
 LiNbO₃, SAW propag. 2-66336
 LiNbO₃, SAW study of subsurface damage 2-76794
 LiNbO₃, shear stress gauge for dynamic loading 2-69153
 LiNbO₃, shock loaded, crystallographic props. 2-71413
 LiNbO₃, shock loaded, microwave dielec. const. meas. 2-72398
 LiNbO₃, Si coated substrate, SAW parametric oscill. 2-65440
 LiNbO₃, single crystal, effects of γ -irradiation on dielectric consts. and optical transmission 2-61814
 LiNbO₃ single crystal, optical uniformity, expt. study 2-86065
 LiNbO₃ single crystals, optical inhomogeneity, high temp. diffusion annealing effect 2-65322
 LiNbO₃ surface-skimming bulk wave IDT on rotated Y-cuts, radiation cond. 2-75817
 LiNbO₃, thermal radiation upconversion, thermal noise effects, theory 2-81023
 LiNbO₃, Ti indiffused proton exchanged waveguides, fabrication and characterisation 2-91043
 LiNbO₃, time-integrating correlator using guided-wave anisotropic acousto-optic Bragg diffraction and hybrid integration 2-60263
 LiNbO₃ waveguide butt coupling to diode lasers, coupling efficiencies >65% 2-65359
 LiNbO₃ waveguide modulator, out-diffused, prism-coupled, fabrication and performance for long-term use at 632.8 nm 2-75670
 LiNbO₃ waveguide modulators, space-charge effects 2-75684
 LiNbO₃ x-cut, efficient waveguide Bragg deflection grating 2-102956
 LiNbO₃:(Ni), γ - and X-ray irradiated, ESR, optical absorpt. and elec. cond. 2-98951
 LiNbO₃:Eu³⁺, polarised optical absorption bands, splitting 2-82835
 LiNbO₃:Fe, cryst., absorpt. spectra, γ -ray effects (Russian) 2-93232
 LiNbO₃:Fe, electro-optic cryst., photorefractive effect, holographic study (German) 2-57057
 LiNbO₃:Fe, emission study of surface states 2-66608
 LiNbO₃:Fe, ferroelectric, anomalous current due to electron drag, photovoltaic effects 2-72027
 LiNbO₃:Fe, influence of irradian. power on photocurrent 2-56632
 LiNbO₃:Fe, single crystal, Mossbauer spectroscopy 2-110733
 LiNbO₃:Fe, spatially-oscillating photogalvanic current (Russian) 2-56644
 LiNbO₃:Fe crystals, anomalous effect of drag of photovoltaic electrons by light 2-110386
 LiNbO₃:Ni²⁺, impurity ground state level splitting, EPR study 2-56530
 LiNbO₃:Ti, strip waveguides fabricated by combined metal diffusion and ion implantation 2-75731
 LiNbO₃:Ti channel optical waveguide, SHG, conversion efficiency depend. on waveguide parameters 2-55273
 LiNbO₃:Ti channel waveguides, photoinduced polarisation conversion obs. 2-109043
 LiNbO₃:Ti coupled channel waveguide electro-optic modulator 2-86093
 LiNbO₃:Ti coupled channel waveguides, second harmonic generation obs. 2-86103
 LiNbO₃:Ti diffused waveguide integrated optic electrooptic modulator electrode anal. 2-55318
 LiNbO₃:Ti indiffused waveguide, integrated optics picosecond transient digitizer 2-60262
 LiNbO₃:Ti integrated optical device fabrication, Ti oxidation process, (Ti_xNb_{1-x})₂O₃ phase form. 2-75735

lithium compounds continued

- LiNbO₃:Ti intersecting waveguides, crosstalk charact., TE/TM mode splitter appl. 2-70668
 LiNbO₃:Ti optical waveguide fabrication, Ti diffusion process, expt. study 2-65347
 LiNbO₃:Ti optical waveguide, acoustooptic interaction, wide-band, with mode conversion 2-91045
 LiNbO₃:Ti thin-film Bragg electrooptic modulator 2-65344
 LiNbO₃:Ti variable-period thin-film Bragg modulator 2-97168
 LiNbO₃:Ti waveguide, double degenerate four-wave mixing, TE to TM coupling 2-55332
 LiNbO₃:Ti waveguide to single-mode fibre coupling at 1.32 μ m 2-65360
 LiNbO₃:Ti waveguide to single mode fibre coupling efficiencies 2-65361
 LiNbO₃:Ti waveguides, geodesic lens fabrication techniques 2-75733
 LiNbO₃:CdSe film, alternating field acoustoelectronic effect, CdSe cond. effects 2-72033
 LiNbO₃:CdSe multilayer struct. with periodic-array contacts, freq. doubling 2-92705
 LiNbO₃:Fe₂O₃, congruently melting, phase rel. 2-62110
 LiNbO₃:Fe₂O₃ solid soln. single cryst., congruently melting, phase transition 2-98264
 LiNbO₃:sapphire waveguide, phase-matched freq. doubling obs. 2-65303
 LiNbO₃:3Fe electrooptic crystal refractive-index grating, investig. by optical microscopy 2-102916
 Li₂NbS₂ organic electrolyte rechargeable cell, electrochemical study 2-99781
 LiNd(PO₃)₄, IR spectra 2-72469
 LiNd(PO₃)₄, weak fluorescence quenching 2-77559
 LiNdP₄O₁₂ crystal electric dipole transition intensity (*Chinese*) 2-90479
 LiNdP₄O₁₂, crystal struct. (*Chinese*) 2-98011
 Li₂Ni_{1-x}O, magnetic susceptibility, Neel temp. (*Russian*) 2-104593
 LiO, spin-orbit coupling consts., ab initio calc. using universal even tempered basis set of exponential functions 2-96415
 Li₂O, neutron and γ -irrad., defect production, optical absorpt. study 2-86737
 Li₂O powder, neutron irrad., T release study 2-76509
 Li₂O, thermal expansion 2-104034
 Li₂O-Al₂O₃-SiO₂ gels, crystn. rel. to glass prep. 2-76309
 Li₂O-Al₂O₃-SiO₂ glass-ceramic, SiC fibre reinforced, thermal transport props. determ. by composite method 2-104088
 Li₂O-Al₂O₃-SiO₂ glass-ceramic, SiC yarn reinforced, high strength and toughness 2-105298
 Li₂O-Al₂O₃-SiO₂ glass ceramics, microstruct., electron microscopy and electron diff. 2-115140
 Li₂O-Al₂O₃-SiO₂-TiO₂ glass ceramics, cryst. props., grain growth, electron and X-ray study 2-66244
 Li₂O-Al₂O₃-SiO₂-TiO₂ glass ceramic, phase anal., Raman and X-ray obs. 2-110853
 Li₂O-B₂O₃ glass, ionic cond., ⁷Li and ¹¹B NMR study 2-93022
 Li₂O-B₂O₃ glasses, non-classical Li diffusion, elec. cond. meas. 2-98333
 Li₂O-GeO₂ glass struct., EXAFS and X-ray diff. study 2-91792
 Li₂O-K₂O-SiO₂ glass microstruct., laser scatt., small angle X-ray scatt. and TEM 2-91799
 Li₂O-K₂O-SiO₂ system, immiscibility isotherm 2-86882
 Li₂O-LiCl-B₂O₃ system glasses, struct., glass transition and density meas. 2-91793
 Li₂O-Na₂O-SiO₂ glass, static load effect on mech. relax. processes 2-62156
 Li₂O-Na₂O-SiO₂ glass, polarisation and cond. mechanism 2-87656
 Li₂O-Na₂O-SiO₂ system, immiscibility isotherm 2-86882
 Li₂O-Na₂O-2SiO₂ glasses, thermally stimulated currents 2-104391
 Li₂O-P₂O₅ glass fibres, mech. props. and struct. aspects rel. to drawing process 2-93608
 Li₂O-P₂O₅-UO₂²⁺ glass, energy levels, absorpt. and fluores. study 2-77565
 Li₂O-SiO₂, sublimation and vaporisation, high temp. mass spectrometric obs. 2-113037
 Li₂O-SiO₂ glass, phase separation, Raman spectroscopy study 2-92212
 Li₂O-SiO₂ glasses, conc. fluctuations and ionic cond. props. 2-92261
 Li₂O-SiO₂ system glass, corrosion behaviour in water, ESCA obs. 2-93656
 Li₂O-SiO₂-B₂O₃ glass ceramics, piezoelec. reson. meas., crystal resonators appl. 2-82786
 Li₂O-ZrO₂, cpd. form., thermal and X-ray obs. 2-83102
 Li₂O-ZrO₂-Na₂O(Al₂O₃), subsolidus phase equilibria 2-116430
 Li₂O+As₂O₃, heat of form. of arsenates meas. 2-88374
 Li₂O+H₂O reaction surface, ab initio MO calc. 2-83368
 Li₂O₂-SiO₂-TiO₂, glass, isothermal cross-section, phase decomposition 2-72706
 LiOH solutions, electrolysis, electrocatalysts and separators 2-62407
 LiOH₂, unrestricted HF MO calcs. 2-75172
 Li(OH)₂, unrestricted HF MO calcs. 2-75172
 LiON, struct., isomerisation, ab initio CI SCF calcs. (*French*) 2-108395
 LiPN₂, cryst. struct., bond angles, X-ray diff. study (*French*) 2-103711
 Li₃PO₄, cryst. struct. and electrostatic energy 2-81755
 Li₃PO₄-Li₂SiO₄ solid electrolyte system, phase diagram and cond. 2-71705
 LiPS₄, cryst. struct., X-ray diff. study (*French*) 2-98000
 Li₂P₂S₆, synthesis, cryst. struct. and vibr. anal., X-ray diff. study (*French*) 2-103714
 Li_{3+x}(P_{1-x})₂Si₂O₄, Li⁺ ion diffusion, NMR spin-lattice relax. study 2-115455
 LiPbF₂Cl(Br)(I), PbBiO₂Cl type struct., cryst. struct. and prep. 2-103718
 LiPrP₂O₇, crystals, growth and spectral properties (*Chinese*) 2-99163
 Li(Pt(CN)₄)₂H₂O, luminesc., mag. field effects 2-82899
 Li₃Pt₂O₄, non-stoichiometric, anal. of internal struct. distortions, neutron diff. study 2-103697
 Li_{2-x}R_{1-x}T₂(BO₃)₃ (R=rare earth, T=Zr or Th), ionic cond. study (*French*) 2-71714
 LiReO₃ and Li₂ReO₃, cryst. struct., neutron diff. powder profile anal. 2-81754
 LiReO₄, temp. and enthalpies of melting 2-103950
 Li₂SO₄, Auger induced decomposition/desorption of covalent and ionic systems 2-76834
 Li₂SO₄, elec. cond. in monoclinic phase 2-71710
 Li₂SO₄ solid electrolyte, Brillouin spectra, 899-1120K, elastic constants 2-104897
 Li₂SiO₃, Czochralski growth, pyroelec., dielec., elastic props. 2-110775
 Li₂SiO₃, INTOR, graphite moderated breeder blanket designs, neutronics anal. 2-80256

lithium compounds continued

- Li₂SiO₄ (Li₂PO₄)(Li₂ZnSiO₄) (Li₂Zn_{0.5}GeO₄), tetragonal-packed crystal structures, theory 2-97968
 Li₂SiO₄, appl. as solid breeder material 2-69852
 Li₂SiO₄, breeding compounds for ³H, preparation 2-69857
 Li₂SiO₄ fusion blankets, displacive transform. 2-69859
 Li₂SiO₄-Li₂AsO₄, Li⁺ ion conductivity and phase diagram 2-115452
 LiTaO₃, A₁ polariton dispersion charact., low temp. 2-67046
 LiTaO₃ bulk crystals, phase shifting at 94 GHz 2-99090
 LiTaO₃ crystals, SAW materials and devices in Japan 2-99056
 LiTaO₃ crystals with linear electrooptical effect, intensified refl. of reversed wavefront waves 2-108967
 LiTaO₃, depend. of photorefractive on temp. and light intensity (*Russian*) 2-61849
 LiTaO₃, elec. field induced ionic displacement and bonding electron redistrib., modulation X-ray diff. study 2-81718
 LiTaO₃, electro-optic cryst., photorefractive effect, holographic study (*German*) 2-57057
 LiTaO₃, F⁺ centre, pot. energy of point ion lattice, Schrodinger eqn. 2-76973
 LiTaO₃, ferroelec. domain boundaries, computer simulation, X-ray and electron microscope study 2-87717
 LiTaO₃, ferroelec. domains and chemical twinning, dislocations and stacking faults 2-93130
 LiTaO₃, ferroelec. transition, soft modes, IR reflection spectra study 2-67009
 LiTaO₃, ferroelec.-paraelec. transition, displacive-order-disorder crossover 2-104819
 LiTaO₃, ferroelectric phase transition, Raman spectra (*Chinese*) 2-77456
 LiTaO₃ large cryst., Czochralski grown, low angle tilt boundaries, edge dislocations and cracking 2-91843
 LiTaO₃, nonstoichiometric, defect struct. model fitting to neutron powder diff. data 2-65807
 LiTaO₃, optical waveguide for integrated optics, fabrication by ion exchange and diffusion processes 2-65411
 LiTaO₃, paraelec. and ferroelec., elastic props. 2-115326
 LiTaO₃, pyroelec. large area high speed detectors for UV 2-101458
 LiTaO₃ pyroelectric infrared detector 2-84703
 LiTaO₃ substrate fabrication and characterization for pyroelectric sensors 2-87969
 LiTaO₃, undoped, wave-front inversion by dynamic-holography methods 2-114380
 LiTaO₃:Fe electrooptic crystal refractive-index grating, investig. by optical microscopy 2-102916
 9LiTaO₃:Ta₂O₅, cryst. struct., powder neutron diff. study 2-65935
 LiTbF₄, crossover to mean-field behavior at marginal dimensionality 2-77316
 LiTbF₄, Landau eqn. of state near T_c 2-66839
 LiTb_{0.9}Y_{0.1}F₄, randomly diluted Ising dipolar-coupled ferromagnet, mag. eqn. of state 2-61730
 LiTb_{0.9}Y_{0.1}F₄, random uniaxial dipolar ferromagnet, critical behaviour 2-92935
 LiTb_{0.9}Y_{0.1}F₄, random dipolar-coupled ferromag., mag. eqn. of state 2-104617
 LiTi₂O₄ supercond. film, prep. and props. 2-115940
 Li_{1-x}Ti_x-xO₄, fabrication and supercond. props., boundary layer Josephson junctions appl. 2-82530
 Li₂TiO₃, thermophysical and chemical data, breeding blanket candidate 2-75007
 Li₂TiS₂, elec. field gradient, anisotropic shift, tetrahedral site occupation and atomic motion NMR study 2-66943
 Li₂TiS₂, intercalation compound, elastic energy and staging 2-71391
 LiTmF₄, influence of magnetostriction on NMR spectrum (*Russian*) 2-72361
 LiTmF₄, Van Vleck paramagnet, magnetoelastic interactions 2-66889
 LiVO₃, X-ray emission spectra, second coord. sphere effects 2-90567
 β -Li₁₀V₂O₆, struct. phase transition, X-ray diff. study 2-65910
 Li₂VO₄, preparation and lattice parameters 2-81752
 Li₂V₂O₆, amorphous, phase separation (*French*) 2-56159
 β -Li₂V₂O₆, quasi-one-dimens. cond., EPR 2-92997
 Li₂WO₃:U phosphors, spectral props. 2-77545
 Li₂WO₃, electrochemical Li incorporation into WO₃ thin films 2-72454
 LiYF₄ and LiY_{0.5}Tb_{0.5}F₄, elastic consts., hydrostatic press. derivatives 2-66104
 LiYF₄:Er³⁺, spin-lattice relax. anisotropy, ESR study 2-72343
 LiYF₄:Er³⁺, stimulated emission 2-116210
 LiYF₄:Ho³⁺, Er³⁺, multilevel, and cascade prod. of induced emission, delayed induced afterglow from Ho³⁺ 2-87819
 LiYF₄:Ho³⁺ (Er³⁺), high-efficiency deep-red lasers pumped by doubled Nd:YAG laser 2-60087
 LiYF₄:Nd, CW laser operation, comparison with Nd:YAG 2-60086
 LiYF₄:Nd³⁺, oscillator strengths and Nd³⁺ optical absorption lines 2-116175
 LiYF₄:Pr³⁺, hyperfine struct., NQR studies 2-66949
 Li_{0.5}Y_{0.5}Zr_{0.5}S_{0.5}:Cr³⁺, NMR ionic motion studies 2-110676
 Li₂Zn_{0.5}Fe_{0.5}O₄, mag. ordering at low temp. 2-66770
 Li_{0.5-x}Zn_{0.5+x}Fe_{0.5-x}O₄ ferrite, magnetisation curves 2-72274
 Li₂ZrO₃, appl. as solid breeder material 2-69852
 Li₂ZrO₃, thermophysical and chemical data, breeding blanket candidate 2-75007
 (⁶Li/⁷Li)_{0.3}B_{0.7}O₃ glasses, mixed isotope ionic elec. cond. 2-110035
⁶LiH, ground state pot. energy curve determ., fluores. study 2-108412
 Li₂O₂SiO₂ glass, polarization activation energy evaluation from TSD currents 2-99024
 MgCl₂-LiCl(CaCl₂) binary melts, surface tension (*Japanese*) 2-76782
 NH₄LiSO₄, ferroelec. phase transition, thermal expansion study 2-98311
 (Na₂Li)NbO₃, hot pressed ceramics, internal stresses, Curie temp. 2-88017
 Na₃Li₂Fe₂F₁₂, garnet cryst. struct., bond lengths and angles, X-ray diff. study (*German*) 2-91936
 Na₂Li₂Si₂O₅, cryst. struct., X-ray study, block-diagonal least squares method 2-81720
 Na₂O-Li₂O-SiO₂ glass, energetics, from acoustic meas. 2-71590
 SiO₂-Li₂O glass, X-ray irrad.-induced defects, ESR study 2-98960
 SiO₂-Li₂O-Li₂SO₄, struct. and prep., elec. cond. study 2-65870
 SrO-Li₂O-P₂O₅:Mn, Ce, luminesc. system, whitlockite phase struct. 2-98015
 Sr_{0.02}Pb_{0.98}(Li_{0.008}W_{0.012}Ti_{0.46}Zr_{0.52})O₃, impurity distrib., props. 2-86701
 SiO₂-B₂O₃-Li₂O-H₂O system, crystallisation, characterisation by X-ray diff. 2-103962

lithospace *see Earth crust*

lithosphere *see Earth crust*

liver

- abdominal tissues, US characterisation via digital anal. of backscatt. wave-forms 2-62710
- acoustic attenuation coeff. slope estimates variation, diagnostic appl. 2-100076
- DNA bases, injured liver, slow elimination in α -irrad. old mice 2-78387
- enzymes in liver and brain, effects of chronic ingestion of tritiated water in mice 2-57868
- fatty liver and cirrhosis diagnosed by US texture discriminant analysis 2-57878
- hepatocytes, rat, repair of X-irrad.-induced DNA damage (*Russian*) 2-88593
- human, Fe storage study using SQUID mag. susceptometer 2-62713
- malignant and healthy tissue, improved characterisation by NMR line-shape relax. correls. 2-93990
- mitochondria, rat, changes in electroneutral Ca^{2+} - H^{+} metabolism after γ -irrad. (*Russian*) 2-105766
- mitochondria, rat liver, elimination with negative aero-ions of respiration changes during stress 2-111639
- mitochondria, rat liver, MM wave irrad. effects on ATP synthesis and Ca^{2+} transport 2-88591
- mitochondria of liver and heart, detect. of new paramag. centres by EPR 2-57792
- mitochondrial fractions, influence of whole-body γ -irrad. 2-62698
- rheology of normal and modified tissue (*French*) 2-68035
- scintigraphy using ^{169}Yb phytate radiopharmaceutical 2-117085
- tissue sections at cellular resolution, elemental mapping using nucle. microprobe 2-99920
- ultrasound frequency-dependent angle scattering by liver 2-109151
- US attenuation coeffs., tissue differentiation (*French*) 2-94105
- US backscattering coefficients evaluation for excised human tissues 2-68045
- US characterisation of diffuse disease, relative importance of freq. content in A-scan signal 2-94137
- US in medicine and biology, conf., Brighton, England (Jul. 82) 2-101123

livestock *see farming*

living systems

- see also biocybernetics; brain models; extraterrestrial life; physiological models*
- nervous system, microcomputer network in living organisms (*Hungarian*) 2-94016

LMC *see Large Magellanic Cloud*

load (electric)

- see also load dispatching; load flow*
- proportional temperature regulator with phase control for an inductive load 2-112891
- trans-Tisza region electrical/thermal energy economy (*Hungarian*) 2-93857

load dispatching

- alternative energy sources, economic impact on electric power systems, analysis method 2-105535
- heat pumps, electric air source, in single family homes, hourly power demand, Monte Carlo model 2-62493

load flow

- solar space heating options impact on electric power systems demand and supply capabilities 2-99767

lobes (distribution) *see antenna radiation patterns*

local moments in dilute systems

- Anderson model, low temperature thermodynamics, symmetric case 2-77263
- ferromagnet with mag. moments dependent on local environment, mag. ordering calc. (*Russian*) 2-98833
- itinerant electron systems with local mag. moments, paramag. state, static props. 2-98837
- noble metal-Co alloys, dil., mag. behaviour Co atoms 2-115971
- theory of magnetism, statics and dynamics, book 2-68978
- transition metal cpds., intraatomic Coulomb repulsion in Hubbard model, ferromag.-paramag. transitions 2-115966
- Al-Fe, Fe impurity mag. moment, cluster approx. calc. with k-dependent boundary conditions (*Russian*) 2-115972
- Cu alloys, dilute, US attenuation, impurity and dislocation effects 2-56096
- Cu-Fe, Fe impurity mag. moment, cluster approx. calc. with k-dependent boundary conditions (*Russian*) 2-115972
- GaSb-Te, Kondo effect obs. under high press. 2-61459
- Pd-Fe, dil., thin film, AC susceptibility, ion irrad. effects, rel. to supercond. 2-56828
- ($\text{Pd}_{1-x}\text{M}_x$)H, M=Cr, Mn, Fe, mag. and supercond. ordering 2-98845
- $\text{Pr}_2\text{S}_4\text{Gd}$, ferromagnet, dil. Gd moments, press. depend., magnetisation 2-72195
- $\text{Pr}_2\text{Ti}_2\text{Gd}$, ferromagnet, dil. Gd moments, press. depend., magnetisation 2-72195
- Pt-Co(Fe), weakly ferromag. alloys, elastic diffuse neutron scatt. 2-98849
- $\text{Y}(\text{Co}_{1-x}\text{Fe}_x)_2$, $\text{Y}(\text{Ir}_{1-x}\text{Fe}_x)_2$ and $\text{Hf}(\text{Co}_{1-x}\text{Fe}_x)_2$, mag. ordering 2-98845

localised electron states

- see also Anderson model; charge-ordered states; charge transfer states; Wigner crystal*
- amorphous, electroabsorption spectra, effective masses 2-77491
- amorphous semiconductors, intrinsic, photoconductivity dependence on photogeneration rate 2-72028
- Anderson localisation, scaling eqns. from self-consistent theory 2-56538
- Anderson model, localisation of electrons by electron-electron interaction 2-82290
- Anderson model, one-dimensional, inverse localisation length 2-76882
- Anderson transition, renormalisation group transform. 2-66493
- antiferromagnet, conduction electron self-localised state in strong mag. field 2-61388
- boson mode interactions with local electronic system with finite Fermi level 2-98556
- chemisorption, localized spin-orbital theory 2-56339
- condensed media, energy spectra (*Russian*) 2-110278
- core-hole Green's function, dispersion theory 2-82267
- covalent systems, localised Auger final states 2-82266
- cylindric conductors, quantum energy levels, cond. electron density of states (*Russian*) 2-82208
- delocalisation theory, effective Hamiltonian, appl. to BCS theory 2-87169

localised electron states continued

- dilute lattices, localisation and quantum percolation 2-104314
- diphenylacetylene-TCNB charge transfer complexes, single crystals, excited triplet states, EPR investig. 2-92989
- disordered 1-D chain, hopping cond. between localised centres, metal-insulator transition 2-77009
- disordered electronic systems, mobility edge, electron-electron interactions effect 2-71876
- disordered interfaces, supercond. transition temp. enhancement by local tunnelling states 2-87457
- disordered materials, self-consistent study near band edge 2-61407
- disordered materials with traps, drift and diffusion, quasi-equilib. transport regime 2-61426
- disordered s-scatterers, cluster approach, density of tail states determ. 2-110304
- disordered semiconductor under illumination, electron localised state distrib. balance eqn. 2-61411
- disordered solids, hopping transport, diffusion temp. depend. 2-82355
- disordered system, transport, localisation in coherent site approx. 2-110317
- disordered systems, electron localisation models 2-71931
- disordered systems, localisation, physical picture, exact results 2-104316
- disordered systems, localisation, tight-binding Hamiltonian calc. 2-71928
- disordered systems, localisation, transport phenomena 2-115710
- disordered systems, localisation length and conductance, 1-parameter scaling 2-104315
- disordered systems, two-dimensional, numerical study of electron localization and entropy of mixing 2-61406
- disordered systems and localisation, conf., Rome, Italy (May 1981) 2-63750
- disordered two-dimensional system, localisation criteria 2-104450
- drift and diffusion in materials with traps, transient current and transient time characs. anal. 2-61428
- electric field effect on the density of localized electron states 2-98568
- electron glass, Coulomb gap in density of states 2-110276
- electronic excitations in solids, Mori-Zwanzig SCF calcs. 2-115681
- elements Nb-Te, core-hole lifetimes, electron spectra determ. 2-57256
- energy transfer, vibr. relax. transition 2-92501
- energy transfer between local centres (*Russian*) 2-61386
- Falicov-Kimball model, spinless, with hybridisation, alloy analog approx. 2-104218
- glass, covalent, self-localisation of electron pairs in mobility gap, thermodynamic anal. 2-110306
- glass, optical bulk breakdown, statistical props. 2-104813
- graphite, electronic and struct. props., EELS and secondary electron emission study 2-110999
- graphite, K-shell near-threshold photoemission cross section, elastic peak and plasmon sideband, energy depend. 2-87950
- Heisenberg ferromagnet, semimetal, localized impurity states 2-66747
- III-V semiconductors, Schottky barrier form. and MOS interface states, unified model 2-87372
- intermediate valence compounds, perturbation techniques for electron systems with strong local correlations 2-56461
- Kondo lattice and mixed valence systems, Fermi surface and Fermi liq. props. 2-66768
- linear chain of δ -scatterers, local density of states, disorder effect 2-61409
- localisation criterion in the Cayley tree without electron-electron interactions 2-104284
- localisation model, exact solution 2-98593
- metal, amorphous, resonant electron scatt. 2-61437
- metal film, ultrathin, localization, resistivity and magnetoresistance 2-61617
- metal wire, localization DC skin effect and linear magnetoresistance 2-87228
- metal-insulator transition, localisation and correl. effects 2-115664
- metallic elements, density functional calcs. of Auger and XPS shifts 2-93370
- metallic system, two-dimens. disordered, nucl. spin relax. rate 2-104735
- metallic thin films, disordered, resistance, weak localisation and dimensional crossover 2-110497
- 5d metals, bremsstrahlung excited Auger electron spectra 2-105035
- metals, weak anti-localisation in presence of spin-orbit coupling 2-92601
- MIS amorphous solar cells, theory of Schottky barrier heights 2-116827
- mixed valence compounds, phonon anomalies rel. to electronic struct. 2-56115
- mixed valence compounds, screening effects in core-level spectra 2-110309
- mixed valence cpds., electrical resistivity, impurity contribs. 2-56544
- molecular crystal, Jahn-Teller and Barnett effects 2-71939
- Mooij criterion and weak localization 2-87216
- normal models of very long chains containing random dil. impurities, amplitude anal., localisation characs. 2-110301
- one-dimensional conductor, Peierls transition and electron localisation by random pot. 2-56554
- one-dimensional conductor, Peierls transition and electron localisation in random pot. 2-110336
- one-dimensional conductors, NMR relax. in interrupted strand model 2-93040
- one-dimensional disordered model, localisation and elec. props. 2-71925
- one-dimensional disordered solid, localisation and resist., symm. group appl. 2-110299
- one-dimensional disordered system, electron localisation and hopping cond., review 2-98594
- one-dimensional lattice, localisation in presence of incommensurate pots. 2-66494
- one-dimensional system with bond distortion, localised and extended electron states 2-92502
- one-dimensional tight-binding model with incommensurate pot. 2-110277
- one-electron states in materials with structural disorder 2-61410
- ordered systems, localisation, correl. induced metal-insulator transition, Hubbard model 2-71875
- polyacetylene, semicond. and metallic, electronic props. 2-82327
- polydiacetylene, spontaneous excitation localisation 2-110300
- polyvinylcarbazole, nitrated, exciton migration and localisation on defect and impurity levels, luminesc. obs. (*Ukrainian*) 2-82896
- potential barriers, periodically modulated array, localisation 2-104285
- quasi-one-dimensional disordered systems, absence of statistical fluctuations 2-61432
- quasi-one-dimensional disordered systems, eigenvectors calcs. 2-82289
- random alloys, localisation estimation 2-66491

localised electron states continued

- random chains, localisation and spectral singularities 2-104313
 random elastic scatt., long-range correlation and localisation 2-66518
 random system, global and regional localisation lengths 2-71924
 random system, N coupled chains, localisation, microscopic model 2-61412
 random systems, one- and two-dimens., electron localisation and elec. cond. 2-110305
 rare earth ions, trivalent, asphericity of 4f-shells in their Hund's rule ground states 2-66471
 rare earth metals and alloys, binding energies of 4f electrons 2-56462
 rare-earth metals, relativistic 2p excitation energy calcs. 2-115686
 s(d)-f model, intermediate valency, phase diag. and transitions, strain effects 2-98596
 s-f model with Coulomb repulsion, thermodynamics of two atomic cluster spin $1/2$ 2-66822
 selection rules, appl. to band calcs. 2-115687
 semiconductor, amorphous, surface double layer model, bulk localised states in gap 2-92726
 semiconductor, amorphous film, gap states, xerographic spectroscopy 2-77213
 semiconductor, optical spectra of interacting donors, localised and delocalised characters 2-67086
 semiconductors, density of localised states, evaluation from field effect data, theory 2-76887
 semiconductors, polycrystn. struct. formation mechanism 2-66243
 TCNQ salts, Qn(TCNQ)₂, quasi one-dimens. conductors, dielec. const., localised electrons by defects 2-104798
 transition metal intercalates, M₂TaS₂ (M=Fe, Mn, Ni), X-ray core level photoemission, charge transfer effects 2-111023
 transition metal surface kink electronic structure 2-56666
 5d transition metals, final state screening systematics, bremsstrahlung excited Auger spectra 2-99209
 two dimensional electron system, random pot., localisation length, energy depend. 2-98563
 two dimensions, Anderson localisation, review (*Japanese*) 2-82294
 two-dimensional electron localization and Coulomb interactions 2-61387
 two-dimensional electron system, disordered, thermoelec. power 2-61433
 two-dimensional electron systems, zero-resistance state and quantised Hall effect 2-61491
 two-dimensional system, disordered, mutual interactions in weakly localised regime, spin-orbit scatt. 2-66511
 two-dimensional system, quantized Hall cond., effect of Landau band struct. 2-61490
 two-dimensional system with off-diagonal disorder, electronic states, tight-binding model 2-115711
 two-dimensional systems, electronic props., conf., New London, NH, USA (Aug. 1981) 2-58536
 valence fluctuations between two mag. configs., electronic, mag. and elec. props. 2-76992
 wear mechanism, electron approach 2-109903
 β -zinc phthalocyanine, bulk trapping states, ohmic and SCL currents meas. 2-98662
 Ag alloy, dilute, impurity d-bands and core level binding energy shifts 2-56482
 Ag, Auger MNN spectra and electron localisation 2-93334
 Ag thin film, resistance, magnetoresistance, weak localisation (*Russian*) 2-87417
 Ag-Te-In₂Te₃ system, molten, elec. cond. and mag. susceptibility, temp. and comp. depend. 2-61465
 Al₂O₃ in MIMS struct., deep trapping levels, photoelec. spectrosc. obs. 2-82405
 Au alloy, dilute, impurity d-bands and core level binding energy shifts 2-56482
 Au-FeF₃-Au struct., FeF₃ film polarisation 2-61821
 Bi thin films, magnetoresist. anomalies in quantum correction region (*Russian*) 2-66574
 Bi₂TiO₁₀, local levels in forbidden band 2-71899
 CO adsorbed on Ni (001), core level angle resolved XPS, single scatt. theory, mol. vibr. effects 2-110334
 Ce, α - γ transition, construction of electronic state for γ phase 2-56189
 Ce metal, 4f level position in ground state 2-61385
 CeAl₃, electronic struct., XPS and bremsstrahlung isochromat spectroscopy 2-56434
 CeH_x, valence band and 4f and 3d levels, XPS study 2-77704
 Ce_{0.9}La_{0.1}Th_{0.1}, mixed valent ground-state, elec. resist., localisation transition 2-36551
 CeM₂Si₂ (M=Fe, Co, Ni, Cu), valence state of Ce rel. to thermoelec. power, X-ray absorpt. spectra meas. 2-61448
 Cr, electron energy loss spectra for clean and oxidized surfaces 2-56663
 Cu alloy, dilute, impurity d-bands and core level binding energy shifts 2-56482
 Cu film, coupled fine particles, electron localization and transport props. 2-61618
 Cu films, elec. cond. localisation effects and negative magnetoresist. obs. 2-82476
 Cu-SiO₂, granular films, elec. props., electron localisation in metallic regime 2-72081
 Fe₂(As₂Te₂Si₂Sb₂)_{1-x} film, sputtered, phys. props. 2-92421
 FeF₃ film, elec. cond. meas., charge transfer between localised states mechanism 2-82503
 FeF₃ granular films, dielec. polarisation, AC cond. and TSC study 2-82774
 FeF₃ thin films, localised electron states, optical absorption study 2-82268
 n-GaAs, epitaxial, far IR photocond. saturation 2-87319
 GaAs:Si, disordered, optical detection of multiple trapping relax. 2-72005
 Ge amorphous film, low-energy excitations, sp. ht. meas., 0.08 to 2.5K 2-71662
 Ge:Sb, low-temp. cond., evidence for localisation effects 2-77057
 Ge, Se_{1-x} glasses, photocond. and recomb. processes 2-77112
 He film, surface electron localisation, UHF EM absorpt. study (*Russian*) 2-56294
 He film surface, self-trapped electron, temp. depend. effective mass 2-76776
 In-Cr dilute superconducting alloy, tunnelling, localised excited states 2-72122
 In₂O₃ film, weak localization, anomalous transport props. 2-61627
 KCl cryst., optical breakdown at localised states 2-82809
 La₂NiO₄, coexistence of localised and itinerant 3d electrons, lattice const. meas. 2-66755

localised electron states continued

- Mg film, with Au submonolayers, spin-orbit coupling effect on weak localisation, magnetocond. meas. 2-66495
 Mg thin film, weak localisation, magnetoresist. meas. 2-82324
 MnBr₂, Mn²⁺ 3d shells, effective occupation number calc. 2-92503
 MnCl₂, Mn²⁺ 3d shells, effective occupation number calc. 2-92503
 MnF₂, Mn²⁺ 3d shells, effective occupation number calc. 2-92503
 Mo, Auger MNN spectra and electron localisation 2-93334
 Ne, crystalline, self-localised luminesc. spectrum, fine struct. (*Russian*) 2-116227
 NiF₂ film, elec. cond. meas., charge transfer between localised states mechanism 2-82503
 NiF₂ thin films, localised electron states, optical absorption study 2-82268
 NiO, empty electronic states, inverse photoemission and SXAPS studies 2-61354
 NiO, narrow band insulators, electronic props. 2-87137
 Np, itinerant 5f electrons, localisation at high temps. 2-76962
 Pb-²³⁷Np, ion implanted, 5f electron localisation and relax., TDPAC study 2-56991
 PbSe, Te, film, IR absorption due to valence state-localised state transitions 2-77608
 Pd alloy, dilute, impurity d-bands and core level binding energy shifts 2-56482
 PdH_x, electronic and cohesive props., localised theory 2-82291
 Pt surface (111), clean and with chemisorbed CO, surface 4f core level binding energy shifts 2-87359
 Pu, core level and valence band XPS spectra 2-105036
 Pu, itinerant 5f electrons, localisation at high temps. 2-76962
 Si, amorphous, density of localised states and carrier mobility, elec. cond. study 2-115640
 Si, amorphous CVD layer, localized state density meas. by field effect method 2-56737
 Si, amorphous films, localised state investigation using field effect technique 2-104509
 Si inversion layer, conductance, logarithmic corrections, localisation and interaction effects 2-61598
 Si inversion layer, inelastic electron-electron scatt. time 2-61599
 Si inversion layer, two-dimens. electron gas, localisation and interaction effects 2-72071
 Si, surface (111), Mott insulator model 2-115839
 Si:F, H, amorphous, density of localised states, DLTS study 2-98591
 Si:F, local electronic struct., molecular cluster method based on HF approx. 2-92533
 Si:H, amorphous, DLTS response due to localized states 2-56492
 n-Si:H, amorphous, deep levels, electron capture cross section 2-76979
 Si:H, amorphous, gap states distrib., modulated photocurrent phase-shift anal. 2-92534
 Si:H, amorphous, Schottky diode spectral response, gap states effect 2-87753
 Si:H, N(Ga), amorphous film, ion implanted, photocond. and energy spectrum 2-92698
 a-Si:H, RF sputtered, elec. and EPR meas. 2-115791
 Si:N, amorphous CVD film, elec. cond., field effect and gap state density meas. 2-87193
 Si:Ne, Ar, amorphous, ion implanted, localised defect states and impurity distrib., photocond. spectra study 2-61414
 SiO₂H₂F, amorphous, photoluminescence, localised states, temp. depend. 2-87854
 Si-SiO₂ interface electronic struct. 2-56711
 Si-SiO₂ interface, localised intrinsic Si gap states 2-92714
 SiO₂, surface electronic struct. tight binding calc., UV photoelectron spectroscopy, and EELS study 2-82226
 Si(100) with adsorbed H, stimulated H⁺ desorption correlation with localised state 2-115551
 Sm compounds, normal and mixed-valent, core level EELS and XPS spectra 2-72588
 SrYbF₆, disordered, luminescence, nonlinear excitation delocalisation (*Russian*) 2-72545
 TaS₂ (1T), electron irradi., Mott to Anderson localisation, electronic transport 2-92594
 TaS₂, X-ray core level photoemission, charge transfer effects 2-111023
 TmSe, mixed valent, hybridisation energy gap, inelastic neutron scatt. obs. 2-61352
 TmSe single cryst., inelastic neutron scatt. studies 2-55956
 UO₂ and UPd₃, f and d electrons, resonant photoemission study 2-116336
 USe₂Te_{1-x}, core level binding energies and heat of formation, UPS study 2-67193
 UTe and U₂Th_{1-x}Sb, f and d electrons, resonant photoemission study 2-116336
 W, surface (110), NH₃ adsorpt. and decomposition, XPS study, core level binding energy interpretation using equiv. core approx. 2-115558
 WO₃ amorphous thin films, coloration mech. study 2-99206
 Y, Auger MNN spectra and electron localisation 2-93334
 ZnO, surface (1010), localized and delocalized charge transfer during adsorpt. 2-110425
- localised modes in crystals** *see* **lattice localised modes**
localised states, electron *see* **localised electron states**
loggers *see* **data loggers; recorders**
logging (recording) *see* **recording**
logic, formal *see* **formal logic**
logic circuits
see also **formal logic; integrated logic circuits; many-valued logics; transistor-transistor logic**
 fast cluster finding cgt. for Fermilab collider detector jet trigger 2-64804
 impulse programming system for NMR relaxation meters (*Rumanian*) 2-64073
 programmable decision logic module for multidetector expts. (*French*) 2-90410
- long-range order**
see also **order-disorder transformations**
 adsorbed layers, long-range correl., correl. functions and density profiles calc. 2-82138
 alloys, binary, phase separation and mag. ordering in case of one mag. component 2-115421
 alloys, Ising model, homogeneous long range and antiferromag. order, kinetic theory 2-103669
 anisotropic quantum spin chain, antiferromag. long-range order 2-87470
 Bose systems, two-dimensional, quasi long range order 2-107230

long-range order continued

- Heisenberg antiferromagnetic spin $1/2$ chain, finite cell calcs. 2-104649
 Heisenberg ferromagnet, quenched random site, mag. states with partial spin glass freezing 2-77252
 magnetic superconductors, fluctuations and defects in spiral state 2-92849
 solid solution, inhomogeneous, scatt. of X-rays, thermal neutrons and electrons (*Russian*) 2-91716
 spin Van der Waals model, long-range order 2-56809
 Ag-Mg, equiatomic, rheological behaviour of β' phase 2-57421
 Au₂Zn, H phase, out of step period 2-71658
 (Co_{0.78}Fe_{0.22})₂V alloy, ordered, microstruct. 2-72719
 CsNiFeF₆, spin glass props. 2-87515
 Cu₃Au, displacement cascade damage, produced by fusion-neutron irradi. 2-85224
 Cu₃Au, elec. cond. and long range order (*Chinese*) 2-104342
 Cu₃Au, fusion neutron disordering 2-85219
 Cu₃BiS₆, cubic, modulated struct. 2-91900
 Eu_{1-x}Gd_xS spin glass, mag. relax., Mossbauer study 2-66833
 (Fe,Ni)₂V long range ordered alloy, resistance to neutron and ion irradi. 2-85217
 (Fe,Ni)₂V, long-range ordered alloys, fusion reactor appl., mech. props. 2-85218
 Fe(Pd_{1-x}Au_x)₃, atomic ordering, quadrupole splitting in Mossbauer spectra 2-104783
 GaP:N, luminescence spectra undulations 2-104950
 Ho_{1-x}Er_xRh₄B₄, superconductivity and magnetism 2-72098
 Na₂Si₂O₅ glass, CC Na self-diffusion, correl. factors calc. 2-110036
 Nb₃Al, A15 type phase, supercond., at. ordering, and stoichiometry 2-61637
 Nb₃Al films, ion irradi., supercond., struct. disorder and phase transitions 2-98786
 NdH₂, ferromagnetism, susceptibility and magnetisation meas. 2-72159
 Ni-Mo, irradi.-induced Mo₂C precip. 2-57356
 α,β -O₂, magnetisation under high press. 2-66760
 α' Pd-D system, approx. to lattice gas, Monte Carlo simulation study 2-67307
 Pr, hyperfine interactions, mag. impurities and antiferromag. ordering 2-104582
 ThNb₆O₁₂, slow-cooled sample, Th-vacancy ordering 2-60928
 Ti-Mo (10 at.%), struct. after low temp. ageing, X-ray and electron microscopy study (*Russian*) 2-93538
 UAs, order-incommensurate disorder mag. transitions (*Russian*) 2-56859
 UBr₃, magnetic susceptibility meas. from room temp. to liq. He temp., antiferromag. interaction 2-92883
 V₂Si, neutron irradi., struct. order and supercond. transition temp., neutron diff. study 2-86736

long tailed pair *see differential amplifiers***Lorentz transformation**

- antiparticles from special relativity 2-58611
 antiparticles from special relativity with ortho-chronous and antichronous Lorentz transformations 2-89529
 charges and monopoles, quantum field theory regularisation 2-84837
 classical electron model and EM field momentum definition 2-95037
 classical electron model and EM field momentum definition 2-95038
 covariant four dimensional expression for Lorentz transformations 2-107064
 CPT, manifest Lorentz invariance by rewriting as MPT 2-107563
 CPT and Lorentz invariance breakdown 2-69380
 Einstein derivation, 'howler' correction 2-58607
 empty spaces and perfect fluids with homothetic transformation 2-107185
 evolution and covariance in constraint dynamics 2-84440
 flat space-time, global isometry approach to accelerating observers 2-53505
 fluctuating space-time basis 2-79356
 gauge field theory invariance, energy-momentum dispersion of glueballs 2-107515
 generalised Lorentz group for transformations of coords. coupled with massive reference system 2-58668
 generalised sub- and super-luminal Lorentz transforms., formal and physical props. 2-101166
 graded Lorentz groups, rel. to superspinors 2-69368
 lattice, Lorentz transform. 2-53929
 Mach's principle and structure of dynamical theories 2-95164
 massive supersymmetric quantum field theory, central charges, Lorentz and internal symmetries 2-84790
 Maxwell's eqns. behaviour under real superluminal Lorentz transformations 2-79384
 Maxwell's eqns. behaviour under real superluminal Lorentz transformations 2-79385
 moving systems, linearity of transformation eqns. 2-101165
 nonlinear equations, Lorentz-symmetric solns. 2-95585
 nonlinear realisations, effect on electrodynamics 2-112699
 proton decay, Lorentz invariance violation 2-69458
 quantum field theories with no Lorentz-invariant formulation 2-101597
 quantum field theory, Lorentz invariance of extended objects 2-113113
 R⁴—R⁴—R⁴—R⁴, composite transforms. 2-69013
 Redel-like model and testing Lorentz invariance 2-101548
 superluminal EM fields polarisation 2-101520
 superluminal Lorentz transformations in 4-dimens., group theoretical props. 2-89531
 superluminal Lorentz transforms and their group theoretical properties 2-89533
 supersymmetric lattice gauge theories 2-84789
 tachyons, Lorentz transformations 2-95001
 time-reversal invariance tests from polarisation quantities in elastic scatt. 2-59056
 topological particle structure probing by period integrals 2-95689
 two-dimensional integrable lattice system, Lorentz group (*Russian*) 2-53700
 unified gravitational and quantum-mechanical space-time structure and special relativity foundations 2-74296
 Yang-Mills fields, asymptotic convergence to free fields 2-113142

Lorentz number

No entries

Loschmidt number *see constants***loss angle***see also dielectric losses*

No entries

loss angle, dielectric *see dielectric losses***loss-angle measurement**

- EM parameters of materials meas., HF and UHF range, COMECON metrological provisions 2-58801
 open resonator method 2-53790
 open resonator method 2-53791
 planar capacitors in SHF range 2-58845
 verification facility for loss angle meas. of solid dielectrics 2-58844

loss measurement

- 10 kHz flux-controlled magnetic core loss tester 2-74473
 ferroelectrics loss tangent measurement after superimposing DC bias voltage (*Slovak*) 2-72432
 fiber loss measurement using optical time domain reflectometer 2-101449
 fibre transmission characts. diagnostic meas., in single-mode fibres 2-109071
 fibre-optic communication system meas. instrumentation 2-97243
 graded-index compound-glass fibres, scatt. sphere and total loss meas. 2-102943
 microprocessor-controlled microwave tester, Narda Model 7000 A Analyser system (*German*) 2-112925
 optical connector parameters meas. 2-109046
 optical fibre loss measurements, selection of mandrel wrap mode filters 2-102944
 optical fibre splice loss and fibre loss meas. by backscatter method 2-55346
 sound transmission loss meas., specimen frame influence 2-114554
 standard launching fibre for optical loss meas., design and characts. 2-75714

losses

- see also dielectric losses; eddy current losses; heat losses; loss angle; magnetic leakage*
 cavity waveguides coupled with square cross section waveguides, coupling losses 2-114423
 chalcogenide glasses, optical properties 2-61851
 concentrator photovoltaic solar cell system effects of non-uniform illumination 2-78226
 endwall boundary layer flows and losses in an axial turbine stage 2-86274
 fibre optic strain gauge based on microbending losses 2-91079
 fibre-optic sensor for cryogen level 2-74402
 high bit rate communication systems using non-linear effects 2-102951
 IR crystalline fibres 2-97182
 IR fibre losses, overview 2-97181
 laser medium, piecewise-continuous, high-power, small-scale self-focusing, nonlinear loss reduction 2-7126
 multimode rectangular IR waveguides, loss increases due to helical deformations 2-86097
 open resonators, diff. losses, geometric approach 2-55219
 optical - 2-86121
 optical dispersion-free single-mode doubly clad fibres with small pure bend losses 2-114451
 optical fibre butt joint alignment sleeve 2-75710
 optical fibre connector, double-bulb, insertion losses meas. 2-102927
 optical fibre loss model, total-loss data separation into absorpt. and scatt. components 2-102934
 optical fibre-type isolator characterised by elliptically deformed fibre core, anal. 2-55345
 optical fibres, high strength, In protective coatings, microbending losses and static-fatigue life 2-81112
 optical fibres, single-mode, uniform bending losses 2-114466
 optical fibres, spliced, reinforcement by nylon moulding method tensile strength 2-109070
 optical fibres, thick core all-glass, radiation sensitivity in reactor radiation fields 2-75692
 optical film waveguides obtained by RF sputtering, cathode-ray vaporisation, loss mechanisms, ion polishing improvement 2-75672
 optical monomode fibre design and fabrication, loss and dispersion optimisation 2-65376
 optical multimode fibres, arc-fusion splice using pre-fusion method 2-75715
 optical single-mode fibre, exact splice loss prediction 2-81103
 optical single-mode fibre, microbending loss in pure-bend loss regime 2-109047
 optical single-mode graded-index fibres, splice-loss evaluation 2-102933
 optical single-mode two- and three-layer W-type waveguides, losses due to bending, microbending 2-70674
 optical two-mode fibres, splice loss prediction, analytical model 2-91058
 optical waveguide, liq. cryst., transmission characteristics meas., 0.7 to 1.7 μ m 2-75674
 solar cell, optimum load for maximum power transfer 2-116820
 star coupler, integrated optical, 1XN single-mode 2-60258
 superconducting emitter, losses caused by radiotransparent cryostat 2-112926
 superconducting layered model systems and in situ materials, supercond. proximity effect 2-66725
 viscoelastic beam, complex elastic modulus meas. by driving point impedance method, impedance head transmission function effect 2-75860
 CsBr single-crystal IR fibres, cryst. growth, mech. and optical props. 2-102947
 GaAs-GaAlAs curved rib waveguides, bending loss minimisation, ion beam milling fabrication 2-75676
 GeO₂-ZnO-K₂O glass cladding for 940 cm⁻¹ CO₂ laser transmitting hollow-core fibre waveguide 2-102946
 In_{1-x}Ga_xAs_{1-y}P_y buried crescent laser, internal loss meas. at 1.3 μ m 2-114269
 LiNbO₃, high-index waveguides, fabrication by proton exchange 2-114419
 NbTi-Cu composite multifilamentary supercond., losses under adiabatic conditions 2-66730
 P₂O₅-doped graded-index multimode fibre, microbending losses 2-114448
 Si solar cell, flat-spot power loss phenomenon at low temp. and low intensity 2-116819
 SiO₂ glass, low absorpt. loss, temp. depend., laser calorimetry study 2-114391
 SiO₂-GeO₂ optical fibre, drawing depend. transmission loss meas. 2-65383

loudness*see also acoustic intensity measurement*Gaussian fluctuating sound (*Japanese*) 2-102989

loudness continued

- impact sounds loudness, comparison with and without steady duration 2-91154
- low-frequency hearing threshold, case of missing 6 dB 2-62631
- single-tone-noise complexes, loudness, annoyance and noisiness 2-97283

loudspeakers

- acoustic system with passive speaker, effectiveness determ. (*Russian*) 2-70802
- church sound system design 2-97295
- cinema loudspeaker system characteristics (*Russian*) 2-60343
- column, propag. charact. 2-60339
- cone vibration modes, computerized analysis and observation 2-55393
- filter-assisted vented box loudspeaker systems with enclosure losses, alignment 2-91198
- fundamental reson. freq., teaching 2-63780
- impulsive noise synthesis using loudspeaker (*French*) 2-70790
- loudspeaker array design, polar-plot method 2-86174
- loudspeaker coverage by architectural mapping 2-86173
- loudspeaker power response meas., elimination of noise 2-114573
- low-frequency horn systems 2-114578
- mini Hi-Fi, symmetrical air friction enclosure type, construction details 2-75821
- polyoxymethylene whisker reinforced polymers, Young's moduli, acoustic props. 2-93547
- sound pulse of finite amplitude generation, loudspeaker use, new method 2-91116
- testing using anechoic chamber with optional boundaries 2-109143
- transient meas. method for finding equivalent electrical network 2-55394
- two-dimensional arrays with omnidirectional radiation (*German*) 2-86152

Love waves

- attenuation in soil layers and Q_s -structure estimation in Kyoto basin 2-106003
- SE China, seismic surface wave dispersion and Earth struct. 2-68285
- generation under initial stress due to a momentary point source 2-109222
- hexagonal cryst. with overlayer, elastic surface waves anal. 2-56318
- Lg waves and coda, statistical models of wave formation 2-62902
- mantle global seismic vel. anisotropy of oceanic areas 2-83781
- propagation due to point source in isotropic elastic medium under initial stress 2-70860
- reciprocal conversion of shear surface and bulk acoustic waves on a periodically perturbed surface zone with a nonsinusoidal profile 2-115350
- scattering of seismic surface waves from groove or step 2-100299
- seismic channel waves, refl. and transmission at coal seam discontinuities 2-100318
- seismic waves, propag. through nonhorizontal structure (*Japanese*) 2-94290
- seismic waves in dry sandy layer 2-73470
- soil, water-saturated, overlying nonhomogeneous elastic medium, Love waves propagation 2-114823
- solid with cold worked surface layer, Love wave propag. 2-62300
- Tibet Plateau, Q struct. from seismic attenuation data 2-105987

low energy electron diffraction

- acetylene, chemisorption on Pd(111), surface vibr., LEED and EELS study 2-71787
- Al, surface, LEED temp. depend. study 2-56307
- atomic local exchange and correlation potentials for electron scattering at solid surfaces 2-105019
- chemisorbed layers, island size distrib., LEED and Fourier anal. 2-115510
- fine structure anal. 2-109639
- graphite (0001) surface struct. determ. by LEED 2-82107
- graphite surface, H_2 adsorption, commensurate-incommensurate transition, LEED study 2-87064
- high energy beam surface probes, ion and electron 2-110987
- II-VI semiconductors, clean and adatom treated surface props. 2-110115
- II-VI semiconductors, electronic surface states, review 2-110411
- intensity meas., appl. of simple spot photometer 2-89787
- intensity meas. by improved Faraday cup collector 2-97869
- large molecule layers, surface struct. determ. by LEED, combined space method 2-55814
- methanol, chemisorpt. and condensation on Pd (100), spectrosc. obs. 2-93812
- polarised, meas. of three components of electron spin polarisation vector 2-58969
- pseudoharmonic approximation, temp. depend. of LEED 2-76250
- review of state-of-the-art 2-109640
- semiconductors, elastic LEED, electron exchange effects and relativistic corrections 2-65815
- solar energy conversion technologies, surface analytical techniques, review 2-88412
- specimen current image of single cryst., diffraction patterns 2-65813
- spectrosc. obs. 2-92344
- surface, ferromagnetic, magnetisation, mag. struct., spin polarised LEED study 2-98910
- surface (111) and stepped surface (755), adsorbed K and K_2O monolayers, LEED, AES and TDS 2-56365
- surface analysis by electron and ion beam methods, conf., Newcastle, NSW, Australia (Feb. 1981) 2-106995
- surface defect structures, LEED spot profile anal. studies 2-110100
- surface imaging in LEED instruments 2-55813
- surface periodicity, crystallography and structure, book contrib. 2-66334
- surface physics, conference, Varna, Bulgaria (Sept.-Oct. 1980) 2-89468
- surface struct. determ., data enhancement by averaging 2-65814
- surface structure anal. using LEED, review 2-76793
- surface structure determination by LEED, review 2-110096
- surface studies using slow positron beams 2-110111
- surfaces, atomically clean, prep., struct. and props. 2-82103
- surfaces with large unit cell structures 2-110105
- threshold effects, reson. and interf. effects 2-76251
- two-dimensional lattices, Ewald summation technique 2-97868
- ultrahigh vacuum apparatus for combined low-energy electron diffraction, Auger spectroscopy, MeV ion scattering, and nuclear microanalysis 2-89733
- UV photoelectron spectroscopy and Auger anal. in same apparatus using LEED head 2-84749
- Ag (110), SO_2 chemisorption, atomic O effects, UPS, LEED and thermal desorpt. study 2-76824
- Ag (111), adsorption of K, ellipsometry, LEED, and EELS study 2-61295

low energy electron diffraction continued

- Ag deposits, on Al(100) substrate, electronic struct. evolution 2-82443
- Ag films growth on Si(100) and (111), LEED, AES and angle-resolved UPS study 2-92413
- Ag surface, (110), (100) and (111), work function, Auger and LEED study 2-77155
- Ag surface (110), LEED surface crystallographic anal. 2-87000
- Ag/Au epitaxial system, initial stages of growth, LEED study 2-92404
- Ag-Au epitaxial system, LEED spectra, influence of ion-core scatt. 2-86525
- Ag-GaAs (001), Ag MBE growth and interfacial diffusion, AES, LEED and SEM study 2-93432
- Ag-GaAs Schottky diodes formation on Kelvin, AES and LEED characterised surfaces cleaned by ion bombard. 2-87391
- Al, (111), blue coloured surface obs. during high temp. oxidation 2-88280
- Al (111) and (111)p(1 \times 1)O, cluster and DVM approach to LEED pot. generation 2-98439
- Al, single cryst., specimen current image 2-65813
- Al, $Ga_{1-x}As_x$ (110) and GaAs(110)-Al adsorbed system, surface struct., LEED study 2-110120
- Al(100), electron spectroscopic study of CO adsorption 2-76819
- Al(111), appl. of r -factor anal. of effect of non-structural parameters in LEED 2-56306
- Ar monolayer on Cu (110), electronic and geometric struct., LEED and photoemission study 2-98407
- Au (100), LEED diagram interpretation (*French*) 2-98397
- Au deposits, on Al(100) substrate, electronic struct. evolution 2-82443
- Au epitaxial growth on Ag(111), ion scatt., Auger and LEED study 2-82160
- Au surface (100), quasidynamical LEED intensity analysis in the medium energy range 200-600 eV 2-98405
- Au(110), transversal polaris. vector in LEED 2-91732
- BaTiO₃(100) surface, dynamic lattice charact., LEED study 2-115528
- Co/Co (0001), angle-resolved photoemission studies 2-83000
- CdTe (110) surface, kinematical anal. of LEED intensities (*Japanese*) 2-115512
- CdTe-metal interface, Schottky barrier form., XPS, UPS, AES, LEED, I-V and C-V meas. 2-115861
- CdTe(110), surface atomic struct., LEED 2-76252
- Co, adsorption and decomp. of water, LEED, UPS, surface pot., and thermal desorption study 2-104160
- Co monolayer on Cu, mag. exchange splitting, photoemission, LEED and Auger study 2-98870
- CoSi (100) and CoSi₂ (110), interaction with O₂, LEED, AES, and UPS STUDY 2-104162
- CoSi₂-Si(111), MBE growth, Rutherford backscattering, TEM and LEED studies 2-66385
- Co(0001), LEED struct. anal. 2-56316
- Cr (100), chemisorption of Cl and surface chloride form., struct. and kinetic study 2-66366
- Cr, surface (110), chemisorpt. of O and initial oxidation 2-115567
- Cs adlayer on reconstructed Ir, Pt and Au surfaces, structure, LEED study 2-115509
- Cs overlayer on Si(100) 2 \times 1, plasmon excitation obs., AES, EELS, LEED and UPS 2-115542
- Cu (100), adsorption and coadsorption of Cs and O₂, LEED, AES, and work function meas. 2-82140
- Cu (100), CO adsorption, ordered structs., LEED, EELS and IR data correlation 2-98456
- Cu (100) and (110), O₂ chemisorption, UPS, EELS, LEED and work function study 2-87071
- Cu, (110) surface, oscill. relax. investig. 2-104137
- Cu (110)-Ni surface alloy, adsorption of O₂ and reaction with H₂ and CO 2-104161
- Cu (111), O₂ chemisorption, UPS, EELS, LEED, AES and work function meas. 2-87072
- Cu (111)(1 \times 1)-Ni, LEED study using reliability (R) factors 2-110116
- Cu, adsorption of NO on (100) and (110) surfaces, EELS, LEED and TSD studies 2-110128
- Cu deposits, on Al(100) substrate, electronic struct. evolution 2-82443
- Cu, growth of Pb and Sn monolayers and ultrathin films 2-71829
- Cu surface, low index planes, LEED fine struct., surface barrier resonances obs. 2-56309
- Cu surface (100), adsorbed Pb, LEED studies 2-98450
- Cu surface (110), LEED surface crystallographic anal. 2-87000
- Cu-Al, surface electronic states, Tamm state, photoemission, LEED and Auger study 2-98712
- Cu-Sn(100) surface struct., LEED obs. (*Japanese*) 2-115511
- Cu(100), multilayer relax., LEED data 2-76362
- Cu(110) with adsorbed Xe, commensurate-incommensurate transition, PES study 2-104154
- Fe (110), chemisorbed H₂ layer, phase transitions, phase diagram, LEED study 2-98276
- Fe epitaxial growth on W(110), periodic lattice distortions, LEED and Auger study 2-82170
- Fe overlayer growth on Ag(110), LEED and AES studies 2-98489
- Fe overlayer on Pd(111), mag. behaviour, photoemission, LEED and Auger study 2-110611
- GaAs (110) surface, struct. anal. at room temp. 2-82099
- GaAs/Sb interface, elastic low-energy electron diff. 2-76842
- GaAs-Ag interface, formation, struct., electronic states 2-104485
- GaAs-Ga interface formation, electronic props., photoemission LEED and Auger study 2-98744
- GaAs(110), adsorbed Al surface struct., LEED study 2-110120
- GaAs(110) substrate for Sb monolayer, LEED dynamic anal. 2-115110
- Ge, atomic step height on clean vicinal faces 2-86997
- Ge surface, high index, struct., order-disorder transitions, LEED study 2-71786
- Ge surface (111), cleaved in superhigh vacuum, low temp. LEED surface struct. study 2-98406
- Ge, surface unit cell cleaved at 4K, (1 \times 1) struct., LEED study 2-110118
- Ge-GaAs (100) heterojunction, MBE growth, surface processes, LEED and photoemission study 2-110203
- Ge-GeS interface struct., LEED, HEED and Auger spectra study 2-71809
- Ge(111), atomic struct. and reactions with deposited Al 2-86991
- InP (100), laser induced order-disorder transition, LEED study 2-110117
- Ir surface (100), quasidynamical LEED intensity analysis in the medium energy range 200-600 eV 2-98405

low energy electron diffraction continued

- KCl (001), 001 LEED beam intensity, temp. depend. hysteresis 2-103567
 KCl (001), Ar ion irradi., defect instability, LEED study 2-82110
 K₂O monolayer on Pt(111) and stepped (755) surfaces, LEED, AES and TDS studies 2-56365
 Kr monolayer on Cu (110), electronic and geometric struct., LEED and photoemission study 2-98407
 LaB₆, adsorption of O on (100), (110), and (111) surface, UPS, XPS, and LEED meas. 2-66365
 MgO, surface struct., ionic bonding, He diff., Auger and LEED study 2-86996
 Mn overlayer on Cu(100), LEED, AES and UPS study 2-87111
 Ne adsorbed layer on graphite, fluid-solid transition line, phase diagram, lattice constant, LEED study 2-66185
 Ni (001), adsorbed O, c-(2×2) binding distance, LEED expt. and theoretical study 2-104152
 Ni (001) surface magnetism, magnetisation, spin polarised LEED study 2-98911
 Ni (100), CO adsorption, ordered structs., LEED, EELS and IR data correlation 2-98456
 Ni (100) reactions between adsorbed CO and O, XPS/LEED studies 2-83414
 Ni (110), chemisorption of Cl 2-56346
 Ni (110), extensive LEED anal. 2-82100
 Ni (110), extensive LEED anal., R-factor anal. 2-82101
 Ni (110), extensive LEED anal., merits and drawbacks of I(g) approach 2-82102
 Ni (110), N₂⁺ implantation, AES, LEED, EELS and secondary electron spectra study 2-92014
 Ni (111), adsorption of water, preadsorbed O effect of azimuthal ordering 2-104157
 Ni (111) surface, clean and O-adsorbed, high energy ion scatt. study 2-62039
 Ni surface, (100), ion bombardment induced faceting, LEED study 2-56310
 Ni surface, (110), adsorbed O, atomic structure, LEED, AES, EELS and work function study 2-66329
 Ni surface, O₂ and H₂ adsorption kinetics, surface struct. effects, Auger, LEED and work function meas. 2-87066
 Ni₂ surface (111), adsorbed acetylene, full dynamical LEED anal. 2-115521
 Ni₂ surface (111), O predosed, NH₃ interaction 2-110156
 Ni surface (311), LEED structural anal. 2-86993
 Ni surface (311), LEED crystallographic studies, methodology and uncertainties 2-86994
 Ni-Fe, surface (100), oxidation 2-116612
 NiO growth, and dissol. on Ni (100), temp. effects 2-83404
 Pd (100), CO adsorption, ordered structs., LEED, EELS and IR data correlation 2-98456
 Pd (110), chemisorpt. of Cl 2-56346
 Pd (111), chemisorption of Br and dibromide form. 2-66364
 Pd surface (100), adsorbed S, LEED anal. 2-98449
 Pd surface (100), CO adsorpt., IR reflection absorpt. study 2-98466
 Pd surface (100), initial oxidation, LEED, EELS and AES studies 2-56314
 Pt (100), CO adsorption, ordered structs., LEED, EELS and IR data correlation 2-98456
 Pt (110) chemisorpt. of Cl 2-56346
 Pt (111), adsorption of methylacetylene, propylene and 2-butenes, surface structures, LEED study 2-71804
 Pt (111), chemisorption from polar solvents, superlattice form., LEED, AES and mass spectra study 2-92354
 Pt surface (100), metastable 1×5 struct. 2-115517
 Pt surface (100), quasidynamical LEED intensity analysis in the medium energy range 200-600 eV 2-98405
 Pt surface (110), nonreconstructed, prep., thermal stability and adsorpt. characts. 2-115515
 Pt surface (111), adsorbed naphthalene mol. orientation determ. by packing energy calcs. 2-87055
 Pt surface (321), kinked, adsorpt. of CO 2-61292
 Pt surface (997), double step form. and destruction dynamics, O₂ induced, He beam scatt. study 2-115513
 Pt surface (100), 1×1-hexagonal transition LEED study 2-115508
 Pt surfaces (111) and (997), clean and O covered, thermal He atom scatt. (German) 2-87001
 Pt(110), CO chemisorption, surface phase transitions, LEED, UPS and thermal desorption study 2-98452
 Pt(110), clean and with adsorbed CO and NO, surface phase study 2-86985
 Re(0001), adsorption of benzene studied by thermal desorpt., Auger spectra and LEED between 100 to 300K (French) 2-110141
 Rh (100) 2-56354
 Rh (111), adsorbed small hydrocarbon mols., LEED study 2-76825
 Ru (001), adsorption of CO, island form. and dissolution at low coverages 2-82126
 S c(2×2) chemisorbed on Co(001), surface superstruct., LEED study 2-98404
 S monolayer on Cu(110) surface LEED diagram interpretation (French) 2-86524
 Sb films, on W(112) and (110) faces, characteristic electron energy losses 2-67164
 Sb overlayer on GaAs(110), LEED/AES/XPS/TDS characterization 2-87060
 Sb overlayers, on GaAs (110), struct. 2-76862
 Sc surface (0001), atomic struct. 2-56312
 Si (100) reconstructed surfaces, LEED studies 2-92324
 Si (111), adsorbed Ag, struct. anal. by LEED/const. momentum transfer averaging technique 2-56347
 Si (111) laser annealed and impurity induced metastable surfaces, UPS and LEED study 2-76789
 Si (111)7×7, SEXAFS studies of I adsorpt. 2-83417
 Si, amorphous UHV deposited film on Si(111), epitaxial regrowth 2-104197
 Si, atomic step height on clean vicinal faces 2-86997
 Si surface, (001), adsorbed H, 2×1 and 1×1 structs., inelastic LEED study 2-92710
 Si surface, (111), thermal epitaxial growth during ion bombardment, LEED study 2-87088
 Si surface, passivation by Au and Ag monolayers, LEED, Auger and photoemission anal. 2-83259

low energy electron diffraction continued

- Si surface (001), plasmon excitation enhancement by LEED due to surface resonance 2-77139
 Si surface (100), Ag film growth, LEED and AES study 2-56397
 Si surface (111), Ag adsorption, struct. and electronic props., LEED and AES study 2-82092
 Si surface (111), epitaxy, high resolution LEED study 2-98487
 Si surface (111)-(7×7), D adsorption, nuclear microanal., LEED and ion scatt. study 2-76821
 Si surface (112), clean and H and Ga covered, surface struct., LEED study 2-71784
 Si, UHV-deposited thin films, laser cleaning of (100), (110) and (111) surfaces 2-83250
 α-SiO₂, X-cut surface, defect stability under ion irradi., LEED study 2-92058
 Si(001), 2×1 struct. reconstruction, LEED anal. 2-110121
 Si(100) and (111), surface electronic struct. changes induced by ion bombard., LEED and AES study 2-82983
 Te, adsorbed layer on W(110), multiple commensurate-incommensurate transitions, LEED study 2-115560
 TiO₂ surface (001) thermal faceting 2-86992
 Ti epitaxial growth on Cu(100), LEED, AES, UPS and EELS studies 2-56398
 V (100) surface struct., O₂ and CO adsorption, LEED and Auger study 2-71783
 V surface (100), clean, LEED study 2-61267
 W (100), adsorption of Se, AES, LEED, work function, and thermal desorption meas. 2-66362
 W (110), H chemisorption effect on LEED fine struct. (French) 2-104122
 W (110), LEED fine struct., effect of H chemisorption 2-81635
 W single crystal, cylindrical, (110) zone surface struct., LEED and work function 2-61269
 W surface, (100)(1×1), reliability of LEED I-V spectra, incidence angle errors and symm. effects 2-76784
 W surface (001) struct. transition, LEED fine struct. 2-110104
 W surface (100), adsorbed H and temp. induced reconstruction, polarised LEED study 2-56308
 W surface (100), adsorption of Te, binding states, LEED, Auger and work function study 2-82146
 W surface (100), chemisorption of S, Auger, TDS, LEED and work function study 2-82147
 W surface (100), polarized LEED, const. moment transfer averaging data reduction 2-110122
 W surface (110), adsorption of I₂, LEED and Auger study, antiphase boundary model 2-82144
 W surface (110), adsorption of I₂, non-coincident adatom net model, LEED patterns 2-82145
 W thin plates, adsorbed O₂, H₂ and Ag effects on conduction electron diff. and reflection (Russian) 2-71959
 W thin plates, adsorbed O₂, H₂ and Ag effects on conduction electron diff. and reflection (Russian) 2-82339
 W(100), adsorption of N₂ and CO, (√2×√2)R45° surface phase, LEED struct. anal. 2-110142
 ZnTe (110) surface, kinematical anal. of LEED intensities (Japanese) 2-115512
- low gravity experiments** see zero gravity experiments
low induction loss see loss angle
low-pass filters
 stereotactic neurosurgery, 3-D digital signal processing 2-62744
- low-temperature physics** see cryogenics
low-temperature production
 see also Joule-Thomson effect; magnetic cooling; refrigeration
 cryorefrigerator, based on reversed Ericsson cycle 2-58833
 dilution refrigerator combining low base temp. high cooling power and low heat leak for use with nucl. cooling 2-89724
 heat exchanger, low temp. for ³He-⁴He dilution refrigerator 2-89726
 integrated multiple mixing chamber 2-84632
 magnetic refrigerator, use of ferrofluid as heat-exchange fluid 2-79588
 Pomeranchuk cell, cooling device, ³He-cycling ³He-⁴He dilution refrigerator 2-64047
 refrigeration, closed cycle, for millikelvin temps. 2-58832
 small split Stirling coolers for IR detectors 2-89730
 step heat exchangers, practical model for design 2-84633
 superconducting machines, DC/synchronous, worldwide development review, Polish uses (Polish) 2-53775
 Al₂O₃ cold conductor for obtaining intermediate temperatures 2-74424
 N liquid-vapour refrigerator for spectral studies 2-74422
- low-temperature techniques**
 see also cryostats; refrigeration
 AC magnetic meas. from 4.2 to 300K, data logging system 2-64006
 cooling method by supply of cryogenic liquid through a single-walled tube 2-101406
 cryo-jaw, clamp for in vitro rheology studies on horse digital flexor tendons 2-117158
 cryo-presentation, long-term storage of biological specimens 2-68206
 cryogenic temperature sensors, use of semiconductor diodes 2-58821
 cryopreservation, of human blood red cells 2-62850
 cryopump attachment, for thin film deposition and characterisation 2-64058
 cryosurgery, appl. to otolaryngology 2-62828
 cryotemperatures measurement using Cu resistance-type sensing element (Polish) 2-53760
 CW NMR dispersion spectrometers using cryogenic tunnel diode RF oscillator 2-69217
 demountable plastic-to-metal vacuum pipe joints for low temps. 2-58838
 dielectric cell, usable up to 10 MHz 2-69202
 dilatometer for the study of rare earths at cryogenic temperatures (French) 2-64014
 DRON-2.0 X-ray diffractometer, low-temp. attachment for recording X-ray absorption spectra 2-95571
 electrical conductivity temperature dependence measuring apparatus 2-112922
 emulsion cooling for amateur astrophotography 2-63261
 genetics, cryogenic preservation, effects on struct. 2-62573
 Hall effect temperature dependence measuring apparatus 2-112922
 hardness testing device for 20-300K 2-72905
 Helitran exhaust gas heater, automatic control circuit 2-79592
 high-pressure cell for meas. of optical absorption coeffs. at liquid N₂ temps. 2-69197

low-temperature techniques continued

- high-vacuum demountable field-emission electron/ion microscope for use at 4.2K 2-58965
 level detector, of refrigerant in cryostat 2-64051
 liquid He cooled specimen holder for electron microscopy 2-64164
 LNG vaporizer and power generation using low temp. LNG 2-57720
 mechanical testing, low-temperature attachment 2-62315
 polarised proton ion sources, cold H techniques 2-75081
 protein crystallography, crystal cooling device for use with synchrotron radiation 2-68209
 pulsed magnetic field spectral apparatus for molecules and crystals at 4.2 to 77K 2-58866
 resistance thermometers, TSKUM carbon and KGG semiconductor, behaviour in magnetic field up to 18 T 2-112898
 SEM EBIC analysis of defects using controlled low temps. 2-65823
 semiconductor cryogenic resistance thermometers for meas. in mag. fields (Russian) 2-64036
 superconducting machines, DC/synchronous, worldwide development review, Polish uses (Polish) 2-53775
 temperature meas. and data processing system (Russian) 2-112909
 temperature meas. in 4K region, using magnetoresistance of Bi crystal (French) 2-64031
 thermal chamber for spectral investigations 2-101438
 thermal conductivity and diffusivity measurements at cryogenic temperatures by double specimen technique 2-89725
 thermal expansion measurement, of epoxies, inorganic cements and polyester resins 2-65460
 thermal grounding of transmission line 2-89722
 thermophysical low-temp. meas. control, microcomputer-based system 2-53773
 TCO carbon resistors for temperature measurements in the range 4.2-450K 2-112897
 twin hollow cathode interferometer-spectrometer, low temp., gas kinetic temp. radial distrib. (German) 2-84713
 X-ray diffractometers, low-temperature attachment 2-113089
 X-ray Weissenberg goniometer, low temp., with closed-cycle cooling to 28K 2-65804
 C-glass resistors, low-temperature thermometry in high magnetic fields 2-101401
 CO laser, all-glass vacuum-insulated, N₂-cooled 2-114247
 CO₂, triple point temp. det. 2-74419
 Ge thin film thermometers, for use at low temps., characts. 2-74412
 In thin film resistance thermometers for low temps. 2-112896
 Pt thermometric resistance sensors, ZPA, low-temp. meas. in range 13-80K (Czech) 2-89727

LPE see liquid phase epitaxial growth

LS coupling see Russell-Saunders coupling

LSA see limited space charge accumulation

LSI see large scale integration

lubrication

see also friction

- bonded solid film, effect of load area of contact and contact stress on wear mechanisms 2-88224
 boundary lubricant layers, elec. props. 2-56653
 boundary lubrication, dynamic behaviour of surface-adsorbed molecules 2-57489
 elastico-viscous fluids, normal and reverse squeezing flows, lubrication props. 2-97602
 hydrodynamic theory 2-55517
 joints, human, microcontinuum approach to lubrication 2-116978
 knee joints, human, effects of rot. on lubrication characts. during normal articulation 2-116979
 liquid-air interface in lubrication flows, boundary conditions 2-91493
 mechanical vacuum pumping, equipment for appls. involving corrosive and aggressive materials 2-79598
 metal parts, magnetisation effect on interaction of rubbing surfaces (Russian) 2-77952
 PMMA thin films, time dependence effects in shear 2-67554
 point contact at heavy load, elastohydrodynamic lubrication 2-91339
 polyvinyl alcohol thin films, time dependence effects in shear 2-67554
 PVC cpds. fusion, lubricants effects, rheological obs. 2-81307
 rough surface lubrication, microcontinuum anal. 2-114738
 squeeze-film bearing, mean Reynolds eqn. in surface roughness 2-91344
 steel, C, lubricated wear transition 2-83239
 steel, wear mechanisms of boundary-lubricated surfaces 2-67561
 steel-steel and steel-glass, point contact at heavy load, elastohydrodynamic lubrication 2-91339
 supercooled liquids, viscosity meas. at high shear rates 2-82006
 surface films and metallurgy related to lubrication and wear 2-109902
 transition metal dichalcogenides, struct. rel. to lubrication performance 2-109901
 tribological behaviour of materials in contact with Na, O₂ effects 2-99566
 zinc stearate, solid lubricant, effect of pressing behaviour of atomised Fe powder 2-67245
 HPO₃, hydrated microdrop, normal-super liq. transform., SEM study 2-98258
 MoS₂ films, lubrication and failure mechanisms, substrate surface finish influence 2-110216
 MoS₂(Se₂)(Te₂), sputtered dichalcogenide layers, friction props. 2-72849
 NbSe₂, sputtered dichalcogenide layers, friction props. 2-72849
 TaSe₂, sputtered dichalcogenide layers, friction props. 2-72849
 TiB₂ coatings, electrodeposited, sliding wear props. 2-62236
 WS₂, sputtered dichalcogenide layers, friction props. 2-72849

Luder's bands

- steel, SAE 1015, flow props., from hardness test, Luders strain 2-80117
 steel, temper rolling metallurgical and mech. phenomena (French) 2-93545
 Fe, pure, H₂ effect on deform. and fracture microprocess (Chinese) 2-62188

Ludwig-Soret effect see diffusion in solids

luminescence see brightness

luminescence

see also cathodoluminescence; chemiluminescence; electroluminescence; fluorescence; fluorescent screens; ionoluminescence; luminescence of gases; luminescence of liquids and solutions; luminescence of solids; luminescent devices; phosphorescence; phosphors; photoluminescence; sonoluminescence; stimulated emission; superradiance; thermoluminescence; triboluminescence

luminescence continued

- analytical chemistry and applied spectroscopy, conf., Atlantic city, USA (March 1981) 2-112636
 anti-Stokes luminescence, diagonal density matrix 2-55100
 bacteria, cell-free extracts, biolum. 2-105677
 bacteria, luminescent, electron microscopic investig. of mol. struct. of luciferase 2-105645
 bioluminescence under ice in central Arctic in spring 2-78696
 excitons and luminescence, conf., Ezernieki, (May 1980) 2-84366
 marine dinoflagellate, laser-induced bioluminesc. 2-105755
 picosecond duration luminescent decay, meas. using three-pulse technique 2-95483
 quadratic vibrationally coupled systems, vibr. relaxation and hot luminesc. (Russian) 2-99187
 spectroscopy, refractive index correction 2-74506
 Ar-N₂, collisions with subexcitation electrons, thermalisation, recombination luminesc. 2-73004

luminescence chambers see scintillation chambers

luminescence of gases

- benzophenone, vapour, delayed luminesc., temp. effects 2-109455
 inert gases, secondary light emission by migrating electrons in weak elec. field 2-109453
 molecules, free, complex, spontaneous and stimulated emission, polarisation 2-81443
 shock front vel. determ. using photomultiplier 2-65755
 three-level systems, laser-excited fluoresc., saturation parameters 2-114966
 two-level systems, laser-excited fluoresc., saturation parameters 2-114966
 Ar, luminous layers in prebreakdown region at low press., Monte Carlo simulation 2-97702
 CO₂-N₂ mixture, vibr. relax., IR luminesc. kinetics obs. 2-75388
 He, luminous layers in prebreakdown region at low press., Monte Carlo simulation 2-97702
 Hg vapour, UV reservoir states quantum yield and lifetime, dimer form., luminesc. 2-113926
 Kr, luminous layers in prebreakdown region at low press., Monte Carlo simulation 2-97702
 Kr₂F⁺ luminescence, 420 nm range, as result of KrF₂ photolysis in KrF₂-CF₄-N₂(Ar, Kr) mixtures 2-80721
 Ne, luminous layers in prebreakdown region at low press., Monte Carlo simulation 2-97702
 UF₆ laser induced fluoresc. and absorpt., temp. controlled vacuum cell and two-stage pumping system 2-84637
 Xe gas excited by ²⁵²Cf fission fragments, recombination luminesc. time delay 2-90361
 Xe, luminous layers in prebreakdown region at low press., Monte Carlo simulation 2-97702

luminescence of inorganic solids

- alkali halide, activated, photostimulated luminesc. decay kinetics, radiation defects spatial distrib. (Russian) 2-82902
 alkali halide colour centre lasers, electrical pumping 2-102801
 alkali halide crystals, lyoluminescence, struct. and props. 2-99192
 alkali halide crystals, mechanoluminescence 2-104975
 alkali halides, activated, photoconductivity, thermoluminescence and TSC 2-82404
 alkali halides, radiative tunnelling transitions between defects, energies calc. 2-77587
 alkali iodides, free exciton luminesc. and sample depend. 2-116234
 alkali metal compounds, M₂(Pt(CN)₄)₂·yH₂O, quasi-one-dimens., luminesc., mag. field effects 2-82899
 alkali metal cpds., M₂[UO₂(MoO₄)₂], (M=Na, K, Rb), solid-phase synthesis, composition determ. 2-72618
 alkali metal halides 2-82297
 alkaline earth compounds, A₂BCl₁₀O₂₀ (A=Sr,Ba; B=Ti,Ge,Sn; C=Al,Ga), cryst. struct. and luminesc., neutron diffr. obs. 2-60935
 BS-12 glasses, Ag-activated luminesc. 2-116240
 chalcogenide glasses and amorphous semicond., at. defects, review 2-65869
 crystallophosphors, effect of impurities on luminescent props. 2-82890
 defect levels 2-115691
 diamond-N₂, structural imperfection annealing, struct. 2-81766
 diamond-N, ion implanted, cathodoluminescence of impurity-defect complexes 2-116276
 diamond-N, ion implanted, defect form., annealing and interactions, cathodoluminescence study 2-116277
 diamond, GR1 luminesc. band, Jahn-Teller effect and stress-induced dichroism 2-57147
 diamond, type Ia, cathodoluminescence from giant platelets and 2.526 eV vibronic system, plastic deform. effects 2-72561
 diamond, uniaxial stress splitting of photoluminescence transitions at optical centres 2-72537
 diamond, yellow-luminescing brown, optical meas. 2-72538
 europium tris-thenoyl-trifluoroacetate, luminesc. spectra, shifts and widths, temp. depend. 2-72551
 excited states of bound excitons, photolum. and magnetooptical spectroscopy 2-116238
 feldspars, X-ray irradi. defects, thermoluminesc. and optical absorpt. study 2-110958
 ferroelectric, charged impurity centre ionisation by polarisation reversal, luminescence 2-76986
 glass laser, fluorescence in small and large signal gain regimes 2-60200
 glasses, recombination luminescence, luminescence centres 2-87831
 halide crystals, mechanoluminescence 2-104975
 II-IV-V₂ semiconductor applications in optoelectronics (German) 2-116219
 II-VI semiconductors, optical props. of 3d transition metals 2-110286
 ionic crystals., luminescence and stimulated emission from colour centres 2-82893
 KI-Sn²⁺, polarised luminesc., nature of Sn²⁺-cation vacancy complex 2-57159
 luminescence, cross relax. optical detection 2-99180
 mechanoluminescence of crystals 2-104975
 naphthalene-d₈, phosphorescence, double exponential decay and noise levels 2-93248
 optical absorpt. and fluoresc. spectra, crystal field anal. 2-72525
 optical glass, optical properties 2-60198
 p⁺-n junctions, highly doped, injection symmetry 2-115868
 phenacite, fast neutron irradi., surface damage obs. 2-81830
 phosphor, luminescence kinetics examination in non-stationary X-ray field 2-64203

luminescence of inorganic solids continued

- phosphor powders, anal. using SEM cathodoluminescence 2-67126
 phosphors, diffusion-assisted luminescent processes, nonequilib. thermodynamics study 2-82914
 photoexcited carriers, time-resolved diffusion profiles, nonlinear luminesc. study 2-116221
 polynuclear uranyl fluoride complexes, luminesc. and vibr. spectra 2-99123
 pyromellitic N,N-dimethyldiimid-anthracene cryst. triplet exciton annihilation rate, fluorescence 2-71880
 quantum well heterostructure laser, carrier collection dynamics, Monte Carlo simulation and photoluminesc. study 2-114282
 quartz, natural, thermoluminesc., paramag. defects effects 2-77573
 quartz, shock-metamorphosed, defects study 2-115227
 quasi one-dimensional crystals M₂(Pt(CN)₄)₂·yH₂O where M=Mg²⁺, K⁺, Li⁺, Ba²⁺, Ca²⁺, Na⁺, luminesc., mag. field effects 2-82899
 rare gas solids, molecular excitons, structured emission 2-76935
 ruby:Cr³⁺, generation, detect. and reson. trapping of very high freq. acoustic phonons 2-93277
 ruby, electronic Raman transition and phosphorescence, zero phonon lines, pure dephasing 2-93251
 ruby, nonequilib. relax. phonon effects on luminescence 2-82886
 ruby, optical properties, high press. effects, theoretical studies 2-87739
 ruby, thermooxidation spectroscopy relaxation oscillator 2-82931
 semiconductor, III-V, band to band transitions, lifetime and probabilities, minority carrier lifetime 2-93253
 semiconductor, polar, direct-band, long-wave secondary radiation, temp. depend. 2-57173
 semiconductor lasers, effect of superluminesc. on modulation response 2-65214
 semiconductors, II-VI and III-V, luminescence of deep transition metal centres 2-57152
 semiconductors, momentum distrib. anisotropy of photoholes, hot luminescence polarisation role 2-67116
 sharp line donor-acceptor pair recombination luminesc. 2-104928
 silver sulphamides, cond., photocond., and luminesc. studies 2-77111
 siltals, thermal stability determ. by luminesc. defectoscopy 2-116671
 spot size effects in picosecond luminescence experiments 2-104953
 transition metals, recombination-emission spectra fine struct. 2-61963
 uranyl fluoride complexes, binuclear, vibr. and electronic spectra meas. 2-72488
 ZnSe:Li, p-type cond. 2-115925
 ZnTe-CdS thin film photovoltaic cells, optical and elec. props. meas. 2-116824
 Ag films, surface plasmons, light emission efficiency meas. 2-77151
 Ag particles, dye coated, absorption and luminescence, extinction cross section, particle size effects 2-77580
 Ag surface (111), NO scatt., laser induced fluorec. 2-99256
 AgBr photographic emulsion microcrystals, luminescence investigations of tunnel relocation of holes (*Russian*) 2-74560
 AgBr photographic emulsions, luminescence, photographic process 2-82888
 AgCl:Br⁻, pure and doped, band-gap-irrad., luminesc. centres, ODMR and level-anticrossing spectra 2-56980
 AgGaS₂, cathodoluminescence, excitonic luminesc. and edge emission obs. 2-72559
 Al, anodic oxide film, electrolum., interference effect 2-61983
 Al-Al₂O₃-Au(Cu)(Ag) tunnel junctions, electron energy loss function image in light emission 2-116267
 AlAs-GaAs superlattice, disorder by Si implantation, photolum. study 2-76465
 Al_{1-x}Cr_x(PO₃)₂:Cr³⁺ tunable IR solid-state laser material, spectroscopic and laser props. 2-108884
 AlGaAs laser diode, spontaneous and stimulated emission, picosecond. meas. 2-65216
 AlGaAs lasers, high injection region luminesc. decay and injected carrier lifetime 2-85962
 AlGaAs, undoped, MOCVD growth and charact. 2-98497
 AlGa_{1-x}As, metalorganic VPE grown, residual shallow acceptors, photoluminescence study 2-93245
 AlGa_{1-x}As, composition control and superlattice fabrication by pulsed MBE and photoluminesc. props. meas. 2-99342
 AlGa_{1-x}As epitaxial solid soln., graded band-gap, photolum. (*Russian*) 2-104965
 AlGa_{1-x}As p-n junction, double injection, electroluminescence 2-61981
 AlGa_{1-x}As:C(Si)(Ge)(Be)(Mg)(Zn), acceptor states, photoluminesc. study 2-104931
 p-AlGa_{1-x}As:Ge, LPE grown, photolum. spectrum 2-57143
 n-AlGa_{1-x}As:Te solid soln. LPE layers, carrier diffusion length, conc. depend., 77-300K (*Russian*) 2-56741
 AlGa_{1-x}As-GaAs interface, extrinsic layer, photolum. study 2-115576
 AlN epitaxial films, cathodoluminescence and optical absorption 2-99195
 AlN:Mn, luminesc. and EPR spectra 2-57174
 Al₂O₃ anodic oxide film thickness determ. by electrolum. method 2-110961
 α-Al₂O₃, corundum, neutron irradi. damage, review 2-115300
 Al₂O₃, emission centre form. by H₂O absorpt., photoluminescence study 2-110930
 Al₂O₃, sintered and fusion cast, and ruby and sapphire, fracture induced photon emission, appl. to fracture mechanics 2-93293
 γ-Al₂O₃, surface states, luminescence study 2-61955
 β'-Al₂O₃, thermolum. props. 2-93292
 Al₂O₃:Cr³⁺, heavily doped, fluorec. spectra and decay times 2-110925
 Al₂O₃:Cr³⁺, single-ion-pair fluorec. ratios and Anderson localisation 2-57176
 Al₂O₃:Fe and laser ruby:Fe, thermoluminescence props., Fe ions absence effects 2-110957
 β-Al₂O₃/La₂O₃:Eu³⁺, optical props., struct., dye laser site-selective excitation and X-ray diff. obs. 2-61959
 As₂O₃ crystals, crystalloluminescence and temporary mechanoluminescence 2-77594
 As₂S₃, amorphous, hot photoluminescence 2-93261
 As₂S₃, amorphous, photoluminescence decay 2-110906
 As₂S₃ and As₂S₄, optically induced localised states, photolum. and EPR 2-57164
 As₂S₃ chalcogenide glass, time resolved photoluminescence 2-116253
 As₂S₃, glassy and cryst., X-ray luminesc. and thermoluminesc. meas. 2-61993
 a-As₂S₃, obs. of mobility gap in photolum. 2-57166
 As₂Se₃:Ni glass films, photoluminesc. meas. 2-116259

luminescence of inorganic solids continued

- Au particles, dye coated, absorption and luminescence, extinction cross section, particle size effects 2-77580
 B₂O₃-K₂O-Ti₂O₃ (14, 1 mol.%) glass, Ti³⁺ centre interaction with laser radiation (*Russian*) 2-105009
 Ba(ClO₃)₂·H₂O, crystalloluminescence and mechanoluminescence spectra 2-110947
 BaF₂:Ho³⁺ single cryst., fluorec. and excitation spectra 2-61943
 BaGeO₃-Al₂O₃-CaF₂-MgF₂-Eu³⁺, glass, spectral-luminescence, IR and Raman study 2-72553
 Ba₂NaNb₅O₁₅, photoluminesc. spectra, theoretical interpretation 2-57175
 BaO-PbO-P₂O₅-Nd₂O₃, glass, separation of luminescence-quenching processes 2-104964
 Ba₃(PO₄)₂:Eu, lumiphosphors, luminescent processes 2-82891
 BaS:Bi phosphors, delocalisation of impurity-electron excitations 2-77574
 BaS:Cu, Er, phosphors, electroluminesc., spectral characteristics 2-67122
 BaS:Cu(Bi) phosphors, thermally stimulated conductivity 2-72006
 BaS-Bi phosphors, Na effect on luminescence 2-72543
 BaSO₄ phosphors, rare earth doped, thermolum. after γ and microwave irradi., dosimetry appl. 2-87877
 Ba₂Sr_{1-x}Nb₂O₆:Ce(Sr₂Nb₂O₇), photoluminescence, thermoluminescence and photocond. 2-110908
 BaTiO₃, deformed, light emission during pulsed repolarisation 2-72555
 BaTiO₃, thermoluminesc. and absorpt. spectra 2-93290
 BeF₃-NdF₃ based glasses, absorpt. and emission spectra of Nd³⁺, at. struct. computer simulation 2-57149
 Bi₂GeO₂₀, photoluminescence spectra, effects of annealing, Al doping, X-ray and γ-ray irradi. (*Russian*) 2-61936
 Bi₂Ge₂O₈, luminescence 2-87863
 Bi₃, deep level photoluminescence (*Russian*) 2-93153
 Bi₃, IR photoluminescence due to lattice defects (*Russian*) 2-93274
 Bi₃:Gd, ESR and photoluminesc. spectra 2-93000
 Bi₃:Gd, luminescence spectra (*Russian*) 2-61974
 Bi₂-La₂WO₆:Pr(Sm)(Eu)(Tb)(Dy)(Er), luminesc. props. 2-82900
 Bi₂SiO₂₀:Nd³⁺ single crystals, energy level spectroscopic study 2-67110
 C:H, amorphous, sidebands in luminesc. spectra 2-67111
 C:H, amorphous glow discharge film, photoluminescence and ESR spin density 2-93244
 (Ca,Zn)S phosphors, phosphorescence decay, trapping levels, luminescence processes 2-61942
 CaF₂ crystal, phonon focusing obs. by luminesc. phonon detector 2-61871
 CaF₂ films, thermoluminescence and thermally stimulated exoelectron emission, γ-ray irradi. effects 2-57191
 CaF₂, fluorite, thermoluminescence rel. to pretreatment history 2-72566
 CaF₂:Dy, gamma-irrad., laser heating in thermolum. dosimetry 2-104971
 CaF₂:Eu³⁺ crystal, scatt. of terahertz phonons, luminesc. detection and piezospectroscopic obs. 2-103926
 CaF₂:Eu³⁺ two photon luminescence excitation and freq. spectrum 2-110937
 CaF₂:Sm³⁺, acoustic phonon-impurity interaction, luminesc. study 2-93269
 CaF₂:Tb³⁺ single cryst., fluorec. spectrum 2-61945
 CaF₂:Tm, thermoluminesc. response characts. to X- and γ-rays, 2-hit traps 2-67127
 CaO, electron transfer between F-centres, luminescence, ODMR study 2-98999
 CaO:Cu electroluminesc., anal. of traps 2-82925
 CaO:Eu³⁺(Er³⁺(Pr³⁺)), site selective spectroscopy, UV and fluorec. study 2-110895
 CaO:Mg, neutron or electron irradi., circular polarised luminesc. from F- and F_A-centres 2-110915
 CaS phosphors, initial decay mechanism 2-61965
 CaS, prep., crystal growth by CVT and luminescence 2-116349
 CaS:Ag phosphors, decay characts. and thermoluminesc. 2-99166
 CaS:Bi excitation mech. of Bi³⁺ luminesc. centres, luminesc., TSC and photocond. meas. 2-67103
 CaS:Ce,Fe(Co)(Ni)(Cd), phosphors, luminescence emission and decay, quenching 2-77584
 CaS:Dy, phosphors, electroluminescence study 2-61978
 CaS:Eu,Sm, phosphor, luminesc., nanosecond IR laser stimulation, dosimeter appl. 2-57140
 CaS:Sm, phosphors, phosphorescence decay, trapping parameters 2-61941
 CaSO₄ phosphor, thermolum. and thermally stimulated exoelectron emission, SO₂ radicals role 2-77602
 CaSO₄, X-irrad., ESR of thermoluminesc. centres 2-66916
 CaSO₄:Dy, sensitised phosphor, and phosphor embedded teflon TLD discs, response to X- and γ-rays 2-67128
 CaSO₄:Dy³⁺, cathodoluminescence spectrum meas. 2-87875
 CaSO₄:Mn(Dy), gamma-irrad., laser heating in thermolum. dosimetry 2-104971
 CaSO₄:Tm, phosphor, thermolum., carrier capture during irradi. 2-104973
 CaSiO₃:Pb²⁺, phosphors, high press. phases, luminescence props., quenching 2-82903
 CaWO₄:Eu³⁺ and CaWO₄:BaWO₄:Eu²⁺ phosphors, luminesc. props. 2-57150
 Ca₃Y₂Ge₂O₁₂:Tb³⁺ garnet, luminescence studies 2-61952
 CdCr₂Se₄, ferromag. semicond., cathodoluminesc. study 2-87876
 CdCr₂Se₄, s-conduction band splitting, photoluminesc. study 2-87849
 CdF₂:Er, Yb, energy transfer, reson. effects 2-72549
 CdF₂:Eu, localised impurity excited states degenerate with cond. band, absorpt., cond., thermoluminesc., and ESR study 2-56473
 CdF₂:Eu³⁺, insulating, thermally stimulated relax. 2-67129
 CdGa₂S₄, cathodolum. obs. in spontaneous and stimulated regimes 2-116209
 CdGa₂S₄, electroabsorption, luminescence studies 2-61875
 Cd,Hg_{1-x}Te, photoluminescence 2-93278
 CdI₂, Auger interaction of donor-acceptor pairs with luminesc. centres, photoluminesc. and photocond. study 2-93270
 CdIn₂Se₄, photoluminescence spectra, radiative recombination 2-57165
 Cd_{1-x}Mn_xSe, exciton and phonon spectra, photoluminesc. and Raman scatt. study 2-110942
 Cd_{1-x}Mn_xTe, exciton luminescence spin splitting (*Russian*) 2-61976
 Cd_{1-x}Mn_xTe, semimag. semicond., photoluminescence band excitation spectra 2-82898
 CdMoO₄ crystal, photocond. and luminesc. 2-66591
 CdS, bixentrics, luminescence assisted two-photon spectroscopy study 2-76933
 CdS, excited states of bound excitons, photolum. and magnetooptical spectroscopy 2-116238

luminescence of inorganic solids continued

- CdS, exciton luminescence and electron-hole plasma near acoustic instability 2-87865
 CdS, green electrolum. and photolum. study 2-72558
 CdS, luminescence study of cooperative defect behaviour (*Russian*) 2-87853
 p-CdS, metastable states, photoluminescence 2-104425
 CdS, photoluminescence, effects of polishing etchant composition 2-93271
 CdS, piezoelec., US luminesc., freq. depend. meas. 2-61994
 CdS, radiative transitions between exciton sub-bands 2-99155
 CdS, recharge-enhanced transforms. of donor-acceptor pairs and clusters 2-61390
 CdS, recomb. radiation spectra of electron-hole plasma 2-116255
 CdS semiconductive single crystals, CdII line spectrum emission 2-82929
 CdS, solid particles, excitons, luminesc. and Raman excitation study 2-77570
 CdS, thermal neutron irradi., optical anisotropy of red luminesc. centres 2-93268
 CdS:Cu, Cl, sintered layers, absorpt. and photoluminescence spectra 2-110928
 CdS:Cu, electron irradi. prod. defects interaction with impurities, elec. and optical props. study 2-56035
 CdS:Cu, photochemically active IR centres, luminesc. and excitation spectra, polarisation characts. 2-61970
 CdS:Cu,Cl, point defect luminescence anal. (*Russian*) 2-87869
 CdS:Hg crystal, optical absorpt. and luminesc. (*Russian*) 2-104841
 CdS:V(Cr)(Co)(Ni)(Cu), excited state lifetimes, 4 to 300K, luminesc. study 2-57162
 CdS-Cu₂S solar cell, photovoltaic props., cathodolum. spectrum 2-116823
 CdS(Se):Ni²⁺, optical spectra, isotope splitting const. 2-57163
 CdS_{1-x}Se_x, epitaxial layers grown by H₂ transport from elements, photolum. props. 2-99172
 n-CdS,Se_{1-x} electrodes in photoelectrochem. cells, photoluminesc. and electroluminesc. props. meas. 2-93925
 CdS,Se_{1-x}, fluorescence line narrowing, localised exciton states, and spectral diffusion 2-82909
 CdSe, excitonic luminesc. spectra, surface elec. field effect 2-82919
 CdSe, ion implantation postrange defects, cathodoluminescence study 2-99196
 CdSe, luminescence from electron-hole plasma 2-87868
 CdSe, spot size effects in picosecond luminescence experiments 2-104953
 CdSnAs₂, melt-grown crystals, surface polarity effect on electrical props. 2-115852
 CdSn,Ge_{1-x}P₂ solid solns., photoactive absorpt. and radiative recomb. anisotropy 2-92690
 CdSnP₂, melt-grown crystals, surface polarity effect on electrical props. 2-115852
 CdTe, Ag diffused, degradation of elec. and optical props. 2-115751
 CdTe, defects evaluation using simple cathodolum. technique 2-77597
 CdTe, magnetoluminescence, electron and hole g-factors, Zeeman effect 2-99193
 CdTe, minority carrier diffusion length, cathodolum. intensity and decay time meas. 2-115776
 CdTe, shallow acceptors, photoluminesc. study 2-57172
 CdTe:Cu(Ag), acceptor levels, elec. and photoluminescence study 2-110296
 CdTe:In, MBE growth, effects of doping on electron conc. and photolum. 2-76846
 CdTe:Li, In, donor acceptor pairs, luminesc. excitation spectra 2-57154
 CdTe:Mn, bound exciton luminesc. spectra, giant spin splitting 2-93266
 CdTe:P, doped by ion implantation, cathodoluminesc. 2-67124
 CsBr(Cl):Ag⁺, far UV spectra, fluorescence and optical bleaching studies 2-110901
 CsCl, luminesc. above the phase-transition temp. 2-116242
 CsCl, piezoluminescence study 2-87870
 CsCl(Br), X-ray irradi., colloid form., optical props. 2-56030
 CsI:Na, tunnelling recomb. luminesc., time evolution 2-72550
 CsI:Na⁺, exciton-Na⁺ interactions, photoluminesc., ODMR and mag. circular pol. study 2-61366
 CsMg_{1/2}Sc(In)(Ce)(Gd)(Ho)(Er)(Tm) thermoluminescence and energy storage 2-99198
 CsMnCl₃(Br₃)(I₃), photoluminescence lifetime and intensity 2-110940
 CsMnCl₃2D₂O, hot magnon sideband in fluorescence spectrum 2-82918
 CsMnF₃, pure, exciton dynamics and energy transfer, fluorescence meas. 2-99171
 Cs₂NaBi_{1-x}Y_{1-x}Cl₆, optical centre conc. effects on electron lattice coupling, optical props. study 2-57151
 Cs₂NaErCl₆, fluorec. spectra and lifetimes 2-110922
 Cs₂NaYCl₆:Eu³⁺, optical emission spectra and cryst. field anal. 2-104934
 Cs₂NaYCl₆:Pr³⁺, optical emission spectra and cryst. field anal. 2-104935
 α-CsNd(PO₃)₂, struct. and luminesc. props. 2-65948
 CsNdP₂O₇, cryst. and glass, room temp. fluorec., laser material use 2-93240
 CuBr, excitonic mol. luminesc. at 4.2K, time depend. 2-67101
 CuBr-CuI system, physicochem. props. 2-111512
 CuCl, biexciton reson. linewidth, collision broadening or not? 2-87155
 CuCl, electron-hole plasma form. after subpicosec. photoexcitation 2-99175
 CuCl thin film, probe biexcitons, momentum space condensation, luminesc. study 2-61363
 CuGaS₄, luminesc. and refl. spectra of free excitons 2-104963
 CuI, single cryst., luminesc. study 2-67104
 CuI single crystals, exciton luminesc. 2-61964
 CuInS₂, photoluminescence, broad band emission, defect electron states 2-93249
 CuInS₂, photoluminescence, exciton and near edge emission, energy gap 2-93250
 Cu₂O 1.5 yellow exciton luminescence intensity temp. depend. 2-87858
 Cu₂O, relaxed excitons, optical and cyclotron reson. study 2-76938
 Dy³⁺ in different host matrices, luminesc. characts. 2-99173
 Er³⁺ impurity ions in fluoride host lattices, optical props. 2-93276
 Eu₂(MoO₄)₃, luminesc. and energy transfer 2-82901
 Fe complex, Fe(bipyridyl)₃²⁺ electronic struct. of metal-to-ligand CT states 2-92535
 GaAlAs:Zn, variable gap semicond., photon transport of carriers, photoluminescence study 2-116256
 Ga_{0.9}Al_{0.1}As, heterostructures, radiative recombination, efficiency and lifetimes 2-87833

luminescence of inorganic solids continued

- Ga_{1-x}Al_xAs heterostructure diodes, laser irradi., electroluminescence emission 2-82926
 Ga_{1-x}Al_xAs, radiative decay rate: exponential distrib. 2-77583
 Ga_{1-x}Al_xAs:Si, Ge, LPE growth and doping, elec. and photolum. props. 2-116393
 Ga_{1-x}Al_xAs:Si, LPE layers, photon recycling, photoluminescence study 2-82897
 Ga_{1-x}Al_xAs-GaAs double heterostruc., laser annealed, electrolum. device performance 2-55158
 Ga_{1-x}Al_xSb, LPE layers, photolum. study, cond. band minimum determ. 2-98540
 GaAs, 1-D photoluminescence distrib. 2-77567
 GaAs, bulk semi-insulating, quenching effect of luminesc. 2-87862
 GaAs, deep acceptor at 77 MeV, photoluminesc. study 2-57145
 GaAs, doped superlattices, quasi-two-dimensional photoexcited carriers 2-110433
 GaAs, electron irradi., luminescence of deep radiative centres obs. 2-57187
 GaAs, epitaxial film growth on amorphous substrate, CLEFT process, TEM and cathodoluminescence study 2-77749
 GaAs epitaxial layers, MBE and LPE, luminesc. props. 2-72564
 GaAs, epitaxial layers, biexcitons in quantum wells 2-92479
 GaAs, heat treated in H₂-Ar₂, surface thermal decomposition, photoluminesc. study 2-62246
 GaAs, heterostructures, radiative recombination, efficiency and lifetimes 2-87833
 GaAs, high purity, electron-phonon coupling associated with BA and DA transitions (*Chinese*) 2-93239
 GaAs, high purity, grown by MBE, characterisation 2-56613
 GaAs, hot photogenerated carriers, slow picosecond kinetics 2-61517
 GaAs, ion-plasma treatment influence on structural and recomb. characts. (*Russian*) 2-66079
 GaAs, LEC grown, photoluminescence, deep acceptor levels 2-99191
 GaAs, LEC growth, donor impurities, photoluminescence evaluation 2-116230
 GaAs LPE layers, high-purity, residual impurity photoluminesc. studies 2-99164
 GaAs, n-i-p-i cryst., photoexcited electrons quantisation, photoluminesc. and light scatt. study 2-61576
 GaAs n-i-p-i superlattices, electron-hole recomb. across tunable effective gap, photoluminesc. study 2-99182
 GaAs, p-n homojunction LEDs, emission spectra calc., ghost peak form. 2-61980
 p-GaAs, photoluminescence, time resolved, by population mixing 2-57138
 GaAs, photoluminescence, elec. field effects, excitons and polaritons 2-99177
 GaAs, plasma etching by tetrachloromethane, kinetic study by nonperturbative optical techniques 2-116565
 GaAs, polycrystalline, scanning cathodolum. microscopy 2-71313
 GaAs, probability of cond. band-acceptor optical transitions 2-116254
 p-GaAs, quantum wells, bound excitons, photoluminescence 2-104956
 GaAs, radiative recomb. and light absorpt., dislocations effect 2-104962
 GaAs, semi-insulating, anti-Stokes luminesc. and deep centre EL2, expt. study 2-87830
 GaAs, semi-insulating LEC, deep level nonuniformity distrib., photolum. spectroscopy 2-76964
 GaAs:Be, MBE layers, photoluminescence, excitonic features 2-116229
 GaAs:Be MBE layers, photoluminescence, bound exciton lines 2-116228
 GaAs:C(Ge) VPE layers, impurity characterisation, photoluminesc. study 2-93264
 GaAs:Cr, deep level optical spectroscopy 2-71902
 GaAs:Cr, deep level photoluminescence, vacancies and annealing 2-99190
 GaAs:Cr, photoluminescence, Cr diffusion 2-99184
 GaAs:Cu, electron irradi., photoluminescence 2-61967
 p-GaAs:Cu, electron irradi., photoluminescence 2-87851
 GaAs:Cu, luminescence, deep centres in bound exciton form. 2-104960
 GaAs:Cu, recombination radiation band, piezospectroscopic study 2-77588
 GaAs:O, deep electron traps, elec. and optical props. 2-98585
 GaAs:Se, ion implanted, carrier props. and photolum. meas. (*Korean*) 2-56585
 GaAs:Si, disordered, optical detection of multiple trapping relax. 2-72005
 GaAs:Si, highly doped, MOVPE grown, photolum., SIMS and Hall meas. 2-77568
 GaAs:Si, ion implantation, elec. props., for dual gate MESFET (*Chinese*) 2-109817
 GaAs:Si LPE layer, photolum. and carrier conc. (*Russian*) 2-99174
 GaAs:Si quantum well, degenerately doped, stimulated emission, luminescence 2-65215
 GaAs:Si(Be) artificial doping superlattices, MBE growth, elec. and optical props. 2-92735
 GaAs:Sn LPE layer, deep level free-to-bound fluorescence line shapes 2-77564
 GaAs:Te, Cu contamination during heat treatment, photolum. study 2-91993
 GaAs:Te, MBE grown, elec. cond. and photoluminesc. props. meas. 2-56734
 GaAs:V, photoluminesc., optical absorpt., and ESR study 2-82916
 GaAs:Zn, Cd, hot photoluminescence spectrum and polarisation 2-82894
 GaAs-Al_{1-x}Ga_xAs heterostructure, cyclotron and plasmon emission from two-dimens. electrons 2-61770
 GaAs-Al_{1-x}Ga_xAs quantum well structs., extrinsic photoluminesc. 2-82912
 GaAs-AlAs p-n structs., electroluminescence, nonradiative recombination current meas. 2-82450
 GaAs-AlAs p-n structs., voltage relax. and electrolum. intensity 2-92741
 GaAs-Ga_{1-x}Al_xAs DH laser, deep level luminescence spectra (*Chinese*) 2-65217
 GaAs-Ga_{1-x}Al_xAs double heterojunction laser, deep level luminesc. 2-102790
 GaAs-Ga_{1-x}Al_xAs multiple quantum well struct., band edge absorpt. and gain spectra after short pulse excitation 2-62003
 GaAs-Ga_{1-x}Al_xAs:H multiple quantum wells, impurity photoluminescence 2-104955
 GaAs-ZnSe heterostructure, photosensitivity spectra and luminesc. 2-92691
 GaSi_{1-x}, solid soln., photoluminesc. obs. for X<0.01 2-61972
 GaSi(Ge), MBE grown, deep levels and photoluminesc., MBE As₂/As₄ flux ratio effects 2-99341
 GaSi_{1-x}P_xN, temp. depend. of luminescence intensity 2-82930

luminescence of inorganic solids continued

- GaAs_{1-x}P_x GaP strain-layer superlattice, MOCVD growth and photoluminesc. props. 2-98729
 GaAs_{1-x}P_x GaP strained-layer superlattice, MOCVD growth and photoluminesc. props. 2-110919
 GaAs_{1-x}Sb_x LPE layer, carrier mobility and photolum., composition depend. 2-77214
 GaInAs epitaxial layer device type structures, defects 2-71461
 GaInAsP epitaxial layer device type structures, defects 2-71461
 Ga_{0.9}In_{0.1}As_{0.9}P_{0.1} heterostructures, radiative recombination, efficiency and lifetimes 2-87833
 Ga_{1-x}In_xAs_{1-y}P_y LED, spontaneous emission efficiency and nonradiative recombination meas. at 1.58 µm 2-116220
 GaN epitaxial layer, optimized growth conditions 2-66391
 GaN epitaxial layers, highly excited, photolum. and gain spectroscopy 2-77561
 GaN heteroepitaxial layer, growth and doping kinetics, cathode luminesc., elec. props. 2-104185
 GaP, Cu related 2.177 eV band exciton, photoluminesc. study 2-110917
 GaP LED, deep level, luminesc. study 2-110949
 GaP, ODMR study of F₀ antisig. defect 2-98573
 GaP/Cu, photoluminescence and impurity states 2-104947
 GaP/Cu, photoluminescence, excitons 2-116249
 GaP/Mg, LPE growth, minority carrier lifetime, photoluminescence study 2-82488
 GaP/N, luminescence spectra undulations 2-104950
 GaP/N, photoluminescence time decay temp. depend. 2-93258
 GaP/N, Te VPE layer, minority carrier lifetime, dislocations influence 2-115920
 GaP/N,Te, epitaxial layers, photoluminescence study 2-61968
 GaP/N epitaxial films, excitation transfer mechanism to NN₁ complexes 2-77589
 GaP/N LED, yellow sideband radiation increases during ageing 2-116261
 GaP/Nd(Sm)(Eu)(Yb) epitaxial films, photoluminesc., effect of γ-irrad. 2-93267
 GaPO, recombination radiation of exciton bound to Zn-O complex 2-104959
 GaP-V, photoluminesc., optical absorpt., and ESR study 2-82916
 GaP-Zn, O, photoinduced Zn, O dissociation, photoluminescence 2-87859
 GaS(Se), uniaxially deformed, absorpt. and photoluminesc. spectra, energy bands 2-67081
 GaSb-AlSb superlattices, MBE growth, photoluminescence 2-99188
 GaSe, intercalated, low temp. reflection spectra and photoluminesc., exciton characts. (Russian) 2-67112
 GaSe, region of existence of excitonic molecules (Russian) 2-76941
 GaSe, struct. phase transition, exciton refl. and photoluminesc. spectra 2-103985
 GaSe:Ni(Fe)(Cr), luminescence spectra, absorption edge, struct. defects (Russian) 2-93273
 GaSe-anthracene (Na) intercalation cpds., ESR, photocond., and optical meas. 2-77367
 GaTe, electrical and optical props. (Russian) 2-57189
 GdAlO₃:Cr³⁺ fluorosc. spectrum, splitting and line shape 2-93262
 GdAlO₃:Cr³⁺, optical props. meas. in paramag., antiferromag. phases 2-93275
 GdF₃:CaF₂:Nd³⁺ trigonal crystals, disordered, spectroscopy and laser emission 2-82905
 Gd₂Ga₂O₇:Nd³⁺ garnet films prep. by LPE, crystallographic and optical characterisation, laser appls. 2-83044
 β'-Gd₂(MoO₄)₃ luminesc. and energy transfer 2-82901
 Gd₂MoO₇:Eu³⁺ spectroscopic props. 2-93254
 GdOBr:Eu³⁺, cryst. field effects, fluorosc. study 2-66503
 GdOCl:Ti³⁺, Stark level, cryst. field anal., fluorosc. study 2-66504
 Ge, electron-hole drop evaporation by laser heating (Russian) 2-104256
 Ge, electron-hole liquid phonon spectroscopy 2-115667
 Ge, exciton and electron-hole liq. luminescence, elec. cond. 2-77578
 Ge, luminescence of electron-hole drops, hysteresis, exciton gas-liquid transition 2-82895
 Ge, strain confined electron-hole liquid, density variations and compressibility 2-110262
 Ge, uniaxially stressed, electron-hole liquid props. 2-104259
 Ge:As, bound-exciton luminesc. polarisation in longit. mag. field 2-87864
 Ge:As(P), luminescence study of nonequilibrium charge carriers (Russian) 2-104945
 GeSe₂(Ge₂Se₃), glassy, photoluminesc. obs. 2-61973
 GeSe, glass, thin films, and crystals, thermal quenching of photoluminesc. 2-87848
 Ge_{0.1}Se_{0.95}:In(Cu)(Fe) glasses, photoluminesc. and excitation spectra 2-93263
 Ge₂Si₂:In, photoluminescence, exciton recombination 2-87857
 p-Hg_{1-x}Cd_xTe, nonradiative recomb. at deep impurity levels 2-92527
 Hg_{1-x}Cd_xTe, photoluminescence spectrum meas. 2-87844
 HgI₂, photoluminescence, 4.2 to 77K 2-57158
 In film, coated with phthalocyanine mols., luminesc. and transmittance meas. 2-85731
 InAs_{1-x}Sb_xP_y epitaxial films, photoluminesc. and optical transmission 2-93303
 In_{1-x-y}Ga_xAl_yAs lattice matched to InP, band-gap energy and electron effective mass, comp. depend. 2-115650
 InGaAs MBE layers, energy gap calc. using Phillips Van Vechten dielec. model, photoluminesc. 2-61939
 InGaAs:Te, VPE growth for photodetectors 2-111086
 p-In_{0.5}Ga_{0.47}As film, high field transport characts. of minority electrons and photolum. meas. 2-98699
 p-In_{0.5}Ga_{0.47}As, hot-carrier relax. 2-57141
 In_{0.3}Ga_{0.7}As-InP undoped VPE layers, photoluminesc. meas. 2-99167
 In_{0.7}Ga_{0.3}As_{0.1}As, lattice-mismatched MBE growth on InP 2-57296
 InGaAsP LPE on InP, growth temp. and impurity doping effect on comp. 2-98482
 InGaAsP relationship between struct. and props. 2-71486
 InGaAsP:Zn(Cd), acceptor impurities, photoluminescence study 2-99189
 InGaAsP/InP DH, photolum. intensity 2-87881
 InGaAsP/InP misfit dislocations, photoluminescence, TEM and etching study 2-98109
 InGaAsP-InP DH LED, aged, dark defects 2-91974
 InGaAsP-InP heterostructure, luminescence method of determ. elastic stresses 2-104957
 In_{0.48}Ga_{0.52}As_{0.01}P_{0.99} lattice matched to GaAs, LPE from In melt rich in P, photoluminesc. obs. 2-88008
 In_{1-x}Ga_xAs_{1-y}P_y-InP LPE layers, strain anal. and optical props. meas. 2-66392

luminescence of inorganic solids continued

- p-In_{0.5}Ga_{0.47}As_{0.01}P_{0.99}-Mn epitaxial layers, doping characts., elec. and luminesc. props. 2-76866
 In_{1-x}Ga_xP:Te(Se)(Cd)(Zn)(Si)(O), epitaxial film, photo-, electro- and cathodoluminescence involving deep levels 2-116258
 In_{1-x}Ga_xP:Zn, photoluminesc., 0.6 < x < 1.0 2-57148
 InGaPAs_{0.01}Zn(Te)(Se) LPE layer on GaAs, doping effect on physical, elec. and optical props. 2-110501
 InP, annealing encapsulants, photoluminesc. study 2-116585
 InP, high quality, MBE growth 2-116367
 p-InP junctions, LPE grown, abnormalities in elec. and optical characts. 2-98738
 InP, photoluminescence of synthesis-solute-diffusion and LEC grown cryst. 2-93259
 InP, plasma etching by tetrachloromethane, kinetic study by nonperturbative optical techniques 2-116565
 InP relationship between struct. and props. 2-71486
 p-InP Schottky diodes, photoluminesc. dead layer 2-104932
 InP, single crystals, liq. encapsulated Czochralski grown, photolum. and IR absorption 2-57144
 InP:Cd, VPE growth and photolum. characterisation 2-88002
 InP:Co, deep levels, elec. and optical meas. 2-76971
 InP:Fe, Be (He⁺) ion implanted, semi-insulating, photoluminesc. meas. 2-99168
 InP:Fe(Cr), photocurrent instability, temp. depend. meas., temp. meas. system appl. 2-58824
 InP:Mg VPE layers, implanted and unimplanted, near-edge emission 2-57157
 InP:Mn(Fe) and undoped, deep level photolum. study 2-104930
 InP:Te, VPE growth for photodetectors 2-111086
 InP:Yb, impurity electron state, ESR, photoluminescence and mag. susceptibility study 2-104307
 InP:Zn(C)(Mg) epitaxial layers, shallow acceptor excited states, luminesc. study 2-57156
 InP-InGaAsP DH with 40% external luminesc. quantum efficiency 2-77591
 InP-InGaAsP-InP DH wafer, LPE grown, misfit dislocations 2-98096
 InSb, electron stimulated IR luminesc., HF modulation interferometric obs. 2-116271
 InSb(As), subband reson., nonparabolicity parallel excitation mechanism and doublet peak problem 2-61863
 InSe, layered semicond., photoluminesc. study 2-99170
 InSe, stimulated photoluminescence 2-67113
 InSe, uniaxially deformed, absorpt. and photoluminesc. spectra, energy bands 2-67081
 p-InSe:Zn, annealing behaviour, photoluminesc. study 2-92276
 n-In₂-Sn₂O₃-γ-InP photo and electroluminesc. diode 2-61571
 KBr, F-centers, relaxed excited state, spin-lattice relax., luminescence study 2-87572
 KBr, intrinsic luminescence under H⁺ and He⁺ ion bombardments 2-67123
 KBr:Eu, with Z-centres, narrowband IR luminesc. and absorpt. spectra obs. 2-116245
 KBr:In⁺, band luminescence, two-photon spectroscopy 2-110939
 KBr:Na, fluorescence restoration from lowest singlet state in self-trapped exciton 2-67100
 KBr:Na, thermo- and photostimulated recomb. of defects, spectra studies 2-110959
 KBr:Sn²⁺, emission spectra 2-87845
 KBr:Ti, visible emission intensity study 2-87846
 KBr:Ti³⁺, X-ray irradi. induced defects, optical and TSC meas. 2-81825
 KCaR(PO₄), R=rare earth, Nd³⁺, Eu³⁺ and Gd³⁺ local struct., probes, luminescence study 2-103715
 KCl crystal, energy parameters for F₂(II) centres and F₂(II) like defects, radiative transitions 2-93257
 KCl crystals, γ- and X-irradiated, dislocation models of mechanoluminescence 2-77595
 KCl, F-centre excitation, reson. Raman scatt. study 2-116232
 KCl, piezoluminescence study 2-87870
 KCl, sequential C⁺ and N⁺ implantation, CN⁻ radical formation, ionolum. study 2-81802
 KCl:Ca(Sr)(Eu), with Z-centres, narrowband IR luminesc. and absorpt. spectra obs. 2-116245
 KCl:Eu, F-centre colouring 2-109791
 KCl:Eu²⁺, γ-irrad., optical, EPR, and ITC meas. 2-109831
 KCl:Eu²⁺, X-irrad., luminesc. and cond. props., elec. field effects (French) 2-116262
 KCl:Na, fluorescence restoration from lowest singlet state in self-trapped exciton 2-67100
 KCl:O₂⁻, superadditive and high-gain mirrorless laser activity 2-87820
 KCl:Pb, precipitation behaviour, luminescence and UV spectra study 2-115418
 KCl:Pb, radiation kinetics during intense excitation in A absorpt. band 2-110932
 KCl:PbCl₂, X-ray irradi. V_F centres, optical production, thermoluminescence, ESR and light absorption study 2-57194
 KCl:SnCl₂, thermoluminescence on γ-irrad. 2-61992
 KCl:Sr, interstitial centres and thermoluminescence 2-72565
 KCl:Ti, visible emission intensity study 2-87846
 KI, intrinsic luminescence under H⁺ and He⁺ ion bombardments 2-67123
 KI, recombination luminescence of thermally stable H-centres (Russian) 2-104939
 KI:In³⁺(Ti³⁺), photoluminescence, quantum yield, ionisation of In and Ti (Russian) 2-104937
 KI:Li⁺, F and M centres, luminescence and absorption spectra 2-67115
 KI:Sn²⁺, luminesc. kinetics and radiative decay times 2-67093
 KI:Ti, activator luminescence, complex excitation spectra shape (Russian) 2-104936
 KI:Ti, decay and polarisation of luminesc. pulses in 336 nm emission band 2-77560
 KI:Ti³⁺, A_X and A_T emissions double struct., photoluminescence study 2-77577
 KI:Ti(In), photoluminescence, exciton-Ti³⁺ and -In³⁺ interactions (Russian) 2-104938
 KMnF₃, antiferromag., photoluminesc. study (Russian) 2-61940
 KNO₃:NO₂⁻, absorpt., excitation and luminesc. spectra 2-72544
 KNaSe₂:Cr₂F₂Cr³⁺ tunable IR solid-state laser material, spectroscopic and laser props. 2-108884
 Knd(PO₃)₃, struct., synthesis and optical props. 2-81765
 K₂O-B₂O₃:Ti³⁺ glass, luminesc. study 2-67105

luminescence of inorganic solids continued

- K₂Pt(CN)₄·K₂Pt(CN)₄ cryst., laser excited luminesc. and absorpt. study of mixed valence 2-71932
- K₂PtCl₆, two-photon excitation spectra in range 680-950 nm 2-57142
- 2 K₂SO₄·Na₂SO₄, crystalloluminescence and mechanoluminescence spectra 2-110947
- K₂SnCl₆·Os(IV), power luminesc. spectra and electronic levels 2-77585
- LaF₃:Er³⁺, 0.2 THz phonon stimulated emission, luminescence study 2-81906
- LaF₃:Gd³⁺ two-photon absorption lines, selection rule violation, anisotropy and anomalous intensity 2-77555
- LaF₃:Pr³⁺, fluoresc. quenching by cross relax. 2-82917
- LaF₃:Pr³⁺, interaction strength of weakly coupled pairs measured by a two laser spectroscopy technique 2-82881
- LaF₃:Pr³⁺, phonons created by quenching process, direct detection 2-71595
- LaF₃:Pr³⁺ single cryst., fluoresc. line 2-61944
- LaF₃:R³⁺, R³⁺ where R=Nd, Dy, fluoresc. obs., decay time meas. 2-110914
- La₂MoO₈:Eu²⁺, spectroscopic props. 2-93254
- LaOBr:Tb, effect of Tb and rare earth impurities (*Chinese*) 2-72530
- LaOBr:Tb phosphors, two-stage excitation of phosphorescence 2-110945
- LaOBr(l):Eu²⁺, cryst. field effects, fluoresc. study 2-66503
- (LaO)₂CO₃, type Ia and II polymorphs, Eu doped, site selective excitation of fluorescence 2-116226
- LaOCl:Tb³⁺, Stark level, cryst. field anal., fluoresc. study 2-66504
- La₂O₃ films, RF sputtered, luminescent, high purity deposition 2-93423
- La_{1-x}Pr_xF₃, inhomogeneous broadening, time resolved fluoresc. meas. 2-116251
- β-La₂S₃:Nd, Ce, efficient energy transfer from band excitation to Nd³⁺ 2-67102
- La_{1-x}Tb_xPO₄:Tb³⁺, strong self quenching of Tb³⁺ in stoichiometric materials 2-72542
- Li₂B₂O₇, gamma-irrad., laser heating in thermolum. dosimetry 2-104971
- Li₂B₂O₇:Cu, thermoluminesc. phosphor, radiation dosimetry characts. expts. 2-113755
- Li₂B₂O₇:Cu thermoluminescent phosphor, dosimetry characts. 2-59556
- Li₂B₂O₇:Mn, Cu, suitability of different props. for medical dosimetry 2-100129
- LiCl:Cu⁺ (Ag⁺), luminesc. props. and impurity electronic struct. 2-57161
- LiF (TLD-100) phosphor, thermoluminesc. sensitivity, irrad. temp. dependence 2-116281
- LiF and ⁶LiF TLD polycryst., SEM obs. of neutron irrad. damage, surface defects, TL and response and recovery 2-115298
- LiF crystals, X-ray luminesc. obs. of F-aggregate colour centres 2-110931
- LiF films, thermoluminescence and thermally stimulated exoelectron emission, γ-ray irrad. effects 2-57191
- LiF lasers based on F₂ centres, lasing action, luminescence 2-80972
- LiF, lasing action and spectra of M-centres 2-75580
- LiF, optical radiation from photon-stimulated desorption of excited atoms 2-110934
- LiF TLD dosimetric characts. 2-64693
- LiF, TLD-100, thermoluminescence, order of kinetics 2-61990
- LiF TLD-100 phosphor, sensitisation and supralinearity, Z-centres and nonluminescent centres role, expt. study 2-99197
- LiF, thermoluminesc. review, radiation dosimetry appl. 2-77600
- LiF:Mg, TLD-100, thermoluminesc. meas., clustering and precip. effects 2-93291
- LiF:Mg, Ti, gamma-irrad., laser heating in thermolum. dosimetry 2-104971
- LiF:Mg, Ti, thermoluminesc., Z-centre model 2-57195
- LiF:Mg, Ti, thermoluminescence sensitivity optimisation method 2-104972
- LiF:Mg:OH crystals, gamma-irrad. new emission centres 2-116248
- LiF:Mg(Cn)(P), phosphor, thermolum., carrier capture during irrad. 2-104973
- LiF:U, fluoresc. and MCD spectra 2-57160
- LiGa₂O₈:Cr³⁺ luminescence and absorpt. spectra 2-82908
- LiH, crystal with self-trapping excitons, exciton luminesc. and multiphonon Raman spectrum 2-82922
- LiH, X-ray irradiated, thermolum., TSC and F centre annealing at low temps. 2-116278
- LiLaPO₄:Ce³⁺ (Eu³⁺) (Tb³⁺) (Bi³⁺), luminescence of broad band emitters, concentration quenching 2-77575
- LiLaSm-phosphate glass:Sm²⁺, luminesc. selective laser excitation study 2-67109
- LiNbO₃, luminesc. excitation by piezoelec. prod. ultrasound 2-82932
- LiNd(PO₄)₃, weak fluorescence quenching 2-77559
- Li₂O·P₂O₅:UO₂²⁺ glass, energy levels, absorpt. and fluoresc. study 2-77565
- Li₂WO₄:U phosphors, spectral props. 2-77545
- LiOBr(Cl):Tb(Tm)(Ce)(Sm)(Dy) phosphor, photoluminesc. and cathodoluminesc. props. meas. 2-116231
- LuPO₄:Nd³⁺, Eu³⁺, optical spectra, crystal field interactions 2-67074
- LuPO₄:Pr³⁺ (Nd³⁺), IR spectra, Zeeman effect and fluoresc. obs. 2-72522
- MgAl₂O₄, spinel, γ- and X-irrad., defect trap levels TSC and thermoluminesc. study 2-56608
- MgB₂O₄, thermoluminesc. props., sensitivity and fading characts. 2-61985
- MgO, additively coloured, photoluminescence, mag. circular polarisation and ODMR study 2-61948
- MgO, cathodoluminesc., electron beam effect meas. 2-110951
- MgO, cathodoluminesc. emission in SEM 2-110954
- MgO crystal, cathodolum., from dislocations, purity influence 2-77599
- MgO, emission centre form. by H₂O absorpt., photoluminescence study 2-110930
- MgO, plastic deform., cathodoluminescence and photoluminesc. of slip bands, SEM study 2-67125
- MgO single cryst., cathodolum., from cutting damage 2-93286
- MgO, thermochemically reduced, phosphoresc., role of H⁺ ions 2-72546
- MgO, thermoluminescent mechanisms involving transition metal ion impurities and V-type centres under UV irrad. 2-116279
- Mg₂SiO₄:Tb, phosphor, thermolum., carrier capture during irrad. 2-104973
- Mn complex, Mn(bromotriphenylphosphoric oxide), photo-, mechano- and electroluminescence 2-93294
- NbBr:Ti, phosphor, complex ion centres 2-61977
- NbBr:Ti phosphors, pretreated, dimer centres 2-61937

luminescence of inorganic solids continued

- NaCl, cryst., triboluminesc., localisation and spectral composition 2-116283
- NaCl crystals, γ- and X-irradiated, dislocation models of mechanoluminescence 2-77595
- NaCl, intrinsic luminescence under H⁺ and He⁺ ion bombardments 2-67123
- NaCl lasers based on F₂ centres, lasing action, luminescence 2-80972
- NaCl, optical radiation from photon-stimulated desorption of excited atoms 2-110934
- NaCl, piezoluminescence study 2-87870
- NaCl:Cu⁺ (Ag⁺), luminesc. props. and impurity electronic struct. 2-57161
- NaCl:Mn, γ and X-ray irrad. charge compensation thermoluminescence and optical absorption spectra 2-61988
- NaCl:Pb, Mn, excitation and emission spectra 2-104952
- NaCl:Pb, precipitation behaviour, luminescence and UV spectra study 2-115418
- NaCl:Pb²⁺, luminescent centre symmetry, photoluminescence meas. 2-57168
- NaCl:Sm, thermolum. and optical absorption studies of Zr centres 2-72568
- NaCl:Sr, Pb²⁺, luminescence and absorpt. spectra 2-72547
- NaCl:Sr, UV light irrad., thermoluminesc. study 2-57197
- NaCl:Sr, X-irrad., thermoluminesc. study 2-57196
- NaCl:Sr(Ca)(Cd), Pb, clustering processes, use of Pb²⁺ as optical probe 2-57131
- NaCl:Ti(In), luminescence obs. at high press. 2-72533
- NaCl:Ti(Tl) prep., beta-radiation thermolum. dosimetry 2-102272
- NaCl-KCl powder, thermoluminescence study of colour centre isothermal stability 2-72567
- NaCl-KCl thermoluminesc., narrow glow peak obs. 2-104974
- NaF Harshaw crystals, thermoluminesc. γ-ray induced sensitization obs. 2-87878
- NaF Harshaw single crystals, γ-ray irrad., thermoluminescence, relationship to colour centres 2-61991
- NaF lasers based on F₂ centres, lasing action, luminescence 2-80972
- NaF:Ca²⁺, γ-ray irrad., colour centres and interstitials, luminesc. spectra 2-110960
- NaF:Ce³⁺, F-centres, luminescence and optical study 2-77601
- NaF:Cu⁺, single cryst., UV absorpt. and fluoresc. study 2-67084
- NaF:U, fluoresc. and MCD spectra 2-57160
- NaF:U, luminesc., EPR of U³⁺ 2-110918
- NaI crystal with self-trapping excitons, exciton luminesc. and multiphonon Raman spectrum 2-82922
- NaI, excitation spectra of exciton luminescence, hot exciton effects 2-66457
- NaI(Tl), phosphorescence generated by betatron bremsstrahlung 2-67095
- Na₂La_{2-x}Tb_x(PO₄)₃:Tb³⁺, strong self quenching of Tb³⁺ in stoichiometric materials 2-72542
- NaNO₂, phosphoresc. to fluoresc. quantum yield, energy depend. intersystem crossing and vibr. relax. 2-72536
- NaNO₂:NO₂⁻, luminescence spectrum fine struct. 2-87841
- Na₂O-CaO-SiO₂ glass:Cu,Cr,Er, energy transfer from Cu and Cr to Er 2-99176
- Na₂O-CaO-SiO₂:UO₂²⁺ glass, energy levels, absorpt. and fluoresc. study 2-77565
- Na₂Sr_{3-x}R_x(PO₄)₃, R=La to Tb, Nd³⁺, Eu³⁺ and Gd³⁺ local struct., probes, luminescence study 2-103715
- Nd³⁺:phosphate glass, ⁴I_{9/2} state, Stark struct. meas. under selective laser excitation 2-87867
- NdP₂O₁₄ and NdNa(WO₄)₂, radiation quenching, cross relax. and excitonic behaviour 2-93247
- Ne, crystalline, self-localised luminesc. spectrum, fine struct. (*Russian*) 2-116227
- Ni (110) surface, outer-shell electronic processes in Ne⁺ collisions 2-77665
- Ni film, CO adsorption, IR luminesc. under ultrahigh vacuum 2-93281
- Ni, photon emission from sputtered atoms as function of phase transition 2-77596
- Ni, UV isochromat spectra, k-conservation effect 2-72562
- Ni²⁺ impurity ions in fluoride host lattices, optical props. 2-93276
- (Ni_{0.4}Zn_{0.6})Fe₂O₄ ferrite, switching and surface line emission spectrum obs. under pulse voltage 2-115831
- O₂ absorption on porous glass, bimolecular radiative processes, luminescence and Raman scatt. 2-82913
- Os complex, (Os(bpy))₂²⁺, symmetry reduction in excited states, photoselection data 2-93241
- Os complex, Os(bipyridyl)₂²⁺ electronic struct. of metal-to-ligand CT states 2-92535
- P, amorphous, radiative, triplet luminescence and metastable states, ODMR study 2-93265
- Pb, photon emission from sputtered atoms as function of phase transition 2-77596
- Pb₂GeGa₁₀O₂₀ cryst. struct. and luminesc., neutron diffr. obs. 2-60935
- Pb₂GeO₁₁:Nd³⁺, cryst. growth and spectroscopic props. 2-99178
- PbI₂, intercalation compounds with org. donor mols., charge transfer and luminesc. (*Russian*) 2-61975
- PbI₂, polariton radiation and relaxation (*Russian*) 2-92487
- PbI₂, secondary radiation and reflection spectra, polaritons and excitons (*Russian*) 2-92486
- PbI₂:Ga(In), exciton spectra, refl. and photoluminesc. spectra 2-67118
- PbMoO₄ crystal, photocond. and luminesc. 2-66591
- Pb_{1-x}Sn_xTe:Cd, photoluminescence study 2-104958
- Pb_{1-x}Sn_xTe:Cd(In), photoluminesc. study 2-93279
- Pb_{1-x}Sn_xTe:In epitaxial film, photolum. 2-77590
- Pb_{1-x}Sn_xTe(Se) solid soln., carrier g-factor longitudinal and transverse components, band gap depend. 2-76903
- PbWO₄ crystal, photocond. and luminesc. 2-66591
- Pd complex, one-dimens. semicond. reflectance, absorpt. and luminesc. study 2-61961
- Pt complex, one-dimens. semicond. reflectance, absorpt. and luminesc. study 2-61961
- Pt, inverse photoemission, density of states, fluorescence 2-77698
- RbBr:Mg²⁺, optical absorption, thermolum. and emission studies 2-61986
- RbI:Eu²⁺, thermoluminescence and optical absorpt., effect of γ-irrad. 2-57192
- Rb:MnCl₄, photoluminescence lifetime and intensity 2-110940
- RbMnCl₄(Br₃), photoluminescence lifetime and intensity 2-110940
- Rb₂SnCl₆:Os(IV), power luminesc. spectra and electronic levels 2-77585

luminescence of inorganic solids continued

- Ru complex, Ru(bipyridyl)₃²⁺ electronic struct. of metal-to-ligand CT states 2-92535
- Ru complexes, (Ru(bpy)₃)²⁺, (Ru(bpy)(py)₂)²⁺ and (Ru(phen)₃)²⁺, symmetry reduction in excited states, photoselection data 2-93241
- Ru(II) complex, Ru(2,2'-bis-isoquinoline)₃²⁺, ligand centred luminesc. 2-90599
- SO₂, crystalline, low lying electronic triplet state, phosphores. emission and excitation spectra 2-72535
- SbI₃/Gd, ESR and photoluminesc. spectra 2-93000
- Si amorphous films, luminesc. study, interf. effects 2-104968
- Si, amorphous p-n junction, electroluminescence 2-82927
- Si, amorphous p-n junction, photoenhanced electroluminescence 2-82928
- Si amorphous solar cells, electroluminescence, quantum efficiency 2-111550
- Si Czochralski wafers, photoluminesc. method to characterise in-depth profile of thermally induced defects 2-93243
- Si, electron irradiated, uniaxial stress anal. of 0.79 eV vibronic band 2-67019
- Si, electron-hole drops, stress depend. kinetics, luminesc. study 2-76936
- Si epitaxial layer, photoluminesc. anal. for characterisation of shallow impurities 2-93242
- Si, excitonic system, equilb. consts., recombination luminescence 2-87860
- n-Si, heavily doped, electronic struct. and photoluminesc. spectra 2-104290
- Si, impurity scatt. within electron-hole liq., far IR and millimetre wave studies 2-99110
- Si, ion implanted, pulse laser annealed, defect-induced photolum. 2-57181
- Si, microcrystalline, plasma deposited, charact. 2-92405
- Si, plastically deformed, photoluminescence polarisation, stress effects 2-110907
- Si, polycrystalline for solar cell appl., photolum. charact. 2-87843
- Si, uniaxially stressed, electron-hole liquid props. 2-104259
- Si wafers, thermally-induced defects characterisation by room-temp. photoluminesc. 2-87837
- Si, with varying uniaxial stress, electron-hole liq. condensation 2-71883
- Si:B, thermally evaporated, near-surface layer impurity distrib., photoluminesc. study 2-110902
- Si:B(P) quantitative impurity anal. by photolum. technique 2-57180
- Si:Cu, deep centre long lifetime photoluminescence 2-110938
- Si:Cu, luminescence, excitons and impurity states 2-104946
- Si:Fe, Ti (In), photoluminescence lines, Fe-Ti complexes 2-104948
- Si:Ga, electron irradi., luminesc. of traps 2-61969
- Si:Ga, heavily doped, free electron zero-phonon transition, luminescence 2-61954
- Si:H, amorphous, 1.4 eV luminescence lifetime distrib. 2-72540
- Si:H, amorphous, excitation wavelength depend. of luminesc. spectra 2-77586
- Si:H, amorphous, ODMR obs. of luminescence fatigue 2-104954
- Si:H, amorphous, photoluminescence fatigue and photo-annealing 2-110905
- Si:H, amorphous, sputtered, time-resolved photolum. spectra 2-77581
- Si:H, amorphous, sputtering and glow discharge prep., photoluminescence and midgap state density 2-87855
- Si:H, amorphous, time resolved photoluminescence, quenching and carrier mobility 2-104949
- a-Si:H, photoluminesc. emission broadening 2-110920
- Si:H amorphous, photoluminescence, band gap fluctuation 2-98530
- Si:H amorphous plasma deposited film, photoluminescence, sub-band gap excitation 2-87856
- Si:H films, amorphous, dependence of gap on hydrogen content, photoluminescence and IR spectra study (*Chinese*) 2-110903
- Si:H(O), interaction between dislocations and H or O, elec. and luminesc. props. (*Russian*) 2-56487
- Si:In, luminescence intensity enhancement by thermal treatment 2-57153
- Si:In, P, electron capture coeff. of neutral In and pair recomb., photoluminesc. spectra 2-77569
- Si:In, vibronic spectrum of U₂ isoelectronic centre 2-61953
- Si:In,Li, In X-centre donor-acceptor pair photoluminescence 2-57139
- Si:N, photoluminesc. anal. for characterisation of shallow impurities 2-93242
- Si:O, C, Czochralski grown, O related donors, 700 to 800°C, expt. study 2-56469
- Si:O,H,F, amorphous, photoluminescence, localised states, temp. depend. 2-78854
- Si:P, donor state line-broadening mechanisms, photoluminesc. study 2-99181
- Si-SiO₂-electrolyte, SiO₂ thin films, conduct. and electroluminescence study (*Russian*) 2-87872
- SiC:Al polytypes, p-n structs., electrolum. characts. 2-93285
- SiC:P, epitaxial kinetics, solubility and polytype 2-76850
- SiC₃:Sn, electron-phonon interaction of impurity centres, photolum. and Jahn-Teller effect (*Russian*) 2-57179
- Si_{1-x}Ge_x, amorphous, optical props. and photoconductivity 2-104920
- SiO₂ glass core optical fibre, broadband triboluminesc. obs. 2-116282
- SiO₂ thin film, cathodoluminescence, luminescent centre distrib. (*Russian*) 2-104970
- SiO₂ thin films, luminesc. study, interf. effects 2-104968
- SiO₂:B, glass, solid state track autoradiography study of B distrib. 2-92016
- SiO₂:Nd glass, plasma torch CVD and fluorescence props: meas. 2-93436
- SiO₂:Ge, recombinative luminescence (*Russian*) 2-61962
- Sn, photon emission from sputtered atoms as function of phase transition 2-77596
- SnCl₂, luminescence at low temp. (*Russian*) 2-57178
- SrF₂:Ni, X-ray irradi., luminesc. meas. 2-110921
- SrMoO₄:Eu,(MoO₄)₃ solid soln., photolum. and thermolum. 2-110910
- SrO-Li₂O-P₂O₅:Mn, Ce, luminesc. system, whitlockite phase struct. 2-98015
- SrS:Cu,Er, phosphors, electroluminesc. spectral characteristics 2-67122
- SrS:Eu,Sm, phosphor, luminesc., nanosecond IR laser stimulation, dosimeter appl. 2-57140
- SrSe:Cu,Er, phosphors, electroluminesc., spectral characteristics 2-67122
- SiO₂:Pb²⁺, phosphors, high press. phases, luminescence props., quenching 2-82903
- SrTiO₃:Cr³⁺, photoelectronic and optical props. 2-82402
- SrWO₄:Eu₂(WO₄)₃ solid soln., photolum. and thermolum. 2-110910

luminescence of inorganic solids continued

- SrYbF₆, disordered, luminescence, nonlinear excitation delocalisation (*Russian*) 2-72545
- Ta, sputtering, continuous emission production of photons 2-57188
- TbAl₃B₂O₇, luminesc. and energy transfer 2-61950
- TbF₃, intrinsic fluorescence, energy transfer mechanisms 2-87839
- Tb₂(MoO₄)₃, luminesc. and energy transfer 2-82901
- TbP₂O₁₄ and TbNa(WO₄)₂, radiation quenching, cross relax. and excitonic behaviour 2-93247
- Th, cathodoluminesc. in presence of O₂, CO, and gas mixtures 2-110953
- ThCl₄:Pa⁴⁺, absorpt. and emission spectra, spin-orbit and crystal field parameters 2-99158
- Th₉₀Y₁₀O₉₅, X-ray irradi., luminescence study 2-67130
- Tl⁺ impurity luminescence, Jahn-Teller model 2-77582
- UO₂²⁺ salt cryst., luminesc. kinetics 2-67106
- UO₂(NO₃)₂·6H₂O, cryst. and frozen solns., visible spectra and fluorescence decay rates 2-61949
- UO₂WO₄·Na₂(K₂)(Rb₂)(Cs₂)WO₄, solid-phase synthesis, struct., IR and luminesc. spectra 2-87752
- WO₃, photo- and electroluminescence, microscopic emission mechanisms 2-116269
- Xe, cryocrystals, exciton spectra, polariton and spatial dispersion effects 2-82904
- YAG:Er³⁺, energy levels of Er³⁺, absorpt. and fluoresc. spectra 2-116252
- YAG:Er³⁺, fluoresc. spectra of Er³⁺, energy level diagram 2-67097
- YAG:Fe cathodoluminesc. props., Fe ions absence effects 2-110957
- YAG:Nd crystals, Czochralski grown, defect disclosure by thermolum. 2-93289
- YAG:Nd crystals, radiation colour centres rel. to growth defects, absorpt. and luminesc. obs. 2-71445
- YAG:Nd garnet, fluorescence lifetimes, particle size and refractive index effects 2-67114
- YAlO₃:Nd³⁺(Er³⁺)(Dy³⁺), luminescence and cryst. field splitting 2-116239
- Y₂Al₂O₇:Tb single crystal, phosphor's produced by ion implantation 2-76472
- Y₂MoO₄:Eu³⁺, spectroscopic props. 2-93254
- Y₂O₃, emission centre form. by H₂O absorpt., photoluminescence study 2-110930
- Y₂O₃ phosphor, Eu activated, chem. transport method cryst. growth, red luminesc. 2-111040
- Y₂O₃:Ce³⁺(Sm³⁺)(Dy³⁺)(Yb³⁺), energy levels, cryst. field anal., fluoresc. and IR study 2-72534
- Y₂O₃:Gd³⁺, Stark levels, cryst. field splitting, fluoresc. study 2-66505
- Y₂O₃:Nd powders, fluorescence lifetimes, particle size and refractive index effects 2-67114
- YOB:Eu³⁺, cryst. field effects, fluoresc. study 2-66503
- YOCl Tb³⁺, Stark level, cryst. field anal., fluoresc. study 2-66504
- Y₂O₃ film, RF sputtered, luminescent, high purity deposition 2-93423
- Y₂O₃S phosphor, carrier migration, cathodoluminesc. study 2-116272
- YPO₄:Pr³⁺ (Nd³⁺), IR spectra, Zeeman effect and fluoresc. obs. 2-72522
- Yb₂O₃:Gd³⁺, Stark levels, cryst. field splitting, fluoresc. study 2-66505
- Zn_{1-x}Cd_xS:Ag phosphor layer on SiO₂ and Zn₂SiO₄:Mn particles 2-110952
- Zn_{1-x}Cd_xS:Cu, Al cathodoluminescent phosphor, saturation obs. at high current density 2-116273
- ZnO, green cathodolum. and ESR spectra 2-116275
- ZnO, sputtered thin films, correlation between film quality and photoluminescence 2-87842
- ZnO:Cu,Yb(Tm) phosphors, photo- and electro-luminesc. studies 2-110909
- ZnO-B₂O₃-Li₂O-H₂O system, crystallisation, characterisation by X-ray diffr. 2-103962
- ZnO(S):Ni²⁺, optical spectra, isotope splitting const. 2-57163
- ZnS ceramic phosphor, electroluminescence, temp. depend. meas. 2-116268
- ZnS, crystals, powders, films, thermoluminesc., luminesc. temp. depend. and damping 2-77604
- ZnS, high resolution in scanning cathodolumin. of edge emission 2-116274
- ZnS, intrinsic-defect hole conductivity, photoluminescence study 2-110927
- ZnS phosphor layer on Zn₂SiO₄:Mn particles, prep. and cathodoluminescence 2-110952
- ZnS phosphors, cryst., radiative recomb. centres, cathodolum. meas. 2-110955
- ZnS, photoluminesc. quenching by DC elec. field 2-110818
- ZnS, planar defects, luminescence study 2-82889
- ZnS, radiative recombination of electron-hole drops and nonequilb. electron-hole plasma obs. 2-66459
- ZnS, vacancy optically detected mag. resonance 2-77425
- ZnS:Ag, photolum. and elec. props. study of Ag doping 2-110944
- ZnS:Ce, Li phosphors, luminesc. excitation and emission spectra 2-57155
- ZnS:Cu, Al, phonon-assisted tunnelling in the electroluminescence exciting process 2-110950
- ZnS:Cu, donor-acceptor recombination, ODMR study 2-99185
- ZnS:Cu, Eu, Cl, electron multiplication process, luminesc. kinetics study 2-67121
- ZnS:Cu, ODMR study of IR photolum. 2-93066
- ZnS:Cu, Sm(Eu)(Tm), electrolum. and photolum., quantum yield meas. 2-110943
- ZnS:Eu, influence of cryst. lattice field on Eu²⁺ emission spectra 2-87866
- ZnS:I, iodine transport grown, channelling and ionoluminesc. spectra study 2-56058
- ZnS:I cubic crystals, blue self-activated luminesc., N, P and Ag ion implementation effect 2-116237
- ZnS:Mg AC thin film electroluminescent devices, luminescence-voltage characts. 2-104967
- ZnS:Mn, Cu, Cl DC electrolum. films, field enhanced changes in comp. and struct. 2-116263
- ZnS:Mn, pulse excited, afterglow of Mn centres 2-110924
- ZnS:Mn, RF sputtered thin film, electroluminescence (*Japanese*) 2-61979
- ZnS:Mn,Cu,Cl, amorphous and cryst. electrolum. film, elec. cond. props. meas. 2-87429
- ZnS:Mn AC electrolum. thin film device, Mn²⁺ emission saturation 2-116265
- ZnS:Mn AC thin film electrolum. devices, UV irradi., current and light generation 2-116266

luminescence of inorganic solids continued

- ZnS:Mn electrolum. films grown by at. layer epitaxy, ageing process 2-116264
 ZnS:Mn film, sputter deposit, luminesc. and struct. props. variation with annealing 2-93287
 ZnS:Mn sputtered thin films, cathodoluminescence and struct. props. 2-110956
 ZnS:Mn thin films, physical and elec. characts. 2-61622
 ZnS:Mn²⁺, Zeeman effects on ⁴E-levels, decay time of luminesc. emission 2-115720
 ZnS:Mn²⁺ and ZnCdS:Mn²⁺, electrolum. and photolum. props. 2-57184
 ZnS:TbF₃ thin films, electroluminescence quenching obs. 2-99194
 ZnS:V(Cr)(Co)(Ni)(Cu), excited state lifetimes, 4 to 300K, luminesc. study 2-57162
 ZnS-Cu luminophore, decay time determ. from photocount statistics 2-102755
 ZnS_{1-x}Se_x, donor-A-centre pairs, ODMR and phosphoresc. study 2-56978
 Zn(SCN)₂:Pb(Sn), excitation spectra, luminesc. 2-104927
 ZnS,CdS_{1-x}:Ag(Yb)(Ni), phosphor, visible image formation from IR radiation 2-77563
 ZnS,O_{1-x}:Cu,Sn, phosphor, electrolum. 2-57182
 ZnS(Se), Z 2-116235
 ZnS(Se):Mn, epitaxial layers grown organometallic CVD 2-116378
 ZnS,Se_{1-x}, elec. and optical props., compositional disorder effects, photoluminescence and excitonic spectra 2-57171
 ZnSe, blue emission of cathodoluminesc. 2-77598
 ZnSe, bulk and epitaxial growth, impurity role 2-116347
 ZnSe, edge emission, collective phenomena, radiative recombination 2-77579
 ZnSe, exciton-impurity complexes, photoluminesc. spectra study 2-72552
 ZnSe, exciton-plasmon Mott transition 2-56443
 ZnSe grown by organometallic CVD on GaAs, blue cathodoluminesc. obs. at room temp. 2-104969
 ZnSe in Sn, LPE, phase diagram and electronic props. 2-116428
 ZnSe LEDs, effect of residual impurities 2-57183
 ZnSe MIS structures, blue electroluminescence and I-V characts. 2-61982
 ZnSe, phonon scatt. at impurity pairs, luminesc. excitation spectra 2-57177
 ZnSe, radiative processes in electron-hole drops and exciton-exciton interaction 2-104961
 ZnSe, single cryst., photoluminesc. spectra, Bi and Sb impurity effects 2-72541
 ZnSe, stimulated photoluminescence, lasing mechanism 2-99183
 ZnSe, VPE growth film on GaAs, optoelectric props. control 2-116382
 ZnSe,ZnSe_{1-x}, organometallic CVD growth, photolum. peak due to I₂ bound exciton line 2-111087
 ZnSe:Ag(Au) LPE layers, luminesc. spectra, acceptor levels 2-116250
 ZnSe:Al, photoluminescence obs. 2-61971
 ZnSe:Cu,Cl phosphor, activated, recombination centres, photoluminesc. study 2-87850
 ZnSe:Ga, MBE growth and elec. cond. and photoluminesc. props. meas., blue LED appl. 2-87986
 ZnSe:Li, donor-induced acceptor-pair splittings, excitation spectroscopy study 2-82906
 ZnSe:Mn²⁺, Zeeman splitting of ⁴T₁, ⁴T₂, and ⁴E states, luminesc. study 2-57063
 ZnSe:Ni(Fe), near IR photolum. detect. 2-116236
 ZnSe,Si_{1-x} MIS diodes, blue and violet electroluminescence emission 2-72067
 p-ZnSnF₂ Schottky diodes, current-voltage characts., photosensitivity and recomb. radiation spectra 2-115863
 ZnTe, edge emission, collective phenomena, radiative recombination 2-77579
 ZnTe, excited states of bound excitons, photolum. and magneto-optical spectroscopy 2-116238
 ZnTe, ion implantation postgrowth defects and 1.59 eV luminescence origin, expt. study 2-99169
 ZnTe, luminesc. and lasing under laser excitation 2-77571
 ZnTe, O diffusion during laser annealing, photolum. obs. 2-115463
 ZnTe:Cl, EPR study of deep Cl-associated centre 2-110642
 ZnTe:P, distance donor-acceptor pairs, luminescence decay 2-110941
 ZnTe:P, Li, magnetoluminescence, electron and hole g-factors, Zeeman effect 2-99193
 ZnTe(Se)(S), electron-hole drops, luminesc. and optical gain meas. 2-87847
 ZnWO₄, cryst. growth and scintillation props. 2-57282

luminescence of liquids and solutions

- alkali halides aqueous solns., UO₂⁺ impurity photolum. spectra meas. (Russian) 2-77593
 anthracene, delayed fluoresc., external heavy atom and mag. field effects 2-110926
 blood, luminesc. meas. using ultra-high sensitivity photon counting system 2-117043
 chlorobenzene, in rigid glass soln., dual phosphoresc. obs. by time resolved emission spectroscopy 2-87834
 chlorophyll, in soln., lipid vesicles and liposomes, conc. quenching, fluoresc. study 2-67955
 chlorophyll in liposomes, phosphoresc. and liposome effects on quantum yields 2-78308
 p-dibromobenzene, in rigid glass soln., dual phosphoresc. obs. by time resolved emission spectroscopy 2-87834
 p-dichlorobenzene, in rigid glass soln., dual phosphoresc. obs. by time resolved emission spectroscopy 2-87834
 6,7-dihydroxycoumarin, aq. soln., pH effect, fluoresc. and UV-visible study 2-65049
 p-(dimethylamino)benzonitrile in propanol soln., ps. dynamics of twisted internal CT phenomena 2-75347
 diphenanthrylpropanes, intramol. singlet and triplet excimers, fluoresc. 2-90600
 9,10-diphenylanthracene liquid dye solution electroluminesc. in waveguide cell 2-82924
 2,5-diphenyloxazole solution in n-hexane, excitation in VUV, luminesc. studies using windowless cell system 2-101468
 dyes in PMMA, thermal lens meas. of quantum yield for luminesc. solar concentrators 2-57678
 fluorescent liquid solutions, self-depolarisation 2-82885
 globular proteins, comparative investigation of radiation oxidation and X-ray chemiluminesc. 2-111745

luminescence of liquids and solutions continued

- highly absorbing fluorescent liquids, laser meas. of spectral extinction coeffs. 2-74504
 liquid crystal dye laser in region of thermodynamic phase transition (Russian) 2-80944
 low viscosity solns., photoluminesc. quantum yield and excitation energy migration 2-110923
 malachite green, fluoresc. polarisation anisotropy and kinetics as a function of solvent viscosity 2-70323
 4-methyl-7-oxyxoumarin, H bonded complexes, luminesc. and laser radiation 2-108871
 organic prolate molcs., rot. motion in soln., luminesc. study 2-104966
 orientation factor and rotation of molecules in luminescent solutions 2-59912
 phenyl nitrenes, spectral and photochem. props. 2-70318
 poly(α-methyl styrene) in solution, excimer struct., fluorescent emission, polarisation 2-65046
 poly-N-epoxypropylcarbazole, films and solns., absorption and emission spectra meas. 2-67119
 poly-N-vinylcarbazole, nitrated, soln., electronic excitation energy transfer, fluorescence and phosphorescence study (Russian) 2-77592
 polystyrene in solution, excimer struct., fluorescent emission, polarisation 2-65046
 POPOP liquid dye solution electroluminesc. in waveguide cell 2-82924
 porphyrin, highly excited states, polarisation-modulation fluoresc. study 2-114040
 porphyrins, etio-, corpo- and meso-, fine-struct. luminesc. on selective laser excitation 2-111619
 quinine bisulphate in aq. H₂SO₄ soln., complex fluoresc. decay 2-75340
 rhodamine 6G-malachite green, soln., fluoresc. decay time meas. 2-67120
 semiconductor, luminescence quenching by non-radiative tunnelling 2-99179
 trans-stilbenes-donor-acceptor substituted, in nonpolar and low viscosity solvents, viscosity depend. of fluoresc. quantum yields (German) 2-82921
 thiofluorenone, phosphorescence spectra, optically resolved zero field splittings 2-87835
 thioxanthione, phosphorescence spectra, optically resolved zero field splittings 2-87835
 vanadyl phthalocyanine electronic transitions in soln. and solid state 2-61938
 water, cavitating lip, acoustic emission and sonoluminesc., dissolved gases effect 2-55622
 windowless cell system for luminescence studies on liquids under excitation in the VUV 2-101468
 xanthene-aromatic hydrocarbon system mixed triplet-triplet annihilation, mag. field effect 2-93256
 xanthione, phosphorescence spectra, optically resolved zero field splittings 2-87835
 zinc etioporphyrin, highly excited states, polarisation-modulation fluoresc. study 2-114040
 zinc porphyrin, in micellar soln., fluoresc. intensity oscils. 2-65038
 zinc tetraabenzoporphyrin, highly excited states, polarisation-modulation fluoresc. study 2-114040
 Ar, liquid, luminescence yield, LET depend. 2-90363
 Eu(II) cryptate in aqs. soln., absorpt. and emission props. 2-104906
 Pr³⁺ ions in Pr chloride aq. solns., luminesc. spectra with excitation in 4f-5d absorpt. bands 2-116244
 Tb³⁺ ions in Tb chloride aq. solns., luminesc. spectra with excitation in 4f-5d absorpt. bands 2-116244
 Xe, liquid, luminescence yield, LET depend. 2-90363

luminescence of organic solids

- acenaphthenequinone, in 1,4-dibromonaphthalene matrix, phosphoresc. study 2-67107
 acrylic, dye doped, UV sensitive phosphors for Si imaging detectors, fluoresc. props. 2-116224
 adenine cation cryst., luminesc., excitation wavelength depend. 2-104941
 anthracene, electrolum. spatial distribution, elec. contacts influence 2-72556
 anthracene, luminescence obs. at 0.4K 2-61966
 anthracene, photoluminesc., vibronic peaks, effect of grinding 2-104940
 anthracene, triplet exciton-exciton annihilation, mag. field depend. 2-115669
 anthracene crystals, fluorescence simulation and its rel. to exciton distrib. 2-87838
 anthracene vacuum deposited films, elec. cond. and blue electrolum. 2-116270
 aromatic compounds, simple, struct. luminesc. in matrices, environmental anal. appls. (German) 2-80720
 1,2-benzanthracene, secondary luminesc. during higher electronic states excitation 2-116246
 benzene clusters, mass-selective two-colour photoionisation 2-75486
 X-benzophenone, doped, excitation transfer, temp. depend. 2-77572
 benzophenone, doped, excitonic phosphorescence 2-110935
 benzophenone, photoluminesc., vibronic peaks, effect of grinding 2-104940
 biphenyl-naphthalene(pyrene), mixed cryst., triplet exciton fusion, luminesc. study 2-110913
 3-chloro-1-(4-halophenyl)-1-propanone, IR spectra 2-99105
 chlorophyll-a and its derivatives in solid solns., sharp line fluoresc. and vibronic spectra 2-87836
 coronene, UV sensitive phosphors for Si imaging detectors, fluoresc. props. 2-116224
 deoxycytidine-5'-phosphate monohydrate, X-irrad., low-temp. thermoluminescent behaviour 2-61987
 1,4-dibromonaphthalene, triplet exciton trapping, delayed fluoresc. obs. 2-98547
 9,10-dichloroanthracene, cryst., excimer form., low-temp. fluoresc. 2-104929
 digital optical information storage by spatial lifetime hole burning 2-60189
 1,4-dihalonaphthalene, crystals and solid solns., singlet-triplet transition dynamics, exciton-phonon coupling 2-81904
 1,4-dihydroxyanthraquinone-d₈(d.), electronic states, vibr. Raman and IR study 2-57070
 10,10-dimethylanthracene-9-one cryst., electronic spectra of spin-orbit/vibronic coupling in 3n* states 2-72519
 dimethylbenzaldehydes, in durene single crystals, phosphoresc. lifetimes 2-67094
 ditetramethylammonium uranyl tetrabromide, vibr., luminescence, IR and Raman study 2-61895

luminescence of organic solids continued

- dye absorbed molecule surface interaction, polarised absorpt. and fluoresc. spectroscopy 2-71795
- dye molecules in amorphous solids, phonon-induced fluoresc. changes 2-54893
- dyes, adsorbed, quantum yield and luminesc. spectra 2-116243
- dyes in PMMA, thermal lens meas. of quantum yield for luminesc. solar concentrators 2-57678
- exciton migration with end detectors, time-dependent luminesc. calcs. 2-110904
- glass fibre reinforced epoxy resin, destruction obs. by mechanoluminesc. 2-88145
- L-histidine, radiation damage, thermoluminescence study 2-61032
- hydrocarbons, polycyclic aromatic, films, struct. and props., substrate temp. effect 2-104205
- layered planar luminescence solar collector using organic dye in PMMA, performance evaluation 2-116780
- lumogen, UV sensitive phosphors for Si imaging detectors, fluoresc. props. 2-116224
- lyoluminescence and spin trapping 2-110948
- molecular crystals, triplet exciton-exciton annihilation, mag. field depend. 2-115669
- naphthalene: 2(1,4-diiodotetrafluorobenzene), exciton-phonon coupling, triplet energy transfer, Raman spectrosc. obs. 2-104869
- naphthalene:anthracene crystals, delayed fluorescence, triplet exciton traps effect (French) 2-77576
- naphthalene, cryst., isotopically mixed, subst. disordered, triplet exciton transfer and fusion 2-92474
- naphthalene (-dn) doped mixed crystals, time resolved donor and acceptor fluoresc., energy transport kinetics 2-72532
- naphthalene in Ar, Kr and Xe matrix, phosphorescence spectra, electronic transitions 2-61957
- neodymium porphyrin complexes 2-110929
- oil colour fluorescence, laser induced, oil painting pigment identification 2-99165
- organic photoconductors, carrier generation and elec. field induced fluorescence quenching 2-67108
- overlayers on reflective substrates, surface emission Fourier transform IR spectra obs. 2-116225
- pentacene in benzoic acid, optical dephasing, optical absorpt. and picosecond photon echo expt. 2-70626
- pentacene-benzoic acid mixed crystal, antihole prod., hole burning, fluoresc. study 2-108973
- α -perylene, luminescence and exciton lattice interaction 2-87840
- β -perylene, luminescence study of exciton self-trapping 2-93246
- (perylene)₂TCNQ, single cryst. Raman spectra, temp. depend., isotope effects 2-72470
- phenanthrene, photoluminesc., vibronic peaks, effect of grinding 2-104940
- phosphorescence, level anticrossing phenomena and optical nucl. polarisation 2-104746
- phthalic acid, photoluminesc., vibronic peaks, effect of grinding 2-104940
- phthalocyanine, x-metal free, electric field induced fluoresc. quenching and photocarrier generation 2-61946
- poly(N-vinyl carbazole) films, excimer dynamics 2-116222
- poly(N-vinylcarbazole) film, doped, energy transfer, fluoresc. study 2-116223
- poly-N-epoxypropylcarbazole, films and solns., absorption and emission spectra meas. 2-67119
- poly-N-vinylcarbazole film, extrinsic carrier photogeneration CT fluorescence quenching by electric field (Japanese) 2-110963
- polyacetylene, resonance Raman scatt. and photoluminescence props., review 2-77522
- polyethylene film, elec. ageing, radiothermolum. obs., relax. characts. (Russian) 2-93288
- polyethylene naphthalate photoelectret, carrier traps 2-98661
- polyethylene terephthalate, electroluminescence and space charge layers 2-93282
- polymer film, stretched, partially oriented mol. fluoresc. polarization, electronic transition moment 2-77609
- polynuclear aromatic hydrocarbons, luminesc. and fluoresc. spectra, pattern recognition appls. 2-90596
- polynuclear uranyl fluoride complexes, luminesc. and vibr. spectra 2-99123
- polystyrene-polyphenylene oxide blends, solid photo-energy transfer 2-104944
- polyvinylcarbazole, nitrated, exciton migration and localisation on defect and impurity levels, luminesc. obs. (Ukrainian) 2-82896
- polyvinylcarbazole film, impurities and struct. effect on photolum. (Russian) 2-67092
- porphyrin in n-decane host, optical dephasing of S₁-S₀ transition studied by photochemical hole-burning 2-72531
- porphyrin, biogenous, solid solns., luminesc. study 2-67952
- propynal, nonradiative relax., fluoresc. and phosphoresc. 2-104933
- styrene-acrylonitrile copolymers, sequence distrib. and intramol. excimer formation 2-77562
- tetrabenz(a,c,d,j,m)perylene film, impurity controlled, crystn. rate, absorpt. and fluorescence spectra study 2-56395
- tetrabutylammonium bromide, intrinsic absorpt. and exciton luminesc. obs. 2-110933
- tris-tetrabutylammonium yttrium hexathiocyanate:Eu³⁺, fluorescence spectra 2-61958
- vanadyl phthalocyanine electronic transitions in soln. and solid state 2-61938
- ytterbium porphyrin complexes, luminesc. and visible absorpt. study 2-110929
- Ag⁺ bis(2,2'-bipyridine)-bis-cyanoruthenium(II) complex form., redox and photochem. behaviour 2-83392
- Cu I complexes, luminesc. spectra, decay times and intensities 2-80716
- Dy³⁺ in different host matrices, luminesc. characts. 2-99173
- Eu complex, β -diketonates:1,10-phenanthroline, IR and luminesc. spectra 2-113989

luminescence of solids

- see also *luminescence of inorganic solids; luminescence of organic solids*
- centre with local mode, secondary resonant radiation, cryst. phonons effect (Russian) 2-99186
- chemical potential of radiation, appl. to emission spectra 2-90849
- colorimetry of luminescent materials, visual evaluation of daylight simulations 2-58880

luminescence of solids continued

- crystalline luminescence, overlap integral calculus in optical transition (French) 2-104926
- dielectric permeability at high concentrations of excitons 2-93135
- direct gap semiconductors, edge luminesc. 2-57185
- energy transfer in excitation trapping conditions 2-116241
- energy transfer models in solids 2-77566
- excitation migration along activator centres, luminescence spectra 2-87832
- exciton luminescence, polariton effects, review (Russian) 2-93272
- exciton-phonon system, optical response, formulation of emission spectrum 2-67098
- exciton-phonon system, optical response, reson. Raman scatt. and luminesc. 2-67099
- F-centre luminescence, effect of spin-orbit coupling on temp. depend. of mag. circular polarisation 2-87861
- F-centres, luminesc. quenching due to nonradiative de-excitation during lattice relax. 2-104951
- glasses, fluorescence, anomalous homogeneous linewidths 2-57167
- insulating crystals, defects, conf., Riga, USSR (May 1981) 2-68967
- molecular crystal, electronic excitation energy transfer, electric field effects 2-98548
- negative luminescent radiation of intrinsic semiconductors (German) 2-93280
- nonlinear phenomena, luminescence, optical susceptibility and radiation quenching 2-86037
- nonradiative energy transport in case of negligible correls. with impurity centre surroundings 2-67117
- phosphors, design of cryostat 2-58834
- radiation migration in crystals 2-104942
- semiconductor, luminescence quenching by non-radiative tunnelling 2-99179
- semiconductor, streaming motion and population inversion of hot carriers, crossed elec. and mag. fields 2-98668
- semiconductor, surface barrier struct., photon-diffusion transport of nonequib. carriers 2-115864
- semiconductor thin films, optical processes, review 2-93310
- semiconductors, quantum yield of electron-hole pairs, crazy-carpentry and probability methods 2-82911
- semiconductors, variable gap, photon transport of nonequib. carriers, photoluminescence 2-116257
- surface emission, universal component rel. to unidentified substance absorption 2-116247
- vibronic spectra, hydrostatic and uniaxial press. effects 2-57050
- luminescent devices**
- see also *fluorescent screens; phosphors; scintillation counters*
- microscope, imaging system for surface studies 2-72554
- CaSO₄ thermoluminescent films, X-ray imaging appl. 2-89878
- ZnS:Mg AC thin film electroluminescent devices, luminescence-voltage characts. 2-104967
- ZnS:Mn AC electrolum. thin film device, Mn²⁺ emission saturation 2-116265
- ZnS:Mn AC thin film electrolum. devices, UV irradi., current and light generation 2-116266
- luminophors** see *phosphors*
- luminors** see *phosphors*
- lumped parameter networks**
- transmission lines, lumped component type, standing and travelling waves 2-107050
- lunar atmosphere** see *Moon; planetary satellite atmospheres*
- lunar geology** see *lunar rocks and minerals*
- lunar rocks and minerals**
- anorthosite 60025, mineral chemistry and petrogenesis 2-117616
- Carnegie crater central peak composition 2-73877
- cosmogenic nuclides giving solar and galactic cosmic ray intensities over past 10⁸ yrs 2-106434
- extra-mare basalt distrib., composition and ages 2-106568
- hydrolysable carbon location in lunar soil 2-89171
- Lemagne Crater soil, photometric studies 2-68639
- Luna 24 regolith, elec. cond. and X-ray obs. (German) 2-73873
- microcraters used to determine interplanetary dust dynamics 2-63314
- regolith, microwave brightness temp., vertical struct. effects, lunar regolith appl. 2-58277
- regolith compressional wave velocity, laboratory expts. 2-73876
- sample preparation 2-100747
- samples stored at Lunar Sample Building 2-78985
- silicates, fossil track studies 2-63283
- soil, Fresnel component of refl. light rel. to connection between albedo and polarisation props. of Moon 2-68640
- solar flare Ne composition from lunar rock anal. 2-63348
- solar wind ion implantation, CO₂ form., astrophysical implications 2-92009
- ¹⁵/₁₄N composition variations, mechanisms anal. 2-84114
- Kr isotopes, spallation production by cosmic rays 2-113473
- Tr isotope ratios of lunar, terrestrial and meteorite samples 2-84113
- Zr isotopic composition, implications for ⁹²Nb as solar system chronometer 2-84116
- lunar seismology**
- regolith compressional wave velocity, laboratory expts. 2-73876
- lunar structure**
- see also *lunar rocks and minerals; Moon*
- core structure from electromagnetic induction due to solar wind 2-112296
- early crust and highland form., reexamination of planetary accretion process 2-63284
- Nectaris multiringed basin, evolution 2-73874
- origin of Moon's figure 2-78986
- tectonism in post-Imbrian period indicating totally molten initial state 2-89173
- lung**
- see also *pneumodynamics*
- adventitious sounds, freq. anal., pulmonary diagnosis appl. 2-117028
- airway smooth muscle, evidence for an Na⁺ electrogenic pump 2-78322
- alpha-active nuclei, microdistrib. in human lung tissue using autoradiography 2-68174
- alveolar epithelial solute and water transport props., effects of lung inflation 2-111646
- alveolar macrophage colony-forming cells, radiosensitivity obs. 2-88626

lung continued

alveolar-capillary diffusion and ventilation-perfusion inhomogeneity, math. model 2-67927
 alveolar-capillary membrane, modelling of mass transfer (*Russian*) 2-62568
 artery pressure monitoring using spectral analysis and Strand's algorithm 2-88678
 artificial membrane blood oxygenator, type MOST-122, development results 2-78495
 autoradiography, α -active nuclei microdistrib. determ. for human lung tissue 2-68223
 autoradiography using CR-39, inhaled Rn decay product microdistrib. determ. for various tissues 2-68221
 basal cell dose distrib. from inhaled natural radioisotopes and lung cancer risk 2-111799
 blood plasma filtration in reptiles 2-73289
 Bohr-Haldane effect rel. to steady-state gas exchange 2-116897
 breath sounds, development of a system for meas. and anal. 2-117026
 bronchus, rat, morphological changes after single inhalation of $^{239}\text{PuO}_2$ (*Russian*) 2-116994
 cancer diagnosis, use of ^{67}Ga citrate (*Russian*) 2-62733
 cancer risk, BEIR III estimates, failures and critique 2-68056
 capillary blood flow estimation, multiple breath method viability 2-83667
 capillary blood flow estimation, single breath method viability 2-83666
 capsular and intra-alveolar fluid press. comparison 2-111718
 conference on radiation research, Salt Lake City, USA (Apr. 82) 2-112652
 density, clinical system for in vivo meas. using Compton scatt. 2-94173
 density, in vivo meas., influence of certain phys. and physiological factors 2-94174
 diffusing capacity adjustment to work, characts. 2-116949
 diffusing capacity for CO, independence from alveolar CO conc. 2-73276
 dipalmitoyl phosphatidylcholine monolayer stability, temp. lung surfactant appl. 2-78297
 dose commitments from radioisotope inhalation, age effects 2-62776
 elasticity model for human lung 2-78360
 electrical bioimpedance of heart, tissue, brain, limb and lung, conf. Tokyo, Japan (Aug. 1981) 2-63741
 electrical properties and ion flow, regional differences in excised canine airways 2-73220
 extravascular pulmonary space, longitudinal diffusion rel. to parameter estimates 2-83594
 fissionable radionuclides spatial distrib. determ. using Lexan, rat 2-68220
 fluid and protein exchange, effects of different size microemboli 2-78368
 functional imaging future in radionuclide studies 2-94190
 functional mapping of organ systems, computer methodology, symposium, New Orleans, LA, USA (1981) 2-63742
 gamma irradiation, early and late toxicity in mice 2-88631
 gamma-irradiation, dose-rate dependence of damage after total body irradiat., mouse expts. 2-88613
 gas exchange during HF ventilation, dog expts. 2-116954
 gestalt-guided heuristic boundary follower for X-ray images of lung nodules 2-73345
 haemodynamic parameters, realtime ECG-gated simultaneous beat-to-beat evaluation rel. to pulmonary circulation 2-88580
 hypercapnia effect on net fluid filtration in lungs of awake newborn lambs 2-78367
 hypoxic vasoconstriction and fluid filtration in pigs 2-78374
 ICRP Task Group Lung Model for radioisotope pollution dosimetry, modifications rel. to age-dependence 2-117088
 inflation-deflation manoeuvres, bulk modulus rel. to relative vol. 2-105748
 inhaled aerosols: lung deposition and clinical appls. 2-83588
 irradiation from $^{170}\text{Tm}_2\text{O}_3$ particles, short term effect in mice 2-68079
 lymph flow, total, and fluid compartmentation in oedematous dogs 2-78381
 mass determination from flow-vol. loop, weightlessness effect, astronaut appl. 2-62785
 mechanical properties during acclimatisation to altitude 2-111716
 mucociliary transport, coordination in human trachea and intrapulmonary airways 2-78373
 mucus-lined tubes, resistance to steady and oscill. flow, canine trachea appl. 2-116952
 neutron RBE values, comparison for normal canine lung, rel. to γ -rays 2-68043
 NMR imaging of lung water, rat expts. 2-105877
 nuclear medicine pulmonary imaging advances, review 2-94202
 oedema, lung density imaging, chest X-rays vs. Compton scatt. tomography 2-83654
 peribronchial stress anal. utilising concentric shells of parenchyma 2-105751
 phonopneumography, freq. anal. of breath sounds 2-57875
 pores of Kohn, size rel. to transpulmonary and vascular press. 2-73286
 pressure-volume relationship in circulatory elements 2-116963
 pulmonary blood flow 2-73292
 pulmonary capillaries, gases transport, equilb. constants arising in the O_2 dissociation curve 2-116898
 radiation damage pathogenesis, kinetic model, rel. to essential cells killing 2-117003
 radiobiology conference, Amsterdam, Netherlands (Feb. 1982) 2-101118
 radiographs, tumour detection by computer 2-111790
 radioisotope uptake, absolute quantitation using gamma camera 2-117064
 regional diffusing capacity in normal lungs during a slow exhalation 2-111720
 respiratory sounds, automatic recognition (*Japanese*) 2-62707
 scintigrams, ventilation and perfusion, automatic anal. (*French*) 2-68121
 single-breath CO diffusing capacity meas., improved accuracy and precision 2-78470
 stretch receptor input, central integration in expiration control 2-116938
 surfactant, lipid fluidity: monolayers of saturated and unsaturated lecithins 2-78371
 surfactant system, sequential effects of irradiat. 2-100063
 tracheal diameter, direct dynamic meas. transducer 2-73403
 tracheal epithelium, canine, nonelectrolyte permeability 2-78305
 tracheal epithelium, posterior, canine, diffusion barriers to passive lipid uptake 2-116896
 tumours in Syrian hamsters following inhalation of $^{239}\text{PuO}_2$ 2-57865
 U fragments anal. using CR-39 plastic autoradiography 2-68175
 vascular tone rel. to dVa/dQ matching in obliterative pulmonary hypertension 2-73278

lung continued

ventilation images, quantitative comparison of $^{99}\text{Tc}^m$ -aerosol and $^{81}\text{Kr}^m$ 2-83632
 visceral pleural fluid movement, influence of alterations in Starling forces 2-73282
 X irradiation, dose-dependent increase in wt., mouse expts. 2-111753
 X-irradiation damage in thoracically irradiated mice, dose-dependence of damage appearance time 2-117002
 ^{241}Am , retention and translocation by beagles after $^{241}\text{AmO}_2$ inhalation, influence of aerosol size 2-73378
 $^{14}\text{CO}_2$ exchange, role of perfusion and diffusion in rabbits 2-78377
 $^{239}\text{PuO}_2$, inhaled into rat and hamster lungs, distrib. 2-73380
 $^{239}\text{PuO}_2$ inhalation effects, morphometric study of rat and hamster lung 2-62693
 ^{222}Rn daughter alpha dose factors, environmental, in 5-lobed human lung 2-94205
 Si measurement in lung phantom by neutron inelastic scatt. 2-94178
 ^{133}Xe , lung clearance parameter estimate variability 2-117054
 ^{90}Y beta-rays, toxicity on inhalation of relatively insoluble fused aluminosilicate particles by mice 2-68071

lutetium see lutetium**lutetium**

see also nuclei with
 Fermi surface meas. 2-66421
 Rydberg states calc. using model pot. method 2-64891

lutetium alloys

Gd, $\text{Lu}_{1-x}\text{Ce}_x\text{Be}_{13}$, cond. electron lattice relax. due to Ce ion 2-72350
 Ho, $\text{Lu}_{1-x}\text{Rh}_x\text{B}_6$, superconductivity and mag. props., μSR meas. 2-72101
 Lu-Fe alloy, recoil mixing produced by atom beams, simulation using computer code 2-76518
 $\text{Lu}_{1-x}\text{Gd}_x\text{Al}_2$, cryst. struct., mag., elec. and ESR props. 2-92564

lutetium compounds

see also lutetium alloys

$\text{BiLu}_2\text{Fe}_2\text{O}_{12}$ garnet magneto-optical cryst., doped, near IR absorpt. reduction obs. 2-72473
 (BiYLu) $_2\text{Fe}_2\text{O}_{12}$ bubble film, mag. props., FMR study 2-72317
 Fe-garnet films, hard-disk domains, investig. 2-104673
 $\text{KLu}(\text{MeO}_4)_2$, (Me=Mo,W), Nd^{3+} and Er^{3+} ion spectra in crystal fields, Stark struct. 2-76999
 $\text{KLu}(\text{WO}_4)_2\text{Ho}^{3+}$, 2- μm stimulated emission 2-104915
 (LaO) $_2\text{S}(\text{LuO})_2\text{Eu}$, STEM analytical and cathodolum. studies 2-72560
 ($\text{Lu}_2\text{Y}_2\text{Fe}_2\text{O}_{12}$), epitaxial bubble film, rare earth segregation 2-72633
 $\text{Lu}(\text{AlMnO}_4)_3$, cryst. struct. 2-60945
 $\text{Lu}_3\text{Al}_2\text{O}_7$, garnet, thermal expansion, optical dispersion, refractive index 2-66261
 $\text{Lu}_3\text{Al}_2\text{O}_7\text{Ho}^{3+}$, 2- μm stimulated emission 2-104915
 $\text{Lu}_3\text{Al}_2\text{O}_7\text{R}^{3+}$ garnet, multiphonon nonradiative transition probability 2-110936
 LuCl_3 gas phase, UVES 2-85739
 $\text{Lu}_2\text{Cu}_2\text{O}_5$, cryst. struct. data 2-81757
 ($\text{Lu}_x\text{Er}_{1-x}\text{Al}_2\text{O}_3$), garnets, 3 μm stimulated emission and spectroscopic props. 2-93229
 LuF gaseous mol., pot. energy curves and dissociation energy 2-113909
 $\text{LuF}_3\text{-BaF}_2\text{-MnF}_2$, glass form., quenching, IR study (*French*) 2-91808
 $\text{Lu}(\text{GaM}^{2+})_2\text{O}_4$ (M=Mg, Mn, Co, Cu, Zn), cryst. struct. 2-60945
 $\text{LuH}_{2.03}$, ^1H NMR studies 2-116082
 $\text{LuOBr}(\text{Cl})\text{:Tb}(\text{Tm})(\text{Ce})(\text{Sm})(\text{Dy})$ phosphor, photoluminesc. and cathodoluminesc. props. meas. 2-116231
 $\text{LuPO}_4\text{:Cm}^{3+}$, EPR, g-factors, excited state doublet wave function 2-104700
 $\text{LuPO}_4\text{:Nd}^{3+}\text{Eu}^{3+}$, optical spectra, crystal field interactions 2-67074
 $\text{LuPO}_4\text{:Nd}^{3+}(\text{Eu}^{3+})(\text{Er}^{3+})$, IR absorption spectra 2-87822
 $\text{LuPO}_4\text{:Pr}^{3+}(\text{Nd}^{3+})$, IR spectra, Zeeman effect and fluoresc. obs. 2-72522
 LuRh_2B_6 , cryst. struct. determ. 2-55923
 $\text{Lu}_2\text{Ru}_2\text{O}_7$, IR spectra and elec. cond. 2-110835
 e-Lu $_2\text{S}_3$, heat capacity, 1.2 to 20K 2-56209
 LuTaO_4 , cryst. struct. study 2-98038
 $\text{Lu}_2\text{V}_2\text{O}_7$, cryst. struct., rel. to mag. props., superexchange pathways 2-91923
 (YSmLuCa_3)(Fe,Ge) $_2\text{O}_{12}$ films, H^+ implanted, laser annealing 2-76492
 (YSmLuCa_3)(Fe,Ge) $_2\text{O}_{12}$ films, ion implanted, cubic anisotropy meas. 2-77340
 (YSmLuCa_3)(Ge,Fe) $_2\text{O}_{12}$ -metal interface, mag. parameters, bubble memories 2-72318
 $\text{YSmLuCaGeG:Ne}(\text{H})$, ion implanted bubble garnet film, mag. and cryst. props. 2-82644
 $\text{ZrF}_4\text{-ThF}_4\text{-LuF}_3$, glass forming area, thermal expansion and UV absorption edge (*French*) 2-115146

Luxemburg effect see ionospheric electromagnetic wave propagation**Lyapunov methods**

charged soliton stability in scalar electrodynamics 2-58629

lyotropic liquid crystals see liquid crystals

ABSTRACTS AND CURRENT PAPERS JOURNALS SUBSCRIPTION PRICES 1983

	USA \$	UK £	ROW £	JAPAN ¥
PHYSICS ABSTRACTS (PA)	1350	540	690	462,300
2nd and subsequent copies	560	300	300	201,000
ELECTRICAL & ELECTRONICS ABSTRACTS (EEA)	1000	460	560	375,200
COMPUTER & CONTROL ABSTRACTS (CCA)	610	285	350	234,500
PA/EEA/CCA COMBINED SUBSCRIPTION	2650	1120	1430	958,100
EEA/CCA COMBINED SUBSCRIPTION	1460	650	830	556,100
CURRENT PAPERS IN PHYSICS				
Member rate	78	38	38	—
Non-Member rate	170	98	98	65,000
CURRENT PAPERS IN ELECTRICAL & ELECTRONICS ENGINEERING				
Member rate	78	38	38	—
Non-Member rate	145	80	80	53,600
CURRENT PAPERS ON COMPUTERS & CONTROL				
Member rate	78	38	38	—
Non-Member rate	145	80	80	53,600
KEY ABSTRACTS				
Member rate*	38	19	19	—
Non-Member rate	80	36	36	24,100
KEY ABSTRACTS EMI/PMI COMBINED				
All Key Abstracts combined	—	60	60	40,200
Member rate	250	125	125	—
Non-Member rate	580	275	275	184,200

*The Key Abstracts Member rate is available to Members of the IEE and IEEE only.

CUMULATIVE INDEXES

Cumulative indexes are available for *Physics Abstracts*, *Electrical & Electronics Abstracts* and *Computer & Control Abstracts*, for both

authors and subjects. These cumulations generally cover a period of four years, with the exception of *Computer & Control Abstracts*

where the initial volume covered the period 1966-68. The table below shows the prices and periods for the two types of cumulative index.

	PHYSICS ABSTRACTS		ELECTRICAL & ELECTRONICS ABSTRACTS		COMPUTER & CONTROL ABSTRACTS	
	Subject	Author	Subject	Author	Subject	Author
	£	£	£	£	£	£
1955-59	20	20	15	20	—	—
1960-64	40	17	20	12	—	—
1965-68	60	25	35	20	—	—
1969-72	—	—	72	64	48	30
1973-76	600	300	250	150	150	75
1977-80	770	450	380	250	250	120
1966-68	—	—	—	—	15	

For US\$ and Yen prices please contact the appropriate address below

ORDERING PROCEDURE

THE AMERICAS

North (including Canada), Central and South

All orders from the above areas, and orders from members of Institute of Electrical and Electronics Engineers Inc. anywhere in the world, should be sent to Fulfillment Manager, Institute of Electrical & Electronics Engineers Inc., 445 Hoes Lane, Piscataway, N.J. 08854, USA. Telephone (201) 981 0060

日本のお客様にご案内申し上げます

日本国内に於ける INSPEC の購入価格はすべて円建てとなっております。また刊行物はすべて航空便で配達されます。INSPEC 刊行物の価格、その他についてのお問い合わせは最寄りの支店取扱専門店または輸入総代理店（エヌ・エス・エー・テクノロジー）カンパニー 千105 東京都港区新橋 13-12 TEL 03 (502) 6471 までご連絡ください。

REMAINDER OF THE WORLD

All remaining subscriptions should be sent to INSPEC Marketing Department, P.O. Box 26, Hitchin, Herts SG5 7RS, England. Telephone Hitchin 53331, Telex 825962, Telegrams IEE G.

OTHER INSPEC SERVICES

SDI

(Selective Dissemination of Information) This is a service individually tailored to the requirements and interests of the engineer or research worker. Details of information relevant to the interest profile of the individual subscriber are selected from the data being processed for the INSPEC database. Information is dispatched weekly on 150 mm x 100 mm (6" x 4") cards.

TOPICS

This is an SDI service based on standard profiles. There are over 70 subjects covering high-activity areas of research and development. This is an inexpensive card service designed to alert engineers and researchers to the availability of literature within their subject area.

MAGNETIC TAPES

Tapes containing all the information included in the INSPEC publications are issued twice monthly. They enable the larger research and development organisations to produce their own internal information and current-awareness services.

1977-80

CUMULATIVE INDEXES

Search 4 years at a time
using the latest
Cumulative Indexes.

- **Save Time**

Your search is completed faster
with the
1977-80 Cumulative Indexes

- **Increase Precision**

The subject indexing has been
revised to relate all the entries
produced over the four year period
to the 1980 subject headings.

Orders and Enquiries to:

INSPEC Marketing Department
Station House
Nightingale Road
Hitchin
Herts, SG5 1RJ
UK

or for Americas only
INSPEC
IEEE Service Center
445 Hoes Lane
Piscataway, N.J. 08854
USA